



# The Essential Guide to **Timber Cladding**

Brookridge   
**Timber**

A Division of the Brookridge Group







**Brookridge Timber is a leading supplier of timber and timber related products, servicing the South West for more than 30 years. We offer customers environmentally sourced, quality timber products all produced in-house across a wide range of end uses.**

- National delivery
- Expert advice
- Range of species
- Standard range and bespoke profiles
- Full range of trims, reveals, cills and drips
- In house machining facilities
- In house preservative treatment and coating facilities
- Fire treatment to Euroclass B s1, d0

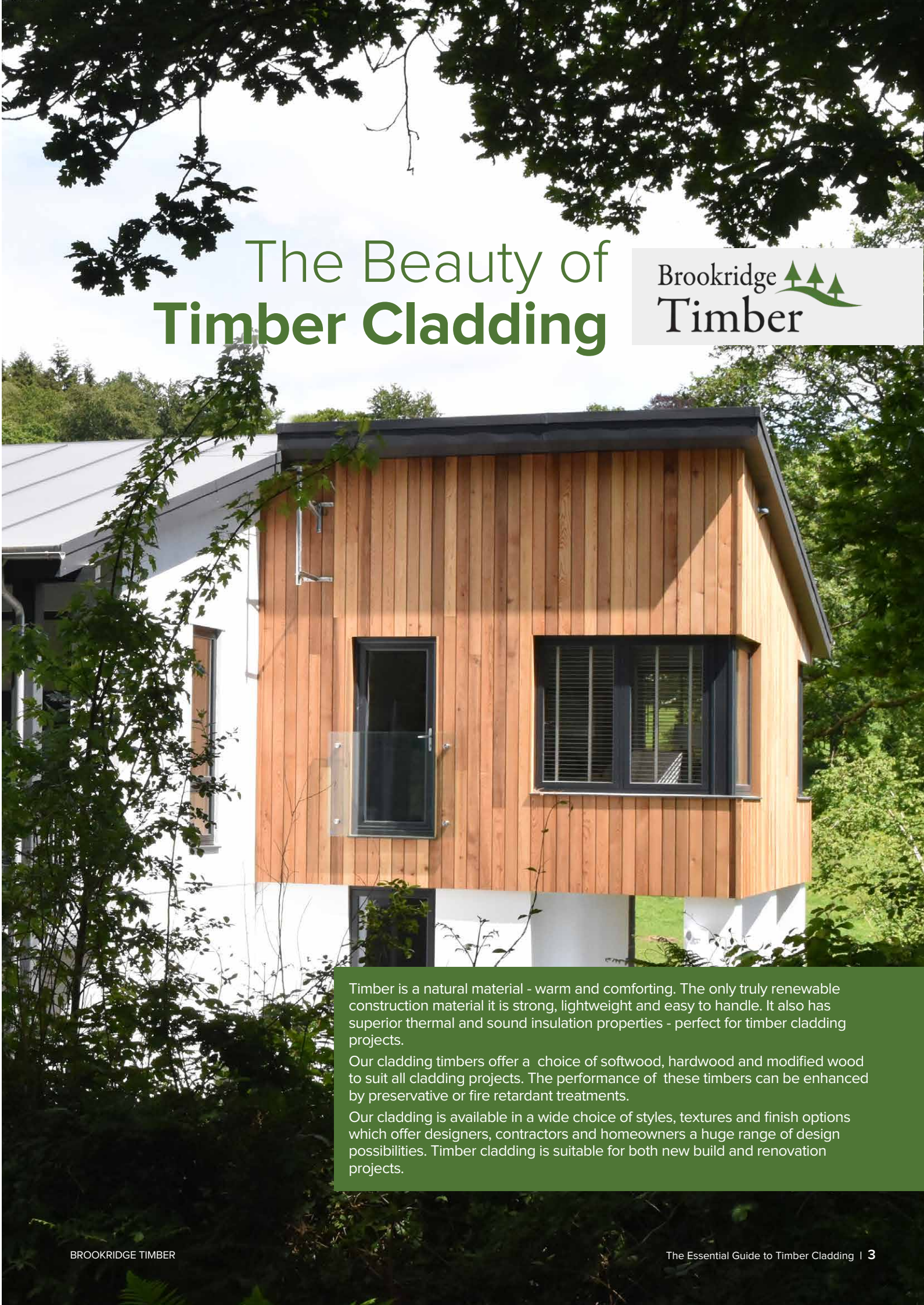


All Brookridge cladding timbers displaying this symbol have been pressure treated with TANALITH wood preservative. See page 23 for more information.

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# The Beauty of Timber Cladding



Timber is a natural material - warm and comforting. The only truly renewable construction material it is strong, lightweight and easy to handle. It also has superior thermal and sound insulation properties - perfect for timber cladding projects.

Our cladding timbers offer a choice of softwood, hardwood and modified wood to suit all cladding projects. The performance of these timbers can be enhanced by preservative or fire retardant treatments.

Our cladding is available in a wide choice of styles, textures and finish options which offer designers, contractors and homeowners a huge range of design possibilities. Timber cladding is suitable for both new build and renovation projects.





# Canadian Cedar

Imported Western Red Cedar is commercially grown in Canada and the Coastal Pacific North West of the USA. It is very slowly grown with a close fine straight grain and is predominantly a red/brown colour.

It is an extremely stable timber with a very low shrinkage factor and it is also resistant to warping and twisting, and it is naturally resistant to decay and insect attack. When exposed to rain and sunlight, Western Red Cedar will go an attractive silver grey

colour. Its low density makes Western Red Cedar an excellent material for thermal insulation. Rated as durable, the heart wood will give a service life in excess of 60 years out of ground contact.



TECHNICAL SPECIFICATION
BOTANICAL NAME <b>Thuja Plicata</b>
WOOD TYPE <b>Softwood</b>
ORIGIN <b>Western Canada and North America</b>
SUSTAINABILITY <b>From well managed forests usually PEFC</b>
DURABILITY (BS 8417) <b>Durable Class 2</b>
STABILITY <b>Very low shrinkage, warping and twisting</b>
DENSITY <b>330 to 390kg/m³</b>
THERMAL CONDUCTIVITY RATING (U VALUE) <b>0.11 W/(m K)</b>
REACTION TO FIRE: <b>D-s2, d0</b>
AVAILABILITY <b>Sawn, planed and profiled products in a wide range of thicknesses and lengths</b>
TYPICAL AVAILABLE GRADES IN THE UK <b>No. 2 Clear &amp; Better, No. 4 Clear</b>





# Western Red Cedar Shingles



Western Red Cedar Shingles are classified as a durable species and because of this durability they are widely favoured by architects and specifiers seeking an aesthetically pleasing, light weight alternative to traditional roof and wall tiles. The Cedar Shingles supplied by Brookridge Timber are 100% clear heartwood, they are 100% vertical grain and kiln dried. Typically, one bundle will cover 2.32m<sup>2</sup> with a 125mm exposure.

Western Red Cedar Shingles can be preservative treated against rot and insect attack. Treatment is highly recommended in areas of high humidity, tree proximity and rainfall. A 30 year warranty is offered with preservative treated shingles.

