

ARCHAEOLOGICAL PARKS AND THEIR INTEGRATION TO URBAN LAYOUT OF ISTANBUL

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ABSTRACT

This paper aims to evaluate the archaeological sites of Istanbul from the perspective of landscape architecture, and provide a new approach to the concept of heritage preservation with regards to landscape planning and urban design principles. In order for our heritage values to remain preserved and be accessible to contemporary and future generations, it is imperative to develop and advance an integrated planning concept.

Istanbul is a multi-layered city, harboring the remains of different eras within its contemporary urban layout. Throughout history, this land has been referred to by three distinct titles: Byzantium, Constantinople, and lastly Istanbul. Urban development therein has been shaped by the influences of Roman, Byzantine, Ottoman and Turkish cultures.

This paper begins by examining the historical characteristics of Istanbul and later focuses on the 'archaeological park' as an emerging developmental concept, in the preservation of historical and cultural heritage sites. An archaeological park is a medium by which the 'past' is presented to the public. The development of such a park not only preserves ancient and historical landscapes within an open space setting, but also promotes local heritage, increases tourism, and creates economic growth. The actual and potential conflicts that may arise from the use of heritage sites in Istanbul for such purpose can be diminished by identifying and setting criteria for defining archaeological parks.

In conveying the spatial and visual connection between the archaeological setting and its contemporary urban form, Landscape Architecture transpires as a vital approach to Urban Archaeology. Since the visibility of archaeological heritage is strongly related to the integration of the archaeological site with its urban landscape (such as in preservation and site landscaping); the use of space syntax methodology will be helpful in exploring such an integration of a site to the urban layout. Hence, the analysis of the selected archaeological park will provide knowledge about the dynamic interrelation between urban layers.

The results of this study will provide a general understanding of archaeological parks as an interrelated concept between archaeological heritage and urban archaeology. Moreover, it will set the criteria in defining archaeological parks. Finally, it will examine the integration of selected archaeological sites to Istanbul's contemporary urban form.

INTRODUCTION

The term 'archaeological park' arises with conservation of the archaeological heritage in urban space. 'Urban' and 'archaeology' terms are used together after by the reconstruction period after the 2nd World War. This made the term "Urban archaeology" to come out and provide studies on this field. The preservation of archaeological heritage in urban areas and to carry them forward for the next generations; archaeological parks undertake the fundamental role by combining different disciplines such as architecture, urban design, landscape architecture and archaeology. As the studies related to archaeological parks are limited, the development of this concept requires detailed research. In preserving and presenting the heritage, archaeological parks show difference from the urban parks. The continuity of these public parks can be achieved only when they are associated with education, recreation and tourism.

The purpose of this study is to examine the role of archaeological parks in conserving the archaeological heritage and by defining the criteria for the planning and design process of these parks, to evaluate the spatial integration potentials of the area. Moreover, the mission of landscape architect in designing the archaeological parks will be questioned while obtaining a source for the future

literature surveys on archaeological parks. In this study in order to determine the criteria of archaeological parks and to evaluate the integration of these areas to urban layout; Küçükyalı and Saraçhane, which show differences in their environmental conditions, usage cases and the user profiles, archaeological areas are selected (Figure 1).



Figure 1 Location of the study area

ARCHAEOLOGICAL PARKS

Archaeological parks are preserved and public archaeological areas. Although they are archaeological areas, in order to achieve the purpose of an archaeological park, they should be treated differently than urban parks. These parks take role in the conservation of historical areas and historical landscapes while being a park or a museum at the same time. These varieties are essential components of archaeological parks. As Kwas stated, when these components are associated with education, recreation and tourism functions; archaeological park concept emerges as a dynamic public urban space (Kwas, 1986).

Archaeological Parks- Education: Education and the archaeological parks should be highly interrelated with each other since it is needed to provide sustainability of the presented culture. The theory based studies in schools could be made practical via these educational programs. Thus the existence of these parks and the related educational activities can be way of teaching public more about the archaeology and achieving sustainability.

Archaeological Parks-Recreation: An archaeological park becomes more than a static museum when it is associated with recreation. These parks should also offer comfortable recreational areas. The inside and outside spaces within a park should be linked to each other with the crucial landscape design and planning principles.

Archaeological Parks- Tourism: The interaction between Archaeological parks and tourism gets more important day by day. By this approach, which can be classified under the 'heritage tourism' notion, archaeology and public interrelation is provided. The strategical interrelation of culture and tourism points out the sustainability concept in planning and managing areas. In managing process it is highly needed to be meticulous in the conservation of heritage and also in decision making. Archaeological parks require utterly consideration not only for heritage tourism in local and regional level but also for forming a basis for national identity.

