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# CONSTRUCTION ENGINEERING AUSTRALIA

JUNE/JULY 2021

V7.02

## COMPLIANCE *MADE EASY*

PRE-QUALIFICATION OF ACRS STEEL MAKES  
COMPLIANCE WITH AS/NZS STANDARDS EASY



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CIVIL WORKS  
CIVIL ENGINEERING**

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EXPERT, INDEPENDENT,  
THIRD-PARTY STEEL CERTIFICATION  
TO AUSTRALIAN AND  
NEW ZEALAND STANDARDS



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# contents

JUN/JUL 2021  
Volume 7 Number 2



## Published by:

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Publication No. 100001889

ISSN 2204-7247



- 2 Editorial
- 4 Industry News
- 10 Cover Feature: ACRS - Compliance Made Easy
- 16 National Precast Feature
- 20 Product Focus: Comblift 60,000th Truck
- 22 Precast Technology
- 26 How engineers are changing the way we build
- 30 Product Feature: Smart Sinks COVID-Safe work sites
- 34 Company Profile: Aussie Pumps Goes Global
- 38 Special Feature: InEight APAC Outlook
- 42 Sustainable Construction
- 46 Project Management



7



18



22



43



## About the Cover

Ensuring that the construction steels being used throughout all stages of construction or fabrication conform with all relevant Australian and New Zealand Standards and Building Codes - irrespective of their country of origin - is of paramount importance. Pre-qualification of ACRS steel makes compliance with AS/NZS Standards easy.

► Turn to Page 10 for the full story.



# SPACE TO BREATHE

## SAFE INNER-CITY GREEN SPACE CRITICAL FOR BUILDING COMMUNITIES

Dear Readers,

While few would argue the massive impact the COVID pandemic has had on our economy and society – both across Australia and around the globe – it's also now clear, that the impact on our larger cities can be expected to last well beyond the end of 2021... and I'm not referring to potential lockdowns, shut-downs or 'vaccine passport' controls.

Put simply, over the past 18 months the COVID pandemic has, for all intents, laid waste to many of our inner-city CBD's – both from a business and economic perspective, and in terms of the mass exodus of residents.

Whereas prior to 2020, the dream for many may have included a nice inner-city apartment with easy access to the many wonderful attractions, facilities and events that our cities feature, the harsh realities of COVID-related lockdowns, social distancing, and fears of an increased risk of infection associated with higher density living have brought those dreams to an end.

Indeed, the increased desire on behalf of many people in the wake of COVID to 'have more space to themselves' has even seen a significant shift away from suburbs of our larger cities out into the regions.

While I feel certain that the coming months – with the change of seasons and the ever-important increase in the number of vaccinated Australians – will see restrictions ease and day-to-day life start to move back to what we once considered 'normal', I fear that the move back to our

inner-city CBDs may not be as rapid. And while there will clearly be a number of reasons for this (including, for some, a newfound love of regional living) I believe for some, the key to their reluctance to get back to the inner-city is simply a 'lack of space' – especially green outdoor space.

In short, while we may have previously taken many things – including an ability to enjoy green space and fresh air – for granted, for a significant percentage of the population, the thought of being locked down in an apartment (even one with a balcony) highlighted just how important access green open space and trees can be! Most people like to have 'room to breathe'.

Now, even though many new inner-city residential developments incorporate a 'common' plaza area for residents to enjoy, most of these tend to be paved areas, or at best, are only designed with minimal amount of 'grassed' areas and a limited number of trees.

Please don't misunderstand, that comment is not an attempt to suggest that these areas are all badly designed or unattractive 'concrete jungles' – quite the contrary.

Many of these plaza and/or common areas are both practical, inviting and aesthetically pleasing. What's more, in many instances, they provide a 'central meeting place' for the high-rise community – in much the same manner as the traditional village green did in the past. They are, however, no substitute for natural parkland or open green space with an abundance of grass, trees and other plants.

We must never underestimate the importance of 'green open space' – both to the environment, and in relation to the positive impact that it has on our mental and physical wellbeing.

Good quality public facilities and infrastructure such as well-planned, useable green open space are critical factors in building 'communities' rather than just groups of 'dwellings'. One only has to look at the positive impact that a community garden can have – regardless of the demographic or the location.

People need to 'room to breathe' – both in the physical sense and the existential sense.

While most of us may have previously taken that experience largely for granted (which is perhaps not surprising given the freedoms that we, as Australians, enjoy), COVID has shown us how fundamentally important that ability really is.

With that in mind, I believe that increasing the amount of safe, useable inner-city green spaces across our major capitals and larger cities can play a significant role in attracting residents and visitors back to our inner-city CBDs.



**Anthony T Schmidt**  
Managing Editor

# CONNECTED DATA DELIVERS PROVEN PROJECT CERTAINTY

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## 380% TIMBER PRICE SURGE CUTS DOWN 'WOOD-BE' HOMEOWNERS

Global demand for critical building materials could bring Australia's residential construction industry to its knees, according to data compiled by Grafa.

Australian builders have been left without their most critical material as a global construction boom sends timber prices into orbit - up 380% to a record high in May this year.

For households waiting to move into their new home, time and cost blowouts are likely to continue due to the scarce and expensive supply of timber, according to Grafa analyst "Data Dan" Petrie.

"In uncovering what was behind lagging construction times, the analysis team at Grafa found that record high timber prices had caused a supply shortage that will plague the industry for the foreseeable future.

"While timber prices have since fallen from a record high, supplies are unlikely to become cheaper any time soon with scarce imported inventories fetching top dollar," Mr Petrie said.

Domestic supplies of timber have also hit a wall following the 2019/20 bushfires in New South Wales and Victoria, which destroyed 8.5 million hectares of forest, taking decades to replace according to the Australian Department of Agriculture, Water and the Environment.

On the receiving end of critical supply shortages are construction businesses forced to wait on \$1.6 billion of residential

construction activity stimulated by the Federal Government's HomeBuilder grants.

"This shortage is going to be felt the worst by young people who've received the HomeBuilder grant, and that's going to have a flow-on effect to the economy as more and more projects are put on hold indefinitely," Mr Petrie said.

Of the 99,000 families who applied for the grant to build their dream home, 9,800 (10%) have been left in limbo, likely forced to resign their lease without knowing when construction will conclude.

The graph which shows the difference between residential projects commenced and completed quarterly, highlights the diminishing capacity of construction businesses during the latest boom.

"Because of affordability constraints and critical value thresholds to remain eligible for the grant, some households have been left with no choice but to put projects on hold indefinitely until the current shortage ends," Mr Petrie added.

Wait times are likely to continue with construction activity still being spurred on by record low interest rates and a raft of federal and state incentives aimed at bolstering the sector over the last 18 months.

Grafa is a financial data, news and analysis platform that gives users access to large volumes of information quickly and in a way that's entertaining and engaging.

## LEWIS LAND GROUP PROVIDES STAFF WITH 2 DAYS PAID VACCINATION LEAVE



Lewis Land Group has announced it is providing all 650 staff members with two days paid vaccination leave. Speaking on the announcement, Lewis Land Group CEO, Matthew McCarron said:

"At Lewis Land Group, we believe the only pathway out of the disruptive cycle of COVID-19 lockdowns is via vaccination."

"In addition, the physical and mental health of our entire team is of utmost importance," Mr McCarron said.

"That's why we're providing all 650 of our people with two days paid vaccination leave to encourage our whole team to get their jobs as soon as possible. This includes both permanent and casual employees."

"We're also offering up a number of our sites as vaccination hubs to increase accessibility to our local communities," he said.

"We believe that it's incumbent on all businesses - big and small - to support the acceleration and advancement of this effort," Mr McCarron added.

### ABOUT LEWIS LAND GROUP

Lewis Land Group is one of Australia's oldest private property developers, founded in 1957. The Group comprises a portfolio of residential, retail and leisure properties, including mixed-use community Sovereign Hills, premier outlet shopping facilities Harbour Town (Adelaide & Gold Coast), and hospitality venues: The Fiddler Hotel, The Belvedere Hotel, Camden Valley Inn and the Mon Komo Hotel.

# LET'S GET BEHIND TRADIES NATIONAL HEALTH MONTH

#TRADIESHEALTH #CHOOSEPHYSIO



## AUGUST IS TRADIES NATIONAL HEALTH MONTH

The well-being of the nation's tradies is vital to our economy, the community and their own families, so keeping them healthy, mobile and pain free is the priority of the Australian Physiotherapy Association (APA) initiative *Tradies National Health Month*.

For the month of August, the APA is again putting a focus on the importance of tradies health and wellbeing, raising the awareness of the effects of physical demands on their health, and encouraging tradies and their employers to take positive steps towards better health outcomes.

Research conducted on behalf of the APA<sup>1</sup> confirmed that being a tradie is physically demanding as the result of the intensity and repetitive nature of their work, revealing that 60 percent of tradies often have aches and pains as a result of their job.

These findings were supported by WorkSafe Victoria, who report that 'tradies account for 60 percent of all injury and muscle disorders

across all occupations<sup>2</sup>, with joint, ligament and musculoskeletal injuries the most common.

APA research<sup>1</sup> highlighted that two-thirds of tradies agreed that they would be more inclined to stretch or warm up before starting work if their employer prioritised it.

National Chair of the APA Occupational Health Group, Deb Sutherland said that the prevention of injury and early treatment are two vital elements of boosting tradies health and wellbeing, with both employers and physiotherapists acknowledged as playing a critical role.

"Whether it is completing worksite risk assessments, providing tradies with treatment, or education and advice on what can be done at work to manage and reduce the risk of injury, physiotherapists have an important part to play in ensuring tradies are in the best physical and mental shape possible throughout the day."

"There is no health without mental health and 20 percent of tradies surveyed reported mental health issues as a result of workplace issues. Physiotherapists are often a first point of contact for tradie injuries and are in a position to identify signs of poor mental health, provide support and encourage seeking appropriate professional help," Ms Sutherland said.

- 1 Tradies Health Survey 2019 – prepared by Empirica Research for the Australian Physiotherapy Association
- 2 WorkSafe Victoria, Get the right tools to build a safe workplace <https://comms.worksafe.vic.gov.au/link/id/zzzz5f4855a89a832115Pzzzz525c801c743ad142/page.html>

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# NEW DESIGN GUIDE SUPPORTS NSW BUILDING REFORMS

In the wake of major NSW legislative and regulatory reforms to improve building quality and safety, three peak bodies have released a landmark guide for design practitioners and engineers. Consult Australia, Engineers Australia and the Australian Institute of Architects have joined forces to develop the Guide for design practitioners and engineers to help their members tackle the recent NSW Building Confidence reforms.

The guide is a practical resource that highlights key issues relevant to contracts and professional indemnity (PI) insurance relating to the recent legislative and regulatory changes.

There are multiple new obligations on design practitioners, engineers and building practitioners throughout the life of a building under the NSW Design and Building Practitioners Act 2020 (the D&BP Act) and the Design and Building Practitioners Regulation 2021 (the D&BP Regulation). The

three peak bodies have worked closely with the NSW Government and authorities on the reforms which aim to ensure better compliance with the Building Code of Australia underpinned by higher quality design documentation in a positive step towards rectifying issues that have had significant negative impacts on consumers and building industry practitioners.

Australian Institute of Architects NSW Chapter President, Laura Cockburn, urged architects and other design and construction professionals to take full advantage of the new guide, saying "We are determined to continue driving quality and safety improvements in our built environment."

"This new legislative framework is an important step in that process that will also rebuild consumer confidence and augment the safeguards detailed design documentation brings to any project, but particularly projects at scale."

Consult Australia CEO Nicola Grayson noted "The interplay between contractual obligations and PI insurance policies is a critical issue for our members that must be considered before signing any contract."

"This guide helps design practitioners and engineers understand this interplay in the context of the latest NSW reforms."

Engineers Australia Chief Engineer Jane MacMaster said "The building reform agenda in NSW encapsulated by the D&BP Act and Regulations will help to ensure buildings are built to the high standard expected by our communities. This guide will assist design practitioners and engineers with their role and obligations in the new regulatory environment."

Matt Press, Director, Office of the Building Commissioner has supported the work by the industry bodies.

"The implementation of the Design and Building Practitioner Act creates new roles, responsibilities and liabilities for many players. It's so important that these are reflected in contracts to make sure clients, designers and engineers are on the same page and we minimise disputes. The Australian Institute of Architects, Consult Australia and Engineers Australia have shown great industry leadership to produce a one stop shop for practice-focused guidance."

A copy of the Guide for design practitioners and engineers is available on the following websites:

Consult Australia -

<https://www.consultaustralia.com.au>

Engineers Australia -

<https://engineersaustralia.org.au> and

Australian Institute of Architects -

<https://www.architecture.com.au>



## CONSTRUCTION SECTOR URGED TO WATCH OUT FOR EMAIL SCAMS

The Victorian Building Authority (VBA) is warning builders and plumbers about a growing trend of cybercriminals targeting construction companies and their customers via business email compromise (BEC) scams.