Western Red Cedar Shingles are generally maintenance free but to increase longevity, debris accumulating on the roof should be swept off with a stiff broom. Installation of a 100mm zinc strip exposed at the ridge will also aid in preventing moss growth.



TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Thuja Plicata</b>
WOOD TYPE	<b>Softwood</b>
ORIGIN	<b>Western Canada</b>
SUSTAINABILITY	<b>From well managed forests - PEFC</b>
DURABILITY (BS 8417)	<b>Durable Class 2</b>
STABILITY	<b>Very low shrinkage, warping and twisting</b>
DENSITY	<b>330 to 390kg/m<sup>3</sup></b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>0.11 W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>Mixed Widths approx 400mm long (15" – 16")</b>
COMMERCIALY AVAILABLE GRADES IN THE UK	<b>No. 1 Blue Label</b>

UK Western Red Cedar was commercially introduced into the UK in the 1950's. Although it is the same species as the imported Western Red Cedar, it is very different.

The UK grown variety is much faster grown and has regular sometimes large knots up to 50mm and when machined it can sometimes be slightly fluffy especially around knots. Care should be taken if using for a cladding to order a cladding

quality grade as there are lower grades available not suitable for this end use.

The UK grown Western Red Cedar is also only rated as moderately durable so if being used externally you should take advice on the best way to protect your cladding from decay and insect attack. If left untreated, when exposed to rain and sunlight, it will go an attractive silver grey colour.

## UK Western Red Cedar



TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Thuja Plicata</b>
WOOD TYPE	<b>Softwood</b>
ORIGIN	<b>UK</b>
SUSTAINABILITY	<b>From well managed forests - FSC®</b>
DURABILITY (BS 8417)	<b>Moderately Durable Class 3</b>
STABILITY	<b>Reasonably stable with a low shrinkage factor but can be prone to some warping and twisting</b>
DENSITY	<b>330 to 390kg/m<sup>3</sup></b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>0.11 W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>Sawn, planed and profiled products in a wide range of thicknesses and lengths</b>
TYPICAL AVAILABLE GRADES IN THE UK	<b>Air Dried Cladding Grade knots up to 50mm</b>







# Siberian Larch



Imported Siberian Larch comes from the Lake Baykal region of Siberia.

It has a consistent creamy yellow brown colour and is slow grown with a tight straight grain. Siberian Larch has a live tight intergrown knot formation and it contains a natural fungicide called arabinoglactan. When exposed to rain and sunlight, Siberian Larch will go an attractive silver grey colour.

It is a tough timber, dense, resinous and very stable in use when dry.

In the UK it is the most durable commercially available softwood species making is suitable for other applications such as decking as well as timber cladding.

Our Siberian Larch cladding timbers can be pressure treated for protection against decay and insect attack.

TECHNICAL SPECIFICATION	
BOTANICAL NAME	Larix Siberica
WOOD TYPE	Softwood
ORIGIN	Russia
SUSTAINABILITY	From well managed forests - FSC® and PEFC
DURABILITY (BS 8417)	Moderately Durable Class 3
STABILITY	Once dry it is stable with minimal movement in boards containing heartwood only
DENSITY	570-630kg/m³
THERMAL CONDUCTIVITY RATING (U VALUE)	0.15 W/(m K)
REACTION TO FIRE:	D-s2, d0
AVAILABILITY	Sawn, planed and profiled products in a wide range of thicknesses and lengths
TYPICAL AVAILABLE GRADES IN THE UK	Unsorted (I-III), Sawfalling (I-IV), Fourths (IV).





# UK Larch



UK Larch is a strong timber and has frequent dark knots up to 50mm in size. It has a high resin content and is not as stable as Siberian Larch as it can be prone to warping and twisting.

Care should be taken if using for a cladding to order a cladding quality grade as there are lower grades available not suitable for this end use.

UK grown Larch is also only rated as moderately durable so if being used externally you should take advice on the best way to protect your cladding from decay and insect attack. If left untreated, when exposed to rain and sunlight, it will go an attractive silver grey colour.

TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Larix Europaea</b>
WOOD TYPE	<b>Softwood</b>
ORIGIN	<b>UK</b>
SUSTAINABILITY	<b>From well managed forests - FSC®</b>
DURABILITY (BS 8417)	<b>Moderately Durable Class 3</b>
STABILITY	<b>Reasonably stable when dry with a low shrinkage factor but can be prone to some warping and twisting</b>
DENSITY	<b>470 - 550kg/m³</b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>0.14 W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>Sawn, planed and profiled products in a wide range of thicknesses and lengths</b>
TYPICAL AVAILABLE GRADES IN THE UK	<b>Air Dried Cladding Grade knots up to 50mm</b>

Waney edge UK Larch Cladding is the most traditional method of cladding a building. Boards are sliced straight from a log with each individual board having one waney edge with the bark on and one square edge.

A building is clad by overlapping boards by 40mm to 50mm leaving the Waney Edge showing on the bottom edge.

UK Larch is rated as moderately durable so if being used

externally you should take advice on the best way to protect your Waney Edge Cladding from decay and insect attack. Brookridge Timber can offer a preservative pressure treatment process which will give your cladding a 30 year warranty.

When exposed to rain and sunlight the Waney Edge Boards will go an attractive silver grey colour over time.

# Waney Edge UK Larch



TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Larix Europaea</b>
WOOD TYPE	<b>Softwood</b>
ORIGIN	<b>UK</b>
SUSTAINABILITY	<b>From well managed forests - FSC®</b>
DURABILITY (BS 8417)	<b>Moderately Durable Class 3</b>
STABILITY	<b>Reasonably stable when dry with a low shrinkage factor but can be prone to some warping and twisting</b>
DENSITY	<b>470 - 550kg/m³</b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>0.14 W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>19mm x 250mm x 3.6m</b>
COMMERCIALY AVAILABLE GRADES IN THE UK	<b>Air dried with a sawn finish</b>







# European Redwood



European Redwood is a very popular species for timber cladding, and is also known as Scots Pine, most of which is imported into the UK from Scandinavia. Scandinavia is known for its good quality slow grown redwood all of which comes from well managed forests. This species offers one of the

most cost effective solutions for timber cladding, and with its low moisture content and open cell structure it is an extremely good species to pressure treat for protection from decay and insect attack and can be supplied with a 30 year warranty when used out of ground contact.

European Redwood is also available in a wide variety of grades from 3/4 Side Clear material which is almost completely knotless to a lower grade sixth quality which has large frequent knots.



