

GEORGE BARNSDALE
British made since 1884

Sash Windows



Lasting Performance Through Innovation
Timber Windows & Doors

The timeless style of a Sash Window has been a prominent feature of architectural history for over 300 years.

Narrow sightlines, intricate profiles and periodic styling has maintained their position as the premium window style throughout their history.

By combining traditional aesthetics with innovative design, George Barnsdale has developed a superior range of Sash Windows, offering a range of high performance products that can match most period styles.

Key features include:

- A premium product manufactured from the finest materials and retaining traditional period features.
- Exceptional thermal performance as standard with an A rated option.
- Engineered timber providing excellent durability, all from certified, sustainable sources.
- Market leading guarantees with a 10 year paint guarantee as standard.
- Excellent weather performance with third party test validation.

This brochure showcases the features of the product range and some of the more popular options that are available. 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.

In addition to our Traditional Range, our box sash and spiral balance sash windows are also available in our Historic Range. Narrow profiles and historic sash moulds with a range of glazing options allow the windows to meet the requirements of heritage, listed and conservation requirements whilst retaining the high performance standards of our Traditional Range, including the use of double glazed units. For further information visit our website or contact us for a Historic Range Brochure.

Please also see our company brochure, providing more detail on the products, materials, processes and performance of the George Barnsdale product range and additional information is available on our website at www.georgebarnsdale.co.uk.

Internal Beading



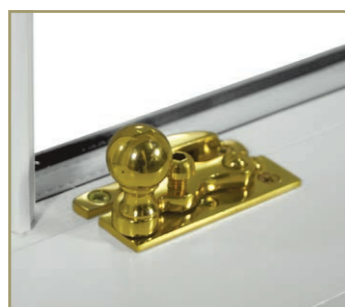
All sashes are glazed from the inside providing enhanced security and improved weather performance as well as protecting the bead resulting in longer life. The sashes are drained and vented to ensure the glazing system is protected allowing it to provide long term performance.

Accoya Linings



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

Security Fittings



By using high quality fittings, with locking catches and a range of limit stops, we ensure that the window provides excellent security in both the locked and ventilated position.



Window as shown: One over one traditional box sash window with brass fittings and standard bead and astragal bar. Paint finish is white to interior and exterior.

Sash & Frame Vents



We offer a wide range of ventilation options, both in the sash and the frame. Options include canopy vents and flush vents in a range of colours and styles. It is also possible to colour match vents if required.

Draught Seals



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

Astragal Bar



Our astragal bars, through precise manufacturing methods and high quality craftsmanship accurately counterprofile to the sash giving an unparalleled finish. External bars are manufactured from Accoya® and dowelled into the sash for exceptional performance.

Window Types



Traditional Box

Based on original designs using cord and weights, which as a counterbalance method still provides the best movement (especially with larger, heavier sashes). Our innovative design and advanced manufacturing processes coupled with the best materials has improved this window to perform very much like the more modern windows in the range.



Spiral Balance

These windows have a similar appearance to our traditional sash windows but by using a spiral spring balance have narrower frame profiles. The high quality balances and innovative seals provide excellent thermal and weather performance. This opening method is the lowest priced within the sliding sash range.



Tilting Spiral Balance

These windows have a similar design to the spiral balance option but enable the window to tilt inwards to allow cleaning from the inside. Recent developments have overcome many of the issues that affect the draughtproofing of tilting windows, providing performance levels close to the non tilting versions.

Ironmongery

The use of high quality ironmongery gives the finish and performance you would expect from a George Barnsdale window. All ironmongery has been selected to retain the traditional appearance of the product, whilst meeting the highest criteria of external tests for window operability.

Sash Pulls

Sash pulls are available in the full 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 eye on the top rail, but can also be provided with a D handle on the underside of the meeting rail (this provides a lower point for access, but requires the bottom sash to be opened to access).



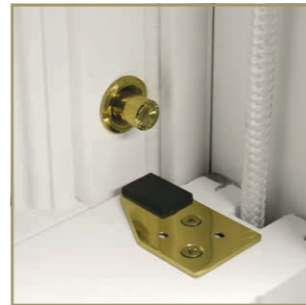
Fitch Catch

A traditional locking catch allowing the window to be closed securely. It applies 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 the full range of finishes below.



