

STEEL EDGE

A newsletter of product innovation, corporate information and news for customers of BlueScope Steel Limited

MARCH 2006

SPECIAL EDITION



BRAND PARTNER PROGRAM

Successful brand program one year old

ONE thousand participants have joined the Steel By BlueScope Steel brand partnership program since it was launched a year ago and the program has continued to grow at a steady rate of 15-20 new participants each week since the Christmas-New Year break.

"It's encouraging to see so many steel-using organisations, from small one and two-person operations through to some of Australia's largest rollformers, co-branding their businesses and products with the BlueScope Steel brand," BlueScope Steel's Corporate Brand Manager, Leo Kerema, says.

"The brand partnership program is now thriving in all States and territories, and growth is across the board.

"As the program grows, visibility of the Steel By BlueScope Steel brand rises through increased brand partnership signage and promotion and every new usage of the logo means more value in the Steel By brand for every participating business throughout Australia.

"This rising visibility of the Steel By BlueScope Steel logo results in participants being able to better leverage the strength of the brand in their day-to-day business and this translates across the whole brand partnership community."

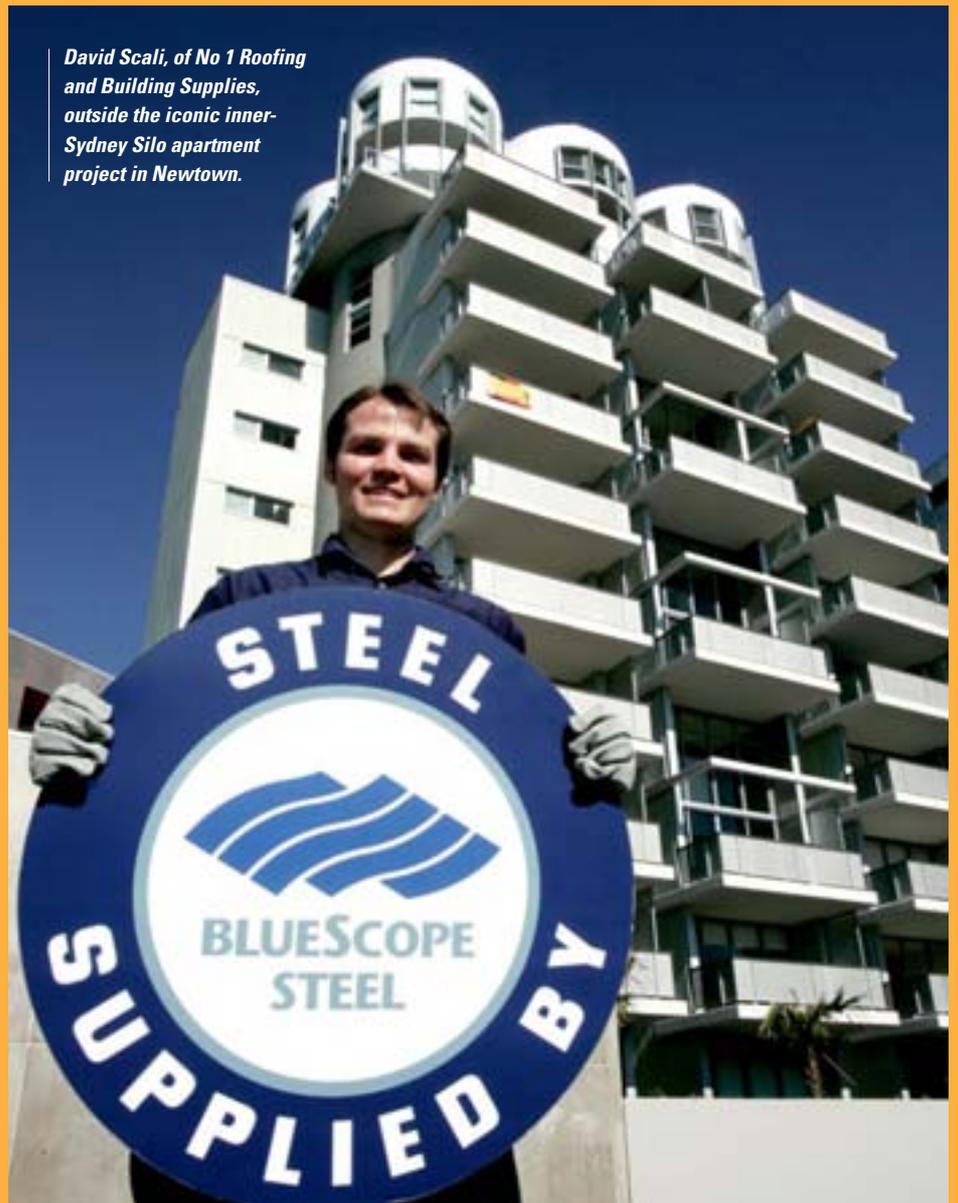
Support from industry heavyweight organisations such as the Australian Steel Institute's Steel Shed Group is also encouraging, with verifications now flowing through from this group's 458 group members.

"While membership growth remains strong, the next 12 months will see us delivering more value to program members," Leo says.

"We are now starting to look at further ways we can add value to the program for our members."

The brand partnership program is open to all companies sourcing 80 per cent or more of their annual volume of flat, sheet or coil steel directly or indirectly from BlueScope Steel.

David Scali, of No 1 Roofing and Building Supplies, outside the iconic inner-Sydney Silo apartment project in Newtown.



Kel Steel Constructions is a real two de force

A small Perth manufacturing company has carved a niche for itself by turning its two-man size into an advantage.

