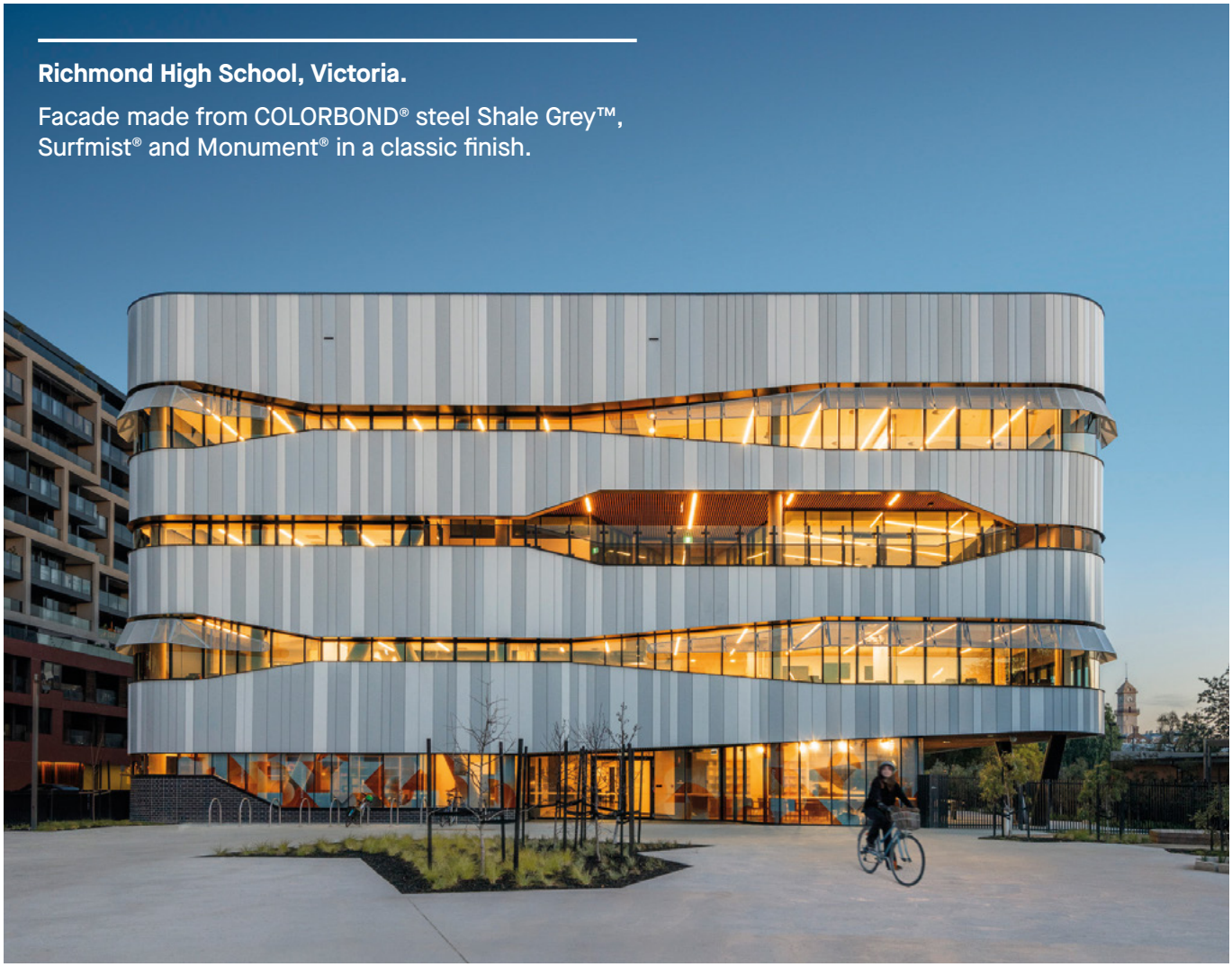
Product Reference Guide

Your guide to specifying steel from BlueScope

BlueScope

Specify with confidence



Richmond High School, Victoria.

