



Examination of Methods Employed in Industrial Archaeology Conservation: Case of Beykoz Leather and Shoe Factory

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Abstract

This paper focuses on examining the transformation of the Beykoz Leather and Shoe Factory area, investigating the qualities of the buildings in the area, and evaluating them in the context of industrial archaeology. The study aimed to determine whether each of the four conservation methods determined by TICCIH and ERIH organizations and Rolf Höhmann (1992) are preferred for the buildings of the Beykoz Leather and Shoe Factory. Data collection was carried out in 5 years between 2018-2022. Data were collected through on-site observation, analysis of relevant documentation, and interviews with the Kundura Hafıza (Shoe Memory) unit established within the factory during multiple site visits. The original aspect and importance of the study is to conduct and comprehensively evaluate all three of the literature study, fieldwork, and data analysis within the scope of the study.

Keywords: Conservation, industrial archaeology, cultural heritage, transformation, adaptive reuse.

Endüstri Arkeolojisini Koruma Yöntemlerinin İncelenmesi: Beykoz Deri ve Kundura Fabrikası Örneği

Öz

Bu çalışma, Beykoz Deri ve Kundura Fabrikası yerleşkesinin geçirdiği dönüşümü incelemeye, yerleşkedeki yapıların niteliklerini tespit etmeye ve endüstriyel arkeoloji bağlamında değerlendirmeye odaklanmaktadır. Çalışma, Beykoz Deri ve Kundura Fabrikası'nın dönüşümde yerleşkedeki yapılar için TICCIH ve ERIH komiteleri ile Rolf Höhmann (1992) tarafından belirlenen dört tarihi yapı koruma yönteminden hangisi/hangilerinin tercih edildiğini belirlemeyi amaçlamıştır. Veri toplama 2018-2022 yılları arasında, 5 yıllık periyotta gerçekleştirilmiştir. Veriler, yerinde gözlem, ilgili belgelerin analizi ve fabrika bünyesinde kurulan Kundura Hafıza birimi ile çoklu saha ziyaretleri sırasında yapılan sözlü görüşmeler yoluyla toplanmıştır. Yapılan tüm araştırmalar, analizler ve tespitler, yerleşkedeki endüstriyel arkeolojinin korunması için dört koruma yönteminin her birinin ayrı ayrı tercih edildiğini göstermiştir. Çalışmanın özgün yönü ve önemi, çalışma kapsamında literatür çalışması, saha çalışması ve veri analizi olmak üzere üç yöntemin beraber yürütülerek kapsamlı bir şekilde değerlendirilmesidir.

Anahtar kelimeler: Koruma, endüstriyel arkeoloji, kültürel miras, dönüşüm, yeniden işlevlendirme.

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1. Introduction

Humans are the only elements of the habitat to produce their structures for protection, shelter, production, and accomplishment of other needs (Çiftçi & Arpacıoğlu, 2021). To fulfil their needs, humans initiated the process of creating an artificial environment within the habitat. Constant changes take place across people, societies, needs, natural environment, and artificial environment, which create variability in the needs and use of buildings, forcing the architecture to change (Ahunbay, 2014).

When buildings cannot meet the changing social, historical, cultural, economic, technological, and environmental needs of their era, they lose their functions and get abandoned (Altinoluk, 1998). Although these buildings become old and are not functional, they continue to exist physically because their structural lives do not come to an end (Cengizkan, 2006). For the buildings to stay in use and not become inactive, they need to keep up with rapid changes and continue to be useful.

Industrial areas remained on the periphery of cities at the time they were built. But, as a result of the growth and expansion of cities over time, they have become a part of the urban areas and are one of the most important potential areas in the ongoing transformation process (Atagök, 2000). With proper spatial planning, these large areas can become a breathing point for growing cities as peripheries expand. Therefore, the conservation and reuse of these areas ensure that people of the cities are aware of conservation and are willing to turn these areas into places embraced by the citizens.

The history of conservation dates back to the first ages. It can be seen that the temples were preserved in an orderly manner in the early ages. The awareness of preserving the historical and cultural values of the buildings and transferring them to the next generations increased after rapid urbanization. In the 20th century, methods of preserving industrial archaeology became an important topic of discussion in architectural literature.

Beykoz Leather and Shoe Factory is an area officially recognized as a historical monument and where all cultural and natural assets are under legal protection. The reason for choosing this area within the scope of the research is that it is one of the industrial facilities with the highest social and economic capacity when it is actively used. Factory, one of the rare examples of industrial cultural heritage that had operated uninterruptedly with its history dating back to the early 1800s, has a rich history covering the Ottoman Empire and the Republic of Turkey. The factory was a pioneer for the Ottoman Empire in terms of modernization with leather products. It was established in Beykoz, one of the most magnificent points of the Bosphorus. It is one of the biggest factories in the Balkans. In this historical area, which is one of the most beautiful points of the city due to its location, the industrial structures that have been challenged over the years have still managed to survive. For this reason, the protection of the area is very important for the city.

Beykoz Shoe and Leather Factory was a structure that was constantly renewed, articulated, and evolved with efforts such as capacity increase, and changes in production methods and technologies. The industrial area, which grew over time as a living organism, had structures that differed in quality due to changes in construction techniques and architectural understanding over time (Küçükerman, 2020). Therefore, the investigation of the Beykoz Leather and Shoe Factory is an important case study for architectural literature.

Although the conservation and reuse of many industrial archaeology works have been widely discussed in different academic studies, the methods of conservation and reuse of the Beykoz Leather and Shoe Factory have been sparsely studied. Therefore, this study focused on the methods that were used for the conservation and reuse of Beykoz Leather and Shoe Factory; a case study was conducted to fill the aforementioned gap in the literature.

