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JUN/JUL 2022

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About the Cover

An official launch with a difference!

(L-R): Gold Coast Mayor, Tom Tate, recently celebrated the completion of Wonder Reef with an underwater ribbon-cutting with Queensland's Deputy Premier, Steven Miles. Wonder Reef, which was jointly funded by the City and the State, opened to divers in June this year.

► Turn to Page 10 for the full story.



TIME FOR A NATIONAL STORMWATER MANAGEMENT PLAN

Dear Readers,

Following yet another series of devastating rainfall events (one of which continues even as I write this), and the subsequent devastation faced by numerous cities, towns and regions across Australia - one could almost be forgiven for wondering if we are stuck in a 'Groundhog Day' style loop where we are condemned to a life of watching the same events and consequences play out time and again.

Indeed, many areas of the country seem to barely have the opportunity to recover and rebuild from one major disaster, before they face the next devastating occurrence.

This is particularly true when it comes to flooding, with some areas - including parts of outer metropolitan Sydney, which are currently facing their fourth major flood this year!

It's no small irony that the driest inhabited continent on earth should suffer so badly during major rainfall events. And that while great swathes of the country are submerged under floodwaters, much of our great continent remains arid and, in many aspects, massively underutilised and unproductive.

Alarmingly, despite the fact that even in my relatively short lifetime, these major flooding events have occurred more times than I could possibly remember, we still seem to suffer the same extreme consequences. And the toll is horrendous - not only in financial terms (with costs often measured in hundreds of millions or even

billions of dollars) but also in emotional and social terms.

From massive stock and crop losses, through to total devastation of homes, businesses and in some instances, entire towns or large CBD areas, as is the case with any major disaster, the true toll of a major flood is almost impossible to calculate.

With that in mind, I believe that it's time that we seriously start to consider stormwater management on a much larger scale - for instance, a state-wide or even national scale.

Much of our great nation is sorely lacking in water for much of the year and as a result, is massively under utilised and under productive. At the same time, large areas are inundated by floodwaters with alarming regularity.

What's more, climate science provides clear evidence that extreme weather events will continue to occur with increasing regularity.

Meanwhile, governments are stuck in a seemingly never-ending cycle of having to spend hundreds of millions of dollars repairing and rebuilding infrastructure after each of these major flood events... and it only looks set to only get worse.

Access to water is perhaps the single most important factor in increasing the habitability and productivity of any area.

With that in mind, I believe that the time has come for us to develop and implement a plan to capture and/or redirect and harness this stormwater to help 'open up'

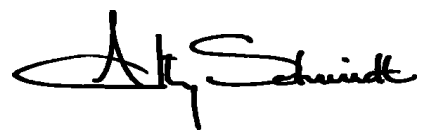
Australia's interior while at the same time, drought-proofing much of the country.

I'm well aware that this is an idea that has been floated in various guises for more than a century, mostly to be dismissed as either being too expensive or for that matter, a pointless exercise for a country with a small population such as ours. However, our population and the planet's population as a whole is growing at an extremely rapid rate.

Importantly, it's not only about having somewhere to live - everyone has to eat. This would be a 'Nation Building' project in every sense of the word, providing an opportunity to create a massive agricultural economy.

Growth ONLY EVER comes from investment. This WILL cost many tens of billions of dollars.

That said, I believe that the tens of thousands of jobs that these projects would create (both during construction and ongoing), as well as the massive long-term economic benefits that a plan like this can deliver for generations to come - including for many of our remote indigenous communities - makes them an excellent investment.



Anthony T Schmidt
Managing Editor



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CALL TO ROUND OUT THE CONSTRUCTION INDUSTRY

New research by ING Australia and Planet Ark's *Australian Circular Economy Hub* (ACE Hub) suggests there's high consumer demand for the construction industry to take a circular approach, reducing its reliance on non-renewable resources.

Three-quarters of Australians surveyed believe it's important that homes and buildings are designed and demolished with reuse in mind and more than eight in 10 want to live and work in buildings that are more sustainable. The research also reveals a possible correlation between a building's value and the impact it has on the environment, with almost half (49%) of respondents admitting they would be willing to pay more for a home that is sustainable when compared to a standard home and one in 10 said they would be willing to pay much more.

Darren Beatty, ING Australia's Head of Real Estate Finance for the Wholesale Bank says: "It's clear from the research that Australians want their built environments to contribute towards a more sustainable future, even if it comes at a financial cost. It's this demand that is driving the construction industry to rethink how they design, build and deconstruct buildings."

"If we really want to tackle climate change we can't only focus on transitioning to renewable energy, we also need to focus on reducing the emissions from the products we make."

"At ING we've assisted construction clients in Europe and other regions to be more circular with their approach through our sustainable finance solutions. As our wholesale lending arm grows in Australia, it's exciting to be able to share our global

expertise with local businesses which may be looking to apply these principles here."

When prompted (with a definition of the circular economy as being designed to ensure regenerative processes and products), 77% of respondents agree that the circular economy is important to them and two in five deem it to be extremely important. This sentiment is matched by Australian businesses, with 88% agreeing the circular economy will be important for the future*.

However, a report by the ACE Hub in December 2021* revealed only 27% of Australian business decision makers could correctly identify the definition of the circular economy when presented with a list of options.

Paul Klymenko Co-Founder and CEO of Planet Ark says:

"Our research showed that most business decision makers see recycling as the defining term for the circular economy, rather than a system redesign focusing on designing out waste and pollution, reusing products and materials and regenerating natural systems."

"It revealed a knowledge gap between early adopters in business and those just now starting their circular economy journey, as well as an opportunity for the ACE Hub to facilitate increased knowledge transfer between these groups to speed up the imperative transition to a circular economy."

To assist the construction industry, ING Australia and the ACE Hub, through their work with the Netherlands Consulate General, have invited world leading circular economy expert, Professor Jacqueline Cramer to share her expertise on how the industry can move towards a more sustainable future.

"Circularity in the construction industry is an upcoming theme worldwide because of the urgent need to deal more prudently with natural resources," Professor Cramer said.

"To power circular construction, network governance should be enhanced, as it enables concerted action. In other countries it's worked well when the Government supports network governance through the implementation of dedicated policy instruments.

However, the industry doesn't need to wait for policy to start working collaboratively to adapt a more circular approach," Professor Cramer added.

ABOUT THE ACE HUB

Our current economic model is mostly linear: take, make, dispose. We extract materials, use these to produce something, then at the end of the product's useful life we throw it away. The growing acknowledgement that we have an urgent need to protect our finite resources and reduce emissions has led to a global movement towards the circular economy.

There is a strong need for a platform in Australia that inspires and facilitates the collaboration and networking necessary for our transition to a circular economy. Planet Ark is taking the lead on the Australian Circular Economy Hub and Marketplace, which will be Australia's leading platform to accelerate our transition to a circular economy.

The mission of the Australian Circular Economy Hub (ACE Hub) is to facilitate the transition to a circular economy in Australia. This can only be achieved with one of the most significant collaboration efforts ever undertaken. The ACE Hub aims to be the focal point for all things circular in Australia — a platform for sharing information and inspiration, and for celebrating the efforts of all those working towards this vital transition.

*Circularity in Australian Business 2021: Awareness, Knowledge and Perceptions <https://planetark.org/newsroom/documents/circularity-in-australian-business-2021>

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AUSTRALIAN PCI®: CONSTRUCTION FALLS INTO CONTRACTION IN JUNE

The Australian Industry Group/Housing Industry Association *Australian Performance of Construction Index* (Australian PCI®) fell by 4.2 points to 46.2 in June, indicating a contraction in activity across the construction sector following months of positive or stable conditions (readings below 50 indicate contraction in activity, with lower results indicating a stronger rate of contraction).

Jeffrey Wilson, Director of Research & Economics at the national employer association Ai Group said: "The Australian construction sector faces significant pressure. Supply constraints for staff and materials are continuing to grow, with input prices setting a record in June."

"Housing, apartment and commercial construction activity all declined further into contraction this month. The effect of rising interest rates was evident across house building and apartments as builders reported

a drop in enquiries and new orders," Mr Wilson said.

HIA Senior Economist, Nicholas Ward, said: "Materials and labour shortages continued to weigh on home building in June. These constraints have resulted in increases in the cost of construction and extended build times. Demand for new detached homes and renovations has been exceptionally strong during the pandemic."

"There is a record volume of detached houses under construction, with more work entering the pipeline each month. With this large volume of work to be done, builders can expect to be at capacity in 2022 and 2023," Mr Ward added.

Australian PCI® – Key Findings for June 2022:

- Three of the four construction sectors – housing, apartments and commercial



– were in contraction in June. All saw activity fall significantly from the previous month.

- House builders reported higher interest rates constraining new orders, which again fell in June.
- Labour shortages and delays in supplier deliveries continued to constrain activity. Builders reported ongoing concerns about increases in inputs (including fuel) and labour prices.
- Capacity utilisation moderated slightly to 82.4% but remains elevated as it has been for much of 2021 and 2022.

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NIGEL FINE RETIRES AFTER 13 YEARS AT IET HELM

Nigel Fine has stepped down from his position as Chief Executive and Secretary (CES) of Europe's Institution of Engineering and Technology (IET), after announcing his plans to retire earlier this year. Nigel has been at the helm of Europe's largest professional engineering institution since 2009.