Facade made from COLORBOND® steel Shale Grey™, Surfmist® and Monument® in a classic finish.

What's different about steel from BlueScope

At a quick glance most steel can look the same, at least when new.

But once you look beneath the surface, steel that can look the same can be anything but.

This booklet provides a clear reference guide to assist specifiers in selecting products that comply with the National Construction Code (NCC), meet and exceed Australian Standards (AS), as well as steel products that are sourced from ResponsibleSteel™ certified sites.

Its a reference guide that can help you specify with confidence.

Compliance with relevant Australian Standards

As required by relevant Australian Standards, steel made by BlueScope is marked with its unique manufacturing identifier and appropriate Australian Standard number for easy reference and identification.

NCC compliance requires that products used in specific building applications meet the relevant Australian Standards where nominated. Steel products made by BlueScope are manufactured specifically to meet relevant Australian Standards, which is an important factor in achieving compliance with the NCC.

Every brand of steel made by BlueScope is guaranteed to meet the relevant Australian Standards.

Responsible steel manufacturing

BlueScope's Port Kembla Steelworks in New South Wales, Australia and Western Port Works in Victoria, Australia, are both certified to ResponsibleSteel™ Standard Version 1.1. ResponsibleSteel™ is the global steel industry's first multi-stakeholder standard and certification programme that covers a wide range of topics including:

- Corporate leadership
- Social, environmental and governance management systems
- Occupational health and safety, labour and human rights
- Stakeholder engagement and communication
- Local communities
- Climate change and greenhouse gas emissions
- Noise, emissions, effluents and waste
- Water stewardship and biodiversity
- Decommissioning and closure

ResponsibleSteel™ certification provides specifiers and building practitioners with confidence that they are specifying steel from a facility that has demonstrated responsible sourcing and production practices.

Responsible Steel™ CERTIFIED SITE RS748734

Responsible Steel™ CERTIFIED SITE RS779651

Sustainability – leading with transparency and stewardship

Products contain recycled content

- Across the range of steel products manufactured by BlueScope in Australia, the average recycled content[1] in the steel is 25.0%, which includes pre- and post-consumer recycled materials.

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.

Steel products may be suitable for reuse

- Steel lends itself to structures that are designed for long life, resilience and flexibility to accommodate multiple future reuse options and designs where end-of-life considerations are key, such as designing for disassembly and reuse.

Commitment to environmental transparency

- Environmental Product Declarations (EPDs), based on Life Cycle Assessment (LCA), are available for a range of products.

Third party certification provides confidence

- Global GreenTag GreenRate™ (Level A) certification has been achieved for a range of products.

Recognised under Green Star Responsible Products Framework

- All BlueScope products manufactured from steel at Port Kembla Steelworks can contribute to a Green Star Buildings rating via the Responsible Products credits.

Underpinned by a global emissions reduction program, goal and targets

- BlueScope has a goal of net zero greenhouse gas emissions (GHG) by 2050[2] as well as mid-term emissions targets[3].
- BlueScope has achieved 8% GHG emissions intensity reduction in global steelmaking operations since 2018[4].

For more information on our sustainability credentials visit steel.com.au/sustainability

Steel is central to our built environments

Steel plays an essential role in the construction of our society. Its strength, durability, adaptability, and versatility make steel one of Australia's most utilised construction materials. The properties of steel also allows it to be successfully used in adaptive reuse and designs for disassembly.

BlueScope continues to invest in new technologies, such as Activate® metallic coating technology that enhances corrosion performance, Thermatech® solar reflectance technology which improves solar reflectivity, as well as products and solutions that support rapid construction, long-term use, flexible design and resilience to extreme weather.

As steel is 100% recyclable and can be recycled repeatedly without losing its quality, it is fundamental to a successful circular economy. In Australia, the recovery rate of metals in 2020-21 was 87%[5] meaning the products we make today can become the resources of tomorrow.

Developed and proven

Building materials used in Australia must endure some of the harshest climatic conditions of any country in the world. That's why steel made by BlueScope is especially designed and tested in Australia for Australian conditions.

