Low-impact greenfield university campus, Ho Chi Minh City, Vietnam

Project data

Type of project  Architecture (education)

Estimated start of construction  April 2009

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Comment of the Holcim Awards jury Asia Pacific

The crucial starting point of this new campus situated on an island in the Mekong Delta was the question of how space and education could coexist and how connectivity and separation between the different university departments could be realized. Further challenges were the seasonal climatic variation with high temperatures, strong winds and heavy rainfalls as well as the large variation of the surrounding sea level. The proposed solution strives for a maximum integration of the new campus into the natural environment, an extensive application of passive design in order to reduce an conditioning use and to create as much outside shaded space as possible. The general layout of the site is driven by the idea of using the strong winds for natural ventilation of buildings and open circulation areas. The heavy rainfalls will be collected and stored in order to meet potable and grey water requirements. Energy conservation is achieved by using a redistribution of daylight and a maximization of the site conditions. The flexible spaces, integration, fluid design, open areas and transparency can be studied as a case study during the design phase of projects in other regions of the world.

Relevance to target issues by author

Quantum change and transferability

This project makes use of a passive design to fulfill the target of not using air conditioning. The passive approach allows occupants to learn sustainability concepts. The quality and flexibility of spaces designed under a fluid concept provides rich aesthetics to the building. Decisions for the master plan were informed by computer fluid dynamics (CFD) analysis, providing a better integration with Mekong Delta landscape and climate. A 21st century approach towards the site was considered with the idea of not imposing architecture but to let it merge with the local conditions. The flexible spaces, fluid design, openness, fluid design, and transparency can serve as a study case during the design phase of projects in other regions of the world.

Ethical standards and social equity

From the initial phase, the design of the master plan was informed by CFD analysis and constant dialogue with the local architect. During meetings with the client, the sustainability ideas were explained to educate the client towards the execution of a project related to the local conditions. Local materials, construction methods and participation of local workers are essential for the execution.

Eco-sensitive material and energy use

The main idea for this project was for the building to integrate as much as possible with the site and climate. The passive strategy consists of natural ventilation, solar shading and flexibility. Working on the concept of porosity, the facade has a double skin, the outer elements are lower for shading from the strong sun and the inner ones are Jalousie windows for cross ventilation.

Economic performance and compatibility

Economic strategies include a small land development, low planning costs, the use of local materials and construction methods, natural ventilation, a maximization of the site conditions and reuse of rain water. Energy consumption costs are reduced with the passive design strategy.

Contextual and aesthetic impact

The design began from the fluid direction of the site, following the idea of slipping into nature. A ring road is proposed, with the distribution of the main campus within it, as a strategy for protecting from the water of the site. Handling the river cooling effect as well as the wind was an important issue. The aesthetics of the project work on the concept of fluid direction and porosity, activating flows, and producing a scarcity of density of people, wind, and light at various scales. By using this idea as design technique, the project is liberated from a pre-modern style and modernist composition, and focuses on events and conditions generated by spaces. The campus provides occupants with many scattered alfresco spaces, as a response to the Vietnamese culture of outside activities.