

BORAL NEWS

DEC 2013

BORAL USA CELEBRATES
SAFETY EXCELLENCE

PLASTERBOARD JOINT
VENTURE, A PLATFORM
FOR GROWTH

ENVISIA™: LOWER-CARBON
CONCRETE OF THE FUTURE

VALUE-ADDED
PRODUCTS VITAL
FOR SUCCESS

Redmond Lloyd, National Manager, R&D



FROM
THE CEO

Welcome

to the new-look *Boral News*

Over the past year we've seen many changes at Boral and our new-look, newly named *Boral News* marks another small change. I hope you enjoy this fresh approach to sharing news from around our organisation.

In mid-October we announced the formation of a strategic plasterboard and ceilings joint venture with USG, which secures access to world-leading technologies across Asia, Australasia and the Middle East (See page 14). We believe this initiative demonstrates that innovation and technology will play an increasingly important role in our long-term strategic thinking.

Then at our recent AGM we confirmed the sale of Dowell Windows to a private building products company which will continue to operate the business under the Dowell brand. This follows several other business sales in the past year, including the divestment of the remaining Asian construction materials business in Thailand, masonry on the east coast of Australia and US construction materials operations in Oklahoma.

By realigning Boral's portfolio and streamlining our organisation from six to four reporting divisions, we have improved collaboration, reduced costs and duplication and are supporting more efficient decision-making and accountability.

Addressing these priorities is fundamental to delivering on our *Fix, Execute, Transform* program, which will transform Boral into a high-performing company that delivers attractive shareholder returns and is known for its world-class performance and product innovation. I'm very much encouraged that the required cultural transformation is well underway! There are clear signs that our workforce has embraced a genuine safety culture and is fully engaged.

As we come to the end of a busy and eventful year, I wish you a safe and happy season of celebration and every success for the year ahead.



Mike Kane
CEO & Managing Director

FRONT COVER IMAGE:

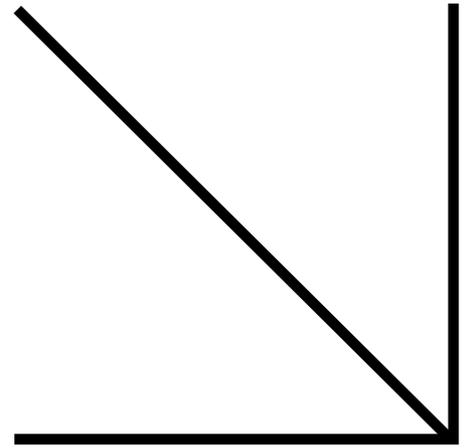
Redmond Lloyd, National Manager for R&D, pictured at the site of Sydney's new \$6 billion Barangaroo waterfront development, for which Boral is supplying concrete. Photograph by Geoff Howden.

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If you have an item of news for future issues, please contact:

Linda Assatoury
from Group Communications
& Investor Relations

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TAKE NOTE

Five interesting projects across Boral



Plasterboard supplied for Northeast Asia Trade Tower, South Korea



Bricks supplied for the Presidential Village at University of Alabama, USA



Hawthorn Town Hall refurbishment, Victoria, uses Boral Timber



Cultured Stone from US used in Frenchs Twist café in Brisbane



Face bricks supplied for award-winning Guildford Grammar School building, Perth

Colourful design sampler site a big hit

Boral Sampler, an online design tool that lets customers mix and match Boral products and colour choices for their construction or renovation projects, has had a flying start.

Since its launch in September 2012, almost 74,000 people have logged onto it (www.boralsampler.com.au), and nearly 1,500 colour schemes have been created and shared via email with friends, family and builders.

Developed inhouse by Boral's Communications Centre, the site allows customers to play around with interior and exterior elements of their building projects. For instance, six internal ceiling cornices can

be placed next to nearly 100 wall colours. Throw in dozens of choices for brick and stone walls, window colours, and timber and polished concrete floors, and the possible design combinations number in the thousands.

Exterior choices are equally comprehensive, covering roof tiles, colours for gutters, fascias and windows, brick and mortar choices, and concrete, decking and pavers. Once a design is chosen, the customer can send a pdf file to their builder to get a quote.

"What we've been able to achieve is unique because we're able to draw on a wide breadth and depth of building products across Boral and deliver a one-stop-shop when it comes to looking at a moodboard to see what the end product will look like," explains Tony Coffey,

Customers can play around with elements of their building projects

Manager of the Boral Communications Centre. "While our competitors might have software to do the same thing, they don't have the same functionality of our software nor our extensive product range."

In addition to helping customers, the site gives Boral's sales team an insight into what's most in demand in combinations of colours and materials. Requests for quotes are sent directly to Boral sales

staff in the relevant state via the sales product leads system. The sales team can then track the value of each lead. ■

Boral HQ moving premises

Boral's head office in Sydney, Australia, has a new home. About 80 corporate and divisional staff in the corporate head office will move in December to new premises at 40 Mount Street, North Sydney. The five-star green-rated space is also sufficiently sized for future expansion if required.

The deal struck by Boral's Property Group was very favourable to Boral. A sublease was simultaneously struck with a publicly listed engineering company, RCR Tomlinson, which will occupy Boral's current premises at AMP House until the lease expires in mid-2015.

The AMP Centre at Circular Quay has been home to Boral's corporate head office since 1995. Relocating to less expensive office space in North Sydney will deliver cost savings of approximately \$14 million over the next eight years, net of exit and fit-out costs associated with the move.

Managing costs down has been a key priority for Boral over the past 12 months, with cost reduction initiatives of \$105 million having been announced in FY2013. It continues to be a priority given the inflationary cost pressures facing the business. Consolidating and

relocating state offices is expected to generate further cost efficiencies. Together with contractor spend savings and back office efficiencies in the Australian operations, savings of \$45 million per annum within two years are anticipated as announced at the Annual General Meeting in October 2013. ■

Leighton Boral Amey joint venture Secures strategic road asset management contracts



Boral is well-positioned to provide asphalt surfacing services

Boral has joined forces with Australian infrastructure company Leighton Contractors and leading UK highways infrastructure firm Amey to form a joint venture that will manage, maintain and improve road networks in several areas in New South Wales and Queensland.

The Leighton Boral Amey Joint Venture has recently been awarded a seven-year contract by the New South Wales government agency Roads and Maritime Services (RMS) to deliver the state's largest road management and maintenance contracts in Sydney's South region.

Valued at approximately \$100 million per annum, the Stewardship Maintenance Contract (SMC) is one of the largest of its kind in the southern hemisphere. The network includes

nearly 2,000 kilometres of roads, 237 bridges and eight tunnels and stretches from the south of Sydney's

"The contract is one of the largest of its kind in the southern hemisphere"

metropolitan district to the Sutherland National Park. It incorporates the key routes to Sydney Airport and the shipping lines of Botany Bay.

Through the contract, the joint venture will deliver the government's vision of keeping Sydney moving while keeping the customer at the heart of the service as they deliver routine road maintenance, improvement

works, operational asset management planning and project management.

In a similar arrangement, the Queensland Government Department Transport & Main Roads (TMR) has awarded the Leighton Boral Amey Joint Venture a five-year road asset management contract to manage, maintain and improve the South Coast region road network in South East Queensland.

The contract, valued at up to \$135 million, involves the joint venture partners designing and delivering programmed and rehabilitation schemes, as well as routine maintenance activities and 24/7 incident response across over 1,000 kilometres of network, including over 650 kilometres of state and national roads. The network stretches from the south of Brisbane's metropolitan district to the New South Wales border and includes the Gold Coast.

The SMC is a new collaborative contract that drives efficiencies, a commitment to improving customer, network and asset outcomes and reducing the total cost of managing and maintaining road assets.

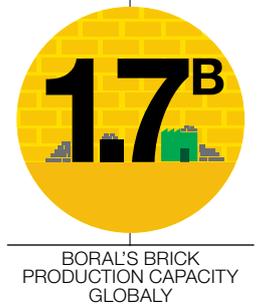
Joe Goss, Divisional Managing Director for Boral Construction Materials, says: "Boral is proud to be

working alongside Leighton Contractors and Amey in this venture."

