

# Introducing WOOD ELEMENTS...

Welcome, to WOOD ELEMENTS a hardwood cladding solution manufactured by Hurford Wholesale, one of the oldest companies in the Australian timber manufacturing business that is still family owned and operated.

WOOD ELEMENTS brings natural style to any exterior surface, whether as an individual feature or an entire façade.

Only the highest quality and naturally durable species are used in the external range of WOOD ELEMENTS. These included the Australian classics like Spotted Gum, Blackbutt & Ironbark that are sought after around the world for their strength, durability and style.

All the timber species used for the external use are rated Durability Class 1 under Australian Standard AS 5604-2005, which give these species the highest possible life expectancy ranking – greater than 40 years

WOOD ELEMENTS is a complete solution for any wall, offering not just the cladding but all the detailed trims required to finish off the project and ensure a watertight result.

Using our expertise in drying and machining hardwoods and our detailed designs enables us to manufacture not only an incredibly beautiful cladding, but also a precision piece of timber suitable for all the ELEMENTS under the Australian sun.

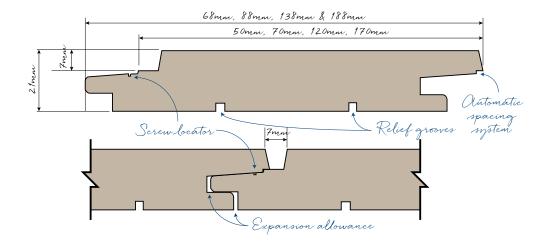
WOOD ELEMENTS can be used externally utilizing the highly durable Australian species or internally where the addition of American White Oak is also available to give a modern crisp look.





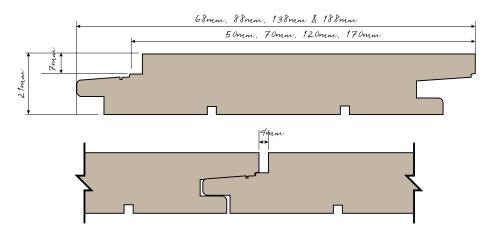
# Designer profiles...

WOOD ELEMENTS profiles collective features include; a straight-line edging process to ensure the cladding is machined to a fine tolerance and is extremely straight; relief grooves which are designed to take the stress out of the cladding, reducing the effect of warping and cupping; a specially designed ridge locater connects with the overlap line providing an effortless straight-line finish, simultaneously controlling the expansion allowance for any timber movement.



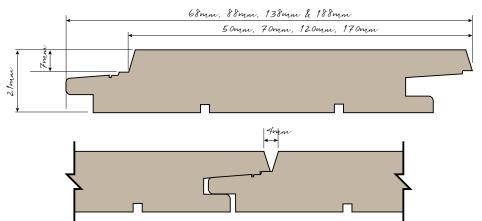
#### Coulee

Following a traditional shadowline profile, Coulee is about flow. The contemporary shadowline can be installed in either vertically or horizontally. This open profile enables water to drain away, ensuring a barrier to the wall.



#### Flume

With its narrow channel, Flume creates a clean square edged pencil shadowline for crisp definition between each board.



#### Ravine (internal use)

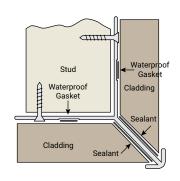
A profile with a deep escarpment creating a distinctive "V" shaped ravine. The deep "V" shadowline will bring sophisticated clean lines to any interior.

# Designer corner details...

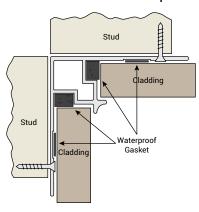


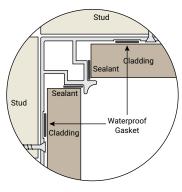
WOOD ELEMENTS trims provide a streamline finish and play an integral part in ensuring a water tight finish. All aluminium trims are factory fitted with waterproof gaskets\*, designed to decrease the on-site sealing process, and delivery of loose materials. Satisfying different design aspects WOOD ELEMENTS trims are available in both traditional matching timber and modern anodised aluminium. A chromate treated aluminium option is also available for powder coating.

