



CONTEMPORARY GLASS IN HERITAGE ENVIRONMENTS

Modernising and restoring heritage buildings can pose significant challenges - especially with regard to maintaining the original style and atmosphere whilst ensuring the restored building meets current requirements and regulations.

Inspired use of structural glass provides an excellent solution, fulfilling many contemporary needs with minimal physical or visual impact on the existing architecture. However, whilst glass has many benefits as a building material, it has many technical restraints and it's definitely worth engaging a specialist company to ensure the glass is fully functional, fully compliant and technically designed to provide the best possible results in each individual heritage setting.

Ion Glass (www.ionglass.co.uk) has a well-deserved reputation for working in heritage and ecclesiastical buildings and have developed a range of specialist skills and techniques to ensure their wholly bespoke glass works perfectly in many different environments.

Above, Glass Balustrades on mezzanine floor St Mary's at the Quay.

'Working in heritage buildings is always exciting as each project is so unique,' says Ion Glass MD Peter Hazeldean, 'It's not just about creating a result that looks amazing, the glass has to work in the space.'

We use specialist equipment to record very precise measurements to ensure the glass fits around out of true walls and corbels – and no two walls, carvings or arches are ever exactly the same!

When you're working in sensitive environments, wherever possible we prefer a finished result that meets structural requirements without the need for a damaging or visually intrusive framework. Our service includes bespoke metalwork to enable us to fit the glass with minimal impact on the original stonework, developing individual brackets and concealed fixing systems where required.

We also use the glass itself to create structural fins and beams and have developed a system of ingenious and robust joints manufactured in glass for wholly frameless results.'

The scope of Ion's work is impressive.

Successful installations include structural glass to link old buildings to modern extensions; bespoke framed and frameless balustrades on staircases or enclosing mezzanine floors; acoustic and heat-retaining screens to divide spaces whilst still allowing light to flow around the building; glass screens to enclose meeting rooms to create private spaces with full visibility and stylish glass doors and draught lobbies to provide welcoming and secure entrances.

St Mary's at the Quay

A recent project undertaken by Ion Glass involved an extensive scope of bespoke structural glass to complete the restoration and conversion of St Mary's at the Quay, a medieval church in the heart of Ipswich.

Built between 1443 and 1543, St Mary's had been a community church for many centuries, surviving the plague, flooding and the bombs of the Second World War – but over the last 50 years it had fallen into disuse, suffering from neglect and structural damage. Saved from demolition by the Friends of Friendless Churches

in the 1950's, the future of the church was not secured until 2008 when Suffolk Mind came together with the Churches Conservation Trust to pursue a shared vision to conserve the building and create a Health and Wellness Centre in the heart of the city.

After a successful bid to the Heritage Lottery Fund for £3.6million work started on the project to develop Quay Place, designed by architects Molyneux Kerr and led by Edward Easton who was involved with the project from its inception.

The initial stage of the building work focused on repairs to the roof and parapet, repairing and restoring the historical fabric of the building before the new build work could take place within the church and an extension built to create additional space for meeting and therapy rooms.

The church shows a distinct outward lean to the south side, and efforts had been made in the 1960's to correct this with the addition of breeze block and concrete buttresses which were not only unattractive but potentially of little structural benefit. These were removed as part of the restoration project and replaced with a steel framework, which also served to create a new mezzanine deck, providing the scope for additional first floor meeting rooms.



Above, Acoustic glass meeting room Ion Glass St Mary's at the Quay



Above, Glass entrance St Mary's

Ion Glass were commissioned to install structural glass to form the new first floor rooms: an office set into the original church tower; an open reception area and a completely enclosed glass meeting room which can be used for business meetings, training sessions or events.

The main meeting room features glass on all sides: a long span of glass panels along the length of the room affords a clear view of the nave between the original stone arches; panels of acoustic glass were installed to protect the original leaded glass window and also serve to minimise the external traffic noise; the open stone arch overlooking the South Chapel has been closed with a trio of glass infill panels and the entrance to the room is via a floor to ceiling glass screen across the width of the mezzanine, fitted with a frameless glass door, to make the room private and secure yet visually unobtrusive.

The glass overlooking the nave has been set into a series of bespoke steel mullions. 'The mullions were designed to echo the external windows and are more of an aesthetic than structural consideration,' said Edward Easton. They did however need to meet all structural requirements and be fully compliant with current

regulations. Fortunately, Ion have their own workshop to undertake bespoke metalwork of this nature and the mullions were supplied and fitted to work perfectly with the glass installation.

The mezzanine floor is enclosed with a glass balustrade which descends to the ground floor on either side of the stairs with flawlessly fitted panels that are a testament to precise measurements and templating skills. Fitted using a bolted PFC channel fixed to the edge of the steel floor structure, the balustrade maintains the minimal, industrial look specified by the client. An aluminium handrail runs along the top of the balustrade, taking in the turns of the stairs with individually manufactured returns which were designed and commissioned for the project and produced by Ion Glass in their bespoke metalwork shop.

Peter Hazeldean of Ion Glass commented, 'Many of the projects we work on use a mezzanine floor to make better use of the space without the need for an external extension, especially where there is little or no surrounding space. At St Mary's the steel framework that created the mezzanine was structurally essential but nevertheless inspired use of structural glass created



Above, Glass meeting rooms St Mary on the Quay

additional space with minimal impact on the aesthetics of the building. St Mary's has an impressive 15th century double hammer beam roof which can be enjoyed from a different perspective and even better clarity from the new mezzanine floor.'

Visitors to the new health and wellness centre use the original doorway but a structural glass lobby has been installed inside the entrance to avoid heat loss from the interior and to keep the cold Ipswich winds out. Entirely created from glass the new lobby provides an uninterrupted view of the interior as visitors enter the building whilst at the same time protecting and highlighting the original 15th century font which sits safely behind the glass. Clever use of discreet stainless steel brackets and structural glass fins maintains the minimal appearance of the structure which is designed to meet current building requirements without detracting from the intrinsic beauty and atmosphere of the building.

Edward Easton, who had worked on the project for eight years, was delighted with the result, saying 'it surpassed my expectations'. He added "we chose extensive use of glass for its low key qualities. It's structurally robust and functional, and doesn't impact

on the original architecture. We have worked with Ion Glass on a number of projects and they are very good - we were very happy with the glass at St Mary's.'

Visitors to the new centre have been full of praise for the restoration, describing it as 'a beautiful and sympathetic restoration', and 'a wonderful mix of old and modern, beautiful and special'. One visitor wrote, 'Alive at last, I love the fact that the old is with the new.'

'St Mary's at the Quay, or Quay Place as it is now called, was a very exciting project to work on,' added Peter Hazeldean 'It engaged so many of Ion's skills and techniques for structural glass and bespoke metalwork within a single heritage building. We were exceptionally proud to be part of the regeneration of the building from disused church to a vibrant and welcoming Health and Wellness Centre -it's a fantastic outcome.'

If you have a conservation or renovation project that involves structural glass, contact Ion Glass on 0345 658 9988 or visit www.ionglass.co.uk

Below, Ion Glass Structural fin & bracket detail St Mary's



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Ion Glass specialise in bespoke architectural and structural glass installations for ecclesiastical, heritage and contemporary buildings

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