For decades, our team of scientists have tested in both real world extreme environments as well as in accelerated laboratory testing to ensure the proven performance and durability that has become synonymous with our products.

BlueScope's products go through rigorous quality assurance testing, and are fully traceable to the point of production.

Local technical support and Australia-wide distribution

Comprehensive Australian based technical support is available. Call BlueScope Steel Direct on 1800 800 789 or visit **steel.com.au** for information, specification tools and case studies.

Building materials made from BlueScope products are widely available across Australia and are supported locally by BlueScope's construction and specification representatives.

Easy checks to minimise your risk

✓ **Warranty check**
Pre-approved warranties* for BlueScope coated steel products may be obtained at **bluescopesteel.com.au/warranties**

✓ **Authenticity check**
Only genuine BlueScope products have BlueScope's brand mark. This is easily identifiable on the back of the steel for our coated steel products, and identifiable on documentation accompanying our uncoated range of products.

✓ **Material Test Certificates**
Test certificates can also be provided for BlueScope steel products (upon request).

1. According to recycled content categories defined in ISO 14021:2016. Scrap and iron-bearing materials generated and reclaimed from BlueScope's steelmaking, including the BF-BOS process up to slab casting, represent 1.7% of the product mass, which is not reported as recycled content. Scrap arising from downstream processes, such as plate and coil milling, rolling, tempering, annealing, pickling, metallic coating, painting, rollforming and/or fabrication are included as pre-consumer recycled content. The figures provided are based on FY23 data.
2. This goal applies to all of our global operational Scope 1 and 2 GHG emissions, and is dependent on several enablers, including the commerciality of emerging and breakthrough technologies, the availability of affordable and reliable renewable energy and hydrogen, the availability of quality raw materials and appropriate policy settings.
3. Applies to our Scope 1 and 2 emissions, relative to a 2018 baseline.
4. FY23 relative to FY18, scope 1 and 2 emissions. Reduction is due to the impact of the North Star expansion ramp-up that has resulted in a greater proportion of production volumes from that site's lower emissions process, as well as the improved energy and resource efficiencies across our other steelmaking sites, including Port Kembla Steelworks. Further information: bluescope.com/sustainability/reports
5. Pickin J et al., National Waste Report 2022, Prepared for the Department of Climate Change, Energy, the Environment and Water, 2023, p. 46.

Your step-by-step guide

Specifying BlueScope products

- ✓ That comply with the NCC
- ✓ That meet and exceed AS
- ✓ That are sourced from a Responsible Steel™ certified site

BlueScope

Steel products made by BlueScope are manufactured to meet the material requirements of relevant Australian Standards, maximising the opportunity for compliance with the National Construction Code. You can have confidence specifying steel made by BlueScope.

To determine the most suitable products for your project visit steel.com.au/products

How to specify

Visit **steelselect.com.au/tools/specwriter** to select products and create a specification that can be cut and pasted into your specification documents.

How to identify

Only genuine BlueScope products have BlueScope's brand mark. This is easily identifiable on the back of the steel for our coated steel products, and identifiable on documentation accompanying our uncoated range of products.

On-site

Look for the brand. To ensure you're receiving what you specified, check your supplied specification and delivery information. Generic descriptions do not provide assurance that your product is a genuine BlueScope product.

Certified compliance

In Australia, BlueScope certifies compliance with many independently established and accredited organisations, such as BSI Global for our Quality (ISO 9001:2015) and Environmental Management Systems (ISO 14001:2015), NATA for our internal testing laboratories, ACRS for hot rolled structural products, Global-Mark for ATIC Scheme 10, and CSIRO and AWTA Product Testing for our coated and uncoated product fire testing to AS 1530.1-1994 and AS/NZS 1530.3:1999.

NCC compliance

The information in this document is provided as a guide only for the application of BlueScope products. For further guidance and to ensure your project fully complies with the requirements of the NCC visit ncc.abcb.gov.au

Australian Standards

Steel made by BlueScope is manufactured specifically to meet relevant Australian Standards, which is an important factor in achieving compliance with the NCC.