#### **Aluminium External Corner Stop**



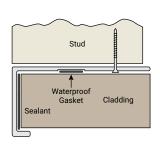
#### **Aluminium Internal Corner Stop**



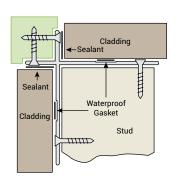


(12 x 10mm inner foam gaskets optional, alternative sealant option)

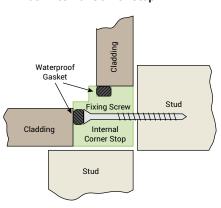
#### Aluminium End Stop L



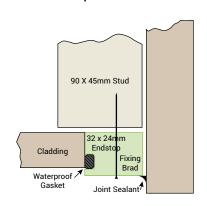
#### **External Cross With Timber Corner**



#### **Timber Internal Corner Stop**



#### **Timber End Stop**



<sup>\* 9</sup>mm x 1.6mm gaskets are factory fitted. Additional foam gaskets, to form second moisture barrier, are available in rolls for on-site installation, or alternative sealant method can be implemented.



## Size & species...

Sizes	68 x 21mm	88 x 21mm	138 x 21mm	188 x 21mm
Cover	50mm	70mm	120mm	170mm



#### Blackbutt - Eucalyptus pilularis

Blackbutt is a species that grows in abundance in the coastal forests in New South Wales and Southern Queensland. The common name is derived from the distinctive black, charcoal look that is only on the base of the trunk. The timber is renowned for both its strength and versatility of application. Blackbutt is a straight grained timber, with a warm nutty hue which will compliment a range of designs where a lighter neutral palette is required.

Dry Density	900kg/m <sup>3</sup>
Modulus of rupture	144 MPa
Natural Durability	Class 1
Bush Fire Rated / BAL	Yes / 29



#### Ironbark - Eucalyptus paniculata, Eucalyptus drepanophylla

Ironbark offers a large variety of colour from dark chocolate to nutty honey with some dark reddish brown. Ironbark has an interesting tight cathedral grain pattern. Recognised as one of the hardest and most durable hardwoods available in the world, Ironbark is an extremely hardwearing timber that makes it perfect for external or internal applications.

Dry Density	1120kg/m <sup>3</sup>
Modulus of rupture	181 MPa
Natural Durability	Class 1
Bush Fire Rated / BAL	Yes / 29*



#### Spotted Gum - Corymbia maculate, Corymbia citriodora

Spotted gum is a large native hardwood that is grown in a variety of forest types along the NSW coastal strip into Queensland. The word "spotted" refers to large spot like features that form on the tree as it sheds its bark in strips.

Spotted Gum is a rich individual timber, desired by architects and designers the world over, particularly for its striking backsawn grain structure, attractive fiddleback and vibrant colour palette.

Dry Density	950kg/m <sup>3</sup>
Modulus of rupture	150 MPa
Natural Durability	Class 1
Bush Fire Rated / BAL	Yes / 29



#### American White Oak - Quercus alba (Interior only)

American White Oak is a popular species due to its interesting and pronounced grain pattern. American White Oak is also a species that takes stain extremely well, meaning that a multitude of colours can be achieved with little fuss. American White Oak is grown predominantly on the East Coast of the United States. The name "White" Oak refers to the bark of the tree which is a whitish, ash grey colour. All the White Oak raw material that Hurfords source is from reputable sawmills that practice sustainable forestry.

Dry Density	/50kg/m³
Modulus of rupture	105 MPa
Natural Durability	Class 4
Bush Fire Rated / BAL	No / na

# Design elements & fixings



Extreme care has been taken in all aspects of WOOD ELEMENTS Refined Architectural Hardwood Cladding. From the environment to milling and drying, to the profile and trim design features, the species selection, right down to the finishes and accessories. Each element plays an important role in the performance of the cladding system.

# DOUBLE DRIED TECHNOLOGY

All the timber used to manufacture WOOD ELEMENTS is air dried for up to 12 months to bring the moisture content down to "fibre" saturation. From this point the timber is kiln dried using double drying technology, developed by Hurfords to ensure significant added stability. This produces a finished product with a very narrow moisture variation.

# STRAIGHT-LINE DRESSED

When timber is milled and dried it builds stress and force, which translates into spring and bow. Steps can be taken during this process to limit the amount of bend in a board, but it can't be totally eliminated at this stage. Hurfords uses a process to straighten the boards post drying to ensure the boards are straight and stay straight. This ensures that WOOD ELEMENTS can be easily installed and all shadowlines remain as they have been designed – straight.

#### AUTOMATIC SPACING SYSTEM

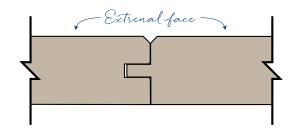
The Automatic Spacing System allows expansion to be placed between the boards, which is automatic and doesn't require any special tools or spacers to get right. The specially designed ridge locator controls the expansion allowance and in addition helps with concealing the cladding screw if the boards were to lose moisture. The expansion is designed to take out any stress caused if the boards absorb or lose moisture.

