

# Evolution of Public Open Spaces in Historical Environments of Yerevan City

Zaruhi Mamyan<sup>1,\*</sup>, Artyom Aloyan<sup>1</sup>, and Tatevik Kartashyan<sup>1</sup>

<sup>1</sup>National University of Architecture and Construction of Armenia, 0009 Teryan str.105, Yerevan, Armenia

**Abstract.** In this article the role of public open spaces in Yerevan city as well as their correct and literate organisation from an architectural and planning perspective are studied and evaluated. In recent years a special attention has been paid to the development of Yerevan, the capital as well as other historical cities of Armenia in order to contribute to tourism development. This aspect resulted in the creation of new urban and architectural requirements. Among other issues the organisation of architectural environment of public open spaces - the role of urban design in our reality are also characterized. In these conditions urban and architectural organisation of public open spaces in historical cities are very important. Thus, the present study not only emphasizes the importance of studying the evolution of open spaces in Yerevan, but also stresses the significance of implementation of the international practice in this field in the city of Yerevan. The complex analyses, coordination and developing conditions of nowadays and historical requirements of historical cities are provided. The urban organisation and appropriate method selection for the current requirements of public open spaces are going to be analysed.

## 1 Introduction

This introduction will focus on the analysis of two aspects separately: public open spaces and historical environment, at the same time it will concentrate on their relationship and the significant role each one has in sustainable development of urban environment in Yerevan city.

It should be noted that during the recent years several studies related to the urban development perspective of settlement and separate elements of urban design were done. These include Avet Miqayelyan “The perspective of Underground Urban Development in Armenia”, 1997, Areg Kanayan “The Effect of urban Strategy in the Formation of Urban

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\* Corresponding author: [zmamian@yahoo.com](mailto:zmamian@yahoo.com)

Composition”, 1997, Karen Berberyan “Modern Architecture and Urban Environment”, 1997, Tigran Danielyan “Territorial Regulation Problems of Yerevan city in Current Economic Conditions”, 1998. A special analysis was devoted to the study of separate sections of urban design as well as artificial lighting and green areas. These include Irina Aghavelyan “Artificial Lighting as a Factor of Organisation of Architectural Environments in an Example of Yerevan City Centre”, 2009. Tzovinar Muradyan “The Use and Development Prospective of Green Roofs in Yerevan City”, 2010. The formation of squares as a part of public open spaces are presented in Ara Harutyunyan “The issues of formation squares in Yerevan city”, 2011. However, the deficiency of theoretical research in the field of contemporary problems of organising public open spaces in historical city environment leads to incomplete solutions to this sort of problems.

From the urban, architectural and visual point of view the historical character of every city in the world, as well as of the capital city of Armenia, Yerevan, is characterized by two aspects: on the one hand urban open spaces – walls and covers without fences, which are mostly open to the natural influences, such as streets, squares, residential courtyards, and, on the other hand, close areas, such as monumental or significant buildings and structures. Unfortunately, nowadays the architectural-planning structure that was created previously has partly changed, due to the development of the city life [3, 4, 5]. In these circumstances the modifications are also visible in organizations of public open spaces, the planning of which have to deal intensively with the question of how much of open space network has to be public and publicly available to allow a sustainable and community oriented urban development [6].

Therefore, the urban open space is the key concept, which will be analysed in this article. For that kind of understanding in landscape and natural engineering there is not an exact term, it's called “fragment of the urban environment”, “Urban areas”, “City landscape”, “Urban interior”, “Urban ensemble”, etc.. Each of these terms define the phenomenon from their perspective, but three of them are most popular: “Open space”, “Urban environment”, “Urban interior”, because these terms most precisely define the "environmental" essence of the object. Architectural open space is present in the city streets, alleys and parks, stadiums and squares, where human creativity sets borders to the “emptiness”, so anything that visually limits the viewer, be it walls of buildings or rows of trees. All these things allow us to understand the essence of the concept “Urban Open Space” or “Urban Interior”. The difference between urban interior from the usual one is the combination of elements that is created by the architect such as fragments of the landscape, horizon, street prospects, panorama, etc. It is clear that the main task of architect is to isolate, to limit the certain part of the space by material forms. The city's “Urban open spaces” in general are created by buildings and structures and especially when we deal with historical cities, these terms automatically become if not monumental buildings, the significant ones for the appropriate city environment [7].

## **2 Analysis of public open spaces in historical environment of Yerevan city during history**

Public open spaces are critical components of life quality in Yerevan. Open space promotes the environmental sustainability of our city. Natural habitat provides sanctuary for wildlife species ranging from mammals, birds and insects to plants, trees and other types of vegetation provided in open space networks can reduce air pollution and wetlands can filter contaminants. The trails and streets of an open space network can also aid in reducing greenhouse gases, by providing alternative transportation routes and promoting cycling and walking.