Under his leadership, the IET has been established as a world-leading membership and learned society, driving forward its charitable purpose to engineer a better world and growing a worldwide membership of 155,000 people across 148 countries.

In the interim, Ed Almond, currently the IET's Director of Finance and Planning, will succeed Nigel as CES from Friday 1 July 2022, whilst an international search for a permanent successor continues. Ed, who has been with the organisation for 21 years, has extensive knowledge of the workings of the IET and is passionate about its purpose.

Reflecting on his decision to retire, Nigel says: "The IET is a fantastic organisation to work for and is uniquely placed to bring engineering expertise together from across the world to deliver world class engineering solutions. I feel very privileged and honoured to have been Chief Executive, and the time is now right for me to pass on the leadership baton.

"I have been supported throughout the last 13 years by a very dedicated network of volunteers across the world and an incredibly professional and passionate international staff team. Together we have driven our mission to inspire, inform and influence the engineering and technology community, as well as wider society, for the benefit of advancing the world around us.

"I'm also incredibly proud to see the thousands of young people we have supported through our programmes and awards go on to have fulfilling engineering and technology careers. Collectively we've made a huge difference to how engineering is perceived, transforming it to be more inclusive, diverse and an accessible career choice for all.

"There is still much more to do and as an IET Fellow I very much look forward to supporting the IET as it continues to progress this important work as we deliver on our vision to engineer a better world."

Sir Julian Young, IET President, said: "Nigel is a committed and effective



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advocate for engineering and its importance to society. With a significant shortfall of engineering skills in the UK, he has focussed his efforts on advancing the profession as a collaborative leader and at a personal level by raising awareness and encouraging young people to choose this rewarding and essential career.

“The influence and engagement of the IET has grown over the last decade during his leadership, providing more engineers with support, knowledge and communities to

develop and innovate. He has championed inclusivity and steered the IET as an Institution to welcome a diverse membership. Moreover, he has introduced successful new programmes to help keep a high-quality pipeline of talent flowing by inspiring young people to pursue STEM subjects.

“And this dedication is mirrored in the IET’s progression as a membership organisation and our international offer. During Nigel’s tenure we have seen two women presidents and the first woman Chair of the IET Council.

He has led the refurbishment of the UK’s London and Stevenage sites, reengineered our brand to reflect a modern, relevant and inclusive IET and celebrated our 150th anniversary whilst steering the organisation through a global pandemic.

“It is no mean feat and he leaves a fantastic legacy behind for us to build on. I wish Nigel all the best for his retirement, thank him for his commitment and leadership, and I trust he will watch on as we deliver his ambitions for the next 10 years and beyond.”

CONSTRUCTING COMMUNITIES: THE ROLE OF INFRASTRUCTURE IN BRINGING VICTORIANS TOGETHER

Built on a history of migration, collaboration and innovation, Australia has long been a ‘melting pot’ of cultures, with diverse ideas and traditions integral to its way of life.

Bringing Australia’s diverse and progressive culture to life are purpose-built construction projects to house communities, ideas and experiences. One example is the Victorian Pride Centre, built by Hansen Yuncken which opened its doors in 2021.

In recognition of the project’s significance and success amongst the community, the project was this week announced as the winner of KONE’s 2022 Victorian People in Property Awards for Team of the Year.

Hansen Yuncken CEO, Peter Salvesson, said, “Underpinning our corporate values is a desire to make a real difference to the communities in which we work. The \$36 million Victorian Pride Centre project ticks all the boxes when it comes to engaging local and diverse communities, and we are extremely proud to have brought this important hub to the St Kilda neighbourhood.

“Having our strong and collaborative team recognised as part of the KONE People in Property awards is extremely rewarding and a great acknowledgement of a collective mindset and delivery – a reminder that we are better together.”

Victorian Pride Centre CEO, Justine Dalla Riva, says the building is a milestone for the community: “It represents progress, openness, becoming and belonging. The opening and operation of the Pride Centre is a step towards equality for LGBTIQ+ communities. It’s a place that embodies our key values of support, celebration, belonging and pride in form and function.

“The Victorian Pride Centre has become a hub of community activity, collaboration, and

celebration. Our social events have brought a sense of togetherness for our communities after a couple of disjointed years during COVID.”

Another example of how communities can be constructed through building development was Hansen Yuncken’s Greater Shepparton Secondary College (GSSC) project in Victoria.

During the peak of COVID, Hansen Yuncken donated \$10,000 to Shepparton Foodshare to bring food to the tables of local families living in isolation. A 1,270 litre freezer, worth more than \$8,000, was also provided to the Greater Shepparton Lighthouse Project to support their work with youth facing food insecurity.

Hansen Yuncken was able to create opportunities to employ Shepparton residents living with disability, to plant beautiful mature trees across the site, through social enterprise ConnectGV. The money paid to ConnectGV for the project has since allowed them to provide meaningful long-term employment for workers within their nursery complex.

“Not only did Hansen Yuncken have the opportunity to support the Shepparton community while constructing GSSC, part

of our project delivery team involved school alumni who attended Shepparton High as students themselves, many moons ago.

“Bringing those team members back to help transform a place that holds memories for them was very special, it was nostalgic for them and certainly strengthened the community connection in the build,” tells Mr Salvesson.

“After Victorian students have faced an undeniably challenging past couple of years of remote learning during COVID, a world leading education hub like GSSC will be a game changer for Shepparton students to seize new opportunities.

“With some of our most crucial and culturally defining sectors being left behind, Hansen Yuncken is excited to be playing a key role in Australia’s post-pandemic recovery through meaningful, considered and relevant construction. Project by project, we are reinvigorating life back into Australia, across rural towns and capital cities alike.

“We are thrilled to win KONE’s People in Property award, and excited to continue working with communities to deliver complex projects with pride.”



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An official launch with a difference! (L-R): Gold Coast Mayor, Tom Tate, recently celebrated the completion of Wonder Reef with an underwater ribbon-cutting with Queensland's Deputy Premier, Steven Miles. Wonder Reef, which was jointly funded by the City and the State, opened to divers in June this year.

GOLD COAST'S CAPITAL INVESTMENTS BUOYED *BY SAFETY AND SUSTAINABILITY*

Whether it's delivering infrastructure under water, over water or beside it, the team at the City of Gold Coast is more than up for the challenge.

The Gold Coast is known for its lifestyle and is a leading tourism, business, and events city. Situated in the south-east corner of the state of Queensland, the Gold Coast stretches along 57 kilometres of coastline, so it's no surprise there's an aquatic element to many of the projects in the City's 2022-23 portfolio.

In the coming year, the City's Transport and Infrastructure Directorate will oversee more than \$200 million in capital expenditure with a focus firmly on safety and sustainability.

The 2022-2023 Annual Plan shows that as the City continues to grow, improving community infrastructure and

investing in transport has never been more important. Strengthening the economy whilst protecting the unique lifestyle enjoyed by Gold Coasters will help create a more sustainable future.

A \$5 MILLION ENGINEERING WONDER

Economic strength is one of the principles at the heart of the Gold Coast's new \$5 million ecotourism attraction, Wonder Reef.

Gold Coast Mayor, Tom Tate, recently celebrated project completion with an underwater ribbon-cutting with Queensland's Deputy Premier, Steven

Miles. Wonder Reef, which was jointly funded by the City and the State, opened to divers in June this year.

To ensure ongoing sustainability of the attraction, the City developed the Wonder Reef Long Term Management Plan to provide clear direction on the implementation of environmental management best practices not only during the construction/installation phase but also throughout the operation and decommissioning of the reef.

Wonder Reef features nine buoyant 'sculptural reefs' - each tethered to a foundation reef installed at a depth of 30 metres.

Wonder Reef features
9 buoyant sculptural
reef flutes.

COVER FEATURE 

“Wonder Reef is a one-of-a-kind underwater experience which will attract divers from around the world.”

GOLD COAST MAYOR, TOM TATE

Mayor Tate said once the reef structures are fully established, they will create more than 32,000 m³ of marine habitat.

“The coral will attract even more marine life to the site and as it grows will become a prominent feature for divers,” said Mayor Tate.

“Wonder Reef is a one-of-a-kind underwater experience which will attract divers from around the world. It’s going to put the Gold Coast on the map for top diving.”

The reef is quickly becoming home to a diverse range of species including Indian scad bait fish, giant gold-spotted rock cod, Queensland groupers and sequined mulloway. Over time they’re expected to be joined by sharks, rays, and turtles.

“It is just an amazing experience – the marine life is as good as what you’ll see at any other dive site. The coral is thriving, and the sculptures are just mesmerising,” Mayor Tate said.

Following installation of Wonder Reef in mid-2021, the next significant milestone towards preparing the site for divers was the successful planting of coral in December 2021.

The coral planting was undertaken by Townsville-based coral reef experts, Reef Ecologic, in collaboration with Subcon Blue Solutions and Sea World.

The coral was transferred from Palm Beach Reef and is anticipated to grow between 1 and 25 centimetres a year, depending on the species. The planting team took two days to complete the complex transfer.

Truly a wonder
to explore.

“Renewing our tourism products and attractions is vital if we want to keep our title as Australia’s tourism capital – and believe me this is something special.”