Sash Stops

For vertical sliding sash windows we offer both locking and non-locking sash stops in the following finishes; brass, polished chrome and satin chrome. They can be fitted to allow a 20mm air gap, a 100mm air gap or if needed, we can fit two and have one with a 20mm air gap and one with a 100mm air gap.



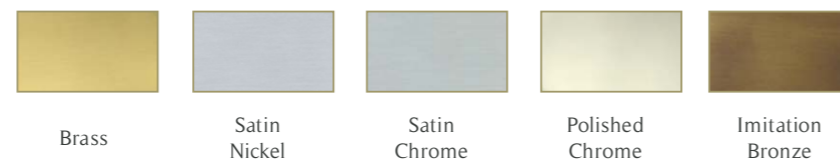
Spring Balances

For spring balance and tilting sliding sash windows, the balances are available in white and black, 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.



Colour Options

The above ironmongery options are available in the following colour ways:



Layout/Opening Options

We make all windows to your specification, meaning that we can supply any layout of window that is required. This can include:

Sash Opening:

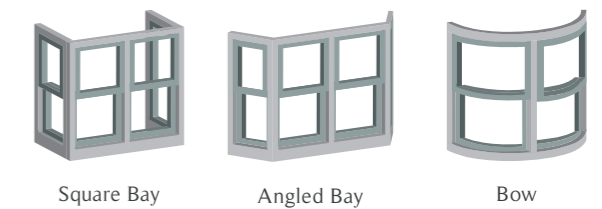
Sashes can be either sliding (up and down) or fixed - any combination of these is possible. Sashes can also tilt inwards for easy cleaning.



*Windows shown viewed from inside.

Bay and Bow Windows:

We are able to supply all windows in the range as a bay window. We can also provide bow windows (a curved bay window).



Round Work/Arches:

We can provide a wide range of curved work designs, including arch top, internal sash arches (to top and bottom rails), arched linings & curved fronted windows.



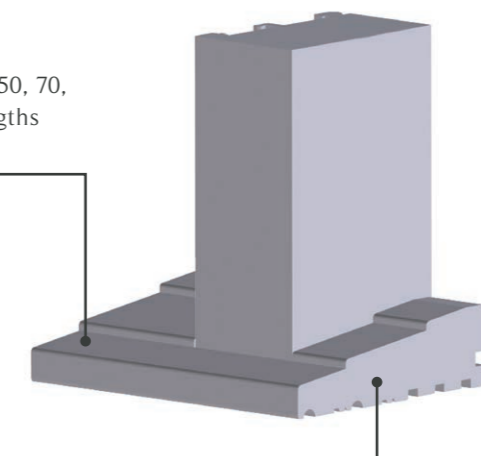
Frame Options

Cill Extension:

Allows the cill to extend over the brickwork. As standard we offer 30, 50, 70, 90 & 110mm extensions. Custom lengths are possible.

Cill Side Extensions (CSE):

Many replacement windows require cill side extensions. As standard we offer 25, 50, 75 and 100mm extensions. Custom lengths are possible.



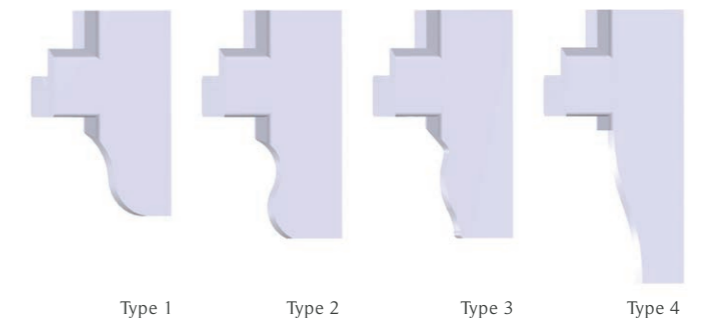
Window Board Groove (WBG):

Our windows can be specified with a window board groove. We have the option of no groove, as well as offering a range of window boards.

Sash Horns

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.

