Assessment of Bedestan (St. Nicholas Church) on the first decade of conservation works

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Abstract: St. Nicholas Church (Bedestan) is one of the most significant monuments located exactly in the centre of the walled city of Nicosia, in the Selimiye Quarter. The significance of the heritage building lies on its temporal transformation. Bedestan initially built by Byzantines in the 5th century, and was later enlarged during the Lusignan, Venetian, Ottoman and British period. Between 2004 and 2009 had gone through conservation works by United Nations Development Programme Partnership for Future (UNDP-PFF) which is funded by European Union. In 2009 the project has won Europa Nostra Award between 140 projects. The project consisted of both architectural and structural strengthening interventions. The aim of the study is to assess current condition of the structure on the first decade of conservation works. The method had three objectives. Firstly, the literature was reviewed in order to understand the historical process of the building. Then, site survey was completed for further understanding of the applied intervention to the structure. Finally, the current condition of the structure was observed after ten years of completed restoration works. Deterioration on used materials as well as durability of strengthening works was assessed and observations were listed herein. Keywords: Restoration, adaptive reuse, cultural heritage, structural durability, masonry deterioration.

1. Introduction

Cyprus, being at the crossroads of many civilizations from the antiquities till today embodies diverse traces of these dominations. Historical research reveals that the first inhabitants of Cyprus were people who arrived from coastal regions of Anatolia and Syria through the Neolithic and Bronze ages. Later Hittites, Phoenicians, Assyrian, Egyptians, Persians, and Romans ruled the island. Towards the end of the 10th century the Byzantains gained power. In the following centuries Cyprus was ruled by Lusignans, Venetians, Ottomans and the British, respectively, who left in the island the most historical structures that still stands still today [1]. These diversities of civilizations brought together a multiethnic and multi religious character to the urban and suburban architectural identity of Cyprus. Greek and Turkish Cypriots became the most permanent residents of the island, dividing the islands’ community into two distinctive and significant ethnic identities.

The city of Nicosia has successfully preserved its rich cultural heritage, regardless of changes in its social, cultural, economic and political structure throughout its history. In Nicosia, despite the changing physical and social structure and also other key factors, especially after 1974 political interferences, traditional architecture in the historic city centre is well kept as much as possible without losing its original identity.
The Nicosia city walls built in the 15th century during the Venetian period and many immovable cultural assets within the city walls are among the most important cultural heritages of the entire island. However, after 1974, the division of the island and the inner part of the city were divided into two parts, North - South Nicosia, and problems started to be preserved regarding the protection of this cultural heritage. The residents of the city walls started to migrate to new settlements outside the city walls by building newer and larger houses. Settlement of immigrants in these abandoned houses brought with it many problems. The division of the city is the main cause of its ongoing problems. This situation causes the process of city planning and future foresights related to the city not to be implemented in a healthy manner. There are many attempts to revive Nicosia in both regions of the city. However, the division of the city limits development and creates various problems in order to develop urban plans and conservation strategies, while also neglecting social values.

In the early 2000s, important developments took place for the city of Nicosia. One of the most important of these is the conservation-restoration works carried out with the European Union funds that have brought a breath of fresh air to the region, and the other is the opening of the Lokmacı/Ledra border gate in 2007, which contributed economically, socially, culturally, politically and physically. Restoration works of monumental buildings such as Bedestan, Municipal Market, Grand Bath, and Armenian Monastery and the improvement works in the Arabahmet region created a catalyst effect within the walls and the region started to attract the attention of the locals again. Many domestic investors have started to open new businesses in the region. At the same time, as the effect of this change, an increase is observed in the number of Greek and foreign tourists crossing from Southern Cyprus to Northern Cyprus.

There has been a noticeable increase in renewal projects especially in recent years within the walls that change, evolve and transform depending on urban dynamics. As a result of the financial support provided by different institutions and organizations to domestic investors in order to support their restoration projects, such initiatives are increasing. Some traditional residences have been reused with functions such as cafes, restaurants and shops.

In 2009, the project was awarded the European Union Prize for Cultural Heritage/Europa Nostra Award in the research category amongst a selection of 140 projects from 24 countries [2].

The methodology consists three components. Firstly, the literature was reviewed in order to understand the historical process of the building. Then, the site survey was completed for further understanding of the applied intervention to the structure. Finally, the current condition of the structure was observed after ten years of completed restoration works. Deterioration on used materials as well as durability of strengthening works was assessed and observations were listed herein.

2. Historical framework of Bedestan/St. Nicholas Church

Being the capital city since the 10th century, Nicosia has been the central node where the majority of the historical monuments resides. Enlart [3], in the most comprehensive work dedicated to medieval architectural history of Cyprus, points out one of the very first references to St. Nicholas Church.

