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The intersection of history and nature: The transformation of Cebeci Asri Cemetery as urban open space

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Abstract

Today, cemeteries are gaining importance as potential open spaces due to the growth of cities and the increase in construction densities. Especially old cemeteries that have completed their function can be integrated into urban life as open-green spaces. Cebeci Asri Cemetery is an old cemetery that has completed its function as a burial space. As the first modern cemetery in the history of the Republic and an architectural competition project, it is an important area with cultural, social and historical value. Important bureaucrats of the Republican era, many poets, writers, journalists and artists who shaped society rest in this cemetery. It is also one of the limited number of green areas in the city. The purpose of this article is to develop a landscape-focused integration model that addresses spatial re-functionalization and digitally supported cultural route design at Cebeci Asri Cemetery. The cemetery area was evaluated as an open-air museum and a cultural route covering important figures of the history of the Republic was created. A mobile application was also developed for the culture route. Original structures such as ossuaries and namazgahs, which are inactive and vacant in the area, were also evaluated in this context and included in the usage scenario. As a result, this study presents an alternative approach for the urbanization of an old cemetery isolated from the city. Although they are early structures, solutions have been developed to preserve the namazgah and ossuary structures and transfer them to the future. It is envisaged that this study will create an idea/guide for urban administrations.

Keywords: cemetery, open space, urban green space, Cebeci Cemetery, urban integration

1. Introduction

Cemeteries have played an important role in urban planning from antiquity to the present day. In antiquity, the necropolis area where the dead would be buried is a determining element of urban planning. In necropolises, burial areas were generally located in areas outside the city center (Pérouse, 2017). For both religious beliefs and hygienic reasons, burial sites were preferred to be outside the city center. This planning approach has been in place since antiquity, and in modern urban planning, cemeteries are still located on the outskirts of cities. However, as cities have grown, cemeteries have become open spaces within the city (Mumford, 2007). For example, while Karacaahmet cemetery was located outside the city in Ottoman times, today it is located in the center of Üsküdar district. Similarly, the Père Lachaise Cemetery in Paris has become part of the center with the growth of the city. Beyond being a disadvantage, this situation creates an important opportunity for cities that are gradually losing their green texture. It is possible for cemeteries to take on the function of open-green areas in the city and make a great contribution to the urban ecosystem and green texture (Gönen, 1992). However, in order for cemeteries to take on such functions, planning, implementation and operational approaches need to be updated. In addition to their main functions, their meaning in urban life can be expanded by supporting them with potential functions. In many European and American cities, cemeteries are used for different functions in addition to their main function (Uslu, 2009). They are utilized as an extension of urban

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green spaces and their urban use is expanded with functions such as education, sightseeing, meditation, exhibition and recreation areas.

The aim of this study is to investigate the importance of Cebeci Asri Cemetery as an urban open space and to develop solutions for its integration into the city. Cebeci Cemetery is of urban significance as it is both the first modern cemetery in the history of the Republic and a unique cemetery acquired through an international competition. There are unique structures such as ossuaries and namazgahs in the area, which are not found in other cemeteries. Since the cemetery has completed its burial function, it constitutes a potential area in the city for new functions. The study aims to expand its urban visibility and possibilities of use as an open space with new usage scenarios without harming the original use of the cemetery. In this context, it is aimed to bring the area to the city as an open-air museum with its cultural, social and historical values while maintaining its main function as a cemetery. The graves of important figures of the history of the Republic are located in the cemetery area. Therefore, this area is a place that sheds light on the history of the Republic. Important politicians, writers, bureaucrats and many artists of the period rest in this cemetery. However, the cemeteries are scattered throughout the area. Without the information of the name-parcel, it is difficult to find specific graves in the cemetery where approximately 250,000 bodies are buried. In line with this goal, a route covering the main graves in the cemetery is organized and the area is used for visiting and sightseeing purposes (Uslu, 2010). Visitors will be guided and informed with introductory signs containing information about the lives of important people and historical events in the area. A route will be created for students of various age groups to visit the area. In addition, there is currently an empty and inactive ossuary structure and a namazgah (open-air masjid) in the cemetery. These unique structures (ossuaries and namazgahs) will be utilized for various exhibition and promotional functions. The study, which is also supported by a mobile application, develops suggestions for a more active and interactive use of the area for users.

The study's original contribution to the literature is that it does not limit the cemetery area to merely a cultural route proposal. It proposes a landscape scenario that also includes unique heritage elements such as ossuaries and namazgahs located within the cemetery. The study contributes to the literature in terms of developing research outputs through instrumental design.

2. Conceptual Framework

2.1. Cemeteries

Grave literally means the place where the dead person is buried. The grave also refers to the covered dissolution rooms where the dead are buried in accordance with legal and religious rules in a way that does not harm environmental health. (Çalbayram, 2001). Cemeteries are places where many graves are located together. There is no standard measure for the dimensions of a grave, but it is generally appropriate for the length to be equal to the height of the dead and the width to be equal to half the height of the dead (Ragheb, 1996). The grave is separated from its surroundings by being raised with a slight mound so that it is higher than the soil. In Muslim graves, the grave is arranged with the grave head facing the qibla. A headstone, usually made of marble, is built at the head of the grave or at both the head and the foot of the grave. Flowers and plants are usually planted on the earthen top of the grave. Coniferous trees such as pine, juniper and cypress are also often planted around the graves. These trees are known to prevent the ammonia released as the body decomposes from accumulating in the soil. Thus, the residents and visitors around the cemetery are protected from the disturbing effects of gases released from the soil and bad smells (Çalbayram, 2001).

In all religions and societies, cemeteries are places that gain meaning under the influence of spiritual values and religious beliefs. In all beliefs, cemeteries are places that are respected and believed to have inner peace (Moda, 2019). Cemeteries remind human beings of the transience of their own life and the world. At the same time, cemeteries raise awareness of past memories and visits to these sites create an awareness of previous connections and relationships. In this respect,

cemeteries do not define a static texture, but form a cultural landscape that is always functioning and changing (Thomashow, 1995).

