

## Wild times

From the Otago gold rush to the adventure tourism boom, a Queenstown bridge has successfully spanned centuries

he Kawarau Gorge Suspension Bridge is arguably the most famous bridge in New Zealand. Spanning a ravine carved by the Kawarau River, just off State Highway 6 and 20 kilometres east of Queenstown, the bridge is a magnet for thrill-seekers – including this author, when she was much younger and braver – who come from all over the world to throw themselves off the 43-metre-high structure, attached to what is essentially a very large elastic band.

In fact, since AJ Hackett established the world's first commercial bungy jump on the bridge in 1988, more than 1.2 million people have taken the plunge – and millions more have played it safe watching from the viewing platform.

But before it was famous as the founding location of the ultimate adrenaline sport, this Category 1 historic place was recognised predominantly for its complex and award-winning engineering. The Kawarau bridge was designed with one of the longest single spans in the country at the time.

The construction of the bridge began in 1879, precipitated by the need to improve access to the Central Otago goldfields and replace the punt services that provided the only way for people to cross the river upstream from Cromwell. The Great Flood of 1878, which inundated the Clutha River/Mata Au (of which the Kawarau River is a tributary), played a part in the bridge's design.

"The flood basically destroyed any bridge with mid-river piers, so afterwards a proliferation of suspension bridges was built in the area," says Karen Astwood, Director of Corporate Services at Heritage New Zealand Pouhere Taonga, who wrote a heritage assessment of the bridge in her previous role with Engineering New Zealand.

Notable New Zealand engineer Harry Paisley Higginson had been part of the commission investigating the Clutha flood, and his familiarity with the geology and waterways of the area allowed him to design the Kawarau bridge in just 16 days. The remote location was tricky so, where possible, the bridge was constructed using locally sourced materials, including schistose rock for the four striking ashlar masonry towers.

However, Australian ironbark was needed for the deck, so the 28 galvanised-steel suspension cables were imported from the Warrington Wire Rope Company in the UK. Due to the sharp turn of the road on the northern bank of the river, these had to be anchored in deep tunnels dug into the rock face.

Harry Paisley Higginson's in-depth knowledge of the area proved vital.

"For example, he knew that strong winds whipped through that gorge, so he offset the towers and abutments slightly on each side of the bridge as a wind-resistance measure," says Karen.

Harry assembled a talented crew – including assistant engineers Arthur Robert W Fulton and Walter Cleave Edwards (who later worked on the Wellington to Manawatū railway) and local contractors John McCormick and James Sutherland – and many credit the longevity of the bridge to this experienced group.

"Harry had a bit of a dream team and a big part of the bridge's engineering significance is the very high quality of the work and the design," says Karen. This was recognised in 1882, when the engineer won the UK's Institution of Civil Engineers' prestigious Telford Premium Award for his paper on the project.

The bridge opened in December 1880 and remained part of the highway until 1963, when it was superseded by a new spandrel steel arch design, located about 230 metres upstream.

Two decades later, in 1981, the Kawarau Gorge Suspension Bridge was the first bridge added to the New Zealand Heritage List – Rārangi Kōrero, and in 1989, aided by funds generated by the 1000-plus people who braved the bungy in its first year, its timber deck underwent a major restoration.

Today the bridge is managed by the Department of Conservation Te Papa Atawhai (DOC) and stands as a testament to the lengths that were taken to provide the interior of Otago with reliable connections to the wider world. Its historic significance is not lost on AJ Hackett Bungy New Zealand, says co-founder and Managing Director Henry van Asch, who adds that the company's guardianship includes working with DOC on the ongoing monitoring and care of the site.

"The bridge is a place where people, through bungy, overcome their fears and have life-changing experiences, and we feel privileged to be operating from such an historic and stunning location," he says.

"The days of the Central Otago gold rush were a wild time, and we feel we have been able to add a few more stories to the history books."





**♦** LOCATION

Queenstown sits on the shores of Lake Wakatipu in the southwest of the South Island.



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For the less adventurous, the bridge is also crossed by Queenstown's Arrow River Bridges Trail (part of the Queenstown Trail Great Ride network). It is also a Tohu Whenua – a place that has shaped the nation – and part of a programme that connects New Zealanders to significant heritage sites so they can learn more about their unique culture and history.

For Andrew Winter, Heritage Assessment Advisor at Heritage New Zealand Pouhere Taonga, the bridge is a heritage success story, illustrating how something old that has been superseded by modern construction can have an important later life.

"It's an iconic part of the landscape and one of the brightest jewels in Queenstown's tourism crown."

heritage.org.nz/list-details/50/ KawarauGorgeSuspensionBridge