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Sustainable Conservation Strategies of Urban Heritage Sites: Kayseri Talas Archaeopark Proposal

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Abstract

Talas, an intersection point of Muslim, Greek and Armenian civilizations throughout history, stands out as one of the important settlements of Anatolia. The rich cultural heritage and unique geographical structure of the region have allowed it to host numerous civilizations throughout history. However, social dynamics such as population decline following the population exchange and changes in the demographic structure have posed significant challenges to preserving the historical texture of the region. In addition, factors such as the risk of landslides and illegal excavations have caused serious damage to the historic structures of Talas and are among the factors threatening the cultural values of the region. To preserve the historical identity of the region, it is significant to reconsider the projects to be carried out in the urban protected area of Talas, aiming to establish a cultural meeting point for both, locals and visitors. In this context, it is recommended that the cultural values of Talas be preserved and enhanced through elements such as museums, workshops, art galleries and cultural activity spaces, as well as the integration of the region into its surroundings through bicycle paths and walking trails. Integrating Talas into the cultural route project will be a strategic move towards making the region a tourist attraction and carrying its historical identity into the future. The Talas Urban Archaeological Site should be reconstructed not only as a historical site in need of preservation but also as a focal point that will contribute to the social and cultural structure of the region. Such approach will allow the development of sustainable solutions to protect and promote the historical and cultural values of the region.

1. Introduction

Talas, as one of the significant settlement areas in Anatolia throughout its history, stands out with its geological structure and the different civilizations. Bearing traces of Islamic, Greek, and Armenian civilizations, Talas has been preferred for settlement throughout history due to its fertile lands and strategic location. However, the population exchanges of the early 20th century resulted in significant changes to the region's demographic structure. With the immigration of the non-Muslim population, significant changes occurred in Talas's social and spatial fabric. During this period, the hillside, where the old urban settlement was located, was evacuated due to the risk of landslides; the uncontrolled area was ravaged by illegal excavations in time, leading to the significant destruction of historical structures. Designating Talas as an urban archaeological site to protect its historical, cultural, and natural values is seen as a crucial step for the region's future sustainability. However, the limited scope of current protection and management policies underscores the need for a comprehensive strategy. In this context, the integration of Talas into urban life by protecting its historical identity, incorporating it in the cultural route, and transforming it into a tourist attraction not only preserve the cultural heritage of the region but also offer significant potential to support economic and social development.

Scientific studies conducted on Talas have generally focused on art history and traditional housing architecture, while research aimed at developing regional protection strategies has been quite limited. Therefore, this situation underscores the importance of interdisciplinary studies to document the historical values of Talas, analyze its current condition, and develop a comprehensive conservation plan. Particularly, in the area designated as an urban archaeological site, it is observed that the historical

texture is rapidly disappearing due to the landslide risk posed by the rocks in the eastern part and the abandoned buildings in the western part. This situation necessitates the detailed documentation of the remains of structures, the analytical evaluation of their current conditions, and the formulation of determinations based on these findings.

This study aims to present a scientific approach to the preservation of Talas's historical and cultural heritage, enhance the functionality of the region, and develop a methodology that will serve as a model for similar areas. A holistic approach is essential to address Talas's social, cultural, economic, and physical dynamics together with its spatial and environmental components. The data obtained underscore the necessity of integrating not only the development of conservation strategies but the reinvigoration of Talas in urban memory and future sustainable development policies. The presented recommendations are expected to illuminate the practices for protecting and re-functioning Talas's urban archaeological site and contribute to passing the region's historical and cultural heritage onto future generations.

2. Urban Archaeological Sites

Archaeological sites play a vital role in preserving the cultural heritage of past civilizations and shedding light on human history. These sites address humanity's search for identity by connecting the past and present through their historical, aesthetic, scientific, and social values [1]. While the concept of archaeological sites is often perceived as limited to findings in rural areas, archaeology encompasses a broad field that includes the discovery, preservation, and conservation of values in both rural and urban areas. Since the early years of the Turkish Republic, archaeological studies in historical city centers and around monumental structures have aimed to integrate these values into the urban fabric through salvage and exploratory excavations. However, since the documentation and database infrastructure for urban archaeological sites in Türkiye have not been sufficiently developed, efforts to protect these sites have relied on classifying them at various levels [2]. In the today's world, rapid urbanization, rural-to-urban migration, profit-driven construction, and unplanned growth have complicated the protection of these areas and rendered them ineffective [3,4]. In this context, not only physical protection but also the integration of these sites into contemporary life has become a necessity [3,5].

The preservation and management of archaeological sites are based on the charter prepared by ICAHM in 1990 and approved by the ICOMOS General Assembly. The first article of this charter defines archaeological heritage as all remains reflecting the traces of human activities and presence [6]. Archaeological sites are regarded as a significant part of material heritage, including settlement traces, abandoned structures, underwater and subsoil areas. In this context, the term "site" refers to a broader concept encompassing not only the structures but also to the surrounding environment. In Türkiye, Law No. 1710 defines these sites as areas that must be protected due to their historical, aesthetic, scientific, ecological and cultural importance (High Council for the Protection of Cultural and Natural Assets Law No. 1710 Article 1, 7).

According to the principle no. 658, dated November 5, 1999, of the Committee on Conservation of Cultural Assets in Türkiye, archaeological sites include underground, aboveground and underwater cultural assets that reflect the social, economic and cultural characteristics of ancient civilizations. These sites are protected within the framework of national and international policies and are classified according to the conditions of use [8,9]. For instance, first-degree archaeological sites are areas that need to be fully protected and construction in these areas is limited only by scientific excavations. In second-degree archaeological sites, repairs and regulations can be made, but these changes must be based on scientific studies. In third-degree archaeological sites, more arrangements are allowed, but these changes are carried out with consideration of archaeological values [9,10,11].

Urban protected areas are of great importance by reflecting the historical identity and social structure of cities. The studies carried out in Talas to preserve this identity have revealed the multi-layered structure of the area and important results have been obtained by documenting these structures. In particular, the studies by Büyükmıhcı and her colleagues, "Talas (Kayseri), Inventory of Urban Cultural Heritage (2007-2009)" and by Eldek and her colleagues, "Experience of Street Rehabilation Project; Case, Kayseri-Talas Kazım Paşa Street" emphasize how the cultural elements in the region should be protected. The necessity for planned management of urban protected areas is supported by concrete examples in these studies [12,13].

