



Shingles & Shakes

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Western Red Cedar Shingles & Shakes from John Brash are a truly renewable and sustainable roofing and cladding material; with one of the lowest carbon footprints of any widely used building product. They are light for transport, and therefore also make savings in supporting structures; they also offer a high degree of thermal insulation.

Shingles and Shakes have been used for a wide range of structures from domestic dwellings to major theme parks.

Shingles and Shakes perform the same functions but are manufactured in different ways. A Shingle is produced by sawing a block of wood on both sides, giving a relatively smooth face and back. A Shake is hand split from a block of cedar along the natural grain of the wood and then re-sawn to produce one smooth surface.

John Brash sources its Western Red Cedar Shingles and Shakes from manufacturers in Canada. All John Brash Cedar Shingles have PEFC Chain of Custody to ensure both a legal and sustainable product.

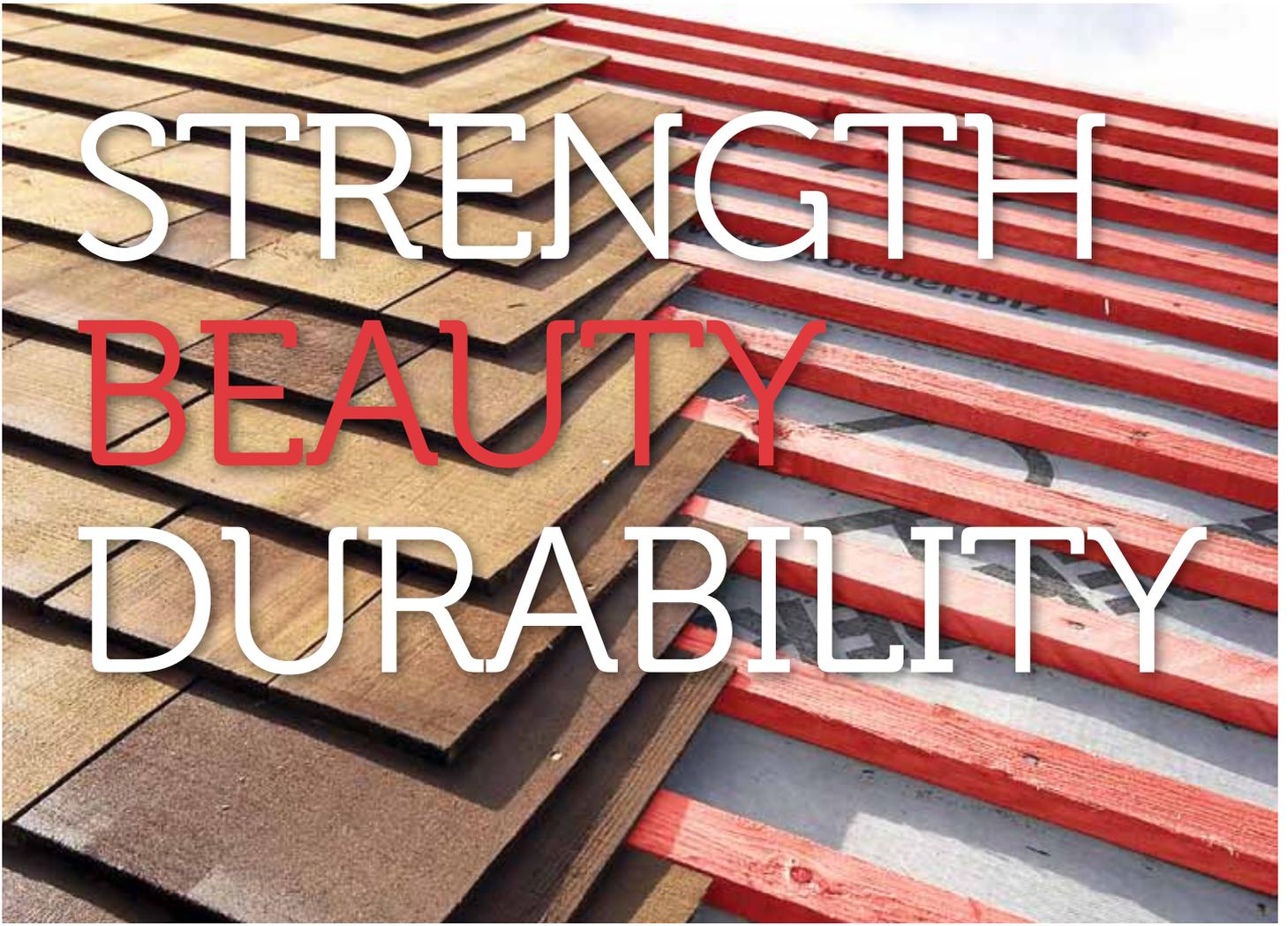
Timber has always been one of nature's more versatile, adaptable and attractive materials. Cedar, in particular, with its natural attributes of strength, beauty and incredible durability, is one of the most popular woods for building applications. The rich, warm colour and texture of Cedar Shingles and Shakes can enhance the design of both traditional and modern structures to create a truly individual building that blends naturally with the environment. The natural preservatives in the wood ensure lasting good looks, with the only effect of ageing and weathering being a gradual change in colour to an attractive silver grey.

