

HELPING TO REBUILD COMMUNITIES



Three of BlueScope Steel's employees lending a helping hand to the bushfire volunteer effort. From Western Port: Tony Brown, Peninsula Group Officer, Country Fire Authority; Michael Carr, Air attack supervisor, FLIR operator, fire fighter, Country Fire Authority; Paul De Bruyn, State Emergency Service volunteer, Hastings.

BlueScope Steel is pitching in by donating \$1 million in steel products and building solutions to put its special expertise to practical use and help respond to the recent Victorian bushfire tragedy in a host of different ways.

On top of the tragic death toll, the bushfires destroyed an estimated 1,800 homes and left nearly 7,000 people in need of accommodation.

Victorian Premier, John Brumby, and officials charged with overseeing the reconstruction have identified the restoration of community infrastructure as one of the key steps in the massive effort required to re-establish rural towns and hamlets all but obliterated by the blazes.

"At BlueScope Steel, Our Bond says, "our communities are our homes". As such, we are determined to play a significant role in the recovery effort," Michael Reay, Corporate Affairs and Corporate Brand Manager, said.

"After much thought we've decided to make our \$1 million contribution in the form of steel building products and construction services to help rebuild these communities.

"We have a capability that is unique in Australia to design, manufacture and erect pre-engineered steel buildings, sheds and commercial water tanks, as well as supply other steel building materials.

These buildings could serve as aid centres, community facilities, storage areas, clinics, school halls and other vital infrastructure – some capable of being deployed relatively quickly.

"Our employees have demonstrated BlueScope's community spirit by doing their bit to support those affected. On top of the \$1m donation, to date over 800 employees have contributed around \$130,000 to the bushfire appeal.

"Also 15 Victorian employees from our Western Port plant at Hastings have volunteered with the SES and CFA. Additionally, we have been able to donate 600 pairs of overalls, safety goggles and gloves to three relief centres (Whittlesea, Yarra Glen and Alexandra) to help people more safely undertake the recovery effort."

The BlueScope Steel Victorian Bushfire Relief and Recovery package is being co-ordinated by an in-house taskforce mobilised to explore the best ways for the Company to directly assist fire-damaged communities in greatest need.

BlueScope Steel Managing Director and CEO, Mr Paul O'Malley, said: "The thoughts and sympathy of all BlueScope Steel people are with all those affected by the horrific bushfire tragedy in the state of Victoria.

"The Company will work with aid agencies and government authorities to provide product and construction expertise to rapidly rebuild key community infrastructure in the worst affected regions", Mr O'Malley said.

COLORBOND® STEEL ON TOP

BlueScope Steel's newly upgraded COLORBOND® steel range has new colours, improved thermal performance and enhanced warranty provisions.

The new colours in the range are: Loft® – a rich, deep brown with a slight aubergine overtone, Monument® – a deep and subtle charcoal grey/blue, and Evening Haze® – a neutral cream. A unique new online colour selector tool makes choice easier than ever before – www.colorbondcolours.com.

Thermatech® technology

The Thermatech® solar reflective technology now built into COLORBOND® steel helps to improve the energy efficiency of homes and public buildings by reflecting more of the sun's heat, keeping the roofspace cooler and providing greater thermal comfort in buildings that feature a roof made from COLORBOND® steel.

There is a reduction in solar absorptance of five per cent across the latest COLORBOND® steel standard range which now includes seven colours classified as light or very light under BASIX and the Building Code of Australia's colour classification.

With the addition of Thermatech® technology the greatest improvement in thermal performance is in the dark colour range.

BlueScope Steel's residential business development manager for COLORBOND® steel, Greg Jones, commented: "Roofing made from COLORBOND® steel now provides builders and designers with a wider choice of lighter and contemporary colours, which can help to achieve reduced energy impact and keep roofs cooler".

Warranty improvements

To underline its confidence in the latest generation of COLORBOND® steel, BlueScope Steel has rolled out a number of improved warranty offers across applications such as roofing, walling, gutters and downpipes.

For all COLORBOND® steel information, including warranty eligibility and application, visit www.colorbond.com or call 1800 022 999.



Evening Haze®, featured on the roof of this home, is one of three new colours in the COLORBOND® steel range

STEEL GIRDERS SUPPORT TIMBER BRIDGE MAINTENANCE

BlueScope Steel has developed a lightweight, high strength alternative to hardwood for timber bridge girder replacement.

