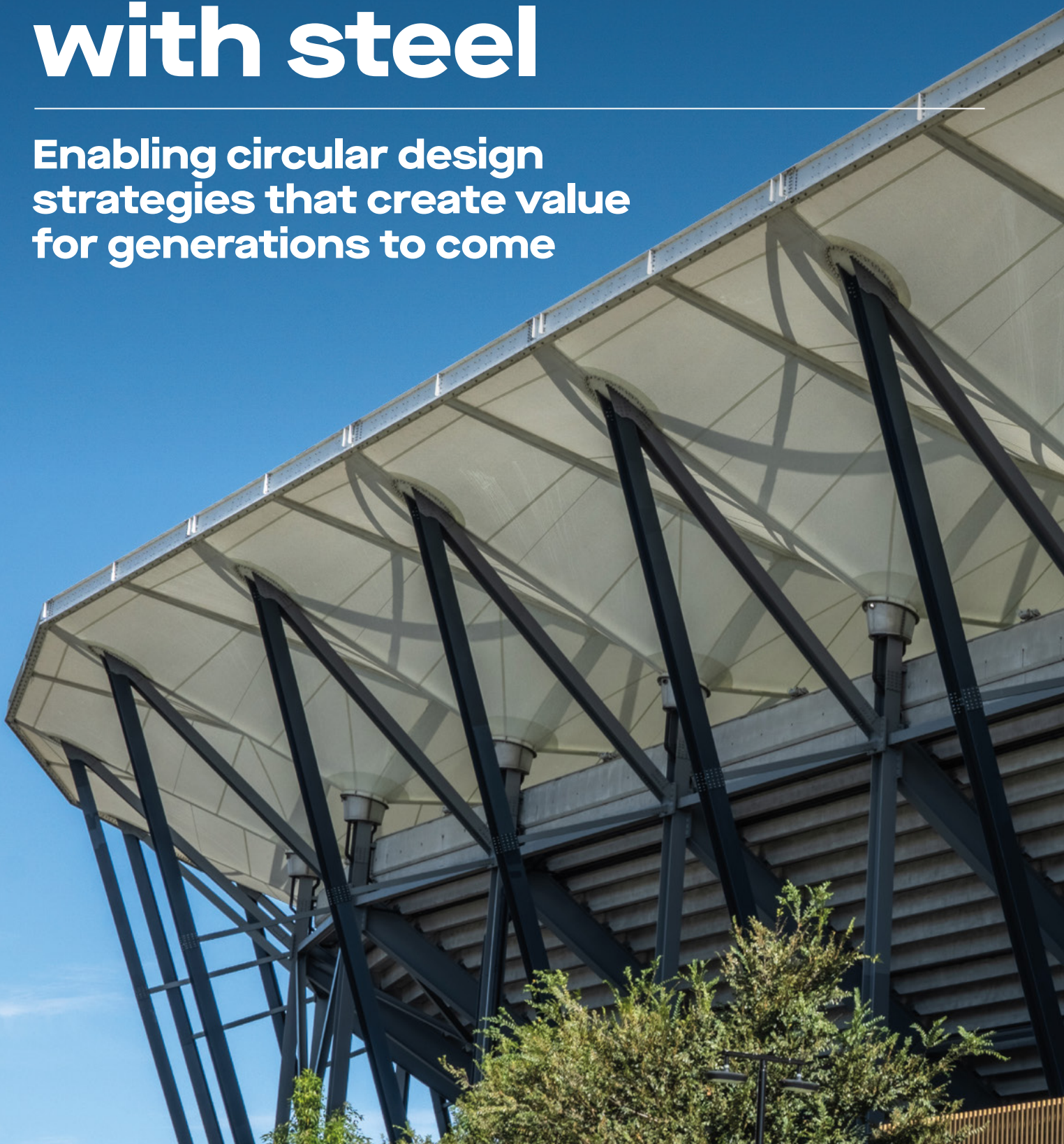


Supporting circular outcomes with steel

Enabling circular design
strategies that create value
for generations to come





Smalls Road Public School, Ryde, NSW

Supporting a circular economy

A circular economy keeps materials in use for as long as possible. Steel can support circular design strategies such as dematerialisation, design for disassembly and reuse. In this way, the steel manufactured today can create value for generations to come.

At BlueScope, we aim to drive resource efficiency in our operations and proactively contribute to circular outcomes in the built environment through our product applications.

Steel solutions for dematerialisation

Dematerialisation focuses on reducing material inputs and prioritising reuse solutions and is most effective when considered early in the planning and design phases.

For low- to mid-rise buildings and multi-storey additions, precision engineered framing made from light gauge steel can reduce foundation requirements and reduce, or in some cases eliminate, the need for hot rolled structural steel. TRUECORE® steel is ideal for structural framing in residential and many commercial applications, offering a high strength-to-weight ratio enabling long spans and flexible designs.

Design for manufacture and assembly, and disassembly

Design for Manufacture and Assembly (DfMA) enables off-site fabrication in a controlled environment, reducing steel waste and optimising resource use. Precision-engineered light gauge steel frames made from TRUECORE® steel are well suited to DfMA.

Design for Disassembly (DfDA) supports future reuse and recycling by using screw or bolted connections instead of welded joints, allowing steel components to be reused beyond their initial purpose and contributing to lower embodied carbon in future projects.

