



HISTORIC BUILDINGS COMPARISONS OF PATHOLOGIES AND INTERVENTIONS: EXAMPLES OF REUSE

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In the recent years, many Gulf States have emerged because of their significant urban growth to contemporary architecture. In the same time, the growing number of conservation projects shows the raising need to enforce appreciation of the architectural heritage, to enhance and regenerate the historical memory of the counties. This paper offers a comparison between some recent conservative projects in Qatar conducted to some significant residential religious and commercial buildings, analyzing the pathologies that affected the structures, the reasons of deterioration before the restorative interventions, the comparison of methods and techniques that were adopted during the works and the proposals for reuse. Analyses of the data have permitted to classify the building pathologies and the conducted interventions and could be applied to other conservation projects in the future.

Keywords: Traditional materials, Restoration, Deterioration, Conservation, Architectural heritage.

1 INTRODUCTION

This paper presents an analysis of some conservation works completed in Qatar with the aim of describing and comparing them concerning their various deteriorations, the materials, and tools used for construction and the several proposals for re-use (Carbonara 2012, Feilden 2003, Muñoz Viñas 2004, Jokilehto 1999).

Our analysis of the restoration interventions was supported by site surveys, data collection and the literature review related to the Qatari heritage conservative approach. The data have described the state of deterioration of the structures before restoration, and then the cause of such deterioration, using the ICOMOS-ISCS glossary (ICOMOS 2008). The original materials used for construction were analysed and described with the aim of providing an overview of the Qatari heritage conservation in and enhancing the value of the local identity, and emphasizing the importance of preserving the past through a relationship built over the historical continuity (Salama and Wiedman 2013, Jaidah and Bourenane 2009, Mazzetto and Petruccioli 2017, Mazzetto 2006, Brandi 2005, Al-Kholafi 2006).

2 MANAGEMENT OF QATARI HERITAGE

In Qatar, the legislation that protects architectural heritage was defined only 1980 to preserve the architectural heritage that evidence of the local history and the past civilizations (Bianchi and Tonner 2013, Carter 2012).

In 2005 the government set up the two leading institutions the Qatar Museum Authority (QMA) and the Private Engineering Office (PEO) which are responsible for safeguarding the state's heritage. The task of both the institutions is to preserve the local heritage and manage buildings of historical value, both within Qatar and internationally, including architectural restoration and regeneration of urban sites, focusing on the integration of the old into the new construction projects.

Although the Qatari tradition in managing architectural heritage is not so long, there are some specific institutions tools and laws, which were established to manage the conservative interventions of historical buildings, promoting good practice examples of management in compliance with international norms.

Recently an IT platform, QNHER (the Qatar National Historic Environment Record, have been developed with the aim of managing and cataloging the collaborative and shared researches between local institutions.

3 ANALYSIS OF SOME ADAPTIVE RE-USE INTERVENTIONS READING

3.1 Souk Waqif

Thanks to the recent restrictions imposed by the Qatari institutions and regulations, some rehabilitative interventions have recently been launched to control the widespread demolition phenomenon and revitalize the abandoned urban fabric by reusing the areas as new entertainment places.

This began with the refurbishment intervention of Souq Waqif (2004-2008), built about 100 years ago and located in the historic center of Doha. The conservative and typological restoration project started in 2004 and was directed by the Private Engineering Office (PEO).

The restoration work, completed in 2008, has reduced the deterioration of the historical buildings, conserving all of the ancient structures constructed before 1950, and restoring the more original parts, following their architectural typology.

The traditional construction method for residential buildings was adequately maintained, using load-bearing walls done by using sun-dried bricks, coral stone, wooden beams and the gypsum mortar.

The more recent materials, such as corrugated metal sheet, were removed since they were interfering with the ancient typology.

The Souq Waqif adaptive reuse intervention constitutes of an urban regenerative project that affected a large part of the historic city center and is currently reused as a new entertainment place with many commercial areas, art exhibitions, theatre performances, and sporting events.

