March 2014

CONCRETE CONNECTIONS

www.acrassoc.com.au

Concrete Connections

On the inside

Cover Photos:
Duratec Australia *– Rio Tinto Dampier Salt Ltd mooring dolphin remediation, Dampier, WA*
BASF Australia *– West Gate Bridge –FRP Strengthening upgrade project, Melbourne, VIC*
Both are 2012 ACRA Award winners

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

Concrete Connections

Welcome to the March 2014 edition of Concrete Connections.

Welcome to the first edition of Concrete Connections for 2014.

It is quite an exciting time for ACRA in the year ahead. The continued growth and recognition of ACRA as an industry leading association will see the inclusion of sub-branches in Queensland and Victoria. This will see three sub-branches in the association, adding to the very successful roll out of our Western Australia sub-branch in 2013. The ACRA one-day concrete repair course continues to receive rave reviews from around the country and a number of dates are planned 2014. Keep an eye out for the next course in your state. Not only does the course provide an outstanding industry leading training session for your employees, it is also a great networking opportunity as it attracts attendees from all aspects of our industry.

Sadly, on-site safety made news headlines again at the start of the year. The concrete repair industry exposes us all to such an interesting, exciting and varied work environment, but it's important to recognise that these sites also have the potential to be some of the most high risk in the industry too. Please take the time to ensure your procedures, training and WHS practices are up to date to ensure we can all send our most valuable assets home safe and sound to their families at the end of every day.

If there is anything you'd like to know about the association, ideas you'd like to see tabled or enquiries in general please feel free to contact me directly on 0409 445 270 or via the ACRA website.

~ Daniel Rowley, President.

ACRA would like to congratulate Daniel and his wife Jess on the birth of their 1st baby born on January 15.
They now have a beautiful baby girl named Stella Mollie-Jean Rowley.

Got something to say?

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

Concrete Connections

Sub Branch Committees

In 2013 we launched our WA Sub Branch Committee who has since organised a successful seminar and few courses in Concrete Repair and Protection. WA now has its own resident course presenter in Peter Trinder from BG&E.

Peter commenced his career in construction in 1978 and has worked in a variety of positions including concrete batch plant manager, site engineer, specialist materials consultant and concrete repair contractor.
He was the Australian Manager of the materials technology consultancy group Taywood Engineering Limited who specialised in providing concrete technology advice. He was also the national Concrete Technology Manager for GHD Pty Ltd before taking on a role as Business Manager of the concrete repair division of Monadelphous Industrial Services.
He joined ANCON Beton in 2006 and heads up its Western Australian and Northern Territory consultancy as well as providing specialist services in concrete technology and durability.
He has recently joined BGE Materials Technology, as a Principal in their Perth Office. He is responsible for the development of this area of expertise within the region. Needless to say all who attends Peter's course is in well experienced hands.

Photo: Bunbury Bridge East Perth. WA 1930

Photo: Westgate Bridge, Melbourne, Vic. 1970

Our Vic Sub Branch Committee were locked in January 2014 and are organising their first event which will be a joint seminar with ACA in June. Stay tuned for more details on this. Our last Melbourne course was attended well and the speaker was Grahame Vile who will be doing this again for anyone who missed out later in the year on September 03 but we are accepting registrations now. These courses fill rather quickly so register now to avoid disappointment.

www.acrassoc.com.au

We welcome our newest ACRA Sub Branch Committee QLD!
They held their first meeting on February 27 which was attended by ACRA Past President Peter Johnsson who also was the speaker at the Brisbane Technical Course on Concrete Repair and Protection which was held on Friday 28th of February.
QLD will be holding their first seminar on **March 18** and they will have two great topics in the one night. Topic 1: Security of Payment Act (QLD) and Topic 2: Durability in Remedial Design. This was held a few months ago in Sydney and was very well received by all who attended. Keep reading this newsletter for more details or go to our website for registration and seminar information. www.acrassoc.com.au

Photo: Indooroopilly Railway Bridge, Brisbane, QLD 1894

To check out all our new Sub Branch Committee Members check out their details on our website www.acrassoc.com.au

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

Concrete Connections

ACRA Seminar – Join us for two great subjects in the one night!