Leighton Contractors brings proven project management capability to the partnership and will undertake minor civil works and routine maintenance. Amey will design the maintenance programs and be responsible for strategic asset management. Boral will undertake the programmed maintenance work (asphalt road resurfacing), the asphalt component of minor civil works and minor patching works, as well as supplying concrete and quarry products.

"We're committed to delivering world-class pavement solutions through the joint venture and to ensuring that safety remains the key priority for employees, contractors and members of the public," Joe says. ■

DID YOU KNOW?



Boral Gypsum presents at world architecture festival



Boral Gypsum presented a sparkling interactive display at the World Architecture Festival (WAF) in Singapore. There were over 2,000 attendees at the largest annual gathering of international architects and designers. The exhibition showcased the latest, most innovative products and solutions for great architecture and design, and our stand attracted much interest. ■

Analysts, investors inspect US operations



Out and about in the USA: the visitors gain firsthand knowledge

Boral's US management team hosted a group of more than 30 market analysts and institutional investors for two days in September. The group from Australia visited the Salisbury brick plant and composite trim operations in North Carolina, as well as the cultured stone

manufacturing plant in Chester, South Carolina.

Together with CEO Mike Kane and CFO Ros Ng, Al Borm and his team helped the group to better understand Boral's position in the US and the future potential of its products and earnings.

With Boral's US business expected to return to profitability in the late second half of FY2014, the pace and quality of the market recovery in the US was a key topic. The visitors were also interested in the composite trim product, a relatively new offering in the US\$2 billion market.

Competing mainly with timber, Boral Trim is a superior alternative to customers seeking an easy-to-install, dimensionally stable, well-finished and cost-effective trim.

A variety of other innovations were on show at the cultured stone operation. The group was particularly impressed by the installation demonstration of Versetta Stone, which is attractive and easy to install by do-it-yourself end users.

The tour ended with a visit to the Boral Building

Products Centre in Charlotte, which included a behind-the-scenes look at Boral's Tint Centre.

"[The tour] was very useful to have a look at what's been going on in the USA for the last few years – the business has changed considerably – and I thought the presentations were very informative," said one large institutional investor afterwards.

Boral has the number one position in clay bricks and manufactured stone veneer (cladding) and in clay and concrete roof tiles (roofing) in the USA. It also operates a national fly ash business and has construction materials interests in Colorado and Oklahoma. ■

Teams thrilled to win Shotcrete award

Boral teams were thrilled when the American Shotcrete Association declared that the Cadia East mining project won the 2013 Outstanding Shotcrete Project of the Year award, in the International Projects category. The award is a huge credit to the teams involved. See: www.shotcrete.org/pages/membership/project-awards.htm. ■

Award-winning Tamara owes it all to Dad

Boral customer and WA apprentice Tamara Jenkins more than holds her own in the tough and traditional wall and ceilings business. In fact she's so capable she recently won the 2013 Australian Wall and Ceiling Industries Apprentice of the year Certificate for Western Australia.

"It's the first time a woman has won the award in WA, or in any Australian state in my 50-plus years in the plasterboard industry," says Ian Moore, Technical, Products and

Training Manager for Boral Plasterboard in WA.

After winning the Apprentice of the Year 2013 title and a bronze certificate in the World Skills Plastering Regional Division, Tamara was also presented with her Boral Interior Lining Plastering Certificate III at a dinner presented by Ian in Hobart.

Tamara works with her father, Terry, and brother Eoin. The Perth-based company in which they're partners, Complex Ceilings, is a Boral customer which

operates throughout WA.

"I couldn't really believe it when I won," says Tamara. "But credit must go to my Dad, Terry, who taught me well. I'm his apprentice; my brother was a large part of it as well."

Her father inspired her choice of career when the family lived in the small town of Kalbarri, WA, where there were few career prospects. "I decided that becoming an apprentice would give me opportunities and allow me to see different places," says Tamara.

Boral Interiors Linings has no contracting division in WA, where it allows contractors to employ and enrol in its training program for residential and commercial interior linings in construction. The apprentices are enrolled, trained and assessed on site over three years to attain a Certificate III in Wall and Ceiling Linings. ■



'It's given me opportunities'

Tamara Jenkins

Wayne wins major trucking award



Wayne Merrick, Senior Asset Supervisor in New South Wales for Boral Logistics, has won the prestigious Craig Roseneder Award for Technical and Maintenance Excellence in the Workshop.

The award is Australia's premier prize for technical

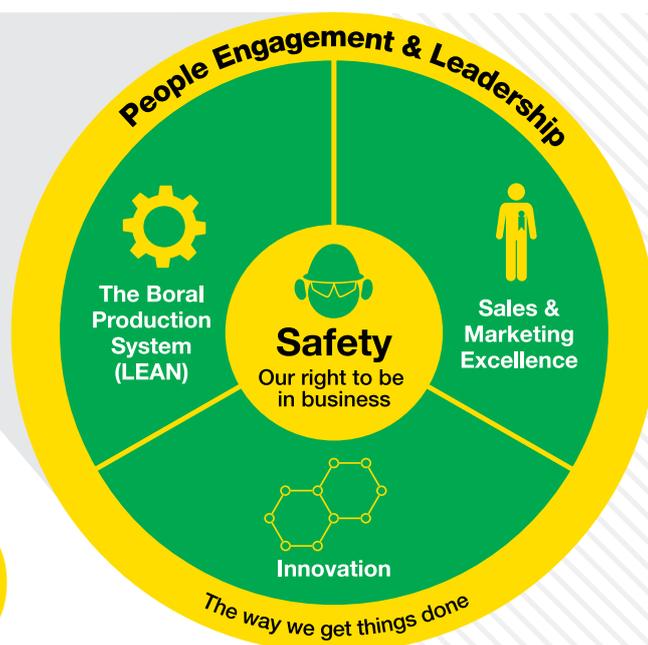
and maintenance excellence in trucking by the Australian Trucking Association (ATA), the peak industry body in Australia.

One of three finalists, Wayne was recognised for his ability in the maintenance of on-road heavy vehicles, his knowledge, achievements,

contribution to the industry, dedication and innovations in trucking. "Wayne has introduced a number of important safety features to the Boral fleet, including tailgate lock indicators for tipper bins and LED undersill door lights," ATA Chairman David Simon said.

Wayne will receive a trip to the American Trucking Associations' 2014 Technology & Maintenance Council Annual Meeting and Transportation Technology Exhibition in Nashville, Tennessee and \$1,500 in spending money. ■

FIX EXECUTE TRANSFORM



SKILLED 4 ACTION

HANDS-ON LEARNING FOR BORAL LEADERS

A group of 20 Boral leaders set aside the PowerPoint presentations and stepped out of the classroom during a series of practical training sessions at Bayswater Concrete Plant and the Orange Grove Quarry in Western Australia.

The customised two-day programs were held in September, at the request of Wayne Manners, Executive General Manager of WA Construction Materials & Cement, to address the specific needs of the team and covered a variety of topics including safety, leadership and the Boral Production System (BPS).

“It was far from the typical training session locked in an air-conditioned meeting room. We were out in the yard, in the rain, doing whatever we practically and safely could to demonstrate practical examples of hazard identification, tool box meetings, difficult conversations and problem solving,” says Wayne, whose team worked with Boral Corporate Services to organise the training sessions.

During the Bayswater program participants including executive managers, general managers, managers and supervisors kicked off the first day discussing ways to improve communication and developing site

improvement plans using BPS tools.

Then they went on a series of ‘gemba walks’ (visiting the business front lines) around the Bayswater site to get an overview of work and processes, to identify unnecessary items and safety hazards, and determine additional actions that needed to be taken.

The next day the group donned high-visibility clothing, boots, gloves, glasses and hard hats and got down to work. Participants were divided into teams and assigned areas of the site. Led by employees, they set about cleaning and tidying up amenities, sheds, workshops and other areas frequently used by employees. The aim was to make jobs safer and easier and to eliminate waste.