The warning follows an *Australian Cyber Security Centre* (ACSC) alert, noting these emails typically target the customers of the business and will ask them to change bank account details for future invoice payments.

In a BEC scam, cybercriminals will send fraudulent emails posing as a legitimate business.

Victims assume this request is legitimate and will then send invoice payments to a bank account operated by the scammer.

These fraudulent emails may come from hacked email accounts, or cybercriminals might register domain names that are similar to legitimate companies, typically by swapping letters or adding additional characters.

All parties to construction projects should be cautious when communicating by email, particularly when discussing bank account details or invoicing.

Strategies that can be used to reduce risk during these transactions include use of a secure email account with multi-factor authentication enabled, training and awareness for staff to recognise suspicious emails and verification of payment-related requests, such as calling the sender's established phone number or visiting them before transferring funds.

VBA Executive Director Building System Technology David Black said construction companies and their customers should remain vigilant when emailing about invoices and bank details.

"This ACSC alert is a timely reminder to companies and customers of the need to be cautious when exchanging sensitive information online," Mr Black said.

"The VBA will never ask a practitioner to give out their online passwords and if building practitioner or customer has concerns, they should seek advice from an experienced cyber security professional."

Consumers seeking more information about building and plumbing matters can find useful resources at: <https://www.vba.vic.gov.au>





## HOLCIM UNVEILS WORLD'S FIRST 3D CONCRETE PRINTED BRIDGE

On 20 July, Striatum was opened to the public in Venice, the first-of-its-kind 3D Concrete Printed bridge, designed by Block Research Group and Zaha Hadid Architects, in collaboration with incremental3D and Holcim. The footbridge holds together through compression with no reinforcements, applying computational design and 3D printing, for minimal material use and maximum strength.

Philippe Block, co-director of the Block Research Group at ETH Zurich: "The name "Striatum" reflects the bridge's structural logic and fabrication process. In arched and vaulted structures, material is placed such that forces can travel to the supports in pure compression. Strength is created through geometry, using a fraction of the materials used in conventional concrete beams."

Shajay Bhooshan, Head of CODE, Zaha Hadid Architects' Computation and Design research: "Striatum stands on the shoulders of giants: it revives ancestral techniques of the past, taking the structural logic of the 1600s into the future with digital computation, engineering and robotic manufacturing technologies."

Jan Jenisch, CEO of Holcim: "Striatum was designed by some of the best architectural and creative minds in their fields. It demonstrates the infinite possibilities of 3D Concrete Printing to enable more sustainable, faster and effective building structures, without compromise on aesthetics and functionality. Its digital and circular design uses concrete at its best, with minimal material use and blocks that can be repeatedly reassembled and infinitely recycled."

George Agriogiannis, CEO of Holcim Australia and New Zealand confirmed that Striatum is made possible by a specific, custom-made ink, from Holcim's TectorPrint range, developed by its 3D Concrete Printing research team. It sets a blueprint to build for the future using advanced technologies from computational design to 3D Concrete Printing. The next generation of inks can include Holcim's green building solutions, such as ECOPact green concrete, including recycled construction and demolition waste.

"Holcim continues to push the boundaries of innovation and sustainability around the world and locally in Australia and New Zealand. In April we launched ECOPact concrete in Australia to offer architects and builders options to reduce embodied carbon by 30 to 60%. Today's opening of Striatum pushes the frontier again to show what is possible with smart collaboration and design ingenuity," Mr Agriogiannis said.

Holcim is working on a range of 3D Concrete Printing applications, from complex infrastructure to affordable housing. In Malawi, Holcim launched the world's-first 3D concrete printed school, taking only 18 hours to build the walls and using 70% less materials than traditional building techniques.

The organisation is also working with GE Renewable Energy and COBOD to 3D concrete print taller wind turbine towers on-site, doubling their height to harness stronger winds and capture 33% more renewable electricity at lower cost.

Striatum is now open to the public during the Venice Architecture Biennale until November 2021.

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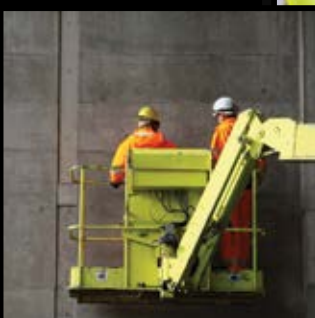
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# COMPLIANCE *MADE EASY*

PRE-QUALIFICATION OF ACRS STEEL MAKES  
COMPLIANCE WITH AS/NZS STANDARDS EASY



The significant growth in major infrastructure and construction projects which has occurred over the past 18 months – together with the associated growth in demand for construction materials – has also resulted in an increased chance of inferior products and materials finding their way onto construction sites in place of materials which conform with the relevant Australian and New Zealand Standards. As such, matters relating to product conformity and certification of construction materials such as structural and reinforcing steels to Australian and New Zealand Standards is perhaps now more important than ever before.

**E**nsuring that the construction steels being used throughout all stages of construction or fabrication conform with all relevant Australian and New Zealand Standards and Building Codes - irrespective of their country of origin - is of paramount importance. After all, these Standards have been considered and developed to ensure that buildings and other structures are not only 'fit for purpose', but are also capable of meeting their design life requirements.

Unfortunately, in this day and age, it's simply not enough to think that just because steel has been ordered to an Australian or New Zealand Standard that the delivered product will automatically conform with that Standard and be fit for purpose. Increasingly, this is not the case. In fact, there are some instances where even though the materials have been specified and ordered to an Australian Standard, the materials that arrive are non-conforming. The product may meet the Standard; it may be supplied with documents for "an equivalent Standard" (but which Standard and is it really equivalent?) or it may not meet any Standard at all.

Importantly, whether this non-conformance is an intentional act of deception or 'counterfeiting' on behalf of the materials supplier, the builder or the contractor; or simply a matter of non-conformance through lack of correct process or an innocent misunderstanding of what constitutes conformance with Australian Standards, is effectively a moot point. Using non-conforming building materials carries a high risk of 'built-in' failure - the results can be disastrous.



## INDEPENDENT, EXPERT, THIRD-PARTY CERTIFICATION

The only way to be truly sure that the materials being used conform fully with the appropriate Australian and New Zealand Standards and are fit for purpose, is through independent, expert third party certification with ongoing validation.

ACRS provides a fully independent, expert assessment and certification to AS/NZS Standards for both Australian and internationally sourced construction steels, including reinforcing steels, structural steels and prestressing steels.

ACRS steel is pre-qualified. The manufacturers and processors have already demonstrated compliance with the relevant Australian and New Zealand Standards.

By using ACRS certified construction steels, builders and contractors can be confident that they are getting the AS/NZS compliant materials that they ordered, and engineers and building certifiers can be confident that the steel meets the requirements of the Building Codes and associated Standards and is fully traceable from the point of manufacture to the point of delivery.

All ACRS certification personnel are fully-qualified metallurgists and engineers with many years of direct experience in the manufacture, processing, or design and construction of the steel materials it certifies. In addition to factory production control audits and independent testing, the ACRS scheme provides regular review and analysis of all products manufactured and supplied by the certified supplier. All testing is observed and verified by independent NATA test laboratories, and all processes, including the use of traceability tags, are audited.

The ACRS scheme operates as a verification-based system modelled on international best-practice standards. Where some certification systems might accept the suppliers' own quality management systems certification and test reporting without further checking, ACRS doesn't. ACRS assessors independently select the samples for testing during the audit to prevent any chance of "cherry picking" by the supplier. It then manages the subsequent verification process through independent qualified laboratories selected by ACRS, not the supplier.

The process is further bolstered by ACRS conformity checking on the suppliers' raw production data, which is undertaken every three months.



## ACRS MAKES IT EASY

Perhaps most importantly, ACRS certification makes checking for compliance with the relevant Australian and New Zealand Standards easy. It demonstrates **INDEPENDENTLY** and **EXPERTLY** that the supplier consistently meets the Standards stated on the certificate.

Beyond checking the supplier's ACRS certificate, product markings and tags, there's no need for you to make any further checks on ACRS certified materials. That means:

- No more checking materials properties against technical specifications;
- No more checking batch numbers against the test certificates.

This makes matching material to conformity documentation simple and effective for the customer and for any verifier.

The ACRS website also forms an integral part of the process of verification of supply claims and helps to protect against fraudulent certification claims. Visitors to the website ([www.steelcertification.com](http://www.steelcertification.com)) are able to search for all current ACRS certified suppliers by location (globally) and/or product category.

Search results include a full listing of all certified suppliers for the selected criteria, detailing: company name; location, certification status and certificate number.

The certificate number also provides a hyperlink to a PDF version of the current certificate. Most entries also contain additional hyperlinks which provide visual details of product markings, together with a scanned example of an actual product tag from the supplier.

The bottom line... **with ACRS it's easy for your suppliers, easy for your customers and easy for you!**

For further information please email ACRS at: [info@steelcertification.com](mailto:info@steelcertification.com) or visit the website: [www.steelcertification.com](http://www.steelcertification.com)

## HOW DO I SPECIFY ACRS CERTIFIED STEELS?

The easiest way to manage and minimise the risk of non-conforming construction steels, is to specify ACRS certified steels.

### SUGGESTED WORDING FOR STRUCTURAL STEELS

"Structural steels shall comply with AS 1074, AS 1442, AS 1579, AS/NZS 1163, AS/NZS 1594, AS/NZS 3678, AS/NZS 3679.1, or AS/NZS 3679.2, as appropriate. Structural bolts shall comply with AS/NZS 1252.

Where applicable, materials shall be fabricated in accordance with the "Fabrication" requirements in Section 14 of AS 4100 or Appendix G of AS 5100.6, or AS/NZS 2327, or NZS 3404, and the requirements of AS/NZS 5131.

Acceptable manufacturers of structural steels, structural bolts, and the fabricators of structural

## STAY UP-TO-DATE AT [WWW.STEELCERTIFICATION.COM](http://WWW.STEELCERTIFICATION.COM)

Just because your supplier was previously ACRS Certified, don't take it for granted that they still are. Their ACRS Certification status may have changed due to factors including:

- > Changes in ownership
- > Changes in manufacturing locations

- > Additional products
- > Discontinued Products

That's why ACRS' comprehensive program of annual audits and rigorous 3-monthly data analysis is so important. It ensures that standards and quality are maintained, so you can have

confidence in your construction steel supplies.

Importantly, checking and confirming that ACRS certificates for products/suppliers are current is quick and easy on the ACRS website.

Visit: [www.steelcertification.com](http://www.steelcertification.com) for full details of all current certificates.



welded sections must hold a valid certificate of approval issued by the Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS), or to such other accredited product certification system as shall be demonstrated by the supplier to be directly equivalent in scope and technical rigour to ACRS and approved as such in writing by the specifier.

*Evidence of the supplier's compliance with this clause must be obtained when contract bids are received."*

#### **SUGGESTED WORDING FOR STEEL REINFORCING MATERIALS**

"Steel reinforcing and steel prestressing materials for concrete shall comply with AS/NZS 4671 or AS/NZS 4672, respectively.

Where applicable, materials shall be cut and bent in accordance with the requirements of the "Material and Structural Requirements for Reinforcing Steel" clauses in AS 3600 or AS 5100.5, or the "Reinforcement" clauses of NZS 3109.

Reinforcing couplers shall comply with RMS specification RMS SF2013/184115 Approval of Mechanical Reinforcing Bar Splices, or NZTA SP/M/022 Bridge Manual (technical approval sections), as specified.

Acceptable manufacturers and processors of steel prestressing and steel reinforcing materials, including both manufacture and application of reinforcing couplers, must hold a valid certificate of approval issued by the Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS), or to such other accredited product certification system as shall be demonstrated by the supplier to be directly equivalent in scope and technical rigour to ACRS and approved as such in writing by the specifier.

