



JULY 2016



CONCRETE CONNECTIONS

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Cover photo provided by Hamid Khan – Parchem

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Welcome to this edition of *Concrete Connections*

Message from the President.

Notwithstanding the events that go on around us, ACRA has remained a fixture for long-term growth of our membership and for improving the knowledge and expertise in our industry.

While we accept the changes through the GFC, Syria, droughts, rain & even Brexit as well as that involving our close family and friends it is important to note that there is a great deal of stability and potential for growth in our industry.

Part of that growth and knowledge is our Biennial Awards' night that showcases what the best in our industry can do for their clients. So stay tuned for the results and the entries from our future winners later in the year.

And part of that stability story is also our membership costs. The good news is that for a 9th year in a row membership prices have remained unchanged. This represents a true savings, as costs increase around us; ACRA has been able to maintain its membership fees through growth.

We hope you'll find some of the following articles of interest to yourselves and that we encourage active participation in our organisation and our affiliate organisations. In addition, by the time you read this it will be the new financial year and I hope your organisation had a strong 2015/16 period where growth and stability were also part of your environment.

~ Henk van den Heuvel, President.

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NSW - 4 AUGUST 2016
SEMINAR
Review of Award Winning Projects

The biennial ACRA Awards are seen as the premier awards within the concrete repair industry. They highlight some of the more prestigious, complex, outstanding and innovative projects undertaken over the past two years. ACRA's last awards night highlighted some outstanding projects and the number of entries and high turn out on the night, really reflected the growth of our Association's membership base and maturity of our industry. The size and type of projects highlighted the progress and developments which have been made within the concrete repair industry in Australia.

As ACRA prepares for our 2016 Awards for Excellence night on October 27 in Sydney, we look back at some award winning projects by MCM Marine & Civil Maintenance and also from Freyssinet Australia Pty Ltd. [Click here](#) for speakers and to register.

Time: Doors open 5.45pm Seminar starts at 6pm

Cost: \$55 for members \$77 for non-members free for students (still need to register)

Where: Harbourview Hotel, North Sydney

Sponsored by:



QLD - 17 AUGUST 2016
SEMINAR
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 of networking drinks which all registrants are invited to mingle with their industry peers and speakers. [Click here](#) to register

Time: Pre seminar drinks from 5.30pm seminar starts at 6pm

Cost: \$55 for members \$77 for non-members and students are free (but still need to register)

Where: Maroochy RSL, Memorial Ave Maroochy QLD

Sponsored by:



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ACRA VIC EVENING TRADE SHOW

The 2016 ACRA Seminar and Trade Show, the event that's all about concrete repair and protection!

Recently the ACRA VIC Sub Branch held the first ACRA Evening Trade Show at Swinburne University Hawthorne Campus. The evening provided such a well-received networking opportunity that ACRA are now looking at how we can roll this event out nationally. Great work from the VIC team Brian Kaye, Alan Mckenzie, Gary Hampson, Andrew Sarkady and Brian Lynch.



Ardex Australia just one of our sponsors held a raffle on the night.



Almost ready to open the doors and a big thank you to all our sponsors

Our next ACRA Evening Trade Show will be announced soon be sure to sign up to our website www.acrassoc.com.au

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WATER LEAKS IN MULTI STOREY BUILDINGS

A PROBLEM BIGGER THAN PANAMA LEAKS! -BY HAMID KHAN

The world is going crazy over Panama leaks. The scale of this leak is the largest of all time leaks that the World has come across in the past. Yet there is another even bigger problem that the Construction World needs to be concerned about – 'Water Leaks'. Water leaks are exceedingly detrimental to the health of high rise buildings. Water could enter the building envelope through different paths – from damp construction materials during the construction stage, through leaking roofs, basements, water features, wet areas and leaking water installations. Concrete being a permeable material, leaking water will find its way in and spread easily. If the source of the water leakage is left unattended, it can cause significant structural damage that often needs very expensive rectification to structural elements.

Recent reports and studies worldwide identified water leaks as the most common defect in buildings. Water leak is the major cause of early onset of corrosion and concrete deterioration. Initiation of corrosion and depassivation of reinforcement is only possible in the presence of water, oxygen and corrosive agents such as chlorides and carbon dioxide. Leaking water in reinforced concrete acts as a perfect electrolyte that is one of the basic elements for corrosion to occur. The role of leaking water and air borne salts in inducing concrete corrosion is well documented. Water leakages in buildings result mainly due to inadequate construction design, inferior materials, poor workmanship and deterioration of building materials.