The role of landscape architect in archaeological park planning and design process: planning and design program of archaeological parks should be considered together with the local settlements. In the proposed plan, the historical remains should take both recreational and educational role. In this stage there are various architectural typologies that shape the functionality of the park. Landscape design comes out as a focus that both soft and hard landscapes propound importance. In the archaeological park there should be structures such as visitor centre and research

center in order to serve public. Landscape architect put forward a proposal on linkage system, tourist places, and vista points within the whole system of park.

The Importance of Archaeological Parks in Istanbul

“Throughout the history Istanbul has been a capital of empires, a sprawling city adorned with architectural monuments of grand and enduring nature” (Özdoğan, 1996). To provide information on today’s settlements in Istanbul, the history of the city should be researched. Istanbul, with its long and complicated history, had been the center of different civilizations. Therefore, the different urban planning concepts of these different civilizations had affected the formation of Istanbul (Belge, 2003). Because of the fact that this city had been shaped under various cultures, it shows richness in urban archaeology. When the development of Istanbul’s urban pattern is examined, three different periods are encountered. These are Byzantium, Constantinople and Istanbul. Istanbul reflects a cultural mosaic within these development and transformation periods. Anonymous structures from different periods are an evidence of this fact. According to Kuban; “Istanbul has substructures of the remains from Constantine’s New Rome, remains from the capital of thousand years Byzantine Empire, remains of 500 year Ottoman capitals (Kuban,1996). All these remains can be seen via cultural and archaeological heritage of Istanbul. Archaeological parks are a way to conserve and present the heritage of this city to the public.

Küçükalyalı and Saraçhane Archaeological Sites as Case Study

Küçükalyalı archaeological site is located in Anatolian side of Istanbul, with in the Maltepe district, Küçükalyalı vicinity, Çınar quarter. As most of the remains dating back to Byzantine period are located on European side of Istanbul, this archaeological area propounds importance for Anatolian part. Stated in TAY Project website (database of Archaeological Settlements of Turkey), J. von Hammer discussed these remains in 1822 and called the place as Satyros monastery dating back to 9th century. On the other hand S. Eyice called these remains as Bryas Palace and supported his idea by stating that the remains of a wide structure having no apses cannot be a monastery. In 2000 Alessandra Ricci worked on these remains and called the place as Satyros Monastery. In 2008 excavations headed by Archaeology Museums and supervised by Alessandra Ricci got started (TAY Project). Today the area can be seen with its rectangular formed soil mass (Figure 2). Inside the archaeological area, remains belong to a huge cistern are seen. This archaeological area is an urban open space used by inhabitants. It is surrounded by Çınar Mosque, children playground and the surrounding residential building pattern. In order to make this area a place for urban development, archaeological park works are being carried out.



Figure 2 Küçükalyalı Archaeological Site

Saraçhane archaeological site is located in European side of Istanbul, within the Fatih district and Saraçhane vicinity. These remains are on southwest of Valens Aqueduct. The remains of Ayios Polyektos Church, which is the Istanbul’s biggest church after Hagia Sofia, take place within the area. The basis of the church was found in 1960 during a subway excavation. Today, various structural unites and a domed cellar with its strong basis stays. These remains are located in an urban open space and surrounded by park and playgrounds (Figure 3). Up to near future this place was used by homeless people and got vandalized, till the area got

fenced. Therefore, today the archaeological site is not accessible and it is disordered.



Figure 3 Saraçhane Archaeological Site

THE METHOD

The method of this study contains three main parts. First of all literature survey is carried out. In this extend, basic principles such as archaeological heritage, urban archaeology, valuing the archaeological remains are observed. With the information gained from this survey, archaeological park concept is discussed in detail. The methodology used in this study- indicating the criteria of archaeological park as environmental, functional, formal and technological criteria¹- is derived after the survey. Secondly; survey and observations are carried out in field and documented as photos. The evaluations of environmental, functional, formal and technological criteria are examined with their sub-topics. In addition to these, interviews with the authorities in municipalities and design offices are made to get documents of the fields. Thirdly; as the environmental, functional, formal and technological criteria are evaluated, being a sub-subject of environmental criteria, the integration value is observed via generating spatial model by using space syntax.