*Evidence of the supplier's compliance with this clause must be obtained when contract bids are received."*



The bottom line...  
**with ACRS it's  
 easy for your  
 suppliers, easy for  
 your customers  
 and easy for you!**



## THE ACRS 'CHAIN OF CERTIFICATION'

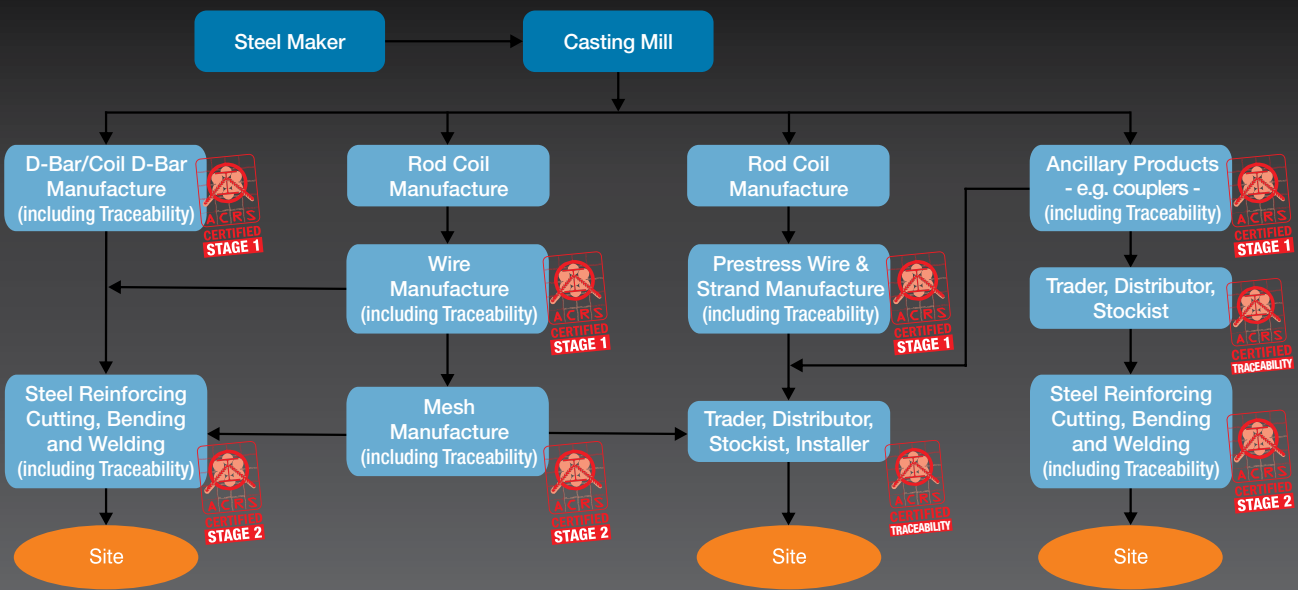
Construction steels manufactured to AS/NZS Standards can be rendered non-conforming by poor transformation, e.g. through processes such as cutting, bending and welding.

Certification systems that only assess the mill of manufacture do not provide for validated performance to Standards of the as-delivered product.

In steel reinforcing materials, the ACRS scheme, through its certification of steel reinforcement ("rebar") processors and the mills of manufacture, provides a rigorous mechanism for "bookending" the manufacture and transformation. This 'chain of certification' provides a vital link between the steel manufacturer and the construction site.

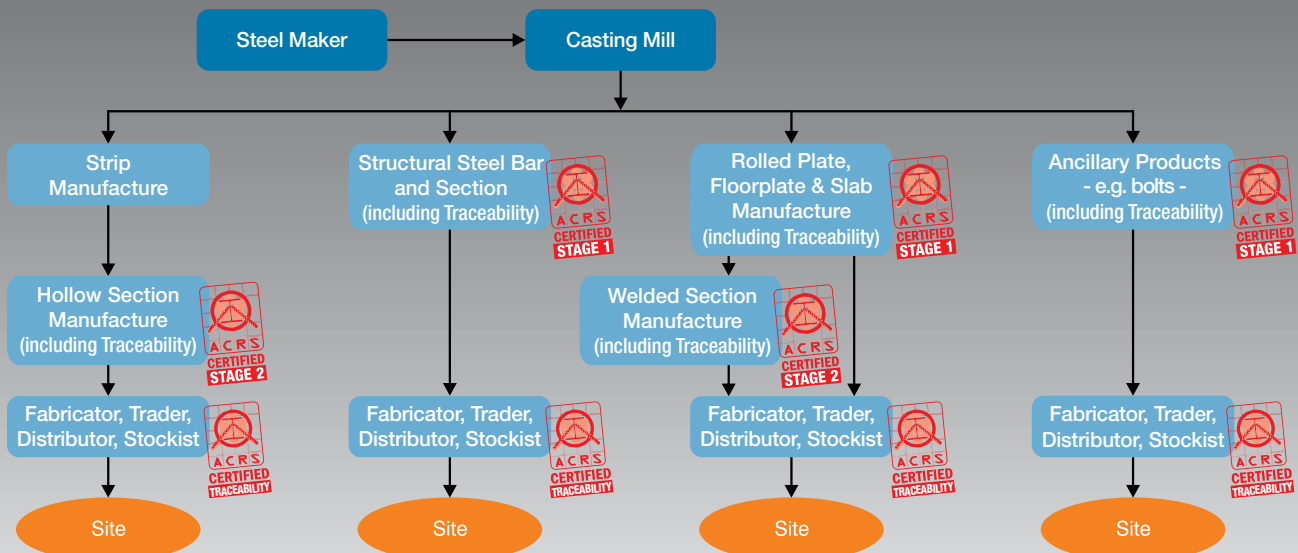
For any steel to be ACRS certified, it must have been manufactured by an ACRS Certified supplier. Any break in the 'chain of certification' of the mill and the processor means the steel delivered to site is not ACRS certified.

### ACRS REINFORCING STEEL CHAIN OF CERTIFICATION



**FOR REINFORCING STEELS**, ACRS certifies BOTH the steel mill that manufactures the steel AND the steel reinforcement processor and mesh supplier. Verification of the outputs of both these supply streams is essential for any steel reinforcing materials claiming to conform with the Standards.

### ACRS STRUCTURAL STEEL CHAIN OF CERTIFICATION



**FOR STRUCTURAL STEELS**, ACRS certifies the steel mill of manufacture, who must actively demonstrate traceability of their supply to the steel distributor. ACRS is working with Steelwork Certification Australia to develop "end to end" certification from mill to site that will provide confidence in fabricated structural steels from the purchase of verified steel from ACRS certified mills right through to delivery of the finished fabricated steel to the project site.





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COMPLETE

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# PRECAST TECHNOLOGY

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WORLDWIDE

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- Highly automated and customized carrousel plants
- Reinforcement machinery and mesh welding plants
- Battery moulds, tilting tables, various mould systems
- Slipformer, Extruder, equipment for production on beds
- In-house precast production and in-house testing plant
- Software for machinery and complete ERP systems

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[www.progress-group.info](http://www.progress-group.info)

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# MEETINGS A SUCCESS **DESPITE COVID**

In the past, National Precast members' meetings consisted of a formal lunch, dinner and conference. Then COVID-19 hit, forcing a rethink of how the precast industry's peak body brings together its members.

According to National Precast's CEO Sarah Bachmann, restrictions on travel and a hesitancy to unnecessarily travel interstate prompted a rethink about how best to continue what is one of the most valued services for our members.

Over the last year, the organisation has worked on improving the value and variety of membership events with local and increasingly casual, open gatherings that allow members to visit factories, develop new relationships, network with peers and discuss industry issues. It has also allowed members to bring along more staff, removing the cost impediment of interstate travel.

"The revised event format has seen precast manufacturers take the lead of the conversation, ensuring the topics discussed are relevant and exciting," comments Bachmann.

Throughout the first half of 2021, National Precast has hosted four member events - in Perth, Newcastle, Melbourne and Adelaide respectively. Each of these events have recorded the record numbers of attendees, despite the complications of COVID-19. Despite being intended as local events, several members have taken the opportunity to travel where able.



Newcastle



Newcastle tour of Waeger Constructions facility



Perth

Perth - the first event of the year held in March - had a focused discourse around some potential items for discussion with Main Roads WA. Since then, the authority has been consulted and a meeting process initiated. At the same time, the event provided a friendly space in which both members and prospective members were able to mingle. It also provided Bachmann and the organisation's Communications Coordinator Kate Moore, with an opportunity to update members on other matters and to visit the factory of one of the Association's newest Master Precaster members, BGC Precast.

Later that month, a similar event was hosted in Newcastle consisting of once again a member lunch, and as well, a tour of local Master Precaster member Waeger Constructions' factory. Matt Press, Director of the NSW Office of the Building Commissioner attended the event and brought members up to speed with the impact the Office was having on non-compliant construction in the state.

The Melbourne event was hosted in early May. This time, the member lunch was preceded with an exclusive guided tour of Master Precaster Hollow Core Concrete's Laverton factory.



Adelaide, the home of National Precast’s office, was host to the latest member event. Due to COVID-19 restrictions remaining a harsh reality, the planned tour of the S.A. Precast factory was unfortunately cancelled. The scheduled member lunch proceeded however, which - like the previous events - gave members an opportunity to discuss the latest industry news and network with peers.

Hosting local member events in various locations around the country allows the Associations’ member base a variety of events to choose to attend. As some members have representatives in multiple states, this allows all members an opportunity to attend their preferred event location.

National Precast’s members have responded well to the shift from formal national events to casual local meetings throughout the last year, with increased event attendances from prior years. Local events will continue, with national events being reduced in number as COVID-19 is better under control and travel restrictions eased.

The next event has been scheduled for the end of August to be hosted in Launceston, Tasmania, where National Precast is excited to showcase Hudson Civil’s precast factory with a member-only tour. The tour will be followed by lunch.

# BACK TO THE FUTURE

**RAMSETREID ANNOUNCES NAME CHANGE TO REID CONSTRUCTION SYSTEMS - FOR REID AND DANLEY BRANDS.**



Iconic engineered concrete solutions brand looks to the past to re-establish its position as the first-choice company for engineered concrete solutions.

National Precast’s first Industry Partner Ramsetreid has announced a change of name to Reid Construction Systems (RCS). The new name reflects the company’s now singular focus on wet concrete construction solutions, including Reid™ and Danley™ market brands. Ramset™ anchoring and fixing solutions will now sit under ITW’s Industrial business unit.

RCS’s Business Manager David Barnes said the move is designed to provide greater market focus and support, building on the company’s legacy of industry pioneering work in concrete construction.

“We are keenly aware of our heritage and the role we once played in leading the market and championing the concrete construction industry,” he said. “The market knows who we are and what we do. Now it’s up to us to demonstrate that we’re far more than simply products – we are the team and technology the industry looks to for support, with the passion and drive to advance concrete construction.”

The company’s new mission is to give customers the complete confidence to build with concrete.

“Ultimately, we’re about ensuring customers have the complete confidence to build with concrete,” he said. “Uniting our two market leading brands – Reid and Danley – under a single business entity enables us to concentrate our skills, expertise, and investment to advance concrete construction across Australia and New Zealand.”

The company is currently making further investments surrounding design, development, and testing to ensure its Reid and Danley products continue to excel in local markets. On this front, the company is looking to its Customer-Backed Innovation program and in-house testing capabilities to raise the bar on product quality and compliance to meet higher standards demanded by regulators and industry stakeholders.

The changes underpin a broader value-engineering approach designed to shift the perception of concrete construction offerings from functional commodities to high-valued engineered concrete solutions.

“These developments carry particular significance considering new legislation that places a greater onus on builders and developers to satisfy higher standards for engineering quality and compliance,” Barnes said.

With the lion’s share of manufacturing split between its Melbourne headquarters and Brisbane, RCS supports clients across both Australia and New Zealand, with a team of approximately 170 employees working from offices in Sydney, Melbourne, Brisbane, Auckland, Christchurch, and other regional locations.

National Precast CEO Sarah Bachmann said “It is great to see Reid Construction Systems take this positive new step forward in supporting and promoting the concrete Industry, and in particular, the use of precast concrete. We are firmly behind our Industry Partner and its mission to bolster customer confidence of building with concrete.”

For the latest news and updates on RCS’s exciting initiatives and products, follow them at their new locations:

**Website:** [reidconstructionssystem.com](https://www.reidconstructionssystem.com)

**LinkedIn:** <https://www.linkedin.com/company/reid-construction-systems>

**Facebook:** <https://www.facebook.com/reidconstructionssystem>



## ECOTONE: COLOURING YOUR WORLD

**A NEW TAKE ON COLOURED PRECAST HAS HIT THE MARKET.**

Combining two already available product lines - Nawkaw Australia stains and ecotio2® environmental self-cleaning coatings - ECOTONE™ will deliver a truly local solution to colours and coatings in Australia.

The company claims its point of difference as bringing to life a structure's internal and external surfaces.

Both brands have a solid history in Australia, with Nawkaw Australia stains being widely specified across architectural and civil projects.

National Precast's CEO Sarah Bachmann affirms the Nawkaw Australia product as having

widened up the ability of Master Precasters to deliver architectural solutions to the market.

"Traditionally, architectural precast was considered to be only available from a few, regarded as precast that had integral oxide colouring or an applied finish such as polishing," Bachmann comments.

