

The London
Hardwood Club.



Backing timber window & door manufacturers



The Joinery Network

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The Joinery Network

www.thejoinerynetwork.co.uk



The London Hardwood Club

Building Regulation Requirements for Sustainable Timber Windows & Doors



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What is the joinery network?

The Joinery Network is a cooperative of leading industry suppliers.

It provides a resource of expert services and knowledge to help joinery companies manufacture superior timber windows and doors, within a sustainable and profitable business model.



How The Joinery Network Works



ACHIEVE PAS 24 & BS6375 FOR YOUR OWN WINDOWS
GENUINE CERTIFICATION FOR DOCUMENT Q WITHOUT THE RISK

TOOLING FOR THE ADVANCED THERMOTECH WINDOW & DOOR SUITE FROM LEITZ TOOLING UK - THE INDUSTRY LEADING MANUFACTURER



GAIN A COMMERCIAL ADVANTAGE OVER THE COMPETITION
END-TO-END SOFTWARE FROM APPLE'S FILEMAKER PARTNER CRITICA



CAN YOU GET AN R&D TAX CREDIT?
FISCALE ARE EXPERTS IN HELPING COMPANIES CLAIM VALUABLE TAX RELIEF ON INVESTMENT IN R&D



WIN MORE CUSTOMERS AND GROW SALES AT THE RIGHT MARGIN
MARKETING FROM GLAZING & JOINERY SPECIALISTS BALLS2 MARKETING



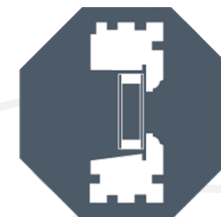
THE RIGHT HARDWARE SOURCED FOR YOU BY AN EXPERT TEAM & DELIVERED NEXT DAY
BJ WALLER ARCHITECTURAL IRONMONGERS IS FOCUSED ON HELPING YOUR BUSINESS



GET SPECIALIST HELP TO GROW, BE EFFICIENT AND MAKE MORE PROFIT
SUPPORT FROM OT DARE JOINERY SPECIALIST CONSULTANCY WITH 35 YEARS EXPERIENCE



FINANCE TOOLING AND MACHINERY
CLOSE BROTHERS ASSET FINANCE FROM A TEAM THAT KNOWS YOUR INDUSTRY



MANUFACTURE A CONSISTANTLY HIGH QUALITY TIMBER WINDOW
MAKE IT FASTER WITH BETTER EFFICIENCY & LOWER COSTS



BEAUTIFUL HARDWARE FOR THE DISCERNING CUSTOMERS YOU WANT
DJH STONEBRIDGE & FINESSE WINDOW & DOOR HARDWARE - GRADE 5 CERTIFIED WEATHER PROTECTION AND ACCOYA TESTED



The Joinery Network

It started with Approved Document Q

- PVCu and aluminium window & door system suppliers and fabricators have invested heavily in achieving PAS24:2016 for their products
- But the timber sector relies on component manufacturers to cascade test evidence
- The result is many joinery manufacturers sign Declarations of Performance (DoPs) with only partial test reports for window types
- This creates liability risk within the supply chain
- This has led to fewer timber windows being specified for refurbishment and new build projects
- A wasted opportunity to make the most of this highly sustainable material - TIMBER



Safe, reliable route to compliance

- The Joinery Network was formed to deliver **safe** and **legal** PAS24 certification for timber windows & doors
- This specialist supply chain has invested in comprehensive system testing - for joinery companies to utilise
- Creating more opportunities for specifiers to source timber windows & doors from compliant joinery manufacturers



The Joinery Network is about growing a sustainable timber window & door market for joinery manufacturers and installers

Work with Joinery Manufacturers to increase capacity and **productivity**

Invest in complete window system testing

Marketing to homeowners, developers the trade and architects

Engage with sales and installation companies to satisfy demand



The Joinery Network

The Joinery Network Members



Leitz Tooling UK

Tooling systems for timber
www.leitz-tooling.co.uk



BJ Waller

Architectural Ironmongery
www.bjwaller.co.uk



DJH Group Ltd

Stonebridge & Finesse Hardware
www.djhgroup.co.uk



Critica Ltd

Lean/Sigma joinery manufacturing software
www.critica.co.uk



OT Dare Joinery Consultants

Manufacturing consultants
www.otdareconsultants.co.uk



Balls2 Marketing

Specialist marketing agency for windows & doors
www.balls2marketing.co.uk



Fiscali

R&D Tax Credits
www.fiscalerdtaxcredits.co.uk



Close Brothers

Asset Finance
www.closebrothers.com



The Joinery Network has already invested over £30,000 in the testing of timber windows & doors in 2019