Kel Steel Constructions in Armadale manufactures steel components for builders of sheds and warehouses, using ZINCALUME® steel from BlueScope Steel.

Repeat business represents a growing part of its output.

The company specialises in supplying one-off and non-standard components where its small size and flexibility give it an edge over its competition because it can better meet customers' requests and tailor solutions to their exact needs.

It also supplies the needs of tradesmen and home handymen.

Henry Ronchi's father Eugenio Ronchi founded Kel Steel Constructions and managed it until eight years ago when Henry took over the management.

With only a two-man workforce the company has to make every part a winner.

It has invested in the latest press and guillotine equipment, and has joined the Steel By BlueScope Steel brand partnership, highlighting its use of COLORBOND®, ZINCALUME® and XLERPLATE® steel.

"We've always used steel from BlueScope Steel," Henry says. "BlueScope Steel's record of quick supply allows us to deliver quicker results to our customers."

Henry says the ability of a small company such



Henry Ronchi is one of only two people operating Kel Steel Constructions in Armadale, WA.

as his to align itself with a major Australian brand such as BlueScope Steel was very important for building customer confidence.

"We have only had the Steel Manufactured By BlueScope Steel signage on our premises for a few weeks, but customers have already commented on it," he says.

"Thanks to the new signage, they immediately know that we use only steel from Australia's leading manufacturer, BlueScope Steel.

"BlueScope Steel also provides technical support through its distributor OneSteel, which is invaluable to a business our size."

Innovative buildings turn heads in Bendigo

Bendigo building company Innovative Steel Buildings has lived up to its name by producing an attention-grabbing all-steel house complete with carport, garage and pergola.

The three-bedroom home outside Bendigo is a showcase for products designed and constructed by the company.

Home owner Anthony Van Emmerik said the house grew from his original idea and was designed and improved upon by working with Innovative Steel Buildings.

"They had some excellent design pointers, created the plans and offered helpful and professional service for the whole project," Anthony says.

Innovative Steel Buildings custom-designs, manufactures and constructs a large range of buildings including sheds, garages, car ports, and outdoor living areas. Houses and studios are built to lockup stage.



Home owner Anthony Van Emmerik with Robyn and Geoff Stephens of Innovative Steel Buildings.

The company joined the Steel By BlueScope Steel brand partnership program and displays signage to highlight its use of steel from Australia's leading steel company.

Joint owner Robyn Stephens says the family-owned company used only steel products from BlueScope Steel and has always done so.

The house employs steel framing and features COLORBOND® steel roofing and wall cladding.

The pergola and verandah structure is made from ZINCALUME® steel rollformed in LYSAGHT FIRMLOK® profile for a combination of strength and good looks.

The company custom designs all of its products, from small, basic structures to large-scale buildings.

"We offer our customers a one-stop shop that takes the worry out of difficult processes such as planning and building permits," Robyn says.

"We want to offer our customers the best quality components and therefore we use BlueScope Steel's products."

BlueScope Steel helps rebuild Aceh and Nias

Barely two days after the Boxing Day 2004 earthquake and tsunami devastated coastal areas across Asia – including Indonesia's Aceh and Nias areas – BlueScope Steel donated \$A200,000 to assist the Red Cross and Red Crescent Societies in their relief efforts.

The company also put in place a program to match dollar-for-dollar every employee donation to the tsunami relief effort, and by January 31, 2005, the total amount raised by employees and company was \$A1.265 million.

BlueScope Steel's contributions did not just stop there; they continued throughout last year. In August, the company helped sponsor the 55-strong BlueScope Steel Youth Orchestra to perform at a benefit concert held at the Yogyakarta royal palace grounds in Central Java, Indonesia to commemorate the 17th anniversary of the coronation of the Sultan of Yogyakarta, Sri Sultan Hamengkubuwono X.

The event raised 160 million rupiah (\$US16,000) for 800 students from Aceh studying in Yogyakarta.

PT BlueScope Steel Indonesia and PT BlueScope Lysaght Indonesia, rallied their design and production teams to investigate the best way of providing steel building materials to those affected by the disaster – for immediate shelter, and for longer-term rebuilding of the devastated communities.

BlueScope Steel donated steel building materials and steel water tanks to Aceh and Nias, and in partnership with PT Krakatau Steel, donated a multi-function building in Bakhoy, Banda Aceh.

As part of the Aceh and Nias reconstruction and development program, PT BlueScope



Indonesia's President, Dr Susilo Bambang Yudhoyono, visiting a Buddha Tzu Chi Foundation Village of Love project. The President took the opportunity to inspect BlueScope Steel's building solutions.



BlueScope Steel's team from its Indonesian businesses helped with the relief effort after the Asian tsunamis hit Aceh.

Lysaght Indonesia has developed in conjunction with the local communities many building designs – from small domestic dwellings to large complex buildings such as schools, medical centres, mosques and multi-storey buildings.

By working with the local people in the design and development of dwellings and other structures for the rebuilding of their community, BlueScope Lysaght Indonesia was able to ensure that the solutions supplied were culturally and contextually sensitive and therefore sustainable for the longer term.

PT BlueScope Lysaght Indonesia has been involved in designing and supplying more than 5000 steel houses and buildings in Aceh and Nias, and supplying significant quantity of steel building solutions through a number of local organisations, including the Buddha Tzu Chi Foundation, which is donating 3700 houses in Aceh.

The company involved local communities in these projects by training those who erected the buildings. So far, more than 100 local people have been trained to construct steel buildings. This move by BlueScope Lysaght Indonesia will ensure that local people are empowered with the skills to repair and maintain their homes in the longer term.

