



SIKA AT WORK

MOHAKA BRIDGE REFURBISHMENT, NZ.

REFURBISHMENT: Sika® CarboDur® · Sika MonoTop®-412 N · Sika MonoTop®-910 N · Sika® FerroGard®-903

BUILDING TRUST



MOHAKA BRIDGE REFURBISHMENT NAPIER, NZ.



Sika Approved Contractors BBR Contech install Sika CarboDur plates to strengthen the Mohaka River Bridge.

PROJECT DESCRIPTION

Spanning 215 metres across the gorge and elevated 50 metres above the water level, the Mohaka River Bridge is heavily exposed to the environment. A survey of the bridge had also revealed some deterioration of the concrete.

PROJECT REQUIREMENT

Increasing traffic loads across the Mohaka River Bridge on the Napier to Taupo Road (State Highway 5) have necessitated strengthening of the reinforced concrete deck.

SIKA SOLUTION

Although strengthening could have been achieved using additional steel plates, the Sika CarboDur was chosen by Opus International Consultants Ltd due to its lighter weight, easier installation and corrosion resistance.

Sika's range of MonoTop repair mortars specially formulated for structural repairs were chosen. The range complies with the European Standard EN1504 'Products and systems for the repair of reinforced concrete'.

The chosen mortar, Sika MonoTop-412 N complies with class R4 of EN1504 Part 3 – the strongest class in the standard – and achieves 55 MPa compressive strength after 28 days. The bonding primer, Sika MonoTop-910 N, has been formulated to provide optimum reinforcement corrosion protection and complies with the rigorous requirements of EN1504 Part 7. Together these products provided

the Engineer with the confidence that a highly durable structural repair was specified.

Clearly, obtaining maximum durability from the structural strengthening is essential for maximizing the value of the works, and any further concrete deterioration needed to be minimized. Sika's FerroGard-903 impregnation was selected as the ideal way to achieve this. It was easily applied to the reinforced concrete surfaces by brush, roller or spray. Sika FerroGard-903 penetrates to the steel reinforcement where it inhibits the initiation of steel corrosion and slows the rate of any existing corrosion, thereby significantly reducing ongoing maintenance costs and extending the life of the bridge still further.

SIKA PRODUCTS

Sika® CarboDur®
Sika MonoTop®-412 N
Sika MonoTop®-910 N
Sika® FerroGard®-903

PROJECT PARTICIPANTS

Client: NZ Transport Agency
Specifier: Opus International Consultants Ltd
Main Contractor: Fulton Hogan
Specialist Applicator: BBR Contech (Construction Techniques Ltd)
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