



CONCRETE CONNECTIONS

The background of the lower half of the cover is a close-up photograph of a concrete structure, likely a bridge or a large wall. It shows a horizontal concrete beam resting on a vertical support. The concrete is grey and textured, with some visible cracks and embedded aggregate. A wooden plank is visible between the beam and the support. The image is partially obscured by a dark blue overlay on the right side, which contains white text.

**OVERSEAS PASSENGER
TERMINAL UPGRADE**

**FACADE
REFURBISHMENT
121 WALKER STREET**

**NORTHUMBERLAND ST
CARPARK**

**INDUSTRY UPDATES
COURSES & SEMINARS**

MESSAGE FROM THE PRESIDENT

DANIEL ROWLEY

Welcome to the latest edition of Concrete Connections. ACRA's growth isn't just happening all on its own. It is a culmination of the effort and assistance provided from a number of our board and sub committees members. The hard work these guys put in can be easily overlooked, but without these volunteers we wouldn't be achieving all the fantastic things which we are. To give you some insight into the hard work taking pace I thought I would provide an update on a few of the projects the board and sub-committees are currently sinking their teeth into. Our Seminars committee have a number of great events planned for the coming 12 months. In NSW we have a Cracking in Concrete coming up in May followed by a the very popular review of the ACRA Awards in July. Later in the year we will be seeing Concrete Structure Maintenance & Durability and the year closed out with a Concrete Coatings event. Queensland has bought together a great seminar in Brisbane titled Practical Repair of Cracks. Held on the 6th May 2015 this event has three well respected speakers and provides a local networking opportunity to our Queensland members. If you have an idea which you feel ACRA should be exploring as a seminar event please touch base with Matthew Ball from Buildcorp via email matthew_ball@buildcorp.com.au

Our technical and training sub-committee are continuing to have success with the ACRA one day concrete repair course. Course's are booked in Sydney, Perth and Victoria, while we have already been to QLD this year and plan to come back mid year. Don't miss out on this great opportunity to invest in your team and improve your company's knowledge base. Our discussions are well underway in the redevelopment of the two day course which will provide an up to date follow on course for the industry, more to come on this in the near future. There are plenty of our members who are yet to take advantage of supporting this industry leading training opportunity. For all the dates and times please contact Nicole via email info@acrassoc.com.au

The whole board is spending some time in reviewing our current membership application process. We are hoping to tailor the process to be more relevant to each membership area of the Association whilst creating a faster and more measurable process for application. It's not a quick fix, but an area of the association's processes which can benefit from a review. If there are any ideas you'd like to see put forward or questions you'd like answered, please feel free to contact me directly on 0407488849 or via email at Daniel@ceind.net.au

Thank you._



ACRA Officers

President, Daniel Rowley - CE Industries

daniel@ceind.net.au

Treasurer, Grant Dowling - Sika Australia

dowling.grant@au.sika.com

Secretary, Peter Johnsson - Hyder Consulting Pty Ltd

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Executive Officer, Nicole Raymond

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info@acrassoc.com.au

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Publisher/Editor Nicole Raymond

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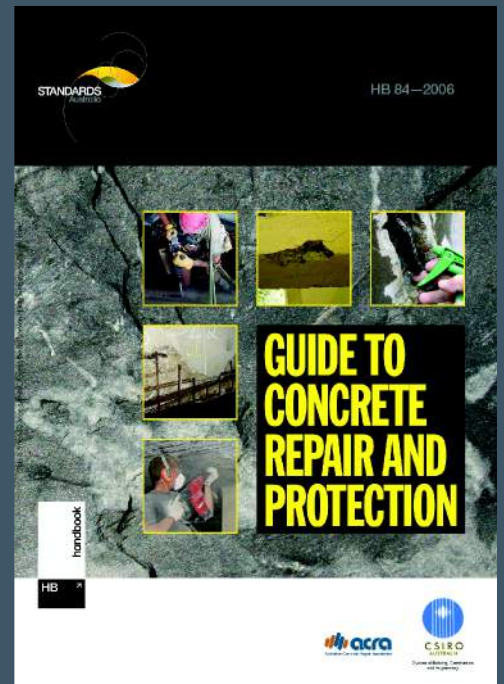
ACRA HAS SEVERAL SEMINARS AND COURSES ON OFFER FOR QLD, NSW, VIC AND WA

NSW Course - May 1

Concrete Repair and Protection Course

Limited to the first 20ppl ONLY.

[Click here](#) to register and for more details. All notes and your copy of the ACRA guide will be handed to you on the day. For anyone who is looking to do this as a refresher course we offer this at 20% off.