Goods that are made to foreign standards may not conform to the requirements of equivalent Australian Standards and consequently may not meet the compliance requirements of the National Construction Code (NCC) where Australian Standards are referenced.

* Warranties are subject to application and eligibility criteria. For full terms and conditions and to determine the eligibility of your project for the warranty visit bluescopesteel.com.au/warranties or call BlueScope on 1800 800 789. Warranties provided by BlueScope do not affect consumer rights under the Australian Consumer Law.

† Environmental Product Declarations available for products at select base metal thicknesses (BMTs) and metal coating classes. Please refer to the corresponding EPD for the full details of the products covered at steel.com.au/sustainability

‡ BlueScope's environmental and sustainability credentials are recognised by a number of national and international green building rating tools and schemes. For more detail on how our products can contribute to a rating, see our articles on Green Star, IS Rating and Living Building Challenge at steel.com.au/sustainability

§ These SA values are nominal values based on new product and measured in accordance with ASTM E 903-96.

¶ These SRI values are nominal values based on new product and determined in accordance with ASTM E1980-11.

Not an Australian Standard but is a compliance solution within NCC.

†† SA and SRI results for ZINCALUME® steel can be highly variable. For the purpose of NCC and/or BASIX compliance, ZINCALUME® steel should be considered as having SA of between 0.50 to 0.60, SRI of 43 to 57, and can be variable depending on weathering.

Application	Roofing & Walling				
Product Brands	Colorbond®	Colorbond®	Colorbond®	Colorbond®	Zincalume®
Products	COLORBOND® steel, COLORBOND® steel Matt	COLORBOND® steel Metallic	COLORBOND® Coolmax® steel	COLORBOND® Ultra steel	ZINCALUME® steel
Typical Environments	Roofing: > 200m from breaking surf > 0m from calm marine Walling: > 800m from breaking surf > 200m from calm marine	Roofing: > 200m from breaking surf > 100m from calm marine Walling: > 1000m from all marine	Roofing: > 200m from breaking surf > 100m from calm marine	Roofing: > 100m from breaking surf > 0m from calm marine Walling: > 500m from breaking surf > 100m from calm marine	Roofing: > 200m from breaking surf > 100m from calm marine Walling: > 1000m from all marine
Australian Standards (Product)	AS 1397:2021 AS/NZS 2728:2013				AS 1397:2021 (AM125)
Australian Standards (Application)	AS 1562.1:2018 HB-39:2015 (Victoria)^				
National Construction Code 2022 Volume 1 Class 2 - 9	**Section B Structure** B1D4 Structural Resistance (j) Roof construction (except in cyclonic areas): (iv) Metal roofing: AS 1562.1. **Section F Health and Amenity** F3D2 Roof Coverings A roof must be covered with – (b) metal sheet roofing complying with AS 1562.1. **F3D5 Wall Cladding** (1) External wall cladding must comply with – (c) Metal wall cladding: AS 1562.1.				
National Construction Code 2022 Volume 2	**Section H Class 1 and 10 Buildings** H1D7 Roof and wall cladding (2) H1P1 is satisfied for sheet roofing if it complies with – (a) Metal Roofing (i) AS 1562.1; (Extra considerations apply for cyclonic environments) (5) H1P1 is satisfied for a metal wall cladding if it is designed and constructed in accordance with AS 1562.1.				
National Construction Code 2022 ABCB Housing Provisions	**Part 7.2 Sheet Roofing** 7.2.2 Corrosion Protection Table 7.2.2a: Minimum metal coating in accordance with AS 1397				
Substrate	AS 1397:2021 (G300, G500, G550)				
Metal Coating	AS 1397:2021 (AM100)			AS 1397:2021 (AM150)	AS 1397:2021 (AM125)
Paint Coating	AS/NZS 2728:2013			AS/NZS 2728:2013	N / A
Colours	COLORBOND® steel: 22 colours COLORBOND® steel Matt: 6 colours (Custom colours are also available)	6 colours (Custom colours are also available)	1 colour (Whitehaven®)	7 colours (check availability with suppliers. Custom colours are also available)	N / A
Thermal Performance Solar Absorption (SA) §	0.28 - 0.95 (value depends on colour)		0.23	0.33 - 0.73 (value depends on colour)	Variable††
Thermal Performance Solar Reflective Index (SRI) ¶¶	-1 to 88 (value depends on colour)		95	27 to 81 (value depends on colour)	
AS 1530.1:1994	Substrate only				
AS 1530.3:1999	Yes				
NCC Non-Combustible Product Declaration	No				
NCC Non-Combustible Product Concession	Yes				
AS 5637.1:2015	Group 1 (Avg Specific Extinction Area = 30.3m²/kg)	N / A			
Other					
Warranty Availability*	Yes	Yes	Yes	Yes	Yes
Possible Point Of Production	Westernport, VIC Port Kembla, NSW Erskine Park, NSW Acacia Ridge, QLD				Westernport, VIC Port Kembla, NSW
Manufactured at an ISO 14001: 2015 Certified Facility	Yes	Yes	Yes	Yes	Yes
Made using steel from Port Kembla Steelworks, a ResponsibleSteel™ certified site	Yes				
Environmental Product Declaration (EPD) †	Yes	Yes	Yes	Yes	Yes
Global Greentag Greenrate™	Yes	Yes	Yes	Yes	Yes
Can contribute to Green Building Rating Scheme ‡	Yes	Yes	Yes	Yes	Yes
Steel Sustainability Australia – Verified Steel Manufacturing Supplier and Verified Product	Yes	Yes	Yes	Yes	Yes

