

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 the CRA and its 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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## CRA SUSPENDS FOUR MEMBERS

Following its declaration that all full members must have achieved Quality Assurance accreditation to environmental standard BS EN ISO 14001 by the end of June 2011, the CRA has suspended the membership of four of its members until the 30th September 2011.

Should any of the four full members still not comply by this date, they will be excluded from CRA membership altogether.

The CRA is keen to further enhance standards within the concrete renovation sector of the construction industry. Currently, 90% of the CRA's full membership has achieved the standard, which henceforth becomes a fundamental condition of membership.

BS EN ISO 14001 specifies the requirements for an environmental management system (EMS). It provides a framework around which an organisation can control the environmental impacts of its activities, products and services and to continually improve its environmental performance. Thus, it applies to those environmental aspects that the organisation can control and over which it can be expected to have an influence. It is applicable to any organisation that wishes to (1) Implement, maintain and improve an environmental management system, (2) Assure itself of its conformance with its stated environmental policy, (3) Demonstrate such conformance to others, (4) Seek certification/registration of its environmental management system by an external organisation and (5) Make a self-determination and self-declaration of conformance with this international standard.

The CRA believes that by setting such self-regulating standards and procedures, engineers, surveyors, authorities, clients and other specifiers are able to confidently select from established professional organisations for concrete repair and related projects.

**LINK TO WEBSITE:** [www.cra.org.uk](http://www.cra.org.uk)

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## CEMPLAS TO THE RESCUE

Number one Grand Avenue, Hove, is a late 1960/70s multi storey private residential block situated in a prime seafront location.

Due to the building's coastal location, however, a number of problems including concrete spalling to the private balconies and ring beams, became evident. Most critically, the ring beams supporting the outer brick skins of the external flank walls were completely delaminated.

CRA member, **Cemplas Waterproofing & Concrete Repairs Ltd**, was appointed to carry out the necessary specialist remedial repairs and protection works, which were in excess of £100,000 in value.

Prior to the commencement of the renovation work, Cemplas undertook cover meter and carbonation testing. In addition, and because of the seafront location, the company also took sample's to test for chlorides within the concrete.

Cemplas began by removing all brickwork to the building's outer skin and cutting off (flush) all ring beams. The ring beams were then replaced with steel shelf support anchors that were resin fixed to the remaining face of the concrete and accurately positioned to support the new outer skin of brickwork.

All concrete balconies were shot blasted to remove previous coatings, before a full protective system was applied. Steel reinforcement was treated with additional protective 'cover' before deteriorated concrete was re-instated with high build repair mortar. Finally, an anti-carbonation coating was applied to vertical surfaces and the balcony soffits.

**SEND AN E-MAIL:** [info@cemplas.co.uk](mailto:info@cemplas.co.uk)

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## CRL LAUNCHES NEW BRIDGE DECK MEMBRANES

CRA contractor member, **Concrete Repairs Ltd (CRL)**, are introducing a new range of specialist bridge deck waterproofing and wearing course systems to the UK construction market.

The systems have recently attained BBA (HAPAS) approval as spray-on waterproofing membranes for highway bridge decks and provide some significant advantages in terms of application and performance.

The systems are based on the latest technology, which is essentially a blend of polyurethane (PU) and methyl methacrylate (MMA). They combine the best technical properties that each resin is capable of, whilst at the same time overcoming the limitations that each resin presents when used on its own.

The systems are available for 3 types of exposures. The first between the concrete/steel deck and asphalt overlay or wearing course (BBA & HAPAS Approved System), secondly for completely replacing the asphalt by providing a thick overlay with all the necessary wear, abrasion, waterproofing and slip resistant properties for both vehicular and pedestrian traffic and thirdly, for application on to concrete/steel decks directly under the rail ballast without the need for any protection board.

Unlike conventional MMA Systems, the new technology is unique in that it offers a very high degree of flexibility. Even at temperatures well below freezing they still exhibit exceptional crack bridging characteristics. They are also capable of being installed at temperatures as low as minus 15°C with a 'handover' of as little as 60 minutes after installation.

The cured systems will also withstand the effects of snow ploughs, de-icing salts as well as all the other wear and tear associated with frequently traversed road and bridge surfaces.

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## NEW DARTFORD FLYOVER RIDES ON WEBER FIVE STAR\* GROUT SP

The recent £120m road network improvement scheme around the Dartford Crossing has included a new flyover over the A2 and M25. The sweeping curves of this elevated section are carried on 80 cast concrete columns, each of which carries a bridge bearing supporting the roadway itself and allowing the expansion movement of the roadway structure.

The high level of vibrations generated by the virtually continuous traffic flow at these points of connection demanded the highest quality of fixing and each of the giant 800mm x 800mm bearing pads was grouted to the top of the columns with Five Star\* grout SP, manufactured by CRA member - **Weber**.

The project included new roads linking the northbound A282 and the eastbound A2, as well as new lanes on the A2 (westbound) for traffic joining the M25, as well as a fourth lane in each direction on the A2 between the M25 and Bean Junction - a distance of 2kms. Two new viaducts have been constructed as well as the flyover.