The Joinery Network

How The Joinery Network is delivering Certification to the industry

- Tested product range that meets PAS24:2016 Enhanced security performance requirements for Windows and Doors in the UK.
- Cascade the test evidence down to joinery manufacturers - through a certification scheme that they will be able to use for planning control.
- Provide a complete method statement for manufacture for all processes to ensure a quality compliant product.
- Train managers and operatives to manufacture in accordance with the method statement as well as machinery and tooling manufacturers requirements
- Part of the certification scheme will be signing up to a complete detailed process from experienced people from a manufacturing background that can help with all aspects through your factory.
- Timber Procurement to comply with PAS24:2016.
- Assembly and Hardware – We will go through the construction and fitting of hardware to make sure you meet PAS24 test evidence and guidelines.
- B J Waller will stock and supply all the required hardware to meet PAS24:2016.
- Glazing – training and advice to comply with Document Q and any regional control requirements.

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CERTIFICATE OF COMPLIANCE

The Joinery Network cascade test certificate to
Company Name

This certificate conforms to the following test evidence: -

PAS24 2016	BS6375-1 2009	Document Q	Document L1B	Document M
Enhanced security performance requirements for windows and doors in the UK	Performance of windows and doors Part 1: Classification for weather-tightness	Security - Dwellings, Windows and Doors	Compliance to Conversion of fuel and power in existing dwellings: Thermal U-value 1.400/m²K	Access to and from buildings: (Open in doors only currently)

Product cascade test evidence for: Insert Product type here

PAS24:2016 UKAS Test laboratory no: (0123456789)

BS6375-1:2009 UKAS Test laboratory no: (0123456789)

Thermal Calculation (U-value test number): (0123456789)

VALID FROM: 00/00/19

Signed: Signature here
O.T. Dare

EXPIRY DATE: 00/00/19

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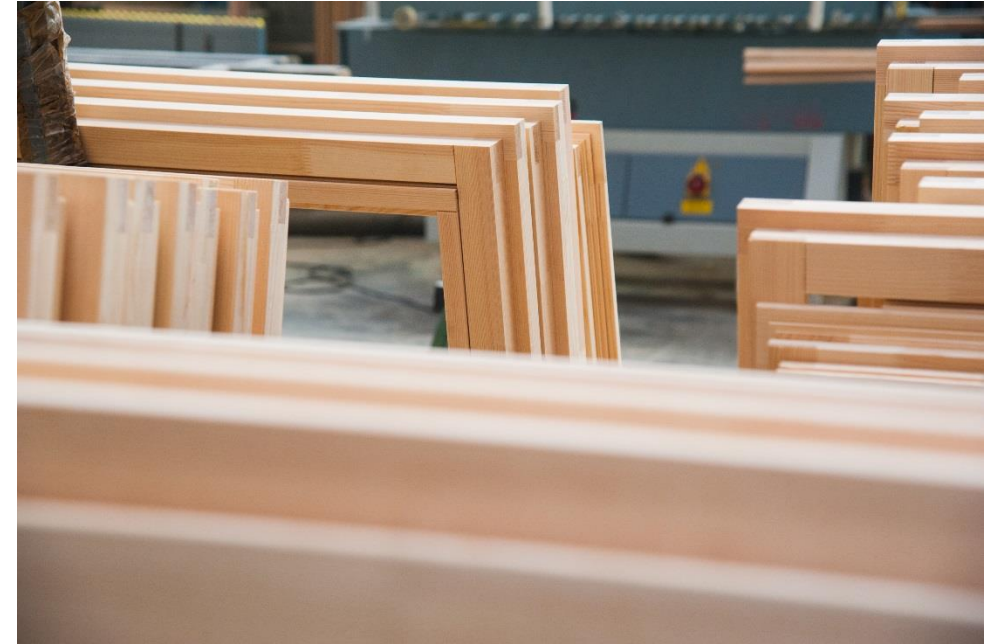
The Joinery Network timber window and door product range

Window or Door Style	Test Status
• Flush Traditional Casement: Side Swing & Top Swing.	✓ Certified
• Stormproof/flush Casement: Side swing and Top Swing.	✓ Certified
• Box Sash Windows. (Vertical slider).	✓ Certified
• French Double Doorsets: Open In and Out. (Option with full glazed/ half Glazed half panels).	✓ Certified
• Single Doors: Open In and Out. (Option with full glazed/ half Glazed half panels).	✓ Certified
• Entrance Doors. Open In. (Half Glazed / half panels & full panel).	✓ Certified
• Bi-folding doorsets. All configurations.	Some configurations tested but W.I.P
• Spring Balance windows. (Vertical slider).	✓ Certified
• Sliding doors. Allowing large glazing areas.	Aiming to test by the end of 2019
• Flush casement with Traditional Butt hinge operation.	Aiming to test by the end of 2019



The Future with The Joinery Network

- We're working with leading fenestration certification and training bodies to support the industry - improving quality, productivity and market share for timber windows and doors.
- Add more certificated products by listening to specifiers and manufacturers.
- Developing new and current ranges to become the leader in the market for performance and service.
- Acoustic sound control: develop a range that will meet the every increasing noise pollution we are having in and round the cities.
- Keep our members informed of changes in legislation and make sure the products meet this criteria before it happens.
- All things are possible and with the quality knowledge base within the Network we plan to stay ahead of the changes.



