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About the Cover

Lauded globally for its extraordinary performance on projects large and small, the revolutionary LATICRETE® SUPERCAP® floor levelling system now is now also available in Australia - thanks to a partnership between manufacturer LATICRETE® SUPERCAP® and Sydney-based specialist contractors AllPrep Flooring Specialists Pty Ltd.

► Turn to Page 10 for the full story.



FUNDING THE NEEDS OF A RAPIDLY GROWING (AND AGEING) RURAL AND REGIONAL POPULATION

Dear Readers,

While the area defined as 'Rural and Regional Australia' is clearly as diverse as Australia is large - with individual towns, cities and municipalities each facing their own particular circumstances and challenges - there does appear to be one major issue now facing rural and regional councils across the country, namely, the additional strain being placed on Local Government services and facilities as a result of a rapidly growing and ageing population.

Whilst the issues relating to an ageing population are clearly also a major concern for metropolitan councils, the massive increase in people looking to make a 'sea-change' or 'tree-change' following last year's COVID chaos - many of whom are over 55 - is further compounding the issue for rural and regional councils.

Put simply, the significant population shift that has occurred over the past 12 months - especially from Melbourne and Sydney into the regions - together with the ever-increasing average population age gap between the city and the country, places a massive financial burden on rural and regional councils as they struggle to provide additional services and facilities.

In recent years, rural and regional areas have experienced a steep increase in the percentage of residents aged 55 or over. Together with the fact that most

Australians are now living longer, in rural areas it is common practice for those who have spent their life on the land to move 'off the farm' and into a nearby town when they retire - generally for reasons of better access to services.

Of course, moving out of the major capitals to rural and regional cities didn't start with Covid either - it's a trend that's been growing steadily for a number of years. Covid simply accelerated it!

And it's not only about a change in lifestyle. Many are simply taking advantage of the massive growth in property values that has occurred in the major capitals over recent years - selling up and trading up for more affordable real estate in regional areas.

While this has provided an economic boom for some areas, this growth is also proving to be somewhat of a double-edged sword. Unfortunately, the increasing 'age imbalance' between the city and the country is a serious concern and is already shaping up as a major threat to many councils throughout rural and regional Australia. Councils are not only being faced with a sharp increase in demand for human services, they're also under pressure to provide more suitable age-related infrastructure, such as aged care facilities and community amenities.

In these days of tight fiscal policy and high community expectations, Local Government is undoubtedly accustomed

to being asked to 'do more with less' - a challenge which is further compounded by their restricted ability to raise revenue through rates and user charges. And while there has no doubt been an increase in rate revenues for some councils as a result of additional residences being built, it's fair to assume that those increases have failed to cover the additional resources required to adequately provide for the increased population.

Be that as it may, there will surely come a time when there are quite simply no more funds available - and on current trends it appears that that time is rapidly approaching.

With that in mind, I believe that the only way that we can possibly hope to address these issues with any level of success, is for all levels of government to work together in a co-operative and equitable manner to develop the facilities and services that are needed.

After all, the population continues to age on a daily basis - and that leaves no time for political 'buck passing'.



Anthony T Schmidt
Managing Editor

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WORLD-CLASS BOULEVARD FOR THE HEART OF SYDNEY

Wider footpaths, more trees, new street furniture and extensive paving for walking and outdoor dining will transform Sydney's George Street into a world-class pedestrian boulevard and draw people back to the city.

The City of Sydney has begun work on creating 9,000 square metres of car-free space along the George Street light rail route from Town Hall down to Railway Square. There are also plans to open up a new public space on Devonshire Street between Chalmers and Elizabeth streets in Surry Hills, with work set to start in 2022.

Lord Mayor Clover Moore said the \$43.5 million project will be a boost for the local economy and support recovery from the impacts of the Covid-19 pandemic.

"Block by block, we're turning bitumen into beautiful paving with room for new trees, outdoor dining and street furniture," the Lord Mayor said.

"We've loved seeing people reclaim George Street south while the temporary road closure measures have been in place. Now we want to make these measures permanent, giving people more space to window shop, dine and walk while maintaining physical distancing."

"This work will complete our long-held vision of turning George Street into wonderful tree-lined pedestrian and light rail boulevard through the heart of our City," the Lord Mayor added.

"Extending this public space with permanent, quality infrastructure will make the whole area more appealing for workers, visitors, residents and local businesses and encourage walking through the centre of our CBD.

"We are working closely with businesses to minimise disruption and thank everyone for their patience as we undertake this transformative project."

Gabriel Metcalf, Chief Executive of the Committee for Sydney, said the pedestrianised section of George Street from Circular Quay to Town Hall had quickly become one of the world's best streets.

"George Street is becoming a magical place and a big draw into the city centre – it's a place to enjoy public life in the city," Mr Metcalf said.

"It makes so much sense to extend that magic to the cultural anchor of Chinatown and the emerging tech hub around Central station. We're excited to see the next phase of Sydney's public space renaissance unfold."

The Albion Place Hotel on George Street is set to benefit from the first stage of the transformation. David Hight, director of operations for venue owner Reserve Hotels, said the new-look George Street will help revitalise the area.

"This part of town has always been a bustling entertainment hub that attracted a diverse demographic looking to eat, drink and come together at a range of venues, but due to Covid, we saw business slump overnight," Mr Hight said.

"This wonderful idea to turn George Street into a European-style boulevard will draw people back into the area and inspire us to explore new business opportunities.

"This is going to help turn George Street south into a destination in its own right and take the precinct to the next level."

Pictured above: Artist's impression of George Street, pedestrianised at Campbell Street. Image by Virtual Ideas based on a design by City of Sydney

The project is supported at all levels of government. The Australian Government will contribute \$7.05 million for part of the project on George Street between Bathurst and Goulburn streets, with the NSW Government funding \$1 million for the overall works.

The project works include:

- extended pedestrianised zones at the southern end of George Street between Bathurst Street and Rawson Place
- open space improvements on George Street between Rawson Place and Pitt Street, Ultimo Road, Thomas Street and Hay Street
- more than 9,000 square metres of new space for walking
- granite footpaths to replace car lanes
- new street trees, seating and lighting
- spaces for outdoor dining
- simpler intersections to reduce travel times for everyone.

Local access and emergency services access will be maintained. The works will be completed in stages to minimise disruption to people and businesses.

Construction work is underway on the east side of the light rail tracks, near Bathurst Street, and will progress south on both the eastern and western sides, block by block, towards Railway Square. Construction to the south of Goulburn Street is planned to start in late 2021. Work on Devonshire Street in Surry Hills is planned to start in 2022.

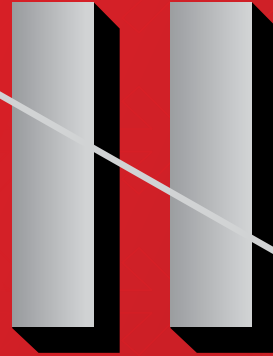
You can see plans for the works at: [city.sydney/george-street](https://www.cityofsydney.nsw.gov.au/city-sydney/george-street) along with details on construction timing and staging.



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Janice Wu
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REAL WORLD EXPERIENCE FOR OUR NEXT GEN BUILDING SURVEYORS

Aspiring building surveyors are getting hands on practical experience at Victoria's agencies to gain skills and further their careers.

The Victoria Building Authority (VBA), Victorian Managed Insurance Authority (VMIA) and Domestic Building Dispute Resolution Victoria (DBDRV) have joined forces and created the *Building Surveyor Career Pathways Program*. The initiative sees final year students and graduates apply their academic knowledge to real situations in a dynamic environment, gaining invaluable on-the-job experience.

Recruits will spend six months at each of the organisations over 18 months with the inaugural six participants already hitting the ground running.

VBA Chief Executive Officer Sue Eddy said it was important to back our future building surveyors.

"Building Surveyors play such an important role in the efficient and effective operation of the building industry. They often save homeowners time and money by spotting issues early before they become a bigger problem."

"We have a responsibility to do all we can to help prepare the future generation of building surveyors, which is why we are putting them in real life situations to test and hone their skills," she said.

"Already our graduates have demonstrated a thirst for learning and have turned their minds to how they can influence positive change in the industry and be exemplary practitioners in the future."

VMIA's Chief Officer, Domestic Building Insurance Efy Karagiannis said the career pathways program gave Victoria's next generation of building surveyors a head start.

"As someone who's spent their whole career involved in the construction sector, I'm proud to give back to the industry by sharing my experience and ideas with our graduates during their rotation.

"Our first graduates will get hands-on experience in insurance claims management including on-site inspections with our assessors and litigation cases," she said.

"As a provider of domestic building insurance, we issue more than 70,000 certificates a year, protecting homeowners when their building or renovation work has defects or can't be completed because the builder has died, disappeared or become insolvent."

DBDRV Chief Resolution Officer Gina Ralston said the inter-agency collaboration was a positive experience.

"It's wonderful to have the opportunity to collaborate with the Victorian Building Authority and Victorian Managed Insurance Authority and for all three agencies to share our expertise," Ms Ralston said. "I look forward to working with the candidates and watching them forge their careers as building surveyors."

Candidates receive support with training, development and mentoring to develop valued work skills, technical experience aligned to the requirements of registration in the categories of building inspectors and surveyors. Candidates also gain exposure to the operation of the regulatory framework from a variety of different perspectives, through both internal and external rotations.

For further information, please visit: www.vba.vic.gov.au



CRYSTAL POOLS WINS CHAMPION BUSINESS OF THE DECADE AT THE 2020 AUSTRALIAN SMALL BUSINESS CHAMPION AWARDS

Sydney-based Crystal Pools has been named *Champion Business of the Decade* at the *Australian Small Business Champion Gala Dinner and Awards Ceremony* held recently at The ICC Sydney, with around 1,000 guests in attendance.

Recognised as the 'Oscars' for small business the *Australian Small Business Champion Awards* is the only national recognition program for Australian small businesses.

The program aims to recognise outstanding Australian small businesses and encourage high standards of excellence in small business practice.

"The Australian Small Business Champion Awards is a way to recognise the efforts of small business people whose efforts contribute to the prosperity and vitality of communities across Australia," said Steve Loe, Managing Director of Precedent Productions and founder of the awards.

"As a small business owner myself, I know the vision and dedication to excellence required to succeed. These traits have been displayed in abundance by all of our 2020 Small Business Champions.

Some of the attributes that contributed to Crystal Pools taking out this outstanding accolade were:

- Excellent standards of customer service and documented customer satisfaction
- A long standing commitment to supporting the community
- A family-like culture
- Business efficiency and performance which translates to value for customers
- High quality construction at competitive pricing

In accepting the Award, Peter Stewart, Director Construction at Crystal Pools said they were honoured to receive the '*Champion Business of the Decade Award*'.

"We've always strived to set the industry benchmark in everything we do – both in terms of our focus on customer service and quality, and in terms of general business operations and the culture that we've built, where we look after our people. We also nurture and retain the best tradespeople in the business – master builders and craftspeople, many working with us for ten years or longer.

"Crystal Pools also confidently backs its pools with the strongest warranties on the market."





NEW POST-TENSIONING SCHEME LAUNCHED TO BOOST CONSTRUCTION SECTOR

Australia's construction sector is set to benefit from the introduction of rigorous new standards for post-tensioning – the method of reinforcing concrete with high-strength steel strands or bars.

Post-tensioning is widely used in commercial buildings, infrastructure and residential apartment blocks as it provides greater design flexibility and speed of construction. It also reduces the amount of concrete or other materials required in construction processes, representing a more economical and environmentally friendly solution.

The new standards, which are specifically designed to provide greater assurance in construction supply chains nationwide, are backed by an independent certification scheme – providing complete transparency and clarity for manufacturers and contractors.

In developing the scheme, CARES has engaged with all stakeholders including structural engineers, major contractors, clients, the *Post-Tensioning Institute of Australia (PTIA)* and the *Australasian Certification Authority for Reinforcing and Structural Steels (ACRS)*. This new product

certification scheme includes both safety-critical installations as well as products entering the supply chain covered by ACRS certification.

Along with enhancing industry expertise, the scheme will complement ongoing activities by State and Territory governments to enhance quality control in built structures through digitalisation of supply chains and proven assurance measures.

The PTIA and CARES are now engaging with structural engineers, major contractors, clients and other key stakeholders, including ACRS, to build awareness and engagement in the local market.

PTIA CEO James Woods and CARES CEO Lee Brankley said the announcement was expected to lead to ongoing improvements in the consistency of construction nationwide, following two years of detailed discussions between the organisations.

“Our overriding goal has been to secure continuing improvements in product standards, materials specification, design and onsite installation,” Mr Woods said.

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“We are delighted to have been involved with CARES on this, and I am confident our members and the wider industry will seize the opportunity to tap into the vast experience and knowledge that CARES is bringing to Australia.

“The scheme will bring much-needed certification and independent regulation to the industry, and is a workable solution at a time of increased scrutiny on building quality.”

Mr Brankley said working with the PTIA was a natural evolution of longstanding collaborative relationships, and reflected CARES’ commitment to effective multi-stakeholder engagement with clients, consultants and contractors.