Topic 1: Security of Payments Act / Topic 2: Durability in Remedial Design

Tuesday 18 March 2014 at 3.45pm – 6.30pm

Traders Hotel, Brisbane, 159 Roma Street, QLD

Security of Payments Act.

The Building and Construction Industry Security of Payment Act 2004 (QLD) was enacted in response to industry calls for a solution to a major problem affecting the construction industry… getting paid on time!
The speaker, Todd Spiller from Corrs Chambers Westgarth will present a general overview of this important legislation, including how it works, how it can help you and things to look out for as a claimant and/or respondent.

Speaker is Todd Spiller from Corrs Chambers Westgarth

Durability of Remedial Design.

Different concretes require different degrees of durability and protection depending on the exposure environment and the properties desired. In this part of the night our speakers will share insights in regards to performance testing and protection of reinforced concrete from a remedial design perspective as opposed to durability design and planning at the construction phase. The two presenters are:

Speaker is Daniel Anstice from GHD
Speaker is Ian Donoghue from Savcor

This seminar aimed to interest designers, consultants, suppliers and contractors who will leave with a wealth of information regarding durability testing and protection.

Both topics will also consist of a question and answer segment and will follow with networking drinks and canapés.

Registration is only $55 for ACRA members and $77 for non members….doesn't get any better than that! Book NOW!

Registration is available online at www.acrassoc.com.au or email Nicole at info@acrassoc.com.au if you require more details.

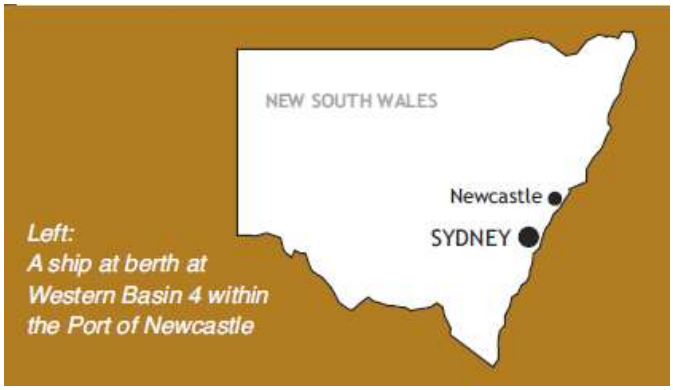
While visiting the website subscribe to all our updates and newsletters…FREE!

Got something to say?

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

Concrete Connections

Marine and Civil Maintenance Pty Ltd Newcastle Port Corporation (NPC), Western Basin 3 and 4 Refurbishment



Left:
A ship at berth at Western Basin 4 within the Port of Newcastle

Western Basin 3 and 4 Refurbishment Facts

- Newcastle Port Corporation (NPC) is undertaking a refurbishment of the Western Basin 3 and 4 wharves within the Port of Newcastle.
- The project will extend the life of the wharves by 30 years. The wharves were constructed in the late 1960s and maintenance and corrosion techniques are required to prevent asset degradation.
- The estimated cost of the three year project is approximately $3.6 million.
- Stage 1 commenced in December 2012. Stage 2 is underway.
- The project involves 3 stages as follows:
  - **Stage 1 - completed**
    • conventional concrete patch remediation work;
  - **Stage 2 - underway**
    - impressed cathodic protection to the underside of the wharf to prevent steel corrosion;
    - protective coatings added to the steel sheet pile seawall;
  - **Stage 3**
    - commissioning of the impressed cathodic protection;
    - final coatings to concrete surfaces; and
    - practical completion.
- The wharves will remain operational throughout the contract period. Construction work is being scheduled around vessel arrival and departure times.
- NPC has contracted this project to Marine and Civil Maintenance Pty Ltd.

acra

Got something to say?

