CEMENT CONCRETE
& AGGREGATES AUSTRALIA

EH&S AWARDS 2014

CMIC·14

• BUILDING PRODUCTIVITY •

CCAA and the Institute of Quarrying Australia (IQA) will present Australia's leading Construction Materials Industry Conference at the Brisbane Convention and Exhibition Centre from 3-6 September.

The theme for CMIC14 is "Building Productivity" which is core to business thinking today. An exciting line up of business, government and community leaders will discuss the challenges and opportunities facing businesses both local and global.

Delegates to CMIC14 will enjoy an insightful program, as well as an excellent forum to meet with suppliers, peers, customers and friends through a range of exciting social occasions.

WELCOME

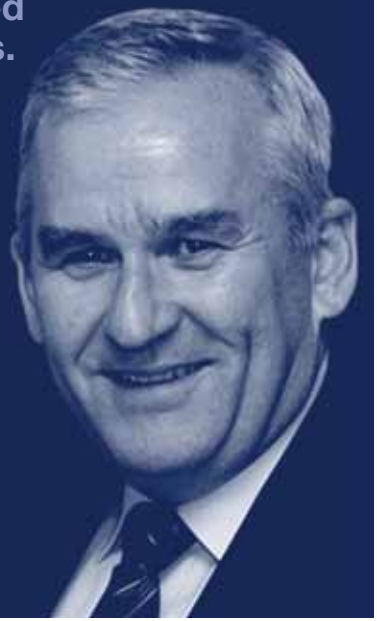
Cement Concrete & Aggregates Australia (CCAA) is proud to host the 2014 Environmental, Health & Safety Awards (EH&S Awards) at the NSW Construction Materials Industry Dinner 2014, brought to you in partnership with the Institute of Quarrying Australia.

The heavy construction materials industry is committed to continual improvement in its Environmental and Health & Safety Management. The EH&S Awards recognise the individuals and companies within the industry that are making outstanding contributions. As we have seen over the years they also encourage even greater achievements in these vital areas.

In New South Wales we have held these awards for over 30 years and I am delighted to announce that we received 44 nominations for this year's awards, which illustrates the industry's commitment to improving our environmental and health & safety performance.

I would like to thank the judges, especially the Trade & Investment and NSW WorkCover representatives, for volunteering their time to assist us in making the very difficult decisions required to pick winners from this year's high calibre nominations.

I would also like to thank all those involved in nominating for the Awards and extend my personal congratulations to the finalists, the recipients of the highly commended awards and to the winners. I wish them well in the national CCAA EH&S Awards that will be presented at the Construction Materials Industry Conference this September.



KEN SLATTERY

CHIEF EXECUTIVE OFFICER
CEMENT CONCRETE & AGGREGATES AUSTRALIA

ENVIRONMENTAL INNOVATION
FINALISTS

This award recognises outstanding achievement in developing and successfully applying a new initiative or an original solution in one or more aspects of environmental management at a concrete, extractive or cement operation.

BORAL CONSTRUCTION MATERIALS & CEMENT

ENVISIA® CONCRETE

Carbon emissions are a major environmental issue for the industry, which is usually solved by increasing fly ash and slag content. However, this can have a negative impact on the performance of the concrete.

Boral Construction Materials and Cement have developed a low carbon technology that replaces cement in concrete without compromising performance. The result is an AS-1379 compliant concrete with lower levels of embedded carbon, superior shrinkage and creep performance that behaves like conventional concrete. Additionally, there is no compromise on early strength and cycle times when compared with an equivalent form of conventional concrete.

Boral's ENVISIA Concrete provides the commercial, industrial and multi-residential markets with a low carbon, low creep and low shrinkage concrete that also reduces the volumes of steel reinforcement and concrete required in construction, which revolutionises building construction and design.

BORAL CONSTRUCTION MATERIALS & CEMENT

TANGARANG CREEK, PEPPERTREE QUARRY

Boral Construction Materials & Cement's new Peppertree Quarry neighbours the Tangarang Creek, which needs continual water flows to remain a healthy and vibrant waterway and habitat. The quarry also needs access to water in the production process and to control dust.

To ensure access to water, Boral constructed a dam and designed it utilising innovative materials, such as glass beads and innovative placement of chimney structures and drainage blanket, all of which combined to ensure continual water flow into Tangarang Creek.