The conservation decisions made in urban protected areas, which focus on the harmony between streets, neighborhoods and buildings, and the traditional architecture and facilities integrated with the city, are implemented with the aim of ensuring the sustainability of these areas. These decisions cover not only existing immovable cultural assets but also new structures and arrangements that are compatible with these assets [10,11].

Urban archaeological sites, which contain both archaeological remains and urban fabric, require a multifaceted management approach that aims to protect historical, aesthetic and social values. The projects in these areas are carefully planned to prevent damage to archaeological values and are subject to the approval of the relevant conservation boards. Projects for the restoration and reuse of registered or unregistered buildings are approved only if they are compatible with archaeological and cultural values [3,11].

Excavations conducted in urban archaeological sites contribute to the understanding of the social, economic and cultural structures of past civilizations. These excavations reveal the role of settlements in human history as well as how they were shaped, presenting findings ranging from prehistory to antiquity. This process enables the sustainable preservation of the urban fabric and the completion of the archaeological

inventory, along with its management through approved plans. However, the conservation of urban archaeological sites requires effective protection against external pressures such as tourism, urbanization, and construction. The management of these sites needs coordination between different stakeholders and experts, and it plays a critical role in transferring cultural heritage to future generations and maintaining social identity.

New structural designs in archaeological sites should be implemented in harmony with the original texture while preserving their historical and aesthetic values. Methods such as conservation roof applications and establishment of sightseeing platforms not only provide physical protection but also give these areas a social function. Archaeological remains can be exhibited by integrating them with new buildings, or they can be reinterpreted by hosting social and cultural activities [14,15,16,17].

In international projects, archaeological sites are integrated as a part of modern life in cities such as Athens, Rome, Milan and Paris, while in Türkiye, these sites are generally not properly protected and integrated into urban life. Legal deficiencies, political interventions and profit concerns complicate the sustainable management of archaeological sites in Türkiye [18,19].

The value of archaeological sites within the city stems not only from reflecting the characteristics of the era but also from the continuity of historical layers created by past civilizations and their significance in urban memory. However, in Türkiye, due to legal deficiencies, political interventions, and concerns over profit, the protection of these sites has been inadequate. In recent years, urban archaeological findings have become a topic of discussion and a subject searching for solutions, particularly within intellectual circles [19,38].

In the protection of archaeological sites in Türkiye, issues such as limited amount of funding, conflicts of authority, prolonged planning processes, illegal construction, and commercial-driven illicit excavations are prominent [20,21]. These problems reveal the need for a sustainable approach to the conservation of cultural assets. Principles outlined in international documents, such as the Venice Charter (1964) [37], serve as guidelines for works to be conducted in these areas. Additionally, it is essential to ensure social accessibility to these areas while considering the spirit of the place and its contextual characteristics during design processes.

In recent years, urban transformation and infrastructure projects in the historical cities such as Istanbul, Izmir, Ankara, Konya, Antakya and Kayseri have once again emphasized the importance of urban archaeology by revealing the richness of archaeological data in these areas [22]. Conservation and restoration of archaeological sites play an important role in preserving the historical and aesthetic values of cultural heritage and ensuring their transmission to the future generations. New technologies and methods provide more efficient conservation of both archaeological findings and architectural heritage. Conservation and restoration education aims to provide a balance in these processes by combining theoretical knowledge and practical skills. In Europe, educational programs have advanced through the Bologna Process, and methods such as 3D data collection play a significant role in the conservation of cultural heritage. Innovative educational approaches such as geomatic laboratories equip students with the necessary skills for their professional careers [23].

3. Historical and Cultural Values of Talas Urban Protected Area

Talas Urban Protected Area is located in the northwestern part of Talas district of Kayseri and encompasses historically significant neighborhoods such as Han Quarter, Harman Quarter, Tablakaya Quarter, Kiçiköy Quarter and Yukarı Quarter. The region is defined by natural and artificial boundaries. The natural boundaries of the area are formed by Ali Mountain to the south, Deliçay to the west, and the sloping terrains of Yukarı Talas to the east, while the artificial boundaries are defined by the university and military zones in the northwest. These boundaries represent important geographical and spatial factors that have shaped the historical development of Talas (Figure 1 and 2).

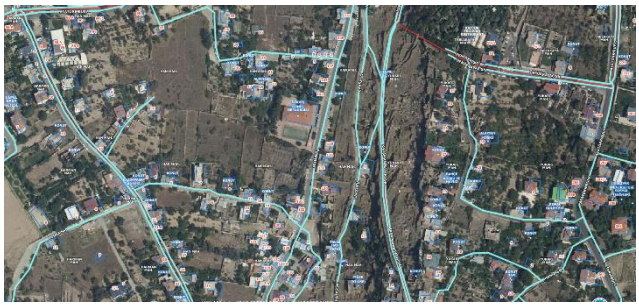

Figure 1. Study Area and Surroundings [24]

Figure 2. Multi-storey Developments in the Western Part of the Area [25]

According to historical records, the Talas Urban Protected Area experienced dense construction in the past, and the settlement in the area was generally constructed using terracing methods to adapt to the sloping terrain. Throughout history, this area has hosted functional buildings such as houses, shops and workshops; Çarşı Street and Karaman Bayırı served as the central axis of the historic trade routes, sustaining vibrant economic activity in the region.

Today, remnants such as foundations and walls along these routes still bear evidence of the dense construction that once characterized the area. However, over time, most of the structures have been destroyed and the historical texture has been significantly

damaged, particularly due to illegal excavations and uncontrolled construction, and dismantling.

Figure 3. The Silhouette of Talas in 1924 (Talas Municipality Archive)

Figure 4. The Silhouette of Today's Talas [25]

Figure 5. Investigated Urban Conservation Area and Erhan Street [25]

Most of the surviving structures from the past were generally constructed using local stone materials. These 2-3 storey buildings with square or rectangular plans stand out for their high buttresses and architectural features that align with the traditional architecture of the region. Additionally, to adapt to the sloped topography, basement floors were used as storage areas, ground floors as commercial spaces and upper floors as residential areas (Figure 3). However, the abandonment of the area due to landslides and migrations, along with the illegal extraction of stone materials, are among the primary reasons for the destruction of the historical heritage (Figure 4 and 5).

