

Historic Range



Welcome

Historic buildings that have been listed or are in conservation areas often have specific requirements regarding aesthetics, materials and manufacturing methods.

Working closely with conservation officers and architects, we have developed a range of products that accurately match the features of original windows including a wide range of profiles, glazing options (including narrow double glazed units and single glazing), narrow frame and sash profiles and traditional glazing methods. These products maintain most of the performance features of our high performance **Traditional Range** including double draught seals for exceptional weather performance.

This range has been designed specifically to meet the stringent planning requirements common for listed buildings and conservation areas. With a focus on achieving high performance, many of the compromises have been overcome, whilst accurately matching the original design details.

The historic range consists of:

Flush Casement Windows

Our historic flush casement window has been developed to maintain original aesthetics whilst providing improved performance. There are a wide range of profile, glazing, ironmongery, timber and paint options available, all offering our market leading guarantees.

Sash Windows

Our historic sash window provides a wide range of original profiles and glazing methods to provide an accurate match to existing designs as well as high quality hardware with original locking systems and cord and weight balances.

Yorkshire Sash Windows

Our historic Yorkshire sash window couples a traditional horizontal sliding mechanism with advanced draughtproofing. There are a wide range of profiles and glazing options to allow it to match with existing windows and an extensive range of glazing, timber and paint options are available.

Entrance Doors

We have a range of historic entrance doors, all with the option of multipoint locking or traditional locks, fully adjustable traditional hinges, as well as excellent weatherproofing. As with our main range, the product can be specified to match any design that you require.

One of the key areas of development within this range has been our glazing systems. We are able to offer a range of reliable high performance glazing systems backed up by long life guarantees. Working with planning authorities and conservation officers has allowed us to provide a wide range of narrow double glazing options that meet the requirements of most installations.

Through substantial investment in research and testing we have ensured that our range of historic windows and doors will excel in all areas of performance and we have extensive test data (all from third party, UKAS approved test houses) to demonstrate this.

This brochure provides you with information on the window and door features and the main options that we offer (there is additional information available on our website). If you have any requirements outside of these, we have a wealth of knowledge and experience in customising our products, whilst maintaining the performance characteristics.

Our company brochure also provides further detail on the products, materials, processes and performance of the George Barnsdale window and door range.

George Barnsdale were able to offer us the design service we needed and an excellent, fully finished product. There have been many problems in retaining the façade, but none have been due to the windows.

Paul Howat, Northacre



The Lancasters

Hyde Park, London, June 2011



Narrow Profiles

As with all of our historic windows the sashes and frames can be supplied with very narrow profiles allowing them to accurately replicate the appearance of the original windows.

Multipoint Locks

Multipoint locks are fitted as standard, providing high security and simple opening. The multiple fixing points also prevent the timber from moving, contributing to the long life of the window. We also have a wide range of traditional fittings available.

Draught Seals

We have retained the multiple draught seal design from our traditional range providing excellent weatherproofing and thermal insulation.



Restrictor

Outward opening doors are supplied with a restrictor to limit opening to 90 degrees, preventing damage from the door being blown open against the outside wall.

Adjustable Hinges

Using advanced adjustable hinges the doors can be set up to ensure that they open easily (doors usually require a small amount of adjustment after installation). The hinge is available in the following colour ways.



Hardwearing Cill

All doors are provided with a teak stained cill as standard, providing a hardwearing finish that is not easily damaged by foot traffic.

Opening Options

Our historic doorset range is available with an inward or a outward opening door and can be a single or french door layout. All of the layout designs in our traditional range are also available in the historic range (see our Entrance Door brochure or the website for more information).

Frame Inside Profiles

Internal Frame Profile:

The internal frame profile is available with Standard, Ovolo and Pencil Round moulds. Matching sash bead and astragal bar profiles are available. See page 9 for more details.



Extended Frame Profile:

We offer the following extended frame profiles on our flush casement range (where the outside of the frame is extended resulting in the sash being sat back in the frame).

