INTEGRATION OF INDUSTRIAL HERITAGE AREAS INTO THE CITY THROUGH URBAN DESIGN: THE CASE OF SÜMERBANK NAZİLLİ TEXTILE FACTORY CAMPUS

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ABSTRACT

INTEGRATION OF INDUSTRIAL HERITAGE AREAS INTO THE CITY THROUGH URBAN DESIGN: THE CASE OF SÜMERBANK NAZİLLİ TEXTILE FACTORY CAMPUS

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Master of Science, Urban Design in City and Regional Planning
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The early 20th century was a modernization period in Turkey, which can be described as a revolution. In this era, transformation of space and society were the main aims of the young Turkish Republic. In this regard industrial facilities were constructed across the country in terms of the principles of statism. Coming to the present day, some of these industrial facilities were closed due to reasons such as change in production patterns, new technological developments and the decrease in productivity. These derelict industrial areas with their physical components and infrastructures, which are not actively used today, are important for the future of urban forms of our cities in many aspects. So as to understand and infer on how they can be conserved and reutilized in cities, first of all, it is important to analyze how those facilities affected on the spatial and social life of cities in past. It can be claimed that there is a relationship between their identities and urbanization process in Turkey. The Sümerbank factories are among these facilities, which remarkably impacted on the spatial and social life of cities. In this thesis, Sümerbank Nazilli Textile Factory will be examined within the framework of the concepts of lost space and industrial heritage, as well as three theories of urban design, namely; figure-ground, linkage and

place theories. In addition, ways of how to integrate it with urban context by protecting it with urban design approaches will be explored.

Keywords: Urban Design, Industrial Heritage, Cultural Heritage, Lost Space

ÖZ

SANAYİ MİRAS ALANLARININ KENTSEL TASARIM YOLUYLA KENTLE BÜTÜNLEŞMESİ: SÜMERBANK NAZİLLİ BASMA FABRİKASI YERLEŞKESİ

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20. yüzyılın başları Türkiye'de devrim olarak nitelendirilebilecek bir modernizasyon dönemidir. Bu dönemde mekanın ve toplumun dönüşümü genç Türkiye Cumhuriyetinin temel hedefleridir. Bu bağlamda devletçilik prensibi ile ülkemizin pek çok yerinde sanayi alanları kurulmaya başlanmıştır. Günümüze gelindiğinde, bu endüstriyel tesislerin bir kısmı, üretim kalıplarındaki değişim, yeni teknolojik gelişmeler ve verimlilikteki azalma gibi nedenlerden dolayı kapatılmıştır. Günümüzde aktif olarak kullanılmayan bu terkedilmiş sanayi alanları fiziksel bileşenleri ve altyapıları birçok yönden şehirlerimizin kentsel formlarının geleceği açısından önemlidir. Bu tesislerin kentlerde nasıl korunabileceğini ve yeniden kullanılabileceğini anlamak ve sonuç çıkarmak için, öncelikle geçmişte şehirlerin mekansal ve sosyal yaşamından nasıl etkilendiğini analiz etmek önemlidir. Bu alanların kimlikleri ile Türkiye'nin kentleşme süreci arasında ilişki olduğu iddia edilebilir. Sümerbank fabrikaları, kentlerin mekânsal ve sosyal yaşamını önemli ölçüde etkileyen bu tesislerin arasında yer almaktadır. Bu tezde, Sümerbank Nazilli Basma Fabrikası endüstriyel miras ve kayıp mekan kavramları ile kentsel tasarımın üç teorisi olan şekil-zemin (figüre-ground), bağlantı (linkage) ve yer (place) teorileri

çerçevesinde incelenecektir. Ayrıca, kentsel tasarım yaklaşımlarıyla korunarak nasıl kentsel bağlamla bütünleştirileceğinin yolları araştırılacaktır.

Anahtar Kelimeler: Kentsel Tasarım, Sanayi Mirası, Kültürel Miras, Kayıp Mekan

To My Family,

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CHAPTER 1

INTRODUCTION

1.1. Problem Statement

Cities have undergone changes in form, density, functions and system of relations with their dynamic structures and industrialization processes. Industrial buildings and sites are important components of the urban identity. Some industrial sites in cities, gradually, lost their functions due to reasons such as change in production patterns, new technological developments and economic policies, and decrease in productivity. These spaces are referred as “lost spaces” in the urban design literature, a concept developed by Roger Trancik. Trancik (1986) describes lost spaces as undesired, abandoned urban areas, which do not positively contribute to the surrounding environment or users. These areas are abandoned, exhausted or used less compared to their former condition. Since they are parts of the collective memory and urban identity, architecture, restoration, city planning and urban design and other related disciplines pay close attention to the conservation and maintenance of these places.

Sümerbank textile factories are among the milestones in the modernization movement of Turkey, which were established in different cities across the country. Sümerbank Nazilli Textile Factory is one of the first industrial facilities in Turkey. The construction of the factory campus was started in 1935, and it was opened by Mustafa Kemal Atatürk in 1937. Covering a 213.875 m² land, it was located in the vicinity of the existing urban area, and connected to the central station of Nazilli with a railway connection (Figure 1.1.) (Peri, 2006, 25).

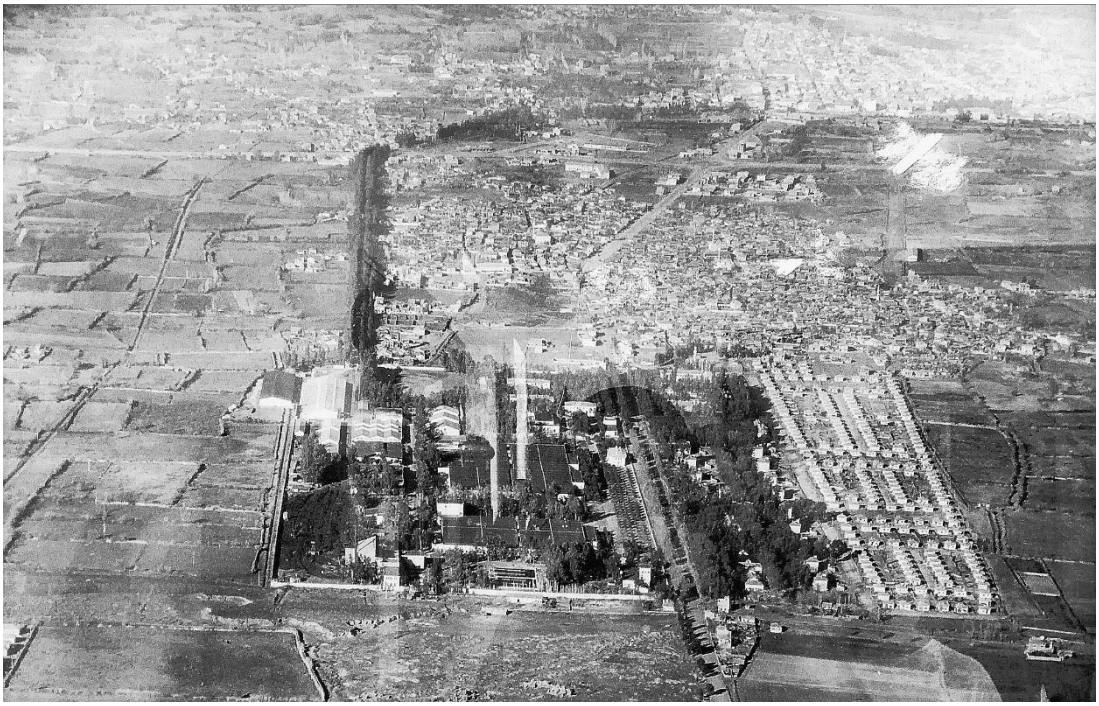

Figure 1.1. Aerial Photo of the Sümerbank Factory Campus,
Nazilli City on the North of the Campus (Author's photo archive)

The Sümerbank Nazilli Textile Factory was developed through state funds. It functioned beyond an industrial facility, as it led to significant social, cultural and economic changes in the Nazilli city along the modernization process.

The factory, designed by the Russian architect Ivan Sergeevich Nikolaev, was developed as a campus with administration, housing, entertainment and educational facilities. The Sümerbank Nazilli Textile Factory was not only established for economic development, but also constructed with the aim of transforming the social life and spatial form. It can be inferred that assuming a modern architectural approach, the factory buildings, administration buildings, workers' dwellings, canteen buildings, schools, public house, semi-public and public spaces in the campus area were designed with this aim. Also, the railroad connection between the campus and the central station of Nazilli did not only carry workers or goods to the factory, but also the

modernization movement of the young Republic to the urban area. It is an interface between the principles of revolution and citizens (Asiliskender, 2005, 222). The campus consisted of different types of structures, community garden, leisure facilities, each of which would be defined as architectural and landscape symbols for Nazilli. The factory campus has strong connections with the city of Nazilli. In its present condition, some part of the campus is allocated to the Adnan Menderes University, the workers' dwellings were demolished and their area was transformed to a city park, and the railway line connected to the Nazilli Train Station in the city center has become a pedestrian road (Figure 1.2.).

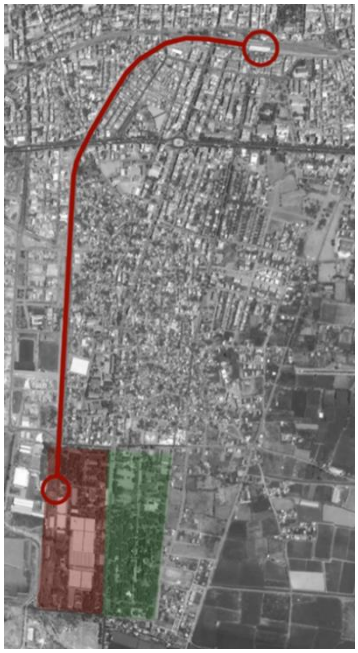

Figure 1.2. Sümerbank Nazilli Textile Factory (Drawn by the Author on the Google Earth Pro Image)

1.2. Aims and Method of the Research

This thesis aims at understanding how industrial heritage can be conserved and reused, and how it can be integrated to the city; and identifying how collective memory is reproduced while these areas assume new roles and functions. In fact, these spaces present a clear opportunity to provide ecological continuity and connectivity within

the densely built urban areas. In this regard, the morphology, solid/void relationship, physical structures and assets within these areas can provide significant opportunities for urban design while reinterpreting their new roles. These areas, together with their components, are valuable for the city as spaces for innovation, freedom of thinking and acting, creativity and experimentation.

It is important to understand how these spaces evolved, how they affected urban areas in the past, and how they will affect them in the future (Waldheim, 2006, 199). While the urban space is reproduced through conservation and urban design processes, not only urban space, but also urban identity and collective memory are rebuilt.

The study seeks answers to the following questions:

- What are the definitions of lost space and industrial heritage? What features identify lost space as an industrial heritage?
- What morphological features of the lost space are significant in conserving and re-utilizing industrial heritage?
- What meaning does the industrial heritage have in the collective memory?
- Can urban design theories be applied in industrial heritage areas? How can these theories be effective in the case of the Sümerbank Nazilli Textile Factory Campus and the railway line between the campus and city center?

The methods assumed in this research are as follows:

- Literature survey: academic works, books and articles are examined to construct the framework of the study, and to develop the structure of case study analysis,
- Case study analysis is conducted through three urban design theories, namely, figure-ground theory, linkage theory, place theory.

1.3. Scope of the Research

The study identifies the concept of industrial heritage and its relation to collective memory and urban identity. It examines how industrial heritage can be conserved and

reused, along with the concept of Lost Space. It also examines some examples across the world, and evaluates the conservation approaches and functional models for these areas.

The Sümerbank Nazilli Textile Factory campus is chosen as the case study area. The study elaborates the planning and architectural processes in the factory campus in a historical manner, the processes it has undergone and its present situation with regards to the Lost Space Theory. It also explores the potentials it provides for conservation and re-utilization.

CHAPTER 2

THEORETICAL FRAMEWORK

2.1. Old Industrial Space Treated As Lost Space

2.1.1. The Concept of Lost Space

Due to changes in production technologies, environmental factors, spatial changes and so on, industrial buildings and areas in the city lacked maintenance, were abandoned, sold, or demolished in order to obtain rent. Trancik (1986) defines these areas as “lost spaces”.

As a result of the industrial revolution, the rapid and uncontrolled growth of cities combined with opportunities and power of attraction of industrialization brought about a number of problems in addition to the increasing growth in the urbanization process. Cities had to face the problems of urban growth and industrialization in this process. In this context, lost space is considered a problem created by the industrialization process (Özbek, 2012, 15).

While lost space appears as a result of the changes and transformations observed in urban space, it can also be regarded as a structure that affects urbanization and urban space. When the lost space is considered as a problem caused by urbanization, it is encountered with spaces that are not connected to the environment. Lost spaces are spaces that do not relate to urban tissue and systems. In cities with dynamic structures, development and collapse occur at the same time. In some cities, lost spaces are given new functions in a short time, and in some cities there are no interventions for these spaces, which can cause major problems in the urban area.

Lost spaces can be considered as an opportunity for cities with the historical traces they carry; and suitable for redesigning and inclusion into urban space with specific

scenarios. These spaces also provide opportunities for urban designers, city planners and architects to develop and implement different methods and experience creative thinking (Berger, 2006).

In his book *Finding Lost Space* (1986), Trancik explores what exactly the lost space is and what distinguishing features it has, what are the differences between the lost space and the positive urban space. He (1986, 3) defines the concept of lost space as follows:

> *"Lost space is the leftover unstructured landscape at the base of high-rise towers or the unused sunken plaza away from the flow of pedestrian activity in the city. Lost spaces are the surface parking lots that ring the urban core of almost all American cities and sever the connection between the commercial center and residential areas. They are the no-man's-lands along the edges of freeways that nobody cares about maintaining, much less using. Lost spaces are also the abandoned waterfronts, train yards, vacated military sites, and industrial complexes that have moved out to the suburbs for easier access and perhaps lower taxes. They are the vacant blight-clearance sites - remnants of the urban renewal days - that were, for a multitude of reasons, never redeveloped…".*

Leftover space, which is included in Trancik's definition of lost space, can be described as non-secure, empty spaces without a defined function. According to Cresswell (1996) these areas are seen by many as "out of place" and perceived negatively. According to Wilkinson (2011), leftover spaces can pose a threat to environmental health, public safety, surrounding neighborhood and building development.

According to Narayanan (2012), leftover spaces can now be divided into three main categories: planning, functional, and geographic leftovers. Planning leftovers, which are the most common leftovers in the urban area, are spaces caused by faulty planning process, land-use policies and practices. Functional leftovers are dysfunctional areas

or building masses that have lost the positive uses they offer for the city. Geographical leftovers are spaces formed due to the presence of a geographical feature such as rivers and hills (Narayanan, 2012).

The spaces lost function in the city center and the residential areas in their surrounding districts that were not formed according to a plan, irregular storage areas, and the areas that turned into non-organized small production areas can also be defined as lost spaces. (Otaner and Keskin, 2005).

2.1.2. Other Definitions for the Concept of Lost Space

Throughout history, cities, places, areas have been abandoned as the needs and beliefs of societies have changed over time; and at different times they have been reorganized to be used for different purposes. Today, in order to answer the question of how sustainable systems can be created in cities, research is carried out on densities, forms, different configurations and layouts in cities. At this stage, the effective integration of unused leftover spaces into our cities offers significant opportunities and these leftover spaces have the potential to create resources for the future of cities.

However, numerous terms and definitions have been used over time to name these areas. Trancik presents leftover spaces as ‘lost space’ with no positive effects on the environment. The concept of lost space, used in this thesis, appears with different names in various resources. Vacant land, abandoned sites, post-industrial urban voids, drosscape, terrain vague, urban wasteland, derelict area, leftover spaces are some of them. According to Özeren (2012, 4), the reason for many terms related to the concept of lost space is because of unique dynamics of cities such as laws and regulations, the ratio of these areas in the built-up areas, etc.

Girolamo (2012) states that the lost space is interpreted in different ways by different researchers, which leads to confusion of meaning. Descriptions began to be made starting from the 1940s. It has been redefined over a period of nearly eighty years (Table 2.1.).