Turkish-Islamic cemeteries have a unique spirit, meaning and texture different from their counterparts in other societies. In Islamic cities, cemeteries are places that are almost lost among the greenery and integrated with the harmony of green and stones (Moda, 2019). However, the situation of cemeteries today is very different from the past, and they have been pushed out of urban life as places that give people fear and creeps (Tırnakçı, 2021). These areas are usually divided into parcels and separated from the cities by high, fenced walls. There are major differences in the way death and cemetery spaces are perceived today compared to the past. While cemeteries used to be a part of everyday life in the past, with modernization, they have lost the importance of being identified with the spiritual journey of the soul (Spellman, 2017). Thus, cemeteries, which used to be a part of daily life, have turned into urban spaces that cannot be integrated into daily life from this point of view and have moved away from urban areas. In fact, cemeteries are very rich areas in terms of green texture. In addition, due to religious ideas and prohibitions, the green tissue in cemeteries is considered untouchable compared to other green areas. Although urban open spaces can be easily transformed into buildings in short periods of time, cemeteries resist a different form of use for a long time because they are considered sacred areas (Uslu, 1997; Akten & Özkartal, 2016). Cemeteries are untouchable areas due to their function and sanctity. This to some extent guarantees that they are permanent open and green spaces (Sarı & Koçak, 2005). Therefore, if qualified solutions and design measures are taken within the scope of the integration of cemeteries into the city, they can make significant contributions to the city and play an active role in urban life.

2.2. Cemeteries as Urban Open Spaces

Urban open spaces are common use areas organized by city administrations in order for people to rest, walk, perform various recreational activities and approach nature (Keleş, 1984). Urban open spaces can be divided into two groups as active and passive according to their usage status. Active open spaces are areas such as parks, squares, gathering areas, all kinds of sports and playgrounds, zoological and botanical gardens, urban agricultural gardens, etc. that are used by the public. Passive open spaces are areas that are not suitable for active use due to reasons such as cemeteries, traffic islands, refuges, areas under ecological protection, topography and drainage (Çöteli, 2007). In urban life, open-green areas undertake many functions ranging from ensuring the long-term mental and physical recovery of the city dwellers to the protection and development of urban biodiversity, oxygen production, reducing heat islands, regulating air quality, reducing noise pollution, developing tourism, creating buffer zones between residential areas and industrial areas, and facilitating pedestrian and vehicle circulation (Tırnakçı, 2021). According to Kumru (2019), the benefits that urban open-green spaces provide to the city both aesthetically and functionally are listed as follows;

-lighten the monotonous and harsh texture of the city and bring vitality to the city,

-add physical and aesthetic value to the city with their structural and vegetal materials

-regulates the microclimate of the city, balances urban heat,

-regulates air quality by absorbing toxic dust and gases that pollute the air,

-eliminates the negative effects of wind,

-facilitate and organize transportation,

-meet the need for recreational space,

-take people away from the stress of the urban environment,

-reduce noise,

-increases the fertility of the soil,

-regulates building and population density,

-limits and directs the development of the city (Karaoğlu, 2007).

Today, open-green areas in urban centers are gradually decreasing both horizontally and vertically. The gradual decrease in open-green areas adversely affects individuals physically and mentally, monotonizes urban areas, and reduces the quality of life and environment. Development-oriented approaches in urban areas destroy the urban ecosystem and thus the need for alternative open-green areas arises, especially in urban areas. Cemeteries are potential areas that can be part of urban continuity when they are evaluated as recreational and open spaces (Tuna & Göker, 2018). Cemeteries are areas that cannot be changed in the zoning plan because they are protected both religiously and with a special protection law. Cemeteries, where burials are completed or still ongoing, are essential open-green areas for the urban fabric (Akten & Özkartal, 2016). Cemeteries constitute an important part of the open-green areas that are gradually decreasing in large cities. These areas, which used to be outside the city, have become intertwined with urban settlements and living spaces. Cemeteries within or close to the urban space constitute organic ties that connect the open-green areas and ecological corridors of the city (Uslu, 2009). Nowadays, cemeteries, which have been left among dense settlements, constitute an important component of cities with their potential within the urban texture. Cemeteries are among the rare open-green areas in cities where green areas are gradually decreasing (Karaoğlu, 2007). Today, as a result of rapid urbanisation, the interest and demand for open-green areas in cities has increased. Along with environmental problems, urbanites have started to better understand the importance of these areas. Cemeteries are the most important places that are candidates to replace the open green spaces lost as a result of urbanisation (Moda, 2019).

2.3. Examples from the World on the Use of Cemeteries as Urban Open Space

Today, the perspective of cemeteries in developed countries is quite different from our country. In the USA, cemeteries were used as recreation and promenade areas before the construction of urban parks in the 1850s. In England, cemeteries within the city were included in daily life as part of the urban open space and green space system (Çöteli, 2007). While the current situation of cemeteries in our country is not very good, European countries have a different approach to the issue and consider these areas as potential open-green areas. They also give importance to cemetery planning and reorganise unused cemetery areas to meet the recreational needs of the city (Güçlü et al., 1996). In this approach, it is primarily aimed to meet the passive recreation needs of the citizens. By prohibiting the burial of the dead in the cemeteries within the city limits, these areas are reserved for public recreation with well-maintained greenery and used as parks. In ecological terms, bridges are created between the city and cemeteries and the green texture of the city is planned as a whole. Thus, with the development and expansion of the city, cemeteries within the urban living space are no longer non-functional areas (Akten & Özkartal, 2016).

In most European and American countries, cemeteries are used as places of meditation or recreation. In fact, examples of cemeteries in the USA are places that offer passive recreation opportunities to the citizens. The main objective of the contemporary cemetery concept in these countries is to give cemeteries the function of a green buffer zone. For this purpose, cemeteries were integrated into the urban landscape with a trend that started in the 50s (Özkan & Küçükerbaş, 1996). In the 60s and 70s, the understanding of designing cemeteries as a natural park began to prevail. The amount of burial areas was reduced and burial areas were hidden by creating a dense green belt. Thus cemeteries became easily recognisable landmarks in the urban landscape and the concept of 'park cemetery' emerged (Kienast, 1990). The idea of relaxing with nature, which started with park cemeteries, has evolved towards forest cemeteries. Cemeteries are located in the forest and the ratio of burial areas has been reduced considerably. Thus, forest cemeteries also point to the new generation's interest in ecology and environmental concerns. These areas create quiet, peaceful and respected places of remembrance in the urban landscape with a new forest and habitat (Akten & Özkartal, 2016).