# MOISTURE SYSTEM

WOOD ELEMENTS aluminium trims feature a factory fitted seal, the foam gaskets compress and expand with timber movement, an extra safeguard against the Australian storm season. Factory fitted gaskets aid in decreasing the on-site sealing process. WOOD ELEMENTS Moisture Barrier System does not eliminate the need for good building practice and meeting the Building Code of Australia.

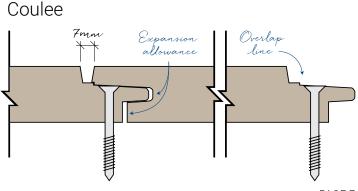
#### ENDITAM

Utilising a specially developed end match system for external use WOOD ELEMENTS endmatch profile has a micro bevel edge designed to encourage water to drain away from the join. End matching the product means the boards can be fixed



mid stud, eliminating the need to dock and create volumes of waste, saving up to 10% of the product that previously would have been thrown away. Not only does this save costs, it's a better for our environment with less resource being used.

WOOD ELEMENTS is a cladding that has been designed with concealed fixing in mind. Using either a stainless or galvanized 8g square drive screw along the pre machined "screw location" line enables the board to slip over the secured row quickly and easily, creating a clear face finish.



# Design points

WOOD ELEMENTS is a natural product, a renewable resource, providing an environmental advantage over common building materials. Timber will only perform within the limits of its natural properties, when specifying, it's critical that the characteristics and properties of the timber are considered and determine how they will respond to the environment they are placed in.

WOOD ELEMENTS Australian Hardwoods are ideal for external cladding being naturally fire resistant and naturally durable.

#### **Timber Movement**

Timber is a hygroscopic product, which means that it will absorb or lose moisture depending on the environment it is placed in. When timber is placed in a high humidity (moist) environment it absorbs moisture and expands, oppositely when timber is placed in a low humidity (dry) environment it sheds moisture and shrinks. Although all Wood Element products are kiln dried it is important that local conditions are taken into account when planning.

Consider the level of sun exposure, wind, rainfall and humidity in the area. Identify any possibilities of extreme conditions and alter the designs to suit. Allowances made at design stage can avoid potential problems later on. Our cladding profiles allow for 2.5mm expansion and 7mm contraction which is sufficient for normal conditions.

#### Leaching

Leaching of tannins occur when timber is exposed to rain which may cause staining on surfaces in contact with the cladding. Directing water runoff, preparing timber prior to installation and maintaining the finish will help reduce any potential leaching.

#### **Water Proofing**

At design stage it's important to detect any potential water traps or ventilation issues that will increase the chances of the cladding being affected by moisture. WOOD ELEMENTS cladding profile and trim designs provide water diversions to decrease the chance of any sitting water, although, the Moisture Barrier System does not eliminate the need for good building practice and meeting the Building Code

of Australia. An appropriate waterproof flashing needs to be installed to ensure the installation is watertight.

#### **Bush Fire Attack Level**

In many parts of Australia, the construction of new buildings and additions to existing buildings will be assessed as being in a Bushfire Prone Area. The relevant Australian Standard AS 3959 provides for a range of Bushfire Attack Levels (BAL) for proposed construction. WOOD ELEMENTS range of Australian Native species are classified as naturally bush fire resistant, making them ideal for bush fire prone areas.

#### **Finishing Options**

Hurford Wholesale Factory prefinish – One coat of Feast Watson Traditional Timber Oil is applied to WOOD ELEMENTS prior to delivery. The factory pre-finish option eliminates the onsite pre-oiling process and costs.

Oils - Hurford Wholesale recommends applying a penetrative oil based finish; this will enhance and preserve the timbers natural colour, and help keep the timber nourished and hydrated. An oil finish protects the timber from moisture and UV radiation, reducing movement and further effects caused by sun exposure.

Stains & Paints - Transforming the timbers colour can be achieved by using a stain or paint to finish. The finish system will need to cater for any possible dimensional changes in the timber, Hurford Wholesale recommends seeking the manufactures advice before application.

Clear film - Unpigmented finishes including clean film finishes tend to have a limited life when exposed to UV-light. Unless strictly maintained, film finishes can be susceptible to trapping moisture, peeling and greying faster.

No finish – Any timber left uncoated and exposed to the direct or indirect sunlight will inevitably weather and fade/grey off. The rate is generally slow, though the life of the cladding may not be as long compared a finished and maintained façade.

#### **Feast Watson Finishes**



#### **TRADITIONAL TIMBER OIL - A**

deep penetrating, traditional oil based coating for decking and exterior timber. Traditional Timber Oil gives rich colour and preserves the natural look of timber.

Traditional Timber Oil weathers naturally and will not crack or peel. It is ideal for use on all exterior timber.

