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Documentation of Mardin Kadife Ertem Mansion's architectural characteristics

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Abstract

Kadife Ertem Mansion is a traditional masonry building, which is located within Mardin's urban archaeological site and of which is important to maintain its sustainability due to the fact that it reflects the characteristics of the traditional buildings of the geographic context it is located in, in terms of the architectural characteristics. However, today it is seen that various deteriorations occurred on the building and the structure encountered the risk of being destroyed. Within this context, the aim of the study is to document the architectural characteristics and material problems of the building, within the context of maintaining the sustainability of Mardin Kadife Ertem Mansion, which is located within Mardin's urban archaeological site and of which its conservation has great importance for the regions. Within the scope of the study, the following stages were followed: literature review, investigation of the building on-site, and obtaining the plan and façade analytic relievos of the building. It was determined in the findings that the most frequent material deterioration seen on the building is the use of cement arising from the faulty repairs. This result demonstrates that human-originated material deteriorations must be prevented immediately on the monumental structure.

Introduction

Conservation and rehabilitation of the historical centres of the country, renewal of the old buildings, and interaction within the urban social areas have achieved a significant growth in recent years. The acts of intervention, which have been made, have considered the perceptual wear, regaining the identity, building and the meaning. One of the basic antecedents is removing the causes of deterioration before the restoration [1]. When the stone structure located within the urban archaeological site of Mardin is considered, it is seen that deteriorations have occurred on the traditional housings with the impact of environment and various conditions. If a constructive intervention process is not carried on the current structures, then the structures display deteriorations at advanced levels, which shall continue to increase. Therefore, documentation and conservation of the structures of the city in terms of architecture gain importance. It is seen that various material problems continue increasingly on Mardin Kadife Ertem Mansion, which is located in Mardin's urban archaeological site and having an important cultural heritage value in terms of reflecting the traditional characteristics of Mardin houses [2]. Within this context, the aim of the study is to document the architectural characteristics of Mardin Kadife Ertem Mansion, which is a traditional masonry house.

Material and Method

Within the scope of the study, literature review, determination of the structure on-site, observational determination of the current material deteriorations and documentation via photographs were adopted as method. Architectural design and deterioration of a cultural heritage has been frequently performed using photogrammetry and point clouds in the last decade [3-14].

Results

The historical house, which is located in Artuklu County, Şar Neighbourhood of Mardin, is consisted of basement, ground and the first floor. Although the building has maintained its original state, partial interventions have also been made. Façade of the building maintains its original status. Iwans, original abat-jour, original arches, and original wooden doors are present in the building. The building is consisted of basement, ground and the first floor. The building has been built in the **'Type of Plan with Inner Court'**. Access to the ground floor is provided through the wooden door on south frontage, and access to the first floor is provided from the west frontage and courtyard. On the first floor of the building, there are attached units. The building maintains its original status. The prominent architectural order of the building is the building type having arches and windows. Ceiling of the units have been built as groined vault. The basement is consisted of 4 units. Units are used as iwan, courtyard, room and bathroom (Fig. 2). Ground floor is consisted of 6 units. Units are used as courtyard, room, and WC. Wet areas have been added into some units on this floor, due to the need (Fig. 3). The first floor is consisted of 9 units. Units are used as terrace, room, WC, hall and kitchen. Some of these units are within the attached building, which have been built later, and the others are within the original building (Fig. 4).

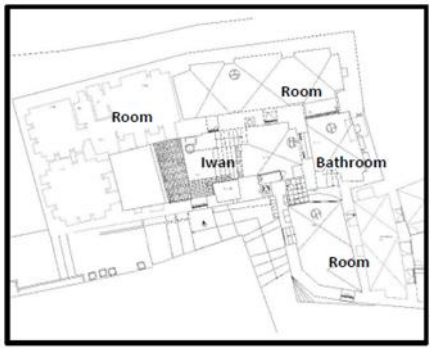

Figure 2. Plan of the basement floor

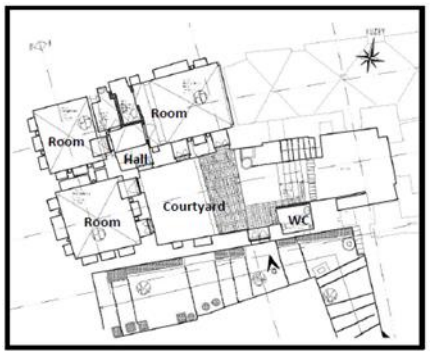

Figure 3. Plan of ground floor

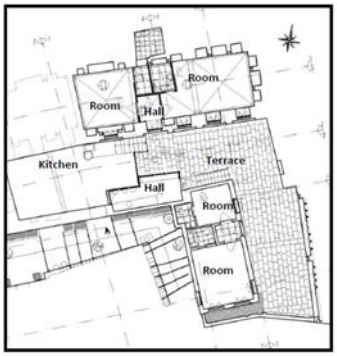

Figure 4. Plan of the first floor

The south façade of the building maintains its original status. One original wooden door, which leads to the roof of the building, is present on the south facade of the building. Jerry-built painted attachment, which was built later, is seen on the right side of the facade. Iron railings are present on the roof of the jerry-built attachment. Blackening is present on some parts of the façade. Illuminations and window boxes are present on the right and left side of the entrance door (Fig. 5).

Figure 5. South frontage

One original wooden door, which leads to the roof of the building, is present on the west facade of the building. The facade wall is consisted of face and rubble stone. Iron railings are present on the roof of the jerry-built attachment. Blackening is present on some parts of the façade. Illuminations and window boxes are present on the right and left side of the entrance door (Fig. 6).