Some examples of cities in Europe and the Americas that have successfully integrated cemeteries into urban life are exemplified in this study (Image 1). The analysed examples formed a basis for the research. Accordingly, Novodevichy Cemetery in Russia (1898) has been opened to tourism by expanding its recreational use. This cemetery, which has turned into an open-air museum, can be visited by tourists for a certain fee. People use the Allegheny Cemetery (1844) in Pittsburgh, USA for visiting and sightseeing purposes. The habitat formed here attracts people's attention and people come here to observe animals such as eagles, owls, deer (Moda, 2019). Skogskykogarden Cemetery in Stockholm, Sweden is a cemetery dating from the early 20th century (1915-1920). The landscape is dominated by a forest of tall pine trees. The vegetation and architectural structures are in harmony and this area is also a UNESCO protected cemetery. Assistens Cemetery (1760) in Copenhagen, Denmark is another cemetery used as an urban green space. In this area, people organise recreational activities such as walking, jogging, resting on the grass and cultural events such as concerts and theatre. Mount Auburn Cemetery (1831), the first garden cemetery in America, serves both as an active cemetery and a museum. In the cemetery, which is considered one of the most important landscape areas in the country, there are more than 5500 trees, about 700 species and various shrubs and herbaceous plants (Kumru, 2019). Spring Grove Cemetery (1845) in Cincinnati, USA, is not only a burial site but also a permanent memorial. It continues to function as a cemetery and includes fine arts, architecture, educational programmes and activities for the public good. Ecologically, it shelters various forms of wildlife. Photographers, bird watchers, and students are frequent visitors to the cemetery as an arboretum and burial ground. Spring Grove is an important green space in the dense metropolitan fabric of Cincinati (Uslu, 2010).

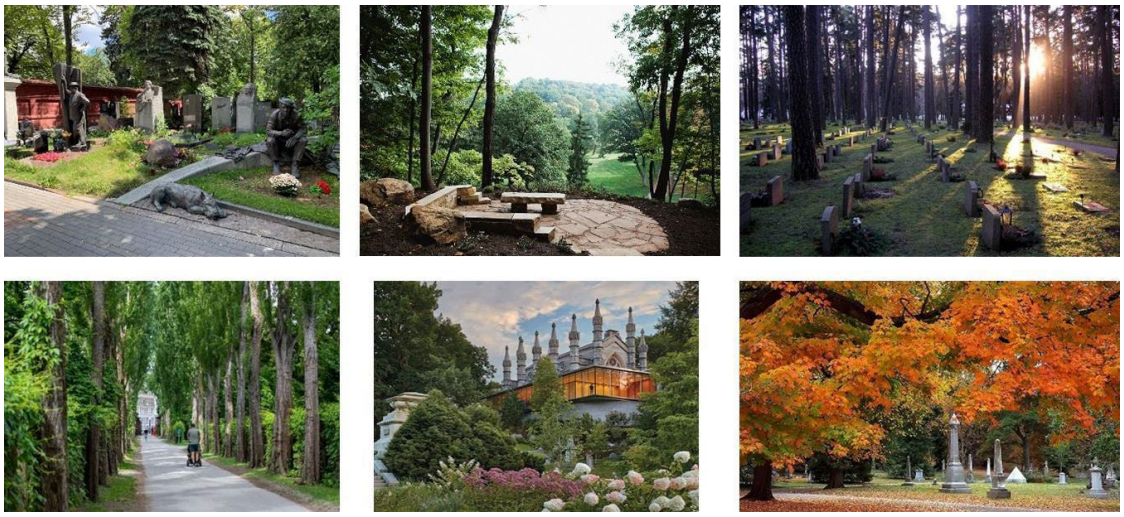


Image 1 From left to right; Novodevichy, Allegheny, Skogskykogarden, Assistens Cemetery, Mount Auburn, Spring Grove (Atlas Obscura, n.d.)

2.4. Literature Review

In the literature, there are studies that evaluate cemetery areas not only for their function as burial spaces but also for their different functions. In these studies, cemeteries are evaluated as components of public green infrastructure, elements of cultural landscape, or recreational areas (Rugg, 2000; Francis et al., 2005). Examples from Europe and America show that when cemeteries are incorporated into daily life as urban open spaces, they serve as places for walking, interacting with nature, and escaping urban chaos (Evensen et al., 2017; Skår et al., 2018; Rae, 2021). Studies examining the importance of cemeteries as green spaces in cities by acquiring different functions have also increased in recent years. These studies emphasize the ecological contributions of cemeteries to cities, such as shading, reducing the heat island effect, carbon storage, and ecosystem continuity (McClymont & Sinnett, 2021; Sallay et al., 2023). In our country, various studies have been conducted on cemeteries, particularly by landscape architects. Cemetery planning has been

evaluated based on fundamental criteria such as geology, topography, and accessibility. Criteria have been developed for afforestation, plant tissue, inventory, and maintenance processes. Case studies of historic cemeteries have clearly identified the problems encountered in implementation and maintenance (Uslu, 1997; Aksoy & Özkardaş, 2011). In this respect, the studies focus on the existing problems within the framework of the main function of cemeteries. More recent studies also highlight the importance of cemeteries as sustainable open green spaces and cultural and ecological resources. These studies evaluate cemeteries in terms of urban plant diversity (Yılmaz et al., 2018), cultural significance and recreational use (Tırnakçı, 2021), and urban air quality (Çobankaya & Akkurt, 2025). Consequently, the literature studies evaluate cemeteries as multifunctional urban green-open spaces beyond being distinct religious sites in cities. Based on this, the study examines Cebeci Asri Cemetery as a representative example with high representational power in terms of offering urban open space potential.

2.5. A Modern Cemetery in Ankara: Cebeci Asri Cemetery

The spatial development process of the city of Ankara covers a period of time extending from prehistoric times to the present day. The proclamation of the Republic is the most important event in the recent history of the city in terms of determining the form and direction of the spatial development of the city (Uslu, 1997). Ankara, which was chosen as the capital of the country with the proclamation of the Republic, entered into a rapid construction process. Many cemeteries in and around Ulus, which was the centre of the city at that time, were displaced for the need of construction. In order to transport the bones from these cemeteries and to meet the cemetery needs of the growing city, a new cemetery area was proposed in the zoning plans. This cemetery area, which can be seen first in the Lörcher plan dated 1924 and then in the Jansen Plan dated 1932, is located in the north of the city and in the region called Cebeci Village (Figure 1). Jansen defined this cemetery area as a part of the open green area of Ankara (Cengizkan, 2004).

Figure 1 Cebeci Asri Cemetery in the 1932 Jansen Plan (Cengizkan, 2004)

The cemetery is located north-east of the castle, which was the centre of the city at the time, and covers an area of 720,000 m2 . An international competition was launched in 1935 for the design of the cemetery and the project was designed by the German architect Martin Elsaesser. There are currently 90.000 tombstones in the cemetery and there are approximately 270.000 graves in total. There are 53 graves in the police memorial, 9 graves in the foreign affairs memorial and 70 graves in the aircraft memorial. In the non-Muslim cemetery, there are 1257 Christian, 515 Jewish and 22 Bahai graves.