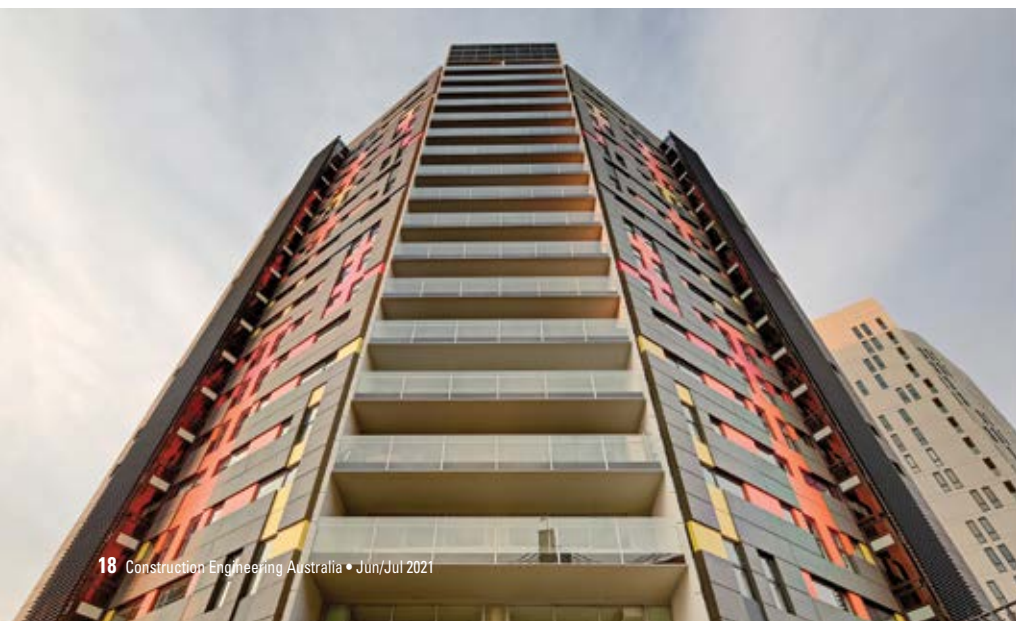
"Architectural precast has become a whole lot more accessible and varied, with almost any quality precaster able to achieve this extended range of architectural finishes. Using a formliner or custom mould for texture, combined with an infinite stain colour palette that is now available to specifiers, really offers so much more. Colours can be solid or translucent colours and metallics are an option too."

Adelaide's Entertainment Centre as well as Sydney's Sky Train and Top Ryde Shopping Centre all boast Nawkaw Australia stains. The stains can be used for colour correction as well, and deliver a 25 year warranty against fading.

ecotio2® has a more recent presence in the Australian market with coatings that keep structures looking new while they purify the air. They are also ISO accredited for anti-viral and anti-bacterial protection.

"With so many amazing precast structures in this country, no-maintenance solutions are essential to keep them looking new. Plus, we need to look after the environment too and protect against COVID-19. These coatings are a game changer," adds Bachmann.

"It makes perfect sense that the two brands have combined under the ECOTONE™ label, a truly Australian solution to simplify a brilliant value-add to the already superior precast product manufactured by our Master Precasters."



 **ECOTONE™**  
Colour for life

# INTERNSHIP



## INTERNSHIP OPPORTUNITIES

Members of National Precast now have Australia wide access to 12-week, no-cost internship opportunities with high-achieving tertiary students.

As part of National Precast’s recently announced internship programme, member companies can opt in to be allocated skilled interns from a range of industry backgrounds including engineering, accounting, IT and business.

According to National Precast CEO Sarah Bachmann, interns available through the Association’s member-only programme are graduates from a range of tertiary institutions across Australia. Each individual is prescreened and matched to the member company, to ensure the best fit for the work environment and required position.

“The program is FairWork compliant and includes full PI, PL and WorkCover insurance. That ensures our members experience a

seamless internship experience,” comments Bachmann.

For each 12 week internship, the graduate is placed with the for 3 to 4 days per week. If you are not yet a National Precast member and are interested in engaging an intern, refer the membership options at [www.nationalprecast.com.au](http://www.nationalprecast.com.au). Memberships are available for precast manufacturers, suppliers to the precast industry and to allied industry professionals such as architects, engineers and builders.

## WORLD LEADING REBAR MANUFACTURING EQUIPMENT

Supporting and supplying to Australasia's leading reinforcing manufacturers for over 40 years. Backed by MEPSGroup Italy, Machinery Indents have the structure, experience and advice to help you with rebar processing equipment

- New and Used Machine Sales
- Genuine MEPSGroup Spare Parts
- High Automation and Flexibility
- Factory Layout Design
- Highest Quality Machinery
- Customer Solutions
- Programmed Maintenance
- Manufacturing Process Consultation
- Manual Handling Solutions
- On/Offsite MEP Equipment Training
- Precast - Rebar Manufacturing Equipment
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Combilift's 60,000th coming off the production lines at the company HQ in Monaghan ready for shipping to Metroll in Toowoomba, Queensland.



## Combilift's 60,000th truck delivered

The Irish manufacturer Combilift recently marked a further milestone when its 60,000th unit came off the production lines at the company HQ in Monaghan and was shipped to the other side of the world. The customer taking delivery of this special forklift is Metroll, a leading Australian manufacturer and supplier of steel building products including roofing, cladding, rainwater, structural and fencing.

Metroll has branches across the country, and the new Combi-CB3000 will be a further addition to its fleet of 13 Combilifts operating throughout the Metroll Group, with another 10 already on order. These range from 3t multidirectional units to a highly customised 10t model.

Combilift number 60,000 will be working at the site in Toowoomba and has been fitted with features such as 4.9m triplex mast with a 3050mm spreader to safely and easily manage the long loads that are typically handled by Metroll.

According to Metroll Operations Manager Vic Josephs "Like most businesses we are very busy and we're also growing at a significant rate, so space has become a premium resource. With this unit we can utilise our space more efficiently whilst at the same time operating safely. Safety is of paramount importance. This forklift allows our machinery to get into tighter spaces and for us to space our racks more closely together to maximise factory floor space."

Combilift CEO and Co-Founder Martin McVicar commented: "This is a great achievement for Combilift, particularly as almost every truck we manufacture is a one-off, designed for specific and individual requirements. There are very few other companies, if any, that can offer this level of customisation whilst manufacturing in such



The new Combi-CB3000 is the latest addition to the fleet of 13 Combilifts that are operating throughout the Metroll Group, with another 10 already on order.

volume. The first half of this year has been by far the best in our 23 year history for the number of orders we have received – not just for Combi-CB models but across our complete product range."

Chris Littlewood, Country Manager of Combilift Australia said: "The Combi-CB 3t model is the most popular unit in the Australian market and accounted for 50% of the machines we sold in the year ending March 2021. So we are particularly pleased that it is one of our customers in this country that has been able to receive this landmark machine."

Following the successful collaboration with Metroll in Australia, Combilift now also supplies its trucks to the company's Californian based operations too.

"We have often found that a recommendation from one country leads to sites elsewhere adopting the same material handling processes with our products," said

Martin McVicar. "So we'd like to congratulate Metroll on taking delivery of our 60,000th truck, and thank them for their continued support over the years."

For further information on Metroll, please visit: <https://www.metroll.com.au/>

For further information on the full range of Combilift material handling solutions, please visit: <https://combilift.com/>

### Watch the Video

Scan the QR Code or visit:

[https://youtu.be/eEulGnhl\\_4U](https://youtu.be/eEulGnhl_4U) to

watch the journey of Combilift's 60,000th truck from the factory to delivery.



SCAN ME



**COMBiLiFT**  
LiFTING INNOVATION

**Safety**  
**Storage**  
**Efficiency**

Manage your construction operations more safely and more productively using less space with Combilift's materials handling solutions

- Safer product handling
- Optimised production space
- Improved storage capacity
- Increased productivity & output
- Enhanced profits



[combilift.com/?cea](https://combilift.com/?cea)



# Successful installation of mesh welding plant in Australia during the pandemic

In 2020, Euro Steel was established as the primary supplier of the reinforcing needs to the Euro Precast QLD business by introducing a new mesh welding plant with a bending machine supplied by progress Maschinen und Automation, a company of the Progress Group. Despite several restrictions and high level safety measures, progress Maschinen und Automation, in close cooperation with the client, managed to set up the plant and provide a full service even during a pandemic.

The message from Euro Steel was clear: **Progress is a safe partner and will make this happen!**

Opened at the end of 2020, *Euro Steel* now looks to supply to and support the construction industry beyond precast.

## AUSTRALIAN PRECAST INDUSTRY REINFORCED WITH AUTOMATION

Precast has always been a highly recognized construction method within the Australian construction industry. As the cost of labour increases, the construction industry constantly reviews the market for innovation and new technology to minimize onsite labour. For this purpose, the highly automated mesh welding plant was the first choice for *Euro Steel*.

The *M-System mesh welding plant* allows for the production of mesh up to N20 and the integrated bending system BGM allows for fully automated bending of the mesh into complete reinforcement cages. The main feature of the system was the ability to create mesh for precast solid walls through an automated process.

Mr George Spiropoulos, Director of Euro Precast and Euro Steel points out the importance for automation in the precast and reinforcement industry in Australia:

“The mesh welding plant is a fantastic machine which allows the production of larger bar meshes without the use of labour. The accuracy and quality of the product is something that labour cannot produce alone.”

## M-SYSTEM MESH WELDING PLANT

Fully flexible production of tailored mesh containing any combination of lengths, widths, wire diameters and pitches are the key advantage of the *M-System mesh welding plant*. Consisting of three main components: the *MMR straightening unit*, the fully flexible welding gantry as well as the BGM wire bending machine, the plant creates a continuous flow of production.



Working from Coil reduces not only material costs, but also human resources needed and thus financially benefits the production.



(L-R) George Spiropoulos, Director of Euro Precast and Euro Steel; with Queensland Minister for Transport and Main Roads, Hon Mark Bailey at the plant's official opening in December 2020.



Finished rebar labelled and prepared for transport to be used in precast elements by Euro Precast.

Each phase of production is based at a separate workstation, working independently of one another but aligned through customized software.

The *MMR straightening system* with rotor straightening technology features 8 electrically driven rotors, each equipped with five staggered straightening dies. The Progress rotor straightening technology ensures constant straightening results and exceptional processing quality of all steel types in compliance with even the most severe standards thanks to the principle of

using separate wire feeds per wire diameter. Wire changeover is performed fully automatic within a few seconds and all wire diameters are permanently clamped into their own rotor available just-in-time.

The additional *BGM wire bending machine*, which can work with wire-diameters up to 16 mm, is an efficient, flexible bending machine, electro mechanically operated for the automatic production of three-dimensional mesh such as cages to an exact size. The machine is equipped with a rapid clamping system for the removable of bent mesh.

The welding gantry is carrying out the mesh welding, which is computer controlled and thus assures precise welding in combination with efficient energy consumption.

Euro Steel benefits from the many advantages of highly flexible mesh production, including:

- tailoring mesh to fit static requirements through variable bar placement and diameters;
- eliminating material waste;
- eliminating greatly reducing manpower requirements; and
- reduction of lead times, logistical effort, and storage costs.

The process control system and the management software *Profit from Progress Software Development*, also member of the Progress Group, ensures the optimal planning, control, and production. It allows for all the production jobs to be planned and monitored remotely.

Thanks to the PTS test service unique to progress, every product can be tested in a virtual environment before sending it to the machine. This is particularly valuable with complex products such as customized mesh and cages. In case of an error in the drawing, the software will recognize it and send a warning as well as suggestions for how to eliminate the error. This guarantees that no time is lost during the actual production process.

With the *stabos* unit, which offers statistical information, the production can be monitored even more efficiently, and long-term inefficiencies can be effectively eliminated. The machine software controls the whole production process from the coil to the finished mesh and thus allows for minimal manpower to be used.

### CHALLENGING TIMES LEAD INTO A BRIGHT FUTURE

"The overall experience with Progress has been exceptional," Mr. Spiropoulos said.

"From the planning phase through to commissioning, the professionalism of the progress team is amazing."

"Understanding the large financial investment in such machinery, it is important to know that a company supplies and supports its product in a way that the customer is left satisfied," Mr Spiropoulos added. "Progress has done this for me and the business."

For further information, please visit: [www.progress-m.com](http://www.progress-m.com)





# ADVANCED FULL PERFORMANCE TENSION ONLY BRACING SYSTEM

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IN AUSTRALIA NOW

**DonoBrace** is Australia and New Zealand's only dynamically tested steel rod bracing system.

- ▶ Fully tested, certified yield strengths available
- ▶ Multiple sizes and strengths available for simple and quick design selection
- ▶ Off the shelf system makes specifying and installation easy and fast
- ▶ More capacity and less weight for an efficient and cost effective solution

## DonoBrace

Go to [www.donovangroup.com/donobrace](http://www.donovangroup.com/donobrace)

A large industrial building under construction, featuring a complex steel frame structure. Two large cranes are visible: a white one in the foreground and a blue one in the background. The sky is clear and blue.