“We painted, shovelled, weeded, sorted unnecessary or broken items, shined, wiped and cleaned, bought needed tools and supplies, and smiled because we’d worked together to make the workers’ jobs safer and the site performance better,” says Craig Excell, WA Regional Concrete Manager at Boral Construction Materials.

Based on the Skilled 4 Action training modules developed by Boral Corporate Services and Learning and Development, the sessions were led by Robert Gates, Group Senior Vice President of Operations, and Wayne Reade, Group Organisational Development Manager, and received plenty of positive feedback. One participant called them “the best two days I’ve spent working for Boral”. Another said, “It was refreshing to actually be at the site and implement what we learnt”.

Skilled 4 Action is part of the multi-year ‘Fix, Execute, Transform’ initiative to change Boral into a company that maximises shareholder returns and is known for its world-class performance and product innovation. Employees interested in organising a Skilled 4 Action module for their team, site or product group should contact their Executive General Manager. ■



REDMOND LLOYD



Redmond Lloyd is one of the many talented people who represent the future of Boral. The 36-year-old former Product Development Manager was recently promoted to National Manager of R&D. He also represents the Innovation Factory in Australia – the facility responsible for making the best use of the Company’s resources to develop new products – and a key element in Boral’s vision for performance excellence through innovation. Here Redmond talks to *Boral News* about his past, priorities and plans.

BORAL NEWS: Redmond, how did you start your career?

REDMOND LLOYD: I’m originally from Melbourne. I studied chemical engineering and biochemistry, then did my PhD in materials science at the University of Melbourne. I moved to Sydney in October 2007.

I began work in a start-up company in 2001, looking to develop and commercialise the technology I was researching for my PhD. This was an alternative cement product that could be produced using less CO₂. Although the company eventually failed, we’d reached a point where we understood the technology reasonably well.

BN: And did that set you up for your Boral role?

RL: Yes. I had previously worked with Ross Harper, who’s now EGM of Cement at Boral. Ross came to Boral in 2006, and when I finished my studies a year later I needed a job. Around this time Ross wanted to begin an innovation program at Boral Cement, mostly around reducing carbon emissions, so it was a good fit.

BN: You now report to Russell Hill, Global Chief Technology Officer in Texas. How does that work in practice?

RL: Very well. I’ve visited Russell in Texas several times over the past few years. We’ve collaborated on projects and developed a good working relationship based on respect. We have a phone conversation once a week and have begun to use online meeting tools. When we get to videoconferencing I’ll have to stop taking early morning calls in my pyjamas!

BN: What equips you best for your current position?

RL: Being stubbornly optimistic, in a professional sense, helps. It’s essential for innovation, because there are so many ways to say something can’t work. In addition I’ve been involved in R&D in cement and concrete for years now, and I’ve also experienced how *not* to do innovation.

The Innovation Factory, a new business unit, is an example of a change in tactic in how innovation is managed at Boral. Our focus is to make it more systematic, strategic

“Being stubbornly optimistic, in a professional sense . . . is essential for innovation”

and focused on what the business needs and, ideally, making the process more efficient.

BN: Without the benefit of hindsight, is it really possible to make innovation a more scientific and objective process?

RL: Absolutely. If you have an idea while sitting in the bathtub, there are ways to develop that. You need the right people to help with business development, operations and marketing, and a key element is efficient management of the process.

It's been said that innovation is one percent inspiration and 99 percent perspiration. If you can make the 99 percent more efficient, or reduce the work to 50 percent of your time, you'll achieve twice as much.

BN: Tell us more about your involvement with ENVISIA™ and ZEP™, from conception to commercialisation.

RL: ENVISIA™ started out as a top secret project, with just a couple of us working in the lab. Gradually more and more people needed to be involved. For me it's been a rewarding journey to see it go from a test tube to building size. Many talented people from different parts of the organisation contributed to this process. Working in a team with them has been hugely exciting. The marketing people are in a different discipline to what I've been used to. I've learned a lot and it's great that, as a team, we've brought something so good to the market.

BN: What makes these products special?

RL: The 'glue' in concrete is Portland cement, which has a high CO₂ penalty associated with making it. We can blend cement with waste materials or co-products from other processes like fly ash and slag. The more of those we put in the less cement we need to use, and the lower the embedded CO₂ in the end concrete product. However when we do that there's a penalty associated with performance. If we add a lot of slag, which is produced in making steel, for instance, concrete typically develops strength more slowly. For many applications the rate of strength development limits the use of slag and fly ash to replace cement. Lab tests have shown that ENVISIA™ concrete gains strength fast enough to use in demanding applications, with half as much cement as would usually be used.^{1,2}

In addition to making concrete with a high slag content gain strength quicker, our lab testing and field trials have shown that ZEP™ reduces shrinkage and has other performance benefits². These ingredients allow us to overcome many penalties, and we get lower embedded

“Within the next ten years there'll be technologies everywhere that can replace everything we do”

carbon and excellent performance in the final concrete product.

BN: Are ENVISIA™ and ZEP™ unique?

RL: We expect to get a patent in Australia for both, which means they are indeed novel and unique. Another company is attempting to sell a similar product in Queensland and Victoria through licensees. Ours has different chemistry, which makes it better in my opinion. While the products are unique, the market segment to which they're aimed – lower carbon concrete – is obviously not. It's currently small but we expect it to grow.

BN: What are your biggest challenges?

RL: The technology landscape is constantly changing. There's a threat that someone else will develop a product that puts us at a disadvantage. That lies at the core of why [Boral CEO] Mike Kane has been a proponent of innovation. Within the next ten years there'll be technologies everywhere that can replace everything we do. If we're

not engaged with these, there's a chance we won't be in business.

It's a challenge, it's an opportunity, and it's why I have a job. Of course there are other challenges, but that's an important one.

We're an operations-focused company that mostly sells commodity products. It's easy to forget to think 'what's next?' when you're focused on driving costs out of your current product line.

For the building and construction materials industry, it's a time of change. There are issues everywhere, whether it's because of a focus on emissions, the quality and durability of products, or the changing way things are built. We can take advantage of these changes and grow our business.

BN: How do you see Boral evolving?

RL: I'd like to see us moving to more high-value products that are less commodity focused, to drive higher revenues. This can only come through innovation, understanding what customers need and giving them a better version than our competitors can. In everything we do, there are opportunities to make product lighter, stronger and easier to install.

If you can offer extra value for customers, it takes the price lever out of the equation. Every product in Boral's portfolio should be able to embrace some version of that.

And I see us becoming more collaborative, with business units working closer together. That process has been happening. ENVISIA™ was a team effort. Its creation was started in the cement division and it is now sold through the concrete division. The point of being vertically integrated is to get synergy from the fact you can communicate and collaborate.

BN: Best advice you ever received?

RL: From Ross Harper – when things are confusing, remember the value of integrity.

BN: What do you do in your spare time?

RL: Mountain-biking, bush walking and camping. I am also co-owner of a small bar in Wollongong, the city in which I live, and it's a passion. It's insightful and rewarding to have a small business. The decisions you make one day can affect your profitability the next. ■

1 Compared to conventional concrete containing currently used blends of Portland cement and SCM that do not include ZEP™ technology, that have been in common use for the given applications prior to the availability of ZEP™ technology and compliant with AS1379

2 Boral Laboratory Testing August 2012-June 2013



A BETTER PERFORMING, LOWER CARBON CONCRETE

WITH A BIT OF HELP FROM LED ZEPPELIN

Never underestimate the power of rock 'n roll. When Boral was developing its new lower carbon concrete ENVISIA™, researchers tested various formulations for the activating agent. One day early in the process, the R&D team left a Led Zeppelin CD playing while samples hardened overnight.

“The samples that hardened while Zeppelin was playing were significantly stronger than those made on other days, so the choice of a name for the proprietary technology which ENVISIA™ uses – ZEP™ – was obvious,” says Redmond Lloyd, National Manager of Research & Development and co-inventor of ZEP™ with Louise Keyte.

After a five-year development process, including numerous field trials and thousands of cubic metres of concrete, Boral officially launched ENVISIA™ into the New South Wales market on 1 July this year. It's already being used in blinding slabs within the first phase of the \$6 billion Barangaroo South waterfront development in Sydney.