Hardware

We have a range of traditional hardware, allowing the appearance of the window to match even more closely with the original designs if required. These include traditional butt hinges and peg stays and they are available in a range of designs.



Hardware

We have the following handle options plus a wide range of additional door hardware including letterboxes, door knockers and numbers.



Balance Options

This window is available as a box sash with cord and weights, which is the traditional way for the window to operate. There is also a spring balance option which offers narrower jamb profiles if required.

Accoya Linings

Traditionally a very weak point in sash windows, the linings are exposed to the conditions and due to their narrow sections cannot be made from engineered timber. By using Accoya, an advanced timber with exceptional durability, we ensure that this is no longer an issue.

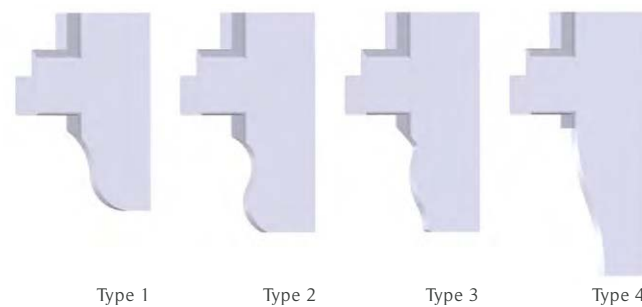
Layout Options

Our sash windows can be designed to replicate almost any existing design. We can supply them with arched heads, internal arches to the sash, as well as a range of bay and bow window designs.

Horn Options

Top and/or bottom sashes can be specified with traditional sash horns. The following styles are available as standard and allow most designs to be closely matched.

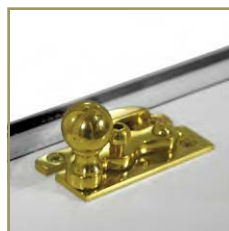
If required we can match your existing design (we would require a dimensioned drawing or photograph).



Ironmongery

Fitch Catch

Traditional locking catch allowing the window to be closed securely and applying pressure to the meeting rail seal providing excellent weather sealing. The catch comes with a lock as standard, but can be specified without and is available in a range of finishes.



Sash Pulls

Sash pulls are available in a range of finishes and allow the sashes to be easily opened and closed. The sash can be specified without pulls if requested. The top sash is specified as standard with a sash pull on its top rail, but can also be provided with a D handle on the underside of the meeting rail (provides a lower point for access, but requires the bottom sash to be opened to access).



Narrow Profiles

As with all of our historic windows the sashes and frames can be supplied with very narrow profiles allowing them to accurately replicate the appearance of the original windows. This is particularly important on the meeting rail (where the two sashes meet) where we are able to supply a 35mm width for single glazing and a 40mm width for double glazing.

Draught Seals

All products have multiple draught seals which provide excellent weatherproofing and thermal insulation.

Smooth Operation

Our track system allows the sashes to move simply and smoothly with very little effort. Our precision manufacturing and high quality fittings further enhance this.

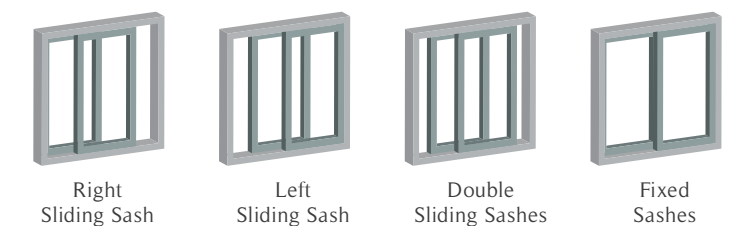


Range of Sash Profiles

As with all of our historic range there are a wide range of sash glazing profiles available allowing you to accurately match your original windows. See pages 8-9 for more details.

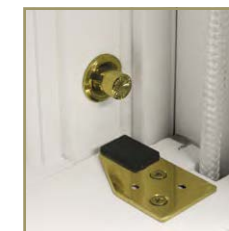
Layout Options

Our Yorkshire sash windows are available in almost any configuration, but the most common are shown here. In addition to the opening types, they can be customised in many other ways to allow them to match accurately with any existing features that may need to be replicated, including profile moulds and widths.



