

## EVALUATION OF THE EFFECT OF CASTLES ON URBAN LANDSCAPE IN TERMS OF LANDSCAPE ARCHITECTURE

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**ABSTRACT.** Historical urban areas play an important role in preserving cultural memory and reflecting the identity of the city, transferring the social, cultural and spatial dynamics of the past periods to the present. Especially castles have been decisive as strategic and spatial focal elements in the establishment of cities throughout history. In this context, the preservation of cultural heritage requires considering not only the physical structure but also the integrity of the structure with its cultural environment and the sustainability of the landscape. In this study, the spatial effects of "Castles" in the urban area, their importance as living monuments of history were revealed and their sustainable use was evaluated in terms of landscape architecture, taking into account today's needs. In this context, Çanakkale Çimenlik Castle and Kilitbahir Castle were determined as the main material of the study. These castles have been compared to Edinburgh Castle (Scotland) and Fort St. Elmo / Valletta Castle (Malta), which set international examples and were opened for use with intensive conservation principles. The selected castles were found important in terms of their relationship with the natural geography and their use with intensive conservation principles. In the study, comparative evaluations were made and it was aimed to protect the resources of the study areas and to use them sustainably. The locations, importance and relations of the determined castles with the urban texture were found suitable for comparative evaluation and analyzed with a table. As a result of the study, the potentials and challenges of Çimenlik and Kilitbahir castles in Turkey in terms of sustainable use were discussed by taking these international examples as a reference.

**Keywords:** Çimenlik Castle, Kilitbahir Castle, sustainability, urban identity, tourism-recreation

### INTRODUCTION

Historical cities still carry the traces of life and artifacts of people and creatures that have lived there for centuries [1]. By transmitting unwritten knowledge about the past to the present, historical urban areas play a crucial role in preserving cultural memory and ensuring intergenerational continuity [2].

The most important element that binds the individuals of a society together is their common past. The most concrete examples of their common past are the places they live in and the cultural values they have [3]. These values are reflected in the spaces in historical cities. A historical event or culture of life can only be adequately understood and internalized if the physical space in which it is located reflects that period [4]. In addition, the formation of historical environments and the social, cultural and spatial dynamics of past periods played a role. One of the strongest reflections of these multi-layered values is observed with castles. Castles are the most important focal element of cities as they have

been both strategically and spatially effective in the establishment of cities throughout history [5].

Castles are structures with strong walls built at strategically important points in order to protect from external threats and provide defense [6]. In the historical process, defense needs have been decisive in shaping the urban fabric through castles and environmental arrangements [7]. In this context, castles should be considered not only with their military and architectural functions; They should be considered as basic hopes that reflect the identity, memory and cultural landscape of the city through the relations they establish with the environment in which they are located.

Castles and their surroundings are tangible reflections of the cultural landscape shaped by the historical process. Their geography and environmental impact have also been effective in the formation of the settled cultural identity, together with the spatial relationship that castles have established with cities. Cultural heritage, beyond being a remnant of the past, is a value that keeps the identity of today's cities alive and ensures its continuity. As Ashworth (2013) states; It plays a role in the holistic development of the cultural environment by contributing to elements such as environmental quality, local identity and space of cultural heritage [8]. However, it is observed that physical structures are sometimes prioritized in the protection of historically important settlements, while the environmental and social context is not sufficiently taken into account [9]. However, the protection of cultural heritage requires considering the integrity of the building with its environment. For this reason, in the processes of conservation and evaluation of castles, the interaction of the building with the cultural environment, its contribution to the local identity and the integrity of the landscape should be taken into consideration.

The aim of this study is to evaluate the conservation, use and sustainability potentials of Çimenlik and Kilitbahir castles in Çanakkale and to discuss this evaluation in comparison with international examples. In this context, Edinburgh Castle (Scotland) and Fort St. Elmo / Valletta Castle (Malta), which stand out with their strong relationship with natural geography and their re-functioning and reopening in line with intensive conservation principles, constituted the main reference points for the study. The locations of the selected castles, their historical importance and their relations with the urban texture were evaluated comparatively and analyzed with a table.

## **MATERIAL AND METHOD**

The material of the study consists of Çanakkale Çimenlik and Kilitbahir Castles, which have significant spatial effects on the urban landscape. These two castles played an important role in the establishment of the city of Çanakkale and the defense of the Bosphorus from enemy ships. The urban area of Çanakkale started to develop in the form of neighborhoods around Çimenlik castle with the construction of the castle by Fatih Sultan Mehmet in the 14th century. Kilitbahir Castle was established on the opposite shore of Çimenlik Castle, which is located in the narrowest part of the Bosphorus, and a small settlement center was formed around it, which is a protected area today.

In the method of the study, a comparative method was used for the spatial and usage analysis of Çimenlik Castle and Kilitbahir Castle. In this context, Fort St. Elmo / Valletta Fortress (Malta) and Edinburgh Castle (Scotland) were chosen as the comparison area, taking into account their international importance, geographical location, tourism-recreational relations with the city, and the values they bring to the city identity. The castles selected for comparison were preferred because their locations were similar to the study material in terms of their connections with the city. The uses and conservation features of these international castles were examined and suggestions were developed for the sustainable use of study materials for the future. The selected examples constitute suitable cases for comparative evaluation.

