

This news bulletin is brought to your desktop by the UK Concrete Repair Association (CRA).

It provides brief and easy-to-digest updates, supplied by CRA members on recent concrete repair developments, new advances and other initiatives occurring in the industry.

To obtain further information on any of the stories, click the email links below.

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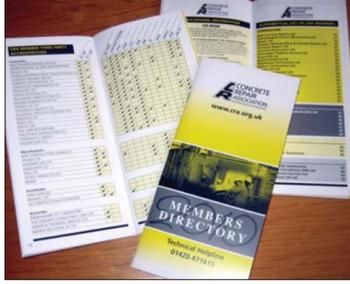
Several new features are included in the 2010 edition of the handy CRA 56-page Members Directory, which has just been published.

For the first time, the Directory carries an easy to follow cross-reference grid highlighting each member company's third party accreditations. Accreditations such as ISO 9001, 14001, 18001, ConstructionLine, CHAS, Exor, British Board of Agrément (BBA) and others, can be quickly and easily ascertained by the reader. In addition BS ISO 1504, the new concrete repair standard that came into force in 2009, is explained.

The Directory is specifically designed to be of practical, every-day use to Clients, Specifiers, Consultants, Surveyors and Local Authorities seeking recognised concrete repair specialists. It provides detailed information on the CRA's 21 contractor, 7 product manufacturer, 3 distributor and 4 Associate members. Each member's page lists the company's head and regional office locations, web site, email details and the names of primary contacts. It also includes a description of the company's specialist concrete repair capabilities (or in the case of manufacturers and distributors, its products).

To facilitate selection when compiling tender lists, each contractor's entry includes details of contract values catered for, the company's largest contract to date, its total turnover, the value of its concrete repair related business and its geographical area of operation. Copies are available free of charge.

SEND AN E-MAIL: publications@cra.org.uk **LINK TO WEBSITE:** www.cra.org.uk



REINSTATEMENT AT EARLS COURT

When built in 1935, the iconic art deco Earls Court building was one of the largest reinforced concrete buildings in existence. Recently, however, Earls Court surveyors noted the Warwick Road basement concourse was showing visible signs of concrete delamination. Following a detailed survey, a full Jet wash of the substrate and hammer testing to determine the full extent of the deterioration, CRA member **Cemplas Waterproofing and Concrete Repairs Ltd** was appointed to undertake major remedial concrete and brickwork repairs.

Defective areas, including hairline cracking, were marked out in a series of straight lines to form a border. These were saw-cut at right angles along previously marked lines to a minimum depth of 10 mm. Where the steel reinforcement bar was exposed and corroding, concrete was removed to a depth of 20mm. Around the exposed corroded reinforcement bar it was removed until 50mm of clean steel could be achieved at both ends.

Two coats of Fosroc Nitoprime Zincrich steel reinforcement protector was applied to the cleaned reinforcement. The area was subsequently primed with Nitobond HAR and whilst tacky, received Fosroc's Renderoc HB Repair Mortar before being cured with Nitobond AR. Concrete and brickwork cracks were resin injected with Fosroc Nitokit Surface Sealant. Defective bricks were replaced, re-pointed and stitched. Upon completion of the repairs, Fosroc's Anti-carbonation coating was applied to provide a decorative protective finish.

SEND AN E-MAIL: info@cemplas.co.uk **LINK TO WEBSITE:** www.cemplas.co.uk



BETCHWORTH AND RUSPER WATER TOWERS

CRA member, **Concrete Repairs Limited (CRL)**, has recently completed the refurbishment of two historic water towers for Sutton & East Surrey Water. CRL's proven track record in the repair and refurbishment of water retaining structures and its specialist knowledge, enabled its contract team to innovate a solution to repair both the exterior and interior of the towers on time, to budget and with due environmental sensitivity.

The contract, worth £430k, was tackled in four phases. The external work was carried out during the summer months and the internal repairs and linings during winter months.

"Both water towers presented a very specialist challenge," explained Mike Ballesta, Infrastructure Manager for CRL. "They were originally constructed in 1930 from conventionally reinforced concrete. Although still in reasonable condition, the repair works were an important and necessary intervention to prolong their working life and maximise operability. Their location; one on private farmland and the other in a protected woodland area, meant that environmental issues were a key criteria in our approach to the works.

"Now the final phase of these works is completed we are confident that both water towers will continue to operate safely and efficiently, providing potable water to the local community. The life of both towers has been extended by some 25 years thanks to CRL's expertise and sensitive approach," commented the Project Engineer for Sutton & East Surrey Water.

SEND AN E-MAIL: JDrewett@concrete-repairs.co.uk **LINK TO WEBSITE:** www.concrete-repairs.co.uk



CRA UPDATES CONCRETE REPAIR ADVICE NOTE

The CRA has recently published the second (updated) edition of its Advice Note No. 1, entitled 'The route to a successful concrete repair'.

The Advice Note contains the basic information needed to establish a good level of concrete repair. It does not attempt to delve into the intricacies of specification, nor site works. Rather, by following the steps outlined and by reference to the more detailed publications and advisors highlighted in the publication, the reader should avoid many of the pitfalls endemic in concrete repair projects of all sizes.

The document has been updated in the light of the recently introduced Standard for concrete repair - BS EN 1504 'Products and systems for the protection and repair of concrete structures - definitions, requirements, quality control and evaluation of conformity', the standard framework around which clients and their consultants, or designers, can build a specification.