The Joinery Network partners and affiliates

Founding Partners



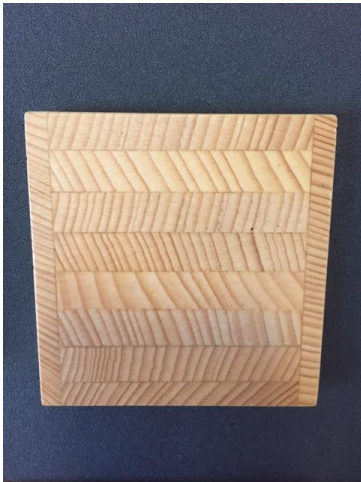
Affiliates



The Joinery Network

Current Joinery materials.

- Common joinery materials have been changing significantly through the last 10 years with medium to larger business using new engineered and modified materials.
- Still popular solid hardwoods such as Sapele, Utile, Idigbo, Meranti and Iroko are still being used but more by smaller businesses..
- Accoya has become a solution for a larger number of small to medium joinery companies because of it's dimensional stability.
- Laminated engineered Softwoods and Hardwoods are being used in volume by window and door specific manufactures.



Joinery Design

- Most window and door sections have stayed the same over the years with only an increase in depth to accommodate larger glazed units.
- The industry is still making Be-spoke products to match existing or to customers request. This makes rationalised stock difficult and increases waste that rarely gets used.
- Modular engineered timbers are better suited to casements and doors though traditional vertical sliders still use solid boards for framing. This could be serviced better with laminated sections?
- So what is involved at the design process? The market for refurbishment is mainly be-spoke or match existing but the New Build Market requires much higher standards.
- Thermal performance to Document 10b.
- Acoustic performance.
- Security performance to PAS24 & SBD (Secure By Design).
- Weather performance to BS6375-1 & 2.



What is required to achieve good design.

- There are decisions to be made when designing products and there are conflicts between species. Hardwood gives you strength and durability but density means poor thermal & acoustic performance and more waste up to 20% as there are less engineered options.
- Softwood improves the thermals & acoustics but loses strength and requires treatments processes or primers to seal the material. Waste is improved with engineered material to 5%.
- So we have to look at the whole picture and not just the timber. All the elements have to be correct to meet the high standards we set in the UK.
- We have to start with the lowest density material but keep the strength for long lasting durability. Radiata Pine (Accoya) would be a starting base but Density can be inconsistent and can be brittle so is a risk and will require designing to support the softer species. Sometimes this increases labour and over engineering of products.
- We would have to consider all the other parts of a product. Hardware, screws, weather seals and glazing methods. These are to support the choice of material and be able to perform to the highest level.
- Once we have all the elements then we have a quality performing product. Accoya will require over engineering to hold strength but European Redwood reduces design labour but increase treatment labour.
- Siberian Larch would be a good option as it is a Class 3 moderately durable material that does not need treatment as is Red Grandis both densities are between 590Kg/m³ to 600Kg/m³.



Typical Joinery business and waste.

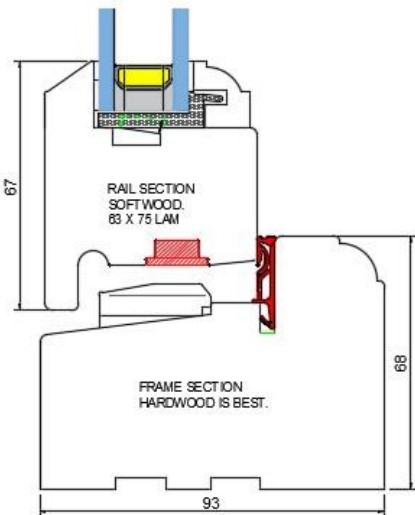
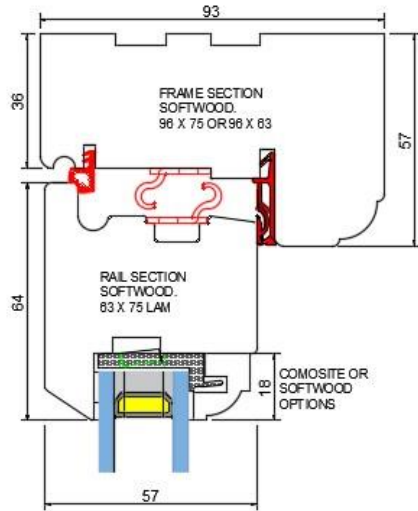


Better storage and use.