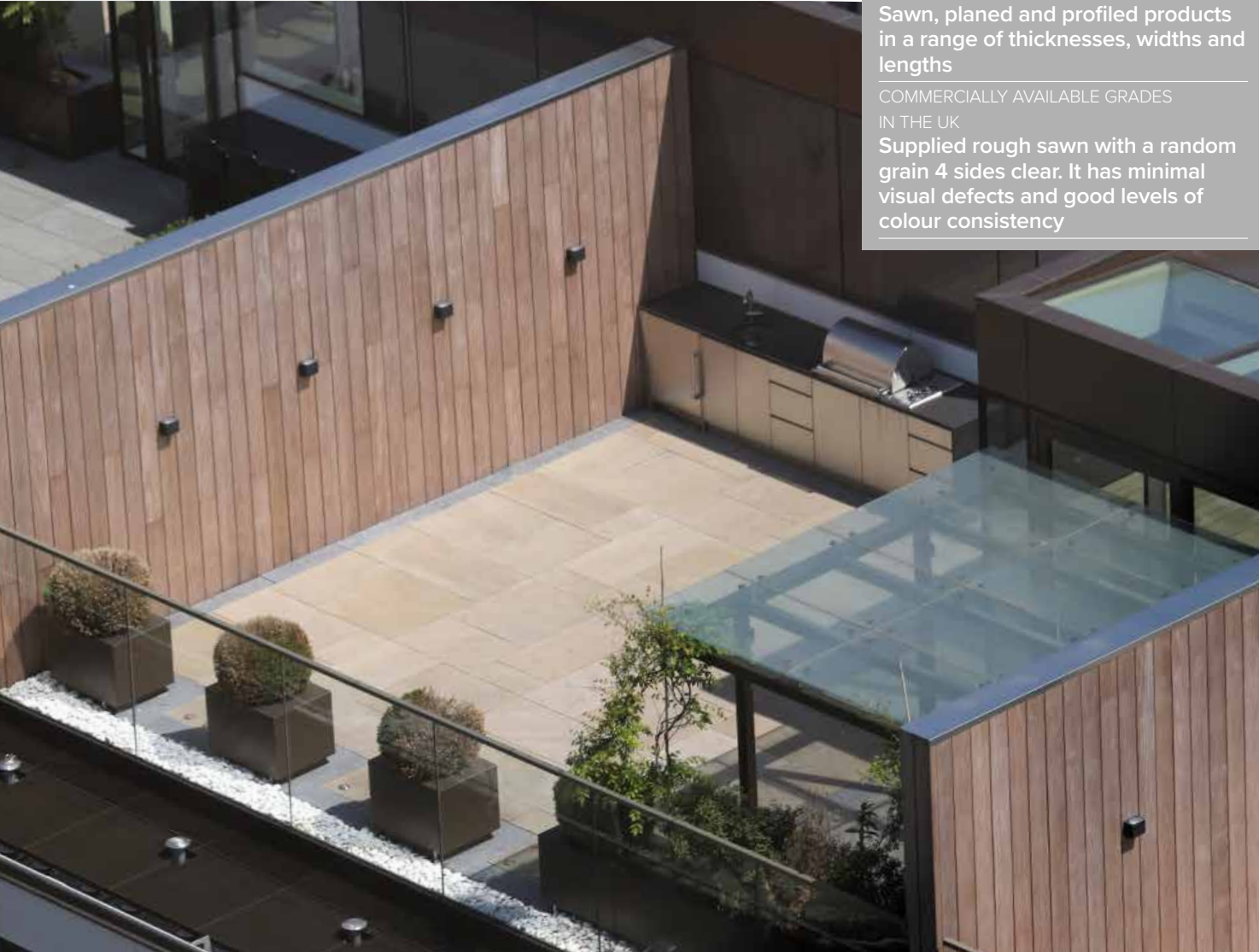
TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Pinus Sylvestris</b>
WOOD TYPE	<b>Softwood</b>
ORIGIN	<b>Scandinavia</b>
SUSTAINABILITY	<b>From well managed forests FSC® and PEFC</b>
DURABILITY (BS 8417)	<b>Slightly Durable Class 4</b>
STABILITY	<b>Once dry it is stable with minimal movement in boards containing heartwood only</b>
DENSITY	<b>510kg/m³</b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>0.13 W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>Sawn, planed and profiled products in a wide range of thicknesses, widths and lengths</b>
TYPICAL AVAILABLE GRADES IN THE UK	<b>3/4 Side Clear Unsorted, Fifths, Sixths</b>



# Lignia

Lignia is produced in the UK and is a softwood modified by firstly kilning and then treating with a formulated Phenol Urea Formaldehyde (PUF) resin. When it has cured the PUF resin condenses to produce a large chemically stable molecule locked into the wood. This process enhances the timber's properties increasing durability (50 years out of ground contact), greater stability, density and hardness with a consistently built in golden brown colour. Lignia is a real wood suitable for use indoors and outdoors and is pH neutral making it less likely to cause corrosion. Lignia has very low emissions of formaldehyde and meets European Emissions Standards E1. Lignia can be painted and performs well when coated.

TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Pinus Radiata</b>
WOOD TYPE	<b>Softwood</b>
ORIGIN	<b>New Zealand and Chile</b>
SUSTAINABILITY	<b>From well managed forests - FSC®</b>
DURABILITY	<b>Durable Class 1 MPA</b>
STABILITY	<b>Very stable with low shrinkage, warping and twisting</b>
DENSITY	<b>650kg/m³</b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>TBA W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>Sawn, planed and profiled products in a range of thicknesses, widths and lengths</b>
COMMERCIALLY AVAILABLE GRADES IN THE UK	<b>Supplied rough sawn with a random grain 4 sides clear. It has minimal visual defects and good levels of colour consistency</b>



# Red Grandis



Red Grandis is a straight grained hardwood timber of the Eucalyptus family. Sourced from Uruguay, it is a fast grown hardwood and it is harvested at around 20 years old when it has reached a diameter of around 60cm.

The trees are tall and straight giving it a good straight grain and the forests are well managed and regular pruning ensures there are minimal knots.

Red Grandis has full FSC® certification and is a very stable and dense timber with a durability class

of 3 meaning that untreated it is rated as moderately durable. As this species is only rated as moderately durable we would recommend if being used externally it is pressure treated to protect the sapwood from rot and insect attack.

We would recommend brown high pressure treatment by Brookridge Timber which would give the product a 30 year warranty against rot and insect attack and increase the durability class to 2 which is rated as durable.

TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Eucalyptus Grandis</b>
WOOD TYPE	<b>Hardwood</b>
ORIGIN	<b>Uruguay</b>
SUSTAINABILITY	<b>All from well managed forests FSC® certified</b>
DURABILITY (BS 8417)	<b>Moderately Durable Class 3</b>
STABILITY	<b>Medium</b>
DENSITY	<b>600kg/m³</b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>0.18 W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>Sawn and planed products mainly 25mm thick in a range of widths</b>
TYPICAL AVAILABLE GRADES IN THE UK	<b>Packed as a combination of First and Second Grade</b>







# Thermowood

Thermowood is produced by heat treating selected Scandinavian Redwood that is conditioned in a unique continuous kilning process, heating the timber to 212°C whilst protecting it with steam.

This thermal process enhances the chemical and physical properties of the timber providing many benefits the main one being increasing the durability of the timber from class 4 to class 2 as detailed in BS 8417.

It is a very stable product and on average is 40% more stable than a non modified redwood and if left untreated,when exposed to rain and sunlight, it will go an attractive silver grey colour.

