



JOHN BRASH

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INNOVATION QUALITY SERVICE

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July 2009



JBCEDAR SHINGLES & SHAKES

A GUIDE TO SPECIFICATION & SUPPLY



THE NATURAL CHOICE

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 today one of the most popular woods for building applications – increasingly in the form of Cedar Shingles and Shakes from John Brash, one of the UK's leading suppliers.

The rich warm colour and texture of Cedar Shingles and Shakes gives any building, inside or out, a touch of individuality that blends naturally with the environment. The natural preservatives in the wood also ensure these good looks last, the only effects of ageing and weathering are the gradual change of colour to an attractive silvery grey.

Shingles and Shakes are ideal for both traditional and modern structures creating truly individual buildings, from a small gazebo to a major theme park. They are equally suited to both roofing, for pitches as low as 14°, and vertical cladding, offering an attractive alternative to weatherboarding.

The aesthetic qualities of Western Red Cedar Shingles and Shakes provide every project with a distinctive beauty.

The natural attributes of Cedar (even grain, exceptional strength in proportion to weight, low ratio of expansion and contraction, high impermeability to liquids and outstanding natural durability) are reinforced by the additional strength derived from the overlapping method of installation. Once nailed in place Cedar Shingles and Shakes possess outstanding rigidity offering structures that are highly resistant to seasonal extremes such as; hurricane winds, driving snow, ice, rain or sun.

John Brash Western Red Cedar Shingles represent a truly renewable and sustainable roofing material, with one of the lowest carbon footprints of any widely used roofing product. Add to this the fact that they are only one tenth the weight of traditional materials, offer a high degree of thermal insulation (with a value of $K=0.1067 \text{ W/m}^2\text{C}$) and are easy to cut, shape and fix with minimum maintenance, Shingles and Shakes become a highly practical and economical solution.

JOHN BRASH CEDAR SHINGLES AND SHAKES: THE NATURAL CHOICE

QUALITY GUARANTEED

John Brash has been marketing timber in the UK since 1905 and today is one of the leading suppliers of roofing timber in the country.

Throughout the years we have established contracts with the best Cedar Shingle and Shake manufacturers in Canada and the USA. All our Shingles and Shakes are specially selected by our Canadian partners, whose strict standards ensure that only the very best Western Red Cedar is used. They also meet the exacting requirements of the Red Cedar Shingle and Handsplit Shake Bureau relative to No.1 Grade Blue Label Certigrade – the mark of a premium grade of Shingle or Shake. The Blue Label grade ensures that the Shingles and Shakes are made from Cedar that is 100% heartwood, 100% edge grain and 100% clear. There are two alternative grades available – No.2 Grade Red Label and No.3 Grade Black Label.

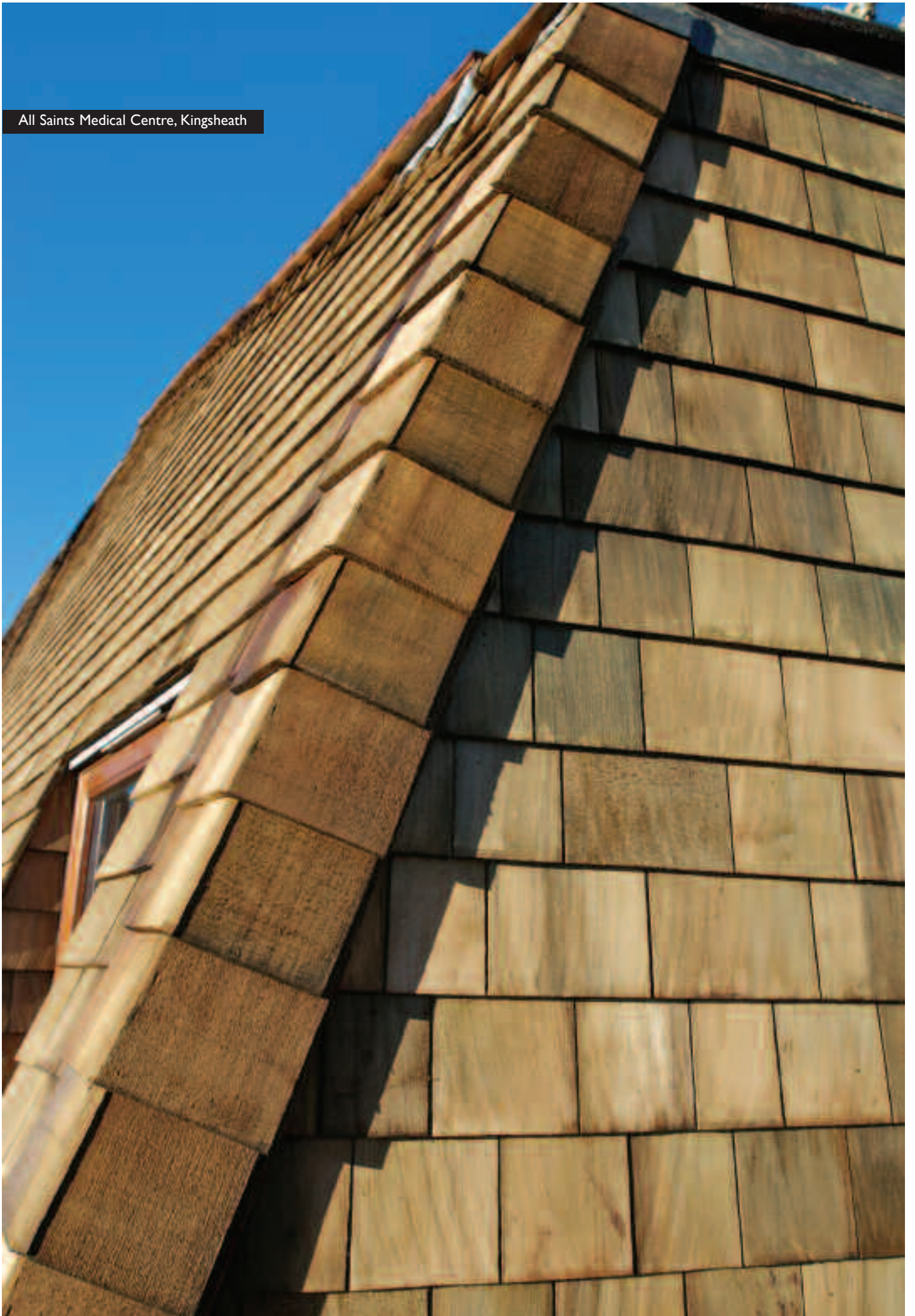
All supplying mills undergo regular independent accreditation and inspection from the grading authorities to meet the Blue Label requirements. To reinforce this John Brash is BS EN ISO 9001:2000 accredited, demonstrating our commitment to the finest quality systems and customer care.

All John Brash Western Red Cedar Shingles and Shakes carry our unique 40 year guarantee when treated with Osiose Naturewood.

The rich warm colour and texture of Cedar Shingles and Shakes gives any building, inside or out, a touch of individuality that blends naturally with the environment.



All Saints Medical Centre, Kingsheath





ENVIRONMENT

With Canada and the USA's strict reforestation and forest management programmes, Cedar stocks are carefully managed. Tough Federal and Provincial Forestry guidelines, that ensure sound harvesting methods to protect fish habitat and reforestation, are now mandatory, bringing new abundant foraging areas to the shaded old growth forest floor. More than half of Canada's forests are naturally reforested and natural regeneration is supplemented by the planting of 600 million seedlings each year. Some of our main suppliers of Cedar Shingles and Shakes have CSA (Canadian Standards Association) forestry certification.

John Brash is certified under both FSC (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification) schemes ensuring independent certification of the timber we supply.

CSA is now part of the wider PEFC umbrella and John Brash can offer full chain of custody PEFC accredited Shingles. Where Shingles do not carry this accreditation, John Brash ensures they are always sourced from both legal and sustainable sources. (Often the timber comes from CSA or SFI accredited sources but the producing mills, that are often small, do not carry Chain of Custody certification)

The designer friendly Handbook of Sustainable Building published by renowned science publisher, James & James Limited, of London, rates Cedar Shingles and Shakes highly through the use of an environmental preference method developed in the Netherlands.

The environmental preference method examines the life cycle over extraction, processing, construction, building occupation and building composition in respect to their environmental impacts. The effects upon the ecosystem, depletion of resources, emission, energy use, waste limitation and processing, refuse, lifespan and repairability are all taken into consideration. Cedar Shingles and Shakes score highly due to their light weight (savings can be made in the supporting structures), long life, low resource waste and because they are made from a renewable source – wood.

BREEAM is the BRE's lifecycle analysis system which gives Western Red Cedar an 'A*' rating, when used as vertical cladding (its use for roofing is undergoing assessment).