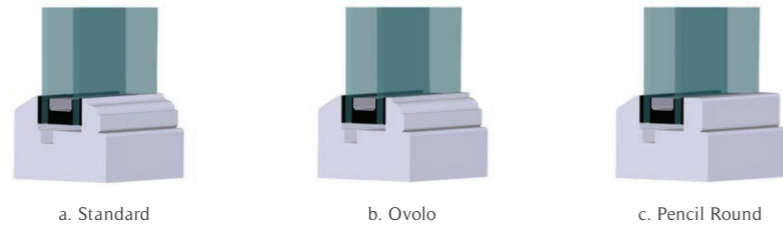
If required we can match your existing design (we would require a dimensioned drawing or photograph).



Glazing Bead & Sash Bar Options

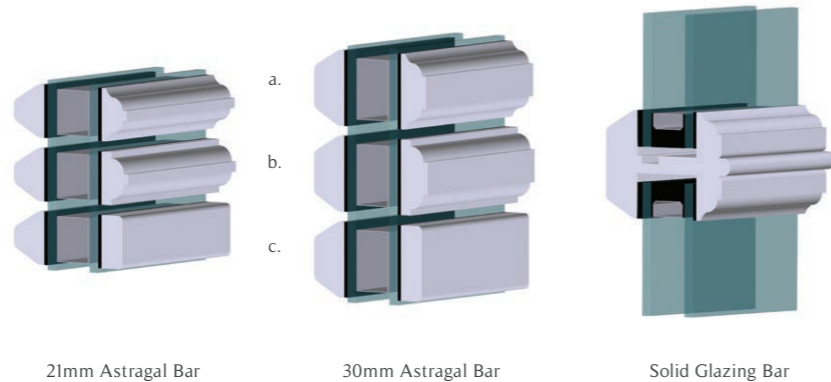
Beading:

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.



Solid Glazing Bars:

These are available in any layout and are specified at 43mm wide as standard. This can be increased if required.

Glass

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

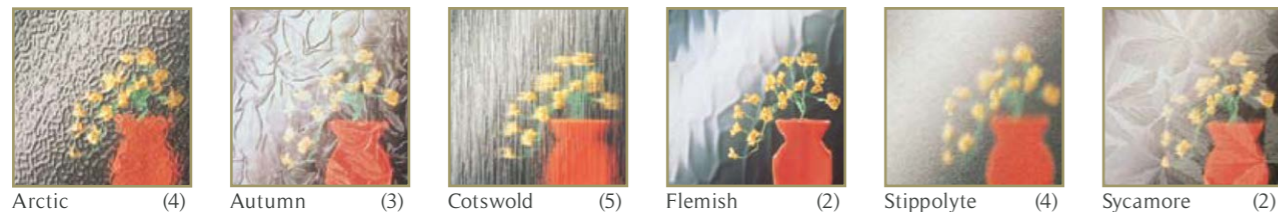
Toughened Safety Glass: Toughening process increases strength and safety.

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 heat gain from the sun to be matched to the requirements of a building.

Obscure Glass: Available in a wide range of patterns, with a sample shown below (the number in brackets indicates the obscurity on a 5 point scale with 5 being the highest). Additional patterns include sandblasted, Oriel and Oriel Textured (a sandblasted pattern on each float of textured glass). Glass can also be painted and tinted. *For the full range please visit our website at www.georgebarnsdale.co.uk.*



Lead: We offer a wide range of options including widths (6, 9 and 12mm), colours (bright and antique) and styles (including square and diamond patterns).

Stained Glass: We can provide coloured glass to your requirements (a photo of an existing design or a drawing is sufficient). These can be supplied with or without lead outlines.

Other Options: We can install all available glazing systems, so please enquire if you have any special requirements. These may include integral blinds or sandblasted/coloured glass to a specific design (for example, your house number or name).

Timber

Our sliding sash windows are manufactured from engineered timber from sustainable sources as standard. The timber is FSC® certified and selected for its outstanding performance and environmental credentials. As standard we use:

Frames & Sashes:

FSC® certified Engineered Redwood is free from knots and provides excellent stability and durability.

Cill & Cill Extension:

FSC® certified Hardwood for enhanced durability (the cill extension gets the most weathering).

Doors:

FSC® certified Grandis Hardwood provides a clear knot free face for the wide door rails and excellent stability preventing the door from excessive movement or warping.