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

MCM preferred for Asset Protection at Newcastle Port

NEWCASTLE PORT is one of the busiest facilities in Australia and has achieved yet another record year of trade in 2012/13 under the management of Newcastle Port Corporation with total trade throughput up by 16%. More than 4,500 vessel movements were also recorded reflecting a 12% increase over the previous year.

This increase follows 13 years of consecutive growth and includes $19.1 billion in commodities and coal exports valued at more than $15 billion for the financial year 2012/13. Such consistent growth is a remarkable achievement in many ways, not least given the turbulent and prevailing economic climate.

However, Newcastle is one of the oldest ports in Australia and as such requires constant attention to ensure that it can accommodate current traffic and future growth.

The port has an extensive range of facilities at Kooragang Island and Carrington Basin to facilitate bulk materials, containers and general cargoes of all types and Marine & Civil Maintenance Pty Ltd (MCM) has contributed to the maintenance of these assets.

Last year the company made repairs to the structure of Wharf 3 at Kooragang Island, and this year MCM has embarked on stage two of a three year programme of repairs and protection at the West Basin Wharves 3 and 4 in Carrington. Newcastle Port Corporation require a 30 year extension of the life of these valuable assets.

The front beam of the 520m long wharf was repaired and treated with impressed-current cathodic protection ("CP") over 12 years ago. This part of the structure is in good condition but rebar corrosion has affected isolated patches of the slab soffits, beams and piles and, more extensively, the rear beam of both wharves.

Consultants GHD specified a patch repair regime for the isolated slab, beam and pile damage. Patch repairs are used where the damage is small scale, isolated and unlikely to spread rapidly, which is the case for the areas of wharf between the front and the rear.

However, the rear beam of the wharf is subject to more damage due to the effects of corrosion so an impressed-current CP system was specified for this element.

In addition GHD specified a protective silane coating for the entire soffit of the wharf that is not protected by CP. Being less exposed to splash water, these areas are only lightly contaminated by salt and silane. The coating is designed to penetrate the concrete surface and control the ingress of salt and water and is an economical method of protecting the steel where it has not yet begun to corrode.

As part of a separate consultancy, SMEC specified a protection system for the sheet pile wall behind the rear beam. This consists of galvanic anodes underwater and a paint coating above.

MCM tendered and won the contract in late 2012, basing its bid on the use of proprietary access platforms suspended beneath the wharf. Lack of headroom means the platforms are set at low water level, and although the work is phased around the tides, the site team needs wetsuits and waders to carry out their work.

Stage 1 of the current programme was completed between January and June 2013, on time and within budget. The work consisted of local patch repairs in the body of the two wharves. Some 85m³ of damaged concrete was removed by specialist hydro-demolition subcontractor Hi Tech Industrial Services. Hydro-demolition is a very effective means of breaking out large areas of concrete surface quickly, safely and with no damage to the underlying concrete.

According to MCM, the concrete patches were reinstated with sprayed gunite by the dry-spray process, using a pump mounted on the wharf deck. The material used was Guncrete E from Parchem Construction Supplies Pty Ltd.

Stage 2 started in July and is programmed for completion at the end of June 2014. The work consists mainly of the repair and cathodic protection of the full length of the rear beam, which lies against the sheet-piled rear wall and has suffered more corrosion damage from splash water than other parts of the structures.

The impressed-current cathodic protection consists of titanium anode ribbons grouted into slots cut in the concrete surface of the beam side and soffit. The ribbons are divided into zones and connected to the reinforcing steel at regular intervals so that a circuit can be made through the steel. An external power source, rectified to DC current at very low voltages, is used to drive ionic current through the concrete between anode and steel, in turn, the steel is protected against corrosion. Embedded probes are used to monitor the current flows locally, allowing the protection system to be monitored and tested for optimum performance.

As well as the work on the beam, Stage 2 will involve the cleaning and painting of the above-water parts of the sheet piled wall. This is intended to protect the piling against atmospheric corrosion.