The Buddha Tzu Chi Foundation project, called Village of Love, has built about 500 of the 3700 houses in three villages using the LYSAGHT® Residential Solutions System.

Every Village of Love also features clinics, schools (from elementary to high school), a mosque, a church, a multi-function building and stores.

Products used in these projects include LYSAGHT SMARTRUSS®, LYSAGHT SMARTFRAME®, LYSAGHT® AUSDEK and LYSAGHT SMARTBUILD™, all made from ZINCALUME® steel.

Indonesia's President, Mr Bambang Susilo Yudhoyono visited the project on December 27 last year as part of his visit to commemorate the first anniversary of the humanitarian disaster.

NQEA wins major awards

*North Queensland shipbuilding and engineering company NQEA was a double winner of the recent 2005 Queensland Engineering Excellence Awards, securing the Products and Manufacturing Facilities Excellence Award and the new Karel*CAD Innovation Award for its work in building the Oceanic Princess.*

The ship – the largest passenger ship built in Australia since the Empress of Australia in the 1960s – is now in service, carrying tourists on regular adventure voyages between Darwin and Broome in Northern Australian waters.

Oceanic Princess - which features heavily in one of BlueScope Steel's 'Get Rhythm' television commercials airing nationally until April 15 – is fully SOLAS-compliant, meaning that Coral Princess Cruises can operate the ship anywhere in the world.



The Oceanic Princess under construction.

NQEA, one of the founding members of the Steel By BlueScope Steel Brand Partnership Program, won the \$25 million Oceanic Princess contract in the face of fierce competition. "We were up against international and domestic competition, but we have a good relationship with Coral Princess Cruises," Mark Fry of NQEA says. "This is the second boat we have built for Coral Princess Cruises, and all their vessels are maintained at slipway facilities in Cairns.

NQEA delivered the Oceanic Princess in March. The ship accommodates 76 passengers and 20 crew members in a layout that includes 39 cabins over four decks.

While NQEA was founded as a general engineering business in 1948, the company extended operations to include shipbuilding and ship repairs in 1966. It has gone on to build about 220 vessels of various types, including 50 for the Australian Department of Defence.

The Oceanic Princess was one of eight vessels built at NQEA's facilities in Cairns in the past 24 months.

"It was a medium-to-large job for us, and more than 100 skilled tradespeople were engaged for most of the construction period," Mark says.

At 65m in length and 13m wide, the ship has a full displacement of 1300 tonnes, and can cruise at 14 knots.

BlueScope Steel supplied 500 tonnes of XLERPLATE® steel of varying grades and thicknesses for the project.



The impressive steel Boat Hull Grandstand.

Beijing boating benefits from steel

When it comes to stylish Olympic success, steel is fast becoming a winning choice.

A fine example of this will be seen at the Beijing Aquatic Park when the 2008 Olympics get underway, courtesy of leading Australian architect Lawrence Nield, of Bligh Voller Nield.

As the venue for the Olympic rowing and canoeing competitions, the Beijing Aquatic Park will contain a number of stylish steel designs, including the impressive Boat Hull Grandstand, a building of dynamic and sleek linear form, reflecting an upside-down segment of boat hull.

"The imagery was developed to echo the forms and materiality associated with sport, and in particular the craft of boat making," Lawrence says.

"We created the grandstand much like a boat hull with the skin peeled away at various locations to reveal the primary structure and expose the dynamism of the form."

The primary structure comprises curved cantilevered steel beams, a delicate skin of steel and glass and louvred panels.

There is a lineal 'pond' of water that runs the length of the grandstand to give the illusion of the hull sitting in the water.

To add to the dynamism at the grandstand's entry, there is even a huge video screen integrated into the glazed entry wall.

The building is organised on two levels, with the lower level forming the main public concourse with various spectator amenities and the upper level containing the VIP facilities, including a spectacular café/restaurant overlooking the watercourse.

"This is a fantastic example of how Australian architects are taking their creativity to all parts of the world," Manu Siitonen, specifier market manager at BlueScope Steel, says.

"Steel is an ideal material for modern and iconic structures whatever their location or theme, so it's natural that it is used so frequently and so well."

Steel not only allows flexibility and endless style possibilities, it brings many functional benefits too, making it easy to work with and, importantly, very durable.

"When you go to this much effort to make an architectural statement, you need to ensure it's still going to be making the statement in the years to come," Manu says.

"Bligh Voller Nield is one of many architectural firms taking Australian creativity around the world, and in the process effectively demonstrating how materials like steel can help create exciting and dramatic structures for the long-term.

"We are looking forward to Beijing 2008 and just hope our competitors in the water can do just as well!"

Historical Aircraft Restoration Society taps into rainwater

The Historical Aircraft Restoration Society (HARS), based at the Illawarra Regional Airport at Albion Park south of Wollongong, will soon be tapping into rainwater, courtesy of a 40,000 litre retention/detention system provided by BlueScope Water.

The system, which captures runoff from the large HARS hangar, will be used to wash down the society's collection of priceless vintage aircraft, flush toilets at the facility, clean hard-stand areas around the hangar and water nearby gardens.

Water will also be used to wash other hard surfaces, such as walls and windows throughout the facility.

A pilot project for BlueScope Water, the system is being closely evaluated by Shellharbour City Council which is keen to determine how similar systems could harvest rainwater runoff from large roofing areas throughout the City.

Installation of the retention/detention system and recent stormwater drainage works – using BlueScope Water's polymer-coated HYDRORIB® piping – was conducted as a community project.