1.1. Industrial Archeology

Industrial buildings that emerged with the industrial revolution have met the needs of cities for many years. Buildings that were constructed away from the city centers for the sake of people's health, the need for large land areas, and proximity to water sources, became structures within the city center. They paved the way for the development and growth of the cities, shaped them, and allowed cities to grow in line with industry. However, historical factories have closed or lost their functions over time across the world due to being unable to operate efficiently, being technologically inadequate, and polluting city centers (Föhl, 1994).

Industrial archaeology was first introduced in England (an active center of industrialization) in the second half of the 20th century when industrial structures were threatened with extinction. After the issue of urban transformation came to the forefront and awareness regarding the preservation of historical culture grew, the dysfunctional industrial structures that remained in the city centers were accepted as an important cultural heritage and the concept of industrial archaeology became widespread.

Industrial heritage included all units that emerged as a result of the industrial process, together with their equipment. In this context, industrial archaeology includes all fields related to various industries (Köksal, 2005). Out-of-use architectural structures, production equipment, building parts, and settlements, along with the natural and urban landscapes these structures are placed within constitute the industrial heritage (ICOMOS, 2013). The International Committee for the Conservation of the Industrial Heritage (TICCIH), which carries out activities to preserve industrial heritage, defines industrial heritage in the Nizhny Tagil Charter published in 2003 as follows: Industrial heritage consists of the remains of industrial culture that are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted, and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education (TICCIH, 2003).

With the first attempts to preserve industrial buildings as well as buildings that can be included in the scope of cultural heritage according to conservation criteria, the methods of preserving industrial archaeology, defined as the act of researching and uncovering old industrial buildings, became an important topic of discussion in the architectural literature in the 20th century.

1.2. Industrial Archaeology Conservation Methods

The change in needs, the emergence of new production methods, and the development of technology necessitated the change of factory structures (Günay, 2002). In particular, after the Second World War, some changes took place in the use of industrial structures around the world. In this period, the industrial facilities that were functionally obsolete and could not keep up with the change became inadequate and lost their functions over time. Areas with historical background and value were abandoned and left idle (Altınoluk, 2000).

After the functionality of industrial buildings came to an end, their conservation and reuse intensified towards the middle of the 20th century. The formation of historical and environmental awareness over time was a factor that triggered the conservation and reuse of industrial archaeology (Atagök, 2000).

Conservation and transformation of these structures, which today reveal themselves as industrial archaeology, are common all over the world. This is primarily because these areas shed light on the historical background of the society and the cities. Reviving these buildings, instead of watching them disappear, is an indicator of the value attributed to the past. In this context, cultural heritage buildings on a global scale are considered within the framework of international criteria, their values are recognized, and efforts are made to regain their place in contemporary life.

The correct conservation and revival of an industrial building or facility can be achieved by determining the necessary conditions and choosing the appropriate preservation method accordingly. If the historical and cultural values of the industrial heritage are determined comprehensively, it can be

ensured that said heritage is protected by appropriate methods (Köksal, 2005). The World Heritage Committee and the Council of Europe are working on the identification, research, and scientific analysis of the heritage, and the determination of conservation methods according to its unique nature. From this point of view, structures within the scope of industrial heritage are protected by various methods in line with the criteria set by organizations such as TICCIH and ERIH (European Route of Industrial Heritage). The protection methods specified by all these institutions and organizations are grouped under four preservation methods categorized by Höhmann: Complete conservation without any intervention or conservation without providing a new function with minimum intervention, conservation by providing it with a function similar to its old function with little intervention, conservation providing museum function, reuse with a different function (Höhmann, 1992). The methods applied in the conservation of industrial archaeology may differ based on the buildings and structures.

1.3. Beykoz Leather and Shoe Factory

In 1810, Tabakhane-i Klevehane-i Âmire was established on the coast in Beykoz (Istanbul), amidst wide plains and rich water resources. This facility produced military shoes and boots for the Ottoman army. Beykoz Leather and Shoe Factory was one of the important facilities of the traditional leather industry that faced the Industrial Revolution that took place in Europe at the beginning of the 19th century. This factory was one of the rare facilities where the industrial revolution was implemented and long-lasting continuity could be achieved. Various breakthroughs were experienced over time, and the boundaries of the factory expanded accordingly. In 1842, steam engines started to be used in the factory and the technical equipment of the facility was improved. During this period, the factory was equipped with a 40-horsepower steam engine, two steam boilers, and 70 leather wells. In 1912, production capacity was increased with two diesel engines imported from Europe, new machines, and another steam boiler (Küçükerman, 2020).

After falling under Sümerbank's ownership in 1933, the name of the facility was changed to Industrial Facility of Sümerbank for Leather and Shoe in 1939 (Toros, 1954). From 1936 to 1940, the number of workers at the factory nearly doubled. Thus, Beykoz Leather and Shoe Factory created a significant level of employment in the Beykoz district (Küçükerman, 1988). The wedding hall, summer and winter cinemas in the Beykoz Leather and Shoe Factory clearly show the effects of the factory on social life. The factory was instrumental in meeting on common ground, having neighbourly relations, and social sharing.

Although Beykoz Leather and Shoe Factory increased its production by adding many manufacturing departments to its structure, the factory recruited its last workers in 1984 (Küçükerman, 2020). Production ceased in 1999 due to negative financial indicators and phosphorus pollution caused by the factory. The factory was privatized in 2003 and production was completely closed.