QLD Seminar- May 6

Practical Repair of Cracks

With our 3 great speakers this will be one evening jam packed full of practical and useful technology and techniques in repairing cracked concrete. The evening will also conclude with 1 hour networking drinks which all registrants are invited to mingle with their industry peers and the speakers.

SPONSORED BY:



Location The Colmslie Hotel, Wynnum Rd Brisbane QLD

COST \$55 ACRA members \$77 Non members

[Click here](#) for more information and to register.

www.acrassoc.com.au

NSW Seminar – May 26

Cracking in Concrete

This seminar will cover the latest in the technology and controlling of cracking in concrete. The seminar will be of value to any person involved with concrete design or construction and interested in producing a quality finish with controlled and limited cracking and also for those interested in the cause and repair of concrete cracks.

[Click here to see who your speakers are and to register.](#)

COST \$55 ACRA members \$77 Non members

Sponsored by:



VIC Course – June 12

WA Course - June 26

Technical Training on Concrete Repair and Protection

ACRA's full day course in concrete repair and protection offers the most comprehensive training yet available in single day. Course is open to the first 20 ppl ONLY.

[Click here to register and for more details.](#)

All notes and your copy of the ACRA guide will be handed to you on the day. For anyone who is looking to do this as a refresher course we offer this at 20% off.

There will also be 1 hour networking drinks at the end of the course where you will be able to relax and share your thoughts on the day with the speaker and others within your industry (included in the cost).

Feel free to phone or email ACRA if you have any questions on any of the above.

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Overseas Passenger Terminal Upgrade....

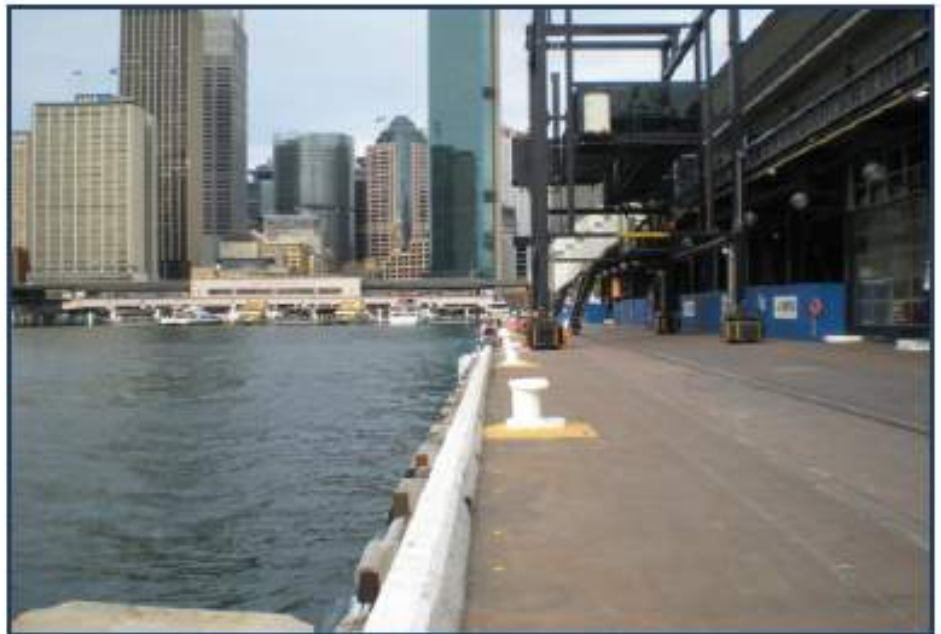
Circular Quay, Sydney NSW

The ever-increasing size of cruise ships has led to increasing demands on the berthing and transit facilities at the OPT in Sydney.

In 2014, Sydney Ports Corporation embarked on a complete upgrade of the terminal buildings and wharf, including extending the length of the wharf by 60m, replacing 83 old fenders with 11 new ones on the existing wharf, and fitting impressed-current cathodic protection on the existing structure. All work had to be carried out while ships continued to berth as scheduled.

MCM was engaged by head contractor Waterway Constructions to design, supply and install the CP system to the 220m long quay wall. This consists of a series of precast concrete caissons founded on the seabed, with an insitu capping beam and fender panels at deck level.

The CP was required to protect the reinforcing steel in the upper parts of the sea wall after removal of the old fenders. In order to maintain berthing capacity during the work, as a rapid first stage the old fender was removed from each new fender location, the CP was installed



on the fender panel and then the new fender was fixed. The intermediate fenders could then be removed progressively for the rest of the CP to be installed. This was designed for MCM by CCE (NSW) and consisted of discrete anodes above water and sacrificial anodes below.