The rocky area located in the eastern section of the site, with a height of approximately 20 meters, has been defined as a region at risk of landslides as a result of geological analyses. Due to its topographic features, weak surface stability, and past soil movements, it has been determined that this area exhibits a risky structural condition. Specifically, the geomorphological structure of the region poses a threat to both surrounding settlements and infrastructure elements, as it has the potential to trigger land movements during periods of heavy rainfall. The small-scale landslide events occurred in the past show that the current condition of the area can lead to larger disasters if not intervened. In this context, comprehensive engineering measures such as surface reinforcement, the construction of retaining walls, and the development of drainage systems are recommended to ensure the stabilization of the region.

It is stated that the Talas Municipality has planned interventions, including surface stabilization, the construction of retaining walls, and infrastructure improvements. These efforts are of great importance in both, ensuring the long-term stability of the rocky area and minimizing potential natural disaster risks. Detailed surface evaluations and orthophoto analyses conducted in the area have enabled the precise mapping of risky zones. These data have served as a primary source of information for hazard analyses and the development of conservation strategies to mitigate the effects of potential risks (Figure 6).

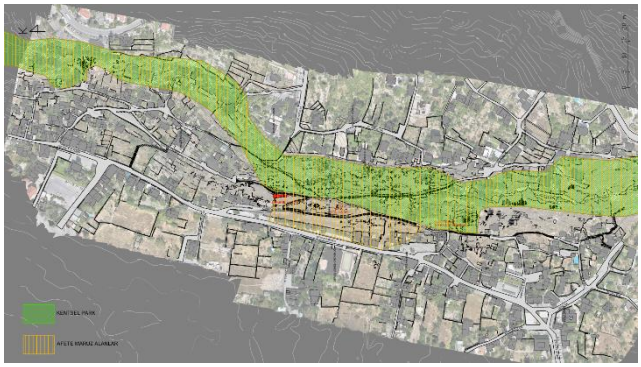

Figure 6. Urban Park and Disaster-Prone Areas on the Orthophoto Site Plan of the Examined Area [25]

Talas Urban Conservation Area reflects not only the historical structures but also the spatial organization of social and cultural life in the region. Religious buildings such as the Panagia Church in the north and the Taxiarhis Church in the south, and social facilities such as the American College, and commercial areas such as the Kuyumcular Bazaar demonstrate the multifaceted functionality of the area. In addition, roads such as Çarşı Street, Karaman Bayırı and Karataş Street, which provide access to these areas, have established important connections that preserve the historical trade and social structure of Talas to the present day (Figure 7,8).

Talas American College in Yukarı Talas, in particular, is a building complex that reflects important changes in the architectural layout and social life of the region during the 19th century. This building complex, connected to Lower Talas via Karaman Bayırı, and serving now as Erciyes University Social Facilities, includes the American Hospital and lodging buildings.

The college's academic building is also located in the same neighborhood [26].

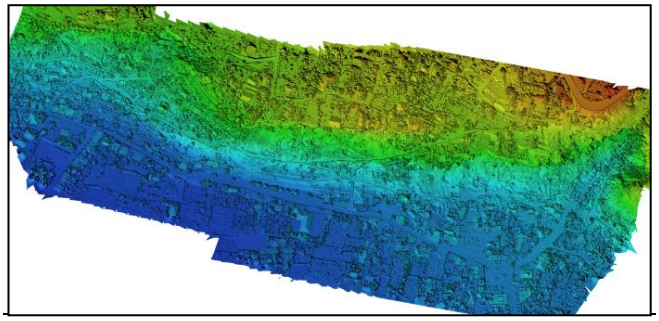

Figure 7. Talas Urban Archaeological Site Dem Map [25]

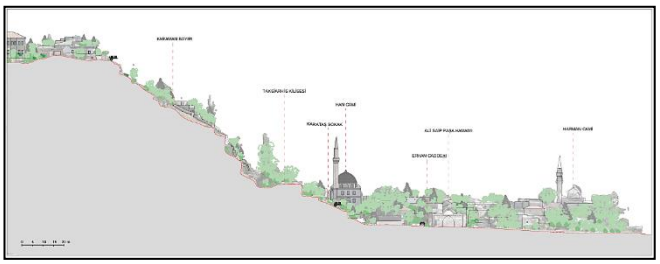

Figure 8. Silhouette of the Talas Slope [25]

Karaman Bayırı extends from the center of the area toward the southeast, with a slope of approximately 19%, reaching Seyran Street. This slope merges with Seyran Street and then intersects with Düzyol Street. On Düzyol Street is the Kuyumcular Bazaar, which hosted important commercial buildings in the past (Figure 9).

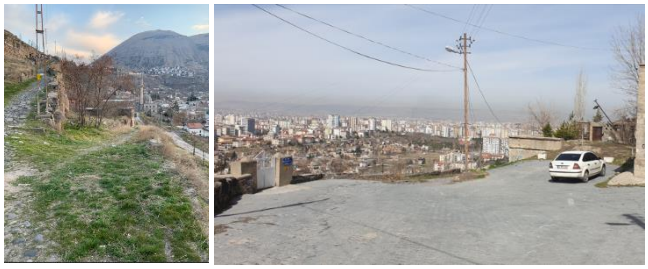

Figure 9. View down from the junction to Karaman Bayırı and Seyran Street [25]

Figure 10. Karabey Street and Karatas Street [25]

In the region, the mansions are aligned parallel to Çarşı Street, Karabey Street and Karataş Street in the north-south direction, extending to Kayabaşı Street in the east. These mansions reflect the characteristic examples of historical settlements. On the western border of this area is Erhan Street, one of the city's main thoroughfares. This street starts from Harman Square and extends to Kazım Paşa Street and Atatürk Boulevard. Erhan Street is intensively used due to its significance as one of the key connection points in the region. Parallel to this street, Çarşı Street, which is entered from the west, forms the main axis of the area with the intersection of Karataş Street and Karaman Bayırı (Figure 10).

Advancing north-south along Çarşı Street, Karabey Street, and Karataş Street leads to the Taxiarhis Church. This Church is located at the junction of Beybağı and Karataş streets. Panagia Church can be accessed via Karabey and Yeni Cami streets, while Yeni Cami Street continues to connect to a pathway that merges with Kayabaşı Street, leading to Erguvan Restaurant, an initiative by the municipality reached via Kayabaşı Street or the pathway from Karataş Street, and that holds an important place in the social life of the region today (Figure 11,12).