St. Nicholas Church has a long and a complex history. The construction of St. Nicholas dates back to 6th century Byzantium period. In later centuries it was expanded and some parts were rebuilt. During the Lusignan period (1192 – 1432) the building was operating as a non-cathedral church [4]. The church was built on top of the remainings of the basilica with added French Gothic architectural elements such as pointed arches, vaults and a dome. The vaults were added to insert further support for the building to withstand pressure and to add longevity by preventing its collapse [5]. Later on, with Venetians coming into power, several structural transformations were made and it was converted into a Greek Orthodox Cathedral, dedicated to Virgin Hodegedria [6].
Figure 1. Plan of St. Nicholas Church/Bedestan and St. Sophia Mosque [7].

St. Nicholas church exemplifies the major architectural and structural characteristics of Byzantium church design of the period, embodying an apse, basilica, domed roof and a cross shape plan. As many of the Byzantine churches, St. Nicholas personifies the eclectic approach embodying cross shape layout together with the architectural characteristics of medieval church such as high ceilings with naves [8].

In the Ottoman period (1571-1878), following an Ottoman tradition of converting existing structures (mostly churches) into a new use, the St. Nicholas Church was converted into a closed bazaar, called *Bedestan*. ‘Here merchants and people from all over the island gather, flocking through the city gates to sell and buy goods’ [9]. The conversion took place in the early years of the Ottoman conquest, and a fountain was built next to the Bedestan to supply water both for the St. Sophia Cathedral (converted into a mosque) and the market place [10]. In one of the earliest mentions of Bedestan, the Dutch traveler Cornelis van Bruyn, who arrived Cyprus in 1683 and stayed there for eight years, writes ‘Close by [St. Sophia] is another fine building, almost entire, with a vault resting on two columns. I think it was formerly a church: now it is a bazar or market’ [11]. We learn from the writings of the traveller Abbé Mariti who lived in Cyprus between 1760 and 1769 that it was ‘a market of all goods’, and it was ‘the business resort of the chief merchants of Nicosia, Turks, Greeks and Armenians’ [12].

From mid-18th century until late 19th century Bedestan was used as a wheat warehouse. According to Bağışkan [4] it was a flour market it 1873. It lost its function at the beginning of the 20th century [13]. Later, in the British period (particularly during early 1930s), it was used as a warehouse [4]. Bedestan was completely abandoned after the British built a nearby closed market (*Bandabuliya*) in 1932. Since 2003, using EU funds the UNDP/PFF has been undertaking the restoration of Bedestan with the aim of revitalization of the Selimiye quarter. The project was completed in two phases. The first phase (2004-2006) was focused on structural consolidation and anti-seismic improvements. The second phase (2007-
2009) was focused on conservation and re-use. The inauguration of Bedestan as a cultural centre took place on 9th November, 2009. The total cost of the restoration was 2 million Euros [14].

Figure 2. Bedestan (Authors, 2019)
Figure 3. Historical evolution based on a stratigraphic interpretation [15]

3. Restoration project and its interventions

The Bedestan (St. Nicholas Church) is one of the most important cultural heritage sites located within the walled city of Nicosia. Research, investigations and design works for the restoration of the Bedestan (St. Nicholas Church) had started in 2003 by UNDP-PFF that was a EU funded project under the framework of Nicosia Master Plan. The main objective of the conservation of the Bedestan (St. Nicholas Church) was to revitalisation of the Selimiye Quarter, which is the focal point of the Walled City of Nicosia [2].

The Bedestan is located in the center of the walled city and it is one of the most significant monuments of Nicosia. When the restoration works started, the heritage buildings was partly demolished and the restoration aimed to strengthen remaining structural parts. The Bedestan was closed to the public due to dangerous structural conditions before the project starts. Conservation works of the structure includes interventions on the roof, floor and windows. All interventions intended as being reversible [2].

The project was completed in two phases. First phase includes the structural works, which was performed between 2004 and 2006. And in the second phase the conservation works were completed between 2007-2009. The first phase of the project aimed to improve the Bedestan and involved survey and investigation of the structure. The heritage buildings include different historic layers and had different interventions. In order to understand the involved process of the building detailed analysis was completed. Tomography resistivity analysis was made and stratigraphic interpretation used in defining historical evolution of the structure [15].

The main aim of the restoration was to preserve all historic layers of the heritage building. In this respect, minimum intervention is made in order to preserve the authenticity of Bedestan. Interventions during the conservation works includes also consolidation of elevated structures. In British period, buttresses were constructed to support the elevated southern façade of the structure (Figure 4). In the conservation works, it was decided not to touch the buttresses, since that part of the building could be collapsed.
The building has 3 entrances built in different periods located side by side as Lusignan, Byzantine and Venetian which is a symbol of showing sympathy to different cultures (Figure 5). Each door reflects architectural characteristics of their period which all ornamentation preserved during restoration.