“We are confident this scheme will work well for the good of the industry. Thanks to CARES’ long track record it is already a proven success in the UK, and as well as Australia is also now being adopted in several other countries.

“We expect colleagues will quickly see improvements in quality through transparency in supply, installation and performance, and much greater clarity around the provenance of critical materials sourced for Australia’s built environment.”

The new scheme covers contractors installing post-tensioning systems, producers of prestressing anchors and prebagged grout, plus firms that carry out remedial grouting of post-tensioned tendons.

ABOUT THE POST-TENSIONING INSTITUTE OF AUSTRALIA

The Post-Tensioning Institute of Australia (PTIA) was formed to represent the post-tensioning contracting industry in Australia, seeking to maintain a viable and competent industry with high standards in design and construction of post-tensioning systems for the benefits of its members, their employees, and their clients.

ABOUT CARES

CARES is an independent, not-for-profit certification body, established in 1983 to provide confidence to the users, purchasers and specifiers of reinforcing steel through a regime of regulation, testing and inspection. It operates for the benefit of the construction industry offering certification schemes for companies that produce materials, components or offer services, primarily to the reinforced concrete industry. Clients can specify CARES approved companies and products with confidence that they will comply with the relevant product or system standards and without the need for verification testing by the purchaser or contractor. There are over 100 producers of reinforcing steel in more than 40 countries around the world already approved by CARES.

GYPROCK TO PROUDLY DISPLAY THE FAMOUS GREEN AND GOLD AUSTRALIAN MADE LOGO AND PROMOTE AUSSIE MANUFACTURING

Australia’s most successful and innovative plasterboard manufacturer, Gyprock, has announced its support of the *Australian Made Campaign* (AMCL) to promote Australian manufacturers in the building and construction industry, with all Gyprock products certified to display the *Australian Made and Owned* logo.

Gyprock pioneered plasterboard in Australia in 1947, and transformed the building industry in Australia with the introduction of paper-faced plasterboard. This revolution enabled lightweight construction, saving time and reducing building costs. Today, Gyprock continues to drive innovation, influencing trends in the home design, commercial and architectural space.

A leader in the design and production of gypsum-based products, Gyprock produces hundreds of products each year in its state-of-the-art manufacturing facilities located across the country, and employs over 2,400 Australians. Gyprock Executive General Manager, Paul Dalton, said the company takes great pride in its local manufacturing operations and is committed to protecting Australian jobs.

“We are proud of our history as an Australian manufacturer. Not only do we take pride in supporting the continuation of local jobs, but there is also a satisfaction that comes with producing a nationally recognised Australian Made product,” said Paul.

“The Australian Made logo is globally recognised and aligns perfectly with our mission statement - when you purchase Gyprock products, you are buying quality. It also demonstrates our commitment to local manufacturing and provides our customers with the peace of mind that comes from purchasing locally made products. We believe our commitment to local manufacturing has contributed to Gyprock’s outstanding reputation for quality.”

Paul adds, “Gyprock is proud to have its products certified with the Australian



Made logo. The logo also adds a lot of weight to our country-of-origin claims. Carrying the Australian Made logo and directing decision-makers to our products on the Australian Made website provides transparency. It clearly communicates our manufacturing processes beyond what we could independently.”

Ben Lazzaro, Chief Executive of the Australian Made Campaign, said, “The Australian Made logo is the true mark of Aussie authenticity. It’s exciting to see Gyprock’s range of Australian Made product proudly carrying the iconic green and gold kangaroo.”

“Aussie products are made to some of the highest standards in the world. They are trusted, known for their safety and quality and increasingly preferred by builders and home renovators. When you buy Australian, you are also helping to pump money back into our economy, which helps to keep Aussie jobs, strengthen local industries and supports local communities.”

A 2020 study from Roy Morgan Research found that Aussies favour Australian Made products, with 68% of Australians preferring to buy Australian-made building and renovation materials, and 58% preferring to buy Australian-made tools and hardware. The research also found that high quality, use of ethical labour, and supporting local jobs and employment are all attributes associated with the Australian Made logo.

Renowned for its expertise in delivering innovative, bespoke solutions for residential and commercial applications, Gyprock manufactures a comprehensive range of high-performance plasterboard products and systems for many applications to meet fire, acoustic and thermal requirements across all segments of the construction industry. The product range includes plasterboard and cornice, as well as compounds, adhesives, specialty plasters and associated finishing materials and accessories, all of which are certified to carry the Australian Made logo.

Gyprock's success reflects its commitment to innovative design, outstanding product options and excellent customer service. Gyprock has a proud history of leading the market with constant innovation, delivering new products and systems to improve building performance, technology, and services to make life easier for specifiers and builders. These new technologies have had a major impact on product performance and installation practices.

As the industry leader, Gyprock has developed a portfolio of leading design support resources for designers, engineers and architects, reducing uncertainty and risk, and allowing professionals to remain on top of the ever-changing codes and products and focused on growth and development. *DesignLINK* partners with clients to workshop complex design issues, provide value engineering, rationalise system specifications and deliver better building performance while maintaining buildability for both builders and contractors. *The Red Book* is the industry's most respected fire and acoustic design guide and offers best-in-class performance detail and technical guidance for selecting fire, acoustic and thermal wall, ceiling, column and beam systems.

"Our Australian Made products have been designed with the expectations and needs of Australians in mind, providing appropriate market solutions that consider Australia's standards and regulations with no compromises," says Paul.

Gyprock has been successful in winning major building and construction projects around the country including Optus Stadium, Crown Sydney, Perth Convention Centre, Chadstone Shopping Centre, providing design, product and onsite technical support.

"It's more important than ever to support and grow the local manufacturing capability. A thriving manufacturing sector is critical to Australia's economic future and prosperity, and will help create jobs, strengthen local industries and support local communities. Gyprock will proudly display the famous green and gold Australian Made logo," says Paul.

Gyprock is part of CSR Limited, one of Australia's oldest manufacturing companies which was formed in 1855. Today CSR is a leading building products company in Australia and is the name behind some of the market's most trusted and recognised brand names. With over 40 manufacturing sites across Australia, CSR is supporting the development of the manufacturing sector while producing new products which are helping improve the energy efficiency, comfort and performance of homes and buildings.

To learn more about Gyprock's range of Australian Made products, please visit: www.gyprock.com.au

ABOUT GYROCK

Australia's leading manufacturer of gypsum-based products, Gyprock has been Australian for 'plasterboard' since 1947, transforming the building industry with the introduction of paper-faced plasterboard, further advancing lightweight construction methods. The most reputable producer of plasterboard and cornice, as well as compounds, adhesives, speciality plasters and associated finishing materials and accessories, Gyprock supplies a comprehensive range of high-performance products and systems for many applications to meet fire, acoustic and thermal requirements across all segments of the construction industry.

Gyprock actively supports plasterboard recycling both to help the environment by reducing waste going to landfill and also because it is often a great way for builders to save on waste tipping fees and site clean-up costs as well as improve site safety with better resource management. Proudly made in Australia for Australian homes.

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Lauded globally for its extraordinary performance on projects large and small, the revolutionary LATICRETE® SUPERCAP® floor levelling system is now also available in Australia - thanks to a partnership between manufacturer LATICRETE® SUPERCAP® and Sydney-based specialist contractors AllPrep Flooring Specialists Pty Ltd.

As the world's only fully-self-contained mobile floor levelling material blending and pumping plant, the LATICRETE® SUPERCAP® system has not only gained an enviable reputation for its versatility and speed, it is also being hailed as massive leap forward in OH&S for floor levelling workers and other trades working in the vicinity. With all product mixing and pumping done in the fully self-contained Mobile Blending Unit (MBU), the LATICRETE® SUPERCAP® system not only eliminates the need for manual handling and unloading of heavy product bags (usually hundreds of bags weighing 20kg each per job), it also prevents exposure to the dangerous silica dust which is an unavoidable consequence of traditional manual mixing inside the building.

IDEAL FOR USE WITH NEW OR EXISTING FLOORS

Designed for use with both new and existing floors, the LATICRETE® SUPERCAP® system from AllPrep has set new benchmarks in performance, productivity and safety. Not surprisingly, the system now looks set to mirror its global success and popularity across Australia.

With the first of AllPrep's custom-built LATICRETE® SUPERCAP® MBU trucks having commenced operations during March, the company has already completed a number of major projects and has several more currently underway – and the results are outstanding.

Speaking about the new system, AllPrep Flooring Specialists Pty Ltd Managing Director, David Kealy, said that the LATICRETE® SUPERCAP® technology represented a significant step forward in floor levelling operations – particularly in terms of speed, flexibility, sustainability and safety.



“We are very pleased to be partnered with the world-wide proven LATICRETE® SUPERCAP® system in Australia.”

“When we first started in the industry some 30 years ago, floor levelling and floor preparation was very basic... some would say primitive,” David Kealy explained. “But even in those early days, we were always focussed on finding better ways to produce the best possible result.”

“From materials technologies (we were one of the first in Australia to use the high performance self-levelling products developed in Germany) through to measuring, prep and finishing techniques, our goal has always been on combining the latest in materials and equipment technology with quality workmanship to deliver finished floors of the highest quality,” he said.

“It's no exaggeration to say that the LATICRETE® SUPERCAP® technology has forever changed the face of floor levelling operations,” David Kealy added.

“It has quite literally redefined what is considered ‘world's best practice’ for floor levelling operations. And we're extremely proud to be able to offer this technology to the Australian market.”

MASSIVE BOOST TO WORKER OH&S

The key to the success of the LATICRETE® SUPERCAP® system, lies within the fact that it effectively removes the material mixing and preparation and pumping operations from inside the building, into a purpose designed and built, fully self-contained mobile blending and pumping plant.

In the past, floor-levelling operations traditionally involved moving numerous heavy bags (often several hundred for a single floor) of cementitious materials to the worksite, where they would then have to be manually lifted, split and emptied into a mixer. Together with the additional time and effort required to transport the materials into the building to the work area – including the heavy manual labour – one of the biggest issues with mixing materials inside the building is silica dust.

Now recognised as a major exposure hazard for workers, long-term or repeated high-level exposure to Silica Dust can lead to an increased risk of developing of lung cancer, silicosis (an irreversible scarring and stiffening of the lungs), kidney disease and chronic obstructive pulmonary disease.





Even with the best equipment and dust suppression precautions, the super-fine nature of the materials used in floor levelling can generate significant levels of dust, requiring all workers in the vicinity (including other trades working in the vicinity) to use appropriate PPE.

The LATICRETE® SUPERCAP® system from AllPrep not only eliminates the need for manual handling of dry materials, it also eliminates the risk of Silica Dust exposure inside the building.

“It’s fair to say that the LATICRETE® SUPERCAP® system would have to be considered the biggest leap forward in floor levelling technology ever seen – especially in terms of worker OH&S,” David Kealy said. “There’s no more heavy lifting, no more manual bag splitting, no more manual loading into mixers... and best of all, there’s no more dust inside the workplace!”

“The system is fully self-contained - with a crane to lift and unload the bulk bags of dry material into the truck’s silos, ready for mixing and pumping to the work face,”



“It’s fair to say that the LATICRETE® SUPERCAP® System would have to be considered the biggest leap forward in floor levelling technology ever seen – especially in terms of worker OH&S”
David Kealy, AllPrep Flooring Specialists Pty Ltd

SIDE-BY-SIDE COMPARISON



The outstanding performance of the LATICRETE® SUPERCAP® system was highlighted in a recent side-by-side comparison with traditional barrel mixing on a project in Boston, MA in the USA, and the results were truly telling.

For the trial, the general contractor selected two specific, identical floor plates of 1023m² each:

- **Floor 4:** Installed with 23kg bags of premium self-levelling underlayment loaded into the building on pallets and delivered through a traditional barrel mixing system; and
- **Floor 5:** Installed with the LATICRETE® SUPERCAP® system, using 1 ton supersacks of premium material mixed outside the building in a mobile blending unit and pumped through a hose into the building.

Each of the newly constructed concrete floors had deflection of 25mm (avg.) which was to be corrected to no more than 3mm in 3m, ready for the installation of wood floors. The results (shown in the table below) speak for themselves.

he added. "It completely eliminates the need to bring dry materials into to building."

"What's more, the fact that the entire process is computer-controlled, means that it's able to deliver product to the work face at the required speed and with the highest possible level of product quality and consistency."

"While it may now be a somewhat overused term, it's no exaggeration to say that this new technology truly is a 'game changer' for floor levelling works," David said.

OUTSTANDING RESULTS IN 50% OF THE TIME



Together with the major OH&S benefits, the revolutionary LATICRETE® SUPERCAP® system from AllPrep is also setting new benchmarks in productivity.

The underlayment goes down at least 50% quicker, the cure is fast, and following trades can be back working on a perfectly flat floor in 24 hours – a significant saving in both time and cost when compared to traditional floor levelling methods.