Table 2.1. *Different Researchers' Definitions for Abandoned Spaces (Adapted from Field, 2005; Doron, 2007; Shaw and Hudson, 2009; Giralamo, 2012; Hall, 2013; Barron, 2014)*

Year	Author	Definition
1946	UK NLUD	Derelict Land
1961	Jacobs	Border Vacuums
1969	Barr	Derelict Land
1974	Sommer	Tight Space - Hard Space
1977	Gemmell	Wasteland
1978	Guttenberg	Urban Desert
1982	Berman	Modem Wastelands
1984	Secchi	Il Vuoto - The Void
1986	Trancik	Lost Space
1988	Whyte	Empty Space
1989	Lanken	Dead Zone
1990	Lynch	Waste Space
1990	Lynch	Urban Wild, Urban Sinks
1992	Jakle & Wilson	Derelict Landscapes
1993	Boeri, Lanzani & Marini	New, Nameless Places
1994	Lerup	Dross
1995	Sucher	Awkward Space
1996	Hillier	Disurbanism
1996	Loukaitou- Sideris	Cracks In The City
1996	Solà-Morales	Terrain Vague
1996	Papastergiadis & Rogers	Parafunctional Space
1996	Greenberg & Schneider	Blight
1997	Jackson	Blank Space
1998	Garde	Marginal Space
2000	Germain & Rose	Dead Space
2000	Cheung	Urban Voıd
2000	Ford	Anonymous Space
2000	Woods	No Man's Land
2000	Doron	Dead Zones. Transgressive Zones
2000	Endsjø	Liminal Space
2000	Bowman & Pagano	Brown Fields
2001	Hajer & Reijndorp	In Between Space
2001	Kallus	Negative Urban Space
2001	Davis	Urban Deserts

2001	Boffet & Rocca Serra	Free Space
2002	Nielsen	Superflous Landscape
2002	Cupers & Miessen	Spaces Of Uncertainty
2003	La Varra	Post-It City
2003	Clément	Délaissé
2004	Hormigo & Morita	Gapscape
2004	Pagano & Bowman	Vacant Land
2005	Edensor	Industrial Ruıns
2005	Groth & Corjin	Indeterminate Space
2005	Girot	Landscapes Of Contempt
2006	Berger	Drosscape
2007	Worpole & Knox	Slack Space
2007	Franck & Stevens	Loose Space
2007	Jorgensen & Tylecote	Ambivalent Landscapes
2007	Doron	SLOAP
2008	Tonnelat	Urban Interstices
2008	Lang	Actual Territories
2011	Farley & Roberts	Edgeland

Lynch (1991) uses the term waste space to refer to the concept of lost space as dead, unused, empty spaces. He states that waste spaces have potential for reuse and they should be used in a way that responds to time periods with a flexible structure. Solà-Morales (1995) uses the term terrain vague to describe these areas as dysfunctional areas abandoned by various processes and focuses more on post-industrial areas. Areas of non-economic contribution and disused housing, industry or transportation are included in this scope. Pagano and Bowman (2000) describe the term vacant land as unused/abandoned land owned solely by the public or private, or areas that may have previously contained buildings but also abandoned, derelict, or partially destroyed buildings. Franck and Stevens' (2007) term loose space is defined as areas that are used outside the stated purpose and that provide a wide range of activities and create an experience environment.

To gather all these descriptions together, the concept of lost space is used for spaces that have been used once, but have been left dysfunctional or idle for different reasons and cannot contribute to their surrounding environment.

2.1.3. The Lost Industrial Space

The term old industrial space is used to describe large areas of production that have become obsolete. These areas have historical, social, cultural, spatial and economic values. In the urban context, the debate about the increase of lost and abandoned old industrial spaces, the preservation of spatial values and their reuse remains a problem for disciplines of city planning, urban design and architecture.

Over time, economic, social, political and technological developments bring about changes in the urban built environment. Some structures are lost in the process, while others find space in a new urban context. Especially industrial complexes that cannot keep up with the evolving technology and changing market conditions, which cannot meet the needs of the users, which cannot withstand the pressure of urban rents, which are usually owned by the state, begin to weaken physically, functionally and economically, and then to be abandoned, lost and demolished in the urban built environment.

Despite their heritage values, such industrial complexes can often be lost in the urban space over time due to the lack of conservation awareness, property problems and economic reasons. When old industrial space, which once had economic, social and cultural relations with other places in the city, begin to lose their functions, they also lose the points of integration with the city and disrupt the functioning of the urban system. At the end of the process, old industrial spaces interrupt the city as a large mass within the city, causing disruption within the city and becoming lost spaces. Such spaces that do not contribute to their environment and users can be considered as lost industrial spaces with reference to Trancik's (1986) term lost space.

Lost industrial spaces can be seen as areas that lose their function and adversely impact on their surrounding areas. However, they are important reserve areas for cities and

can offer many opportunities. When evaluated from a positive point of view, the lost industrial space can initiate a transformation in the disruptive parts of the urban system, as well as the potential for complete transformation. In addition, these spaces can become important urban spaces that can contribute to urban identity and collective memory given their values, spatial features and potentials.

Industrial heritage areas need to be protected as evidences of historical development, social structure and industrialization process of cities. The legacies that have become lost industrial spaces after the processes mentioned above offer great advantages to the city and society in terms of economy, design and sustainability. They are economically valuable, mostly located in the city center, and have ample land available for revaluation. They generally offer valuable space for functions requiring large volumes, high-roofed production units and large space use with open spaces.

The historical, functional, environmental, cultural, symbolic and architectural values of the industrial heritage present a variety of potentials in the efforts to integrate lost industrial spaces into the urban context. Furthermore, it is important for the integration of lost industrial spaces into the city to highlight these values in the design and implementation processes and to prepare policies for their protection.

2.1.4. Dimensions of Lost Space

There are five main reasons leading to the formation of lost space (Trancik, 1986). These reasons can be listed as the increasing dependence on cars and therefore on highways, the behavior of the modern movement in architecture towards open spaces, the zoning and land use policies and practices dividing the city, the reluctance of public and private institutions to assume responsibility for the urban environment, and the emergence of abandoned areas in the inner core of the city (Trancik, 1986).

To explain these reasons briefly, cities were shaped according to their dependency on the automobile and this resulted in an urban environment where highways, streets and parking spaces were the dominant type of open spaces. Trancik (1986) points out that a surprising percentage of urban land was reserved for the movement and storage of

automobiles in modern cities, and emphasizes that the communication between buildings was cut off by being surrounded by large open spaces such as parking and motorway, which are not intended for social purposes (Figure 2.1.). An increased dependence on the automobile reduced the diversity and richness of urban public life.

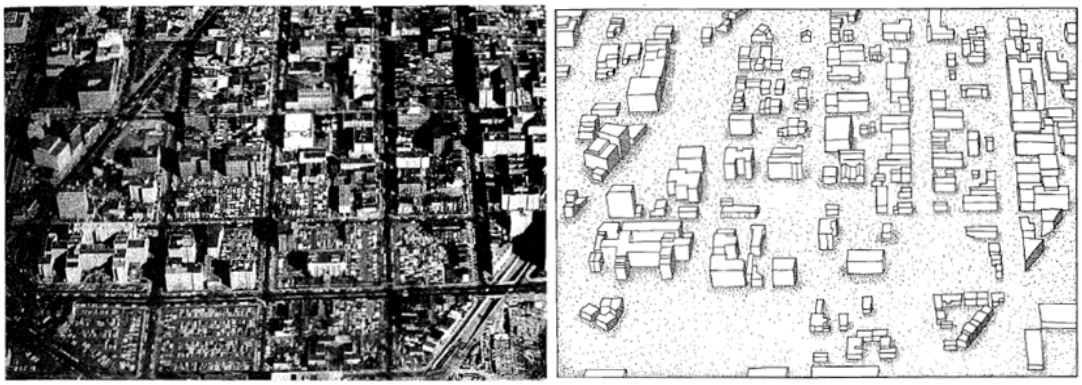

Figure 2.1. Washington D.C. Aerial Photograph and Diagram of the Same Site (Source: Trancik, 1986)

Trancik (1986) accepts the modern movement in architectural design as a second reason for the formation of lost space, described this process, which continues from 1930 to about 1960, as a system that designs freestanding buildings but ignores the importance of open spaces such as street spaces, green spaces, and squares. According to him, the problem of planning and architectural approaches in this period arises from the fact that the spaces between the structures are not designed. Cities, regions or structures, designed with the modern movement approach have closed structures, disconnected from urban activities and undefined. Consequently, physical connections, qualities and meaning of public space and human dimension lost (Trancik, 1986). Gehl (2010, 4) mentions that modernists ignore cities and urban spaces and focus only on the structure, and comments "*If a team of planners was asked to radically reduce the life between buildings, they could not find a more effective method than using modernist planning principles*". According to Jacobs (1961), cities were victims of an approach in which buildings did not relate to urban environment and urban life on a street scale.

The third reason that Trancik stands on is the zoning and land-use policies of the urban renewal. Trancik (1986) attributes the loss of the traditional characteristics of the urban space to the development policies and urban renewal projects implemented in the 1950s and 1960s. He says these approaches are the cause of urban decay when they are misdirected. Urban renewal projects rarely coincide with the changing social texture in the spatial structure and cannot respond to social relationships that make sense to the existence of society. In such cases, major demolitions are encountered, such as the blowing up of the Pruitt-İgoe public housing blocks in St. Louis (Figure 2.2.). In zoning policy, the functions of working, housing, trade and recreation areas are separated and homogenous, isolated and inward oriented areas are designed. The slogans identified in the zoning approach are defined as "*health, safety and welfare*". He drew attention to the fact that the abstract ideas of compatible uses no longer produce physical and social diversity and therefore create urban areas that are not really urban anymore; he expressed that the importance of spatial order in social function was not understood (Trancik, 1986).

Figure 2.2. Demolition of the Pruitt-Igoe Housing Project in St. Louis (Source: https://www.researchgate.net/figure/Iconic-demolition-of-the-Pruitt-Igoe-housing-project-in-St-Louis-5_fig1_276328208, accessed on 19 November 2019)

Trancik (1986) focuses on the privatization of the public space as the fourth reason that lead to the lost space. He points out that while the economic prosperity of a city

reinforces urban centers, it has created an intense demand for ground floors at the center, and has pointed out that the allocation of public space has become an important by-product in the second period. Every space in the city is seen as a place for potential "image" structures of companies. The city of the collective space was made into a city of special symbols. The continuities of streets are broken or divided by poorly placed structures, frequently violating height ordinances, and various material and facade styles competing to attract attention. For these reasons, the city becomes a showplace for private icons. According to Trancik (1986, 17), the responsibility of each of the elements in today's cities is in different private or public organizations, and therefore the unity of the total environment is lost. Moreover, unwillingness to assume responsibility for the urban environment by contemporary public and private institutions and putting private interests in front of public benefits are main reasons for lost space (Trancik, 1986).

According to Trancik (1986), the last problem is the changing land uses in large areas such as abandoned industry, military areas. Large urban areas that have remained in the city and have lost their function are potential in terms of mixed use. These areas are reserved areas within the city. They should be evaluated in the right place in urban fiction. The lost space can also be defined as an area that is not used effectively or cannot be reached in the city. These spaces divide the city in physical and social terms. Roads or railroad networks, car parks, disconnected urban areas, large, isolated and self-enclosed residential, work, recreation areas and industrial areas which are used or abandoned in urban areas can be given as examples of lost space. It is inevitable that places with no accessibility or limited access will also be transformed into lost spaces. The availability and viability of an urban place depends on the protection of the identity of that particular place.

In summary, Trancik assesses that lost spaces are urban parts that need to be redesigned, have no measurable boundaries, are badly defined, have failed to connect their elements consistently, and have not been effectively used. On the other hand, the lost space provides opportunities for regeneration, creatively replenishment and the

re-exploration of many hidden resources in the city (Trancik, 1986). In other words, lost spaces need functions that can participate in urban life (Jacobs, 2009). As a result of the inclusion of these spaces into urban life, the diversity and richness of urban public life can be ensured.

2.2. Industrial Heritage, Cultural Heritage and Related International Organizations

2.2.1. Evolution of the Concept of Industrial Heritage

The Industrial Revolution changed the way of production, led to rapid urbanization as a result of migration from rural areas to urban areas. Industrial facilities in the European cities started to lose their functions especially in the second half of the twentieth century due to the change in production patterns, new technological developments and the decrease in productivity and inadequate production (Kaya, 2012, 37). As the flexible production model eliminated the need for cheap labor in cities, manufacturing shifted to different geographies or out of urban areas. With the vertical fragmentation strategy, big producers shifted their production activities to the developing countries to benefit from cheap raw materials and labour by only keeping management, control and design units in the West (Ersoy, 2001, 35-37). Gradually, the industrial structures and areas located within cities became derelict or unusable areas.

In the second half of the twentieth century, many industrial facilities, which had expanded in the eighteenth century, became vulnerable and fragile. This process has created sites, landscapes, buildings, cities, and routes that had been exposed to industrial production activities in many countries. Some of these structures were in danger due to lack of awareness, inadequate documentation, changing economic policies, negative perceptions and inadequate conservation. The deindustrialization process in which many countries lived after the rapid industrialization period emerged due to the removal of industrial activity. The social, economic and environmental

impacts of industrial loss have posed difficult questions to society and governments, and brought the concept of industrial heritage, a new debate about these impacts.

The first awareness of the conservation of old industrial buildings emerged in the United Kingdom in the second half of the twentieth century. As a result of the increase in the awareness of historical, technological, social, architectural and scientific value of industrial buildings which are losing their use and which are rapidly disappearing under the threat of rent, the concept of industrial heritage has been developed. Today, industrial heritage is used to express old industrial buildings, sites and all kinds of related industrial assets that have a certain historical character and importance (Saner, 2012, 53).

Old industrial areas within cities have been in the agenda of academic and practical realms since the 1960s. In the early 1950s, the origins of industrial heritage were a voluntary movement (Symonds, 2005, 59). Volunteers have carried out studies on the protection, maintenance and promotion of canals and railways in the United Kingdom. In the 1960s, the scope of protection was expanded to include old industrial facilities such as mill, mine, casting workshops (Saner, 2012; Trinder, 1981). In this period, the importance of industrial structures and areas was not an academic and scientific concern, rather a rapid collapse of the struggle to prevent (Tanyeli, 2000, 50).

In 1955, Michael Rix used the term industrial archaeology for the first time in his article named "*Industrial Archaeology*" in the magazine The Amateur Historians (Trinder, 1992, 350). After Rix stated in his article that monuments belonging to industrial revolution should be protected, it was argued that these monuments should be considered within the scope of the heritage in countries such as England, France and Germany, where the industrialization process was extensively experienced (Palmer and Neaverson, 1998; TMMOB, 2008, 145). The use of the term "industrial archaeology" for the first time in the article attracted the attention of the British Archaeological Council, and the Council established Industrial Archaeology Research Committee in 1959 and held a public meeting in order to include the issue of recording

and preserving early industrial remains in the national policies of the government. (Palmer and Neaverson, 1998, 1-2). The term industrial archaeology was developed by Kenneth Hudson, who wrote his first book on this subject, and L.T.C. Rolt, one of the pioneers of industrial archaeology and transportation protection and one of the founding partners of the Industrial Archaeology Society (Palmer and Neaverson, 2001, 18; Smith, 2006, 26).

In 1962, the society reacted to the collapse of the Euston Arch, the monumental entrance of London station, which was an important railway monument (Figure 2.3.). In collaboration with the British Council of Archaeology and Ministry of Public Works, an Industrial Monuments Examination Board was established and the National Industrial Monuments Index was formed and casting works were started in 1963 (Palmer and Neaverson, 1998, 2; Casado Galván, 2009; cited in Alpan, 2012, 24). The Ironbridge Gorge Museum was founded in 1968, aiming to protect the mine and steel industry campus in the Coalbrookdale Valley on-site (Figure 2.4.) (Álvarez-Areces, 2008; cited in Alpan, 2012).

Figure 2.3. Euston Arch (Source: https://i.pinimg.com/originals/75/71/80/757180b3fed26bcc2147574e2d52fbdd.jpg, accessed on 27 October 2019)

Figure 2.4. The Ironbridge Gorge Museum (Source: https://ourbucketlistlives.co.uk/wp-content/uploads/2018/11/Ironbridge-copy.jpg, accessed on 27 October 2019)

In the following years, industrial heritage was acknowledged as a branch of science in countries such as England, Germany, and France. With the establishment of the International Committee for the Conservation of the Industrial Heritage (hereafter TICCIH) in 1978, the protection of physical traces of the industrial revolution gained an international dimension (Alpan, 2012). Concepts such as "industrial heritage", "industrial archaeology", "industrial culture", "industrial landscape" and "cultural heritage" emerged (TMMOB, 2008, 145).

Two new concepts are discussed as "industrial archaeology" and "industrial heritage" in order to draw attention to the loss of industrial structures and spaces since the 1960s.

2.2.2. Cultural Heritage

Before elaborating the industrial heritage, the concept of cultural heritage is to be addressed as a larger field that encompasses the industrial heritage. Cultural heritage concept was born as urban transformations began to destroy the city's identity after the industrial revolution. The borders of the concept gradually expanded and a new cultural heritage dimension developed. European countries pioneered the emergence

of the concept of industrial cultural heritage; i.e. the importance of industrial structures in terms of cultural identity was emphasized. Due to the development of technology and the inadequacy of production techniques, the reactions against the abandonment of industrial structures initiated conservation work in this area (Kariptaş Seçer and Altuncu, 2009).