Open spaces are critical components of every city including Yerevan and by necessity have to come in different forms and experiences. Open space provides the ‘breathing’ in a dense urban environment and promotes opportunities to engage in outdoor activities, access nature, enjoy scenic views, and experience the ecosystem of cities.

The Open Space Element in cities follows these guiding principles to ensure such holistic system: An integrated and multifunctional open space network would respond to a variety of needs for recreation and open space, better utilizing the existing resources. Yerevan is the center of ecological, economic, and cultural diversity. Open spaces should aim at building on our City’s intrinsic qualities, both natural and cultural, and to reflect the values we place on cultural diversity. Open space and recreational programs should be equitably distributed. They should provide access for all residents, workers and visitors. Open spaces in historic core of our city are wholly connected. This aspect nowadays is very important. Open space should increase the City’s capacity to be a safe and healthy place to live. Its design should promote social interaction, wellness, and a healthy lifestyle by providing opportunities for physical, cultural and social activities, and a connection to nature. With environmental sustainability as a driving theme, the quantity and quality of natural systems in the City should be preserved and expanded, by promoting aquatic and terrestrial biodiversity, by designing for watershed health, and by implementing environmental, ecological and conservation-minded strategies [8].

The public open spaces are evaluated during historical phases of Yerevan city. Our city as a locality has passed a long development, starting in 782 B.C., but as a city was founded already in 779. However, the term of “historical city” of the Yerevan is coming not only from the long term development in history, but also from the urban and artistic aspects, such as significant historical monuments, ensembles, municipal complexes, urban and natural landscape, cultural areas that also have archeological values [9, 10].

For further analysis of development of public open spaces in Yerevan city, within the frames of this article, the whole period of city’s history can be conditionally divided into several phases.

Before 1924 (so called pre-Tamanyan phase). A. Tamanyan was the author of master plan of Yerevan city. In this phase the city developed according to the plan designed by Mehrabov in 1911.

With half-rounded configuration of flat part of the territory, an amphitheatre surrounding the central parts of northern and eastern highlands is formed. The main strong compositional and functional point of attraction forms the city centre with vibrant spaces of commercial and cathedral squares. From the centre departs a tree-beam system of ceremonial roads. The idea of city-garden is being formulated in the conception of saving in the city’s widened green zone structure (98%), formed by estate gardens and public parks, flowing in the built-up neighbourhoods flanking the peripheral architectural areas.

Tamanyan’s period 1924. The development of the second important project of planning Yerevan was initiated by academician A. Tamanyan in 1919. The project of Yerevan city reconstruction was finished in 1924. Tamanyan’s project of Yerevan master plan retains the concept of the plan of 1911, with a corresponding development of urban areas and increasing the number of residence. According to this master plan the increase of the surface of public open spaces, parks, avenues, sidewalks, alleys, etc was provided. The project also provides branching city streets: main transit movements, streets for residential areas, pedestrian ways. The main mass of the green is concentrated on the wide boulevard, with the ring covering the central part of the city.

After 1924. In 1971 the master plan of Yerevan (last master plan of soviet period) city was determined, one the hand, by Soviet Economy Development features, and the other hand by the city’s area and landscape situation. In that period Yerevan city was the developed capital city of Armenia, unprecedented growth of population entailed increase of

construction process, but on the whole public open spaces didn't "suffer". In 2005 the new project of master plan of Yerevan city was approved. City management and development of basic concept was developed in accordance with international cooperation of political, social and economic programs and high-tech investment [11, 12]. A survey showed that today together with an approved master plan a whole range of regulatory and urban planning documents function in the capital city of Yerevan. The below-mentioned list shows the essential normative and directory documents concerning the urban planning regulations and the preservation of the historical center of the city of Yerevan. The following urban planning documents can be found in the Republic of Armenia:

The decision of the RA Government on the zoning of Settlements, the development of projects, expertise, agreement, validating the verification and modification order /14.05.2001/;

The decision of the RA Government on the invalidity of decisions on RA communities (residential areas), development of master plans, expertise, agreement, verification and modification rule validating made on May 2, 2003;

Construction norms of urban and rural areas planning and building. /14.10.2014/;

RA Regulation on "the preservation and usage of historical and cultural monuments and historical environments". 1998;

RA Government. Decision on "Validating the norms of the realization of urban planning activities in urban planning areas/objects needing special regulation" 2009;

RA Government. Regulation on "the building of the core of the center of the city of Yerevan based on the urban planning regulation of the Republic of Armenia"/2013/ [13-19].