For product datasheets and technical bulletins visit steel.com.au/library

Application	Rainwater Goods			Fencing	Controlled Environments
Product Brands	Colorbond®	Colorbond®	Zincalume®	Colorbond®	Colorbond®
Products	COLORBOND® steel, COLORBOND® steel Matt	COLORBOND® Ultra steel	ZINCALUME® steel	COLORBOND® steel	COLORBOND® Intramax® steel
Typical Environments	> 200m from all marine	> 100m from all marine	> 200m from all marine	> 1000m from breaking surf > 500m from calm marine	For thermally and hygienically sensitive internal environments
Australian Standards (Product)	AS 1397:2021 AS/NZS 2728: 2013 (for prepainted products)			AS/NZS 2728:2013	AS 1397:2021 AS/NZS 2728:2013
Australian Standards (Application)	AS/NZS 2179.1:2014 AS/NZS 3500.3:2021			N / A	N / A
National Construction Code 2022 Volume 1 Class 2 - 9	**Section F Health and Amenity** F1D3 Stormwater Drainage Stormwater drainage must be designed and constructed in accordance with AS/NZS 3500.3.			Refer to state legislation & local government requirements	Requirements vary with construction type
National Construction Code 2022 Volume 2	**Section H Class 1 and 10 Buildings** H2D2 Drainage Performance Requirement H2P1 is satisfied for drainage if it is designed and constructed in accordance with AS/NZS 3500.3.			Refer to state legislation & local government requirements	N / A
National Construction Code 2022 ABCB Housing Provisions	**Part 7.4 Gutter and downpipes** 7.4.2 Materials Gutters, downpipes and flashings must— (a) be manufactured in accordance with AS/NZS 2179.1 for metal components;			Refer to state legislation & local government requirements	N / A
Substrate	AS 1397:2021 (G300, G550)			AS 1397:2021 (G550)	AS 1397:2021 (G300)
Metal Coating	AS 1397:2021 (AM100)	AS 1397:2021 (AM150)	AS 1397:2021 (AM125)	AS 1397:2021 (Z275 & AM100)	AS 1397:2021 (Z275)
Paint Coating	AS/NZS 2728:2013	AS/NZS 2728:2013	N / A	AS/NZS 2728:2013	AS/NZS 2728:2013
Colours			N / A	15 colours	1 colour (Coolroom White)
Thermal Performance Solar Absorption (SA) §	N / A	N / A	N / A	N / A	N / A
Thermal Performance Solar Reflective Index (SRI) ¶	N / A	N / A	N / A	N / A	N / A
AS 1530.1:1994	Substrate only			Substrate only	Substrate only
AS 1530.3:1999	Yes			Yes	Yes
NCC Non-Combustible Product Declaration	No			No	No
NCC Non-Combustible Product Concession	Yes			Yes	Yes
AS 5637.1:2015	N / A			N / A	Refer to panel manufacturer for advice
Other					HACCP certified as food-safe and suitable for use in the construction of coolrooms and food preparation facilities
Warranty Availability*	Yes	Yes	Yes	Yes	Yes
Possible Point Of Production	Westernport, VIC Erskine Park, NSW		Westernport, VIC Port Kembla, NSW	Westernport, VIC Port Kembla, NSW Erskine Park, NSW	Westernport, VIC
Manufactured at an ISO 14001: 2015 Certified Facility	Yes	Yes	Yes	Yes	Yes
Made using steel from Port Kembla Steelworks, a ResponsibleSteel™ certified site	Yes			Yes	Yes
Environmental Product Declaration (EPD) †	Yes	Yes	Yes	No	Yes
Global Greentag Greenrate™	Yes	Yes	Yes	No	Yes
Can contribute to Green Building Rating Scheme ‡	Yes	Yes	Yes	Yes	Yes
Steel Sustainability Australia – Verified Steel Manufacturing Supplier and Verified Product	Yes	Yes	Yes	No	Yes