Sash Stops

Sash stops allow the window to be opened for ventilation, but restrict further opening providing safety to people in the building and preventing intruders from lifting the sash to gain access. The stops are fitted as standard at 15mm (usually meets Building Regulation Part F for trickle ventilation), but can also be fitted at 100mm to allow for additional ventilation, whilst still operating as a safety restrictor.



Spring Balances



For spring balance and tilting sliding sash windows, the balances are available in white and brown, and the tilting channels are provided in white or brown. As standard we will specify the colour that we deem most suitable to the paint colour, but you can specify an alternative if required.



Specification Guide

Due to the variation in window styles, listed building requirements and planning authority interpretation, we have created a very wide range of options to ensure that we can meet the optimal requirements for any project.

To specify the optimum design, we have produced a flowchart. This starts with the best performance and lowest cost (a solution that works for about 75% of projects we have been involved with), with the cost/performance then affected as more strict aesthetics are specified further down the chart. We are able to quote for multiple options to provide you with more precise details. The following pages give more details of the profile and glass choices within each option.

System 1: Internal Bead with Astragal Bar

Narrow sash and frame profiles and all of our historic features, but using a modern internally glazed design for optimal performance.


Glazing Method: Internally beaded using advanced system from traditional range



Glazing Bar: 21mm astragal bar (with interbar as option)

Performance: * * * * *

Cost: £ £

Options: Sash Bead Profile, Astragal Bar Profile, Standard Glass



System 2: External Bead with Astragal Bar

Changing to an externally glazed system more accurately replicates the original designs, but loses many of the performance advantages of a modern internally beaded design.


Glazing Method: Externally beaded



Glazing Bar: 21mm astragal bar matching historic sash profiles

Performance: * * *

Cost: £ £ £

Options: Historic Sash Profile, Historic Astragal Bar, Historic Glass



System 3: External Bead with Structural Glazing Bar

As system 2, but with a traditional structural glazing bar. As this requires separate glazing panels rather than a single unit, there are more thermal shortcuts and it requires more time to glaze the window.


Glazing Method: Externally beaded



Glazing Bar: 21mm (single glazing)/24mm (double glazing) Solid Glazing Bar

Performance: * *

Cost: £ £ £ £

Options: Historic Sash Profile, Historic Glazing Bar, Historic Glass



System 4: External Putty with Structural Glazing Bar

As system 3, but glass is installed with putty rather than a bead. This replicates the aesthetics and the production methods of the original product, but is the highest cost option with reduced performance and guarantees.

Glazing Method: Externally face puttied

Glazing Bar: 21mm (single glazing)/24mm (double glazing) Solid Glazing Bar

Performance: *

Cost: £ £ £ £ £

Options: Historic Sash Profile, Historic Glazing Bar, Historic Glass

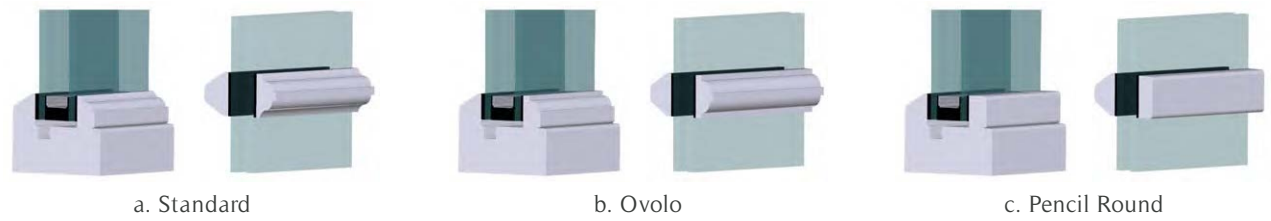
Sash Bead & Astragal Bar Options (System 1)

Beading:

Our beads are available as Standard, Ovolo and Pencil Round. All sashes in the traditional range are beaded internally to improve security and weather performance and result in a window with longer life.