Once the floor has been laser-surveyed, the installation crew preps the floor and set the levelling pegs to indicate the required depth of self-levelling underlayment across the floor. Hoses are then run from the Mobile Blending Unit (located at ground level outside the building) to the work face, enabling the precision Self Levelling Underlayment to be delivered wet directly to the prepared floor. Computer-controlled blending ensures consistent quality control across the entirety of every job.

THE BENEFITS

- > **Improved jobsite safety** – No more loading material into the building, staging thousands of small bags – creating dust. A small crew manning a hose is all that is required in the building.
- > **Time savings** – The underlayment goes down at least 50% quicker, the cure is fast and following trades can be back working on a perfectly flat floor in 24 hours.
- > **Cost effective** – The volumes and efficiencies offered by the LATICRETE® SUPERCAP® system result in significant reductions in both the time and cost of floor levelling. Additional cost benefits can also flow from reductions in delays to following trades.
- > **Environmentally responsible** – LATICRETE® SUPERCAP® Self Levelling Underlayment is Low VOC certified, and meets the rigorous and comprehensive standards for low emissions of Volatile Organic Compounds.
- > **Quality controlled** – The computerised Mobile Blending Unit delivers outstanding product consistency and quality control. The system provides a detailed log of the quantities and blends of materials used for every stage of every project.
- > **Versatility** – Suitable for use on both new and existing floors, the LATICRETE® SUPERCAP® system is ideal for projects with difficult access, including inner-city high-rise buildings.

	 SUPERCAP® System	 Traditional System
	SUPERCAP® Mobile Blending Unit	Traditional Barrel Pour
Quantity (materials)	22 supersacks	652 x 23kg bags
Loading materials in building	0 hours	16 hours
Need freight elevator time	No	Yes
Removal of bag waste from building	No	Yes
Total hours	128	264
Total days	3	8

	SUPERCAP® System	Traditional System
Hours	128	264
Days	3	8

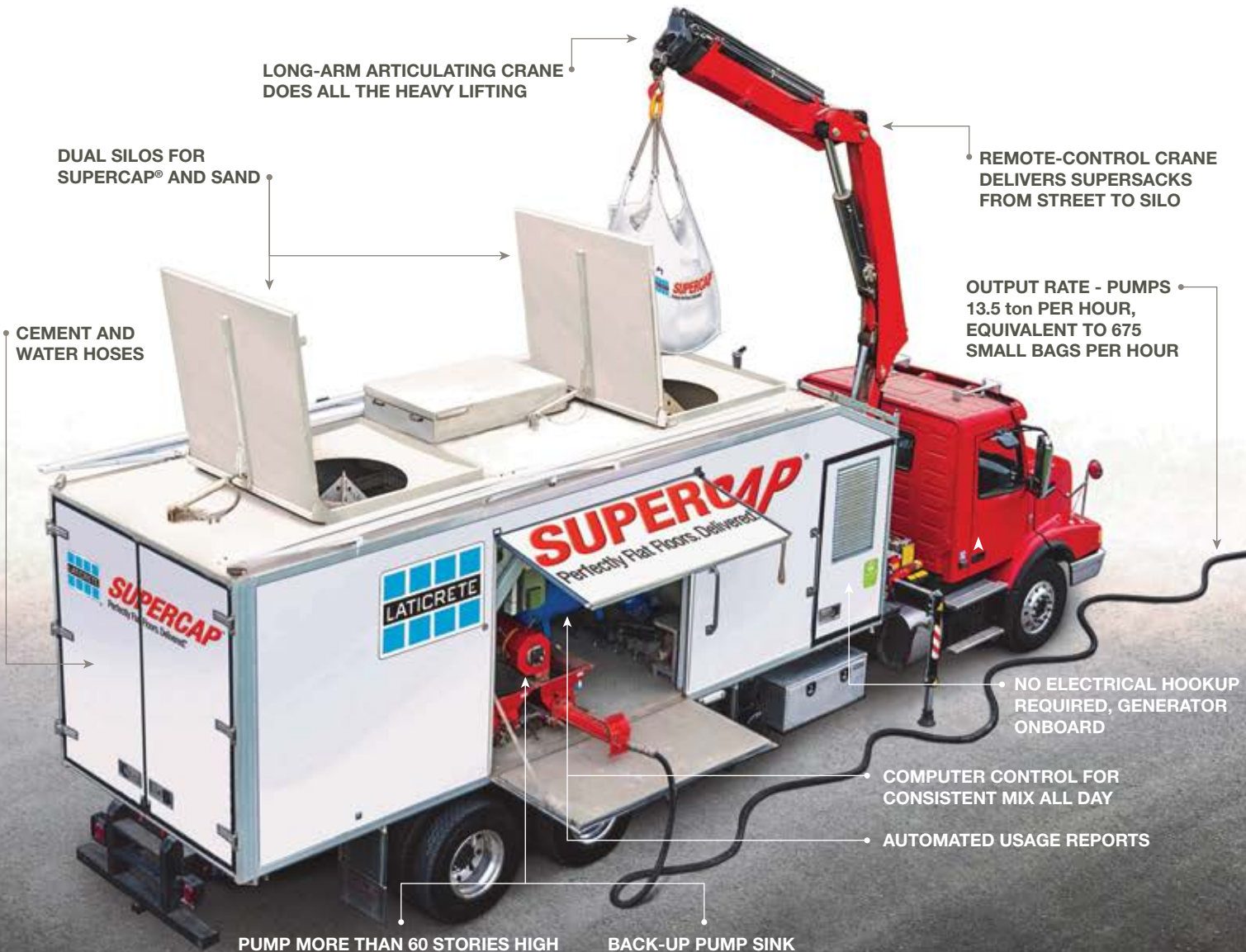
SUPERCAP® completed the floor in 50% less time.

Study conducted by Allegheny Contract

“The patented, computer-controlled LATICRETE® SUPERCAP® Mobile Blending Unit can continuously deliver up to 13.5 tons of our premium self-levelling underlayment (SLU) per hour from street level up to 60 stories high,” David Kealy said. “That’s the equivalent of 675 small bags of material per hour!”

“The system enables us to deliver perfectly flat floors faster, safer and greener than ever before. We can correct concrete deflection to an extremely flat specification at a rate of over 4,500m² per day in all kinds of buildings, including high-rises located in congested inner-city areas.”

“What’s more, the fast-curing nature of the material, combined with the fact that we can place the material without tying up lifts or creating harmful dust, means that following trades can be working on a perfectly flat, dust-free floor 24 hours later,” he added.



Flatlining Sales?

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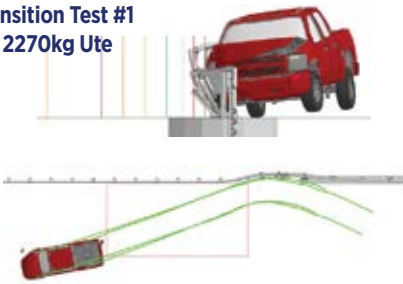
(After all, you're reading this aren't you?)

sales

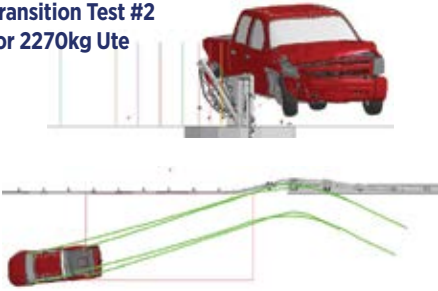


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Transition Test #1
for 2270kg Ute



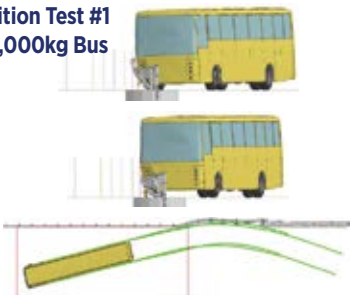
Transition Test #2
for 2270kg Ute



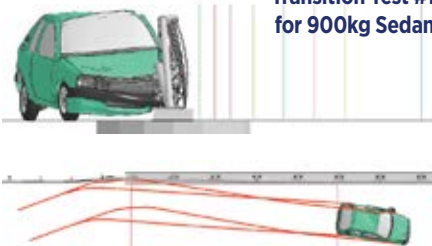
Transition Test #3
for 2270kg Ute



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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ACRS set to raise the bar with new sustainable steel certification scheme

Scheme enables consumers, industry & government to confidently source high quality constructional steels produced under high standards of environmental, social and ethical management and will help combat ESG confusion through the steel supply chain

Australasian Certification Authority for Reinforcing and Structural Steels (ACRS), the leading independent steel certification authority for Australia and New Zealand, recently announced the Australasian launch of a certification scheme that will dramatically improve buyers' ability to source high quality, ethically and sustainably produced steel for construction across Australasia. The Scheme will ensure that the public knows that steel installed in their homes, high rise commercial and residential buildings and across Australasian infrastructure meets the highest global standards.

ACRS has partnered with the leading international construction steel certification authority, CARES, to introduce its market leading Sustainable Constructional Steels Certification Scheme into the Australasian markets – to be known as the SCS Scheme ('SCS' or the 'SCS Scheme'). The Scheme ensures that construction steel entering Australia and New Zealand from anywhere in the world meets the highest global environmental, social and ethical standards, using independent certification of ESG criteria and performance indicators.

Despite Australia and New Zealand importing significant volumes of steel to meet expanding building and infrastructure needs, many existing sustainability schemes fail to provide adequate, independent verification of the supplier's claims regarding the sustainability of the materials supplied to consumers. There is rapidly increasing

demand for a premium, independent verification scheme in the area of steel sustainability, that provides surety there is no producer bias, misrepresentation or dilution of the expected certification process.

Australians and New Zealanders will now be able to determine with confidence the sustainability performance of the steel procured.

Australian and international steel producers are working hard to reduce their emissions – around 7% of global CO₂ emissions are generated by the industry. The SCS Scheme will help steel producers and processors measure, monitor and improve the sustainability performance of their products and will strengthen industry efforts already underway to combat greenhouse gas emissions.

As construction will play a major role in post-pandemic economic recovery across Australia and New Zealand, this Scheme will help building designers, specifiers and customers make informed decisions about the materials they are buying.

Commenting on the Australasian launch of the SCS Scheme, Philip Sanders, CEO of ACRS, said:

"This is an important development not just for the Australasian steel industry but for the general public. We all look at vehicle emissions and ethically produced clothing but how about the steel that holds up our infrastructure and buildings? This internationally recognised, best-

in-class sustainability scheme will help leading producers better demonstrate the sustainability of their product and it will give the general public confidence that our cities are being built with environmentally and ethically sourced steel.

"Global demand for sustainable steel is growing in line with increasing public and government demand. Many Australian and New Zealand government projects are demanding it."

Commenting on the partnership with ACRS, Lee Brankley, CEO of CARES said the launch of CARES' SCS scheme into the Australasian markets represented a "real turning point" for the industry



“Recent events have confirmed, more than ever, how important it is to build confidence in the provenance of safety critical products, like steel, entering the construction supply chain. CARES is proud of its long track record in operating an SCS scheme which has gained global recognition and the partnership launched today with ACRS is a real turning point for the sector in Australia and New Zealand.”

Mr Brankley said CARES, based out of the UK, has grown its reach globally as more manufacturers and clients have sought to lock in the confidence that comes from verified, independent, third-party scrutiny:

“Whether it is constructors, their consultants or consumers, all our stakeholders are entitled to know the full story behind the products they are choosing to rely on for a secure, sustainable future.”

SCHEME PROVIDES A CLEAR PUBLIC BENEFIT

The Scheme’s supplier mapping evaluation and management systems requirements provide insights into labour conditions and human rights risks in sourcing and production. The Scheme aligns to the UN convened Sustainable Development Goals - ‘The Global Goals’ - and measures and monitors a comprehensive range of criteria through the global supply chain, including ethical business practices; modern slavery, human rights and labour conditions; environmental impacts (including circular economy and climate change); fair supplier treatment and the socio-economic impacts of the steel value chain.