During restoration every characteristics and detail has been preserved. All interventions to the structure are compatible, legible and reversible. Arches on the south façade are covered with polyurethane which is a transparent material like glass but much lighter. A special hinges hold the windows and the roof which allows expansion due to settlements (Figure 6). Since the original roof was collapsed, a new roof added that comprises contemporary materials and techniques. A lightweight contemporary roof addition covers the main hall of the church. During restoration original roof of the building had been search through all literature but there was not any information regarding to the original condition of the roof. In this respect, it was
decided to add a contemporary roof with its form and material that can be easily perceived that it is new and can be removed easily.

Elevated floor was designed to cover the floor of the monument. Wooden elevated floor was selected as the system since it is reversible. Some parts of the floor left opened in order to show original floor to the visitors.

Conservation works also ensured the accessibility to the monument for people with reduced mobility. However, interventions to ensure accessibility to the monument do not harm the originality of the heritage building. Ramps have been added with contemporary material and can be removed easily (Figure 7).

Between 2010 and 2012, the cultural center is supported on the cultural heritage management of Bedestan. A workshop designed to train specialized personnel in the field of maintenance, restoration and conservation of historical buildings was conducted for a team of architecture and engineering students, as well as for the local technical craftsmen assisting the planners and sub-contractors in the drawing of the project and the restoration phase [2].
4. Assessment of Bedestan on the first decade of conservation works

4.1 New use and its activities
The Bedestan represents a cultural role for the whole city of Nicosia by functioning as a cultural centre. Different activities including concerts, exhibition, seminars, etc. were organized in the venue since 2012. Sufi Dance performances are also performed twice a day in Bedestan.

4.2 Structural durability of the heritage building
Significant structural interventions were made during the conservation works. Due to the excessive soil shrinkage, tensile cracks were initially developed. The conservation project, targeted not only the repair of the damage but, a comprehensive strengthening strategy. First, micro piles were utilised for further soil related deterioration. Then, beam additions on masonry walls provided an improved diaphragm behaviour which increased the lateral resistance of overall structure.

Furthermore, advanced structural intervention techniques were also utilised. Post-tensioning the tilted masonry column and pendulum system for the tower structure [15]. The applied intervention techniques successfully managed the targeted seismic performance of the building. Furthermore, crack monitors were placed on existing crack patterns (Fig. 8) during the conservation works and no such progress was monitored since then.

Rainwater drainage systems were repaired during the conservation works and drainage systems were provided for alteration of rainwater. However, due to the lack of continues maintenance of masonry walls, vegetation re-occurred on several parts (Fig. 8).

![Figure 8. Photos of the Bedestan (Current condition) (Authors, 2019)](image)

4.3 Proposals for future use and maintenance
The project contributed to create new jobs during the restoration works, and local expertise in the field of cultural heritage preservation. At the same time, through its re-establishment as a new cultural pole in the heart of the revitalized walled city of Nicosia, it also brought together an awareness towards the preservation of cultural heritage. As of November 2012 the EVKAF administration put in place a ticket system of an entrance fee in as a financial sustainability. The financially improved management can now take position on developing bodies for maintenance purpose.
Although the current state of Bedestan is in a favourable condition regarding to its social cultural and economic inputs, since it has been 10 years post conversation, the maintenance of the building should be scheduled. The ownership of Bedestan belongs to Evkaf, but the organisation does not embody experts in conservation/maintenance works. This makes Bedestan vulnerable against deterioration due to external/internal conditions. It would be beneficial to form a body which will ensure the continues maintenance of the building.

Vegetation on some locations were monitored on building. It is strongly suggested to use anti-vegetation coatings on sandstone to avoid any further damage to the building.

5. Conclusion

Compatibility with the heritage building is one of the most important criteria of the conservation principles. The proposed addition and the historic structure should be compatible in terms of scale and material selection. Generally, additions are successful in terms of conservation principles. All additions on the building are compatible with the heritage building. New additions are differentiated from the old and is distinguishable from the existing building. New additions are not only harmoniously integrated with the context, but it also respects the relation of the building with the surrounding in terms of architectural characteristics. Historic buildings could have different historic layers. Aim of the conservation does not mean to remove all historic layers and preserve one of them. Restoration work respects the building’s history and cultural significance. All additions are designed with steel and wood, which is a demountable and removable structure.

Apart from above mentioned physical interventions made to the building, the new proposed function of the building is found to be appropriate. The socio-cultural and economic sustainability is ensured. The success of this conservation acted as a catalyzer for historic buildings around the close surrounding neighborhood.

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