WONDER REEF FEATURES

- World first buoyant reef design
- Nine buoyant sculptural reef flutes standing about 22 metres above the sea floor, anchored to the sea floor by 9 reef foundations
- Buoyant sculptural reef flutes submerged approximately 8 metres below the surface, suitable for certified open water divers
- Reef foundations are 4 metres by 4 metres in size and weigh about 72 tonnes each, accessible by advanced open water divers
- Reef purposely designed to provide habitat for a diverse range of marine life
- Swim-throughs and landing platforms for divers
- Three commercial moorings for appointed dive tour operators and one public mooring to facilitate diver access.
- Eighteen months of complex technical analysis and design with expert input from around the world, to ensure the reef can withstand the harsh marine environment including waves up to 18 metres
- Designed by reef experts Subcon Blue Solutions and renowned Queensland artist Daniel Templeman.

For further information on
Wonder Reef, visit: [https://
www.wonderreef.com.au/](https://www.wonderreef.com.au/)

Iconic Oceanway extension

Onshore, the City's tourism offerings will be enhanced with the completion of further sections of what is becoming a must-do experience for pedestrians and cyclists - the Gold Coast Oceanway.

The City has a long-term vision to create a 36-kilometre-long network of shared pathways stretching from Coolangatta in the south to the Gold Coast Seaway at the northern end of The Spit.

The new sections totalling about 2 kilometres in length are Surfers South and Main Beach South. Their construction follows the recent completion of a 670-metre section of Oceanway at Palm Beach North.

Surfers South is under construction and will connect the tourism hubs of Broadbeach and Surfers Paradise. It will tie into a continuous off-road pathway network that stretches all the way to Main Beach. The Oceanway will comply with the Disability Discrimination Act 1992 and will enable more people to enjoy the beach and the Gold Coast's iconic skyline views. Weather and construction conditions permitting, it is expected to open to locals and visitors in December this year.

Main Beach South is in the final design phase. Construction on the pathway between Richard Court and Woodroffe Avenue at Main Beach is expected to commence in February 2023.



Early works on the Surfers South Oceanway.

The Gold Coast Oceanway incorporates a total of 36 kilometres of shared cycle and pedestrian paths along the Gold Coast's iconic coastline.





The Sand Bypass System transfers sand to South Stradbroke Island and ensures the Seaway navigation channel is maintained.

Image courtesy GCWA.

Improving beach resilience

Work is nearing completion on a 7.8-kilometre pipeline to deliver sand from The Spit to Gold Coast beaches stretching north from Surfers Paradise, protecting them from the impacts of storms and king tides.

The City has been actively working with the Gold Coast Waterways Authority (GCWA) to secure the delivery of sand from its Sand Bypass System at The Spit. The Sand Bypass System transfers sand to South Stradbroke Island and

ensures the Seaway navigation channel is maintained. GCWA is providing a significant contribution to the project by capturing the sand through the Sand Bypass Jetty for the City to transport and allowing the City to use and modify its infrastructure.

The pipeline will enable the City to conduct annual renourishment campaigns proactively increasing the resilience of the Gold Coast northern beaches. It complements a 2017 beach

nourishment project which replenished Gold Coast beaches with three million cubic metres of sand.

The pipeline has the ability to redirect up to 20 per cent of the 500,000 cubic metres of sand transported via the Sand Bypass System to South Stradbroke Island each year. Impacts on the shoreline at The Spit, Main Beach, Narrowneck, Surfers Paradise and South Stradbroke Island will be included in the City's coastal monitoring program.

Tackling congestion, connecting communities

The \$40 million Isle of Capri Bridge project is at the centre of the City's congestion-busting strategy on the road and waterways networks.

The original bridge crossing the Nerang River and connecting Surfers Paradise with the Isle of Capri was 60 years old.

In 2019, the major east-west thoroughfare carried 18,000 cars daily. That is forecast to grow to 25,000 cars a day by 2027.

Planning for the Isle of Capri Bridge Project in Surfers Paradise began in July 2016. Construction began in August 2019.

In April 2022 Mayor Tate opened this project which involved:

- replacing the 2-lane bridge that had one 1.2-metre-wide path with a 4-lane bridge that has 4-metre-wide shared paths on both sides
- upgrading and relocating multiple major underground services on both Remembrance Drive (Gold Coast Highway) and Via Roma Street

- widening Via Roma Street near the bridge from 2 to 4 lanes with additional bicycle lanes
- reconstructing the intersection of Remembrance Drive and Via Roma Street including opening Enderley Avenue to through traffic
- reconstructing the intersection of Via Roma Street and St Peters Place/Remo Street

- rejuvenating road pavement several hundred metres beyond the intersections and
- upgrading two parks.

The new bridge also addressed a challenge for the City's boating community with vessel clearance being increased to 4.5 metres to allow bigger craft to pass beneath it.

Isle of Capri Bridge at twilight.



It's all about the lifestyle

With 1 million people expected to call the Gold Coast home by 2040, the demand for world-class community facilities giving people the chance to play in, on and around the water continues to grow.

The City is helping to meet that demand with the Palm Beach Aquatic and Community Centre Redevelopment project. It will transform the centre into a vibrant and contemporary destination for the southern Gold Coast.

Originally built between 1977 and 1981, the Palm Beach Aquatic Centre is

one of the City's most popular aquatic facilities.

The centre has outgrown its serviceable life and no longer meets current compliance standards. The site is overdue for redevelopment to meet the changing needs of this highly urbanised area.

The new centre, comprising aquatic, fitness, and community facilities, will inject fresh life into the precinct, with subtropical design elements to reflect the culture, climate, and character of the southern Gold Coast.

A major new inclusion is a contemporary community centre with multipurpose hall and breakout area, flexible spaces, and a dance studio.

The existing 50-metre outdoor pool, built in 2010, will be retained and integrated into the redevelopment of the site. The remaining facilities will be removed to make way for the new centre which is due to reopen in early 2024.

Exciting times are ahead for the Gold Coast - a City inspired by lifestyle and driven by opportunity.



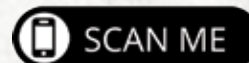
Palm Beach Aquatic and Community Centre.

Artists impression



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BUILD A CITY: BUILD YOUR CAREER

Those who live on the Gold Coast boast that it's one of the best places in the world to live, work, study, play and raise a family.

Their enthusiasm stems in large part from the way the city is managed and maintained. It is an incredible challenge and success is achieved by an outstanding team of committed professionals who work for the City of Gold Coast (the City).

A VISION FOR THE FUTURE

As one of Australia's largest local government authorities, the City of Gold Coast has a distinct vision: Inspired by lifestyle. Driven by opportunity. It unites the team who have a genuine passion for their roles, and it can be seen in the quality outcomes they deliver.

The City's Transport & Infrastructure Directorate plays a major role in nurturing the Gold Coast's liveability. Its vision is to ensure our transport and infrastructure is safe, sustainable and contributes to a world-class lifestyle for current and future generations. The success measure is the maintenance of the Gold Coast as a prosperous and attractive city.

PROTECTING CITY ASSETS

This directorate maintains more than \$9 billion of City assets. It is a massive, complex, and intriguing portfolio of projects, programs, and services.

Those who join the team have access to a wide variety of role opportunities to utilise their skills and experience. They appreciate the City's commitment to help staff develop their competencies. Practical and valuable support is provided to further career development. The more we can foster your talents, the better we can make our city. It's a partnership that works.

With a city as large and diverse as the Gold Coast there are many out of the

ordinary challenges that arise frequently. The rain events of the past few years are a standout example. The glorious green hinterland that sits behind our coastal plain channels volumes of water that are sometimes truly exceptional. The force of these flood waters can cause major damage to roads and other vital infrastructure.

Internal and external staff need to act with speed - but always being mindful



of safety - to protect the community and restore services and infrastructure with minimal possible delays. The challenges are very real, and our responses impact a lot of lives.

TRANSPORT AND TRAFFIC BRANCH

Transport & Infrastructure Director, Alton Twine, says there are great career opportunities in the Transport and Traffic Branch (T&T). This outstanding team is responsible for planning, operating and enhancing the City's local transport system, including roads, intersections, pathways and provision of numerous public and active transport services.

T&T works closely with transport industry partners like the Queensland Department of Transport and Main Roads to ensure Gold Coast's transport system is safe, reliable and continues to enable the City's remarkable growth trajectory.

Mr Twine says T&T is looking to attract more terrific staff so it can meet community and stakeholder expectations. The Branch is currently seeking a significant number of project managers, transport planners, traffic engineers and support staff. "It's an exciting time to be working here, with some major projects being planned or moving into delivery phase," he said. Projects include future stages of Gold Coast Light Rail, major road upgrades, trials of emerging transport technology and early preparations for Brisbane 2032. For more information about these opportunities, visit 'Careers with Council' or contact the Branch directly on 07 5582 8457.



PALM BEACH ARTIFICIAL REEF

The City has achieved wide recognition for its innovative coastal protection program. A fine example is an erosion protection structure the City constructed in 2019 at a cost of \$18 million. It works by influencing surrounding waves and currents to promote a long-term increase in sand deposited along vulnerable sections of the Palm Beach coastline. It sits 270m offshore and is 160m long, 80m wide and 1.5m below the average water level at its highest point.

To form the reef, 60,000 tonnes of basalt and greenstone rock were loaded onto barges in Brisbane and transported to the site. A specialist marine construction vessel then moved the rocks into position using GPS technology.