## FINDINGS

### *Edinburgh Castle*

Edinburgh is a capital city in southeastern Scotland, located on the east coast of the country and on the shores of a wide bay connecting the region with the interior (Figure 1). Edinburgh Castle is located on a volcanic rock bedrock mound. This geological formation was shaped by the glacial flow, which indicates that the region was covered by a thick layer of ice less than twenty thousand years ago [10]. The geological mass formed provided the castle with a natural barrier against attacks from the west with high cliffs, while its sheltered ridge extending to the east created an ideal location for settlement and defense.

The castle officially became a city center in the 11th century. Established as a royal center since the reign of King Malcolm III, the castle formed the core of an urban fabric that developed around it [11].



*Fig. 1. Edinburgh Castle country and city location map*

### *Impact on Urban Landscape*

The natural protection offered by the castle attracted people to this region from very early times. Archaeological evidence suggests the presence of human habitation in the area from the Late Bronze Age and Early Iron Age onwards [12]. At the same time, this organic mass has been directly effective in determining the main direction of the city, street orientations and settlement density [11] (Figure 2).



*Fig. 2. Edinburgh Castle's location in the city [27]*

More than just a singular structure located within the city, Edinburgh Castle is the primary element that fundamentally shapes Edinburgh's urban morphology and visual identity [13]. As both a physical starting point and a perceptual focal point, the castle has been the defining element of the urban landscape [10].

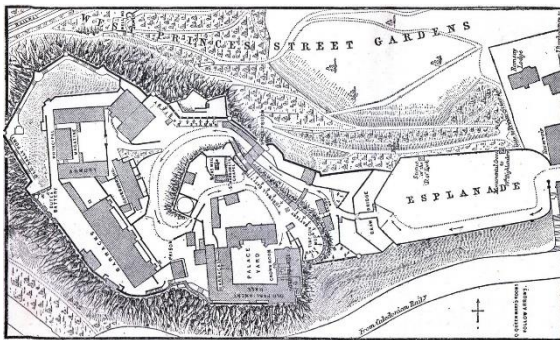
Edinburgh Castle's most significant transformation in the modern period has been its evolution from its military functions to a symbolic monument that houses Scotland's

national identity, memory and heritage. The castle's last important military role was during the rebellions that broke out in the 18th century [14]. After this event, the function of the castle began to change; In the 18th century Age of Enlightenment, the castle was opened to civilian use by turning it from a military area into a "promenade for citizens" with the idea of "improvement" [14].

### *Re-functioning*

The transformation of the castle from a barracks to a monumental structure was supported not only by the change of cultural context, but also by the reinterpretation of the physical multilayeredness of the structure. The architectural plan of Edinburgh Castle makes this transformation spatially legible. The medieval core located at the upper levels of the castle plan exhibits a structure overlapping with the early modern defensive lines and terraces located at the lower levels (Figure 3, 4). This stratification shows that the castle has been constantly rearranged throughout history in order to respond to both military and political function changes.

The transformation process of Edinburgh Castle started in the early 19th century with the attribution of new meanings to the castle due to the change in cultural and social thought dynamics.



**Fig. 3.** *Edinburgh Castle plan* [28]



**Fig. 4.** *Three-dimensional model of the castle* [29]

Those who repurposed the castle's narrative in the Victorian era not only preserved the structure, but turned it into 'spaces for reimagining Scottish identity'. The restorations were not only physical, but also transformed into a collective space that meant to reflect certain historical narratives and national identity, such as the revival of Scotland's history and religion, the phenomenon of heroism and the representation of the power of the Scottish kingdom [14]. A monument built in memory of the Scottish soldiers who lost their lives in the First World War has added new meanings to the castle such as memory and respect, not only as a place of military victories but also as a place of commemoration of social mourning. Castle with monument; It has evolved into a multi-layered place of memory, where the Scottish nation's search for identity, heroic narratives, and tragedies across different periods are embodied.

### *Conservation and management practices*

Edinburgh Castle is protected by a planning based on the cooperation of different institutions. The conservation approach is basically carried out by the joint work of the public, private sector and civil society. In total, 3 different institutions are interested. The first is the institution in the Scottish Government and its role is to manage changes to registered buildings and ensure the protection of national monuments. The second is the council in the local government and carries out the planning. The third is independent charities and undertakes duties such as supervising practices and providing training [14].

Edinburgh Castle is divided into five zones to facilitate management and ensure preservation: ceremonial sites, visitor areas, memorial area, museum grounds, and military areas. Thanks to this division, historical values are preserved, visitors can travel safely and orderly, and the management is to make it more systematic.