Structures for warehouse areas, technical areas, and similar functions have been altered as the production scheme has changed over time, completely in line with the needs. 53 buildings in the industrial area have ceased to operate. The area consisted of many different structures, from small workshops that began to be built at the beginning of the 19th century, to industrial-functional structures that evolved into more complex structures (Küçükerman, 1988). The area had buildings allocated for manufacturing, social events, warehouses, and offices, along with 32 flats in four blocks with sea views. In addition, the factory area included forest areas. It had a 350-meter front to the Bosphorus. The orientation, positioning, and geometry of the buildings in the area are planned in such a way that the use of daylight in architecture is abundant. The amount of sunlight taken into the buildings is sufficient to meet the users' needs in terms of quantity and quality (Çiftçi & Arpacioğlu 2021).

Today, the entire land area of 182,250 square meters of the Beykoz Leather and Shoe Factory has turned into a movie plateau that hosts a museum, an open-air concert and cinema area, and an indoor movie theatre. There are 25 registered industrial structures in this area. During the transformation,

the natural historical texture and identity of the industrial area were preserved and maintained. This industrial area still contains many traces of the past.

An evaluation of the present structure together with its old manufacturing buildings, social structures, and green areas, allows us to describe this area as a breathing point for the urban fabric, both culturally and recreationally.

The oldest and at the same time the most common production area of the Ottoman industry is leather. Beykoz Leather and Shoe Factory is a prominent factory of the Ottoman industry with its leather products. Winning a gold medal at the Vienna International Fair in 1877 can be shown as a success proving the quality of Beykoz Leather and Shoe Factory's production (Küçükerman, 1988). The area is one of the rare factories that is also socially active and has created a workers' neighbourhood culture around it.

2. Material and Method

The present study focuses on examining the transformation of the Beykoz Leather and Shoe Factory area, investigating the qualities of the buildings in the area, and evaluating them in the context of industrial archaeology. The study aimed to determine whether each of the four conservation methods determined by Höhmann (1992) is preferred for the buildings of the Beykoz Leather and Shoe Factory.

(1) Complete conservation without any intervention or conservation without providing a new function with minimum intervention: This method aims to preserve industrial archaeology as an outdoor museum.

(2) Conservation by providing it with a function similar to its old function with little intervention: In this method (preferred for industrial areas), some older functions are preserved alongside the development of some new functions.

(3) Conservation providing museum function: It is a method that aims to re-function buildings as museums. This method applies to buildings that are capable of presenting sufficient technical information about their era and have not endured much damage nor lost a lot of their original equipment.

(4) Reuse with a different function: In this method, the aim is to integrate the building and the space into the present day and bring it back to life with a different function.

Literature review, archive review, on-site examination, and documentation of the structures related to the study area were used within the scope of the study. Field trips were made with the Kundura Hafıza (Shoe Memory) unit established within the Beykoz Leather and Shoe Factory. The details of the one-to-one interviews with more than 200 former factory employees and their relatives brought together by the Kundura Hafıza team, photographs taken during the factory's active period, documents, and drawings were examined. In addition, the archive of Kundura Hafıza, industrial machinery, materials, and personal belongings of the employees from the factory's active period was examined and photographed on site in the new museum area in the building, which had been the carpentry shop of the factory at that time.

Data collection was carried out in 5 years between 2018 - 2022. Data were collected through on-site observation, analysis of relevant documentation, and interviews with the Kundura Hafıza team during multiple site visits. The transformation of many buildings that took place in this process was observed on-site during field visits. Reinforcement work in structurally weak buildings was documented as well.

3. Findings and Discussion

Höhmann (1992) described four methods for the conservation of industrial archaeology. These methods can be listed as complete conservation without any intervention or conservation without providing a new function with minimum intervention; conservation by providing a function similar to the old function with a little intervention; conservation by providing a museum function; and reuse with a different function. Different methods can be preferred in line with different requirements for

the conservation and reuse of industrial archaeology. At this point, the following objectives should be considered as a priority when making decisions:

- To exhibit the industrial heritage,
- To carry out activities that will increase the knowledge and awareness of the public,
- To obtain information and learn examples from international practices and institutions, and
- To evaluate the economic aspect in the context of implementation and sustainability of decisions.

The present study examined the transformation of Beykoz Leather and Shoe Factory in terms of four methods of Höhmann (1992) for the conservation of industrial archaeology.

3.1. Complete Conservation Without Any Intervention or Conservation Without Providing a New Function with Minimum Intervention

Preserving industrial archaeology as it is and ensuring that it is passed on to future generations is a process with many historical and cultural benefits. In addition, the conservation of historical buildings is often more economical than constructing new buildings. The Venice Charter (ICOMOS, 1964) states: 'The conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable, but it must not change the lay-out or decoration of the building [...].' Conservation of vacant and unused buildings that lost their function can be achieved by applying the right conservation principles and evaluating the structures correctly. Based on the historical and cultural function of the conservation; traces, equipment, data, and details of the identity and original function of the building should be preserved and integration of the old function with the building should be emphasized and brought to the fore.

An on-site examination of the Beykoz Leather and Shoe Factory helped determine whether the conservation method of complete conservation without any intervention or conservation without providing a new function with the minimum intervention was preferred. Many buildings and areas have been protected by this method in the industrial area. The area of the leather cabinets, where raw leather was processed and made ready for shoe production by resting in some chemical liquids, is subject to the conservation method of complete conservation without any intervention or conservation without providing a new function with minimum intervention (Figure 1). Industrial archaeology has allowed the historical leather cabinets of the factory, to be restored and preserved, as they were in earlier times (Figure 2). Also, the old and new shoe factory buildings, tire operation revision buildings, raw leather warehouse (Figure 3), water tank, and fire station located in the industrial area are preserved as they were.