ENVISIA™ was designed from the outset to reduce the carbon emissions associated with concrete production. Cement manufacture is a key carbon-emitting step in concrete production, so less cement can mean lower levels of embedded carbon in concrete. For many years industrial byproducts, such as fly ash from coal-fired power stations and slag from iron production, have been added to reduce the amount of



TOP: ENVISIA™ is being used in the blinding slabs in Sydney's Barangaroo project
RIGHT: Our onsite concrete plant at the same site

cement used in concrete. But they can also affect performance, and slow down the rate at which concrete strengthens.

That's where ZEP™ comes in. The proprietary technology allows ENVISIA™ to meet the same performance standards as conventional concrete. Indeed, by many measures it performs better. For instance, laboratory tests have shown that ENVISIA™ can provide up to a 50 per cent reduction in shrinkage over conventional¹ concrete². This can simplify the construction process by allowing the production of larger slabs with fewer joints.

¹ Concrete containing currently used blends of Portland cement and SCM that do not include ZEP™ technology, that have been in common use for the given applications prior to the availability of ZEP™ technology and compliant with AS1379

² Boral Laboratory Testing August 2012-June 2013

ENVISIA™ can also reduce creep strain by up to 40 per cent over conventional¹ concrete with comparable characteristics². At the same time it delivers concrete plastic, placement and finishing properties similar to normal Portland-cement based concretes. Crucially, there are no additional safety handling requirements – an important distinction from some other lower carbon concretes that are beginning to enter the Australian market, such as geopolymers, which make use of highly alkaline activating agents, which are not used in ENVISIA™.

Boral's industry partners have expressed excitement about the product, which Tony Thomas, Chief Engineer of Boral Concrete, believes is "the most significant change to Australian cement technology and resulting innovation in concrete in the last 40 years".

Perhaps most importantly, it assists developers and contractors to meet sustainability goals. "ENVISIA™ is an exciting product innovation helping us achieve our vision for Barangaroo South," says Tom Waters, Lend Lease Construction Manager for Tower 2 of International Towers Sydney at Barangaroo South.

"Lend Lease is committed to delivering a climate positive and lower carbon outcome for the entire Barangaroo precinct, pioneering a new era in sustainability and setting new engineering benchmarks for others to follow."

Approximately 300 cubic metres of ENVISIA™ have been poured for blinding slabs as part of Barangaroo's first phase. Project Manager Ben Gow explains that

Boral worked with Lend Lease at its Ropes Crossing site in western Sydney, where the developer built a two-floor prototype to see how the project was working architecturally. "We took the opportunity to do mix testing – half Portland and half ENVISIA™," Ben says. "We trialed various mix designs and the results were excellent. The feedback from the concreter, Boral's placing company, De Martin & Gasparini, was that it was easier to place and finish."

Redmond Lloyd explains that the development of ENVISIA™ began with a small team working in secret, but over the years the number of people working on it has grown. "It's taken an enormous amount of work from the project team, and significant collaboration across cement, concrete and Boral's placing company, De Martin & Gasparini, to get to this point," he says.

"Along the way we've developed a product that's truly world-class in sustainability and performance. Congratulations to all members of the Boral team involved in delivering it to market. Now it's over to Daniel Kavov, Metropolitan Sales Manager NSW (Concrete), and his team who are leading our sales effort."

A number of names were considered for the new product, but ENVISIA™ was eventually chosen because it combines the concepts of sustainability (ENV) and vision for the future (VISIA). ■

"It's taken an enormous amount of work from the project team"





BORAL WINS BIG AT QUARRY AWARDS

The Institute of Quarrying Australia (IQA) has recognised Boral's dedication to safety, innovation and LEAN principles again and again in its 2013 awards. Boral representatives won five of the ten prizes presented at the IQA's annual conference in Townsville in September, and seven other submissions were shortlisted.

And the winners are:



**HITACHI HARD HAT
AWARD FOR SAFETY
RICHARD TOMKINS,
SEAHAM QUARRY,
NSW**

When Richard took over as Manager of Seaham Quarry, he was concerned about the risks of using mobile cranes to move crusher components around the quarry for maintenance. The work was done at night, when visibility was lower and fatigue more likely.

Using LEAN principles, Richard's team designed a faster change process that replaced the mobile equipment with a fixed monorail crane. The change-out could be done during the day, so the procedure was safer, and the change-out time was cut from 30 hours to 11 hours. Traffic around the site was reduced and the crusher line life extended, providing annual savings of up to \$236,000. "These simple but effective changes have totally eliminated the risk [associated with] mobile cranes operating in the quarry for crusher line changes," Richard says.



**CATERPILLAR
CONTINUOUS
IMPROVEMENT
AWARD
BRAD DOYLE,
GRAFTON QUARRY,
NSW**

Grafton Quarry, a floating plant that extracts sand and gravel from the Clarence River in northern New South Wales, was facing a serious challenge. The quarry's two older-style cranes no longer met mine specifications and were in need of a major overhaul. And because the cranes operated side-by-side, there was always the risk of collision.

The answer, Brad decided, was to redesign normal excavation machinery so it could be used on the Grafton float. The result was a single CAT 336 Excavator with an 18-metre reach boom mounted to the flat-top barge. It's quieter, uses fewer wearing parts and complies with industry standards.

Operator Ron Durrington has noticed additional benefits: "I get home from work not covered in grease and less tired."



**LOADRITE LEAN
PROCESSES AWARD
ALAN SEIDENKAMP,
WEST BURLEIGH
QUARRY,
QUEENSLAND**

For Alan, the key to successfully implementing LEAN principles – preserving value for customers with less work – was getting buy-in from the entire West Burleigh site team. "The Boral Production System philosophy starts at the front gate," he says. "The presentation of the whole site, its workshop and amenities is very important because the continued implementation of the LEAN tools requires input from everyone."

"The team constantly asks themselves, 'Is this the best we can do,'" Alan says. "If it's not, we have the LEAN tools available to apply and achieve the best."



ESCO YOUNG MEMBERS AWARD
CRAIG POTTS,
PEPPERTREE QUARRY, NSW

Craig has come a long way since 2007, when he joined Boral as a casual labourer shovelling spillage at Narangba Quarry in Queensland. He became a full-time employee in early 2008, and eventually was promoted to leading hand.

Craig transferred to Dunmore Quarry in 2009, where he completed his Certificate II and III in Surface Extraction Operations through the Boral Registered Training Organisation. The next year he was promoted to production supervisor, then went on to complete his Certificate IV in Frontline Management and Certificate IV in Surface Extraction Operations. Earlier this year he moved to Peppertree Quarry to become quarry supervisor and completed his Certificate IV in Training Assessing. He also serves as Chair of the IQA Illawarra Sub-Branch.



ALEX NORTHOVER AWARD
TODD KALAJZICH,
DUNMORE QUARRY, NSW

The Alex Northover Award recognises the best Portfolio of Evidence submitted to a Registered Training Organisation in support of an application seeking either Certificate IV or Diploma accreditation. Todd's portfolio, spanning 22 folders, was submitted to the Boral RTO as part of his Diploma in Extractive Industries.

A third generation quarryman, Todd started in the business as a labourer at age 14. He has worked his way through various roles during his 24 years with Boral Quarries and is currently Quarry Manager at Dunmore. ■

“It’s great to see many of the great initiatives across our organisation in executing the Boral Production System and safety improvements are recognised as industry-leading innovations,” says Joe Goss, Divisional Managing Director for Boral Construction Materials & Cement. “Having our people win more awards than any other company is a big accomplishment.”

IQA GRADUATES QUALIFY

The Institute of Quarrying Australia presented 16 Boral employees with Certificate IV and Diploma qualifications at a graduation dinner held at the New South Wales Parliament House in June. Working with the Boral Registered Training Organisation (RTO), a total of 96 employees have received Surface Extraction qualifications, from Certificate II up to Diploma, this year.





ROLLING OUT

THE NEXT GENERATION OF CONCRETE TRUCKS

Three recent Boral Concrete innovations have won widespread acclaim – and are setting new standards in concrete truck safety and efficiency. Here are three initiatives that are making a difference.

