

Project Brief

Kaiwharawhara Rail Bridge 3NL Bridge Plinths



Wellington, NZ
2005



Abutment creep was causing higher loading of the bridge plinths on top of the piers. The plinths were cracked and required repair and confinement. Significant corrosion staining and concrete spalling was evident. The no obligation, free Fyfe design service provided steel equivalency calculations and One layer of Tyfo® SCH 41 carbon composite 610mm wide flush with the top face of the plinth with a second layer 305mm wide at the top (flush with the plinth) was installed.

This specification provided more tensile force than provided by 2x 25mm Dia grade 500 RediBars. The strength is distributed over the full height of the plinth and the materials are low profile and non-corrosive. Vertical RediBars were installed for block shear and overturning forces.

The top 2 photos for this reference were taken in 2010 (5 years later) and the plinths appeared in the same condition as immediately after the retrofit.