Consisting of three lightweight polyethylene underground tanks buried on the northern side of the hangar, the system can fill in less than 40 minutes in steady rain.

The tanks are joined by 1500mm-diameter polymer-coated steel pipes and Davey pumps, soon to be fitted, which will enable HARS to wash down all its aircraft – including a rare Lockheed Super Constellation (aka 'Connie'), an even rarer Consolidated PB Catalina Flying Boat, two Lockheed P2V Neptunes, two Douglas C-47 Dakotas, two de Havilland Vampire jets, two Bell Huey Cobra gunship helicopters, two Cessnas, two Winjeel trainers, a Tiger Moth and a de Havilland Drover.

HARS is a totally voluntary incorporated society whose mission is to recover, restore, maintain and fly aircraft of historical significance to Australia.

The HARS project brought together a number of parties – including BlueScope Water, Shellharbour City Council, Illawarra-based construction and earth-moving company Cleary Bros, Raymond Plumbing, Reece Plumbing, Bob's Pumps & Pipes and HARS volunteers

Shellharbour City Council's Director of Operations & Services and Airport Manager, Arthur Webster, said the system was flexible and easy to install, compared with alternative systems.

"The system was quick to install, due to the light weight and ease in assembling the component parts," Webster said.

"Harvesting stormwater runoff has many benefits, including stormwater retention particularly where large-capacity systems are used.



HARS' rare Lockheed Super Constellation 'Connie' standing outside its hangar. (below) The HARS retention-detention system being installed.



"Like so many other fast-growing areas throughout Australia, we have a large number of buildings with huge roofing areas – including schools, commercial premises and residential developments.

"If large-scale runoff can be captured and used, this will not only benefit Shellharbour's waterway environments, it will also lessen demand for precious reservoir water."

Webster believes the system could easily be adapted to residential applications simply by downsizing the components to suit the constraints of smaller sites.

According to BlueScope Water's Manager for Technology and Product Development, Neil Wallace, the cubed storage pods are

far more flexible than traditional concrete storage cisterns.

"We can assemble our retention/detention systems like Lego blocks – in line, angled or grouped together – depending on site conditions," he said.

"A competitor to concrete storage systems, the BlueScope Water retention/detention system calls for far less earthmoving. It also doesn't require complex formwork, is easier and lighter to handle in the field, and takes a fraction of the time to install."

Wallace says a similar concrete system would take more than perhaps two weeks to install.

The pipes connecting each pod are of a composite material made of galvanised steel and a polyethylene coat for extra long life.

"While also being lightweight, these pipes deliver superior performance compared with alternatives," Wallace said.

"Installing this retention/detention was a real team effort," said John Cleary, Chairman of BlueScope Steel Australian Historical Flying Museum.

"HARS is delighted to be playing such a ground-breaking role in demonstrating the benefits of rainwater harvesting on such a large scale," Cleary added.

"It's important to demonstrate that what's good for water conservation is also good for the overall environment. Without this system, our main hangar roof would shed more than 40,000 litres of water every good rainfall – and this would be lost in Shellharbour's stormwater network."

Ingal EPS pole-vaults competitors

Thirty-four steel poles being designed, fabricated and installed by Ingal EPS will soon become an integral part of the Port of Brisbane container terminal.

Completion of the 18-month project will enable Patrick Stevedores to commission one of the world's first port facilities to incorporate totally automated cargo handling equipment.

The 35m poles, made from XLERPLATE® steel will carry from six to 18 luminaires on galvanised steel headframes, on two large platforms.

Even more significant than the poles' illumination role on the 20-hectare container storage site is their safety and security function, which goes to the heart of Patrick Stevedores' high-tech approach to future cargo handling.

Each pole will also serve as a mounting point for radar reflectors, essential for the terminal's driverless container movers.

These automated container trucks use a combination of global positioning systems and radar signals to navigate from wharf-side to container stack.

"We have a lot of experience in designing and

One of the 35m poles being readied for installation.



making steel poles, and our combination of service, research, innovation and quality of craftsmanship has set a benchmark," Ingal EPS Operation Manager Ian Munday says.

"Time was tight on this contract, but we were able to split the rolling, galvanising and fabrication work between our Carole Park and Acacia Ridge plants to supply the poles on time.

"Obviously we have a preference for local products, but we have used BlueScope Steel as a supplier for many years because of its quality, price and supply reliability."

Ian says the quality of the steel was important because of the way in which Ingal EPS assembled and erected the poles.

"We trucked the segments to the new container terminal area, then assembled them on the spot," he says.

"The tapered ends were joined by a slip-fit process that involved no mechanical fixing or welding.

"Tight tolerances were involved, and we used 10-tonne compression to slide each section over the one below it when the completed pole was erected."

The company used the same configuration for a series of 50m poles at Mount Tamborine on the escarpment behind the Gold Coast. The pole height ensured the bush would not be damaged during installation.

Ingal EPS is Australia's leading manufacturer of poles, columns and streetscape products, with a presence in every state and territory.

HYDRORIB® piping underpins Erskine Park project

With the skeleton of BlueScope Steel's huge new COLORBOND® steel paintline facility taking shape in Sydney's western suburbs, positive feedback is rolling in on the company's choice of HYDRORIB® for stormwater drainage.

More than 5km of HYDRORIB® piping, in diameters ranging from 300mm to 900mm, have been laid on the sprawling 10ha site at Erskine Park in what has been the first major HYDRORIB® pilot project for BlueScope Water.

Stormwater collected and run through the pipes will end up in a huge nearby retention basin, allowing for eventual controlled release into Sydney's western waterways.

