



Precedent Studies



Precedent Studies



PRECEDENT STUDIES

The proposed building would not only educate people in ways to live Water Wise, it will also lead you to discover the realms of impossibility when it comes to water. It will demonstrate water in all it's phases : gas, liquid and solid; water as an aesthetical catalyst, water as a building element the sensory experience when in contact is made with water, either by smell, touch, hearing, seeing, tasting and sensing.

The following precedent studies are used to open the mind to the possibilities when confronted with the enigma of water. Water will be experienced in its totality. The first precedent study is the Swiss Water Expo by Diller and Scofidio.

(Lim, 2002)

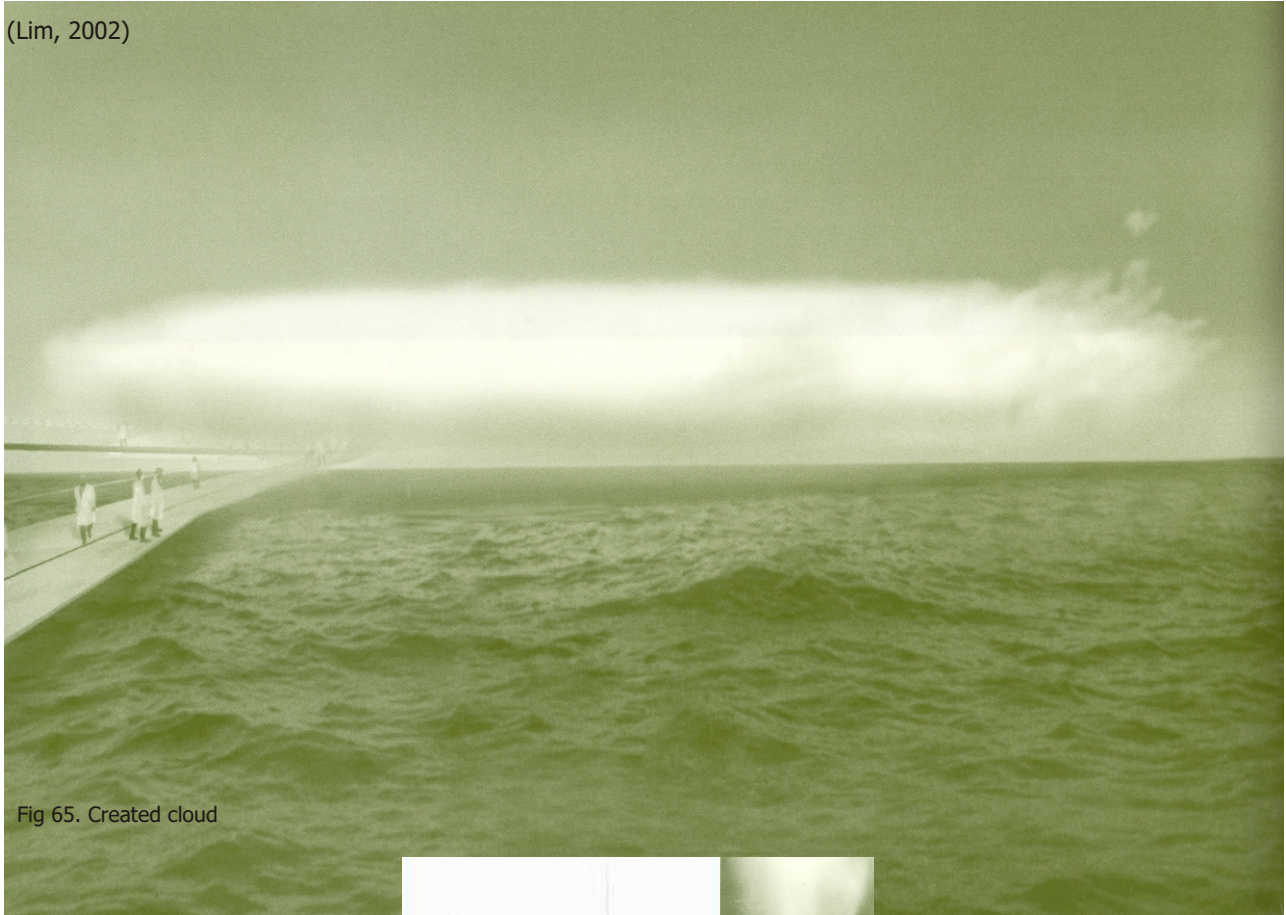


Fig 65. Created cloud



Fig 66. Visitors inside cloud

Fig 67. Nozzles used to create fog

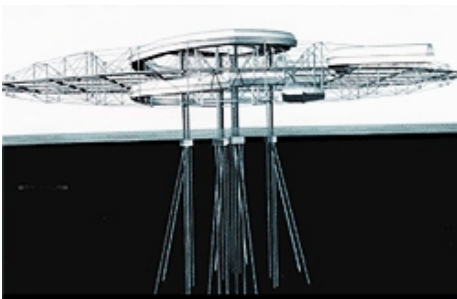


Fig 68. Construction

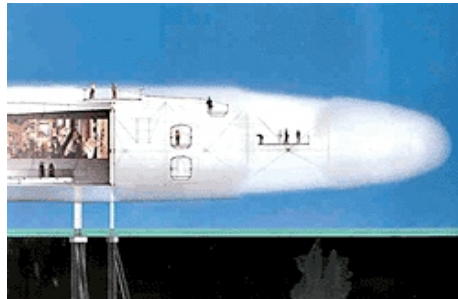


Fig 69. Construction detail



Fig 70. Walkway to entrance of building



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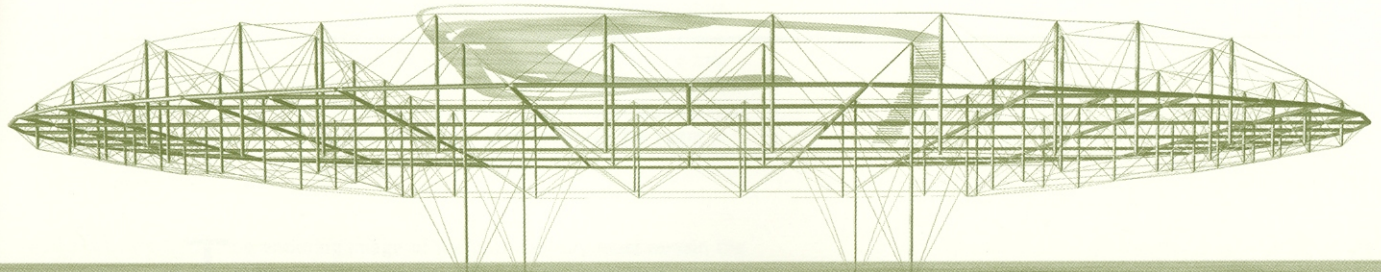


Fig 71. Detail of building

The centrepiece pavilion of the Sixth Swiss National Exhibition is a suspended platform shrouded in a perpetual cloud of man-made fog, designed by architects Elizabeth Diller and Ricardo Scofidio. The cloud can host up to 400 visitors.

The so-called 'blur pavilion' is visible from afar. The building consists of a 60 x 100 x 20 - metre metal construction that sprays innumerable tiny drops of lake water from 31400 jets. The high-pressure spraying technology ensures that the fleeting sculpture will be visible in all weathers, rain or shine.

The high-pressure spraying is carried out by high-grade steel jets with tiny apertures only 120 microns in diameter, through which the water is forced at a pressure of 80 bars onto fine needle points directly above the apertures and atomised into innumerable tiny droplets 4 to 10 microns in diameter. The droplets are so small that most of them remain suspended in the air. If sufficient jets are installed in a specific volume, they saturate the air with moisture and create the effect of mist or, in this case, the effect known as the blur.

Walking down the long ramp, visitors arrive on a large open-air platform at the centre of the fog mass where the only sound to be heard is the white noise of pulsing water nozzles. Computers are adjusting the strength of the spray according to the different climatic conditions of temperature, humidity, wind speed and direction. The fog mass changes from minute to minute. The blur building expands and produces long fog trails in high winds, rolls outward at cooler temperatures, and moves up or down depending on air temperatures.