A Double edged sword effect: Water leak in multi storey buildings has a double edged sword effect when it initiates corrosion problems in private residential and commercial multi-storey buildings along with a serious threat to hygiene. Moisture within the buildings can have destructive effects both structurally and on the health of inhabitants. Wong and Hui, (2005), revealed that the failure of sanitary fittings, inadequate maintenance of sewer piping system and defects to waterproofing membrane in wet areas can cause dampness and seepage inside the buildings. In Hong Kong, the Department of Health identified water seepages in buildings as the possible source of the outbreak of the severe acute respiratory syndrome (SARS) epidemic in 2003. Water leakages in the buildings due to poor maintenance and building defects could lead to growth of toxic moulds that could cause serious health and safety issues for the occupants. There are also established evidences of the relationship between water leaks in buildings and respiratory symptoms in occupants.

Wet Areas Water Leaks: Ceiling leaks from bathrooms of the upper floors is the last thing one would like to experience. The water leak makes its way across the ceiling causing dampness patches and even worse when it starts to drip steadily. One of the main reasons of leakages in bathrooms, toilets and other wet areas is due to the failure of waterproofing membrane. The installations in wet areas should allow prompt detection of leaking water and easy access of its vulnerable parts.



Water seepage from leaking bathroom to external building facade



Bathroom ceiling corrosion problems in multi storey buildings

Leakages in wet areas of high-rise buildings recorded high number of defects in most countries across the world. The annual maintenance cost for wet areas is about 40 per cent of the total maintenance cost of a building (Chew and De Silva, 2004). With growing maintenance costs of existing buildings and facilities, researchers worldwide emphasize the importance of awareness of the root cause of the failures. Interestingly, few studies revealed that the damage in these areas occurs when the bathrooms are relatively new, implying that the damage is not mainly due to poor maintenance rather incorrect workmanship and use of inferior materials are the main culprits.

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Roof leaks: The aggressive effects of external weathering on the roofs make them more vulnerable due to deterioration. Roofs suffering from leaks could not only cause serious damages to structures but also pose a great risk of injury. Symptoms such as water drippings, damp patches, paint peeling-off, rust stains on the ceiling indicate that the roof waterproofing system is not performing. Due to lack of awareness, most of the times, the ceiling is cosmetically repaired with 'masala mortar' without addressing the source of leaks. Consistent leaks from top roofs and wet areas of the upper levels can initiate corrosion of the reinforcement causing concrete spalling, which in turn can turn into a soffit collapse.

A large percentage of seepage and moisture related defects in buildings originate from rains. Roof leakages in the buildings lead to seepage to the flats below causing discomfort to the occupants and frequent disputes between the landlord and the tenant in regard to the liability to repair. The monetary costs and psychological repercussions of roof leaks, bring a level of stress that can put the occupant on a scary roller coaster ride full of ups and downs without knowing where it will take them next. A research conducted by Lo, Leung and Cui (2005), on roof construction defects highlighted that the root cause of failure of the roof waterproofing membrane stems from the roof parapet wall cracks. It further concluded that the design and choice of material for roof parapet wall is critical to avoid the waterproofing membrane failures on the roof slab.



Roof leakage causes severe corrosion



Delamination of paint due of roof leakage

Leaking Balconies Syndrome – External balconies form an integral part of multi storey apartment buildings. Water leaks in balconies could easily trigger the electrochemical corrosion process because these are subjected to more aggressive environment as compared to other in door wet areas resulting in damage and spall concrete. Balconies blunders could be attributed to various factors such as environment, air borne salts, atmospheric carbon dioxide, rain, humidity, temperature, leakage due to failure of waterproofing membrane, inadequate drain slope, poor design, inadequate detailing, poor workmanship or the combination of these factors. The effected balconies if remained unattended, present both a danger to the structural integrity of building and the health and safety of the occupants. Inferior quality waterproofing membrane is one of the contributing factors of balconies failure. The use of a robust tenacious liquid waterproofing membrane for waterproofing balconies must be encouraged. Concrete being the first line of defence, the cantilever structural element with high concrete mix design parameters should be considered. If screed is used for slopes, it should have additional waterproofing properties using rubber latex emulsion. Water resistant tile adhesive and tile grouts should be considered to fix the final finish tiles with an adequate slope and drainage details.



