

# IQ<sup>®</sup> GLASS [\(https://technical.iqglassuk.com/\)](https://technical.iqglassuk.com/)



## *Glass for Side Return Extensions – A Specification Guide*

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Side Return Extensions (<https://www.iqglassuk.com/side-return-extensions/s47230/>) are a popular form of house extension, especially in town and city centres. The side return, a small pathway that runs down the side of a house that leads to the rear garden. This small strip of outdoor space is most found on older Victorian or Georgian-style buildings where quick extensions were added to the rear of the properties as housing demands increased. The left-over passage to the garden area is often an underutilised and narrow space used as storage.

Architects can completely transform the rear ground floor area of these houses by extending into this unused space, creating what is known as a Side Return Extension.

The resulting extensions create more open-plan living areas with better connections to the rear garden. The inclusion of architectural glazing (<https://www.iqglassuk.com/structural-glass-and-glazing/s49703/>) into these Side Return Extensions is important as it helps turn dark rear living spaces into bright light-filled spaces.

## Roof Glazing to Side Return Extensions

90% of side return extensions include a full glass roof (<https://www.iqglassuk.com/products/structural-glass-roofs/s15028/>) or partial rooflight (<https://www.iqglassuk.com/rooflights-and-roof-glazing-systems/s49705/>).

As you are generally extending out to meet the party wall in most terrace houses you will lose any side light you had achieved through the original wall. Using a glass roof over the extension will maximise the natural light influx and create a much lighter space than was there previously.

The side infill extension at Dovercourt Road (<https://www.iqglassuk.com/projects/dovercourt-road-glass-roof-and-sliding-glass-doors-extension/s15981/>) included a full structural glass roof over the entire extension. This glass roof was large and included frameless glass beams (<https://www.iqglassuk.com/products/structural-glass-beams/s15039/>) to support the silicone joints of the structural glazing (<https://www.iqglassuk.com/structural-glass-and-glazing/s49703/>). The resulting extension is full of natural light and feels extremely open and bright.