Archaeological Park Criteria

The archaeological park criteria are grouped under four main subjects. These are considered as following:

- A. Environmental criteria: Environmental criteria contain the sub-topics such as security, recycling, revelation, integration, the current situations of green areas, and linkage system, nearness to urban center, land use and building density. The integration of areas to urban layout is evaluated via using space syntax methodology.
- B. Function criteria: Function criteria is set up with educational, recreational functions of the area, public awareness, research-interpretation studies, tourism potential of the area, the interrelation with local people, management of the area, presentation of the area and presentation of the remains.
- C. Formal criteria: Formal criteria contain the rearrangement of the place, the guiding elements like signs, the use of topography, vegetation, service units, parking, entrances, vista points and lighting system of the area.
- D. Technological criteria: Technological criteria reflect the use of local sources, proper material usage, providing comfort level in design, the

¹ These criteria is developed from the study called "Heritage, Tourism and Sustainability: An Archaeological Park as a Tool for Local Sustainable Development" written by Luciana Inés Repiso in 2007.

integration of natural and man-made landscapes and the damage fact on remains.

In order to examine the areas according to archaeological park criteria, a dichotomous questioned survey is carried on. In this survey the following questions are searched (Table 1):

Table 1. Archaeological Park Criteria Survey

A. Environmental Criteria	B. Functional Criteria
1. Is the area near to urban center?	1. Is the area protected under laws?
2. Can the area be reached via public transportation?	2. Are there any universities working on area?
3. Is the land use mixed in near surroundings?	3. Is the area used by pedestrians in daily life?
4. Is the building density low in near surroundings?	4. Is the area used as an urban open space within daily life?
5. Are there any green spaces near the area?	5. Is there a visitor center?
6. Are there any parks near to the place?	6. Is there a cultural activity center?
7. Is there a school nearer to the area?	7. Are there any tourist tours to the area?
8. Is the area integrated to the urban layout? (will be evaluated via space syntax)	
C. Formal Criteria	D. Technological Criteria
1. Are the entrance and exit points distinctive?	1. Are there any arrangement works carried out on the land?
2. Is the area surrounded by a wall or is it fenced?	2. Is there an excavation on field?
3. Is the site well-cared and clean?	3. Are the remains protected adequately?
4. Are there any signs orientating the visitors?	4. Does the area have a website/brochure?
5. Are there any information boards?	
6. Is the lighting system sufficient?	
7. Is there car parking area?	
8. Is the planting density high?	
9. Are there seating elements on site?	
10. Are there service units like Cafe/WC?	

Integration to Urban Layout

The study has adopted the basic concepts and methods of Space Syntax to calculate the integration of the case study areas to the urban layout. As a set of techniques for the morphological analyses of buildings as well as urban areas, and an associated body of theories linking space and society, Space Syntax is now one of the most influential scientific movements in the field of architecture and urban design (Hillier et al., 1992; Hillier, 1996). Space Syntax focuses on ‘integration’. Integration is calculated from the axial map by calculating how many lines must be used to reach every other line in the whole axial map (Kubat et al. 2007). The integration of space is a function of the mean number of lines and changes of direction that needs to be taken to go from that space to all other spaces in the settlement system (Eyupoglu et al. 2007). In this research, Küçükyalı Archaeological Area is examined firstly by its existing situation as an archaeological area, and secondly by its potential situation as an archaeological park whereas, Saraçhane archaeological area is only examined with its existing archaeological park situation. Axial maps for each situation and place are drawn and spatial models got generated. According to the computerized results, archaeological sites’ integration levels are discussed.

THE EVALUATION OF KÜÇÜKYALI AND SARAÇHANE ARCHAEOLOGICAL PARKS VIA PROPOSED METHODOLOGY

In this section, Küçükalyalı and Saraçhane archaeological sites are evaluated according to the criteria obtained from literature survey. In this direction, the remains in Küçükalyalı archaeological site are analyzed in two situations. Firstly the existing situation as an archaeological area is analyzed and after that the proposed situation with the archaeological park plan is analyzed. The second case study area, Saraçhane archaeological site, is analyzed with its existing situation as an archaeological park already. The selected sites are evaluated via archaeological park criteria and their integration to urban layout is observed. Finally the two sites are compared to each other.

Analysis of Küçükalyalı Archaeological Site's Existing Situation

As a result of the environmental criteria observation, it is evaluated that Küçükalyalı archaeological site is near to urban center and can be reached easily via public transportation. Because of the fact that the residential and commercial uses, which together shape the mixed land use feature of the site, makes the place vivid all day. There is no distinction between active and passive green spaces nearer to the site, whereas, the area comes out with its urban open space property that is used by public via children playground and mosque functions. Despite the importance of schools in interrelating the archaeological remains and education, there is no educational unit near to the area. According to spatial integration analysis it's observed that integration level is highest on the main street called "Eski Bağdat" street and then on the Atatürk street, whereas the integration of the archaeological site and the roads surrounding the site are low. This makes the Küçükalyalı archaeological site a segregated place within the urban environment (Figure 4).



