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LANDFORMhouse, sustainable architecture in Riyadh by theOtherDada

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The latest residential project by the Lebanese architectural firm theOtherDada is located in Riyadh, Saudi Arabia. LANDFORMhouse stands out for its landscaping strategy and for the use of a formal language derived from the study of the region's past indigenous civilization, the Nabateans, proposing a green approach.

We know Adib Dada, founder of the Beirut-based Integrated Consultancy & Architecture firm, theOtherDada, for his social and environmental commitment with initiatives like the Beirut RiverLESS Urban Forest, putting their approach into practice to plant trees and bring more green and better environmental quality to the city.

Based on biomimetics, the work of tOD fosters a symbiotic relationship between nature and the built environment, exploring new ways to create regenerative buildings. You can see this design philosophy clearly in their latest work, called LANDFORMhouse in Riyadh, Arabia Saudita. Adib Dada based his concept for the building- or rather, the housing complex- on a formal language derived from the study of the Nabateans. This ancient indigenous civlization lived in the region already in 500 BC, drawing inspiration from the land monuments they left behind. They were masters at surviving in the desert climate of the Arabian Peninsula, adopting techniques like the use of local materials and underground cisterns to collect and store water.

For the construction of LANDFORMhouse, tOD uses these elements to express the landscape as architecture, creating a residential complex that seems to be excavated in the earth and rises from the ground. The residence recreates a complete ecosystem to introduce, protect and improve the proliferation of local wildlife by enhancing biodiversity in the dense desert city of Riyadh. This concept comes to life in a series of planted terraces that form the accessible green roof of the construction, which in turn has a serpentine form. This engenders an ascending progression of different landscapes that encompass three garden typologies (Janna, Bustan and Rawda), inspired by the traditional Islamic garden, to create diverse microclimates, thus extending the cooler season. Only greywater is used for irrigation of the gardens with native plants.

Many sustainable architectural solutions used traditionally are integrated into LANDFORMhouse. In addition to the mudbrick building material, these also include narrow laneways running through the

complex, offering shade and echoing the alleys of the traditional medina. And natural ventilation is achieved by mimicking the Malkaf, a traditional windcatcher. Here it is reinterpreted in a hybrid ventilation strategy, fitted with sensor-controlled mechanical louvres, facing into the prevailing north winds. Photovoltaic panels are integrated into the design of the project for onsite energy production.

The design by theOtherDada combines environmental, traditional and social conventions that respond to the contemporary living needs of Saudi Arabia. Which also includes privacy, something highly valued in a densely populated context. The residence is inward-looking, with narrow cracks in the exterior reminiscent of the cracks in the rock settlements of the local tribes, reducing exposure to the neighbours. The programmatic spaces open outwards using shaded courtyards and alleys, effectively separating public, private and service areas.

Christiane Bürklein

Project: theOtherDada
Sub Services: Architecture, Interior Design, Landscape Design by theOtherDada
MEP, Environmental studies and CFD analysis by SEEDS Intl.
Structural studies by Nabil Hennaoui
Location: Kingdom of Saudi Arabia
Status: Completed 2017
Recognition: BREEAM Certified, Very Good [Interim Design Phase]
Images: courtesy by theOtherDada

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