Stage 3 of the contract, which is planned for the second half of 2014, will see the commissioning of the impressed-current CP system on the beam and the installation of sacrificial anodes to protect the underwater areas of sheet piling beside the beam, as well as the application of silane to the main body of the wharf soffit.

Project manager Michael Karlaftis summed up the maintenance work by saying; *"While the work itself is quite straightforward, it needs extensive access decking to be set up under a busy working facility over half a kilometre long, and the work is dictated by the tides. The logistics of getting staff, materials and equipment safely to and from the work face at all times of the day and night are just as important as doing the work well.*

It is also essential to work safely while ships and vehicles are arriving, loading and departing. This requires strict adherence to procedures and excellent communication between the contractor, the vessel traffic controllers, the owner and the berth operators. We are very pleased with the co-operation we have received from all parties."

MCM expertise provides an edge in planning and performance

MCM prides itself on both management expertise and discipline and it is reflected by the company's impressive frontline safety record which is rated higher than the national industry average.

The safety first approach taken by the company is paramount particularly because of the nature of its work conducted in extreme climates and environments. MCM actually designed a system of modular access platforms which can be enclosed to prevent contamination of the environment. MCM also developed a new form of discrete anode, in conjunction with the (then) RTA, and have pioneered the hybrid anode form of cathodic protection, which combines the best attributes of impressed-current CP with sacrificial (galvanic) CP.

MCM is a company managed by engineers and therefore the approach to any project is governed by an understanding of modern technologies and the principles in the work required, whether it is concrete repair, cathodic protection or structural strengthening. Although innovation is an important aspect of the company's operational strength, it applies proven systems wherever possible to remove or manage risk. Quality control is the key rather than taking shortcuts.

Of course the value and strength of any company can often be measured by the loyalty created between it and the client and its consistency in the successful delivery of every project undertaken. MCM's record in winning tenders and securing repeat business is well proven when you consider that 50% of its annual business are those clients who have seen them in action before.

For more information about Marine & Civil Maintenance, visit their website: www.marineandcivil.com.au

Concrete remediation is a proven Parchem asset

Corrosion control and remediation in relation to reinforced concrete, is a critical element of sustainable infrastructure.

For those who manage our ports it is an increasing challenge to know how best to deal with their assets which by nature, have to be located in the harshest of environments. However, with proven product technologies, reinforced concrete structures in the face of severe corrosion attack can be protected – avoiding costly repairs and extending the life of the asset.

TIME IS the ultimate judge of product performance, and Parchem have a 30 year track record in proving its technologies are up to the task in projects right across Australia. Parchem Construction Supplies is the leading manufacturer and supplier of concrete repair, corrosion control and protective coatings in Australia.

Parchem have just recently been involved in Newcastle Port Corporation's West Basin Refurbishment project which is just one of many port and wharf refurbishment projects it has provided products over many years.

Parchem's relationship with the world's leading concrete repair company, Fosroc International, gives them unprecedented access to the world's leading technologies in this area. Parchem and Fosroc have been closely aligned for over 30 years, and have developed technologies specific to the Australian market.

It was the relationship with Fosroc's technologies, and Parchem's long proven performance that allowed them to confidently contribute to the West Basin Wharves refurbishment. Parchem enlisted special concrete repair mortars, protective coatings and corrosion controlling anodes to get the job done.

Parchem's Product Manager Andrew Dickinson is particularly proud of the company's involvement in the West basin refurbishment:

"We are fortunate to be in a position to supply a range of construction products that we have total confidence in. All the products we supply are proven performers and we know they will do the job that is required and we can also provide onsite technical support for any of our clients.

We have another advantage because we have our own state of the art, manufacturing facility in Wyong (NSW) and so we can develop products specifically for use in Australian conditions. We can also further enhance the proven international range of Parchem products to conform to the Australian climate, environment and conditions."

