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Preservation of Archeological Sites in Armenia

Abstract

The problems of preservation of complexes and groups of monuments discovered by archeological excavations are always relevant not only in Armenia but all over the world. The issues of restoration of these complexes and preservation of their historical environment are discussed in the article as a result of practical measures and prophylactic implementation. It is worth to mention that the fortification process was considered as a continuation of the scientific research of the monument.

The presented materials and proposals contain novelty and can be useful in the processes of preservation of the archeological excavated monuments and historical-architectural heritage of the Republic of Armenia and Artsakh (Nagorno Karabakh).

The article proposes the strategic directions of conservation of the complexes in question, the methods of restoration, which were developed in accordance with the theory of monument preservation and the principles established by the restoration charts. Concern is expressed that the ancient site of Tigranakert in Artsakh has come under the control of Azerbaijan after the Nagorno-Karabakh war and is considered endangered from the point of view of protection.

Keywords: Republic of Armenia, archeological sites, architectural heritage, preservation, Nagorno-Karabakh

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Охрана археологических городищ в Армении

Аннотация

Проблемы охраны памятников и их комплексов, обнаруженных археологическими раскопками, постоянно актуальны не только в Армении, но и во всем мире. Вопросы восстановления этих комплексов и сохранения их исторической среды в статье обсуждаются в контексте практических и профилактических мероприятий. Отмечена важность того обстоятельства, что процесс консервации рассматривается как продолжение научного исследования памятника. Представленные материалы и предложения содержат новизну и могут быть полезны в процессах сохранения археологического и историко-архитектурного наследия Республики Армения и Арцаха (Нагорный Карабах). В статье представлены стратегические направления и методы консервации объектов, которые были сформированы в соответствии с принципами, установленными теорией сохранения памятников и по конвенциям восстановления.

Выражена обеспокоенность в связи с тем, что городище Тигранакерта после войны 27-ого сентября 2020-ого года в Нагорном Карабахе оказалось в подчинении Азербайджана и, с точки зрения сохранения, находится под угрозой.

Ключевые слова: Республика Армения, археологические городища, архитектурное наследие, консервация, Нагорный Карабах

Introduction. The history of the start and formation of the ideas and principles concerning preservation and restoration of the Armenian historic — architectural monuments and complexes began at the end of the 19th and at the beginning of the 20th centuries. They have been conducted in Armenia along with the excavations and investigations in the town of Ani and in the medieval Armenian complexes of Zvartnots (since 1903). Originally, they dealt with the repair of some separate buildings and architectural decoration, reinforcement and partly reconstruction. The architect — reconstructor P.E. Knyagnitski conducted preservation in Ani using methods of anastylosis and partly reconstruction. Broken off the line-concrete, coating stones and architectural elements in the lower rows bearing a decorative arcade on a pair of two semi columns in the Saviour Church were put in their places there. This was the first scientific attempt in the history of preservation and reconstruction of Armenian monuments [Restoration of Architectural Monuments, 2003, p. 51].

The process of archaeologically excavated monuments and restoration of settlements and preservation of their historical environment was particularly activated after the World War II. It was then that excavations at Argishtikhinily, Armavir, Erebuni, Teishebaini, Artashat, Garni, Dvin and other sites took place, due to which it became possible to implement measures sustaining preservation of historic — architectural monuments and their environment. The reinforcement of this kind of monuments is aimed at the prolonging the life span of the monuments in the same condition as they are now. The Venice Charter allows placing the dismembered parts and elements of the monument in their original places, i.e. to use the method of anastylosis. The Venice Charter verifies the main principles of archaeological reconstruction first of all stressing the importance of its reinforcement, the main requirement of which is to stop reconstruction where supposition begins. The diametral remains of the walls as they give information about the plan composition of the monument should be covered with some protective layer (concrete, concrete blocks, tiles of waterproof modern substance) to protect them from the atmospheric influence. Before placing that layer, engineering measures should be implemented to drain the melted snow and rain water from the territory of the monument. Positive examples of reinforcement of already excavated archaeological monuments in Armenia are the ruins of Zvartnots (with a purpose of establishing a museum there), the ancient settlement of Shengavit, the palace of Garni and the ruins of dwelling houses in Teishebaini.