The specifications of the competition organised for the cemetery and the selection criteria for the winning projects were published in the 1935 issue of Arkitekt magazine. A total of 12 projects were submitted to the international competition for the planning and design of Ankara's new city cemetery, and the project of Martin Elsaesser, who was also the architect of the Sümerbank Building, was selected as the winner. Elsaesser, a German architect, shaped his current design by applying the cemetery design principles already developed in Germany (Figure 2). The tomb sections are separated from the service spaces by small shrubs and grouped around grids. Between the grids are two squares connected to each other radially. Another characteristic feature of the design is the high perimeter walls between the plots. The cemetery design does not express a hierarchical order, but rather a homogeneous and balanced distribution. The hierarchical order is only noticeable in the composition of plants and roads. In order to green the cemetery and emphasise the main axis, the main roads are heavily planted under the control of the administration. The secondary roads and paths are left to the control of both the management and the grave owners. Thus, grave owners were also allowed to honour their loved ones (Kor, 2013).

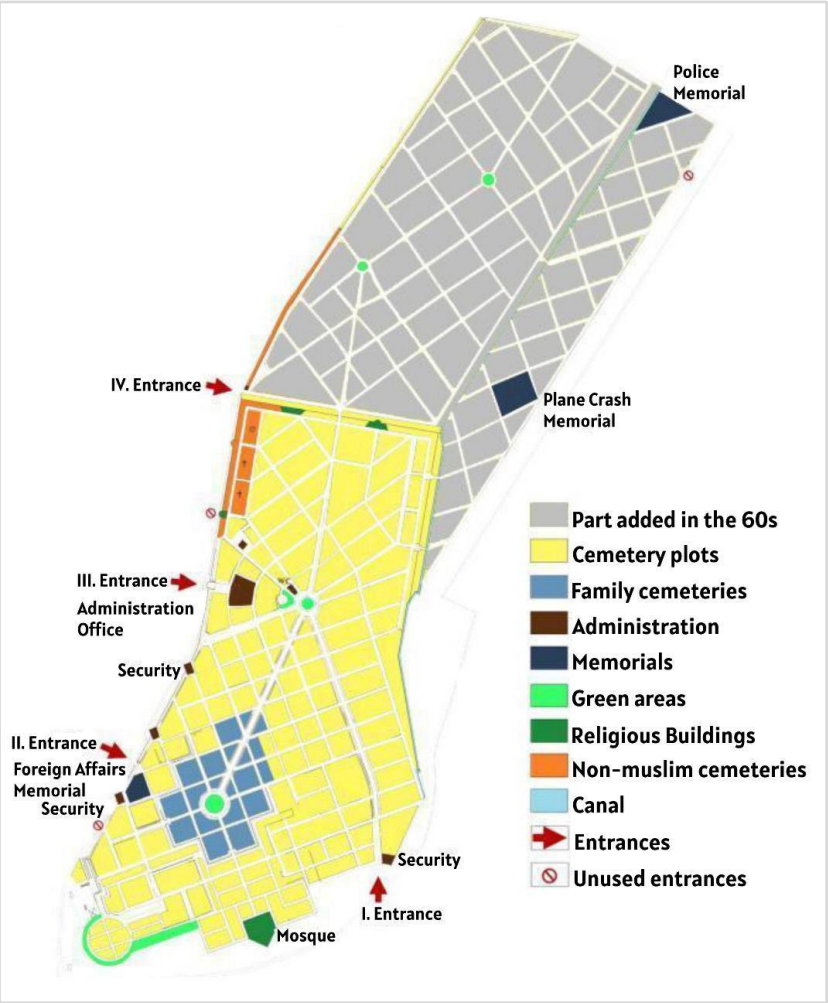


Figure 2 Cebeci Asri Cemetery spatial organisation (Adapted from Kor's 2013 study)

Towards the end of the 1950s, Cebeci Cemetery could not meet the demand for burial. From 1958 onwards, the cemetery boundaries were extended to the north of today's Siteler neighbourhood. This expansion was implemented without reference to Elsaesser's design principles. This extension to the north of the Cebeci Cemetery is incompatible with the original plan. Elsaesser's design principles of small blocks and squares have been replaced by a randomised grid plan with larger grave blocks. Only the grave blocks and streets were repeated to avoid any loss of burial space and to allow for more burials. By 1974, Cebeci Asri Cemetery was closed for new burials except for special requests with reference to the cemetery directorate (Kor, 2013).

3. Material and Method

Cebeci Asri Cemetery is located north of Ulus, the old city center of Ankara, and is a cemetery that has largely completed its burial function today. The study covers the evaluation of the cemetery as an urban open-green space. The research employed literature review, field observation, and architectural documentation methods. Feasible design proposals were presented for the integration of the area into the urban open space system.

The field survey was conducted on different days throughout January 2024, covering various periods of the day. This allowed for the observation of the cemetery's usage intensity, the current state of the graves, and circulation areas. As part of the on-site observation method, interviews were conducted with personnel responsible for managing the site. Qualitative information was obtained regarding the cemetery's maintenance and operation routines, usage intensity, and problematic issues. Photographs were taken and field notes were kept throughout the process. Original architectural structures in the area were documented as part of the architectural documentation method. The prayer area, ossuary, and mortuary structures were documented by measuring them on site according to survey principles and verifying them with photographic records. Based on the data obtained, a cultural route proposal has been presented. The route was created using observation and rule-based prioritization based on field data. A draft route was created on the map, taking into account entry and exit areas, shortest distances, vehicle parking areas, graves of important figures, and historical heritage elements. The route's functionality was analyzed through on-site walks. After necessary revisions in terms of walking time, comfort, and safety conditions, the final route was determined. Simultaneously, the current conditions of the area were analyzed within the scope of the criteria, and a table containing solution proposals was presented (Table 1). The review criteria include urban connections, entrances, security conditions, heritage elements, urban furniture, landscaping, flower greenhouses, the condition of gravestones, parking areas, and circulation. Along with the route proposal, solutions to the area's existing problems have also been suggested. This study is also supported by a mobile application to promote the effective use of the area.