# HOW ENGINEERS ARE CHANGING THE WAY WE BUILD

**We're engineers and we've been building products for engineers for a very long time.**



# DonoBeam

In 1969, Graham Donovan started a company that became Donovan Group. From the beginning, Graham was fascinated by advanced manufacturing and automation, rolling up his sleeves to solve big problems and make the construction industry better. Initially his focus was on manufacturing construction hardware and his business became a leader in the space, but the company was always adapting to what it was learning because Graham knew that what really mattered was to develop what comes next so that construction could become easier, faster, better, safer, and more affordable for everyone.

Eventually his sons, Brett and Kyle, joined the business and expanded on this legacy of curiosity, experimentation and discovery. Today, Donovan Group is known for building products and technologies that have transformed the global construction industry with fresh approaches to age-old problems and a commitment to making the lives of engineers easier and their work more impactful.

The insights we have gained as engineers ourselves learning from engineers are at the heart of what we do, especially when it comes to our flagship building products. These products are where our focus on research and development meeting real world construction needs deliver real impact.

Let's use our two flagship building products, DonoBrace and DonoBeam, as examples of what learning from engineers and designing consciously looks like in practice.

Decades of engineering experience and learning went into understanding how to create a product that delivered unprecedented strength and resilience while remaining cost-efficient and waste-smart—all while reducing the burden on engineers to configure coupling components. The result is the only off-the-shelf steel rod bracing product dynamically tested in a simulated earthquake environment in Australia and New Zealand, designed to resist lateral wind and earthquake loads. DonoBrace is lighter, stronger, and faster to install, and has been embraced in New Zealand for its serious seismic capacity and ease of installation. DonoBrace is an advanced full performance tension only bracing system that holds up under the pressure test of New Zealand's environment and gets the job done, while also contributing to the Donovan Group commitment to cut down on waste. By making measurements very specific, minimal to zero off-cut is produced when the DonoBrace bar is created. This design efficiency extends to the manufacturing of DonoBrace's brackets, which are made from the off cuts of larger steel products. This waste-reduction effort is a small part of the DonoBrace story and its benefits, but also a testament to the holistic and committed design process that

*Reducing steel volume by up to 40% with the tapering of DonoBeam means significant carbon reduction and significant cost savings, with high spans.*

goes into developing our products. Being industry-responsive and innovation-oriented stands behind everything we do, and steers the adoption of our products in market.

DonoBeam's development followed a similar trajectory. A result of Donovan Group's industry-informed design process and desire to build for tomorrow, DonoBeam is a construction solution seriously addressing the global problem of steel—a much-needed material with a massive carbon footprint. Marrying product efficiency with significant steel-saving impact, DonoBeam is a tapered box beam manufactured by welding two folded halves of steel plate together to form a box. It's specifically tapered to reduce the amount of steel needed for any given design, without reducing structural integrity. A range of benefits flow from the breakthrough, not the least of which is the capability of delivering a large unobstructed space economically with the architectural freedom to incorporate the aesthetic and practical elements the project requires. Moreover, we've seen savings of up to 40% in steel weight, which means both carbon reduction and cost savings, and achieved clearspans of up to 70 metres on projects in New Zealand and Australia.

None of these innovations would have been possible without our ongoing commitment to research that focuses on powerful solutions to big problems. We continue to invest in research with academia, industry bodies and experts to challenge out-dated construction norms and discover better ways of doing things. Cooperating formally with leading researchers at Monash, QUT and University of Melbourne has taken our R&D to the next level.

Data drives what we do, as we use data to improve efficiencies and set the stage for a world where we can build abundantly with less resources and smaller carbon footprints. And the best kind of data? Listening to the world around us, the global construction industry we're a part of, and our engineering colleagues inside and outside Donovan Group.

For further information, please visit:

**[www.donovangroup.com](http://www.donovangroup.com)**

or contact our Customer Relations Team by calling:

**(02) 9098 7622** or emailing:


**[au.enquiries@donovangroup.com](mailto:au.enquiries@donovangroup.com)**

*Designed for better performance, faster installation, and safer construction, DonoBrace makes bracing specification easy.*



# DonoBrace





# TAPERED BOX BEAM WITH SAVINGS OF UP TO 40% IN STEEL WEIGHT

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## IN AUSTRALIA NOW

**DonoBeam** offers savings of up to 40% less steel weight compared with conventional steel systems.

- ▶ 450Mpa high strength steel
- ▶ Up to 70m clear span
- ▶ Save on steel and painted surface area
- ▶ Unique architectural look
- ▶ Bird and vermin resistant design
- ▶ Manufactured in Australasia

# DonoBeam

Go to [www.donovangroup.com/donobeam](http://www.donovangroup.com/donobeam)

smart sinks®  
Waste Water Filtration & Recycling Systems

# SMART THINKING

The Smart Aussie invention that SAVES TIME, SAVES WASTE, SAVES WATER  
and helps to deliver A COVID-SAFE CONSTRUCTION SITE!



Together with its enviable reputation for saving thousands of litres of water per week through recycling, preventing waste sediments being flushed into pipes or stormwater, and saving plasterers and tilers an average of over one hour, per person, per day in time spent moving between the work face and washout facilities,

the remarkable Australian-designed and internationally patented Mobile Smart Sinks unit has also become an invaluable front-line tool in helping to establish COVID-SAFE construction sites.

By providing tool washing/washout facilities at the work face rather than at a centralised location, Mobile Smart Sinks

units not only save time, save waste and save water – they help to significantly reduce movement around the construction site while also eliminating issues associated with social distancing and maximum density requirements at centralised tool wash/washout locations.



Since its launch in 2015, the Australia-designed Smart Sinks technology has gained an enviable reputation for its ability to keep waste sediments out of drains.

Originally developed as a built-in unit for use in dental and medical facilities as an effective, affordable, and easy-to-use method of preventing plaster residues from washing into drains (an extremely common and expensive problem for the dental and medical sectors), Smart Sinks inventor Craig Hanson soon realised that the technology could also provide an ideal solution for the construction sector - particularly when it came to plasterers' and tilers' washout and tool washing needs.

Introduced to the Australian market in 2016, Mobile Smart Sinks incorporate the patented Smart Sinks filtration technology, together with additional water recycling capabilities and foldable stainless steel trays, to deliver a 100% mobile tool washing/washout facility that is easy to use, highly affordable, keeps washout and tool

washing residues out of pipes and drains, uses filtered recycled water, and doesn't even require a nearby water source to operate.

Interestingly, while Mobile Smart Sinks rapidly gained popularity with construction companies and tradies around the country for their outstanding environmental performance and convenience, it's only with the advent of the COVID-19 pandemic and subsequent workplace controls, that Mobile Smart Sinks are now also widely considered to be an ideal solution to workplace OH&S, social distancing and density requirements on construction sites large and small. Craig Hansen explained:

"When we designed and developed the Mobile Smart Sinks, our focus was purely and simply on the environmental benefits – helping plasterers and tilers to keep plaster residues out of pipes and drains, while also helping them to significantly reduce the amount of water being used for tool washing and washouts."

"After the first couple of units had been out working in the field for a couple of months, we were also starting to hear about how much time it was saving the plaster and tiling teams by having the washout facilities right there at the workface, rather than having to travel to a central washout facility, which on most sites, is located in the basement," he said.

"Then, with the advent COVID-19, and the introduction of strict workplace density limits and controls on movement around building sites, it became clear that Mobile Smart Sinks also provide the ideal solution to these challenges."

"Each team can have their own Mobile Smart Sinks unit, right there with them. As they move between locations or floors, they simply take it with them, plug it in to the power and start working – no need for a nearby water source, and no need for a central washout facility," Craig added.

## PATENTED FILTRATION TECHNOLOGY

Designed and developed in Australia, Smart Sinks' unique filtration design has been awarded a total of nine Australian and international patents – including two US Patents. Smart Sinks use a series of interlocking sinks and disposable filter bags to remove particulates from the washout water.

Based around a 240 litre MGB, Mobile Smart Sinks incorporate two additional filtration stages (5uM and 1uM) as part of the water recycling system. The filtered recycled water is used for the tool washing/washout activities, after which it passes through the filtration system again ready for reuse.



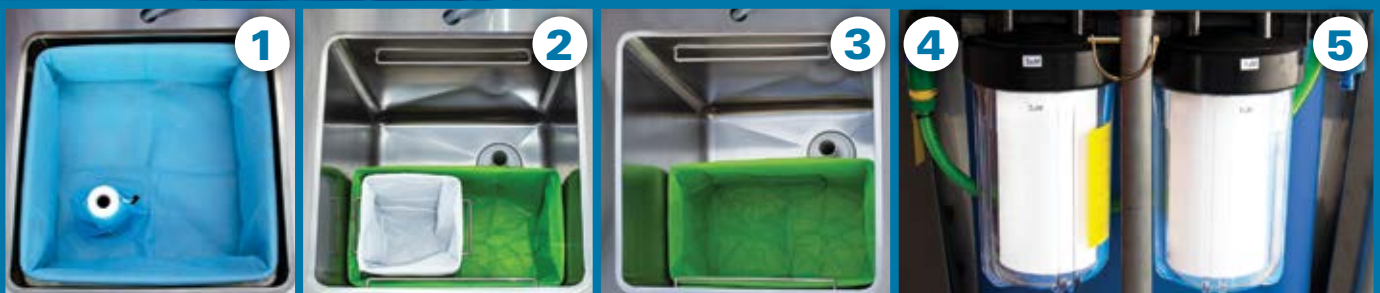
## 100% MOBILE

Mobile Smart Sinks are extremely easy to move and manoeuvre around the construction site.

Once positioned near the work face, all that remains is for the foldable trays to be lifted into position and secured with the support legs, and for the unit to be plugged in to a standard 240v power outlet.

The fact that the Mobile Smart Sinks unit filters and recycles the water as part of the tool washing process, means that it doesn't need to be connected to a water source to operate.

## 5-STAGE FILTRATION SYSTEM



Mobile Smart Sinks' unique 5-stage filtration system filters the wash water down to 1 micron, removing particulates and allowing you to reuse the water, or dispose of it down the drain when you're done.

## SIGNIFICANT WATER SAVINGS

As well as eliminating the issues of particulate waste from tool washing/washout being disposed of down sinks, in drains or stormwater side-entry pits, Mobile Smart Sinks result in a significant reduction in water use.

For example, using an average minimum flow rate of 18 litres per minute from a standard domestic water supply, the average 5-minute tool washing/wash out process uses around 90 litres of water. Based on an average of five plaster box & tool wash outs per day, one plasterer can use around 450 litres of water per day, or 2250 litres per week for washout water.

The Mobile Smart Sinks unit only requires 60 litres of water to operate, and that water is filtered and recycled every time the unit is used, for up to a week – that’s a saving of almost 2200 litres of water, per person, per week. That can equate to tens of thousands of litres of water saved on every job.

What’s more, as a Trade Waste Approved unit, at the end of each week the clean filtered recycled water can be disposed of down a drain.

## MASSIVE PRODUCTIVITY BOOST

One of the biggest responses to come from users of the Mobile Smart Sinks, is how much time it saves compared to using traditional ‘centralised’ tool washing/washout facilities.

Perry Richardson, Managing Director of Pro Plaster, exclusive Australian distributors of Mobile Smart Sinks, commented:

“The feedback we’ve had from our customers has been amazing. They can’t believe how much time and money the Mobile Smart Sinks units are saving them.”

“Whereas in the past, tool washing/washout was taking an average of 15-20 minutes by the time they travelled to and from the basement and used the shared central washout facility, by having the washout facility right there with them at the work face, they’re able to complete the process in around 5 minutes,” Perry said.

“Even working on an average of only 5 box wash outs per day, that’s a saving of around 60-75 minutes per day, per person, which is not only a massive boost in productivity, it’s

also a huge cost saving,” Perry added. “In fact, we’ve had a number of customers say that the Mobile Smart Sinks units have paid for themselves after only the first job!”