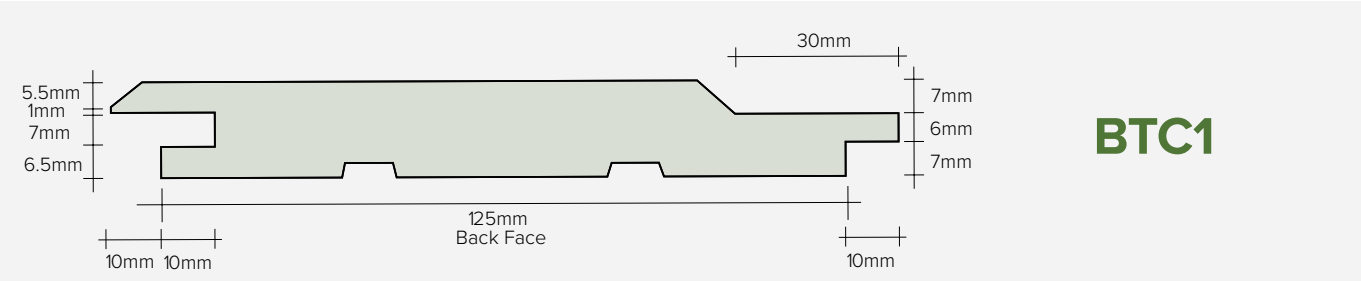


TECHNICAL SPECIFICATION	
BOTANICAL NAME	<b>Pinus Sylvestris</b>
WOOD TYPE	<b>Softwood</b>
ORIGIN	<b>Scandinavia</b>
SUSTAINABILITY	<b>From well managed forests FSC® and PEFC</b>
DURABILITY (BS 8417)	<b>Durable Class 2</b>
STABILITY	<b>It is of a brittle nature but is very stable with low shrinkage, warping and twisting</b>
DENSITY	<b>350-480kg/m³</b>
THERMAL CONDUCTIVITY RATING (U VALUE)	<b>0.127 W/(m K)</b>
REACTION TO FIRE:	<b>D-s2, d0</b>
AVAILABILITY	<b>Sawn, planed and profiled products in a limited range of thicknesses, widths and lengths</b>
TYPICAL AVAILABLE GRADES IN THE UK	<b>Thermowood D (Durable) Pine</b>

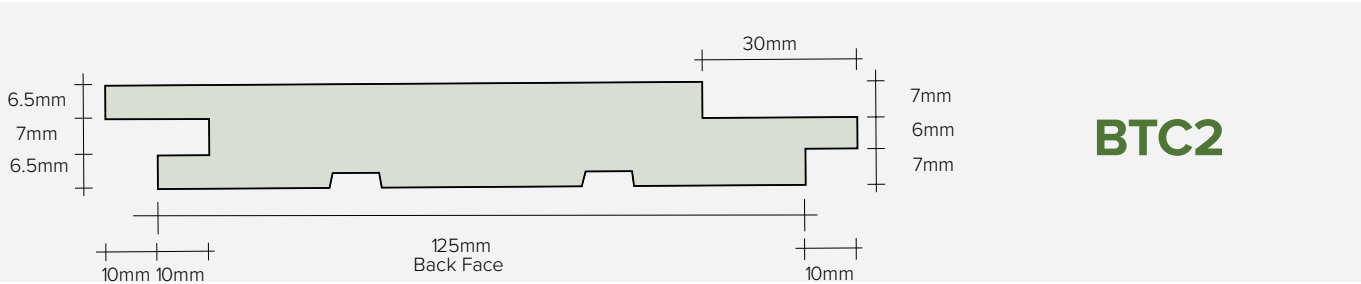


# Profiles

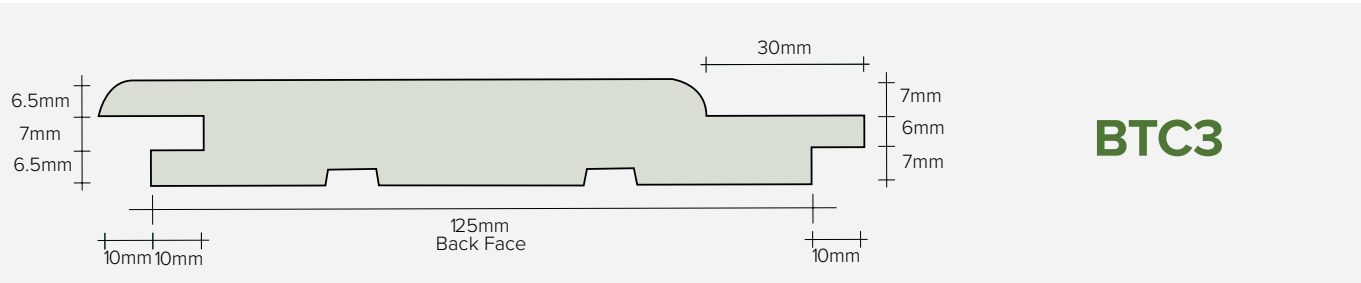
Please contact us if you require something different. We machine all of our cladding and can produce any profile you require in any size. These profile drawings are not shown to scale.