Figure 11. Çarşı Street and Beybağı Street [25]

Figure 12. Pathway from Karabey Street upwards to Erguvan Restaurant [25]

Another important point that increases the social interaction of this area is the Maharetli Eller Women Producer Market located on the Erhan Street. This market, an open space/square where hand-made textile products, food and ornaments crafted by housewives are exhibited and sold, increases the vitality of this area (Figure 13).

Figure 13. Maharetli Eller Women Producer Market [25]

The historic commercial axis, known as Esvak-ı Sultani, which once stretched along Çarşı Street, has largely been damaged and has lost its physical integrity. In the past, this commercial area functioned as an important trade center hosting the small Kuyumcular Bazaar alongside religious and communal structures such as mosques, churches, fountains, and baths. The presence of these buildings has made significant contributions to the city's cultural and economic life as an integral part of its historical fabric, while forming the main elements of the cultural heritage of the region. However, the fact that these buildings, today, have become dysfunctional and have lost their structural integrity to a significant extent brings not only a physical destruction but also a risk factor threatening the identity and historical richness of the city.

The increasing destruction accelerates the loss of the historical texture and negatively affects the cultural landscape of the region. In addition, these structures have become vulnerable to environmental risks due to prolonged neglect and lack of proper maintenance efforts. Structural weakness, in particular, diminish their resilience to natural disasters, which creates a risk of collapse and a safety hazard for the surrounding areas.

In this context, a comprehensive restoration and rehabilitation project must be implemented to preserve the historical heritage of Esvak-ı Sultani. These works should aim not only to ensure the physical integrity of the existing buildings but also to revitalize the historical, cultural and economic potential of the region. The conservation projects to be undertaken will play a vital role in raising social awareness by contributing to the sustainable development of the region while bringing the cultural heritage of the past to the present.

3.1. Existing Structures and Structural Remains in the Urban Archaeological Site

In this study, the existing structures and structural remains in the urban archaeological site, which reflect the historical and cultural value of the region, were examined in detail. Specifically, the arched structure and tol structure on Çarşı Street, leading from the east of Erhan Street, and Hacı Ahmet Efendi Fountain located on Karataş Street were included in the scope of the analysis. In addition to the physical conditions of the buildings, understanding their historical context and evaluating their spatial relations within the city constitute an important part of this process.

The arched structure and the tol structure, with their architectural features and location, formed an important part of the commercial and socio-cultural activities of the past, which are considered as examples reflecting the construction culture of the period, particularly in their use of local building materials and techniques. Although these buildings have lost their historical functions, they continue to be important elements of the historical and aesthetic texture of the region.

Hacı Ahmet Efendi Fountain, located on Karataş Street, draws attention as an important example of public infrastructure that sheds light on the social history of the region. This fountain, serving functions such as water supply and social interaction, is considered not only from an engineering and architectural point of view but also as a structure addressing the social needs of its time. The architectural details, ornamental elements and building materials of the fountain reflect the aesthetic and technical understanding of its period (Figure 14).

Figure 14. Location of the Arched Structure, Tol Structure and Hacı Ahmet Efendi Fountain [25]

3.1.1. Architecture of the Arched Structure

Arched structure is located on Çarşı Street, with Karabey Street extending beyond it, leaning against the slope to the east and built in a contiguous order, creating a building complex approximately 47 meters in width. The lower level contains three independent arches, while the upper level features the remains of three interconnected arches and two semicircular arches. The arch spans vary between 340 cm, 360 cm and 395 cm at the lower level while at the upper level between 280 cm and 300 cm. The heights, on the other hand, range from 235 cm to 380 cm at the lower level while at the upper level from 270 cm to 300 cm. Rough dressed stone was used on the main walls and cut stone for the arches (Figure 15,16).

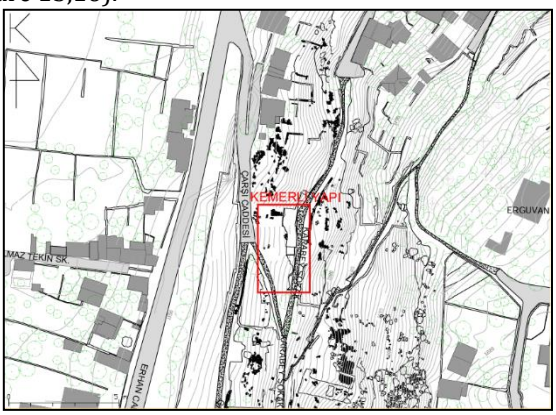

Figure 15. Location of the arched structure [25]

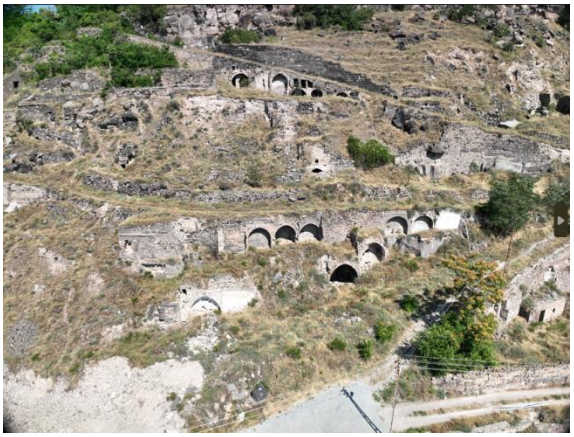

Figure 16. Arched Building General View [25]

Some of the arches at the lower level are enriched with niches, and there is a niche measuring 100x105 cm on the north wall of the central arch. The upper coverings are generally in the form of barrel vaults or semicircular arches. In the remains located at the upper level, the arch spans are range from 210 cm to 300 cm, and the structures were similarly built with rough masonry stones. Due to the destruction, a significant portion of the structure has been buried and their floors and upper coverings are sealed by soil fill. These structures feature a structural integrity enriched with interior spaces and rock-carved areas, showcasing remarkable details at both the lower and upper levels (Figure 17).