Figure 1. Conservation of leather cabinets without any intervention

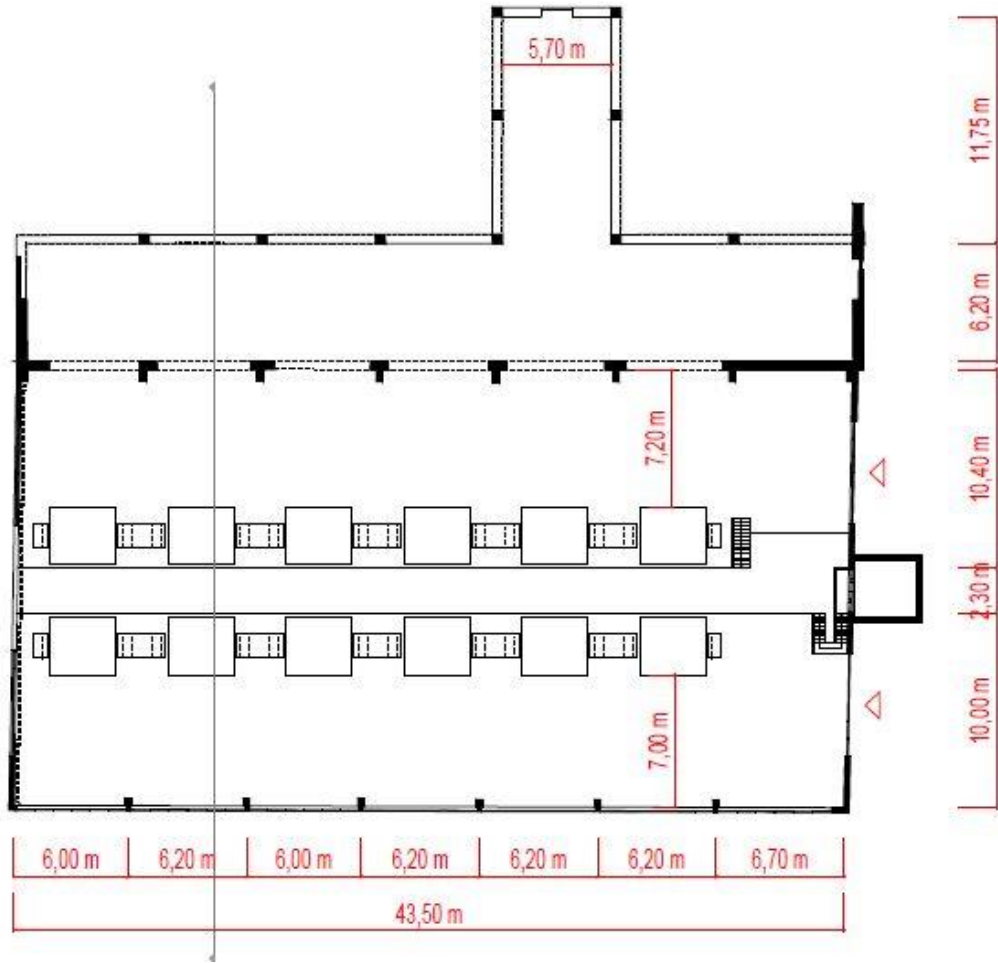


Figure 2. Plan of conservation of leather cabinets without any intervention (Beykoz Kundura, 2022)

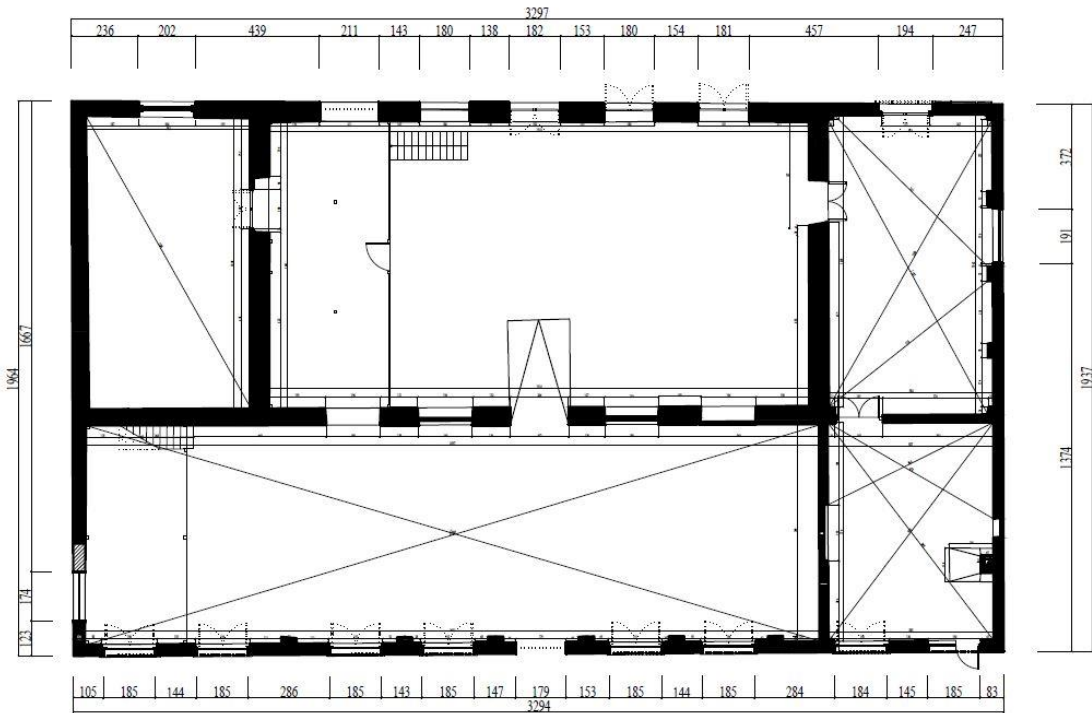


Figure 3. Plan of conservation of raw leather warehouse without any intervention (Beykoz Kundura, 2022)

It is important to identify the industrial buildings and to preserve them as they are, together with the parts that convey information about the production style of the period and their environment.

