JB Red Roofing Batten

and the Importance of Graded Battens

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Date – 5th February 2025
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Why are Roofing Battens Important?

Roofing battens are important for 3 key reasons: Safety, Performance and Compliance

Safety

- Roof work is a high-risk activity because it involves working at heights
- Inadequate battens are a Health & Safety risk and could cause roof failure and accidents
- HSG33 sets out ways in which accidents while roofing can be prevented
- HSE only approve BS 5534 graded roofing battens as a secure foothold when installing a roof
- NFRC Technical Bulletin 33, section 5 also refers to battens supplied and fixed in accordance with BS 5534 may be used as an alternative to roof ladders

Why are Roofing Battens Important?

Performance

- Battens are a structural and load-bearing element of the roof
- They support the dead weight of tiles, snow etc and imposed loads, such as wind, on the roof
- Unlike most structural timber, roofing battens act as a principal member during installation
- In this case there is no load sharing, and a single failure can have serious consequences

H&S concerns for contractors?

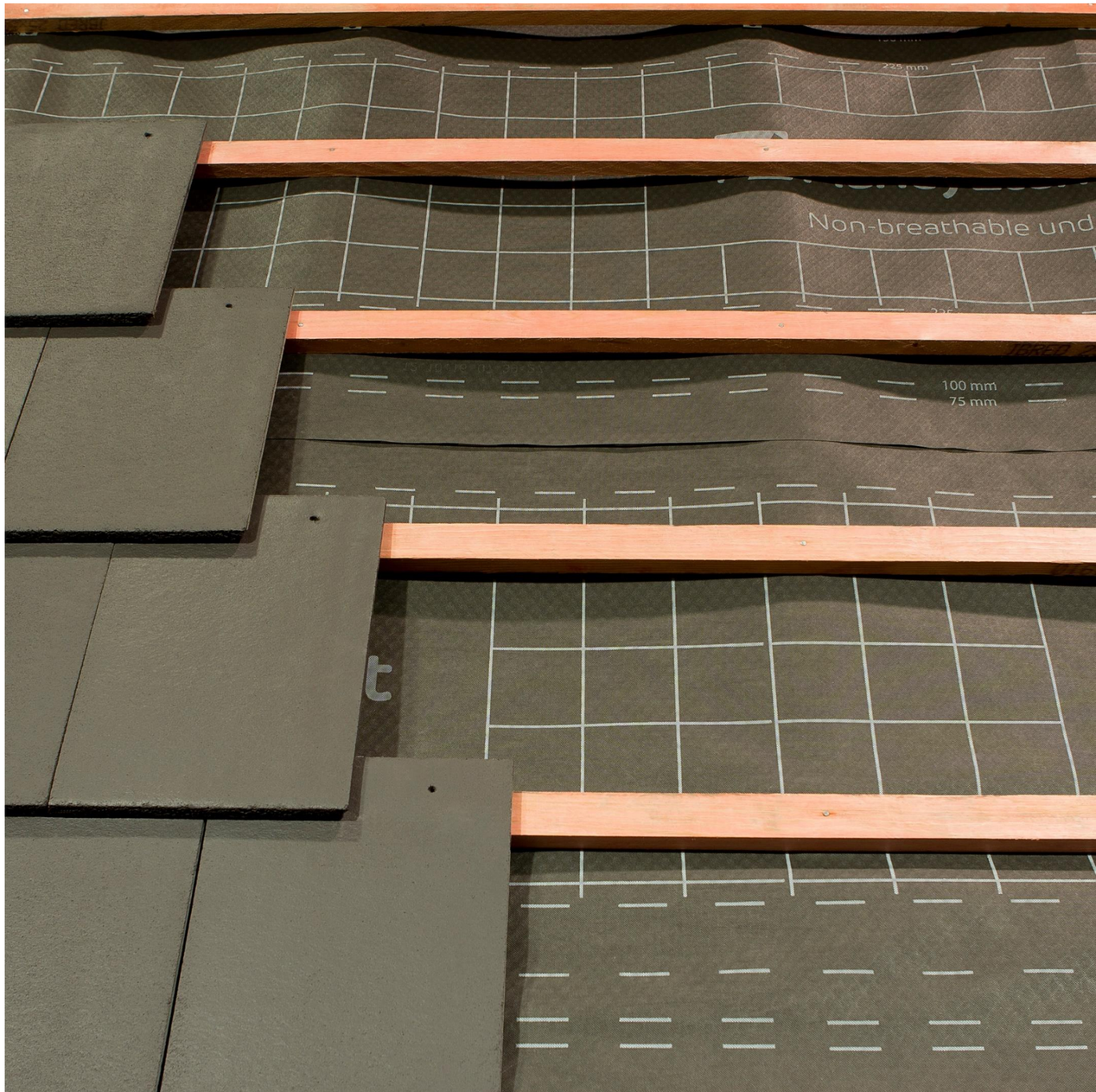
Taking battens for granted

- Prior to 2015, and changes to BS 5534, contractors could grade battens themself on site
- The changes were made to ensure consistency, safety and compliance with regulations whilst reducing the risk of human error
- Now most contractors wouldn't know how to grade battens as this previous skill has been lost
- Contractors are dependent on the battens meeting the British Standard and rely on them being compliant - lives depend on it!
- But are they getting what they are being sold?

Why are Roofing Battens Important?

