

Transparent film to protect Louvre Abu Dhabi from rain

Rain will not affect the Louvre Abu Dhabi museum since there will be a transparent film between the two layers of the perforated dome structure, said its design team yesterday in an exclusive interview.

Meanwhile, the piling works for the project have gone out to tender and will commence in early December, a senior official from its developer Tourism Development Investment Company (TDIC) told Emirates Business. "TDIC will soon notify shortlisted companies on the main contract," said Felix Reinberg, Project Director of Cultural District at TDIC (see box for fact sheet).

The project will be housed in the Cultural District of Saadiyat Island with the Zayed National Museum, the Guggenheim Abu Dhabi Museum and this museum due for completion in 2013.

"I think that in every project, you have to find a good reason to do things," said Jean Nouvel of Jean Nouvel Atelier speaking to this newspaper. "I research the character of the missing piece of the puzzle in a city. Hence, my buildings are different each time and more related to its cultural, economical and social context. Architecture is a gift and you try to create pleasure for the people using this project.

"This project is very special in the sense that it will be located on an island without buildings. I imagined the relationships of the new landscape created by the three museums in front of Abu Dhabi and got the idea to create this little neighbourhood," said Nouvel.

The Louvre Abu Dhabi will showcase fine arts, decorative arts, and archaeological artefacts, in exhibitions that are unique to the museum and its setting, according to a statement from its developers TDIC.



Louvre Abu Dhabi will showcase fine arts, decorative arts and archaeological artefacts. (JOSEPH J CAPELLAN)

In his design statement, Nouvel said the museum is conceived as "a complex of pavilions, plazas, alleyways and canals, evoking the image of a city floating on the sea. Hovering over the complex will be a form inspired by traditional Arabic architecture". It will be a vast, shallow dome or cupola – some 180 metres (590 feet) in diameter – perforated with interlaced patterns so that a magical, diffused light will filter through.

"The cupola will create the effect of the light in the souk, when you play with different superposition of different images and enrich the interiors," said Nouvel.

A prototype of the dome, six metres in diameter, has been installed on Saadiyat Island and is being used to test the play of light and shadows on the site prior to fabrication of the final structure.

"We are undergoing enabling works and moving half a million cubic metres of earth on the actual site. The dome is the largest element in the project and we

want to test its functionality and manageability. This is Phase 1, where the patterning of the "rain of light" (light patterns through the interlaced perforations) testing is taking place for a section of the dome," said Reinberg.

"The next step will be to look at the actual cladding materials and the finishes and the layering. Lastly, we will test the night lighting conditions and later on test the design solutions for maintenance and cleaning."

So what about the functional aspects of the design in a country, which has occasional showers during winter, and, in a sensitive project, such as a museum that will house extremely expensive artwork?

"The rain will not affect the museum. We held many discussion where the inner layers had glass openings," said Matthias Schuler, of Transsolar Energietechnik, who is part of the design team doing the testing studies on light.

“But Nouvel wanted the feeling of the connection between inside and outside. So finally, to ensure that people won't get wet in the walking spaces between the Museum, there will be a transparent film between the two layers of the dome to ensure that it does not rain in these areas. There will also be a drainage system hidden at the edge of the dome. There are 320 days of sun in Abu Dhabi. So Nouvel said that we will design for a sunny day. The outer places are not the museum areas. But we will try to improve the quality of outside in UAE and ensure that you can stay outside with this dome.”

Nouvel is unaffected by his image as a star architect.

“Architecture is always temporary transformation of a site. We do not know how many years will a building last. An architect always has different images of the future of his work. You have to imagine the building in different ages and situations,” added Nouvel.

“But we might look at stainless steel as the outside skin after 10 to 15 years with the evolution of the skin over the years. With this building, we have to imagine that it will stay like a testimony. And to do that we need all the technology of today, which we are using,” he said.

Awards

Jean Nouvel has headed his own architectural practice since 1970. He has won, among others, the Gold Medal of the French Academy of Architecture, the Royal Gold Medal of the Royal Institute of British Architects, the Aga Khan Prize for the Arab World Institute, honorary fellowships in the AIA. In 2001 he won Italy's Borromini Prize for the Lucerne Culture and Congress Center and Japan's Praemium Imperiale Career Prize. In 2005 he won the Wolf Prize, the Arnold W Brunner Memorial Prize in architecture, etc.

Fact file

- The 24,000 square metre museum will include 6,000 sq m of galleries for permanent display and 2,000 sq m for temporary exhibitions
- Special ductile concrete will be used on the floor of the museum in matt finish
- 300 lux light inside the project
- The architects started light testing first with 1:200 model in Stuttgart with nine different dome design and now use a 1:33 model
- 492 aluminum panel layers on the outer cladding of the dome
- 9,988 aluminum bars and steel tubes and 4,316 aluminum and steel knots in the middle structure of the dome
- Dome inner cladding is 484 aluminum panel layers