The unique TRANSISPAN® girder design provides compatibility with existing timber girders in Australia's aging short-span timber bridges.

The new hollow-section steel girders are made from hot rolled coil produced at BlueScope Steel's Port Kembla plant in New South Wales. The coils are converted to the patented profile at the nearby Orrcon operations at Unanderra.

In the finishing operation of the transformation from strip to pipe, circular section girders are produced with flat sections on opposite sides. The 120mm minimum width of the flat surfaces provides an ample load-bearing area for seating on corbels or below abutments, and for the fitting of the bridge decking above.

Hot dip galvanised

To ensure that the section delivers the longest working life possible in all environments, TRANSISPAN® girders are hot dip galvanised inside and out. The end result is a high strength beam with bending strength and bending stiffness properties in excess of those inherent in high quality hardwood

timbers. The unique profile delivers handling and transport efficiencies because of its light weight and its engineered properties.

Independent engineering assessment of TRANSISPAN® girders by third party bridge engineering specialists has verified their suitability as timber bridge girder replacements for short spans (5.2m to 7.6m), intermediate spans (7.6m to 9.1m) and potentially for spans up to 12m.

Easy installation

The girders have also been successfully installed by bridge maintenance crews. Attachment practices used for timber girders can be used with the TRANSISPAN® section, for substitution in existing bridges. In addition, each girder specification in the range has consistent dimensions and performance so work crews will always know what to expect and what equipment to schedule when installing TRANSISPAN® steel girders.

The lightweight steel profile allows bridge maintenance crews to carry out girder replacements using TRANSISPAN® girders, with minimal traffic disruption and downtime.

Since the days of colonial settlement, hardwood timbers have been the cheap and easy solution

for constructing crossings over creeks, rivers and floodways. However, Australia's stock of more than 25,000 timber bridges is beginning to present its own set of maintenance challenges as this asset base nears the end of its working life.

Some councils and authorities are finding it difficult to obtain good quality and affordable timber girders for maintenance requirements. Research undertaken for BlueScope Steel has indicated that as much as 80 per cent of all timber bridge stock is in need of repair and in excess of 30 per cent is rated as being in poor condition.

Cost competitive

The new TRANSISPAN® girder uses BlueScope Steel's manufacturing process that lends itself to the cost-competitive production of large volumes to stock requirements. The steel section addresses the known shortcomings of hardwood timber, prone to rot and termite attack, and delivers additional benefits through bushfire-proof performance and a weight advantage of approximately 40 per cent over equivalent length hardwood girders.

Further information is available from John Barrett at BlueScope Steel, email John.Barrett@bluescopesteel.com or phone (02) 4275 3920.



Flat sections on opposite sides of TRANSISPAN® girders spread loads and simplify installation.

BLAST FURNACE RELINE UNDERWAY

BlueScope Steel has begun major maintenance work on its No. 5 Blast Furnace at Port Kembla Steelworks, undertaking a \$370 million reline which is scheduled for completion by mid June.

The Port Kembla Steelworks supplies domestic and export customers as well as providing feed for some of BlueScope Steel's own domestic and offshore production facilities.

To safeguard supply for Australian customers during the reline period the company will continue to operate Port Kembla's No. 6 Blast Furnace.

No. 5 Blast Furnace, a key asset in the production of Australian steel, had operated for 18 years and produced 42 million tonnes of iron since it was last relined.

Modern blast furnaces typically have an operating campaign life of 15 to 20 years. The reline is an essential maintenance project that will restore the furnace to peak operating condition.

BlueScope Steel will communicate project progress during the reline to keep customers fully informed of any issues that may impact their business.



SPECIAL FEATURE: ENERGY

Major infrastructure projects are underway throughout Australia. This feature highlights four ways in which steel is helping to keep energy supplies ahead of demand.



REFINERY'S SPECIAL DELIVERY A WHOPPER

Delivery of a new process unit for BP's Kwinana refinery in WA created almost as many challenges as its fabrication.

More than 200 tonnes of 460N grade (normalised plate) XLERPLATE® steel went into fabrication of the 64 metre long naphtha splitter column's cylindrical shell and dished ends.

United Group Resources (UGL) delivered the column after a major fabrication project at its nearby workshop.

Because of the size of the finished vessel the shell was constructed in 3m x 4.5m diameter sections which were welded together to form the column in the horizontal plane.

