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Integration of Ottoman Baths with Contemporary Cultural Functions: The Case of the Zeyrek Tiled Bath and Museum

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Abstract

Historical baths are significant architectural complexes that embody both tangible and intangible cultural heritage through their architecture, construction methods, and various social, economic, and cultural dimensions. Over time, the physical and functional deterioration of these structures threatens their long-term conservation. Today, conservation strategies for these historic buildings generally begin by preserving their original functions or those closely resembling them. Subsequently, they may be enhanced with additional functions to adapt to modern needs, or with new functions. This article examines the conservation of the original function and architectural identity of traditional baths, which have historically served as spaces for cleanliness, health, and social interaction, alongside their integration with contemporary cultural functions and design approaches to enhance their sustainability. This study evaluates the Zeyrek Tile Bath and Museum, which reopened in 2023 following nearly 13 years of restoration. The project includes the addition of a new museum building and open exhibition spaces that adopt a modern design approach while preserving the original bath structure. The study argues that integrating new cultural functions aligned with contemporary needs, while conserving the site's original identity, can enhance its environmental, social and economic sustainability, as well as support the transmission of this cultural heritage to future generations.

1. Introduction

In the earliest periods, humans primarily used waterfronts to fulfill their need for cleaning. Over time, however, factors such as climate, population growth, and the desire for privacy led to the construction of dedicated baths. The buildings as integral structures for washing, purification, rest, and social interaction, hold significant cultural heritage value due to both their tangible and intangible attributes. They have been specialized for their unique architectural features, construction techniques, and functional systems —such as heating, plumbing, lighting, and acoustic elements—have served as vital spaces since antiquity. Initially gaining prominence during the Roman era, baths became embedded in daily life as a cultural practice, reaching their zenith in Rome with advancements in construction and material technologies (1). Over time, baths evolved into a central element of Islamic and, more specifically, Turkish settlements, influenced by the emphasis Islam places on cleanliness.

In Anatolia, numerous Turkish baths were built with local materials and techniques; however, they were not as monumental as those from Roman times. Nevertheless, during the Ottoman period, they became widespread and varied in scale (2, 3). Over time, while some Ottoman baths maintained their original functions, others either disappeared or were used with new functions due to economic reasons and changes in social and cultural life, losing their users.

The conservation of the original functions and architectural features of historical baths should be the primary approach to maintain their authentic identity. However, it is a fact that people today primarily fulfill

their bathing needs at home and have alternative opportunities for socialization such as cafes, restaurants etc. Due to these changes, baths—once essential spaces for bathing and social interaction—are struggling to adapt to contemporary life.

On the other hand, efforts to conserve baths by refunctioning them to meet modern needs often overlook their original architectural and functional systems, including heating, water supply, lighting, and acoustics. As a result, such interventions risk compromising their authentic identity.

This study aims to explore solutions for conserving bath buildings by maintaining their original functions and architectural integrity while adapting them to contemporary living conditions.

In this context, Zeyrek Tile Bath, one of the notable bath buildings from the Ottoman classical period in Istanbul, was examined as a case study. The Bath, which had deteriorated over time due to various factors such as natural disasters (fires, earthquakes), neglect, property disputes, and inappropriate interventions, was reopened for use in 2023 following an extensive restoration process. In addition to its original function as a traditional bath, the building now serves as a venue for temporary socio-cultural activities, and exhibitions in an additional museum building, and open areas.

The findings of this study emphasize that integrating cultural and artistic activities that align with the original architecture and functions of historical baths enhances their sustainability through a holistic conservation approach.

2. Ottoman Baths

In the architectural evolution of baths, Ancient Greek civilization played a crucial role as a stepping stone, influencing the design and development of baths in later periods. In the 4th century BC, the design of baths included round or rectangular spaces with seated bathtubs (4). In gymnasium complexes, the palaestra (sports area) and bathing units, initially featuring cold water pools, evolved into more elaborate spaces known as *balaneion* (the precursor to the modern 'bath'), with the addition of hot water areas in later periods. This architectural development influenced the shaping of Roman bath architecture, and in the following periods, the bath architecture experienced its most brilliant period in Rome.

The plan arrangement in Roman baths typically consists of a palaestra (open sports area), frigidarium (cold room), apodyterium (dressing room), piscina (swimming pool), tepidarium (warm room), and caldarium (hot room).

The discovery of Roman concrete and advancements in construction techniques, such as the use of domes and vaults, enabled the creation of large, symmetrical imperial baths. These baths often featured a hypocaust system, which is an underground heating mechanism using brick pillars called *pilae* to elevate the floors above the ground. Furnaces below the ground heated the air, which was distributed through channels called *tubuli* in the walls, effectively warming the entire structure.

However, due to maintenance and operational challenges, as well as economic factors, the significance of Roman bath architecture waned during the Late Antique period. While large-scale imperial baths were repurposed for different functions, smaller-scale baths continued to be used (1).

Turkish baths were influenced by the architecture of Late Roman baths and continued to be built following similar principles, particularly in their use of underground heating systems, which were directly derived from Roman baths. However, they differ in some aspects, especially in the exclusion of palaestra (sport areas) and cold water pools (5).

Examples of Turkish bath architecture began to emerge in Anatolia during the Seljuk and Principalities periods and became more widespread during the Ottoman era. In the early Ottoman period, baths were typically smaller and featured asymmetrical layouts. However, in the Ottoman classical period, particularly in Istanbul, large-scale symmetrical double baths became prominent, reflecting the growing significance of water structures in Ottoman architecture (6, 7).