Astragal Bars:

These are matched with the outside sash profile and internal glazing bead. They come with an internal glazing bar as standard.



Historic Profile Options (System 2, 3 & 4)

Our range of sash options allow us to match almost any original glazing system:

Sash Profiles



Astragal Bar Profiles



Glazing Bar (Beaded) Profiles



Glazing Bar (Puttied) Profiles



Our standard range uses a 44mm sash, but we have a variety of thicknesses available, so if you have a specific requirement, please contact us.

Standard Glass Options (System 1)

We have a wide range of options to suit any special requirements you may have including:

- Toughened Safety Glass:** Toughening process increases strength and safety.
- Laminated Security Glass:** Laminate provides additional security over a toughened unit.
- Acoustic Glass:** Increases already high level of sound insulation using specialist laminates and thicker glass.
- Solar Control Glass:** Allows the heat gain from the sun to be matched to the requirements of a building.
- Obscure Glass:** These are available in a wide range of designs that include textured, etched, sandblasted and painted finishes. For the full range please see our website at www.georgebarnsdale.co.uk.

Historic Glass Options (System 2, 3 & 4)

Due to the narrow sashes and sightlines, the specification of a double glazed unit becomes more complicated, requiring special gases to provide thermal insulation and advanced edge seals to space and seal the glass. We have chosen to offer the following glazing systems, based on the suppliers providing proven test data and being established glazing suppliers, to ensure that they meet our performance requirements and will achieve our guarantees (we advise you to be very cautious in considering glazing systems from unproven companies).

- Single Glazing:** Available in a range of thicknesses, with toughening, security and acoustic laminates, and solar control options available.
- Historic Double Glazing:** Our standard narrow double glazed unit, using warm edge spacer bar and Krypton gas to provide good thermal insulation. Toughening, security and acoustic laminates, and solar control options are also available on this product.
- Pilkington Spacia (Vacuum Glass):** By creating a vacuum between the two panes, this glass is the best performing and also the narrowest. The use of this glass allows most products to meet the thermal performance criteria outlined in the Building Regulations. In order to achieve a vacuum the glass uses micro spacers within the unit and has a plug in the corner (the point where the air is extracted). This has an aesthetic impact, but these are not visible from more than a few metres.
- Histoglass:** This is a very well regarded narrow glazing solution that has been accepted by many planning departments and will often be accepted without the need to submit a sample, making the process quicker and simpler. The glass is similar to our Historic Double Glazing option, but uses an aluminium spacer with a wide range of colour options available. This glass is also available with different glass manufacturing processes including Hand Drawn, Machine Drawn and Cylinder glass allowing it to very accurately replicate the optics created by older glass.

		THERMAL		ACOUSTIC				
Glazing Method	Safety Glass	U _{glass}	U _{window}	R _w	Warranty	Delivery	Price	
Barnsdale Standard	Double	Toughened or Laminated	1.1 - 1.7	1.4 - 1.9	31 - 36	10yrs	Standard	£
Single Glazed	Single	Toughened or Laminated	5. 7	4.5	29	10yrs	Standard	£
Barnsdale Historic	Double	Toughened or Laminated	1.2 - 2.1	1.5 - 2.1	31 - 35	5yrs	Standard	££
Pilkington Spacia	Vacuum Double	Safety Film	1.4	1.6	34	10yrs	+ 6 weeks	££££
Histoglass	Double	Toughened or Laminated	1.5 - 1.9	1.8 - 2.1	31	7yrs	+ 6 weeks	£££££

*Please note: All above values are indicative and will vary dependent on window/door size and configuration.