The concept of cultural heritage has undergone a change throughout the twentieth century in terms of its definition, meaning and scope. Cultural heritage and conservation evolved into a broader understanding, which considered ordinary civil structures as an important part of collective memory besides monumental architectural artefacts, historical and artistic structures and archaeological sites (Aksoy and Enlil, 2012).

Among the reasons of this transformation are the negative impacts of modern urban planning practices after the destruction of European cities in the Second World War, the transformation of cities, rural areas, the discussions in conservation and conservation practices, the rise of cultural heritage as an economic value in relation to globalization and locality (Köksal, 2012). Today, a more inclusive understanding of cultural heritage, which includes all cultural values of humankind, has been reached.

Industrial structures / areas are considered among the components of cultural heritage. As an industrial structure or area is part of the collective memory, it is seen as an important element in terms of urban memory and identity. Therefore, “industrial heritage” is considered to be one of the branches of cultural heritage today.

Societies are defined by their culture and cultural heritage. Cultural heritage is part of social life, cultural identity and societal pride. It has a broad meaning that expresses intangible and tangible heritage with cultural content inherited from ancestors to nations. It is valuable for the area it is in, as well as for the whole world, and in this context it becomes more important. In summary, cultural heritage is seen as an important intangible and tangible expression in the history of which it has carried its

importance to date and wants to preserve and transfer it to future generations (LeBlanc, 1993; cited in Elhan, 2009).

Cultural heritage includes many elements that include traces of the past, and in studies related to cultural heritage, the intangible and tangible values of the city should be considered together.

Cultural heritage is a whole of tangible and intangible assets and values related to our identity, culture, and history, and is closely related to the existence of the nation-state. One of the basic elements that form the collective identity of the nation along with language and history and gives legitimacy to the land of the country is the cultural heritage. Cultural heritage defined under the authority of the nation-state has been a tool for creating a collective "identity" in the process of building the nation (Ünsal and Pulhan, 2012).

In particular, developments in the case of cultural heritage after 1950, as well as the artistic or scientific value of cultural heritage, the understanding that humanity should be protected as a common heritage has been revealed. European cities during the Second World War, the large-scale destruction of historic urban environments has been effective in the preservation of cultural heritage.

The International Charter for the Conservation and Restoration of Monuments and Sites (which is also known as the Venice Charter) was adopted in the 2nd International Congress of Architects and Technicians of Historic Monuments in 1964, and adopted by ICOMOS in 1965. The Venice Charter has been an active document in the dissemination of a position that defines the movement related to the protection and rehabilitation of historic centres and prevents the destruction of the heritage. The Charter mentions that civil structures have cultural assets to protect and the scope of immovable cultural assets has been expanded (Aksoy and Enlil, 2012). Furthermore, the Charter has been an important step in the process of protecting large urban areas by declaring a heritage site.

A further change in the definition of cultural heritage is the Convention Concerning the Protection of the World Cultural and Natural Heritage, which UNESCO signed in 1972. In the preamble to the Convention (UNESCO, 1972), "*deterioration or disappearance of any item of the cultural or natural heritage constitutes a harmful impoverishment of the heritage of all the nations of the world*,", "*parts of the cultural or natural heritage are of outstanding interest and therefore need to be preserved as part of the world heritage of mankind as a whole*," and "*in view of the magnitude and gravity of the new dangers threatening them, it is incumbent on the international community as a whole to participate in the protection of the cultural and natural heritage of outstanding universal value*" having decided. The following are considered as cultural heritage for the purpose of this Convention (UNESCO, 1972):

- Monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;
- Groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;
- Sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

Intangible cultural heritage refers to practices, representations, expressions, knowledge, and skills passed down between generations. It creates a sense of identity for communities and is constantly recreated according to their environment. This heritage is called intangible because it depends primarily on the immaterial human will and is transmitted by imitation and living experience. It is also referred to as a "living heritage" or "living culture". Therefore, the cultural heritage, which almost addresses every value of the society in the city, covers many elements with its broad content and is affected by many developments (Çoban, 2015, 13).

With the development of new economic policies and information technologies, cultural heritage has attained a special place in the economy, especially in the context of tourism. Conservation and sustainability can be considered as important parameters of the cultural heritage economy. The balance between cultural heritage and tourism will be considered as sustainability of cultural values, local development, and conservation practices; and the relations through economic policies will prevent the damage of cultural heritage (Çoban, 2015, 14).

In 2005, cultural heritage was defined by the Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Faro Convention) as follows (2005, Article 2, paragraph 1):

> "*cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge, and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time*".

Industrial structures/areas are considered among the buildings of cultural heritage. The industrial heritage is an important part of other cultural heritage as it forms industrial buildings and facilities built during the industrialization process and is part of the common heritage of humanity.

2.2.3. Industrial Heritage

As a starting point for the industrial heritage, industrial archaeology represents a basic theoretical basis. Gradually, the physical traces left by the industrial revolution became the focal point. The interest in the industrial remains began in the 1950s, during the processes of development and change, after the World War II (Köksal, 2005, 110).

Rix, in his article "*Industrial Archaeology*" (1955), used the term archaeology for the first time in this context. Although he did not define the concept precisely, he stated

that industrial archaeology included factories, workshops, steam machines and locomotives, first metal roofed structures, cast iron water arches, bridges, railways, and canals, which were built in the eighteenth and nineteenth centuries (Minchinton, 1983, 125). Rix highlighted the importance of industrial structures, although their functions had been lost. He claimed that it was possible through the physical elements to learn what happened to the industrial revolution. Rix (1955, 225; cited in Palmer and Neaverson, 2001, 18) states that:

> "*Great Britain as the birthplace of the Industrial revolution is full of monuments left by this remarkable series of events. Any other country would have set up machinery for the scheduling and preservation of these memorials that symbolize the movement which is changing the face of the globe, but we are so oblivious of our national heritage that apart from a few museum pieces, the majority of these landmarks are neglected or unwittingly destroyed*".

Although industrial archaeology is often used in the United Kingdom and United States, in the international context, it is often studied under the concept of "industrial heritage studies" (Martin, 2012, 40). In some countries, the use of concepts such as "technical monument of culture" and "technical monument" is also preferred (Neumann, 1986; Köksal, 2005, 105-106).

The term industrial archaeology is defined by industrial archaeologist and a co-founder of the Association for Industrial Archaeology Buchanan (1972, 20-21) and Sande (1973, 117) as a field of study that investigates, surveys, records and, in some cases, preserves industrial monuments. It also aims to assess the significance of these monuments in the context of the history of society and technology (Buchanan, 1972). Buchanan (1972, 20-21) describes the scope of industrial archaeology as "*For the purposes of this definition, an 'industrial monument' is any relic of an obsolete phase of an industry or transport system, ranging from a Neolithic flint mine to a newly obsolete aircraft or electronic computer*". According to Cossons (1975, 15), it is the

discipline that examines past cultures to gain evidence of the chronological and geographical divisions in the evolution of man and sorts the specific periods or special characteristics, often depend on technology; that the industrial revolution is one of those periods. He defines industrial archaeology with the link between "archaeology" and "industry" as "*the examination and analysis of the industrial revolution's physical remains*". TICCIH, in the Nizhny Tagil Charter for Industrial Heritage, draws the latest boundaries of the definition of industrial archaeology: “Industrial archaeology is an interdisciplinary method of studying all the evidence, material and immaterial, of documents, artefacts, stratigraphy and structures, human settlements and natural and urban landscapes, created for or by industrial processes. It makes use of those methods of investigation that are most suitable to increase understanding of the industrial past and present” (TICCIH, 2003).

Industrial archaeology is an archaeological branch as generally defined, which deals with the structures and processes of industrial landscapes, complexes, buildings, structures, machines, and their historical and technological relationships. It includes many disciplines. While the studies related to the history of architecture and technology, there is also an archaeological dimension considering the underground areas in addition to the protection dimension of the studies (Köksal, 2005, 105).

The definition of industrial heritage became clearer in time, as was the definition of industrial archaeology. Köksal (2005) states that the term industrial archaeology did not even become clear at the TICCIH meeting held in Sweden in 1978, and that only expressions such as industrial monuments and industrial heritage were used at the meeting. The most recent and acknowledged scope of Industrial Heritage has been stated in The Nizhny Tagil Charter for Industrial Heritage:

> “*Industrial heritage consists of the remains of industrial culture, which 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, paragraph 1).

The Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes, also known as Dublin Principles, were jointly published by ICOMOS and TICCIH in 2011. These principles include industrial heritage sites, areas and landscape areas in the definition of industrial heritage. According to these principles, industrial heritage reflects the profound connection between the cultural environment and the natural environment, as they depend on natural resources, energy and transport networks to produce industrial processes and distribute the products they produce to wider markets. It is emphasized that industrial heritage includes abstract dimensions such as technical knowledge, organization of work and employees. As a result, industrial heritage is defined as a type of heritage which is integrated with social and cultural practices that shape the lives of industry, communities, transformations of societies and their impact on the world in general (ICOMOS and TICCIH, 2011, 1-2).

Industrial heritage has two principal values. The first value is that of witnessing the world of work and the everyday life of a period that transformed humanity, and the second value is a document that helps us better understand how people lived and worked during this time (Casanelles, 2006).

In addition, local establishments also contribute from diverse points of view to the concept of industrial heritage. Industrial heritage is part of the local history, as stated in the Taipei Declaration for Asian Industrial Heritage. The declaration identifies that industrial heritage is *"…witnessing the process of the modernization, contributes to the identity of regions and countries, and forms an integral part of the history… part of a comprehensive cultural landscape, either in urban or in rural settings. In addition to the built environment, it strongly reflects the interaction of humans and the land, featuring the characteristics of hetero-topography.*" (TICCIH, 2012, 1).

As stated above, industrial production systems, industrial structures, support structures, and areas should be considered as industrial heritage along with all the technical equipment and infrastructures they have. In this context, objects with Movable Cultural Assets and industrial structures with immovable cultural assets and landscapes constitute the industrial heritage. According to Kıraç (2001), it is possible to classify industrial buildings under immovable cultural assets under the headings of "production structures, factories", "transportation structures", "warehouses", "sales, exhibition spaces" and "workers' settlements".

It is insufficient to separate industrial structures from the urban system in which they are located and consider them as singular. Because one-dimensional approaches reduce the industrial heritage to the level of mere physical structure. These structures should be evaluated together with the environment with which they interact.

The types of industrial heritage were determined by the countries as mining, energy resources, production industries, transportation items, building material production, support facilities, and systems created for infrastructure services. These titles can change due to their specific characteristics (TMMOB, 2008, 146).

2.2.4. Approaches to Industrial Heritage Conservation And Related International Organizations

While some of these areas were demolished, conservation of such areas was first debated at national scale then moved to the international scale. Number of good practices for conservation and reuse started to increase after the 1970s (Köksal, 2012).

Conservation of industrial heritage is an issue integral to the cultural identity of the city and improving the quality of life (Köksal and Ahunbay, 2006). In this way, the industrial heritage perspective develops and the continuity of cultural values is on the agenda. All protection values identified for cultural assets are also valid for industrial heritage, and protection values for industrial heritage can be defined as historical, functional usability, environmental, technical, originality, hardware and internal features, cultural, symbolic, architectural artistic, and rareness value (TMMOB, 2008)

In order to achieve the intended objective of protection, it is necessary to determine industrial heritage areas within the scope of protection, analyse them and raise awareness for the protection of industrial heritage (Severcan, 2012).

Severcan and Barlas (2007) list six reasons for the appropriate protection and re-functioning of industrial heritage:

The first is the location of historical industrial buildings. These structures are present in urban centers and waterfronts, and it is important that collective memory is brought into the city for the formation and sharing of social identity, and for the revitalization of urban centers and public life.

In the second place, open areas are covered by industrial areas. In today's cities, these areas offer opportunities to recreate breathing spaces.

The third reason is the structural stocks of industrial areas; these structures can be re-evaluated with many different uses thanks to their spatial characteristics (Altınoluk, 1998; Atagök, 2000; Köksal, 2002; cited in Severcan, 2012). When identifying appropriate uses for industrial buildings; criteria such as type of buildings, spatial and technical features, locations in the city, status of economic resources, social demand and demands of the owner are effective, and the issue of how they will support public life should be taken into account (Severcan, 2012).

The fourth place is the symbolic and monumental features of industrial buildings. The preservation of monumental structures is very important for reasons such as the formation of collective memory, strengthening feelings towards the place, place attachment, formation of a social consciousness, and having a healthy soul. (Arendt, 1958; Lynch, 1960; Riegl, 1982; cited in Severcan, 2012). In addition, the transfer of these to future generations will inform individuals about their dates and guide them.

Fifth is the architectural features of industrial buildings. By providing information about architectural construction techniques of a period, it makes the city perceivable with its architectural elements. By enabling individuals to understand “where they

come from and where they go" (Council of Europe, 1987, 9), they can discover themselves and create alternative areas for disappearing public spaces today (Severcan and Barlas, 2007; cited in Severcan, 2012).

In the last place, there is a sense of responsibility towards the public. It is easier to maintain and re-function industrial areas, which are usually in public ownership. Public institutions may continue to use old industrial structures for public purposes or may assign them to the private sector and determine methods for the protection and re-functioning of structures before the process. (Severcan and Barlas, 2007).

The concept of values of industrial heritage is central to research on conservation. Various typologies of value have been discussed in literature, under different titles on industrial heritage (Table 2.2.).

Table 2.2. *Value of Industrial Heritage Defined by Various Authors (Adapted from Canaran, 2009)*

Author, (Year)	**Values**
Riegl ([1902], 1982)	Age, Historical, Commemorative, Use, Newness
Australia ICOMOS (1979)	Aesthetic, Historic, Scientific, Social
Lipe (1984)	Economic, Aesthetic, Associative/Symbolic, Informational
Darvill (1995)	Use, Option
Carver (1996)	Market, Community, Human
Frey (1997)	Monetary, Option, Existence, Bequest, Prestige, Educational
Ashley-Smith ((1999)	Economic, Informational, Cultural, Emotional, Existence
Pye (2001)	Historic, Artistic, Scientific, Cultural, Contextual, Condition, Economic

Throsby (2001)	Aesthetic, Spiritual, Social, Historical, Symbolic, Authenticity
Mason (2002)	Historical, Cultural/Symbolic, Social, Spiritual/Religious, Aesthetic, Market, Existence, Option, Bequest
Feilden (2003)	Emotional, Cultural, Use
Keene (2005)	Social, Aesthetic, Spiritual, Historical, Symbolic, Authenticity
Appelbaum (2007)	Art, Aesthetic, Historical, Age, Use, Research, Educational, Newness, Sentimental, Monetary, Associative, Commemorative, Rarity
English Heritage (2008)	Evidential, Historical, Aesthetic, Communal
Orbaşlı (2008)	Age and Rarity, Architectural, Artistic, Associative, Cultural, Economic, Educational, Emotional, Historic, Landscape, Local, Distinctiveness, Political, Public, Religious&Spiritual, Scientific/Research/Knowledge, Social, Symbolic, Technical, Townscape
Stubbs (2009)	Universal, Associative, Curiosity, Artistic, Exemplary, Intangible, Use
Gómez Robles (2010)	Typological, Structural, Constructional, Functional, Aesthetic, Architectural, Historical, Symbolic
Szmelter (2010)	Cultural, Contemporary, Socio-Economic
ICOMOS New Zealand (2010)	Aesthetic, Archaeological, Architectural, Commemorative, Functional, Historical, Landscape, Monumental, Scientific, Social, Spiritual, Symbolic, Technological, Traditional
Lertcharnrit (2010)	Informational, Educational, Symbolic, Economic, Entertaining/Recreational

According to Kıraç (2001, 84), new values emerging in the protection of industrial heritage can be addressed in four groups, depending on time, historical studies and our environmental experiences.

- Symbolic value: Cultural resources establish a measurable link between the past and now, and this link takes place on the remnants of the formerly existing work in practice.
- Informatics-informatics value: Not only buildings but also engineers and inventors associated with them are taken into consideration, they are examined in all aspects of industrial history. The more material is obtained during the study, the more reliable information can be obtained from here.
- Economic value: From a material point of view, it arises from the fact that heritage is attractive or that there are new uses that can live for buildings.
- Aesthetic value: Often conflicts with the other three.

These structures are usually built for practical and functional use. Therefore, they often do not have symbolic meaning in the urban context and structurally. However, they are in the memory of industrial societies as evidence of industrial developments.