Coupled with our advanced coating system, this results in a product that retains the characteristics of the timber and will last indefinitely with minimal maintenance.

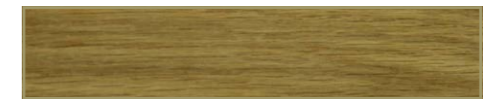


FSC® certified Engineered Redwood

We can also manufacture sliding sash windows in the following timbers if required - see our **Company brochure** for more information.



FSC® certified Grandis Hardwood



FSC® certified European Oak



FSC® certified Accoya®

Standard Coating Options

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.



Colour: We can provide almost any paint colour or stain finish. All we require is a RAL Classic, RAL Design, Natural Colour System (NCS) or British Standard (BS 4800 or BS 381C) colour or an actual sample.

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.

Paint Finishes*:



Stain Finishes*:



*please note that actual colours may vary due to the print process - please contact us for a sample.

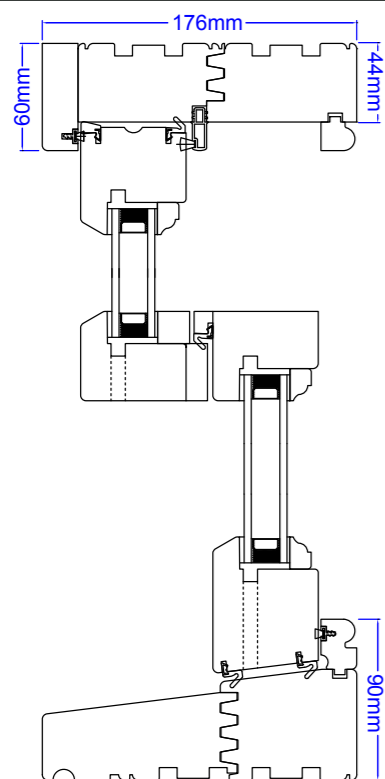
Guarantees

Our industry leading manufacturer backed guarantees:

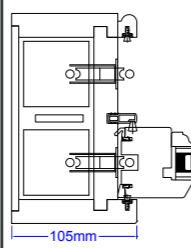
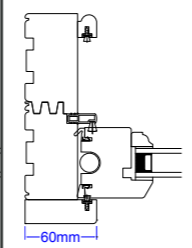
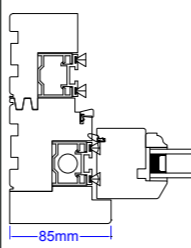


Sectional Details/Performance

VERTICAL SECTION



Common across all window types. The traditional box also has an option for a box head design if required.

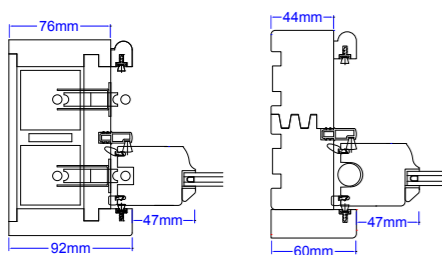
DESIGN			
Window Type	Traditional Box	Spiral Balance	Tilting Spiral
Horizontal Section Profile	 105mm	 60mm	 85mm
THERMAL			
U _w (Standard)	1.6 W/m ² K	1.5 W/m ² K	1.6 W/m ² K
U _w (Best)	up to 1.1 W/m ² K	up to 1.0 W/m ² K	up to 1.1 W/m ² K
Energy Rating	up to A		
WEATHER			
Air Permeability	Level 3	Level 3	Level 2
Wind Resistance	Pass	Pass	Pass
Water Tightness	Pass	Pass	Pass
ACOUSTIC			
Noise Reduction	up to 38dB		
SECURITY			
Can conform to	BS 7950		

Window Comparison

Our range of sash windows has been developed to maintain the features of the original windows, whilst drastically improving the performance. We have kept a common design for each opening type, allowing them to be mixed within a property without standing out. The following gives a summary of the relative advantages of each type:

- Traditional Box Sliding Sash Window:** Near perfect match for original windows. Excellent opening mechanism that performs equally well with large, heavy sashes.
- Spiral Balance Sliding Sash Window:** Narrow frame profile. The best weather performance in the range. The lowest cost option.
- Tilting Spiral Balance Sliding Sash Window:** Tilting mechanism, allowing for easy cleaning from the inside.