Raincoats

The interactive media project also features wearable, wireless technology embedded into 'brain coats', technologically-enhanced raincoats. Visitors' rain coats react to each other, indicating either positive or negative affinity between visitors through colour changes and sound.

Diller & Scofidio

The focus of Diller & Scofidio is as much about the nature of space as it is about creating spaces. Their architectural practice utilizes design, performance, and electronic media with architectural and cultural theory as accompanying tools to investigate architecture as a field of social relationships and to remind us that architecture is everywhere.

(Lim, 2002)



Fig 72. Cloud visible from a distance



Fig 73. Cloud visible from a distance



Fig 74. Cloud visible from above

SPLASH!!

OSAKA, Folly (1990)

Peter Cook + Christine Hawley

Every 1^{3/4} minutes, a giant splash projects from the otherwise calm metal mask which clads this structure. To understand the mechanism, the visitor must enter the body of the structure. A small internal corridor reveals a large glass pane over which a thin veil of water periodically runs, blurring the view of the lake outside. The water is collected in a pebbled trough beneath the transparent walkway, and then into a hopper from which the collected body of water is then tipped through the facade causing the 'splash'. Observing the water's passage, the visitor becomes part of the event.

(Lim, 2002)



Fig 75. Osaka Folly (1990)

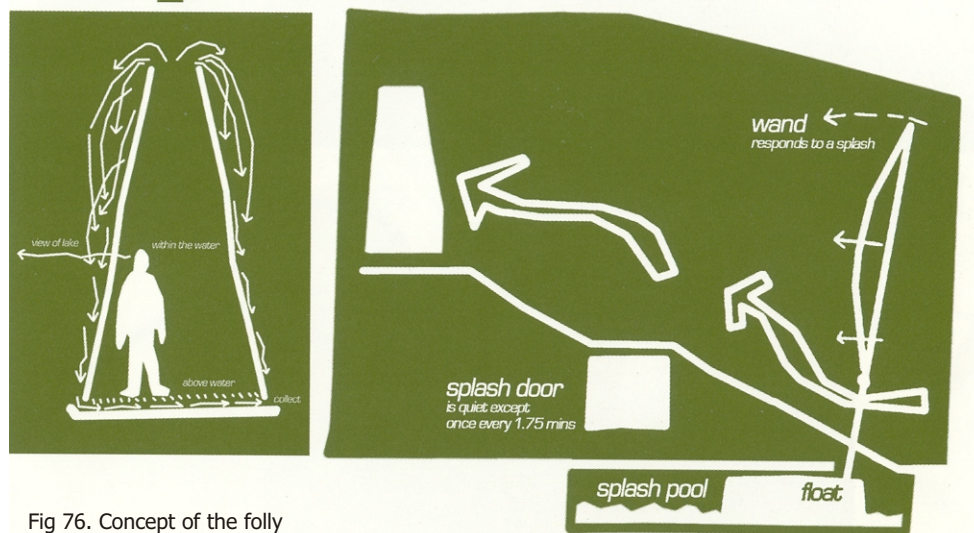


Fig 76. Concept of the folly



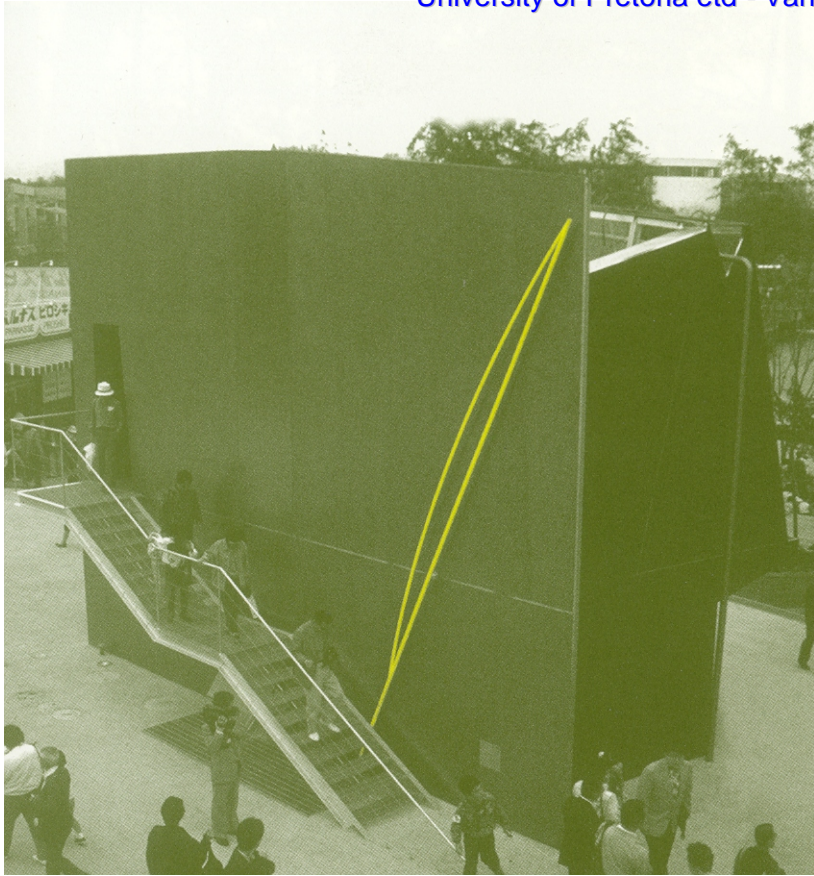


Fig 77a. Entrance to folly

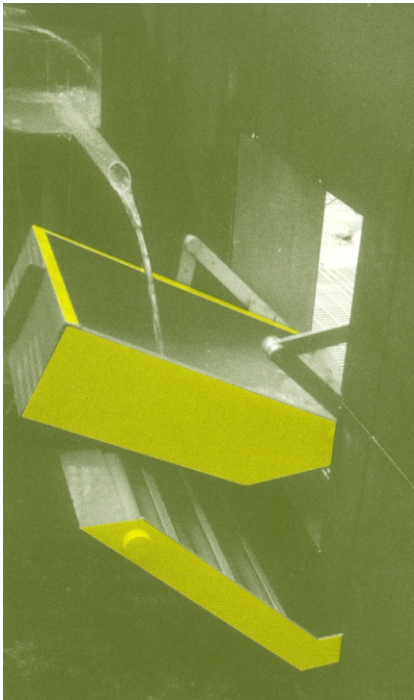


Fig 77b. Preparation for 'splash'

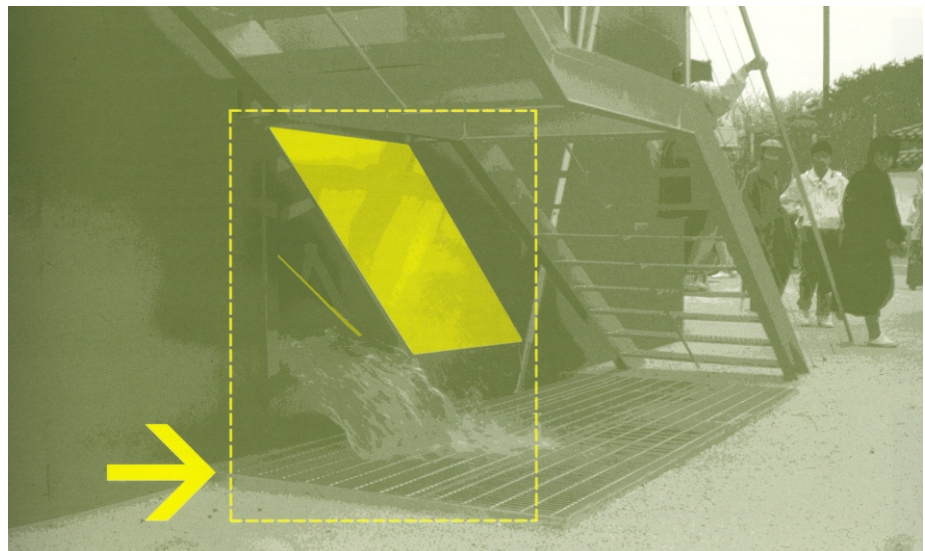


Fig 77c. 'Splash'

The following precedent studies will show the materiality, and possibilities of material use for the building. A variety of materials will create a sense of diversity which will link to the variable nature of water.