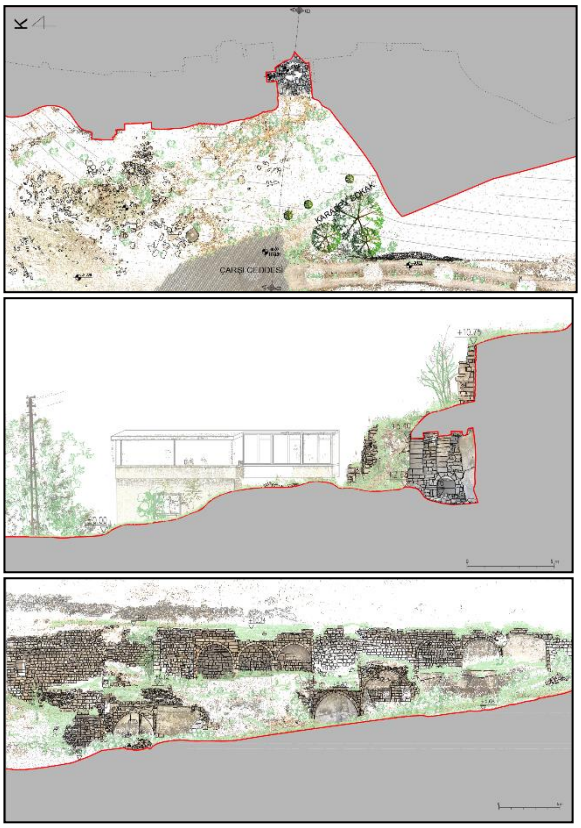

Figure 17. Arched Building +1.660 Elevation Plan, A-A Section and Façade Orthophoto [25]

3.1.2. Architecture of the Tol Structure

The Tol Structure is located on Çarşı Street, on a sloping land, and it is believed that there are remains of other buildings on it. The building is accessed through a garden wall that surrounds it on three sides. The eastern façade leans against the slope and the main walls of the neighboring structures continue to the north and east. The pathway to the east of the structure leads northward to Karabey Street and southward to Karaman Bayırı. The Tol Structure is considered to be a part of a building complex together with the neighboring remains.

The structure consists of two levels: an entrance and a basement. It has a rectangular plan, approximately 5 meters in width and 10 meters in length. The entrance opening measures 90x180 cm with a window above it measuring 60x120 cm. The interior was built of cut stone, with a vaulted barrel ceiling covering the upper space. (Figure 18,19).

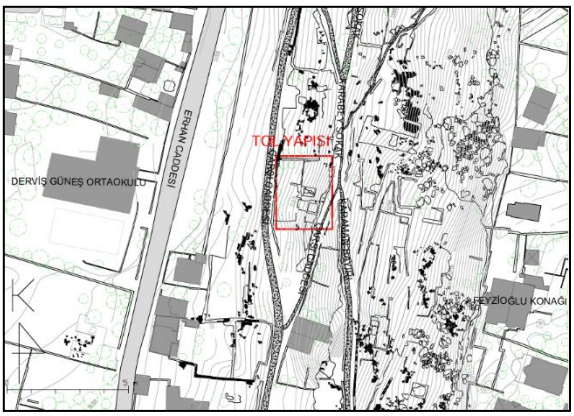

Figure 18. Location of Tol Structure [25]

Figure 19. Tol Structure General View [25]

A small storage area (alcove) located at the northwest of the structure is separated by an ornate arched opening, measuring 105x180 cm. The walls and the ceiling of the storage area are built with cut stone. On the eastern side, a passage in the ground leads to the cellar on the lower level through a staircase. The cellar has an oval plan measuring 240x550 cm and is covered with a vaulted barrel ceiling. There are two niches in the walls of the cellar (Figure 20).

Figure 20. Tol Structure -0.19 Elevation Plan, D-D Section and Façade Orthophoto [25]

The demolished stairs and the steps above the entrance found in the garden indicate the existence of another place at a higher level in the past. Rough masonry stone was used on the exterior of the structure and cut stone in the interior. However, some parts have been damaged due to serious destruction and soil fill throughout the structure.

3.1.3. Architecture of the Hacı Ahmet Efendi Fountain

Hacı Ahmet Efendi Fountain is located on a sloping land within a garden wall, bordered to the west by Beybağı Street and to the north and south Karataş Street. The fountain, with its eastern façade leaning against the slope, is part of a wall approximately 30 meters long, located southeast of the Han Mosque. According to the measurements, the fountain measures 2.35 m in width, 2.60 m in height and 1.28 m in depth (Figure 21,22).

Figure 21. Location of Hacı Ahmet Efendi Fountain [25]

Figure 22. Hacı Ahmet Efendi Fountain and LIDAR Scanning Process [25]

The fountain constructed from cut stone features a single facade with rounded arches. The niche, supported by two square plaster pillars, is covered by a half-dome constructed with a radial stone arrangement. The stone arrangement above the niche is also observed in the Göllü Fountain and the Gevher Nesibe Fountain in Kayseri. The fountain, which once had an inscription written in thuluth script, was damaged over time, lost its neighborhood identity due to the elevation of the road level and became non-functional (Figure 23).

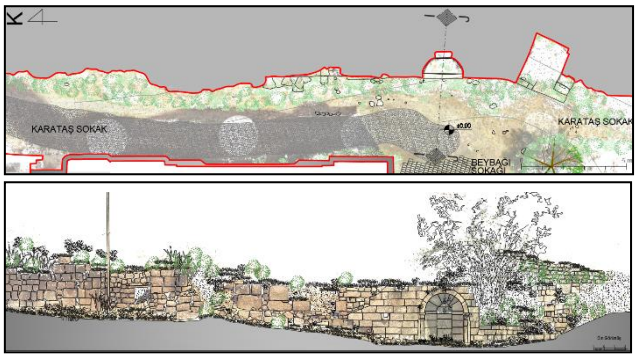

Figure 23. Hacı Ahmet Efendi Fountain +0.32 Elevation Plan and Façade Orthophoto [25,27]

4. Talas Urban Protected Area and Archaeopark Proposal with Sustainable Conservation Strategies

The conservation of archaeological sites and their integration into society is critical for the sustainable transmission of cultural heritage to future generations. Archaeoparks integrate the physical, cultural and environmental values of historical and archaeological sites with functions such as conservation, exhibition, education, tourism and recreation to raise awareness of cultural heritage at both local and global scales. Unlike traditional archaeological sites, archaeoparks serve the communities as publicly accessible, interaction-oriented, and multifunctional spaces [28,29]. Archaeoparks function as recreational areas and archaeological sites, offering spaces for rest and relaxation while providing physical and mental benefits. These areas, where archaeological heritage is integrated with sustainability and recreational activities, create a vibrant and dynamic environment by publicly exhibiting the settlement patterns of diverse cultures [9].

