



## TECHNICAL MANUAL

### ULTRAWOOD Non-combustible Aluminium Cladding System\*

1. Introduction
2. Physical Properties
3. Fire Performance
4. Installation

#### 1.1 About This Manual:

This manual has been developed to effectively assist fabricators and contractors to work with ULTRAWOOD. Due to the uncontrollable conditions onsite and different methods of job scope, as well as the variable skills and judgment of installers and the quality of equipment, tools, etc, the suggestions and recommendations contained in this manual are provided without warranty. The information and recommendations herein are believed to be correct at time of publishing.

BLUECHIP reserves the right to revise the contents of this manual without prior notice. Any construction or use of the product must be in accordance with all local zoning and/or building codes and in accordance with the current NCC at the time of use. Except as contained in a written warranty certificate, the supplier does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.

#### 1.2 Company Background:

Founded in 2003 by five brothers, BLUECHIP has grown every year since to become one of Australia's leading suppliers of architectural building envelopes. BLUECHIP's product range covers the complete system from the structure out including all types of cladding materials, composite decking, sub-framing, insulation, waterproofing and fixings.

With offices in Sydney, Melbourne and Perth, BLUECHIP has supplied more than 3,000,000m<sup>2</sup> of materials to Australian projects since 2003. Our commitment to innovation and ongoing investment in R&D ensures BLUECHIP will continue to lead the market with BCA/NCC compliant facade solutions in the years ahead.

For architects and consultants, BLUECHIP's wide range of different materials and 'complete-system' approach enables the creation of inspiring high-performance facades. For builders and contractors, BLUECHIP's large local stock, well established supply chains and genuine appreciation for our clients means you can trust us to deliver as promised every time.

#### 1.3 Company Details:

Company: Blue Chip Group Pty Ltd  
ABN: 98 162 282 064  
Head Office: 16 Ashby Close, Forrestfield WA 6058  
Phone: 1300 945 123  
Email: [sales@bluechipgroup.net.au](mailto:sales@bluechipgroup.net.au)

**\*Please Note:** This document only covers ULTRAWOOD Cladding Profiles and does not cover ULTRAWOOD Batten Profiles. For relevant ULTRAWOOD Batten information, please refer to the latest ULTRAWOOD Battens Technical Manual and Install Details available here:

<https://www.bluechipgroup.net.au/timber-cladding-perth/non-combustible-timber-cladding-perth.html>



## 1.4 Product Description:

### Non-Combustible Timber Cladding & Battens

ULTRAWOOD is an innovative new generation exterior cladding product made from highly durable marine-grade aluminium and factory pre-finished using the latest matt-effect technology in 38 realistic timber colours. Deemed-to-satisfy non-combustible in accordance with the BCA/NCC, it has been fully tested in Australia by CSIRO achieving excellent results to AS 1530.1 and AS 1530.3. Eco-friendly, low maintenance and incredibly durable, ULTRAWOOD is ideal for type A and B construction projects such as high-rise apartments and bushfire rated areas which require non-combustible cladding.

### AS 1530.1 Non-Combustible

ULTRAWOOD is a non-combustible cladding product in accordance with the relevant requirements of the NCC/BCA and has been tested by NATA accredited CSIRO to AS 1530.1 and AS 1530.3.

### Intelligent Profile

The ULTRAWOOD profile has been intelligently designed to provide excellent usability such as multi-angle mating and it has double swarf-free contact points for superior consistency and weatherproofing.

### Very Light-Weight

Compared to many other timber cladding products, ULTRAWOOD is a very light-weight system weighing only 8.75kg per square metre offering potential structural advantages and cost savings

### Natural Aesthetics

The beautiful looking finish on the ULTRAWOOD boards is possible because the latest matt-effect coating technology provides incredible richness and variation along with outstanding long-term durability.

### Marine Grade Durability

Along with the marine-grade aluminium base material, the matt-effect ULTRAWOOD coating has undergone extensive durability testing and has been proven to perform in the harsh Australian conditions.

### Easy Installation

Supplied in custom lengths, ULTRAWOOD has 155mm cover per board making it fast and easy to install to a simple sub-frame at 600mm centres using secret-fix screws and a colour-matched trim system.

### Manufacturer's Warranty

Despite the undisputed durability of high-grade aluminium, ULTRAWOOD cladding offers a 10yr manufacturer's warranty on all different finishes for peace of mind and guaranteed performance.

### Colour-Matched Trims

The ULTRAWOOD system is completed using the CLADTRIM click-together trim system covering all common construction details and finished in the same matt-effect coating for a perfect match.