In order to preserve the ancient terma, in the fortress of Garni, it was first reinforced with the coating and now it is taken into the structure (fig.1, 2).

Fg. 1. Ancient terma, in the fortress of Garni. Photo of the author

Fg. 2. The general view of the ancient palace of Garni after reinforcement. Photo of the author

It became possible to save and complete the main plan of the Bronze age settlement of Shengavit by reinforcing the upper parts of the walls. Today it presents round and square planned buildings joint together and uneven narrow streets.

In the Urartian settlement of Erebuni large scale work was done to improve the territory of the citadel especially by constructing roads for pedestrians and transport. The roads were covered with the cobblestones, trees and greenery were planted on the slopes of the heel, a drainage system was built and the territory wars electrified. Large scale reinforcement was implemented in the palatial complexes within the citadel, though along with positive solutions there were some negative ones. To complete the missing parts, walls were newly built in many places.

Along with the reinforcement reconstructive work was also done which, in case of archaeological ruins, is not allowed (there are exceptions). As a rule only reinforcement is advised. Not only was reinforcement implemented but also some architectural forms were reconstructed which were stipulated by the necessity to preserve original and peculiar forms and compositions. With the intention to preserve the original view reconstruction was implemented with its original building material and original constructive measures. In this way the portico, part of Haldi temple, peristyle courtyard, the forms of the small hall and some parts of the outer walls were reconstructed. Some fragments of frescos found during the excavations enabled us to restore its original composition, especially that those frescos were similar to those of Haldi temple and the palatial frescos of the small hall [Hovhannisyan, 1978, p. 86].

The remains of the palatial complex of the citadel of the Urartian town of Teishebaini was impossible to preserve in those days as it was built of mud bricks, so in order to preserve it the whole surface was covered with a layer of soil which was an irreparable measure. Today there are examples (Marmashen) where by injecting special mortar the architectural remains of mud brick can be reinforced and so preserved [Sargsyan, 2005, p. 39].

In medieval Armenian examples, early medieval constructional and constructive solutions are recreated in connection with creative restructuring and modern requirements [Tamanyan, 1988, p. 4]:

The international experience of preservation of monuments emphasizes the development of the museums as well [Vedenin, 2009, p. 179].

In Armenia such museums were established in Shengavit settlement, Metsamor, Arin Berd — Erebuni, Karmir Blur — Teishebaini, Dvin. Drawings, models, displayed material complete the whole picture of the archaeological territory. The summed up impression of some partly reconstructed monuments reveals the archaeological territory as a holistic body of the historic- architectural form and supports its further reconstruction as well [Hovhannisyan, 1978, p. 86].

Our participation in excavations of Tigranakert in Artsakh enables us to conduct preventive preservation measures along with field investigation and to form a methodology to sustain them and to find new utilization for archaeological-architectural heritage as well. We suggest that this experience be used in case of other Armenian archaeological sites (Shengavit, Erebuni, Teishebaini, Artashat, Dvin).

Materials and methods. The settlement of Tigranakert in Artsakh was founded and named after Tigran the Great. The town is located in the Askeran region of Nagorno-Karabakh Republic (Artsakh), to the south of the lower current of the Khachenaget River on one of the comparatively low heights of the slopes of Vankasar Mountain and in the depression nearby the slope in the vicinity of the Royal Springs. The existence of water springs played a crucial role for the selection of this particular location. Due to this resource the issue of water supply of the city was solved. The place of the settlement was defined and archaeological excavations have already been held for 17 years [4] [Petrosyan, Kirakosyan and other, 2011, 228].

The territory of Tigranakert in Artsakh is about 70 hectares. The main construction of the town became visible during excavations: there is a Fortified area with its citadel (1), a Early Christian place (2), Hellenistic Area (3), Hellenistic Area I (9), Early Christian Cemetery (4), Hellenistic Necropolis (5), Cave winepress room (6), Cave Canal (7), Water pull (8). The total excavated area up to 5.0 hectares [Petrosyan, Kirakosyan and other, 2012, p. 223, 224] (fig.3).

[4] The traces of the town were found and archaeological excavations have been held by the expedition of the Institute of Archaeology and Ethnography of the National Academy of Sciences of Armenia. The expedition is headed by Doctor of Historical Sciences H.Petrosyan.