Galvashield XP4 - the preferred solution for Newcastle port refurbishment

Unless all chloride contaminated concrete is removed from the structure, chlorides will be present in the concrete adjacent to the repairs. This will create abrupt differences in corrosion potential in localized areas and creates a risk that corrosion activity will be initiated or aggravated in the existing concrete adjacent to the repair, commonly referred to as the "incipient anode effect".

The **Galvashield XP4** was ideal for providing protection of those areas beyond the main section of concrete that was being repaired. For over a decade, embedded alkali activated galvanic anodes in a discrete form have been used to provide localised corrosion prevention around concrete repairs.

Galvanic systems such as **Galvashield XP4** are used to provide low-maintenance protection that can be economically tailored to protect large and small sections of the structure. Embedded discrete anodes are installed around the perimeter of the concrete repair as close as practical to the patch edge. The anode spacing is dependent on the amount of steel protected but is generally in the range of 300-600mm which is sufficient to provide cathodic prevention as per EN12696. (e.g. prevent the initiation of new corrosion activity adjacent to the repairs).

Galvashield XP4 prevents the initiation of new corrosion activity adjacent to the repairs and extends the life of the asset. More recently, this type of anode has been produced in various sizes to provide more options for the engineer.

The leaders in concrete repair and concrete protection

In addition to the use of the **Galvashield XP4's**, Parchem's **Guncrete E** was used as reinstatement dry spray mortar to repair defective concrete caused by corrosion to the reinforcement. This has proven to be the product of choice for contractors using these types of specialised shotcrete materials.

The final process for the concrete remediation strategy at the West Basin project in involved the application of a protective treatment to the concrete surfaces to further extend the life of the wharf.

The most effective way of protecting reinforced concrete is to prevent water uptake. The past decades have shown that silanes with long alkyl chains, such as **Emer-Stop Crème** and **Emer-Stop S100N** are the ideal product class for this. Parchem have a range of silane treatments available which are usually spray applied onto the concrete surface. The silane penetrates into the concrete and prevents water from entering the structure and therefore the entry of aggressive chlorides from the severe marine environment.

One of the additional advantages Parchem were able to offer the contractor, Marine and Civil Maintenance was the ability for them to store products at Parchem's Newcastle Trade Store which they could draw off when needed. This ensured that there were no delays in getting materials to site and minimised any downtime or delays that could occur. The Newcastle branch is one of 19 specialist concrete and construction Trade Stores that Parchem have around the country.

Supplying high performance products with a proven track record is only part of the package that Parchem offers. Parchem prides itself on the level of support and technical advice that they can be provided right from the design and specification stage of a project through the life cycle of the project to ensure successful completion.

This level of support along with a proven range of products is the one of the reasons Parchem has become the market leader in the supply of concrete corrosion protection products for reinforced concrete marine assets across Australia.

When you look back over the many years of operation it's easy to understand why Parchem is the market leader in the supply of concrete corrosion protection products for reinforced concrete marine assets across Australia. It's also clear that, with such obvious dedication to the needs of the construction sector, Parchem will continue to lead the way for many years to come.

For more information about Parchem and its range of products visit: www.parchem.com.au

Above and Left: Western Basin 3 & 4 Berths at Newcastle Port

Concrete Connections

NZ News

HEALTH AND SAFETY | FALLS FROM HEIGHTS

The costly business of falls from heights

by Kathryn Heiler and Francois Barton

Every year hundreds of New Zealand workers are seriously injured due to falls from height at work, some of them fatally. The cost of these falls from height is estimated to be $24 million a year in ACC claims – and that doesn't even touch the human cost of losing a loved one, a valued worker and a member of the community.

As the construction work in the Auckland area quickly moves ahead, it is crucial we do not lose sight of the importance of keeping our workers safe and healthy and protect them from the hazards of working from height. Unless everyone commits to making the rebuild safe, we risk lost lives and injured workers.

What we're doing

When we look at the statistics, construction industry injuries and fatalities do not paint a pretty picture. When we break them down we can see that falls from height continue to be responsible for an unacceptable number of serious injuries reported to the Ministry. More than half of these come from falls from less than three metres – most commonly off ladders or from single-storey roofs.