Installation of the piping began at what BlueScope Steel calls its Project Waratah site about a year ago and proceeded smoothly, according to site Construction Manager, Henry Martignago.

"While HYDRORIB® calls for different handling and installation procedures, it proved to be far lighter and easier to handle than traditional concrete stormwater piping," he said.

"Because we worked with HYDRORIB® in 6m lengths – compared with 2.4m lengths for

traditional concrete pipes – the actual laying was quicker than we expected."

AWJ Earthmoving was contracted to lay the piping and the company's Site Manager, Ian Macdonald, said the HYDRORIB® piping was



bonded, and joined using special spigots and sockets while angles were formed by feeding pipe ends into concrete sumps cast on site.

"HYDRORIB® is flexible to work with," Macdonald said. "We carried sections by hand and also used machines to lift it in some locations. Because it's light, it can also be craned over buildings, and laid in difficult spots."

Traditional 2.4m concrete pipes weigh more than one tonne each, and must be handled mechanically.

The HYDRORIB® piping was laid at a depth of 600mm below ground level, and compacted using fine stone and reconstituted concrete and tile chips.

BlueScope Water is also installing three huge 750,000 litre and three 10,000 litre above-ground rainwater tanks to collect roof runoff at the facility. This water will be used for fire suppression, cooling tower purposes, irrigation and toilet blocks.

The \$120 million Erskine Park facility is scheduled to come on stream in March 2007 and has been designed to produce 120,000 tonnes of COLORBOND® steel roof cladding a year – enough to supply 80,000 homes.

"The growth of steel as a building material and the growth in demand for COLORBOND® steel drove the decision to develop this site," BlueScope Steel's Vice-President Sales, Peter Nash, said.

"The site, located close to our three biggest NSW customers, will provide BlueScope Steel with a coil-painting presence in western Sydney, Australia's largest metropolitan market."

Flexible home design an award winner

A house in Wembley Downs, Western Australia, has impressed judges at the Western Australian Housing Industry Awards after being recognised for its effective use of COLORBOND® steel and ZINCALUME® steel.

The project has been highly commended, winning four awards:

- The Most Innovative use of Steel
- Best Custom Designed house in the \$300,000 to \$400,000 price range
- Best Custom Designed House
- Home of the Year.

Adhering to the clients' requests, the project makes the best use of available space while reflecting the owners' vibrant personalities. COLORBOND® steel and ZINCALUME® steel have been used extensively throughout the project to achieve a stylish, liveable home.

Project building designer Gary Keen says, "Positioned at the front of the project is a uniquely curved roof which was achieved using COLORBOND® steel and is a defining feature of the exterior of the home.

"COLORBOND® steel was an obvious choice



when creating this curved design because of the product's flexibility and durability."

Two prominent peaks feature at the front, emphasising the versatility of COLORBOND® steel as a roofing material. ZINCALUME® steel in CUSTOM ORB® profile was the ideal choice for the remainder of the home's roofing, helping to achieve sleek lines and adding to the contemporary feel of the house.

The open-plan living design was an essential factor for the clients who requested that all available space be used to its full potential, allowing them to exhibit their extensive collection of artworks. This was achieved through the innovative use of steel, allowing for a sleek and contemporary feel.

The landscaped garden was an important feature which was incorporated into the structure of the project. The garden's simple design complements the sophisticated use of steel throughout the project.

Storing more Melbourne water

One of Victoria's most experienced fabrication companies has been working on the simultaneous construction of two major steel water tanks for Melbourne Water.

E Brockman and Sons won separate tenders to design and construct a 33-megalitre storage tank at Mornington and a 53-megalitre storage tank at Frankston.



Part of an ongoing program by Melbourne Water to improve water quality and upgrade storage capacity, the 65m-diameter Mornington tank was finished late last year, while the 95m-diameter Frankston tank will be commissioned in April.

Both tanks, the largest yet built by the company, are fabricated from XLERPLATE® steel. They will replace open reservoirs and provide more effective storage and water quality for surrounding areas. The Mornington storage tank is 10.5m high and the Frankston tank will be 8.7m high.

In 1989, current E Brockman and Sons Managing Director Don Forbes put together a

team that bought a major shareholding in the company. It already had a strong reputation for quality fabrication work, covering everything from bridge girders to crane jibs and metal processing vessels.

This team started building steel storage tanks for the chemical, oil and water supply industries, and this is now a core activity for the 84-year-old Corio-based company.

"Since 1988 we've designed and constructed almost 100 storage tanks," Project Manager Max Goddard says. "Most have been in Victoria, but we've also tackled projects in NSW, QLD and SA."

Both tanks are being fabricated from 2100 tonnes of 250 Grade XLERPLATE® steel. Tank wall thicknesses vary from 22mm at the base to 10mm at the top. Floors and roofs will be fabricated from 6mm XLERPLATE® steel.

Previously, Melbourne Water tanks had roofs clad with aluminium profiles. The Frankston and Mornington tanks will incorporate roofs fabricated from 6mm XLERPLATE® steel.

Internal surfaces of the tanks will be coated with a special "high-build" epoxy layer developed for contact with drinking water.

"These have been projects where the flexibility of suppliers has been crucial to success," Max says.

"Melbourne Water has particularly high engineering standards which presented their own challenges. Both tanks are built to a US standard which has tighter tolerances than the Australian standard."

Enhanced KingFlor Designer Suite

South Australia's Fielders Steel Roofing has now made it even easier for engineers to select and use the company's KingFlor steel formwork for concrete flooring.

