

# BORAL NEWS



DEC 2019



STRENGTHENING OUR USG BORAL  
GROWTH PLATFORM

**INNOVATION:** GOOD FOR THE  
PLANET, GOOD FOR BUSINESS

MR WILLIE WALKER JR  
CELEBRATES 60 YEARS AT BORAL

## Working together to build something great

At Boral's Annual General Meeting in November, a shareholder addressed the meeting, saying:

*"I came here to hear about the company, its success in previous years, and its intentions and plans for the future. I am quite pleased with what I have heard this morning, and would commend our Board and our [people] for the work they're doing in ensuring that Boral is a company that's profitable and has a future."*

Another shareholder said:

*"I enjoyed reading the written reports, and hearing in the reports today, comments about the importance of innovation to the future of Boral ... I'd also say that I love the inspirational words on the front page of the annual report – 'Working together to build something great'. That to me is a challenge to all Boral people to be innovative. So congratulations on that."*

We are so busy responding to the challenges in the current business environment – focused on optimising costs, streamlining processes, expediting growth plans, keeping our minds on the job at hand and staying safe – we don't always hear the positive feedback that comes our way.

Boral is a great company with a proud history, and our people are our greatest assets. We touch the lives of many stakeholders, including our customers and shareholders, in a positive way as we work together to build something great.

It is the resilience, determination and innovation of everyone at Boral that will help us deliver on our promises and meet the needs of our stakeholders, in good times and in tough times.

Let me thank and congratulate each of you for your hard work and determination to ensure the company's success.

I also want to recognise those Boral people who have played a role in protecting and helping to rebuild communities affected by the horrendous start to the Australian bushfire season. In the face of adversity, we have seen some incredible efforts to support our local communities and look after our neighbours.

I wish all of you and your families a safe and enjoyable Christmas and holiday period.



**Mike Kane**  
CEO & Managing Director

FRONT COVER IMAGE:  
Willie Walker Jr celebrates  
60 years at Boral

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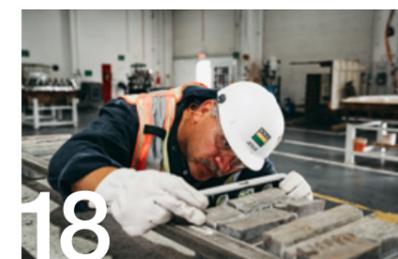
Isabel Menton  
Communications and Partnerships Manager

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# TAKE FIVE

## Five interesting projects across Boral



USG Boral supplied approximately 55,000 m<sup>2</sup> of FIBEROCK® to the new Karratha Health Campus, which won the Australian Institute of Architects Western Australia State Chapter Award for Public Architecture.



Boral Australia supplied asphalt to the Geraldton Airport Upgrade Project, which involved resurfacing and extending the existing runway to accommodate larger aircraft.



The beautiful Graceview Home, built using Eldorado Stone's Chalk Dust TundraBrick®, was the first home sold on the Street of Dreams in Hillsboro, Oregon. The annual Street of Dreams event showcases cutting-edge trends and technologies.



Boral supplied construction materials for the complex upgrade of Kingsford Smith Drive, one Brisbane's busiest traffic routes, connecting Brisbane Airport, the CBD and the Port of Brisbane.



Boral construction materials and cement are being used in the \$6 billion West Gate Tunnel Project, which will connect Melbourne's western suburbs to the CBD, ease traffic congestion and remove around 9,000 trucks from local streets by 2022.

## Constructathon 2019

In August, some of Australia's largest and best known construction and building industry companies – including Boral, Built, Mirvac, Stockland and Laing O'Rourke – came together for Constructathon, Australia's first construction industry innovation event. More than 200 people from across the industry joined forces with technology and innovation experts, university students and start-ups to solve some of the most complex challenges in the industry.

**“Constructathon 2019 provided a great opportunity to discuss and work on solutions to issues that are important to the industry and to our employees, especially the ability to ensure Zero Harm on building sites, at quarries and in factories,”** said Wayne Reade, Executive General Manager of Human Resources, Boral Australia.

The top prize at Constructathon went to the OkayMate mobile app, which enables workers to anonymously rate the safety of building sites. The app concept was developed by a 10-member team comprising students from Western Sydney University and representatives from Boral, Stockland and Savills. ■



The winning team at Constructathon 2019



## Investors visit Boral's US Stone operations

Boral hosted around 22 investors and analysts from Australia at our annual two-day US site tour on 19–20 September. On day one, Boral North America's management team presented on each business in the division, and industry expert John Ward provided an overview of the US fly ash industry.

The following day, participants toured Boral's stone plant in Napa, California. Our Napa facility produces Cultured Stone, Versetta Stone® and ProStone® products. It has been operating since 1962 and currently employs around 425 employees. ■



## Boral sells Midland Brick

In August, we announced that Boral had entered into an agreement to sell the Midland Brick business. The sale is consistent with our strategy of focusing on construction materials in Australia.

The new owners intend to further strengthen Midland Brick's position as a sustainable, locally owned business, continuing to supply Western Australian customers as it has done for more than 70 years.

**“We have owned and operated Midland Brick for close to 30 years, and we recognise and value the contribution the business has made to the Boral Group over that time,”** said Mike Kane, CEO & Managing Director.

“We are confident that this change of ownership will strengthen Midland Brick's prospects for the future, which is great news for customers and our local staff.”

We expect the transaction to be completed in early 2020. ■

## SHEETROCK® creates healthier workplaces

SHEETROCK® Dust Control took top honours in the 2019 Good Design Awards 'Product Design' category earlier this year. The awards, announced at a gala ceremony in Sydney on 11 July, recognise excellence in design, innovation and impact.

Boral designed SHEETROCK® Dust Control Joint Compound to reduce the amount of respirable airborne dust released during the sanding process. The innovative product received praise from the Good Design Awards jury, which stated that **“Dust Control Joint Compound solves a genuine problem in the building industry and promotes the use of design beyond the traditional design disciplines associated with this category.”** ■



## DID YOU KNOW?



43 years

AVERAGE AGE OF OUR EMPLOYEES



\$1.3m

CONTRIBUTED BY BORAL TO COMMUNITY CAUSES AND PROJECTS IN FY2019

## Transforming the customer experience

**Boral Concrete has launched Boral Connects, a platform that enables our customers to monitor and manage their concrete orders using their mobile phone, tablet or desktop computer.**

Our customers can now view their past, current and future orders, and can download dockets electronically, which include more up-to-date information than is currently available on paper dockets.

Each load of concrete can now be tracked in near real time. The Boral Connects system continually calculates an estimated time of arrival, taking into account traffic conditions between the truck and the delivery address.

“Boral Connects is defining a new way that we do business with our customers,” said Julie Adamo, National Manager, Commercial Development and Marketing, Boral Australia.

“The uptake of the platform with customers has been outstanding. We are receiving feedback that the tool is helping customers manage their day-to-day business activities when it comes to viewing concrete orders and delivery.”