## 1.5 More Information:

<https://www.bluechipgroup.net.au/timber-cladding-perth/non-combustible-timber-cladding-perth.html>



## 2.1 Technical Data – Physical Properties:

ITEM	TEST STANDARD	UNIT	RESULT
Alloy Grade / Temper	Actual	-	6063 T5
Material Density	Actual	Kg/m <sup>3</sup>	2,709
Magnesium Content	Actual	%	0.7
Silicon Content	Actual	%	0.4
Thermal Expansion	Actual	mm/m/°C	0.025
Weight per Lineal Metre			
▪ 155 x 18mm Groove	Actual	Kg	1.321
▪ 155 x 25mm Cabin	Actual	Kg	1.437
▪ 205 x 48mm Seam	Actual	Kg	2.028
▪ Base Clip for Battens	Actual	Kg	0.507
▪ 50 x 50mm Batten	Actual	Kg	1.062
▪ 100 x 50mm Batten	Actual	Kg	1.618
▪ 150 x 50mm Batten	Actual	Kg	2.281
▪ 200 x 50mm Batten	Actual	Kg	3.763
▪ 250 x 50mm Batten	Actual	Kg	5.252
▪ 300 x 50mm Batten	Actual	Kg	6.065

### 3.1 Deemed-to-Satisfy Non-combustible:

ULTRAWOOD is deemed-to-satisfy non-combustible as per the requirements of the NCC 2019, clause C1.9(e)(v) and NCC 2022, clause C2D10(6)(e) making it compliant for use as external cladding or internal lining on any building of types A, B & C construction, classes 2-9.

### 3.2 Fire Performance – Timber-look Coating:

ITEM	TEST STANDARD	UNIT	RESULT
Non-combustible	AS 1530.1	CSIRO	Pass
Non-combustible (DTS) – NCC 2019	NCC C1.9(e)(v)	CSIRO	Pass
Non-combustible (DTS) – NCC 2022	NCC C2D10(6)(e)	CSIRO	Pass
Ignitability Index	AS 1530.3	AWTA	8
Spread of Flame Index	AS 1530.3	AWTA	0
Heat Evolved Index	AS 1530.3	AWTA	0
Smoke Developed Index	AS 1530.3	AWTA	4
Group Number	AS 5637	AWTA	1

### 3.3 Fire Performance – Standard Powder Coating Colours:

ITEM	TEST STANDARD	UNIT	RESULT
Non-combustible	AS 1530.1	CSIRO	Pass
Non-combustible (DTS) – NCC 2019	NCC C1.9(e)(v)	CSIRO	Pass
Non-combustible (DTS) – NCC 2022	NCC C2D10(6)(e)	CSIRO	Pass
Ignitability Index	AS 1530.3	CSIRO	0
Spread of Flame Index	AS 1530.3	CSIRO	0
Heat Evolved Index	AS 1530.3	CSIRO	0
Smoke Developed Index	AS 1530.3	CSIRO	3
Group Number	AS 5637	AWTA	1



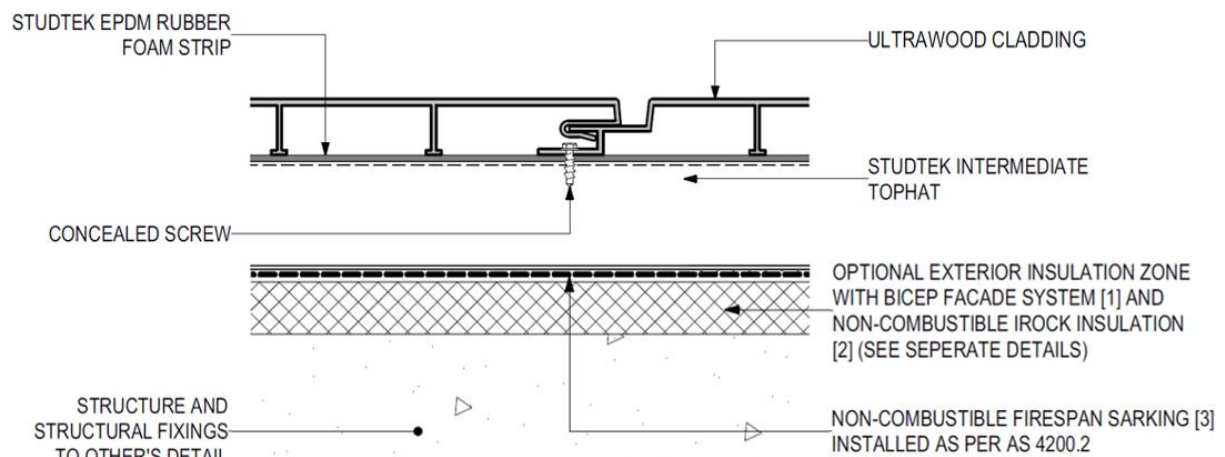
#### 4.1 Installation:

ULTRAWOOD is installed either vertically or horizontally using secret-fix screws to STUDTEK steel top-hats or timber framing over AS 4200.1 compliant sarking which has been installed as per AS 4200.2 to satisfy the deemed-to-satisfy (DTS) weatherproofing requirements in accordance with NCC 2022, clause F3D3. Use CLADTRIM colour-matched trims supplied by Blue Chip Group Pty Ltd or custom trims and flashings, supplied by others, for all junctions and joint details, sealed with PROLASTIK sealant as required to ensure weatherproofing.

