

# Structural Maintenance Services















**Break out** the concrete using hand tools (or hydro demolition for large scale repairs) ensuring the edges of the repairs are square cut

**BS EN1504 Part 10** 

**Prepare** the surface & **clean** and **treat** the exposed reinforcement

BS EN1504 Part 9 Principle 11

Fix a **shutter** to the required profile and reinstate the concrete using hand placed mortars, flowable microconcretes or sprayed repair mortar

EN1504 Part 9 Principle 3

Trowel **finish** the concrete repair (if required) to match the existing concrete. Cure the repair material as per the manufacturer's instructions

**BS EN1504 Part 10** 

Apply a **protective coatings** to enhance the durability and appearance

BS EN1504 Part 9 Principles 1 & 8











# Corrosion Control Systems

structure & building assessment

To significantly enhance the durability

of concrete structures CRL can advise on the

design and installation of cathodic protection systems which

provide cost effective sustainable solutions. For marine facilities we use galvanic

CP systems to protect the reinforced concrete, steel piles and sheet piling below the mid-tide level using either zinc or aluminium alloy anodes. For reinforced concrete structures and steel framed buildings **CRL** use **impressed current CP systems** with a range of anode types depending on the exposure and layout.

Our systems are designed in accordance with the European Standards BS EN12696 and BS

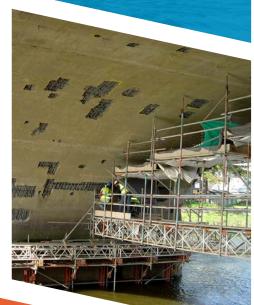
**EN12473** and **installed** by our **qualified** and **experienced CP Engineers** 

and **Technicians** who are certified in accordance with

BS EN15257.







## Masonry and concrete

tunnels often have water ingress which can cause structural

and operational problems. CRL are experienced and 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. CRL 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.



## Waterproof membranes,

both sprayed and hand applied, when fully

bonded to the substrate can drastically improve the chances

of roofs, car park decks, balcony walkways and bridge decks not leaking.

**Supplied** and **installed** by **CRL**, they are also used to line tanks and bunds to protect the concrete and prevent fluids leaking out from the structures. Unlike sheet membranes they do not have joints or seams which might leak and are fully bonded so water cannot travel underneath the membranes.

Waterproof membranes can help protect concrete decks from de-icing salts (which are a major cause of the concrete deterioration), as well as dramatically

improve the aesthetic appeal of buildings &



The calibre of **people CRL employ** are our main reason for **maintaining** the **quality** and **reputation** that we have **achieved** over the last 65 years. The Board of Directors (some of whom joined as Engineers in the 1990's) provide a wealth of experience and knowledge to the business. On average **our employees** undertake **6 days training per annum** to maintain and **develop** the **standards** of service which our clients expect.

# **CRL Restoration**

cathodic protection & concrete repairs to listed buildings

maintenance Structural important part of heritage building refurbishment.

CRL Restoration specialise in the cathodic protection of steel

framed buildings and the concrete repairs of historic, period and modern buildings

and structures. CRL Restoration utilise in-house teams to undertake the works in accordance with the specification and recommendations set down by the client and heritage bodies. CRL Restoration are committed to working collaboratively with all the parties involved to value engineer the works, thereby coming up with the right solutions and ensuring that the clients' expectations are met and the final works

are as anticipated. **CRL Restoration** have extensive experience of working on

### **CRL Restoration's**

listed buildings with all Heritage and Conservation Bodies.

mission is to restore our clients' and the nation's heritage buildings utilising all the combined experience of our directly employed managers, skilled operatives and reliable supply chain. CRL Restoration constantly exceed our clients' expectations by completing projects on time, within budget and to our clients' satisfaction.





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