Durability and resilience

Designing products for durability and long life is central to a circular economy. For instance, BlueScope's industry-leading metallic coating incorporating Activate® 1 technology, enhances COLORBOND® steel's corrosion resistance. The paint system is baked on over primer and pretreatment coatings to help the finish retain its good looks for longer.

COLORBOND® steel cool roofing colours help reduce roof temperature and improve building thermal performance² through high Solar Reflectance Index (SRI) values, helping provide resilience to extreme heat conditions in the Australian climate.

Potential reuse

Steel lends itself to structures that are designed for long life, resilience and design flexibility, to accommodate multiple future reuse options and designs where end of life considerations are key, such as design for disassembly and reuse. In some cases, steel can be reused without reprocessing, saving energy and resource use. Light gauge steel framing made from TRUECORE® steel can support adaptive reuse strategies to upgrade buildings and increase the capacity and height of existing assets.

Steel is 100% recyclable

The steel in BlueScope products is 100% recyclable. At the end of its useful life, steel can be turned into new products without loss of quality, supporting circular economy outcomes. In Australia, 90%³ of metals, including steel, are recovered for recycling.

What BlueScope is doing

Circularity principles are a key priority in the manufacture of BlueScope steel products. Our processes are optimised to minimise resource use and reduce waste.

Across the range of steel products manufactured by BlueScope in Australia, the average recycled content in the steel is approximately 25%, including pre- and post-consumer materials.

At Port Kembla Steelworks, steelmaking generates useful co-products such as Blast Furnace Slag, which can be used as a cement replacement and road base material.

We are committed to improving our environmental performance and work on projects to reduce our environmental footprint. For more information on environmental management at Port Kembla Steelworks visit bluescope.com/illawarra-environment

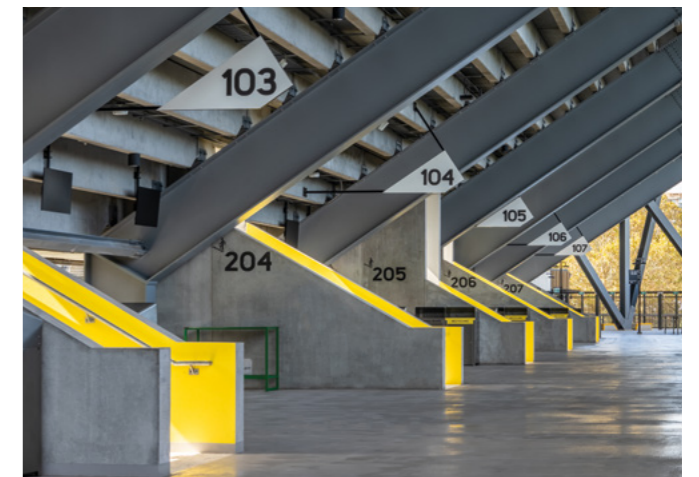
BlueScope is committed to actively addressing climate change and investing in GHG emissions reduction to transform BlueScope for long term success. We are progressing a pathway to low-emissions primary steelmaking through initiatives such as Project NeoSmelt.



Western Sydney Stadium, Parramatta, New South Wales.
Welded Beams and Columns made from XLERPLATE® steel.
Steel Distributor and Fabricator: Southern Steel Supplies
Engineer: Aurecon
Architect: Populous
Builder: Lendlease

Western Sydney Stadium Design for Disassembly

The steel structure made from XLERPLATE® steel, was optimised for disassembly and enabling future re-use. Unlike welded structures, its components can be unbolted, facilitating disassembly, relocation and reuse.



Smalls Road School

Dematerialisation

Prefabricated framing modules using TRUECORE® steel were assembled on-site and craned into position for the upper-level wall frames and roof trusses. By reworking the original design and substituting structural steel with light gauge steel frames made from TRUECORE® steel, almost 120 tonnes of steel were eliminated, saving 469 T CO2-e.



Smalls Road Public School, Ryde, New South Wales.
NSW Department of Education – School Infrastructure.
Frames made from TRUECORE® steel.
Architect: Conrad Gargett
Builder: Richard Crookes Construction
Fabricator: Austruss Pty Ltd



See how steel can support a circular economy

Discover more case studies, articles,
and watch our circularity video at
steel.com.au/circularity

For further information, contact
BlueScope Steel Direct 1800 800 789

1. Activate® technology is not available for COLORBOND® steel products with a zinc-coated steel substrate. 2. Actual cool roofing performance, including potential energy savings and thermal comfort improvements, depends on a wide range of factors including roof colour, roof shape, level of insulation, type, location, shape, and function of the building, and the type and efficiency of heating and cooling systems. 3. Pickin J et al., National Waste and resource recovery Report 2024, Prepared for the Department of Climate Change, Energy, the Environment and Water, p. 45. 4. The average recycled content in the steel is 25.7% which includes pre- and post-consumer recycled materials. Materials reclaimed within the steelmaking process represent an additional 2.1% average recovered content. According to recycled content categories defined in ISO 14021:2016. The figures provided are based on FY25 data. Information provided in the brochure is correct at the time of printing. COLORBOND®, TRUCORE®, XLERPLATE®, BlueScope, and the BlueScope brand mark are registered trademarks of BlueScope Steel Limited. © 2026 BlueScope Steel Limited ABN 16 000 011 058. All rights reserved.