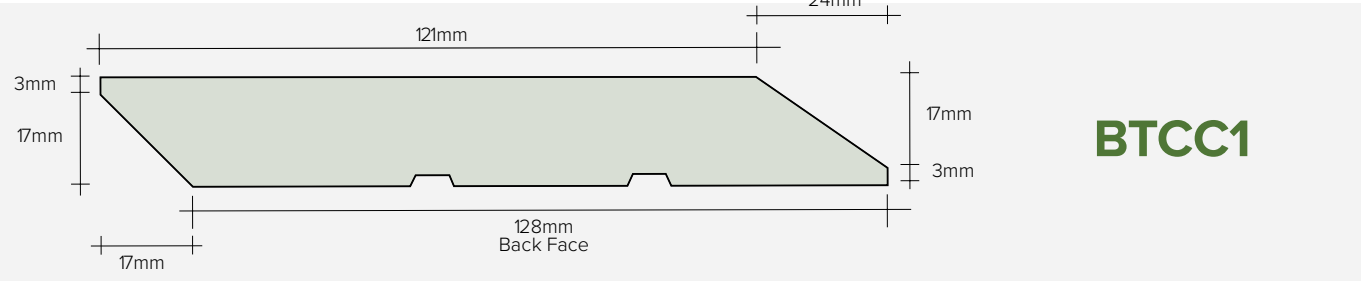
BTC1



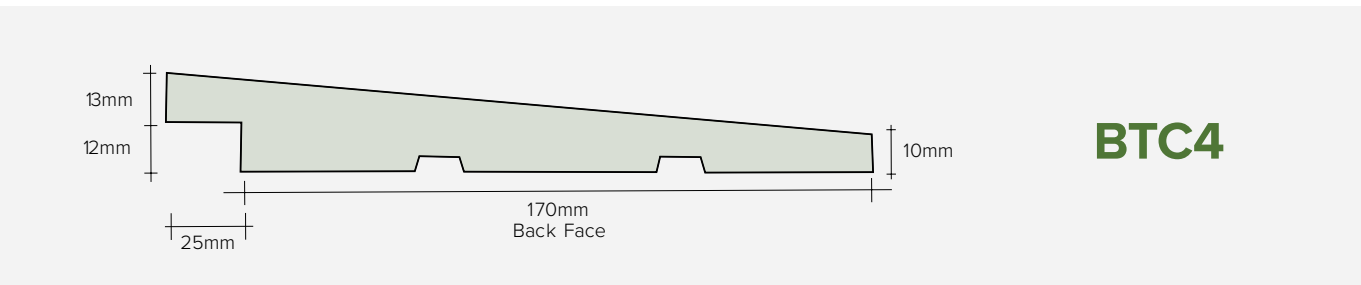
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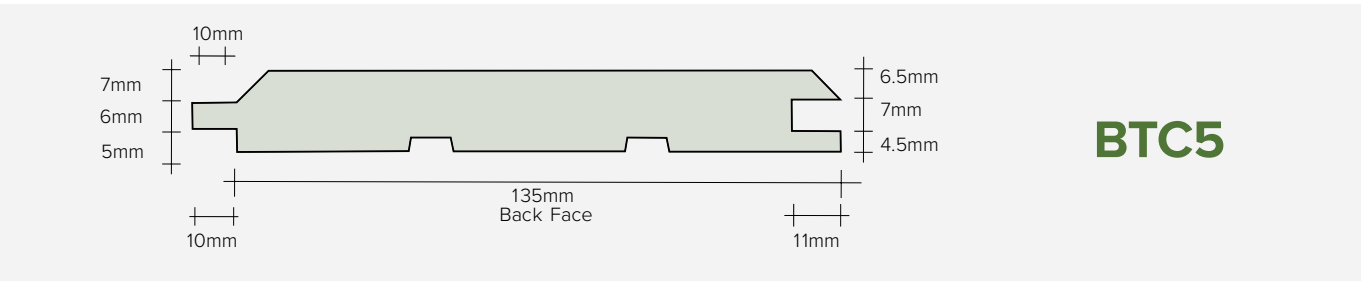
BTC3



BTCC1



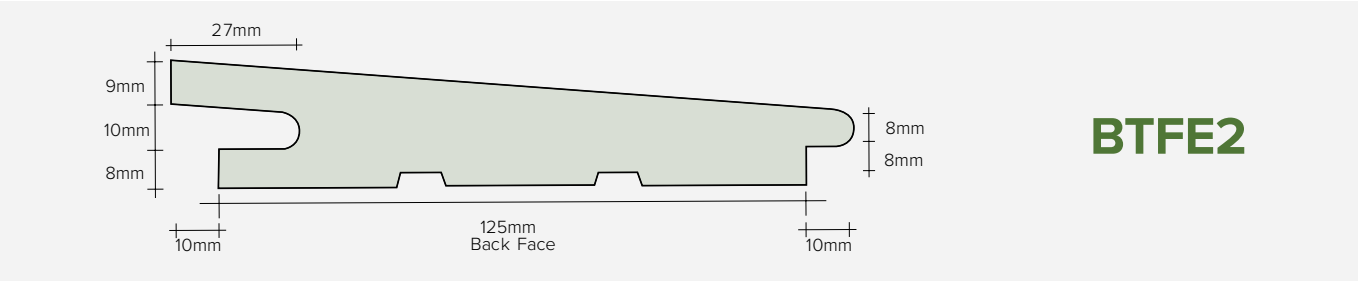
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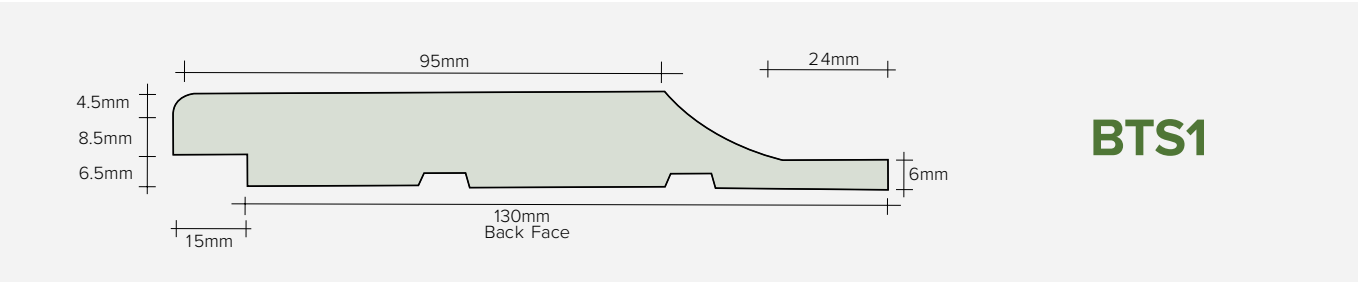
BTC5

# Profiles

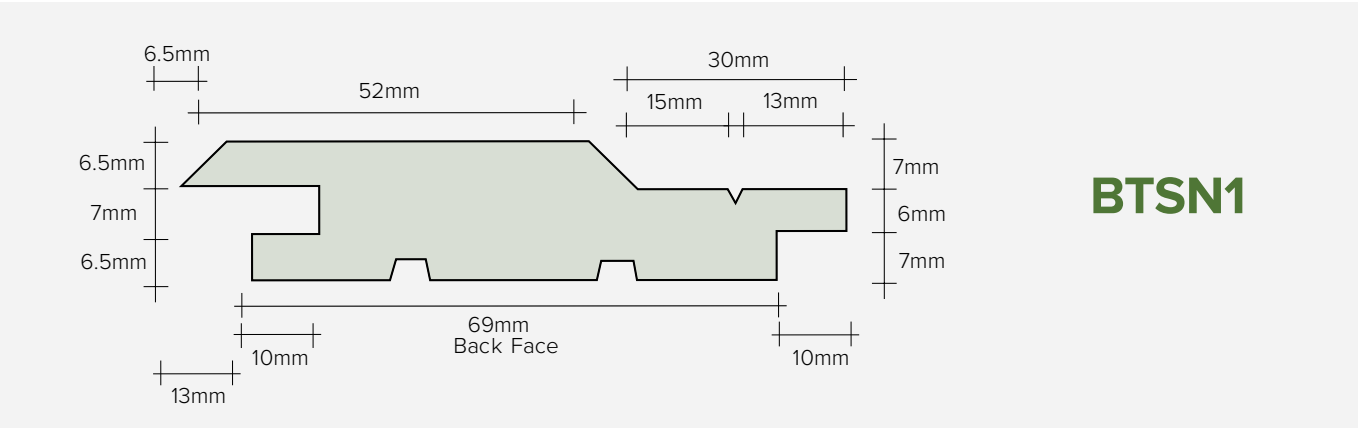
Please contact us if you require something different. We machine all of our cladding and can produce any profile you require in any size. These profile drawings are not shown to scale.



