

The Pearl Learning Center: A sustainable oasis in the United Arab Emirates

Amna Al Ameri, Eiman AL Shaikh, Mai Salah and Khawla Al Ali.
United Arab Emirates University
Corresponding author : 200610470@uaeu.ac.ae

Abstract

Theme of this project was about a women's cultural center, which aims to help women in solving their day-to-day problems, and to provide them with new skills or to improve their existing skills. The inspiration was the sea shell; a protective shelter for the pearl. In that context, the pearl inside the represents the women, that is so valuable, for that we have to protect her from the outside environment. (Reflect on the woman of the UAE)

The concept translated to have that enclosed private space, and the seashell shape gives the users of the building the impression of privacy and luxury. The main parts of the building are the central court and the envelope. There are two envelop systems used in the building, the Glass louvers as the outer skin which creates a well tempered climate. The main layer of glass acts as insulation against temperature extremes, wind, and sound.

The second system used was the green wall envelope. Due to the effect of vapor-transpiration of the green wall, energy consumption of a building is reduced by lowering the need for air conditioning. By providing the building with this green wall, it increases the green area in the surrounding environment, so helps in reducing the urban heat island affect.

Also, a green roof system was proposed the diff not only as thermal and noise insulation but also the idea to be used as accessible green roof.



Figure 1 : 3d view of the building shows the main courtyard and the two envelop system.

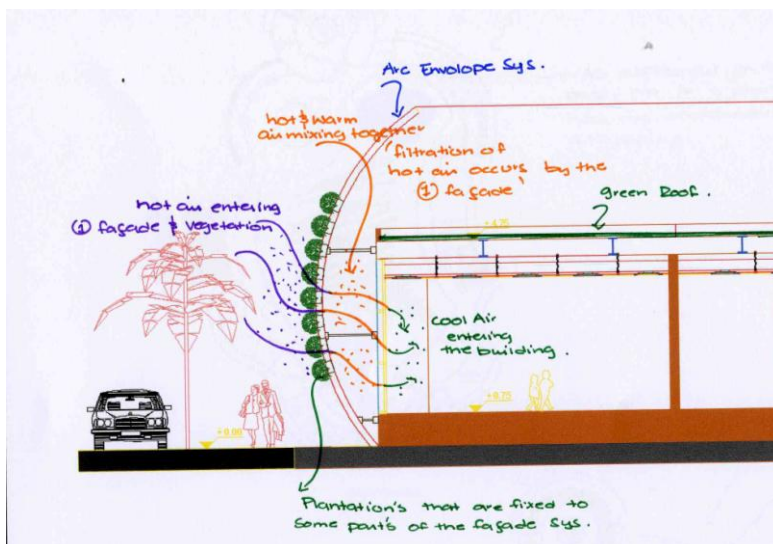


Figure 2 : diagram shows how the sys of green wall work.