The solution removed the need to install additional monitoring stations in three creeks upstream of the dam. It also removed the need to install pumps and diesel generators at the dam, as environmental flows into the creek are delivered through the dam design.

CEMENT AUSTRALIA & PORT KEMBLA MILLING

PORT KEMBLA CEMENT MILL

Cement milling is a highly energy intensive manufacturing process.

During the planning and development stage of the Port Kembla Cement Mill the joint venture partners, Cement Australia and Port Kembla Milling, implemented a number of technological advances that significantly reduced the amount of energy required in the milling process.

The key innovation is the vertical roller mill that is the first of its kind being operated in Australia. This new mill technology includes variable speed and soft drive milling, which reduces the amount of energy used in the process by 30% when compared to conventional ball mills.

The new mill being operated by Cement Australia and Port Kembla Milling increases the flexibility of cement production and matches the intensity of production to output requirements, which further improves energy efficiency.

HANSON CONSTRUCTION MATERIALS

DUST SUPPRESSION, CLARENCE QUARRY

Controlling dust at a quarry is a significant issue for the heavy construction materials industry. The usual approach utilised by the industry is to deploy a water cart that hoses down dusty areas on the quarry.

Hanson Construction Materials have developed a sprinkler system that controls dust at their Clarence Quarry and removes the need for a water cart. The sprinkler system utilises 1,800 metres of poly pipes and over 200 shrub head sprinklers that are self-cleaning and easy to remove for maintenance. The sprinklers are spaced to ensure maximum coverage and bunded in place to protect them from mobile plant.

Innovatively, the sprinkler system is attached to a rain sensor system that ensures that the sprinklers are only used when required and that no water is wasted at the quarry.

HOLCIM AUSTRALIA

DGB20 ROAD BASE, ALBION PARK QUARRY

Coal fired power stations produce ‘Run-of-Station’ Ash, which is a very fine powder that is notoriously hard to dispose of, especially in the vast quantities that are produced. This material is usually disposed of in landfill and due to it being very fine can lead to air quality issues.

Holcim Australia has fully developed a process for including this waste material into their DGB20 Road Base design. Importantly the mixture used is fully compliant with RMS 3051 specification, which allows the material to be used throughout New South Wales.

This innovative application of a waste material to the road construction process not only reduces the cost of the road base but also reuses the waste in an environmentally friendly and sustainable manner.

HEALTH & SAFETY INNOVATION
FINALISTS

This award recognises excellence in developing and implementing a solution to an identified health and safety issue. Entries for this award may include a product solution, engineering innovation, a training program, an awareness raising activity or other risk control measures that reduce the risk of work-related injury and illness.

CEMENT CONCRETE & AGGREGATES AUSTRALIA

BORAL CONSTRUCTION MATERIALS & CEMENT

DUMP-STOP, MARULAN SOUTH LIMESTONE MINE

A near tragic incident that could have seen a fully loaded Caterpillar 777, with driver, descend uncontrollably down a benched quarry face initiated a complete rethink of how material is dumped at Boral's Marulan South Limestone Mine.

The incident occurred as rain had undermined the integrity of the bunding used to prevent heavy plant from falling down the quarry face when dumping. As such, Boral designed and built a steel dump-stop that utilises the weight of the truck to prevent it from falling down the quarry face. Importantly, the dump-stop can be easily moved and installed using front-end loaders and does not require specialist moving equipment, such as cranes.

This innovative design was developed in full consultation with workers and the regulator and can be utilised at all quarries and mines in New South Wales.

BORAL LOGISTICS

QUARRY TRUCK & DOG DESIGN

Slips, trips and falls, caused by vehicle access and egress, are the number one cause of injuries to drivers in the heavy construction materials industry.

Boral Logistics, in consultation with workers and Mack Trucks, have developed a number of safety innovations for their Truck and Dog fleet that have greatly reduced the risk of injuries caused by accessing and egressing the vehicles.

These innovations include yellow safety grab handles mounted on the inside of the door, on the A-pillar and on the outside of the cabin, the installation of a flexible LED light strips on the underside of the door that dramatically lights up the step area at night and a non-slip work platform mounted on the rear of the front bumper that facilitate safe access for drivers and mechanics when carrying out pre-trip fluid checks.

