



LINKING OLD WITH NEW

Whether it's a church, a stately home or a country cottage increasing the space or functionality of a heritage building raises many interesting challenges, especially if the property is fully listed or subject to conservation restrictions. Consideration has to be given not just to the aesthetics of old meets new and the decision to either reflect and match the original style or aim for a wholly contemporary new addition but also to the physical interface between modern building technology and the centuries old techniques employed by the original builders.

Glass specialists Ion Glass have worked closely with architects and builders on a number of varied heritage and ecclesiastical projects where the properties of glass as a structural material have played a key role in designs to modernise, improve or extend the building.

Peter Hazeldean, MD for Ion comments 'It's not unusual for the project to involve the input of numerous official bodies to ensure that the result meets the approval and constraints imposed by English Heritage and other conservation officers.

Above, Ion Glass linkway

A defined link between the two can create not just an aesthetic division but also provide a physical buffer between the harder, less flexible, modern addition and the original heritage property.'

Glass is particularly appropriate in this situation, separating the new building from the original structure and allowing for movement between two buildings of very different age and construction.

As a spokesman for English Heritage points out: 'Older buildings behave quite differently. They are likely to have more shallow foundations, be more flexible and breathable. If you build one directly against the other there will be a difference in movement.'

Peter Hazeldean continues: 'We can create a robust glass structure that is fully compliant with current heat loss requirements using double glazed glass panels, so that the link becomes an integral part of the new extension. Or we can provide a more simple, single glazed, structure to provide a weather resistant link between the two buildings.'

Both can be built with minimal footings, using channel set fixings, to create a flexible and attractive buffer between the two buildings.

The beauty of glass is that it won't impact either physically or visually on the structure of the building. There are no height or size restrictions and we can

design the linkway so it has no visible fixings. We can even incorporate structural glass fins or beams which provide all the required integrity with a wholly minimal result.'

Typically, the Church of St Thomas of Canterbury at Worthing near Basingstoke needed a new hall where parishioners could meet, hold church events and Sunday school workshops.

Built in 1848 in 14th century style St Thomas of Canterbury is a charming church at the heart of the village community. The new community space was designed to be quite separate to the church itself and has a separate entrance – but nevertheless there was a requirement to access the venue from the church itself.

What was ostensibly a simple community building proved to be a much more complex project, not least because the Hall was built over part of the graveyard and had to be constructed on concrete piles positioned by infrared survey to avoid disturbing the graves. The hall also required approval from some five different organisations in order to obtain planning permission.

Ion Glass constructed a complete linkway joining the church to the new building. It is entirely constructed in glass, including structural glass beams that are fixed into the original church wall and support the roof with minimal visual impact. The toughened glass walls are set into channels, avoiding any need to disturb the graves below the ground. Just 8' long and 6' wide it is



Above both pictures, Ion Glass Structural Glass Linkway, St Thomas of Canterbury church, Worthing



Above, Old Alresford - Glass Screening

a modern addition to the original architecture that is both stylish and functional.

Old Alresford House in rural Hampshire is a Grade II listed Georgian mansion dating back to 1750 when it was built for naval hero Admiral Lord Rodney as a family home. Over the years the house has seen many additions, with subsequent owners making their mark on the property. More recently Old Alresford's current owners have lovingly restored the whole house, re-capturing the elegance of this historic family home.

All work was carried out with the utmost care and attention to detail, ensuring that nothing was done to damage the fabric of the house whilst at the same time ensuring that it met contemporary requirements. The owners needed to extend and re-order the interiors of the house to provide a modern kitchen and to increase the size of their ballroom to enable them to use it as a wedding venue.

Ion Glass were commissioned to provide a glass link to separate the original building from the new extension. Soaring fixed panels, 3.5metres high and a metre wide were slotted into bespoke stainless steel brackets into the brick walls allowing a level of flexibility against movement between the buildings. The 5 metre roof panels, which were designed to slightly overhang the vertical panels to keep rainwater off the face of the glass



Above Ion Glass linkway close up

as much as possible, were lowered into position by crane and made watertight with lead flashing.

Whilst the new brickwork is very much in keeping with the original building and the profile of the extension reflects the style of the Georgian architecture, the glass linkway ensures that a distinction is made between old and new, providing a buffer between modern construction techniques and a building that is more than 2 centuries old. What's more it adds a stylish contemporary feature to the renovation.

A converted oast house

It's not just churches and public bodies, or large scale projects that need to consider the implications of linking old buildings and new extensions.