#### *Tourism and visitor experience*

One of the most prominent roles of Edinburgh Castle today is that it is the leading tourist destination in Scotland and the United Kingdom. Within the scope of the castle visit strategy, different themed experience areas were created with the exhibition of symbolic products, multilingual audio guides, three-dimensional modeling, periodic military band festivals, historical site reenactments, cafes and shops serving visitors (Figure 5). This strategy offers visitors the opportunity to get to know the history and cultural values of the castle closely, providing fun and interactive experiences.



**Fig. 5.** *Edinburgh Castle accompanied by visitors [30]*

#### *Transportation*

Edinburgh Castle's central location provides significant advantages in terms of access by foot and public transport; The castle can be reached by walking along the street axis, and city bus and train services can be used. The bridge and city road, built to facilitate access, facilitate visitors' access to the castle.

#### ***Çimenlik Castle***

Çimenlik Castle, also known as Kale-i Sultaniye, was built by Fatih Sultan Mehmet (Mehmet II) between 1462 and 1463. The primary construction purpose of the castle is to effectively control the Dardanelles and to be aware of and manage any threat that may come from the sea. For this purpose, it was positioned in the narrowest position of the Dardanelles, directly opposite the Kilitbahir Castle on the Rumelian side (Figure 6).

Çimenlik Castle is a work that reflects the simple and function-oriented structure of 15th century Ottoman defense architecture. It is an example of the defense approach developed during the reign of Fatih. Every architectural element featured in Çimenlik Castle is designed to maximize its defensive power.



**Fig. 6.** *Çimenlik Castle country and city location map*

Çimenlik Castle, which has a rectangular plan of approximately 100x150 meters, consists of different functional units integrated with each other. While the main defense line of the castle is formed by the outer walls and towers, the main tower in the center stands out as the most protected structure. The circular armory where ammunition is stored supports the castle's defensive function, while two masjids from the Fatih and Sultan Abdülaziz periods add both a religious and cultural dimension to the castle. The bastion added to the western façade and the modern defense platforms added to the castle increase the strategic value of the building. In Çimenlik Castle, the mixed wall technique, which was widely used in Ottoman military structures and facilitated construction with its functionality, strengthened the strength of the castle. The materials used in its design reflect an engineering approach that prioritizes the durability of the structure.

#### *Impact on urban landscape*

Çimenlik Castle has developed a continuous interaction with the surrounding urban fabric over time. The construction of the castle was a decisive starting point in the formation of Çanakkale and shaped the development direction of the city (Figure 7).



**Fig. 7.** *Çimenlik Castle image taken from Kilitbahir castle*

The first settlements were established around the castle in order to accommodate the military and civilian population; these settlements turned into the first neighborhoods of the city and started the natural growth process of Çanakkale. In this respect, Çimenlik Castle is not only a defensive structure, but also an important structure that was effective in the emergence of the city and contributed to the formation of urban identity [23].

Today, Çimenlik Castle stands out as an important cultural landscape element with its historical value, location and open space nature. However, the intensive construction of its surroundings over time and its transformation into the commercial center of the city caused the castle to remain in the background within the urban texture. This change caused the building to lose its visibility among the surrounding tall buildings and weakened its visual relations with the city (Figure 8, 9).



**Fig. 8.** *Çimenlik Castle is located in the city [31]*



**Fig. 9.** *Çimenlik Castle perspective view [32]*

### *Re-functioning*

Today, Çimenlik Castle stands out as an important cultural landscape element with its historical value, location and open space nature. However, the intensive construction of its surroundings over time and its transformation into the commercial center of the city caused the castle to remain in the background within the urban texture. This change caused the building to lose its visibility among the surrounding tall buildings and weaken its visual relations with the city. It is a place frequented by those who come to the city for touristic purposes and a place to promote the Çanakkale war with visual materials. In the park area of the castle, there are educational promotions that will attract the attention of children.

The preservation and re-functioning of Çimenlik Castle and its opening to the public as a military museum allow the history of both the castle and the Dardanelles to be experienced directly. The historical sea vehicles exhibited in the area and the educational content introducing the maritime culture have strengthened the cultural and instructive nature of the castle. Çimenlik Castle has the character of an open-air museum with its exhibition elements and events; it also functions as a public space, hosting various cultural activities.

With the restorations made, the castle was repaired by remaining faithful to the building architecture and uses were brought to its surroundings by considering it holistically. Public areas such as cafeteria, exhibition hall, sales unit, promotion of the ship used by Atatürk have been added and transformed into a place that can be integrated into the daily life of the city.

### *Conservation and Management*

While preserving historical military sites and opening them to the public offers important opportunities for the preservation of cultural heritage, it also brings with it various challenges such as security and access. Çimenlik Castle is one of the examples where these opportunities and challenges are evaluated together. Today, it is used as a military museum under the supervision of the Dardanelles Strait Command. Thus, it can be visited while preserving both its historical and military identity. Although it is operated by the military administration, it restricts the social use of the area and its integration with the city.