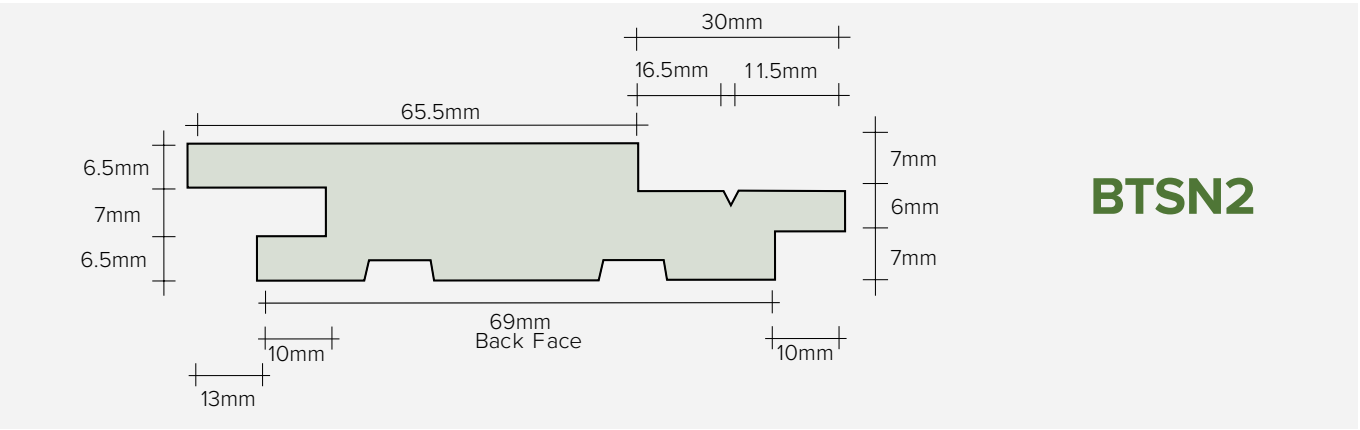
BTFE2



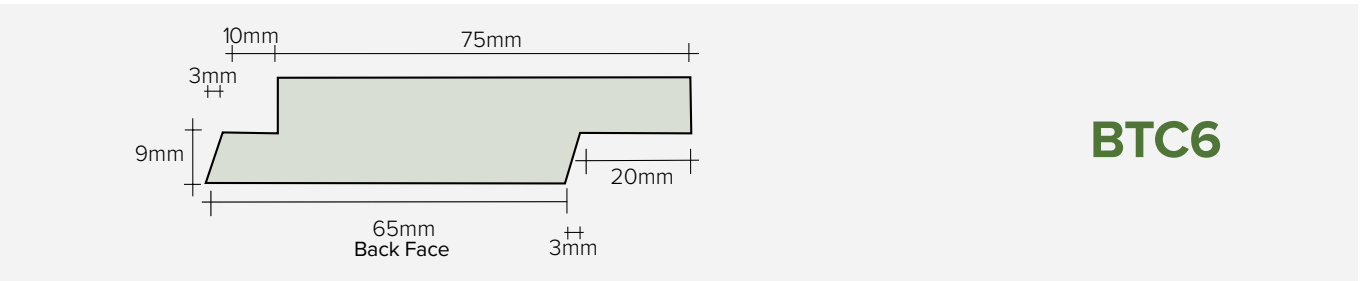
BTS1



BTSN1



BTSN2

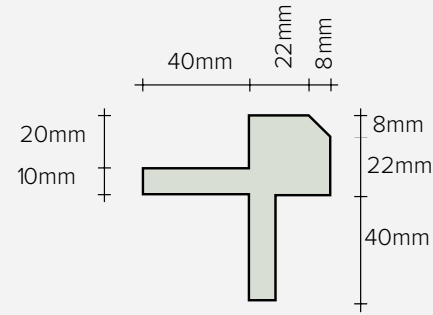


BTC6

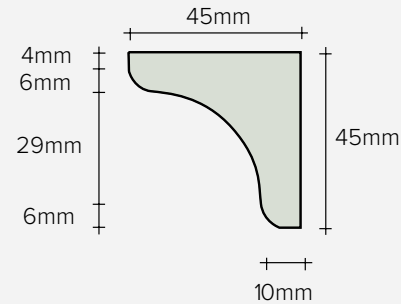


# Trims

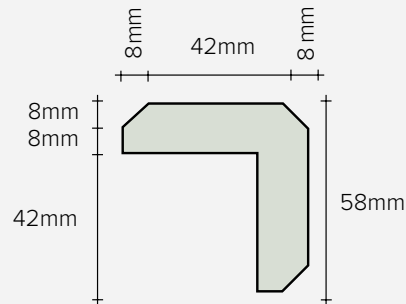
Please contact us if you require something different. We machine all of our cladding and can produce any profile you require in any size. **These profile drawings are not shown to scale.**



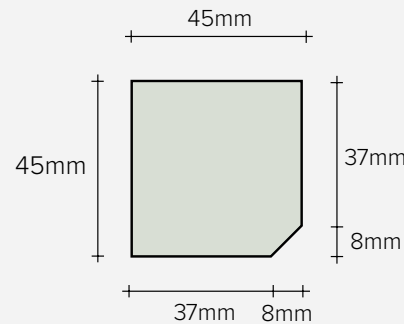
**EXTERNAL TRIM A1**



**INTERNAL TRIM A2**



**EXTERNAL TRIM A3**



**INTERNAL TRIM A4**

## Timber Cladding Installation Tips

The material used to produce Brookridge Cladding and Trims is a natural material and as such will respond to the environment.

Timber is hygroscopic which means it will swell or shrink as it gains and loses moisture as the timber seeks to achieve equilibrium with the moisture content of the surrounding area. It is essential that the moisture content of Brookridge products are at this equilibrium before being installed as this will ensure any movement after installation will be minimised.

The following is general advice and not intended as a comprehensive guide. Please speak to your professional cladding installer/architect/local authority for fixing details relevant to your particular development.

- When your Brookridge Cladding is delivered it will arrive on site plastic wrapped.
- Remove the plastic wrapping from the sides of the packs not the top.
- This will allow for airflow and help with product acclimatisation.
- Store the packs undercover in an area with good airflow.
- Measure boards prior to installation to check dimensions are fully acclimatised.
- Don't install boards if they are measuring over size.
- Ensure your backing structure allows good airflow.
- Make sure all fresh cut ends made on site are sealed with an appropriate product. End grain absorbs moisture 250 times more rapidly than other wood surfaces and must be protected.
- Use stainless steel grade 304 annular ring shank fixings with a fixing length of 2.5 times the thickness of the cladding.
- Use a flat head nail which when fixed should sit flush with board surface.
- Lost or small head nails are not recommended.
- Fixings should be at least 20mm from the end of a board and 15mm from the edge.
- Any profile over 100mm should have at least two face fixings.
- When fixing leave gaps between boards and the perimeter of the facade to allow for expansion.
- Fix boards independently.
- Ensure design detailing and flashings direct water away from the building.
- Timber cladding should be installed a minimum of 200mm above ground level and vegetation should not be allowed to come into contact with the timber cladding.

## Regularised Pressure Treated Batten for a Backing Structure

Where timber battens are used to fix timber cladding there are usually two situations. When installed over a timber frame structure they are normally fixed into the solid timber studs through the breather membrane and sheathing board using a maximum 600mm centres.

Where the battens are fixed to a masonry structure, they are normally fixed at a maximum 600mm centres and a damp proof course may be specified between the timber batten and the masonry structure.

