

Design criteria for Adaptive reuse of heritage buildings to achieve The principle of sustainability (Al Ghouri Group Case Study)

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Abstract

The preservation of the architectural heritage is an integral part of the process of preserving the cultural identity. The preservation of the heritage buildings is an integrated process that must be applied in all its aspects. It is not logical to consider that the restoration alone is sufficient to preserve the heritage buildings, But adaptive reuse after restoration provides the protection of the heritage buildings whether in the use for which it was established or in a new use corresponds its interior design and area, as well as its location and its cultural character, without prejudice to its archaeological value and privacy. Adaptive reuse of heritage buildings with a deliberate manner, takes into consideration the design aspects of the internal spaces of the buildings is necessary to preserve it so that adjustments and architectural elements added do not affect the buildings in terms of construction or interior design, or cause damage to them as happened to many homes, palaces and "Khanqua" in the Islamic world.

Keywords: Adaptive reuse – Reuse- Rehabilitation - Heritage buildings - Sustainability

The Main point in the research lies in:

- Lack of clear design criteria for adaptive reuse of heritage buildings.
- Random reuse of heritage buildings in a way that does not fit with the location, area, and interior design, which harms them.
- Neglecting the principle of adaptive reuse and only the restoration and renovation of heritage buildings.

The research aims to:

- 1 - Develop the design criteria for the adaptive reuse of heritage buildings to ensure their sustainability
- 2 - Adaptive reuse of heritage buildings in a systematic scientific methods.

The research proposes:

- 1- Adaptive reuse of heritage buildings after restoration ensures the preservation and sustainability.
- 2 - Respecting the design criteria achieves the most benefit from the heritage buildings during Adaptive reuse

Research Methodology: Descriptive, Analytical

Research Outline:

To study the impact of the adaptive reuse process of heritage buildings on their preservation and sustainability.

1-Adaptive reuse:

The purpose of Adaptive reuse is to transform or change the function of heritage buildings that have lost their original function with a good construction condition to new uses suitable to the current needs and ensure the preservation of the building.

1-1 There are three possible ways:

- Deep interventions on the building in order to make it compatible with his new job and this harms the value of the heritage building.
- An unstable internal environment in order to avoid any interference on the building.
- Preserve the heritage values of the building with effective functionality, and that is the role of the interior designer

2. Criteria for the success of Adaptive reuse schemes:

2.1 Preserving the aesthetic and symbolic values of the heritage building.

2.2 Provide structural strength of the heritage building.

2.3 Selection of a new function and distribution of spaces.

2.4 Economic Feasibility.

Basic aspects of Adaptive reuse	Architectural side	-Preserve the heritage building and improve its general appearance. -Repair of structural structure and degraded parts.
	Physical side	-Designing the urban environment and coordinating the public site (roads, landscaping)
	Environmental side	-Improve infrastructure networks. -Reduction of pollution ratio.
	Social side	-Improving the standard of living of the population. -Raising the behavior and habits of the population and instilling cultural awareness and civilization
	Economic side	-Raising the economic level of the population through the development of their productive work and the creation of new jobs. -Achieving an income for the maintenance of building.

3-Design Method for the Adaptive reuse of Heritage Buildings:

- Leave the building unchanged when we use the building as Tourist place or in a use related to the oldest use.

-Make changes in the interior or exterior design of the building

4- Areas of Adaptive reuse of Heritage Buildings:

Heritage buildings are reused in many areas suitable for the nature of their interior design (residential, commercial, administrative, tourist and hotel) and the nature of the surrounding area to accommodate public activities such as exhibition halls, music halls, museums, hotel reception or chain of shops. Specialized in the artisanal production and may reuse the building to be a haven to host tourists who love the distinctive character of the heritage buildings as mentioned in some studies to reuse the (Agency Ghouri) in Cairo



The Al Ghouri Agency was equipped as a creative center with a modern theater and the expansive exhibition chairs (the open courtyard), which is surrounded by an eight-rib marble fountain, which can accommodate up to 300 spectators. The units were used as dressing rooms, souvenir shops and books. Technically, two high-tech sound and lighting systems are available for stage performances as shown in the pictures



Results:

- 1 - Adaptive reuse of old buildings and archaeological activities suitable to be one of the components of the reconstruction of the building and help to maintain the conservation and conservation.
2. The call to revive and preserve the cultural heritage has not become a kind of historical and cultural affiliation, but also a kind of investment and economic development.
3. The Adaptive reuse process of the heritage buildings will achieve multi-cultural, historical, social and economic objectives.

4. The proper Adaptive reuse of heritage buildings must be accompanied by a sound methodology and design criteria for internal spaces through the selection of new functions that integrate with the interior design of the building.
5. The alterations in the interior design of the heritage building should be in order to create a new function in a very limited manner as well as the external structure in order to maintain its originality.
6. In order for the Adaptive reuse process to be successful, the new job must meet the requirements of the present age without prejudice to the aesthetic and historical values of the heritage building and contribute to its preservation.
7. The design and coordination of sites and spaces in archaeological areas are an integral part of the recruitment processes and complementary to them.
- 8 - There are risks arising from the difficulty of reconciling with the principles of preservation contrary to utility, there are physical hazards related to the state of the heritage buildings and their architectural character and interior design.
- 9 - Adaptive reuse helps to create new opportunities for work in archaeological areas may not exist before.

Recommendations:

- 1 - reuse of heritage buildings for purposes of serving the community and provide direct benefit to him as this leads to the attention of the community Conservation and employment projects.
- 2 - Analysis of successful experiences in order to ensure the development of the culture of conservation and Adaptive reuse of heritage buildings and transfer of scientific and educational expertise for successive generations.
- 3 - Heritage buildings should be enriched and integrated into daily life by Adaptive reuse and use that conforms to the nature of its interior design.
- 4 - We should develop the concept of preservation of heritage buildings from the traditional method, which is limited to restoration and maintenance to the modern method known as (integrated preservation), which adds the proposal of a modern function that matches the historical value and interior design of the building and benefit the social, cultural and economic level and achieve integration in life Contemporary.
- 5 - Prevent the reuse of heritage buildings in activities that are not commensurate with them.

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