4. Results

Cebeci Asri Cemetery has an important place in urban memory as it is both the first modern cemetery in the history of the Republic and was acquired through an international competition. Documenting, preserving and evaluating the architecture of the Republican period is necessary for the sustainability of urban memory (Kayın, 2007). Cebeci Cemetery is an area that has a documentary quality because it reflects the social, economic and cultural life of the society to the space; has identity value as a part of urban memory; has architectural value in terms of reflecting the design and architectural understanding of the period in which it was built; and has original artistic and regional value. In addition to the importance of preserving this area as a cultural carrier of the Republican period, increasing its urban sustainability and visibility with new scenarios will make significant contributions to urban life. Cebeci Cemetery constitutes a large open space in the city with an area of 720,000 m2 . According to the 2018 data of Ankara Metropolitan Municipality, the total green area size in Altındağ district, where the cemetery is located, is 9,880,800 m2 (Ankara Metropolitan Municipality, 2018). Cebeci Cemetery constitutes an important green area by covering 6.38% of the total amount of green area in the district. Therefore, by developing new

usage scenarios without harming the original function of the cemetery, it will be possible to both increase the contact of the citizens with the area and to keep the area alive with active use (Figure 3).

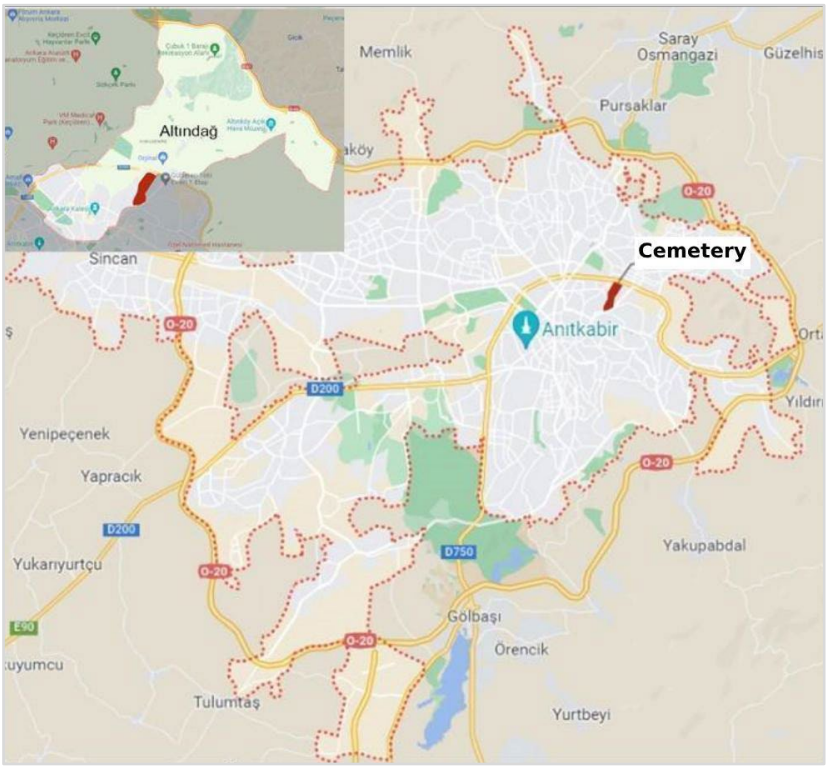


Figure 3 Location of Cebeci Asri Cemetery in Ankara and Altındağ district (https://earth.google.com)

Cebeci Asri Cemetery offers a rich source of social, cultural and archaeological artefacts since the foundation of the Republic of Turkey (Cengizkan, 2004). As it witnessed the Republican period, it is the final resting place of important personalities of the period. Many important politicians, writers, bureaucrats, poets and artists were buried in this cemetery. Afet İnan (historian), Ahmed Arif (poet), Cahit Sıtkı Tarancı (poet), Mevhibe İnönü (wife of İsmet İnönü, 2nd President and first Prime Minister), Makbule Atadan (sister of Atatürk), Mehmet Emin Resulzade (one of the founders of the Democratic Republic of Azerbaijan), Uğur Mumcu (journalist), Nasuh Akar (national sportsman), Refik Saydam (fourth Prime Minister) and Hasan Ali Yücel (founder of the Village Institutes) are some of the important people buried in Cebeci Cemetery. In addition to the graves of important personalities, the tombstones used in the cemetery also attract attention with their different forms, designs and use of materials (Image 2).

Image 2 Some of the well-known figures buried in Cebeci Cemetery (Author archive)

In addition to Muslim graves, there are also Christian and Jewish sections in the cemetery. Apart from the Abrahamic religions, there are a few graves of different religions and beliefs such as Baha'ism (Çiçek, 2017). The Christian, Jewish and Muslim graves in the area face in the same direction (south). The direction of the Baha'i graves in the area is orientated to the east. It was observed that there are differences in the directions of Muslim graves built at different times (Image 3).

Image 3 Graves of different faiths in the cemetery (Author archives)

From the 1940s, when the cemetery was first used, until the 1960s, Ankara stone (andesite) was widely used for gravestones. At that time, the graves were first approved by the municipality and then constructed. Therefore, while the cemetery had a regular, uniform and controlled construction until the 1960s, a disorganised and irregular construction started to develop from the 60s onwards. With the introduction of marble in grave structures and new legal regulations after this period, polyphony and irregularity began to occur in grave structures (Kor, 2013). Today, although marble graves with different designs are the majority in the cemetery, there are also a few graves where Ankara stone is used (Image 4).

Image 4 Andesite old graves before 1960, marble grave examples after 1960 (Author archive)

When the accessibility characteristics of the cemetery were evaluated, it was determined that there were four main entrance gates and all of them were located in the old part of the cemetery (Figure 2). Although the additional section built later covers a larger area, these graves can only be accessed from the old section. The third gate, located in the west of the cemetery, serves as the main entrance with security, reception and administration building. There is no car parking area in the cemetery. However, vehicles can be parked on the road close to the visited cemetery. In the outer part of the cemetery, many places are reserved for car parking areas. Therefore, there is no shortage of space for car parking in the area. However, there is no car parking area inside the cemetery, and vehicles temporarily stop on the main roads. The secondary roads are only wide enough for a single vehicle to pass.

When the spatial organisation within the cemetery area is evaluated, it is seen that there is a security office at each entrance gate. There is a mosque (İsmet Oğultürk Mosque) near gate I and an administration building opposite gate III. In addition to these, there is a gasilhane (where the

dead are washed), which is not in use today, and an ossuary (osteophilac) as an original space near gate IV. An ossuary is a place where the bones of the dead whose grave money is not paid within 10 years after burial are stacked. It is not a practice seen in Muslim cemeteries, but it is more common among Zoroastrians, Jews and Greeks. Although they had different purposes of use at the time, they are places where the bones of the people who were buried in the past are taken out and stacked when the existing grave areas are filled. Although there are few ossuary structures in our country, they can be seen in non-Muslim cemeteries and churches (Coşkun, 2009). Therefore, the ossuary structure in Cebeci Cemetery is one of the unique places that can rarely be seen in cemeteries. There are also 6 namazgahs (open-air masjids) in the area. 2 of these namazgahs were used as burial grounds to meet the burial demand of non-Muslims. The other 4 continue to exist as empty-open spaces. There are also 3 gasilhane structures in Cebeci Asri Cemetery to wash the dead. These structures are located inside the retaining walls (Image 5) (Figure 4).