It is the north façade of the building. The exterior façade maintains its original status. A metal ventilation window of Room Nr. ZK07, a metal door, which provides entrance on the ground floor and a snow window, which is closed with a metal cover, are present on the right wing of the façade. Parapet wall is present on the left wing of the building. On this façade, blackening, wear, and jerry-built attachments are present.

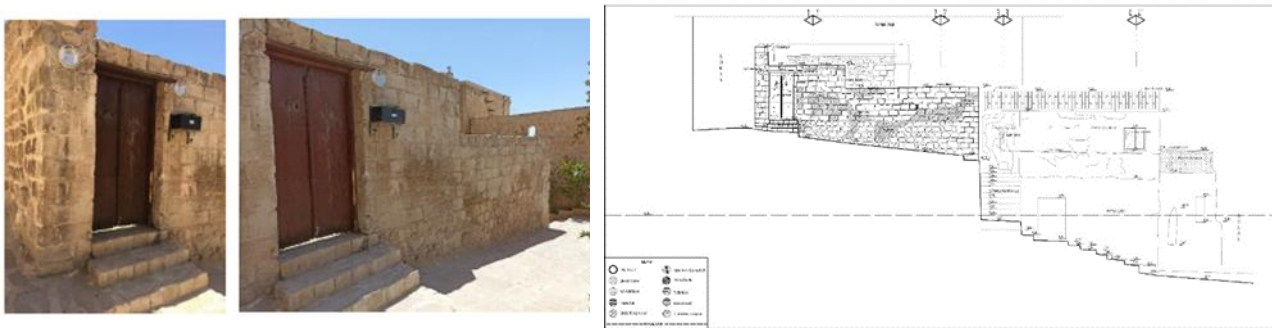

Figure 6. West frontage

Conclusion

Within the scope of the study, the architectural characteristics of Mardin Kadife Ertem Mansion, which is located within Mardin's urban archaeological site and of which its conservation constitutes great importance for the region, were documented within the context of maintaining its sustainability. As a result of the studies conducted within the scope of the study, it is concluded that the building must be subjected to a general maintenance and repair process as soon as possible. Cleaning of the plant formations, which have been / are being developed on the construction elements, must be carried out primarily. Interventions for those in herbaceous and woody nature among these plant formations must be carried out using mechanical methods (herbicides).

References

1. Ministerio de Instrucción Pública(1972). Carta del Restauro, circular N° 117. Ministerio de Instrucción Pública.
2. Karataş, L (2016). A Research on the Use of Material and Problems on the Praying Structures Within the Urban Archaeological Site of Mardin. Master's Thesis, Uludağ University, Institute of Science, Bursa, 340p (in Turkish).
3. Karataş, L., Alptekin, A., Kanun, E., & Yakar, M. (2022). Tarihi kârgir yapılarda taş malzeme bozulmalarının İHA fotogrametrisi kullanarak tespiti ve belgelenmesi: Mersin Kanlıdivane ören yeri vaka çalışması. İçel Dergisi, 2(2), 41-49.
4. Alptekin, A., & Yakar, M. (2021). 3D model of Üçayak Ruins obtained from point clouds. Mersin Photogrammetry Journal, 3(2), 37-40.
5. Kanun, E., Alptekin, A., & Yakar, M. (2021). Cultural heritage modelling using UAV photogrammetric methods: a case study of Kanlıdivane archeological site. Advanced UAV, 1(1), 24-33.
6. Doğan, Y., & Yakar, M. (2018). GIS and three-dimensional modeling for cultural heritages. *International Journal of Engineering and Geosciences*, *3*(2), 50-55.
7. Mirdan, O., & Yakar, M. (2017). Tarihi eserlerin İnsansız Hava Aracı ile modellenmesinde karşılaşılan sorunlar. *Geomatik*, *2*(3), 118-125.
8. Alptekin, A., Çelik, M. Ö., & Yakar, M. (2019). Anıtmezarın yersel lazer tarayıcı kullanarak 3B modellenmesi. *Türkiye Lidar Dergisi*, *1*(1), 1-4.
9. Alptekin, A., Fidan, Ş., Karabacak, A., Çelik, M. Ö., & Yakar, M. (2019). Üçayak Örenyeri'nin yersel lazer tarayıcı kullanılarak modellenmesi. *Türkiye Lidar Dergisi*, *1*(1), 16-20.
10. Alyilmaz, C., Yakar, M., & Yilmaz, H. M. (2010). Drawing of petroglyphs in Mongolia by close range photogrammetry. *Scientific Research and Essays*, *5*(11), 1216-1222.
11. Yakar, M., & Doğan, Y. (2017). Silifke Aşağı Dünya Obruğunun İHA Kullanılarak Üç Boyutlu Modellenmesi. *Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi*, *17*(4), 94-101.
12. Şasi, A., & Yakar, M. (2017). Photogrammetric modelling of sakahane masjid using an unmanned aerial vehicle. *Turkish Journal of Engineering*, *1*(2), 82-87.
13. Kanun, E., Alptekin, A., & Yakar, M. (2021). Documentation of cultural heritage by photogrammetric methods: a case study of Aba's Monumental Tomb. *Intercontinental Geoinformation Days*, *3*, 168-171.
14. Yilmaz, H. M., Karabork, H., Yakar, M. (2000). Yersel Fotogrametrinin Kullanım Alanları, Niğde Universitesi Mühendislik Bilimleri Dergisi, 4(1), 18-28