Timber

Our historic windows and doors are manufactured from engineered timber from sustainable sources as standard. The timber is approved by either FSC or PEFC bodies and is selected for its outstanding performance and environmental credentials. As standard we use:

- Frames & Sashes:** PEFC Redwood WoodHeart® (timber from the central heartwood of the tree, engineered to be free from knots whilst providing excellent stability and durability).
- Cill Extension:** FSC Hardwood for enhanced durability (the cill extension gets the most weathering).



Redwood WoodHeart®

We can also offer the window in the following timbers if required (see our company brochure for more information):



Red Grandis



European Oak



Sapele



Accoya

Paint

Our advanced coating system has been developed to provide maximum protection, allow the timber to breathe and let the characteristics of the timber show through. This allows us to give a 10 year guarantee on paint finish (a 25 year guarantee may also be available - please contact us for more information).



- Colour:** We can provide almost any opaque or translucent colour. All we require is a RAL Standard, RAL Design, Natural Colour System (NCS) or British Standard (BS 4800) colour or an actual sample.

George Barnsdale Standard Colours:

Opaque*

Translucent*

- Dual Colour:** We can provide dual colour windows with a different colour inside to out or frame to sash. This also allows for the frame and sash to have a different dual colour specification if required.

*please note that actual colours may vary due to the print process

Guarantees

Our industry leading manufacturer backed guarantees Certain options do affect this - see p8-10.

PRESERVATIVE
30
YEAR
GUARANTEE

WEATHER SEALS
10
YEAR
GUARANTEE

STAIN FINISH
7
YEAR
GUARANTEE

GLAZING UNIT
10
YEAR
GUARANTEE

HARDWARE
10
YEAR
GUARANTEE

PAINT FINISH
10
YEAR
GUARANTEE

How To Choose The Right Options

Our Historic Range of windows and doors has been designed to provide a wide range of options to allow existing designs to be closely matched and allow a compromise to be reached with planning officers regarding cost and performance. As standard we offer our System 1 design (see p.8), unless we receive information detailing more specific requirements. With this brochure we give an indication of the cost and performance effect of different options and as part of the quotation we can provide an exact price for these options. Our approved installers and technical department can discuss the options in more detail. Below are a number of considerations that should help you with the process.

Choosing The Best Glazing Unit

This is usually based initially on your preference between maintaining the exact aesthetic detail of the existing windows, what level of thermal performance you want to achieve and how much you want to spend. It is advisable to use the information on pages 8 and 9 to be clear on what options you want to consider. Once you are clear with your own preferences, it is then time to approach your planning officer, to understand their views on the property and hopefully an agreement can be made at that point.

Choosing The Right Glazing Bar

Glazing bars are another balance between performance/cost versus original aesthetics. Our astragal bar options allow you to achieve the visual appearance of a structural bar, but allow a single piece of glass to be used and have significantly less glass edge seal, which is a thermal shortcut leading to reduced performance. However, when matching original windows that have a structural bar, this change is sometimes too much and the structural option is deemed to be a better fit with the original. It is important to consider that on a double glazed window the minimum bar width is 24mm (we sometimes go below this, this results in the spacer being visible), whereas an astragal option can be 21mm.

Choosing The Right Layout And Design

On a sash window we have a cord and weights option and a spiral balance option. The cord and weights option is an accurate match for the original as it uses the same balance method, but the spiral balance looks very similar and costs less. As originally sliding sash windows were fitted in reveal (meaning the brick overlapped with the frame), a cord and weights window can be easily installed, but on the occasion where this doesn't apply, the narrow profiles of the spiral balance can result in a more traditional looking fit.

Understanding The Performance With The Requested Options

We have tried to provide performance details for the windows in a clear and concise manner within this brochure, but in doing so have not been able to list every possible iteration. We have more detailed information on our website and our quote provides specific U-values and BFRC energy ratings (where applicable) to the products you have specified. The quote will also provide details of the guarantees that you will receive for the products based on these options.