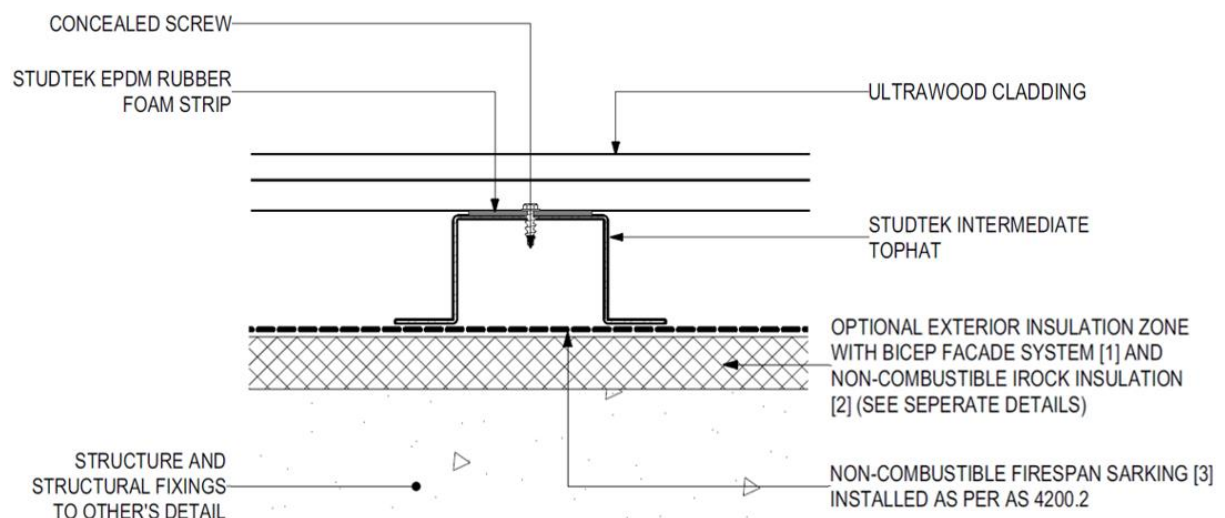
#### Installation Details:

The panels shall be fabricated and installed in accordance with the most recent version of the ULTRAWOOD Cladding Install Details which are available online at [www.bluechipgroup.net.au](http://www.bluechipgroup.net.au) or by emailing [sales@bluechipgroup.net.au](mailto:sales@bluechipgroup.net.au) or by calling **1300 945 123**. (Only PDF installation details are available online. For CAD/DWG installation details email or call as above).

#### Vertical Installation (Typical Plan Detail):



#### Horizontal Installation (Typical Plan Detail):





## 4.2 Acceptable System Components:

### Insulated Façade System - OPTIONAL:

For an optional insulated façade system use BICEP façade brackets and support profiles with IROCK non-combustible insulation to achieve an engineered exterior insulation zone.



### Sarking:

In climate zones 1-3, sarking shall be FIRESPAN DTS non-combustible vapour barrier and in climate zones 4-8, sarking shall be FIRESPAN Class 4 vapour permeable membrane, as per the requirements of NCC 2022 clause F8D3. Install and tape sarking in accordance with AS 4200.2 behind all cladding areas for DTS weatherproofing compliance as per NCC 2022 clause F3D3.



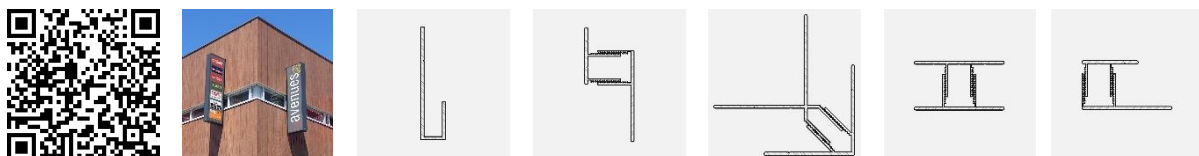
### Sub-framing System:

The sub-framing system shall be STUDTEK steel top-hats attached to the main structure (or BICEP Façade System) in a manner to ensure all applied loadings to the cladding is transferred back to the main structure. Size and spacing of top hat members shall be determined according to applied loads and deflection limitations for any given project. Top-hat centres shall be maximum 600mm centres unless otherwise approved by a structural engineer.