Balconies concrete spalling

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Leakage problem in balconies

Working Backward Approach - Avoid Swimming in Basements: Leakages in basements could be attributed to many factors such as poor selection of the waterproofing system, inadequate detailing for joints and other critical locations, inadequate design, poor concrete quality and poor workmanship, damage to waterproofing membrane, ground water level rise and so on. Interesting analogy by Chew and De Silva (2003) suggests that water seepage signs appear from the basement ceiling are not always related to the above factors but could also originate from the non-basement features of above ground landscaping, water features, swimming pools or water ponding. Insufficient slope or clogged drainage of the planter structures could result in moist patches that, if unattended, lead to seepages and algae growth on basement ceiling finish.

Rising levels of ground water table in urban areas can have serious implications to the basements. The rise of ground water could be due to seasonal rise, capillary action or closure of dewatering activity in the surrounding neighbourhood construction sites. The structures designed without considering the obvious risks of GWL rise and the resulting hydrostatic pressure associated with water leakages is a serious risk. Due to leakages, the structural integrity of basements is seriously compromised, as the chloride content of the concrete rises above the threshold level resulting in severe corrosion problems. The challenges of soil mechanics and groundwater conditions need to be considered during design stage and a site specific waterproofing system should be selected for the structure against ground water infiltration.

'Poka yoke' (mistake proofing) is a Japanese term introduced initially for the automotive and manufacturing industries. This is an approach of 'working backwards' that is now equally popular in other industries. There is a saying that 100 steps backward are as good as 1000 steps forward. (Busch, 2013). Suppose, a manager is running a newly opened restaurant and suddenly he has been given a task to take action to fail the restaurant business. That sounds bizarre, but the question is what could lead to the failure of the newly set-up venture? There could be multiple ways such as, the restaurant starts serving rotten food, the food provided in dirty chipped edge plates and served by non-professional staff or the glasses have an impression of red lipstick all around. The end result would be the failure and closure of the restaurant. Now, if the restaurant needs to succeed, then working on backward approach, the manager would ensure to avoid the above failure factors. By inverting the process, the manager would recruit the trained and qualified staff, display good quality crockery, adopt the best hygiene practices and so on.

Similarly, working backwards is the best approach in avoiding basement leaks. In other words, it means injecting 'error proofing in waterproofing'. Most contractors and engineers have a linear way of thinking to perform their tasks. Engineers appreciate rationality, consistency, the common sense, one-step-forward-at-a time approach (Busch, 2013) to perform site activities and it all makes good sense but at the same time reversing the order of one's approach has its advantages too, as it challenges the brain to think in an unconventional way. Assume, if a project manager at a new construction site wants his basement to leak. It sounds weird, but the argument is, what actions would lead to the failure of the basement? The answer is simple – the project manager at site would make sure to avoid using waterstops in construction joints, use poor quality concrete, select underperforming waterproofing membrane, omit pile head waterproofing, appoint inexperienced waterproofing installation company and so on. The worst is, to use multiple suppliers for waterproofing that rules out single point of responsibility. The project manager can now self-question and develop a check list that what factors need to be considered to have a leak proof basement. This is possible by addressing and countering all the above pit holes by adopting backward approach.

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Leakage through retaining wall construction joint



Basement leakage at corners and kickers

The Way Forward: Water leaks can cause significant structural damages, inconvenience, trouble and litigation issues. These leaks result from combination of the above highlighted failure factors rather than an individual element. Alarmingly, early onset deterioration of most of the buildings during the first ten years of its life cycle is of great concern to asset owners demanding high service life. Water leak is the main culprit for the early inception of corrosion and concrete deterioration in multi storey residential and commercial buildings. To help minimize leakage nuisance and potential hazard to life and property, robust construction practices should, therefore, be adopted during building plan, design and execution stages. Working backward approach is also a viable strategy, which is in fact, getting ahead by moving backward. Backward approach also leads to the adoption of 'system based waterproofing approach'. It is important that the waterproofing in basements, roofs and wet areas, such as bathrooms, shower rooms, balconies, kitchen is driven by 'complete waterproofing system' rather than the waterproofing membrane only. The Engineers and authorities should further scrutinise processes of building plan approvals, inspection of construction works, and quality control procedures regarding waterproofing aspects. A stitch in time, saves nine and prevention is always better than cure.