Figure 4 Küçükalyalı Archaeological Site Spatial Integration Analysis (Existing Situation)

The function criteria come out with a fact that the area is a protected site. Koç University's Research Center for Anatolian Civilizations has studies for the area. The site is used by pedestrians in daily life, this results in public awareness and makes the space livable. On the other hand, the absence of a center for visitors and cultural activities and the lack of guided tours for heritage tourism limit the site's contribution to local development.

According to formal criteria evaluation, it's seen that the entrance and exit points are not clearly identified in the area. As the remains are not totally accessible to public, the formal arrangements are unaccomplished. There are no surrounding elements like fences or walls except a fenced door opening to the cistern part. Parking is only available on street and there are few vegetation elements. Moreover, there are no service units such as café and WC. On the other hand, the seating elements are provided by the mosque and playground landscaping opportunities and the site is protected well by the public while representing a clean urban space with the care of local people. Orientation elements such as signs start from the main street called Eski Bağdat Street, and there are information panels located within the site in order to increase public awareness.

The continuing development process requires works on field and technological criteria analysis shows that the excavation- research studies are to be carried out in order to improve existing situation and present the remain to public but the lack of publicity, such as website or brochures, is limiting the potential of area to reach public.

Analysis of Küçükyalı Archaeological Site's Proposed Situation: Archaeological Park

In observing the potential situation of Küçükyalı Archaeological site, the archaeological park plan, which reflects the current regulations on land, is taken into consideration.

As a result of the environmental criteria observation, by the proposed plan the archaeological site continues its characteristics by being a vivid place within an accessible urban area. The proposed plan makes up distinction between active and passive green spaces nearer to the site and puts forward its urban open space property that have integrated to children playground and mosque functions. Despite the importance of schools in interrelating the archaeological remains and education, there is still no educational unit near to the site. According to spatial integration analysis it's observed that integration level is highest on the main street called "Eski Bağdat" street but now moves to Karayollari Street, which is the main road to reach the park, and the integration of the roads surrounding the site has thus been increased. Although with the proposed park plan the remains got accessibility, the integration of area decreases because of the design proposal's fragmented road structure. Yet, the integration value of the proposed park decreases when compared to the existing situation (Figure 5).



Figure 5 Küçükyalı Archaeological Park Spatial Integration Analysis (Proposed Situation)

The function criteria show that the project is supported by the municipality and Istanbul European Capital of Culture Agency. The site promotes public awareness. Moreover a center for visitors and cultural activities and the guided tours for heritage tourism will increase the site's contribution to local development.

According to formal criteria evaluation, it's seen that the entrance and exit points are clearly identified and the site becomes totally accessible to public with the formal arrangements that confirms the cistern as a part of the archaeological park. There are no surrounding elements like fences or walls except a fenced door opening to the cistern part. Park is well protected by the public while representing a clean urban space with the care of local people. The increase in the number of orientation elements such as signs information panels will result in the increase of public awareness. By the parking spaces the park's comfort level and accessibility will increase. Service units and seating elements are located within the park whereas vegetation elements used to provide places with shadow. Soft landscape elements providing access limitation to the park is provided by using plants.

Technological criteria analysis shows that the excavation- research studies will be carried out in order to present remains to public and publications, such as website or brochures, will be used to reach public.

Analysis of Saraçhane Archaeological Park

According to the environmental criteria observation, it is evaluated that Saraçhane archaeological park is near to urban center and can be reached easily via public transportation. Because of the fact that the land use is dominated by commercial usage, the site becomes a disused area at night. Active and passive green spaces surrounding the park make up a multifunctional urban open space. Despite the importance of schools in interrelating the archaeological remains and education, there is no educational unit near to the site. According to spatial integration analysis it's observed that the archaeological park is not integrated to urban layout. The axial showing the highest integration is the main street called "Şehzadebaşı" street. As the archaeological remains are fenced, they are not accessible. This makes Saraçhane archaeological park an isolated space within the urban environment (Figure 6).

Archaeological park evaluation via function criteria comes out with a fact that the area is a protected site. The development of the site is inaccurate as there are no organizations working on field. Because of the fact that the archaeological area is fenced, there is no accessibility to the remains. Although this strategy is a way to protect the remains against vandalism, site cannot be used by pedestrians in daily life. Therefore it has negative effects on public awareness and the livability of space. Moreover a center for visitors and cultural activities and the guided tours for heritage tourism will increase the site's contribution to local development. The absence of visitor and cultural activity center, and the lack of guided tours to the area limit the archaeological park's contribution to local development and put downs the archaeological park functions.

