



# Why Glass?

*By Rebecca Clayton*

Using glass in projects is the definition of luxury, modern architecture and construction. Glazing is no longer simply a pane of glass and a frame. From years of engineering, research, experience and design, Glass is now a functional, architectural element to any build; large or small.

Natural light is scientifically proven to improve living standards, increase quality

of life and glass is the only modern building element that can combine the thermal performance needed for today's constructs and whilst allowing light transmission wanted.

There are so many different options and uses for glazing and windows now.

Glass can be used as fixed structural elements of glazing - from glass walls, glass roofs, skylights, glass floors - these

elements will all draw in light creating a bright, light bathed environment.

Walk on rooflights are always useful in a balcony or basement project as they do not impeded on any floor space on the above floors. Placing these on southern elevations will bring in the maximum amount of light and if you are extending to the basement area walk on glass panels embedded into the floor, decking or patio



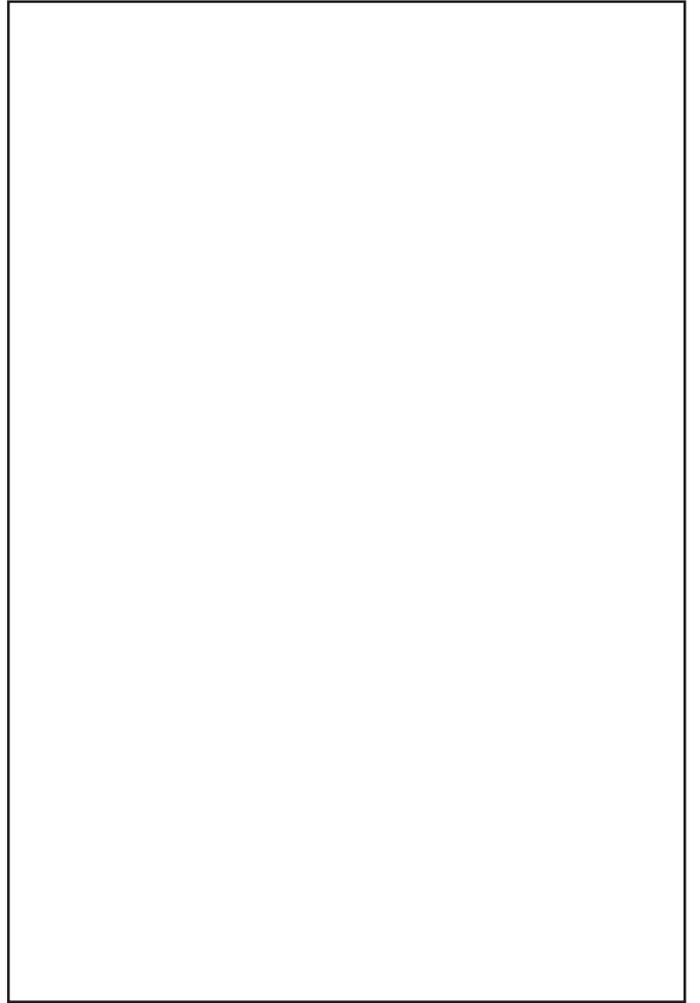
are great minimal solutions to light ingress below.

Once the light ingresses into the new space are designed thinking about the functional results of transparent surfaces into the building construction should be your next thought. For southern elevations a solar control coating is the first port of call. These coatings reduce the amount of long radiation waves that

can enter a space through the glazing and reduce the extent of overheating due to solar gain through glass. In areas where snow fall is frequent or heavy you may want to consider using IQ Heated Glass on rooflights and glass floors. This specialist technical glazing solution will melt any snow or ice fall on the glass elements keeping them clear and transparent at all times of year.

If you are worried about privacy when using glass elements having, glass floors, walls or rooflights translucent or sandblasted is a very straightforward way of ensuring that the glass aspects of a building are not impeding on the privacy of any occupant, but then will not allow vision through the glass at any time. An alternative option is to use a technical glass solution such as IQ's Privacy Glass







that can change from transparent to translucent with the application of electricity, leaving the choice up to you.

For project where high thermal performances are required IQ would suggest Super Insulating Units, especially for any horizontal glazing elements such as rooflights or walk on glass floors. To comply with part L of Building Regulations all windows and doors must have a  $U_w$  value of 2.0 W/m<sup>2</sup>K or less; IQ's Super Insulating Units carry a standard u-value of 0.7 which will not change if used as a rooflight. It is not secret that heat rises and therefore these elements at the top of a space need to have the best thermal performance. Glass is at its least effective when titled horizontally due to the convection current heat loss through the glass or air fillings inside a unit. By using IQ's Super Insulating Glass

you eliminate that heat loss due to the structural makeup of the glass and film these convection currents don't form so there is no dip in performance from this highly insulating glass panel.

Using glass in access points, entrances and exits can play a critical role in ensuring maximum light transmission. Using transparent items in your entry and exit points allow light to seep uninterrupted through the necessary opening into the further areas. Glass Balustrading, glass steps and full length, double storey windows will all allow light to filter from above, for a higher end solution glass lifts shafts can be used.

In narrower or larger projects escape routes need to be planned into the design in the event of an emergency of fire. Using Fire Glass around the exit points will ensure that these emergency exit routes

are protected and will stop fire spreading to these must have escape routes whilst maintaining the transparency and the natural light ingress into the adjacent spaces. Building Regulations will always advise as to what elements need to be fire rated and to what rating.

When it comes to framing systems, glazing specialists such as IQ Glass focus on quality of materials, high end-precision engineering and fine-tuned detailing. Remember; these are items that you will be interacting with on a sometimes daily basis; it is not an area to cut corners or cost.

Sliding doors systems such as Minimal Windows give highly contemporary, large glazing finishes in sliding door elements meaning you don't have to cut back on light transmission or increase framing to have a glass item moveable. These



Minimal Windows Sliding Doors are exclusive to IQ Glass in the UK and can be designed and detailed to have all surrounding framework hidden; leaving only the 21mm panel joint at the sliding panel connection.

Once light is actually in the space you need to create spaces for the light to flow through. Open plan living is very popular at the moment in renovations and new builds and is obviously ideal for uninterrupted light transmission but further into the rooms, using glass partitions to divide the space is a great way of allowing this light transmission continue.

Minimal detailing can allow for these internal glass panels to be full height and frameless creating nearly 100% light transmission through the elements from floor to ceiling. If privacy is a thinking point between the spaces, privacy glass

can be utilised here on internal elements to create controllable vision through glazing with little change in light transmission between the two spaces.

Building gyms, pool, steam and sauna areas are very popular at the moment and a great use of any extension or renovation to a building. Condensation and glass can be a problem in these high humid environments. By introducing IQ Heated Glass into these glazed elements you eliminate any condensation build up on the glazing leaving the glass clear and all the surrounding finishes minimally detailed without ugly floor grates used in conventional condensation removal.

Glass, both internally and externally, can be used as a decorative element to a design. Using various methods of decorative glass will allow light transmission whilst creating a decorative elevation, such as Kiln Formed Glass,

LED laminated panes or by laminating various materials in the glass itself to create the decorative aspect.

If you are considering using a large element of glazing or specialist glazing solutions then you need to use a specialist glazing company such as IQ Glass.

IQ Glass are architectural glazing experts due to their expertise in specialist technical glass, their experience in large glazing elements and their learnt understanding of building regulation and architecture.

**Contact IQ Glass for more information about using glass to sensibly maximise light transmission through your home, build or extension.**

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