A GREAT PLACE TO WORK

If you are intrigued by the opportunities offered in working for the City of Gold Coast, take a moment to note the attractive employment provisions offered to help you build your career.

Staff health and wellbeing top the list. Ensuring you have more time to do the things you enjoy; we provide flexible work options that include nine-day fortnights with some opportunities for working from

home. And, if you are older, a phased transition to retirement. There's still time to see your talents realise some great outcomes.

To help provide a solid foundation for quality work-life balance we offer initiatives like our Fitness Passport and Employee Assistance Program.

NICE BENEFITS, TOO

Staff benefits include generous leave entitlements, study allowance provisions, subsidised onsite gyms, and an active social club with a large array of entertainment and experience options at reduced prices.

There is also a Corporate Health Plan with Medibank and Bupa, discounted home and personal loan rates through the Commonwealth Bank and discounts on a range of technology suppliers.

IT'S NOT ALL ABOUT THE MONEY, BUT . . .

The City of Gold Coast offers competitive remuneration with provision for increases and salary and wages paid into nominated bank accounts.

There are options for salary sacrifice with generous superannuation payments of up to 18%.

All in all, the City offers the chance to realise personal and professional goals in a vibrant, friendly workplace in which excellence, innovation and quality service delivery are recognised and rewarded.

BUILD YOUR CAREER WITH THE CITY

City of Gold Coast uses Equifax eRecruit, a self-serve portal which enables you to apply for employment online, 24 hours a day, 365 days a year.

Register with eRecruit to view and apply for current vacancies, including apprenticeships and student work experience, and make sure you sign-up to receive job alerts when positions become available.

For further information, visit:
www.goldcoast.qld.gov.au





Bespoke culvert crowns in 1 week? Dincel can!

When experienced civil contractors talk about culvert crowns they generally refer to the conventional method of pre-cast modules. Construction plans will feature designs set to a standard profile which are inflexible in nature and unfortunately generally come with long lead times, pending profiles. Upon completion of construction plans, panels are ordered and then the wait begins.

Understanding that time is money, earlier this year saw lead times for some pre-cast panels blow out up to a staggering 48 weeks for custom profiles. Currently, this lead time has been reduced and is generally sitting closer to 3-4 months.

Upon arrival of these pre-ordered panels contractors then need to factor in the associated crantage costs not only for delivery on-site, but to move these heavy panels to their required location. Site conditions may also restrict or even hinder the actual access and installation process.



Contractors now take into account that site conditions and/or design may have changed and these pre-ordered pre-cast panels may no longer suit their intended application. With no way of adjusting or customising pre-cast panels on site they now need to not only repeat the engineering design process, but re-start the ordering process. This can result in further expensive delays and the very real risk that their project will not be delivered on time let alone budget.

Australia's own Dincel Structural Walling are leading in innovation, having solved alternative engineering solutions which will see your bespoke culvert crowns delivered with as little as 1 week's lead time. With a manufacturing facility located in Western Sydney Dincel Structural Walling is capable of meeting tight timeframes, and even tighter turnarounds.

Supported by sister company Dincel Civil Solutions, the team is in the enviable position of being able to offer in-house fully engineered culvert crown solutions and installation service. Or, proving how flexible this lightweight modular system is, provide on-site training for contractors to keep operations totally in-house.

Cost-wise using the Dincel Structural Walling system comes in "like for like" to conventional pre-cast methods. The real benefits associated with the Dincel Structural Walling system centre around the need for less mechanical lifting. The panels are light enough for total manual handling without the need for engineered access roads for heavy truck and crane access with the ability of builds taking place within more confined spaces within the site.

Importantly, the Dincel walling system provides the ability to customise and/or re-design on the fly, complimenting actual site conditions.

DINCEL STRUCTURAL WALLING

Originating from the foundations of a structural engineering consultancy back in 1977, Dincel Structural Walling has emerged as Australia's Own "Concrete Wall with Benefits".

Developed to meet the demand and pace of today's building developments, Dincel's unique and internationally patented snap-lock joint connects the Dincel panels for fast, easy and lightweight maneuverability and installation.

An advanced, innovative and mature solution, Dincel Structural Walling enables load bearing walls and columns to be constructed at lower cost, in less time and with lower skill demand over traditional methods – delivering a waterproof skin, and fire-safe permanent formwork solution.

Since the first profile rolled off the production line in 2006, Dincel Structural Walling solutions have been widely used across Australia, New Zealand and the Pacific Islands.

For further information, visit: <https://www.dincel.com.au/>



When it comes to the total amount of time invested in preparation, the Dincel culvert crown solution sees contractors invest less time and money - all you need is a base slab, starter bars and the panels are then easily cast in. With Dincel's patented snap-lock system, the added bonus is that no additional waterproof membrane is required at the joints as implemented between pre-cast culverts, resulting in a seamless installation aesthetic.

Dincel culvert crowns are a combination of the Dincel walling system combined with various profiled metal decking systems (pending spans and design loads), formed and poured on-site.

If your build calls for fully engineered bespoke culvert crowns with minimal lead-time contact the team at Dincel Civil Solutions to get the ball rolling:

For more information, contact us direct on: 0427 744 908 or visit: www.dincelcivilsolutions.com.au



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Four ways your engineering career could change in the future

The future is full of uncertainties, but one thing engineers can be sure about is their work in the years and decades to come will look different to how it has in the past.

Here are the trends experts are predicting will change the face of the engineering profession.

1. THE FUTURE WILL BE MULTIDISCIPLINARY

Future projects will be conducted on a scale too great to be confined to one discipline. Engineers Australia's Advisor to the Chief Engineer Peter Briggs points to the transition to clean energy as an example.

"In the next couple of decades, we have to build seven times the amount of generation capacity that we have put historically into the grid, and we have to do it in a coordinated and planned fashion," he said.

"It's not just one particular discipline that does that; you've got all of them."

2. CREATIVITY IS SOMETHING THAT CANNOT BE AUTOMATED

Robotics and artificial intelligence are rapidly expanding the scope of automation. Fortunately, engineers themselves are unlikely to be replaced by an algorithm.

"Engineering is a skill set that actually equips you for the economy of the future, because it gives you a first-principles approach to problem-solving, and that approach can be applied to so many things beyond your discipline," Briggs said.

3. BOOM SECTORS: MANUFACTURING, INFRASTRUCTURE, SPACE AND CLEAN ENERGY

Expect to see more megaprojects in clean energy and infrastructure with sustainability becoming a vital inclusion.

Australia is also seeing the return of manufacturing and a continuing emphasis

on infrastructure, particularly as a matter of importance in sovereign capability.

According to Briggs, the pipeline of infrastructure work is projected to be there for the next 25 years, so future engineers can expect to have employment security and opportunities available to them.

4. MICRO-CREDENTIALS WILL MATTER

Engineers have always needed to stay abreast of new information, and that will matter more than ever in the future.

Micro-credentials are a great way of adding to your skill set to make sure you stay current and at best practice.

Ready to set yourself up for the future of the profession? Get \$90 off when you join Engineers Australia during July.

Visit engaus.org/getsaving to learn more.

A version of this post originally appeared in [create Digital](#).



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



With the ASBAP (Austroads Safety Barrier Assessment Panel) guidelines now requiring all new TMAs sold for use in Australia to be tested and approved to MASH Standards, one of the most critical questions for equipment purchasers to ask is: **“Is it MASH Approved?”**

When it comes to **Scorpion® TMAs**, 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.



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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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With a pumping capacity of up to 360,000 litres of water per hour, Aussie Pump's MQ600TD trailer-mounted pump is an ideal frontline flood mitigation tool.



Aussie's mobile flood mitigation

Climate change is making us all realise that the weather is changing.

We are more aware because of the extreme events experienced over the last four or five years. Who can forget the six-year drought? How about the Black Summer? Followed by more floods than we have ever seen before, beginning with the Rockhampton Fitzroy River overflow, Townsville (with the loss of 500,000 head of prime cattle, drowned), followed by weather events on the East Coast that have subjected towns like Lismore and those on the Hawkesbury close to Sydney, to more than one major flood event.

There is consistent talk of Royal Commissions into this, and potential remedies.

We are used to the idea of flood mitigation works, like those being implemented to protect the city of Hamburg. Similar works have been carried out in other parts of Europe.

Should this be considered by governments?

AT WHAT COST? HOW LONG WILL IT TAKE?

The fires are coming this year, and we're not sure if we won't have more floods before

Christmas! To quote an old saying, "We live in interesting times."

One company experienced it providing fire pump solutions for local governments, farmers, and homeowners, Australian Pump Industries, thinks they have a solution.

"We have been building and selling big 6" heavy-duty diesel drive trash pumps, either skid-mounted, or trailer mounted for around 16 years," said Aussie Pump's chief engineer John Hales.

These are big self-priming, super simple pumps designed for mining and tough jobs like construction site dewatering. They are used by people like Rio Tinto, miners, and leading construction companies wanting to move a lot of water fast.

Hales claims that the company only really started thinking about these pumps as the perfect flood mitigation tool when orders and enquiries started coming in from Local Government bodies around the east coast.

"That coincided with a massive program to procure and air freight these big pumps to the South Sudan where they were having even bigger problems than we are having in Australia," said Hales.

WHAT MAKES THIS A GOOD IDEA?