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Application	Structural Decking	Purlins	Light Gauge Steel Framing	Uncoated Structural Steel	
Product Brands	Deckform®	Galvaspan®	Truecore®	XLerplate®	RedCor®
Products	DECKFORM® steel	GALVASPAN® steel	TRUECORE® steel	XLERPLATE® steel (Structural Steel, Welded Beams, Plate)	REDCOR® weathering steel (Structural Steel, Welded Beams, Plate, Coil)
Typical Environments	Multi-storey Commercial & Residential	Commercial & Light Industrial enclosed applications	Residential & Commercial enclosed applications	Commercial & Residential Structures	Commercial & Residential Structures
Australian Standards (Product)	AS 1397:2021	AS 1397:2021	AS 1397:2021	AS/NZS 1594:2002 AS/NZS 1595:2014 AS/NZS 3678:2016 AS/NZS 3679.1:2016 AS/NZS 3679.2:2016	AS/NZS 1594:2002 AS/NZS 1595:2014 AS/NZS 3678:2016 AS/NZS 3679.1:2016 AS/NZS 3679.2:2016
Australian Standards (Application)	AS/NZS 2327:2017	AS 4100:2020 AS/NZS 4600:2018	AS 4100:2020 AS/NZS 4600:2018	AS 4100:2020 AS/NZS 4600:2018 AS/NZS 5131:2016 AS/NZS 2327:2017	AS 4100:2020 AS/NZS 4600:2018 AS/NZS 5131:2016
National Construction Code 2022 Volume 1 Class 2 - 9	**Section B Structure** B1D4 Structural Resistance Structural resistance of materials and forms of construction must be determined in accordance with the following (d) Composite steel and concrete: AS/NZS 2327.	**Section B Structure** B1D4 Structural Resistance Structural resistance of materials and forms of construction must be determined in accordance with the following (c) Steel Construction: (i) Steel structures: AS 4100. (ii) Cold-formed steel structures: AS/NZS 4600. (iii) Residential and low-rise steel framing: NASH Standard – Residential and Low-Rise Steel Framing Part 1 or Part 2#. (i) Termite Risk Management (i) for the purposes of this provision, a primary building element consisting entirely of, or a combination of, any of the following materials is considered not subject to termite attack (A) Steel, aluminium or other metals.			
National Construction Code 2022 Volume 2	Refer ABCB Housing Provisions	**Section H Class 1 and 10 Buildings** H1D6 Framing (3) Performance Requirement H1P1 is satisfied for steel framing if it is designed and constructed in accordance with one of the following: (a) Residential and low-rise steel framing (i) Design: NASH Standard 'Residential and Low-Rise Steel Framing' Part 1. (ii) Design solutions: NASH Standard 'Residential and Low-Rise Steel Framing' Part 2. (b) Steel structures: AS 4100. (c) Cold-formed steel structures: AS/NZS 4600. (5) Performance Requirement H1P1 is satisfied for structural steel sections if it is designed and constructed in accordance with one of the following: (a) Steel structures: AS 4100. (b) Cold-formed steel structures: AS/NZS 4600.			