HANSON CONSTRUCTION MATERIALS

RIPPER BOOT CHANGE-OUT STAND & WINCH HANDLING SYSTEM, CENTRAL COAST SAND QUARRY

Changing the ripper boot beneath a dozer is an extremely high risk activity, as workers must work below a raised nine tonne ripper attachment and manually change a 45 kilogram ripper boot that can be extremely hot after ripping sand for extraction.

Hanson implemented its 'Zero Harm' work place hazard identification process and consulted widely with its workers to develop its innovative ripper boot change-out stand and winch handling system.

The ripper stand has proven to be a vital piece of equipment as it safely supports the raised attachment eliminating the falling ripper boot hazard and the battery operated winch allows a single operator to safely handle heavy and sometimes extremely hot ripper boots with ease.

The change-out stand and winch eliminates manual handling risks and Hanson's innovation can be applied across the wider extractive, construction and mining industries.

HOLCIM AUSTRALIA

SCREEN CHANGE: WORKING SAFELY AT HEIGHT, TEVEN QUARRY

A screen change is an especially hazardous task that is faced by all extractive operations in the industry. The workers at Holcim Australia's Teven Quarry faced an additional hazard as their screen is two storeys high, which means they had to be harnessed to the screen to safeguard against a nine metre fall.

After conducting a number of risk assessments and consulting with workers, engineers and the regulator Holcim decided to completely redesign the screen making it safer for workers. Holcim built a complete handrail structure to enclose the top deck of the screen, attached to an independent frame around the screen, installed step down stairs with a spring loaded gates and a winch on an easily accessible set down platform.

The solution created a safe working at height environment and illustrates a proactive approach to safety culture.

HY-TEC INDUSTRIES

DOWNHILL HAUL TRUCK SAFETY PROCEDURE, AUSTEN QUARRY

At Hy-tec Industries' Austen Quarry there is a 1.2 kilometre downhill access road with various gradients ranging from -12% to -21%. This presents a hazard to loaded haul trucks, as they could easily lose control on the steep incline with catastrophic consequences.

To mitigate the risks associated with the steep decent Hy-tec completed a road gradient, truck speed, RPM and gear selection analysis, in consultation with workers and their supplier Komatsu.

From their analysis Hy-tec implemented a system of highly visible signs along the access road that informs the drivers of the designated gear selection and speed. In addition, drivers participated in an emergency braking course that educated them on the dangers involved in downhill descents.

The signage, safety procedures and training have combined together to improve traffic management at the site and there has been a marked improvement in safety culture.

ENVIRONMENTAL BEST PERFORMANCE
FINALISTS

This award recognises excellence in developing and implementing a solution in one or more aspects of environmental management, considering the size, age and location of the operation.
Entries for this award may include, but are not restricted to, noise management, energy and water conservation initiatives, waste avoidance, resource recovery and site rehabilitation beyond mandatory requirements.

CEMENT CONCRETE & AGGREGATES AUSTRALIA

BORAL CONSTRUCTION MATERIALS & CEMENT

LEAN ENVIRONMENTAL MANAGEMENT, KOORAGANG

Boral Construction Materials and Cement's Kooragang cement plant has applied the LEAN production management system to their environmental management practices. LEAN principles include delivering on demand, minimising inventory, maximising multi-skilled employees, flattening management structures and focusing resources to where they will deliver value.

The Kooragang team uses the above LEAN principles to manage their environmental responsibilities and as a direct result has reduced the amount of waste produced at the site, improved the site's stormwater drainage system and truck wash facility and instigated a new and improved silo alarm system.

The Kooragang team is a great example of an enthusiastic and engaged workforce utilising production management techniques to improve environmental outcomes. This is of great benefit to the individuals involved, the company and the industry as a whole.

BORAL CONSTRUCTION MATERIALS & CEMENT

WATER MANAGEMENT, PEPPERTREE QUARRY

Boral Construction Materials and Cement's Peppertree granidiorite quarry on the Southern Tablelands has no secure ongoing water resource that is readily available for use in production process or for environmental management purposes.