Aussie Pumps applauded a contractor with one of the big 6" pumps that saved the town of Horsham from flooding back in 2011. The trailer-mounted pump was used to divert water from the town into a side channel, pumping water at up to 360,000 litres per hour (the maximum capacity of the pump at 0 head). That's what Miller Contracting used it to do, just taking water from one area and dumping it into a channel to drain away.

"That should have opened our eyes then," said Hales.

Now, Aussie Pumps has come out with a Local Government Flood Mitigation program based on their MQ600TD. Local Governments can invest in these big pumps for under \$50,000 and can have a battery for two of these pumps for under \$100,000.

On top of Council discounts, Aussie Pumps is even considering offering a financing package for Local Government bodies to get them into flood mitigation.

One of the other advantages of the MQ600TD is not only its flow but that it self-priming without any additional priming devices needed. That means that there is no compressor or vacuum pump required.



pumps, or hoses to fail. Engine protection packages are also included in the standard equipment.

“There is a limit to the number we can produce before the end of the calendar year. Engine supplies are an issue, but we currently have the capacity for 12 units to be built before the end of the year,” he added.

Information on Australian Pump Industries flood mitigation trash pump package and Local Government finance terms is available from: www.aussiepumps.com.au

The operator simply fills the pump body with water, ensures there’s no air leak in the suction side and starts the engine.

The vacuum created inside the pump causes the liquid to come straight up the suction hose and into the pump and away it goes! Its simplicity is what attracts construction and mining companies. They have pumps being operated now for 15 years without even having a seal change!

The heart of the pump is a huge cast iron impeller that can handle solids of up to 40mm.

“Two units, side-by-side can handle up to 700,000 litres an hour. That’s a bargain considering these machines aren’t expensive and can operate essentially service-free,” John Hales said.

Powered by 80 hp Deutz air-cooled diesel engines, they have no radiators, no water



Aussie Pumps build the high-capacity MQ600TD pumps at their Castle Hill works in suburban Sydney.

Bennett Equipment

QUALITY AND PERFORMANCE

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RotoFlex® by Blundstone

World-Leading, Biomechanically Designed Safety Footwear

Blundstone step ahead with market-led insights.

Blundstone has always been a market-led business, researching and identifying those products its customers need and want and understanding the role Blundstone products play in their lives. Over the past three years the business has invested in a massive, multi-layered research project which has created an even greater depth of understanding of today's worker and the footwear they want to be wearing tomorrow.

These consumer insights have led to the development of Blundstone's most technologically advanced safety footwear range, RotoFlex®, designed utilising biomechanical principles to provide an outstanding level of comfort and safety for wearers. The evolution of new materials and world-leading technologies has been a

game-changer in the development of these safety boots, which Blundstone are confident will increase consumer expectations of the Australian safety footwear market.

"The research has shown without doubt that wearers want better performing work boots," says Adrian Blandford, Blundstone's Global Work & Safety Range Manager.

"They want them to be strong, lightweight, offer good grip and manoeuvrability as well as high protection for the user. The most common injuries occurring on work sites include musculoskeletal injuries and ankle and knee injuries caused in falls and slips."

Other concerns and priorities for wearers included durability and quality of componentry and materials; pain-free, all-day comfort with ankle flexibility and movement; thermal regulation with ventilation to increase airflow and a sole that provides ergonomics, longevity, stability, and traction.



As an outcome of the research, Blundstone embarked on a journey to 'build' safety boots that would address all the above concerns.

"We have built them new from the ground up. This is something the safety footwear market in Australia has been demanding for many years," says Blandford.

A collaboration with the University of Tasmania's School of Health Science's Biomechanics experts, resulted in the RotoFlex range of six new styles—four unisex and two designed specifically for women. These are truly new 'whole-of-boot' designs, based on





People, Planet, Product, and with the mission ‘to make every step we take better than our last’. In line with Blundstone’s commitment to minimise the impact on the environment, the boot’s lining and laces are made with 100% recycled materials, and the heel grip, insole, and counter stiffener utilise sustainable raw materials.

Throughout this process, Blundstone has developed a greater understanding of what safety boot wearers want, need, and expect in their footwear.

“We utilised our consumer research insights to design safety boots with the features workers have been looking for - RotoFlex is the result. We are very proud to launch our RotoFlex range”.

biomechanical research and evidence to create a boot system that is safer, more comfortable, better performing and more durable. RotoFlex is a range of boots where stability meets the freedom to move, allowing the wearer’s foot to rotate and the ankle to flex to avoid injury.

“Every single component used in the construction of the RotoFlex range has been researched, tested and trialled to ensure we deliver truly innovative, better performing safety footwear. Our design team and technicians looked at multiple options for each element and selected the best performing, most appropriate product, and if they couldn’t find the perfect piece, they went and created it so we could deliver best-in-market safety footwear,” says Blandford.

The biomechanical systems central to the RotoFlex design comprises four unique elements - GripTek® HD, Fortalite®, AirCell, and SoftCell® - along with a host of componentry and materials critical to the performance of the product.

Starting with a strong foundation from the ground up, the biomechanically conforming sole design, GripTek, utilises a unique TPU tread pattern and super-cushioned midsole, with zoned support carefully designed for all-day stability and comfort and optimum grip.

“The sole has been designed with extra width in the heel for stability and toe area to help stop ankle rolls. The wearer uses less energy when walking, which will help reduce fatigue - another contributor to workplace injuries,” explains Blandford.

RotoFlex sees an evolution in composite toe cap technology, with Fortalite - a lightweight composite material that resists compression and meets safety standards without compromising comfort. This toe cap holds strong under immense pressure, keeping its shape without restricting toe movement and achieves ‘steel-

like’ safety for impacts and rolling compression without the weight associated with steel toe caps. Blundstone confidently includes the Fortalite composite toe cap in fit-for-purpose safety boots.

The third key element of RotoFlex is a uniquely constructed zoned airflow footbed perfect for moisture management. The footbed is designed to activate ventilation, allowing air to be pumped through channels to the heel, arch of the foot and between toes, offering cushioning comfort as the wearer walks and moves.

The overarching comfort system, SoftCell utilises a combination of specialist materials and a unique biomechanical foot-cradling design to increase stability, balance, comfort and manoeuvrability while reducing ankle slip risk and fatigue.

“We believe the world-leading biomechanical advancements incorporated through the SoftCell fit design will revolutionise safety footwear expectations. Our design does not lock the foot in, it positions the foot perfectly to allow movement within a precisely defined range of rotation and flexion of the ankle,” says Blandford.

SoftCell creates more room to move within a stable foothold. This is achieved through expert understanding of the connection between a moving foot and the inside of a boot, providing room for the foot to move more freely whilst still maintaining stability with the ground. It also incorporates Infinergy E-TPU, a super elastic energy foam which is used in top brand sports shoes. This soft and resilient compound provides enhanced cushioning and reduces the impact of every step taken.

The RotoFlex range has been developed with all the principles of Blundstone’s Every Step Better (ESB) program front and centre of their decision-making process. ESB encapsulates an ongoing commitment to three key pillars:



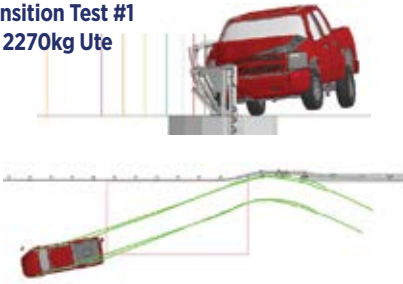
“RotoFlex will be the benchmark for boots in the safety footwear market,” says Blandford. The product can back up best-in-class claims: trial results, comfort ratings, durability and componentry testing are all rating at never-seen-before levels. Blundstone is a safety footwear brand that Australian workers relate to, and we aim to increase this with the delivery of a premium, lightweight, super-specified product they will love.”

The RotoFlex range brings six new safety boots into the Australian PPE market and is suitable for workers across a range of industries. The range includes four unisex styles; the six-inch #8560 and #8561, the five-inch #8553 and #8550, and two women’s boot styles; the #8863 and #8860.

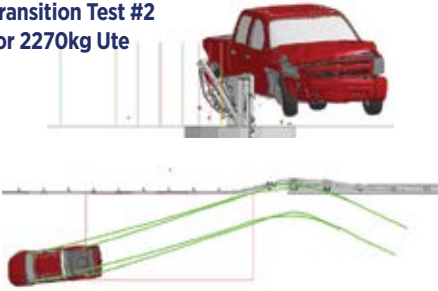
Blundstone boots are available online and in stores via select retailers throughout Australia and are backed by a 30-day comfort and six-month manufacturing guarantee.

For more information on the full Blundstone range, visit: www.blundstone.com.au

Transition Test #1
for 2270kg Ute



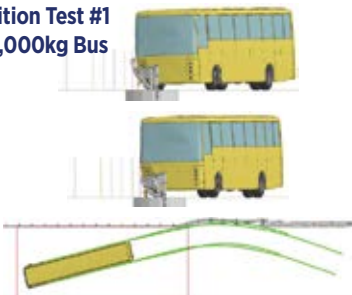
Transition Test #2
for 2270kg Ute



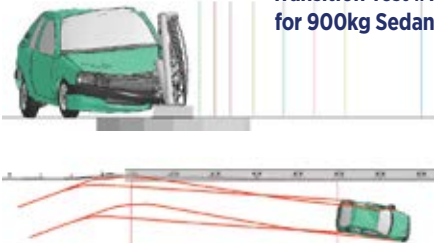
Transition Test #3
for 2270kg Ute



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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MORE**



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It's never been easier to design it with Fielders

Designing, specifying and constructing with Fielders® products has never been easier with the wealth of information available via the Specifying Fielders online portal.