Compliance

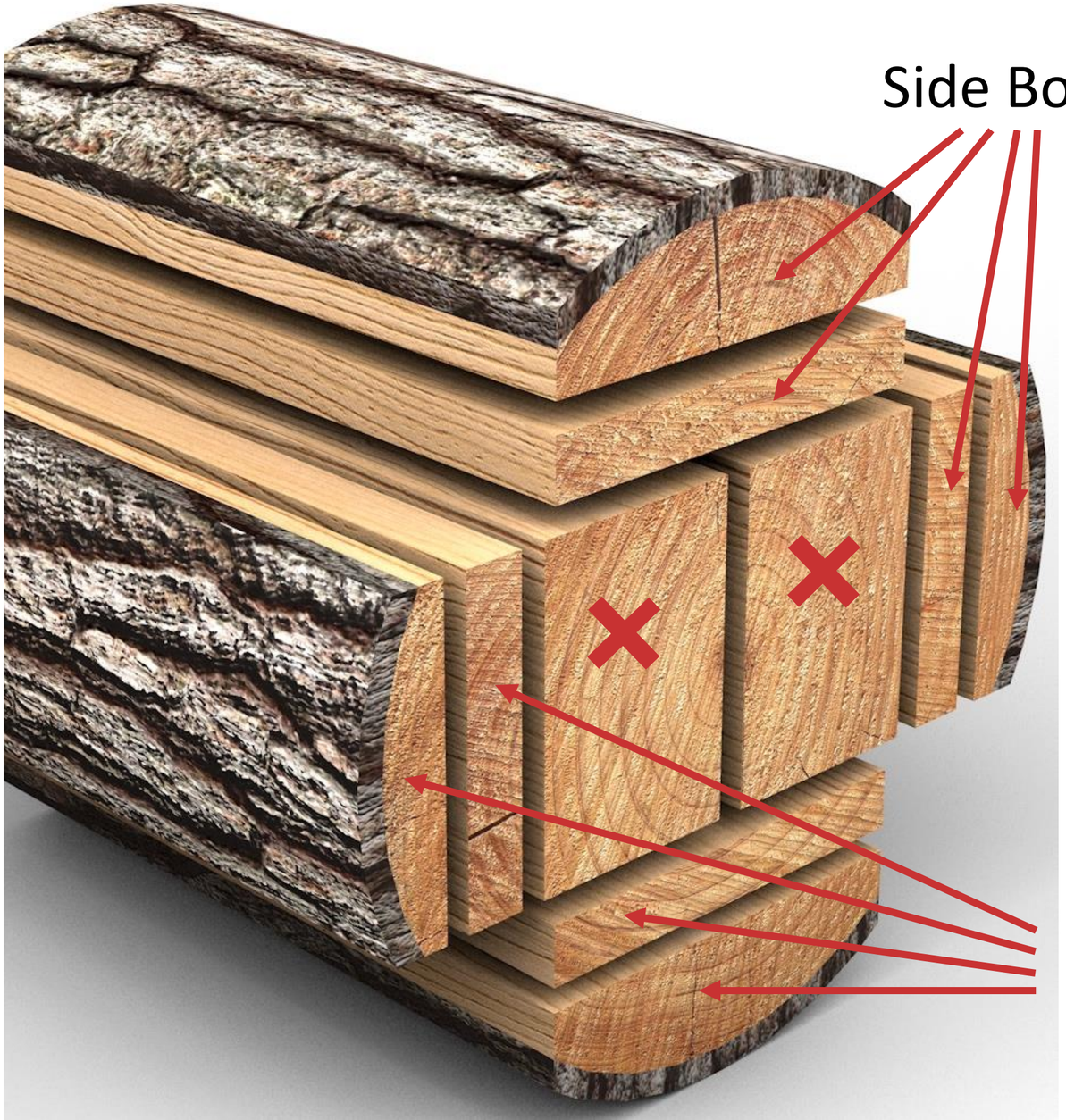
- All battens used for roofing must meet BS 5534 as required by NHBC, LABC, Building Regulations and Competent Roofer.
- Grading on site is no longer an accepted practice
- Roofing battens must arrive on site correctly marked and supported by correct paperwork
- Battens must meet chain of custody requirements if requested



What Timber Should be Used to Make Roofing Battens?

- Ideally slow grown, kiln dried timber from the Nordic countries
- Timber grown in colder climates grows more slowly and produces stronger timber
- Average age trees felled in Nordic countries is 60 years old – compared to Baltic trees faster grown circa 20-30 years timber not as strong
- European Red / Whitewood has been proven to be 17% stronger in bending and stiffness than home grown UK timber

What Part of the Log Makes the Best Roofing Batten?