The manufacture of Cedar Shingles and Shakes ensures maximum utilization of the forest resource. Parts of the log that are unsuitable for sawn timber can be used, thus recycling parts of the tree that would otherwise go to waste. Other than thatch, they are the only roofing and cladding material made from a renewable source. Growing trees emit oxygen and absorb carbon dioxide, making wood the material of choice for cleaner air and a healthy environment.

Cedar Shingles and Shakes consume less energy during manufacture and transportation than tiles or slates, making them an attractive, economical, ecological alternative to man-made roofing and cladding products.



TIMBER TREATMENTS

Whilst Cedar is one of the most naturally durable timbers, it is not completely immune to the elements.

John Brash Cedar Shingles and Shakes are supplied with a 40 year warranty when treated against wood rotting fungi and insect attack.

To ensure consistent quality and prompt availability, John Brash operates its own pressure impregnation plants which are considered to be some of the most advanced in Europe. Shingles and Shakes are treated in a vacuum pressure impregnation process in compliance with BS 8417:2003. This treatment is permanently fixed within the timber cells and no further preservative treatment is required during the life span of the product.

FIRE RETARDANT CEDAR SHINGLES AND SHAKES

The demand for Fire Retardant Shingles and Shakes is increasing. After extensive research into the many fire retardant treatments that are available, John Brash offers FRT Exterior® Shingles and Shakes.

FRT Exterior® Shingles and Shakes retain all the beauty and performance of natural Cedar with the bonus of fire retardant treatment. FRT Exterior® processes the Shingles and Shakes with a safe and non-toxic chemical that makes the wood fire retardant treated for life.

FRT Exterior® meets BS 476: Part 3:2004 giving a double '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).

FRT Exterior® is a full-cell pressure treatment that makes the Cedar Shingles and Shakes fire retardant for life. The Shingles and Shakes are placed into a treatment vessel and a powerful vacuum draws out the air and moisture. FRT Exterior® fire retardant is by pressure impregnation, forcing the treatment into the cells of the wood. After this treatment process, the Shingles and Shakes are kiln dried and cured so that the fire retardant bonds directly to the wood's cellular structure, ensuring it does not leach out. As a bonus, this process impairs the development of surface mould and fungal spores and provides resistance to insect attack. This gives greater life expectancy over untreated Shingles.

Each and every bundle is clearly labelled, ensuring proof of treatment and regular inspection and tests are carried out to ensure conformance. Fixing is straightforward, and identical to other Cedar products.

When specifying FRT Exterior® Cedar Shingles and Shakes, you can rest assured that they have a double 'AAP60' rating in accordance with BS 476: Part 3:2004. Shingles and Shakes that are treated with a preservative have a 'CB' rating.

CEDAR SHINGLE SPECIFICATION

John Brash offers one of the widest ranges of Cedar Shingles in Europe.

Western Red Cedar Shingles: These are taper sawn and have a relatively smooth face and back. Three lengths are generally available: 400mm ('XXXXXX'), 450mm ('Perfections') and 600mm ('Royals'). The 400mm Shingle is most often used in the UK and we hold significant stocks, along with smaller quantities of 600mm Shingles. John Brash only recommends the use of the premier No 1 Grade Blue Label Certigrade Western Red Cedar Shingle in the standard XXXXXX size (the Lower Red and Black labels contain flat grain and sapwood that makes them unsuitable for premium roofing applications, often curling and with reduced longevity). The Certigrade designation is the third party accreditation from the Red Cedar Shingle and Handsplit Shake Bureau (not all Blue Label shingles carry this designation).

Cedar 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.

Shape and Dimension: Cedar Shingles are supplied in random widths varying between 75mm and 350mm. Their thickness tapers from approximately 10mm at the tail or butt edge to 3mm at the head. Cedar Shingles are supplied by the bundle ready to apply, either untreated, or with a timber preservative or fire retardant treatment.

Underlay: The use of underlay is not generally recommended in normal conditions for 'cold' roofs. However, if one is to be used, the vapour permeable type to Annex A of BS 5534:2003 is recommended.

Battens: Should be strong and stiff enough to withstand the proposed loading and to provide adequate fixing and alignment. They should comply with BS 5534: Part 1:2003. The minimum size recommended is 25mm x 38mm. John Brash recommend the use of **JBRED** factory graded battens.

Nails: For maximum life, fixing should be made with 2 No. 31mm x 1.8mm silicon bronze annular ring nails per Shingle (stainless steel can be used as an alternative). As a guide 0.9kg of nails are required to fix four bundles of Shingles.





Fixing Details: Shingles are normally fixed directly to battens but are suitable for other forms of construction. For example, they can be nailed directly onto plywood, or onto battens and counter battens over solid insulation. There should be 2 nails per shingle 19mm in from each edge 38mm above the butt line of the course above. There should be a 5mm gap between the edges of each shingle. Between courses, the gaps between each shingle should be offset by at least 38mm and no gap should align on adjacent courses. This is essential to maintain the weather tightness of the roof. (See figures 1 and 6).

For 400mm ('XXXXX') Shingles the recommended gauges are:

- Roofs 14°-21° = 95mm gauge, giving a coverage of 1.73m² per bundle
- Roofs 22°+ = 125mm gauge, giving a coverage of 2.28m² per bundle
- Vertical = 190mm gauge, giving a coverage of 3.47m² per bundle

N.B. These are exact areas and do not allow for cutting and wastage.

In addition, for all cases allow extra:

- Double starter course – 1 bundle for every 18 linear metres
- Valleys – 1 bundle for every 7.5 linear metres
- Hips and Ridges – 1 bundle for every 7.5 linear metres (traditional method).

Shingles are normally applied in straight lines starting with a double or triple course at the eaves, depending upon the conditions of climatic exposure. This application may be varied to produce different patterns of staggered butts, double or shadow coursing, thatch weave or ocean wave.

Cedar Shingles can also be used over a variety of roof types – boarded roofs, metal decks and warm roof constructions. Care should be taken to follow current building regulations and individual specifications can be determined in conjunction with the insulation manufacturer.

John Brash can supply pre-formed Cedar Hip and Ridge units, and their use achieves considerable savings in construction time. Where it is not possible to use pre-formed units, hips and ridges may be formed by selecting 100-150mm wide Shingles and manufacturing the cappings on site, laid horizontally along the hip or ridge using an alternate overlap.

Flashings: It is recommended that flashings are installed in accordance with normal good building practice. Where lead or other metal flashings are used, care should be taken to avoid contact between the Cedar Shingles and the metal. This is due to the natural properties of cedar, as it contains a level of tannic acid that can cause corrosion to unprotected metals. We recommend that you apply a bituminous paint as an effective barrier or, alternatively, GRP valleys and flashings are suitable.

See figures 1-6 and 9-13.

Welsh Primary School, Swansea





Fire: Some building regulations impose certain restrictions concerning possible fire risk and may require a fire retardant treatment, for example, FRT Exterior® which achieves the following performance:

- Euroclass B to BS EN 13501-1 (transposes to Class 0)
- Euroclass C to BS EN 13501-1 (transposes to Class 1)
- AAP60 rating BS 476: Part 3:2004 External Fire Exposure of Roofs

Shingles and Shakes that are treated with a preservative have a 'CB rating'.

Preservation: Cedar Shingles and Shakes, which are treated by John Brash to a specially designed cycle and formulation, carry a 40 year treatment guarantee against all forms of wood rotting fungi and insect attack in compliance with BS 8417:2003.

Frost: Cedar Shingles and Shakes are resistant to frost.

Thermal: Shingles & Shakes offer a high degree of thermal insulation with a value of $K=0.1067W/m^{\circ}C$.

Alternatives: We can also obtain Taper Sawn Shakes, Eastern White Cedar Shingles, Alaskan Yellow Cedar Shingles, Chestnut Shingles and Oak Shingles.

Shingles

Available in three lengths

Type	Lengths	Butt end	Availability
XXXXXX	400mm (16")	10mm	From stock
Perfections	450mm (18")	11mm	Special Order*
Royals	600mm (24")	13mm	Special Order*

* Approximate order time of 6 to 8 weeks

Shingles – Coverage

Approximate coverage in m² XXXXXX Shingles

Type and Size	Exposure / Gauge						
	95mm	100mm	125mm	140mm	190mm	215mm	290mm
XXXXXX 400x10mm	1.73m ^{2*}	1.83m ²	2.28m ^{2**}	2.56m ²	3.47m ^{2***}	3.93m ²	5.3m ²
Perfections 450x11mm	1.57m ²	1.66m ^{2*}	2.08m ²	2.33m ^{2**}	3.16m ²	3.57m ^{2***}	4.82m ²
Royals 600x13mm	1.15m ²	1.22m ²	1.52m ²	1.70m ^{2*}	2.31m ^{2**}	2.62m ²	3.53m ^{2***}

* Maximum recommended exposure for roofs between 14° and 21°

** Maximum recommended exposure for roofs of 22° and above

***Maximum recommended exposure for walling

Shingles – Weight

Based on one bundle of XXXXXX Shingles

	Weight per bundle	Weight per m ² 125mm gauge	95mm gauge
Clean	14kg	6.14kg	8.09kg
Preservative treated	28kg	12.28kg	16.19kg
Fire retardant treated	16kg	7.02kg	9.25kg

Roll Vent: Roll Vent is relatively new to the UK but has been available in the USA for many years. It is used where both ridge and eave ventilation is required.

