

# Marine Structure Refurbishment

Structural **Analysis**

Condition **Survey** & Material **Testing**

**Concrete** Repair

**Steelwork** Repair

Cathodic **Protection**

**Protective** Coatings & Wrapping

**Guniting** & Grouting

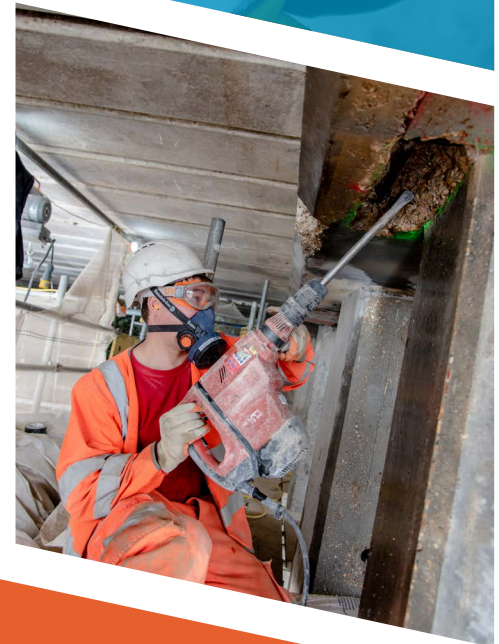
Fender **Repairs** & Replacement



# Specialist Contractor

protecting your **vital infrastructure**

CRL is a **specialist contractor** for the **survey, inspection** and **repair of marine structures** both in the UK and overseas based on 65 years' experience in the industry. CRL provide a **comprehensive service** as a **specialist main contractor** for projects up to the value of £10M supporting owners and operators of **marine infrastructure** both **on-shore** and **off-shore**. CRL has an **integrated Safety, Health, Environmental and Quality system** and is registered with ISO 14001, ISO 9001 and ISO 45001. In recognition of the company's ever increasing **commitment to Health & Safety**, 2020 saw CRL presented with a **RoSPA Order of Distinction** for twenty consecutive **RoSPA Gold Medals**.



**Marine structures suffer from deterioration** due to **corrosion** of the **steel reinforcement**, **exposed steel piles** and **sheet piling**. Corrosion of the reinforcement is initiated by high chloride ion levels in the concrete from the saline environment. The corrosion can be rapid and cause major loss of steel section with cracking and spalling of the surrounding concrete. **CRL use hydro demolition** to remove the defective areas of concrete and **clean the exposed steel reinforcement**. The concrete is then **repaired to reinstate the structural integrity** using a range of repair techniques in accordance with the **European Standard BS EN1504**.

# Cathodic Protection

prolonging the life **of your structure**

To **significantly enhance** the **durability** of marine structures CRL can **design and install cathodic protection** systems which provide **cost effective sustainable solutions**. CRL use galvanic cathodic protection systems to protect reinforced concrete, steel piles and sheet piling below the mid tide level using zinc or aluminium alloy anodes. For the reinforced concrete which is atmospherically exposed we install **impressed current cathodic protection** systems using a range of anodes. For accelerated low water corrosion of steel piles and sheet piling we use a combination of cathodic protection below mid tide level and protective coatings above, all designed in accordance with the European Standards and installed by our **Certified CP Engineers and Technicians**.

Sometimes **repairing concrete** and **damaged steelwork** will not be enough to stop the problems re-occurring in the future. **Coatings** can be an effective form of corrosion prevention and are used to **protect the concrete** and **steel** by stopping the chlorides in the sea water entering the concrete. Our specialist **Chartered Engineers** can provide **technical advice** on suitable **coating systems** for **aggressive marine environment** in tidal conditions, advising on **costs, application** and **maintenance**.

## LONDON & SOUTH EAST

Cathite House  
23a Willow Lane  
Mitcham, Surrey  
CR4 4TU  
020 8288 4848  
london@crl.uk.com

## SCOTLAND

Cathite House  
31 Winchester Avenue  
Denny  
Falkirk  
FK6 6QE  
01324 821 400  
falkirk@crl.uk.com

## NORTH EAST & MIDLANDS

Portland House  
Britannia Road  
Chesterfield  
S40 2TZ  
01246 544 900  
chesterfield@crl.uk.com

## NORTH WEST & NORTH WALES

Bridgewater House  
Old Coach Road  
Runcorn  
Cheshire  
WA7 1QT  
01928 567070  
runcorn@crl.uk.com

## SOUTH WEST & SOUTH WALES

The Old Boiler House  
Burnett Business Park  
Gypsy Lane, Keynsham  
Bristol, BS31 2ED  
0117 986 8088  
bristol@crl.uk.com

## KENILWORTH (CRL Surveys)

No.2, The Stables  
46 Castle Hill  
Kenilworth  
Warwickshire  
CV8 1NB  
01926 515 430  
kenilworth@crlsurveys.co.uk

## AUSTRALIA

Cathite House  
19 Venture Drive  
Sunshine West  
Vic 3020, Australia  
+61 3 9315 2807  
contactus@crl-aus.com

## NORTH EAST

Office 9  
The Cadcam Centre  
Highforce Road  
Middlesbrough  
TS2 1RH  
middlesborough@crl.uk.com

# crl.uk.com