Çimenlik Castle has undergone many repairs and arrangements throughout history [24]. In the 16th century, during the reign of Kanuni Sultan Süleyman the Magnificent, the entrance tower was renovated, and a masjid was added to the building with the restorations made afterwards. In the 19th century, some of the outer walls were removed and the current bastion was built in their place. By the 20th century, the castle was officially declared a historical site and taken under protection. These processes show that the castle was

reconsidered in line with changing needs and its identity that has survived to the present day was shaped by these interventions.

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Çimenlik Castle has recently undergone extensive restoration and renovation work to preserve its historical texture and enhance the visitor experience [25]. During these works, it was aimed to increase the value of the castle by adding new functions. Following its transfer to the military institution, its interior and exterior spaces were structurally rearranged and informative equipment was added.

#### *Tourism and visitor experience*

Çimenlik Castle stands out as one of the most popular cultural venues in the city. The elements that attract visitors vary, each offering different experience opportunities. In particular, the one-to-one scale model of the Nusret Mine Layer, which is the symbol of the Çanakkale Naval Victory, has both symbolic value and creates a historical and emotional interaction point for visitors.

Since the castle is located at the narrowest point of the strait in terms of strategic location, it is very impressive in terms of watching the opposite shore and the view of the Bosphorus. The 'Dardanelles Strait', seen from the walls of the castle, not only provides visitors with an aesthetic visual experience but also allows them to grasp the historical and strategic importance of the castle.

Historical war objects, artillery from different periods, mines and other military equipment offer visitors the opportunity to experience the atmosphere of war and the process of technological development in a tangible way (Figure 10).



*Fig. 10. Çimenlik Castle with exhibition objects [33]*

In a section separated from the park area of the castle, concerts and other cultural events held in the summer months transform the area into a dynamic place that integrates with the city and lives. The fact that these activities are more and that they show continuity throughout the year will enable the citizens to own the area.

#### *Transportation*

Çimenlik Castle is located in the center of Çanakkale and is located in an area that can be easily accessed by visitors on foot. It is possible to reach the region by public transportation, especially city buses or by using private vehicles. However, the fact that the signs and directions on the roads

leading to the museum are not sufficiently readable makes it difficult for foreign visitors to access the venue and causes disruptions in city traffic. In addition, the floor design of the area does not offer equal and appropriate accessibility for different user groups.

### *Valletta / St. Elmo's Castle*

Valletta Castle was built following the Great Siege of Malta in 1565, on a peninsula separating two natural harbours. Both military and political factors played a role in the construction of the castle [15].

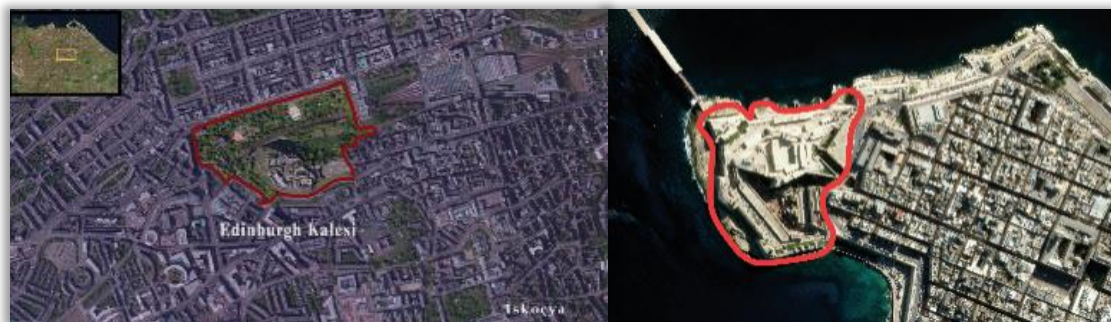


**Fig. 11.** *Valletta/St. Elmo Castle country and city location map*

The geographical structure of the peninsula on which Valletta Castle was built is such that it is surrounded by the sea on three sides and has a high slope [16] (Figure 11). This location gave the castle a natural defensive advantage against enemies.

### *Impact on urban landscape*

Valletta Castle existed intertwined with the city. The city was planned with a defensive grid/axis layout, and the bastion-street relationship of the castle is an example of the integration of defense needs with urban planning (Figure 12). The gaps, cellars, road connections and squares created by the castle walls also had a decisive effect on urban life [16]. This allowed the walls to be considered not only as physical barriers but also as essential elements of social memory and urban imagery.



**Fig. 12.** *Valletta/St. Elmo's Castle location map [34]*

### *Managment and re-functioning*

Within the scope of the project initiated for the protection of the historical site, Valletta Castle was researched and documented and the restoration process of the castle was completed [15]. The repair and restoration process was recorded with documents; Thus,

the technical and historical traces of the interventions were preserved in a way that will serve as a reference for future studies.

The re-functioning efforts aimed to increase the economic and cultural potential of the walls and contribute to cultural tourism. The walls and areas inside the castle were restored and opened to the public, and Valletta Castle functioned as a museum. It includes exhibition halls, a theater, a library and an observation terrace with panoramic views, and the values that are symbols of the city have been restored and represented in the exhibition [15]. In this way, the castle functions as a place that tells not only its military history, but also its relationship with the identity of the city (Figure 13, 14).