3.2 Al Wakrah Souq

The adaptive reuse project of Al Wakrah was completed in 2015, under the direction of the Private Engineering Office (PEO) and was financed by the Emir. The historical fabric of Al Wakrah fisherman village, located close to the ancient port, was regenerated after being abandoned for many years. The area was then transformed into the new Souq of Wakrah, through the reconstruction of many collapsed buildings, the adaptation of the properties, the removal of damaged elements and materials, and the management of new commercial units (Figure 1).

The restoration of Al Wakrah village and its reuse was a small action, with limited repercussions on the adjacent territory, which was not able to trigger physical-environmental rehabilitative results in the surrounding areas. In Al Wakrah currently are located new activities and functions, and still the real cultural, and social values are tangible and well preserved.



Figure 1. Al Wakrah Souq. Public spaces for the new entertainment activities. (Source: Author)

3.3 Al Dakhira Mosque

The neglected and abandoned Al Dakhira Mosque located in the north coast of Qatar was structurally restored in 2015 under the direction of the Private Engineering Office and is currently being used as new cultural and religious center.

Before the restoration works, the ancient structure was affected by the characteristic deterioration due to the wet saline environments, causing permanent problems of rising damp on the external walls. The plastered surfaces were almost detached due to the Saline efflorescence, and the structural stability of the building was damaged by the deteriorated foundations affected by high level of salinity percentage of the ground.

The external plasters were restored entirely; the wooden roofs were consolidated by using traditional materials.

With the aim of reusing the old mosque as a new religious center, the new aluminum doors were fitted, along with the systems upgrading.

3.4 The Heritage Houses Quarter at Msheireb

The residential Heritage Houses (2006-2015) conservation project, located in Msheireb Downtown Doha was completed in 2015 under the supervision of the Private Engineering Office PEO. The four historic residential buildings that date from the early 20th century (Figure 2), exemplified the local building tradition and were integrally preserved, recovering all the original construction materials and replacing only a few parts that were missing.

Today the Heritage Houses are reused as new museums of the Msheireb Quarter's history and included some exhibitions about the residential project and the history of slavery in the region. The national institution of Msheireb Museums, responsible for the safeguard of the Heritage Houses district has been established with the aim to protect and promote the value of the preserved buildings.



Figure 2. Mohammed bin Jassim House. (Source: Author)

4 RESULTS

The approach to restoration taken for each intervention was related to the government authorities in charge for the works. The completed projects are mainly divided into two main categories: the architectural and the urban. Most of the interventions had been conducted using traditional materials like wooden beams, blocks stone, and mud mortar for plasters.

The same construction methods were usually adopted in similar conditions, such as the mud mortars, the sun-dried bricks, the "danchal" wood beams used as lintels, and the wooden "marazim" gargoyles.

Because of the repetitive use of materials and tools of construction, the reasons of deterioration were usually analogous and mainly due to the systematic abandonment of buildings, leading to common collapses of the foundations.

All the interventions intended to maintain the existing materials as found, without alterations, but in some cases, because of the advanced level of deterioration, substantial structural interventions were carried out combining traditional and contemporary materials such as reinforced concrete, cement mortar, and concrete blocks. In the case of commercial and entertainment reuses, the restoration projects allowed for typological reproduction, requested by the new uses.

5 CONCLUSION

All restoration works in Qatar were conducted with the aim of preserving the existing architectural heritage, to transfer their value to the future generations.

Although many recent management tools exist, there is a lack of interaction between the various governmental institutions involved in the conservation of Qatari Heritage, to standardize the conservative methods throughout the country and promote the application of new approaches in the field of the conservation.

The use of natural materials should be imposed, avoiding contemporary products, which in some cases are responsible for the increasing deterioration of old materials.

This paper attempts to document the recent architectural heritage conservation projects in Qatar, with the aim of promoting a standardized methodology for conservation that should avoid

the frequent use of a case-by-case approach, integrating the individual interventions as parts of an organic vision concerning good conservation practices.

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