3.2. Conservation By Providing a Function Similar to The Old Function with A Little Intervention

Another approach adopted in conservation methods is to preserve buildings with very little intervention. This method ensures that the building is protected along with the continuity of its use to prevent it from falling into an idle state again. In terms of ensuring the continuity of use, it is primarily evaluated whether the function of the building adapts to today's needs.

The charter of Carta Del Restauro states that 'it is acceptable to provide new uses to living, that is, standing monuments, only not far from their original function and where necessary adaptations can be made to the building in such a way that it does not cause significant damage' (ICOMOS, 1931).

An on-site examination of the Beykoz Leather and Shoe Factory helped determine whether the conservation method of conservation by providing a function similar to the old function with a little intervention was preferred. There are many buildings and areas protected by this method in the industrial area. The warehouse area used for storage is subject to this conservation method (Figure 4). The building, which was used as a sheet metal warehouse during the factory's active period, is used as a storage area for hundreds of hand tools and machines used in the factory period. The office sections in the new shoe factory building, built towards the end of 1950, have been transformed into the accounting and human resources offices of Beykoz Kundura today. The Czech house, which was used as an accommodation and working area for engineers at the time it was built, is used as a boutique hotel with a function close to its former function (Figure 5).



Figure 4. Conservation of the warehouse by providing a function similar to the old function

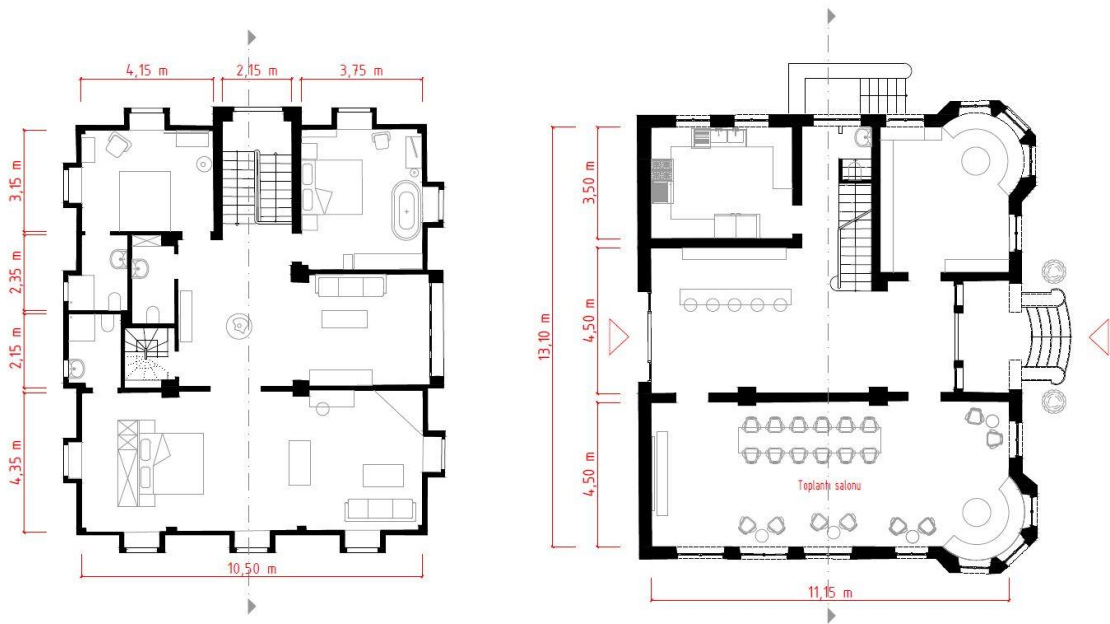


Figure 5. Plans (ground floor on the left and first floor on the right) of conservation of the Czech house by providing a function similar to the old function with a little intervention (Beykoz Kundura, 2022)

It is easier and more convenient to reuse the buildings with a function that needs functionally similar spatial programs and spatial scenarios than to use them with a different function. The old units of the buildings, which were used with a similar function to the old ones in Beykoz Leather and Shoe Factory, could be reused for the new function without the need for any intervention or with simple renovations.

3.3. Conservation Providing Museum Function

The buildings which have been re-functionalized from factory to museum ensure both the preservation of industrial heritage and the revival of history. The transformation of an industrial building into a museum not only provides the sustainability of architecture but also brings historical sustainability with it.

An industrial museum is expected to answer the question ‘What changes have occurred in the economic, social, urban, and ecological areas in and around the industrial facility with industrialization?’ (Engelskirchen, 1998). For this reason, the industrial museum must provide information such as the economic and technical development of the period in which the building was built, the daily lives of the workers, the way the products are used in daily life, as well as social and cultural information (Föhl, 1994). In the use of industrial areas as museums, it is important to convey information about the unique environment of the industrial building such as sound, noise, and smell. Often large machines such as steam engines are exhibited in museum galleries as monument-like objects (Blockley, 1999). Industrial archaeology machines provide essential data for understanding the industrial process. It is not possible to protect industrial areas, which have completely lost their equipment and traces of old functions, by turning them into museums. It would be misleading to create museums where machines brought from different places are exhibited as if they were there before. The best solution would be turning the equipment, even while working, of industrial buildings into a museum to enable visitors to observe the function of this equipment and learn by experiencing their development in history.