Weber Five Star\* grout SP is a premixed, high-flow, high-strength, shrinkage-compensated cementitious precision grout especially designed for the fixing of bridge bearings, rails, machinery installation and underpinning. It is formulated from specially selected Portland cements, graded aggregates and admixtures including a special form of carbon and meets the Highways Agency specification for Highway Works Vol. 1, clause 2601.

The Five Star\* grout SP can be poured or pump applied in difficult-to-reach areas, in thicknesses from 10mm to 50mm. It can be used at a range of temperatures and site conditions and develops a compressive strength of 40N/mm<sup>2</sup> in just seven days and 60N/mm<sup>2</sup> in 28 days.

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## COMPREHENSIVE RESAPOL REFERENCE MANUAL

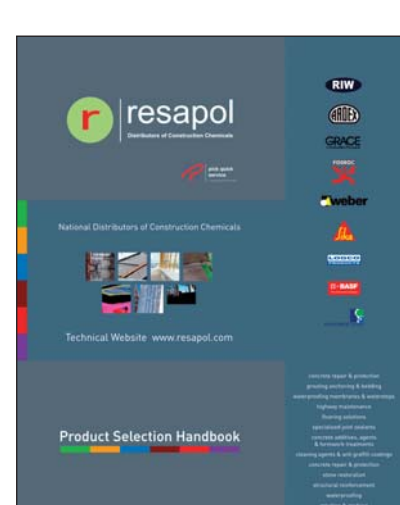
CRA distributor member, **Resapol Ltd**, has just produced the latest edition of its 'Product Selection Handbook', which is specifically designed for buyers, estimators, engineers and architects.

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.

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. Copies of the new handbook are available upon request.

Resapol is a national independent distributor of construction chemicals and specialises in stocking and supplying a huge range of products. The company has depots in Manchester (Head Office), Leeds, Stockton-on-Tees, London, Southampton and Dartford.

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## COMMUNITY CAR PARK RESTORED IN CHELMSFORD TOWN CENTRE

Work to repair a multi-storey car park in Chelmsford, which had been closed for more than six months due to safety concerns, is now nearing completion. High Chelmer Car Park was closed in March after spalling concrete highlighted serious problems with the ageing structure.

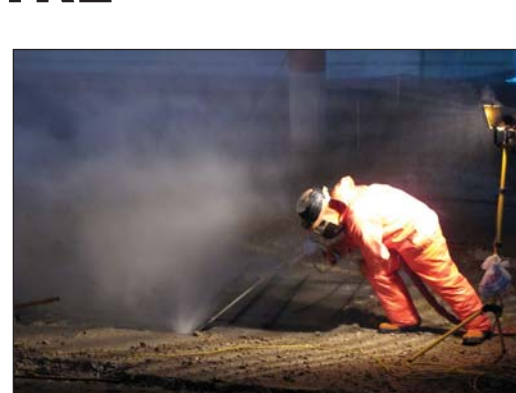
CRA member, **Gunite (Eastern) Ltd**, was appointed as main contractor by Chelmsford Borough Council after structural engineers J P Chick & Partners had carried out extensive tests on the reinforced concrete ramps, decks and supports. The sixteen week, £1.6m project, began in July and is on target to fully reopen in November.

Large areas of the concrete decks and ramps, some in excess of 50m<sup>2</sup>, were cut out by hydro-demolition (ultra-high pressure water jets at up to 3000bar) for both speed and reduced vibration. These areas were then reinstated with Sika Armorcrete, a flowable micro-concrete repair mortar. Sacrificial anodes were installed in the repairs to combat the high levels of chloride present in the concrete. Coloured deck coatings and white anti-carbonation coatings to the ceilings and columns will help to stabilise the concrete and brighten up the car park, making it more user friendly.

The 1,000 space car park is being repaired from the bottom up to allow the Council to reopen the car park in phases. 106 market traders, who had to be moved from the ground floor Retail Market for the first eight weeks of the contract, are now trading again.

Darren Noller, Project Manager for structural engineers, J P Chick & Partners, commented "We are very pleased with the way that the project has been managed. Gunite's team have worked very well with us and the Council to restore and improve this car park, which will serve the community for years to come."

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## EXTENSIVE MULTI-STOREY REFURBISHMENT IN DONCASTER

Extensive improvements have been carried out at Doncaster's existing southern multi storey car park by CRA member, **Universal Sealants (UK) Ltd**, to provide users with a safe and secure parking experience.

All levels of the concrete car park have been repaired and treated to safeguard against future corrosion and the works have ensured that the building fits into the new environment, in this new quarter of the town.

Prior to works commencing, all surfaces were power washed to remove decades of grime. Repairs to the soffits, walls and concrete decks were undertaken using high build mortars and following reinstatement an extensive repainting program was undertaken.

Works included grinding the rough tamped concrete to give an improved finish, before BASF's Protectosil corrosion inhibitor was applied to all concrete decks. The appearance of the running isles were further enhanced by the application of BASF Mastertop 524 to provide a smooth finish. This was followed by the application of BASF Conideck waterproof wearing surfacing throughout all decks. Once concrete repairs were completed, anti carbonation/decorative coatings were applied to provide a bright and airy finish to the structure.

During the works, the appearance of the finished decks as opposed to the existing decks was dramatic.

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