Naphtha splitter

The naphtha splitter stands 64 metres tall, weighs 308 tonnes and holds a total volume of 1000 cubic metres.

UGL Resources was responsible for design, detailing, fabrication, delivery to site and also provided much of the labour to erect the process unit. Intelligent design enabled the use of 16mm, 20mm and 25mm XLERPLATE® steel at various points throughout the shell,

helping to contain costs for the customer, while still providing the required performance.

"Despite the XLERPLATE® steel grade requirements and non-standard sizes involved, everything was delivered as and when we needed it," said United Group Resources Project Team Leader Glenn LeMerle.

The project provided significant challenges for the company's combined design and fabrication teams as the column required temporary support saddles, lifting attachments and complicated transportation requirements.

Largest of its type

It also involved close liaison with balance-of-plant design engineers Worley Parsons, in numerous 3D design review sessions, to refine the interface with the associated civil, piping, electrical and instrumentation works. All internal and external attachments for the naphtha splitter column were fabricated from 350 Grade XLERPLATE® steel.

Internally, the column has been fitted with perforated process trays approximately every 450mm. On the

exterior, nearly 300 square metres of platforms have been mounted in various segments. Fabrication of the column was completed on schedule by UGL Resources, with zero health and safety incidents and zero quality issues.

The splitter column is the largest vessel fabricated by UGL Resources to date. It was delivered to the refinery using heavy-lift specialised transporters.

Challenging delivery

The three kilometre trip involved lifting and de-energising of power lines, and civil works including the removal and replacement of traffic islands and traffic signals.

The unit is believed to be the largest of its type ever fabricated from steel in Australia.

"Despite the XLERPLATE® steel grade requirements and non-standard sizes involved, everything was delivered as and when we needed it."

Glenn LeMerle



NEW EPIC ENERGY GAS PIPELINE TO SERVICE SOUTHERN STATES

A new gas pipeline incorporating 17,000 tonnes of BlueScope Steel's special API grade PIPESTEEL™ will help transport natural gas from Queensland reserves to homes and businesses in South Australia and New South Wales.

Epic Energy's Queensland to South Australia/NSW (QSN) Link, will draw on Eastern Queensland gas fields, which are some of the most productive in Australia. The 180 kilometre pipeline will link with Epic Energy's South West Queensland Pipeline in the Bowen/Surat basin and deliver gas via the Moomba to Adelaide Pipeline and the Moomba to Sydney Pipeline.

"The PIPESTEEL™ grade we supplied for this project was manufactured from a low Carbon, Manganese, Molybdenum, Niobium, Titanium chemistry," BlueScope Steel Industry Manager - Water, Oil & Gas, Dave Langley said. "It has been specially developed to meet the stringent mechanical properties and field weldability requirements of high-strength, high-pressure, oil and gas pipeline applications."

Local manufacture

Production of PIPESTEEL™ coils – 1300mm wide and weighing 27 tonnes each – began in December 2007. Coils were delivered by road from BlueScope Steel's Port Kembla Steelworks to the Pipe and Large Tube division of Orrcon at its Unanderra pipe mill. Orrcon is an Australian company specialising in the manufacture of precision tubing, structural pipe and RHS, water pipe and API accredited oil and gas linepipe.

The coils were then formed into 19.3 metre pipes before being coated by APC Socotherm in Unanderra.

Laying of the pipeline was undertaken by worldwide underground infrastructure construction company Nacap. Construction of the 180km pipeline began in April 2008 and completed in January 2009.

Epic Energy's Project Manager Daniel Wallace said "BlueScope Steel was the only steel manufacturer

in Australia that could produce and supply to the specifications required.

"The project required high strength, high pressure pipeline steel able to be fabricated into a 400mm diameter, increased from its original specification of 350mm. And we like our pipelines to be made from Australian steel whenever possible because of its quality."

Capacity boost

"This larger diameter will enable Epic Energy to deliver a greater volume of gas to our customers," Mr Wallace said.

BlueScope Steel's production flexibility and responsiveness to the needs of Epic Energy meant this increase in diameter could easily be achieved. An alteration of this type is not always possible when the steel is sourced, fabricated and shipped from an offshore steel mill, especially if restricted timeframes need to be met.

It took 650 semi-trailer loads to deliver the PIPESTEEL™ to site. Laying began in April 2008 with the pipeline being commissioned in January 2009.