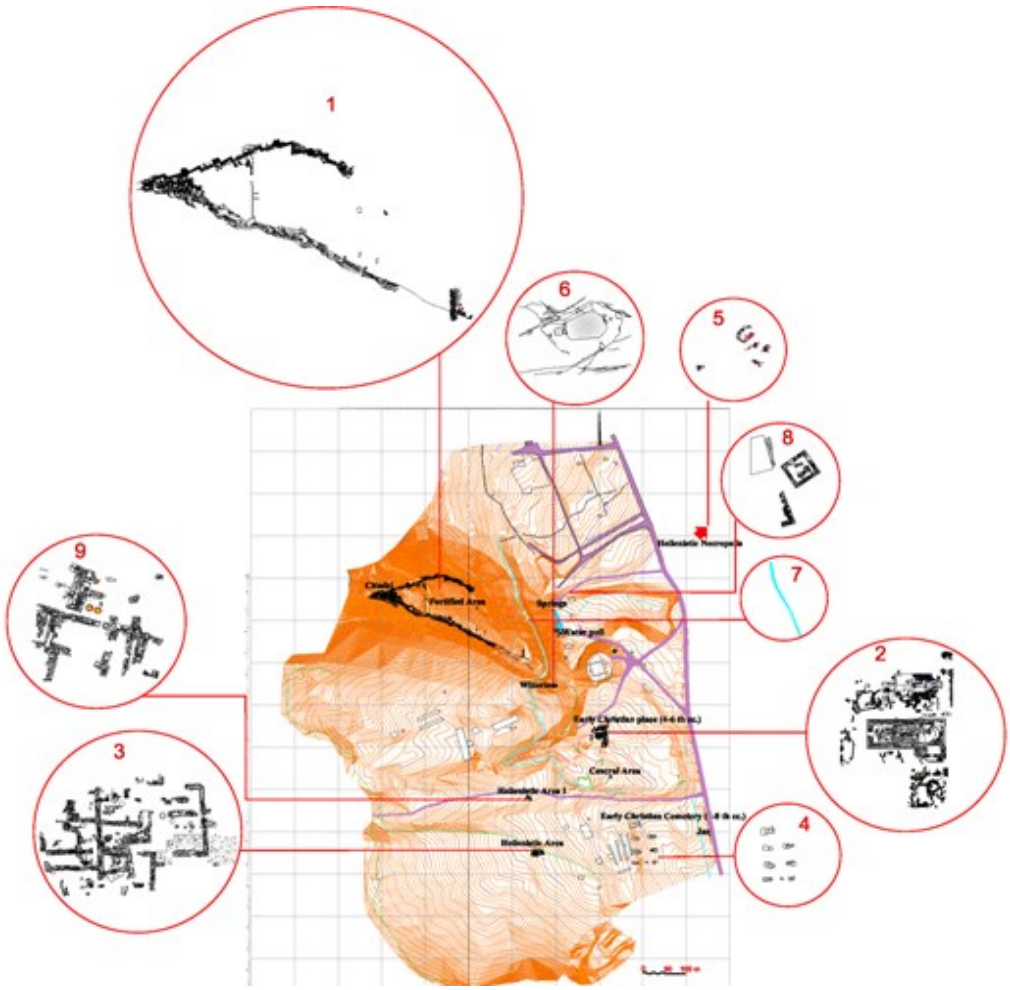


Fig. 3. The general plan of Tigranakert after excavations in 2020. Author's drawing

It should be noted that the issue of preservation of the Tigranakert complex in Artsakh is very important, as it came under the subordination of Azerbaijan after the Karabakh war.

The condition of early Christian monuments especially churches and the grave on the territory of Tigranakert of Artsakh is even worse. Today the Great Church is in the pit of about 800 m^2 and 4,0 m deep which in its turn has become a basin for surface waters (especially rain). In fact the building is in an artificial basin where not only atmospheric but also subsoil waters are accumulated. High humidity of the region has brought about salt accumulation the traces of which are noticed on the stylobates of the church, walls (on the inner surface of the southern wall) and on the lime-based mortar. The subsoil waters raised salt compounds which have crystallized on the surface threatening to

eat away the stones. Outer and inner drainage work greatly contributes to the preservation of the monument. The necessary condition to preserve archaeological sites is to obtain all the possible information and fix them.