CRA Advice Note No.1, in conjunction with BS EN 1504, provides a framework for designing, specifying and applying the chosen repair principles. However, there are many variables such as the right material may not have been chosen in the first instance, or the material, or procedure, may not have been applied properly. It is best to seek advice and guidance on how to carry out the works on site from a specialist contractor or material manufacturer, such as members of the CRA.

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THE PASMORE APOLLO PAVILION CIVIC TRUST AWARD

CRA member, **Freyssinet Makers** (a division of Freyssinet Limited), working in conjunction with Burns Architects, has recently been awarded a Civic Trust Award for concrete refurbishment work on the Pasmore Apollo Pavilion in County Durham.

The Civic Trust Award was established in 1959 'To recognise the best architecture, design, planning, landscape and public art'. In addition to being judged on quality of design, projects granted the award are considered to have made a positive contribution to the local community with regards to culture, society, or the economy.

The Pavilion, originally designed in the 1970s by Victor Pasmore, spans a small lake and provides a pedestrian link between two estates. It was intended to bring these communities together, using architecture and abstract sculpture to create 'a free and anonymous monument which, because of its independence, can lift the activity and psychology of an urban housing community on to a universal plane'.

Freyssinet Makers carried out concrete repairs and refurbishment work on the sculpture. The project was unique in that the structure is not only considered a walkway, but also a piece of artwork and a centrepiece to the surrounding communities. The project has been described as having breathed new life into the piece of public art, not only aesthetically, but also in terms of improved access and lighting, which has contributed to more social interaction.

SEND AN E-MAIL: info@freyssinet.co.uk **LINK TO WEBSITE:** www.freyssinet.co.uk



QUADRIGA STRENGTHENS BRIDGES IN TRICKY ENVIRONMENT

The East and West Bridges at Pont Llys Meirchion, Henllan, in Wales, have both been strengthened with carbon fibre composites, by CRA member **Quadriga Concepts Ltd**, for Denbighshire County Council.

The works included the initial design of the strengthening system using carbon fibre reinforced polymer (CFRP) plates to meet specified client requirements in relation to Highways Agency standards.

Quadriga employed needle-gun preparation techniques to remove cement laitance from the concrete soffit surfaces and to improve adhesion by providing a mechanical key, prior to installing of the high modulus carbon fibre plates using a high strength epoxy adhesive.

Even though the work was carried out in a very difficult environment with very low head-room and continuously running water, Quadriga needed to ensure that deleterious contamination was prevented from entering the watercourse.

SEND AN E-MAIL: tdavies@quadrigaltd.com **LINK TO WEBSITE:** www.quadrigaltd.com



USER-FRIENDLY HANDBOOK FROM RESAPOL

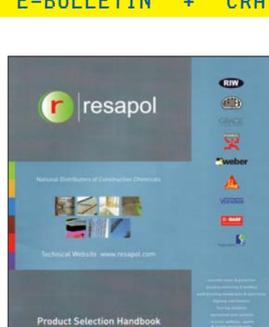
CRA distributor member, **Resapol Ltd**, has just published the latest edition of its 'Product Selection Handbook', which is specifically designed for buyers, estimators, engineers and architects.

The document pulls together construction chemicals, waterproofing, flooring materials and anchoring systems from all major manufacturers, to provide a comprehensive and user-friendly reference book.

Items can be located by using either the Product Index by Sector page or the Product Listing A to Z. Each product listed is supported by a summary description together with its performance capabilities, pack size, yield, coverage rates, primer requirements and/or other relevant supporting products.

Resapol is a leading national independent distributor of construction chemicals and specialise in stocking and supplying a huge range of products. Copies of the new handbook are available upon request.

SEND AN E-MAIL: info@resapol.com **LINK TO WEBSITE:** www.resapol.com



WEBER.CEM PRODUCTS REPAIR CONCRETE FERRIER TOWER

Products manufactured by CRA member **weber.cem** concrete repair are being used extensively in a major £7 million refurbishment of the Ferrier Point tower block in the London Borough of Newham.

The 66-metre tall block of apartments, built in 1968, rises 23 storeys and is the tallest still remaining from the many built in London around that period.

The project is viewed as a flagship renovation by Newham to prove that today's building technology can push up sustainability and performance to achieve 'Decent Homes' standard for the 143 apartments.

Work includes the removal of the core structure and the concrete panel facings, where moisture ingress has rusted some steel reinforcing bars, causing the surrounding concrete to spall and leaving the rebar further exposed. The affected areas are being cut out to be replaced to where the concrete is sound. The steel is cleaned before weber.cem keycoat is applied to seal the steel and substrate and to aid repair concrete adhesion. Reinstatement is with weber.cem HB30, a high-build, polymer modified cementitious mortar.

To enhance protection, weber.tec guard MCI, a corrosion inhibitor that is absorbed by the concrete and migrates to preserve the embedded steel reinforcing bars, is being applied. Finally, before insulation and cladding is installed, the entire concrete surfaces are being jet washed prior to the application of weber.cote smooth, an acrylic anti-carbonation, chloride ion resistant coating.

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BE PREPARED!

CRA member, **Structural Renovations Ltd**, has successfully completed further structural repairs and protection work to both concrete and steelwork at the Scout Association's Baden Powell House, in West London.

The work follows two earlier refurbishment projects also carried out by Structural Renovations Ltd in 2007 (structural repair) and 2008 (liquid applied roofing membrane) at the property, which was built as a tribute to Lord Baden Powell, the founder of the scouting movement.

The repair and protection work to the structure, carried out in the early stages of deterioration, shows that the Scout Association is practicing what it preaches – 'be prepared!'

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