As such, Boral has had to design the quarry that is able to operate using minimal water, manage the site so that it could effectively harvest stormwater and implement a water management system that only applies water where it is absolutely necessary. Additionally, the water system's dams are located in close proximity to a number of significant aboriginal heritage sites that must be taken care of and maintained.

The water management system implemented at Peppertree has successfully reduced the amount of water used in the quarrying process and delivered exceptional environmental and aboriginal heritage outcomes.

HANSON CONSTRUCTION MATERIALS

WATER MANAGEMENT, KULNURA QUARRY

Hanson's Construction Materials' Kulnura Quarry receives significant storm water runoff that must be processed and cleaned prior to being released into the surrounding water catchment area and creeks.

After consulting with workers, civil contractors and the regulator, Hanson designed and constructed a water management system that captures and stores all dirty water on the site and removes all ultra-fine sediments prior to the water leaving the site. The system contains a mixture of diversion drains, bund walls, dams and a water treatment plant.

Construction of the system has improved the site's water quality and facilitated a culture amongst the workers at the quarry where they want to assist in the maintenance of the water management system and have become more aware of their environmental responsibilities.

HOLCIM AUSTRALIA

FRAZERS CREEK REHABILITATION, ALBION PARK QUARRY

The Dunmore, Shellharbour Hills area contains the largest remaining patches of native vegetation in what is described as one of the most biologically diverse regions in NSW. Significant areas of this remnant vegetation lie on Holcim Australia's buffer land surrounding their Albion Park Quarry.

Working with the Southern Region Catchment Authority, contractors and the children from the local primary school, Mt. Terry Primary, Holcim workers have rehabilitated the headwaters of Frazers Creek.

The project has protected and enhanced 50 hectares of land, installed over 3 kilometres of stock proof fences, constructed an in-stream bed control system in the creek, revegetated and weed controlled over 900 metres of riparian corridor and planted thousands of locally sourced trees.

This project is a proactive rehabilitation and biodiversity conservation initiative that far exceeds standard requirement and is an excellent example of how our industry exceeds its environmental responsibilities.

HOLCIM AUSTRALIA

PENDLE HILL CONCRETE BATCH PLANT

Water management and stormwater runoff are major issues at pre-mixed concrete batch plants. The high alkalinity of the water at the site means that contaminated water must not be discharged from the site rather it must be captured and recycled back into the batching process.

Holcim Australia has recently redesigned and upgraded their concrete batch plant at Pendle Hill. The new site has solved water management issues. For example, no slurry is transported from the site, high PH water and suspended solids are fully reused in the concrete batching process, all dirty and contaminated water areas are controlled and no town water is used at the site except for drinking and amenities.

The Pendle Hill concrete batch plant is now considered best practice with learnings from the project are being included in Holcim's *National Environmental Guidelines for Water Management*.

HEALTH & SAFETY BEST PERFORMANCE
FINALISTS

This award recognises demonstrated commitment to continuous improvement of workplace health and safety outcomes through the implementation of an integrated health and safety management system.

BORAL CONSTRUCTION MATERIALS & CEMENT

SAFETY MANAGEMENT PLAN, PEPPERTREE QUARRY

Boral Construction Materials and Cement's Safety Management Plan has been fully integrated into the operations of their Peppertree Quarry. The Safety Management Plan encompasses eight key areas, including:

- OH&S management system
- Risk management system
- Plant and traffic management
- Behavioural safety
- High risk activity management
- Health management
- Hazardous substances and dangerous goods
- Emergency response and preparedness.

The Safety Management Plan exemplifies Boral's commitment to providing best practice for managing safety and health for all its workers, including contractors. The system has inducted over 5,000 workers who have clocked over 690,000 hours in two and a half years. In this time the system has identified over 250 hazards, supported over 115 formal inspections and 400 safety observations and conversations and only 22 medical treatment injuries.

METROMIX

PARTICIPATORY ERGONOMICS PROGRAM, MARRANGAROO QUARRY

The team at Metromix's Marrangaroo Quarry participated in the Participatory Ergonomics program that has been developed by Ms Kylie Newton, Practice Leader Health and Human Factors at NSW Department of Trade and Investment, Mine Safety and proudly supported by Cement Concrete and Aggregates Australia and the Institute of Quarrying Australia.

In this program, the team assessed the gut-busting jobs at the quarry. Utilising the PERVD (Posture, Exertion, Repetition, Vibration and Duration) methodology they identified the aspects of activities that cause injuries and then brainstormed different solutions.

