

Case Study

Library of Birmingham

Centenary Square, Broad St, Birmingham

Architect: **Mecanoo Architecten**

Main Contractor: **Carillion Plc**

The largest public library in the UK and a major new cultural destination, the £188 million Library of Birmingham is seen by Birmingham City Council as a flagship project for the redevelopment of the city and looks set to become a model for the future.

Central to the design of this iconic, highly transparent glass building are a significant number of bespoke glazed partition solutions by Optima. Designed by Dutch architects Mecanoo and delivered by a team including main contractor Carillion and multi-discipline engineers Buro Happold.

The Library of Birmingham will provide a showcase for the city's internationally important collections of archives, photography and rare books.

Products Installed:

Revolution double glazing

Revolution pocket sliding doors

Optima 117 plus single glazing

Bespoke fire rated screens

Bespoke high acoustic screens





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New facilities include state-of-the-art gallery space, community health centre, exhibition halls and cafes, while digital technology will open up public access to the collections.

To meet the complex design requirements, Optima's extensive package of work included independently supported internal glazed partitions and fire screens, including bulkheads and upstands, fire rated glass screens and doors to stair cores, special acoustic screens for the music rooms, single glazed doors, plus bespoke double glazed screens.

In addition, there was a requirement for automatic double fire doors, curved fire screens to the atria, free standing part height screens and doors, acoustic windows, sliding windows and installation of DDA compliant manifestation.



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The unique design of the building's interior required Optima to engineer and install a number of bespoke solutions. This included the curved fire screens, all of which were different with specific design requirements.

This required the individual drawing of each screen and the careful coordination on site to ensure a seamless integration. Due to budget challenges, the company also had to value engineer elements of the package of works, ensuring the architectural brief was maintained in order to achieve the impressive interior.

With a design scheme that reflected an architectural approach of simple, stylish design with uncluttered aesthetics, the Optima 117 plus single glazed system offered an ideal solution for installation throughout the lower ground mezzanine level and level 7.



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The frameless glass doors perfectly complemented the clean lines and simple detailing of the glazed partitioning system.

Featuring virtually invisible patented Nebula™ dry joints between the glazed panels, Revolution double glazed screens were specifically designed to achieve acoustics of Rw40dB and Rw48dB – to provide outstanding aesthetic and acoustic performance throughout the building.

The specification was completed with the installation of Revolution pocket sliding doors designed to achieve Rw30dB on levels 2 and 3 and timber veneered doors across the remaining floors.

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"The Library of Birmingham isn't just a building with books in it," commented Patrick Arends of Mecanoo. "It offers a taste of the libraries of the future. During its construction, the external façade has offered passers-by something that is architecturally different but it is inside where the real 'wow' factor lies.

Achieving a simple, seamless appearance requires complex engineering and it is credit to Optima as to how they have engineered their products to meet our brief. The end result is quite simply a triumph."

Now complete, the Library of Birmingham looks set to not only form the catalyst for further regeneration within the city but also how future libraries are designed and perceived by the user. With the integration of glazed partitions from Optima helping to create a light and airy interior that inspires visitors, the scheme truly has rewritten the rule book.

If you would like to find out more about Optima or to discuss your options, visit our website:
www.optimasystems.com