KingFlor Designer Suite Version 4.1 helps engineers select the correct KingFlor profile from Fielders' range of four – soon to be five – products, and allows them to design and specify every aspect of their composite slabs.

This latest version of the software includes the company's KingFire and KingSlab features, for optimal design of KingFlor in concrete frame construction. New features of the KingFlor Designer Suite include:

- KingFire and KingSlab – Concrete Frame Design Assistance Package
- Full compliance with AS3600-2001, Concrete Structures standard
- BDES- Composite Steel Beam Design for Fielders KingFlor KF70® product
- Composite slab design
- Span lengths and configuration (simply supported, double and continuous spans)
- Propping arrangements
- Fire design
- Negative reinforcing requirements
- Vibration analysis.

Fielders, which has operations in all mainland capital cities, recently bought Brisbane Sheet Metal, giving it rollingforming capabilities and additional product capabilities in Queensland.

Sweet success for Brisbane's The Refinery

The heritage-listed Colonial Sugar Refinery Building at Cutter's Landing on the fringe of Brisbane's CBD has won two Queensland architecture awards for developer Mirvac.

The exterior of The Refinery, erected in 1893, has been completely restored as the centrepiece of the \$250 million Cutters Landing project, and the transformed interior now houses 30 luxury apartments.

Restoration of the landmark building's exterior involved completely recladding the roof and tower areas with LYSAGHT CUSTOM ORB® profile made from COLORBOND® steel – the classic



Australian corrugated profile which has won an enduring place in local architecture for roofing and walling in residential, industrial and commercial applications.

As one of only a handful of centralised sugar processing facilities in its era, the Brisbane riverfront building was used to store and process sugar cane brought from all over Queensland and Northern NSW.

The Refinery stands on a prominent site at New Farm, with a north-easterly aspect. Its adaptive reuse as part of Mirvac's Cutters Landing development involved the conversion of a large industrial processing building to residential use.

Mirvac's in-house architectural and interior design practice, HPA, was responsible for bringing the vision of The Refinery to life.

HPA Qld Pty Ltd's efforts have been recognised in the Royal Australian Institute of Architects (Qld Chapter) regional, multi-residential and adaptive reuse awards categories.

Preserving the building's character and cultural heritage was a challenge because of the original floor plan, which was based on six functional segments related to sugar processing and administrative tasks.



The conversion led to the creation of a range of apartment types not often found nor even considered in a new building.

Leading roofing contractor, Fultoncote Pty Ltd carried out the challenging task of recladding the large roof and vertical tower walls. "The existing cladding was old galvanised sheeting in very poor condition," Fultoncote's Brian Sorensen said.

"We weren't involved with the removal of the old cladding, but the staging of the construction tasks at The Refinery meant that our installers were back and forth to the site for re-cladding work several times as other building work progressed.

"BlueScope Lysaght supplied more than 1000 square metres of sheeting made from COLORBOND® steel in LYSAGHT CUSTOM ORB® profile for the work. We used the colours of Shale Grey™ for the walls and Windspray® for the roof. It was all lifted by crane to the roof and fixed to the frame which had also been extensively rebuilt.

"The CUSTOM ORB® profile for the tower section was manhandled into position and installed with the corrugations running vertically.

"The final result has transformed the appearance of the building and given it a new look which will last for decades."



LYSAGHT W-DEK® produces advantages for 3M Australia warehouse

A decision to use LYSAGHT W-DEK® structural steel decking has solved design and site challenges at 3M Australia's new 3000 sqm logistics and distribution centre in Sydney's west.

Walker Corporation completed the office and warehouse complex at Greystanes late last year.

Grant Roe, director of Costin Roe Consulting Pty Ltd, said challenges posed by the Greystanes site and the layout of the building prompted his company's suggestion of the decking.

"Truck access from the road to the sloping warehouse site and the need to provide 6m of clearance on the building's lower level would have given rise to considerable additional cost and complexity if conventional formwork had been used to create the slab," Grant says.

"We suggested to Walker Corporation that LYSAGHT W-DEK® could provide a cost-effective solution for the steel framed building."

Developed specifically for Australian conditions by BlueScope Lysaght's research and development team, LYSAGHT W-DEK® is a steel formwork system that has been designed to provide optimal efficiency, speed of construction, and economy.

Steel formwork acts not only as formwork, but as additional bottom reinforcement, so less reinforcement needs to be used in the concrete. It also requires less propping than traditional ply formwork, and there is no stripping, reducing material handling on site, leading to faster installation and reduced cycle times.

"The use of traditional plywood formwork for the slab would have been a major undertaking on the 3M site," Grant says. "The time and cost involved in providing propping above the 6m clearance represented a significant impact on the whole project.

"We were aware of LYSAGHT W-DEK® and its spanning capabilities. It provided a straightforward construction solution, and we were able to use clear spans of 4m."



Walker Corporation and Costin Roe Consulting Pty Ltd co-ordinated the supply and installation of the complete suspended flooring solution through Lysaght Design and Construction.

The company, which was involved with the development of LYSAGHT W-DEK® and associated design methodology from its inception, provides total construction solutions, from design assistance, to the construction of building elements.

On the 3M Pty Ltd project Lysaght Design and Construction supplied and installed the LYSAGHT W-DEK® and all reinforcing and accessories, including the two-stage pouring of a concrete slab necessary to achieve effective drainage in a carpark area. Intimate knowledge of the project, from its inception through to construction project management, was a significant benefit to all parties on this project.

Constructed of high-tensile Australian steel, LYSAGHT W-DEK® spans distances up to 40 per cent greater than traditional re-entrant systems. Its unique "w" shaped profile has been designed specifically for its spanning capability.