FELIX NUSSBAUM MUSEUM, OSNABRUCH, BERLIN, GERMANY

Architect: Daniel Libeskind

The museum sought to provide an emotional architectural experience. This is achieved through the simple intersection of three rectangular volumes. It's a 'museum without exit', which symbolises the artist's exile and search for orientation.

The design is highly unconventional and contain areas displaying layers of space and meaning. Disorienting effects riddle the interior spaces. For example, a particular space may appear to allude to one thing upon entering and then appear to be something quite different when looking back from another side. This was achieved by three-dimensional spatial manipulations, such as sloped floors and ceilings and non-parallel walls. Spaces even fold back upon themselves. Spaces are familiar, yet different in form and concept, questioning the occupant's.

This techniques can be incorporated in the Water Wise centre to distinguish between the different phases of water and the different volumes required to illustrate to it's allocated water-phase.

The building consists of three main components. Made of exposed concrete, the two-story Nussbaum Corridor is 45-metres long and 3 metres wide. The two-level zinc-clad Nussbaum Bridge links the new museum to the old. The oak-clad box contains most of the gallery and work space. (Grayston Trulove, 2000)



Fig 78. Design based on a series of interrelated lines

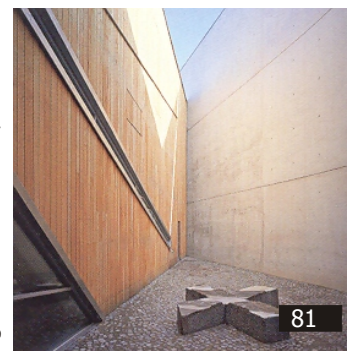


Fig 79-81. Use of wood, concrete and zinc sheeting in the maze-like building

49°



Precedent Studies





Fig 82 & 83. The spacial illusions extend into the gallery spaces



Fig 84-86. Use of wood, concrete and zinc sheeting in the maze-like building





Fig 87. Exhibition spaces with defused lighting

51°

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For an interactive building like the Water Wise Centre, the landscape surrounding the building should be integrated with the whole design. The landscape will be the place where scholars or visitors have the opportunity to interact with water, to experience, smell, see, hear and feel the water. The landscape should flow into the interiors. The next precedent study shows the possibilities there are to create a playful yet practical landscape to fuse site and building into one.

ENRIC MIRALLES - NEW PARK, BARCELONA

The areas around the site lacked specific characteristics and this demanded a redefinition of the site.

The overall experience in this landscape is one of entering a dreamlike space. From any entrance point one is guided by the frozen landscape. There is an outdoor theatre with staircases, new topographies and a multicoloured floor. Pieces of old graffiti walls were kept and combined into the new lines and shapes of the site. The light sifting delicately through screens, create varying zones of sun and shade, and redefine the zones of activity according to the hour of the day or the time of the year. The radical geometry of the Park of Colours gives one a sensation of moving through timeless space.

The park is an authentic display of different time shapes, of varied notions of the passage of time, most ingeniously resolved in the idea of a place 'where it rains every morning', evoked by the traces of water left by the discontinuous spurts of the fountains. Their rounded shells, covered with blue ceramic, glitter through the trees like small pools of petrified water.

The design provokes one to engage with the sense of scale in a playful game of details, alternately making one feel too small, dangling ones feet above the ground while seated on one of the benches, or too big, coming up too close to one of the sturdy, gnome-like lampposts. Vegetation contributes to the functional division of the park.

Through its combination of differently textured materials (coloured concrete, brick, ceramic, steel and wood) and the ever-changing lights and shadows, the park appears iridescent and unpredictable.

(Grayston Trulove, 2000)



Fig 88. Landscape



Fig 89. Landscape



Fig 90.



Fig 91.



Fig 92.



Fig 93.