Through the Specifying Fielders portal architects, designers, engineers, builders and installers have access to ideas, inspiration, technical, design and compliance information they need to confidently specify, install and support the complete Fielders® steel building products range. By accessing the portal users can view, print or download product information about the complete Fielders® range.

The portal can also assist building professionals stay abreast of industry regulatory requirements, by providing access to a suite of National Construction Code (NCC) Statement of Compliance bulletins covering the complete Fielders product range.

As well as offering this detailed product information, the site also presents case studies showcasing the use of Fielders® steel building products across a range of residential, commercial and industrial applications, giving added insight and valuable feedback from real end users.

A key feature of the portal is the availability of design and specification tools developed specifically to aid architects, building designers and engineers in the application of the Fielders® range of products to their projects.

Key products in the Fielders® range include:

- ARAMAX® - a structural cladding system that is bigger, bolder and deeper than conventional steel cladding profiles. Thanks to its innovative profile it can deliver unsupported roof spans of up to 20 metres enabling designs that can significantly reduce the cost and complexity of a building's structural elements
- FreeForm™ - an innovative roofing profile offering incredible flexibility and design capabilities to meet the most demanding architectural requirements including curved roofing and conical tapered applications. With the ability to be manufactured on-site to extremely long lengths, and curved in multiple directions FreeForm™ is often chosen to bring the most out of structurally complex building designs
- Finesse® - the six profiles of the Finesse® range offer the designer a range of eye-catching options for building designs.
- KingFlor® - this widely-respected steel decking range provides the designer with the flexibility to tailor a composite flooring solution that best suits project requirements whilst accessing the inherent benefits of steel decking over labour and material-intensive ply timber and lost formwork alternatives.

In addition to the availability of general product and technical information related to these products the Specifying Fielders portal provides

a range of online and digital tools to further assist the design and specification professional in their application of the Fielders Platinum range:

- SpecCreator – this simple to use online tool helps produce comprehensive project-specific technical specifications for Fielders ARAMAX®, FreeForm™ or Finesse® projects. The tool ensures project specifications capture the important design, fixing and installation details
- KingFlor Design Suite – this downloadable program, together with the KingFlor® Design Manual enables designers to quickly design and assess a multitude of options, to help determine the most economical and effective composite deck design solutions
- BIM Content – enabling the integration of these premium products into building design the portal offers BIM content files in both REVIT and CAD formats, along with comprehensive user guides to assist users.

Further support is available for the design and specification professional with the availability via the portal of downloadable NATSPEC sections for ARAMAX®, FreeForm™ and Finesse® cladding, as well as the broader Fielders roofing and walling range of products.

For more on the wide range of Fielders' support materials and resources for the building professional visit:

www.specifying.fielders.com.au



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EPS Waffle Pods helping to reduce CO₂ emissions

Expanded Polystyrene (EPS) Waffle Pods - the preferred system in slab construction in Australia for the past 30 years - are helping homeowners, architects, builders, and innovators to reduce CO₂ emissions, and are here to stay.

Up to 40% of Waffle Pod materials are made from recycled materials from white goods, fresh produce boxes, and other construction offcuts. Waffle Pod manufacturers only deliver the quantity needed for the slab, collect the offcuts, and recycle what you don't use, ensuring the product is used in best practice.

The inclusion of EPS Pods in slabs reduces energy consumption, therefore greenhouse gas emissions with their thermally efficient qualities. Including Pods in your slabs allow for reduced use of cement, vastly reducing CO₂ emissions. Pods are stable, durable, and inert; non-toxic, they don't rot (keeping vermin away), produce ozone-depleting gasses, or use chlorofluorocarbons.

When Waffle Pods are used in slabs, less site work is required, reducing foundation

cracks, limiting soil disturbance, and reducing waste. EPS has a low water absorption allowing work to continue in adverse conditions, in cooler climates, it provides thermal insulation, in hotter, it limits cracks and with cyclone-proof designs, the slab is sturdy in tropical, storm-prone areas.

SCRAP BAG DIVERTS WASTE HEADING TO LANDFILL

Our industry upholds best practices in the development and delivery of a product stewardship scheme targeting the reduction of expanded polystyrene (EPS) litter from waffle pod offcuts on building sites and the diversion of this material from landfill. The introduction of the Pod Scrap Bag Program has been an industry initiative of Expanded Polystyrene Australia (EPSA) and its Pod Group members.

Scrap bags are supplied with all pod deliveries to building sites to assist with the separation of EPS offcuts from the general waste stream. The filled scrap bags are then collected and taken back to the EPS

manufacturer where it can be granulated and recycled in new waffle pods and other building and construction products.

Use of recycled and re-used material EPS pods have become an important part of building concrete slabs, particularly for domestic dwellings. The lightweight and superior compressive strength of EPS pods deliver formwork for slabs that is uniform and consistent with ease, thereby reducing construction time and costs. In addition, the thermal properties of EPS provide significant insulation benefits, making waffle pods popular in new-home construction where concrete slabs are used.

The size of the waffle pod market in Australia is around 7,000 tonnes per year. From this, around 600 tonnes of EPS pod offcuts are generated on building sites. It is estimated that where the Pod Scrap Bag Program has been implemented, the collection and recycling rate of EPS pod offcuts is extremely effective — around 90%.

For more information, visit: <http://epsa.org.au/about-eps/eps-in-building/pod/>





COMPLETE

PRECAST TECHNOLOGY

WORLDWIDE

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

Kilsaran Precast in Kilcullen, County Kildare is the most modern and automated carousel plant in Ireland. **SCAN THE QR CODE** for a video tour of the plant.



At Kilsaran the most automated carousel plant in Ireland takes shape

In early 2021 *Kilsaran* commissioned their new precast plant in Kilcullen Co. Kildare, which is the most automated precast concrete plant in Ireland. Kilsaran is Ireland's largest independent manufacturer of a wide range of concrete products.

Founded in 1964 by the late Patrick McKeown in the village of Kilsaran in County Louth, this family-owned and run business mines raw materials from its own quarries and manufactures products at its various manufacturing plants across Ireland. The new precast concrete production facility in Kilcullen Co. Kildare features a new carousel plant which includes automated reinforcement and precast element production machinery as well as modern software from companies of the PROGRESS GROUP.

PRECAST CONCRETE PRODUCED TO SUIT THE IRISH MARKET PERFECTLY

The carousel plant has been planned in a very detailed manner and only took a short time to construct. Kilsaran spent a lot of time perfecting the efficiency of the plant as well as the precast elements it produces. It is completely BIM-oriented and not constrained by static moulds. One of the most important features of the new plant is that the building dictates what precast

elements are produced and not the plant itself. The plant can produce a full range of precast elements for the Irish market including solid walls, double walls, flooring solutions, as well as façade solutions.

"We manufacture the products to suit the building of the Irish market and not so suit our production," explains James Murphy, Business Development Manager at Kilsaran Precast.

Key to this vision is a production facility offering quality assured, traceable precast that are manufactured with precision. Cost and environmental benefits are delivered with on-time production requiring minimal storage. Each component is individually constructed, avoiding redundant processes, to achieve maximum cost benefits.

James Murphy refers to the selection of the machinery supplier: "When searching



ABOVE: The Form Master shuttering robot places the shutters automatically and precisely on the pallet surface, without the need for filling elements that would have to be disposed of afterwards.

for a precast plant installer we were guided towards PROGRESS GROUP by experts in the industry who noted that Progress Group were established and recognised as a market leader in precast machinery manufacture, following our initial meetings it was clear that Progress possessed the mindset that we required.”

“Progress demonstrated very quickly a willingness to provide an innovative plant that could manufacture multiple products efficiently at the same time. This was important for us to have an innovative partner who understands the need for development in the precast industry,” Mr Murphy added.

AUTOMATION LEADS THE WAY TO HIGH-END EFFICIENCY AND QUALITY

PROGRESS GROUP came up with a carousel plant that allowed Kilsaran to produce the required range of products efficiently and automatically. The level of automation is one of its kind in Ireland and was one of the main drivers Kilsaran focused on while developing the plant together with PROGRESS GROUP companies *Ebawe Anlagentechnik* as well as *progress Maschinen & Automation* and *Progress*



The production of line wire and cross wire without waste - by working directly from coil - without cutting mesh to size or laying work, also optimises the production flow.

Software Development. Automation saves time on-site and guarantees a dimensional accuracy, resulting in better and more consistent quality.

Kilsaran made sure to place robotics and automation wherever it was possible. The automation has been implemented throughout the entire production process to make sure the quality is consistently high. At the same time, every step should be traceable, from the very inception right through to completion.

PRECAST CONCRETE ELEMENTS PRODUCTION AT ITS BEST – FULLY AUTOMATED

The PROGRESS GROUP shuttering system includes one for solid elements as well as one for half slabs and double walls. For the production of high-quality precast concrete elements, a storage robot is used, which selects the required shutters from the shuttering storage according to the CAD data transmitted



The M-System BlueMesh® mesh welding plant ensures quick production of reinforcement for the precast elements produced.