1 Truck rollover risk reduced

A big safety issue for the pre-mix concrete industry is the stability of concrete agitator trucks. With the concrete in the barrel constantly rotating, the shifting load results in an increased risk of the vehicle rolling when compared to similar-sized, static-load trucks.

Boral Concrete's solution is the Agitator Stability Control (ASC) System. The ASC system comprises a number of sensors that detect the vehicle's roll, pitch, yaw, suspension pressure and brake application. If it determines that a rollover is imminent, it automatically kicks in and applies individual brakes and reduces engine torque.

The net result is a significant reduction in risk of rollover associated with four key areas:

avoiding collisions, cornering, road conditions, and off-road travel.

The system has won several awards. It was a finalist in WorkCover's 2013 SafeWork awards, where it was recognised as one of the best initiatives to address a workplace hazard. It also won the national industry award in 2012 for best OH&S Innovation.

Developed in consultation with heavy vehicle truck manufacturers Mack and Kenworth, it is now available for purchase as a standard feature from these suppliers across Australia.

Boral Concrete has installed it in 11 vehicles and a further 28 are on order. "Stability control is now standard in the Boral specification for all new concrete trucks," says Adam Tointon, Fleet Manager Boral Concrete NSW/ACT. "The system is now also available for anyone in the industry from Mack and Kenworth at minimal cost."

"The innovation has helped improve the driving style and behaviour of operators because it makes at-risk situations clearer while having no adverse operational impact," Adam explains.

Driver survey feedback also indicates that operators feel safer on the road because the truck 'reacts' when cornering, and they

feel more in control. "It reminds me of the higher centre of gravity on a loaded agitator," says one.

Cement Concrete and Aggregates Australia, of which Boral is a member, estimates that the heavy construction materials industry operates 4,000 concrete agitators across Australia and there are some 40 rollovers per year.

"It's a major step in preventing rollovers and all about achieving zero harm," says Adam.

2 Weighscales ensure drivers don't fall

Concrete agitator drivers in the past have typically had to climb ladders and stand on platforms on the back of their trucks, risking slips, trips and falls from heights.

Boral has addressed the issue by developing an Agitator Weight Management System that eliminates the need for a driver to climb onto the back of an agitator, and the need for ladders and platforms.

This system is the brainchild of Boral Concrete NSW Metro Fleet Manager Richard Smithson, who's been involved in the production of concrete for over 40 years and has used his knowledge to make a variety of health and safety improvements at Boral. Richard had the idea of mounting a weighing system on

“The system eliminates the need for a driver to climb onto the back of an agitator.”

the pedestals directly under the mixer which would give drivers immediate information on how much product remained after a pour.

Drivers gave feedback about how they use ladders and platforms on trucks, after which a prototype was devised and fitted to the truck of Leading Hand driver, Jamie Halpin.

“The system works brilliantly,” says Adam Tointon. “It eliminates one of the industry’s most common safety risks and has multiple other benefits.”

For example, drivers can weigh an agitator accurately when it’s loaded, with delivery figures sent in real time from an onboard computer to servers for use by allocations, sales and compliance teams. Drivers can also show customers weight

readings before and after pours so they know what they’ve received.

Boral will continue to deploy the system across its fleet, and ladders and platforms have been removed from many existing trucks.

It’s earned praise and official recognition, having recently won the Cement Concrete and Aggregates Association award for innovation for 2013.

3 New mixer blade design cuts costs

Boral Concrete and Procurement has worked closely with industry pioneer Max Hood to develop new concrete mixing technology. Indeed Max, who is renowned for design and innovation, was responsible for creating the initial agitator design that the Company uses today.

More recently, Max has again worked closely with Boral to develop a new transit mixer blade design. The more aggressive mixing action that it provides results in shorter mixing times at lower revolutions, and delivers a variety of efficiencies.

A six-cubic-metre version of the mixer was trialed by Boral Concrete in 2011, and Metro Fleet Manager Richard Smithson has subsequently worked with Boral’s agitator supplier to manufacture and fit two trucks

with the new drum design. A 6.5 cubic-metre unit has been in operation since January 2013 on one truck and an eight-cubic-metre unit was fitted to another in February.

Tests have confirmed the blade design allows operators to save time and fuel due to reduced mixing times and lower revolutions during the loading and slumping (concrete testing) process.

“We’ve estimated the revolutions required to mix during the load-to-slump process will be reduced by 40 per cent,” says Adam Tointon.

“There’s a saving in fuel and a 20 per cent reduction in load-to-slump cycle creating the potential for improved productivity. It will create far less wear and tear on major mixer and truck components like the gear box and engine.”

“This innovative project was the result of many months of work by members of the Concrete Council and represents the first innovative breakthrough in agitator design in 40 years. Boral has secured the exclusive licence for the Australian market. Congratulations to all involved!” says Shane Graham, Executive General Manager, Major Projects. ■



CLOCKWISE FROM TOP: a truck fitted with the stability control system; the weigh system front scale; the system’s rear scale





Plasterboard

JOINT VENTURE SETS BORAL UP
FOR LONG-TERM GROWTH



The transformational US\$1.6 billion plasterboard and ceilings joint venture with Chicago-based building materials manufacturer USG Corporation is the platform for the future growth of Boral's plasterboard business.

A year in the making, the joint venture is first and foremost a technology venture and has come at a critical time in Boral's 67-year history. The deal provides a formidable lever to expand its leading plasterboard business in the rapidly growing Asian economies by securing a game changer in technological development, allowing it to race ahead of its traditional competitors and enrich its offer to customers.

And importantly, the deal will allow Chief Executive Mike Kane to de-risk the group's balance sheet and initially reduce net debt by around US\$500 million.

Although we expect the deal to complete around the end of January 2014, the benefits have already become apparent: pre-integration work is bringing Boral and USG teams together in planning, engineering teams are preparing to undertake technological improvements across 24 manufacturing lines in readiness to send out technically advanced products through the group's vast distribution network in the region, and marketing teams are developing strategies to bring a broader product range and advanced products to market. >



The plant upgrades will cost around US\$50 million and be self funded by the JV, being phased in over approximately two years.

The geographical spread of Boral's businesses was a major attraction for USG, which is widely regarded as being at the forefront of technology in the global plasterboard industry.

Boral is the leading plasterboard player in the Asia Pacific, and securing access to USG's technology was seen as critical to a successful JV. Also, the addition of USG assets gives the JV a stronger position in India and the Middle East.

“The JV’s footprint in 12 countries means it can push new products into existing and new territories”

The goal is that the JV will be the clear market leader across the Asian, Australasian and Middle East region.

Without such a venture, Boral would have been forced to develop its own technology at great cost, then go head-to-head with USG, which has been patenting its technology for more than 50 years. Instead, the JV will have access to the technology behind USG's successful SHEETROCK® Brand UltraLight Panels, sold in North America.

The deal had its infancy in talks that started in October 2012 between Mike Kane and the CEO of USG, Jim Metcalf. At the start, both men were focused on how the two companies could structure a technology sharing agreement to tap into the fastest growing plasterboard markets in the world.

It did not take long for them to realise that a JV agreement would offer the greatest economic benefits to both companies.

It was clear to Boral that the smart play was to share ownership of the USG production technology rather than outlaying the capital expenditure required to develop its own technology and then face direct competition from USG.

And while USG was seen as the natural partner, Boral considered a number of options as it sought to secure long-term technology options in the gypsum business.

Boral was aware that the USG business in Asia and the Middle East was in start-up mode, but given that Boral had such a large footprint in the region with its manufacturing and distribution operations, the potential synergies available with USG's advanced technologies and R&D capabilities were significant.

The key planks to the deal were:

- Combining Boral's leading distribution footprint in Asia and Australia with USG's technologies and strategic assets in Asia, Australia, New Zealand and the Middle East
- Cementing Boral's leading market position in those markets while obtaining direct access to the Middle East and regional India
- A US\$500 million cash injection which will allow Boral to reduce debt
- Combining the skills of world-class executives from both companies
- Significant phased synergies, including manufacturing and freight cost savings, following the roll out of new technologies.