More than 4,500 of our customers are already using Boral Connects, and the feedback has been overwhelmingly positive. We will continue to release new features to improve the functionality of the system. ■



## Kevin “Bluey” Bishop celebrates 55 years



Kevin Bishop

Plant operator Kevin Bishop recently celebrated his 55th year at Boral. Kevin first joined J. H. Leverington (later acquired by Boral) in 1964. He operated a hand-held roller until the age of 16, after which he obtained his driver’s licence and learned to operate heavy mobile mining equipment.

In the 1980s, Kevin worked at our Stonyfell Quarry in South Australia before moving to the Linwood Quarry. He is still based at Linwood today, often operating front-end loaders or rigid dump trucks. He has been involved in countless projects over the years, including Southwark Brewery, Yatala Labour Prison and several of Adelaide’s popular hotels.

Thank you Kevin, for 55 incredible years – and for those still to come! ■

## Louise and Scott present at climate workshop

Dr Louise Keyte, General Manager – Innovation Development, and Scott Carter, Group Environment Manager, were guest presenters at the Climate Recovery Through the Development of Carbon Removal Technologies in Australia workshop in Melbourne in October. The conference was attended by academics, policymakers, researchers and industry representatives.

Louise and Scott discussed the challenges associated with the need for our industry to transition to lower-carbon practices, and Boral’s response to climate-related impacts. They also shared insights on the development of Boral’s lower-carbon products, such as ENVISIA® concrete. ■



Dr Louise Keyte and Scott Carter

## Congratulations



**Frank Pedretti** from Boral’s Lobethal Quarry in South Australia was honoured with the prestigious Quarry Manager of the Year Award at the Institute of Quarrying Australia National Conference.



**Judy McKittrick**, Manager, National Land Development became a Life Member of the Urban Development Institute of Australia – NSW for her contribution to the urban development sector.



**Shane Braddy**, National Quarries General Manager, Resources and Development has been elected as President of the Institute of Quarrying Australia.



## KATHY LAWRENCE

### Kathy Lawrence serves her family, her community and her country.

**K**athy Lawrence is an Administration Officer for Boral Concrete in Cairns. She is also a Private in the Army Reserve, passionate about supporting Indigenous communities and a proud mum of three.

Kathy’s father served in the Army and always hoped that one of his children would follow in his footsteps. When her son turned two, Kathy started looking for opportunities to return to work and began the process of enlisting as a driver in the Army.

Kathy joined Boral in 2011 in a part-time role. Her initial intention was to stay until she completed her basic army training, but in 2013 she changed her mind. At that point, with her army training under her belt, she decided to transition to full-time work with Boral, which supported her to continue as an active member of the Army Reserve.

Kathy gained a range of valuable qualifications and skills in her first two years with the Army, including her Approved Driving Instructor certification. Today, as a Private in the 51st Battalion Far North Queensland Regiment, Kathy is involved in reconnaissance and surveillance tasks as well as a wide range of community engagement activities.

In 2017, the Army asked her to assist in recruiting women in Wujal Wujal, a small Aboriginal community situated a four-hour drive north of Cairns. She jumped at the chance.

“I felt very privileged to support these ladies through their journey, from sitting with them while they made the call to recruiting, to marching alongside them in the Anzac Day parade at Wujal Wujal,” Kathy said.

While much of Kathy’s army responsibilities take place outside of her normal work hours, there are times where it does overlap. Kathy says she is grateful for the support she receives from Boral.

“Boral recognises the skills and qualities that we’ve gained through our time in the forces,” she said.

“The Boral Defence Force Alumni provides excellent support and brings together a strong community of like-minded people within the company. We all share the same drive and commitment to our goals, as well as a sense of duty. The Alumni is a great way for us to think about how we can apply our skills in our roles at Boral.”

**For more information about the Boral Defence Force Alumni, visit [boral.com/careers](http://boral.com/careers).** ■

“I would not be able to do any of this if I didn’t have the support of Boral and, most importantly, my manager Jim Mildren. I am truly grateful and appreciate the opportunity to continue serving my country.”

**Kathy Lawrence, Administration Officer, Boral Concrete**



Kathy Lawrence



# ROSS HARPER



**It's been a long but rewarding journey for Ross Harper – from a young boy in New Zealand with a fascination for chemistry (and the odd minor explosion in the family basement) to becoming Group President, Operations and overseeing Boral's businesses in Australia and North America.**

Ross spoke to Boral News about his 40-year career in industrial processing, the challenges inherent in his new role, and the great future ahead for Boral and our people.

**BORAL NEWS:** Tell us about your career before you joined Boral.

**ROSS HARPER:** I have been in industrial processing for more than 40 years, but like many people, when I started, I didn't have a clear career path. What I did have was a fascination with chemistry. I can still remember, as a schoolboy in New Zealand, causing some consternation in my parents with minor explosions and strange smells resulting from experiments in the basement of our home.

I pursued a chemistry degree, and right after university joined the then New Zealand Department of Scientific and Industrial Research as a chemist. In the early 1980s, I moved to the Philippines, where I spent seven years as a geochemist working with the Philippine National Oil Company.

The call of home was inevitable, and I returned to New Zealand to complete my PhD while working for a Fletcher Building subsidiary in pulp and paper.

After some years as a consultant, working with clients in places as diverse as Iceland and Israel, and about five years in the concrete business with Fletcher, I got the call from Boral. That was 13 years ago.

**BN:** Describe your trajectory at Boral.

**RH:** I started in 2006 as General Manager for NSW of Blue Circle Cement, as it was known then. From there, I moved across to head national operations for Boral Cement, then became Executive General Manager, and finally Group President, Operations.

**BN:** Name three highlights of your time at Boral.

**RH:** Our absolute, day-to-day commitment to safety and to safer outcomes for our people is a clear highlight for me; to be involved in a company that takes safety and Zero Harm seriously.

A second highlight has been to work alongside some truly talented peers who have made the leadership journey a much more rewarding experience.

And finally, the opportunity in this new role to lead across businesses – in Australia and North America – to strengthen our competitive position.

**BN:** What do you most value about working at Boral?

**RH:** This is a down-to-earth business with genuine, dedicated and very proud people. Our people have been instrumental in building what is a formidable and successful organisation.

I am humbled by what our people achieve day in and day out, their authenticity, and their commitment. And I also value the rewards that we reap by embracing a more inclusive and diverse culture.

**BN:** What are some of the key challenges you face as Group President, Operations?

**RH:** At a personal level, one of the key challenges for me is that this is a new role for Boral, so I get to be the architect of the role. And it means having to spend more time on strategy and goal setting, and less time on hands-on operational leadership, which is what I have been doing for quite some time.

At a business level, safety is a key challenge. We are constantly trying to do better, but the fact is that people still get hurt at work, and that is not acceptable. It's about each and every one at Boral having a role to play.

I am also now responsible for the culture that surrounds our large contractor base, including our procurement systems and processes, and how we engage with our stakeholders.

**BN:** You recently spent a month in North America as part of your new role. What are your impressions of the businesses there?

**RH:** In North America, our business runs along two lines: the supply of exterior materials – which I refer to as the 'glue' of the business – and a very strong fly ash business. And while it may not seem that way to some people from outside, there is a great deal of commonality between the two.

I was impressed by the commitment demonstrated by the people I met, across the board. Some have been there for decades; long-serving, loyal people, who are just as proud of the Boral brand as anyone else in Boral.