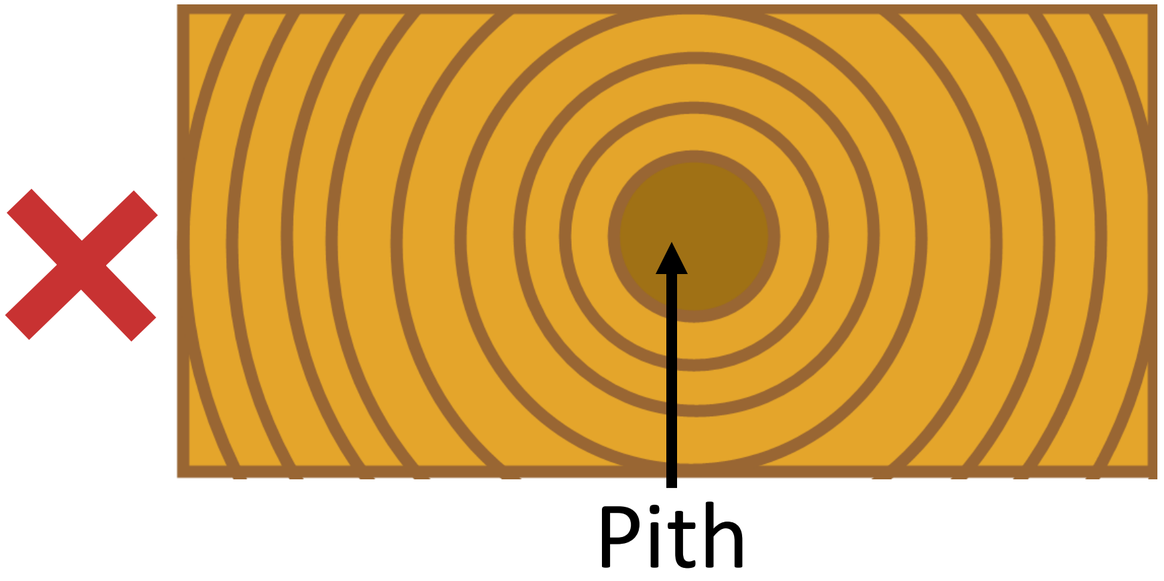
Side Boards

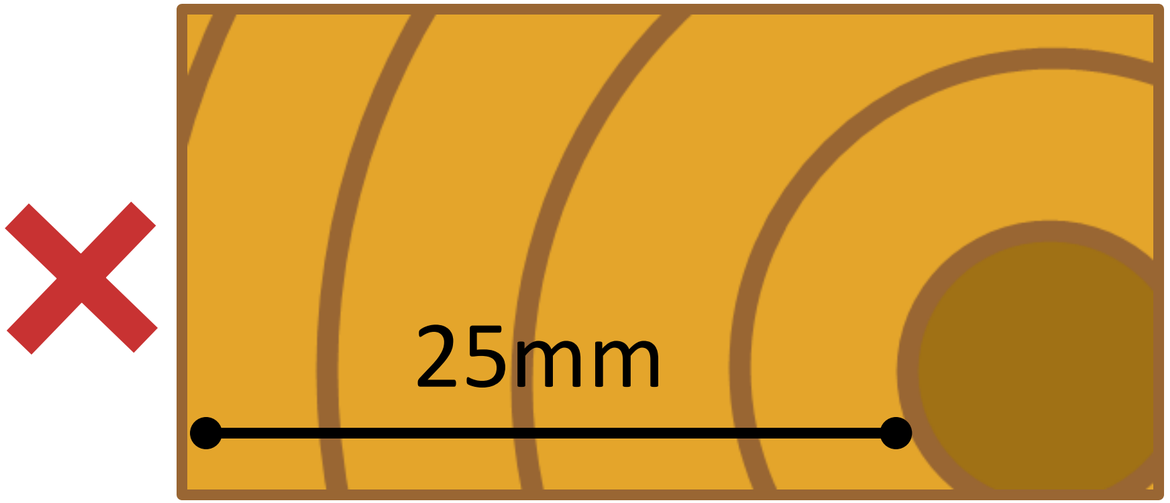
- Sideboards should be used for roofing battens as the timber is stronger and less likely to distort than heartwood containing the pith.

Centre Cut Should Not Be Used as Batten

- Centre cut is sometimes used by mills who use faster growing timber which isn't as strong

How can we Identify Centre Cut Battens?





- The natural characteristics shown here make centre cuts easily identifiable.
- Pith is the very centre of the tree and is easily identifiable. It can be visible on one or both ends of the timber
- Growth rings in centre cut material are often less than the required 4 per 25mm
- Growth rings may be vertical, or almost vertical
- Centre cut material poses a serious threat to the integrity of the batten and therefore the safety of the roofers

Why is ‘Centre Cut’ Unsuitable for Roofing Battens?

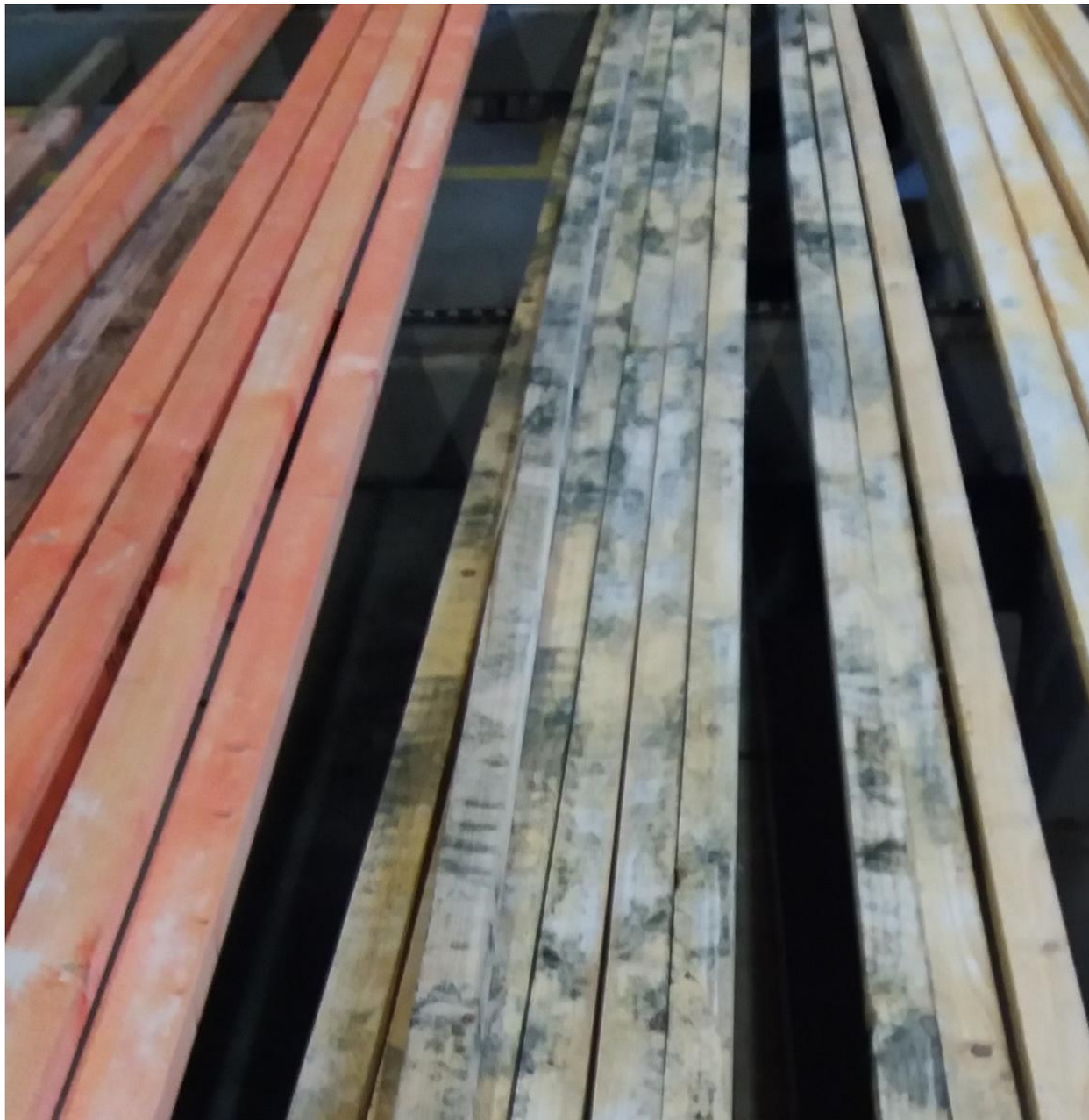
- Material that is cut close to the centre or pith is less stable and more likely to distort (i.e., bow, twist, or spring)
- The slope of the grain can be difficult, if not impossible to measure
- Centre grain can be more difficult to grade due to poor quality
- Battens are not straight and therefore harder to fix correctly. Adjacent image is centre cut material and you can see the distortion in the bundles

Why is Roofing Batten Graded?

Timber is checked for its suitability and safety as a roofing batten. It must also meet the BS 5534 Standard.