**Fig. 13.** Valletta/St. Elmo's Castle perspective with the city [35]



**Fig. 14.** Castle perspective [36]

#### *Tourism and visitor experience*

Valletta's characteristic skyline starts from the main façade of the city and continues slowly towards Fort St. Elmo, preserving the spirit of the city largely unchanged throughout history. One of the features that has earned the city registered as a UNESCO World Heritage Site is that the walls are modeled in accordance with the natural topography [15]. The Valletta fortifications spatialize sections of history from the time of the Ordre of St. John to the British period, reinforcing Malta's historical narrative and urban identity. The grounds at Fort St. Elmo offer visitors the ability to see tangible evidence of historical events, making the city's narrative more realistic.

As part of their tourism strategy, the Military History Museum and the Valletta Museum have been established in the castle, and a Ramparts Walk has been created, allowing visitors to experience historical structures and walk on the walls around the castle. In this way, historical values have been preserved and the visitor experience has been enriched [16].

#### *Transportation*

Transportation to Valletta is via land and sea connections, and thanks to the transportation arrangements and infrastructure improvements made, the castle and the town center have become more accessible to both locals and tourists. Practices such as controlled vehicle access, public transportation systems, sea transportation, and vertical pedestrian connections regulate traffic, facilitate urban circulation, and effectively provide visitors with access to the castle [17] [18].

### ***Kilitbahir Castle***

Kilitbahir Castle was built in 1462 by Fatih Sultan Mehmet in order to take the Ottoman rule over the Dardanelles after the conquest of Istanbul. The main purposes of the establishment of the castle are to ensure the security of the strait and to stop possible enemy navies by controlling the ships passing through the sea. The possibility of ships crossing the strait during the siege of Constantinople caused Fatih to attribute strategic importance to the Dardanelles and positioned this point as the first line of defense against naval attacks [19]. Kilitbahir Castle is designed to be located opposite Çimenlik Castle on the Anatolian side and to allow the management of the Bosphorus crossing.

Kilitbahir Castle is located on the Gallipoli Peninsula, at the narrowest point of the Dardanelles, as a coastal settlement (Figure 15).



***Fig. 15. Kilitbahir Castle country and city location map***

Built on a sloping and steep land, the castle is in the form of a three-leaf clover specific to its period, unlike the square or rectangular plan schemes common in Ottoman period castle architecture. The plan layout includes the following elements: Inner and middle tower: The triangular, seven-storey inner tower in the center of the castle allows firepower to be directed in different directions. Fortification structures: Three inner fortification walls surrounding the inner tower complete the three-leaf clover form. Moat: The moat around the outer walls surrounding the castle also functions as a retaining wall against landslides that may arise from the land elevation difference on the west side.

### ***Impact on urban landscape***

Although Kilitbahir Castle was initially built for military purposes, it was effective in shaping the urban settlement that developed around it over time due to its location and affected the direction of the city in terms of maritime traffic and coastal settlement (Figure 16).



*Fig. 16. Kilitbahir Castle location map [37]*

In line with its relationship with the sea, the Kilitbahir settlement paved the way for the organization of reactive activities on the sea axis and determined the orientation of the settlement [20] (Figure 17). In the 20th century, the construction of ferry piers that facilitated transportation with the center led to the formation of urban focal points around it and an increase in settlement density [21].



*Fig. 17. Kilitbahir Castle together with the city [38]*

The urban texture that developed along the coast was shaped according to the spatial planning of the castle, and the changes in the land use of Kilitbahir show that the city exhibited an independent and fragmented development instead of growing on a single axis.

#### *Preservation and re-functioning*

Historical environments and cultural landscape form the memory of a city; It carries the traces of civilizations, architectural structures and social-economic characteristics by establishing a link between the past and the present. Kilitbahir Castle is located at the center of this cultural landscape, both in terms of its physical presence and symbolic meaning. The visual dominance and historical importance of the castle in the urban fabric has been one of the strongest elements defining the identity of the region (Figure 18). For this reason, the preservation of the castle does not mean the preservation of the building, but also ensures the sustainability of the entire settlement area and the cultural landscape.

Kilitbahir Castle is an important part of the Gallipoli Historical Site of the Gallipoli Wars as a historical site. It also holds monumental value and reflects historical narratives about the local identity. Built during the reign of Fatih Sultan Mehmet, the castle reveals a different plan order in Ottoman castle architecture with its three-leaf clover plan and central triangular inner tower.



*Fig. 18. Inside Kilitbahir Castle [39]*

One of the main objectives of cultural heritage management is not only to preserve the physical integrity of historical buildings, but also to continue to live functionally by establishing a relationship with today's society. In this direction, the castle in question and its immediate surroundings have multi-layered protection statuses due to their archaeological, historical and urban qualities.