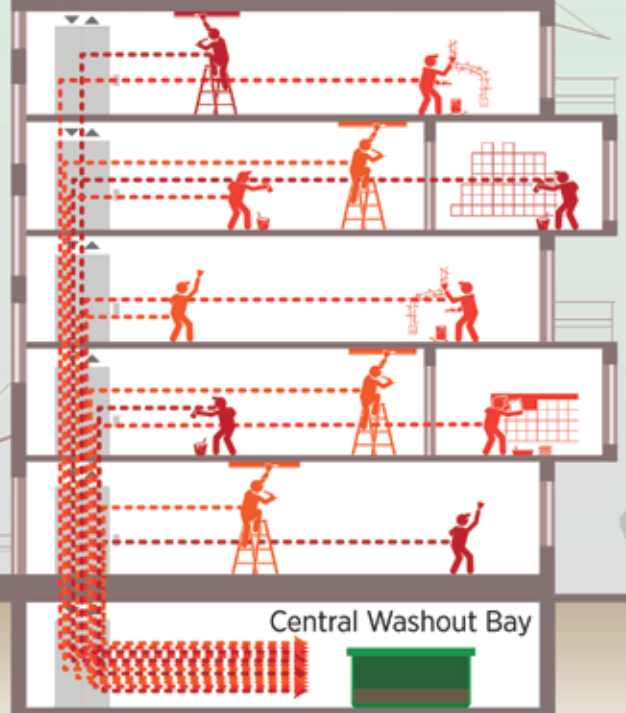


### ‘TRADITIONAL’ CENTRALISED WASHOUT FACILITY

- ✗ Multiple movements between worksite and washout facility
- ✗ Excess use of lifts
- ✗ Social distancing & hygiene challenges
- ✗ Lost time & productivity travelling to and from central washout facility
- ✗ Increased water use
- ✗ Waste management challenges including sediment in drains/tradewaste



## HOW ‘COVER YOUR CONSTRUCTION’



## COST-EFFECTIVE SOLUTION

With an average weekly operating cost of around \$60 per unit (based on recommended daily replacement of the top filter bag, weekly replacement of the middle filter bag and fortnightly replacement of the lower filter bag), Mobile Smart Sinks are also an extremely cost-effective solution. Indeed, Mobile Smart Sinks can work out to be as little as 1/10th of the cost of some centralised tool washing/washout solutions.



## COVID-SAFE CONSTRUCTION SITES

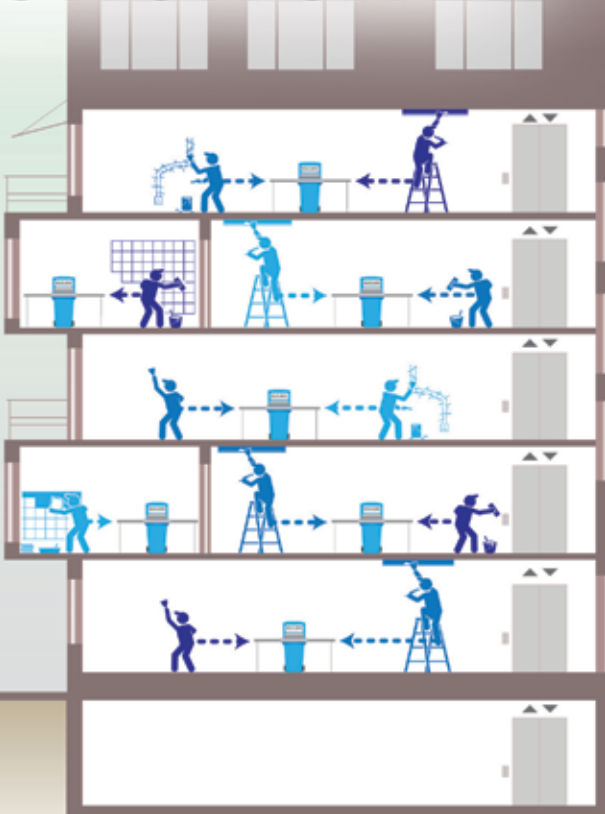
While there can be no doubt that Mobile Smart Sinks have set a new benchmark in waste sediment control, water saving and productivity gains for tilers and plasterers, they have also, quite unintentionally, proven to be a critical front-line tool in establishing COVID-SAFE construction sites.

By providing a tool washing/washout facility at the work face rather than at a traditional centralised location (usually in the basement), Mobile Smart Sinks significantly reduce movement around the construction site, including lift usage. They also eliminate issues associated with social distancing and maximum density requirements at centralised tool washing/washout locations.

For further information, please contact the exclusive Australian distributor, Pro Plaster, Phone: 1800 652 267, email: [sales@proplaster.com.au](mailto:sales@proplaster.com.au) or visit: [www.smartsinks.com.au](http://www.smartsinks.com.au)



# 'COVID SAFE' IS A CONSTRUCTION SITE?



**smart sinks**<sup>®</sup>

Waste Water Filtration & Recycling Systems

- ✓ REDUCES movement of personnel around the site - washout facility at the work face
- ✓ REDUCES lift use
- ✓ IMPROVES social distancing & hygiene
- ✓ NO LOST TIME travelling to and from central washout facility
- ✓ REDUCES water use through recycling
- ✓ ELIMINATES waste management issues
- ✓ NO sediment in drains/tradewaste



(R-L) Aussie Pumps' Managing Director, Warwick Lorenz showing NSW Minister for Police, and Emergency Services, David Elliott around the company's new production line at Castle Hill.



# Innovative Aussie goes global

Australian Pump is fast becoming the choice of professional users of pressure cleaners and heavy duty trash pump type equipment. The machines are built on a 2 ½ acre facility in Sydney's Norwest Business District. The company focuses on the development of professional high pressure cleaners and are largely responsible for the development of high pressure jetting equipment for drain cleaning in Australia and South East Asia.

In the pump range, they build what is claimed to be the best lightweight, portable fire pump in the world and a complete range of transfer and trash pumps, all the way up to products designed for mines and quarries.

The company is a "start-up" that only began trading some 25 years ago. Over that time, they developed a product range that is considered first rate and aimed always at customers who want quality and value for money.

"That's our key priority", said Aussie Pumps' Managing Director, Warwick Lorenz. "Because we're lean in the way we do things, we're able to produce top quality products and put them on the market

against competitors that aren't designed for Australian conditions."

"Understanding our markets' requirements, whether it's for contractors, miners, local government or even farmers and tradesmen, is key for us. We know that they'd want what we want if we were in their place," he added.

The company recently got the opportunity to show the New South Wales Minister for Police, and Emergency Services, David Elliott the major progress the company has made in the doubling of its production facilities.

Minister Elliott, whose portfolio includes the NSW Rural Fire Service, was impressed to see that the company ships its products all over the world.

Lorenz explains that the company's success is based on research.

"First, we understand what it is Australian consumers need - even for some of the roughest and most demanding applications on the planet. Then, we looked for opportunities around the world where we know there must be similar circumstances."

"For example, Australian mining engineers are working all over the globe... and many of them are familiar with our products."

"Most importantly, they know our products are well built, extremely reliable, and are able to withstand even the harshest operating conditions," he added.

"Needless to say, having that reputation has played a major role in helping us to establish ourselves in markets around the world."

Together with its success in the mining and batch plant sectors, other major Aussie Pumps success stories include significant sales of high performance Honda-powered fire pumps to the US market for their fire season, as well as drain cleaning Jetters to Israel.

"This local company has enjoyed a 25 percent increase in turnover in the last year and are exporting to the world," the Minister said. "It's a great Australian story."

Further information on the Aussie Pumps range is available from Australian Pump Industries T: 02 8865 3500 or from the website: [www.aussiepumps.com.au](http://www.aussiepumps.com.au)

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READY TO GO



At A1 Roadlines we understand that our customers have a range of preferences when it comes to fleet vehicles. That's why we fit and service the Scorpion II TMA across a full range of suitable host vehicles from world-leading manufacturers including **ISUZU**, **UD**, **FUSO** and **HINO** to name a few.

So, when it comes to selecting a fully MASH tested, passed and eligible TMA that has also been **ASSESSED, APPROVED & RECOMMENDED FOR ACCEPTANCE** throughout Australia by ASBAP (Austroads Safety Barrier Assessment Panel), the only name you need to remember is **Scorpion II® TMA** from **A1 Roadlines**. When it comes to the brand of host vehicle... that's up to you!



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**P:** 1300 217 623 (A1ROAD) | **F:** (03) 9765 9499 | **E:** [sales@a1roadlines.com.au](mailto:sales@a1roadlines.com.au)

# INFINITY TESTING

'Infinity Testing' is without a doubt the harshest method of testing the performance of a Truck Mounted Attenuator (TMA) during an impact.

## NO RELIANCE ON ROLL-AHEAD DURING AN IMPACT

Rather than relying on some of the impact energy being absorbed by the forward movement of host vehicle on which the TMA is fitted, with 'Infinity Testing' the host vehicle is anchored to the ground to prevent any forward movement during an impact.

## 'WORST CASE' SCENARIO TESTING

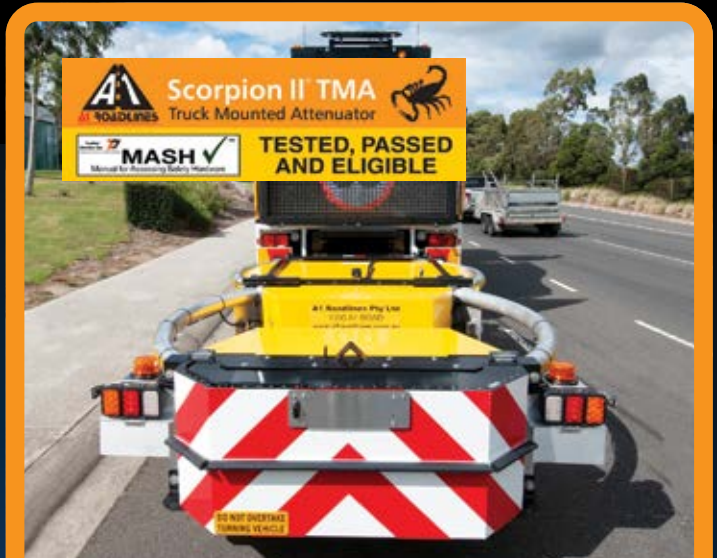
Compared to standard testing with an unrestrained host vehicle, Infinity Testing is a much tougher testing regimen. It is considered 'worst-case scenario' testing which makes it much more difficult to meet the pass criteria for IS values, as all of the Ridedown Acceleration must be provided by the TMA absorbing the energy from the impact.

## TMA ABSORBS & DISSIPATES 100% OF THE IMPACT ENERGY

Testing the TMA on a host vehicle which is anchored in place, tests – and for both the Scorpion II® TL-3 and Scorpion® II METRO® TL-2 TMAs – confirms the capacity of the TMA to absorb/dissipate 100% of the impact energy - without the benefit of the host vehicle roll-ahead.

## NO UPPER LIMIT FOR HOST VEHICLES

From a practical standpoint, the fact that both the Scorpion II® TL-3 and Scorpion® II METRO® TL-2 TMAs were successfully tested to MASH Standards using the 'Infinity Testing' method, means both units are MASH certified with no upper weight limit for the host vehicle.



[www.a1roadlines.com.au](http://www.a1roadlines.com.au)

# THE ULTIMATE TEST OF ATTENUATOR PERFORMANCE

## HOW IT'S DONE

With 'Infinity Testing' the host vehicle is anchored in place during the impacts to assess the TMA's capacity to absorb/dissipate 100% of the impact energy without the benefit of roll-ahead.



## WHAT ABOUT ROLL-AHEAD DISTANCES?

Importantly, to emulate 'real world' operating conditions, both the Scorpion II® TL-3 and Scorpion® II METRO® TL-2 TMA have also been successfully tested and MASH certified using standard 'non-anchored' host vehicles, with both units posting impressively low roll-ahead distances.

### Scorpion® II TL-3 TMA

Crash Test: MASH Test 2-53  
Impact Angle: 10.3 Degrees  
Roll-Ahead Distance: 5.1m

Impacting Vehicle Weight: 2266kg  
Impact Speed: 103.8km/h

### Scorpion® II METRO® TL-2 TMA

Crash Test: MASH Test 2-53  
Impact Angle: 9.9 Degrees  
Roll-Ahead Distance: 12.4m

Impacting Vehicle Weight: 2295kg  
Impact Speed: 81.6km/h



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# APAC construction sector shows strong optimism and investment post-COVID with digitisation tipped as key growth area, InEight Outlook finds

**Ninety-three percent of capital project and construction professionals in APAC are optimistic about their organisation's future with 78% citing digital transformation as a key growth opportunity.**

InEight Inc., a global leader in construction project management software, recently launched its first annual *Global Capital Projects Outlook*. The Outlook, drawing insights from new research conducted with the world's largest capital project owners and contractor construction professionals across the Americas, Europe and APAC, focuses on optimism levels and digitisation, and found that despite COVID-19, 93% of respondents in the APAC region are either fairly or very optimistic about their future, and 89% believe their organisation to be resilient.

Digital transformation is considered the biggest short-term source of opportunity according to 78% of respondents in APAC with data analytics, artificial intelligence and machine learning considered most critical for success for the next one to three years. However, respondents are divided on the ongoing impact of the economic situation,

with 59% identifying economic recovery as an opportunity, and 52% identifying economic stagnation or recession as a risk to their organisation's growth in the coming year.

Despite facing challenges such as border closures and material shortages, respondents are largely positive when it comes to improvements being made by the sector to deliver projects on schedule. Though when it comes to delivering projects on time, 61% of respondents in APAC say that, in the last three years, the number of projects delivered on or ahead of schedule has increased, compared to 56% and 54% in Europe and the Americas respectively. However, when asked about delivering projects on or under budget, 55% of those in the Americas and 56% in Europe report a significant or slight increase in projects being delivered on or under budget, compared to 52% of APAC respondents. Delivering projects on budget remains a challenge within the region, with 20% of APAC respondents revealing that the average cost of a project that goes over budget is 15-20% over the original approved budget.