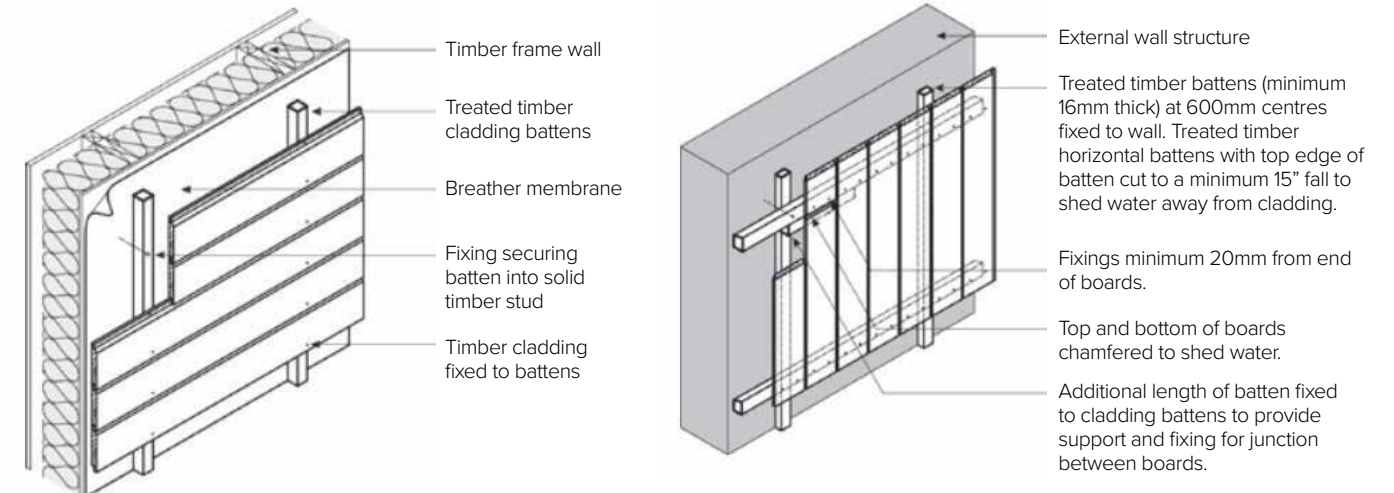
Depending on the imposed load of the timber cladding to be fixed to the batten and the likely wind loadings, a structural engineer may need to determine the exact fixing specification. Additionally, the size of the batten will be determined by the fixing required in the cladding board and the size of the cavity required which should never be less than 19mm.

The battens used in the backing structure should never exceed 600mm spacing and limiting the centres will restrain the natural

tendency for the cladding boards to twist, bow or cup.

Horizontal cladding boards can be fixed to vertical battens and these will not restrict drainage or air flow.

Vertical boards will need to be fixed to a horizontal counter batten to allow drainage and airflow as long as the horizontal battens are omitted from the top and bottom of the cladding.



## Guide To BS1186

BS 1186 has been superseded by the European Standard BS EN 942. It is however still widely quoted on site by the construction industry and used extensively by specifiers.

The purpose of this document is therefore to give the reader an insight into the contents of BS 1186-3.

The primary purpose of BS 1186 'Timber for and workmanship in joinery' is to categorise the quality of timber used in joinery by defining requirements against which the physical characteristics of the timber can be measured. The 1991 revision takes into account current good practice and availability of species.

There are three grades applicable, mostly concerned about the size and frequency of knots:

### CLASS 1

Class 1 is suitable for high status buildings. Using cladding boards of 100mm – 150mm width, sound knots are limited to 22.5mm. Most hardwoods are available to this quality, but in softwoods it is limited mainly to imported douglas fir and western red cedar.

### CLASS 2

This is the most common classification for unfinished timber cladding. Sound knots are limited to 35mm

### CLASS 3

Knots are restricted to 50mm or no more than 35% of the board width BS1186 also details limits of natural defects of timber in the following areas:

- Splits, shakes and checks
- Resin Pockets
- Sapwood
- Wane
- Straightness of Grain
- Exposed Pith
- Decay and Insect Attack
- Plugs, Insects or Filler

Moisture content is one of the most important aspect of joinery specification and BS1186 gives four levels of moisture content which approximate to end use conditions for joinery. It recommends the following average moisture content:

#### External Joinery

13% to 19%

#### Internal Joinery

Unheated Building 13% to 17%  
Room temperature 12°C-21°C 10% to 14%  
Room Temperature in excess of 21°C-8% to 12%

**Please remember that this document is for information only and as previously stated BS 1186 has been superseded by the European Standard BS EN 942.**

## CE Marking Quality Rules

From 1st July 2013, the Construction Products Regulation (CPR) replaced the Construction Products Directive (CPD) and this new regulation makes CE marking compulsory for many construction products in Europe including timber cladding.

The letters CE are an abbreviation of the French phrase "Conformite Europeene" which literally means European Conformity.

Through CE Marking, a manufacturer declares that there is a process control in place at every stage of manufacture of the timber cladding to ensure it meets all the legal requirements for the CE marking for timber cladding.

### GRADE A

Scandinavian Redwood  
Canadian Western Red Cedar  
Siberian Larch  
Red Grandis

### GRADE B

Homegrown Larch  
Homegrown Cedar  
Thermowood



Guide To **BS8417**

This is a very important standard for timber treatment which combines a number of European Standards (BSEN350) which collectively deal with wood durability, species and performance of preservatives.

BS8417 is a code of practice and advises on the choice of timber species and the use and application of wood preservatives depending on the end use.

BS8417 as a code of practice puts the emphasis for the responsibility for achieving the required penetration and retention of the timber preservative treatments with the timber treater.

If specifying particular preservative types or timber species, it is important to note that not all preservatives are appropriate for all Use Classes and that some timber species are not sufficiently permeable to achieve the penetration levels required, at

least without additional preparation such as mechanical incising.

When deciding on a timber species and end use the specifier needs to consider.

- 1. The natural durability of the chosen species.**
- 2. How the timber component will be used.**
- 3. The relevant treatment required to protect the species from rot and insect attack in that end use.**
- 4. The treatability of the chosen species.**

It should be noted that the treatability of timber varies between species.

If a specific wood species is to be specified, care should be taken to ensure that a species chosen is appropriate to the treatment requirements. e.g. European whitewood is

slightly durable but cannot be treated to Use Class 4 for use in ground contact.

Treatability refers to how easily timbers can be penetrated with vacuum pressure preservative treatments. The four levels of treatability in BS EN 350-2 are 'easy', 'moderately easy', 'difficult', 'extremely difficult' and any specifier should cross reference their chosen species with this standard.

Brookridge Timber takes great care in only using the correct species which will treat to the required hazard class and the treatment process is fully audited by a third party. Additionally all of the company processes are audited by a 3rd party and Brookridge Timber has achieved ISO 9001 and the treatment process is also covered by this.

Glossary of Terms

CE Marking

From 1st July 2013, the Construction Products Regulation (CPR) replaced the Construction Products Directive (CPD) and this new regulation makes CE marking compulsory for many construction products in Europe including timber cladding. The letters CE are an abbreviation of the French phrase “Conformite Europeene” which literally means European Conformity.

Through CE Marking, a manufacturer declares that there is a process control in place at every stage of manufacture of the timber cladding to ensure it meets all the legal requirements for the CE marking for timber cladding.