Kent's oast houses were traditionally used for drying hops but many of them have been converted into attractive homes. However, many of the buildings are listed and the conversions have to meet conservation and heritage guidelines as well as building regulations. 'This was a delightful project,' continued Peter Hazeldean. 'The oast house is charming but the owners needed more space. They planned a single storey extension where they could entertain family and friends whilst enjoying the wonderful views over the Kent countryside.'

The new room was separated from the original building with a structural glass link that provides both a visual separation and allows for the disparity in building techniques between the oast house and the new extension. The glass link meets all building and conservation stipulations.

Created from double-glazed glass wall and roof panels the linkway is an integral element of the building, fully compliant with building regulations and meeting all heat loss requirements. Pressed zinc flashings fitted to the slightly sloping roof ensure that that it is fully secure and watertight.



Using glass to provide internal links

Sometimes it's internal links that pose a challenge, separating different areas to meet current requirements or opening up new spaces without obscuring or detracting from the original architecture.

At Hurst College in Sussex, the requirement for a glass link was quite different. The College was built in the 1870's to resemble the collegiate system at Oxford & Cambridge. Nathaniel Woodward designed the college to have adjoining Inner and Outer quads, with the chapel and dining hall distinctly separate.

But as the school expanded space in the chapel had become increasingly limited and a suspended gallery was proposed above the main chapel entrance. The current headmaster also wanted to connect the chapel to the hub of the school, allowing pupils to embrace the ecclesiastical heritage and culture as an integral part of their daily school life.

The designs drawn up included extensive use of glass to maximise the flow of light, open up the views into the chapel from the dining hall and create additional space within the chapel itself. As with any ecclesiastical project, a key priority was to ensure the contemporary design did not detract from the tradition and beauty of the building and existing surroundings.

Glass screens divide the dining hall from the chapel ensuring that visitors are able to enjoy uninterrupted

Above Hurst College link from the dining hall to the chapel

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views of the magnificent altar with glass balustrades installed around the new suspended gallery to cause minimal visual intrusion, channel set for accurate positioning. The finishing touch is a set of curved timber steps leading into the gallery with glass balustrading to provide a focal point to the division between the hall and chapel.

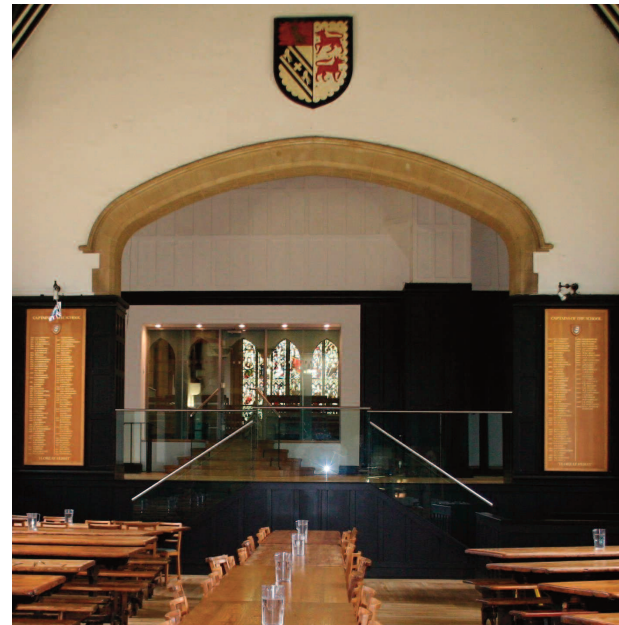
‘This project had to be completed within the summer holiday period,’ said Peter Hazeldean. ‘All the glass was wholly bespoke and had to be templated prior to manufacture to ensure a perfect fit but timing was critical as we had to have everything installed and finished before the pupils returned to school in September. We were delighted with the results that passed all examination with top marks!’

The chaplain described it as "beautiful architecture that does not detract from the rest of the chapel" a sentiment echoed by the college's headmaster who stated that "although modern in construction and style, the new gallery fits beautifully within the building. It is an outstanding addition, linking our chapel to the day to day life of the school."

Glass has been incorporated into buildings for centuries and the contemporary use of structural glass to link old buildings with modern additions or to open up and link

spaces internally can achieve the best possible result – both structurally and aesthetically. ■

For information about Ion Glass and their work on other ecclesiastical and heritage projects call 0345 658 9988 or click on www.ionglass.co.uk



Above Hurst College view from the dining hall to the chapel