



MAXIMISE INTERNAL SPACE WITH A GLASS MEETING ROOM

An innovative and flexible approach to reconfiguring the internal space of churches and heritage buildings is often beneficial if the longer term aim is to modernise the building to welcome a wider community. Many churches have plenty of space but nowhere suitable to conduct a private meeting, welcome younger children to Sunday School without disturbing the main congregation or to host a smaller gathering or discussion group.

The challenge is to design and create a functional, modern environment without detriment to the existing architecture.

Use of structural glass provides a versatile solution to meet contemporary needs whilst at the same time offering minimal impact, either physically or visually, to the building itself.

Peter Hazeldean, MD of heritage glass experts Ion Glass comments: 'Structural glass is robust, durable and easy to maintain and meets a wide variety of

contemporary requirements, including heat retention and acoustic privacy. Provided it is correctly installed, use of glass to create rooms within a building opens up exciting opportunities to make significant changes to the functionality of the space without obscuring or damaging the original architecture.

Importantly, glass ensures that natural light continues to illuminate the interior of the building, a factor of particular relevance in churches where stained glass windows are so often a key element.

Typically, Holy Trinity Church just off Sloane Square in the heart of fashionable Chelsea, had plenty of internal space but nowhere for private discussion. The church was built at the end of the 19th Century and is a testament to the Arts and Crafts Movement, containing treasures by renowned artists and craftsmen William Morris and Edward Burne-Jones, including some beautiful sculptures, an exquisitely embroidered altar cloth and a magnificent stained

glass window. It's impressive interior (the nave is slightly wider than the nave of St Paul's) has enviable acoustics and regularly hosts concerts and recitals. Whilst Holy Trinity attracts a lot of visitors, the church managers recognised that the building did not always meet the needs of its thriving 21st century congregation.

'Fundamentally,' said Church Warden Martin Cleveland, 'we lacked adequate meeting rooms. Somewhere where we could hold private discussions and individual counselling and also space where younger children could be accommodated and entertained whilst their parents participated in the Sunday Service.'

With a tight urban location the new meeting rooms had to be constructed within the confines of the building but retaining the intrinsic atmosphere of the church was paramount. The solution was to commission two substantial structural glass rooms, providing space for private meetings and individual counselling.

Creating the new rooms in glass ensured minimal impact on the architecture of the building and also met the requirement for anyone within the meeting rooms to enjoy an unimpeded view of the nave and any activities taking place.

Architects David Le Lay prepared drawings to locate new meeting rooms under the original gallery, on either side of the main entrance to the church. This had never previously been used as a unified space, more a collection of areas used for informal meetings and storage, reflected in disparate floor surfaces, doors and decoration.

Ion Glass were commissioned to undertake the work, providing technical advice to ensure full compliance and an optimum result, as well as undertaking the supply and installation of the new meeting rooms and entrance lobby to the church.

The two meeting rooms are entirely constructed from structural glass, built to fit in and around the original stonework with lateral bracing provided by partial glass fins for a wholly minimal result.

Due to the undulating floor levels and varying ceiling surfaces within the spaces, ensuring a precise fit against the stonework was a challenge. Ion produced full sized templates prior to glass manufacture using laser measurement techniques and a templating cone for an accurate result around the stone corbels and uneven floors. Ion also successfully pioneered a complex manufacturing technique on this project:



Holy Trinity internal door to meeting room

offsetting the individual laminated panes by 10mm where the glass met the stone columns at an oblique angle.

Acoustic glass ensured total privacy for any discussions held within the two new rooms and to allow Sunday School Meetings to be held without disturbing the congregation.

Access to the new rooms is via frameless glass pivot doors again chosen to create minimal visual impact, combined with full sound proofing and the option of being held open when required.

Moving original metal screens from the rear of the church to the front of the new meeting rooms retained the style of the Arts and Crafts movement, complemented by a decorative applied glass manifestation that echoes the motif in the screen.