Raw material and transport data combined with independently verified



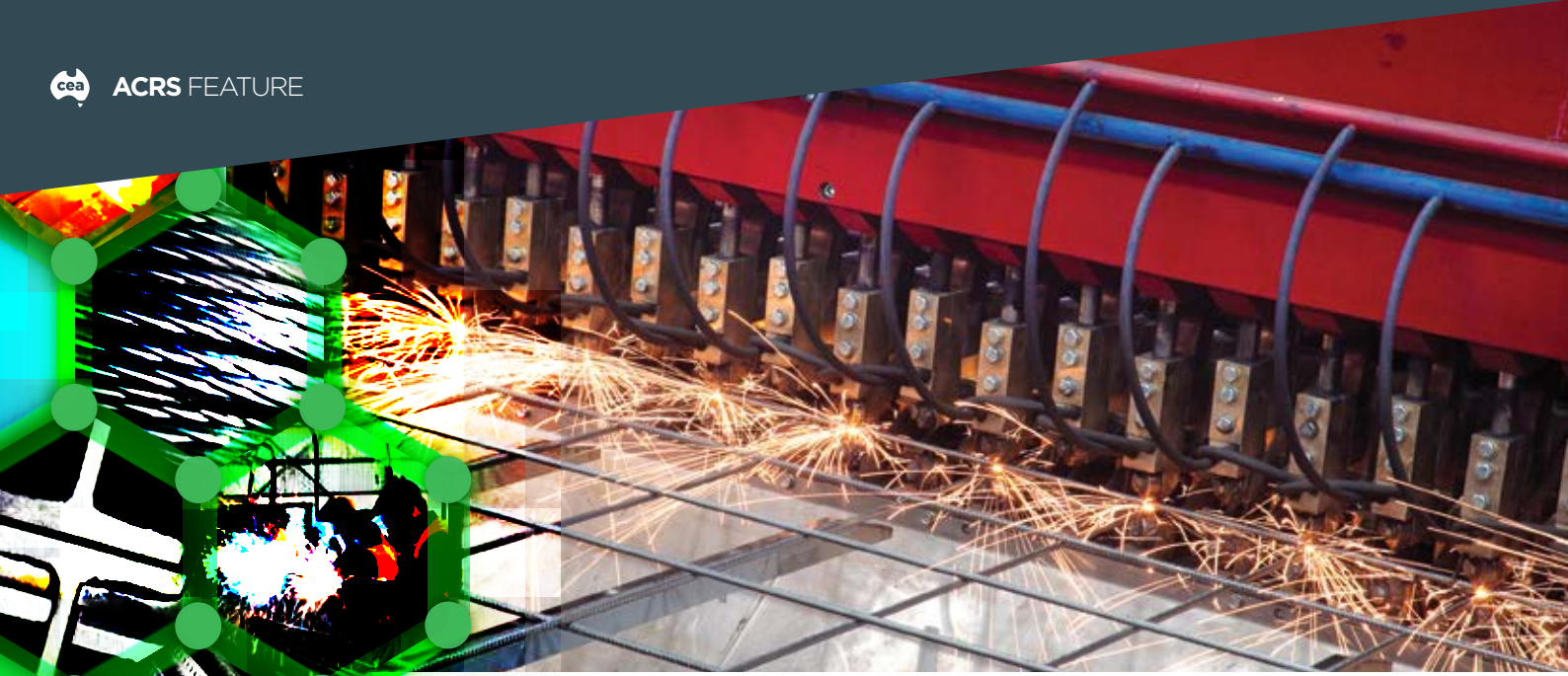
production and life cycle emissions data supports the development of the products carbon footprint and Environmental Product Declarations – prerequisites of the scheme. This enables accurate data, for example the Global Warming Potential, per tonne of product, to be easily accessed by designers and specifiers. On product bar marking and digital product labelling allow 100% traceability on all verified products from manufacture to site.

SUPPORTING INTERNATIONAL TRADE AND COMMERCE

The Scheme already certifies over 40 producers and suppliers in 13 countries.

Products certified under the Scheme are approved inputs for a range of international building and infrastructure rating systems. It is currently seeking recognition from the Green Building Council of Australia and is compatible with the recently released Responsible Steel Standard.





The UK's Building Research Establishment Environmental Assessment Method (BREEAM) recognises the Scheme as a 'responsible sourcing certification scheme'; with the US LEED building rating system and the Hong Kong CIC scheme also recognising its Environmental Product Declarations (EPD).

HELPING TO ACCELERATE THE ONGOING TRANSITION TO AN ENVIRONMENTALLY FRIENDLY CONSTRUCTION INDUSTRY

The Scheme assesses producers annually against benchmark sustainability performance, assisting the better performing producers independently verify environmental and social performance of their product and its production processes.

Utilising a Rosette Rating System, credits are awarded to recognise and incentivise levels of performance exceeding mandatory levels, enabling organisations to better understand and plan a 'transition pathway' from current performance levels to an aspirational 'sustainable' steel production represented by a '4 Rosette Rating'. This rating requires zero emission steel production, responsible sourcing, good safety record, sustainably produced and processed constructional steel, with a digital record.

For steel specifiers and procurement teams, the Scheme's easy to access producer performance data and information allows them to more easily and accurately assess and demonstrate the expected certification requirements of the leading construction firms and government.

Ryan Alexiou, a regional environmental manager at Multiplex, said: "Governments, clients and the community expect the construction industry to operate and build in an ethical and sustainable way. The SCS Scheme will help suppliers not only demonstrate high quality products, but also

best practice standards for environment, safety and trade through their supply chains."

BENEFITS FOR FIRMS SEEKING SCS CERTIFICATION

With the introduction of SCS certification, product conformity, traceability, and sustainability certification will all now be available through ACRS. Firms seeking both independent premium product and sustainability certification can now do so through one certification body.

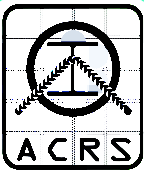
The independence and rigour that ACRS is renowned for in Australia and New Zealand will help achieve the desired quality, environmental and socially responsible outcomes across the construction industry.

The SCS certification scheme covers steelmaking (billets, blooms), production of intermediate materials (e.g. wire rod, slabs) and finished materials (e.g. steel bar/coil and structural steels), and fabricated materials (mesh, processed bar and welded fabrication). The Scheme is compatible with ACRS' traceability provisions in ACRS "Stage 1" (Manufactured Product) and "Stage 2" (Fabricated Product) certification plus the Traceability scheme for traders and distributors.

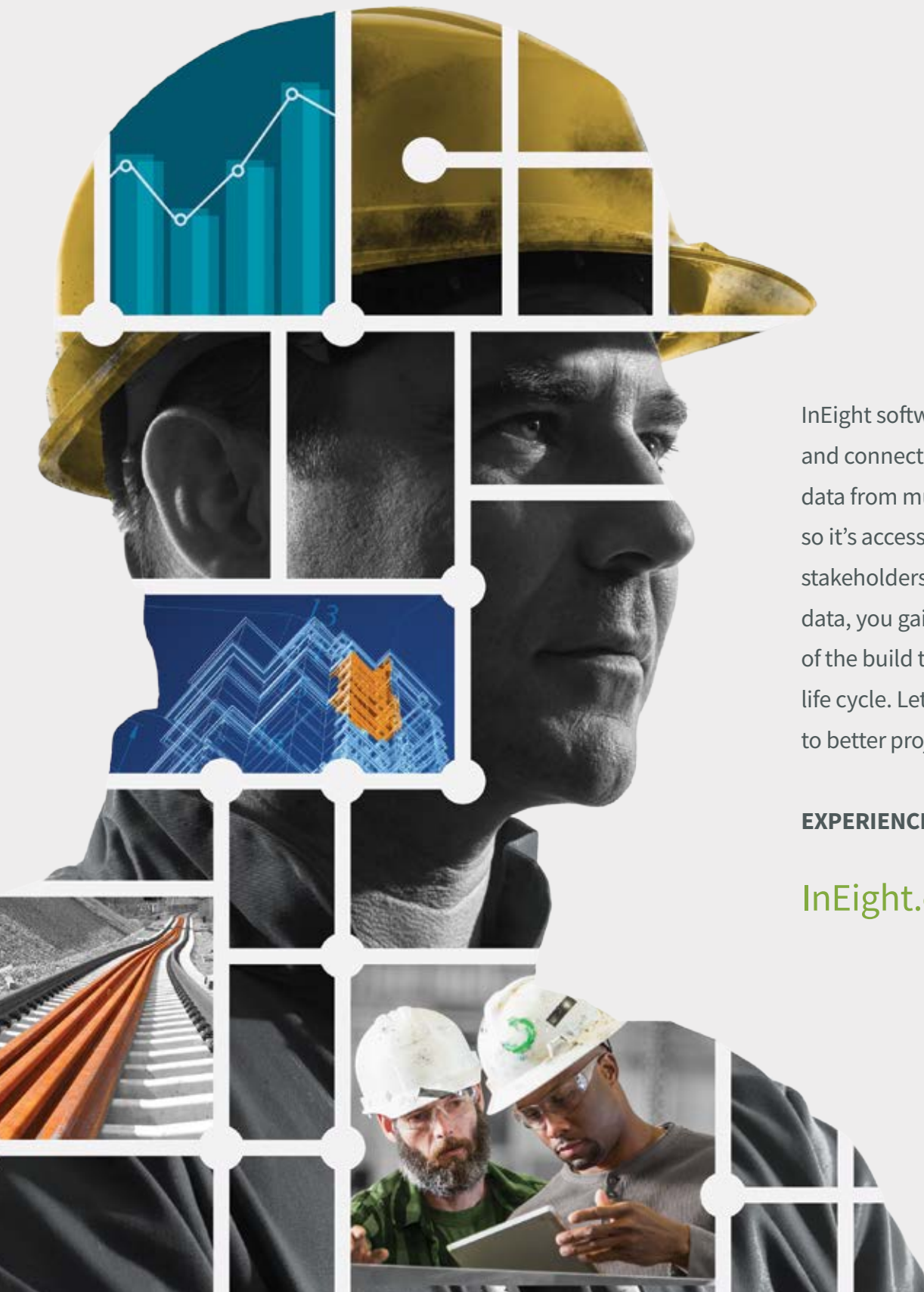
ACRS is the sole certification body in Australasia for delivery of CARES' SCS, the internationally recognised scheme that is compatible with ACRS' existing certification schemes and meets local market needs.

ABOUT ACRS

Founded in 2001, the Australasian Certification Authority for Reinforcing Steels (ACRS) is Australasia's leading, not-for-profit, independent steel certification authority. ACRS provides the most technically-rigorous, internationally-aligned, independent steel certification scheme to Australian and New Zealand Standards. It has audited and certified over 100 suppliers from more than 24 countries to Australian and New Zealand Standards.



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STRONGER TOGETHER

MB SOLUTIONS AUSTRALIA ACQUIRES BLUEY TECHNOLOGIES

At a time when MB Solutions Australia was re-establishing itself in Australia as a market leader for specialised construction products, Bluey was also looking for ways to continue its expansion and support its growth efforts both locally and abroad. The solution for both companies came in the form of an acquisition that was finalised during March.

Considered a major step forward for both companies, the acquisition of Bluey Technologies by MB Solutions Australia allows both companies to continue their expansion together, building on their strong reputations for innovative products and high-quality service.

Importantly, the acquisition also looks set to deliver a range of benefits for their many customers across the construction, infrastructure and mining sectors, including: access to a larger and more diverse pool of expertise; expanded in-house manufacturing, product testing and R&D capabilities; and better support for customers on the ground.

Following its recent separation from BASF Group, MB Solutions Australia became part of MBCC Group and was looking to grow the Australian & New Zealand customer experience with its main brand Master Builders Solutions.

In keeping with those goals, the company approached Bluey late last year to discuss a possible acquisition. After the initial discussions, it was clear to all, that the

proposal had great merit and would be highly beneficial for both companies.

MB Solutions Australia Managing Director Australia & New Zealand, Jason Bolt, explained:

“Master Builders Solutions and Bluey Technologies both have a strong focus on innovation and sustainability and have a long history of being at the forefront of materials and technologies for the construction, infrastructure and mining sectors.”

“We’re also both experiencing a strong growth for our products and services across Australia, New Zealand and beyond. The acquisition is a perfect fit for both companies, especially given the massive ‘post-COVID’ surge in demand that has occurred across these key industry sectors,” Jason said.

“In an acquisition, both companies are stronger together. We’re combining our strengths and capabilities, which is a great result for both companies, and all of our customers,” he added.

These sentiments were echoed by Bluey Technologies Founder, Daniel Bosco, who added: “The acquisition enables all of us at Bluey to continue offering the same high-quality services and products to both our current and future customers across Australia and around the world.”

“The Master Builders Solutions brand will increase our strength and will be

instrumental in our future growth and success. It’s also going to deliver a number of major benefits for our customers.”

“With our newly expanded capabilities, we’ll be better able to develop and deliver high-quality products and solutions faster than ever before. What’s more, our expanded network of facilities and warehouses, together with our national logistics network will significantly increase the reliability of our supply chain for all customers,” Daniel said.

“It also provides an expanded geographic reach, enabling us to better support our customers on the ground, regardless of their location,” he said.

“Most importantly, from the customer perspective, it’s business as usual. Same points of contact, same people, same product names,” Daniel concluded.

For further information, please scan the QR Code below or visit: www.bluey.com.au



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STRONGER TOGETHER

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



With the Austroads Safety Barrier Assessment Panel (ASBAP) 'Transition to MASH' final transition date of 31st December 2020 looming large, there's never been a more important time for equipment purchasers to ask the critical question: "Is it MASH Approved?"

When it comes to **Scorpion® TMA's**, the answer is a resounding **YES** – for BOTH TL-2 and TL-3 attenuator.

In fact, the Scorpion II® Metro MASH TL-2 TMA is not only **THE FIRST** TL-2 TMA to be fully tested and approved to the latest MASH Standards, it is currently **THE ONLY** TL-2 Truck Mounted Attenuator to be successfully **TESTED, PASSED & ELIGIBLE** to the current MASH Standards.

