



### Bridge Refurbishment

A92 Bervie Jubilee Bridge, Montrose

**Client**  
Aberdeenshire Council

**Principal Contractor**  
Freyssinet Makers

**Contract Value**  
£1.5m

**Works Commenced**  
September 2008

**Contract Duration**  
40 Weeks

**Works Completed**  
June 2009



Freyssinet Makers, the structural repair division of Freyssinet Ltd undertook the £1.4 million refurbishment of the A92 Jubilee Bervie Bridge for Aberdeenshire Council. This impressively curving 8 span reinforced concrete structure carries the busy A92 between Montrose and Aberdeen. The bridge stands 20 metres over the Bervie water and has undergone various repairs over the years due to exposure to severe coastal conditions since 1935.

The Council's routine bridge maintenance programme identified corrosion of reinforcement within the concrete which had led to cracking, rust staining and spalling of large concrete sections.

Aberdeenshire Council engineers considered that if left unchecked in this condition the corrosion would eventually lead to significant deterioration of the structure and its strength.

Prior to the works commencing, site specific method statements and risk assessments were completed. The works took place close to and over a water course "Bervie Water" which meant that special consideration had to be given for both the safety of operatives, and the protection of the environment. Extensive scaffolding was erected to allow the works to progress with minimal disruption to local services and the environment. Traffic management was put in place to reduce the A92 to a single lane controlled by traffic lights.

Freyssinet were also responsible for the temporary support and jacking of the bridge during the works. A 30m high RMD tower was designed and supported from a cased pile foundation to form the temporary support to a concrete half joint. Whilst supported, the defective concrete in the half joint (totalling 2 cubic metres) was broken and reinstated. Defective areas of concrete were broken out with extensive hydrodemolition and repairs were made by the application of sprayed concrete.

The Council adopted an innovative approach by using an impressed current Cathodic Protection system to protect the heavily chloride contaminated soffit and beams, prolonging the life of the whole structure. Over 8,500 discrete anodes were installed and connected to a remote monitoring system.

In addition, during the course of the project emergency repairs were made to the existing bridge parapet subsequent to accidental vehicle impact damage.

This 40 week project continues Freyssinet's successful association with Aberdeenshire Council.

In 2011 the Bervie Jubilee Bridge project received an Award of Merit from the International Concrete Repair Institute in the Historic category of their Projects Award Program.

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