At 700mm, LYSAGHT W-DEK® is also a slightly wider cover than other steel formwork systems. Fewer sheets to lay and fewer props to handle adds up to labour, time and cost savings.

The design of LYSAGHT W-DEK® optimises the way in which it bonds with concrete, giving it composite strength tested to be nearly four times the capacity of similar products tested overseas.

Tilt rail wagons boost deliveries

The first of 12 new purpose-built tilt rail wagons, designed to carry wide XLERPLATE® steel across Australia, are now in service.

Built at EDI Rail's Port Augusta plant, and being operated by Pacific National, all wagons are expected to be in service within weeks.

The \$250,000 wagon, seen here being shunted into Port Kembla's Plate Mill, delivered the first load of railed XLERPLATE® steel into BlueScope Steel's new WA facilities at Forrestfield, in Perth's eastern suburbs, last November.



The same wagon can be seen unloading in Perth. Each wagon is expected to carry 50-70 tonnes of XLERPLATE® steel.

These new wagons are supplementing the existing fleet of 38 similar wagons used for interstate deliveries. Another 20 slab delivery wagons, converted to carry XLERPLATE® steel have also entered service.

"These new wagons will lift our delivery capacity – especially in light of future demand for plate steel – and will shorten delivery times," Scott Dunstan, Customer Service Manager, Plate Mill, says.

Stan Clark, BlueScope Steel's National Sales Manager, says the XLERPLATE® steel supply chain is being reviewed due to the larger rail delivery fleet.

"Our Australian customers should have no concerns about BlueScope Steel delivering all the XLERPLATE® steel they need – when they need it," Stan says.



Food can is tops

The food can has taken the top spot in an industry publication's selection of the top 100 packaging ideas.

For the past year, Packaging magazine has been counting down the top 100 most important, most life-changing or just most interesting packaging developments of the past 100 years.

Ten packs have been revealed each month this year, with the top 10 appearing in the December issue of the publication.

Packaging magazine commissioned long-serving packaging industry figures Mike Hubbert and Michael Hussey to compile its list.

The magazine said the food can rightly takes its place as No 1.

"Walk down the supermarket aisles and estimate the amount of shelf space devoted to canned foods," it says.

"Supermarkets, themselves, might not exist if it weren't for food in cans."

Packaging magazine said the "tin can" had a long history of successfully packaging and preserving a wide variety of foods.



"We, the consumers, have benefited greatly from this packaging innovation," the publication's authors said.

Canned Food Industry Association (CFIA) Chairman, Ross Nuske says he was thrilled that Packaging magazine had given this top accolade to the steel can.

"In the industry we often say that if steel food cans had been discovered today they would be considered one of the world's greatest mediums," Ross says.

"Food cans have the ability to preserve the nutritional value of many types of food, offer safety and are recyclable."

Steel packaging offers a lightweight solution, is easily stacked on supermarket shelves as well as in the pantry. Easy-open ends also mean cans offer safe and convenient meal solutions.

"When it comes to the environment, steel is a winner as it is 100 per cent recyclable and is reused again and again," Ross says.

The full panel easy-open (FPEO) end for food cans also featured at number nine of Packaging magazine's selection.

The magazine said the FPEO can end has revolutionised food cans.

"No need for that can opener any longer. All you do is lift the tab and pull."



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SA tapping into roofing apprentices

South Australia's TAPS (Trainee & Apprentice Placement Service Inc) has tripled the number of roofing apprentices on its books in the past year – from 11 in late 2004 to 36.

Helping to address part of Australia's skills shortage, the highly successful collaboration between this not-for-profit group training scheme and BlueScope Steel now accounts for the lion's share of SA's 50 roofing apprentices.

Those roofing apprentices not with TAPS are being directly employed or are working with other group schemes.

While TAPS is placing second, third and fourth-year apprentices, the vast majority (21) are first-year students. A growing number of first-year apprentices are also older than 21.

TAPS' list of host employers has also grown – from 17 to 23 in the year.

Peter Van Loggem, BlueScope Steel's Development Manager SA/NT, says none of this

growth has been at the expense of traditional plumbing apprenticeships, which have remained constant for the past four years.

"Almost all apprentices who have gained their full qualifications are remaining with their employers, working as roofing plumbers," Peter says. "As vacancies with host employers remain extremely low, TAPS is not training for the sake of training."

TAPS says it wants to continue recruiting 15-20 apprentices a year to satisfy upcoming demand from host employers.

Peter says BlueScope Steel is also working with Regency Park TAFE by providing the latest range of roofing display materials and steel framing for apprentices to work with.

"This is helping roofing apprentices understand the latest building techniques, which can only be to South Australia's best, long-term advantage," he says.

AllGal opens regional doors

A Newcastle manufacturer and supplier of kit garages, car ports and other rural steel-framed buildings is continuing to flourish on the strength of rural and regional business.

"Our sales have primarily been to coastal and regional NSW, but word-of-mouth referrals have resulted in deliveries much further afield," AllGal's General Manager Mark Travis says.

"We were recently been approached by an Australian mining company operating in South East Asia to supply on-site buildings. It certainly hints at possibilities for us to expand our market beyond Australia, which we would love to explore."

AllGal Garages, a division of the Williams River Steel Group, began manufacturing premium quality steel-framed garages for the residential market in 1990.

It has won a reputation for quality, as well as the ability to deliver a complete building to site in kit form, with sales around Australia and the Pacific.

The company recently introduced a line of curved-roof structures in single or double-storey formats that has been generating a high level of interest from customers in Australia and overseas.