In this context, Cengizkan (2002, 9) emphasizes that the preservation of industrial structures creates a paradoxical situation and states that industrial buildings built for functional and practical uses often have no symbolic meaning in the urban context, and that they take their place in the collective memory of industrial societies as evidence of industrial developments. Based on concepts such as relative art value, development value, use value introduced by the Austrian art historian Alois Riegl at the end of the nineteenth century, and based on the concept of factory aesthetics introduced by Reyner Banham, it is stated that the action of transforming the industrial structure corresponds to a new coding and reconstruction concept. (Cengizkan, 2002, 9).

The concept of the development value of Riegl refers to the value of layered life patterns for the protection of the whole with spatial traces in all areas of life. Recognizing the artistic value of industrial heritage, the changes in the person's perception of environment/relationship are one of the important reasons for the acceptance of industrial heritage as cultural heritage. Because machines and machine-

like forms and spaces look familiar to modern people. The art value of industrial buildings, areas, and products can be understood mainly by the relative art value of Riegl. Relative art value is the value of such structures within the framework of machine aesthetics (Ravara, 2006).

If the protection of industrial heritage is evaluated in the context of the Riegl's approach and the dynamics of today's world, the relative art value precedes the use value. The use of these structures, in other words, by re-utilizing the city life, has lost its value by realizing the relative art value within the marketing policies of the city today. Because today, the heritage industry, which is protected in the cross-urban race, has created important images with art values and has found the opportunity to market more easily (Çoban, 2015, 25).

Canaran (2009, 25-30) categorizes multi-layered values of industrial heritage structures/sites in the urban context as socio-cultural, historical, technological and scientific, educational and academic, architectural and aesthetic, landscape, economic, and resource values. He describes these values as follows:

Socio-Cultural Value: Industrial heritage as a reflection of the evolution of social, cultural values and society in its working period, it can provide the opportunity for today's city users to share a common value and identity, providing social integration, and the emergence of a sense of identity and belonging.

Historical Value: Industrial heritage has a historical value that documents and interprets important values for cities and people, bears witness to cultural, social and economic developments. This value is important for preserving and refreshing the historical memory of the country, the city and the place.

Technological and Scientific Values: Industrial heritage is indicative of the steps taken in reaching today's technology through engineering, architecture and production techniques. It has a value that reflects the scientific and technical sophistication of the period and its methods.

Educational and Academic Values: Industrial heritage carries values, characteristics, potentials and academic and educational values in many respects.

Architectural and Aesthetic Values: Industrial heritage buildings have an architectural style based on specific standards, giving priority to function and efficiency. They also contribute to the aesthetic quality of the urban landscape and landscape, while the structures, production machinery have technical and aesthetic value. The structures are large and impressive in size. It has character-defining architectural details and features.

Landscape Values: Industrial heritage provides aesthetic and cultural contributions to the urban landscape with its monumental features, while also providing recreational areas.

Economic Values: Finding appropriate economic uses for the preservation and revitalization of industrial heritage can give an economic advantage from building scale to urban space and community.

Resource Values: They provide energy efficiency through the improvement and revitalization of old areas, resources, materials and structures of industrial heritage. They also provide resources for different uses and applications.

Canaran (2009, 17-24) categorizes the opportunities provided by the multi-layered values of industrial heritage structures/sites in the urban context as location advantages, catalytic benefits, public realm, identity and collective memory, property ownership, sustainability, spatial advantages, structural advantages, and visual advantages and describes these values in summary as follows:

Locational Advantages: Industrial heritage sites are often located in urban centers, or at strategic points close to the city center, supported by existing infrastructure, and dependent on highly accessible transportation systems.

Catalytic Benefits: The revitalization of industrial heritage can play a catalyst role in the revitalization of the city, from the smallest unit to the whole.

Public Realm: Industrial heritage can create public space for the integration of lost spaces in cities into the urban fabric through various public uses and activities, reinforcing the sense of place.

Identity and Collective Memory: Industrial heritage, which provides an opportunity for future generations to connect to collective history, functions as a concrete expression of identity. The preservation of heritage is therefore important for the users of the city to feel belonging, and to keep the collective memory alive.

Property Ownership: It can be seen as an opportunity to protect industrial legacies, which are often owned by the public, and to facilitate the process of intervention.

Sustainability: The reuse of old industrial areas in urban centers may reduce urban scattering, attracting the focus to the city center. It can also meet the demands of sustainable development by reducing environmental pollution.

Spatial Opportunities: Industrial heritage that can provide high quality, flexible spaces offer opportunities for new uses and functions with their dimensions, architectural features, and spatial configurations.

Structural Advantages: Industrial heritage structures built in accordance with special functions; their large internal volumes, the quality of materials used during their construction, and construction techniques provide an advantage in adaptive reuse.

Visual Advantages: The industrial legacies that create the focal point become an important part of the urban landscape, while creating a sense of place in the city's users. In addition, some industrial heritage structures become the symbol of the city with their characteristic architectures, and spatial components.

Canaran (2009, 18). also explains the benefits of protecting old industrial structures / sites that are no longer in use as follows:

> "*Reducing urban sprawl and infrastructure costs,*
> *Enhancing environmental quality and performance,*
> *Redirecting the expansion of the city,*

Providing better levels of urban amenity, vitality and livability,
Improving image and quality of the built-up area,
Re-establishing the relationship between city and obsolete segregated parts of the city,
Enhancing the urban voids,
Strengthening the physical and social fabric of the built-up area,
Providing public spaces".

Köksal (2006) describes five stages for the protection of industrial heritage: 1) research, documentation, restitution, 2) the decision to protect, 3) restoration, 4) the function, and 5) the use. The first step in protecting industrial heritage is to conduct inventory work. It is useful to make the inventory written, visual and sensorial in order to define sufficient information about the production process of the industrial structure. It is easy to understand and interpret with the presentation of visual and audio resources together. In addition, the digital environment of documentation systems increases the access to information and archiving options.

Since protection is to carry the message of the protected object and its image to the future, various protection methods emerge because the method of each protection action and protection will affect the message of the protected object. Höhmann (1992) divides these methods into four groups:

1. Without any intervention or minimal intervention, without giving a new function as it is biased.
2. It is protected with very little change and with a function close to its old function. This method is preferred for technical monuments that have not lost their function.
3. The building is protected by giving the function of a museum. However, the use of the museum is not suitable for all buildings. The function of a structure that has not lost its original equipment, has not been damaged much, has not been intervened and has sufficient technical knowledge is more successful. In the event that the intervention of the technical monuments used as a museum

is too much and the additions are overshadowing the historical structure, it loses its aim of protection and becomes a tool for new purposes. Therefore, it is important to convey information about the original environment of industrial structure such as sound, noise, and smell in the field of museum usage.

4. Reusing industrial monuments with a new function. Lack of regular maintenance and repair of a lost and abandoned structure causes destruction in a much shorter period of time. Time, nature conditions, rant anxiety, vandalism, and many more factors accelerate the deterioration of structures. Under these circumstances, the reuse of structures as the size of protection appears to be a solution. However, the first goal and the main objective of re-use should be to extend life by adding the structure to life again (Höhmann, 1992).

The common objective of protection methods is to document and protect industrial structures, which are not used for technological, environmental, economic or social reasons, and which are on the agenda of destruction due to rent pressures. The protection of an old industrial campus in a holistic way is not only necessary for the protection of architectural heritage but also necessary for the promotion of the cultural significance and quality of life of the city (Çoban, 2015, 26).

2.2.4.1. International Organizations

The industrial heritage that was first brought up in the 1950s was accepted as a science branch in the 1960s.

In countries such as the United Kingdom, France and Germany where industrial revolution experienced intensively, some meetings on industrial heritage in the 1970s started to be held because of the negative consequences caused by the destruction of industrial structures for environment and people's health and hygiene and raising awareness on industrial heritage started by conservation organizations and the universities.

In countries such as England, France and Germany, which experienced in the industrial revolution intensively, meetings on industrial heritage were started in the 1970s as the destruction caused negative results for environment and people's health and hygiene, and the protection organizations and universities started to raise awareness in this direction (TMMOB, 2008, 44).

British expert Neil Cossons, who was the director of Ironbridge Gorge Museum from 1971 to 1983, was a pioneer in carrying the approach of protecting old industrial buildings and areas to the international platform. Upon Cosson's recommendation, the First International Conference on the Conservation of Industrial Monuments (FICCIM) was held in the UK in 1973 (Trinder, 2000; cited in Saner, 2012, 54). SICCIM meeting, which was held as the continuation of FICCIM, was held in Bochum, Germany in 1975 and was followed by TICCIM, the third meeting of the series in Stockholm, Sweden in 1978. TICCIM (Third International Conference on the Conservation of Industrial Monuments) has been a witness to an organization aimed at conserving industrial monuments. The word "monuments" in the name of the meeting was replaced by the word "heritage" and the International Committee for the Conservation of the Industrial Heritage was established (Köksal, 2005, 115). In 2000, a cooperation agreement was signed between TICCIH; the first international organization for the conservation of industrial heritage, and ICOMOS (ICOMOS / TICCIH, 2014). ICOMOS, established in Warsaw in 1965 to promote and direct all relevant research on the principles, techniques, and policies for the conservation and evaluation of historic monuments and sites, is an international and non-governmental organization. With the agreement signed, TICCIH was appointed as ICOMOS' expert committee on industrial heritage (ICOMOS / TICCIH, 2000).

TICCIH, who organizes international meetings and publishes newsletters and magazines on a subject that is predetermined every three years, also has specialized working groups within its organization (Köksal, 2005, 115). Working groups designated as agriculture and food production, bridges, communication technologies, global and local problems, hydroelectric and electrochemical industries, metallurgy,

mining, Textile industry, mints, polar region production, railways and tourism, hold national and international meetings from time to time. In addition, the thematic works prepared in cooperation with ICOMOS and TICCIH have also been prepared with reports on canals, bridges, coal mines, cultural landscapes related to laces, labour settlements and railways. In the first part of these reports, while evaluating the relationship between the World Heritage List criteria and the related heritage listed above, there are different examples in the second part of the world (Hughes, 2012, 177).

In 2003, TICCIH published the Nizhny Tagil Charter, which was prepared in accordance with the Venice Charter, in order to reach the wider masses of the concept of industrial heritage by taking an important step. Although the Nizhny Tagil Charter was the most comprehensive constitution ever prepared, it was unable to obtain the approval of ICOMOS and the United Nations it needed for its long-term validity. At the 17th ICOMOS General Congress in Paris in 2011, a text, which was inspired by the Nizhny Tagil Charter and prepared in cooperation with ICOMOS and TICCIH, was adopted by General Assembly. The document is named as "Joint ICOMOS - TICCIH Principles for the Conservation of Industrial Heritage Sites, Structures, Areas and Landscapes", which is also referred as the Dublin Principles. (Casanelles, 2012, 233).

Another institution that played role in the conservation of industrial heritage is the Council of Europe. The first initiative of the Council on this issue was a recommendation in 1979 with the title of Industrial Archaeology. This recommendation includes articles such as the establishment of teams of experts from different disciplines, the transmission of the definitions of the main objectives to the member states, and the development of recommendations for the classification of industrial heritage (Council of Europe, 1979). In order to protect the industrial heritage within the framework of a plan and to increase its relevance, it has conducted a research to determine the status of industrial heritage in Europe, which started in 1981, consists of two parts and lasted for five years. The first part of the study was conducted

by Wendorn and included Northern European countries (Austria, Belgium, Denmark, Germany, Great Britain, Ireland, Iceland, Liechtenstein, Luxembourg, Netherlands, Norway, Sweden and Switzerland), while the second part was run by J.A. Fernandez Ordonez and included southern European countries (France, Greece, Italy, Malta, Cyprus, Portugal, Spain and Turkey) (Wehdorn and Ordonez, 1985). In 1985, when the relevant research report was published, an international colloquy titled "The industrial heritage: what policies?" was held in Lyon, France. This colloquy is important because it is the first event of the Council of Europe to consider the industrial heritage separately from the architectural heritage. In the period following this event, meetings were held on similar topics; industrial heritage has been discussed with different dimensions (Saner, 2012, 58). After these meetings, the Council of Europe's Committee of Ministers' recommendation was published in 1990 and adopted as the basic text of the Council of Europe's industrial heritage for a long time. Emphasizing the determination of monuments, legal arrangements, promotion of tourism and strengthening inter-governmental cooperation, the scope of this text was extended by the text titled "Industrial Heritage in Europe" published in 2013 (Committee of Ministers of the Council of Europe, 1990; Committee of Ministers of the Council of Europe, 2013).

In the 1980s, besides the establishment of industrial information collection centers in the Netherlands and France, another significant development is widening the scope of the concept of protection: It not only included the building scale, but also went beyond and included the protection of industrial areas, which had lost their function (Kıraç, 2001, 78; Saner, 2012, 56). With the proposal of the Parliamentary Assembly of the Council of Europe, 2015 was celebrated as the year of European Industrial Heritage with the participation of more than 20 countries.

National and international organizations working on industrial heritage can also be listed as follows:

- ERIH (The European Route of Industrial Heritage)

- E-FAITH (European Federation of Associations of Industrial and Technical Heritage)
- ICOHTEC (International Committee for the History of Technology)
- SHOT (Society for the History of Technology)
- NEKTAR (Europäischen Netzwerk der Kultur der Arbeit)
- DOCOMOMO
- CILAC (Comité d'Information et de Liaison pour l'Archéologie, l'Étude et la Mise en Valeur du Patrimoine Industriel)
- SIA (American Society for Industrial Archaeology) (Köksal, 2005, 115-118).

The terms industrial heritage and industrial archaeology are quite new in Turkey. Although there is an increasing number of research on the subject, there are limited opportunities for implementation (Saner, 2012, 64).

Today, protection laws in Turkey do not include the concept of industrial heritage. Following the approval of Venice Charter in 1964 and the establishment of the International ICOMOS in 1965, the Venice Charter was adopted in our country and published in Vakıflar Magazine for the first time in 1968. In Turkey, ICOMOS was established by the name of ICOMOS Turkey National Committee as a semi-official council connected to the Ministry of Culture with a regulation published in 1974. This council issued the ICOMOS Turkey Architectural Heritage Conservation Charter in 2013. In this Charter, definitions such as industrial heritage, industrial heritage item, technical and technological value are included (ICOMOS Turkey National Committee, 2013).

2.2.5. Examples of Conservation and Re-Utilization of Industrial Heritage across the World

The conservation and re-utilization of industrial heritage sites and abandoned railroads are analyzed in this section through two examples. Bicocca Transformation Project is selected because it revealed that industrial heritage offers opportunities for urban renewal and has the potential to trigger development that will be reflected in the entire

city. High Line Project is selected because it revealed the preservation and functional transformation of abandoned railroad.

2.2.5.1. Bicocca Transformation Project in Milan by Pirelli

Milan is one of the cities that plays an important role in the development of the Italian economy. The Bicocca Region is located in the historic industrial center in the northeast part of Milan (Figure 2.5.). This area, which included power plants, was established in 1872 by Giovanni Battista Pirelli for the production of rubber and rubber products. Pirelli, which pioneered the use of Taylorist and later Fordist production methods in Europe and launched iconic advertising campaigns, was soon strengthened in different countries (Bolocan Goldstein, 2003; Colli, 2001; Dalmasso, 1970; cited in Kaika and Ruggiero, 2013).

Figure 2.5. Present View of Pirelli Bicocca (Source: Google Earth Pro, accessed on 13 October 2018)

Pirelli expanded in 1917 by purchasing an area of 200,000 m² in Bicocca and soon came to be referred to as the city of factories (Irace, 1997). Pirelli grew up during the World War II, its state-sponsored economic miracle in the 1950s came up short and its decline began in the 1960s (Bolchini, 1967; Bertelè, 1993; cited in Kaika and

Ruggiero, 2013). At the end of the 1970s, the industrial facilities in the Bicocca Region were unable to adapt to changing industrial processes; therefore production decreased first and then ceased completely.

Pirelli, in search for a solution in the early 1980s, initiated a program to turn Bicocca into a TechnoCity that would make it the catalyst for change. Giovanni Nassi, the CEO of Progetto Bicocca (Bicocca Project), played a leading role in planning and presenting Bicocca's transformation, realized that the land could in itself become a saving tool and a growth engine for a troubled company. Pirelli has rediscovered its land as a pure financial asset, shedding its traditional practice of treating industrial land as a condition of production and as a depreciating investment over time (Harvey, 1982, 347; cited in Kaika and Ruggiero, 2013, 6).

Prior to this period, there were certain problems with the planning system in Milan, and there were no master development plans or projects of any kind that would have been pioneers (Figure 2.6.). In the 1980s, Milan local government adopted a different urban renewal approach and envisioned a development and renovation plan led by the transformation of the old industrial areas. Therefore, in the period between 1980 and 1990, efforts were focused on transformation and re-functioning by the local government. With Pirelli's Bicocca Transformation Project, public-private cooperation was achieved and a development was envisaged that would be reflected in the whole city (Bolocan Goldstein, 2002, 2; cited in Elhan, 2009).