LEFT: The innovative traverse gripper automates the logistics process even for specially bent mesh and cages.

by the ebos® control system. The plotter draws outlines or other information, such as the position of built-in parts on the shuttering surface. The Form Master shuttering robot then positions the shutters precisely on the pallet, according to the elements to be produced, and activates the integrated magnets of the shutterings. The electric sockets and magnets are installed automatically from specialized gripping tools, which ensure a highly automated outcome.

Additionally, the spacers for bespoke mesh are automatically positioned on a production pallet by a robot system called Mesh Spacer. During production, a positioner takes the required number of spacers from the magazine and places them on the exact places defined by the CAD-CAM data.

The patented Infinity Line® Notch-Free shuttering system of the *Form Master* makes

centimetre-precise shuttering a reality, without the need for filling elements such as polystyrene fillers, which also complies perfectly with the various sustainability efforts of Kilsaran in general. A sophisticated combination system reduces the number of shuttering lengths used to a minimum.

A fully automatic concrete spreader eCon Drive® from Ebawe Anlagentechnik accelerates the filling of the shuttering and ensures an additional level of safety for the machine operators, whilst at the same time saving material through exact dosing. For compaction of the freshly poured concrete, two compacting devices are installed suitable for variable and particularly heavy loads ensuring a high-quality element surface at the same time. Roughing equipment is available for half slabs.

After curing, the pallets containing the finished precast elements are destacked from the curing rack by means of an automatically controlled pallet stacker. For the manufacture of double walls, turning equipment serves for turning the first cured skin and connecting it to the freshly poured second skin.

Afterwards, the pallets still containing the finished precast panels are fed to the deshuttering robot, which recognises the shutters by scanning the pallet surface and picking up the shutters fully automatically.

In the next step, the wall elements are lifted by dint of the tilting equipment with a movable ladder - simplifying the demoulding process for the operators. The pallets are then fed to a pallet cleaning device for cleaning and the subsequent application of a release agent. The cleaned and oiled shutters are deposited length-sorted by the LPR robot back into the shuttering storage.

For insulated wall elements, the new plant at Kilsaran is equipped with an insulation material cutter that cuts the insulation plates with precision in a specially developed water jet cutting method. The necessary CAD data are supplied by ebos®. A special 3D cutting head also allows three-dimensional cutting processes. The advantages for Kilsaran lie in huge cost savings in material and staffing as well as less waste.



ABOVE: Installed by Ebawe Anlagentechnik, the state-of-the-art turning equipment delivers an almost flawless surface quality.



ABOVE: With the automatic eCon Drive® concrete spreader connected to the plant's high-tech software solutions, the amount of concrete spread is calculated accurately, thereby reducing waste.

MESH WELDING PLANT M-SYSTEM BLUEMESH® WITH INTEGRATED BENDING SYSTEM

In order to be able to achieve a very good reinforcement solution for the needed precast concrete elements, an automatic M-System BlueMesh® mesh welding plant was installed. The mesh welding plant is operated by an MSR multirotor straightening-cutting machine for the reinforcement bars. The bars can also be cranked up lengthwise and crosswise for element slabs and welded for walls. The MSR straightening machines straighten, cut and bend rebar as well as process the reinforcing wire with a diameter of up to 16 mm directly from coil, thus optimising production. The strengths of the machine lie in its versatility as well as high efficiency and cost-effectiveness due to low power connection values, which are achieved by inverter welding.

INNOVATIVE AUTOMATED SPECIAL MESH TRANSPORT

Within the completely new carousel plant, equipped with the latest models of reinforcement systems, an absolutely novel concept was created together with *progress Maschinen & Automation*. The requirement for the reinforcement production part of the plant was that the machine needed to produce not only straight mesh but also bent mesh for solid

wall applications. Therefore a new logistics concept was developed and implemented. This concept ensures that specially bent mesh and cages can be transported onwards automatically with a new flexible gripper.

Normally, the storage gantry robot grips the mesh with the help of magnets and transports it to the next station. However, this was not possible with multi-bent mesh and overlapping reinforcement as the magnets cannot react to this flexibly. With the new traverse gripper, the tongs can now flexibly access exactly where it is needed and can move the mesh into storage or directly into the prepared shuttering on the pallet.

This new traverse system offers enormous added value to Kilsaran, as fewer additional bars have to be integrated by hand afterwards, and the mesh is placed automatically in the pallet, thus reducing labour requirement. This also made it possible to automate the transport to the next processing step of mesh / special mesh bent on all sides. The new traverse gripper also automatically transports the mesh one level down to where the pallets are and positions the mesh precisely on the pallets.

SOFTWARE – EBOS® AND STABOS

The automation begins very early on in the planning phase due to the advanced software solutions and is implemented in the plant up until the final steps of preparing the elements for

transportation. Not only is the production facility itself fully automated, but the information is delivered using the advanced PXML system.

Punch Consulting works in collaboration with Kilsaran to provide BIM support and structural analysis for each building project with direct information supply to the factory. The software solution *stabos*, which is now implemented with every progress reinforcement machine as a standard software since 2021, is used to record and evaluate production data. The centrally collected data can be used to increase the productivity and quality of the plant.

In combination with *ebos®* a comprehensive software solution for work preparation, production and process analysis, which addresses all aspects of the manufacturing process, from start to finish, it is possible to replace a large number of stand-alone software solutions with a perfectly integrated system. Since complex interface problems are eliminated, all work processes can be carried out in one user-friendly system.

James Murphy, satisfied with the cooperation, states: “We have faced numerous challenges during the commissioning of the plant including COVID and we recognise the commitment from PROGRESS GROUP to deliver a state of the art facility for the manufacture of multiple precast products, which will service the Irish and UK market.”

smart sinks®
Waste Water Filtration & Recycling Systems

SMART THINKING

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



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

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

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

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

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

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

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

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

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

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

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

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

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

PATENTED FILTRATION TECHNOLOGY

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

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



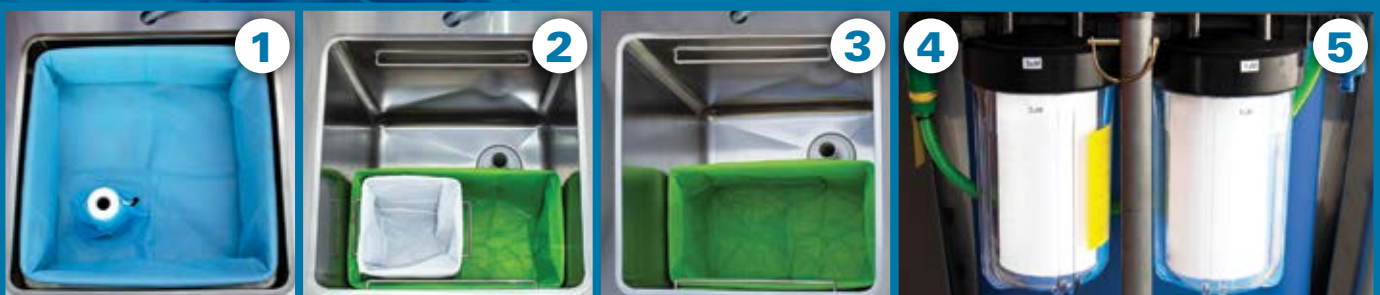
100% MOBILE

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

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

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

5-STAGE FILTRATION SYSTEM



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

SIGNIFICANT WATER SAVINGS

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

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

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

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

MASSIVE PRODUCTIVITY BOOST

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

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

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

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

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

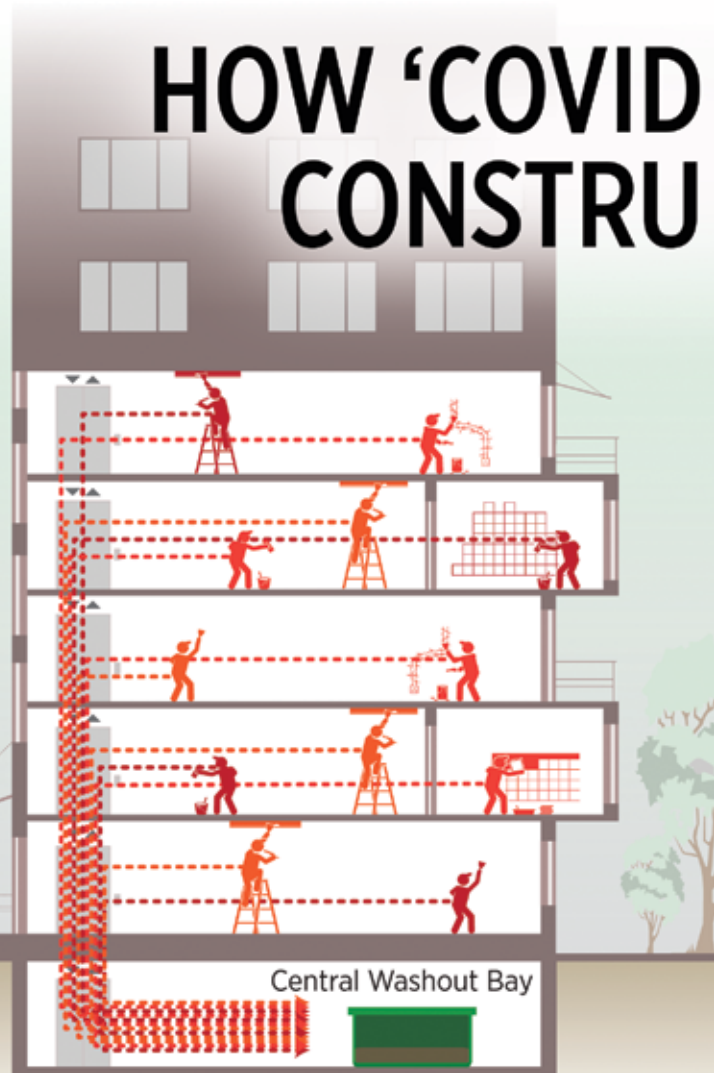
also a huge cost saving,” Perry added. “In fact, we’ve had a number of customers say that the Mobile Smart Sinks units have paid for themselves after only the first job!”