An on-site examination of the Beykoz Leather and Shoe Factory helped determine whether the conservation method of conservation providing a museum function was preferred. There are many buildings and areas protected by this method in the industrial area. The entire old carpentry area of the Factory and the foyer areas are currently used as Kundura Sahne (Stage) and Kundura Sinema (Cinema). As part of the re-functioning of Beykoz Shoe and Leather Factory, the industry museum in the carpentry structure explains both the industrial culture of the factory, which had continued for nearly two centuries and the social life shaped around it (Figure 6). The energy system in the boiler

room of the old factory is exhibited as an industrial heritage in the middle of the carefully designed Kundura Sahne. A part of the boiler room of the old factory is exhibited to visitors in the foyer of Kundura Sinema.



Figure 6. Conservation of carpentry structure by providing museum function

Industrial heritage buildings and equipment in the area are preserved as industrial archaeology. In the industry museum created this way, information and narratives are presented on many subjects such as production techniques, objects produced, the history and evolution of production, its place in the history of technology, the work of workers, and ordinary working days. In this sense, in the created museum, pictures, documents, and examples of leather in the production phase are exhibited, together with the background of leatherwork, the production stages, and the evolution of leatherwork in the factory together with the buildings over time. Shoe samples, which are the products of the factory from the early 19th century onwards, are exhibited in the factory's museum today. With the help of these examples, it is possible to evaluate the development of shoe tradition and art in terms of technique and design. The archive section in the carpentry not only exhibits preserved machines but also records the oral history studies carried out with the former employees of the factory and their relatives after 2015.

The re-functioning of this area, which is very important for the people of Beykoz, to bring it into social life, and the use of a few of the buildings in this area as museums, have enabled them to be used by different cultures, genders, and age groups, and by this way, many more people can benefit.

3.4. Reuse With a Different Function

The deprivation of regular maintenance and repair of a non-functioning and abandoned building causes faster destruction of its structure. Time, natural conditions, and many other factors accelerate the deterioration of structures. In these circumstances, reusing the structures with a different function for conservation can be a good solution. The main purpose of reuse is to extend the lifetime of the building by making it alive again. In this case, the historical value of the building and its environment is protected by a change in function. Instead of demolishing structures that have lost their function, reusing them with necessary interventions is a method that has been used for centuries. Evaluating old materials and equipment are important factors in ensuring the continuity of history and monuments (Schweger, 1985). Article 10 of the Venice Charter (ICOMOS, 1964) states: 'Where traditional techniques prove inadequate, the consolidation of a monument can be achieved by the use of any modern technique for conservation and construction, the efficacy of which has been shown by

scientific data and proved by experience.' It is still being determined whether smart materials with special dynamic properties can be used to reuse historic buildings (Topal & Arpacioğlu, 2020).

Re-functioning industrial monuments often offer different options than other building types. Industrial buildings are generally quite simple in terms of structure; therefore, they can accommodate a wide range of options in the selection of new functions (Köksal, 2000). However, while re-functioning the building, the features that make it unique should not be spoiled. It is necessary to preserve the carrier systems, window proportions and profiles, interior openings, wall texture, courtyards, rails that provide transportation within the facility, and other similar features of such buildings. Achieving these depends on finding the appropriate function and performing the application correctly.

While determining the new functions, the historical and industrial archaeology values of the factories should not be ignored, the new functions should not lose the traces of the old functions integrated with the buildings and the area. The preservation of traces, equipment, data, and details of the identity, and original functions of the buildings ensures the monumentalization of the old functions by emphasizing their historical background and industrial culture. The selection of the new function and the nature of the implementation are directly related to each other. Therefore, the main decisions must be made correctly first. For reuse efforts, it is common that public cultural and artistic use is preferred over individual use (Zöpel, 1985). It is aimed at wide participation that is not isolated from the land, that contributes to cultural development by considering the local users, and that prevents destruction and unconsciousness. Thus, while industrial monuments come back to life, they also contribute to the urban culture.

An on-site examination of the Beykoz Leather and Shoe Factory helped determine whether the conservation method of reuse with a different function was preferred. There are many buildings and areas protected by this method in the industrial area. Kundura Sinema, which was created as a part of the boiler room restoration project in 2019 (Figure 7) is the most intensive example of this method of restoration (Figure 8). The building, which was used as an oil rendering plant during the active years of the factory, functions as a cafe, seminar room, and activity area today. Also, many buildings in the industrial area have been preserved and transformed into a form that serves as a decorative series-film stage where many projects can be created using the green box and technological fiber infrastructure. The new shoe factory building is used for cinema and music events as well as the shooting of TV series and movies. The forge structure, which is the old iron workshop of the factory, is used as a restaurant open to the use of guests participating in the events organized within Beykoz Kundura, remaining faithful to its historical features and structure. The additional structure of the carpenter's workshop is used as a children's workshop area. Some of the rows of buildings called Leather Wells are used as restaurant kitchens, offices, and temporary accommodation areas. The cafeteria structure at the factory entrance is now used as a technology office and training area. The union building is used as a cafe.