Approaches and recommendations emphasized at conventions on Protection of European Architectural Heritage and on Preservation of Archaeological Heritage are of great importance for solving many problems concerning preservation of the monuments and historic-architectural environment in the Republic of Armenia and particularly of Nagorno-Kharabakh (Artsakh). It has been stated that the preservation of our heritage without participation of public is impossible and educational measures should be taken to form and develop opinion about values of heritage. The surrounding and the inside of these monuments and complexes should be well organized, investigations should be encouraged with the object to reveal all those factors which cause deterioration and destruction of the historical environment [Dayan 2016, p. 15].

Preservation zones of the Artsakh Tigranakert have been established [Kirakosyan, 2019].

The practice of reconstruction is as varied as the monuments themselves. The choice of their methods depends on a number of factors: the technical condition of the monument the cause and form of destruction, the previous reconstruction, the condition of landscape, the organisation of reconstruction and so on.

The architectural reconstruction is a sort of creative work. The choice of methods should correspond to the norma based on thorough investigation. Final conclusion should not be given by one person's opinion but by wider range of professionals. It should be confirmed by state authorities responsible for preservation of monuments based on the opinion of Scientific-methodological Council. Contemporary restoration methods are archaeological which give wider opportunities to preserve both monuments and their environment. Venice Charter extends the principles of reconstruction to a) reinforcement, b) partial or fragmental reconstruction, c) total reconstruction. The implementation of one of them has one objective-to ensure the preservation and long liferspan of the monument. These are which make the differencial elements of the composition holistie. In future during reinforcement work it is suggested that the surface of walls be smoothed covering them with waterproof mortar. It is also important that at the end of excavation season ramps should be made to drain the rainwater and preserve the monument.

For reinforcement of mudbrick in sites we suggest preservative technologies and temporal reinforcing measures [Petrosyan, Kirakosyan, 2016, p. 53]. First of all the ability for preservation and implementation should be considered in advance of excavations. Preventive approaches are especially relevant in archaeological context to reinforce the earthen architecture. This approach has been used since 1980 by specialist who first undertook a thorough investigation and analyzes of the surrounding of the site and the features of its destruction. For those parts which are still being excavated traditional methods of coating are tested and found applicable. The excavations over and reinforced, monuments and sites should be covered with protective roofs or shelters. Preventive preservation on measures (protective coating, drainage, partial reconstruction and so on) which enable to stop destructive processes and sustain the remains is also applicable (fig. 4). The approach which considers temporal character of excavations, preliminary preservation and implementation reflects the goal which intends to better organise work at sites in order to manage the heritage intact from the holistic point of view.

An archaeological museum was opened on the territory of Tigranakert settlement with the object to stimulate investigations and popularize the site [Petrosyan, Kirakosyan, 2016, p. 131]. The suggestion to improve the territory of the museum was presented and partly implemented. Paths leading to the museum were made. In the vicinity of the Royal Springs, without damaging the historic — architectural landscape, a large paved square was built in the form of an amphitheatre where cultural and public events are held. In order to more freely and clearly orientate within the territory of Tigranakert of Artsakh pointers with notices as well as tablets introducing the history of the monuments are placed.