When examining the spatial organization of Ottoman baths, it becomes apparent that their plan layouts were designed to align with a specific functional cycle. The primary spaces of the baths are divided into *soğukluk* (cold room), *ılıklık* (warm room), *sıcaklık* (hot room), and *külhan* (furnace) areas. These are complemented by secondary spaces, including rest rooms, wc, shaving areas, *iwans*, *halvet* (private room) cells, and other supporting spaces such as cold and hot water tanks, the bath attendant room, and wood storage (8).

The functional systems of Ottoman baths demonstrate advanced technologies, particularly in heating, plumbing, lighting, and acoustics. The heating system utilized a *külhan* furnace where firewood was burned, heating both the water and the air. The *cehennemlik* part under the floors, supported by *pilae* brick pillars, circulated warm air through channels in the walls, thereby heating the entire interior space.

The water systems in the baths were designed for efficient water supply, storage, distribution, and the evacuation of dirty water, ensuring the proper functioning of the baths. Water delivery to the baths is facilitated through water sources connected by waterways, pipes, cisterns, wells, or other similar elements. The water brought into the baths is stored in both cold and hot water tanks. From there, it is distributed through the walls via two separate channels (known as *kunks*) to taps and basins (*kurnas)* for use. Afterward, wastewater from washing activities is drained through sloping sewage channels (8).

Both natural and artificial lighting systems were utilized in Ottoman baths. To ensure privacy, natural lighting was primarily provided through skylights, with variations between the changing and bathing areas. Historical examples also include upper and lower windows built into the changing room walls. In buildings with wooden roofs and lanterns were used, while domed structures featured light lanterns at the center of the roof to provide illumination. In the *ılıklık* and *sıcaklık* spaces,

which were not exposed to the outside, glass lanterns featuring multiple small light sources, known as *filgözü*, were initially used in the dome centers during the early periods. In later periods, these lanterns were distributed across the entire dome. Artificial lighting in the baths was provided by elements such as oil lamps and candlesticks, which were particularly used during the nighttime operation of the baths (9).

Lastly, it is important to note that the bath buildings were carefully designed with acoustics in mind. The plasters used in the construction had sound-retention properties, ensuring that the resonance within the space was optimized for the intended use (10) (Figure 1).

Figure 1. Tiled Bath Men's Cold Room engraving (11)

2.1. Conservation of Ottoman Baths

To ensure the sustainability of historical buildings while conserving their cultural and architectural identity, their original form and function should be maintained, and interventions should be minimized and applied only when necessary.

Baths are distinctive structures with unique architectural features, construction techniques, and functional systems. To conserve their original integrity, maintaining their original function as baths should be the primary approach. In this regard, the goal should be to carry out restoration works that preserve the building's original function while making any interventions minimal and carefully executed.

While the baths initially served as places for washing, they also functioned as social spaces where people, especially women, gathered weekly or fortnightly to eat, drink and socialise with friends and neighbours (12). However, due to changes in socio-cultural life and economic factors, these baths have faced challenges to their sustainability.

Today, large-scale baths are primarily used for tourism, with only a limited number of neighborhood baths remaining open for public use (13). Yegül (14) argues that, in order to ensure their accessibility to both locals and tourists, baths that still serve their original functions should also be adapted for contemporary secondary uses. In this context, enhancing the utilization potential of these buildings by introducing contemporary secondary functions that include social and cultural activities such as meetings, education and entertainment in addition to their original purposes can serve as an effective conservation strategy.

If it is later determined that the refunctionalization of the building is more effective than its original use in ensuring its preservation for future generations, this approach can be adopted while maintaining its original architectural features. Throughout the entire refunctionalization process, it is essential to consider that baths are more vulnerable to risks related to spatial and functional systems compared to other types of heritage buildings. In this context, decisions and practices related to re-functionalization must strictly adhere to conservation criteria specific to each building. This process should be meticulously carried out by qualified specialists to prevent unintended damage. Otherwise, rather than enhancing the building's value and ensuring its reuse, such interventions may cause architectural, spatial, structural, and social deterioration, potentially leading to vandalism under the guise of reuse (15, 16, 17).

Nowadays, the re-functionalization of baths into spaces such as bazaars, restaurants, museums, and venues for various cultural activities (18, 19) is often favored for economic benefits, particularly in commercially active areas. Unfortunately, the re-functionalization of many baths has resulted in severe damage to or complete destruction of significant architectural and functional elements. For instance, the *külhan* (furnace) sections of numerous baths have been removed under the pretext that they no longer serve a functional purpose. Similarly, interventions have often disregarded the *cehenemlik* components of heating systems (20). In many cases, partition walls in the bathing areas have been demolished to create larger spaces, leading to the loss of fundamental interior architectural elements such as the *göbek taşı* (raised platform for deep massage in the hot room), *kurnas* (marble basins), and decorative details. These alterations prevent the preservation of baths in their original architectural form. For example, during the re-functionalization process in Istanbul, the Üsküdar Yeşil Direkli Bath, the İskele Bath, and the Hocapaşa Bath underwent significant architectural losses as a result of their conversion into bazaars (21).

3. Method

This study examines how the integration of contemporary cultural and artistic functions into original bath structures contributes to their sustainable conservation. Initially, the architecture and conservation of Ottoman baths were analyzed through a literature review. A detailed case study was then conducted on the Zeyrek Tiled Bath, which serves not only its original bathing function but also accommodates cultural activities. The bath was selected based on its historical significance, architectural features, and its adaptation to contemporary life through the addition of a museum and temporary events within the bath. The study draws on written, drawn, and visual sources as well as on-site investigations. Interviews were conducted with the museum director, visitors, bath employees, and users to

gather their opinions on the contribution of the museum exhibitions and temporary events organized within the bath, across different periods, to the usage of the building.

By combining these methods, the study aims to develop a comprehensive understanding of how integrating cultural and artistic functions into the original architecture and function of historical baths contributes to their sustainability. The findings will offer valuable insights into the effectiveness of these contemporary functions in promoting both the tangible and intangible cultural heritage of the bath.