So, whether it's TL-2 or TL-3, 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, the only name you need to remember is Scorpion® from A1 Roadlines.



THE EQUIPMENT YOU NEED – THE SERVICE YOU EXPECT

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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

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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The Aussie GMP range of cast iron self-priming semi trash pumps are ideal for Batch Plants.

Post COVID infrastructure boom

With all three branches of government, Federal, State and Local, working hard to drive the economy, it looks like our 4.5% GMP is in the bag. Projects like Badgerys Creek are proliferating, and mining, exploration and construction are bringing new life into many regional centres.

Even country sub-divisions are blossoming as the six year drought becomes a memory.

This is good news for concrete manufacturers, the mainstay of Australia's construction industry. In fact, predictions are that this year we'll pour up to 3.3 million cubic metres of concrete as new projects get underway.

BATCH PLANT RELIABILITY... CUT CONCRETE COSTS

One Australian Pump supplier, Australian Pump Industries, has become the prime specialist in supplying batch plants with reliable pumps for this tough and demanding application.

"We know the conditions that batch plant pumps have to endure," said Aussie Pumps' Product Manager, Mood Ellahi.

"We've found that Aussie GMP heavy duty cast iron semi trash pumps can outperform and outlast submersible pumps," he said.

Aussie GMP semi trash pumps are available in a wide range - from 2" in both high and low pressure pumps, all the way through to big 6" long coupled motor pumps, capable of handling up to 4,500 litres per minute.

Australian Pump, known in the industry as Aussie Pumps, has worked closely with big and small concrete producers to help improve batch plant productivity. Large capacity semi trash and trash pumps are available from the company in both electric and diesel drive configurations.

Pumps with capacities of up to 6,000 lpm are part of the range.

The best news is that although the pumps are designed for semi trash applications, they are suitable for pumping abrasive liquids. The

Aussie GMP product line offers simple self-priming cast iron construction, and a choice between big open non-clog style cast iron impellers and 316 stainless steel equivalents.

"We've found that Aussie GMP heavy duty cast iron semi trash pumps can outperform and outlast submersible pumps."

A recent addition to the range were high head trash pumps that will not only lift water out of a sump through a vertical lift of 6 metres but, also have the capability of pumping up to a 70 metre head - making them ideal for batch water systems. The pumps are mounted above the sump where they can be easily serviced in the event of a failure.

Being trash pumps, they offer a front clean-out port mounted below the suction inlet. That means that the pumps can be cleaned out without having to uncouple pipework or remove the pump from the sump, as is required with submersibles.

“We’re finding more and more batch plants seeing the attraction of these big surface mounted cast iron pumps,” said Mood.

CONTINUOUS PRODUCT DEVELOPMENT

Although the pumps are manufactured in Northern Italy (in one of the most advanced pump-works in Europe) a lot of the design work is done in Australia. Aussie Pumps engineers worked with the concrete industry and associated quarrying operations to better understand the requirements of the market.

“We were surprised to find that many highly experienced engineers and plant managers didn’t clearly understand pump selection and application,” said Aussie Pumps’ Chief Engineer, John Hales.

“The beauty of the system is its simplicity. There is nothing to go wrong, no priming devices.”

“For example, there was little understanding of the advantages of surface mounted self-priming trash pumps,” he said.

An example of this is the principle of the self-priming pumps. Aussie’s GMP range is designed with an integrated water tank built into the pump like a pair of big shoulders. The pump also has a high quality check valve, weighted so that it hangs shut in the event of the pump being filled with water, preventing backflow.

To prime, all the operator needs to do is fill the pump bowl with water through a top mounted priming plug, and then start the motor. As the power kicks in, the water is expelled through the discharge port of the pump, creating a vacuum inside the casing.

“The vacuum created acts like a straw, drawing the liquid up through the suction

and into the pump bowl where it is in turn expelled through the discharge by the heavy duty cast iron, or cast 316 stainless steel impeller,” said Hales.

“The beauty of the system is its simplicity. There is nothing to go wrong, no priming devices,” he added.

HIGH HEAD TOO

Using one of these 3-phase motor driven 2”, 3” or 4” pumps, provides a degree of versatility and in the event of pump failure, no need to drag the pump out of the pit (as is needed with submersibles). The pumps feature a stainless steel wear plate, mounted inside the pump body as well as a silicon carbide mechanical seal.

This combination of features and benefits - particularly their high performance capabilities - makes them ideal for batching and a number of other applications in or around the plant.

Further information, including a free GMP Selection Guide, is available from Australian Pump Industries on 02 8865 3500, distributors throughout Australia, or by visiting:

www.aussiepumps.com.au

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Pictured left: MCI-2018 being spray-applied to the walls of a prefab concrete building.
Image courtesy Cortec

MCI® Technology Helps Concrete Structures Last Longer in Harsh Coastal Conditions

With Australia's largest cities located on or near the coast, there exists a plethora of concrete structures at heightened risk for deterioration from a corrosive environment. These range from bridges, walkways, and wharves to office buildings, homes, and public venues. Among some of the most famous concrete structures in Australia are the Sydney Opera House (precast concrete), Victoria State Offices, and the Queensland's Art Gallery. These and many other public and private facilities and structures face the same general prospect of progressive concrete attack: gradual carbonation that lowers the protective pH of concrete, compounded with the higher likelihood of exposure to sea spray or air saturated with chlorides. Because of the potential for accelerated corrosion on embedded reinforcing metals, it is worth considering the benefits of good

preventative maintenance using Migrating Corrosion Inhibitors to extend the service life of vulnerable existing concrete structures.

THE IMPACT OF CORROSION ON A CONCRETE STRUCTURE

Corrosion is a problem for concrete structures because it leads to structural deterioration. Once corrosion is incited, the corrosion products begin to expand, placing pressure on the concrete cover. This in turn causes cracking that can lead to pieces of concrete spalling and falling off. Cracks and spalls create additional problems by leaving the rebar further exposed to the elements, starting a vicious cycle.

Eventually, corrosion, cracking, and spalling necessitate concrete repair or replacement, both of which can be expensive and time-consuming projects.

Rather than waiting for the corrosion to occur, a wiser and more cost-effective approach is preventative maintenance. This can be done by applying Migrating Corrosion Inhibitors and water repellents to exposed concrete surfaces as early as possible in the structure's service life.

ENHANCING STRUCTURAL DURABILITY WITH MIGRATING CORROSION INHIBITORS

Migrating Corrosion Inhibitors - also known by the brand name Cortec® MCI® - are corrosion inhibitors that penetrate through cementitious materials to form a protective layer at the level of the rebar or other metal reinforcement.

Typically considered mixed inhibitors (protecting against corrosion at the anode and cathode of a corrosion cell), this protective molecular layer interrupts the normal circuit of oxidation and reduction that occurs during the corrosion process. Thus, MCI® delays time to corrosion and also reduces corrosion rates once started. The overall effect is to slow or arrest the deterioration process, helping the structure last longer before it has to be repaired.

While it is ideal to apply MCI® to new structures as an admixture, the lack thereof does not mean it is too late to protect an existing structure. MCI-2020 was designed for this purpose as a surface applied MCI that can migrate up to 3 inches (7.62 cm) deep in 30 days in order to protect embedded reinforcement.

Another option especially relevant for damp coastal environments is to apply a combination MCI/water repellent. The application of a concrete sealer is already recommended as a good periodic maintenance practice on concrete floors, driveways, etc. This helps discourage the ingress of moisture and other corrosives.

The same concept can be beneficial for buildings, especially those exposed to a frequent dose of sea spray right at the water's edge.

Good preventative maintenance can make all the difference to forestall the day of corrosion repairs by the strategic use of Migrating Corrosion Inhibitors and water repellents. When considering the size and importance of many of these concrete structures, MCI application becomes a logical choice to extend the service life of landmarks and infrastructure alike.

For more information on MCI® Technology, please visit: <https://www.cortecmci.com/>



A conceptual illustration of how Migrating Corrosion Inhibitors create a molecular barrier against corrosion on the surface of embedded rebar.. *Image courtesy Cortec Middle East*



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OUTSTANDING START TO MEMBER MEETINGS IN 2021

National Precast members are clearly keen to resume face-to-face contact now that the prevalence of COVID-19 has reduced and travel restrictions have been largely lifted. Since travel has been opened up, the organisation has held member meetings in Sydney, Brisbane, Perth and the NSW Hunter Valley.

According to National Precast CEO Sarah Bachmann attendance has been extremely positive and at a record high for these meetings.

LOCAL MEETINGS DISCUSS LOCAL ISSUES

"These local meetings are a new concept for us. We have in the past talked about having more meetings at a local level. While we were unable to hold our regular quarterly national meetings for a year, as travel restrictions have eased we have taken the opportunity to initiate local meetings to discuss local issues and to further develop relationships with and between members. These meetings have also been a great opportunity for potential members to be introduced to what we do and our members," Ms Bachmann comments.

The latest meeting in Newcastle saw 44 at the lunch. The lunch was also attended by Matt Press, Director of the NSW Office of the Building Commissioner, who took the opportunity to update members and others present about the activities of the OBC since its inception.

"The atmosphere was brilliant," says Ms Bachmann.



Main Roads' issues were the hot topic at the recent Perth meeting.

WAEGER FACTORY TOUR ADDED BONUS

"As well, we'd organised for a member-only factory tour of Maitland-based Master Precaster Waeger Constructions. That was incredibly well received."

The precast factory is owned by National Precast President Michael Waeger and produces custom precast elements, from small landscaping units, to stairs, to large structural civil elements.

Supplying projects right around the state, the company also specialises in bridge design and construction and other civil construction works. One of its most notable projects is the ANZAC Memorial Walk which straddles the Newcastle cliff tops.

ROADS ISSUES HOT TOPIC

Prior to that, National Precast's Perth meeting was also well attended with over 35 at the lunch.

"Perth was a great example where members were able to discuss mutual areas of common interest. One of these was a discussion around their dealings with Main Roads Western Australia and an action plan was developed going forward," says Bachmann.

The lunch also provided an opportunity for Ms Bachmann to update members about recent Association initiatives including the introduction of the Master Precaster and Affiliate membership categories, the reduction of fees for precasters and works that are being done to revise the organisation's publications. That work includes the development of new guides and online learning. Members were also brought up to date with public relations initiatives including the Association's coverage in national magazines.

FUTURE MEETINGS

Several other meetings are planned for the remainder of the year, according to Ms Bachmann, in Melbourne, Adelaide, Launceston, Brisbane and Sydney.

"Until full rollout of the vaccine for COVID-19, meetings will remain at a local level. That's not to stop any of our members travelling interstate if they wish. We'd like to think that the Launceston meeting planned for August and the Melbourne event in November will both be able to resume to our usual format, national events. We will keep flexible on that at this stage," stated Ms Bachmann.

Details of the events can be found on the organisation's website: www.nationalprecast.com.au, or by contacting: info@nationalprecast.com.au

If you are a precaster and interested in membership and would like to attend the lunches (the factory tours are strictly for members only), then please contact CEO Sarah Bachmann at: exec@nationalprecast.com.au



The recent Newcastle meeting allowed 44 precasters and suppliers the opportunity to network.

Pictured below: BGC Precast's General Manager Teo Prka (L) with Project Manager Andre Segedin



BGC PRECAST THE NEWEST ADDITION TO MASTER PRECASTER COHORT

Aligned with National Precast's recent member lunch in Perth, was a visit by National Precast CEO Sarah Bachmann and Communications Co-ordinator Kate Moore to the organisation's newest Master Precaster member, BGC Precast.

Ms Bachmann and Ms Moore were shown around the precaster's factory in Naval Base, Western Australia.

"BGC is an impressive operation, and we are delighted that they have come on board," Ms Bachmann commented.

The company manufactures an extensive range of precast elements including hollowcore flooring, wall panels, beams, columns, stairs and other bespoke units. ISO 9001:2015 certified, the company passed National Precast's audit with flying colours.

BGC joins a line-up of other impressive Master Precasters in Western Australia, including Delta Corporation, PERMAcast, Reinforced Concrete Pipes Australia, MJB Industries, Humes and Aus-Precast.

"The recent decision to apply for Master Precaster membership and their audit result is testament to BGC's commitment to quality, safety and customer service," Ms Bachmann adds.

COOPERATING TO RAISE THE BAR

National Precast has welcomed the NSW Office of the Building Commissioner (OBC) as its newest member, as the peak body works to raise the bar and improve construction outcomes in the precast concrete space.

According to National Precast CEO Sarah Bachmann, the OBC has recently joined National Precast as the organisation's first government member.

"The work being done by the OBC in NSW is leading the entire government sector across Australia when it comes to addressing construction defects and lifting standards. Other state governments have a lot to learn by the enthusiasm and commitment being shown by the OBC's team," Ms Bachmann commented.

OBC Director Matt Press endorses the OBC's involvement with the industry body.

"Partnering with industry is a big part of our transformation strategy and we commend National Precast for this innovative new membership category. We all benefit pulling in the same direction. We want all players putting the customer at the centre delivering trustworthy buildings and products," Mr Press said.