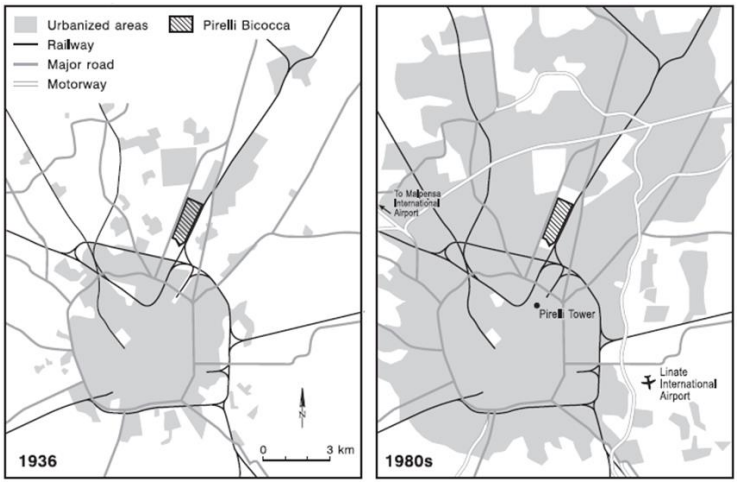

Figure 2.6. Map of Milan and position of Pirelli Bicocca (Source: Kaika and Ruggiero, 2013, 7)

In the early 1980s, it was predicted that the axis of development of the city of Milan would be in a north-west /south-east direction, and with Pirelli's proposal, Bicocca was identified as a strategic transformation area in 1988. Because of its location, the north-east axis was attached to the main development axis, and Bicocca was given primary development status on Milan's development axis which was defined as an inverted T shape as shown in Figure 2.7. (Kaika and Ruggiero, 2013).

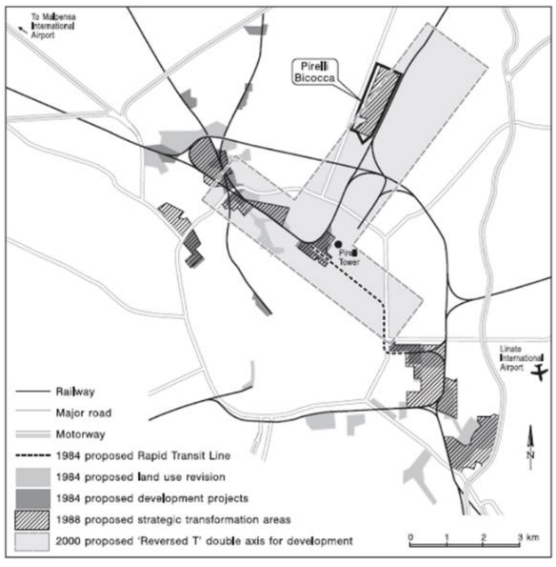

Figure 2.7. Pirelli's influence on the development of Milan (Source: Kaika and Ruggiero, 2013, 9)

Pirelli Group launched an international design competition aiming to create a mixed-function technological attraction for the north eastern area of Milan, featuring 20 world-renowned architects including Frank Gehry, Renzo Piano, Vittorio Gregotti, and Richard Maier.

The project of Gregotti Associati and his team were selected among the three projects that participated in the second phase of the competition in 1988 (Figure 2.8. and Figure 2.9.). In addition to this competition, Pirelli has appointed Professor Umberto Colombo as the director of the international scientific group for the development of scientific and technological scenarios that may be of appropriate capacity for the twenty-first century in the field (Elhan, 2009).

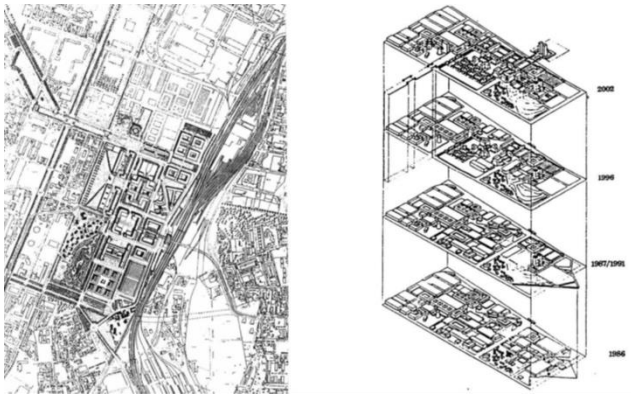

Figure 2.8. Gregotti's design proposal and phases of the project (Source: Galea, 1992, 102-104)

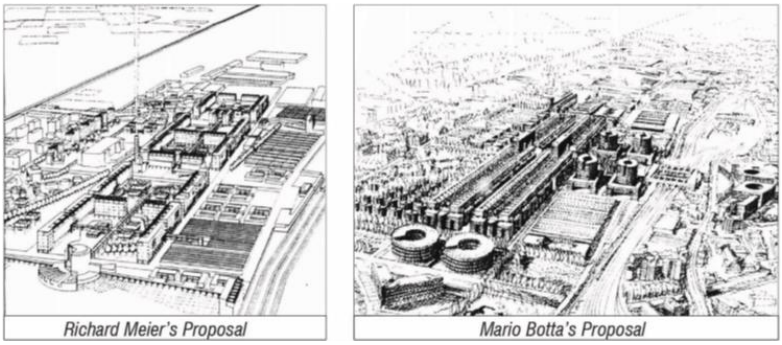

Figure 2.9. Other design proposals (Source: Galea, 1992, 79)

The program of the Bicocca project is primarily covered within the framework of the Urban Planning Scheme developed by the Local Government of Milan. The project was developed in an urban area of about one million m², but 800,000 m² of the project was completed. In this context, the design project was envisaged to develop the Università Statale di Milano-Bicocca with a capacity of thirty thousand students, Consiglio Nazionale delle Ricerche (National Research Center), and the Pirelli Headquarters around the cooling tower. The project area consists of a residential area with a capacity of five thousand people, 50,000 m² pedestrian walking areas and squares, 110,000 m² parking area, and pedestrian paths and bridges connecting the design area to Parco Nord and Bresso (Dell'Agnese, 2005; cited in Elhan, 2009).

The main goal in the Bicocca project was actually to create a technological attraction point or a science center. It was also planned to create research infrastructures, as well as mixed-use development involving commercial and residential. However, the latest version of the project has changed a little, again retaining the University in the centre but proposing more residential development (Puri Negri, 1999).

Another element in the vision of the project was on the type and use of the urban landscape. According to Molinari (1999), the project basically aims to transform the planned areas and products of Pirelli industries into an open space for various uses. Another important issue during this transformation process in the field was that it was designed to create a bridge between the past and the present by evaluating the history of the industrial past. The layout plan of the area was arranged by the design of large industrial heritage building blocks integrated with existing road networks. The protection of the existing tissue by building blocks and road network has been very effective in terms of carrying and reflecting the traces of the past. Apart from this general design approach, industrial heritage structures were renovated individually and opened to use with different functions.

In the Bicocca project, the separation of pedestrian and vehicular traffic is one of the main criteria. However, combining the area with the bridge and road system as a

corridor between the green areas has also been one of the important objectives (Galea, 1992). Bicocca is connected to the centre by motorway, railway and tram system; as a result, projects to be implemented in the area are intended to adapt to the city.

Università Statale di Milano-Bicocca is one of these structures. In 1994, the University of Milan acquired approximately 40% of Bicocca's land and buildings in order to create research and education units that the community could benefit from in parallel with the general approach of the Bicocca project, and the flagship project for the area, Università Statale di Milano-Bicocca, was established. Within the scope of the project, the University played an important role and in many ways contributed to the progress of the project. The university complex is located on the north of the railway and forms a planned extension of the Bicocca-Breda-Falk technological axle. In some parts of the complex, the number of floors rises to ten and while providing high density, it also respects the rest of the area (Elhan, 2009).

The university complex consists of multiple floors of different types and is associated with streets and squares. The university buildings in the centre of Bicocca Square are characteristically prominent with red walls and white window shutters. The main complex fronting the Ateneo Square and the Science Centre Square consists of the old Pirelli warehouses. The structures chosen as universities have largely preserved the existing forms and sizes from the industrial era as they were (Elhan, 2009).

Another symbolic structure in the project is the iconic Pirelli RE Headquarter, designed by architect Vittorio Gregotti. Bicocca's old industrial cooling tower was inserted into a new oversized glass structure by design (Memo, 2007; cited in Kaika and Ruggiero, 2013, 14). With its new glass structure above the old industrial heritage, the building has been an important indicator of Bicocca's transformation from city of workers to city of finance. The architect of the structure Vittorio Gregotti states that the Headquarter harmoniously combines both the past and present of Pirelli (Kaika & Ruggiero, 2013). The old industrial cooling tower within Pirelli RE Headquarters has been preserved to convey and commemorate traces of the past. Three sides of the

tower are surrounded by offices, while one side is left empty with the aim of making the tower stand out like a statue. Meeting and reception rooms were built inside the tower, which are connected to the floors. A heliport is located at the top of the tower. In this respect, both protection and use of the building is an example of adaptive reuse (Figure 2.10. and Figure 2.11.) (Archello, n.d.).

Figure 2.10. Pirelli RE Headquarter (Source: https://archello.com/project/pirelli-real-estate-headquarters-at-bicocca, accessed on 13 October 2018)

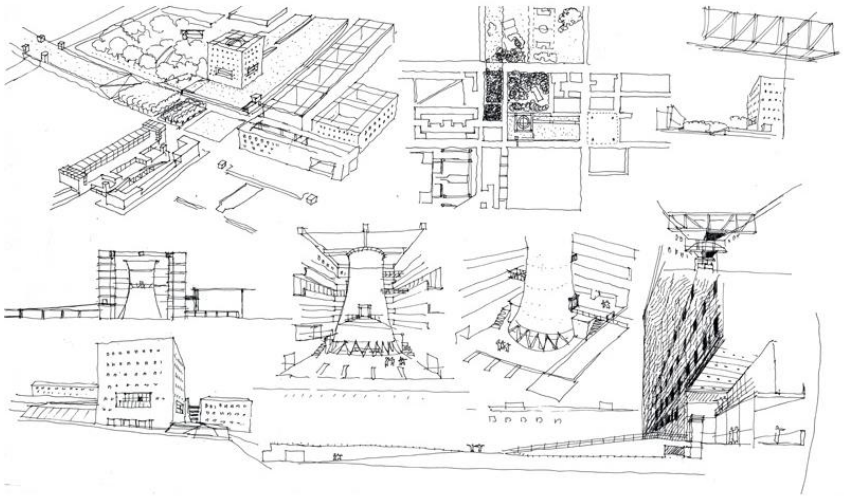

Figure 2.11. Pirelli RE Headquarter Sketches (Source: https://archello.com/project/pirelli-real-estate-headquarters-at-bicocca, accessed on 13 October 2018)

Another key design element in the Bicocca area, the construction of the two-level, 2,375-seat Arcimboldi Theatre, designed by Vittorio Gregotti in collaboration with Mario Botta and Elisabetta Fabbri, has increased the speculative value of residential and office developments in Bicocca. Shortly after its opening in 2002, the closure of Milan's most prestigious opera house, the Teatro alla Scala, for renovations, caused the Arcimboldi Theatre to host performances. The structure is basic and has a compact style. The basic view of the exterior of the structure consists of a sheltered area that marks the entrance, and a wide curved and sloping window.

The aim, objective and method were determined prior to the implementation of the project. The aim of this project is to revitalize this dysfunctional area by preserving the industrial heritage of the Bicocca area and to create an attractive urban centre that would change the image of the city. The objective of the project is to create an urban area that respects the industrial heritage of Bicocca, maintains its original nature as much as possible, and is the main attraction point of the university with solutions suitable for the industrial texture and the development of mixed-function uses around it. The determined method in the direction of aim and objective is to evaluate the industrial heritage within the framework of the educational concept and to express the area with various functions around it as a living space that is used and re-active (Elhan, 2009).

Bicocca is nowadays located in an important location and accessible area. Transportation systems and connections are very important in the project. Links have been established between the project area and nearby landmarks. The Bicocca project has played a trigger, leading role in the development of transformation and renovation projects throughout the city, as well as in and around the area itself. It has changed the image of the city. They have had positive economic, social and physical returns. The University concept in the project has enabled the field to develop culturally and have a different image. At the same time, the university has contributed to the development of different renovation, transformation and design projects associated within and around the area (Elhan, 2009).

In the Bicocca project, with the principle of carrying the traces of the industrial past to the present, the aim of creating a bridge between the past and the future and providing historical continuity has been set out, and applications have been carried out in this direction. The existing texture of the industrial area, building blocks and streets were preserved as in the past and the area was perceived as a whole. Protected industrial structures have been renovated and reused with various functions, while open spaces have been reorganized so as not to lose their identity in their past. Thus, while the industrial heritage was preserved on the one hand, new design applications were tried to be developed on the other (Elhan, 2009).

2.2.5.2. The High Line Transformation Project in New York

The High Line is a 2.33 kilometers long railroad that was built approximately 9 meters above ground level and opened for operation in 1934, as part of a major infrastructure project under the West Side Improvement Project to serve industrial factories and warehouses located in New York City (Figure 2.12.). After the Second World War, with the development of road transportation, the High Line began to lose its function as a result of the decline of rail use in transportation. The southern section of the line was demolished in the 1960s and the last train service on the High Line was made in 1980.

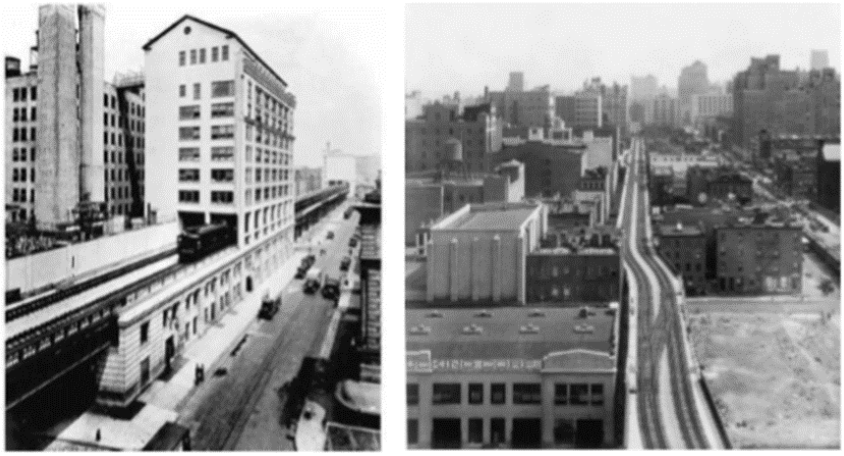

Figure 2.12. Past view of the High Line (Source: https://www.thehighline.org/photos-videos/, accessed on 14 October 2018)

In the early 1990s, decision-makers considered that the line had disrupted the layout and image of the city due to its dormant state; they brought up the opening of the line to public transport or the demolition of it. By 1999, the NGO named "Friends of High Line", which was established to protect the High Line area and transform it into an urban park as a green space, started to produce various projects to incorporate the line into the city. The decision was approved by the municipality to demolish the High Line, considering that urban transformation would be costly. The Friends of the High Line convinced the municipality that the High Line should not be demolished and economically restored, and at the end of this process the decision was taken by the municipality to use the line as a public space (Thehighline, n.d.).

An international competition was opened in 2003 to revitalize the High Line and convert it into a public pedestrian zone. 720 design teams from 36 countries participated in the competition, among which the landscape architecture office James Corner Field Operations and the architecture office Diller Scofidio + Renfro won the competition (Figure 2.13. and Figure 2.14.). Construction of the 2.33 km long High Line Park began in 2006. The project was completed in three stages and opened to the public in 2009, 2011 and 2014 respectively (Thehighline, n.d.).