The meeting room installation was combined with new internal and external doors to the church, creating a contemporary lobby area which excluded the local traffic noise whilst providing a visually welcoming entrance.

Despite the complexity of the installation the entire project was successfully directed by Martin Cleveland, who is a retired structural engineer. He said, 'I fully understood the process and had no qualms about managing the project myself - in fact I rather enjoyed it!'

On the South Coast, **St Clement's Church** has been at the centre of the historic old town of Hastings for centuries. Set back from the promenade and the fisherman's market area, the perpendicular Gothic architecture and church tower dominates the network of ancient streets that surround the building.

Recently a £1million legacy was left to the parish with the stipulation that the money could only be used to improve the interior of the church and should not be used for exterior renovations or repairs. The money provided the opportunity to commission an internal meeting room, encouraging greater use of the church by the wider community, as well as accommodating a permanent and accessible base for the parish office.

Maximum use of glass in the installation allows for an unimpeded view of the nave and the altar whilst at the same time the space benefits from the natural light that enters the church via a series of beautiful and primarily contemporary stained glass windows. The space above the meeting rooms has been fully utilised, ensuring that the impact of the new installation on the floor space is compensated with a mezzanine level that can either be part of the main congregation during services or used for smaller gatherings and events.

A glass balustrade around the upper area was designed and constructed to fit perfectly around the stone arches that were previously high above the nave and are now an integral part of the new space. The mezzanine area is accessed via a glass clad staircase positioned at the rear of the meeting rooms.

Ion Glass were commissioned to provide the balustrades, precisely engineering the glass to fit flawlessly around the stone arches, interfacing with the glass balustrade on the staircase for a visually perfect and fully functional result. The glass is finished with a European Oak handrail that fits seamlessly all around the upper level and down the staircase.

Ion Glass MD Peter Hazeldean said, 'The result looks deceptively simple. But the panels around each stone arch had to be accurately templated and the glass cut with a computer controlled water jet for accuracy.

Ensuring that the arch panels could be subjected to the toughening process and that they would subsequently sit in the exact position across the span of balustrade was a challenge for our technicians.'

Yvonne Hardman, Church Warden for the parish, is delighted with the new installation. She said 'It's a very contemporary addition but it's brought the church firmly into modern usage. Like many churches, our core congregation had dwindled so it's really important for us that St Clements remains an integral part of the community. The new meeting rooms make it possible for us to hold regular church breakfasts and clubs - we're anticipating using them as an art gallery and for other events.

Innovative use of structural glass can add a new dimension and a greatly improved use of the original space to buildings of any age.

Peter Hazeldean continued: 'There really is no limit to the size and space of a glass meeting room, whether it's built into the existing architecture or installed as a stand-alone structure such as the one commissioned at St Clements in Hastings.

Each installation should be approached on a very individual basis, designed to be structurally and



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visually compatible with the building itself whilst at the same time meeting the requirements of church officials, parishioners and any relevant heritage bodies.

With years of experience in heritage glass installation Ion Glass is able to offer technical expertise and advice to ensure the glass has minimal impact on the surrounding structure – whether it's the installation of structural glass fins to provide integrity with minimal visual impact; using discreet stainless steel patch fittings to fix the glass to the stonework or creating bespoke metal channels to hold the glass. Each project is individually assessed as no two buildings are the same.

Careful use of modern measuring techniques and accurate templating makes it possible to have the glass manufactured so it sits perfectly around stone corbels and accommodates inconsistencies in floors and ceilings – centuries of wear will make a significant impact on the shape of the floor. We have developed methods to seal the glass against the stonework for a visually perfect result that retains both heat and sound.

The use of glass is both contemporary and timeless, it truly is a beautiful and versatile building material.' For other church and heritage projects including glass structures, glass doors and glass balustrades, visit www.ionglass.co.uk or call 0845 658 9988 to discuss your requirements. ■



*Above: Holy Trinity Structural Glass Fins
Below: Holy Trinity Meeting rooms*