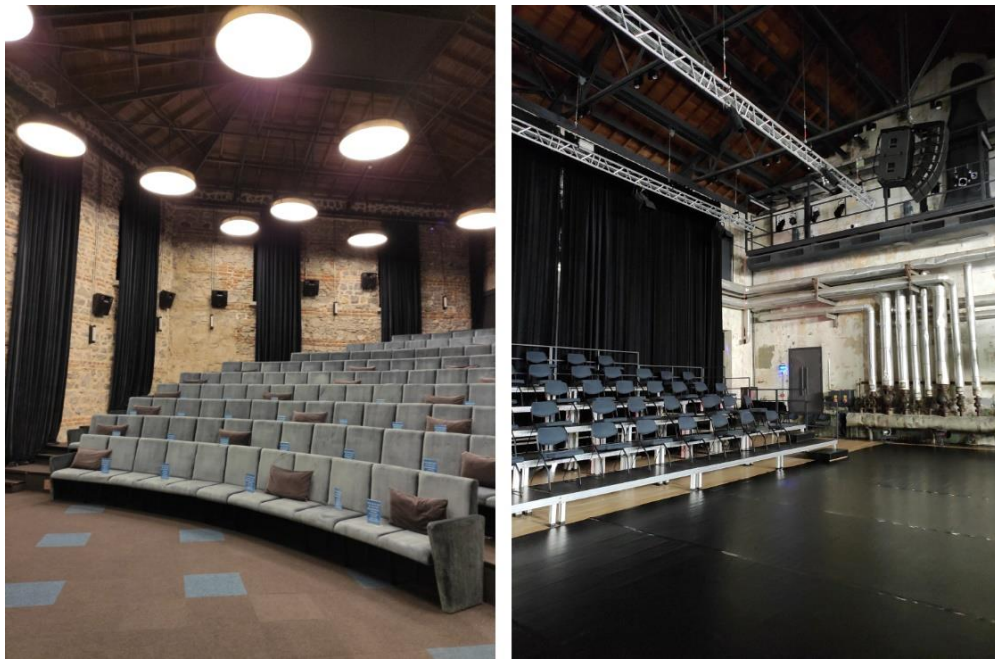


Figure 7. Reuse of the boiler room with a different function

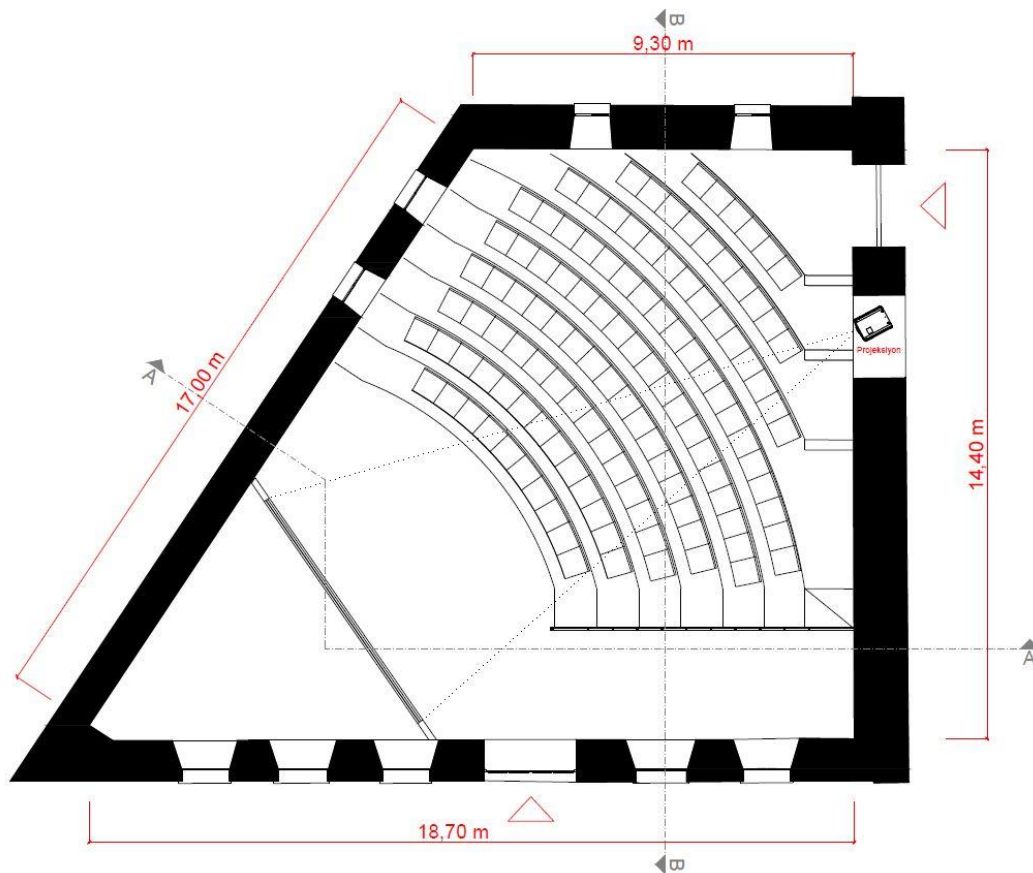


Figure 8. Plan of reuse of the boiler room with a different function (Beykoz Kundura, 2022)

Conservation proposals put forward are in line with the continuation of some structures in the area with a different function. The multifunctional use of the area has allowed it to be a visible space for the city and its inhabitants by serving more types of users.

4. Conclusion and Suggestions

Conservation of industrial archaeology is important both in terms of architectural memory and social memory. Numerous elements, such as facade, materials and construction techniques, equipment, furnishing, decoration, and plan scheme of the buildings, are information sources that illuminate the advancements of human history. Conservation is an important architectural approach in terms of both maintaining original structural values and ensuring the transfer of industrial heritage to future generations. Additionally, conservation is a sustainable approach. In contrast to conservation, the demolition of a building and the construction of a new one from scratch causes great harm to the environment, both in terms of waste generation and use of materials. Therefore, preserving and keeping alive industrial archaeology has several positive outcomes.

Preserving only a single structure or detail makes it difficult to understand industrial archaeology's dimensions and content. Therefore, for the conservation of industrial areas, it is important to properly determine and evaluate all parts of the area that convey information about the production style of a period and its surroundings.