The subcontract was awarded to MCM at the end of June 2014. As the cruise season begins in October and the site must be cleared for the day of a ship visit, the site team, led by Steve Ridge and Keith Gosnell, faced a number of challenges. Not least of these was the need to work around the ship visits, which involved large numbers of passengers.

The quay area was cleared for each ship movement. To allow work to continue when a ship was alongside, MCM designed and built a number of modular steel platforms to fit in the small gap the new fenders made between the face of the wharf and the side of a ship. The access platforms had to be able to be removed in minutes when required.

To cope with increasing numbers of ships, the site team worked at night in the last two months.

The CP system was commissioned successfully in two stages in November and December 2014.



FACADE REFURBISHMENT - 121 WALKER STREET

By Peter Johnsson- Hyder Consulting

Hyder Consulting and Andersal are preparing to start the repair and façade refurbishment of a North Sydney 'eyesore'. 121 Walker Street is a 1980s office tower with precast concrete spandrels in an alluring brown colour. Hyder first inspected the building in 2005 and identified a few problems with concrete spalling and in particular form tie plugs gradually working their way to the point of detachment due to corrosion of the ferrous inserts. The Diagnostic team at Hyder have kept a close eye on this building since 2005 as it obscures the view from their corner of the office. Now, as they say, good things take time, and following our second inspection of the building in 2013 the owners decided the time was right to repair the façade and upgrade its appearance.

The scope of works involves cutting out all form tie plugs from the cast in situ concrete, repairing lifting ferrules as required on the precast spandrels, repairing spalling concrete as required and replacing all joint sealants. Finally, a new protective coating system will be applied to change the appearance of the building, something Hyder has done successfully on a number of buildings included the now landmark 75 Miller Street overlooking the Greenwood Hotel.

The main complexity with the works is access. The roof slopes east to west and has a metal deck roofing. The north and south elevations above roof level are triangular, making swing stage access impossible (or at least prohibitively expensive). The solution is to undertake the works using rope access. Andersal's specialist rope access team will spend months working their way around building completing the works. Hyder will oversee the quality of the works using our own rope access engineering team, the largest and most experienced in the country.



PHOTO: PETER JOHNSSON - HYDER CONSULTING
HENK VAN DEN HUEVEL - ANDERSAL PTY LTD (RIGHT)



Hyder Consulting

www.hyderconsulting.com

INDUSTRY UPDATES

STRUCTURAL SYSTEMS TO SRG



Welcome to SRG Limited

We have some exciting changes that have occurred.

Structural Systems Limited and associated entities including ROCK Australia have rebranded as one unified company, SRG Limited.

Amalgamating our businesses into one unified company means we can now bring our combined expertise, skills and technical excellence in an integrated and precise way to all our customers projects. Our vision is clear: "Making the Complex Simple" for our customers.

What this means for you is that SRG Limited is making it easier for you to access our full offering of complex services. Please find enclosed a brochure that further explains who SRG are and the breadth of our service offering. Your SRG representative will be in touch with you to explore how we can better partner with your business. It is important to note that the ABN, banking details and office address remain the same.

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Sth Melbourne VIC 3205

MIDDLE EAST
Office M-03, Bu Shaqar Building
Garhoud, Dubai, UAE

HONG KONG
Office 606, 6/F, Shun Feng International Centre
182 Queen's Road East, Wan Chai, Hong Kong

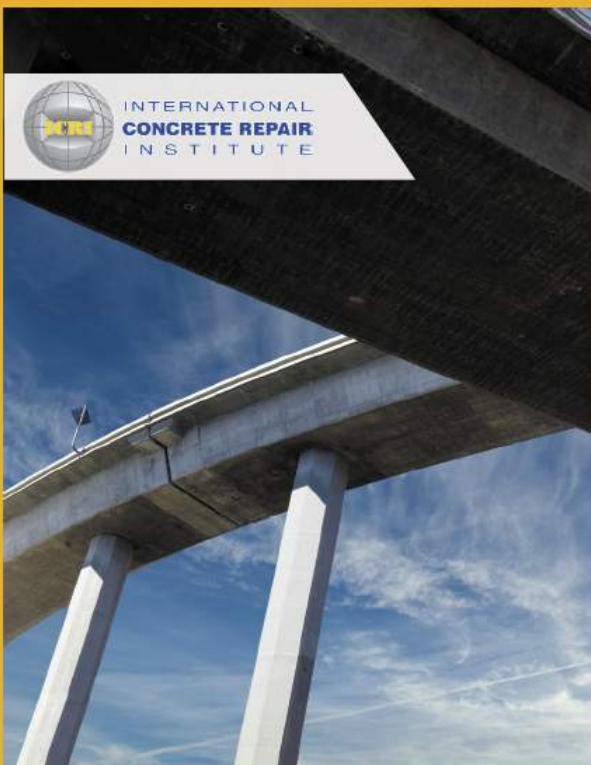
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BUILDING TRUST