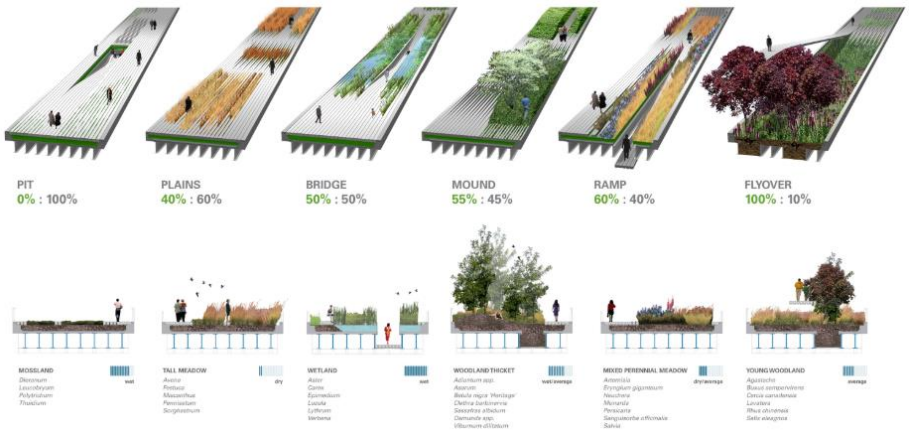

Figure 2.13. The Sections of the High Line Park (Source: https://www.thehighline.org/photos/design-competition/fo-and-dsr/, accessed on 14 October 2018)

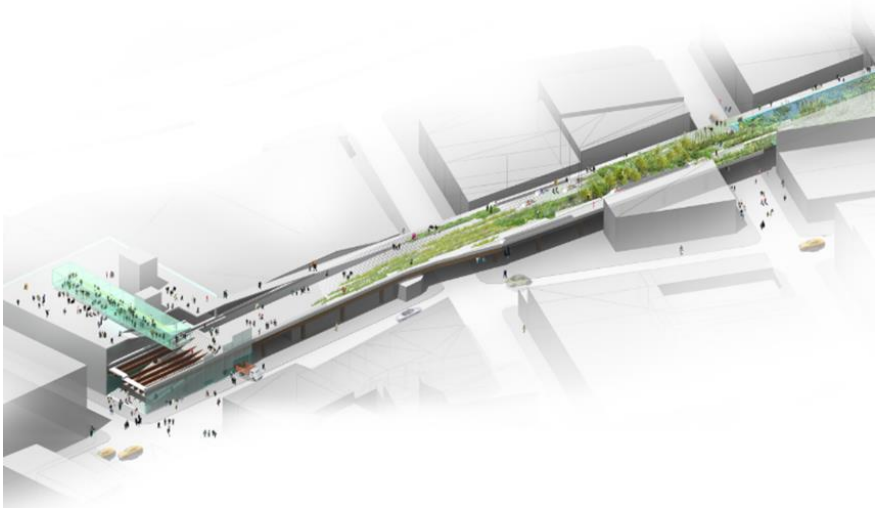

Figure 2.14. The sections of the High Line Park (Source: https://www.thehighline.org/photos/design-competition/fo-and-dsr/, accessed on 14 October 2018)

The concept of Agri-tecture, derived from the combination of the words architecture and agriculture, has been the basic concept that led the design process. Selecting plant species with little need for maintenance in the project has formed the basis of sustainable design. Plants that have grown over time since the railway line closed have also been part of the park's design. Native plants and trees designated for landscape design were selected based on longevity, sustainability, texture and color diversity. These have been integrated into existing plants and an integrated green system has been created (Thehighline, n.d.).

The High Line is centrally located, accessible by walking, public transport, and private car. There are many entrances for easy access for visitors to the park, and elevators at some points on the line are used for the transportation of persons with disabilities (Figure 2.15.).

Figure 2.15. The Entrances of the High Line Park (Source: https://www.quora.com/Where-are-the-entrances-to-High-Line-Park-in-Manhattan, accessed on 14 October 2018)

The park is designed with spaces where users can sit and relax with views of New York City. Today, many people prefer this park to read books, walk and socialize. The High Line also has cafes, eating and drinking units, stalls selling souvenirs (Figure 2.16.) (Thehighline, n.d.).

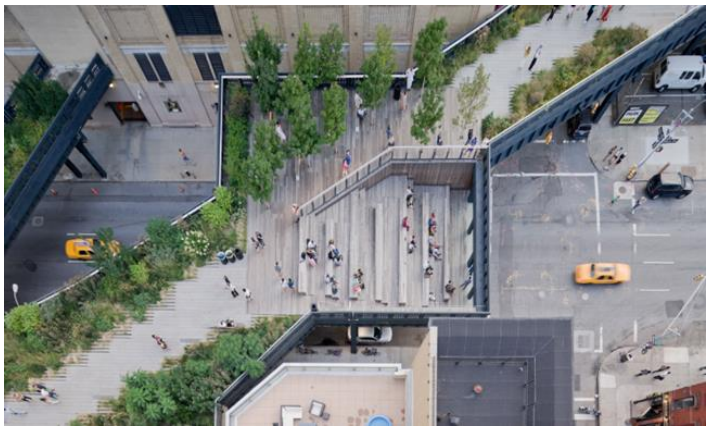

Figure 2.16. Aerial view of the High Line Park (Source: https://www.thehighline.org/photos-videos/, accessed on 14 October 2018)

The Friends of High Line organizes many programs and events in the park in order to provide the necessary financial resources. The park offers general tours, each accompanied by volunteer guides, describing the history, design of the park; special tours for further information; art tours related to all art activities in the park; garden tours related to landscape items and plants in the park. In addition, art exhibitions, parties, and organizations for special days and nights are also among the events held in the park (Figure 2.17.) (Thehighline, n.d.).

Figure 2.17. Aerial view of the High Line Park (Source: https://www.thehighline.org/photos-videos/, accessed on 14 October 2018)

The High Line Park project appears to be protected by re-functioning. After the original industrial function of the High Line railway line ended, a new function was given to the area as an urban park. Traces of the old railway line can also be seen in the present state of the park today. In this respect, the park offers an imaginable space where collective memory is sustainable. With its new function, it has been reintroduced to the city by hosting different functions within it, allowing the space to be used as a public space (Thehighline, n.d.).

The High Line project has contributed both culturally, ecologically and economically to the city by maintaining the railway image in the city memory and reusing the industrial heritage in line with today's needs. It has also increased the value of properties on the route and improved the quality of life (McEntee, 2012).

2.2.5.3. Review of the Bicocca and The High Line Transformation Projects

These analyses reveal that industrial heritage offers opportunities for urban renewal, and has the potential to trigger development that will be reflected in the entire city as in the case of the Bicocca project. In the process of revitalization, it is important to evaluate the history of the industrial past and design it to create a bridge between the past and the present, to bear the traces of the past and to reflect it. In the Bicocca project, with the principle of carrying the traces of the industrial past to the present, the aim of creating a bridge between the past and the future and providing historical continuity has been determined, and applications have been carried out in this direction. The existing texture of the industrial zone, building blocks and streets have been conserved as in the past, and the area has been perceived as a whole. Protected industrial structures were renovated and reused with various functions, while open spaces were rearranged so as not to lose their identity in their past.

The High Line Project has been shown to contribute to the city culturally, ecologically and economically, and improve the quality of life on the route by preserving the image of the railway in the city's memory and reusing it in line with today's needs.

2.2.6. Review of the Concept of Industrial Heritage

In this chapter, cultural heritage, industrial heritage and conservation approaches, which constitute the conceptual framework of the study, have been elaborated; their significance in the collective memory and urban context, and the opportunities they offer and the values they show have been examined.

Industrial heritage sites occupy an important place in the economic development of cities. In addition, industrial heritage is one of the important structures within the scope of cultural heritage in terms of developing the city, the social structure and the evidence of its industrial past. Industrial heritage is faced with a danger of disappearance because of the loss of functions of industrial structures and areas and their lack of use.

Research on the conservation and reevaluation of buildings/areas within the scope of industrial heritage is important. The revitalization of industrial heritage offers great advantages to the city and society in terms of urban quality of life, economy, design and sustainability. Because industrial structures offer opportunities for urban use when they lose their functions. These buildings have large plots and are mostly located in the city centre or just around the city. For this reason, they offer potentials for reutilization through conservation. Structurally, these areas generally accommodate high structures with large volumes, large open spaces and high technology, especially in terms of production units, and offer valuable spaces for functions requiring large space use. They represent the science and technology levels of their periods; they have indicative characteristics in terms of documentation.

In addition, the rise of awareness about the appropriate use of resources; the emergence of concepts such as sustainability and transformation, and the idea of transforming and reusing industrial areas play an important role in shaping the urban space.

In applications for the reevaluation of industrial heritage structures, the objective should be to preserve their characteristics. If the industrial heritage to be preserved contains data from the point of view of engineering, history, economics and social sciences as well as from the architectural and urban aspects, it requires collaboration in a common field of activity (Saner, 2012, 63). In the approaches to these areas, analyses should be made and functions should be proposed according to the conditions and needs of the day and the future, according to the needs of the urban space.

2.3. Three Theories of Urban Design to Analyze the Concept of Industrial Heritage

The city is a large-scale settlement in which people live in order to maintain their social, cultural and economic needs. It is a construct created by urban spaces and it creates the organization between the parts (Yamaçlı, 1997; cited in Erdönmez, 2014). Spatial forms in the city are closely related to space, meaning, communication and

time, and these components influence on the physical environment choices of the individual or society (Erdönmez, 2014). The place is a three-dimensional expression of the distances and relationships between people and objects themselves and each other, and the form emerges at the intersection of solids and voids. Spatially, the main solid, void and the space within it must be considered as a whole and complement each other. Similarly, in the urban design, structures and open spaces / empty spaces should form a whole.

According to Zevi (1957, 30; cited in Madanipour, 1996, 7-8), urban space continues in squares, streets, playgrounds, parks, and gardens where artefacts limit or define an enclosed space. All the spaces between buildings in cities can be named as outdoor spaces. The boundaries of urban spaces have been determined with a variety of physical, social and symbolic features, as well as functionally and structurally defined individuals, groups, or groups with common social characteristics.

This study examines how industrial heritage can be protected in urban transformation processes, how it can be integrated into the urban context, and how an urban design approach can be implemented in such processes. Therefore, it is important to examine and analyse the basic urban design theories, which are applied by Trancik in his explanations on the Lost Space. The theories of urban design presented by Trancik (1986) are to be applied in the thesis. Trancik examines three theories of urban design:

- Figure-ground theory
- Linkage theory
- Place theory

These theories refer to spatial quality and coherence. The figure-ground theory which studies the relationship of urban solids and voids defines physical formations; linkage theory which studies form and spatial formations as a whole discovers relationships and interactions; and place theory which includes social and cultural values evaluates personal experiences with spatial systems. These three theories are considerably different from each other, "*but taken together can provide us with potential strategies*

for integrated urban design" (Trancik, 1986, 97). Trancik (1986, 98) discusses the overlay of these three theories as it is indicated in Figure 2.18. by stating that:

> "*The integrated approach suggested in this text would incorporate figure-ground, linkage, and place theories; giving clear structure to solids and voids, organizing connections between the parts, and responding to the human needs and unique elements of the context*".

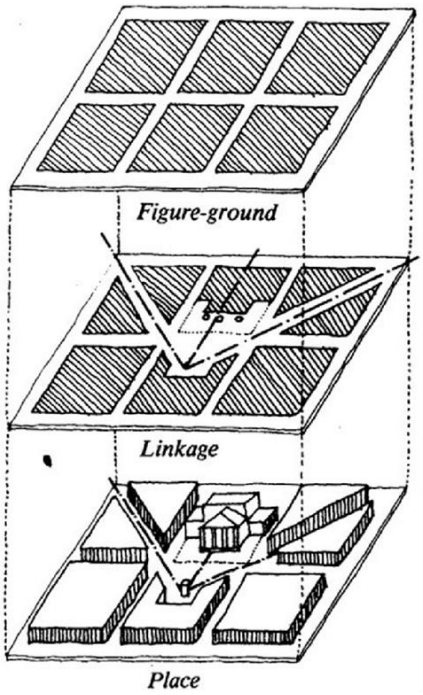

Figure 2.18. Diagram of Figure-Ground, Linkage and Place Theories (Source: Trancik, 1986)

2.3.1. Figure-Ground Theory

Figure-ground theory examines the relationship between solids and voids. Each urban environment has its own solid-void relationship. Trancik (1986) indicates that this relationship is between buildings and open spaces.

On the map of Rome, drawn by Giambattista Nolli in 1748, the figure-ground relationship of solids and voids can be established depending on our perception of

positive urban elements (Figure 2.19). In some parts of Nolli's map, structures appear as positive forms that define street spaces; in other parts, the main voids in city squares, gardens, and important public buildings are positive; while the surrounding building masses are the background.

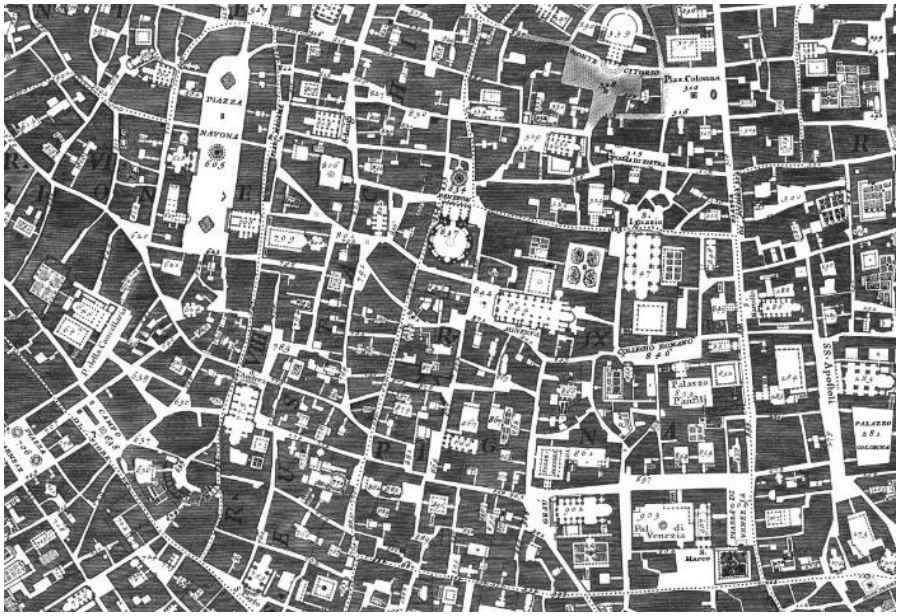

Figure 2.19. Nolli's Map (Source: https://3wqjvwh65v-flywheel.netdna-ssl.com/wp-content/uploads/2019/09/morphocode-Nolli-map-detail.jpg, accessed on 19 November 2019)

In this theory, the figure-ground relationship was established with the evaluation of buildings as figure, open spaces as ground. Figure-ground approach to the design of open urban spaces is an approach to analyse the general occupancy and emptiness patterns of the city or a region. The figure-ground expression, which is a two-dimensional abstraction on the plan, is a graphical tool that reveals this relationship.

Zevi (1994) states that each building helps the formation of two spaces; the first one is the interior space of the building itself, and the second is the outer space or urban space provided between the adjacent buildings.

Figure 2.20. Figure-ground Diagrams of the City Centres of Venice, London, Paris, and Brasilia (Source: https://www.researchgate.net/profile/Geoff_Boeing/publication/318862360/figure/fig23, accessed on 24.06.2019)

Figure-ground drawings express differences between urban solids and spaces, and these urban solids and spaces contribute to the design and perception of the public space. Urban solid types include public buildings/institutions, dominant urban blocks and buildings that define direction/edge; urban void types include foyer spaces, inner block voids, street and square networks, public parks and gardens, linear open-space system (Trancik, 1986, 101). Trancik (1986,106) states that:

"*If the relationship of solids to voids is poorly balanced, fragments become disjointed, falling outside the framework; the result is lost space. In order to reclaim our lost space, there must be a willingness to reconsider the object and evaluate the ground rather than worship of the figure.*".

2.3.1.1. Urban Solids

Urban solids defined by Trancik (1986) are public buildings/institutions, dominant urban blocks, and buildings that define direction/edge. The first of the most important types of urban solids are public buildings or institutions that are usually separated from other groups in the vicinity of a public place. These structures can assume the central role of monumental images in urban tissue and give information about historical values, visual focal points, and urban identity and character.

Dominant urban blocks, the second main urban solid type, are the basic components of the figure-ground theory. The size, pattern, and orientation of the urban block are the main elements in the composition of public space according to Leon Krier (Trancik, 1986, 102). For the most part, the combination of urban space reveals a repetition of these blocks or an identical language. Dominant urban blocks differ in shape and size because of different land-uses such as housing, retail, and industry, while these differences reflect the main characteristics of the cities.

The buildings that define direction/edge, another urban solid type, are generally linear, non-competitive, router-like structures with special forms. The walls/buildings, which are the founders of the spatial hierarchy of urban blocks with their imperfections and/or permeability, become the background for urban life, street, or courtyard. Buildings that define direction/edge are often designed to define alternative voids, and these structures are deliberately designed to violate the dominant area, and may be set up to face an avenue or square or to set the edge of a town, or may support other structures to highlight visual mastery.

2.3.1.2. Urban Voids

There are five urban voids associated with urban solids listed by Trancik (1986, 103-105) as foyer spaces, inner block voids, street and square networks, public parks and gardens, and linear open-space system (Figure 2.21.).