Roll Vent complies with the requirements in the USA (CABO, BOCA, SBCCI and IICBO, FHA and US Department of Housing and Development) with independent certification. This product gives a nett free area of 38,100mm² per m (18 sq. inches per linear foot) and should be installed in a balanced system. Full technical details are available on request.

Roll Vent is simple to install. Standard ridge units are suitable for use with this product.



CEDAR SHAKE SPECIFICATION

Western Red Cedar Handsplit and Re-sawn Shakes give a roof or wall a highly textured surface

Western Red Cedar Handsplit and Re-sawn Shakes: These are handsplit from blocks of Cedar with the natural grain of the wood, and then re-sawn to produce one smooth surface. Shakes are available in a wide combination of lengths and thicknesses.

Shape and dimension: John Brash has 600mm x 19mm 'heavy re-sawn' Shakes available in stock. These give the roof or wall a highly textured surface. Other types of Shake are available to special order only. As with Shingles, Shakes are supplied by the bundle, ready to fix.

Underlays: For roof pitches of 20° - 30°, a reinforced bitumen roofing felt underlay, complying with the specifications for types 1F or 5U detailed in Annex A of BS 5534:2003, is required between the Shake courses. This acts as a baffle to prevent the ingress of wind driven snow, or other foreign matter, into the roof space.

The strips of felt should be fastened to the lower part of the next batten exposed above the head of the Shake, and the lower edge of the felt should be at a distance above the butt equal to twice the weather exposure. For example, 600mm Shakes laid with a 250mm exposure would have felt applied 500mm above the butt. Thus the felt will cover the top 100mm of the Shakes and extend 357mm onto the sheathing. Note that the top edge of the felt must rest on the spaced sheathing.

As an alternative for steeper pitches, where the slope of the roof is over 30°, a more simple method of fixing may be used. A breather type of roofing felt is laid over the rafters and battened in the traditional fashion. We would recommend using a 3-ply roof construction in this case.

In conditions of severe climatic exposure or other exceptional applications, please contact John Brash for further advice.

Battens: Should be strong and stiff enough to withstand the proposed loading and to provide adequate fixing and alignment. The minimum batten size recommended on rafter centres up to 600mm is 25mm x 50mm. John Brash **JBRED** factory graded battens should ideally be used. Rafters should be a minimum size of 38mm x 75mm.

Nails: For maximum life, fixings should be made with 2 No. 45mm x 2.65mm silicon bronze annular ring nails (stainless steel can be used as an alternative) per Shake. As a guide 0.9kg of nail are required for bundles of four Shakes.

Shakes - Weight

Based on one bundle of handsplit and re-sawn Shakes

	Weight per bundle	Weight per m ² 250mm gauge	190mm gauge
Clean	13kg	7.1kg	9.35kg
Preservative treated	20kg	10.93kg	14.39kg
Fire retardant treated	15kg	8.2kg	10.8kg

Eden Centre





Shakes - Coverage

Based on one bundle of handsplit and re-sawn 600x19mm 'heavy' Shakes

	Exposure / Gauge		
	190mm	250mm	290mm
Coverage	1.39m ^{2*}	1.83m ^{2**}	2.12m ^{2***}

* Maximum recommended exposure for 3-ply roof construction

** Maximum recommended exposure for 2-ply roof construction

*** Maximum recommended exposure for single course on walls

Fire: Some building regulations impose certain restrictions concerning possible fire risk and may require a fire retardant treatment, for example, FRT Exterior® which achieves the following performance:

- Euroclass B to BS EN 13501-1 (transposes to Class 0)
- Euroclass C to BS EN 13501-1 (transposes to Class 1)
- AAP60 rating BS 476: Part 3:2004 External Fire Exposure of Roofs

Shingles and Shakes that are treated with a preservative have a 'CB rating'.

Fixing Details: As with Cedar Shingles, the Shakes are fixed directly on to the batten at the specified gauge. Shakes are normally fixed directly to the upper parts of the battens (thereby avoiding conflict with the felt underlay nails) and applied in straight single courses. A starter/ eaves course of one or two layers of Cedar Shingles is overlaid with a single course of Shakes.

Hips and ridges are formed with alternative bevels laid to the same gauge as the plain roof.

- Roofs 3-ply (3 course) = 190mm gauge giving coverage of 1.39m² per bundle
- Roofs 2-ply (2 course) = 250mm gauge giving a coverage of 1.83m² per bundle
- Vertical = 290mm gauge giving a coverage of 2.12m² per bundle

N.B. These are exact areas and do not allow for cutting and wastage.

In addition for all cases allow extra:

- Starter Course – either (a) double course of Shingles, 1 bundle for every 9 linear metres or (b) single course of Shakes, 1 bundle for every 7 linear metres
- Valleys – 2 bundles for every 7.5 linear metres
- Hips and ridges* – 2 bundles for every 7.5 linear metres (traditional method)

*there is no pre-formed capping available

Flashings: It is recommended that flashings are installed in accordance with normal good building practice. It should be noted that where lead or other metal flashings are used care should be taken to avoid contact between the Cedar Shakes and the metal. As with Cedar Shingles a bituminous paint affords an effective barrier or, alternatively, GRP Valleys and flashings are suitable.

See figure 7.

ALTERNATIVE SHINGLES AND SHAKES RANGES

Western Red Cedar Taper Sawn Shakes: Taper Sawn Shakes are manufactured in a similar material to Western Red Cedar Shingles but are laid in the same way as Handsplit Shakes. They give all the advantages of a Cedar Shingle roof – a regular, clean appearance but with a more solid textured look. However, unlike Cedar Shingles, Taper Sawn Shakes are usually only suitable for pitches of 22° and more. Taper Sawn Shakes have a deeper shadow line at the butts. The standard thickness is 22mm (7/8”) and length 450mm (18”). They are laid in a 2-ply fashion with felt interleaving.

Oak Shakes: These attractive hardwood Shakes are particularly suitable for building conservation projects, such as the restoration of a church spire or bell tower. Oak Shakes can be supplied with preservative pre-treatment.

Oak Shakes are supplied in lengths of either 400mm or 450mm. They are much narrower than Cedar Shingles and range in width from 60mm to 125mm, with a butt end 8-10mm thick. They are fixed with a minimum side lap of 30mm.

The 400mm Shakes will be fixed, for a 3-ply application on roofs over 22° pitch, at 125mm gauge with a gap between each Shake of 5-8mm. The 450mm Shakes are fixed at 140mm gauge. For sidewall application the Shakes will be fixed at 175mm gauge giving a 2-ply cover. Extra wide Shakes can be supplied for use where a hip is formed. These Shakes will vary randomly in width from 125mm to 225mm.

Ridges and hips are formed on site and mitred to form a weatherproof capping.

Chestnut Shakes: The rich colour of chestnut results in a natural roofing material that is extremely appealing and aesthetically very pleasing. Like Oak Shakes, they are particularly suited to restoration projects. Chestnut Shakes are supplied in lengths of 325mm and range in widths from 70mm to 125mm with a butt end of 10-15mm thick.

The 325mm Chestnut Shakes will be fixed for a 3-ply application on roofs of over 22° pitch at 100mm gauge with a gap between each Shake of 5-8mm. Each Shake is fixed using two 45/50mm stainless steel annular ringshank nails driven straight through the Shake 25mm minimum from the edge - no pre-drilling is necessary.

As in the case with Oak Shakes, ridges and hips are formed on-site and mitred to form a weatherproof capping.