However, encouragingly 89% of APAC

respondents are confident of completing future projects on or ahead of schedule, and 91% confident of doing so on or under budget. These figures reflect the highest levels of confidence in comparison to the 83% and 82% reported globally.

Commenting on the Outlook, Rob Bryant, EVP APAC, InEight, says: "It's encouraging to see that the results of our Outlook show a construction sector in the APAC region that is full of confidence and optimism, despite facing tremendous challenges this past year. Capital project spending is on the rise in APAC, as governments go on infrastructure spending sprees to avoid recession, which has led to high confidence levels locally."

"While investment in the sector is increasing, organisations increasingly acknowledge the importance of digital transformation to keep projects on time and on budget. Respondents in the region are acutely aware that lagging behind competitors in their digital transformation efforts presents the biggest risk to their organisations in the coming year. In fact more than half of respondents list this as the biggest threat, compared to 30% in the Americas and 37% in Europe."



# Powering a Sustainable Future

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“The region shows strong appetite to invest in digital transformation, but this enthusiasm is being hampered by difficulties with integration and implementation, as well as issues such as a lack of available capital and return on existing investments,” he said.

“Pleasingly though, many respondents still report significant investments being made, or planned, to take advantage of the benefits digital transformation has to offer. Pairing this motivation with APAC’s sizeable capital project pipeline, further digitisation could not come at a better time,” Rob Bryant added.

While regions across the globe gather digitisation speed at slightly differing paces, what is a commonality, is that the construction industry is foundational to the success of economies and societies worldwide. It is encouraging that despite a difficult year, respondents remain resilient and optimistic for the future; committed to continuing as a vibrant, vital and innovation-minded industry.

To access the full report, please visit: <http://ineight.com/globaloutlook-2021>

## ABOUT GLOBAL CAPITAL PROJECTS OUTLOOK FROM INEIGHT

This report is based on a survey of 300 large enterprise capital project and construction professionals, conducted over six weeks in February and March 2021, via an online survey. The survey included 25 questions designed to gauge general confidence and optimism levels across the industry (especially important during the pandemic), and assess track record, plans and attitudes towards digital transformation.

Of the 300 respondents, 100 each are drawn from our focus regions of the Americas, Europe and APAC, giving each equal weighting in the report. Globally, 64% of respondents are project owners, and 36% are contractors. All respondents work in construction, however in order to get a true reading of the global construction sector worldwide, we included those working construction roles within broader industries, including:

- Power and Utilities
- Commercial and vertical
- Infrastructure
- Mining & Minerals
- Water & waste
- Oil, Gas & Chemical

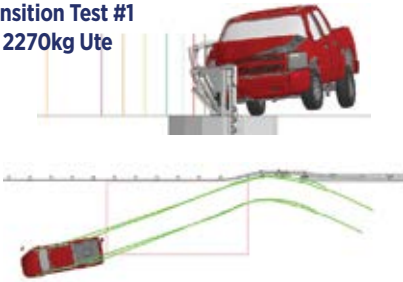
The survey has been designed and conducted in conjunction with a specialized global enterprise technology market research partner, with results then analyzed and submitted to InEight experts for commentary based on their experiences and vantage points in the industry.

## ABOUT INEIGHT

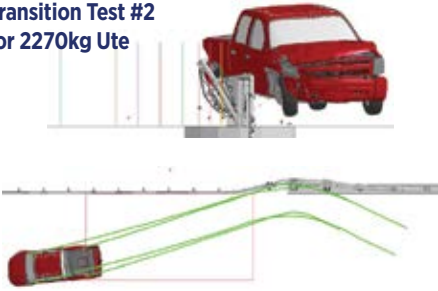
InEight provides field-tested project management software for the owners, contractors, engineers and architects who are building the world around us. Over 300,000 users and more than 750 customers worldwide rely on InEight for real-time insights that help manage risk and keep projects on schedule and under budget across the entire life cycle.

From pre-planning to design, from estimating to scheduling, and from field execution to turnover, InEight has powered more than \$400 billion in projects globally across infrastructure, public sector, energy and power, oil, gas and chemical, mining, and commercial. For more information, follow InEight on LinkedIn or visit [InEight.com](http://InEight.com).

Transition Test #1  
for 2270kg Ute



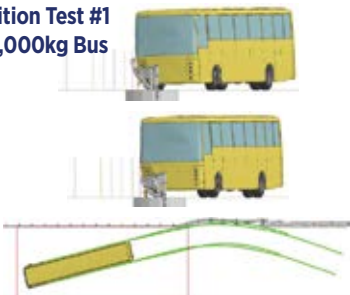
Transition Test #2  
for 2270kg Ute



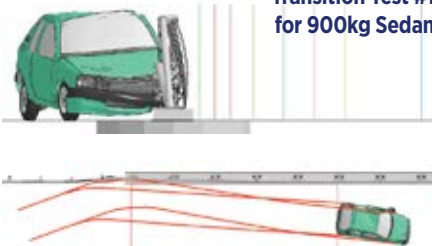
Transition Test #3  
for 2270kg Ute



Transition Test #1  
for 13,000kg Bus



Transition Test #1  
for 900kg Sedan



The DOLRE bridge traffic barrier development demonstrates how the incorporation of FEA into the design process can optimise a solution that is vastly different from the solutions that traditional Engineering methodologies would produce.

A problem was identified and through the iterative use of FEM combined with Eurocodes for structural analysis a solution was found and optimised that was vastly different to the direction that traditional engineering was leading.

Once the bridge barrier design was optimised, the same process was used to assess **transition designs** to various European roadside barriers in accordance with EN1317 and TR16303-2011 requirements.

Australian authorities required product assessment to Australian bridge standards. Future finite element modelling in accordance with MASH standards and NCHRP179 validation requirements satisfied ASBAP's analysis for both traffic barrier and transition designs.



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# Australia's largest wellness accredited community to be built in the Hunter Valley



Australia's largest WELL accredited community will be built in New South Wales in the Hunter Economic Zone (HEZ), as the former mining district transforms to become Australia's healthiest and most sustainable city. A deal worth in excess of \$50 million inked between the HEZ and global wellness pioneer Delos will see more than 3500 homes and units, as well as over 800 commercial and industrial buildings on the 3200 hectare site delivered to International WELL Building Institute (IWBI) certified standards.

Construction on the homes, commercial buildings and industrial projects are expected to commence later this year, while the whole project is anticipated to generate over 15,000 jobs across the next ten years.

The wellness real estate focus supports the HEZ's broader sustainability vision, after the Hunter Investment Corporation unveiled a major proposal for the world's largest new grid-scale battery facility in the HEZ with a capacity of 1200-megawatts.

Hunter Investment Corporation Chairman Frank Cavasinni said the Hunter Economic Zone aimed to deliver a new benchmark for both living and workplace standards that can evolve with the community to meet its future requirements.

"The Hunter Economic Zone will be the first sustainability-driven WELL-community of its kind in Australia and will elevate modern living and workplace expectations," said Mr Cavasinni.

"After the past 12 months, people have never been more aware and educated around how the indoor environment can affect their health. As developers, we have a duty of

care to deliver best-in-class infrastructure that promotes wellbeing and productivity for people spending time in our buildings.

"Our partnership with Delos Australia means all 4,300 buildings within the development will be fitted with advanced wellness technologies and adhere to best practice processes that help to improve the health of every indoor space."

All homes in the considered master-planned estate will feature Delos's DARWIN Home Wellness ecosystem that enhances indoor settings by optimising air, light and water sources.

Indoor air quality monitors and advanced HEPA air purification units to filter airborne pollutants including allergens, chemicals and potential carcinogenic particulates from bushfire smoke will be fitted in residences. Three-stage filtration units will remove sediment and potentially harmful elements like chlorine and heavy metals from water at the mains, ensuring the entire household is supplied with clean, quality water. Innovative circadian lighting installed in the HEZ's new homes will mimic outdoor light patterns, passively promoting a better night's sleep and improved energy and productivity during the day.

Every commercial building at the HEZ will be certified by the international WELL building Institute - Delos' wholly owned workplace wellness subsidiary that helps advance human health in commercial settings through infrastructure performance audits, design interventions and operational protocol vetting – all of which are verified by a third party.

Delos Australia President Bill Giannikos said his team was incredibly excited and eager to be embarking on a project of the HEZ's scale that would be delivering vast public value for people living and visiting the area.

"Our new partnership with the Hunter Economic Zone is a game changer for the development sector and will benefit the landmark project's end-users for generations to come," said Mr Giannikos.

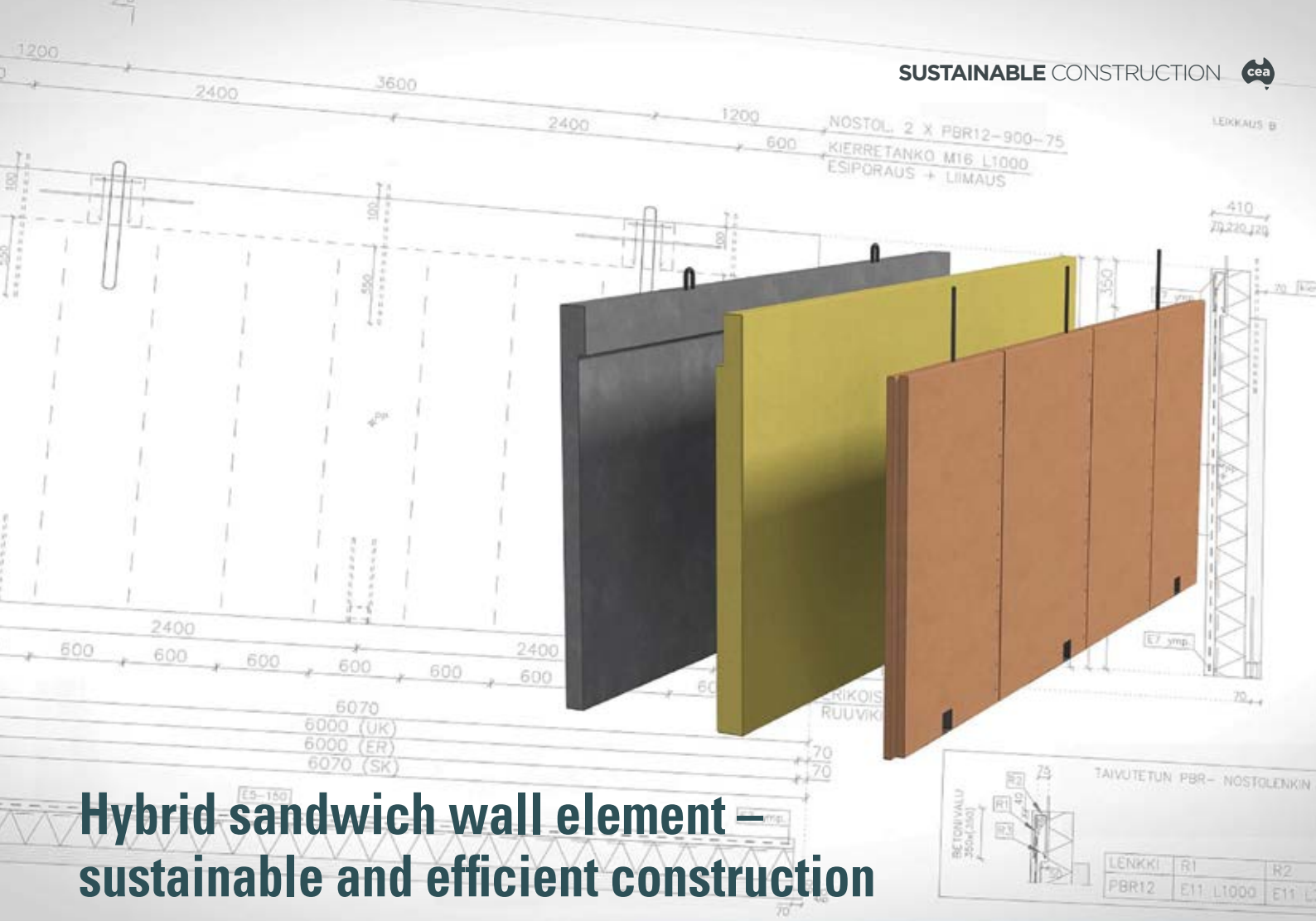
"No matter what building you step into, people can rest assured that the indoor environment will be working hard to promote their health and wellbeing.

"Nothing of this scale has been undertaken in Australia before and we are proud to have partnered with the Hunter Investment Corporation to deliver the country's largest WELL-community."