**BN:** What is the principal challenge Boral faces in Australia?

**RH:** As we have said publicly, we are in a transitional period – moving from multi-level residential projects to infrastructure. And it's not always been a smooth transition, despite Boral having a strong infrastructure pipeline. It's the nature of the business.

So, we are having a bit of a 'gap year', and we have had to adjust quickly, in a way that I believe will make Boral into an even more resilient business.

**BN:** You have been closely involved with innovation at Boral. How has our approach to innovation changed?

**RH:** Innovation has always been part of the Boral story, especially when it comes to products. We are well known as product innovators, but now we have extended innovation into our business processes. We put our customers at the centre of innovation and ask ourselves "Is this going to solve a customer's pain point or provide them with a value proposition?"

The other great beauty is that at Boral, we have enormous regional freedom to innovate – to come up with ideas to solve problems for customers. We don't need to wait for someone in head office in Europe, for example, to give us permission or a recipe to innovate.

**BN:** What excites you about the future for Boral?

**RH:** Our growth prospects are exciting, both in North America and in Australia. And so are the commitments we have made to improve our customer experience – putting our customers front and centre. We are not complacent.

But also, the fact that we are tackling change head on. We are embracing disruption. We are constantly asking ourselves "How do we turn those disruptive forces into an opportunity?"

**BN:** What's the best advice you've been given?

**RH:** My father once said to me, "If a job is worth doing, then it is worth doing right." I don't think he said that to me because he thought what I was doing was somehow inadequate – or at least I hope not! But, yes, that piece of advice still rings in my ears. It's been a source of discipline that has served me well.

**BN:** What advice would you give a younger colleague?

**RH:** Be curious, listen and be open to the contribution of others. Take chances and back yourself. We want you to be the best person that you can be.

**BN:** Who has inspired you?

**RH:** My parents. They had a strong work ethic, which was borne from adversity, especially when my father's family was forced off the farm. My father could remember vividly having to become the breadwinner at home when he was still a young man. It was tough but my parents were always positive about the future.

**BN:** What do you enjoy doing in your spare time?

**RH:** Spare time? What's that?

I've played a bit of sport in my time, and I still take a lot of interest in rugby and tennis, in particular. I find cooking enjoyable and relaxing too. And spending time with my daughters. But right now, it's the garden we are building at our place, which means that most weekends I can be found landscaping – under the very close supervision of Robyn, my wife. ■

782 million m<sup>2</sup>  
plasterboard capacity



# STRENGTHENING OUR USG BORAL GROWTH PLATFORM

## On 24 April 2019, German building products maker Knauf completed its acquisition of Boral's joint venture partner USG Corporation.

This agreement saw Knauf assume 50% ownership of the USG Boral joint venture. As a result of Knauf's announced acquisition of USG, Boral assessed a range of options relating to the joint venture.

### Expanded Asia joint venture

After an extensive period of due diligence, Boral announced on 26 August 2019 that it had agreed with Knauf to form an expanded joint venture in Asia. This agreement will see the USG Boral joint venture acquire Knauf Asia Plasterboard, which includes interests in China and South Asia. It will also sell its Middle East business to Knauf. Once completed, the expanded USG Boral Asia joint venture will deliver a stronger growth platform in Asia.

Knauf's plasterboard business is one of the largest in China. A highly profitable business, its products have been the brand of choice for China's high-end niche plasterboard segments for more than 20 years. Knauf also has emerging businesses in Thailand, the Philippines, Indonesia and Vietnam.

The expanded USG Boral Asia joint venture is expected to generate around US\$900 million in revenue, as well as deliver increased scale and a highly complementary manufacturing and distribution network. It will have improved geographic reach in Asia, and will provide opportunities to reduce freight costs and substantially improve the use of the company's combined plasterboard manufacturing capacity of 782 million m<sup>2</sup>.

The joint venture will also have a greater ability to grow through world-leading innovation and product development, thanks to continuing access to USG technologies. This will be strengthened by Knauf's additional research and development (R&D) and operational capabilities.

## Australia and New Zealand

In August, Boral also announced that we had reached an agreement with Knauf to return to 100% ownership of USG Boral Australia and New Zealand.

USG Boral Australia and New Zealand is a high-performing business underpinned by our exclusive SHEETROCK® technology. SHEETROCK® is the brand leader in Australia. The business will continue to access R&D support and intellectual property from USG, including SHEETROCK®, and to use the USG Boral brand.

As part of the transaction, Boral has agreed to provide Knauf with a 'call option'. This means Knauf can buy back 50% of USG Boral Australia and New Zealand within the next five years, subject to regulatory approval. This could see the business become part of the USG Boral Asia joint venture in the future. Until then, the Australia and New Zealand business will be operated independently by Boral.

Commenting on the announcement, Mike Kane said, "returning to full ownership of our plasterboard business in Australia and New Zealand gives Boral increased exposure to a well-positioned, high-performing business that generates strong cash flows."



### Expanded operating footprint (number of sites)

- Knauf plasterboard plants
- Knauf other plants
- Knauf gypsum mine
- USG Boral plasterboard plants
- USG Boral other plants
- USG Boral gypsum mine

"The expanded joint venture in Asia will be a world-class operation, bringing together the world's largest plasterboard manufacturer, Knauf, and USG Boral in Asia – and have the enviable position of operating in the fastest growing plasterboard region in the world."

Mike Kane, CEO & Managing Director



## Transaction highlights

- On 26 August 2019, Boral reached an agreement with Knauf to form an expanded joint venture in Asia, and for Boral to return to 100% ownership of USG Boral Australia and New Zealand.
- In line with Boral's strategy, the transaction is expected to secure additional exposure to a high-growth, low-capital intensity business.
- Earnings on a per share basis are expected to increase by around 3% to 5%, before the realisation of any synergies. This is based on pro-forma FY2019 financials.
- We expect to achieve acquisition synergies of US\$30 million per annum, delivered over four years.
- Boral's total investment is US\$441 million. A portion of this investment will be funded through the USG Boral joint venture. Boral's net investment will be US\$335 million. This will be funded through the proceeds of asset sales and debt.
- The transaction is subject to regulatory approval and is expected to be completed in early 2020. ■

## USG Boral product innovation

USG Boral's water-resistant plasterboard, WETSTOP™, is showing impressive growth rates in Australia.

Satisfying regulatory requirements for wet area applications, WETSTOP™ is ideal for the internal lining of wet areas in bathrooms, showers and laundries – areas where fibre cement is traditionally used. It can also be used as a lining for garage ceilings, alfresco areas and other external protected ceilings.