Alternative Shingles and Shakes Ranges - Coverage Chart

All calculations are based on one bundle of each type of Shingle/Shake *

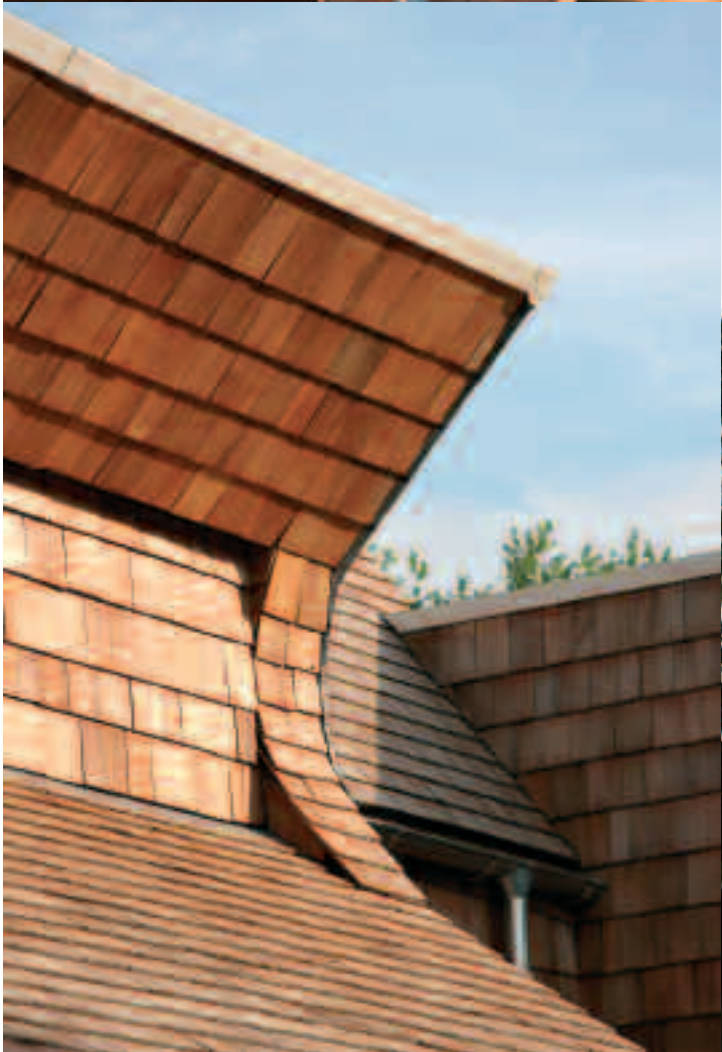
Exposure / Gauge Coverage

Taper Sawn Shakes 22° pitch	190mm	1.85m ²
Taper Sawn Shakes vertical	210mm	2.05m ²
Oak Shakes over 22° pitch	125mm	1m ²
Chestnut Shakes over 22° pitch	100mm	1/4m ²

* An allowance must be made for cutting and wastage



Bateman Mews, South London





SCULPTURED SHINGLE SPECIFICATION & ACCESSORIES

Sculptured Shingles (Fancy Butt Shingles): These are speciality products which are re-buffed and re-jointed to ensure that the Shingle is perfectly square, and then sanded. Available 450mm long by 125mm wide, the Sculptured Shingles are available in a wide variety of patterns. From stock Square, Round, Arrow and Diamond are available together with samples of Half Cove, Fishscale and Octagonal. They are suitable for both interior and exterior roofs and walls. They can be mixed with other patterns, or standard Shingles, to break up large areas and create a unique feature.

Shape and dimension: The normal dimensions of Sculptured Shingles are 450mm long and 125mm wide. Their thickness tapers from 11mm at the tail or butt edge to 3mm at the head.

As with standard Shingles, Sculptured Shingles are normally fixed directly to battens; a double eaves starter course of standard Shingles is used if the complete surface is to be covered with Sculptured Shingles.

In fixing Sculptured Shingles care must be taken to ensure that each one is centred exactly over the gap between the two Shingles on the course below to ensure a balanced effect. For internal applications the normal gap left between the Shingles may be closed.

ACCESSORIES

Pre-Formed Cedar Hip and Ridge Units: Offering considerable savings in construction time, they are supplied in bundles of 36 No. 450mm long units, consisting of 18 left-hand and 18 right-hand bevels. Each unit is secured by two staples giving sufficient flexibility to accommodate a range of pitches. The hip and ridge cappings should be laid with alternate bevels at the same gauge as the field of the roof, but should not be used at a gauge exceeding 150mm. Each unit should be fixed with two silicon bronze or stainless steel nails each side, long enough to penetrate 19mm minimum into the substrate. Nails should be positioned not less than 19mm from the outer edge and 25-50mm above the exposure line. For additional weatherproofing a 150mm wide strip of Type IF roofing felt should be fixed under the units.

Coverage:

- At a 95mm gauge – 1 bundle covers 3.4 linear metres
- At a 125mm gauge – 1 bundle covers 4.5 linear metres

Nails: Silicon Bronze annular ring nails are available from stock. Stainless steel can be used as an alternative. The naturally occurring chemicals in cedar make the use of these nails essential to a long life.

Fancy Butt Shingles – Weight

Based on one carton Sculptured Shingles – 96 pieces

	Weight per carton	Weight per m ² 190mm gauge	125mm gauge
Clean	11kg	4.83kg	7.33kg
Preservative treated	22kg	9.65kg	14.67kg
Fire retardant treated	12.5kg	5.48kg	8.33kg

Fancy Butt Shingles – Coverage

Approximate coverage of one carton Sculptured Shingles

	Exposure / Gauge 125mm	190mm	250mm
Coverage	1.50m ^{2*}	2.28m ^{2**}	3.00m ^{2***}

* Maximum recommended exposure for roofs

** Maximum recommended exposure for external cladding

***Maximum recommended exposure for internal cladding

Shingle Hatchet: Shingle Hatchets are unique, in that they have a peg which can be moved to set the gauge.

Maintenance: Shingles and Shakes are generally maintenance free, but to increase the longevity any debris accumulating on the roof should be swept off with a stiff broom or wire brush. The use of a strip of zinc, exposed at the ridge, can also help prevent moss growth.



FIGURE 1: FOR COLD ROOF CONSTRUCTION

Code 4/5 lead valley flashing edges dressed over tilt fillets - all in accordance with LSA (Lead Sheet Association) recommendations. Underlay to be taken over valley flashing

Layboards fitted between rafters to support valley flashing

Tilt fillets fixed to each side of layboard

Ends of battens to be fixed to layboards

Vapour permeable underlay laid taught over tops of rafters

25mm x 38mm battens set to gauge

Paint the lead with a bitumen paint where it is likely to be in contact with the Shingles

Lead lining to valley to be dressed into gutter

6mm gap left between each Shingle

Adjacent course to be offset by 38mm

Order of applying Shingles at valley

- 1 Stop course line here
- 2 Place pre-cut piece so that cut angle is positioned chalk line with tip on course line
- 3 Select a Shingle of the required width to complete the course