Over one million tonnes of PIPESTEEL™ has been incorporated into more than 150 pipeline projects across Australia since it was specially developed by BlueScope Steel in 1968.

Epic Energy are in the process of calling for tenders for further expansion involving duplication of the South West Queensland and QSN pipelines. A total distance of 950 kms.

"...we like our pipelines to be made from Australian steel whenever possible because of its quality."

Daniel Wallace



HORIZON POWER'S ESPERANCE UPGRADE

WA regional electricity provider Horizon Power is meeting a key commitment to customers in the Esperance region by taking advantage of readily available SURELINE® steel power poles.

State government owned Horizon Power services the Pilbara, Kimberley, Gascoyne, Mid West and Southern Goldfields regions.

With Alliance partner Transfield Services, Horizon Power is upgrading 20 kilometres of electricity network along the South Coast Highway, beginning 70 kilometres west of Esperance, as part of the Esperance Network Rural Upgrade Project.

SURELINE® availability

"Replacing that section of line would provide greater benefits than repairing it," Horizon Power's Project Manager, John Small, said. "Our Manager of Asset Strategy in Perth, John Zanello, became aware of the SURELINE® poles and in particular their availability in a size and strength which was well suited to our requirements for this project.

"This provided a solution for us because our normal supplier was unable to manufacture a 12.5 metre pole with the strength rating we required, within the time frame for this project. The service we have had from BlueScope Steel has been exceptional."

BlueScope Steel worked with Horizon Power to establish a detailed delivery schedule for the 220 poles, which were railed to Kalgoorlie and then

delivered 400 kilometres to site by road train. By taking advantage of their lightweight specification, and consistent straight-sided dimensions, it was possible to stack 33 SURELINE® poles per wagon, significantly reducing freight movements and cost.

Maximum flexibility

"BlueScope Steel worked with us to devise a hole drilling pattern which was applied to each pole in accordance with Horizon Power's construction manual," John Small said. "That gives us maximum flexibility when dressing the poles so that we can achieve nine different configurations. It's almost a universal pole."

Because the holes are drilled before the poles are hot dip galvanised inside and out, the integrity of their corrosion protection is not diminished. The poles' robust design will allow them to weather the storms that the region experiences regularly.

"As a result of our experience with the SURELINE® poles for the renewal of part of the 33kV Esperance to Munglinup line we've ordered another 110 of the 12.5 metre poles to use on other projects throughout the region," John Small said.

"The service we have had from BlueScope Steel has been exceptional."

John Small





POWERING WA'S FUTURE

Western Australia's newest and largest power station is a showcase for the diversity of BlueScope Lysaght's range of steel purlins, roofing and wall cladding.

The recently commissioned \$400 million NewGen Power Station on the coast at Kwinana, 30 kilometres south of Perth provides 320 megaWatts of baseload power. Construction of the state-of-the-art plant was a joint venture between multinational construction company Laing O'Rourke and Alstom Power.

The facility is Western Australia's most efficient gas-fired, combined-cycle power station and will provide electricity to Western Australia's main electricity grid, the South-West Interconnected System (SWIS).

LYSAGHT® cladding solution

BlueScope Lysaght supplied 8,500 square metres of roof and wall cladding products for the project, as well as 80 tonnes of purlins.

Fabricator Western Construction fixed LYSAGHT® Cee and Zed purlins in a range of sizes on various buildings throughout the plant. Industrial Roofing Services completed the installation of the roofing and cladding using a team of up to six men at various stages throughout the project over a 20 week period.

To meet the highly specific acoustic requirements of the turbine hall, BlueScope Lysaght roll formed 5,500

square metres of LYSAGHT SPANDEK® in COLORBOND® Ultra steel.

The specially produced sheets were roll formed 12 metres long and at 0.80mm were nearly twice as thick as normally specified, presenting a handling challenge for the cladding fixers.

Alan Croll, General Manager of Industrial Roofing Services said, "Initially the extra length, thickness and weight of the sheets made handling a challenge.

Installation challenge

"We developed a rope and pulley system, which allowed us to align the sheets in the correct position. Once in place, securing them was very simple.

"LYSAGHT® cladding is an excellent construction product to work with and BlueScope Lysaght followed the order specifications exactly," Alan said. "All materials were delivered to site cut to size to simplify installation."