A key driver during the JV talks was the strong economic outlook for Asia, which is expected to be the largest gypsum market in the world by 2015.

The JV's footprint in 12 countries in the region means it can use its sales and marketing excellence to push new products into existing and new territories. The JV aims to be providing state-of-the-art gypsum products and other complementary products to high-growth countries.

During the many media interviews Mike Kane undertook when the JV was announced on 17 October, he reiterated that the deal was foremost a technology led arrangement that will provide the Group with an advantage over its competitors in the Asian region.

Mike also emphasised that it would be a value accretive deal over the long term, despite the initial negative impact to earnings in the early years.

The technology inroads Boral will achieve through the JV will dovetail with the innovative products and services Boral already delivers to customers. Boral has an existing philosophy of manufacturing products that offer ease of installation, cost improvement, performance and sustainability.

Boral has excellent existing R&D talent who are helping to manage the group's intellectual property globally through the 'Innovation Factory' in San Antonio, Texas. >



Given Boral's large footprint in the region and USG's advanced technologies and complementary products, the potential synergies available are significant



“The deal had its infancy in talks that started in October 2012 between Mike Kane (right) and the CEO of USG, Jim Metcalf”





The growth potential of the region served by the JV is compelling. Urbanisation and strong economic growth in most Asian markets is expected to increase new residential and commercial construction and that will be accompanied by increasing adoption of plasterboard as the interior lining product of choice – currently the region exhibits very low adoption rates for plasterboard of as low as one square metre per capita in some markets compared to around six in developed markets such as Australia and USA. Attributes of the new plasterboard technology include ease of installation, lighter weight, lower CO₂ content and water efficiency, which are expected to enhance its growth potential.

Growth is also expected to come from increased adoption of the JV's solutions for ceilings.

The JV will introduce a combination of UltraLight and other advanced technology across all Boral's existing markets in a phased approach over approximately two years. The roll-out will occur in different phases to suit the various markets.

Third-generation UltraLight technology will first be rolled-out in Australia and Korea where Boral believes its superior performance attributes will resonate most strongly. In other countries, the JV will deploy the technologies that significantly upgrade product performance while best positioning the product in the market.

A critical component of construction in Asia is transportation. USG's technology will mean that the JV will sell superior performing products that are lighter, stronger and more efficient to manufacture, transport and install.

USG plasterboard is about 30 percent lighter than the traditional product and is more resistant to sagging, important in Asia because of construction techniques and high levels of humidity.

The overall benefits equate to more efficient use of raw materials and less energy needed to manufacture, therefore decreasing production costs. The superior performing products will be positioned as premium products in the marketplace.

The terms of the technology licence are exclusive, and USG is not able to licence its technology to any other company in the territories covered. Meanwhile the technology arrangements are robust in requiring technical support and rights to access new products.

The JV will function largely as a single unified business. The two shareholders will have equal representation on the board and equal voting rights.

It is designed as a long-term partnership and both parties are committed to staying in it for a minimum of seven years. The agreement includes typical termination provisions in specific circumstances, as well as a call option in the event of a change of control of either of the shareholders. There is also a non-compete in place. Should one of the parties exit the JV they would be prevented from competing in the JV's territory for the longer of ten years from the commencement date or three years from the date of the exit.

There will be a combination of Boral and USG executives under the leadership of CEO Frederic de Rougemont, currently Divisional Managing Director of Boral Gypsum.

The Board will consist of equal nominees from Boral and USG with the initial Chairman being Jennifer Scanlon, Senior Vice President of USG Corporation and President, USG International. Finance and Technical committees will provide additional oversight. ■

PUTTING THE TECHNOLOGY THROUGH ITS PACES

Before agreement could be reached for the ground-breaking joint venture with USG, senior Boral executives and product experts spent more than six weeks testing the plasterboard technology developed and used by the Chicago-based, 111-year-old company.

In a highly sensitive and confidential operation, Boral experts in the United States, across Asia and in Australia put the USG technology and processes to the test.

The results were unambiguous, according to Joel Charlton, Executive

General Manager Innovation and Vice-President of the Intellectual Property Portfolio.

“For some time we'd been looking at technology from several other areas but we formed an opinion early on that the USG technology was quite unique, and this was confirmed by our extensive testing,” Joel says. “The technology is a game changer.”

According to Joel, who is based in Atlanta, what makes the USG technology unique is a combination of factors, in particular its lighter weight yet superior sag-resistance properties.

“The product developed using USG technology was between 30 and 40 percent lighter than anything else in the market, including



The uniqueness of the USG technology has been confirmed in extensive laboratory testing

the products produced by Boral, but without any loss in performance,” he says. “The product is just as strong as the much-thicker boards, but customers love it, especially tradies, because it’s easier to carry, store and work with.

“It’s a truly premium product that will provide a range of benefits to customers”

“And we soon confirmed that the product was much more sag-resistant than anything else in the market, despite it being lightweight.

“Overall, it was clearly a superior product, underpinned by superior technology, which meant we were happy to give our tick of approval.”

While the financial experts combed through revenue and profit figures ahead of the joint venture announcement, Joel and his team continued to test the technology in laboratories across the world.

Testing was conducted at Boral facilities in the US, Asia and Australia and at a USG facility in Mexico, where USG used its technology to produce sample products to Boral’s exacting needs.

Russell Hill, Boral’s Texas-based Global Chief Technology Officer, says the team handling the testing was small and focused, working hard to ensure it was completed within a tight timeframe.

“You could say a lot of people put in a lot of overtime!” Russell says.

“The products to be developed under the joint venture were better than anything available in the US, Australia or Asia,” he added. “We have something unique here – a truly premium product that will provide a range of benefits to our customers right across the distribution line, and which we will be able to market at a premium.”



Frederic de Rougemont, Divisional Managing Director of Boral Gypsum, with Jennifer Scanlon, Senior Vice President of USG Corporation and President, USG International, pictured at the recent JV announcement

“The joint venture will function largely as a single unified business, with the shareholders having equal representation on the board”



BORAL USA'S MILESTONES TOWARDS ZERO HARM

Two Boral companies in the US are celebrating the power of zero – zero injuries, that is. Both Boral Material Technologies (BMT) of San Antonio, Texas, and Boral Stone Products' Napa, California, facility, recently celebrated remarkable safety milestones.

For the first time in 14 years, BMT, which sources fly ash and other byproducts from coal-fired power stations for concrete and building products, achieved a full year with no recordable or lost-time injuries in FY2013.

The drive towards maximum safety was overseen by the Behavioural Accident Prevention Process (BAPP) Steering Team. "This is a huge milestone that required relentless hard work and dedication from the entire Division," says Al Borm, President and CEO of Boral USA. "Safety is a core value at Boral, and this achievement represents part of BMT's progress towards fostering an injury-free work environment."

At BMT all employees make observations and provide

feedback on safe and at-risk behaviours. A target number of observations is set, and employees perform coached observations, identify risk, provide feedback and help to remove barriers.

BMT finished FY2013 with 305,182 man hours worked, 589 near misses, 2,889 observations and 78 barriers removed.

At a congratulatory dinner in June, BMT President Terry Peterson presented the BAPP Steering Team with a plaque marking its stellar year. "BMT is focused and will continue to strive for a zero-harm workplace," Terry says.

Boral Stone Products' Napa facility, which manufactures Cultured Stone® Veneer building products, has also chalked up





a tremendous safety record. As with BMT, the Company's safety program is built on employee participation. Goals and expectations are clearly communicated and supported with daily meetings, ongoing performance-based team communications and regular one-on-one supervisory reviews and feedback sessions. "Napa employees have taken personal accountability and responsibility for owning their individual safety as well as the safety success of their teams and workplace," Al Borm says.