38mm projection

Double starter course

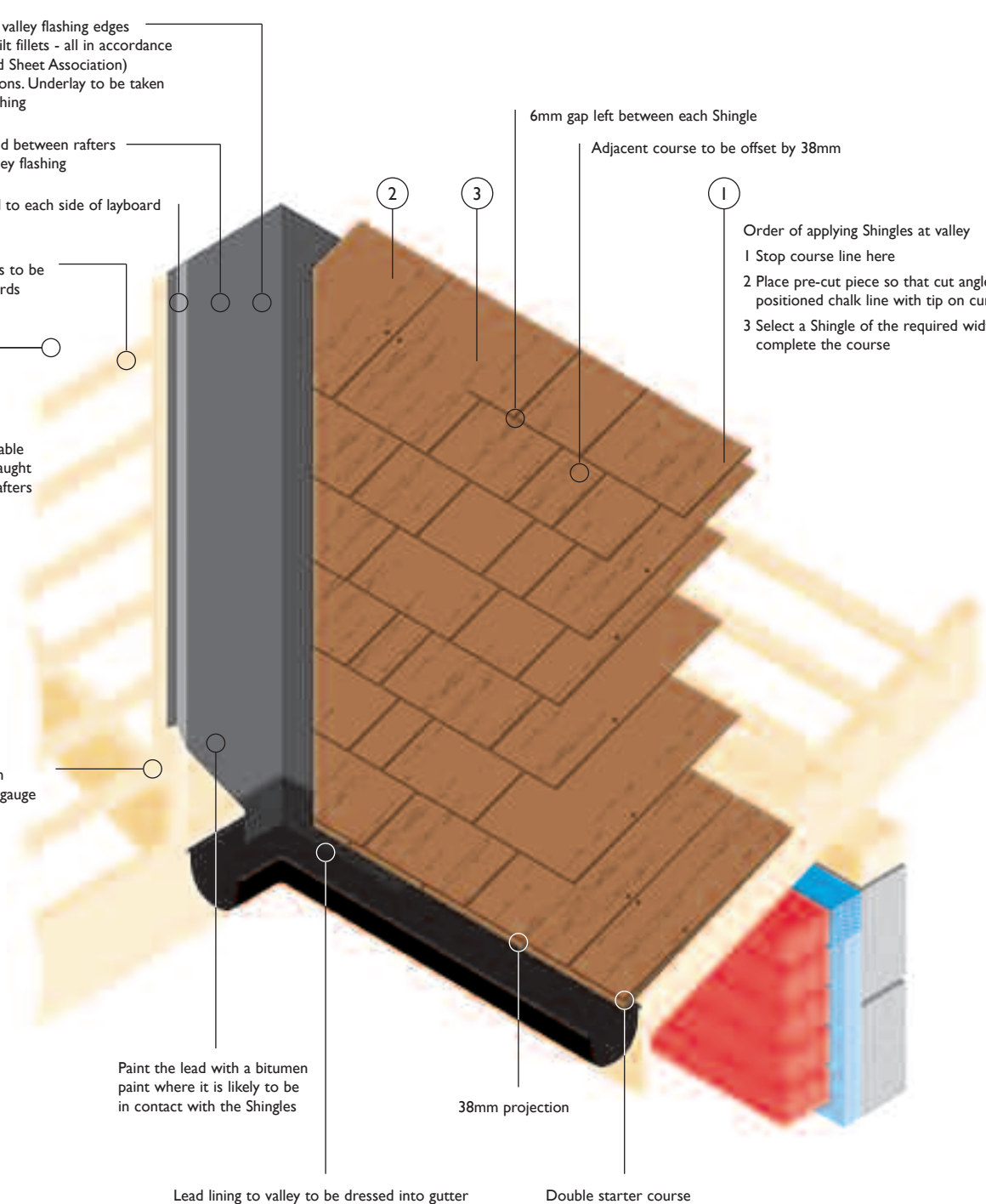


FIGURE 2: ROOF RIDGE WITH VENTILATION

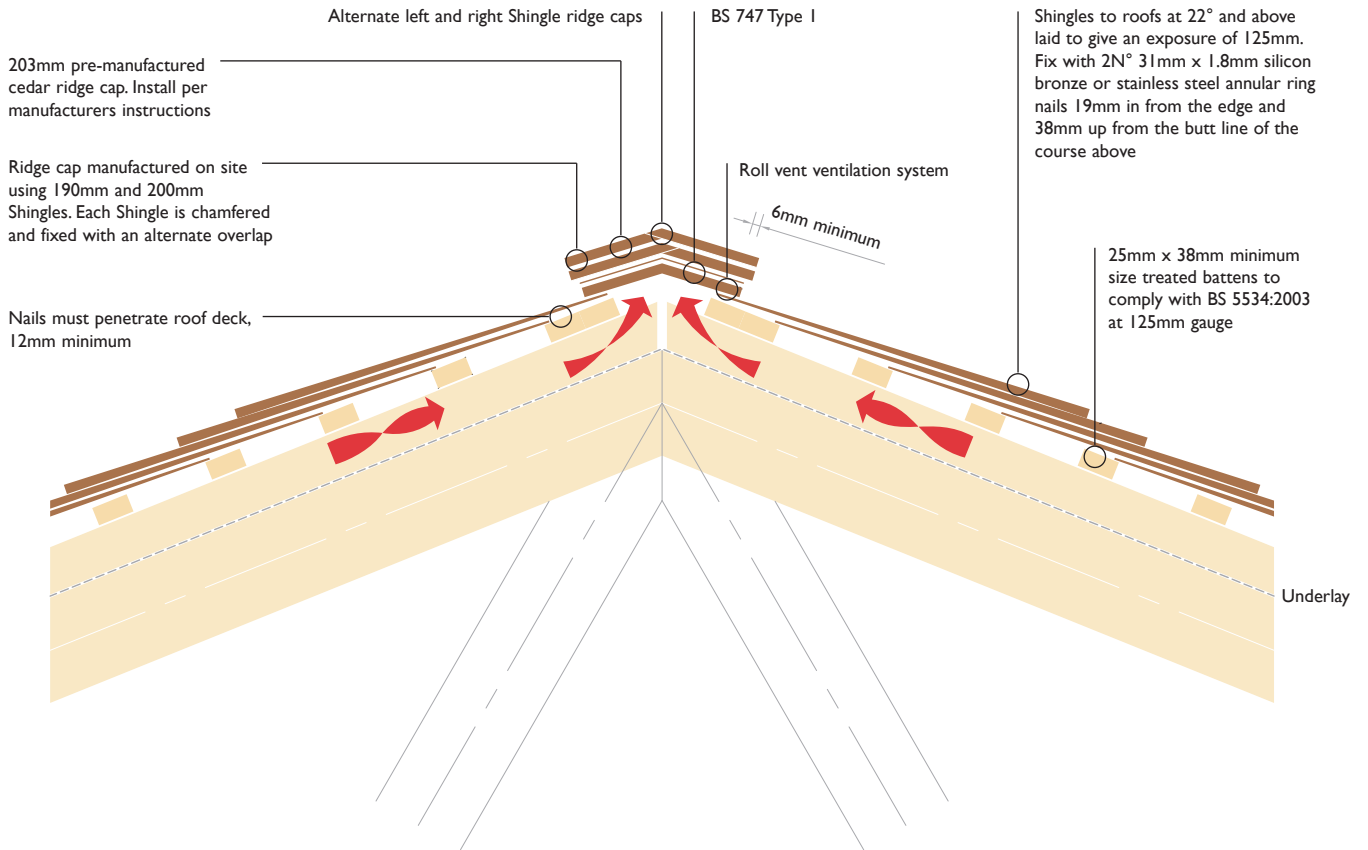
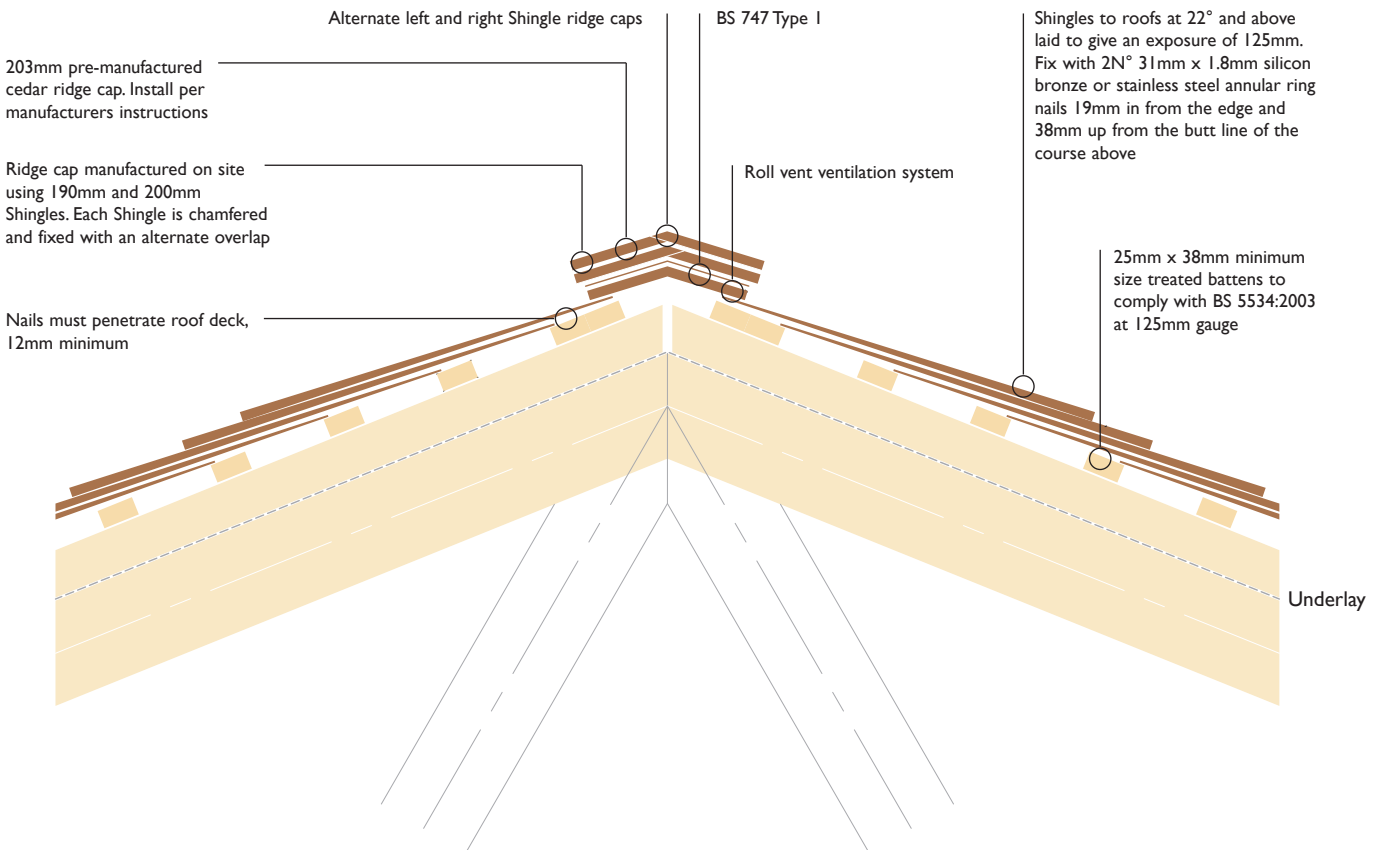