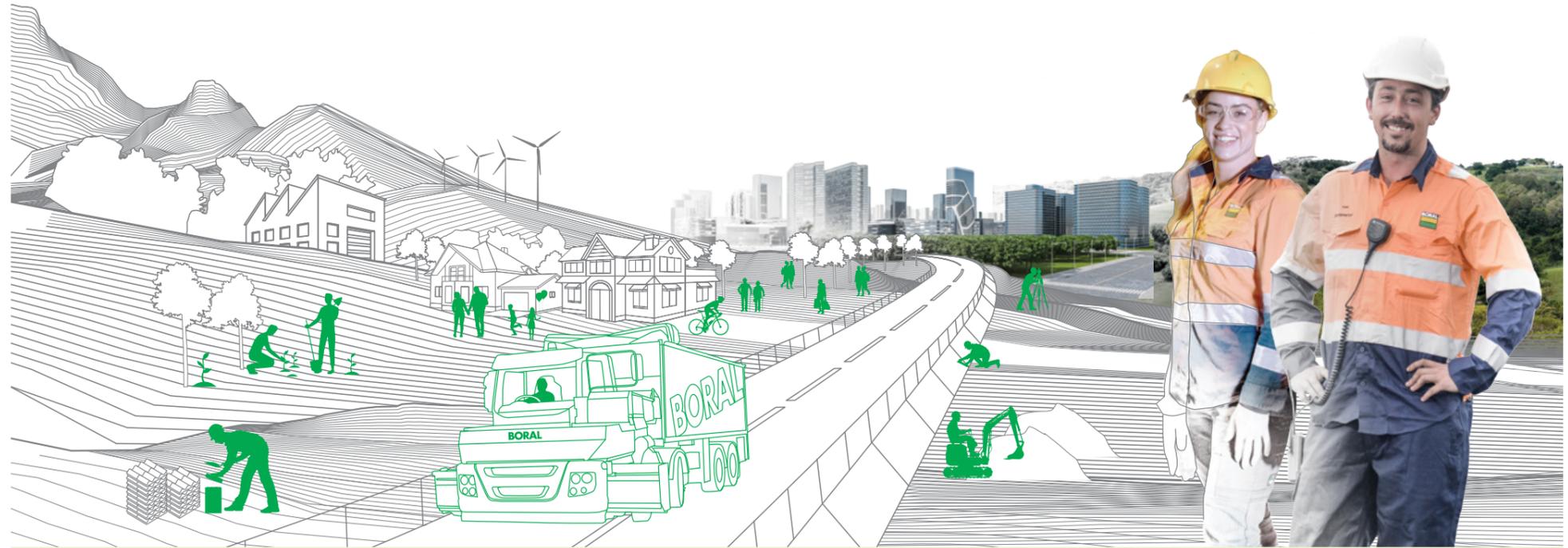
Chris Lubbers, Category Manager, USG Boral, said a recent in-store promotion is encouraging uptake by smaller builders, contractors and DIY customers.

"The current promotion combined with the very successful campaign earlier this year, featuring past Australian cricketer Mike Whitney, means we are looking at WETSTOP™ being used in more than 5,000 homes this year across Qld, NSW and SA. Builders are telling us they love USG Boral WETSTOP™ for its impressive water resistance, versatility, simplicity and speed of installation," said Chris. ■



# Sustainability

## Core to our strategy



In FY2019, we continued to make good progress

↓14%  
reduction in recordable injury frequency rate

↓7%  
reduction in carbon emissions and emissions intensity

1:1  
female-to-male base pay equity in Boral Australia

680  
employees participated in zero|one|ten training

~\$30m  
invested in R&D

\$1.3m  
to community partnerships and local community causes

### Integrating Boral's environmental and social responsibilities into our business strategy is the right thing to do and also critical to our continued success.



Fly ash reclaim operation at Montour, Pennsylvania

Over the past decade, sustainability has become increasingly important not only for companies, but also for investors, regulators and the broader community. Sustainability is a business approach that considers economic, social and environmental factors, and recognises them as core to a company's longevity.

For us, this means considering what is important to our key stakeholders – our employees and contractors, suppliers, local communities, shareholders and customers.

Boral's sustainability priorities, outlined in our 2019 *Boral Review*, include safety; employee diversity and equality; training and development; environmental impacts; innovation; sustainable products; operating ethically; and contributing to local communities.

"Safety is of course our most important priority," said Mike Kane, CEO & Managing Director. "We've made great strides in reducing the frequency of accidents over the past seven years, including a 14% reduction in Boral's recordable injury frequency rate in the 2019 financial year."

Reducing greenhouse gas emissions from our operations – which totalled 2.4 million tonnes of CO<sub>2</sub>-e in FY2019 – and building Boral's business portfolio's resilience to climate-related impacts are also important priorities. Since 2012, Boral's carbon emissions have reduced by 32% and our emissions intensity (carbon emissions per A\$ million of revenue) is down 48%. This includes a 7% reduction in both these metrics in FY2019.

"It is important that our business strategy and sustainability efforts are aligned. In 2018, we set three climate-related goals and targets. These focus on reducing Boral's carbon footprint and increasing the proportion of lower carbon and high-recycled-content products that we sell."

**Ross Harper, Group President, Operations**

Our high-recycled-content and lower carbon products and businesses include fly ash and TruExterior® Siding & Trim in North America and, in Australia our Recycling business and lower carbon concretes such as ENVISIA®. ENVISIA® concrete can achieve a cement replacement of up to 65% while also providing other valuable benefits such as low shrinkage and high durability.

Reducing operational emissions in Boral's Cement business – which accounts for around 60% of our carbon emissions – is a key focus for us. The business is investigating several high-priority abatement opportunities, including further low-carbon fuels programs. The existing low-carbon fuels facility at Berrima, that will further ramp up capacity in 2020, will decrease our coal-related carbon emissions from clinker manufacturing by 18%. This will also deliver cost savings.

With the company spending about \$4 billion each year on purchasing products and services, we are also focused on delivering better environmental, social and economic outcomes through our purchasing decisions.

Matthias Fuchs, Chief Procurement Officer, is driving our sustainable procurement efforts. On the radar in 2020 will be strengthening our approach to assessing and mitigating the risk of modern slavery in our supply chain. The Group procurement team is also working on further promoting diversity and inclusion in our supply chain, including through increased participation of social enterprises and Aboriginal and Torres Strait Islander suppliers.

"While it is pleasing to see that our efforts are delivering continued improved social and environmental outcomes, we have a lot more work to do," said Ross. "Sustainability is challenging and it requires forward thinking and creativity. We need to continue to adapt our strategies and processes to deliver further improvements." ■

#### Sustainability recognition

Boral is a member of the Dow Jones Sustainability Indices and FTSE4Good Index Series, which recognise leaders in corporate sustainability.



### Climate-related goals and targets

By FY2023, further reduce emissions intensity by 10–20% on FY2018

↓7% in FY2019

Grow revenue share from lower carbon and high-recycled-content products, up from 9%

↑to 10% in FY2019

By FY2022, reduce 1.1–1.5 million tonnes of CO<sub>2</sub>-e in the supply chain, on FY2018 figures, through increased fly ash supply

↑0.1 million tonnes CO<sub>2</sub>-e in FY2019

See page 38 of the 2019 *Boral Review* for further details.



cal

EMPYREAN

# Innovation:

Good for the planet,  
good for our business

**We understand that it's important for Boral to respond to change and disruption. This year, we invested approximately \$30 million in research and development (R&D) across our innovation centres in Australia, North America and Thailand.**

Our focus is on developing superior performing products and solutions that deliver a lower carbon footprint and use recycled content.

"To be number one, we need to act like we are number two. We need to continually find that next idea, process, or technology that will keep us ahead of our competitors. Only through innovation can we sustainably generate value for our all our stakeholders," said Greg Miller, General Manager, Innovation & Commercialisation.