In this example of the program the team redesigned the tail drum guard on their C9 conveyor, which eliminated all hazardous manual handling tasks associated with cleaning the conveyor. This project represents best practice in terms of consulting with workers and the regulator to fully assess and eliminate risk from work activities.

CEMENT CONCRETE & AGGREGATES AUSTRALIA

HOLCIM AUSTRALIA

SHE SYSTEM, MITCHELL CONCRETE

Holcim Australia's Mitchell Concrete is a leader in safety management both within Holcim as well as within the concrete industry.

The site has a successfully functioning SHE system, which is demonstrated by its up-to-date safety schedules and planners, regular consultation and consistent reporting and monitoring. Audits are regularly conducted and the site continues to perform well in all aspects of WH&S Management.

The site's well-developed safety culture explains their outstanding safety results recorded over the past year with a total recordable injury rate of zero. This is a reduction of four injuries compared with the previous 12 months and brings the plant in line with the 'Zero Harm' culture that Holcim is striving to achieve through best practice in health and safety management.

HOLCIM AUSTRALIA

SHE SYSTEM, TAREE SOUTH CONCRETE

Holcim Australia's Taree South Concrete is an example of safety management best practice. The site shows engagement in day to day safety that is demonstrated by its excellent results in the prevention of injuries.

The Holcim Safety Management System comprises of five key standards that ensure positive results, these are:

- Policy, planning and process
- People
- Health and safety risk management
- Environment risk management
- Measure, review and improve.

The leadership team provides consistent prioritisation of safety through their completion of the SHE scheduled activities on a monthly basis, regular auditing and close-out of identified actions. Consultation with workers is regularly conducted and they are trained in risk prevention programs, such as Safe Site Delivery. The Holcim ethos of 'Zero Harm' is embedded into work and drives the safety culture at the site.

HY-TEC INDUSTRIES

AGITATOR ROLLOVER PREVENTION PROGRAM

Concrete agitator truck rollover is a major safety issue for the industry. Hy-tec Industries, after experiencing three rollovers in three months decided to get on the front foot to prevent these accidents.

Hy-tec implemented a new safety management system and training package that was designed in consultation with VicRoads and aimed at preventing concrete agitator rollovers. The system included:

- A high impact poster illustrating the dangers of rollovers.
- A presentation targeting agitator rollovers.
- A new induction process.
- Agitator Competency Assessment program
- VicRoads developed a rollover video that specifically focuses on concrete agitators.

The combination of the rollover prevention presentation, the video and the poster, as well as the driver assessments has created positive awareness regarding the prevention of agitator rollovers and safer driving in general.

ENVIRONMENTAL INNOVATION NOMINATIONS

BORAL CONSTRUCTION MATERIALS & CEMENT

FLUID CRACKING CATALYST, BERRIMA CEMENT WORKS

Boral's Berrima Cement works has developed a process for disposing of Fluid Cracking Catalyst, which is a waste product leftover from processing gasoline, diesel and jet fuel. By adding FCC into the cement manufacturing process Boral has removed 4,000 tonnes per annum from ending up in land fill.

HANSON CONSTRUCTION MATERIALS

QUARRY LIFE AWARDS, TWEED SANDS

Heidelberg Cement runs an international award, the Quarry Life Award, aiming to raise the knowledge of the biological value of quarry sites and contribute to enhancing it. The Quarry Life Awards demonstrate that quarrying can be compatible with nature protection and this year the award winners were able to access Hanson's Tweed sands operation and assess its biodiversity.

HEALTH & SAFETY INNOVATION NOMINATIONS

BORAL CONSTRUCTION MATERIALS & CEMENT

MATERIALS HANDLING SYSTEM, BAULKHAM HILLS LAB

The team at Boral's Baulkham Hills Lab redesigned their lab to eliminate all manual handling hazards. The redesign included removing all the walls in the lab and installing a ceiling 2T gantry crane, specialised storage racks,developing an innovative spring loaded lifting device, purpose built stainless steel curing tanks and access walkways with guard rails.

