

# KĀHU

## KĀHU EXPLAINED

Kāhu is a steel roofing and external wall cladding system. The Kāhu system comprises:

- › A long run steel sheet with a symmetrical profile
- › Associated design and installation information

Metalcraft fabricates the Kāhu sheets from steel manufactured by New Zealand Steel. This steel is supplied with different protective coatings which are designed to withstand conditions in specific New Zealand Corrosion Zones. Refer to NZ Steel's Environmental Categories Brochure at [www.nzsteel.co.nz/technical-resources](http://www.nzsteel.co.nz/technical-resources) for details.

Kāhu sheets are available in the following NZ Steel branded products:

- › Colorsteel® Endura®
- › Galvsteel®
- › Colorsteel® Maxx®
- › Zinalume®

In the following sizes:

- › Thicknesses: 0.4mm and 0.55mm
- › Width: Cover = 875mm Sheet = 950mm

And with the following profile dimensions:



## PURPOSE

Metalcraft Roofing supply the Kāhu system as a horizontal and vertical external wall cladding, and for roofs with a defined minimum pitch of 3 degrees.

## SCOPE OF USE

Metalcraft Roofing supply the Kāhu Roofing and External Wall Cladding system for use on commercial and residential buildings within the following scope:

### LOCATION:

- › In wind zones:
  - › Up to and including Extra High as defined by NZS-3604:2011.
  - › Subject to specific engineering, if the engineer has satisfied themselves that the product, pitch and fixings will meet the conditions.
- › In all climate zones as defined by NZS-3604:2011, subject to the limitations set out below (see limitations overleaf).
- › On buildings located within 1m of the relevant boundary, in respect of fire spread only.

### BUILDING:

- › On new buildings that have been designed and constructed to comply with the NZ Building Code (NZBC) using timber or steel framing.
- › On existing buildings using timber and steel framing where the designer and installer have satisfied themselves that the building is suitable for the intended building work.
- › In conjunction with a vapour permeable building wrap that has a permeability of 36g/m<sup>2</sup>/day of a vapour resistance of no more than 500MN/g.
- › In conjunction with a potable water collection system.



## VERSION:

*NOTE: Uncontrolled in printed format.*

## DATE:

**Name:** Frances Charles  
**Position:** National Sales & Marketing Mgr

Signed on behalf of: Metalcraft Roofing.

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.

## FURTHER INFORMATION

For further product assistance please contact:  
[www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)

To find your nearest Metalcraft Roofing branch visit [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)

## LIMITATIONS OF USE

### LOCATION:

- ▶ Kāhu may be used as a roof cladding system in exposure zones B, C & D as defined in Sec 4, NZS3604:2011. For use in "Microclimatic considerations," (as defined in Sec 4.2.4) refer to Metalcraft Roofing.
- ▶ Kāhu may be used as a wall cladding system in exposure zones B & C. Where Kāhu is to be used in exposure Zone D, then only Colorsteel® Endura® or Colorsteel® Maxx® may be used.

### BUILDING:

- ▶ Where Kāhu is used in an insulated building in conjunction with steel framing, a thermal break is required.
- ▶ Contact with other materials must be in accordance with Table 21 (E2/AS1), or compatible with the The New Zealand Metal Roofing Manufacturers Association Inc (NZMRM) Code Of Practice.
- ▶ Building height and design wind speed is limited by the Kāhu design load span tables (refer to: [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)).
- ▶ Where it is used as a roof cladding system, Kāhu sheet lengths of ≤40m must be installed on a roof with a minimum pitch of 3°. Kāhu sheet lengths of >40m but ≤60m must be installed on a roof with a minimum pitch of 4°.
- ▶ When installed vertically as a wall cladding, Kāhu may be direct-fixed up to a risk score of 12 when risk calculation relies on the E2/AS1 risk matrix methodology.
- ▶ When installed horizontally or vertically as a wall cladding, Kāhu must always be installed in conjunction with a drained cavity.

## PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Metalcraft Roofing requirements, the Kāhu Roofing and External Cladding system will comply with or contribute to compliance with the following provisions of the New Zealand Building Code:

## USEFUL INFORMATION

Refer to [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz) for information relating to:

- ▶ Technical information, drawings and specification.
- ▶ Specification of the correct fasteners.
- ▶ Care and maintenance.
- ▶ The Metalcraft Roofing warranty.

## NZ STEEL ASSURANCE

As the manufacturer of the steel from which Kāhu is fabricated, NZ Steel provides assurance that the steel:

- ▶ Has been manufactured in accordance with AS 1397-2001.
- ▶ Is coated in accordance with AS/NZS 2728:2013, or galvanized in accordance with AS/NZS 2312.2:2014.

## SOURCES OF INFORMATION:

- ▶ MBIE Acceptable Solutions
- ▶ AS/NZS-1397:2001 "Steel sheet and strip—Hot-dip zinc-coated or aluminium/zinc-coated"
- ▶ NZ Metal Roof and Wall Cladding Code of Practice (NZMRM) (V2.2)
- ▶ AS/NZS-1170:2004 "Structural design actions"
- ▶ AS/ NZS-2728:2013 "Prefinished/pre-painted sheet metal products for interior and exterior building applications"

## CONTACT INFORMATION

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Basis of compliance		
NZBC Clause	Means of compliance	Relevance
<b>B1 Structure</b> B1.3.1, B1.3.2, B1.3.3 (a, b, c, d, g, i)	<b>ACCEPTABLE SOLUTION</b> <b>B1/AS1</b>	<ul style="list-style-type: none"> <li>▶ AS/NZS 1397:2011</li> <li>▶ AS/NZS 1170:2002 (span tables)</li> </ul>
<b>B2 Durability</b> B2.3.1 (b)	<b>ACCEPTABLE SOLUTION</b> <b>B2/AS1</b>	<ul style="list-style-type: none"> <li>▶ Coated in accordance with AS/NZS 2728:2013. (NZ Steel claim) cited in E2/AS1</li> </ul>
<b>C3 Fire Affecting Areas Beyond the Fire Source</b> C3.4(a), C3.5, C3.7 (a)	<b>ACCEPTABLE SOLUTION</b> <b>C/AS2-C/AS7</b> <ul style="list-style-type: none"> <li>▶ Metals are non-combustible</li> </ul>	<ul style="list-style-type: none"> <li>▶ ISO5660 BRANZ (FH 6102-TT, dated 3/1/2017) (Material Group 1-S)</li> <li>▶ Steel non-combustible (refer para 5.8 C/AS2-C/AS7)</li> </ul>
<b>E2 External Moisture</b> E2.3.1, E2.3.2, E2.3.7 (a-c)	<b>ACCEPTABLE SOLUTION</b> <b>E2/AS1</b>	<ul style="list-style-type: none"> <li>▶ NZMRM Code of Practice (v2.2)</li> </ul>
<b>F2 Hazardous Building Materials</b> F2.3.1	<b>ALTERNATIVE SOLUTION</b> <ul style="list-style-type: none"> <li>▶ ColorCote safety data sheet</li> </ul>	<ul style="list-style-type: none"> <li>▶ Coating system is inert once dry</li> </ul>

Basis of compliance		
Other performance claims	Means of compliance	Relevance
Kāhu Roofing and External Cladding system will not contaminate potable water	<ul style="list-style-type: none"> <li>▶ AS/NZS 4020:2005</li> </ul>	<ul style="list-style-type: none"> <li>▶ Claimed by manufacturer: NZ Steel</li> <li>▶ BRANZ statement that metal roof suitable refer: <a href="http://www.level.org.nz/water/watersupply/mains-or-rainwater/harvesting-rainwater/">http://www.level.org.nz/water/watersupply/mains-or-rainwater/harvesting-rainwater/</a></li> </ul>

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