

# BRIDGE & TUNNEL REFURBISHMENT



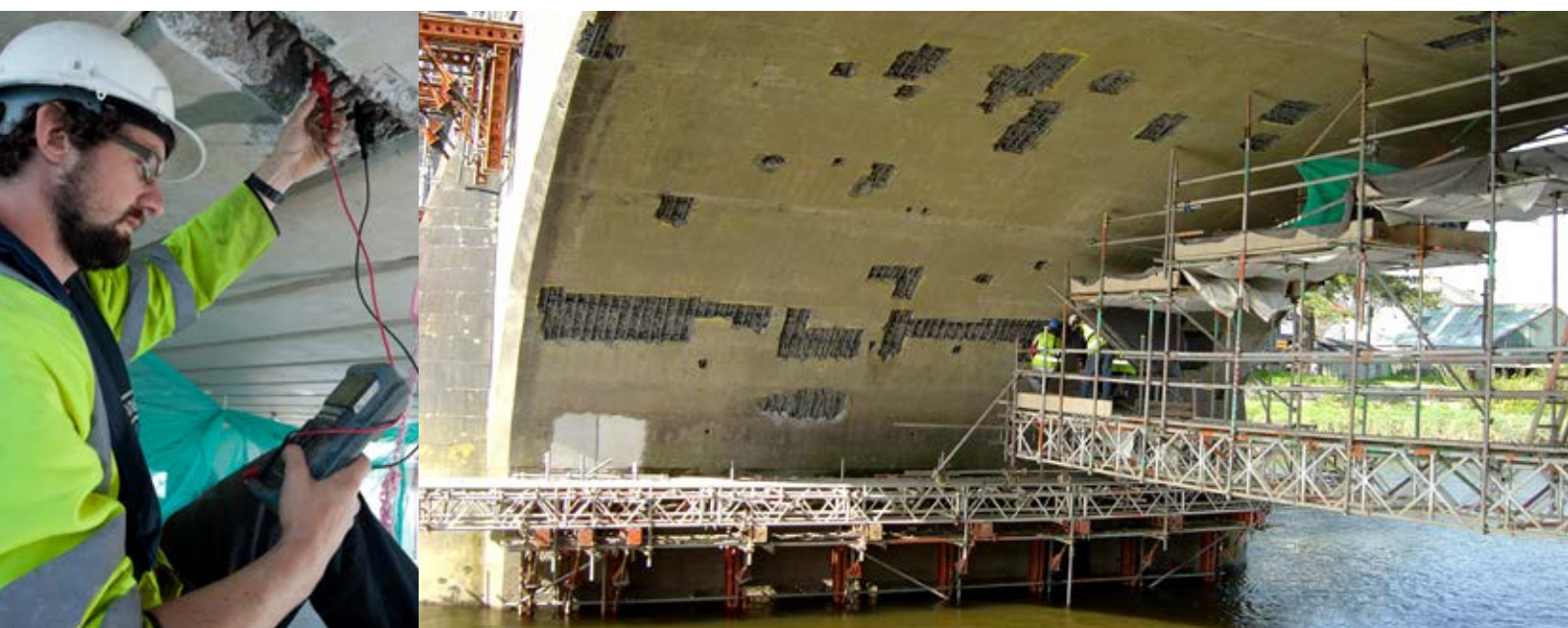
- condition surveys ■
- concrete & masonry repairs ■
- structural strengthening ■
- waterproof membranes ■
- corrosion control ■
- bearing replacement ■

CRL IS A SPECIALIST contractor for the inspection and repair of bridges and tunnels. We have been established since 1955 and have a network of six regional offices in the UK providing a comprehensive refurbishment service.

CRL Surveys are UKAS Accredited to undertake the initial condition surveys to identify the nature and extent of any structural deterioration. This allows us to then provide professional and informed advice on how to repair the defects in a cost effective and sustainable manner.

We are a multi-award winning company, renowned for providing professional, innovative engineering solutions.

- Condition surveys & investigations
- Concrete & masonry repairs
- FRP composite strengthening
- Waterproof membranes
- Bridge bearing replacement
- Corrosion control systems
- Resin Injection
- Grouting & gunting
- Specialist coatings
- Bridge deck joints



MANY HIGHWAY AND RAIL structures suffer from deterioration of the concrete due to corrosion of the steel reinforcement which is initiated by high chloride ion levels in the concrete

from de-icing salts. Repairing the defective areas of concrete will initiate further steel reinforcement corrosion adjacent to the repair, which is called the incipient anode

effect, unless a corrosion control system is used. CRL is able to repair the concrete with minimal disruption to traffic and design and install corrosion control systems such as cathodic protection to enhance durability in accordance with BS EN 1504 and BS EN ISO 12696.

CONCRETE & MASONRY REPAIR





**MASONRY AND CONCRETE TUNNELS** often have water ingress which can cause structural and operational problems. CRL is skilled in the management of water ingress using a variety of techniques to stop or control the water flow. After repairing the existing tunnel lining we use resin injection, grouting and tunnel liners to manage any future water ingress. We are approved applicators for a range of epoxy, polyurethane and acrylic resins which can be used to seal cracks and voids in the tunnel lining. Masonry tunnels can be strengthened and lined with a sprayed mortar to enhance future durability.



**STRUCTURAL STRENGTHENING** is often required to accommodate increased loading requirements or structural deficiencies. CRL have been using fibre reinforced polymer (FRP)



composites since 1996 to strengthen steel, concrete and cast iron. We are able to design, supply and install both plate and wrap systems using carbon

## WORKING WITH FRP SINCE 1996

or aramid fibres in accordance with the Concrete Society Technical Reports TR55 and TR57. These materials are lightweight, quick to install and durable providing a cost effective and sustainable solution for structural strengthening.



Amey	Kier Highways
Balfour Beatty	London Underground
Bristol City Council	Moray Council
Derbyshire County Council	Network Rail
Devon County Council	Nexus Rail
East Sussex Highways	North Lanarkshire Council
Edinburgh City Council	North Yorkshire County Council
Essex County Council	Reading Borough Council
Galliford Try	Skanska
Halton Borough Council	Southampton City Council
Henry Boot	Transport Scotland
Highland Council	Welsh Assembly Government
Highways England	Weymouth & Portland Borough Council

[www.concrete-repairs.co.uk](http://www.concrete-repairs.co.uk)



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