

CASE STUDY

Geogrid

Project: Avon River Precinct - Bridge of Remembrance
Date: April 2016
Client: Ōtākaro Ltd
Designer: ENVIVO
Contractor: City Care JFC Joint Venture Ltd
Location: Christchurch CBD



Tensar TriAx[®] 170 Geogrid

The Bridge of Remembrance over the Avon River in Christchurch was structurally damaged during the 22 February 2011 earthquake.

This category one heritage structure became known as the “Bridge of Remembrance” after the location of the Triumphal Arch on top of the original bridge built in 1873. The construction of the Arch followed a letter written by a resident to the local newspaper in 1919, suggesting a memorial to soldiers from the Great War. The memorial to honour those who fought in World War I was opened on Anzac Day, 1923.

Earthquake strengthening and repairs were started in May 2013 and completed in September 2015. The work means that the Arch, built from rock quarried in Tasmania, will rock rather than twist in any future earthquakes.

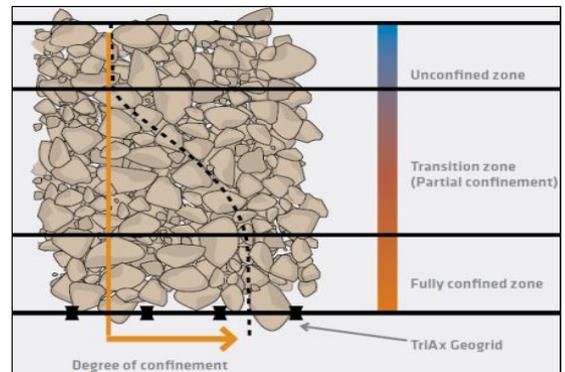
Construction started in January 2016 of the paths, steps and ramps following the completion of the bridge repairs. The works had to be completed by Anzac Day on the 25th April for the re-dedication ceremony.

To mitigate against future earthquake damage, a layer of **Tensar TriAx[®] 170** geogrid was included at the base of the 100 - 200mm thick AP40 granular basecourse. **Tensar TriAx[®]** geogrid works by interlocking with soil particles to create a mechanically stabilised composite layer providing a high level of aggregate stiffness. This stiffness enhancement improves the resistance of the underlying granular layer to flexural distortion and differential settlement during earthquakes thus maintaining the integrity of the pavers. A total area of 1100m² of **Tensar TriAx[®] 170** geogrid was successfully supplied and laid in less than 2 weeks.

City Care JFC Joint Venture Ltd were the successful contractors for this part of the project working alongside 3 other main contractors in a very tight area. The bridge was successfully opened for public access by Anzac Day.



Laying of Tensar TriAx[®] 170



Tensar TriAx[®] Effective Zone



Completed Bridge

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