How To Approach The Planning Officer

Planning officers need to protect the appearance and heritage of buildings and as a result have to be very cautious about material changes to the design of windows and doors within them. The best way to get such changes approved is to provide detailed information regarding the proposed replacements. To aid this we are able to provide detailed drawings of all products and options to support this brochure. We also have a wide selection of samples that can be provided to support a meeting. Our approved installers and members of our technical team are happy to support these meetings if required.

Hamsell Cottage, Penshurst, Kent

George Barnsdale manufactured traditional windows and doors with narrow, krypton filled double glazed units for this Grade II listed residential property in Kent, matching historic aesthetic detailing with high performance.

Project Details

- Product:** 23 flush casement windows, 1 inward opening entrance doorset and 1 outward opening French doorset with sidelights.
- Timber:** Red Grandis.
- Finishes:** Fully finished white to interior and exterior.
- Site Address:** Poundsbridge, Penshurst, Kent.
- Client:** Private residential client.



Project

The owner commissioned this project with the aim of improving the appearance of this 16th century Medieval Hall House property and improving energy efficiency, whilst maintaining its character. As custodians of an ancient building, there were many, very specific requirements and constraints placed upon the owners by the Conservation Officer, before conservation and planning permissions were considered and granted.

Usually, single or secondary glazing is normally only permitted on listed properties; very few historic properties in the Sevenoaks District Council area are granted permission for double glazing. The predominant causes for rejection are: style of casements; internal and external glazing bars and the cavity thickness and reflective properties of the glazing unit.

After detailed window specifications were provided by George Barnsdale, discussions between the owner and the Conservation Officer provided assurance to the local Planning Team on the suitability of our proposed System 1 glazing solution, the most high performance and cost effective double glazed system in our Historic Range. The Conservation Officer fully endorsed the application on the basis that the narrow glazed system with its 6mm gap and overall product design accurately replicated the aesthetics of existing windows and the traditional design expected of a historic property of this style and age whilst, at the same time, achieving an excellent improvement in thermal efficiency.

Once listed building approval was granted, we manufactured flush casement windows and doorsets from Red Grandis timber which were fully finished in a traditional white. The historic design was completed with the use of black monkey tail handles for all the windows and black Kirkpatrick handles for all the doors providing additional enhanced security to the owner.

This project involved a number of design challenges key to ensure that the original character was preserved and that no damage occurred to the exposed beams, hanging tile-work or the wattle and daub render. The design specifications within our historic range allowed the bespoke, handmade windows and doors to closely replicate the traditional design. The high performance glazing system provided exceptional thermal performance with an average U-Value of 1.5 W/m2K and a Window Energy Rating of B resulting in immediate energy savings to the owner.

“The installation went very, very well, especially considering the age and the idiosyncrasies of the building. The windows look amazing, stunning in fact, and we have had to turn the heating down in the rooms where the windows have been fitted!”

Lorraine Kirker, Homeowner

“We got so much help and support from the George Barnsdale team, from the start of the project right through to completion. They supply such a great product and it was a pleasure installing such high quality.”
Derek Dalton, Windows Plus, specialist window installer



The Lancasters, Hyde Park, London

The Lancasters was originally an elegant parade of 15 magnificent stucco-fronted Grade II listed houses dating from the mid-nineteenth century. Restoration by London's leading team of developers, architects and interior designers has created a unique fusion of traditional architecture with brand new design and construction.

Project Details

Product:	800 doors and windows.
Timber:	Red Grandis for the doors and WoodHeart® for the door frames and windows.
Finishes:	Fully finished white to interior and exterior.
Architect:	Nilsson Architects.
Contractors:	Woolf Ltd.
Client:	Northacre plc & Minerva plc.



Project

George Barnsdale have recently completed a three year project supplying and installing 800 doors and windows for one of the most exclusive residential developments in Central London – The Lancasters.

The majority of the 77 properties face south with views onto, or across Hyde Park. Each home has been designed around the grandeur of the original architecture and interior features of the building, such as high ceilings, ornate cornicing and fireplaces.