4. Zeyrek Tiled Bath and Museum

4.1. Location

The Zeyrek Tiled Bath, located in the Zeyrek District of Istanbul, and listed on the UNESCO World Cultural Heritage List, is situated at the intersection of İtfaiye and Çinili Hamam Çıkmazı Streets in the Kırkçeşme Quarter of the Fatih District. Positioned on the border of the Zeyrek neighborhood, the bath is surrounded by an organic urban fabric to the northeast (the Zeyrek Church Mosque), and by a 19th-century grid-patterned urban texture to the southwest (Atpazarı region) and northwest (Fatih Ottoman Social Complex), which developed in response to the major fires of the period (22) (Figure 2).

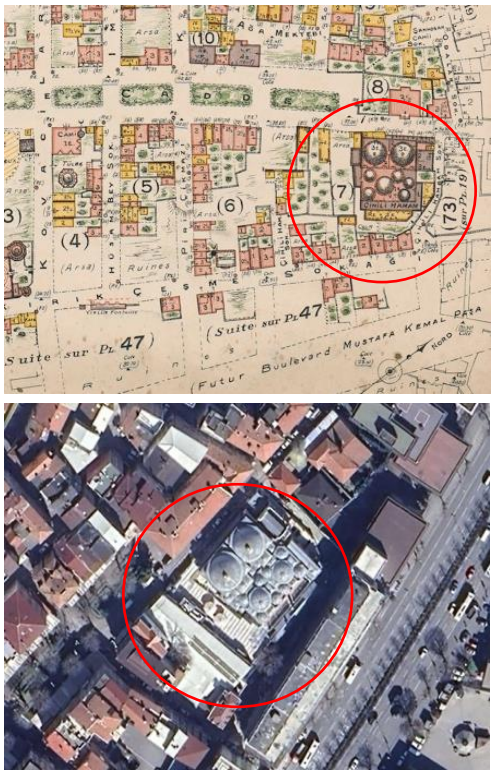

Figure 2. a) Zeyrek Tiled Bath on Pervititch Map, 1933 (23) b) Tiled Bath and Museum on aerial photo, 2025[1]

4.2. History

Experts estimate that the Zeyrek Tiled Bath, popularly known as "Hayreddin Paşa", "Kaptan Paşa", or "Tezgahçılar Bath", was constructed between 1530 and 1540. It is believed to have been commissioned by Admiral Barbaros Hayreddin Paşa, with Mimar Sinan likely serving as the architect. The building is considered one of the earliest baths Mimar Sinan designed in Istanbul during his tenure as Chief Architect of the Ottoman Empire (24, 25). A foundation document authored by Barbaros Hayreddin Paşa in 1534 refers to the bath's construction; however, the original document has not survived.

In the 16th century, Sultan Suleyman the Magnificent commissioned Mimar Sinan with the restoration of the Bozdoğan (Valens) Aqueduct and the repair of the Belgrade Forest water system to ensure a continuous water supply to the city (26). The construction of the Zeyrek Tiled Bath in close proximity to the Bozdoğan Aqueduct demonstrates a strategic approach to maximizing water accessibility (27) (Figure 4).

Further evidence of this deliberate siting is provided by the discovery of cisterns, dating to earlier periods, during the survey and foundation excavations conducted on the northeast and northwest sides of the structure as part of the restoration project (28).

The historical development of the Zeyrek Tiled Bath, from its construction in the first half of the 16th century to the early 18th century, can be traced through various sources that shed light on the social and cultural life of the city. Seventeenth-century court records offer valuable insights into the usage patterns and customs associated with the bath. These records also help explain why, unlike other double baths, the entrances to the men's and women's sections of the Zeyrek Tiled Bath were situated on separate façades, deviating from the conventional principle of privacy (22). Court documents from 1662 record a fire that destroyed the rooms and houses adjacent to the bath's *külhan* (furnace). An analysis of the entrances positioned along the same façade suggests the existence of additional structures adjoining the bath in the 16th century. However, following their destruction in the fire, the entrances appear to have been relocated to different façades (29).

Throughout its history, the Zeyrek Tiled Bath sustained considerable damage from fires in the Cibali region between 1728 and 1783, as well as from earthquakes during the 17th and 18th centuries. In the aftermath of these events, the bath underwent numerous repairs. For a brief period, it was repurposed as a military saddlery before being rented in 1790 by the sixth wife of Sultan Abdülhamid I. Following severe damage in the fire of 1833, the structure remained vacant for a time and was eventually transferred to private ownership in the first half of the 19th century. Court records from an inheritance case dated 1883—1884 provide detailed information about the bath's various owners.

[1] Zeyrek Çinili Hamam, https://www.google.com/maps/place/Zeyrek+Çinili+Hamam/(accessed 12 January 2025)

Additionally, a newspaper advertisement from 1890 indicates that shares in the Zeyrek Tiled Bath (specifically one-quarter and one-half) were listed for sale. By 1905, the last known owner was Tevfik Efendi. In the subsequent years, ownership changed hands frequently, with many of the bath's operators being women (28) (Figure 3).

Figure 3. Zeyrek neighbourhood photograph in 1899 (30)

The condition of the bath in 1921 is documented in research conducted by Heinrich Gluck (31), a scholar specializing in the study of Istanbul's baths. The most recent accessible historical references to the Bath dates to 1942. Over the years, the structure deteriorated due to neglect, compounded by the construction of makeshift additions and shops in its immediate surroundings. Historical maps of Istanbul also indicate that the Kırkçeşme water system, dismantled during the construction of Atatürk Boulevard in 1940, was located near the baths. This proximity underscores the deliberate selection of the bath's original site in relation to the city's water infrastructure (28) (Figure 4).