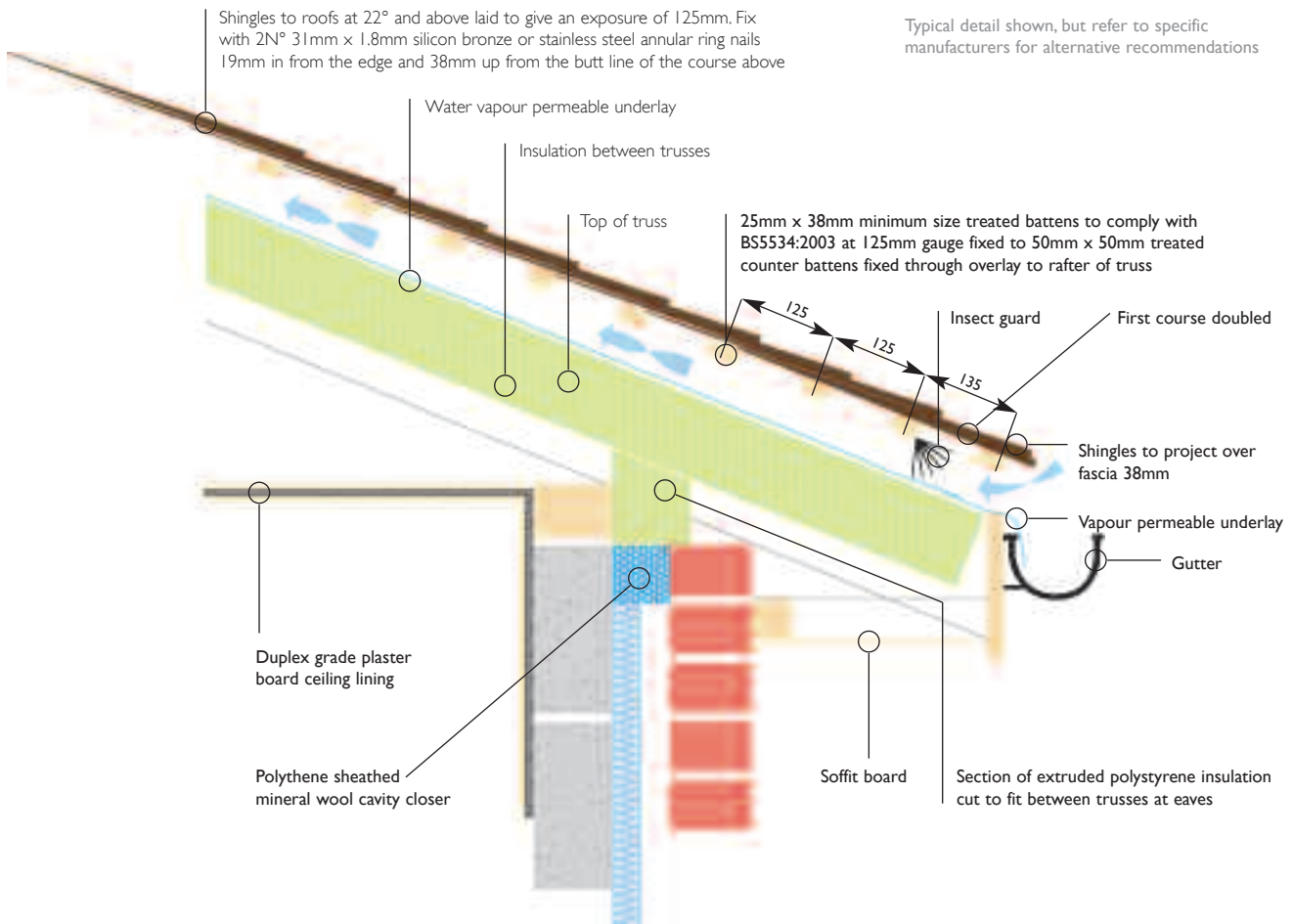
FIGURE 3: ROOF RIDGE WITHOUT VENTILATION



All Saints Medical Centre, Kingsheath



FIGURE 4: WARM ROOF CONSTRUCTION EAVES WITH SOLID INSULATION



Typical detail shown, but refer to specific manufacturers for alternative recommendations

FIGURE 5: HIP DETAIL

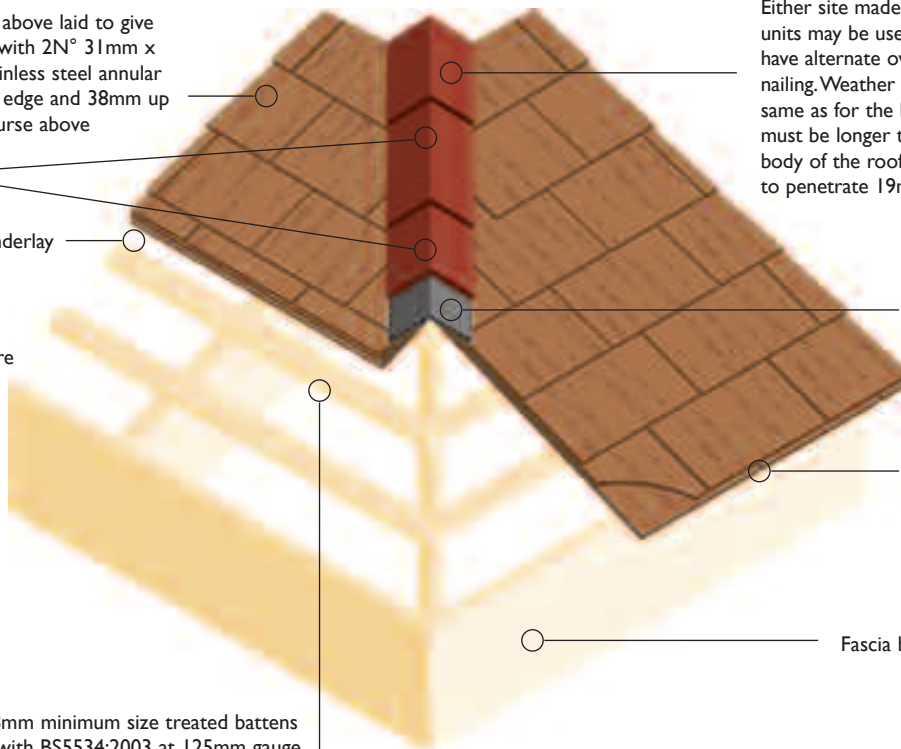
Shingles to roofs at 22° and above laid to give an exposure of 125mm. Fix with 2N° 31mm x 1.8mm silicon bronze or stainless steel annular ring nails 19mm in from the edge and 38mm up from the butt line of the course above

Alternate overlaps

Water vapour permeable underlay

Airspace open to atmosphere

25mm x 38mm minimum size treated battens to comply with BS5534:2003 at 125mm gauge



Intersecting roof surfaces at hips to be capped to ensure a weathertight joint. Either site made or factory-assembled hip units may be used but both types must have alternate overlaps and concealed nailing. Weather exposure should be the same as for the body of the roof. Nails must be longer than those used for the body of the roof and of sufficient length to penetrate 19mm into the battens