In the following local example we can see how the architects achieved greatness with less than expected. Visitors are drawn into the experience of "Apartheid" and undergo an emotional and physical experience as they progress through this linear path of experience. There are places that upset the emotions, there are places that calm the emotions, there are places to get involved hands-on and there are places to leave one's own legacy. It is in looking at this building and its architectural characteristics that one should take note of simple but very effective ways of getting visitors involved in the holistic experience of architecture.

APARTHEID MUSEUM, JOHANNESBURG, SOUTH AFRICA

The museum came about as part of a casino bid seven years ago. Bidders were obliged to include a social responsibility project, and the winning consortium indicated that they would build a museum.

R80-million was committed to the building of the museum by Claude Grundman, from the Akani Egoli consortium. The consortium is committed to the running costs of the museum for a further two years, by which time they would have spent around R100-million on the project. Linda Mvusi Architecture and Design and Mashabane Rose Architects were some of the architects working together with GAPP Architects on this project.

The Museum occupies approximately 6 000 square metres on a seven-hectare site, which consists of natural recreated veld and an indigenous bush habitat containing a lake and paths, alongside the stark but stunning building.

The synergy between the natural elements and the building finishes of plaster, concrete, red brick and rusted and galvanised steel, creates a harmonious relationship between the structure and the environment.

A multi-disciplinary team of curators, filmmakers, historians, musicologists and designers were assembled to develop the exhibition narrative which sets out, by means of blown-up photographs, artefacts, newspaper clippings, and film footage, to graphically animate the Apartheid story.

Tickets for the Museum are plastic credit-card size cards indicating either "Non-white" or "White", and procuring one heralds the start of a harrowing journey.

As one swings through the turnstile, one starts a journey beginning with the early peoples of South Africa, and ending with the birth of democracy in the country. One is greeted by cages, inside which are blown-up copies of early identity cards,



Fig 94. Entrance to Apartheid Museum



Fig 95. Bench for Europeans only

The remainder of the Museum is just as graphic:

One can sit in a large yellow and blue armoured police vehicle, nicknamed a "casspir", and watch footage taken from inside the vehicle driving through the townships.

- Dangling from the roof, 121 nooses represent the political prisoners hanged during apartheid.
- A June 16, 1976 room with a curved wall of monitors shows footage of that day from around the world.
- A cage displays dreadful weapons that were used by the security forces to enforce Apartheid.
- Footage is shown of a remarkable 1961 BBC interview with Nelson Mandela when he was in hiding from the authorities, as well as footage of prime minister Hendrik Verwoerd addressing a crowd in English, explaining how the country could be happily ruled only if the races were separated.



Fig 96.



Fig 97.



Fig 98.

University of Pretoria etd - Van Wyk, H (2003)

At times one feels overwhelmed by the screens and the sounds and the powerful images they are projecting. One is led through room after room in a zigzag of shapes, some with tall roofs, some dark and gloomy, some looking through to other images behind bars or cages that make it clear that Apartheid was evil.

And just when one feels that the bombardment of the senses has become intolerable, one reaches a quiet space, containing a glass case with pebbles on its floor, which holds a book of the post-apartheid Constitution.

One can express solidarity with the victims of Apartheid by placing one's own pebble on a pile. Then one is led out on a grassland with paths, which take one to a small lake, for much needed time to reflect.

There is also a recording studio in which visitors can leave their experiences under Apartheid, if they had any, for others to hear.

It is not only important to tell the Apartheid story, but it is also important to show the world how it has been overcome. There certainly is a lesson for other countries here, and this is related through the complexity and sheer power of the installations.

The overriding message is to show local and international visitors the perilous results of racial prejudice and how this, in the case of South Africa, nearly destroyed the country, and in so doing, destroyed people's lives and caused enormous suffering.

An architectural consortium consisting of five leading architectural teams was assembled to design the museum. The museum is a triumph of design, space and landscape fused to create a building of international significance.

The building itself has power, which is what is needed to put across the powerful message the Museum conveys. It is the most important public building to be built in South Africa in the last 20 years.

56°

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Fig 99.



Fig 100.