LYSAGHT® cladding material used on the NewGen Power Station buildings was supplied in three sheet thicknesses to suit individual applications.

SPANDEK® in COLORBOND® Ultra steel was used to clad the workshop/warehouse, and the central control and fire fighting buildings.

For the even more demanding environment of the demineralised water building of the power plant, nearly 800 square metres of SPANDEK® in COLORBOND® Stainless steel provided an exceptionally high performance cladding. All cladding was supplied in the COLORBOND® steel colour Deep Ocean®.

Sequenced delivery

Careful production planning and sequencing the delivery of the various LYSAGHT® products was essential to avoid delays during the installation phase.

"The successful completion of the project was helped by BlueScope Lysaght delivering all the materials to site as we needed them. This also ensured the project ran very smoothly." Alan said.

NewGen Kwinana power station operator ERM Power is now pushing ahead with construction of another gas-fired power station, the 330MW NewGen Neerabup power station, 36km to the north of Perth.

"LYSAGHT® cladding is an excellent construction product to work with."

Alan Croll



FAMILY BEACH HOUSE IS AN AWARD WINNER

A family holiday home at Pindimar Bay on the north shore of Port Stephens, NSW, has won a regional Master Builders Association (MBA) award less than a month after its completion.

The large home was designed by Alexander Kinross-Rowe for his parents Phillip and Janet Rowe and their extended family. Construction was carried out by local family business, Lambert Building Pty Ltd, a specialist in architect designed residential projects.

LYSAGHT CUSTOM ORB®

It won the MBA Newcastle region award for best architect designed home \$500,000 to \$700,000. One of the features of the home is the extensive use it makes of LYSAGHT CUSTOM ORB® cladding for roofing and walling.

"The large areas of cladding in the CUSTOM ORB® profile were chosen to introduce texture, using colours

selected from the COLORBOND® steel palette to match the colours of the site and the surrounds," Alexander Kinross-Rowe said.

"We used lighter colours, Jasper® and Dune®, to be visible when viewing the house from the waterfront side and the darker colour, Ironstone®, on the woodland side."

Alexander Kinross-Rowe has frequently used CUSTOM ORB® cladding as a featured element on residential projects he has designed in the Byron Bay area of northern NSW.

Lambert Building Director, Craig Lambert, said his construction team which worked on the award winning house was quite familiar with the use of CUSTOM ORB® profile as a wall cladding.

"The CUSTOM ORB® profile is a long time favourite," he said. "We've featured it for wall cladding

as well as on roofs of homes which we've had designed and then built in the Hawks Nest and Tea Gardens area.

"Using steel wall cladding such as CUSTOM ORB® to its best effect is a challenge for the builder, because you have to be careful how it combines with brickwork, render or some other form of cladding.

Best possible aesthetics

"We have a very good team of tradesmen and they know how to get the detailing and flashing correct, not just from a waterproofing point of view, but to give the house the best possible aesthetics."

At the Pindimar Bay home the use of steel cladding has also been carried into the interior, in the form of LYSAGHT MINI ORB® profile in ZINCALUME® steel applied to laundry and WC walls.



FOCUS ON SUSTAINABILITY

Peak industry body, the Australian Steel Institute (ASI) has released the first dedicated publication on steel's environmental credentials from an industry-wide perspective.

"Touching the Earth Lightly... Australian steel's role in a sustainable world" is part of current work by the ASI's Sustainability Group to make sure the domestic steel industry at large stays at the forefront of current debate.

ASI Chief Executive, Don McDonald said that with issues like carbon trading and energy loads becoming prominent, there's never been more need for a publication that explains steel's sustainability credentials in plain English.

"This new publication is the first real attempt to provide a steel industry-wide response to the sustainability issue aimed at lifting understanding of steel's environmental value," he said.

"There's a lot of conflicting information out there on evaluating 'green' materials, such as points schemes, embodied energy and other measures."

The ASI is working through the Building Products Innovation Council (representing major material suppliers) to ensure that scientifically conducted life cycle analysis is used to accurately account for steel's recyclability.

The new publication also talks about a number of major programs here in Australia involving recycling water and waste heat to reduce the greenhouse gas and eco footprint of steelmaking.