To better support collaboration, the sharing of best practice and the commercialisation of great ideas, Boral's innovation centres will become part of a new Global Innovation Factory, reporting into a central global innovation office.



Louise Keyte, General Manager – Innovation Development, Boral Australia



## Innovation: Good for the planet, good for our business

“To be number one, we need to act like we are number two. We need to continually find that next idea, process or technology that will keep us ahead of our competitors.”

**Greg Miller, General Manager, Innovation & Commercialisation**



Jodi Jones, Russell Hill and Louise Keyte

Our global innovation strategy will be led by Russell Hill, who has been appointed to the new role of Group Chief Innovation Officer. Russell will ensure Boral continues to cultivate a diverse innovation ecosystem that drives performance.

In Australia, this ecosystem includes our B/HUB facility in Sydney, which facilitates and enables innovation for our people; the Applied Research Centre at Maldon; and the new UTS-Boral Centre for Sustainable Building at the University of Technology Sydney (UTS). In North America, it includes our Discovery Centre and Engineering Research Centre, both located in San Antonio, Texas.

**“Our global innovation strategy will guarantee Boral’s future competitiveness by providing a roadmap that guides our collective capabilities to create short-term value while fuelling long-term growth,”** said Russell.

The global innovation strategy will drive transformation across all divisions, and act as a hub for technology and the transfer of knowledge globally. It will support both the development of new ideas and the continuous improvement of existing innovations including ENVISIA® and TruExterior®. Under the new structure, projects can remain regionally responsive while also capitalising on collective experience, capabilities and resources to unlock growth and value potential.

### ENVISIA® – a lower carbon concrete

Achieving a lower carbon footprint is important to Boral and our customers. Boral is committed to leading the charge with our advanced concrete solutions, including ENVISIA®.

The idea for ENVISIA® was born after Ross Harper, Group President, Operations, challenged our team in Maldon to develop a lower carbon concrete without compromising quality or performance.

The biggest hurdle for the team was working out how to replace a portion of high carbon Portland cement without affecting performance. After extensive experimentation and testing, the team, led by Louise Keyte, developed ENVISIA®.

This innovative product has up to 50% lower levels of embodied carbon and superior shrinkage and creep performance that behaves like conventional concrete. There is also no compromise on early strength or cycle times when compared with an equivalent grade of conventional concrete.

ENVISIA® can help our customers lower the carbon footprint of their projects and is ideal for Green Star projects. By using ENVISIA®, construction company Watpac was able to avoid approximately 400 tonnes of CO<sub>2</sub> emissions.

**“We decided to use ENVISIA® on the 333 George Street project in Sydney because we have very high benchmarks with respect to sustainability and achieving the lowest carbon footprint that we possibly can on the project,”** said Atena Malamiri, Design Manager, Watpac.

Around 15,000 m<sup>3</sup> of ENVISIA® will also be used in the construction of Boral’s new cement grinding and storage facility in the Port of Geelong. As well as enabling us to reduce our carbon footprint, it allows the team to make larger pours along the north-south external and intermediate retaining walls, and reduces the overall schedule of the raw material store construction by six weeks.



ENVISIA® is being used in the construction of Boral’s new cement grinding and storage facility in the Port of Geelong



Boral North America Materials Testing and Research Facility

### TruExterior® – a more sustainable product category

In the late 2000s, Boral engineers in North America developed a proprietary blend of polymers and fly ash (a by-product recovered from coal combustion) that yielded outstanding results in durability, dimensional stability, moisture resistance and workability. The technology led to the creation of a new, more sustainable exterior cladding product category, and opened new channels to previously untapped customers.

TruExterior® siding and trim products are a more sustainable solution that combines the look of wood with extreme durability. Rigorously tested in various extreme climates, TruExterior® products resist rotting, splitting, freeze-thaw cycles and termites, without priming or end sealing. The products are manufactured using 70% recycled materials, renewable energy credits and alternative energy. Wastewater from the production process is treated in state-of-the-art water management systems.

The team in North America is continuing to innovate and expand the poly-ash platform to develop new products and opportunities. These include lightweight composite panels and designed materials for fire resisting and sound attenuating products. The team is also working on developing multi-functional smart products that will be important in the future building space.



### A new partnership with UTS

To strengthen Boral’s R&D efforts, we are forming a new partnership with UTS. The partnership, known as the UTS-Boral Centre for Sustainable Building, is an opportunity for Boral to work together with researchers at the university’s state-of-the-art facilities in Sydney.

The UTS-Boral Centre for Sustainable Building will strengthen Boral’s ability to develop, incubate and commercialise building material solutions required for Boral’s sustainable products strategy. The partnership will also give Boral access to bespoke equipment, technology and subject matter experts that will enhance our in-house knowledge and capabilities.

**“Product innovation is strategically important to Boral in order to maintain our current position and respond to emerging trends. The partnership with UTS is a major step forward for Boral’s ability to deliver cutting-edge solutions to our customers.”** said Louise Keyte. ■



# RECYCLING SUCCESS IN ROAD RESURFACING TRIAL

**For the first time, Boral has trialled the use of four different recycled materials in the construction of a road, located in the City of Canning local council area in Perth.**

According to Paul Ng, Mayor of the City of Canning, the council's decision to partner with Boral in the road resurfacing trial was driven by its desire to think and operate more innovatively and be more sustainable.

"We are consistently asking our ratepayers to be more sustainable in their thinking and behaviour. This partnership reinforces that we are leading by example," he said.

Before the project went ahead, the asphalt mix underwent an extensive design and testing process. Emanuel Popescu, Technical Manager for Asphalt and Quarries, worked with Ryan Jansz, National Technical Manager for Boral Asphalt, on the design of the prototype mix. The team at the Boral Material Technical Services Lab at Baulkham Hills in NSW also conducted extensive tests to ensure the mix met performance requirements.

Boral's commitment to environmental sustainability is embedded in our business strategy. We consider the full life cycle of our products and invest in innovative new products that are higher in recycled content.

The transition to offering more sustainable products within our suite of asphalt mixes presents a significant opportunity for both Boral and our customers.

**"We want to be part of the solution by helping to reduce landfill waste. We can make a real difference by promoting sustainable practices in road construction. The re-use of materials in our asphalt pavement operations is helping to promote the benefits of recycling,"** said John Ralph, Regional General Manager, Western Region, Boral Australia.

Paul Ng said the City of Canning is very proud to have been part of the trial and that he is astounded that these recycled materials can be used in such a positive way. ■



Road resurfacing trial in Canning, Perth

"Single-use plastics are one of the highest-volume items going to landfill. It's astounding that 58,000 water bottles can be used in a positive way that helps create a road that will last for more than 30 years."

**Paul Ng, Mayor of the City of Canning**

## Recycled materials used in the road



**58,000**

plastic bottles



**37,500**

glass bottles



**316**

car tyres



Recycled asphalt

# ZERO HARM TODAY IMPROVING SAFETY ACROSS BORAL



Kathy Mackay and Louise Keyte

## A 'nudge' for safety

Boral is piloting a series of 'safety nudges' across the business. These positive reminders are designed to enhance existing safety policies and procedures by influencing individual behaviour.