BORAL CONSTRUCTION MATERIALS & CEMENT

TELEMETRY SIGNALLING, BERRIMA CEMENT WORKS

Boral's Berrima Cement Works relies on rail to receive raw materials and to deliver final product. The team has developed and implemented an innovative wireless signalling system that is located in the cabin of the train and controlled by the shunters.

BORAL CONSTRUCTION MATERIALS & CEMENT

REMOTE CONTROL DIGGER TR-825, DUNMORE QUARRY

Traditionally the team at Boral's Dunmore Quarry used a mini dingo tipper to clean up any spillages. The machine was involved in a nasty accident and it was decided that the job could be achieved in a much more simple and safe manner through the utilisation of a Remote control digger, the TR-825.

BORAL CONSTRUCTION MATERIALS & CEMENT

ERGONOMIC BREAKER PLATE LINER REPLACEMENT, TALBRAGAR QUARRY

Every two weeks the team at Talbragar Quarry is required to change out the breaker plate liners on the Metso Nordberg NP1110 impact crusher, as each plate weighs in at 200 kilograms this was a gut-busting job. The team participated in Mine Safety's Participatory Ergonomics program and developed an attachment plate and crane methodology for lifting the breaker plates.

HANSON CONSTRUCTION MATERIALS

TRUCK INSPECTION PLATFORM, BRANDY HILL QUARRY

Drivers of truck and dog tippers leaving the Hanson's Brandy Hill Quarry had no safe means for inspecting their truck loads and as such could not be sure that all of the materials were safely loaded. In response to this problem the team at Brandy Hill Quarry designed and constructed a safe platform for drivers to inspect their loads.

HANSON CONSTRUCTION MATERIALS

ELECTRONIC BREAKER, HANSON KULNURA

When a drive motor trips an electrician must enter the main switch room to reset the breaker, which introduces the electrician to the deadly risk of an arc flash. At Kulnura Quarry the team introduced an engineering control involving an electronic breaker operated from the control room.

HANSON CONSTRUCTION MATERIALS

CALIBRATING STABILISED COURSE MIXING PLANT, BASS POINT QUARRY

Calibrating Hanson's stabilised course mixing plant, at their Bass Point Quarry, required the workers be put at risk through excessive manual handling tasks, awkward postures and contact to hazardous materials. To prevent these risks the team developed and constructed a container that utilised the sites forklift capture and move the binder material.

HANSON CONSTRUCTION MATERIALS

NEW ACCESS ROAD, HANSON KULNURA

Hanson's Kulnura Quarry was experiencing heavy traffic flows caused by transport workers driving through the quarry to access the transport area. This presented a number of risks associated with light and heavy vehicle interactions. As such, the team constructed a new access road that bypassed the quarry and workshop areas, reducing vehicle movements by 1,050 trips a week.

HOLCIM AUSTRALIA

LABORATORY CONCRETE GRINDER, ALBION PARK QUARRY

Generally concrete compressive strength cylinders have been capped using molten sulphur flyash mixtures, which has a number of risks, such as fire, burns from being splashed with the molten mixture and allergic reactions to the sulphur. The team at Holcim's Albion Park Quarry Laboratory installed a grinder, which removes the need for sulphur capping for most concrete samples.

HOLCIM AUSTRALIA

WELDING FLASH, JANDRA QUARRY

At Holcim's Jandra Quarry the risk of welding flash was identified to be a hazard in their workshop. To prevent this type of injury the team developed and installed a warning system, including flashing lights and sign that informed workers when welding was occurring, notifying them of the hazards and to take the relevant precautions.

HOLCIM AUSTRALIA

RECYCLED CONCRETE BLOCK RETAINING WALL, BUNGENDORE SAND QUARRY

The team at Holcim's Bungendore Sand Quarry identified that the used tyre retaining wall containing their raw feed stockpile was not structurally designed or certified. Using outside-the-box thinking the team replaced the wall with ICB containers filled with waste concrete to form a robust retaining wall that safely contains the stockpile.

HOLCIM AUSTRALIA

SCREEN INSPECTION PLATFORM, COOMA ROAD QUARRY

The screen at Holcim's Cooma Road Quarry had no safe platform for inspecting the screen for wear and tear. As such, the team designed and installed a ladder and inspection platform that allows workers to climb up and inspect the screen safely.