The result has been a series of significant milestones: two years without a recordable incident with over 1.3 million man hours worked, and five years without a lost-time incident (LTI)

“Goals and expectations are clearly communicated and supported”



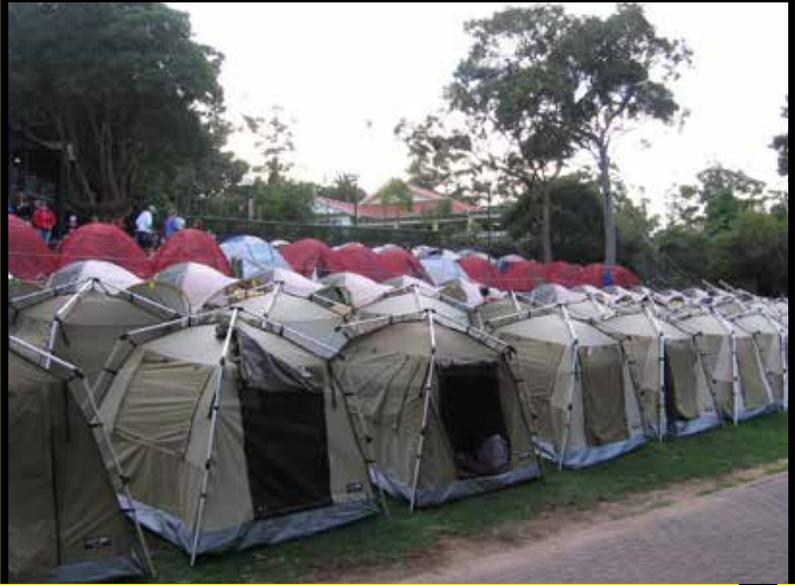
with over 3.6 million man hours worked. As well, Boral Stone Products has received several awards from the National Safety Council: Two Million Work Hour and Three Million Work Hour Awards for working without an LTI in 2011 and 2012, the Safety Leadership Award for working five years without an LTI from April 2008 to April 2013, and the Perfect Record Award for zero injuries during 2012.

"The Napa team continues to strive to find new ways to create a deeper understanding and renewed commitment to safety through empowerment and safety engagement," Al says. "This will always be part of our continuous improvement process . . . to drive a safety culture focused on the pursuit of zero harm."

In addition to these two outstanding achievements, since FY2010 there has been no lost time incident in the USA's Boral Building Products and Boral Roofing Manufacturing businesses. ■



Taronga Zoo



A sleepover at the zoo for Boral families

Celebrating ten years of partnering with Taronga Zoo

This year marks the tenth anniversary of Boral's sponsorship of Sydney's Taronga Zoo, a collaboration that has paid dividends for the Company and for thousands of young wildlife enthusiasts through the Boral Youth at the Zoo program.

It all began in 2003 when Boral signed on as a 'Crown' level sponsor of Taronga Zoo in Sydney and Taronga Western Plains Zoos in Dubbo, New South Wales. As a founding partner of the Zoo's 'Backyard to Bush' educational exhibit, Boral initially sponsored this rural precinct of the zoo. In 2006 Boral decided to extend its commitment to Taronga, becoming the naming rights partner for the now very popular Youth at the Zoo (YATZ) program.

Every year YATZ signs up 400 young volunteers, aged 13 to 19, to take part in educational and conservation programs.

Through the provision of a range of building materials, Boral has contributed extensively to the zoo's 12-year historic Master Plan rebuilding project, which has changed the face of Taronga Zoo through improved education, conservation, research and recreational facilities. Boral provided timber products to the hospitality precinct, plasterboard and paving to 'Backyard to Bush,' substantial quantities of concrete to the Great Southern Oceans exhibit and more.

In addition to the product pull-through and marketing benefits, Boral's partnership with Taronga has provided the Company with a unique opportunity to deliver tangible benefits to the community, to Boral's customers and suppliers, and to employees and their families. Local and visiting Boral employees and

their families have made approximately 15,000 visits over the past ten years. They have enjoyed complimentary passes and memorable Boral family days, zoo sleep-overs, behind-the-scenes tours, Eco Fairs and twilight concerts.

We appreciate the mutual support that the team at Taronga has shown to Boral and look forward to continuing to work together in the future.

The 'YATZ' program – making a difference in young lives

Each school holiday, the Boral Youth at the Zoo (YATZ) members spend time at both zoos, discovering how animals are cared for, joining in conservation activities and helping educate the public about the importance of protecting wildlife through events such as the zoo's annual Eco Fair.



The program is designed to be hands-on. For example, over the past decade, YATZ teens have planted more than 10,000 trees at various locations in New South Wales to expand the habitat of endangered species.

"Some kids are more interested in the husbandry side of things, the technical skills of zookeeping, while others are set on working on conservation campaigns related to issues like climate change," says Paul Maguire, Manager of Experience and Learning for the Taronga

Conservation Society Australia, which runs the zoos. "But they come together at the zoo as a community."

Cate Fredrickson, the YATZ Coordinator in Sydney, notes that the volunteers often take the lessons they learn back to their schools and communities. "We'll organise a beach clean-up, and they might be inspired to do a rubbish campaign of their own," she says.

In all, thousands of youngsters have participated in YATZ over the years. One of the great pleasures for the program's organisers is witnessing how many participants make a lifetime commitment to conservation. Several YATZ 'graduates' now work at Taronga, while others have gone on to study environmental science, become vets or work in ecotourism.

Cate stresses that YATZ membership is not limited to people who live near the zoos. "It's open to anyone who's happy to come to Sydney or Dubbo," she says. For more information, visit the Taronga Conservation Society website (taronga.org.au).

Boral recently extended its sponsorship of YATZ for another three years, until 2016. "The support of our zoos is a model for responsible and active corporate citizenship that is helping deliver a better future," says Taronga Director Cameron Kerr.

Adds Paul Maguire: "We're very fortunate to have Boral as such a great partner." ■



Amy Chen and Lloyd Varga, with friends



THE YATZ LEGACY MEET TWO FORMER YOUTH AT THE ZOO MEMBERS WHO ARE BUILDING CAREERS IN THE ANIMAL WORLD.

Lloyd Varga was one of the first members of Youth at the Zoo (YATZ), signing up in 2001 when he was 15. These days he works as a veterinarian in southwestern New South Wales, but in a sense he's never left Taronga Zoo.

Like most YATZ members, Lloyd was drawn to the program by a love of animals. He decided early on that he wanted to be a vet, but growing up in Sydney, his experience with animals was largely limited to cats and dogs. YATZ changed all that.

"The program really isn't about getting to play with chimpanzees or baby tigers," he says. "It's about learning about wildlife and issues that are important to wildlife and being able to educate people about those issues."

By the time he began studying veterinary science at the University of Sydney, Lloyd was working as a Discovery Officer at the zoo. Later he arranged to do his internship with Taronga's veterinary department.

He credits YATZ with giving him an abiding interest in wildlife. In addition to treating house pets and farm animals in the towns of Cootamundra, Temora and Harden, he's cared for echidnas, snakes and, on one occasion, a sick emu.

Lloyd still comes back to the zoo to act as a guide for Taronga's Roar and Snore sleepover program, and dreams of one day bringing his professional life full circle. "Many years down the track, I'd love to be a vet at a zoo." ■

When Amy Chen first heard about YATZ, she was a shy 13-year-old who wasn't sure about joining. Fortunately, her sister knew better and signed her up. "I've been thankful to her for doing so ever since," Amy says.

These days, Amy is an outgoing Discovery Officer at Taronga Zoo, working in a variety of public programs including outreach education, vacation care, Roar and Snore, keeper talks and VIP tours and events.

For Amy, YATZ was an opportunity to grow. "I wouldn't be the person I am today without the program," she says. "It took me out of my shell and made me more confident."

By the time she had to leave YATZ, when she turned 19 in 2009, she knew she wanted to work with wildlife. "It started as a hobby and something fun but has led to so much more than I thought it would."

Initially she studied a science degree at the University of Sydney, which included a research project on the effects of fire and rainfall on small rodents and plants in the Simpson Desert. More recently, she switched her interest from ecology to education, thanks in part to the satisfaction she got from her Discovery Officer work with school groups and YATZ members.