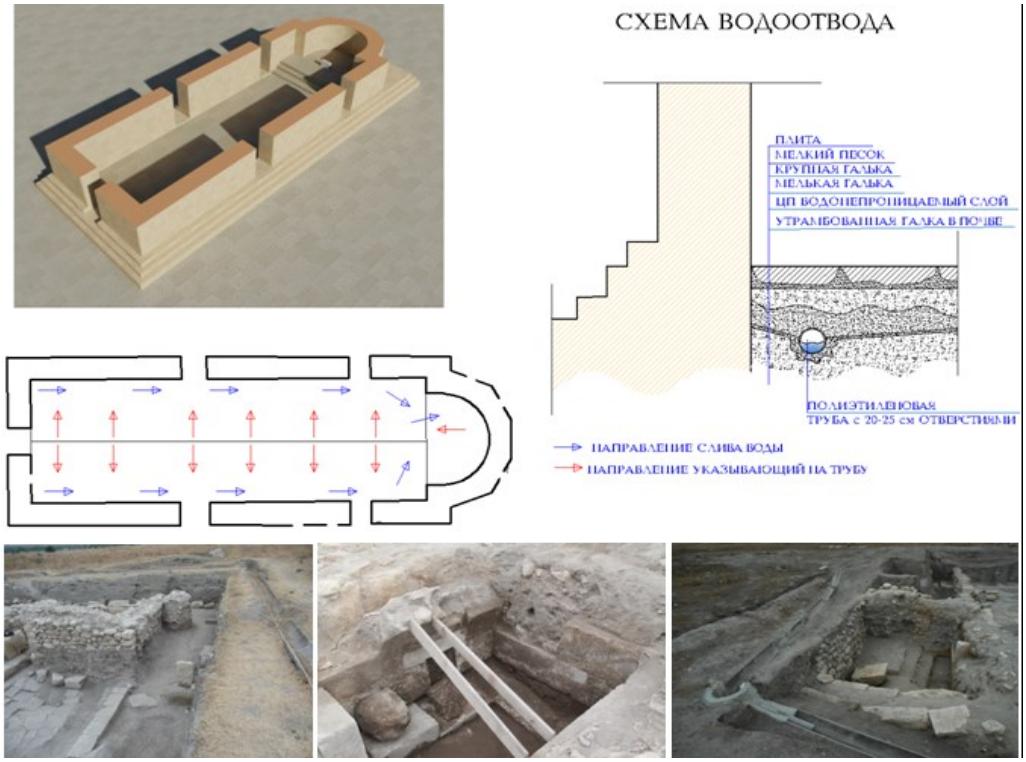
Results. The analysis of the architecture of Tigranakert is to:

– define the environment and landscape preservation zones separating the territory of the town as a historic-architectural preserve;

– conduct complex maintenance to preserve the environment and monuments, improve the territory and make it suitable for general and scientific tourism, build a museum provide drainage and temporary protective system;

– present proposals for the best preserved monuments such as one nave Great Church Tigranakert Church of Vankasar an early Christian graveyard for reinforcement, partial reconstruction, rebuilding and re-erection of the stelas as well as give a virtual picture of Tigranakert of Artsakh [Kirakosyan, 2015, pp. 605-606];

– verify that the processes of public availability of this historic-architectural territory being diverse are regarded as the final goal from the very beginning of investigations. in case the monument proves to possess high artistic values its preservation and implementation processes will be conducted smoothly as the role of the development of the environment heritage is becoming more and more important.



Fg. 4. The inner and outer drainage system of the basilic church of Tigranakert. Photo of the author

Conclusion. To investigate the environment and architectural complexes of Tigranakert of Artsakh a number of strategic measures are suggested. These suggestions can be beneficial in the Armenian context (Erebuni, Karmir Blur, Shengavit, Aratashat, Dvin, Metsamor) as well.

1. The benefit of interdisciplinary cooperation before excavations, reinforcement and implementation: cooperative work of archaeologists, restorers, archaeologist-architects, workers is beneficial to define as early as possible the long-run utilization of the archaeological site taking into consideration interests of the public and all participants. This kind of cooperation may enable to reveal the balance which is necessary while excavations and reinforcement are being carried out at the same time so as not to damage, or at least use methods suitable for the protection of the constructions.

2. Correspondence of the principles of preventive reinforcement and methods: the investigation of deteriorative factors and thorough examination of the environment enables to form effective and least harmful technologies and methods to save the original building material. This is the preferable approach of all international Charters and the case of least interference in the preservation of the heritage.

3. The importance of forming respectful utilization of the monument: the capability to preserve and utilize the site should be considered before any excavation is undertaken. For already excavated remains besides protective shelters which are already covering some parts other preventive technologies should be used (protective layers, outer and inner drainage systems, partial reconstruction, temporal protective measures) which will enable to stop all destructive processes and preserve the remains.

The implementation of methods and complex work introduced for preservation of the monuments and their environment of Tigranakert of Artsakh are to preserve the landscape intact, to present them to the public at their best, to popularize them and to reanimate this historic-architectural environment. This approach is also acceptable for other historical monuments of the Republic of Armenia.

Concern is expressed that the ancient site of Tigranakert in Artsakh has come under the control of Azerbaijan after the Nagorno-Karabakh war and is considered endangered from the point of view of protection.

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