Image 5 Respectively; ossuary, namazgahs, gasilhane (Author archive)

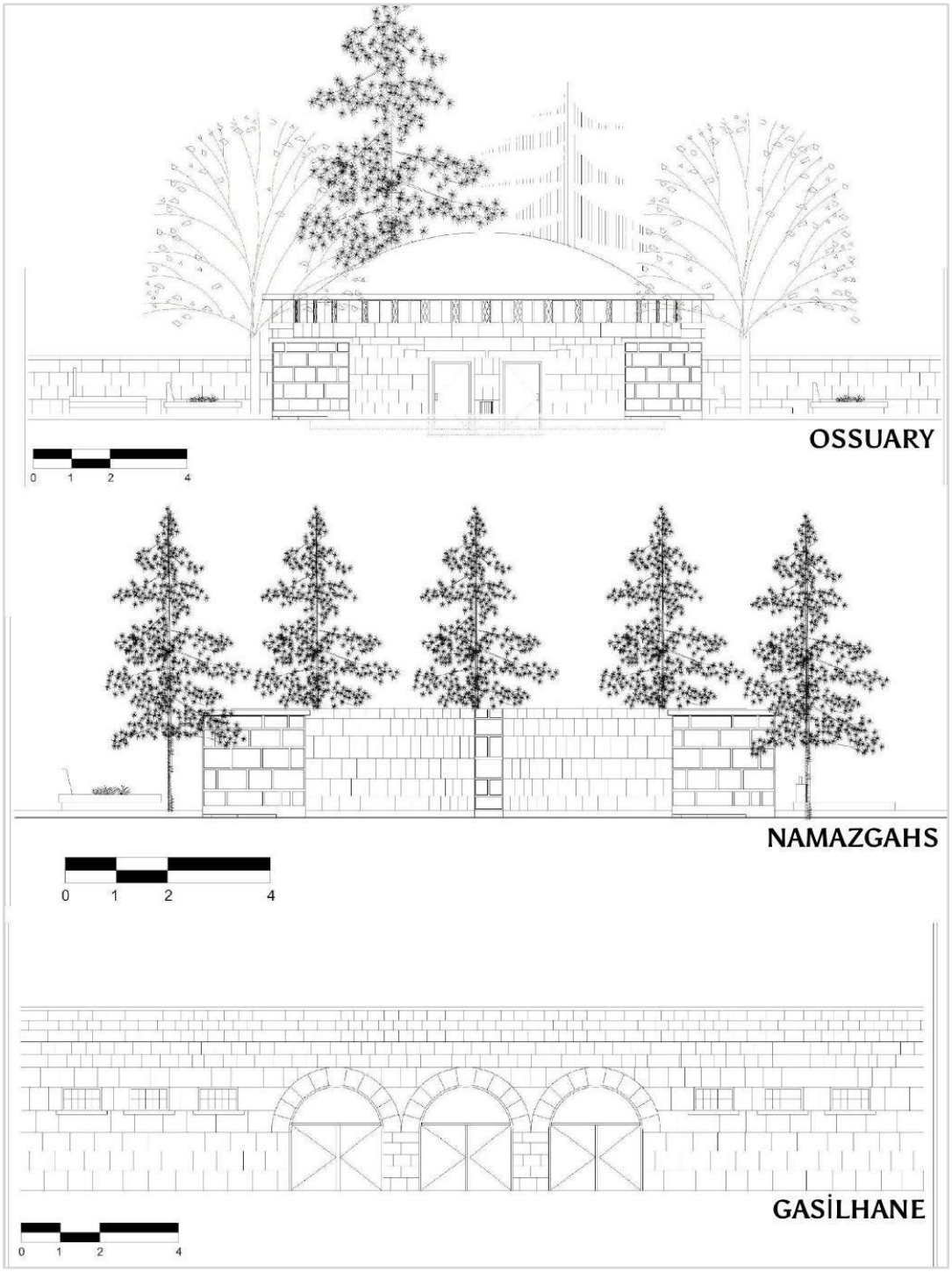


Figure 4 Respectively; front views of ossuary, namazgahs, gasilhane (Author archive)

Cebeci Asri Cemetery is the first modern cemetery in the history of the Republic. With its features such as being an international competition project and being the resting place of important figures of the Republic, it is not only a burial site but also a cultural monument. In this respect, it forms a part of the national memory. At the same time, the cemetery serves as an important buffer as a green area in the region. In Altındağ, which has a low density of green areas, Cebeci Asri Cemetery creates an ecological resource for the sustainability of urban life. Documenting, preserving and evaluating the architecture of the Republican period is also important for the sustainability of national memory. In order to ensure this continuity, the value of Cebeci Asri Cemetery should be understood and brought to the society. In line with this goal, a cultural route was designed in the study, which allows visiting the graves of important personalities in Cebeci Asri Cemetery. On this route, there will be panels giving information about the people and their works

in the cemetery. For this route, the entrance gate on Plevne Street, which is not used today, is proposed to be reused. The ossuary and namazgah structures specific to the cemetery have been functionalised as exhibition areas and added to the sightseeing route. The non-Muslim graves, police, foreign affairs and aircraft memorials in the cemetery are also included in the proposed route. In Figure 5, the proposed sightseeing route is shown on the cemetery plan. Accordingly, the route is designed so that it can be entered from two different gates on Plevne Street, and both roads converge at the area (9) where Uğur Mumcu's grave is located. From here, two branches divide to the left and right. By following these branches, graves of different faiths, namazgahs and ossuary structures can be visited. Since the area to the north of the grave plan was added in the 60s, the route is limited to the original planing area.