The team at our packaged cement facility in Maldon is trialling a 3D zebra crossing to increase visibility for drivers and pedestrians. The initiative has received positive feedback from both pedestrians and drivers, and the team will continue to collect data and feedback over the coming months to determine whether the nudge has been a success.

Kathy Mackay, Group Learning Manager, is leading the nudge initiative. "Nudging helps us to help each other with awareness through simple, friendly messages," she said.

Each nudge is simple, low-cost and easy to implement, allowing them to be effective at a site-specific level. ■

## Outstanding safety achievement

On 28 June 2019, Boral's Baulkham Hills Material Testing Services (BMTS) Laboratory celebrated 20 years without a lost time injury (LTI). "It is a remarkable achievement that this site has not had an LTI this century," said Bob Bornstein, Manager Technical Services, NSW and ACT.

The BMTS Laboratory is the major materials testing facility for Boral Construction Materials, and undertakes testing for internal and external clients worldwide. Its approximately 50 employees represent 23 different nationalities, which Bob believes has played a big part in the site's safety achievement.

**"The cultural diversity at the site has promoted a level of inclusion and caring for each other that I have not witnessed before. It really is a special place,"** he said. ■



Mojtaba Habibinejad and Aaron Lacy



The new drawbar

## New drawbar design for truck and dog tipper trailers

Boral's Queensland Logistics team has designed a new drawbar that connects the tipper trailer to the truck of our quarry tipper trucks.

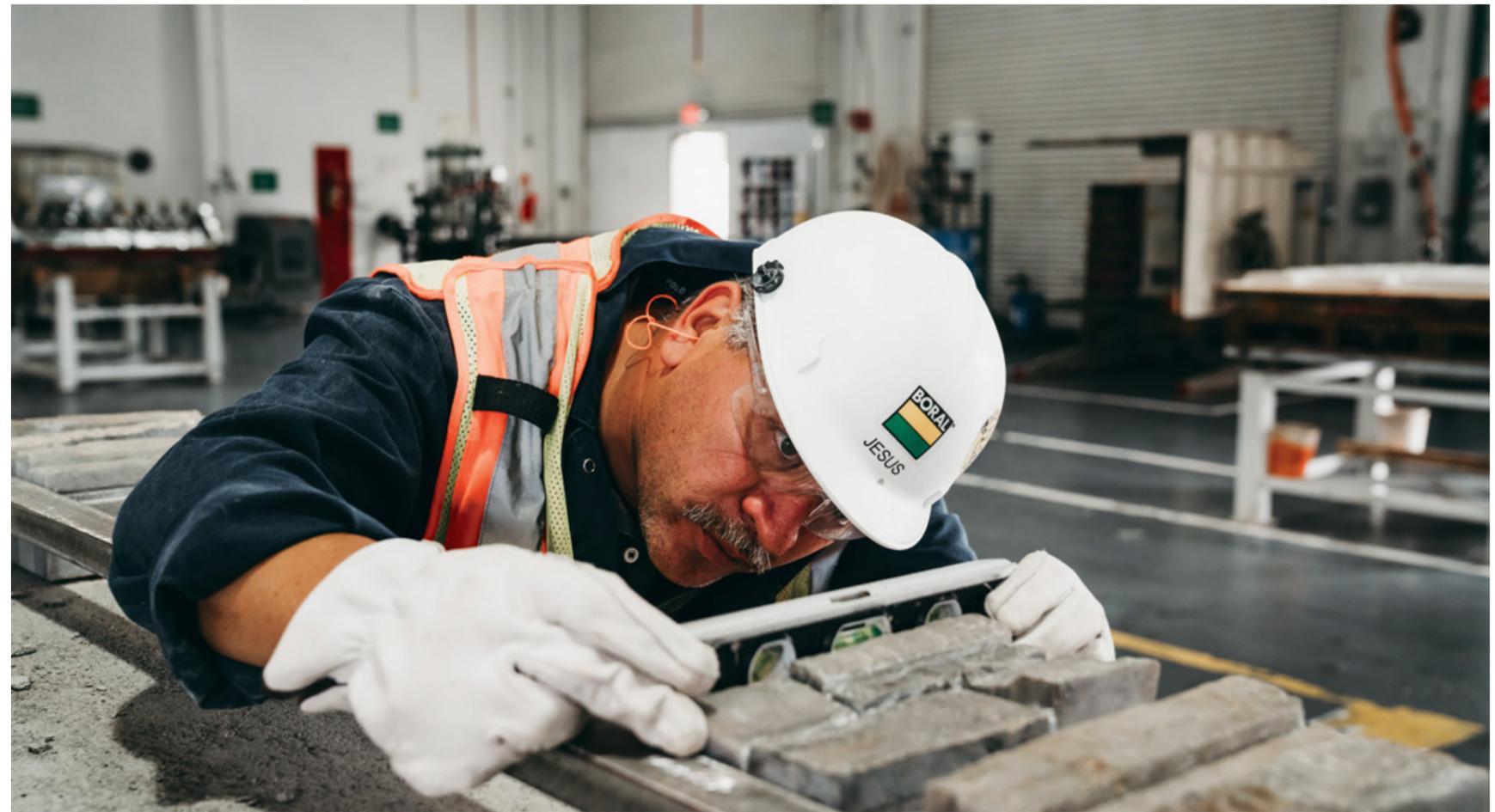
The new drawbar is based around a single central hollow main tube, so the wiring, air hoses and hydraulic lines are now protected from impact, damage or wear during the transfer of quarry product.

It is also self-cleaning, which reduces maintenance costs, and less material is tipped over the drawbar during the unloading process. When no stones remain on the drawbar after tipping, there is a much lower risk of damage to other vehicles on the road. ■



# Boral North America

Building a strong foundation for growth



Boral's stone plant in Napa, California



California home featuring Boral Steel – Stone Coated Roofing

**Following a period of transformation resulting from Boral's acquisition of Headwaters in 2017, we continue to look for ways to incrementally grow Boral North America's position in one of the world's largest building and construction markets. Here are some of the strategic initiatives currently underway.**

### Launching Boral Steel roofing

Through our acquisition of Headwaters in 2017, we expanded our US roofing business to include composite and metal roofing products, in addition to concrete and clay tiles.

While Boral's stone coated steel roofing products have been in strong demand, our California-based manufacturing operation was plagued with challenges during our first year of ownership, which limited capacity. This made it difficult to supply our existing customers, let alone grow.

There was a substantial turnaround in manufacturing performance during FY2019, thanks to the efforts of a team that included local US expertise and Australian engineering support.

The application of Lean principles delivered lower operational costs and substantial improvements in quality. Importantly, capacity is no longer limited. In fact, production capacity of the plant has quadrupled since the acquisition. This is the result of better planning, fewer bottlenecks, and optimisation of the plant and its operations.

This year, the business is well placed to supply existing customers and grow. We also have plans to launch Boral Steel in Florida this spring.

### Expanding the distribution of our Light Building Products

Boral's Light Building Products and Stone businesses are partnering to expand the distribution of Versetta Stone across a wider customer base. A mortarless stone siding panel, Versetta Stone is manufactured at our Stone plants in Napa, California, and Chester, South Carolina.

