

Docklands Digital Doughnut

Major Project Thesis

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This proposal is for an entertainment complex comprising of cinemas and multimedia gallery spaces within a torus form on a prominent Docklands site.

Site Analysis:

Urban Context

Docklands New Quay is dominated by large apartment buildings near the water and carparks and office buildings directly to the north. The apartments face the water views and the northern aspect is treated with a regimented array of narrow balconies used by the apartment dwellers for drying clothes and storing bicycles. The building podiums house restaurants, bars and cafés with a scattering of services such as solariums and day spas. This project proposes cinemas and multimedia galleries in response to this absence of alternative entertainment and culture in the area.

Well connected

The site is on essentially flat terrain. It is well connected, with direct pedestrian access to New Quay promenade, regular trams on Harbour Esplanade and Docklands Drive and a well used bicycle path extending west to Footscray Rd. Many people currently park here and in the many nearby parking areas while attending sports events at Docklands stadium. This project aims to capture patrons from the large volume of passing traffic in addition to the many people who live or stay in Docklands apartments.

Shelter from intersection

Although the site is a heavily used pedestrian route from New Quay to Docklands Drive, it is windy, dusty and noisy due to its adjacency to four major roads with thousands of vehicles passing each day. This condition is responded to by providing a sheltering form to the main intersection, while opening out to the public domain.

Visual prominence

The highly visible nature of the site suggests a structure that celebrates its visibility in the urban landscape. The need to invigorate Docklands suggests that an entertainment venue may provide residents and visitors a service that is lacking in the area, provide a 'view' for the apartment dwellers and potentially attract new visitors to Docklands. The project takes advantage of the site visibility by providing a 360 degree 'face' to all four carriageways, to New Quay and as far away as the Bolte Bridge and Melbourne Central.

Program

- External surface covered in low resolution LED screen
- Outdoor cinema
- Ten cinemas of various sizes from 100 to 400 seats
- One large gallery space formed by the negative space between the torus skin and the internal cinemas
- Interstitial spaces fitted out for installations and multimedia works
- Kiosk, bar and ticket counters
- Digital control centre (biobox)
- Delivery, storage and work area for gallery spaces
- Staff offices and staffroom for cinema staff

Design Response

The project is a large torus with ten cinema pods arranged in a circular array that appear to float freely. The cinemas are arranged in two layers, six above and four below. An outdoor sloping paved area leads to the main entrance and, combined with an external cinema screen on the surface of the torus, creates an outdoor area for summer events.

Urban design response

Because the site is plagued by high winds, dust and noise the torus is embedded in an earth berm at the north and east edges to shield entries and outdoor areas. The form is tilted up on the west and south edges opening up to New Quay and Aquitania Way creating an invitation to explore the spaces created by the form on the site and then to enter and experience the internal volumes. Entry is via a small aperture through which the visitor's field of view is compressed before emerging into the visual spectacle of the interior.

Access to the site optimizes proximity to the tram stop on Docklands Drive, to the flow of pedestrian traffic on Aquitania Way to and from car parks and invites passing pedestrian and bicycle traffic to divert from New Quay Promenade.

The torus form provides a conceptual link from the Docklands stadium to the south east to the Melbourne Eye (Southern Star) to the north west while differentiating itself from the rear elevations of the surrounding vertically extruded apartment blocks. Docklands Stadium and the Southern Star are both visible from the site and the project would be a prominent feature from the Southern Star and to floods of people returning to their cars from the stadium.

External skin technology

The external skin utilizes cutting edge LED technology to create a dynamic, colourful, creative skin that can be programmed and animated to vary of the appearance of the building. It could be used to display coherent content across the whole surface, or could be divided into separate 'screens'. For example a film could be screened on the inner surface of the torus to an audience sitting on deckchairs along the gently sloping auditorium space under the torus, while the outward facing surface could be displaying images of the people watching the film. The form provides a 360 degree image area so could provide a focus visible from all four major roads, from the Bolte Bridge, across Victoria Harbour as well as from close by on New Quay or down from the north facing apartment windows and balconies. It would provide interest, activity and spectacle.

Structure

The main structure is provided by a space frame. An earth berm supports the eastern side of the torus and houses the digital control room, plant room delivery entrance, workshop, storage and management offices. The earth berm forms part of the protective form and dampens noise from the plant room. Twin glass and steel lift cores provide support for the elevated section of the torus and for spiral staircases. These provide accessible routes to the upper internal walkway, vertical transport for gallery exhibition assets and fire escapes. A second ticket booth and an automated ticket machine are incorporated into the western lift base.