Talas Urban Protected Area, with its rich historical background and architectural legacy, offers an important potential for archaeopark development. This study presents a comprehensive framework of sustainable conservation strategies, design criteria, and management approaches for preserving Talas Urban Protected Area and organizing it as an archaeopark.

The emergence of archaeoparks began in Europe in the 19th century as a result of the increasing awareness of the past and efforts to preserve cultural heritage with the Industrial Revolution. The first open-air museum was established in the 1850s through a project involving reconstructions of prehistoric settlements. Skansen Open Air Museum, founded by Artur Hazelius in Stockholm in 1891, became one of the pioneering examples in this field. The Unteruhldingen Museum in Germany is another significant example of the exhibition of prehistoric remains [30]. In Türkiye, this concept gained prominence with Halet Çambel's Karatepe-Aslantaş Open Air Museum in the 1950s, attracting attention as a model practice for sustainable conservation and nature preservation approaches [31].

The planning, design, and management criteria are fundamental elements in the establishment of archaeoparks. During the planning phase, factors such as environmental sustainability, conservation, accessibility, and regional development are analyzed, and based on this, steps such as conservation, restoration, and visitor comfort are planned. During the design phase, experience-oriented approaches, entry and exit arrangements, tour routes, and creative experience zones are emphasized. Through emotional design, visitors are encouraged to form a connection with the space. At the management phase, an administrative framework is established to support local development, and a sustainable process is implemented with the collaboration of multidisciplinary experts [32,33,34]. Archaeological parks are planned and managed with the dual goals of conservation and providing societal benefits [35].

The preservation of archaeological sites and their integration with new functions play a crucial role in ensuring the sustainability of cultural heritage. Projects such as the DOMunder Museum, Triana Ceramic Museum, and Siyasa Archaeological Site are exemplary cases that demonstrate how modern design and technologies can be harmoniously integrated with archaeological sites. These projects preserve archaeological remains while offering visitors interactive and educational experiences, thereby carrying the values of the past into the future. Designs using contemporary materials and minimal intervention ensure that these spaces remain functional without damaging their original fabric. Such projects not only contribute to the preservation of archaeological sites but also enhance society's interest in cultural heritage [36].

4.1. Conservation Strategies in the Context of the Talas Urban Archaeological Site

The Talas Urban Archaeological Site offers significant potential for archaeological park development, given its rich historical background and architectural heritage. Sustainable conservation strategies, design criteria, and management approaches for the preservation and development of the Talas Urban Archaeological Site as an archaeological park need to be addressed and evaluated within a comprehensive framework.

Conservation strategies for the Talas Urban Archaeological Site should aim to preserve the historical identity of the area while contributing to the social, economic, and cultural development of the region.

Sustainable conservation strategies can be categorized under the following headings:

1. Systematic Documentation

In the process of cultural heritage preservation, documenting the current state in detail is a critical step. This phase includes:

- Digital and Traditional Methods: Detailed data collection through 3D modeling, photogrammetry, orthophoto analysis, and ground-penetrating radar technologies.
- Mapping and Database: Systematic mapping of historical structures and archaeological remains in the region and storing them in a digital database.

2. Structural and Reinforcement Works

- Structural Strengthening: Reinforcing existing structures with materials and techniques compatible with the historical fabric.
- Disaster Management: Implementation of terrace works and safety measures to mitigate landslide risks in rocky areas.

3. Refunctionalization of Historical Structures

- Functional Compatibility: Re-functionalizing monumental structures such as Ottoman Street, Tol structures, and churches as exhibition areas, cultural centers, or social event spaces, without damaging the historical fabric.
- Cultural Route Integration: Enhancing visitor potential by linking the proposed archaeological park with the Kayseri Cultural Route.

Design Criteria

1. Talas Spatial Organization and Tour Routes

In the design of Talas Archaeological Park, it is proposed to integrate monumental structures such as Ottoman Street, Tol structures, and churches into a thematic tour route. This route would be complemented by walking and cycling paths to enhance the visitor experience of the archaeological sites.

2. Education and Interaction-Oriented Areas

- Augmented Reality (AR) Technology: Allowing visitors to engage more deeply with the historical context through 3D virtual representations of past settlements.
- Experimental Archaeology Areas: Designated spaces where archaeological techniques and historical production processes can be actively experienced.

3. Social and Recreational Areas

- Open-Air Theater: Designing an amphitheater to host cultural events.
- Social Facilities: Museums, exhibition areas, and interactive digital walls.

4. Ecological and Sustainable Approaches

- Energy Efficiency: Environmentally friendly infrastructures such as solar panels and rainwater harvesting systems.
- Preservation of Natural Landscape: Protecting local vegetation and maintaining natural balance in landscape design.

Management and Sustainability Approach

To successfully implement the Talas Archaeological Park Project, an interdisciplinary management model must be adopted. In this context:

- Local and National Collaborations: A multi-stakeholder management system involving municipalities, universities, and non-governmental organizations.
- Training and Awareness Programs: Organizing training programs and events to enhance local community participation in the project (Figure 24,25).