Because it has an installation method similar to other types of siding, the Light Building Products business plans to continue selling Versetta Stone through lumber and retail channels. The business currently distributes products through 170 Home Depot stores, and growth is expected across the US and Canada. The focus through retail channels is on consumer-friendly applications such as fireplaces, splashbacks, accent walls and column wraps.

Increased interest in the easy-to-install Versetta Stone panels has led to a pilot program to distribute the product through the Stone business's Masonry channel. The two businesses will also be working together on new product development to meet the future needs of their respective channels.



Minnesota home featuring Versetta Stone

### Leveraging intelligence across Boral Stone's manufacturing network

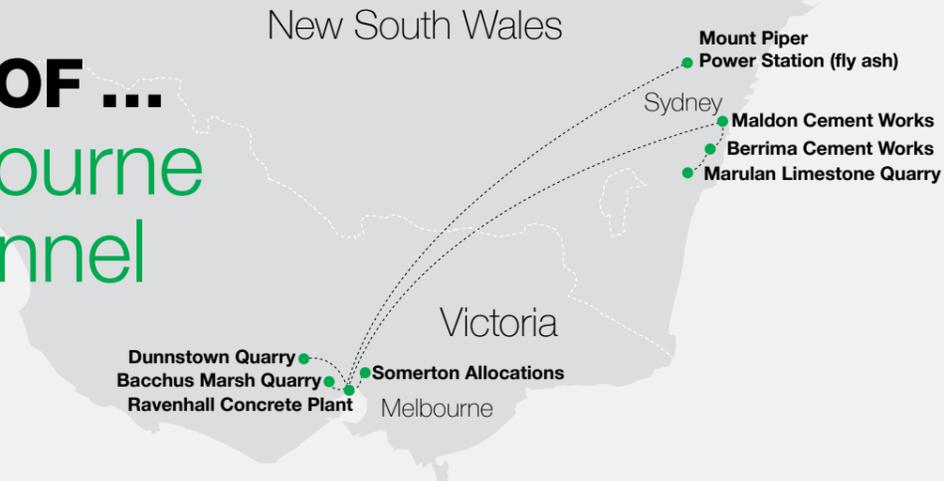
Boral's Stone business is drawing on the technology strengths of the legacy Headwaters business and Boral's automation and manufacturing prowess to optimise its manufacturing and distribution network.

Mould technology developed by Headwaters is being paired with Boral's manufacturing process expertise to create unified platforms for value and premium lines. Advances in mould size and handling technology have already eliminated labour-intensive manual handling tasks, and allowed production teams to be separated from mobile equipment operators.

The move will lead to significant safety advantages, optimised manufacturing, reduced costs and a strong foundation for future innovation.

Standardised moulds, equipment and processes are also increasing interchangeability across the plant network, reducing freight costs and increasing the business's ability to scale operations to meet changes in demand. ■

# A DAY IN THE LIFE OF ... the Melbourne Metro Tunnel Project



**Boral is playing a part in the construction of one of Melbourne's major rail infrastructure projects: the Metro Tunnel. We're supplying the Cross Yarra Partnership consortium with concrete to help build twin nine-kilometre rail tunnels.**

Boral has built a dedicated batch plant to supply concrete for the manufacture of 56,000 concrete tunnel lining segments for the project. Each day, concrete from the plant's two wet mixers discharge loads into a 'flying bucket' that transfers the concrete into Cross Yarra Partnership's manufacturing facility, where it is poured into moulds.

Given the integrated nature of our operations, Boral is in a good position to supply these types of major projects. Many Boral sites and teams are contributing to the Metro Tunnel Project.

In NSW, contributors include Marulan Limestone Quarry, Berrima Cement Works, Maldon Cement Works and Mt Piper Power Station which supplies fly ash. In Vic, Dunnstown Quarry, Deer Park Quarry, Bacchus Marsh Quarry, Ravenhall Concrete Plant and Somerton Allocations all play a role. ■

## The project at a glance

**56,000**  
pre cast segments

**100,000 m<sup>3</sup>**  
of specialised concrete supplied over two years

**\$11 billion**  
total value of the Metro Tunnel project

**9 km**  
of new rail tunnels and five new underground stations



Clinker is transferred by rail to the Maldon Cement Works where it is milled into cement powder. Slag is mixed with the cement powder to make Enviroment, a supplementary cementitious material. The Enviroment is loaded into an isotainer with cement and sent by rail to a logistics facility in West Melbourne, Vic.



**6.00am**  
Limestone is mined at our quarry in Marulan and transferred by train to Berrima Cement Works. The limestone is blended with iron ore and sand before being ground into fine powder. John, Process Systems Engineer for Boral Cement, checks the rotary kiln where the mix is heated to 1,450°C and transformed into clinker.



**10.45am**  
Rod, the Allocations Supervisor at Somerton Allocations, receives a request for cement from the Boral team at the Tunnel Segment Lining Manufacturing Facility in Ravenhall. Rod schedules a delivery with Tim, one of Boral's drivers.



**11.00am**  
Tim picks up an isotainer from Qube Logistics in West Melbourne.



**11.30am**  
Tim delivers the cement to Boral's dedicated batch plant at the Ravenhall site where it will be combined with aggregate and sand from three additional Boral quarries to make concrete.



**12.45pm**  
Michelle, a Production Engineer for Boral Concrete, visits the Ravenhall site to review the technical results with the team and provide operational support.



**1.00pm**  
Concrete is delivered via a hopper to Cross Yarra Partnership's facility, where it is poured into pre cast segment moulds.



**2.00pm**  
Basem, the Plant Manager, checks the two fibre feeders on the top level of the plant. The steel fibres provide strength to the concrete and the polypropylene fibres help with fire resistance.



**3.15pm**  
Completed segments are stored at Ravenhall until they are required.



**4.30pm**  
When needed, the segments are delivered to the construction site and installed.

# WILLIE WALKER JR CELEBRATES 60 YEARS AT BORAL



Willie Walker with other Meridian Brick employees with over 50 years of service



Willie and his wife at a party in the 1980s

“Working is good for your health. If you lay around too long, just like a car, you won’t run.”

**Willie Walker Jr, Heavy Equipment Operator, Meridian Brick**

**Known as Mr Willie to many, Willie Walker Jr is a full-time heavy equipment operator at Meridian Brick’s plant in Augusta, Georgia in the US. This dedicated, reliable and knowledgeable team member turned 84 in August, and on 24 November celebrated 60 years at Boral.**



Merry Brothers in the 1960s

Willie first joined Merry Brothers Brick as a young boy. His father drove trucks for Jones Brothers and would frequently pick up brick shipments from Merry Brothers. As his father’s unpaid sidekick, Willie’s job was to insert straw between the stacked layers to prevent damage during transport.

A decade or so later, in 1959, Willie officially joined Merry Brothers. His first job was on a construction crew, building offices that are still in use today, as well as what is now Meridian Brick’s Plant 3. He had hoped to move into a dehandler role once construction was completed, but a supervisor encouraged him to operate heavy equipment instead. In retrospect, Willie attributes some of his employment longevity to that sound advice that steered him to a less physically demanding role.