Grading identifies common defects including:

- Wane
- Knots
- Dimension
- Distortion
- Insect attacks
- Resin pockets
- Splits
- Decay



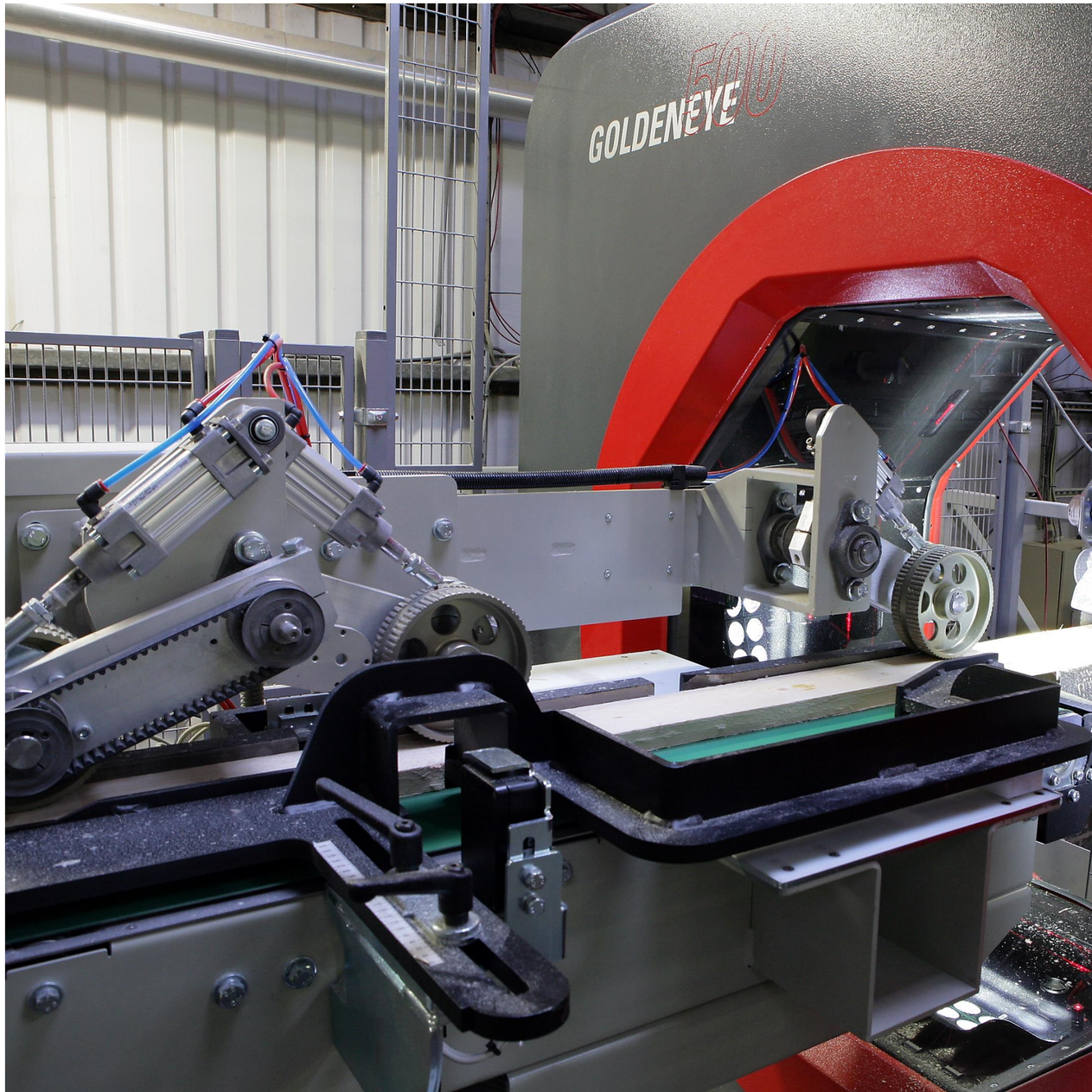
Batten Grading

There are 2 ways that batten can be graded, either visually graded and/or machine graded.

Computer Laser Scanning

JB Red is graded using the Goldeneye computer laser scanner. Its benefits are outlined below:

- Accurate - Assessing defects every 0.1mm
- Consistent - No chance of human error
- 99.9% accuracy
- 250m per minute go through the scanner

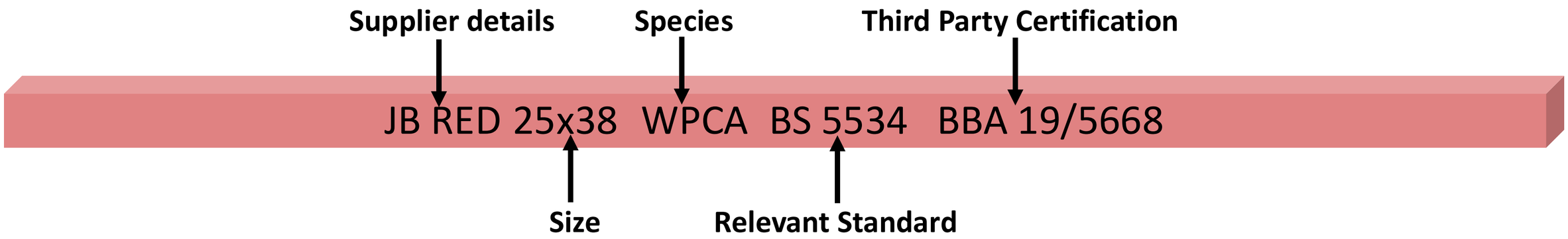


Visual Grading

Visual Grading is the process of judgement by the human eye. The possible problems are outlined below:

- Accuracy - Judgement by human eye at a distance
- Inconsistent - prone to human error
- Slow and inefficient

Rules for Marking Timber Battens



There are clear rules for marking. Every piece of batten must show the following markings:

- Supplier, e.g. JB Red
- Size, e.g. 25 x 50
- Origin/Species Code, e.g. WPCA (Whitewood) - Picea Abies or PNSY (Redwood) - Pinus Sylvestris
- The standard to which it is graded, e.g. BS 5534

Each piece must have all the above to comply.

