



Left The SDL Akzent Plus Wintergarden roofing system is fully thermally efficient and starts from £30,000. A similar glazed project to this – including the Wintergarden roofing system, SL60e bi-fold doors and SL60e sliding doors – would cost around £50,000-£70,000 from Solarlux

Q I'm thinking of replacing a solid exterior wall in my kitchen-diner with a large glazed panel. What do I need to consider?

A Used as replacements for solid walls, exterior glazed walls and windows can provide wonderful views over a garden, plus bring plenty of light into your home. Getting the framing right is vital in terms of how it looks, how thermally efficient it is, and how much maintenance might be involved.

Steel is the strongest material, meaning that the frames can be engineered to be very narrow and unobtrusive. Powder-coated aluminium frames are another option, offering good sound insulation, while wooden frames might offer a chunkier look that appeals, but be aware that they can be prone to shrinking, expanding and twisting over time.

Glazed walls and windows should be double- or even triple-glazed to be thermally efficient. You can fit heated glass, too, which can heat the whole room for you – it works by using the outer pane to reflect radiant heat to the inside and the radiant cold to the outside. This glazing costs from around £780 per square metre.



Left Large glazed expanses needn't be frameless – in fact, framing can be used to add character, such as with this Crittall-style floor-to-ceiling window. The cost for a window like this would be from £3,400, although the minimum order from Apropos is £15,000

DESIGN DETAILS

- You will need an architect, structural engineer or specialist framing/glazing company to design and install a large glazed wall or window into an exterior wall.
- Consider the orientation of the room and its exposure to sunlight. South-facing walls or windows might benefit from being recessed or from having an overhanging roof to provide some shade.
- Think about combating heat-loss and draughts with a trench heater, which sits across the width of the wall or window, and can also be used in front of glazed doors. These heaters combat condensation, too. Try Jaga, which has a number of models on offer.



What's new in glazed walls and windows?

'Innovare is a new, flush-glazed complete window and door system,' says Rebecca Clayton, technical sales executive at IQ Glass. 'It offers stunning frameless, fully glazed exterior finishes with the highest performance in thermal and acoustic insulation, toughest weather-resistance even on coastal properties, security and easy-maintenance. Prices start from around £600 per square metre.'



Left A run of glazed panels within a pitched roof throw daylight into an otherwise enclosed, narrow space. The pitched roof glazing by Apropos, with its contemporary aluminium frames, helps the ceiling feel higher and the space therefore feels larger. Similar projects to this by Apropos would cost around £250,000, with a minimum spend of £15,000

DESIGN DETAILS

- Use roof lanterns to raise ceiling heights in a flat roof extension.
- Even with solar-control coatings, heat can build up in a room with a lot of glazing, so ensure your windows are fitted with remote control fittings that allow you to open – and close – them easily.
- To create a contemporary look, consider slim-framed expanses of glass that will give uninterrupted views of the sky.
- Consider not only how much light you'll be gaining, but also what effect your windows will create visually from indoors. For example, evenly-spaced windows will be more pleasing than unevenly-spaced ones, while slimmer frames will be less obtrusive than chunkier ones.

Below This frameless glazed roof by IQ Glass over a side return extension is highly insulated and throws lots of daylight into the rest of the space. At around (W)175x (L)280cm, it costs around £11,500



Q How can I ensure my new side return extension will be filled with light?

A Rooflights will light up side return extensions effectively, and can be configured in a variety of ways to suit your budget. If you need to keep down costs you can simply use ready-made Velux rooflights, just as you would in a loft room. These come in a range of sizes and configurations, starting at around £300. The latest designs have slimmer sashes and framing and an increased glazing area to allow in more daylight than ever before. They also offer improved sound insulation, ventilation and energy-efficiency.

With a large budget, you can have bespoke, single or two-tier roof lanterns or large expanses of glazing fitted into the roof. Double- or triple-glazing and low-emissivity glass will ensure the room retains warmth, and solar control coatings reduce heat build-up.



Left From the outside, these flat glass and aluminium-framed rooflights are virtually invisible – especially since the frames are colour-matched to the roof tiles. Indoors, they make a vast difference to the light levels of a narrow extension. By Apropos; minimum spend is £15,000

Getting glazing right for a side extension

'For a side extension, you need to find a balance between using lots of glazing to allow plenty of daylight into the room and creating a room that won't suffer too much from solar glare and solar gain,' advises James Munro, director of Granit Architects. 'South-facing rooms will be very bright and might benefit from blinds and shutters, while north-facing rooms won't enjoy the sunshine but will get a large amount of daylight. The other important factor in bringing in light is to minimise the structure as much as possible. A self-supporting glass extension can give a bespoke look with wow-factor and a great view. The doors will be closed 95 per cent of the time, so maximise the area of glass over structure with large sliding and fixed panels rather than folding-sliding doors.' ▶

Q We are considering a glazed extension. What do we need to know?

A Frameless extensions, with glass-to-glass corners, large sliding panels and glazed roofs make a strong style statement. Less contemporary, but just as good at letting in light, extensions with conspicuous frames work best if finished in a discreet colour that blends with the garden or original building. For more traditional homes, orangery-style additions provide the benefits of a solid extension with the bonus of plenty of glazing. Small glazed extensions should fall into your property's permitted development rights, but large rooms may need planning permission, which is more likely to be gained if yours is tucked away.

Glazed extensions shouldn't be confused with conservatories, which aren't subject to the same regulations. The perfect glazed extension should, at the very least, be double-glazed, and glass with low-emissivity, solar-control or self-cleaning coatings is useful.

Building an extension entirely from glass doesn't come cheap. Expect to pay between £2,500 and £4,000 per square metre for a bespoke building; pre-designed solutions, such as Vitrendo (see bottom), will be cheaper at around £1,500 per square metre.



Above This glass-and-aluminium extension has wide-leaf Aprofold doors and a flat rooflight to bring yet more light into the room. Similar structures by Apropos would cost around £35,000



Right This glass-and-aluminium lean-to kitchen extension has automatic ventilation, which helps to keep the space comfortable on hot days. Similar structures by Apropos would cost around £40,000



DESIGN DETAILS

- 'When planning a glass extension, ensure the design marries with your house's aesthetics,' advises Brendan Day, head of design at Apropos. 'Listed or period buildings suit an orangery-style design, which is often sympathetic to antique features. Or choose a design that contrasts dramatically with the building, adding interest and individuality to the architecture.'
- 'Ensure that your design meets your family's requirements. Kitchen extensions often sit well in lean-tos or orangeries, which incorporate brick and can accommodate electrical outlets, and dining rooms are equally suited to fully glazed structures. Whatever your intended use, it will be personal to you and this should be carried through into the design process.'

The latest developments for glass extensions

'Glass technology has progressed and it is now possible to install self-cleaning glazing, solar-control glazing, and switchable or frosted glass if you require privacy from overlooking neighbours. Tinted glass can also give a great finish to a glazed extension,' says Apropos' Brendan Day.

'Vitrendo is a brand new, modern solution of elegant, architect-designed contemporary glass extensions, built with precision engineering and detailing where needed,' says Rebecca Clayton, technical sales executive of IQ Glass, which produces the design created by Smerin Architects (see below). 'Available in a range of sizes and configurations to suit all situations, it costs around £1,500 per square metre.'