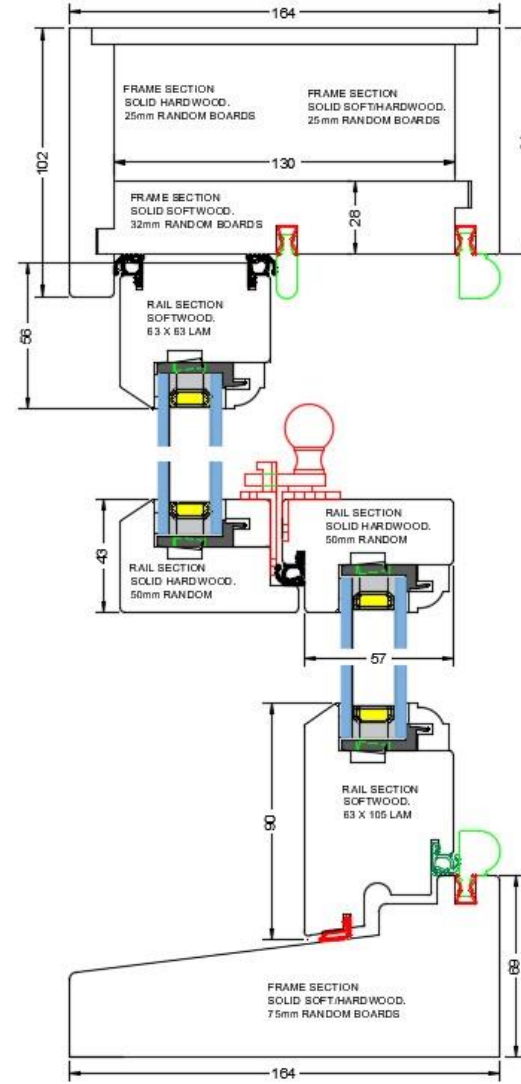
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Product material used.



CASEMENT WINDOW

1. Framing Redwood
2. Sill Hardwood (Sapele)
3. Rails Laminated Redwood or Accoya.
4. Doors would be the same for framing and sills.
5. Door rails larger sections but the same species.
6. Internal beads Softwood.
7. External beads Accoya or composite.



VERTICAL SLIDERS

1. Head/Jambs Redwood
2. Liners Hardwood (Sapele).
3. Top, Bottom and stile rails Redwood.
4. Meeting Rails Hardwood.
5. Sills Hardwood (Sapele)
6. Internal beads Softwood.
7. External beads Accoya or composite.



Material control for joinery.

- The things that should be thought about are waste, labour, workability, durability and stability.
- Moisture control is also a big concern. Most joinery businesses don't check moisture content.
- This needs to be checked on delivery, then prior to painting and finally before delivery to the customer. If any of these processes result in low or high moisture the product will perform poorly.
- The regulation under British standard is 12% to 18%. This would be an average through a pack of material.
- Solid boards will increase labour and waste so need to be kept to a minimum.
- Workability means less breakout and longer tool life. Most of the common species work well but Engineered softwood works best though increases labour down the painting process.
- Accoya is another option but you have to consider where this is needed. It offers great dimension stability but needs special anti-stain primers and Stainless steel hardware which increase cost.
- European Oak needs special care and coatings do not last long and the material has greater movement.
- Durability and stability are key to service life. The better the design and process the better the durability. So it is important to get the design right to the highest quality.



How modified and engineered products are replacing traditional sawn hardwoods

- Internal joinery is still using a wide range of timber species With Oak, Sapele, Tulipwood, Ash, Beech and Poplar still being used for doors, Kitchens and staircases.
- External Joinery has been changing with engineered timbers and modified woods. Sapele, European Oak, Idigbo are still hardwood options but more joinery business are switching to Other options such as Laminated softwood, Red Grandis, Accoya, Lignia.
- **What are the reasons for Change?**
- Better Procurement with engineered boards at a consistent 6.0m length.
- Less waste at normally 5%
- Less deflecks and remedial work as laminated sections remove these issues.
- Dimensional stock to help reduce cutting labour and improve tool life.
- The environment with FSC and PEFC being specified from architects and building control.
- Health and safety and manual handling as it is easier to move dimensional smaller boards.



The future of Joinery.

- Modified timbers have a place in our future. Accoya, Lignia, Thermowood and other will improve life cycle of products.
- The environment has become a key issue with the next generation and the government will have to listen.
- New buildings are now looking at timber again as the only self-sustainable material over plastics and other materials.
- If the industry make a range of quality products to service the industry they will thrive and grow for future generations.
- Investment is key and the industry in the UK needs to if it is not to be left behind by our European competition.



Thank you.

Any Questions?

**Backing timber
window & door
manufacturers**



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