A foyer space is a function that defines transitions to important areas and provides integration between different regions. They can be both private and public (Trancik, (1986, 103).

Inner block voids are defined as semi-private areas that offer significant uses in urban tissue and are often used as a shopping or recreational areas.

Street and square networks represent important urban areas that offer active public life in cities with different activity and functional intensity. These are the corridors for movement as well as leisure places. Trancik (1986, 103) emphasizes that in past, street and square networks were essential in civil design and spatial organization, but in modern times, mixed-use streets are changing with the emergence of shopping centers.

Public parks and gardens, usually located on the periphery and central parts of cities, are the nodes for the protection of nature in urban landscapes, and are incorporated into the urban fabric to provide a rural image and accessible recreation (Trancik, 1986, 103).

Linear open-space systems are major water forms such as rivers, wetlands, and waterways and are sliced between districts, forming edges and connecting places. Trancik (1986, 105) emphasizes that they can provide a movement by breaking monotonous patterns with traversal degrees, although these systems are generally described in linear forms.

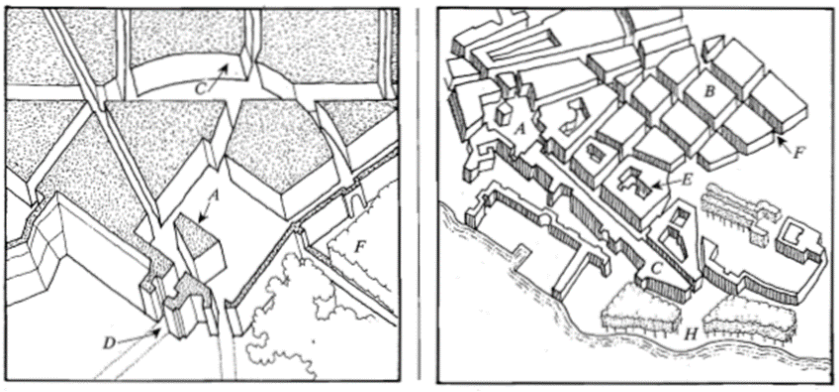

Figure 2.21. Diagram of the Types of Urban Solid and Void (A: public monuments and institutions, B: predominant field of urban blocks, C: edge-defining buildings, D: entry foyers, E: inner block voids, F: the network of streets and squares, G: parks and gardens, H: linear open space systems) (Source: Trancik, 1986, 102)

Open spaces in the city are spaces left for purposes with physical content potentials. Even if space can be divided into categories according to physical properties, it creates a unique character influenced by the history of a place and its surrounding characteristics. When the theory is approached from this point of view, space can be expressed as a continuous and permanent system in which people can develop their social, cultural, political values and behavior (Erdönmez, 2014).

When solids and voids are defined, urban tissue is shaped. The occupancy of the settlement form, the borders shaped by the streets, gradual transitions from public places to semi-public places represent a strong social presence. According to Jacobs (1998), the streets are one of the important elements that make the city noticeable and exciting. The streets in the corridor feature, the formation of a crowded sidewalk life offer opportunities for social interaction and reveals the relationship ways between individuals (Erdönmez, 2014).

When the solid and void relationships in the city are analysed, the hierarchy between the spaces is revealed. Spatial hierarchy reveals a definite distinction between the use of streets as public, semi-public, semi-private and private spaces (Erdönmez, 2014).

Krier (1988) states that the urban space is composed of public, semi-public and private spaces that have spatial relations with each other in a particular hierarchy, and he lists all the relationships and possible variations between street, square, and urban space elements and basic forms such as square, circle, and triangle (Figure 2.22.).

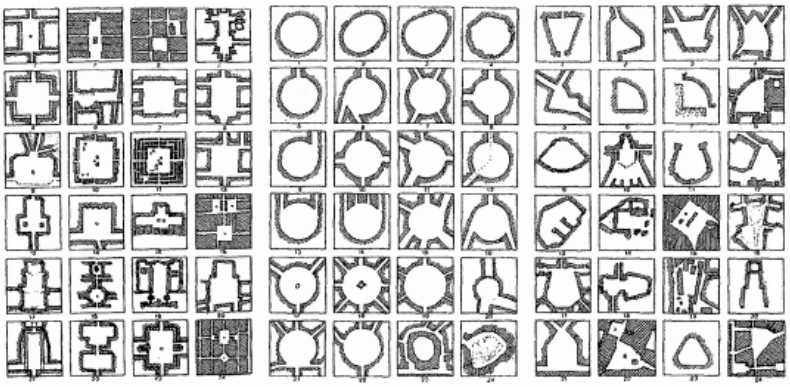

Figure 2.22. Relationships and variations urban space and basic forms (Source: Krier, 1988)

Like Krier, Trancik (1986) explains urban spaces through the establishment of hierarchies of spaces of different dimensions, each of which is defined within itself but associated with each other in the axis of orientation. He approached the spatial structure of the cities as the organization of urban solids and voids, which were discussed above. When the relationship between urban solids and voids is completed comprehensively, the parts are joined together in a frame to form the character of the region. On the other hand, when the relationship between solids and voids is not well organized, the parts are divided and replaced in the urban context as lost, unused spaces.

In general, the figure-ground theory is a clear method, but two-dimensional analysis can lead to deficiencies in some cases. In order to prevent deficiencies in two dimensions, it is more useful to support the theory of figure-ground with three-dimensional analysis.

2.3.2. Linkage Theory

In contrast to the figure-ground theory based on urban solid and void patterns, the linkage theory examines the system of relations that forms the structure which regulates the spaces, and the structural components that form the basic spine of individual functions (Figure 2.23.). These components generate forms and forms generate spatial systems. The basic linking elements of the city are the network of streets, pedestrian roads, and linear open spaces that physically link parts of the city together and form the basic structural layout and circulation in the city. It is recommended that the circulation activity of this network be provided from the public, semi-public, semi-private, in all hierarchical order, not only through the main roads but also through the second side roads. It is important to take into account the spatial quality elements such as security, privacy and the emergence of spaces that support social relations (Erdönmez, 2014).

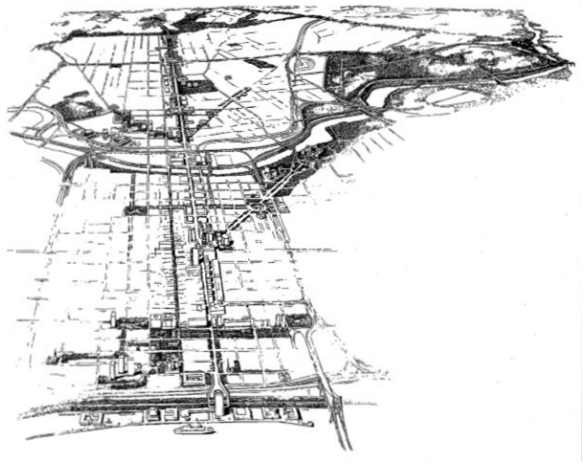

Figure 2.23. Representation of Linkage Theory, Ed Bacon, Downtown Philadelphia Redevelopment Plan, 1964 (Source: Trancik, 1986, 112)

Maki (1964) describes this theory as “the glue of the city” and states that there are many different functions that work in harmony in different forms. There are three forms that are based on this approach, namely; compositional form, megaform, and group form. Compositional Form represents forms where individual structures that

stand out in an undefined space system, which can be encountered in post-modernist urban tissue, are more important than the field, and the structures are far away from each other. Megaform is structural system that has a continuity that forms an open-ended system within a hierarchy but can be considered as large according to the human scale. Group form is system in which the individual and group are defined in a balanced manner as a result of organic development in which the layers have integrated relationships.

These three forms show the systems of different forms that control the built environment. Through the study of the Maki, Trancik (1986) comments that there are different methods of organization of spatial relations under the linkage theory and that the public space composition should be established as a whole before planning individual spaces and structures.

2.3.3. Place Theory

Place Theory is the third theory Trancik has dealt with. In place theory, personal experiences, cultural, historical, and natural environment are accumulated through spatial systems. In this respect, the theory differs from the theory of figure-ground and linkage. In this theory, social and cultural values, visual perception of users, individual control in public space are emphasized.

According to Trancik (1986), the urban designer should be able to predict the application results based on social responses from the two-dimensional plan to the place and combine not only the parts of the city but also social, cultural and spatial characteristics. At this point Norberg-Schulz (1979, 5) defines the place as follows:

> "*A place is a space which has a distinct character. Since ancient times the genius loci, or spirit of place, has been recognized as the concrete reality man has to face and come to terms with in his daily life. Architecture means to visualize the genius loci, and the task of the architect is to create meaningful places, whereby he helps man to dwell.*"

Lynch (1972 cited in Trancik, 1986, 115) describes the relationship between time and space as follows:

> "*Just as each locality should seem continuous with the recent past so it should seem continuous with the near future. Every place should be made to be seen as developing, charged with predictions and intentions. The concepts of space and time appear and develop together in childhood, and the two ideas have many analogies in their formation and character. Space and time, however conceived, are the great framework within which we order our experience. We live in time places.*"

For a successful urban design application, it is important to capture the harmony between the figure-ground, linkage and place theories. The theories that combine relations between urban solids and voids can be the basis for spatial analysis. Especially, the theory of place is significant, which shows that the integration of physical and social factors. Trancik (1986, 124) states that only when an urban context is designed around the theory of linkage, the product will not be spatial and therefore will fall short because it becomes inexperienced. In a similar vein, if only place theory is applied, important connections outside the design area and new spatial opportunities within the design area may be lost. Moreover, he mentions that the results of the implementation of the theory of figure-ground alone cannot be completely spatial and realistic in terms of user needs and application. Therefore, these theories will be applied collectively and appropriately to every urban design project (Trancik, 1986, 124).

2.4. Conclusion for Theoretical Framework

Industrial heritage areas are places in which the evolution of cities, society, social structure, architecture and urban development can be observed. Even if heritage areas are legally conserved in societies, where the awareness towards their significance and conservation is not fully established, they may face the threat of physical obsolescence

and destruction, loss in urban space, and oblivion in urban memory until they are completely demolished or revitalized.

A long-lasting, comprehensive and holistic conservation and reutilization of such areas can be developed by analyzing their historical roles, values, potentials, opportunities, and spatial, morphological and architectural components, and by dealing with them through appropriate conservation, architecture and urban design approaches. Therefore, industrial heritage should not only be considered in physical terms, but also in the aspects affecting society and the city at the time it was functioning, and the qualities expressed by these aspects should be taken into consideration in spatial terms.

The flow diagram below is developed which shows the reutilization of such areas by use of the three theories of urban design (Figure 2.24.). In the case study analysis, these theories will be combined with the values, potentials, opportunities and benefits of industrial heritage and integrated with the life cycle of industrial heritage in urban context.

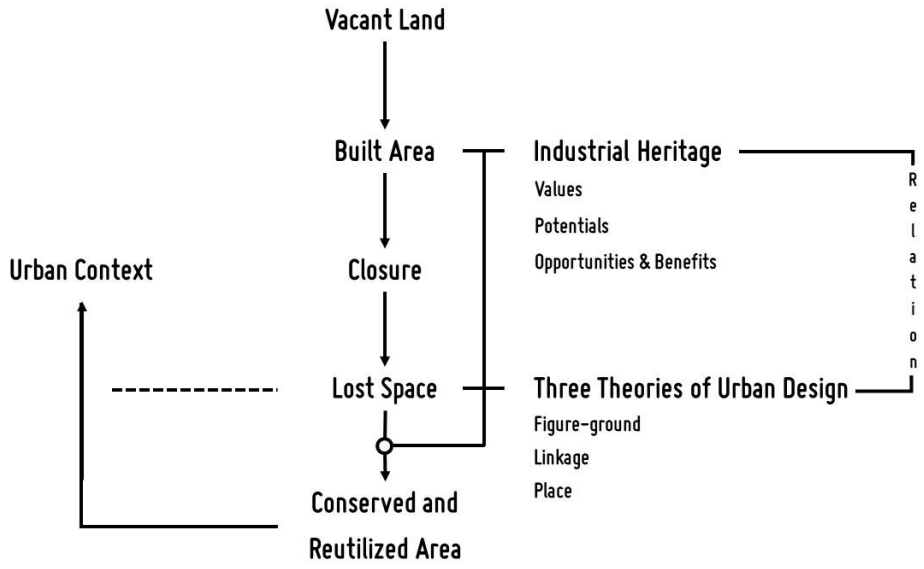

Figure 2.24. The Flow Diagram from Vacant Land to Conserved and Reutilized Area (Drawn by Author)

Trancik (1986) presents a perspective with the definition of lost space and the three theories of urban design, which he presents by bringing together different urban components (Figure 2.25.). These theories are figure-ground theory, which studies the relationship of urban solids and voids; linkage theory, which studies form and spatial formations as a whole; and place theory, which includes social and cultural values. If only these theories are applied spatially, the industrial heritage might not be fully perceived.

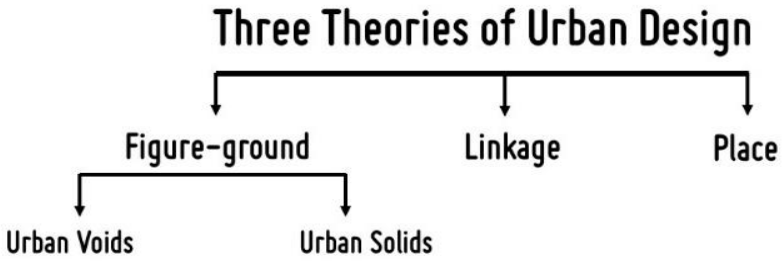

Figure 2.25. The Three Theories of Urban Design (Source: Drawn by Author)

This incompleteness for the perception of industrial heritage can be remedied by establishing the relationship of three theories with the components of the industrial heritage, as presented by Severcan and Barlas (2007) and Canaran (2009) (Figure 2.26.). Although these components are not usually spatial, in a spatial system to be created, the image values of these non-spatial components can be repeated in different places and used to strengthen connections on an urban scale.

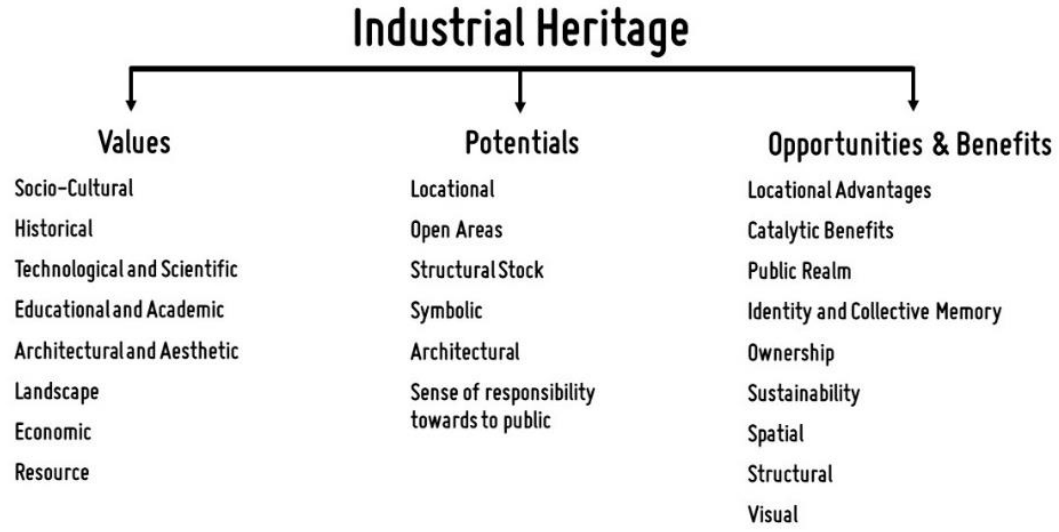

Figure 2.26. The Values, Potentials, Opportunities and Benefits of Industrial Heritage (Developed by Author with Reference to the Studies of Severcan and Barlas (2007) and Canaran (2009))

In figure-ground theory, the physical components of industrial heritage are used to analyze the relationship between urban solids and voids. In linkage theory, the working mechanism of industrial heritage can be evaluated as a whole in the urban system. In place theory, how industrial heritage is experienced in urban areas and place-making characteristics can be discussed. As a result, the historical and cultural characteristics of the industrial heritage can be spatially integrated into the urban structure and refresh the city's collective memory. In summary, a study with design theories and components of industrial heritage could give a new dimension to the spatial framework of urban design practices and conservation policies.