Between the inner and outer cladding the space frame provides services, maintenance access and flexible configuration for setting up gallery exhibitions. The space frame provides multiple connection points for cameras, projectors, lights, audio equipment and other gallery requirements.

Internal skin technology

The inner surface is composed of triangulated matte white cinema screen material panels. Panels can be removed, replaced, reconfigured and rearranged to suit gallery requirements. For example you may install a display created with LCD screens with pressure sensitive floor panels so that the work reacts as you walk towards the display.

Internal walkways are accessible under the lower pods, around the centre of the torus, along the outside of the upper cinemas and across the top of the main double height gallery space on the south side of the torus. This allows viewing of exhibitions installed in space under, over, between and on any surface or space in the building including the large surface/volume in the main gallery.

Installations and multimedia works such as those curated by Experimenta and The Australian Centre for the Moving Image can be presented using a variety of methods. LCD screens could be attached to surfaces or placed freestanding in the large under-cinema spaces. Projection works could be installed in between two of the cinema pods as a destination in themselves or to add interest to the journey to a cinema session. Interactive works that require camera or proximity sensors could be installed on the central walkway and large volumetric works would be installed in the large double height gallery.

Circulation

There is a large entry stair, leading to two internal levels of circulation, one for each layer of cinemas. The two central platform walkways are connected by stairs. They provide entrance to the cinemas. The lower walkway deals with the slope of the building by touching the inner surface on the raised side of the torus, providing an alternative circulation path. On the second layer a suspended walkway runs around the outside edge of the cinema pods. Two lift cores offer support for the raised portion of the torus spaceframe that distributes load throughout the structure. The west lift is an alternative entrance while the east lift is for staff use.

Experience

The design creates an environment where a person can create their own path through the spaces inside the torus. For example you could enter the complex, buy a cinema ticket and a drink then wander along the bottom of the torus interacting with multimedia installations, move onto the lower walkway to experience the large gallery exhibition and enter your cinema. Alternatively you could buy a ticket from the ticket machine on the plaza outside, enter the lift and go to your cinema session via the suspended walkway experiencing works installed above and between the cinemas as you go. Or you could buy a ticket online, enter by the main entrance, take the grand staircase to the centre walkway and make your way to the cinema from there.

Missed opportunity for a cultural space

Recently a hoarding has gone up on the site advertising a block of apartments similar to existing blocks. This seems to be a missed opportunity to add richness and to contribute to comprehensive services for the New Quay precinct of Docklands.

Precedents:

The design was informed by a number of programmatic, formal and technical precedents.

- OMA/Rem Koolhaas, Seattle Public Library: This project was a key precedent in the arrangement of programs, in the way the main forms are linked by interstitial spaces that house additional program as well as their more direct function as circulation. I was also interested in the design process of developing the spacial requirements by stacking the required volumes to generate the form. While Koolhaas wrapped a taut skin around his forms, my approach diverged at that point by encompassing the entire program in a large torus, as a way of generating more unprogrammed interstitial space.
- Toyo Ito, Sendai Mediatheque: Amongst other things the mediatheque houses new technology exhibitions and multimedia works. Ito created 'tree trunks' that extend vertically through the building form. These structural trunks carry services but also provide visual access from one floor to another. The building is intended to operate as a whole with intermediate spaces, forming links rather than divisions for circulation and program. I was interested in the idea of moving through the building as an exploration of spaces while still being visually connected to the whole.

- The use of light, projection and 'pixelated' surface to provide spectacle draws upon numerous contemporary precedents including the Xicui Entertainment Complex Beijing; the National Theatre Beijing; the 250m LED horizontal Skyscreen Beijing and older examples of interactive architecture including Toyo Ito's Tower of the Winds and the Cook and Fournier's Kunsthaus in Graz. The Kunsthaus was a key precedent both in the use of this technology and formally, as the insertion of a blob into traditional urban fabric.
- This project is also broadly informed by the theory and practice of spectacle in architecture throughout history. From the grandeur of the Coliseum, to the computer generated fantastic architecture of movies and computer games
- Precedents of curved form interiors used as floor surface such as the Nox Water Pavilion at Archilab 1999.