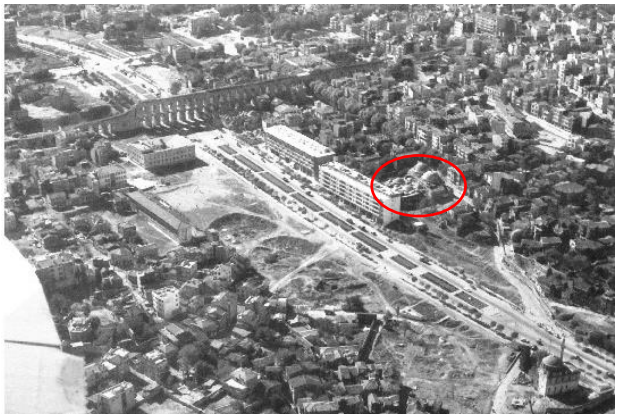

Figure 4. Bozdoğan Arch, Atatürk Boulevard and Tiled Bath in 1960 aerial photograph (32)

The bath remained in active use until 2010. In that year, restoration efforts commenced under the Tiled Bath Conservation, Repair, and Sanitation Project, which aimed not only to restore the physical structure but also to revive its cultural and social significance within the community, while preserving its original functions as a bath. After 13 years of meticulous work, the building was reopened, through the collaborative efforts of experts from various disciplines (28) (Figure 5).

Figure 5. Zeyrek Tiled Bath and Museum aerial photograph [2]

4.3. Architecture

The masonry structure, constructed using the alternating stone and brick wall technique, is situated above cisterns dating to the Byzantine period (Figure 6).

Figure 6. South-west facade of the bath (Photo: Author, 2025)

The bath, which feature the symmetrical design of an Ottoman double-bath consists of the *soğukluk* (cold room), *ılıklık* (warm room), *sıcaklık* (hot room), and *külhan* (furnace) sections. Elements that diverge from the symmetrical layout include the entrances to the cold room, the latrines, and a secondary water supply in the women's section, which also serves as a storehouse. Access is provided from the square-shaped *soğukluk* to the rectangular *ılıklık,* and from which users can enter

[2] Zeyrek Çinili Hamam restorasyonun ardından *Kalıntıların Şifası* sergisiyle ziyaretçilerini ağırlıyor https://www.dailymotion.com/video/x8og5fa (accessed 9 March 2025)

shaving and wc areas. The *sıcaklık* sections are characterized by chamfered corners at 45-degree angles, contributing to the overall geometric form of the structure. Within the *sıcaklık*, a central navel stone *göbek taşı* is surrounded by rectangular *iwans,* with square-shaped *halvet* rooms positioned at the corners. A cold-water tank is positioned adjacent to the southwest wall of the men's and women's *ılıklık* sections, while a hot-water tank is located along the northeast wall of the women's section. An intermediate water tank is situated between the two (22) (Figure 7).

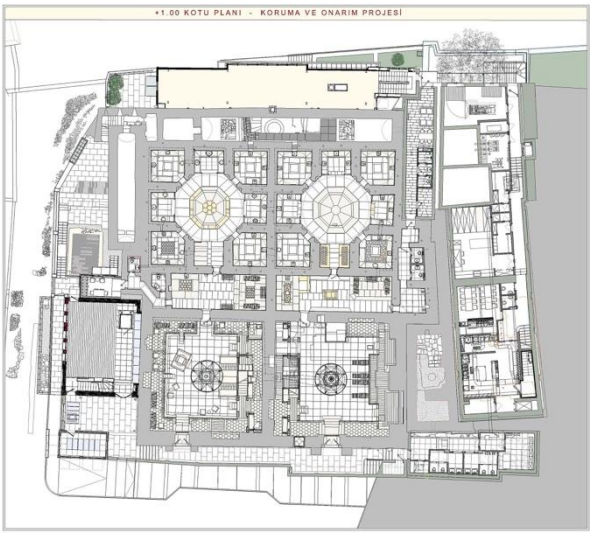

Figure 7. Conservation and restoration plans of the bath (+1.00)[3]

The *soğukluk* (cold room) sections are covered with domes, illuminated by lanterns positioned at their apex. These domes, placed over square-planned spaces, are supported by pointed arched tromps, serving as transition elements. The surfaces of these tromps, which feature small convex muqarnas decorations at their corners, are chamfered in the men's section and flat in the women's section. Additionally, both sections of the bath contain pointed arched niches on the walls of the cold rooms (22).

The rectangular *ılıklık* (warm room) sections are flanked by *iwans* with pointed arches on either side, open into the central space. These *iwans* are topped with fluted half domes and furnished with benches while the central zone between them is covered with a mirror vault. Both the vaults and the half domes are pierced by six-pointed star-shaped skylights. This skylight pattern also appears in the roofing of the latrines and shaving areas.

The central area of the square-planned *sıcaklık* (hot room) in both the men's and women's sections is likewise covered by a dome. In the men's section, the dome of the soyunmalık (dressing room) is accentuated by *muqarnas* mouldings and triangular corner fillings also decorated with rows of *muqarnas* (features absent from the women's section). From the central space, the iwans, covered with rectangular vaults, are accessed through a wavy arched opening. At each corner of the central space domed *halvet* (private room) cells are positioned. The transitional elements to the domes vary, incorporating different types of tromps or *muqarnas*-filled tromps. The vaulted iwans and the six-pointed star-shaped skylights in the domes of the *halvet* rooms provide illumination through the spaces (22).