New open spaces, restored and consolidated historical public open spaces in a historical core of the city were designed and implemented. According to Table 1 during long term of Yerevan city's development, the situation of public open spaces was radically changed. Instead of open spaces, new buildings and structures were constructed. As a result, the presence of public open spaces decreased and the construction surface in a total land use scheme of Yerevan city increased [19, 20].

### **3 Discussion and results**

Unfortunately due to the development of the city life the architectural-planning structure that was created in the previous period has partly changed. In these circumstances the modifications are also visible in organizations of public open spaces, the planning of which has to deal intensively with the question of how much of open space network has to be public. Contemporary tendencies of urban development also show that nowadays the recreation, restoration and reuse of public open spaces still continues. Tab. 1 shows how modern "quality and quantity" of public open spaces and their historical environment and image are changed.

**Table 1.** Modern “quality and quantity” of public open spaces and their historical environment and image are changed.

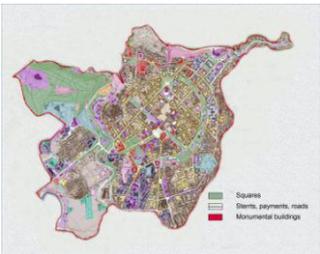
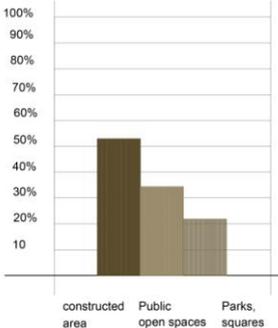
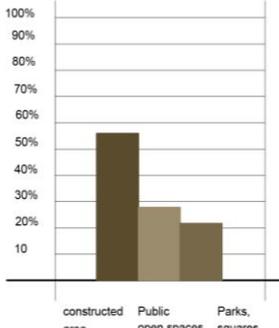
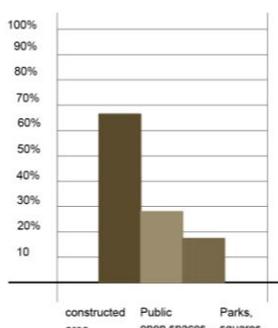
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 <p>General plan of Yerevan city, 1911, by architect Mehrabov</p>	 <p>General plan of Yerevan city, 1924, by architect A. Tamanyan</p>	 <p>General plan of Yerevan city, 2005, “Yerevan Project”</p>																								
<b>Announ of public open spaces in city</b>																										
Phase I	Phase II	Phase III																								
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Table 2 shows the present situation of public open spaces in Yerevan city. It is divided into three groups: public open spaces, in which the historical image of the environment is preserved, Public open spaces the historical image of which “is ruined” by new constructions, which change the scale of the existing environment, and new constructed public open spaces, in some cases in historical structure of Yerevan city, in some cases using the historical buildings and structures as fragments of newly created architecture.

**Table 2.** The present situation of public open spaces in Yerevan city.

N	Historical image of public open spaces	Combination of historical and contemporary image of public open spaces	Contemporary image of public open spaces
1	 Abovian street	 Abovian street	 Northern Avenue
2	 Abovian street	 Hanrapetutyan street	 Square of Moscow
3	 Hanrapetutyan street	 Hanrapetutyan street	 Aram-Byuzand streets
4	 Republic square	 Square of Aznavour	 Project of Old Yerevan

## 4 Conclusion

Today, when speaking about the historical urban planning of Yerevan we base our assumptions on single monuments of historical-cultural heritage, which are included in the list of preserved historical-architectural legacy. The recent transformations due to urban planning have changed the city's historical image, have altered a huge historical layer. We think that the historical monuments or ensembles should be given a significant role in environmental composition, they should be the starting points for reorganization of the space and they should determine the urban planning easements [20]. We also consider the possible preservation or renovation of 'complementary' environment for the monument, environment which is an open public space, environment which is not a monument in itself, but which 'tells about' the monument, 'leads' to it. It is this environment in its regenerated

form that is seen as the main point for investment into city development [20, 21]. This in its turn can increase the anticipated potential profit from the cities as centers of touristic consumption. In general, the organizational actions of urban authorities, which are based on the orderly transformation, steady development and the preservation of historical and cultural environment within the architectural and planning organization of urban society spaces, must be realized together with the following essential steps:

- Formation of united planning connections of historical zones as well as involvement of objects which are being preserved or modernized into the planning structure.
- Improvement of the mechanisms realizing and controlling urban planning documents and projects.
- Provision of dominance of long-term projects over short-term projects by forming a regulating system and involving them into corresponding investors in order to have a complex realization of urban planning projects (engineering, transportation and the simultaneous realization of other substructures).
- The rising of the role of the civil society in the planning and realization of urban planning projects [16].

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