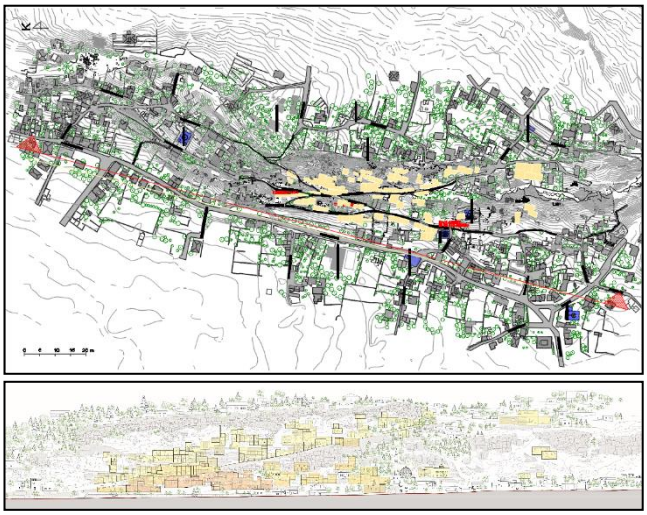

Figure 24. Proposal for the Site Plan and Silhouette Restoration of Talas Urban Archaeological Site [25]

Figure 25. Proposal for the Archaeological Park of Talas Urban Archaeological Site [25]

5. Conclusion and Evaluation

This study emphasizes the need of a holistic and sustainable approach to the preservation and transmission of the urban and archaeological site of Talas to future generations. Talas stands out as a valuable heritage area, having hosted various cultures throughout history and preserving its rich past into the present. However, issues such as the destruction of traditional structures, insufficient documentation of archaeological remains, and inadequate conservation efforts are among the key problems threatening the future of this area. Therefore, the development of effective conservation strategies, documentation of existing structures, and the scientific evaluation of archaeological findings are crucial.

In this context, historically and architecturally significant structures such as the Arched Structure, Tol Structure, and Hacı Ahmet Efendi Fountain in Talas have been comprehensively documented and evaluated, and

suggestions have been made for their integration into urban life. These structures, specifically, not only serve as heritage elements that establish a connection to the past but also play a critical role in preserving the cultural identity of the region and transmitting it to future generations. However, the spatial changes resulting from the modernization process and the destruction of the traditional fabric make it necessary to refunctionalize these areas through sustainable conservation strategies.

The archaeological park proposal is presented as both a scientific and practical solution for preserving and promoting Talas's historical and cultural heritage. This proposal envisions the area not only as a conservation site but also as a dynamic space where the public can engage with the past and use it for educational and cultural activities.

The main elements of the archaeological park proposal can be summarized as follows:

Cultural and Educational Areas: Including a museum, art gallery, archaeology workshops, and cultural event spaces.

Access and Connections: Integrating the area harmoniously with the city and surrounding areas through bicycle paths and walking trails.

Sustainable Conservation and Landscape Management: Implementing design principles that are environmentally sensitive and compatible with the natural landscape.

Technological Applications: Providing visitors with an interactive experience by creating 3D representations of historical settlements using augmented reality (AR) and virtual reality (VR) technologies.

Sustainable Conservation and Risk Management: The natural disaster risks in the region, especially the landslide hazard, must be addressed as a priority issue in the conservation of the site. In this regard, the construction of retaining walls, reinforcement works in rocky areas, and strengthening of buildings in risky zones are necessary. Additionally, protecting these areas as reserve zones is crucial for further investigation using advanced excavation techniques in the future.

In conclusion, the Talas Urban Archaeological Site should not only be preserved as a historical site but also transformed into a cultural center where the community can engage with the past. This process should begin with the documentation, reinforcement, and implementation of sustainable conservation measures for the historical structures. Through the archaeological park proposal, the historical and cultural heritage of Talas can be transformed into a space where both the local community and visitors can thoroughly experience it. Furthermore, Talas's historical richness can be carried into the future through conservation and management strategies supported by scientific methods, positioning the site as an exemplary model for cultural heritage preservation on an international scale.

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Author contributions

Fatma Güler: Conceptualization, Methodology, Field study, Discussions, Writing-Reviewing and Editing. **Leyla Kaderli**: Conceptualization, Methodology, Field study, Discussions, Writing-Reviewing and Editing.

Conflicts of interest

The authors declare no conflicts of interest.

References

1. Arkeolojik Mirasın Korunması ve Yönetimi Tüzüğü, 1990. https://www.icomos.org.tr/
2. Belge, B. (2004), Çok Katmanlı Tarihi Kent Merkezlerinin Yönetimi: Kentsel Arkeoloji ve Planlama, Planlama, Cilt 4, 48-56.
3. Karakul, Ö. (2009). Değişim, Süreklilik, Uyum Üçgeninde Tarihi Çevrede Yeni Yapı. Dosya, 1 (14): 50-57.
4. Saraç, Ö., Tanrısever, C. (2018). Kastamonu'da yeniden işlevlendirilen tarihi Yapıların Sürdürülebilirliğe Etki Eden Çekicilik Faktörleri. Anatolia: Turizm Araştırmaları Dergisi, 2 (29): 151-163.
5. Büyükmıhçı, G., Kılıç, A. (2015). Tarihi dokuda yeni yapı uygulamaları: Yasal ve eylemsel sınırlar. 9. Uluslararası Sinan Sempozyumu 'SINIRLA-MA', 125–132. Edirne: Trakya Üniversitesi.
6. URL 1: https://www.icomos.org.tr/
7. Doğru, M., Büyüksaraç, A., Aksoy, E., Karahan, R., Yakar, M., Ekinci, Y. L., Toprak, A. S. (2017). Dünya Mirası Ahlat Selçuklu Mezarlığı İle Kümbetlerin Lidar Ve Jeofizik Yöntemlerle Araştırılması, Yüzey Ve Yüzeyaltı Yapı Modellemesi *International Journal of Turkish Literature, Culture, Education*, *6*(1).
8. Kaderli, L. (2014). Kültürel Miras Koruma Yaklaşımlarının Tarihsel Gelişimi. Tüba-KED, 12: 29-43.
9. Tuna, A. (2019). Arkeolojik Sit Koruma Pratikleri: Türkiye ve ABD Karşılaştırması, Gaziantep University Journal of Social Sciences, 18 (2), 724-735.
10. Ahunbay, Z., (2010). Arkeolojik Alanları Koruma Sorunları Kuramsal ve Yasal Açılardan Değerlendirme, Türkiye bilimler akademisi kültür envanteri dergisi, (8), 103-114.
11. Dönertaş, P., Şener, Y. S. (2023). Kentsel Arkeolojik Sitlerin Tanımlanması ve Kavramsal Olarak İrdelenmesi. Akademik Sanat (20), 62-75.
12. Büyükmıhçı, G., Yılmaz Bakır, N., Eldek, H. (2009). Talas: Çok Kültürlü ve Çok Katmanlı Bir Anadolu Yerleşmesi, Kentsel Kültür Varlıkları Envanter Çalışması, TÜBA Kültür Envanteri Dergisi, 7, 25-44.
13. Eldek Güner, H., Kozlu, H., Büyükmıhçı, G. (2019). Sokak Sağlıklaştırma Proje Deneyimi Kayseri-Talas Kazım Paşa Caddesi, Online Journal of Art and Design, 7(1), 184-201.