4.3.1. Architectural Details

As with all Ottoman bath buildings of the classical period, stone ornamentation in Tiled Bath is minimal. At the entrance to the men's section, there are flat arches composed of white marble and *Hereke* pudding stone, carved with palmette motifs and placed in an inverted position. Similarly, at the entrance to the women's section, flat arches interlace the same materials. Additionally, the floors of various spaces in both sections of the bath are decorated with geometric ornaments made of colored stones. The small marble fountain on the wall separating the women's section from the warm room features a hemispherical basin. In the men's cold room, there is a pool, dating to the late 18th and early 19th century, with a scalloped upper basin and a conical fountainhead (22) (Figure 8).

Notable architectural elements in the building include short marble balustrades, shaped like armrests with palmette motifs at their ends, which border the benches used for bathing in the warm and hot rooms. Additionally, the armrests in the hot room's *iwan* are decorated with rosette ornaments in the form of passion flowers.

Another notable example of stone ornamentation in Tiled Bath is the *kurnas*. A total of 52 marble *kurnas* have been identified in the bath. Those in the men's section are more robust and elaborately crafted than those in the women's section. The *kurnas* from the original construction feature chamfered edges and corners adorned with *muqarnas*, while those reflecting the Late Baroque and Empire styles exhibit varied forms, incorporating beveled edges or 'C'-shaped curves. Similarly, small arched niches designed for placing shoes (*başmak*) are arranged beneath the benches in both the women's and men's cold rooms (22).

Figure 8. Fountain in men's cold room (Photo: Author, 2025)

[3]Zeyrek Çinili Hamam, https://www.arkitera.com/proje/zeyrek-cinili-hamam/, (accessed 19 December 2024)

4.3.2. Decorative Features

During the restoration process, it was revealed that the building was originally adorned with blue tile panels featuring various patterns up to a certain height, complemented by colorful marble patterns on the floors.

The most striking architectural feature of the building is its tiles, which also give the structure its name. These tiles, produced in İznik during the 16th century, were applied up to a certain height on the walls of the *soğukluk, ılıklık,* and *halvet* sections of the bath, creating an impressive visual effect (33).

However, it is understood that the tiles were largely lost or damaged during the interventions carried out on the structure, which was destroyed for various reasons over time. Stanley (1874) noted that the Bath tiles were dismantled and subsequently sold in the Paris market, one of the prominent antiques markets of the period. He further observed that the South Kensington Museum, which holds some of these tiles in its collections today, regularly acquired items from this market, with its purchases notably increasing in 1890 (33). The recent restoration work revealed numerous tile samples from the Tiled Baths, now held in the inventories of various museums in Turkey and around the world (29).

Approximately 3,000 tiles were uncovered during the restoration of the baths, found beneath plaster layers, above plaster, and even underground. Experts carried out documentation, cleaning, and conservation of the broken or scattered tiles. Based on analyses of the recovered fragments on sources related to tile art, as well as collections from domestic and international museums and auction houses, researchers identified thirty-seven distinct tile patterns.

Additionally, meticulous *in situ* studies conducted by architects and the tile research team revealed four distinct tile arrangements: square, rectangular, hexagonal, and triangular. These patterns were identified by tracing the dark pink plaster joints exposed after the removal (scraping) of marble and cement-based layers from the walls (29, 34, 35).

On-site investigations of the bath further revealed that only a small number of original tiles have been well-preserved. In the men's *sıcaklık* (hot room) section, five hexagonal tile panels and eight rectangular tile plates were uncovered. The hexagonal panels were conserved and retained *in situ* following restoration efforts (Figure 9).

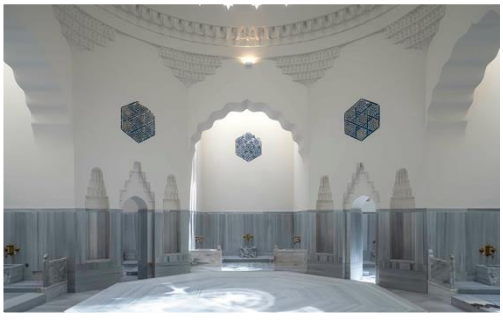

Figure 9. Original hexagonal tile panels on the wall of men's hot room (Photo: Author, 2023)

The eight rectangular tiles were identified as part of a series inscribed with *Hamamiye* Persian poems that center on bathing culture. Beneath these tiles, *muqarnas* ornaments were discovered, suggesting that the tiles were installed in the 18th century, likely after the fires that had affected the baths. This finding raises the possibility that the *Hamamiye* tiles may have originated from another bath. However, experts who have conducted studies on this subject assert that the *Hamamiye* tiles do indeed belong to this bath. Nevertheless, they note that the tiles are not in their original locations, and several are missing (34). As part of the restoration works, it was decided to reveal the original *muqarnas* texture beneath the *Hamamiye* tiles. Consequently, the tiles were removed from the wall and, following conservation efforts, were relocated to be displayed in the additional museum building (Figure 19).

The second significant component of the ornamentation program in the baths is *kalemişi*, or hand-drawn decoration. Over time, both *kalemişi* and wall paintings were renewed layer by layer, reflecting the prevailing decorative trends of their respective periods and making substantial contributions to the architectural character of the bath. Due to the high humidity levels in the warm and, particularly, hot sections, *kalemişi* decorations were applied exclusively in the cold section (*soyunmalık*) of the baths. During the scrapping process in the women's cold room, five layers of *kalemişi* were identified (36). Numbering the layers from oldest to newest (from bottom to top), Tanman stated that the first four layers, reflecting Baroque and Rococo styles, date to a period spanning the second half of the 18th century to the early 19th century. In both the men's and women's cold rooms, no *kalemişi* decorations in the classical style can be identified that would date to the original construction period of the bath (22, 37) (Figure 10).