The mission of the OBC is consistent with that of the precast peak body, according to Ms Bachmann.

"We recently introduced Master Precaster, and that's aiming to deliver a better precast experience."

The concept came about following discussions with the tier one builder quality manager's group, the Australian Construction Quality Industry Group.

"Discussions with the Group suggested quality inconsistencies between precasters and a lack of confidence in third party certification, which didn't always equate to high quality precast," Ms Bachmann explained.

The Association audits its members to ensure that regardless of third party certification, claimed practices and procedures are actually being implemented on a daily basis. Unlike auditors from other third party certifiers, National Precast's auditors have a thorough understanding of the precast manufacturing process and they know what to look for.

"It sets our Master Precasters above all other precasters," Ms Bachmann added. "As well as passing their audit, Master Precasters also agree to comply with a Code of Conduct. That reduces risk, takes away the need for head contractors to do their own checks about the precaster, and overall delivers a good precast experience."

To find a Master Precaster, please visit:

www.nationalprecast.com.au



(L to R) National Precast President Michael Waeger; National Precast CEO Sarah Bachmann; and Matthew Press, Director, NSW Office of the Building Commissioner.

ANZAC Memorial – Application of ecotio2® Sealer and ecotio2® Premium in September 2018. Benefits include: Long-term aesthetics, self-cleaning, anti-carbonation and air purifying which extend the life of the asset. The same functionality also inhibits black mould and protects against bacteria and viruses (including COVID-19).

COATINGS GET GREEN LIGHT WITH VIRUS CONTROL

A self-cleaning coating which is also environmentally beneficial has been given the global green light when it comes to viruses, bacteria and mould.

As well as supplying its popular staining products, National Precast Industry Supplier member Nawkaw®, has a line of photocatalyst coatings that when coated on precast concrete or Nawkaw-coated precast concrete, have significant benefits.

One of the coatings, ecotio2®, can be applied to many different types of surfaces including concrete, painted and Nawkaw-coated surfaces, brickwork and even glass without changing its appearance.

Applying the coating offers a water based porosity sealer that is over-coated with thin film nano titanium dioxide photocatalyst. This outer layer is energised by light, causing a number of reactions at the surface that imparts multiple benefits including self-cleaning, inhibiting unsightly black mould and streaking, and even purifying the air.

This chemical reaction decomposes airborne organic matter and mould, odours, VOC's, and airborne pollutants upon contact with the coated surface. In plain English, the coating keeps the concrete asset from soiling, ageing and deteriorating due to carbonation. Structures have a longer life cycle when coated and continue to

look good for many years due to the self-cleaning, anti-carbonation and sealing.

As the coating is a catalyst, it is not consumed in the reaction, so last for years. The product is applied to precast by trained technicians, usually on site.

In addition to this photocatalyst technology, the company offers next generation nano carbon redox catalyst coatings which are long life, anti-bacterial, antiviral and anti mould thin film coatings. These coatings do not need light energy to do their work.

According to Nawkaw Managing Director Tony Watling, this new generation of coatings have been certified by the SIAA (Society of Industrial Technology for Antimicrobial Articles) in Japan, who certify product quality, performance and safety for humans. They have exceeded the requirements of global standards namely:

- ISO 22196 - 'Measurement of antibacterial activity on plastics and other non-porous surfaces'; and
- ISO 21702 - 'Measurement of antiviral activity on plastics and other non-porous surfaces'

"The ecotio2® Ultra AV coating was also tested against the Covid-19 strain of virus and proved effective at deactivating this virus on contact

of the coated surface. Its results were at 92% in 10 minutes and 99.9% over time," Mr Watling commented.

"This is great news for our business and offers a huge added benefit of our product. The product is widely used overseas and increasingly used in Australia, and we expect its use will increase now with proven anti-viral benefits especially as it is invisible and continues to work for many years," says Mr Watling.

National Precast's CEO Sarah Bachmann says the coatings are increasing in popularity here in Australia and have been used on a number of precast projects, including the Sydney Sky Train, ANZAC Memorial, Parramatta Leagues Club, Holiday Inn and many more.

"ecotio2® and this new range of coatings that do not require light to activate, add great value to precast and other surfaces" Ms Bachmann comments.

"They have numerous benefits, both environmental and economic. Not only do they purify the air, they reduce maintenance costs over the life of a structure with their self-cleaning properties and at the same time protect structures from sun damage and soiling. And now, we learn they have anti-viral properties too."

For more information, please visit: www.nationalprecast.com.au/finishes/

HUMES LEADING SUSTAINABILITY WITH SUPPORT FROM GLOBAL GIANT LAFARGEHOLCIM



Precast concrete is a durable construction material that is suitable for both civil and architectural applications. Its manufacture uses local materials and supports local communities. The longevity of precast structures contributes to a sustainable building future by ensuring buildings and civil works last for many generations. As well, they are fire, flood and termite safe and thermally efficient. Precast buildings also require minimal maintenance.

As a National Precast Master Precaster, Humes is the Australian precast division of global building materials' company LafargeHolcim. It has a strong and established history of supplying critical, high quality precast elements to infrastructure projects nation-wide.

Impressively, LafargeHolcim is the first global building materials' company to commit to a Net Zero Pledge by 2050, with core 2030 targets aligned and validated with the Science Based Targets initiative. The journey toward Net Zero has seen the company reduce CO₂ intensity by 27% since 1990, focusing on reduction initiatives including clinker substitution, renewable energy, carbon capture and development of green products.

Not surprisingly, Humes is also a proud advocate for sustainability in the construction industry. The company has a strong environmental commitment, including its partnership with the Infrastructure Sustainability Council of Australia (ISCA) as a member since 2010. Alongside the ISCA, Humes has helped to develop sustainable practices for design, construction, and operation of infrastructure projects.

In 2017 Humes developed and published an Environmental Product Declaration (EPD) for Reinforced Concrete Pipes under accreditation of EPD Australasia. The company's commitment to environmental transparency was ground-breaking for the construction manufacturing industry and was recently complimented with the Precast and Prestressed Concrete Products' EPD, which was certified and published in 2020.

As a proud advocate for improving construction manufacturing's social and sustainability performance, Humes is also certified under the Australian Government's National Carbon Offset Standard, 'Climate Active, Carbon Neutral'.

Humes uses the lifecycle modelling data from their EPDs to calculate the embodied carbon of precast products for each project and offset these carbon emissions by supporting projects that affect real change.

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VICTORIA'S FIRST TIER IV DATACENTRE SPECIFIES PRECAST

Project: NextDC M2 Tier IV Datacenter

Location: Tullamarine, Victoria

Master Precaster: Hollow Core Concrete

Client: NextDC

Builder: Kapitol Group

An unprecedented growth of the cloud-computing sector in the last 5 years has put unprecedented demands on physical server infrastructure worldwide. Very specific in their requirements, server buildings often necessitate open floor plates with high structural capacity for the abundance of electrical, data and ventilation services they contain.

NextDC - a leading datacentre operator - has recently expanded their capacity with the construction of Victoria's first Tier IV datacentre, located in the Melbourne suburb of Tullamarine.

As a National Precast Master Precaster, Hollow Core Concrete supply consistently high-quality precast products. In collaboration with project builder Kapitol Group, Hollow Core Concrete produced a set of innovative, long span super tee beams for the \$85 million project.

Each load-bearing beam is designed to withstand a 5kPa (1.5 tonne/m²) load over a 20-meter clear-span, which allows vertical members to be relocated along the building's façades and allows NextDC to maximise server rack density. This innovative application of precast concrete enables both long spans and high load-bearing capacity to accommodate the many servers and their associated services.

The carefully designed system of super tee beams was manufactured off-site in a factory-controlled environment.

While ensuring a high quality outcome, the prefabricated concrete beams significantly minimised the congestion of trades on, and materials' deliveries to, a traditional construction site.

Although using precast concrete reduced the number of on-site trades during construction, the \$85 million project has been projected to generate 300 new employment opportunities throughout NextDC's supply chain.

With the desired result to maximise the datacentre's usable floor area achieved, the innovative use of long-span precast beams has also delivered a time and cost efficient outcome, while at the same time ensuring the required structural capacity.



WHY USE A MASTER PRECASTER?

Carrying out proper due diligence is extremely resource intensive. The process of auditing a precast manufacturer should be complex and detailed, calling for checks that the business is sound and that the required processes and procedures are not only in place, but are actually being implemented on a daily basis.

Whilst any precaster's price might be 'right' and they may have a similar level of experience, are you confident you have done your due diligence to mitigate the risks? Here are some that you might not have thought of:

- A precaster might be ISO certified but they may not implement procedures on a day-to-day basis, and the ISO audit may not have been conducted by someone who intimately knows precast;
- Staff turnover may be high so what you get today, you may not get tomorrow;
- A precaster may have little repeat business and disputes may be commonplace;
- The precaster may cut corners during manufacture;
- Shop drawings may be inadequate or not properly authorised;
- Hold points may not address the most important stages during manufacture;

- A precaster may not have a thorough understanding of – and may not comply with – Australian Standards, codes and legislative requirements;
 - Testing may not be adequate.
- "Most checks are inadequate if the goal is to mitigate any unwanted delays, cost blowouts, quality issues or unexpected finishes," says National Precast CEO, Sarah Bachmann.

"ISO certification isn't failsafe and proper checks of a precast manufacturer are needed to minimise risk of cost blowouts. Master Precasters are audited by us and follow a Code of Conduct, to ensure you get the best possible outcome from your precast experience," she adds.

THE BENEFITS OF USING A MASTER PRECASTER

Master Precasters are the country's most skilled and experienced precast manufacturers. They follow the National Precast Master Precaster Code of Conduct and they have met National Precast's strict audit requirements.

- They have a strong track record with happy, repeat clients.
- They are financial stable and hold the right insurances.

- They implement stringent quality, safety and environmental procedures.
- They provide a safe working environment for their workers.
- They consistently produce high quality precast.
- They take pride in their work and remedy any defects.
- They employ long term, skilled workers.
- They understand and comply with Standards, codes and legislation.
- They know about and embrace new technology and practices.
- They have good working relationships with their subcontractors, such as transportation and erection contractors.
- They look after the natural environment.
- They are good corporate citizens and they are invested in their industry.

Master Precasters supply every state and territory of Australia. They can specialise in a particular type of precast such as flooring or can manufacture a range of precast elements. They can supply – and often erect - precast for large or small projects in the residential or commercial buildings or civil sector.

Visit www.nationalprecast.com.au to find a Master Precaster for your next project.

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A SNAPSHOT OF WORK FROM THE MASTERS

National Precast has introduced a new standard in the manufacture of precast concrete - Master Precaster. It's an initiative that has come about in response to discussions with government and industry.

"Master Precaster is a vital safeguard when awarding a precast contract," says National Precast CEO Sarah Bachmann.

"Awarding precast contracts based purely on price can be fraught with danger. We have seen the negative results that this kind of short-sighted thinking can have on the quality, safety, timing and cost of a project," says Ms Bachmann.

"This new standard has a clear aim - to make those in the industry who meet and exceed best practices, easily identifiable to the people that

specify precast concrete. And importantly, our Master Precasters have a genuine interest in the longevity of the industry. They are engaged and committed to raising standards."

Take a look at some of their current work. To find a Master Precaster for your next project visit:

www.nationalprecast.com.au

Project: Coburg Station
Location: Coburg, VIC
Master Precaster: Advanced Precast
Architect: Wood Marsh
Construction: John Holland Group





Project: West Dubbo Gross Pollutant Trap
Location: West Dubbo, NSW
Master Precaster: Rocla
Client: Dubbo Regional Council
Builder: Whittaker Civil
Project Management: Optimal Stormwater



Project: Powering Sydney's Future
Location: Sydney, NSW
Master Precaster: Waeger Constructions
Client: TransGrid
Bridge Design / Construction: Certus Projects, Turnball Engineering



Project: Cross River Rail
Location: Exhibition Station, Brisbane, QLD
Master Precaster: The Reinforced Earth Company
Client: Queensland Government
Architect: Hassell



Project: Astina Suites
Location: Penrith, NSW
Master Precaster: Austral Precast
Client: Astina Group
Construction Manager: Thomas Schrupf



Project: Edzell House
Location: Toorak, VIC
Master Precaster: Hollow Core Concrete
Builder: Surrey Developments



Project: St George Sailing Club
Location: Sans Souci, NSW
Master Precaster: Alpha Precast
Client: St George Sailing Club
Developer: Join Construction
Architect: Jon Jacka
Precast Installation: Total Precast



Stage one completed at \$2.8bn Melbourne Square precinct

Stage one at Melbourne's largest new city precinct Melbourne Square is complete, with the expansive \$2.8 billion development delivering on once lacking everyday assets in Southbank including a new park, full-line supermarket and childcare centre.

Construction at Melbourne Square has been led by Multiplex and commenced in 2017, with the Kavanagh Street hub since evolving to feature a new 3,745 square metre Taylor Cullity Lethlean-designed (TCL) public park, Victoria's first double-storey Woolworths supermarket and an 87-place childcare facility operated by THINK subsidiary Nido Early Schools.