In terms of legal framework, Kale is considered as a registered immovable cultural property within the scope of national protection legislation. This status obliges all kinds of interventions to be carried out in line with the principles of protection. Since its construction, it has undergone various additions, repairs and restorations. With a comprehensive application carried out a year ago, the building was rearranged on the basis of its original architectural features. Within the scope of the conservation and landscaping works carried out in recent years, both the suitability of the building for visitor use and its physical protection conditions have been improved. The traces of walls and other finds unearthed during the excavations and research studies carried out in the area were preserved and integrated into the existing texture.

#### *Tourism and visitor experience*

The re-functioning of the castle as a cultural and tourism-oriented center was implemented with comprehensive arrangement works initiated in 2015. In this process, spatial solutions were developed that preserve the historical texture of the building but are compatible with contemporary museology. Thematic museum areas have been created in the castle; the historical context of the defense structures, the elements of daily life and the maritime heritage are presented to the visitors in a holistic setup (Figure 19, 20). Digital applications have been developed, and beach use, pedestrian circulation and recreational functions have been strengthened with the arrangements made in the environment [22]. Thus, the castle has turned into a multifunctional public space that integrates with the city while preserving its historical identity.



**Fig. 19.** *Kilitbahir Castle museum entrance*



**Fig. 20.** *Kilitbahir Castle museum entrance*

The castle combines its historical nature with modern exhibition layouts and interactive narrative techniques, offering a dynamic museum experience that appeals to a wide range of visitors. Digital applications increase the attractiveness of the space for users of all ages and with different requirements.

#### *Transportation*

Kilitbahir is located on the Gallipoli Peninsula, on the opposite shore of Çanakkale city center. Transportation between the two sides is provided quickly and uninterruptedly thanks to regular ferry services. This ease of access makes it practical to reach both the castle and the surrounding historical settlement, increasing the tourism potential of the region. In addition, renewed roads and tunnel connections have accelerated transportation from nearby provinces.

## **CONCLUSION**

### ***Castle locations and their evaluation from the perspective of landscape architecture***

As a result, Çanakkale Çimenlik and Kilitbahir Castles and international examples Edinburgh Castle (Scotland) and Fort St. Elmo / Valletta Castle (Malta) were evaluated comparatively.

Comparisons were made on five main criteria: the impact of castles on the urban landscape, re-functioning, conservation/method, tourism and visitor experience, and transportation. Comparative data show that the four castles examined have significant differences in terms of location, area and environmental landscape values (Table 1).

Çimenlik Castle, located in Çanakkale, forms the main part of the defense line due to its location at the narrow point of the Bosphorus; It is directly integrated with the city center, coastal landscape and port area. Kilitbahir Castle, on the other hand, is strategically located on the opposite shore of the Bosphorus and reinforces the continuity of the landscape by establishing a complementary defense system with Çimenlik Castle. Located in Valletta in Malta, Fort St. Elmo is one of the main military structures that shape the identity of the city with its relationship with the sea and its location controlling the port entrance, and has similar thematic features to Kilitbahir. Unlike other examples, Edinburgh Castle is not a coastal defense, but creates a visual and cultural focus thanks to its mass rising on a dominant topography in the city center. These data reveal that the positioning of the castles played a decisive role not only in terms of military but also in terms of urban morphology, landscape readability and urban identity (Table 1).

The data in Table 1 show that each castle undertakes different landscape functions according to its geographical location and shapes the urban identity in different ways. The

location of the castles has a decisive role in terms of creating an urban focus and providing environmental integrity as well as military-strategic importance.

**Table 1.** Locations of castles, environmental landscape values

Castle Name	Location (Country / City)	Coordinates / Area (m <sup>2</sup> )	Landscape and Significance
Çimenlik Castle / Kale-i Sultaniye	Turkey / Çanakkale (Headquarters)	40°08'47"N , 26°23'57"E / ≈ 17.600	At the narrow point of the strait, part of the maritime defense line; It is in the center of the city, integrated with the coastal landscape and the port.
Kilitbahir Castle	Turkey / Çanakkale (Eceabat)	40°08'52"N , 26°22'46"E / ≈ 26,400	It is located on the opposite shore of the city in the Bosphorus and creates a visual and strategic match with Çimenlik Castle. It is the holistic element of the landscape.
Fort St. Elmo / Valletta Fortress	Malta / Valletta (Centre)	35°54'07"N , 14°31'08"E / ≈ 39,000–50,400	It is thematically similar to Kilitbahir in terms of its relationship with the sea, coastal defense castle, and shaping the coastal city identity.
Edinburgh Castle	Scotland Edinburgh (Central)	55°56'55"N , 3°12'3"W / ≈ 35,000	It is located on a high rock mass in the center of the city. The focus is the element.

### **Çimenlik Castle vs. Edinburgh Castle**

Edinburgh Castle generally performed higher than Çimenlik Castle.

### *Impact on urban landscape*

Edinburgh Castle (4 Points - Very Good) excelled in this criterion. Edinburgh has established absolute superiority as the primary element of urban identity, while Lawn Castle (3 Points - Good) has taken on the role of "decisive starting point". Edinburgh Castle has an area of approximately 35,000 m<sup>2</sup> and is located on a high rock mass in the center of the city, creating a focal point in the city. Çimenlik Castle (approximately 17,600 m<sup>2</sup>) is located in the center of the city, integrated with the coastal landscape and the harbor, and is part of the maritime defense line at the narrow point of the strait (Table 2).

