

Fayoum University
Faculty of Engineering
Department of Architecture



The role of Traditional Architecture Techniques in the formulation of Sustainable Architectural Form in the Natural Reserves in Egypt

A Thesis Submitted By

Eng. Esraa Ahmed Abdulazim Abdulalim

In Partial Fulfillment of the Requirements for degree of Master of Engineering Sciences –
Department of Architectural Engineering

Under the supervision of:

Prof.Dr. Ehab Mahmoud Okba

Professor of Architecture and Environmental Design
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ABSTRACT

This research is based on shedding light on the techniques of traditional architecture in natural reserves and their relationship to sustainable architectural formation. God Almighty has appointed human on earth to build it, granted him intelligence and strength, subjugated all creatures to him, and provided him with the means of living to fulfill this message.

And Allah says: "We have made that which is on the earth adornment for it that We may test them which of them is best in deed" [verse 7 of Surat Al-Kahf].

Therefore, it was necessary to put forward a theoretical framework in five chapters, the most important theories that explain the relationship between the characteristics of the natural and built environment in natural reserves in Egypt, where the focus was on building restrictions in natural reserves at the forefront of the topic. Then It's dealt with the role of architectural formation in achieving sustainability by knowing the principles of sustainable architectural formation through compatibility of requirements and criteria for achieving sustainability with the characteristics of sustainable architectural formation in natural reserves. Then, at the end of the theories, It's dealt with the formulation of sustainable architectural formation using traditional architecture techniques, with knowledge of traditional architecture in terms of concept, characteristics, techniques, and standards. In the fourth chapter, the analysis of international and Arab experiences in natural reserves and the reasons for choosing these experiences were dealt with. The experiments were analyzed and evaluated in the light of the proposed methodology, with deriving the criteria that must be met in order to reach the role of traditional architecture techniques in serving the marketable architectural formation of "sustainability". Thus, in the fifth chapter, the case study was applied and evaluated in the light of the proposed methodology, while extracting the criteria that must be met in order to reach the role of traditional architecture techniques in formulating sustainable architectural formation in nature reserves in Egypt.