Comprising 1054 luxury apartments, residents of the vibrant new lifestyle precinct's twin elliptical towers can enjoy a host of amenity including a sweeping resort-style outdoor lap and wading pool area sheltered by a sun terrace, an indoor pool with uninterrupted views over Melbourne's eastern suburbs, sauna, yoga studio, music room, comprehensive gyms, golf simulator, cinema, private dining areas and kitchen facilities, as well as further communal spaces for games including Mahjong, table tennis and billiards.

The vast private and public amenity offered in the first stage of the Melbourne Square precinct spans over 14,000 square metres and key conveniences will be activated with a considered range of pop-ups for residents during May.

OSK Property Sales and Marketing Director Scott Jessop said he was thrilled with how well Melbourne Square has resonated with

purchasers in the off-the-plan market, as well as the positive impact the project has already had on the community.

"It has been an incredibly exciting journey to see our vision for Melbourne Square come to life over the past four years. While last year had its challenges, it was immensely rewarding to see our parkland and Woolworths supermarket playing a supporting role for the public during a time of uncertainty. The amount of visitation they have both seen in a short timeframe is quite amazing," said Mr Jessop.

"Melbourne Square aims to deliver an elevated lifestyle experience for residents while championing the concept of a two-minute neighbourhood. Further to this, we have been thrilled to watch how seamlessly the project has anchored itself in the broader Southbank community."

The two COX Architecture-designed towers feature contemporary interiors conceived by Carr and stand at 236.7 metres and 184.3 metres respectively.

COX Architecture director Paul Curry said stage one of Melbourne Square formed a key component in the growing footprint of the City of Melbourne and will comprise a total of six towers when fully completed including a workplace tower, luxury hotel and retail precinct.

"The Melbourne Square masterplan is an exciting public realm focused addition to the city's urban fabric," said Mr Curry.

"It is fantastic to see the project creating value for the broader precinct and it will continue to generate public and economic benefits throughout its development journey."

For further information, please visit: <https://melbournesquare.com.au/>





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Celebrating the achievements of industrial cables and connectivity pioneer Oskar Lapp

The life of a technology pioneer whose cables, connectors and automation innovations are helping facilitate automation and Industry 4.0 transformations now sweeping the globe is being celebrated in Australia on the 100th anniversary of the birth of Oskar Lapp.

LAPP Australia is one of the latest and highly successful members of the global family of LAPP companies employing more than 4,500 people across the world, with 20 production sites, more than 40 sales companies and around 100 international representatives.

The company Founder began his lifetime of engineering innovation after escaping as a POW of the former Soviet Union and setting about to reshape the cables and connectivity landscape at a time when the cores of such products were all black or grey and electrical engineers had difficulty assigning the cores to the correct ends when connecting. Solving the puzzle required a complex process, known as continuity testing.

Oskar LAPP invented a flexible cable made of coloured cores: ÖLFLEX® was born. It was the first industrially manufactured power and control cable – an invention that revolutionised connection technology

and which is today among a range of more than 40,000 products sold globally and in Australia, including, UNITRONIC® data transmission systems, HITRONIC® fibre optic cables, SKINTOP® screwed cable glands, SILVYN® cable protection and guiding systems, EPIC® industrial connectors, ETHERLINE® data transmission systems for ETHERNET technology and FLEXIMARK® marking systems were added.

LAPP Australia General Manager Mr Simon Pullinger says companies of the LAPP group have remained in continuous family ownership with the same spirit of innovation, quality and outstanding service since it was founded in 1959, after Oskar Lapp escaped from East Germany and with his wife Ursula Ida Lapp and borrowed 50,000 marks to start a company that began work from their garage. It now turns over more than \$A1.7 billion annually.

“The outstanding success of the local LAPP company is strong tribute to the innovation, and enduring family values of service, quality and integrity of a great inventor and passionate entrepreneur, who died in 1987 but whose family-owned company is now celebrating 100 years from the birth of its Founder on March 20, 1921,” says Mr Pullinger.

As with so many start-ups today, the Lapps’ business began from the garage of their house in Stuttgart-Vaihingen. Oskar Lapp took care of sales while Ursula Ida Lapp looked after the accounts, orders and logistics from home, while taking care of their young children. Ursula Ida Lapp is today Honorary Chairwoman of the company Supervisory Board and present at important events for the company.

“The relevance to Australia of Oskar Lapp’s legacy is profound. His inventions have helped shaped connection technology worldwide and continue to advance today,” said Mr Pullinger.

“The establishment of LAPP Australia has given this country direct access to the best technologies relevant to the seismic industrial changes now shaping the world, such as Industry 4.0 and the need to future-proof rapidly evolving industries.”

“His family-based legacies of integrity, service and innovation have continued the LAPP success story here,” said Mr Pullinger, who is delighted to see LAPP Australia continue to grow.

The organisation was established three years ago to bring a new dimension to service for future-focused industries in Australia.

LAPP Australia markets include manufacturing and plant engineering (including automation, robotics and process engineering systems); electrical engineering systems and energy systems, including wind and solar green energy; machine building and machine tools; food and beverage; automotive, rail and mobility systems; intelligent buildings and infrastructure; and resources industry, including mining and oil and gas process engineering.

Besides the 40,000 products in LAPP's global range to which LAPP Australia has direct access, the local company has expanded its depth and range of technologies sixfold in just two years.

"In keeping with the traditions of Oskar Lapp, we always want to offer the best solution. So, if the customer cannot find what they are looking for in our local or global ranges, our experts are on hand to develop a solution in partnership with the customer, throughout Australia," says Mr Pullinger.

THE LEGACY OF OSKAR LAPP

Oskar Lapp was born on 20 March 1921 in Benshausen in the eastern part of Germany, one of four children from a craftsman's

family. From an early age, he showed an impressive talent for technical things and an inventive spirit. After being a prisoner of war and subsequent fleeing across the "green border" to escape the former Communist GDR, in the mid-1950s, he began a new life with his family in West Germany.

Starting again was tough, as he had left behind everything he owned when he fled to the west. Oskar Lapp initially worked for Harting, where he was responsible for the Southern Germany region. And his innovative ideas also started to attract attention. For example, he developed the first rectangular connector for industry for the company. Thanks to his many meetings with customers, Oskar Lapp knew exactly what users needed.

With ÖLFLEX®, Oskar Lapp set quality standards that are still applicable all over the world in cable production today. He was even offering ready-made cable harnesses with up to 130 coloured cores. Demand was huge. LAPP was also one of the first suppliers to offer and cut the cable harness length to customer requirements.

ÖLFLEX® was the right product at the right time and sales grew rapidly. Later, UNITRONIC® data transmission systems, HITRONIC® fibre optic cables, SKINTOP® screwed cable glands, SILVYN® cable protection and guiding systems, EPIC® industrial connectors, ETHERLINE® data transmission systems for ETHERNET technology and FLEXIMARK® marking systems were added.

Because of his painful experiences as a Soviet prisoner of war, Oskar Lapp was always committed to establishing international business relationships and friendships in the west. He found his first sales partners in Switzerland and Israel back in 1960. Oskar Lapp founded the first international subsidiary in the USA in 1976, which he no doubt saw as the exact counterpoint to the Soviets during the Cold War. At the same time, he positioned his company as a one-stop shop in connection technology and this principle remains a successful formula to this day.

"Our father led our company to success with hard work and ambition and with a clear view of what is really important. He exhibited persistence, entrepreneurial spirit and innovation and these are still part of LAPP's DNA today," says Siegbert Lapp, Chairman of the Supervisory Board at LAPP Holding AG.

The Lapp family and employees all over the world honoured this great entrepreneurial personality by laying a wreath at the old cemetery in Stuttgart-Vaihingen and by holding various commemorative events.

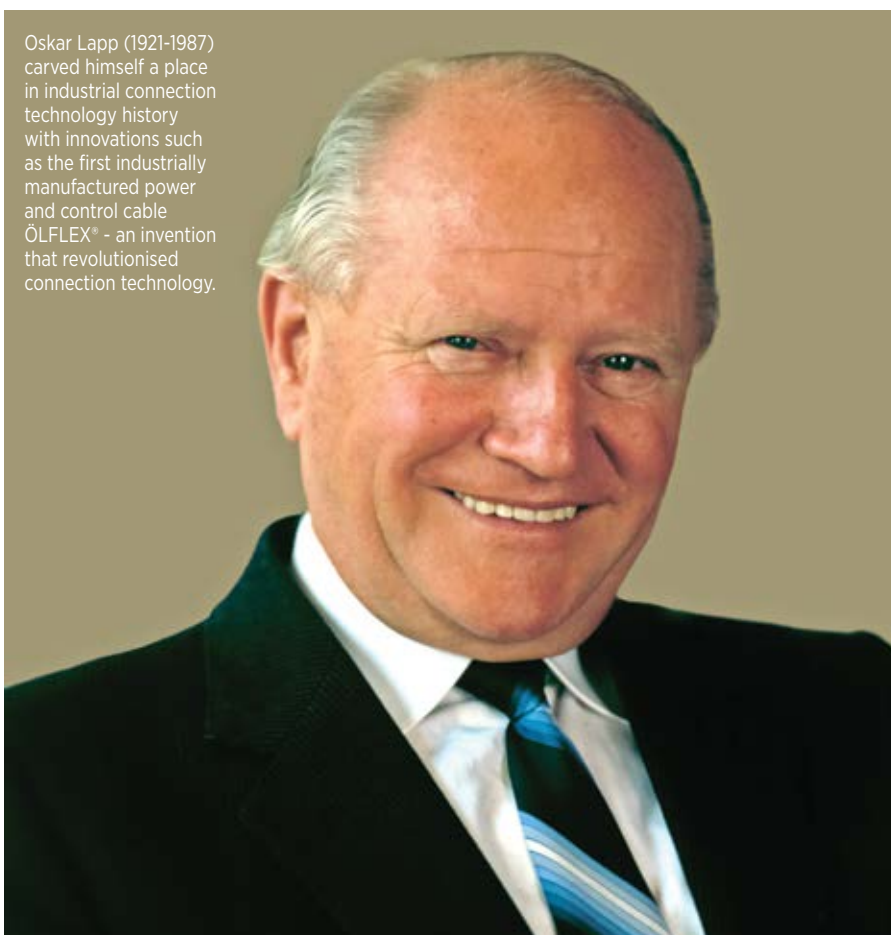
"Our father is still a major role model today. The LAPP company would not exist without Oskar Lapp. We continue his life's work with the deepest gratitude. The fact that the third generation has now taken over the running of LAPP would definitely make him very proud," says Andreas Lapp, Chairman of the Board of LAPP Holding AG.

For further information, please visit:

www.lappaustralia.com.au

THE OSKAR LAPP FOUNDATION

In memory of Oskar Lapp, the founding family set up the Oskar Lapp Foundation in 1992. This provides young scientists with incentives to effectively engage them in cardiovascular research. The Oskar Lapp Research Prize, worth 12,000 Euro, is presented annually, while the Oskar Lapp Grant, which provides up to 20,000 Euro for equipment, is awarded every two years.