### *Re-functioning*

Edinburgh Castle (4 Points - Very Good) has a more comprehensive functionalization process in terms of transforming its military role into a national identity. Çimenlik Castle (3 Points - Good) has been integrated into social life by preserving its military identity.

### *Protection method*

Edinburgh Castle (4 Points - Very Good) scores highest thanks to its multi-stakeholder and holistic management model. Çimenlik Castle (3 Points - Good) provides protection as a military museum under the supervision of the ministry.

### *Tourism and visitor experience*

Edinburgh Castle (4 Points - Very Good) has succeeded in engaging the visitor in the experience using History + Technology + Interaction. Although Grassy Castle (3 Points - Good) offers multi-layered experience (military, cultural), the depth of interaction is less detailed than Edinburgh.

### *Transportation*

Edinburgh Castle (4 Points - Very Good) has made a big difference in central access by public transport (bus, train) due to its solution-oriented approaches to the traffic problem. Çimenlik Castle (2 Points - Medium), on the other hand, has traffic problems and orientation deficiencies despite its central location.

**Table 2.** *Çimenlik Castle vs. Edinburgh Castle*

Criteria	Çimenlik Castle score	Edinburgh Castle score	Comparison	Suggestions for Çimenlik Castle
<b>Impact on Urban Landscape</b>	3 (Good)	4 (Very Good)	Edinburgh has established absolute superiority, while Lawn Castle is the "decisive starting point".	In order to increase the visibility of Çimenlik Castle in the city, "visual corridor" analyzes should be made on the critical axes around it. Regulations should be implemented to reduce the pressure of high-rise buildings. The perceptual focus feature should be reinforced by planning a "cultural route" that focuses on the castle with lighting and directions.
<b>Re-Functioning</b>	3 (Good)	4 (Very Good)	The functionalization of Edinburgh Castle and the transformation of its military role into a national identity are comprehensive. Çimenlik Castle, on the other hand, has been integrated into social life by preserving its military identity.	Separate thematic exhibition venues should be created for Ottoman maritime, Bosphorus defense and Çanakkale city history. Interactive touch maps and audio guide systems should be developed. Indoor and outdoor event areas should be designed throughout the year and transformed into a lively cultural venue.
<b>Protection Method</b>	3 (Good)	4 (Very Good)	Edinburgh Castle's multi-stakeholder, holistic management model makes it easy to use. The military rule of Çimenlik Castle is limiting.	For Çimenlik Castle, an integrated management-protection model should be created with inter-institutional cooperation. Issues such as transparent decision-making processes, community engagement and visitor experience tracking should be evaluated.
<b>Tourism and Visitor Experience</b>	3 (Good)	4 (Very Good)	At Edinburgh Castle, success has been shown in involving the visitor in the experience by using the history + technology + interaction model. Although Çimenlik Castle offers a multi-layered experience (military, cultural), the depth of interaction is low.	The thematic "walls walking path" that continues from Çimenlik Castle to the city can be designed and the Bosphorus view can be extended. Creating a three-dimensional (3D) digital model of Çimenlik Castle will enable the building to be perceived holistically. Users' virtual tour of the building and getting closer to certain focal points will increase spatial awareness. In addition, the user can see what happened in the past at the point where they are, discover areas they cannot reach, and establish a stronger bond with the building.
<b>Transportation</b>	2 (Intermediate)	4 (Very Good)	The central access of Edinburgh Castle by public transport (bus, train) includes solution-oriented approaches to the traffic problem.	Since there are traffic problems and orientation deficiencies in the city center, the transportation and guidance of Çimenlik K. is sufficient. In order to provide easy access to the castle on foot, safe and comfortable walking paths extending from the city center and public transportation stops to the castle should be created. Accessibility for disadvantaged individuals should be considered.

### ***Comparison of Kilitbahir Castle and Valletta Castle***

In this comparison, Kilitbahir Castle performed equally or better than the international reference point in some criteria (Table 3).

#### *Impact on urban landscape*

Valletta Castle (4 Points - Very Good) stands out. While Valletta Castle succeeded in shaping daily urban life in an integrated manner with its defensive architectural elements, it was stated that the settlement in Kilitbahir (3 Points - Good) developed irregularly. The area of Fort St. Elmo/Valletta Fort is approximately 39,000–50,400 m<sup>2</sup> and has a thematic similarity with Kilitbahir in terms of shaping the coastal city identity. Kilitbahir Castle, on the other hand, has an area of approximately 26,400 m<sup>2</sup> and is a holistic element of coastal defense and landscape by creating a visual and strategic match with Çimenlik Castle.

#### *Re-functioning*

Both goals were found to be equal in this criterion (Kilitbahir 4 Points - Good, Valletta 3 Points - Good). Both buildings (Valletta military history museum/cultural center, Kilitbahir open-air historical site/cultural tourism center) have turned into successful cultural heritage centers.