The upper floor of the two-storey buildings is designed to carry residential floor loads, making it possible to be fully furnished to the customer's preferences.

AllGal Garages manufactures its buildings



Tim Jeffrey (left) and Peter Agoand of AllGal Garages and Car Ports with some of the steel buildings manufactured by the company.

from COLORBOND® steel and ZINCALUME® steel.

The company's manufacturing facility is located in Tomago, NSW, and it has six sales outlets from the Central Coast north of Sydney to Lismore and the NSW North Coast.

"We have built our reputation on quality, so we make sure that our customers know that we only use premium brands such as BlueScope Lysaght's TRIMDEK® and TRIMWALL® products," Mark says.

AllGal Garages has joined the Steel By BlueScope Steel brand partnership program and displays signage attesting that it uses steel from Australia's leading manufacturer.

"Garages and work sheds need strength and durability," Mark says. "When customers see the steel that goes into our buildings it puts their mind at rest."

"We think this will also be extremely important as we pursue further sales outside Australia."

Backing Australia a matter of pride

Perth company Pride Plumbing & Gas is helping to boost trade skill levels by taking on the maximum number of apprentices that it can effectively train.

The award-winning Maylands company has five apprentices working and learning alongside its own trades people.

"Some of our current apprentices were recruited via programs such as the Master Plumbers Association apprentice scheme," Pride Plumbing & Gas owner and founder, Bill Busby says.

"We believe in recruiting young talent because it's through them that our business can really grow and meet our customers' demands with greater professionalism."

Some of the apprentices decide to take on full-time employment within the company at the end of their apprenticeship while others seek employment elsewhere – then, it is hoped, return when they have broadened their experience.

Pride Plumbing & Gas' customers include police, defence, hospitals and federal and state



Bill Busby

government organisations, and it also provides services to building consultants and engineers.

"We are not afraid of taking on jobs of all sizes, from providing roofing and flashing solutions all the way down to replacing tap washers," Bill says.

The company is a past winner of the Master Plumbers Association Award for Excellence.

It is also one of a growing number of companies to join the Steel By BlueScope Steel brand partnership program to reaffirm its preference for genuine high-quality products from Australia's leading steel manufacturer.

"Supporting Australian skills and products obviously ranks very high on our list of priorities as an Australian company – because we want to show our customers out there that the very best comes from right here," Bill says.

"Responding promptly to customer needs and offering the best quality roofing products such as those made from COLORBOND® steel and ZINCALUME® steel is a good way to ensure that the business prospers – and continues to provide training and employment for apprentices."

New ventilation system makes roofs breathe easier

A Brisbane company has optimised a way to ventilate commercial and industrial buildings without spoiling rooflines.

Underwood-based roofing products company Eziform Sheet Metal says its system improves air circulation while maintaining an effective seal against rainwater intrusion.

Its natural roof ventilation system uses roof flashings and ridge capping which the company manufactures from COLORBOND® steel and ZINCALUME® steel.

The Eziform Sheet Metal system, suitable for virtually any pitched roof, allows stale air otherwise trapped inside buildings to escape via an opening along the roof's ridgeline.

"We have carried out extensive testing and fine tuning of the system to counter rain penetration since we started developing it five years ago," Eziform Sheet Metal Director, Steve Cassidy, says.

"We have now begun a limited release of the ventilation system commercially and the response from customers has been overwhelmingly positive."

Eziform Sheet Metal has joined the Steel By BlueScope Steel brand partnership program to reaffirm the company's preference for the quality assurance offered by BlueScope Steel.

"I'm not prepared to risk using steel that does not originate from BlueScope Steel, especially



Machine operator David Luck (left) and Director Steve Cassidy of Eziform Sheet Metal form special steel guttering as part of the Queensland company's manufacturing operations.

when launching a new product," Steve says.

"I have been in this business for 20 years and have seen first-hand some of the appalling problems that can arise from the use of lower-quality steel that isn't supported by a strong guarantee.

"We also prefer steel from BlueScope Steel to match products already in use by customers,

such as roof cladding manufactured from COLORBOND® steel and ZINCALUME® steel."

Eziform Sheet Metal manufactures general roofing accessories such as flashings and other rainwater goods chiefly for commercial and industrial applications.

How to join the program

For more information call Steel Direct on 1800 800 789 and ask for an information brochure and registration form or download the information from www.steelby.com.au.



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Gutter innovation an ace for customers

Time-pressed Australian home owners are now benefiting from the innovative, Half Round self-cleaning guttering system from Ace Gutters.

Manufactured from COLORBOND® steel, the Half Round guttering can save home owners a small fortune in ongoing maintenance costs.

Because these gutters self-clean, home owners no longer need professionals to regularly clean them, especially in leafier suburbs or bush settings.

Ace Gutters, which has manufactured high-quality rainwater goods in Australia for more than 50 years, introduced the Half Round gutter based on a European style.

The guttering, supported by matching semi-circular brackets, is now widely available throughout Australia.

Ace Gutters' Managing Director, Don Anderson, says the self-cleaning nature of his company's Half Round gutter is proving popular with architects and home-owners alike

The guttering's 150mm diameter allows for greater water capacity in heavy rains or storms and permits faster water flow.

It is this water flow which helps clean the gutters of silt and debris.

"Apart from saving home owners time and money, our Half Round guttering has a more aesthetically pleasing modern look than normal quad gutter," Don says.

Another recent Ace Gutters' innovation is a range of leaf diverters. Inserted into down pipes, these allow storm water to drain clear.

"These leaf diverters are also popular with people using tank water, and who want the cleanest possible water at all times," Don says.