According to the Council of Forest Industries: "Wood is by far the most environmentally friendly construction material. Not only is it a renewable resource, it is also a recyclable one. This is vital if we are to preserve our resources and minimize our global environmental impact.

Buildings constructed of wood benefit from wood's superior insulating properties. They are more efficient than concrete or steel, which translates into long-term energy savings and a reduced load on our environment."

There are similar arguments from the Cedar Shake and Shingle Bureau, a recognised authority since 1915, who say that Cedar compares very favourably to other roofing products in terms of energy consumption, creating pollutants, and as a sustainable form of production.





Western Red Cedar Shingles & Shakes

John Brash only recommends the use of the premier No 1 Grade Blue Label Western Red Cedar. The Blue Label grade ensures that all Shingles and Shakes are made from cedar that is 100% heartwood, 100% edge grain and 100% clear.

To view detailed product spec sheets,
installation details and case studies visit:
www.johnbrash.co.uk/shingles-shakes



Shingles

The John Brash product range covers the following types of Shingle: **XXXXX** (5X - 400mm), **Royals** (600mm), **Hip & Ridge** (450mm) and **Fancy Butt Profiles**.

The Shingles are sawn to length but are in random widths. The most widely used Shingle is the **XXXXX**.

Shingles can be laid in straight lines giving a clean regular appearance to the roof or wall, or with random butts giving a much more irregular aspect.

Western Red Cedar Shingles are supplied by the bundle either untreated, or treated with Osmose Naturewood® preservative treatment in compliance with BS 8417:2011. A fire retardant treatment is available upon request.

Shakes differ from Shingles in that they have a split, rather than sawn face.

Shakes

Available in several combinations of width and length, the size that is readily available from stock is 600mm x 19mm.

Like Shingles, Shakes are supplied by the bundle and are in random widths, similarly only the top grade is supplied, No.1 Grade Blue Label. The Shakes can be supplied

untreated, or treated with an Osmose Naturewood® preservative treatment in compliance with BS 8417:2011. A fire retardant treatment is available on request.





Environment

The botanical name of Western Red Cedar (WRC) is *Thuja Plicata*, also known as British Colombian Red Cedar, Giant Arborvitae and Red Cedar.

Imported

WRC is abundant in the province of British Columbia, and grows nowhere else in Canada. British Columbia has approximately 750 million m³ of WRC, with more than half of it found in the coastal region.

Forestry practices across Canada are extensive and logging is carefully controlled.

Volumes are monitored strictly and are always below the Annual Allowable Cut, which currently is approximately 6 million m³ per year (less than 1% of the growing stock volume). The Annual Allowable Cut is reviewed every 5 years. Increasing volumes of accredited Cedar are available with full chain of custody. Canadian Standards Authority (CSA) and Sustainable Forestry Initiative (SFI) are the most common, and both are recognised within the PEFC umbrella. Limited volumes of FSC are available.

Chain of custody - John Brash is a responsible and ethical supplier and only source fully accredited timber from responsible suppliers. We are members of both the FSC and PEFC chain of custody schemes and our membership numbers are:-

PEFC:- BMT-PEFC-0109

FSC:- TT-COC-001967

Home Grown

FSC timber is available and UK forestry practices ensure that all cutting is sustainable. Home-grown Heartwood is available but commercially difficult to source due to the small diameter of the harvested trees.

