

## Corkerhill Road Bridge, Glasgow: CFRP Strengthening



Corkerhill Road Bridge

### Balvac strengthens and repairs important road bridge in Glasgow using CFRP plate bonding

Client	Glasgow City Council
Principle Contractor	Balvac
Contract Value	£620k
Programme	16 weeks
Completion	October 2005



Preparing the CFRP Plates

Balvac has completed a £620k contract for Glasgow City Council to strengthen and repair the busy, Corkerhill Road Bridge in Pollock, Glasgow. The Client, Glasgow City Council, wanted the load capacity of the bridge increased from the original 17 tonne weight restriction to 40 tonnes. The road bridge provides a main route for traffic travelling from the M8 into Glasgow and so the strengthening scheme will be of great benefit to bridge users. An extensive Traffic Management scheme was implemented during the contract. To avoid a shutdown, traffic was diverted to the non-bonding side of the bridge in an effort to minimise disruption.



CFRP Plates bonded to the soffit

In Phase 1 of the works defective concrete was broken out using Hydro-demolition. Sprayed concrete was then applied to the beams and soffit of the bridge. Carbon fibre plates were bonded to the beams and soffit to strengthen the bridge. A carbon fibre wrap was used to encapsulate the plates and provide extra support. In total, over 3 Km of carbon fibre plate and 6 Km of carbon fibre wrap were bonded to the structure.



Scaffolding erected under the bridge

To enable access to the bridge soffit, scaffolding was erected beneath the bridge structure. In the final phase of work, the bridge was resurfaced and waterproofed and the carriageway was reinstated. Corkerhill Road Bridge is the second bridge in the area to be completed for the client by Balvac, and so continues Balvac's good relationship with the City's Land Services Department.



Carbon Fibre wrap was used to add extra strength

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