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About the Author

Hamid Khan working presently as Brand Manager/Technical Product Manager – Concrete Durability, at Parchem (Dulux Group), Australasia, holds a bachelor degree in Civil Engineering discipline. He also holds a double Master in Business and Strategy from the University of Wollongong.

Hamid is certified in Concrete Technology and Construction, by City & Guilds of London Institute (UK) and is a qualified expert in concrete repair & refurbishment with 19 years of experience in the industry.

He was associated with Fosroc International in Dubai for 14 years taking up various roles in technical and management. Hamid's experience comes from the Gulf, Middle East, Europe, East Asia and Central Asia.



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Industry News.....

Kennards Hire Start Their Engines

WRC Rally Australia & Kennards Hire Announce A Major Sponsorship Agreement



Leading equipment hire company, Kennards Hire is excited to announce their new sponsorship agreement with the FIA World Rally Championship - 'Kennards Hire Rally Australia'. Kennards Hire are the naming sponsor and will supply the vast majority of equipment and infrastructure required for the event.

The Kennards Hire Rally Australia will take place in Coffs Harbour from 17-20 November. The event will encompass 300 kilometres of shire and forestry roads surrounding the Coffs Harbour region.

NSW General Manager Darren Simmons is excited to be sponsoring the final stop of the FIA World Championship Tour and pleased to have the opportunity to place Kennards Hire equipment and services into the global spotlight - with the logistics and setup of the event's infrastructure keeping the brand promise to make our customers job easy.

"We're thrilled to be bringing our capabilities and expertise to this partnership with Rally Australia. Kennards Hire will provide the equipment and facilities for the competitive stages, competitor service areas, international media centres, spectator areas and much more," stated Mr Simmons.

Kennards Hire have signed a two-year deal with Rally Australia as the naming sponsor. The event is also backed by Destination NSW. The Kennards Hire Rally Australia in November will see approximately 61 million television viewers tune in to watch the action across one of Australia's most picturesque stretches of countryside.



For more information about Kennards Hire Rally Australia visit rallyaustralia.com.au, or to view the entire equipment range from Kennards Hire visit kennards.com.au.

Photo: Jim Green from Kennards Hire Coffs Harbour and Wayne Kenny - Rally Australia fly the flag for the start of the Kennards Hire Rally Australia partnership.

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Buildcorp announced as naming-rights sponsor of the Wallaroos

Today Australian Rugby Union (ARU) announced an historic partnership with Buildcorp who will become naming-rights partners of the Wallaroos and upcoming Women's National XV's Championships, which will be held from 24-26 June, at Riverview, Sydney.

Following the Buildcorp Women's National XV's Championships, a Wallaroos squad will be selected for the first-ever Eden Park double-header, where the Wallaroos will take on the Black Ferns before the Wallabies play the All Blacks on 22 October.

It is the first time in Australian Rugby history that the Wallaroos and the Women's National XV's Championships have received such strong support from an external partner.

Under the two-year partnership arrangement, the Buildcorp logo will adorn the Wallaroos' playing jersey, and they will have naming rights for the team and Women's National XV's Championships.



Through these partnerships, Buildcorp now has a presence at grassroots, state, national and international levels of rugby. The company's rugby partnerships range from women's and men's university rugby teams in Sydney, Melbourne and Brisbane, to the Buildcorp National Rugby Championship, and now the Buildcorp Women's National XV's Championships and the Buildcorp Wallaroos.

ARU CEO Bill Pulver said he was thrilled that Buildcorp had bolstered its commitment to women's rugby in Australia.

"With the Buildcorp Women's National XV's Championships kick-off less than two weeks away, and with our Australian Women's Sevens preparing for Rio Olympics, our women's rugby players throughout the country are hitting their peak. Buildcorp's support comes at an opportune time, and will be invaluable to these women throughout the Buildcorp Women's National XV's Championships as they vie for selection in the Buildcorp Wallaroos team which will take on the Black Ferns at Eden Park."

"Women's rugby is a core strategic focus for our organisation, as we strive to make Australian Rugby a game for all, and inspire all Australians to enjoy our great global game. By 2020, we want 15% of all Australian rugby players to be female."