Historic Range



Developed to satisfy aesthetic/planning requirements, where a 176mm frame and larger sashes are not permitted. This range comes in a 146mm option with 44mm sashes and a 164mm option with 53mm sashes (allowing for larger glazing systems). There are a wide range of sash options for single and double glazed using moulds common in historic buildings, as well as our standard high performance glazing options.

Whilst this product does not have quite as high performance as our 176mm range, it still performs extremely well and maintains the other performance properties of the traditional range.

See our Historic Range brochure for more information.

Redington Road, Hampstead, London

Working in partnership with one of our approved installers, George Barnsdale designed and manufactured replicate windows and doors for a prominent Hampstead residence.

Project Details

- Product:** Super-tilt sash windows, flush casement windows, French doorsets and an internal oak doorset.
- Timber:** Windows from Redwood WoodHeart®; Doorsets from Redwood WoodHeart® (frames) and Red Grandis (doors). Internal doorset was manufactured from oak.
- Finishes:** High quality white finish on all windows and external doorsets. Clear natural finish on internal doorset.
- Client:** Private residential client.



Project

George Barnsdale were tasked with the design and manufacture of replacement timber windows and doorsets for a prestigious house in Hampstead. We worked in partnership with one of our approved installers, who surveyed the property and installed the windows and doors.

The client had two important requirements for this project; to closely match the original windows and to provide a solution for noise reduction to the front elevation.

With this criteria in mind, the George Barnsdale team designed and manufactured 16 high performance inward tilting sash windows, 7 flush casement windows, 3 external doorsets and 1 internal doorset. All closely matched the originals and suited the aesthetics of the property.

All of the windows and external doorsets were manufactured from Redwood WoodHeart® with our high quality white finish. The internal doorset was manufactured from oak with a clear natural finish.

Noise reduction was further improved by implementing sealed units which incorporated 6.4mm laminated glass to the front elevation.

The installation was planned between our approved installer and the client to ensure the least amount of disruption, with bedrooms, and in particular children's bedrooms, taking priority. A quick installation period was achieved by a team of 4 installers using full scaffolding around the property.

This project combined the benefits of modern, high performance windows with the original period features and characteristics of the property, including the use of lead in all upper casement windows and curved sashes where required on sash windows.



The Rex Building, Queen Street, London

The Rex Building provides 74,908ft² of new build office accommodation behind a subtle array of contemporary and classic facades, creating a stylish, modern office building which is spread over seven spacious floors.

Project Details

Product:	Fixed screens and sash windows.
Timber:	Standard Redwood Hardwood c/w Hardwood FSC® cills.
Finishes:	Fully finished white to interior and exterior.
Architect:	Rolfe Judd.
Contractors:	BAM Construct UK Ltd.
Client:	UBS Triton Property Fund.



Project

As part of the development of The Rex Building, the original aesthetics of the exterior had to be strictly adhered to. The inside of the building was completely re-built with modern design and contemporary materials.

George Barnsdale manufactured very large sash windows, many of which featured arched heads to match the original appearance of the building.

These aesthetics were combined with outstanding modern performance techniques including the use of acoustic glass, excellent weather performance and our long life coatings to provide an extremely high quality and durable product.

As well as the manufacture, supply and installation of the windows, George Barnsdale also supplied some very large glazed screens with ornate corner details.

Regular visits to site ensured the smooth running of the installation and ensured that it was finished on time.

The completed installation resulted in the restoration and modernisation of this impressive building where classic appearance meets modern performance.

As a direct result of the high class nature of the development, in September 2010 the UBS Triton Property Fund let the Rex Building to Gartmore Investment Management for a term of 15 years.



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 FSC® scheme.
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 guarantee (except some slim unit options). Our glazing systems are supplied to a higher specification than the industry standard - for more information visit www.georgebarnsdale.co.uk/technical .
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/m ² K 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 (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 and doors can be manufactured to achieve PAS 24 (requirement for Secure by Design).

Certifications & Standards



GEORGE BARNSDALE

British made since 1884

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