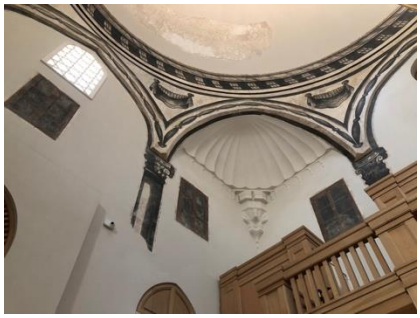

Figure 10. *Kalemişi* decoration in men's cold room (Photo: Author, 2025)

4.4. Conservation Approach for the Bath

Kabaoğlu (2023) stated that the primary objective of the bath's restoration was to preserve its original function in accordance with the principles of *authenticity, integrity,* and *sustainability.* To achieve this, experts from various disciplines collaborated throughout the restoration process, ensuring that all interventions remained consistent with these guiding principles.

In all interventions related to the conservation, repair, and consolidation of the bath, priority has been

given to conserving the Classical Ottoman Bath architecture and maintaining the traditional bath culture, which encompasses bathing, cleanliness, and recreation.

The studies conducted demonstrated that it was essential to consolidate the building while adhering to the original data to ensure its conservation. Restoration decisions emphasized maintaining the original features and retaining valuable and functional additions from later periods, following a "fragmented integrity" approach to reveal these elements cohesively. In the re-use of the bath, the primary goal was to accommodate the operational requirements, structures, and materials of contemporary life, with a focus on areas outside the building. Subsequently, it was decided to integrate these elements within the bath as needed, ensuring that they did not compete with the original structure.

Scientific studies conducted in and around the building revealed that it was shifting towards the south-west. To mitigate the risk of collapse, experts decided to construct an additional building support structure in the south-east direction. The two floors below the level of the additional building are designated for the installation of technical equipment, while the two floors above are allocated for the Tiled Bath Museum (Figure 11).

This arrangement ensures that technical equipment does not interfere with the original structure, while also providing space for cultural and artistic activities, including a dedicated exhibition area for the bath. Additionally, the adjacent parcel of land was acquired and repurposed into both open and semi-open exhibition areas for the museum (29).

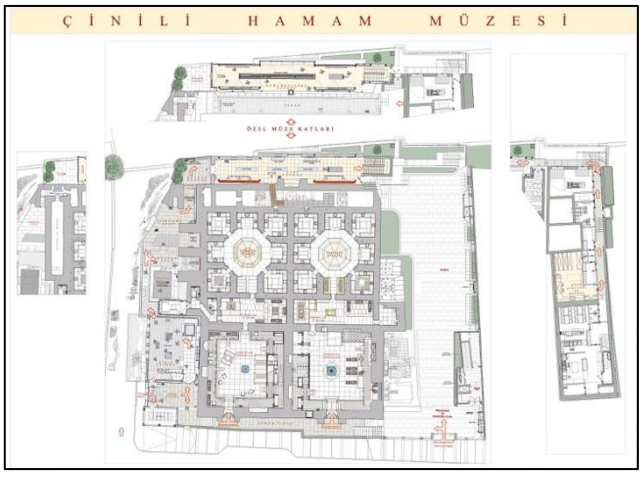

Figure 11. The floor Restoration Plan of the Bath and Tiled Bath Museum[4]

In this context, the bath's additional sales building bath and museum entrance structure were positioned on the north side of the bath, adjacent to the semi-open space designated as the entrance courtyard for both local and international visitors. Visitors to the baths have the opportunity to purchase items related to bathing culture, such as soap, loincloths, towels, and souvenirs, in the sales area. They then proceed through a glass-covered hall to the side entrance for ticket sales, which grants access either to the baths or to the remains of the cistern and the museum (Figure 12).

After completing the information and ticketing procedures, visitors can explore exhibition models illustrating the architectural and water systems of the bath, as well as the restoration process, through a wall projection in the foyer area (Figure 13). From this area, they can either visit the remains of the Byzantine Cistern uncovered during excavations beneath the bath, or proceed to the museum building, which was added later.

Figure 12. (a) Glass-covered hall b) The ticket sales entrance (Photo: Author, 2025)

Figure 13. The foyer area of the museum (Photo: Author, 2025)

4.5. Parts of the Bath Used for Cultural functions

4.5.1. The remains of Byzantine Cistern

The remains of a Byzantine cistern were unearthed during survey and foundation excavations conducted under the supervision of the Directorate of Istanbul Archaeological Museums. The cistern is accessible via a staircase descending from the foyer area. The site, which can be explored using temporary metal walkways, consists of three sections. In the first section, visitors can observe the remains of the cistern wall and its supporting

[4] Zeyrek Çinili Hamam, https://www.arkitera.com/proje/zeyrek-cinili-hamam/(accessed 12 September 2024)

piers. From here, they can proceed the second section, a vaulted tunnel passage. At the end of the passage, a small opening leads to the third vaulted chamber, where graffiti depicting galleys and galleons can be seen on the walls. These depictions have been interpreted as evidence linking the bath's construction to the Ottoman naval commander Barbaros Hayreddin Pasha, possibly created by galley convicts or levies under his command. Another prevailing interpretation suggests that this space was used as a warehouse or played a role in the construction of the building during the 16th century and in subsequent periods (28). The remains of the cistern sections of the bath have also been repurposed for various temporary artistic and cultural events. For instance, in the exhibition *Sailing to Byzantium*, which opened to art lovers on October 24, 2024, the artist aimed to establish a dialogue between the multifaceted heritage of the baths and the cistern. The exhibition was well received by visitors, and was subsequently extended beyond its original closing date of December 31, to February 22, 2025 (Figure, 14).

Figure 14. Alekos Fassianos*, Sailing to Byzantium* Exhibition in the cistern (Photo: Author, 2025)

4.5.2. The Museum Annex of the Bath

The museum annex of the bath, designated as a 'private museum' under the Ministry of Culture and Tourism, is designed to exhibit items related to bath culture, along with tiles and small artifacts unearthed during the excavation and restoration of the baths.