Strip of felt on edge over ridge and hip covered by ridge cappings

Shingles to project over fascia 38mm

Fascia board

FIGURE 6: CEDAR SHINGLES FIXING DETAILS

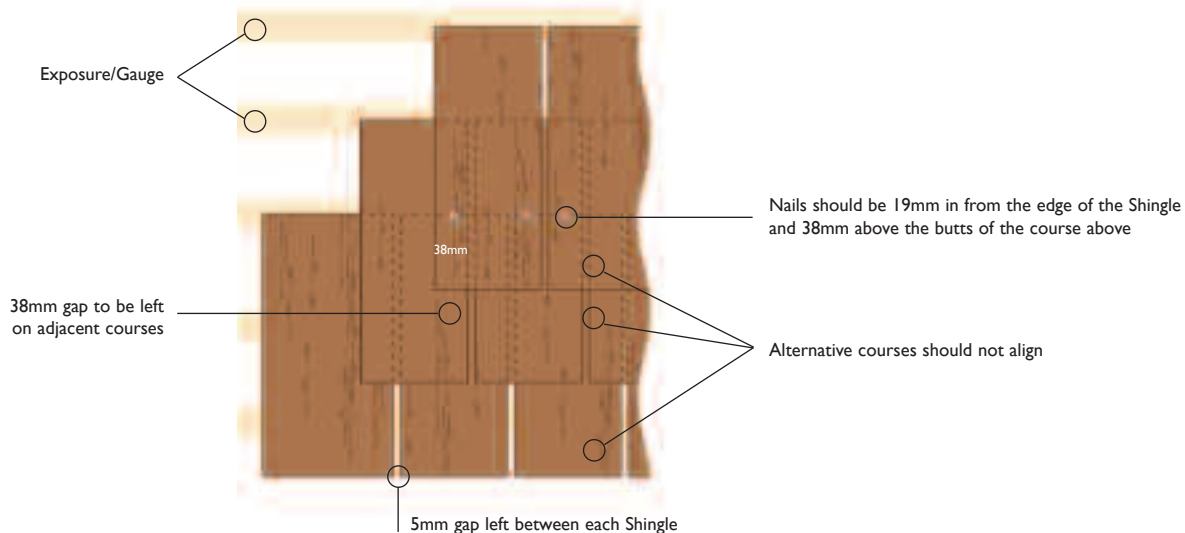


FIGURE 7: CEDAR SHAKES FIXING DETAILS

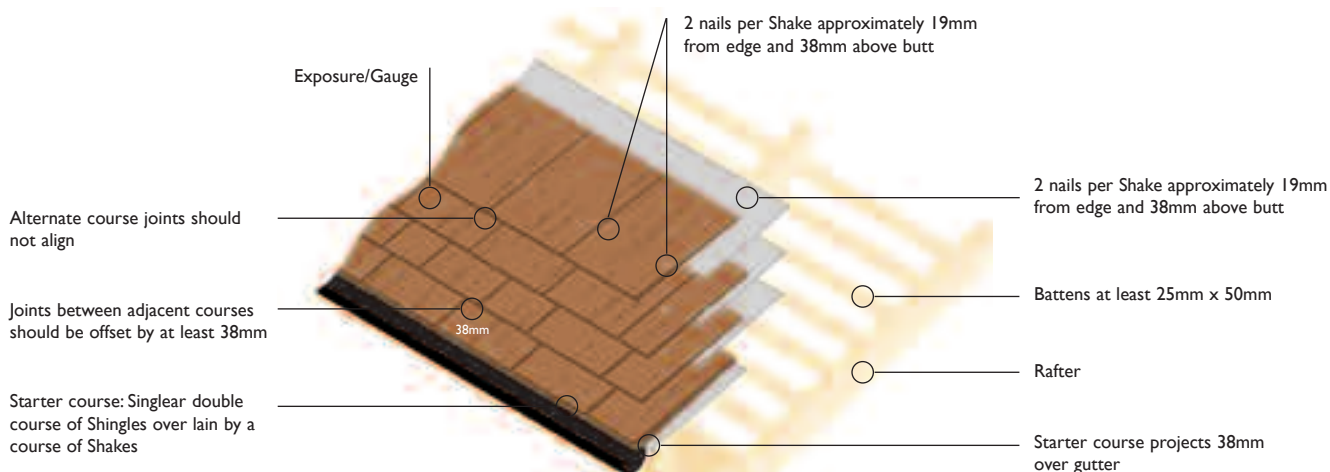


FIGURE 8: SPECIALITY SHINGLE FIXING DETAILS

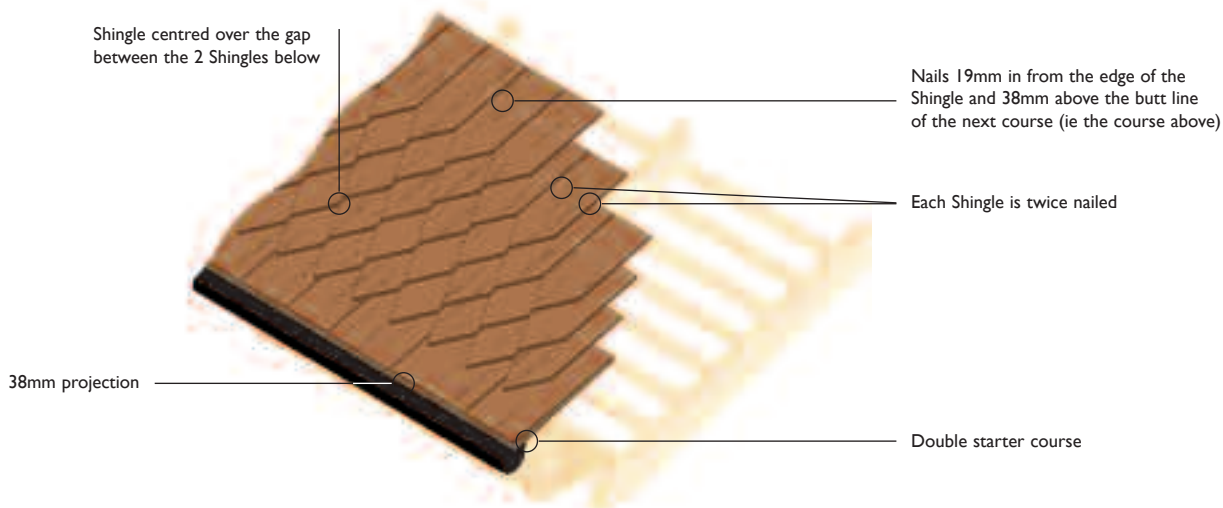


FIGURE 9: SWEPT / BALL EAVE

For excessive sweep Shingles may be steam bent

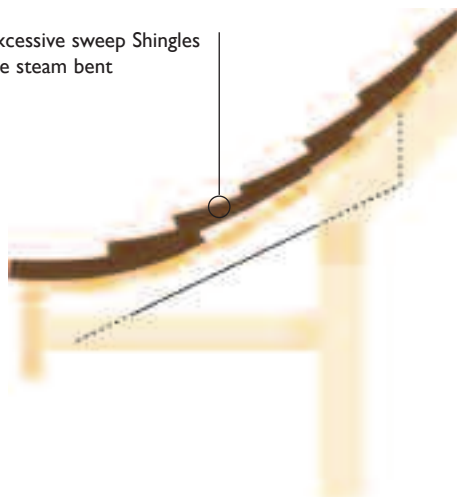


FIGURE 10: CONCAVE ROOF JUNCTURE

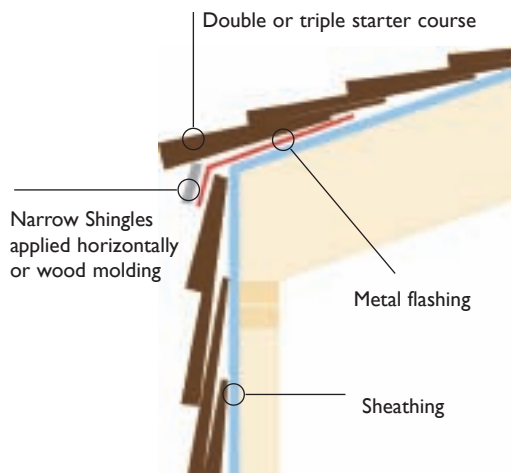


FIGURE 11: CONCAVE ROOF JUNCTURE

Double starter course
Two last courses over flashing

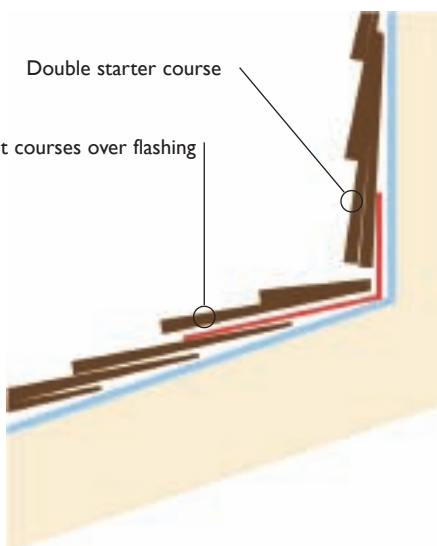


FIGURE 12: CONCAVE ROOF JUNCTURE

Double starter course
Metal flashing

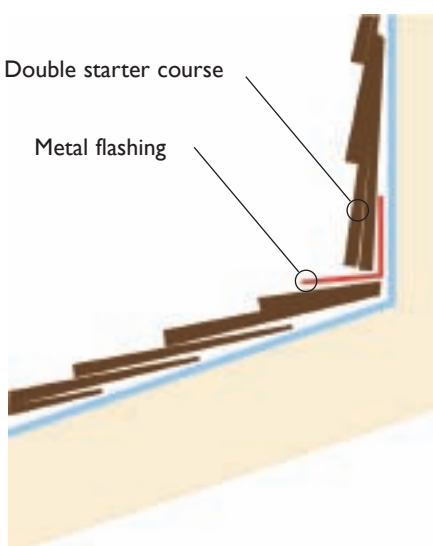
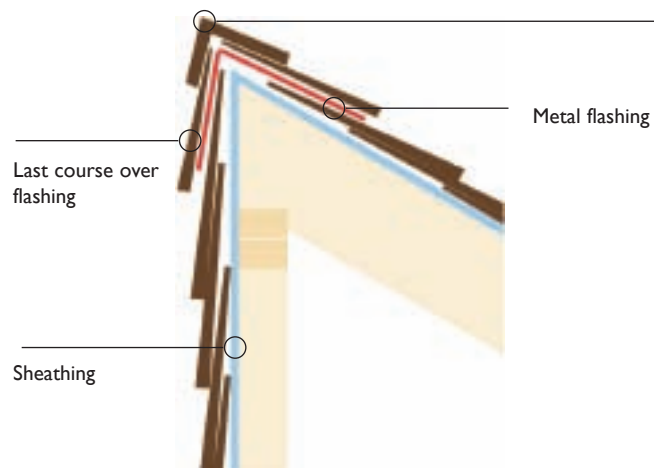


FIGURE 13: APEX ROOF JUNCTURE



Ridge cap: Alternate overlap with double starter course



The Treehouse, Alnwick Garden



WHY USE TIMBER?