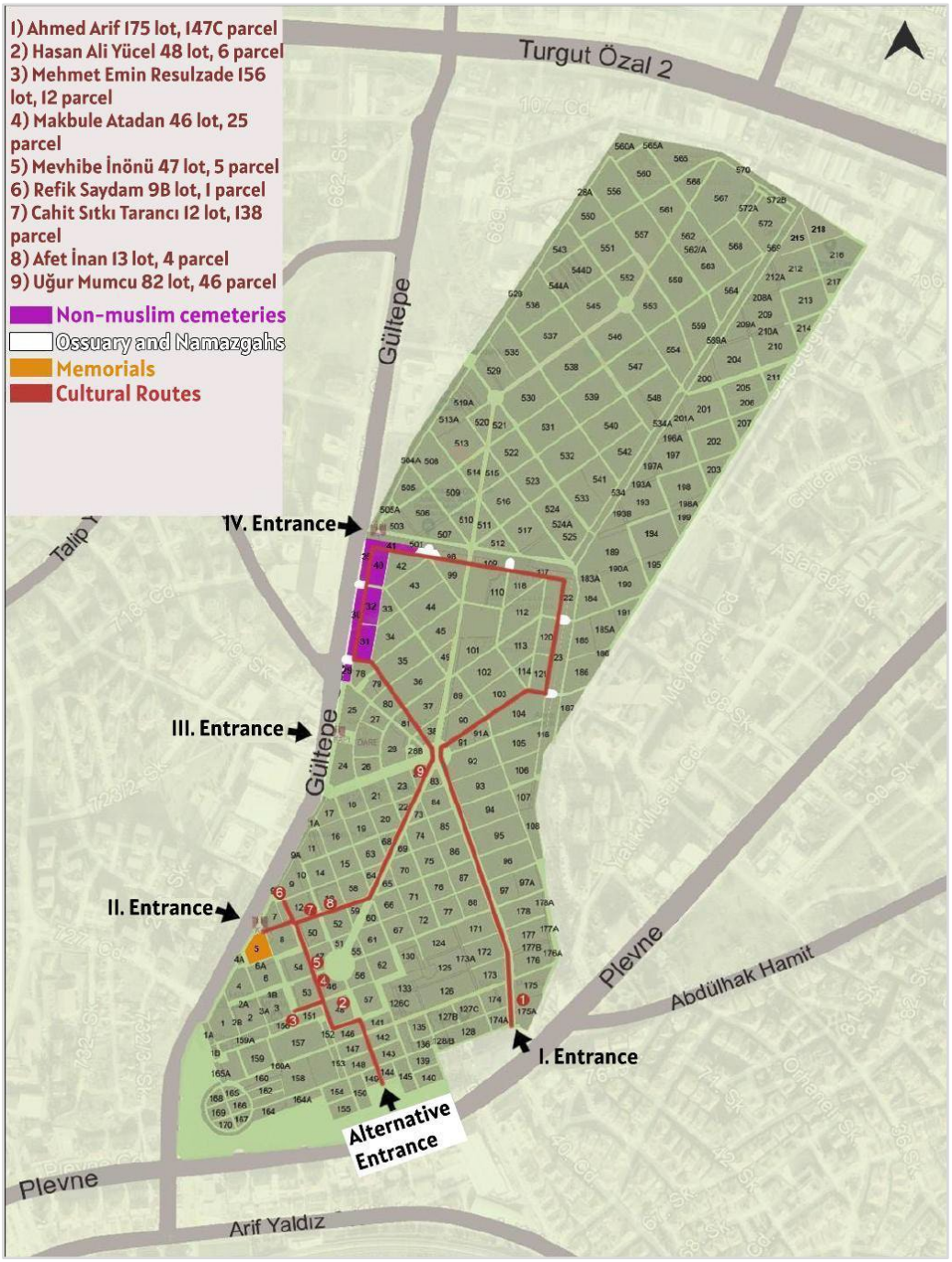
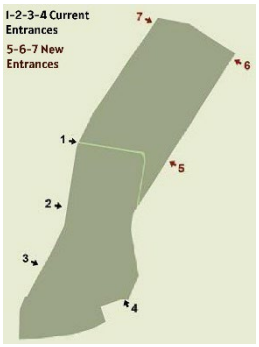
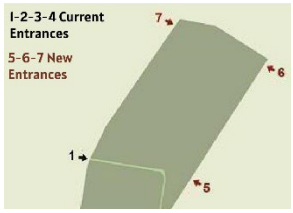
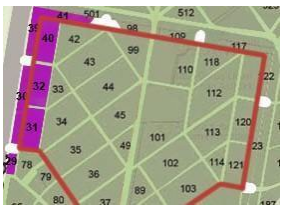
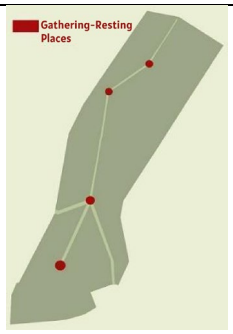
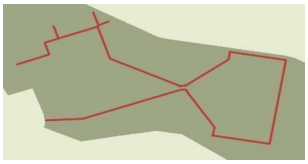
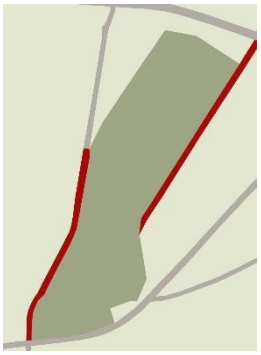


Figure 5 Cebeci Cemetery sightseeing route

Although a new function is proposed for the cemetery area, the current situation has been analysed and suggestions have been developed to use the area more efficiently and in accordance with the new function. In addition to the main function of the cemetery area, environmental connections, entrances, securities, cemetery units, urban furnishings (seating units, garbage bins, direction-information signs, lighting elements), plants, greenhouse-planting areas, tombstones, car parks and circulation-pedestrian roads are analysed and solution suggestions are presented in the table.

Table 1 Evaluation of Cebeci Cemetery in the Context of Criteria

Assessment Criteria	Current Condition	Images from the Cemetery	Solutions
Urban Connections	The cemetery is physically isolated from its surroundings. The cemetery is separated from its surroundings by masonry stone walls of varying heights and iron railings.		A separate entrance area was created for the sightseeing route in the southern part of the cemetery (Plevne Street). Thus, both the visibility of the area can be increased and the green area can be utilised in a more defined way.
Entrances	The cemetery has 3 entrances from the west and 1 entrance from the south via Plevne Street. There is no entrance gate to the second part of the cemetery, which was added to the cemetery in the 1960s, but this area can be accessed from the first part.		In order to have direct access to the second cemetery section, which was added in the 1960s, entrance areas should be created from suitable places in the cemetery. Necessary control and security measures should also be taken at the entrance areas.
Security	Within the cemetery, there are security areas only at the entrance gates (4 in total). In the additional part of the cemetery, there is no alternative entrance and no security point.		The homogeneity and holistic use of the cemetery should be increased by adding both entrance and security areas to access the additional section.
Cemetery units	Within the cemetery, there is an abandoned ossuary structure and unused namazgah areas.		The ossuary should be utilized as a closed exhibition area and the namazgahs as open exhibition areas and promotional functions.