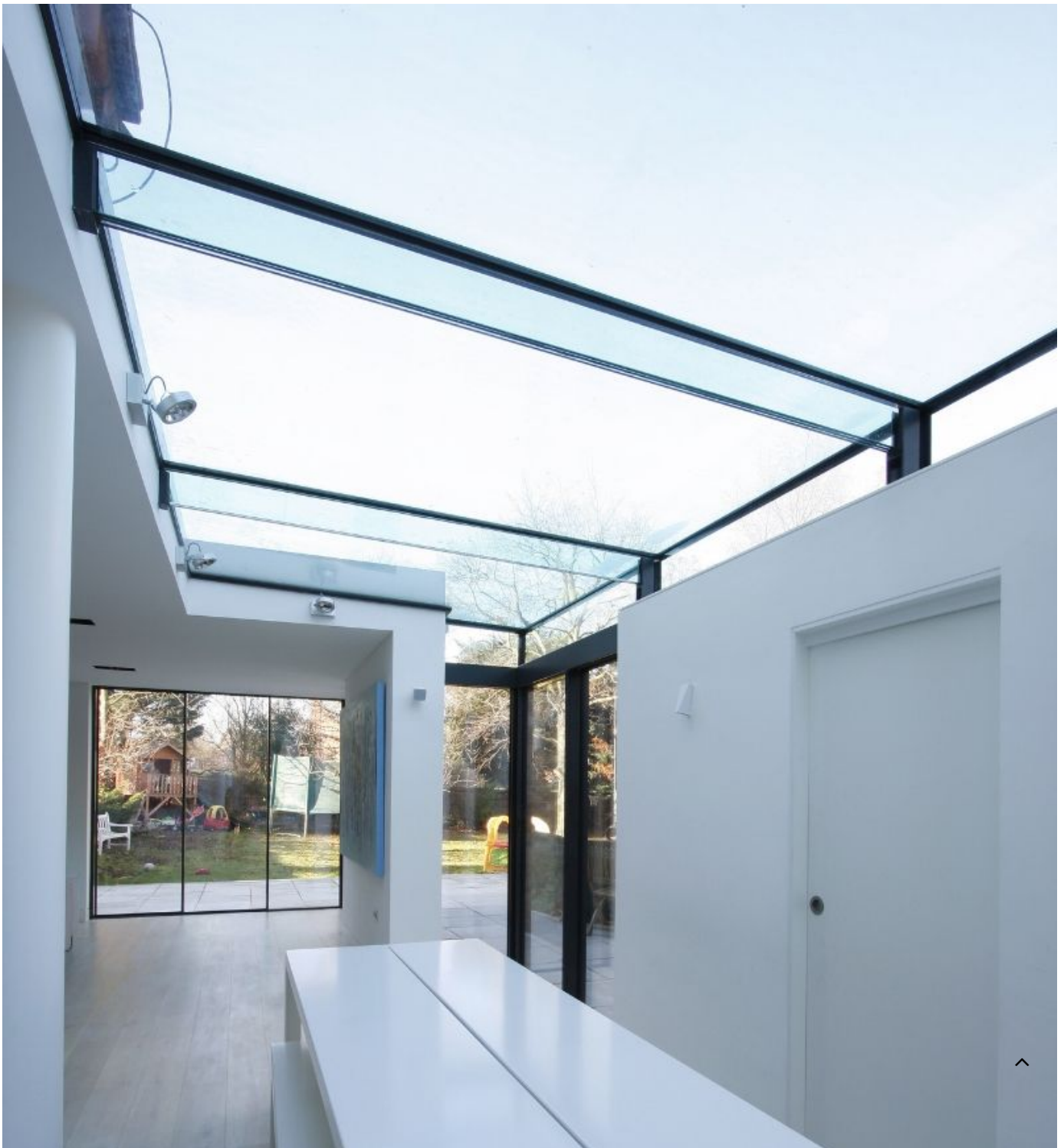




This side infill extension in Fulham (<https://www.iqglassuk.com/projects/bradbourn-street/s16211/>) was much smaller than Dovercourt Road and instead used a smaller yet no less effective structural glass roof design. The glass roof was a strip rooflight design (<https://www.iqglassuk.com/products/invisio-strip-rooflight/s25580/>). This is where the silicone joints between the multiple panes are under 1.2m. No internal supports are required, creating a 'strip' of frameless glass for the roof.



This side extension in Dulwich (<https://www.iqglassuk.com/projects/woodwarde-road-aluminium-bifold-doors/s14912/>) included smaller single pane frameless rooflights (<https://www.iqglassuk.com/products/invisio-thermally-broken-rooflight/s53537/>) within a solid roof. This solution was better suited to this property due to the overlooking properties that surrounded it. The frameless rooflights provided natural light from overhead whilst not intruding on the occupant's privacy. These rooflights could also be specified in an opening venting configuration (<https://www.iqglassuk.com/ares-auto-rising-electric-rooflight-system/s15035/>) with no visual difference to the design.





## Drainage of Glass Roofs in Side Infill Extensions

You have to think very carefully about the drainage for glass roofs within a side return extension. You have three options:

1. Drain the glass roof towards the rear elevation of glass of the extension.
2. Drain the glass roof towards the party wall.
3. Drain the glass roof back towards the existing building.

All of these options are possible but it will depend on your Party Wall Agreement and side extension design as to which ones are most suitable for your project.

This side infill extension in Angel (<https://www.iqglassuk.com/projects/claremont-square-structural-glass-roof-doors/s15763/>) included a large structural glass roof which was pitched back towards the existing house. Here we used a structural gutter (<https://www.youtube.com/watch?v=KrndoTXI93A>) to support the glass roof and provide a drainage solution at the same time.

Read more about drainage options for Glass Roofs here (<https://technical.iqglassuk.com/technical-advice/water-drainage-for-glass-roofs/>).

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## Glass Doors for Side Return Extensions

By introducing a side return extension to the rear of the property you have to also now change your access point to the garden. This is normally a great opportunity to introduce as much glass as possible to the rear elevation of the home.