"Buildcorp have a history of supporting rugby's growth markets, as we saw when they became the inaugural naming-rights partner of the Buildcorp National Rugby Championship. Women's rugby is now the fastest growing sport in the world, with 500k new female players across the world joining every year, for the past few years. With Buildcorp's support, we will harness this momentum to ensure there is a place in our rugby community for all girls and women around Australia." Buildcorp Principal Josephine Sukkar said: "I have seen firsthand the hard work and dedication these inspirational athletes put into their game and their team. Nothing makes Buildcorp prouder than to support the Wallaroos as they begin their crucial preparations for the 2017 World Cup. In our 25 years supporting grassroots rugby, we've seen the exponential boost that investment and support gives to a team's development and achievements. The recent Australian Women's Sevens World Series win is testament to that. It's our aim to give this same opportunity to the women who want to play XV's rugby and we look forward to seeing them thrive over the next two years".

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“However, this sponsorship is just the start and we urge other businesses to commit to investing in women and growing the game. Through our shared investment, we can all help to develop stronger players, teams and leaders in rugby, business and our communities.”

Former Wallaroo and co-captain of the 2015/16 Championship-winning Australian Women’s Sevens team, Sharni Williams said, “It’s great for the Wallaroos and the National Championships to have the support of Buildcorp. It’s a massive step in the right direction for women’s rugby in this country.”

“I started off playing fifteen-a-side rugby when it basically had no national profile at all. Now, with the Buildcorp Women’s National XV’s Championships, girls can get out there and impress selectors and put themselves on a pathway towards representing their country in the Buildcorp Wallaroos team.”

“Playing New Zealand, in Sevens and XV’s, is always a tough battle, but running out on the field at Eden Park will be amazing for all the women who get that opportunity this year.”

Last year over 200 women from across Australia competed in the Women’s National XV’s Championships, which was won by Sydney.



Video Link: <http://www.rugby.com.au/news/2016/06/16/07/04/wallaroos-pathway-to-follow-sevens>

Buildcorp

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Industry News Continued.....

BASF Employee News.



Fleur Nielsen commenced as the State Sales Manager in Queensland in late March. Fleur brings a wealth of sales and commercial management experience to the role.

Michael DiCirsto has moved from New South Wales to Queensland, where he had joined the sales team as Technical Sales Representative -Repairs and Grout. Michael replaces Rob Sutherland who retired in April.



BASF New App

The new Master Builders Solutions app is now available for use on Windows, IOS and Android devices. The app has all of our brochures, tech data sheets, safety data sheets and contacts. In iTunes or Play store, search for either "solutions finder" or "Master Builders Solutions". Once downloaded, click on the menu and select "setting". Select Australia-English to obtain our version.



ACRA GUIDE TO CONCRETE REPAIR AND PROTECTION HB84 - UPDATED



The ACRA Guide to Concrete Repair and Protection HB-84 is being updated, and with this update will come refreshed photos as well. This is where you, the members can help.

If you have any photos you would like to donate to this updated handbook along with a very brief description of the photo/s we just may use it in the guide or it may even make the cover.

Email your photo/s to info@acrassoc.com.au or phone +61 2 9645 3692 if you have any questions.

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The Freyssinet Brand for
Excellence in Repair

Freyssinet has evolved as a leader in remedial engineering with projects throughout Australia and New Zealand - buildings, wharves, mining and marine structures, transport infrastructure such as bridges and tunnels - as a main contractor or specialist subcontractor.



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*Successfully
approaching the
half-way mark on
one of our many
landmark projects*

ACRA TRAINING COURSE

Our two most recent courses held in NSW were both sold out! With the success of the training day held at Ardex's training facility in Seven Hills we will be holding another course out west in September.

Other course dates are:

Adelaide, SA 9 Sept – [Click here](#) for more detail and to register – **LIMITED TO 20 PPL**

Seven Hills, NSW 30 Sept – [Click here](#) for more detail and to register – **ALMOST FULL**

Adelaide, SA 24-25 Sept – [Click here](#) for more detail and to register for this ACA/ACRA 2 Day course

Auckland, NZ 10-11 Nov – [Click here](#) for more detail and to register for this ACA/ACRA 2 Day course

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City Reach Boardwalk, Brisbane River

Refurbishment of the concrete walkway and bicycle path

Project:

City Reach Boardwalk,
Brisbane River

Location:

Between Admiralty Towers and
River Place Apartments,
Brisbane, Queensland.