14. Kuban, D. (2000). Tarihi Çevre Korumanın Mimarlık Boyutu. Yapı-Endüstri Merkezi Yayınları, İstanbul, 207 s.
15. Tanaç Zeren, M., Uyar, O. (2010). Arkeolojik alanlarda koruma çatıları ve gezi platformlarının düzenlenmesi kriterleri. DEÜ Mühendislik Fakültesi Mühendislik Bilimleri Dergisi, 12 (2): 55-64.
16. Karataş, L., Alptekin, A., & Yakar, M. (2022). Mardin Tarihî 1. Cadde Yayalaştırma ve Sokak Sağlıklaştırma Projesinin Mekânsal ve Sosyokültürel Etkileri. *Türkiye Arazi Yönetimi Dergisi*, *4*(2), 82-89..
17. Aslan, Z. (1997). Protective structures for the conservation and presentation of archaeological sites. Journal of Conservation and Museum Studies, 3: 16-20.
18. Büyükmıhçı, G., Kaderli, L. (2016), Arkeolojik Alanların Çağdaş Kent Mekânı ile Bütünleştirilmesi Mümkün Müdür?, Uluslararası Medeniyet, Şehir ve Mimarli Sempozyumu, 12-14 Nisan, İstanbul: Türk Tarih Kurumu.
19. Büyükmıhçı, G., Kaderli, L. (2020), Kentsel Arkeolojik Alan Koruma Çalışmalarının Düşündürdükleri, Mimarlık Bilimlerinde Akademik Çalışmalar, (169-194), İstanbul: Livre De Lyron.
20. Naycı, N. (2014). Arkeolojik Alan Yönetiminde Sürdürülebilir Yaklaşımlar: Aspat (Strobilos) Yönetim Planı Çalışmaları METU Journal of the Faculty of Architecture, 31(2), 189–207.
21. Tunçer, M. (2007). Korumanın Yasal, Yönetsel, Planlama ve Kültürel Boyutları: Perge-Antalya-Kaş-Patara Koridorunda Korumanın Son 15 Yılının Değerlendirilmesi, Sonuçlar ve Öneriler, Medi3ology2: Coastal Cities, Culture, Conservation, International Gazimağusa Symposium, Doğu Akdeniz Üniversitesi Yayınları, Kuzey Kıbrıs.
22. Tuna, N. (2000), Kentsel Arkeoloji Üzerine, İdol Arkeoloji ve Arkeologlar Derneği Dergisi, Ekim-Kasım-Aralık (7), 7-14.
23. Güleç, S. A., Canan F. & Korumaz, M. (2006). Analysis of the units contributing climate comfort conditions in outdoor spaces in Turkish traditional architecture. PLEA 2006- The 23rd Conference on Passive and Low Energy Architecture, 6-8 September 2006, Geneva. Switzerland: University of Geneva and University of Applied Sciences of South-West Switzerland. 103-110.
24. https://cbs.kayseri.bel.tr/
25. Güler, F. (2024). Kentsel Arkeolojik Sit Alanlarının Arkeopark Olarak Değerlendirilmesi: Kayseri Talas Örneği, Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Yüksek Lisans Tezi, Kayseri.
26. Kozlu H. H., Büyükmıhcı G., Karahan S., Kılıç A. (2018). Talas Amerikan Koleji "Kız Okulu Binası" koruma çalışmaları. Restorasyon ve Konservasyon Çalışmaları Dergisi, 21(1), 41-54.
27. Güler, F., Kaderli, L. (2023). Güncel Belgeleme Yöntemlerinin Karşılaştırılması: Talas Hacı Ahmet Efendi Çeşmesi, 569-577. 12. Uluslararası Mühendislik Mimarlık ve Tasarım Kongresi, 23-24-25 Aralık, İstanbul.
28. Kwas, M. L., 1986. Archeological parks. Department of Conservation, Division of Parks and Recreation.
29. Salinas, C. E. ve Osorio, J. A., 2006. Turismo y Sustentabilidad: de la Teoría a lapráctica en Cuba. Cuadernos de Turismo. Universidad de La Habana-Universidad de Murcia, 201-221.
30. Keskin, Y. ve Tanaç Zeren, M. (2018). Arkeolojik alanlarda bir sunum yöntemi olarak arkeoparklar. Mimarlık Bilimleri ve Uygulamaları Dergisi (MBUD), 3 (2), 110-124.
31. Eres, Z. (2010). Tarihöncesi Kazı Alanlarında Koruma Ve Sergileme Kavramının Gelişimine Kısa Bir Bakış, TÜBA-KED 8, 119-130.
32. Nigro, F., 2002. Cultural Heritage Planning and Management for Development: The Palestinian Archaeological Park of the Jericho Oasis, Rome, 191-208.
33. Eres, Z. (2001). Tarihöncesi kazı yerlerinin kültür sektörüne kazandırılması için deneysel bir proje önerisi: Kırklareli- Aşağı Pınar Açık Hava Müzesi. Arkeoloji ve Sanat Dergisi, 23, 101-102.
34. Tuna, A. ve Erdoğan, E., 2016. Arkeolojik sitlerin sürdürülebilirliği kapsamında arkeolojik parklar, Tekirdağ ziraat fakültesi dergisi, 13 (02), 110-122.
35. Güler, F., & Kaderli, L. (2024). The Concept of Archaeopark in the Context of Conservation of Urban Archaeological Sites. In Innovation in Design: Methods and Technology for Progressive Practice and Research, 349-374, Livre De Lyon.
36. Akşehirlioğlu, A., Uçar, S., ve Büyükmıhçı, G., (2024). Arkeolojik Alanlarda Yeni Yapı Tasarımlarının Koruma İlkeleri Çerçevesinde İncelenmesi, Korumada Modern Yaklaşımlar ve Söylemler, (15-48), İstanbul: Livre De Lyron.
37. Venedik Tüzüğü, 1964. https://www.icomos.org.tr/
38. Kaderli, L. (2021). Documentation methods from tradition to the present: case study cappadocia.advanced Advanced LiDAR,1 (1), 18-26.