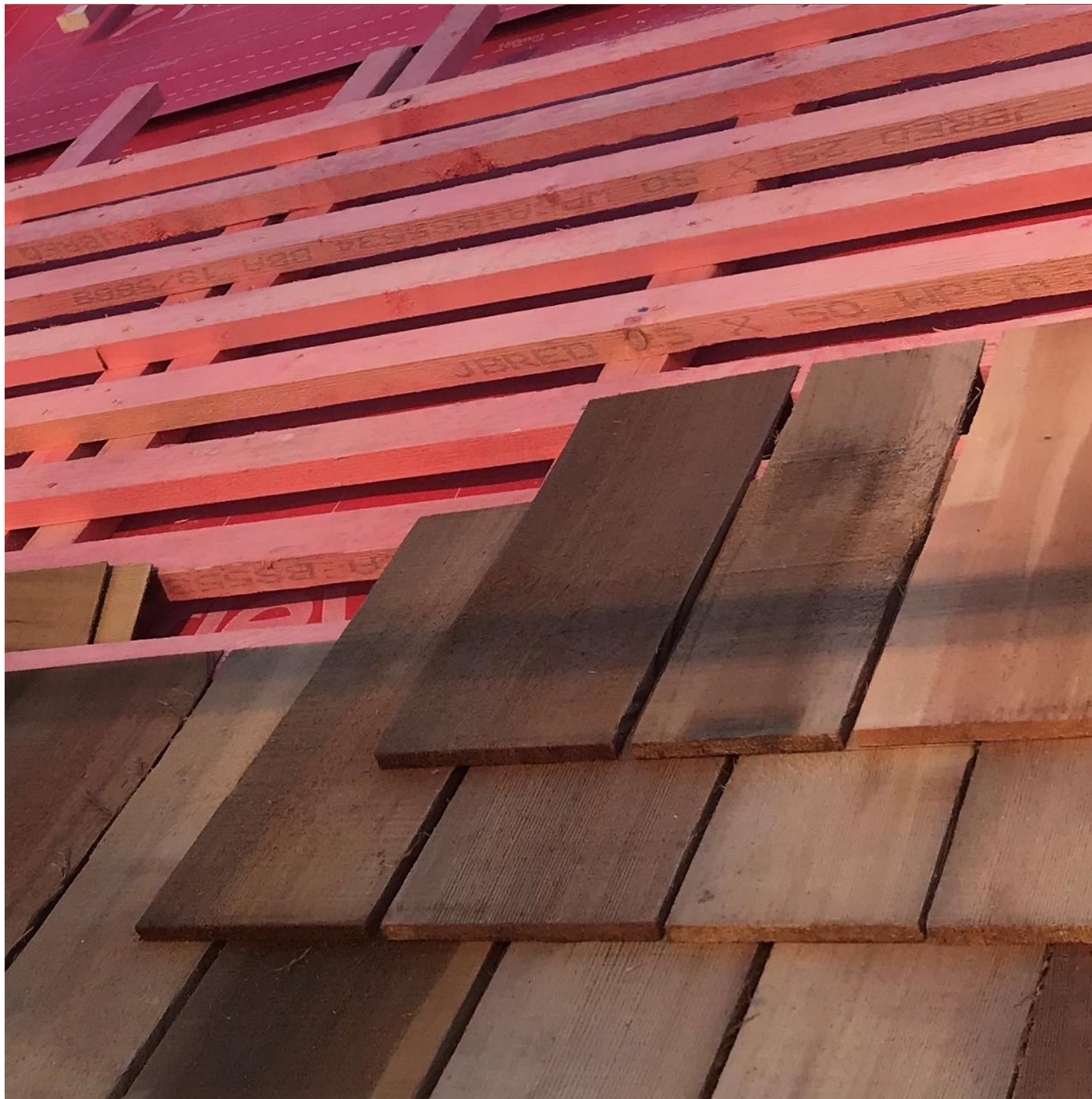
- If third party certified it is good to include but not a requirement for BS5534. So ideally the company and license number, e.g. BBA - British Board of Agreement 19/5668

Chain of Custody

- Chain of Custody is an unbroken and documented chain of ownership (custody) all the way from the forest, via the mill, the importer, and the supplier to the end user.
- Timber into the UK Construction Industry should be sustainably sourced and be subject to chain of custody requirements, tracking where the timber has been sourced from.
- Marley timber is all PEFC™ sustainably sourced, and this is documented on every customer timber invoice.
- PEFC™ – Programme for the Endorsement of Forest Certification™. All JB Red is PEFC material
- FSC – Forest Stewardship Council

Counter Battens

- There is some uncertainty as to whether counter battens need grading to BS 5534.
- Counter battens **do not** need grading providing they are fully supported and are fit for their intended purpose.
- The dimensions of counter battens should be sufficient to provide a ventilation gap as recommended in BS 5250 and/or to provide a drainage path beneath the battens.



Trust in JB Red

- JB Red is the only factory graded batten produced in the UK.
- Each batten is laser scanned at our Gainsborough site to ensure compliance with BS 5534
- Red colour ensures excellent visibility onsite for LABC, NHBC or any other inspectors
- Manufactured from side boards from slow-grown high-grade timber sourced from Scandinavia
- Preservative treated against insect attack and wood rotting fungi to Use Class 2 (when installed in guidance with UC2)
- Low wastage due to laser scanning and grading
- Quality checks – Our timber is quality checked at every stage of the process. Raw materials are checked for conformity to our buying specification, and they are also checked before they go through the Goldeneye scanner to ensure no deterioration has taken place.

Trust in JB Red

- Only kiln dried sideboards are used to ensure stability and dimensional accuracy
- Only European Whitewood (WPCA) or European Redwood (PNSY) species are used.
- Marley are an Approved Treater under the WPA Benchmark (Wood Protection Association) Quality Approval Scheme
- Treated to BS8417 Use Class 2
- JB Red has been a LABC registered detail and is often approved for use by local authorities
- The product holds a BBA Agreement Certificate (exclusive to JB Red)
- Code for Construction Product Information verified