Project completed:

September 2015

Applicator/Contractor:

O'Connor Kelly

Market sector:

Wharves and Jetties

Products used & amounts:

MasterProtect® 8065CP:

1,200 pieces

MasterEmaco® P 5000AP:

40 kg

MasterEmaco® N 5200CI:

1,140 kg

MasterEmaco® S 5440CI:

20,700 kg

MasterEmaco® S 822CI:

7,000 kg

MasterEmaco® N 5100:

75 kg

MasterProtect® H 1150:

282 litres



Brisbane's City Reach Boardwalk along Brisbane River.

The background

Brisbane's popular City Reach Boardwalk which runs along the Brisbane River from the City Botanic Gardens to Howard Smith Wharves, has undergone a \$7 million refurbishment in order to extend its life.

The first stage of maintenance work (between 145 and 175 Eagle Street) was completed last year, this included replacing deck panels, patch repairs and sealing concrete to eliminate further corrosion.

The second stage focused on two sections of the bridge at Admiralty Quays and River Place Apartments. This stage involved repairing and replacing the concrete deck slabs that support the suspended bridges and repairing piles and beams under the boardwalk.

The challenge

Brisbane City Council's warranty required a single source supplier that could provide a complete repair system for the maintenance work needed on the boardwalk.

The complete repair system installation for the deck soffit, which also included fiber reinforced polymer (FRP) strengthening, was required to be completed in seven days.

On top of these requests, project engineers requested the repair mortar to achieve 40 megapascals (MPa) before installation of the FRP laminate strip in order to take the load where prestressed strand sections were damaged.

Contact:

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City Reach Boardwalk, Brisbane River Refurbishment of the concrete walkway and bicycle path



Beam repair preparation and installed MasterProtect 8065 CP sacrificial anodes



Some of the 92 pile caps that were repaired.

Our solution

BASF presented a specification for a complete repair system in order to meet the required program for the soffit repairs and rectification of the pile caps on the boardwalk.

BASF also worked closely with the Brisbane City Council and their contractors to ensure that compliance to warranty requirements were met.

The customer's benefit

- Easy to use 'form and pour' product, MasterEmaco S 5440CI was used for the pile cap repairs to re-establish original strength and structural integrity.
- Ability to pack around the cathodic protection anodes with a low resistivity repair mortar such as MasterEmaco N 5200CI before placing MasterEmaco S 5440CI on the pile caps.
- Fast turnaround of the overhead soffit repairs was achieved with MasterEmaco S 822CI by dry spray method.
- BASF's recommendation of experienced dry spray applicators capable of achieving high builds, saved time in application.
- Application of MasterProtect H 1150 at thick creme consistency, eliminated the possibility of excess product dropping into and potentially contaminating the Brisbane River.

Projects facts at a glance

- The Brisbane City Council required a complete repair system from a single supplier.
- Repairs to the boardwalk pile caps and beams included installation of cathodic protection sacrificial anodes.
- Repair to soffit by gunite and coating the soffit with silane creme to protect from further ingress of chloride ions.
- Design changes eliminated the FRP, but speed of application was still essential due to the project deadline.

Master Builders Solutions from BASF

The Master Builders Solutions brand brings all of BASF's expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures. Master Builders Solutions is built on the experience gained from more than a century in the construction industry.

The know-how and experience of a global community of BASF construction experts form the core of Master Builders Solutions. We combine the right elements from our portfolio to solve your specific construction challenges. We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global BASF technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

The comprehensive portfolio under the Master Builders Solutions brand encompasses concrete admixtures, cement additives, chemical solutions for underground construction, waterproofing solutions, sealants, concrete repair & protection solutions, performance grouts, and performance flooring solutions.

Got something to say?

If you want to feature a story in our newsletter, email us now at info@acrassoc.com.au

Concrete Connections



The ACRA Awards night showcases the outstanding work in concrete remediation being produced by our members from across the county.

This is our industries leading networking event and a great chance to celebrate with you peers from the industry. Be sure to block this event out in your calendar!

Concrete Connections

Calendar of Events

Mark your diary!