Timber is without doubt one of the most environmentally friendly building materials available. It is extraordinarily versatile, naturally renewable, beautiful, light and strong to build with - warm and welcoming to live with.

Whether it is a landmark building, government office, housing, school or hospital, architects look to timber to express a contemporary beauty. Timber is a high performance material, light in weight, yet with excellent load bearing and thermal properties.

FSC & PEFC: John Brash has full chain of custody. This ensures that our timber is purchased from both legal and sustainable sources. These schemes trace the timber from forest to end use. FSC (Forest Stewardship Council) and PEFC (Programme for the Endorsement of Forest Certification schemes) are internationally recognised organisations. PEFC also acts as an umbrella organisation, incorporating national schemes such as CSA (Canadian Standards Authority) and SFI (Sustainable Forestry Initiative).

Carbon cycle: Carbon, and especially CO₂ emissions, are recognised as a key factor in climate change. In the UK 40% of all carbon emissions come from buildings, split evenly between domestic and commercial. There is a drive to 2016 for the Zero Carbon House. Timber can contribute significantly with the carbon sink effect of the forests, the carbon storage of the timber and as substitution for carbon intensive materials.

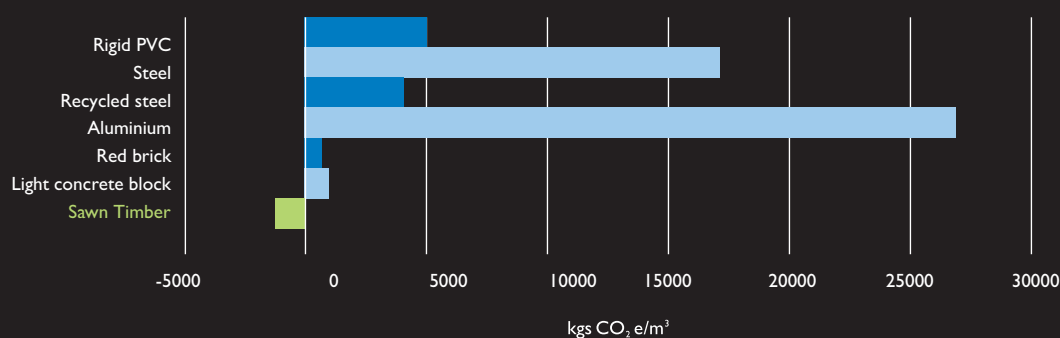
- Every 1m³ of timber absorbs 1 tonne of CO₂
- Timber energy is CO₂ neutral (only the CO₂ absorbed is returned back to the atmosphere)
- There is little waste in manufacturing, as the by-products can be used for energy generation in bio-mass power plants, which can be used to generate power for the site or the grid.

Life cycle: Life cycle assessment measures the environmental impacts of a building component right the way through its life. It takes into account where the material comes from and how it is used, all the way through to disposal or recycling.

There are 3 phases:-

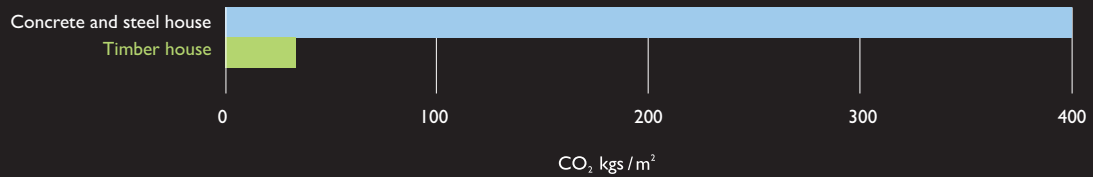
- Production phase or embodied energy: timber has the lowest embodied energy of any commonly used building material.

'HOW WOOD PRODUCTS SLOW GLOBAL WARMING' NET EMISSIONS OF CO₂ INCLUDING CARBON SINK EFFECT



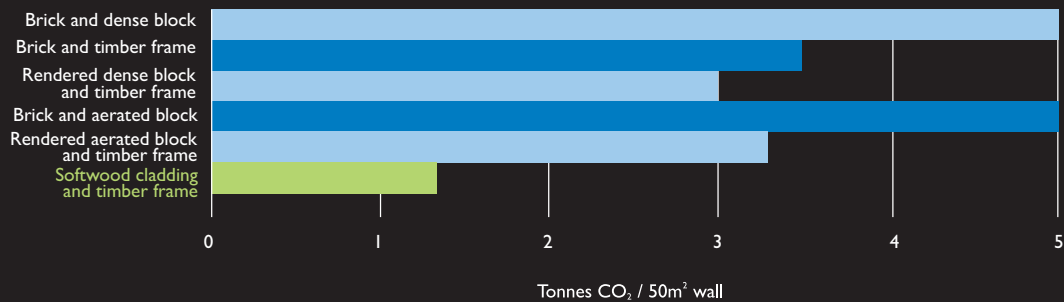
- In use phase: timber buildings can be most cost effective in constructing energy efficient buildings.

CO₂ EMISSIONS FROM DIFFERENT HOUSE CONSTRUCTIONS



A 2001 Swedish study showed the difference to be equivalent to 27 years heating, or driving a Volvo s80 130,000km!

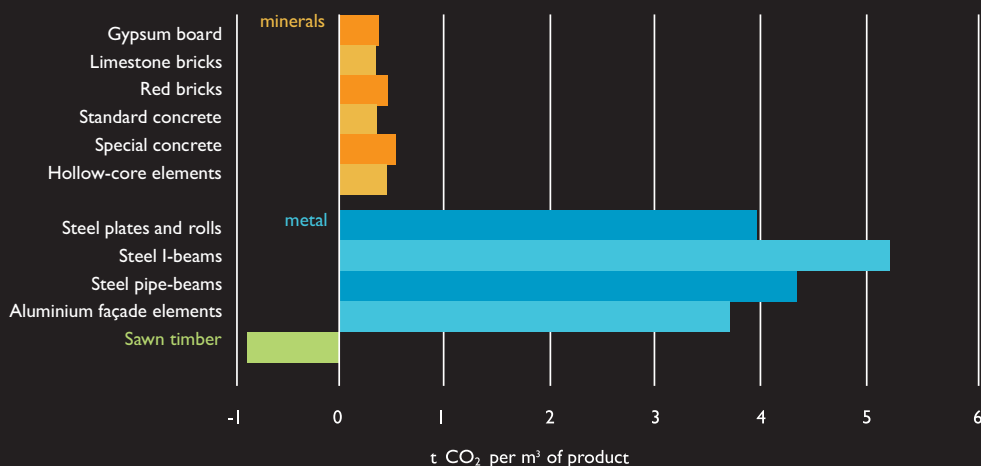
CO₂ EMISSIONS FROM DIFFERENT WALL CONSTRUCTIONS



- End of Life: If the timber cannot be recycled it can be used as a substitute for fossil fuels, providing renewable energy.

CO₂ can be saved using timber over the whole life cycle. Substituting 1m³ of timber for other construction materials can result in savings of up to 1 tonne of CO₂. This combined with the carbon storage, means that 1m³ of timber stores and substitutes 2 tonnes of CO₂.

NET CO₂ LIFE CYCLE EMISSIONS



Fire: Timber can burn but unlike other materials it behaves predictably, the timber forms a charred surface that acts as protection to the inner surface. Modern fire retardant treatments are also available that reduce the risk further still.

TIMBER FROM JOHN BRASH - THE NATURAL CHOICE



JOHN BRASH

T I M B E R

FOUNDED 1905

INNOVATION QUALITY SERVICE



Photograph: Fred J Kuipers

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