‘TRADITIONAL’ CENTRALISED WASHOUT FACILITY

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

HOW ‘COVID CONSTRU



COST-EFFECTIVE SOLUTION

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



COVID-SAFE CONSTRUCTION SITES

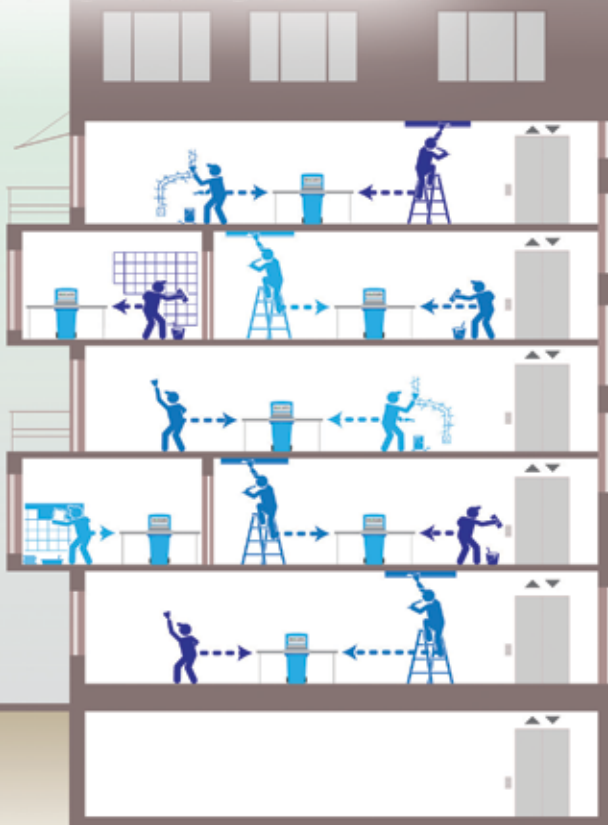
While there can be no doubt that Mobile Smart Sinks have set a new benchmark in waste sediment control, water saving and productivity gains for tilers and plasterers, they have also, quite unintentionally, proven to be a critical front-line tool in establishing COVID-SAFE construction sites.

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

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



SAFE' IS YOUR CONSTRUCTION SITE?



smart sinks[®]

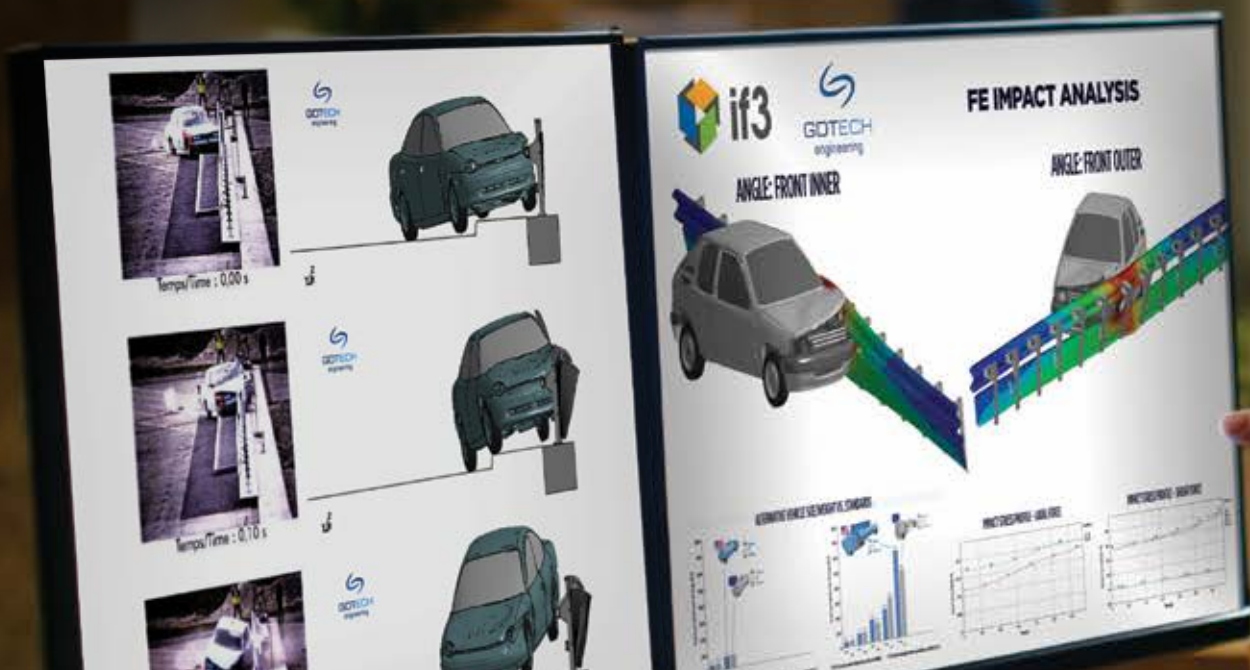
Waste Water Filtration & Recycling Systems

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





So too, the Engineer can use the vast capacity of Finite Element analysis to validate, optimize and adapt data to create the finest design solutions.





Just as Conductors use all the instruments at their disposal to create the finest music...



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NATIONAL PRECAST MEMBERS' SNAPSHOT

Established in 1990, National Precast is the only industry body representing precast concrete manufacturers. Membership comprises precast manufacturers of all capabilities, across all states, as well as product and service suppliers, industry professionals, tertiary institutions and allied organisations. As it unites the industry through national members' meetings and dinners, National Precast empowers, represents and promotes its members. Following is a snapshot of some of the projects being undertaken by National Precast members across Australia. For more information, or to find a Precaster for your next project, visit: www.nationalprecast.com.au

Project: Capital Jet Charter

Location: Canberra, ACT

Master Precaster: Advanced Precast

A new bespoke hangar designed and constructed using precast concrete complements the existing Capital Jet Facility in Canberra. As the operational base for Capital Jet Charter and a fixed-base operation for visiting executive jets, the new hangar has been designed to exacting standards. Using a special concrete mix, wall panels were manufactured by National Precast Master Precaster Advanced Precast and then double sandblasted.



Project: Waterfall Station Upgrade

Location: Waterfall, NSW

Master Precaster: Wager Constructions

Precast concrete is proving to be both an effective architectural and civil solution for replacing elevated railways and upgraded stations for the Waterfall Station Upgrade project. National Precast Master Precaster Waeger Constructions was recently engaged to supply prefabricated stairs, columns and headstocks for the Transport for NSW project, which will increase the number of train services able to be operated along the line.



Project: The Ambrose

Location: Milton, QLD

Master Precaster: Euro Precast

Precast concrete gives architects and designers a medium to replicate patterns, shapes and other materials to blend seamlessly with existing structures and contexts. National Precast Master Precaster Euro Precast brings together the versatility of precast concrete with advanced engineering to create this stunning curved feature staircase for an architecturally designed building project, The Ambrose.



Powering a Sustainable Future

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Project: St Pauls Terrace Apartments

Location: Fortitude Valley, QLD

Master Precaster: Austral Precast

Precast concrete is playing an ever-increasing role in major high-rise residential projects across the country. National Precast Master Precaster Austral Precast's prefabricated brick panels have been used throughout this new multi-purpose development in the bustling heart of Brisbane's Fortitude Valley to enhance the project both structurally and aesthetically.



Project: Bell Street Station

Location: Preston, VIC

Master Precaster: Advanced Precast

Construction continues in Melbourne's north, with an architecturally designed new Bell Street Station. National Precast Master Precaster Advanced Precast was engaged to supply these exemplary precast concrete façade panels featuring sophisticated patterns created through the use of form liners.



2022 Excellence in Precast Concrete Awards

Nominations close Friday, 30th September, 2022
www.nationalprecast.com.au/awards

AWARDS RECOGNISE SAFETY IMPROVEMENT INITIATIVES

A new awards programme introduced by the precast concrete industry's peak body National Precast, recognises excellence across a number of areas, and safety is one of them.

"The Excellence in Precast Awards are a first for the precast industry," says the Association's CEO Sarah Bachmann. The awards will not only recognise exemplary projects, they will also acknowledge

contributions by the organisation's companies and people. Those contributions can include new initiatives that improve safety practices in the industry.

"Many of our members are constantly introducing new initiatives which set new benchmarks in safety. Alternatively, a contractor may implement an outstanding practice on site. Nominating for an award not only recognises this but shares the information

among all members and the broader industry," Ms Bachmann says.

Entries are open until the end of September and can be submitted by either National Precast members or by contractors or designers who have used a National Precast member to supply a project. Visit <https://nationalprecast.com.au/awards/> to enter and for more information.

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