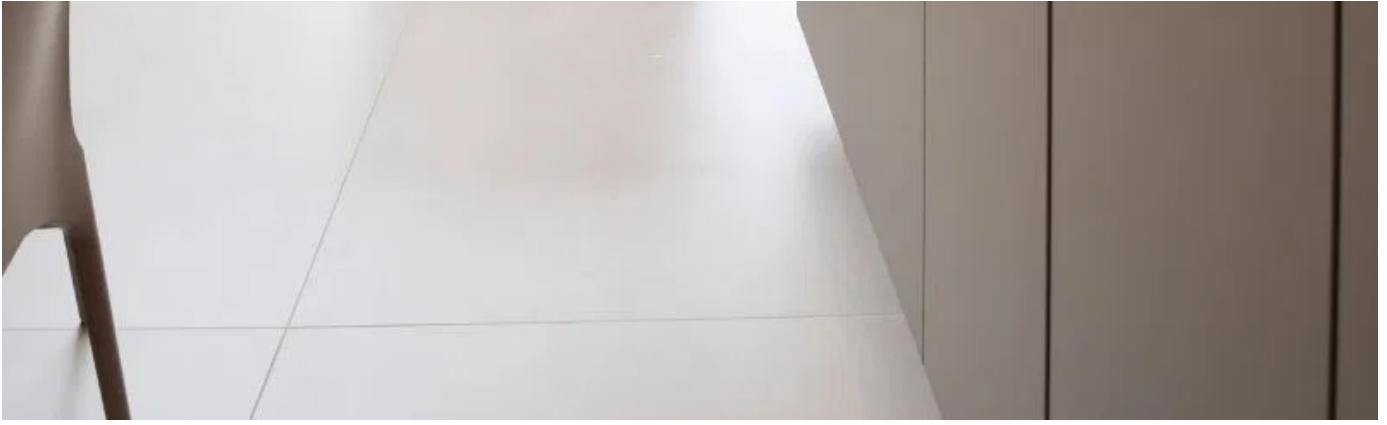


There are various design options for the rear elevation of a side return extension. Some projects open the entirety of the rear of the property with glass doors (<https://www.iqglassuk.com/glass-doors/s49699/>) whereas some just add glass doors to the new extension.

With any design, using flush floor finishes with these opening elements will make this interchange between inside and out much more seamless and greatly improve the connection to the garden, making the outside space more accessible.

This rear extension in Chiswick (<https://www.iqglassuk.com/projects/sharon-road-full-home-renovation/s21513/>) extended into the side return space creating a completely open rear kitchen area. At the back, the existing house and extended space are merged together with a large slim framed sliding door (<https://www.iqglassuk.com/ultra-slim-windows-and-doors/s104607/>) that fills the entire rear elevation. The resulting extension feels wider and more open than if the spaces were segmented.





In comparison, this side extension in Westminster (<https://www.iqglassuk.com/projects/the-bevel-extension/s53941/>) showed a clear division between the new extension and existing house. The exterior finishes were porcelain cladding with a single large pivot opening

(<https://www.iqglassuk.com/products/slim-pivot-doors/s14958/>) set within the bevelled structure.



A more traditional design can be created with the use of bifolding doors (<https://www.iqglassuk.com/products/sieger-lux-bifold-doors/s22372/>) or aluminium casement doors in the rear elevation. The above side extension was completed in Richmond (<https://www.iqglassuk.com/projects/onslow-avenue-aluminium-bi-fold-doors/s15359/>) and included a large structural glass roof over the extended section with new aluminium bifolds at the rear.





## Fire Rated Side Windows for a Return Extension

If your glazing is facing a boundary you may have to use fire rated glazing (<https://www.iqglassuk.com/fire-rated-glass-systems/s68573/>). This protects neighbouring properties should there be a fire within the building and stops the spread of fire.



Where fire rated glazing is required is determined by Building Regulations (<https://technical.iqglassuk.com/technical-advice/building-regulations-planning-permission/>) (Part B for England or Annex 2.A for Scotland (<https://technical.iqglassuk.com/glazing-applications/scottish-building-regulations-guide/>)).