#### *Protection method*

Both goals were found equal (Kilitbahir 5 Points - Good, Valletta 3 Points - Good). Both castles are protected by official and special statuses.

#### *Tourism and Visitor Experience*

In this criterion, the result was evaluated equally (Kilitbahir 4 Points - Very Good, Valletta 3 Points - Good). Kilitbahir Castle offers a more active experience than Valletta's role as a cultural center (exhibition, library) with interactive technological reenactments and an inclusive approach that transforms the castle into a "living experience".

#### *Transportation*

Kilitbahir Castle (3 Points - Good) was found superior. Kilitbahir is accessible by ferry from the center. Valletta (2 Points - Medium), on the other hand, has both land and sea access, although it is stated that the borders arising from the city structure create traffic.

**Table 3. Comparison of Kilitbahir Castle and Valletta Castle**

Criteria	Kilitbahir Castle Score	Valletta Castle Score	Comparison	Suggestions for Kilitbahir Castle
<b>Impact on Urban Landscape</b>	3 (Good)	4 (Very Good)	Valletta Castle stands out because it succeeds in shaping daily urban life in an integrated manner with its defense-oriented architectural elements. In Kilitbahir, the settlement developed irregularly.	Urban design projects should be prepared for Kilitbahir village and structures, signboards and irregular piers that disrupt the silhouette should be arranged. Thematic recreation areas that combine urban culture, history and castle value should be designed. If the castle is no longer a military structure and combines with urban culture, local life, traditions and social memory, it becomes a living element of the city. Each visitor reception structure should be designed.
<b>Re-Functioning</b>	3 (Good)	3 (Good)	Both castles (Valletta military history museum/cultural center, Kilitbahir open-air historical site/cultural tourism center) have turned into successful cultural heritage centers	Although it has been restored for current use, the historical texture is insufficient in the immediate vicinity and in the interior of the settlement. Identity should be gained with designs
<b>Protection Method</b>	3 (Good)	3 (Good)	Both castles are protected by official and special statuses.	The historical texture of Kilitbahir Castle has been preserved. However, reflecting the concise history to the place in coastal use will keep the national memory alive.
<b>Tourism and Visitor Experience</b>	4 (Very Good)	3 (Good)	Kilitbahir Castle Kilitbahir offers a more active experience than the cultural center role (exhibition, library) offered by Valletta, with its interactive technological animations and inclusive approach that transforms the castle into a "living experience".	Through photography contests, thematic events, and user-generated content, Kilitbahir K can become an exploration-oriented cultural space that is constantly gaining visibility both domestically and internationally. This approach allows visitors to perceive the castle not just as a "passing point" but as a place where different perspectives emerge, strengthening the experience of focusing and noticing. Thus, the visitor memory is strengthened, a personal bond with the castle and the production of memories takes place. Interactive areas to be established within the castle can offer a task-based experience where visitors become active participants rather than passive spectators.
<b>Transportation</b>	3 (Good)	2 (Intermediate)	Due to the location of Kilitbahir Castle with the city, access is available by ferry. Valletta, on the other hand, has been stated that the borders arising from the city structure create traffic.	The road between the castle and the pier; a story that tells, guides, introduces the city and prepares the visitor for the experience. It should be reconstructed as a cultural transition corridor. Pedestrian routes; It should be transformed into an experience route with canopy structures, urban furniture bearing thematic graphics, and stopping points framing the Bosphorus view. With multilingual, audio guidance and digital access maps, the castle should be a barrier-free cultural space for every user profile.

The location, importance and relations of Çimenlik Castle and Kilitbahir Castle, which are the main materials of the study, with the urban fabric were found suitable for evaluation in comparison with international examples. As a result of the analysis, the potentials and challenges of Çimenlik and Kilitbahir castles in Turkey in terms of sustainable use were discussed with reference to international examples.

Comparisons with Edinburgh Castle, in particular, show areas that need improvement in terms of Çimenlik Castle's impact on the urban landscape, re-functioning, conservation method and visitor experience. Despite the central location of Çimenlik Castle, the traffic and routing deficiencies indicate that Edinburgh's public transportation-oriented solution-oriented approaches should be examined.

On the other hand, the comparison of Kilitbahir Castle and Valletta Castle reveals that Kilitbahir has turned into an internationally successful cultural heritage center, especially in terms of re-functioning, conservation method and tourism experience (interactive animations). Kilitbahir's ease of access by ferry has resulted in better accessibility compared to Valletta's urban traffic problems. However, the irregular development of settlement in Kilitbahir lagged behind Valletta's success in defensive integrated urban forming.

In conclusion, the historical significance of castles plays a significant role in ensuring the continuity of the cultural landscape and urban identity. Taking the international examples determined in the study as a reference, it is aimed to protect the resources of local castles and to use them sustainably. This comparative analysis emphasizes that in the processes of preserving and evaluating cultural heritage, the interaction of the building with its surroundings, its contribution to local identity and landscape integrity should be taken into consideration.

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