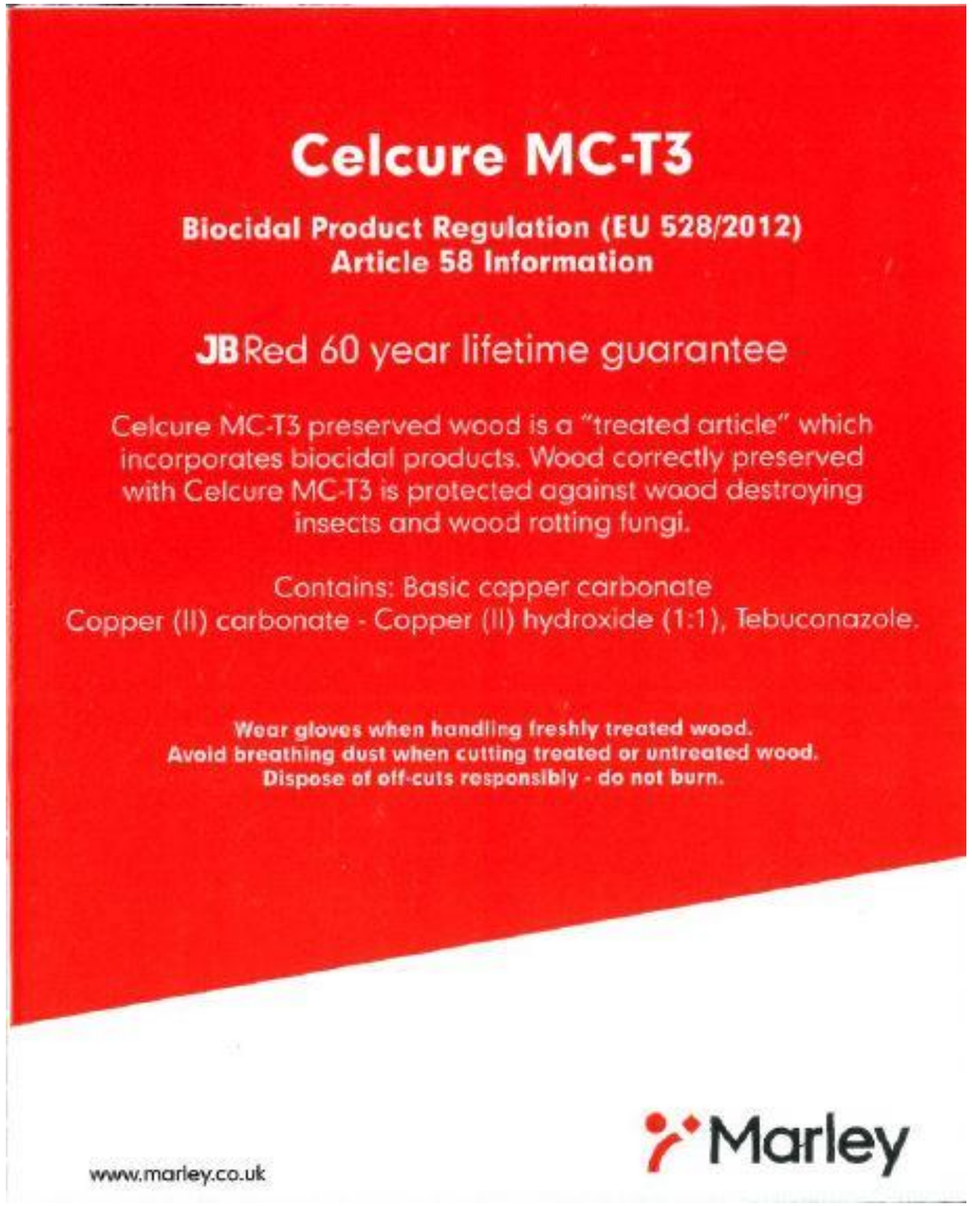
Biocidal Products Regulation - BPR Label

What is a BPR label and why is it important for timber roof battens?

- The GB Biocidal Products Regulation (GB BPR) defines how products that contain biocides should be packaged and labelled.
- The requirements for BPR labelling are extensive, and full details are available on the HSE website. What specifiers need to know is that the label should provide comprehensive information about the biocides used in the product, including:
  - The identity and classification of the biocides
  - The concentration of those biocides in metric units
  - Any hazard and precautionary statements
  - Details of possible side effects

BPR labels provide crucial safety and handling information. For timber roof battens, this is important because some products may contain preservative treatments that can leach out of the timber, which could lead to injuries to roofing contractors and may compromise the roof build-up.

Every pack of treated timber should have a BPR Label attached to it



Wood Protection Association WPA

Benchmark Scheme Approved Treater

Wood Protection Association Benchmark Quality Scheme
for Wood Treated with Preservative by Impregnation

Preservative Treatment Approval Schemes

The **WPA Benchmark Approved Treated Wood (TW) Scheme** relates specifically to the durability of wood and wood based materials pre-treated by an industrial process.

Approved Treater

A company operating a treatment plant or plants that have been subject to a WPA audit and shown capable of producing Approved Products under the terms of the Benchmark scheme.
Not all materials produced by an **Approved Treater** will necessarily be **Approved Products,** depending on the scope of products submitted for audit.

Approved Product

Treated wood product lines for which the production process has been subject to audit and for which the required penetration and retention of preservative has been assured by direct testing or by safe relationship (indirect) testing*. Approved Products must comply with the requirements of **BS 8417** / **WPA Code of Practice: Industrial Wood Preservation** and will normally be defined by end use/Use Class, species and service life as a minimum. The scope of Products approved will be recorded on a company's Benchmark accreditation certificate and should be clearly stated in/on company marketing materials, online or in paper form.