You can introduce a certain amount of non-fire-resistant glazing to a boundary facing elevation. The size of this non-fire rated glazing depends on how close the window is to the boundary. For example, for projects in England, if the window is to be installed 1m away from the boundary then the non-fire rated window can be up to 1m<sup>2</sup>. If you include a sprinkler system within the building you can double the size of this non-fire rated window.

If you want to include windows that are larger than the Building Regulations parameters, then these will need to be made using a fire rated system.

Fire rated windows for side infills are created using specialist fire rated glazing. This is a specially designed glass construct with various intumescent layers within the glazing to stop the travel of heat and smoke from a fire.

A fire rated window can be frameless (<https://www.iqglassuk.com/products/frameless-fire-rated-doors/s22597/>) in appearance but will still need to be installed with a fire rated frame of steel or timber. This can be hidden by the building finishes after installation.

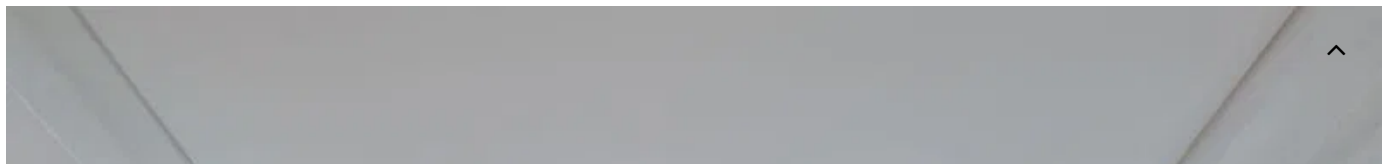
## Planning Permission for Side Return Extensions

Most side infill extensions are covered by Permitted Development rights (<https://technical.iqglassuk.com/technical-advice/planning-permission/>) (meaning that full planning is not required). This will depend on the size of the side return extension that is being planned.

In order to be built under Permitted Development, the side extension must only be a ground floor extension, is not taller than 4m and not wider than half the existing house width.

For a more daring or unique extension design planning permission will likely be required. For instance, if you wanted to use a unique cladding material or use interesting structures. The project architect will be able to assist with planning requirements.

Even if you can build the extension under Permitted Development you will still need to ensure that the extension is built in adherence to Building Regulations which the architect will also work towards.







## How Much Does the Glazing for Side Return Extensions Cost?

The cost of the glazing for a side infill extension will depend on multiple factors including the size of the glass installed, the door types used and whether the glass needs to be fire rated.

Bifolding and aluminium casement solutions (<https://www.iqglassuk.com/products/sieger-aluminium-casement-doors/s14956/>) are the most off-the-shelf and therefore most cost-effective glazing option for the rear doors to a side extension.

Most high-end architectural designs will opt for slim framed sliders (<https://www.iqglassuk.com/products/slim-framed-sliding-doors/s22159/>) or bespoke pivot openings (<https://www.iqglassuk.com/products/slim-pivot-doors/s14958/>) to create a statement design.



Large glass roofs (<https://www.iqglassuk.com/products/structural-glass-roofs/s15028/>) with glass beams are more expensive than smaller single rooflights (<https://www.iqglassuk.com/products/invisio-thermally-broken-rooflight/s53537/>) within a roof structure but you compromise on natural light ingress.

If fire rated windows are required to the boundary side this can greatly increase the glazing cost for your project.

You can find out more at our dedicated article: How much does a side infill extension cost? (<https://news.iqglassuk.com/how-much-does-a-side-infill-extension-cost/>)

## Further Reading:

Side Return Extensions Project Examples (<https://www.iqglassuk.com/side-return-extensions/s47230/>)

Side Return Extensions Product Page (<https://www.iqglassuk.com/products/glass-side-return-extensions/s15006/>)

How Much Does a Side Infill Extension Cost? (<https://news.iqglassuk.com/how-much-does-a-side-infill-extension-cost/>)

Types of House Extensions (<https://news.iqglassuk.com/types-of-house-extensions/>)

The Anatomy of a Glass Box Extension (<https://news.iqglassuk.com/anatomy-glass-box-extension/>)

What is the Difference Between a Glass Extension and a Conservatory (<https://news.iqglassuk.com/difference-glass-extensions-conservatories/>)?