The functional suggestions put forth after the Beykoz Shoe and Leather Factory lost its function and was privatized were aimed at preserving the area in a multifunctional structure. Since industrial archaeology is subject to unearned income in terms of large areas, building stock, and location, the factory is reused with multiple functions, which allows it to be a space for the city and its people, serving various users. Moreover, it has continued to preserve its feature of being an element that will increase the economic return, which is one of the main conditions for the protection and survival of the area.

The conservation and reuse of this facility, which has historical and cultural value for the people of Beykoz district and İstanbul, is valuable in many respects. By conservation and re-functioning, the buildings in this area are equipped with cultural functions, such as a museum, open-air concert and cinema area, indoor movie theatre, and a film plateau that hosts movies, TV series, and video clips. This allows the area to be used by different cultures, gender, and age groups, allowing more people to benefit from the area.

After the closing process of the factory started with the decision of the Council of Ministers, the factory area turned into one of Turkey's most important TV series and movie plateaus. The area, which has been protected as a monument by registering its buildings, has become an industry for a period and an institution that shapes the cultural and artistic life of the time. It should not be forgotten that the transformation of the factory is for the public good. Even though the buildings in the area are transformed, their original names turn them into places of memory. The original venue names of the factory, such as Tire Operation Revision Buildings, Oil Rendering Plant, and Leather Cabinets, are still used in the field. In addition, the Carpentry Area, where the exhibition takes place, is still a place with its original name, where we can see the machines still used in the period and the wooden shoe molds that were produced. Machines are indispensable elements of the industrial heritage as they reflect both the stages of shoe production and the technology of the period in which they were produced.

The principles applied in the Beykoz Leather and Shoe Factory transformation project were determined according to the size of the area, its location in the city, and the decisions of the authorities. The main strategies for the transformation project can be listed as follows:

- To ensure the integration of the area with the city.
- To transform the area by assigning needed and appropriate functions, considering the physical and social structure of the city, in a dynamic context.
- To ensure that the area contributes to the city economically, socially, and culturally with the conservation and reuse programs to be implemented.

All the research, analysis, and on-site determinations reveal that each of the four conservation methods determined by Höhmann (1992) is preferred separately for the conservation of industrial archaeology in Beykoz Leather and Shoe Factory (Figure 9).

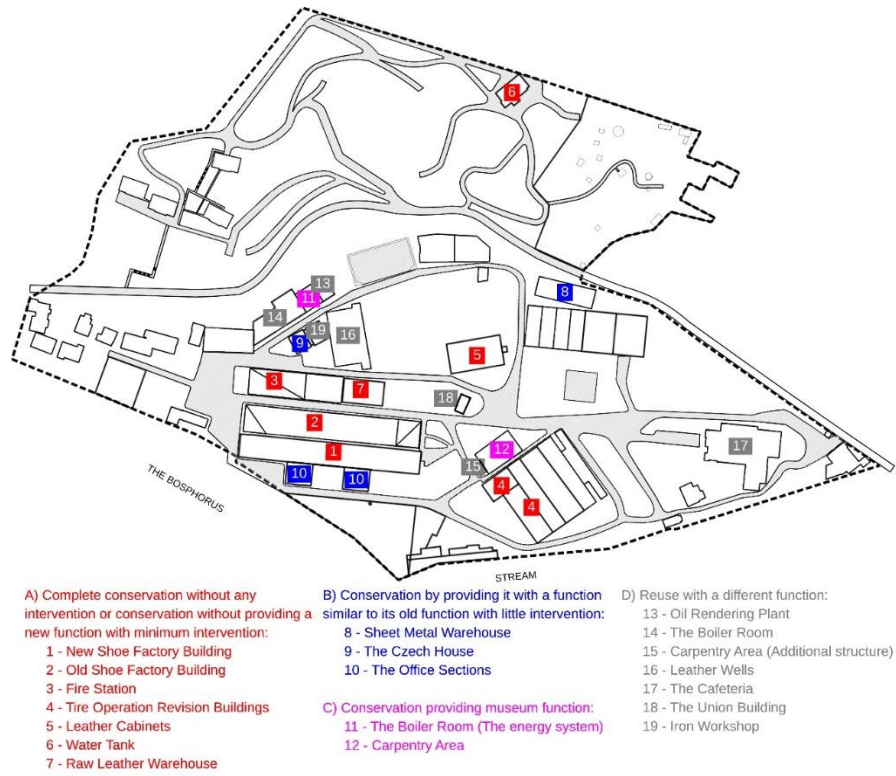


Figure 9. Map of conservation methods of buildings in Beykoz Leather and Shoe Factory

The structures that have survived from the past to the present in all industrial heritage areas indicated on the map have been preserved in line with different requirements with the four different protection methods described above (Figure 9). At this point, the ones that are prioritized in the decisions given for Beykoz Kundura; It is the implementation and sustainability of approaches such as exhibiting the industrial heritage, carrying out studies that will increase the knowledge and awareness of the public, taking information and examples from international practices and institutions. This situation has been possible with different protection methods being proposed, without forgetting that the main purpose is to keep the urban identity and memory alive while remaining within the concept of protection.

After the production of Sümerbank Beykoz Leather and Shoe Factory ceased, a new and different life was created within the remaining industrial heritage. To achieve this, different methods were used together, namely: complete conservation without any intervention or conservation without providing a new function with minimum intervention, conservation by providing it with a function similar to its old function with a little intervention, conservation providing museum function, and reuse with a different function. With its conservation and re-functioning methods, the entire factory area can be considered an example of a planned transformation as an industrial heritage and open-air museum.

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The article complies with national and international research and publication ethics. Ethics Committee approval was not required for the study.

Author Contribution and Conflict of Interest Declaration Information

All authors contributed equally to the article. There is no conflict of interest.

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