

Australian awards showcase best concrete repairs

It's not even about peers judging each other's work. It's about independent expert judges studying a body of work done by Australia's leaders in concrete repair and protection and saying "These are the best".

Such is the importance of the biennial ACRA Awards for Excellence, staged continuously by the **Australian Concrete Repair Association** since 2000 and whose 2008 winners' list will be announced soon.

With judging in nine categories, the event provides a line-up of benchmarks to apply against those who say they can save deteriorating buildings and structures.

Those in need of such benchmarks include asset owners and managers, main contractors and consultants/architects.

Armed with the opinion of respected unbiased experts such as Izzat Consulting's Warren Green (Chairman), Prof. Ian Gilbert, University of NSW's School of Civil and Environmental Engineering and Port Stevens Strata Management's David Morris, we can all get a more confident idea of what com-



prises world's best practice and world's best practitioners in concrete repair.

It also serves to challenge other concrete repairers to meet the challenge, not only of seeking entry into ACRA ranks, but also of having their successful projects showcased in such a high profile way.

The winners, of course, gain great prestige. But the winners are the best of an excellent bunch, such that there are invaluable benchmarks to be had from every submission, not just the winners, and worthy exposure to be gained by every ACRA member who enters.

This feature reviews sample entries in the nine categories:

1. Innovation
2. Investigations
3. Projects up to \$250,000
4. \$250,000 to \$1,000,000—Residential/Commercial
5. \$250,000 to \$1,000,000—Industrial/Marine/Civil
6. \$1,000,000 and above—Residential/Commercial
7. \$1,000,000 and above—Industrial/Marine/Civil
8. Long-term performance
9. Repair Industry Excellence Award



a.

Entrant: Andersal Engineering

Project: Glebe Island Silos, Sydney, NSW

Category: >\$1m (industrial/marine/civil)

Works: Strengthen the silos to increase cement holding. Install reinforced columns and reinforce existing columns, infill and thicken walls and footings, and install concrete annulus inside each silo.

Outcome: Completed on time and budget, and without injury or lost time.

ACRA contributors: Sika, Maunsell

Other categories entered: 3, 4, 8

b.

Entrant: Buildcorp Asset Solutions

Project: Clean Coal Silos 1&2, Mt Thorley, Warkworth, NSW

Category: >\$1m (industrial/marine/civil)

Works: Following an options study, remediate the silos using carbon fibre composites following major repair of concrete spalling and cracking.

Outcome: The silos now running at 100% and have a design life of the 15 years.



ACRA contributors: BASF

Other categories entered: 6

c.

Entrant: Crest Restoration Services

Project: 50 Palm Beach Road, NSW

Category: >\$1m (residential/commercial)

Works: Install new windows, balconies, balustrades, roof, sunroof and lobby. Also solve magnesite problem and apply anti-



carbonation and anti-chloride coatings.

Outcome: The 30 year old unit block has the desired facelift and is protected against future attack from sea air.

ACRA contributors: Parchem, Sika.

Other categories entered: 4

d.

Entrant: Diagnostech

Project: BP Bulwer Refinery, Queensland

Category: Investigation

Works: Inspect and identify causes of cracking, and design remediation of two structural elements suffering severe decay: a concrete pad footing for a seven storey high steel bypass stack and four large concrete columns supporting a staircase and work platforms.

Outcome: Project completed on time.

ACRA contributors: Structural Systems (Remedial)

e.

Entrant: GHD

Project: Ulladulla Fisherman's Working Jetty, South Coast, NSW

Category: Long term performance

Works: Inspect, identify and cost repair



options, trial on-site a CP design and test. Verify encapsulation around anodes.

Outcome: Inspections over ten years reveals no additional cracks, spalls or delamination in the concrete and no formation of incipient anodes around the repair.

f.

Entrant: Hyder Consulting

Project: 75 Miller St, Sydney, NSW

Category: \$250k–\$1m (residential/commercial)

Works: Inspect facade by rope access and estimate quantity of repair. Present three price-scaled options. Submit DA, Construction Certificate and Environmental Impact Statements and oversee the repair.

Outcome: Estimates proved accurate. Effectively a facelift for 5% under budget.

ACRA contributors: Parchem, RM Watson



g.

Entrant: Maunsell AECOM

Project: Lae Container Berth 3, PNG

Category: Innovation

Works: Condition assessment, recommendations, technical specifications, site supervision and training in the course of rehabilitating a quarter century old berth.

Outcome: Life extended by 30 years.

ACRA contributors: Savcor ART

h.

Entrant: Metropolitan Restorations

Project: SWSOOS1, Sydney, NSW

Category: Innovation

Works: To avoid catastrophic failure,



structurally rehabilitate 1.6 km of sewage tunnel including 1 km of HDPE lining and deal with a section in heavily contaminated ground.

Outcome: Completion including a “first” mobile formwork to install a liner in an irregular tunnel and including a back-grouting technique tailored to the project.

ACRA contributors: Parchem

Other categories entered: 3, 4, 5, 7



i.

Entrant: Parchem Construction Products and Central Systems

Project: Garden Island Causeway, Rockingham, WA

Category: >\$1m (industrial/marine/civil)

Works: In the course of refurbishing the 613 m long High Level Bridge, survey and repair all concrete defects, remove existing coatings and apply silane coating.

Outcome: Service life extended, saving the expense incurred if chloride ingress and defects had not been rectified promptly.

ACRA contributors: GHD

Other categories entered: 1

j.

Entrant: Preservation Technologies

Project: Kentbridge House, 491 Kent Street, Sydney

Category: \$250k–\$1m (residential/commercial)

Works: Despite time, access, safety and other constraints, repair and protect the north, south, west and northwest facades.

Outcome: The building is fully protected against future corrosion around window sills and heads such that the client will avoid dealing with the difficult access and



safety issues in their future maintenance.

ACRA contributors: Hyder, Parchem

k.

Entrant: RM Watson

Project: Crest Hotel, 111 Darlinghurst Rd, Kings Cross, NSW

Category: >\$1m (residential/commercial)

Works: Remove all over-cladding. Repair and upgrade the façade with a decorative protection coating system.

Outcome: Open the hotel a week early with new façade and under budget.

ACRA contributors: Hyder, Parchem, BASF

l.



Entrant: Savcor ART

Project: Tugan Bypass, Gold Coast, Queensland

Category: Innovation

Works: CP and corrosion monitoring; a change to ground bed anodes outside the diaphragm walls and along the tunnel.

Outcome: A 100 year design life for all reinforced in-soil concrete elements.

Other categories entered: 7

m.

Entrant: Xypex Australia

Project: Kiewa West Power Station

Category: <\$250k

Works: Replacing old roof membrane with crystalline technology. Seal joints and repair parapet walls and cracks. Protective coat, ending with an architectural finish.

Outcome: Successful. No moisture or efflorescence now visible.

Other categories entered: 3

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