As one of Australia's most significant commercial and industrial zones, the HEZ covers an area of 3200 hectares, around 70 percent of the Zone (2300 hectares) is dedicated as a green buffer of forest and rural land.

Community wellbeing will be promoted further in the Hunter regions great outdoors with an integrated 18-kilometre network of walking and bicycle tracks that intertwine through public amenities including a shopping complex, hospital, schools and a new community centre.

For more information about the new Hunter Economic Zone development and its partnership with Delos Australia, please visit: <https://delos.com.au/>



## Hybrid sandwich wall element – sustainable and efficient construction

Hybrid construction offers construction companies more sustainable way of building without changing the current way of construction. Metsä Wood and its partners have designed a hybrid sandwich wall element which will renew offsite construction. The innovation combines concrete with Kerto® LVL (laminated veneer lumber). The first construction project to use the elements is Metsä Fibre's Rauma sawmill.

The need for more sustainable solutions is acute, because construction causes 30% of all CO<sub>2</sub> emissions. Combining concrete and Kerto LVL, the hybrid sandwich wall elements offer an easy way to replace typical concrete sandwich elements, the popular wall element in residential multi-storey buildings in Nordic countries.

Most importantly, the innovation guarantees efficient construction.

"The hybrid sandwich wall element helps to increase the share of wood to build more sustainable buildings efficiently. This joint development is our effort to support the construction industry," says Jussi Björman, Director, Business Construction at Metsä Wood.

### Innovation in partnership

Metsä Wood partnered with Finnish

construction and structural design companies to design the optimal hybrid sandwich wall element. Precast element manufacturer Lipa-Betoni saw the potential of the hybrid elements.

"The hybrid sandwich wall element is a great opportunity. We look for a new market with a product, which can be used in the same way than concrete sandwich elements," says Satu Lipsanen, CEO of Lipa-Betoni.

Lipsanen is pleased with the cooperation, where Lipa-Betoni's concrete knowhow meets Metsä Wood's wood experience. The goal was to design a practical element, which is easy to produce and build with.

### Sustainable construction

"As Kerto LVL is a light material, the hybrid sandwich wall elements will be faster to produce at the factory and transport to the site, and even the transport emissions will decrease due to the light load. The light elements are also easier to lift," says Björman.

He also points out that new easy-to-produce construction solutions are needed to turn the industry in a more sustainable direction.

"Around 1 million square metres of concrete wall elements are produced annually in Finland. Their load-bearing core creates 45,000 tons of CO<sub>2</sub> emissions. If all concrete walls were replaced with hybrid sandwich wall elements, CO<sub>2</sub> emissions would decrease by 30,000 tons a year and 95,000 tons of carbon would be stored," highlights Björman.

Metsä Fibre's new Rauma sawmill is the first construction project where the hybrid sandwich wall elements will be used. Skanska is the main constructor of the mill project. The elements will be produced at Lipa-Betoni's factory in Pieksämäki, Finland, and installed in June.

### ABOUT METSÄ WOOD

Metsä Wood is one of Europe's leading manufacturers of engineered wood products. They process valuable log wood into environmentally friendly products for the construction and transport industries, which are both megatrend-driven businesses of the future.

The company's main products are Kerto® LVL, birch and spruce plywood and further processed sawn timber. Material-efficient wood products store carbon and play an important role in combatting climate change.

With sales totalling approximately EUR 400 million in 2020, Metsä Wood has some 1,600 employees worldwide. Metsä Wood is part of Metsä Group.

For further information visit: [www.metsawood.com](http://www.metsawood.com)

# Daikin unveils the 4-step guide to decarbonizing Europe's homes

Daikin has unveiled a 4-step plan to transform residential heating and cooling for a greener Europe. The goal is to decrease CO2 emissions from residential buildings by raising the share of renewable heating and cooling systems to 40% by 2030. This is in line with the raised goal of cutting CO2 emissions from 40% to 55% by 2030, as signed in the European Climate Law on April 21.

## A key role for renewable heating systems

The majority of residential housing is still heated with outdated systems, often using polluting fossil fuels such as coal and oil. As of today, the European building stock is responsible for approximately 36% of all CO2 emissions in the EU. In some European countries, renewable heating via heat pumps has become the new standard in new builds, while the potential they offer calls for more exposure in replacement. This observation contrasts sharply with the raised EU goal of CO2 emission cuts from 40% to 55% by 2030 in the recently signed European Climate Law.

Patrick Crombez, General Manager Heating and Renewables at Daikin:

"A clear and accessible strategy for decarbonizing residential heat is needed and renewable technologies are playing an essential role in achieving the new targets, especially in the replacement market. Daikin has adopted the ambitious new targets and takes the lead with a 4-step guide to transform residential heating."

## The 4 steps to decarbonizing residential heat

1. The founding step of this new plan is to strengthen new build rules on energy use.  
Today, Daikin estimates that heat pumps already have up to 50% market share in new (single family) houses across Europe. Reinforcement of the current rules must therefore be put in place, to make heat pumps the standard.
2. The second step is to increase the replacement rate. In order to achieve the objectives of the European Climate Law, the replacement rate must double from 1% to 2% by 2030. By increasing the replacement rate, old systems are being replaced by more energy-efficient ones, leading naturally to emission cuts. The next challenge is therefore to motivate EU citizens to

choose renewable solutions. This involves the need to explain on a wider scale that renewable heating systems, like heat pumps, are an efficient, cost-effective and established solution.

3. The third step consists of ending fossil fuel incentives. Policy makers should avoid incentives for fossil fuels. Currently, direct or indirect incentives benefit oil or gas-based boilers over heat pumps. They are made cheaper and more accessible, and that's why renewable technologies also need a level playing field. The gap between today's electricity and gas prices in many member states is too high to make heat pumps accessible for all EU citizens.
4. The final step is to make renewable heating the standard in replacement. Daikin believes that heat pumps are the best solution. Indeed, they are increasingly capable of high efficiencies even at lower outdoor temperatures. They are therefore fit for any type of house or apartment. Using renewable energy sources to heat your home reduces the consumption of polluting fossil fuels and CO2 emissions.

***"A clear and accessible strategy for decarbonizing residential heat is needed and renewable technologies are playing an essential role in achieving the new targets, especially in the replacement market."***

## Clear actions are needed

Daikin has set itself the ambition to become a carbon-neutral company on a global scale by 2050. These four steps are today the most effective method of decarbonizing residential heat and Daikin calls on all stakeholders to roll up their sleeves and join the movement.

As an industry leader in sustainable heating, Daikin is showing the way.

"At Daikin we're working on a daily basis to help making these 4 steps reality. Technology is in place, our investments support this. We are making sure our installer community is joining the movement," Patrick Crombez added.

"Heat pumps are the future in the replacement market and it is our duty to convince all stakeholders. All the signs are indicating that we need to act now. Words are no longer enough; clear actions are needed. This is the only way we can make Europe climate neutral by 2050," he concluded.

**Carbon**



## 6 stars success for Collins Square

Collins Square in Melbourne has been confirmed as market leaders in Australia for indoor environment quality after receiving *6 stars NABERS Indoor Environment* ratings on all four towers owned and operated by Walker Corporation.

Walker Corporation Executive Chairman Lang Walker AO said it's a proud moment in the evolution of Collins Square.

"Our company has always strived to put environmental sustainability and a quality indoor environment at the forefront of our construction using world's best practice and technology," Mr Walker said.

"It's a tremendous achievement to secure 6 stars from NABERS on our all four Collins Square towers for Indoor Environment, marking us top of the class in thermal comfort, indoor air quality and acoustic performance."

NABERS Director Carlos Flores said Walker Corporation have shown outstanding commitment to achieving the very best ratings.

"Indoor environmental quality is an essential measure of building performance. Buildings exist to provide comfortable, productive environments for people. Investment in healthy and sustainable buildings has never been more important." Mr Flores said.

"We commend Walker Corporation's Collins Square Towers for their significant efforts to make four different towers in this precinct beneficial for their occupants as well as the planet."

Coupled with its second place energy rating ranking in NABERS' national Sustainable Portfolios Index, Collins Square is demonstrating that leading environmental performance and a high quality indoor environment can both be achieved.

NABERS is a national independent rating system that measures the environmental performance of Australian buildings and tenancies. A NABERS Indoor Environment (IE) rating measures the indoor air quality, temperature and thermal comfort as well as the acoustic quality of a building.

Visit [www.collinssquare.com.au](http://www.collinssquare.com.au) to find out more about one of Australia's largest award-winning commercial precincts.





# Why the adoption of project management skills will improve the agility of Australia's construction sector and weather the current storm

**Ben Breen, Managing Director, Asia Pacific and Global Head of Construction at the Project Management Institute**

The current shutdown on construction across Greater Sydney, imposed by the New South Wales State Government, presents new challenges the sector must overcome. As stated in media reports, in NSW alone, the sector is worth more than \$60 billion and is one of the state's biggest employers. This shutdown is estimated to cost the economy more than \$1 billion per week and impact more than 350,000 jobs.

Setbacks of this scale mean it is more critical than ever that construction workers and project managers possess the right skills to mitigate against the impact of the shutdown and for the sector to bounce back and continue to boom.

The construction sector must ensure its workforce has the knowledge and skillsets to combat this and future disruption by bringing greater agility, innovation, and effectiveness to the delivery and management of construction projects.

Three fundamental approaches are needed to ensure the continued success of Australia's construction project delivery going forwards:

## EFFECTIVE PROJECT MANAGEMENT

In Australia, it is estimated that US\$133m is lost for every US\$1 billion spent on projects and programs due to poor project performance. Many projects fail to

effectively implement the vision, with more than half finishing over time.

The development of project management skills across the industry will help those involved across all elements of the delivery of construction projects. Equipping businesses and individuals with the skills to manage multiple related projects and navigate complex activities that span functions, organizations and regions will improve the overall efficiencies of individual projects and, ultimately, the sector.

The construction project manager not only needs to plan his work but also lay out the tasks for his team. He is responsible for getting the right people to handle all the tasks for a single project. A thorough project manager needs to forecast and determine the work that needs to be done for the proposed project.

Project management skills will equip these leaders with the tools and know-how to effectively manage stakeholders along the journey. Essential, as new facts emerge and complexities present challenges that need to be overcome. Having the right person to determine project complexities and make the tough decisions on division of work packages is critical to ensuring that a business will deliver a job on time and within budget, mitigating far-reaching negative knock-on effects.



While some challenges may be inevitable with respect to cost, schedule and scope, maintaining consistency in respect to processes and systems is a key challenge facing the sector and has been addressed by PMI in creating a common language for the project management profession itself over the past 50 years.

## EMBRACING THE POTENTIAL OF TECHNOLOGY

Traditionally risk-averse in the past, construction has lagged behind other sectors in leveraging the power of emerging technology. Recent supply chain challenges caused by the pandemic is bound to have an impact on the major construction projects, creating an urgent need for companies to utilise faster and more efficient ways of building.

Promising smart construction and simulation technologies, such as Building Information Modelling (BIM), 5D modular construction, 3D printing, autonomous



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construction, and the Internet of Things (IoT) can play significant roles in accelerating projects, rethinking, rebuilding and reviving the industry.

By digitally representing all aspects of a given structure, organizations can cut down on waste and delays by identifying potential challenges before executing it in the field.

While investment in research and development of construction-specific technologies is important, but it needs to be complemented with forward-thinking project management leaders who can leverage the existing and new technologies

The pandemic has also brought about ways of working that are more efficient and cost-effective, hence likely to stay. As the construction sector resumes across Greater Sydney, an enhanced focus on worker safety, including social distancing, could deliver substantial change and accelerate technological uptake across the industry.

The future will likely see more projects awarded based on how innovative they are in approaching new public health requirements – and how efficient they are with their construction methodologies.

### UPSILLING AND THE ABILITY TO WORK EFFECTIVELY WITH PEOPLE

While there is some concern that efficiencies created by emerging technologies will see workers displaced by automation, the reality is that the workforce will need to shift and evolve its skill set. Construction companies are increasingly seeking talent that will bring attributes beyond the traditional technical skills.

As technical skills become more-and-more automated, project management capabilities are increasingly being sought. Traditionally considered to be 'soft skills'

such as working with people, leading and working with teams, creativity and adaptability, collaboration and communication, are essential skills for a more agile and remote workforce, that are seeing traction.

Particularly when engaged on complex projects, with various stakeholders, a skill of critical importance is communication. You can have all the knowledge in the world, but if you are unable to get your message across, it will have limited impact.

The future will undoubtedly present challenges, including some we may not anticipate, such as future pandemics or climate shocks. But I strongly believe that with effective project management, use of emerging technology and investment in upskilling the workforce, the construction industry in Australia will continue to innovate and find the silver lining in any challenge.

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# Whether it's a TL-2 or TL-3 attenuator, your first question should always be: **IS IT MASH APPROVED?**



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