NORTHUMBERLAND STREET CAR PARK

Northumberland Street car park in Liverpool is a 5 level, reinforced concrete, multi deck structure which was constructed in the 1960's. Very little maintenance has occurred on this car park and Liverpool City Council had noticed cracks in the structure due to increased vehicular traffic over the years.

We were asked to provide a lump sum tender for the works which included the carbon fibre strengthening to increase the capacity of the structure, as well as undertaking concrete spalling repairs.

To prepare the substrate, we used garnet blasting equipment which ensured a clean and clear substrate to bond to. We fully encapsulated the working areas as the lower levels of car park were still open to the public and the car park was in close proximity to local business and busy pedestrian thoroughfares.

We then applied around 6.2 kms of Sika CarboDur S1214 carbon fibre plates to the slab soffits. Sika visited site on several occasions to ensure our application process fit within their guidelines.

In parallel to this, we completed around 1,400 litres of concrete spalling repairs using Sika MonoTop 412 NFG.

All up, one of the largest carbon fibre strengthening projects in NSW was completed in around 6 weeks, 2 weeks ahead of schedule and within budget with 0 Lost Time Injuries, 0 Medical Treatment Injuries and 0 complaints.

This project serves as a glowing example of how Buildcorp Asset Solutions can deliver projects of this nature quickly, safely and to a high quality, minimising cost and risk to our clients.



Buildcorp

www.buildcorp.com.au

Infracorr Consulting

Firstly, the company is celebrating its 10th year of operations. From small beginnings as Ian Godson and Associates in early 2004, it has evolved into Infracorr which now services all states of the country possessing expertise in areas such as design for durability, inspection of steel coatings and UTT, rope access, confined space works, and of course the design, specification and supervision of cathodic protection of reinforced concrete and steel structures.

And as a consequence of this growth in the company's services, we have moved into new and much larger premises at 20 Business Park Drive, Notting Hill Victoria. An 'Office Warming' function was held in late August for our clients, associates and friends to celebrate our growth and launch of our new offices.

But probably the biggest impact on the company this year relates to our involvement in the Port of Melbourne Corporation's Maritime Works Project and in particular the \$400 million development of Webb Dock. McConnell Dowell Contractors, awarded the contract in early 2014, engaged SKM (now Jacobs Group) as its structural consultant and Infracorr is providing specialist consultancy services to SKM. This is by far the largest project undertaken by Infracorr to date.

These services, which are now well underway, include the investigation, design and specification for the rehabilitation of the existing 600m long Webb Dock East (4WDE and 5WDE). The physical investigation has been completed by now but involved very extensive Half Cell Potential surveys and further testing and sampling of the supporting transverse beams and literally thousands of Ultrasonic Thickness Tests on the steel piles and sheet pile wall. The rehabilitation design will require cathodic protection to both the concrete and steel members.

Infracorr is also designing for the possible future installation of a cathodic protection to the new Webb Dock West (WDW) and WDE Extension structures. And to ensure the longevity of the rehabilitation and new construction works, Infracorr has been engaged to provide the Durability Management Plan for the entire project. This is truly a wonderful assignment for Infracorr, which is expected to extend into 2015/2016 with a QA role during the repairs and new construction.

The exciting news does not stop here. We are currently trialling a couple of very exciting technologies which will be of great benefit to certain clients. The trials have been most successful so 'watch this space' for more news in the next Newsletter.

www.infracorr.com



INDUSTRY UPDATES

RM WATSON PTY LTD have moved to a great new location:

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KCCCONC015

Corrosion & Protection of Reinforced Concrete

a 2 day ACA/ACRA course

Adelaide - August 20-21 2015

Perth - September 1-2 2015

Participants will receive a solid body of knowledge on the mechanisms of corrosion associated with reinforced concrete and the best preventive and remedial methods available today, so they can offer more effective solutions to combat this costly problem in the construction industry. For more information and to register [click here](#) or phone +61 3 9890 4833



Interested in becoming a corporate member of ACRA?

Call us today or click on the link to register online for membership and to view all corporate membership entitlements.

They thought it was a camera