*(*as defined in the WPA Code of Practice)*

Wood Protection Association

- Marley are an approved treater under the WPA benchmark scheme.
- Third party assessed on all our timber treatments, audited every year.
- All treatments carried out at our Gainsborough site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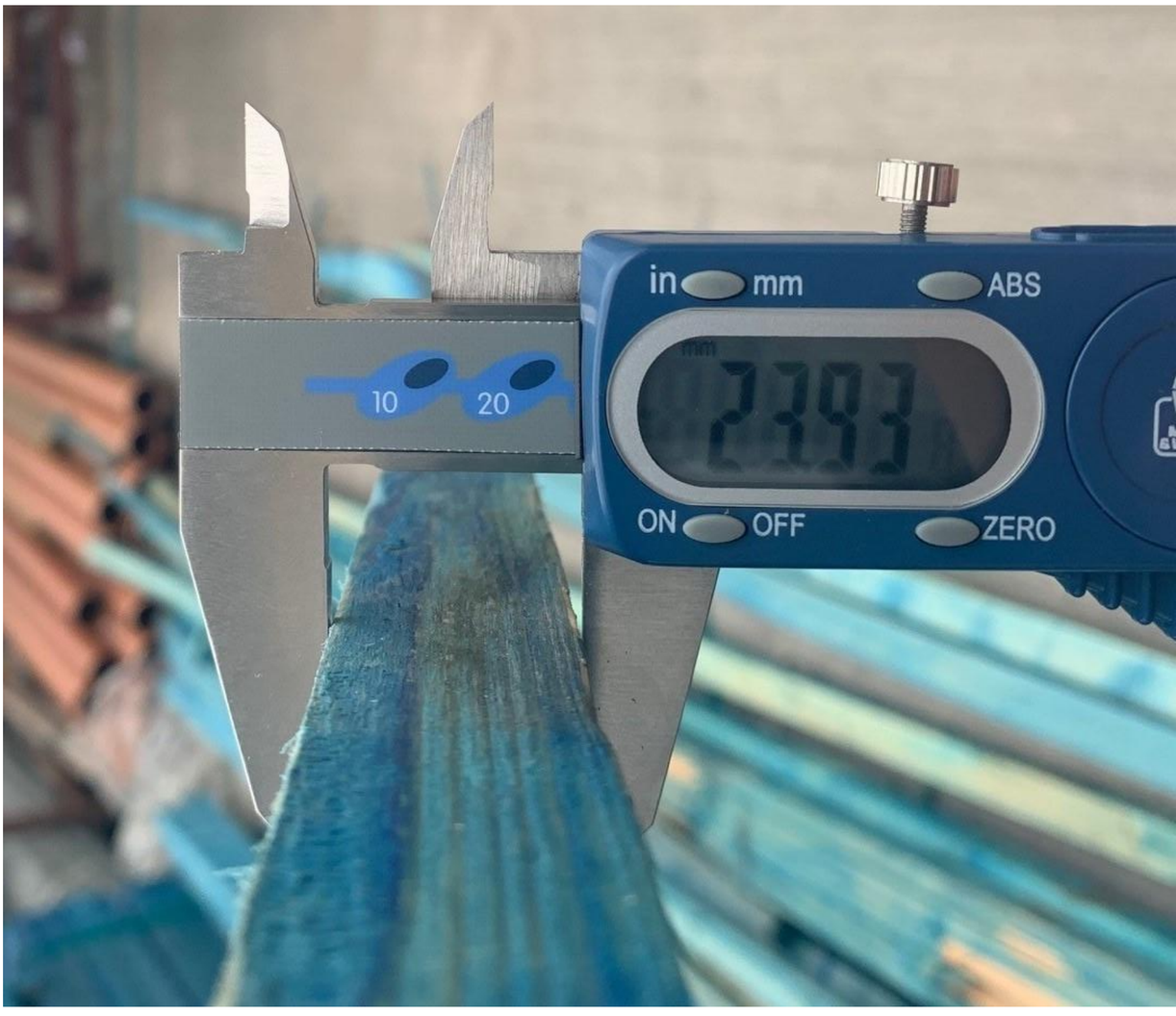