National Construction Code 2022 ABCB Housing Provisions	**Part 2.2 Structural Provisions** 2.2.4 The following must be used to determine the structural resistance of materials (j) Composite steel and concrete: AS/NZS 2327.	Refer NCC Vol. 2 H1D6 (3)		**Part 2.2 Structural Provisions** 2.2.4 The following must be used to determine the structural resistance of materials (h) Steel construction (including steel framing and structural steel members): H1D6	
Substrate	AS 1397:2021 (G550)	AS 1397:2021 (G450, G500, G550)		AS/NZS 1594:2002 AS/NZS 1595:2014 AS/NZS 3678:2016 AS/NZS 3679.1:2016 AS/NZS 3679.2:2016	
Metal Coating		AS 1397:2021 (Z350, Z450)	AS 1397:2021 (AM150)	N / A	
Paint Coating	N / A	N / A	N / A	N / A	
Colours	N / A	N / A	N / A	N / A	N / A
Thermal Performance Solar Absorption (SA) §	N / A	N / A	N / A	N / A	
Thermal Performance Solar Reflective Index (SRI) ¶	N / A	N / A	N / A	N / A	
AS 1530.1:1994	Substrate only	Substrate only	Substrate only	Yes	
AS 1530.3:1999	Yes	Yes	Yes	N / A	
NCC Non-Combustible Product Declaration	Yes (C2D10 Non-combustible building elements (5)(b) Steel, including metallic coated steel.)	Yes (C2D10 Non-combustible building elements (5)(b) Steel, including metallic coated steel.)	No	Yes (C2D10 Non-combustible building elements (5)(b) Steel, including metallic coated steel.)	
NCC Non-Combustible Product Concession	Yes	Yes	Yes	N / A	
AS 5637.1:2015	N / A	N / A	N / A	N / A	
Other				ACRS Steel Certification and ATIC Scheme 10	ACRS Steel Certification for hot rolled structural products
Warranty Availability*	Yes	Yes	Yes	N / A	
Possible Point Of Production	Port Kembla, NSW	Westernport, VIC Port Kembla, NSW	Westernport, VIC Port Kembla, NSW	Port Kembla, NSW Westernport, VIC	
Manufactured at an ISO 14001: 2015 Certified Facility	Yes	Yes	Yes	Yes	
Made using steel from Port Kembla Steelworks, a ResponsibleSteel™ certified site	Yes	Yes	Yes	Yes	
Environmental Product Declaration (EPD) †	Yes	Yes	Yes	Yes	Yes (WR350 grade only). Refer to XLERPLATE® steel EPD.
Global Greentag Greenrate™	Yes	Yes	Yes	Yes	Yes (WR350 grade only). Refer to GreenRate™ certificate for XLERPLATE® steel.
Can contribute to Green Building Rating Scheme ‡	Yes	Yes	Yes	Yes	
Steel Sustainability Australia – Verified Steel Manufacturing Supplier and Verified Product	Yes	Yes	Yes	Yes	No

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BlueScope

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For BlueScope product information and library

steelselect.com.au
For colours, specification tools and supplier's products

bluescopesteel.com.au/warranties
To activate or apply for a pre-approved warranty

Cover image: Western Sydney Stadium, Parramatta, New South Wales. Welded Beams and Columns made from XLERPLATE® steel.

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