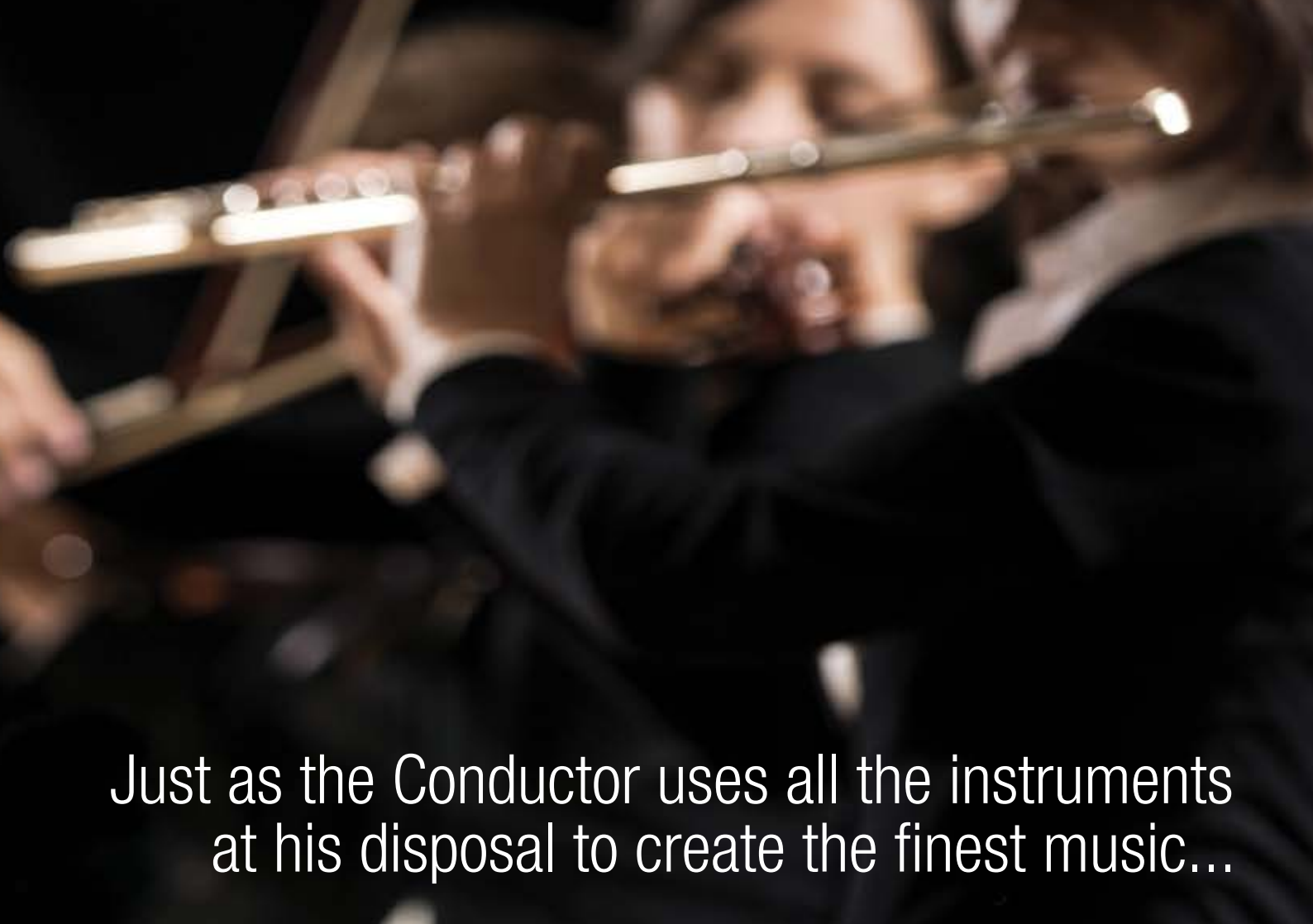


Oskar Lapp (1921-1987) carved himself a place in industrial connection technology history with innovations such as the first industrially manufactured power and control cable ÖLFLEX® - an invention that revolutionised connection technology.



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High performance NVH isolators reduce the risk of worker hearing damage



More than one in six Australians suffers hearing loss, a number that is expected to rise to one in four in coming decades, thanks to an ageing population and an increasing number of people being exposed to dangerously loud noise.

The resulting productivity losses, according to recent (2020) figures from Australian hearing care and professional services groups, total more than \$16.2 billion, or \$4,109 per person with hearing loss, most of which was due to reduced employment of people with hearing loss (\$12.6 billion).

Workers hit disproportionately harder includes those aged in their 50s and 60s, who are often among the most skilled, but also those most affected by hearing loss and prone to further damage from NVH in the workplace (NVH: Noise, Vibration and Harshness). Their numbers will be further swelled as the government pension qualification age rises to 67.

“The hearing loss figures don’t surprise us, because it has been known for a long time that continual exposure to loud noise is the most common preventable cause of sensorineural hearing loss. This is the permanent type of hearing loss which accounts for more than 90 per cent of hearing loss in adults,” says James Maslin, technical product manager at Air Springs Supply Pty Ltd, distributor for some of the world’s most effective NVH isolators.

“In fairness to industry it is important to note that there are many causes for deafness besides loud noise in the workplace – such as natural ageing and genetic factors – and that much of industry is very much aware of the problem as its workforce ages. The use of personal protective equipment has expanded radically in recent decades, for example.”

Currently the issues affect men much more than women, but this may change as more women join traditionally male-dominated industries, such as manufacturing, construction, civil engineering, and mining and energy. These are all industries that are seeking to manage their NVH issues, both in the workplace and – in some cases – in surrounding communities (as urban expansion and infrastructure spending on roads, rail and tunnels brings more big projects with major NVH issues sources much closer to existing residential and business districts).

“It is important not only to provide PPE to try to stop noise getting through to the ear, but also to cut off the noise at source – like crashing metal springs and unsuspended

stamping, conveying, compressor, generator and HVAC equipment,” says Mr Maslin.

“As we all work longer, the risk issue expands further, with lost hearing posing communication issues and, ultimately, the loss of major skills because of a preventable problem. We are already getting people dropping out of the workforce because of problems with hearing and communicating, and this is costing both the individual and our skills base.”

“It is one of the reasons why a person with untreated hearing loss earns an average of \$10K less than people with no hearing loss or treated hearing loss,” says Mr Maslin.

Air Springs Supply has decades of first-hand experience of the issue as the



national distributor of one globally proven highly effective solution to NVH issue, its Firestone Airmount® pneumatic isolators. These ultimate actuators, which support up to 40 tons per unit, not only silence intrusive NVH from machinery and plant, but also are also suitable for suspending and protecting entire structures – including building and electronic facilities – against NVH created by passing rail and road traffic, civil engineering machinery and other ambient NVH.

Super-silent Airmounts – either permanently sealed or fed by standard industrial compressor equipment – range from palm-sized to nearly a metre across, individually supporting weights extending from a few dozen kilograms up to more than 40,000kg. They are available in single, double and triple-convoluted types as well as rolling sleeve models in Australia’s leading range of such technology, comprehensive stocks of which are housed in Air Springs Supply’s expanded headquarters in Sydney. They are distributed nationally by a supply and technical advice network built up over more than 40 years.

Engineered from tough fabric-reinforced rubber, Airmounts are identical in construction to the air springs used in the suspensions of heavy trucks seen every day on the toughest Australian roads. They are also used beneath passenger railway locomotives and rolling stock, where they withstand grime and shock while providing the outstanding ride and isolation properties required. Examples of applications include:

- Complete structures up to 500 tons or more
- Vibrating screens, conveyors and elevators
- Computer rooms and hospital facilities
- Crushing and stamping equipment in heavy industry
- HVAC and refrigeration equipment in widespread use, including food and beverage
- Sorters, sizers and vibrating bins
- Compressors and generators
- Bulk handling and minerals processing equipment
- Garbage compactors and waste-to-energy equipment

Firestone’s fabric-reinforced solid rubber Marsh Mellow® isolators provide a complementary low maintenance alternative for quiet isolation of machinery vibration and for general shock absorption throughout industry. The Marsh Mellow isolators are constructed of a solid rubber core with a hollow centre and several plies of fabric-reinforced rubber as an outer cover.



Quiet and hygienic, Marsh Mellow® industrial springs can replace noisy coil springs in manufacturing, food and beverage and other applications where metals pose washdown and breakage issues



The plies provide the springs with stability as well as a consistent cylindrical shape, giving consistent performance regardless of changing loads, while also offering high lateral stability and compact size.

The low natural frequencies of Marsh Mellow springs mean they provide excellent isolation of forced frequencies in the range of 800-1200 cycles per minute (13-20 Hz). Marsh Mellow springs are quiet in operation, unlike steel springs which readily transmit high frequency structural noise and often suffer from coil chatter. A failing coil spring may crack, causing fragments of the coil to damage equipment, resulting in expensive downtime.

CONCLUSION

There is no silver bullet to this issue, says Mr Maslin. Rather, individual approaches are needed to what is still a multi-layered and expanding problem.

“But overall, we do need to recognise that industry’s Duty of Care to its workers is changing, given that Australia currently has about two million people aged over 55 in the workforce – and the proportion of such workers is expanding.”

“As Australia’s population and retirement age rises, there is a real and growing

workplace hazard and risk management issue here, as OHS people know that one in three people in this group suffer hearing loss and one in two after the age of 60,” Mr Maslin added.

“And hearing protection needs to start as early as possible because the later effects of age and noise exposure are additive, so that noise exposure may cause hearing loss in middle age that would not otherwise occur until old age. So the problem is major, ongoing, predictable and, in many cases, preventable,” he concluded.

ISO CERTIFICATION

Air Springs Supply Pty Ltd has enhanced its commitment to national and global standards of quality assurance by gaining ISO 9001: 2015 Quality Management Systems – Requirements certification.

The company places a high priority on continuously reinforcing its customers’ confidence in doing business with an organisation that can consistently meet or exceed their needs on time.

ISO 9001 certification is invaluable to customers in demonstrating that the organisation involved can consistently provide products or services that meet the requirements of customers and of any applicable regulations relating to them.

ISO 9001 benefits to customers include assurance of global standards of consistency, quality and supply of products for which Air springs is exclusive national distributor, including Firestone air springs – the world’s No 1 brand for heavy vehicle suspensions.

For more information about Air Springs Supply’s ranges, national distribution and technical support network, please contact Air Springs Supply Pty Ltd, T: (02) 8877 5500, E: sales@airsprings.com.au or visit:

www.airsprings.com.au



The digital future of the construction industry

By Rob Bryant, EVP Asia Pacific at InEight



Despite traditionally being one of the slowest industries to adopt new technologies, the pace of technology adoption in the construction sector is rapidly changing. Pressure to improve productivity, profit and to differentiate and add value to their offering means that digital transformation is now a must for contractors. Capital asset owners are under greater scrutiny to produce a stronger return on investment on the back of increased infrastructure spending. In fact, according to economists, Australia's major project pipeline sits at levels unseen since the mining boom, with \$AUD400 billion in potential investment over the next five years. Arguably the difference now is that this boom is driven by government and not public funding.

While several public sector megaprojects have been fast-tracked, many have also experienced budget blow outs, putting infrastructure spending into the public spotlight.

Whilst this investment is a driver of change for the sector, it is the last push, catapulting the industry round a long slow corner in its lifecycle. Technology investment hovering near 1% of revenue and a focus on cost cutting and protection of margin in an increasingly competitive landscape, means most players have been looking in the rear-view mirror.

Technology advancements in project controls, data capture, analysis and mobile access are huge enablers. The introduction of innovations such as the Internet of Things (IoT), Artificial Intelligence (AI), and 4D modelling, are allowing project managers to leverage connected data to deliver the efficiencies needed to secure vastly an improved return on investment.

CONNECTING DATA THROUGH SMART CONSTRUCTION

Through connected IoT data project managers have the ability to track and share data in real-time, helping them to act on insights almost instantaneously. In many cases, workers would have to manually manipulate and input data on a physical spreadsheet that would be shared with other stakeholders. By moving this digitally, not only will this ultimately save

time and effort, it also minimises the risk of losing important information, while enabling stakeholders to leverage the data pre-emptively.

Technology helping to automate project workflows exists in tracking through radio-frequency identification (RFID) and the leveraging of Bluetooth. which expands the traditional exchanges of information from purely document-centric to object-centric. Material tracking through RFID and Bluetooth monitoring delivers up-to-date accurate information regarding material location and status (fabrication, store quantity, site or built) as well as helping with equipment and tools. Huge in assisting efficient work scheduling, reducing wastage, and reducing manual tracking activity. By removing data entry from the project site and transferring ownership back to the supplier, it increases project visibility and provides a better understanding of the supply chain, accelerating interactions between clients, developers and workers.

While IoT and material tracking technologies help create data efficiencies, AI and machine learning are increasingly being used to provide intelligent insights on connected data to inform future project planning and manage risk.

By collating information from past projects, AI can accurately predict future pain points based on a number of factors including project size and materials

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available. It can also assist project planning by suggesting realistic timelines for future projects based on previous statistics.

BUILDING A COMPLETE PICTURE WITH BUILDING INFORMATION MODELLING (BIM)

Another key innovation helping project managers deliver greater efficiencies is multi-dimensional or building information (BIM) modelling. 3D models provide a visual representation of an entire project. By adding multiple perspectives through BIM modelling of construction assets, project managers have a complete picture of a project enabling them to make informed decisions. Referred to as a digital twin, the complete asset construction build digitally before the ground is broken. The emergence of digital twins adds another layer of visualisation for a project. A digital twin is a permanent digital replica and record of the physical asset. This form of real-time data enables simulations to be run to test hypothetical scenarios and predict outcomes before injecting money into a new project.

“3D models provide a visual representation of an entire project. By adding multiple perspectives through BIM modelling of construction assets, project managers have a complete picture of a project enabling them to make informed decisions.”

The extra dimensions of insight are added to a 3D model by incorporating schedules, to show build progress as it appears in the project plan, costs as the materials are incorporated and the build evolves. By integrating modelling, documenting, and scheduling, managers can gain access to

all relevant real-time build information. Moreover, it enables faster progression to the handover point to operations, potentially saving millions of dollars in time and efficiency.

Digital twins also provide more insight into the serviceability of an asset during its operational lifespan and enable a more proactive approach to supporting and extending its lifespan to ultimately reduce uncertainty, delays and mistakes.

By embracing emerging digital technologies such as IoT, AI and digital modelling, return on investment challenges driven by poor planning and inefficiencies will be an issue of the past for the construction sector. With infrastructure spending high on the priority list to boost our economy, investing in technology will ensure major projects can deliver value, on time and on budget.

The construction industry, delivering capital assets is undergoing an accelerated evolution. Of course, the physical build will always be part of the process for projects. The digital intervention is happening and the future is now.

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