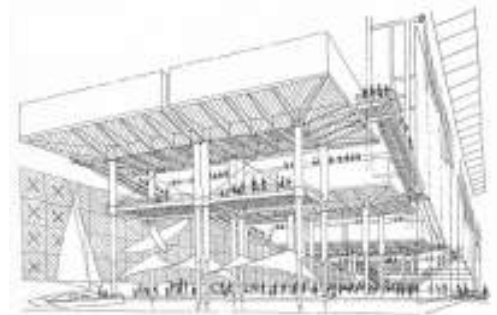


Grimshaw and Associates: British Pavilion

Buildings as Living Organisms

Nia Garner
March 23, 2004



Nicholas Grimshaw Philosophy

- Building as living organisms - grow, change, adapt, and react to internal and external forces
- Energy conservation/avoidance of waste
- Integration of the building within the city; the building must take part in the web of the city
- City – organisms that need a rich mix of activities, which cannot be created artificially

British Pavilion

- Architect: Nicholas Grimshaw and Partners
- Theme: The Age of Discovery
- Client: Department of Trade Industry
- Duration: April thru October 1992
- Location: Seville, Spain



Client: Department of Trade Industry

- Maximum unobstructed floor space
- One-way circulation
- Access for disabled
- Strong United Kingdom identification on the exterior
- External shaded queuing area
- Possibility for dismantling and resiting after Expo

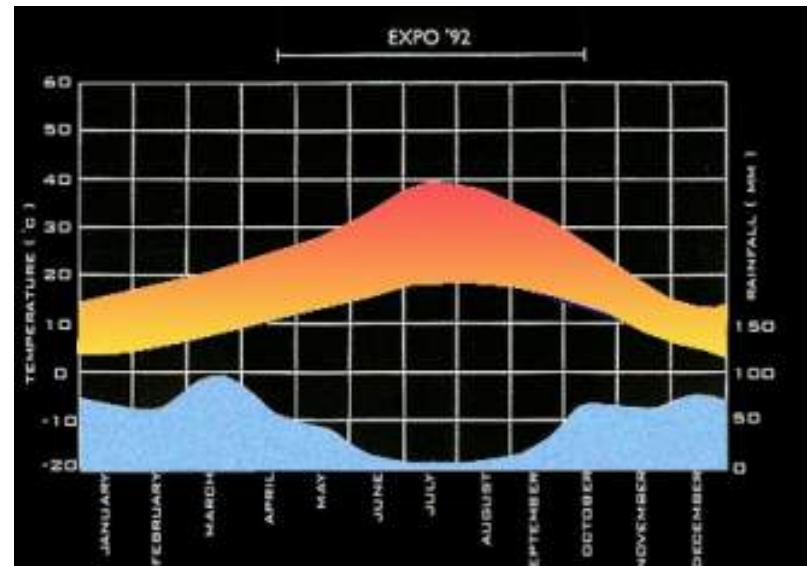
Design Objectives

- Unique attitude toward climate
- Between two rivers; importance of water
- Laurie Lee. As I Walked Out One Midsummer Morning.
- Place of coolness and rest



Climatic Experience

- Principle generator of design
- Shade and coolness
- Temperature outside 86 – 113 Fahrenheit
- Possible 20 degree day and night difference
- Rainfall minimal through July and August
- East side water wall
- Solar collectors on the roof, which power the water wall
- South side shading by fabric

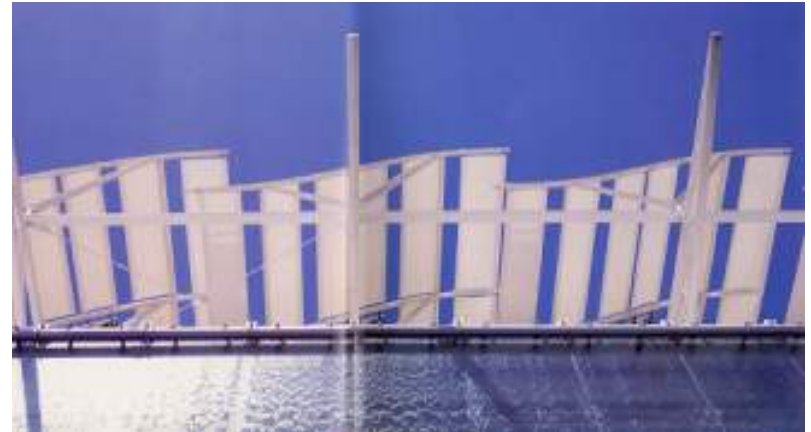


Circulation

- Travelators - moving staircase that moves up and down in front and through the building
- People sit moving through exhibit
- General circulation in the middle of the building