Last year the Ministry launched its Preventing Falls from Height campaign. This campaign has three parts:

- Awareness raising – engaging the sector about the hazards associated with working at height
- Education - providing safety information about what safe working at heights looks like
- Targeted enforcement – visiting residential worksites where there is a risk of corners being cut.

The Ministry, in association with 21 businesses and industry associations from the country's construction sector produced the Best Practice Guidelines for Working at Height in New Zealand. The guidelines are a critical element of the programme, as they give all involved with working at height clear direction on how to manage their work in a way that will bring down the death and injury toll.

The guidelines outline how people organising, planning and doing work at height can keep themselves and others safe. By achieving that, the guidelines also help those involved in the process meet their legal obligations under the Health and Safety in Employment (HSE) Act and the Health and Safety in Employment Regulations, 1995 (NZ).

Enforcement

From July 2012, the Ministry began nationwide targeted enforcement to ensure firms were taking their ethical, social and legal responsibilities seriously, and making it their priority to prevent falls while working at height.

If an inspector observes inadequate or no precautions to prevent falls from or through a single-storey roof and other structures, or unsafe use of ladders, a prohibition notice will be issued. If the problem can be rectified immediately, a written warning will be issued.

If an inspector finds evidence that the hazard of a fall from height has not been adequately managed, and appropriate steps and controls are not being taken, inspectors will issue an improvement notice.

This may require the duty holder's hazard management system to identify work involving the height hazard and the appropriate steps for carrying out the work safely.

For cases involving a fall causing serious harm, a recommendation of prosecution can be expected.

Between July 2012 and January 2013 the Ministry's inspectors visited 1,500 workplaces across New Zealand in the first enforcement phase of the campaign. Of those, 700 residential construction sites had to be shut down because of poor safety practices. More than 900 enforcement actions were taken against construction sites in that time.

With falls from height such a major contributor to the number of serious harm and fatalities reported in the construction sector, it is crucial that the industry fully understands the hazards involved and their responsibilities to help keep workers safe. We must work together to make sure all our workers return home healthy and safe every night.

Kathryn Heiler is the programme director, Canterbury Rebuild Health and Safety.
Francois Barton is acting general manager Health and Safety Operations, Southern Region Ministry of Business, Innovation and Employment.

Concrete Connections

ACRA AWARDS FOR EXCELLENCE IN CONCRETE REPAIR AND PROTECTION

The ACRA Awards night — **NOW OPEN** for corporate members to enter their projects for a chance at this prestigious industry award– Entries close July 8, 2014.

Dear ACRA Corporate Members

The October 16, 2014 will see the 8th Biennial ACRA Awards For Excellence held in Cockle Bay, Sydney.

In past years, we have seen some of the best projects and entries from all over Australia. This year, we want to continue the tradition of showcasing our members' good work. Following the awards, we will be running an editorial in industry publications to showcase the awards and the winners.

All entries will be acknowledged, with the winners having the opportunity to further promote themselves.

For information as well as the entry form click here or visit the ACRA website www.acrassoc.com.au

We look forward to receiving your entries!

Photo: 2012 Major Award winner of the ACR A Award for Excellence, BASF Australia for their West Gate Bridge project

Got something to say?

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

NDUSTRY CALENDAR OF EVENTS 2014 .....