HOLCIM AUSTRALIA

REMOTE CONTROLLED ACCESS GATE AND FEL OPERATOR WARNING, TWEED HEADS CONCRETE PLANT

Unauthorised pedestrians and vehicles were accessing Holcim's Tweed Heads Concrete Plants front end loader materials yard from an exit driveway, causing a number hazards and unsafe work environment. The team at Tweed Heads developed a remote controlled access gate and loader operator warning system that prevented unauthorised access and greatly improved site safety.

ENVIRONMENTAL BEST PERFORMANCE NOMINATIONS

BORAL CONSTRUCTION MATERIALS AND CEMENT

SCAR TREE RELOCATION, DUNMORE QUARRY

An Aboriginal heritage investigation identified a scar tree that is of significance to the local people. Boral has worked closely with the local Aboriginal groups to move the tree to a safe location where it is to become the centre piece for a cultural and education program.

BORAL CONSTRUCTION MATERIALS AND CEMENT

WATER SUSTAINABILITY, SEAHAM QUARRY

Boral's Seaham Quarry has improved their water management system to become completely self-sufficient and reduced consumption by 145 mega litres in the past year. This was achieved through redesigning and extending the site's dams and through the installation of pump stations and storage tanks.

HOLCIM AUSTRALIA

REAL-TIME WEATHER STATION, LYNWOOD QUARRY

Holcim is currently constructing the Lynwood Quarry west of Marulan. The quarry will produce up to five million tonnes per annum over the initial 30 year quarrying period. As part of the project, Holcim has installed a state-of-the-art weather station that provides real-time access to weather data for all workers.

HEALTH & SAFETY BEST PERFORMANCE NOMINATIONS

BORAL CONSTRUCTION MATERIALS AND CEMENT

CONFINED SPACE AND ACCESS MANAGEMENT, PEPPERTREE QUARRY

Boral's Peppertree Quarry has been designed to reduce the risk to workers caused by accessing confined spaces. In this regard, the LT160 Mobile Crusher has custom designed access stairs and platforms, electrical switch rooms have been elevated, all tunnels have double walkways and screens have modular media to assist with manual handling.

BORAL CONSTRUCTION MATERIALS AND CEMENT

ELECTRICAL CONTROL SAFETY SYSTEM, PEPPERTREE QUARRY

The team at Boral's Peppertree Quarry have implemented a complete electrical control safety system. The system includes an electrical manual, LV and HV permits, risk assessments, an electrical hazard management plan, electrical induction, maintenance schedule and isolation matrix.

BORAL CONSTRUCTION MATERIALS AND CEMENT

IN PIT TROMMEL, PEATS RIDGE QUARRY

Boral's Peats Ridge Quarry clean clay off their hard rock by first sifting it through an in pit trommel. This not only improved the production and quality of the product but eliminated a major vibration safety risk to the excavator who no longer has to use the bucket to sieve the clay from the rock.

BORAL CONSTRUCTION MATERIALS AND CEMENT

MAJOR KILN OVERHAUL, BERRIMA CEMENT WORKS

At the Berrima Cement Works Boral implemented a complete health and safety management system for a major overhaul of their number 6 kiln. In this process there were over 130,000 hours worked and only 3 minor injuries reported and zero lost time and medically treated injuries.

CEMENT AUSTRALIA

TEAM SAFETY MANAGEMENT PLAN, PORT KEMBLA GRINDING FACILITY

Cement Australia assembled a team of construction specialists, the Cement Australia Oversee Team to act as the Principal Representatives to oversee the construction of the new Port Kembla Grinding Facility.The team selected the appropriate equipment suppliers, contractors and safety systems and ensured that all health and safety standards were exceeded.

HOLCIM AUSTRALIA

STANDARDISATION OF PROJECT SAFETY PLAN, NORTH WEST RAIL PROJECT

Holcim's North West Rail Project Safety Team has developed a simple yet effective project safety plan that successfully manages health and safety at construction sites. Additionally, the plan has been standardised so that it can be utilised across all of Holcim's construction projects.

CEMENT CONCRETE & AGGREGATES AUSTRALIA

Level 10,
Altitude Corporate Centre
163-175 O'Riordan Street
Mascot NSW Australia 2020

T: (61 2) 9667 8300
F: (61 2) 9693 5234

WWW.CCAA.COM.AU