### Colour-matched Trim Profiles:

Shall be CLADTRIM aluminium trims supplied by Blue Chip Group Pty Ltd and colour-matched to the selected cladding finish. Install and seal with PROLASTIK sealant in accordance with this manual to ensure weatherproofing.



### Dissimilar Materials:

Where two surfaces of dissimilar material come into contact, such surfaces shall be separated with a layer of PVC or Polyethylene tape, or powder-coat finish as required to ensure against bimetallic corrosion.





### Joint & Trim Sealant:

All penetrations and junctions shall be sealed with PROLASTIK matt NC silicone sealant supplied by Blue Chip Group Pty Ltd and installed over closed cell foam backing rod, as applicable, to manufacturer's specifications and as required for weather-proofing compliance.



### Fixings:

Fasteners, including concealed screws, nuts, bolts, and other items required for connecting aluminium to aluminium or aluminium to steel shall be in accordance with AS 3566.2 and of a type to suit its application and exposure conditions.

- Class 1/2: Internal applications.  
Class 3: External applications, moderate industrial and marine applications.  
Class 4: Severe marine applications

### 4.3 General Fixing & Maintenance Instructions:

- ULTRAWOOD can be installed either horizontally or vertically.
- ULTRAWOOD is to be secret fixed using suitable screws over AS 4200.1 compliant sarking which has been installed as per AS 4200.2 to satisfy the deemed-to-satisfy (DTS) weatherproofing requirements in accordance with NCC 2022, clause F3D3.
- ULTRAWOOD wood-look decors are equivalent to natural wood surfaces meaning that different grain textures are possible within a single shipment (plain and/or mottled). In order to obtain a uniform overall finish, we recommend considering this fact and, for example, laying out the cladding profiles before starting with the installation to ensure satisfactory appearance.
- ULTRAWOOD boards should be at ambient temperature prior to any cutting or installation.
- ULTRAWOOD should be acclimatized as required onsite to ensure temperature equilibrium with the surrounding environment prior to installation.
- All ULTRAWOOD boards should be ordered approx. 50mm longer than required onsite to allow for trimming at each board end to remove 20-25mm of uncoated or blemished material resulting from the production and coating process.
- ULTRAWOOD can be cut to length with standard high-quality aluminium cutting tools. Recommended blades are a specialised aluminium saw blade with a high number of teeth. Test any proposed blade first for acceptable results before mass cutting.
- When installing ULTRAWOOD, leave a minimum 10mm gap at the end of the cladding board between all trims, joints, butt joints, end stops and between any permanent structure and/or penetration to allow for thermal expansion and contraction.



### General Fixing & Maintenance Instructions (Continued):

- The sub-frame shall be level and aligned and installed perpendicular to cladding direction at maximum 600 mm centres. The sub-frame shall be minimum 15mm thick to provide adequate ventilation behind the cladding. The back-ventilation cross-section must not be regularly diminished by battens or other objects. The ventilation inlets and outlets must have consistent widths of at least 15mm to avoid excessive heat transfer into the building. Alternatively install onto insulated exterior cladding zone using BICEP façade system and IROCK insulation.
- The ULTRAWOOD cladding shall be fixed at maximum 600 mm centres by inserting screws through the grooved v-slot in the cladding boards. Drivers should be adjusted to a low or medium torque and screws should not be overdriven.
- The CLADTRIM corner profiles shall be installed as required using PROLASTIK sealant , suitable structural adhesive such as Sikaflex 11FC and flashings as required to ensure structural integrity and weatherproofing.
- To install the CLADTRIM colour-matched extrusions the base section is to be fixed to the wall or sub-frame first and then after ULTRAWOOD cladding is installed, sealant and structural adhesive should be applied as required to ensure weatherproofing before the external CLADTRIM piece is clipped into place until it is flush with the cladding face.
- The cladding shall be installed as per the latest version of the ULTRAWOOD Install Details allowing for any site-specific expansion and contraction requirements and using colour-matched CLADTRIM extrusions for all junctions and abutments along with custom trims and flashings supplied by others as required, to ensure weatherproofing.
- The cladding shall be installed as per the latest version of the ULTRAWOOD Draft Specification allowing for any site-specific requirements to ensure the desired long-term performance and aesthetics are achieved.
- The cladding system shall be installed in accordance with the latest version of the Australian NCC/BCA as well as any other government regulations or requirements at any given time and for any project.
- The supporting wall must be watertight including sarking installed as per NCC 2022 clause F3D3 and there must be ventilation / drainage at the base of the wall.
- ULTRAWOOD use is limited to non-cyclonic wind categories (N1-N6) and should not be used in cyclonic locations without additional site-specific design engineering and structural assessment relative to any given project to ensure suitability and NCC compliance.
- The cladding shall be cleaned and maintained as required to avoid any accumulation of surface contaminants and to maintain the desired performance and appearance.