Urban furnishings	There are no resting areas within the cemetery. The direction signs are insufficient and it is difficult to find the cemeteries. Since garbage bins are insufficient, garbage accumulates on the roadsides. There is no homogeneous lighting in the area.		The cemetery area is insufficient in terms of urban facilities both for the sustainability of the cemetery function and for new functions. Considering the whole area, a homogeneous distribution of urban furnishings elements should be ensured.
Vegetation and plantation	The cemetery area is planted with broad-leaved species to camouflage the grave sites.		Isolation of the burial sites from the walking paths for the cultural route should be ensured by planting.
Greenhouse area	There are no greenhouses or flower shops in the area for visitors to the cemetery.		A greenhouse should be created in the undefined park area south of the cemetery.
Grave stones	Within the cemetery, destroyed or neglected graves are found.		The graves should be routinely maintained and any damage should be repaired.
Parkings	Outside the cemetery area, there are parking areas only on the west side and the other parts of the area are not accessible by vehicle.		It is not possible to create a parking area inside the cemetery due to the density of graves. However, areas can be created outside the cemetery (outside the west wing) where vehicles can park. In addition to car parking areas, bicycle and motorcycle parking areas and areas for the disabled should also be organized.
Circulation-pedestrian routes	Pedestrian paths have been damaged due to the density of graves in the cemetery.		Pedestrian paths should be redesigned and improved considering the proposed sightseeing route. Broken paving and curb stones should be repaired. Vehicle entrances and exits should be restricted with barriers. The walking route should be pedestrianized.

In this study, a mobile application proposal for the cultural route was also developed (Figure 6). The application includes a GPS-supported map that allows users to find important points in the cemetery. Users can follow the route through the cemetery on the map or create customized routes according to their interests. For example, a route that includes only the graves of poets. The mobile app also includes an audio guide that informs users about the history and significance of the graves. For each stop on the route, there is audio and written information about the biography of the

people buried in the cemetery, historical events and structures. This application, where users can share their experiences and opinions, also includes a module that provides information about plant species and ecological values in the cemetery. These components bring together wayfinding, information, and participant feedback processes under a comprehensive digital tool. The mobile app makes the cemetery more active and dynamic while also ensuring integration with modern communication methods.

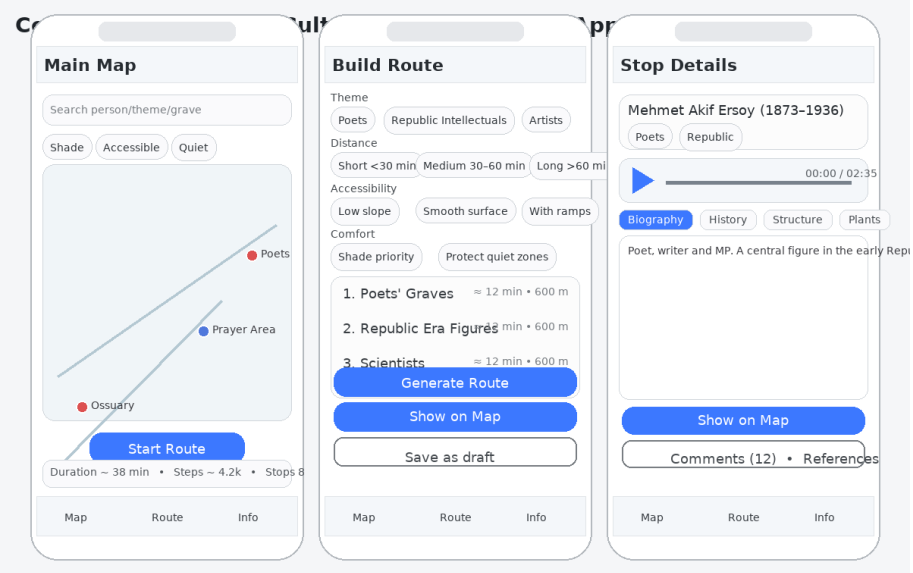


Figure 6 Mobile application ınterface

5. Discussion and Conclusion

Today, the perspective on cemeteries is gradually changing. In European countries and the United States, a movement started in the 1950s to integrate cemeteries into landscapes. Until today, this understanding has evolved towards the concepts of 'park cemetery' in the 1970s and 'forest cemetery' in the 2000s. In our country, the situation works in the opposite direction. While in ancient Turkish cemeteries and in the Ottoman period, graveyards were used as parks and green areas where daily activities were carried out, cemeteries have been isolated from urban life with modernization. Today, most cemeteries have become frightening, and insecure places that are rarely visited only during burials and religious days.

In this study, Cebeci Asri Cemetery, a socially, culturally and historically important cemetery in Ankara, is analyzed. With reference to examples of cemeteries in Europe and America, it is aimed to increase the urban visibility of Cebeci cemetery and its integration with the city as a green space. In line with this goal, a usage scenario has been developed based on the analysis and observations made in the area. The original burial function of the cemetery was preserved and the area was revitalized with new functions. Cebeci Asri Cemetery is a site with positive impacts on the urban ecosystem. Coniferous and broad-leaved trees are common throughout the cemetery and are beneficial in improving the air quality of the environment and reducing carbon emissions. The dense green space in the cemetery positively affects the microclimate, absorbs noise and reduces the urban heat island effect. At the same time, the cemetery plays an important role in the urban ecosystem by providing a habitat for birds, insects and other animals. Therefore, the integration of Cebeci Asri Cemetery with the city, like the cemeteries in Europe and the United States, will provide significant gains to the city both culturally and environmentally. The cultural route created within the cemetery area offers the opportunity to discover the graves of historical figures from the Republican era. It also reveals monumental structures such as the namazgah, ossuary, and mortuary within the site. Thus, it provides visitors with a sequential and thematic route that offers a historically rich, accessible experience while respecting the site's current function.

It is aimed that such approaches will both provide an idea for urban administrations in the evaluation of cemetery areas and provide guidance for the development of similar approaches in different cemetery areas. In our cities where urban open spaces and green texture are gradually disappearing, it is an inevitable necessity to use the existing open spaces in the most accurate and effective way. Future studies may examine the impact of route suggestions on parameters such as legibility, comfort, and safety through user experience surveys and field interviews. Accessibility within the area can be tested with disabled users and independent expert supervision.

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CRediT Authorship Contribution Statement

Aslı Taş: Writing-review & editing, Writing-original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. Mazlum Kalak: Writing-review & editing, Writing-original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

Data will be made available on request.

Ethics Committee Approval

Ethics committee permission is not required.

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