



Singapore's oldest museum gets a new look

The redevelopment of the 122-year-old National Museum of Singapore from 2003 to 2006 has restored the entire building to its former glory, not only in terms of aesthetic beauty but also in the way the building was originally constructed. A key architectural highlight located at the new extension is a 16 metre high and 24 metre wide Glass Rotunda, and an 11 metre high and 22 metre long Glass Passage, which functions as the bridge between the colonial building and new extension.

The Singapore History Gallery explores 700 years of Singapore's history, from the 14th century to the present day. The 2,800 square metres Gallery uses a combination of multimedia and artefacts to tell the history of Singapore.

As visitors enter the gallery, dramatic music sets the atmosphere and accompanies scenes of Singapore projected on the 360° inner wall of the Glass Rotunda. A long pathway spirals down into the depths of the gallery where history begins.

Unlike traditional history museums, the Museum has adopted a multilayered story-

telling approach. It juxtaposes popular history and anecdotal history in two paths that visitors can choose to follow. The **events path** traces the major events and characters that were part of Singapore's history, while the **personal path** tells the stories through the eyes of the man on the street.

At each step of the way, visitors are guided by a multimedia handheld device, The Companion, specially developed for the Singapore History Gallery. The Companion will play guide and narrator, bringing the stories to life through various sections of the gallery – *Temasek, Settlement, Emporium,*



History gallery. Photo: National Museum of Singapore

Port-City, Modern Times, Fortress, Syonan-To, Merdeka, New Nation and August 9th. The Companion contains more than nine hours of audio and video content in four different languages – English, Mandarin, Malay and Japanese.

Rotunda Dome

The Rotunda Dome is the National Museum's most iconic architectural feature. Originally built as the former Raffles Library and Museum in 1887, the elegant neo-Palladian styled building had been expanded in 1906, 1914 and in 1916. The redevelopment of the Museum that begun in 2003, is the most extensive and complete rebuilding and conservation project in the building's history. In compliance to strict conservation guidelines laid out by the Urban Redevelopment Authority (URA), the entire building has been restored to its former glory, not only in terms of aesthetic beauty but also in the way the building was originally constructed.

Stained Glass Restoration

All 50 pieces of stained glass from the old dome were carefully restored over more than six months from late 2004 to mid-2005. The Victorian glass patterns were carefully inspected on site, and their condition assessed by a professional stained glass artist in Singapore. All 50 pieces were removed and delivered to the artist's workshop for restoration. The reinforcement system, most of the joints and lead work also had to be rectified.

As the stained glass pieces are curved in shape, timber moulds following the profile were constructed for the restoration process. Timber boxes were specially

made for these delicate 1.82-metre-long stained glass for delivery to the workshop. Individual glass and lead profiles were recorded and damaged portions tagged. All damaged pieces were removed and replaced with new ones. The artist adopted professional soldering techniques to restore the original decorative lead solders. A new reinforcement system was also added to the glass frames to prevent sagging.

Upon completion, the stained glass pieces were cleaned and buffed with a special polishing compound to bring out the original colour and shine of the beautiful Victorian flower and square patterns. The final effect is stunning. On a clear day, the sunlight filtering through the restored glass throws a ring of coloured lights on the floor of the Rotunda.



Rotunda. Photo: National Museum of Singapore



Dome. Photo: National Museum of Singapore



Glass Passage
Photo: ©Arup / Kelvin Kan

Redevelopment Authority to the former Raffles Library and Museum building.

Built entirely of glass and engineered by Arup's façade specialists, the Glass Passage allows visitors to have a clear view of the elegant Palladian motifs and the fish-scaled zinc tiles on the external façade of the



Exterior of Glass Passage
Photo: ©Arup / Kelvin Kan



The Concourse
Photo: National Museum of Singapore

Glass Rotunda

Designed as a modern interpretation of the old Rotunda Dome by architect, Mok Wei Wei, the Glass Rotunda is the signature feature of the museum's new extension. Standing at 16 metres high (five stories) and 24 metres wide, special designed glazing system for the all glass wall and roof panels were developed by Arup's façade team.

The Glass Rotunda consists of a smaller steel mesh drum encapsulated by a larger glass façade drum. During the day, the drum serves as the main entry to the new Singapore History gallery where 360 degrees of projected images will surround visitors upon entry.

At night, the drum will transform into a lantern, with images appearing on the 'skin' of the inner drum, visible on the exterior facade.

Rotunda Dome. This 'intrusion' has been designed to blend into the old neo-Palladian architecture.

The Glass Passage rises almost 11 metres (four storeys) from the ground level and is one of the world's largest outdoor self-supporting glass structures. It functions as the bridge between the old and new building and is the only modern intrusion allowed by the URA in the museum's history.

While visually simple, the engineering behind this structure is extremely complex. Engineers from four different countries took more than a year to design this structure. To enhance visual transparency and enable visitors the experience of viewing the old building in an art gallery setting and the grandeur of the Dome up close for the first time from within the museum, optical glass is used in various areas of the connector.



Glass Rotunda
Photo: National Museum of Singapore