"I love the education so much I've applied to go back to university to get my formal teaching qualification," Amy says. ■



In the community

MAY



INCLUSIVE KIDS PLAYGROUND IN MELBOURNE

Alice's Playspace in St Albans is one of 42 inclusive playspaces in the Livvi's Place National Network supported by the Touched by Olivia Foundation. Boral donated concrete for the pathways, enabling access to the various areas like the pirate ship and flying fox. It's the third such project Boral has assisted since 2011.

JUNE



JARRAH PEDDIE WINS PHD SCHOLARSHIP

Boral Director Dr Eileen Doyle presented this year's Glenn and Ken Moss Research Scholarship to Jarrah Peddie. The scholarship was established in 2012 in memory of Dr Ken Moss, Boral's former Chairman, and supports a PhD engineering student for two years at the University of Newcastle.

OCT



BACK TO SCHOOL

Three members of the Plasterboard Marketing and Development team came face-to-face with a demanding audience – 120 Year 1 students. When Kororoit Creek Primary School in Burnside Heights, Victoria, asked if someone from Boral could speak to the kids about buildings, Plasterboard's Thanh Huynh, Daniel Lim and Tizi Page accepted the challenge. The lively group was bursting with questions.

OCT



CREATIVE WRITING WORKSHOP

Supported by Boral, twenty students had the opportunity to publish their stories in a series of creative writing workshops run by the Sydney Story Factory which targets marginalised, Indigenous and non-English speaking young people. The class focused on creating crazy inventions – everything from an animal translator, to a hat that makes you look younger and a chalkboard made of pizza.

SEPT



BANGARRA HOSTS 2013 FAMILY DAY

More than 100 Boral employees and family members participated in the Bangarra Family Day. It included a private performance of the Bangarra Dance Theatre's show, Brolga, in their studios at Walsh Bay, Sydney. Boral has partnered with Bangarra, Australia's leading Indigenous performing arts company, since 2002.

SEPT



CONCRETE DONATED FOR HOMELESS TEENS' HOUSE

Stepping Stone House in Sydney's Dulwich Hill, which accommodates homeless teenagers for medium to long-term stays, needed a new external laundry. Community service group Rotaract gave a \$1,000 grant and Boral donated concrete for the floor slab, so the house now has a functioning new laundry.

OCT



CVA IN A CLASS OF THEIR OWN

Conservation Volunteers Australia volunteers have helped 35 schools around the country develop their own 'biodiversity classrooms,' in or near school grounds creating vegetable or bush food gardens, maintaining rainforest habitats or creating frog-friendly environments. Boral volunteers have been working with CVA for the past 24 years.

OCT



GOOD TURNOUT FOR AGM

Over 190 shareholders and visitors attended Boral's 2013 Annual General Meeting in Sydney, taking the opportunity to hear the Board and senior executives speak about the Company's priorities and answer questions from shareholders. Many shareholders joined the webcast, which is now accessible at www.boral.com.au.

OCT



FUNDRAISING FOR REDKITE

Boral Greystanes House in New South Wales ran a 'Design a Kite' competition for Redkite, involving the children of Boral families. Together with other activities this year they raised over \$4,400 in funds for Redkite, which supports families dealing with cancer. Boral has partnered with the charity since 2011. Pictured is 10-year-old Bronte Jackson's winning design.

NOV



MATTHIAS TAKES WING FOR CF RESEARCH

On 7 November, Boral's Chief Procurement Officer Matthias Fuchs set off on an epic 140,000km journey to raise funds for cystic fibrosis research. His challenge was to fly for 170 hours on Qantas visiting every continent except Antarctica, and to beat his previous effort by raising \$130,000, which he did. Well done Matthias!

NOV



FUNDRAISING FOR FIRE VICTIMS

Boral's Greystanes House in New South Wales supported communities affected by devastating bushfires, with 10 per cent of sales from the cafeteria's special Halloween menu being donated to the Conservation Volunteers Australia NSW Bushfire Relief. Funds raised will go towards environmental protection and repair.

NOV



HELP FOR TYPHOON VICTIMS

Boral and USG have donated \$25,000 and \$10,000 respectively to the Philippines Red Cross to provide immediate assistance for victims of Typhoon Haiyan. Boral will donate a further \$25,000 for longer-term rebuilding. Employees and their families who live in the Visayas islands, the region most affected, are all safe. To provide additional support, please visit www.redcross.org.ph.

This image is courtesy of Richard Whitcombe / Shutterstock.com

A sophisticated **stylish** house.

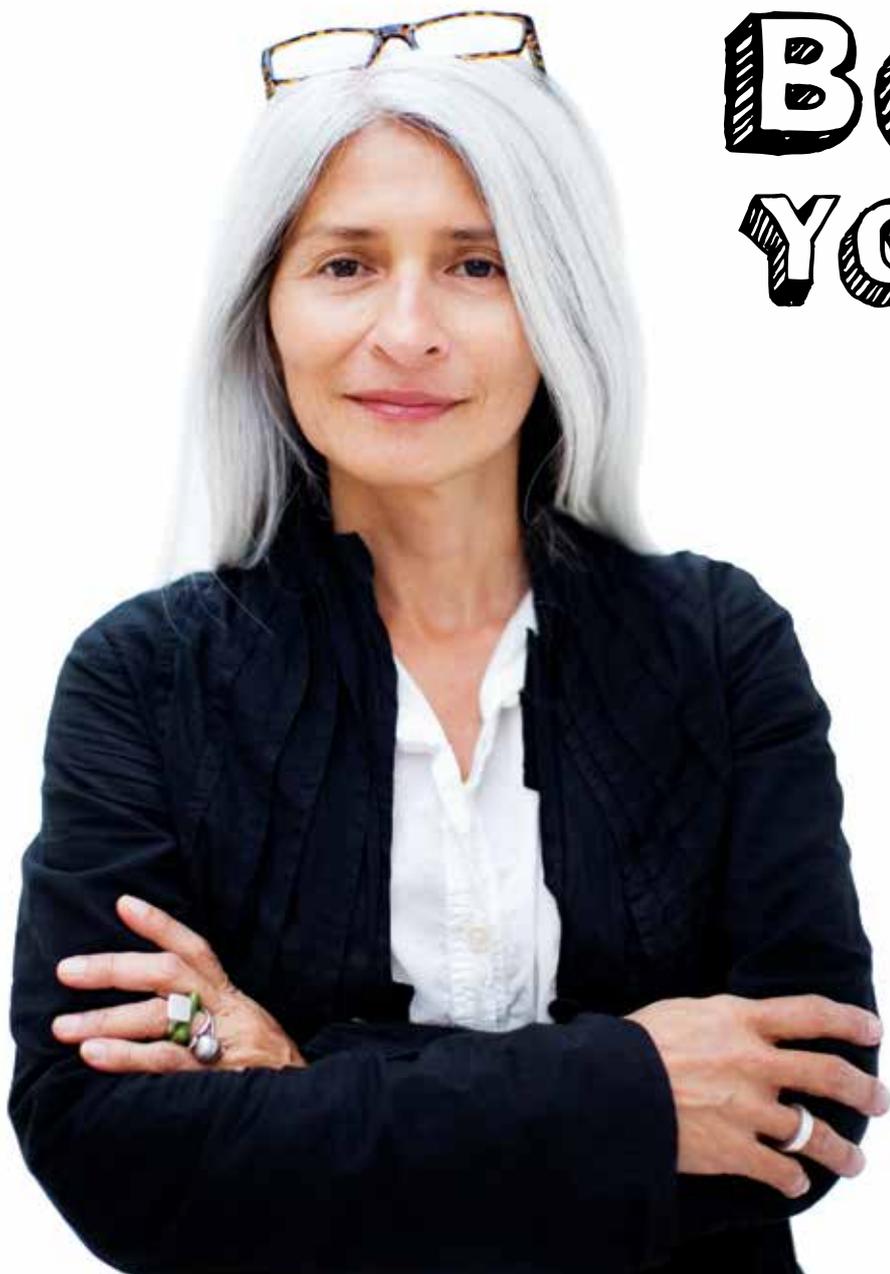
Understated elegance.

Beautiful **stone** entrance.

energy **efficient**
and **easy to maintain.**



WITH BORAL YOU CAN.



Build something great™