18 March	**ACRA Seminar** Security of Payments Act. & Durability in Remedial Design	**Brisbane, QLD**	**www.acrassoc.com.au**
1-2 April	**Australian Road Engineers & Maintenance Conference**	**Melbourne, VIC**	**Scott.matthews@commstrat.com.au 03 8534 5004**
30 May	**ACRA Concrete Repair and Protection Course**	**Sydney, NSW**	**www.acrassoc.com.au**
27-28 May	**Australian Small Bridges Conference**	**Sydney, NSW**	**Scott.matthews@commstrat.com.au 03 8534 5004**
13 June	**ACRA Concrete Repair and Protection Course**	**Melbourne, VIC**	**www.acrassoc.com.au**
19-20 June	**ACA/ACRA Corrosion & Protection of Concrete Structures**	**Sydney, NSW**	**www.corosion.com.au under the Training Calendar tab**
21-22 May 7-8 August	**ACA Corrosion of Concrete Structures Course**	**Sydney, NSW Brisbane, QLD**	**www.corosion.com.au**
1 September	**International Conference on Concrete Repair**	**Belfast, Northern Ireland**	**www.rilem.org**
3 September	**ACRA Concrete Repair and Protection Course**	**Melbourne, VIC**	**www.acrassoc.com.au**
16 October	**ACRA Award in Concrete Repair**	**Sydney, NSW**	**www.acrassoc.com.au Open to Corporate Members Only.**
27-28 November	**ACA/ACRA Corrosion & Protection of Concrete Structures**	**Brisbane, QLD**	**www.corosion.com.au under the Training Calendar tab**

NEW CORPORATE MEMBER.....

Contech Specialist Contracting (Auckland, NZ) **Email:** mlawson@contech.co.nz

BBR Contech is New Zealand's most recognised provider of technical expertise and specialist contracting services in the construction and civil engineering industry.

Services include post-tensioning, seismic strengthening, structural upgrading, concrete repair, cathodic protection, concrete crack injection, ground anchoring and grouting. We also supply industry with specialist materials including FRP, Macalloy bar, Drossbach ducting and Kerneos calcium aluminate concrete. www.contech.co.nz

Mulford Holdings Ltd (Dunedin, NZ) **Email**: barrie@mulfordholdings.co.nz

Mulford Holdings Ltd commenced business as an Applicator of Specialist Coating and Painting Systems. We then diversed into Waterproofing Systems, Floor Coatings and Concrete Grinding for Commercial and Domestic buildings to compliment our ever changing range of services.

This remains the main thrust of the operation to this day, with additional complementary products introduced, to extend the range to encompass a full range of coating and waterproofing materials for all types of construction. Our expertise is in the areas of Waterproofing Membranes, Spalling Concrete, High Build Acrylic Coatings and Membranes, Waterborne Epoxies and High Solids One and Two Component Urethane Coatings, Tanking, Sealant Application, Decks and Flat Roofing. Mulford Holdings Ltd is one of the leading Companies in the South Island for Waterproofing, Injection and Grouting. http://www.mulfordholdings.co.nz

NEW INDIVIDUAL MEMBER.....

Wayne Mitchell (NSW) Email: info@wsbenchmark.com.au

Concrete Connections

CORPORATE MEMBERS

CONSULTANTS

ACOR Consultants
AECOM Australia
ARUP
BAAM Consulting
Bellmont Façade Engineering
Costin Roe Consulting
Diagnostech
GHD
Hyder Consulting
Infracorr Consulting
Integrated Consultancy Group

SUPPLIERS

BASF Construction Chemicals Australia
Parchem Construction Supplies
SIKA Australia & NZ
Volumetric Concrete Australia
Xypex Australia

ASSET OWNERS

Brisbane City Council
Main Roads WA
Moira Shire Council
Roads & Maritime Services NSW
Sydney Ports Corporation
VIC Roads
Water Corporation of WA

CONTRACTORS

Absafe
Andersal
Australian Concrete Repair Group
BCMG
Buildcorp
Caps Beta
Central Systems
Consolidated Quality Projects
Contech Specialist Contracting
Dapcor Building Services
Duratec Australia
Eptec
Evolution Civil Maintenance
Fluid Building Services
Freyssinet Australia
Hitech Remedial & Construction
Interflow Pty Ltd
Marine & Civil Maintenance
MDP Group
Metrocorp Technologies
Mulford Holdings Ltd (NZ)
National Concrete Solutions
Portolesi Structural
Preservation Technologies
RCW Group
Remedial Building Services
RM Watson
Savcor ART
Structural Systems (Remedial)
Water Infrastructure Group

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.

Click here to join now!