Density of Timber

The strength of wood increases as its density increases. It is a measure of its weight to a particular volume so the higher its density the stronger and heavier it will be. The measure is usually shown as kg (kilograms/weight) per m³ (cubic metre of material).

FSC® and PEFC

Worldwide there are two internationally recognised systems for the certification of sustainable forestry management and its supply chain.

PEFC stands for the Programme for the Endorsement of Forest Certification.

FSC® stands for the Forestry Stewardship Council.

Both movements work towards the implementation of sustainable forest management throughout the world.

Hardwood and Softwood

The term hardwood does not necessarily mean its is a harder material as softwood does not necessarily mean a softer material.

For example we are all familiar with Balsa Wood which is very soft and light but this species is classified as a hardwood.

In general hardwood comes from a deciduous tree which loses its leaves annually and softwood comes from a conifer which usually remains evergreen.

Hardwoods tend to be slower grown and therefore are usually more dense.

Softwood trees are known as Gymnosperm which reproduce by forming cones which emit pollen to be spread by the wind to other trees. Examples include, pine, redwood and larch.

Hardwood trees are known as Angiosperm which produce seeds with some sort of covering such as a shell or fruit.

These trees usually form flowers to attract birds and insects to carry pollen to other trees and when fertilised the trees form fruits nuts and seeds.

The hardwood/softwood terminology does make some sense as conifers do tend to be less dense than deciduous trees making them easier to cut while hardwoods tend to be more dense and sturdier.

Rain Screen Cladding

Rain screen cladding is exactly what it states. It is a screen that protects a building from rain. This is done by attaching an outer skin of rear ventilated timber cladding to a building to form a ‘double wall’ construction. The outer layer of timber cladding keeps out the rain and the inner later provides thermal insulation.

This system allows for the ingress of air at the base and the egress of this air at the top. This is the ventilated cavity which also allows any water which penetrates the outer timber cladding layer to run down the rear face of the cladding and out at the base.

Thermal Insulation

This refers to the use of materials in a method or process to reduce the rate of heat transfer between two objects.

U Value of Timber

A U value simple measures how effective a material is as an insulator. The lower the U value, the better the material is as an insulator. U values are written as W/(mK) where W are the Watts (of heat) passing through every square metre (m²) for each 1 deg C temperature difference between the inside and outside of the building. The U value is simply a measure of thermal efficiency.

Natural Durability of Timber Species

This list is not exhaustive but provides details on some of the more popular species used in the UK.

DURABILITY	TIMBER TYPE	TIMBER SPECIES
1. Very Durable	Softwoods <b>Hardwoods</b>	- <b>Afromosia</b> <b>Greenheart</b> <b>Opepe</b> <b>Iroko</b> <b>Teak</b>
2. Durable	Softwoods <b>Hardwoods</b>	Canadian Western Red Cedar <b>Ekki</b> <b>Sweet Chestnut</b> <b>American White Oak</b> <b>European Oak</b> <b>American Mahogany</b>
3. Moderately Durable	Softwoods  <b>Hardwoods</b>	UK Western Red Cedar Douglas Fir Siberian Larch European Larch  <b>Malaysian Keruing</b> <b>African Mahogany</b> <b>Red Grandis</b>
4. Slightly Durable	Softwoods       <b>Hardwoods</b>	Scots Pine Canadian Hem Fir Corsican Pine European Spruce Parana Pine Canadian Spruce Pine Fir Radiata Pine Silver Fir European Redwood American Hem Fir  <b>American Red Oak</b> <b>English Elm</b>
5. Not Durable	Softwoods <b>Hardwoods</b>	- <b>Alder</b> <b>Silver Birch</b> <b>European Horse Chestnut</b> <b>Sycamore</b>

Treated Timber Use Classes

Through BS 8417, the industry Code of Practice for the preservative treatment of timber, the eventual end use of preservative treated timber is classified into one of the 5 main categories shown in the table below. These Use Classes, defined in BS EN 335-1, are based on the potential threat to the timber from decay or insect attack in its eventual application.

For instance, internal building timbers in Classes 1 and 2 will be under less threat than timbers used externally in ground contact - Use Class 4. Therefore, Use Class 4 timbers will require a higher degree of protection.

USE CLASS	TYPICAL SITUATION
<b>1</b>	Internal, dry - eg. upper floor joists
<b>2</b>	Internal, risk of wetting - eg. tile battens
<b>3.1</b>	Outdoors, coated, above ground - eg. soffits/cladding
<b>3.2</b>	Outdoors, uncoated, above ground - eg. cladding/fence rails
<b>4</b>	Direct soil or fresh water contact - eg. fence posts

This is only a guide to the various considerations all specifiers must make when specifying timber in a particular end use and a more detailed look at the various standards is recommended.

Long Lasting Timbers

To help ensure a long term performance of our softwood cladding timbers, they are preservative treated with latest generation Tanalith wood preservative from Lonza Wood Protection against the threat of decay and insect attack.

Brookridge Timber use an industrial high pressure impregnation process to force the TANALITH preservative, now incorporating award winning BARamine™ technology, into the wood structure. This protection is in the cladding timbers for good - no further treatment is required.

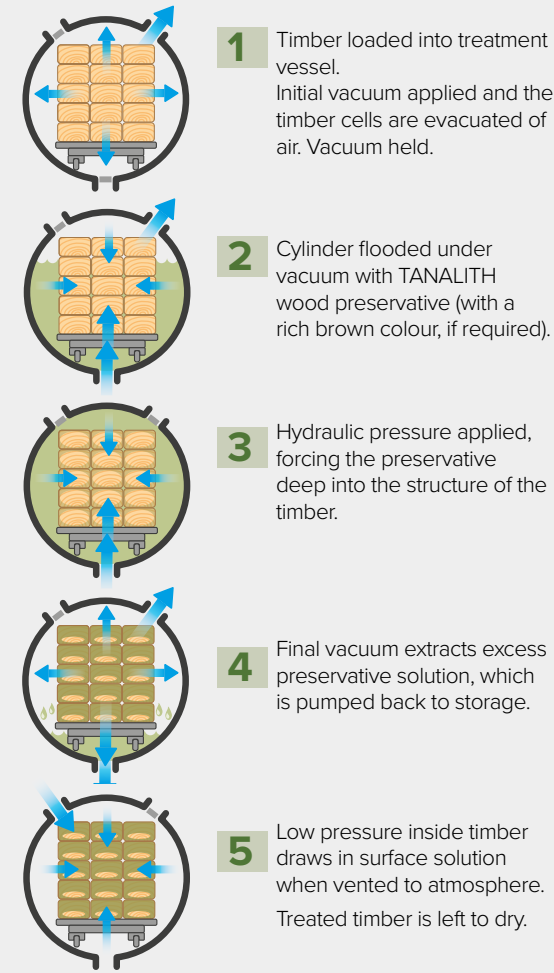
The resulting TANALISED cladding timbers are a pale green colour as standard. Brookridge Timber can also offer a rich brown colouration if required. Both will slowly weather to a honey brown and eventually to a natural silver grey.



Look out for the symbol - Cladding displaying this logo has been pressure treated with TANALITH wood preservative.



Timber Treatment Process







# Brookridge Timber

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