To this day, Willie nimbly climbs into the cab of a front-end loader. Over the course of six decades, he has moved what must surely amount to a whole mountain range of dirt, sending it on to be sifted, mixed, coloured, extruded, cut and then fired into literally millions of bricks.

The first thing many people notice when they meet Mr Willie is his huge smile. He is a true people person who loves to greet his way through the office – and towards fresh coffee – on a regular basis. It’s a habit well-honed through many years and three iterations of owners: Merry Brothers Brick, Boral Bricks and now Meridian Brick. Willie has a saying often heard by those who know him best: “It ain’t what you make, it’s what you do with it”.

Mr Willie never finished school – a missed opportunity he feels to this day. He is quick to express gratitude to Merry Brothers, who provided after-hours courses in reading, writing and spelling, which allowed him to receive a high school diploma. Boral Bricks later offered a similar program, and Willie took full advantage to receive additional education.

When asked what he considers to be his greatest accomplishment, Willie talks about his daughters. When the time came, he was determined to give them the best education possible. Both have attended private school and gained college degrees.

**“I wanted to give my two girls something I didn’t get. I didn’t get any schooling and I didn’t want them to grow up that way,”** Willie said.

Initially, it seemed appropriate to ask Mr Willie some questions about his early experiences – in and out of the brick plant – with inequality and injustice during a period in US history that was governed, to a large extent, by the colour of one’s skin. However, it quickly became apparent that Mr Willie is not one for recrimination and grudges. He has no regrets. Instead, he is wired for optimism, extending grace to even the most undeserving people and situations.

To ask Mr Willie to talk about himself is to learn he has three great loves: his faith, his family and his work. Every answer circled back to at least one of those three things. Hobbies? None, really, but he loved to take his daughters to Six Flags Theme Park when he had a day off. He gave – and still gives – his spare time to his church, where he was in a leadership position for almost 30 years and still plays a role.

Memorable vacations? He rarely takes them, preferring to put in a good day’s work instead. (He once took the family to a well-known amusement park in Florida. He returned at midday to the hotel, alone and unimpressed by the magic of the kingdom. He then waited patiently for his family to join him at the end of the day.)

Willie’s words of advice flow freely during conversation. Have a troublesome supervisor? “Do what you’re supposed to do and you’ll stop a lot of problems from happening,” he said. Need financial advice? “Save something out of every pay cheque every week, no matter what. And never borrow money.” Want the key to on-the-job success? “Each day, plan on giving a good day’s work.”

Willie says he is not thinking about retirement just yet.

We thank you, Mr Willie Walker Jr, on 60 remarkable years of service. We are honoured you have chosen to spend so many years with us. ■

## Employees with 50 years of service or more

**Willie Walker Jr**  
**Service years:** 60  
**Location:** Meridian Brick  
**Job title:** Heavy Equipment Operator

**Kevin Bishop**  
**Service years:** 55  
**Location:** Boral Quarries  
**Job title:** Plant Operator

**Leroy Safford**  
**Service years:** 55  
**Location:** Meridian Brick  
**Job title:** Forklift 4 Wide Shipping

**Robert Germany**  
**Service years:** 52  
**Location:** Meridian Brick  
**Job title:** Hacker

**James Moore**  
**Service years:** 52  
**Location:** Meridian Brick  
**Job title:** Maintenance

**Clarence Blockett**  
**Service years:** 52  
**Location:** Meridian Brick  
**Job title:** Maintenance

**James Kennedy**  
**Service years:** 50  
**Location:** Meridian Brick  
**Job title:** Maintenance

**David Currey**  
**Service years:** 50  
**Location:** Boral Concrete  
**Job title:** Plant Supervisor

**Derek Hobson**  
**Service years:** 50  
**Location:** Boral Quarries  
**Job title:** Laboratory Technician

**Bob Bornstein**  
**Service years:** 50  
**Location:** Boral Concrete  
**Job title:** Technical Services Manager

**Juencio Ruiz**  
**Service years:** 50  
**Location:** Boral Stone  
**Job title:** Crew Leader

# In the community

## New partnership with Black Dog Institute



**OCT:** Through our new community partnership with Black Dog Institute, Boral is helping to start a dialogue around mental health, reduce stigma and improve the lives of people affected by mental illness.

The Black Dog Institute is a world leader in diagnosing, preventing and treating mood disorders such as depression and bipolar. In October, Boral and USG Boral employees hosted fundraising morning teas and barbeques for Black Dog Institute, raising more than \$5,000. Boral matched every dollar raised, doubling the contribution to more than \$10,000.

## Helping communities affected by bushfires



**NOV:** Boral employees have been supporting those affected by the devastating bushfires around Australia by making donations and volunteering their time to support local emergency services.

The team at our Johns Rivers Quarry in NSW opened the quarry to give emergency service vehicles access to the quarry's water supply, and used the quarry's water cart to transport water to the fire service vehicles. Approximately 30 trucks were filled from the quarry.

Owen Harper, Production Technician, Boral Asphalt, set up his ute to cart water to emergency services on the front line near Wingham in NSW, that relies on rain water. After realising more help was needed, he formed a convoy of 21 vehicles. Together, they were able to deliver 21,000 litres at a time.

Boral is also supporting the emergency response by matching employee contributions to the Australian Red Cross Disaster Relief Appeal.

## Building a new home for a family in need



**MAY:** Senior executives from Boral and Mirvac travelled to Vietnam with Habitat for Humanity to build a home for Nguyen Viet Tuan, his wife Dinh Thi Binh and their two children. The team also raised more than \$130,000 for Habitat for Humanity.

## Repairing emergency accommodation



**JUL:** A team from Boral and USG Boral in Brisbane spent a day painting and completing minor repairs on an 18-room, 27-bed crisis accommodation facility for vulnerable women and children.

## Celebrating NAIDOC Week



**JUL:** Indigenous artist Aryssa McAlister travelled to Boral's Peppertree Quarry to create a special artwork. Featuring the tracks of people travelling to and from the site, the artwork symbolises Peppertree Quarry's importance as a meeting place.

## Supporting Indigenous performing arts



**AUG:** Boral was proud to support Bangarra's national tour of *30 years of sixty five thousand*. The performance celebrates the spirit of 65,000 years of Aboriginal and Torres Strait Islander culture.

## Giving hope to the vulnerable



**SEP:** More than 50 Boral employees participated in HomeAid's Care Day in Atlanta, Georgia. They undertook repairs and maintenance work on housing for low-income and homeless individuals and families affected by HIV/AIDS.

## Protecting endangered wetlands



**SEP:** Boral volunteers joined forces with Conservation Volunteers Australia to plant native seeds on the Tamar River in Tasmania, and repair a walking track that is vital to the conservation of the endangered Melaleuca wetlands.

As Boral has evolved  
to meet the changing needs  
of our customers, our brand  
has also evolved.



- ✓ Modern approach to colour
- ✓ Streamlined designs and templates
- ✓ Tone of voice to help craft company messages
- ✓ Flexibility in design for all print and digital material
- ✓ Covers logos, typefaces, colour, photography, signage, stationery, sub-brands and more

For employees, design agencies, suppliers, media.

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