Key Properties

Flammability

WRC has flame spread and smoke development classifications that are superior to the minimums set by most building codes, which permit the use of cedar heartwood without preservative treatment. Because of its favourable performance WRC can be used for interior applications where other species would not be permitted.

In some instances fire/flame retardant treatments are required. The interpretation of building regulations varies around the country and John Brash recommend checking with your Local Authority Building Control.

Preservative treated Cedar Shingles or Shakes obtain a 'CB' rating when tested to BS476. FRT Exterior® fire retardant treatment is available which meets BS 476: Part 3:2004 giving an 'AAP60' rating and BS 476: Part 6:1997 giving a Class 0 rating. When used as vertical cladding Cedar Shingles and Shakes can be specified to BS EN 13501-1 to either Euroclass B (transposes to Class 0) or Euroclass C (transposes to Class 1).

Generally fire retardant treatments are required when building within 5m of the boundary of the site. However, Building Regulations vary around the UK and advice may need to be taken.

Durability

WRC is naturally durable and resistant to decay. The heartwood of WRC is classified under BS EN 350-1:1994 and BS EN 350-2:1994 'Durability of wood and wood based products - natural durability of solid wood' and classed as Class 2 Durable; this gives an expected service life of 40-60 years. Cedar Shingles & Shakes are resistant to frost.

Even though John Brash Shingles & Shakes are 100% heartwood, and WRC is resistant to preservative treatment, we still recommend that Shingles & Shakes used for roofing are preservative treated.

If the timber is going to be exposed to conditions where decay could be a factor, such as in roofing, then preservative treatment is advised in line with BS EN 335-1:2006, to Use Class 3 or Use Class 4, depending upon the service location and potential exposure to wetting.

Acoustics

WRC is particularly effective in a sound-damping capacity and provides effective, economical sound insulation by converting sound energy into heat by frictional and visco-elastic resistance. WRC can therefore be used effectively to reduce noise or confine it to certain areas.

Thermal Properties

Due to WRC's low density and coarse texture it has good insulation properties. WRC is recognised as the best thermal insulator amongst the commonly available softwoods, and is far superior to brick, concrete and steel. It is widely used in saunas because of its low thermal conductivity; with a value of $K=0.1067 \text{ W/m}^\circ\text{C}$ at 12% moisture content.

Service Life

For roofing applications John Brash recommend using a pressure impregnated preservative, Osmose Naturewood to BS 8417:2011 Use Class 3. All John Brash preservative treated Cedar Shingles are guaranteed for 40 years, but we would expect a service life of up to 60 years. When used as vertical cladding Shingles & Shakes do not need to be treated and would have an expected service life of 40-60 years. Fire Treated Shingles would have at least an equivalent service life.



JB ShingleFix

John Brash have teamed up with Paslode to produce a unique fixing staple, exclusively designed to reduce the installation time of shingles.

In independent time trial tests witnessed by the NFRC, the use of JB ShingleFix over traditional fixing methods has shown up to 50% reduction in installation time* - making it a practical, sustainable & competitive alternative to other tiling and cladding solutions.

* excluding felt & battens.

The JB ShingleFix fixing staple is a unique innovation and is only available from John Brash.

A project of between 50-60 bundles (100 m²) will recover the cost of the Paslode Staple Gun and every project after this will offer even greater savings. As low pitched roofs have even more fixings per m², the saving will be achieved even more quickly.



This 2,500m² building, with an elongated curve and consisting of over 80,000 individual shingles, would have been impractical to fix by traditional hand nailing. The staple fixing method has proved to be a very practical and cost effective method of fixing shingles.

Testing Results Table

Two identical areas of roof measuring 1.5m eaves and 1.4m rafter (2.1m²) were covered in breather membrane and battened to a gauge of 125mm using JB Red 25x50mm battens.

Kevin Taylor, NFRC (Independent witness) recorded the time taken by the two roofers to cover each area in cedar shingles to our recommended specification, the first using the traditional method of hand nailing using 31mm silicon bronze nails and the second using the Paslode IM200 staple gun and JB ShingleFix S16x38mm stainless steel staples.

Trial	Roof Area	Time Taken	Time per m ²	Saving
A - Traditional Fixing Method	2.1m ²	44 minutes	21 minutes	-
B - JB ShingleFix Method	2.1m ²	23 minutes	11 minutes	50%



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