According to formal criteria evaluation, it's seen that the entrance and exit points are not clearly identified in the area. As the area is fenced, remains are not accessible to public and the formal arrangements are unaccomplished. Being a squalid place decreases the comfort level and results in being open to damages. There are no orientation elements or signboards therefore the public awareness is not provided. On the other hand, as the archaeological park is surrounded by active green areas, there are service units which can be possible for servicing the archaeological park. Within the green space urban furniture such as seating and lighting elements are located. Moreover the planting in these areas provide shadow that increases the visitor comfort in near surrounding spaces. Parking is available via the garage provided by the municipality.



Figure 6 Saraçhane Archaeological Park Spatial Integration Analysis

For the development of the park, works on field are required but according to the technological criteria analysis there are no excavation- research studies in the area. The lack of improvement operations results in the lack of presenting the remains to public. As there are no publications, such as website or brochures, the potential of area in reaching the public is limited.

Comparison via Evaluation Data

After the evaluation of archaeological sites, results can be compared. As the sites are analyzed via 29 questions according to the proposed methodology, each site shows different responses to criteria (Figure 7).

Küçükalyı Archaeological Site comes up with 15 positive and 14 negative responses. The reason for getting high positive response is that the site gets its criteria via mutual functions provided by the mosque and children playground areas. According to the syntactic evaluation, site shows low integration with its existing situation and cannot use its full potential in order to be a focus point. Moreover, the site does not support the educational, recreational and tourism functions of an archaeological park.

Küçükalyı Archaeological Park with its proposed plan comes up with 26 positive and 3 negative responses. The park proposal supports criteria while putting forward the education, recreation and tourism functions of an archaeological park. The park proposal affects its near surroundings' integration to urban layout. By this proposal the spatial integration of the site to urban layout decreases (Table 2) but the integration of main roads that accesses the park increases.

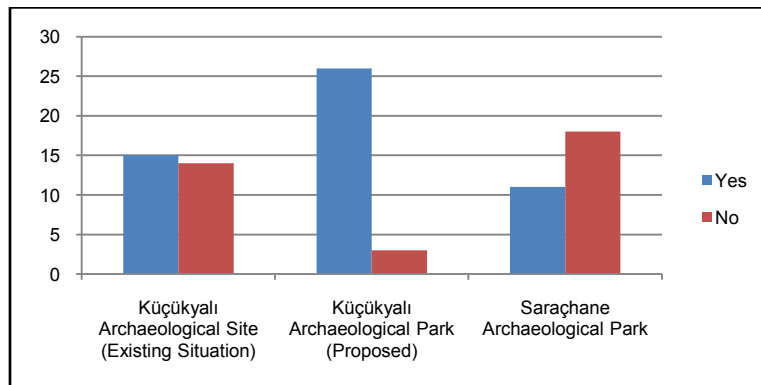


Figure 7 Results of Survey (Site Responses to Archaeological Park Criteria)

Table 2. Change in Spatial Integration Values of Küçükalyı Archaeological Site

<i>Case Study Area, Integration Values</i>	<i>Minimum</i>	<i>Average</i>	<i>Maximum</i>
<i>Küçükyalı Archaeological Site (Existing Situation)</i>	0,662012	0,969393	1,4474
<i>Küçükyalı Archaeological Park (Proposed Situation)</i>	0,336612	0,729466	1,11539

Saraçhane Archaeological Park comes up with 11 positive and 18 negative responses. These results show that the park is not integrated to the urban layout and however it is surrounded by actively used green areas, the archaeological park cannot fulfill its potential and it does not support the educational, recreational and tourism functions of an archaeological park.

CONCLUSION

In this study archaeological parks were introduced and criteria for archaeological parks were identified. Küçükyalı archaeological site and Saraçhane archaeological site were analyzed through the proposed methodology. Using Space Syntax in order to analyze the integration of the case study areas to urban layout, was a part of archaeological park criteria. Evaluation of the sites with their existing and proposed situations showed that the archaeological park is a solution to protect and present the heritage while creating public awareness. This study has indicated the contributions of archaeological parks to urban space.

As Istanbul is a multi-layered city, harboring the remains of different eras within its contemporary urban layout, these remains can be experienced via cultural and archaeological heritage of Istanbul. Archaeological park, as a way to present the past to public, is an emerging concept to preserve and protect the heritage, to provide interpretive and educational opportunities on site and to provide recreational opportunities.

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