It's important
to know that variations
in colour and feature are normal.
It's the variation that gives timber
its natural beauty and appeal.

^ Read more www.as3959.com.au

## Maintenance



#### Maintenance

Considerations at design stage regarding the accessibility, positioning and finish should be discussed between the client and builder. The expected outcome will determine the level of maintenance required.

Australia has the highest UV rating, causing any timber left uncoated to turn a weathered silvery grey. This is due to the UV rays slowly degrading the surface and cellulose fibres in the timber, which in turn changes the natural colour.

The extent of maintenance can depend on two main points; 1. The type of

finish that's applied - All external coatings need to be applied and maintained in accordance with the manufacturer's recommendations. 2. The amount of additional protection the façade has from the weather including the degree of sun exposure

- Extra protection can include wide eaves, soffits, avoiding water traps, utilise balconies/ covered space or even glass panelling installed in front of the cladding.

For a minimal maintenance option, consider allowing WOOD ELEMENTS to weather naturally. Greying affects the surface of the timber, if a change

in appearance is decided WOOD ELEMENTS can be rejuvenated and finished to the new desired effect<sup>^</sup>. Hurford Wholesale recommends installing either Blackbutt or Spotted Gum as they both grey beautifully.

WOOD ELEMENTS requires no structural maintenance once installed correctly.

^ An extensive process may be required to prepare the surface for rejuvenating and finishing, depending on the degree in breakdown of the surface fibres.



## Recommended accessories



#### Stainless Steel Decking Screw

(Available from Hurford Wholesale)

Many types of wood can be processed without pre-drilling thanks to the drilling tip.

#### Small countersunk head with under head pockets

The head can be sunk very easily and cleanly with a small diameter. The under-head pockets pick up protruding chips.

#### **Grooved shaft**

Your advantage: Provides for additional screw strength as austenitic stainless steel (A2) cannot be hardened. This virtually eliminates the possibility of the screw tearing off.

#### **Drilling tip**

Your advantage: Splitting and tearing of the wood is prevented.



#### AW® drive 20

(Available from Hurford Wholesale)

Excellent snug fit of the bit in the screw drive, which allows the screw to be set very easily. Wobbling impacts and sliding of the bit from the screw is prevented when screwing in.



Sikaflex®-11FC

Sikaflex-11 FC is a one part, moisture curing, elastic joint sealant and multipurpose adhesive based on polyurethane for indoor and outdoor applications. Suitable as a joint sealant for vertical and horizontal joints, caulking between partitions, seam sealing, sealing in metal and wood construction and ventilation construction



#### Feast Watson - WOODCLEAN

A powerful, oxalic acid-based preparation treatment that aids the removal of oils, mould, stains and tannins from new and weathered timber. Ideal for rejuvenating grey, weathered timber.



**TRADITIONAL TIMBER OIL** - A deep penetrating, traditional oil based coating for decking and exterior timber. Traditional Timber Oil gives rich colour and preserves the natural look of timber.

Traditional Timber Oil weathers naturally and will not crack or peel. It is ideal for use on all exterior timber including decking, steps, fences, gates, posts and beams.



**TIMBER DECK & STAIN** - Timber & Deck Stain is a penetrating, semi-transparent exterior timber finish that adds rich colour and a subtle sheen to timber, highlighting the natural beauty of the timber grain.

The two coat system is ideal for transforming the colour of timber, or rejuvenating the colour of old, weathered timber.

# Architectural specification



#### **Architectural Specification**

PRODUCT NAME	WOOD ELEMENTS CLADDING
Profile Name:	Coulee, Flume & Ravine
Size:	68mm, 88mm, 138mm or 188mm X 21mm
Timber:	Blackbutt, Spotted Gum, Ironbark & American White Oak
Grade:	Prestige
Moisture Content:	Per AS2796.1
Fixing:	Concealed stainless steel 8g 50mm AW drive screw
Joining:	End Matched micro bevel
Trim – External Corner:	<ol> <li>Aluminium with fitted moisture proof gasket.</li> <li>Wood with moisture proof gasket.</li> </ol>
Trim – Internal Corner:	<ol> <li>Aluminium with fitted moisture proof gasket.</li> <li>Wood with moisture proof gasket.</li> </ol>
Trim – End Stop:	<ol> <li>Aluminium with fitted moisture proof gasket.</li> <li>Wood with moisture proof gasket.</li> </ol>
Pre Oiling:	Feast Watson Traditional Timber Oil (optional factory finish)
Finish:	2-3 coats of Feast Watson Traditional Timber Oil following installation
Product Sampling:	200mm long profile/species samples available.











Manufactured By:



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