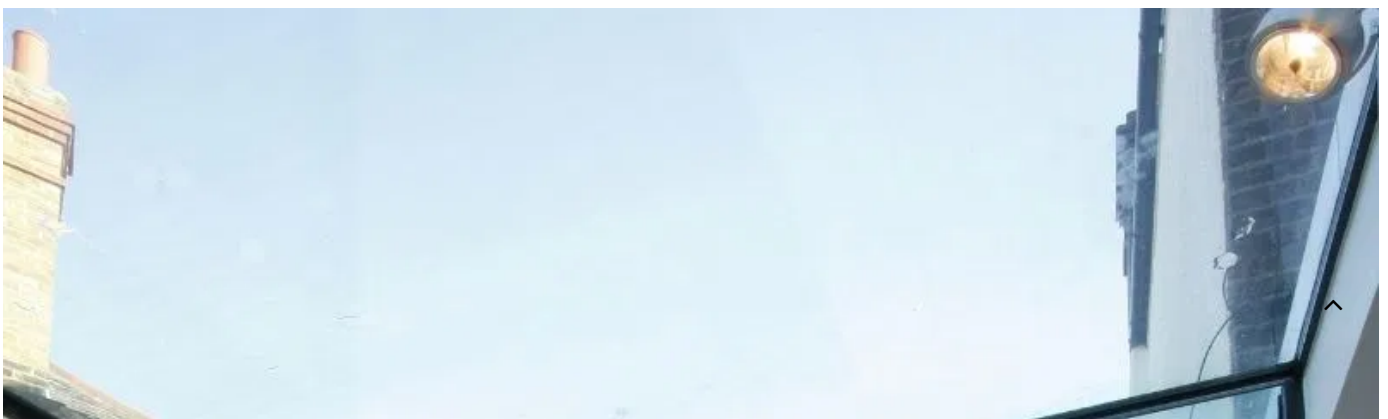
How Much Will a Glazed Extension Cost? (<https://news.iqglassuk.com/how-much-will-glass-extension-cost/>)

How to Incorporate Slim Frame Sliding Glass Doors in Side Fill Extensions (<https://news.iqglassuk.com/how-to-incorporate-slim-frame-sliding-glass-doors-into-a-side-fill-extension/>)?

How to Add a Glass Extension to a Listed Home (<https://news.iqglassuk.com/how-to-add-a-glass-extension-to-a-listed-home/>)

A Beginners Guide to Glass Box Extensions (<https://technical.iqglassuk.com/technical-advice/beginners-guide-to-glass-box-extensions/>)







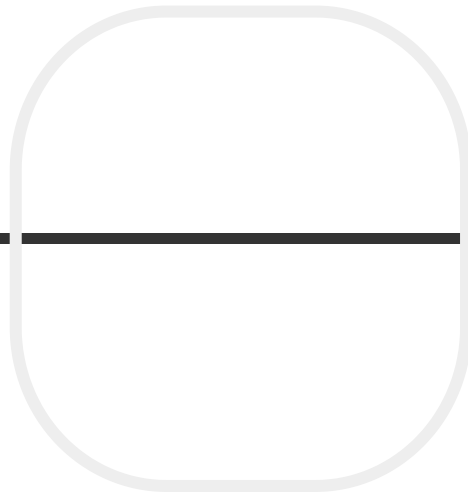
## What Next?

If you are planning a side return extension speak to the experts at IQ about your glazing. We offer a full glazing design and specification service and work with the world's leading architects. Our glazing projects can be found all over the UK – from Cornwall to Scotland – as well as all over the world.

Our technical team are available to answer any questions regarding the glazing on your project. Just visit our Contact Us page (<https://www.iqglassuk.com/contact/1661/>) to see all the ways you can get in touch with us.



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# Innovative Ways to Use Aluminium Glazing With Wooden Beams (<https://news.iqglassuk.com/aluminium-glazing-with-wooden-beams/>)

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