After passing through a single-opening door located in the southwest corner of the foyer and descending a single-flight staircase, visitors reach the additional museum building by following the directional signage.

After footing the staircase, they encounter a symbolic water well—no longer extant and displayed in the open— as well as the original draw well beneath the iron railing (Figure 15). Wall niches along the path contain illuminated panels that explain how water was brought to the bath via the Kırkçeşme waterway and how it was distributed through the bath's internal water system.

Figure 15. Symbolic representation of the bath water well (Photo: Author, 2025)

Next, visitors pass through a vaulted ramp, where archaeological findings uncovered during excavations are displayed in glass cases mounted along the walls, before reaching the entrance to the annex museum (Figure 16).

Figure 16. A vaulted ramp with archaeological findings displayed in glass cases (Photo: Author, 2025)

The narrow, two-storey, rectangular museum annex is situated to the southeast of the main bath building. With its modest height, the use of rubble stone on the ground floor, and minimalist metal façade elements on the upper floor, the annex exemplifies an architectural approach that is both respectful of and harmonious with the historic structure. Access is provided through a single-leaf glass door (Figure 17).

Figure 17. The entrance facade of the museum (Photo: Author, 2025)

Tile fragments and associated data from the bath are displayed on the ground floor of the museum building. Approximately 300 tile fragments recovered from the baths are exhibited in glass showcases positioned along the central axis of the space. Wall-mounted information panels provide contextual details about the tiles and the research conducted. In addition, projection screens display visual and textual information about 37 different tile motifs identified by the tile research team (Figure 18).

Figure 18. Tiled exhibition section on the ground floor (Photo: Author, 2025)

On the first floor of the museum, accessible via staircase, a section is dedicated to exhibition of the intangible cultural heritage associated with the bath culture. In this space, eight ceramic plates featuring *hamamiye* poems are displayed in glass showcases along the southeast wall, accompanied by Turkish translations presented beneath each plate. An analysis of the Persian poems reveals that their central theme is the bath (Figure 19).

On the opposite wall, informational panels provide descriptions of various historical bath workers, including the *meydancı*, *hamamcı*, *tellak (male bath attendant)*, *külhancı (stoker)*, *natır* (female attendant), *peştemalcı* (towel maker), and *kahveci* (coffee maker).

Figure 19. The *hamamiye* ceramic plates exhibition on the first floor (Photo: Author, 2025)

A glass showcase, positioned along the central axis of the first floor exhibits a collection of ornate bath clogs donated to the museum (Figure 20).

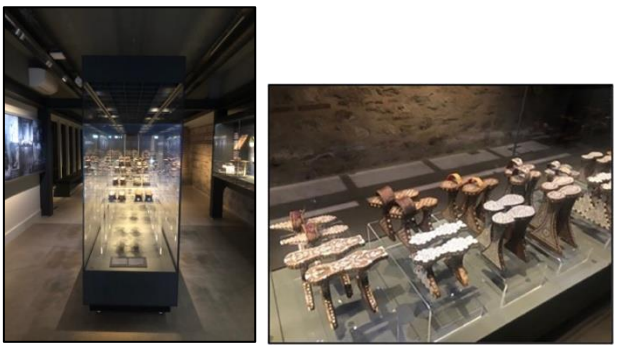

Figure 20. Ornate bath clogs exhibition in glass showcase on the first floor (Photo: Author, 2025)

The continuation of the southeastern walls features glass showcases displaying ethnographic artifacts related to traditional bathing culture such as bath bowls, mirrors, and loincloths as well as small objects, including pipes and pottery, unearthed during archaeological excavations (Figure 21). On the opposite wall, visual and textural materials present depictions of baths from both Western and Ottoman archives, accompanied by explanatory panels.

At the far end of the museum, visitors can engage with a 360-degree interactive digital screen that recreates the 16th-century bath ritual.

Figure 21. Ethnographic and archaeological artifacts exhibitions in glass showcase on the first floor (Photo: Author, 2025)

The exit of the museum building leads to the garden/courtyard area located to the southwest of the bath, which serves as a venue for cultural and artistic events (Figure 22). This area also houses workshops, storage facilities, and open and semi-open exhibition spaces designated for the special museum. Visitors can observe archaeological remains excavated in the area as well as architectural elements of the bath, such as *kurna* and fountain.

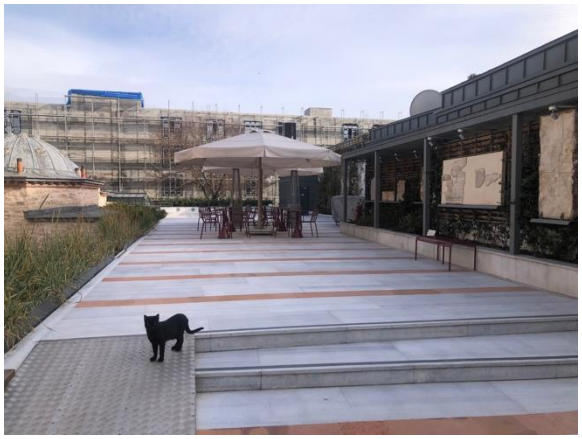

Figure 22. The garden/courtyard area for cultural and artistic activities (Photo: Author, 2025)

4.5.3. Bathing Sections Used for Cultural Activities

During its original construction, the Zeyrek Tiled Bath served as a social space where individuals participated in various bathing traditions of the time, including the puerperal bath (for newborn mothers and their babies), bridal bath (for women prior to their wedding), circumcision bath (for boys undergoing circumcision), groom's bath (for the groom and his entourage), and soldier's bath (for young men departing for military service) (38).

In 2023, nearly 500 years after its construction and following an extensive restoration process, the Zeyrek Tiled Bath was reopened, continuing to function both as a social gathering space and for its original bathing purposes.