Emission reduction technology

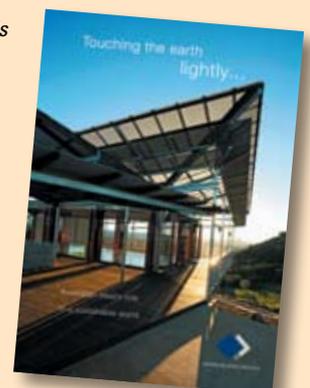
It points out that the Australian steel industry produces about eight million tonnes of steel a year and including all of its steelmaking, manufacturing and distribution activities has a turnover of \$29 billion and employs 91,000 people earning \$4.6 billion in wages. BlueScope Steel's Western Sydney sheet steel paint-line plant is cited for its state-of-the-art emission reduction technology. The plant's new regenerative thermal oxidising technology is reducing energy consumption and greenhouse gas emissions by reusing heat from the product

drying and baking processes to preheat ovens and heat water.

Only a handful of paint-lines in the world use this technology and it is already reducing gas consumption.

In early 2009 the ASI will conduct a seminar series in each state to provide a forum on steel and sustainability and to discuss the impact of the proposed emissions trading scheme on individual businesses.

For further details visit Sustainability at www.steel.org.au



MORE THAN JUST STEEL

Through a long relationship BlueScope Steel has become a strategic partner to storage solutions specialist Dexion, transforming a traditional supplier/purchaser arrangement into something much more for both companies and with significant benefits for Dexion customers.

There's even a parallel history which the two companies share. Both are Australian success stories and both have expanded into Asia, not just with product sourced from Australia, but also as local manufacturers.

Both are innovators and both have ensured their ongoing success by a dedication to customer focus and a determination to provide solutions and not simply a range of standard products.

The outcome of the companies' relationship which sees Dexion manufacturing plants in Sydney and Melbourne supplied with hot rolled, cold rolled and pre-painted coil from BlueScope Steel service centres in the two cities is simply the visible side of a successful multi-layered relationship.

In fact, Dexion's project based approach and BlueScope Steel's sharpening customer focus have brought about an alignment of interests which bring the companies into ongoing dialogue.

Over the years the meetings and conversations between the two groups have enhanced their ability



to work together to deliver solutions for Dexion customers which would not have been achievable by either party acting alone.

Leveraging the expertise of both organisations to achieve time and cost savings for its customers has been central to the success of many of the largest projects Dexion has delivered.

"If we were to import steel we would be locked into tonnages three months out with no ability to change and adapt as the market moves," Dexion's General Manager Procurement, Michael Mills said.

"Beyond that consideration however, our relationship with BlueScope Steel also means that as well as being able to order on short lead times we don't have to worry about issues such as product quality and reliability, because they share our strong focus on those areas.

"BlueScope Steel slit the hot rolled coil steel and deliver it to us in 200mm to 400mm wide strips which are suitable feed for our roll formers to manufacture Dexion components for the industrial market.

"In Melbourne the steel is delivered in wider strips, prepainted for processing into shelving frames and back panels for Dexion's commercial range."

Dexion's aim to deliver everything from integrated systems for high-tech distribution centres to a single shelving unit for an office or workshop has necessitated the development of its close relationship with BlueScope Steel.

Whether it's dealing with consumer goods multi-national Procter & Gamble, or cold storage specialist the Swire Group, the need to deliver state-of-the-art solutions at a globally competitive price is unrelenting.

And that's why regular discussions between BlueScope Steel and Dexion cover everything from delivery and pricing to the performance and strength of various steel options.

"BlueScope Steel has often helped us out at the research and development level," Michael Mills said. "We are always looking to improve our offering to our customers."

Sometimes that can be achieved by exploring flexible options available within the scope or design characteristics to achieve optimal results. Often it's achieved by parties from both companies doing what works best in any relationship – listening.



**BLUESCOPE
STEEL**

1800 800 789

This number is for callers within Australia only; callers in other countries should refer to our website for the contact number of their nearest BlueScope Steel Limited office.
www.bluescopesteel.com

STEEL EDGE NO. 31 MARCH 2009

CORRESPONDENCE: Steel Edge,
PO Box 1, Macarthur Square LPO
Campbelltown NSW 2560
EMAIL & STORY IDEAS TO:
bluescopeeditorial@imadvertising.com.au

Published by BlueScope Steel Limited

® and ™ are trade marks of BlueScope Steel.
© 2009 BlueScope Steel Limited
ABN 16 000 011 058