Solar Panel Roof

- Solar panels shade the roof from direct sunlight
- All enveloping roof covering whole pavilion creating cathedral like space underneath
- Photocells collecting sun and using electricity to keep building cool and power the water wall
- Solar cells face South and pick up the full rays of the southern sun
- Energy collected by the solar cells on the roof also power water wall pumps

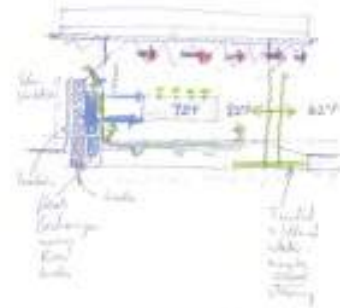


Water wall



<http://courses.arch.hku.hk/bss/01-02/students/British%20Pavilion/>

- Designed by William Pye
- National flag expressed in a “muted-way” behind the water wall
- Water wall modified the internal temperature of the building to 82 F from 102 F outside
- Air conditioned exhibition space is 72 F
- Western side of building is a piled-up wall of water tanks filled with sand acting as a massive barrier from the Western sun in the afternoon
- Water wall on eastern side should have the sun off of it almost before people enter the building
- Creating feeling of cool wall of water on the eastern side the entire time the exhibition is open
- Spans across the façade of the building – 65 meters long, 15 meters high
- Pumps lift the water to the top of the fall and then allows it to fall down the wall cooling the eastern side of the building



South Side

- No glazing
- Stretched fabric, stretched between ship masts.
- Stretched fabric is shaded by another layer of fabric which prevents sun from directly falling onto the lower levels, which serves as the VIP entrance



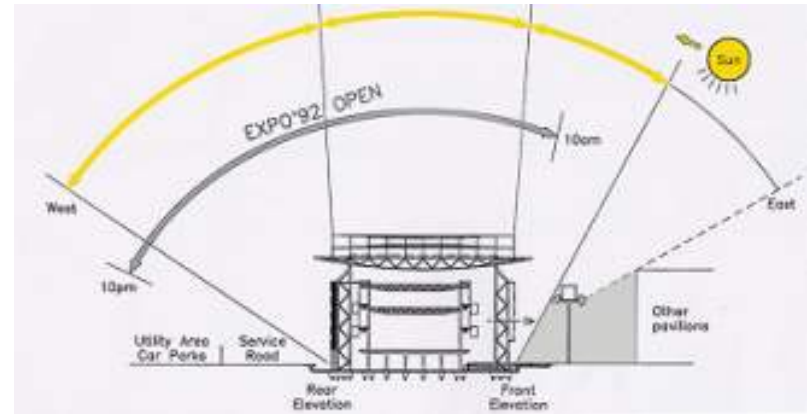
West Side

- West façade takes the full force of afternoon sun
- No glazing
- Heavy-weight wall – composed of water tanks filled with water or sand that acts a barrier to the sun on the west side of the building



North Side

- Same fabric as used on the South side is continued; however, light is allowed to come through it to give background lighting
- North side courtyard (in Spain) allows people to sit/stand in the cool while being protected from the sun



Night Scene

- The East side faces one of the main avenues, International Avenue, of the Expo site.
- The lighting effects of the running water wall are “marvelous.”
- The entire building is lit allowing a view of the underside of the roof and roof structure.
- The whole wall will glimmer at one end of European Boulevard and the Spanish pavilion will look towards it at the other end.



<http://courses.arch.hku.hk/bss/01-02/students/British%20Pavilion/pic-features.jpg>

African Moorish/Local Architecture

- Masonry architecture
- Use of light colors to reflect radiant heat
- Minimum windows
- Internal courtyards with pools and fountains
- Laurie Lee: “Seville itself was dazzling, a creamy crustacean of flower banked houses fanning out from each bank of the river. The Moorish occupation had bequeathed the affection for water around which so many of even the poorest dwellings were built. A thousand miniature patios set with in-exhausting fountains which fell trickling upon ferns and leaves. Each a nest of green repeated in endless variations around this theme of domestic oasis ...”



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