Before the installation of the heating system and the conversion of the space into a bathing area, the exhibition *Healing Ruins*, inspired by the discovery and restoration of historical remains uncovered during the preservation of the bath, was presented to the people of Istanbul. The exhibition aimed to encourage visitors to reflect on the healing impact of restoring not only historical structures but also social and spiritual heritage. Open to the public in Istanbul from September 30 to November 30, the exhibition featured sculptures, paintings, photographs, and drawings by 22 artists from Turkey and abroad, displayed alongside site-specific sound and video installations within the bath (Figure 23).

Figure 23. The *Healing Ruins* exhibition at Tiled Bath (Photo: Author, 2023)

Since the bath's reopening, the *soğukluk* (cold room) has hosted various cultural and social events, such as talks, meetings, and promotional dinners, on Mondays when the bath is not in operation.

For example, the 2024 Bath Culture Wikimarathon aimed to enhance existing Wikipedia articles on bath culture and bath structures, while also promoting and encouraging the use of baths (Figure 24).

Figure 24. Wikimarathon event in the men's cold room, 2024[5]

5. Results and Discussion

The Zeyrek Tiled Bath and Museum was evaluated through a combination of literature review, on-site inspections, and interviews with the museum director, visitors, bath employees, and users. The goal was to assess the contribution of the bath to the sustainability of its use, integrating contemporary cultural and artistic functions alongside its original bathing purpose.

[5] Zeyrek Çinili Hamam Events,
https: // zeyrekcinilihamam.com/event (accessed 25 May 2024)

The evaluation reveals that, during the restoration, the Zeyrek Tiled Bath Museum and the open exhibition area were designated not only to enhance the bath's structural stability but also to emphasize its tangible and intangible cultural heritage. These spaces contribute to Istanbul's cultural life and promote both the use and appreciation of the bath.

Interviews with the museum director and staff revealed that the museum attracts both foreign tourists, who constitute the majority of bath users, and locals, primarily for the exhibition of the original tiles—extracted from the bath—that give it its name.

Furthermore, the Zeyrek Tiled Bath Museum was awarded the Silver Award in the 'Spatial Experience-Exhibition' category by the Art Directors Club (ADC), further enhancing the recognition of bath within the art and cultural community.

On the other hand, the remains of the Byzantine cistern, uncovered during archaeological excavations as a part of bath's restoration process, along with the galleon graffiti found on its walls, intrigue many visitors. Additionally, the occasional hosting of temporary art exhibitions within the ruins significantly contributes to the promotion and utilization of the bath.

Today, the bath, which maintains its original bathing function, is closed on Mondays, when cultural events such as talks, meetings and seminars are held in the cold room, thus increasing both its promotion and use. At the same time, the exhibition *Healing Ruins,* inspired by the revitalization of the bath following 13 years of restoration before its reopening in 2023, made a significant contribution to both the initial promotion and the ongoing use of the site.

Interviews with the bath staff revealed that the facility is primarily used by foreign tourists, largely due to the high admission fees. However, efforts are currently underway to introduce a public day to increase accessibility for local residents. In this context, it is recommended that cultural activities be organised in the cold room and open exhibition areas of the bath through temporary or annual collaborations with various public, civil, and private organisations. Such initiatives could enhance the bath's economic sustainability, with the generated income contributing to both the ongoing maintenance of the facility and the provision of more affordable access for local users.

Additionally, the prestigious *TIME* magazine has included a visit to the Zeyrek Tiled Bath in its 2024 list of *the World's Greatest Places*, recognizing it as one of the 100 most exciting experiences globally. This inclusion significantly enhances global awareness of its cultural, historical, and artistic heritage.[6]

Finally, an integrated interpretation of the findings suggests that the preservation of the Tiled Bath by incorporating cultural functions alongside its original purpose has significantly contributed to sustainability in environmental, social, and economic terms (39).

In terms of environmental sustainability, the Zeyrek Tiled Bath and Museum have enhanced the environmental value of the Zeyrek District and created conditions for it to become a center of attraction. Since social sustainability is inherently people-oriented, the continued use of the bath for both its original and newly integrated cultural functions has revitalized the social life of Istanbul's residents and contributed to an improved quality of life.

The involvement of foreign artists in various cultural and artistic events held at the bath has also fostered cross-cultural understanding and social integration among different communities. Moreover, the building's inclusion in the *World's Greatest Places* list in 2024 has increased its visibility, attracting a significant number of tourists and reinforcing its preservation through a sustainable cultural tourism approach (40). The revenue generated from cultural tourism has further supported economic sustainability by providing funding for the conservation, maintenance, and ongoing development of the bath's cultural heritage

6. Conclusion

The Zeyrek Tiled Bath stands as one of the most valuable structures in Istanbul's cultural heritage, having endured from the 16th century to the present day. Its unique architecture and splendid decorations reflect the rich bath culture of the time.

After a meticulous restoration lasting approximately 13 years, the building reopened in 2023 as the Zeyrek Tiled Bath and Museum. In addition to its original bathing function, it now accommodates contemporary cultural activities while preserving its historical, architectural, and artistic integrity.

This study analyzes the contribution of these contemporary cultural functions to the bath's usage and sustainability, drawing on written, visual, and drawn sources, as well as on-site examinations and interviews with the museum director, visitors, bath employees, and users. The findings indicate that the integration of contemporary cultural functions not only enhances the bath's visibility and utilization but also contributes to its environmental, social and economic sustainability, thereby supporting its long-term conservation for future generations.

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[6] World's Greatest Places 2024, Zeyrek Çinili Hamam, Istanbul, https://time.com/6992370/zeyrek-cinili-hamam/ (accessed 25 July 2024)

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