DATE	MONTH	EVENT NAME	LINK
4	AUGUST	NSW ACRA Seminar- Review of Award Winning Projects	http://acrassoc.com.au/index.php/events/icalrepeat.detail/2016/08/04/110/-/nsw-acra-seminar-review-of-award-winning-projects
17	AUGUST	QLD ACRA Seminar- Practical Repair of Cracks	http://acrassoc.com.au/index.php/events/icalrepeat.detail/2016/08/17/111/-/qld-acra-seminar-practical-repair-of-cracks
19-20	AUGUST	Malaysia – Corrosion & Protection of Reinforced Concrete Structures & Buildings – ACA Course	http://www.corrosion.com.au/Training/Calendar/agentType/View/PropertyID/439
30	AUGUST	CALCULATING ANODE SIZE & SPACING FOR CONCRETE REPAIR (INVERMAY, TAS)	https://www.concreteinstitute.com.au/Events/414.aspx
31	AUGUST	CALCULATING ANODE SIZE & SPACING FOR CONCRETE REPAIR (SANDY BAY, TAS)	https://www.concreteinstitute.com.au/Events/415.aspx
9	September	SA ACRA Course – Concrete Repair & Protection	http://acrassoc.com.au/index.php/events/icalrepeat.detail/2016/09/09/116/-/sa-acra-course-concrete-repair-and-protection
13	September	Why Concrete Cracks and How to Avoid It	https://www.concreteinstitute.com.au/Events/469.aspx
30	September	NSW ACRA Course – Concrete Repair & Protection	http://acrassoc.com.au/index.php/events/icalrepeat.detail/2016/09/30/117/-/nsw-course-concrete-repair-and-protection
24-25	OCT	ACA/ACRA Training Course Corrosion & Protection of Concrete Structures (Adelaide)	http://www.corrosion.com.au/Training/Calendar/agentType/View/PropertyID/110
27	OCT	ACRA AGM (members only)	www.acrassoc.com.au

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Concrete Connections

27	OCT	Biannual ACRA Awards	www.acrassoc.com.au
9	NOV	ACRA Course on Concrete Repair and Protection (Auckland)	www.acrassoc.com.au
10-11	NOV	ACA/ACRA Training Course Corrosion & Protection of Concrete Structures (NZ)	http://www.corrosion.com.au/Training/Calendar/agentType/View/PropertyID/110
13-16	NOV	Corrosion & Prevention 2016 NZ	http://acaconference.com.au/
17-20	JAN 2017	World of Concrete	https://www.worldofconcrete.com/Attendee/ShowInfo

**Swollen Concrete?
Rust Spots?**

Delays can be costly

ACT NOW!

Concrete Spalling Repairs

We do it right.... first time!

- **Responsive professional service** from start to finish
- **Speedy and thorough investigation** of the damage
- **Single contact point** to ensure everything runs smoothly
- **Complete process** including magnesite removal and cementitious floor levelling

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0404 857 360

www.prestech.com.au

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Concrete Connections

NEW CORPORATE MEMBERS

RKF ENGINEERING SERVICES

RKF Engineering Services is a specialist engineering consultancy with more than 27 years' experience working in mining, marine, transport and heavy industries across Australia. We work on strategically critical projects, shutdowns, design jobs and remediation tasks that underpin the profitability of some of Australia's busiest mines and ports. We are at the forefront of Australian engineering practice in concrete, corrosion and cathodic protection technology. <http://rkfes.com/> [CONTACT US CLICK HERE](#)



WARRINGAH COUNCIL

Leading the community. Protecting our environment. Creating our future. Warringah Council was established in 1906. It administers an area of 149 square km on Sydney's northern beaches, extending from Manly in the south to Pittwater in the north and inland to the Ku-ring-gai Chase National Park.



UNIVERSITY OF WOLLONGONG

University of Wollongong is a research-intensive university with an outstanding reputation for its learning environments across a broad range of disciplines. Our commitment to our students is evident in our graduates, who are recognised for their capability, quality and success in the global workplace.



Are you interested in becoming a corporate member of ACRA?

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

Membership means **more.**

NEW INDIVIDUAL MEMBERS.....

Name: David Bellamy
Sunshine Coast, QLD

Email: sc@concreterepairs.com.au

Phone: 0423 53 9966

Name: Karl Wootton
Narre Warren South, VIC

Email: karl@waterproofingconsultants.com.au

Phone: 0484 315 804

Name: Matthew McKenzie
Manly, NSW

Email: matt@artisconsulting.com.au

Phone: 0450 030 990

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Concrete Connections

ACRA CORPORATE MEMBERS



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