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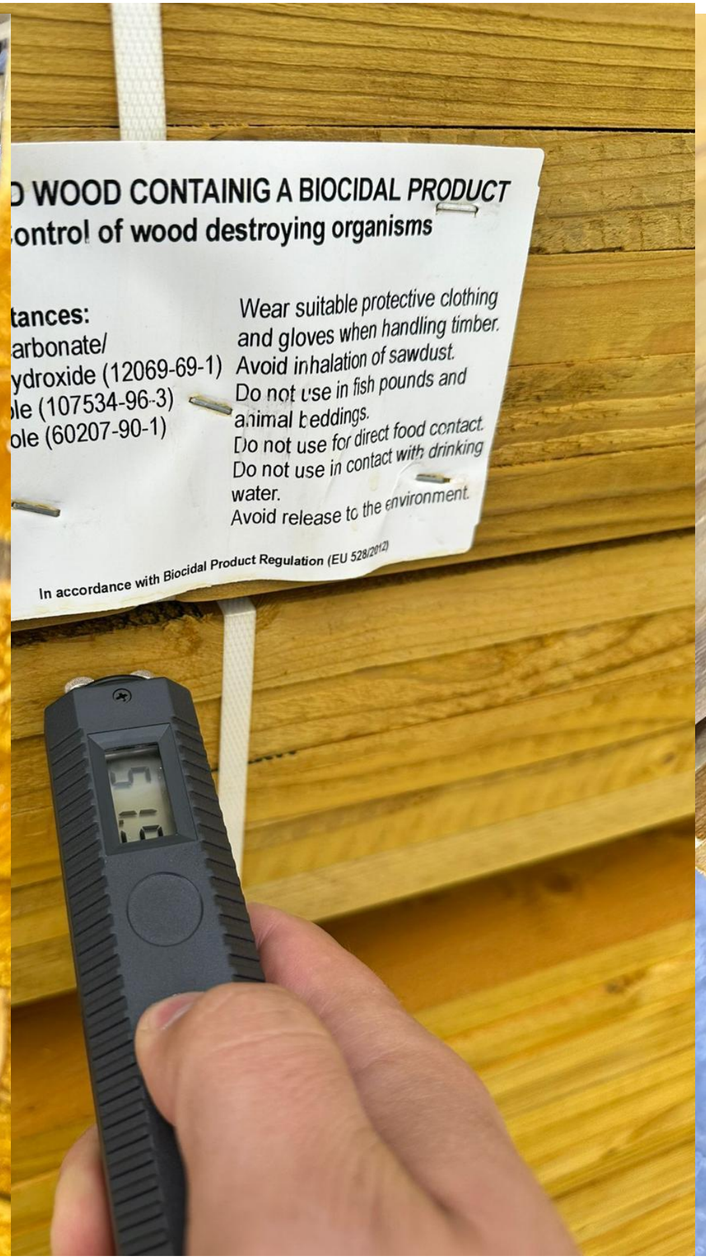
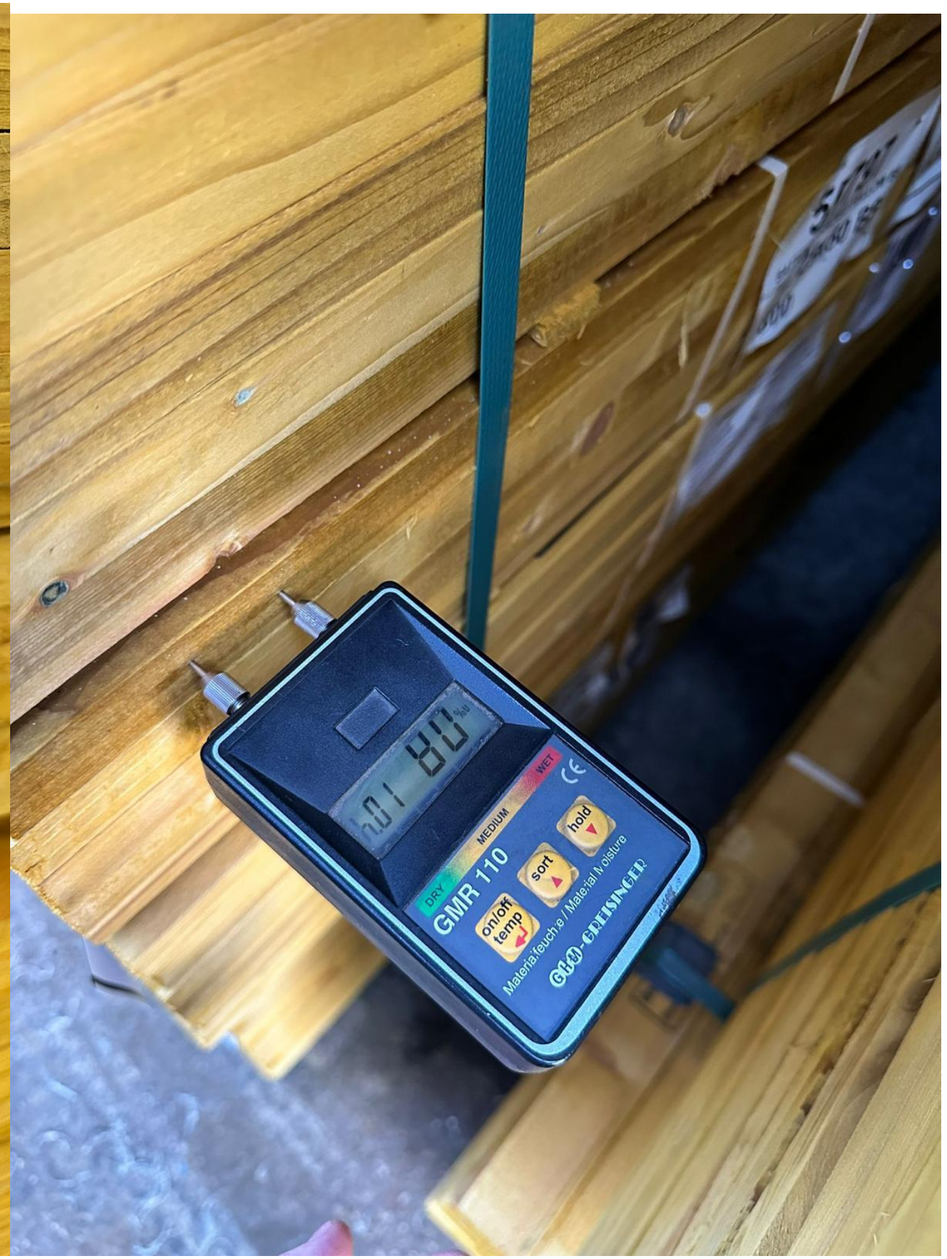
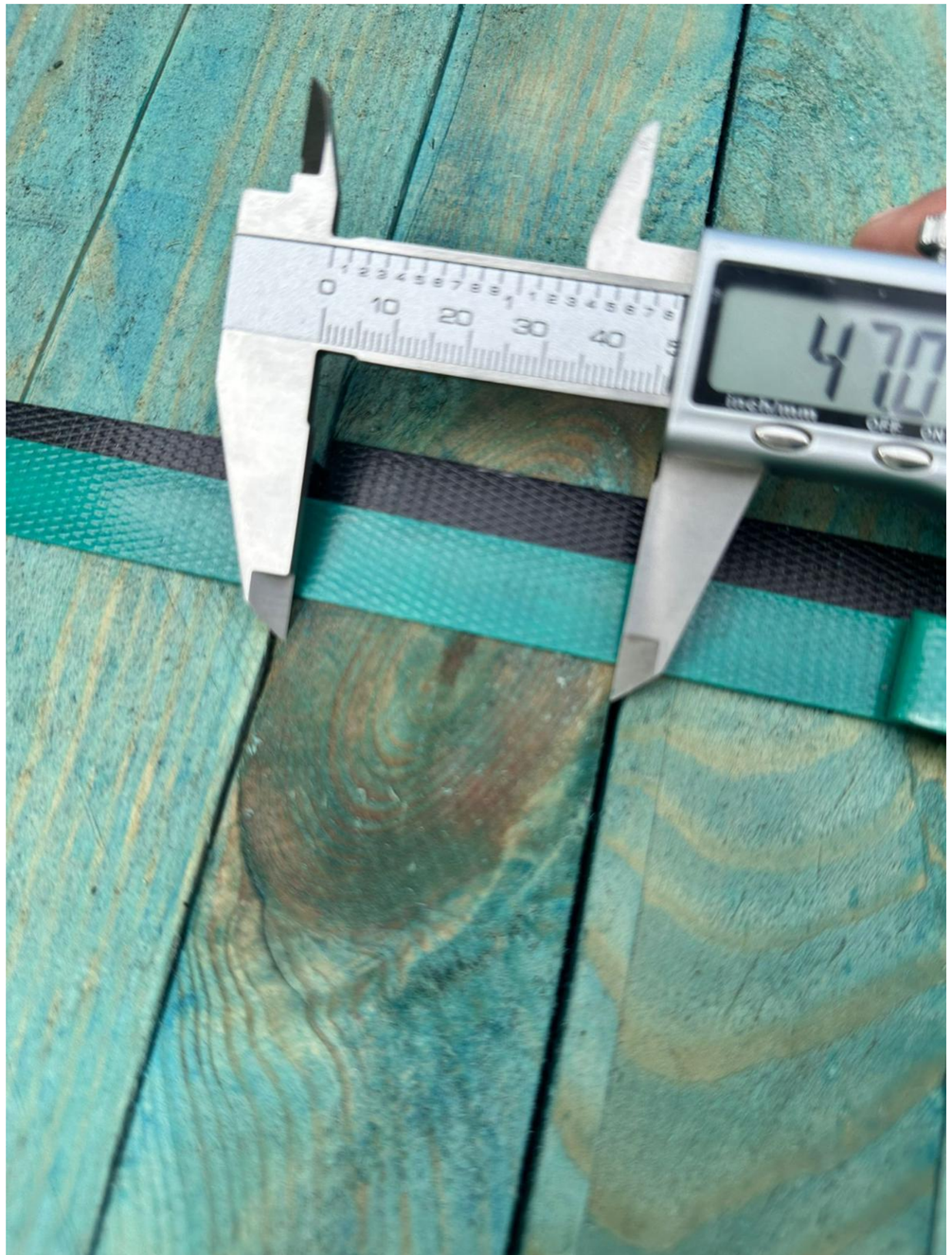
Moisture Content



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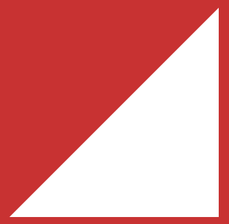

Thank you