Grade II listed and made up of 15 stucco-fronted houses dating back to the 19th century, this large scale development presented some interesting challenges. George Barnsdale manufactured a range of traditional box and tilt & slide sliding sash windows, inward opening doors and sliding doors, all made to measure and finished with our high quality white paint finish. We liaised with architects to design doors and windows that would compliment the period and French Renaissance style of the building.

The project's architects specified FSC certified timber and as The Lancasters is a listed development we had to seriously consider the aesthetics of the wood as well as its performance, stability and natural durability.

The door frames and windows were manufactured from Redwood WoodHeart®. This is x-ray selected engineered timber and is a similar product to the original timber used by the Victorians.

We decided to use engineered Red Grandis for the production of the doors as it is FSC certified and has received third party testing by TRADA Technology Ltd, where it achieved great results for natural durability and resistance to fungi, which is very positive for long term performance.

From an aesthetics point of view, we needed something that would look sympathetic to The Lancasters heritage. Red Grandis is a high quality, flawless, uniform timber that lends itself well to a variety of styles and shades and its consistent colour means wood stain can be applied to achieve the desired effect.



For more case studies on projects like yours please visit www.georgebarnsdale.co.uk.

About Us

At George Barnsdale, we have been making premium quality timber windows and doors since 1884.

Every window and door is designed, engineered and hand finished in the UK by our team of skilled craftsmen using the finest materials and state of the art robotic machinery.

Our technical team provide expert support and advice to ensure our products meet your aesthetic and performance requirements, enhance UK building regulations and reflect the character of your building.

Investment in research, development and testing has enabled us to achieve the very highest levels in thermal, weatherproof, security and acoustic performance, in a range of products that have been sourced and manufactured in a sustainable way.

Credentials for Lasting Performance

Design:	Internally beaded for security and long life; Double and triple gaskets for class leading weather performance; Traditional designs matching period features with a specialist range for listed buildings (historic range) and modern buildings (contemporary range); Designs fully tested by UKAS approved third party test houses.
Timber:	Use of high quality engineered timber providing excellent durability and stability characteristics; Range of redwoods and hardwoods available; All timber sourced sustainably through either FSC or PEFC certification schemes.
Paint:	Cutting edge robotic paint facility allowing precise control of paint application; advanced coating system providing excellent protection, whilst allowing the characteristics of the timber to remain visible; 10 year guarantee with no redecorating required available on most products (7 years for stain finish).
Glass:	High performance glazing with Saint Gobain Planitherm Total+, argon fill and warm edge spacer as standard; Many options including security, safety, acoustic, thermal, solar gain/reduction, obscure patterns, triple glazed units, slim units (including Pilkington Legacy and Histoglass); Internally beaded, drained and vented glazing systems for improved performance and life; All units tested to BS EN 1279 and supplied with a 10 year warranty (except some slim unit options). Our glazing systems are supplied to a higher specification than the industry standard - see our website technical area for more information.
Fittings:	High quality fittings used as standard; Wide range of colour and style options; Products meet BS 7950 / PAS 23/24 requirements where applicable; All fittings covered by 5 year guarantee.
Thermal:	Optimised designs through thermal modelling by in-house BFRC simulator; Products can meet an A rating; First A rated timber window in UK; Window U-value and Window Energy Rating displayed on all quotations; Window U values less than 1 W/m²K available on most products; Passivhaus window option now available.
Wind/Water:	Double/triple seals around the window provide excellent sealing from weather; Investment in research, development and testing have optimised designs and extensive test data is available to validate performance.
Acoustic:	Draught seals and advanced glazing provides excellent noise reduction as standard. Our acoustic glass range can provide further improvements if required (a range of test data in accordance with BS EN ISO 717-1 is available).
Security:	High security fittings supplied as standard; Increased security specification is available if required; Windows can be manufactured to achieve BS EN ISO 7950 (requirement for Secure by Design) if required; Doors can be manufactured to PAS 23/24 if required.

Certifications & Standards



The mark of
responsible forestry
FSC® C021044



GEORGE BARNSDALE

ESTABLISHED 1884

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