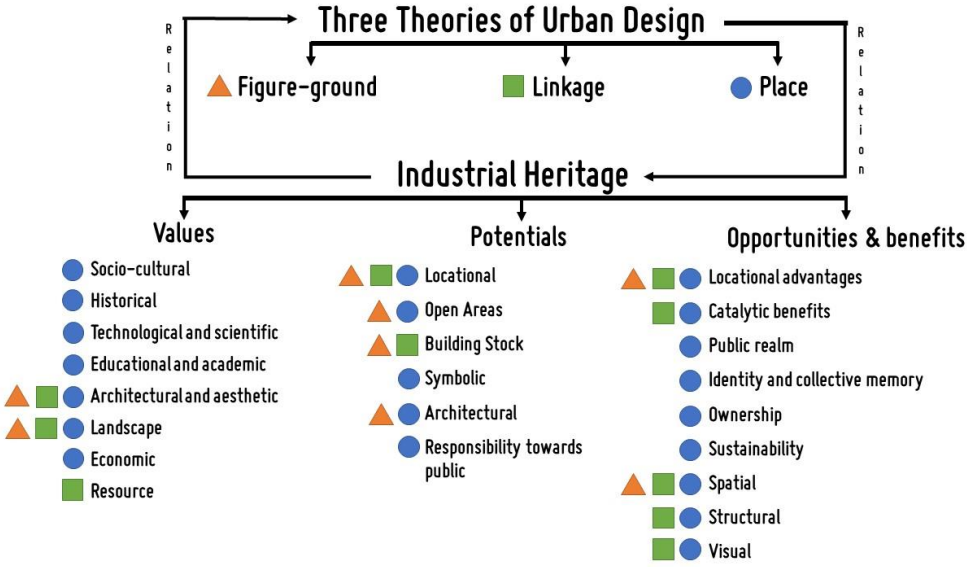

Figure 2.27. The Potential Integration of Three Theories of Urban Design and Industrial Heritage with Each Other (Drawn by Author)

CHAPTER 3

CASE STUDY: SÜMERBANK NAZİLLİ TEXTILE FACTORY

3.1. Introduction to the Case Study

"Every factory is a castle."

Mustafa Kemal Atatürk

Sümerbank Nazilli Textile Factory is located in the Nazilli District of Aydın Province, within the Sümer Quarter. The location of Sümer neighborhood has an important place within the urban layout. The Nazilli-Bozdoğan road cuts through the campus in the southern part of the quarter. To the west of the campus is the Organized Industrial Site, to the south is the Büyük Menderes River, to the east are the residential areas and agricultural areas, and to the north is the city center, the Aydın-İzmir railway and the Aydın-Denizli highway (Figure 3.1.). The area is in connection with Nazilli city center thanks to its location and transport links. In addition, the factory has had an important place in the industrialization process and history of the region and of Turkey. Even today, the campus has the potential to trigger the socio-cultural, economic and physical improvement of Nazilli and its immediate surrounding area, as it had in its early years.

In addition to its production function, Sümerbank Nazilli Textile Factory was an institution which, like the other Sümerbank facilities, aimed to instill the values and habits of Turkey's new ideology to the public. In the early Republican Period, not only factories, but also a new, contemporary and modern nation was built. Therefore, there

are buildings and structures within the factory campus that can be considered industrial heritage related to this ideology.

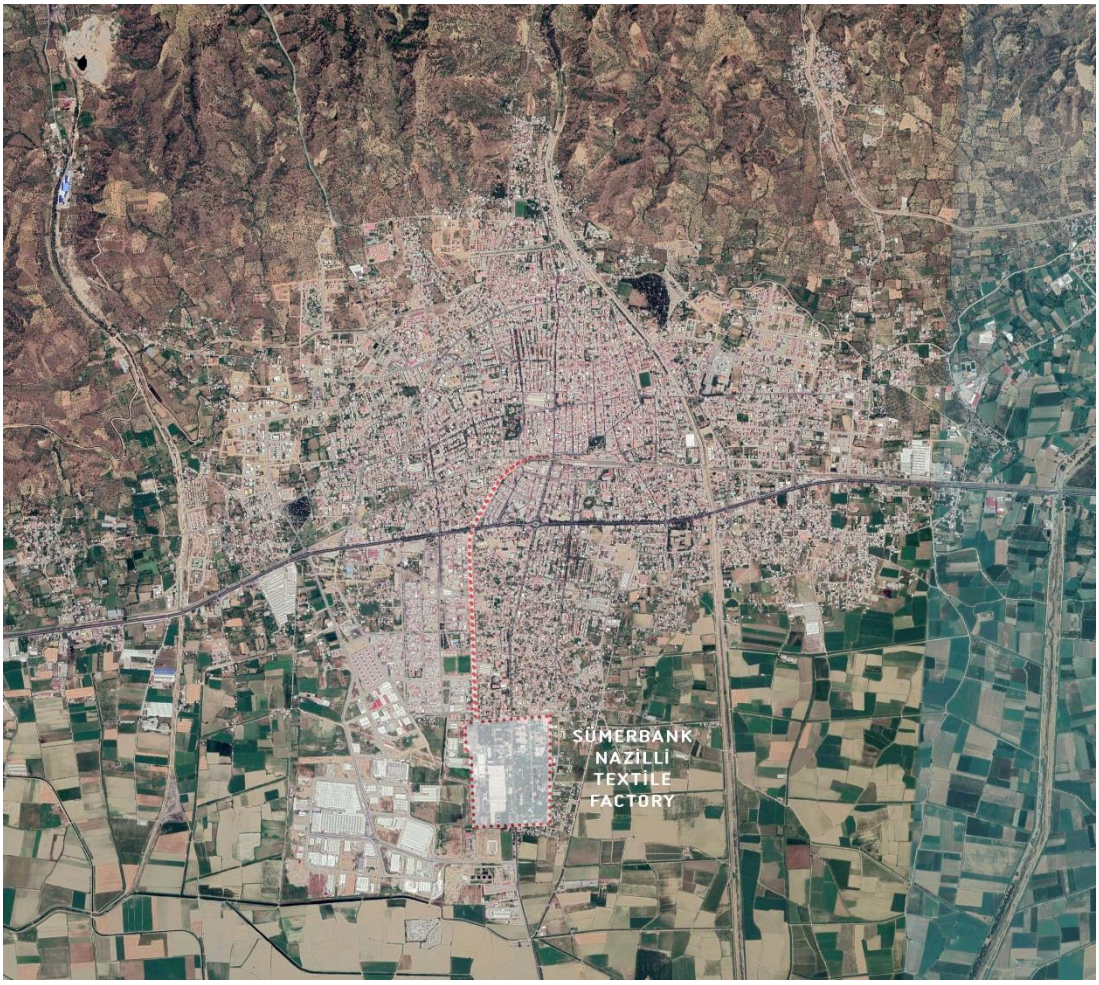

Figure 3.1. Location of Sümerbank Nazilli Textile Factory and the Old Railway Connection to the City Center (Drawn by Author on Google Earth Pro Image)

Sümerbank Nazilli Textile Factory was opened on October 9, 1937 by Mustafa Kemal Atatürk. Şevket Süreyya Aydemir (2011, 357-358) describes the opening day as follows:

> "*Here, the factory looked like a headquarters square where teams, divisions, battalions lined up and took their places for the parade. And*

like a headquarters square, a command was expected here. The command was not heard, but a silent signal was given from the director standing behind Atatürk. He might have thought that when they took him up there, they wanted him to see the surroundings, maybe say something to the Factory people. But when the earth beneath his feet and the surrounding air came into motion suddenly, he was at first even a little surprised. You could say he didn't know what to do. He was a little shaken up at first. He pretended to want to ask around a little bit. But, at that moment, perhaps without even realizing it, those words came out of his mouth:

-This is music!".

Sümerbank Nazilli Textile Factory has performed this industrial music for sixty-six years with the printed fabric it produced. However, this industrial music, which was played in the factory that the founder and leader of the modern Republic of Turkey opened, has gone completely silent by the 2000s (Doğan, 2007, 661-689). The campus, which was transferred to the Adnan Menderes University in the year 2000, stopped production in 2002 and transformed to the University in 2003. Sümerbank Nazilli Textile Factory, which was one of the 100 largest enterprises in the country for some time, is considered an industrial and cultural heritage in many studies with its history.

Sümerbank Nazilli Textile Factory has been registered as a third degree natural site and its building, along with Gıgı Gıdı train and railway route, has been registered as cultural heritage by the decision of İzmir Culture and Nature Protection Board II, dated to and numbered 17.06.1998/7863 and 09.09.1998/7997 (Figure 3.2. and Figure 3.3.).

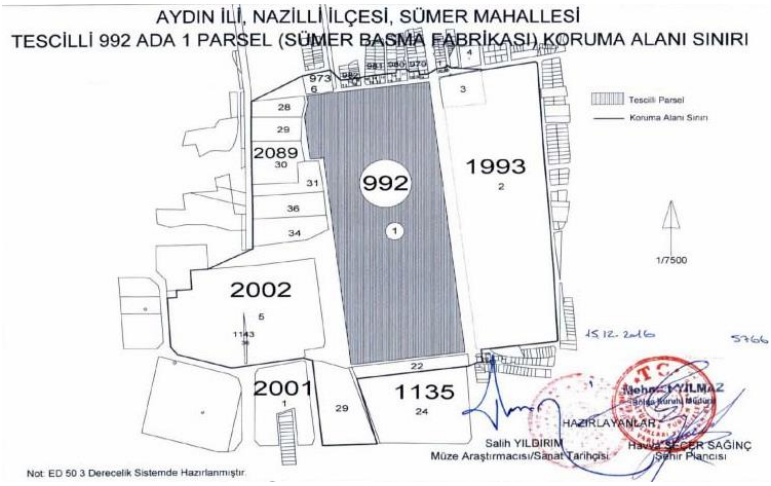

Figure 3.2. Sümerbank Nazilli Textile Factory Conservation Area Boundary (Source: https://resmigazete.gov.tr/ilanlar/eskiilanlar/2017/01/20170111-4-1.pdf, accessed on 29.01.2019)

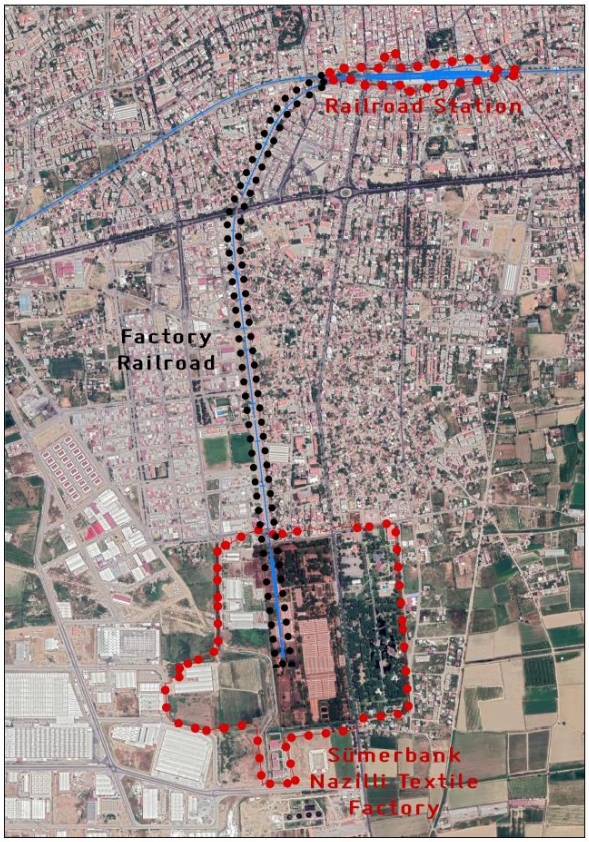

Figure 3.3. Conservation Area Boundaries of the Factory Campus, Nazilli Railroad Station, and Factory Railroad (Drawn by the Author on Google Earth Pro Image)

Sümerbank Nazilli Textile Factory was established on an area of 213,875 m². There were warehouses, central power stations, administration buildings, workers' houses, sports facilities, cultural and social structures in the factory campus.

The campus was built as an independent structure to the south of Nazilli, three kilometers away from the city center. Unlike the dispersed and organic settlement pattern of Nazilli, a planned and regular settlement is observed in the factory campus. The factory campus also significantly influenced the shaping of the Nazilli urban fabric. With the establishment of other industrial companies, the south of the city became an industrial zone (Zeybekoğlu, 2002, 37).

3.2. History of Sümerbank Nazilli Textile Factory

> "*No matter how great the political victories may be, the successes that will be won will not survive if they are not crowned with economic victories, they will fade in short time.*"
>
> Mustafa Kemal Atatürk

After the War of Independence, the modern Republic of Turkey was established with a new social order and form of government. After the War of Independence was won, national policies followed, and economic independence in particular was emphasized. With the above statement by Mustafa Kemal Atatürk, Turkey has taken important steps to crown its political victories with economic victories.

At the same time, a state-led modernization process began. This process aimed at transforming institutions and people's social life. Under the leadership of Mustafa Kemal Atatürk, reforms in areas such as education, law, social life, clothing, music, art and architecture adopted western norms, but traditional Anatolian culture with the Turkish modernity that can be called a unique nation-state structure was targeted to be

established (Himam, 2006, 13). Industrial policy is one of the important policies implemented in the formation of social reforms and the new nation structure.

Location selection criteria for new state enterprises should be considered as part of the overall socio-spatial strategy of nation-state formation (Şengül, 2001, 70). According to Şengül (2001), the declaration of Ankara as the capital, the creation of railway infrastructure and transportation network, and the choice of location to spread state enterprises throughout the country led to the new spatial organization. Ankara became a symbol of the revolutions after being declared the capital, and in the middle of Anatolia, it became a model city of development and of the young republic in many ways with its parks, sports fields and buildings. In this process, the railways were nationalized; Ankara was added to the central railway routes to provide political and military control; and economic revival and mobility in the domestic market was achieved (Figure 3.4.). The railway network has been not only an infrastructure service, but also a political symbol. Proximity to raw materials, transportation with railway, and prevention of interregional inequality in location choices of the factories included in the industrial plans, and integration of the national economy via railway were aimed (Peri, 2002, 24). During this period; statesmanship, five-year development plans and economic congresses had attracted attention, and formed the foundations of the modernization movement and the industrialization process.

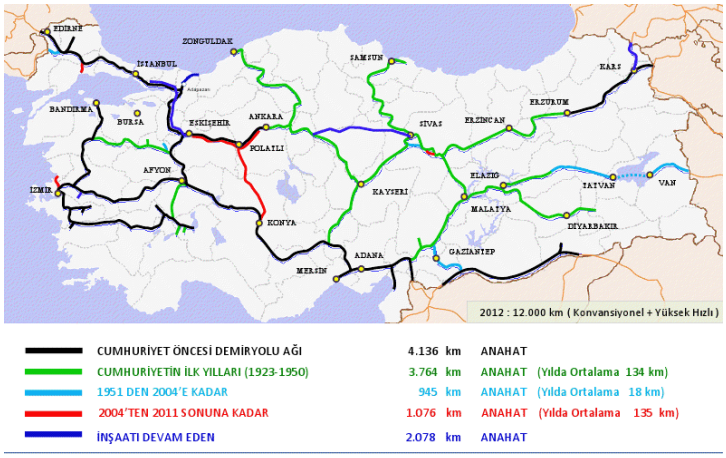

Figure 3.4. Map of Railways by Historical Periods (Source: https://slideplayer.biz.tr/slide/2010334/, accessed on 29.01.2019)

In 1923, the İzmir Economic Congress started to move away from the more liberal economic policies initiated with the foundation of the Republic, and aimed to give the leading role in industrial development to private enterprise, due to its agriculture-based and export-dependent economy, which was largely affected by the Great Depression in 1929. In the early 1930s, protectionist policies were pursued and direct control over the industry was sought (Bigat, 2017, 2).

Statism was adopted as the ideological principle of the Republican People's Party in 1932. In the early years of the Republic, the solutions towards industrialization were through the adoption and implementation of the principle of statism economically and politically. The state participated in the industrialization process as the principal stakeholder for new industrial investments in the economy. The fact that the Union of Soviet Socialist Republics (USSR) was not affected by the 1929 Great Depression due to the five-year industrialization plan of 1927 revealed the importance of having a plan behind the principle of statism. Lack of financial resources for the realization of the plan has been the biggest problem for Turkey. In addition to the plan, the creation of financial resources was resolved by a loan agreement with the USSR in 1934; thus, the first five-year development plan was prepared. The relations established with the Soviet Union in the aftermath of the war of Independence were strengthened by the signed political treaties (Peri, 2002, 25).

The first five-year plan consisted of five fundamental sectors: textile, mining, cellulose, ceramics and chemistry. A total of 18 factories were planned to be built within the scope of these basic sectors. The institution responsible for the implementation of the plan, for the network of textile factories to be built throughout the country and for financing other industrial branches was Sümerbank, which replaced the Industrial Credit Bank and the State Industrialization Office with its establishment in 1933. With the opening of Sümerbank, the dual model of the Industrial Credit Bank and the State Industrialization Office has been replaced by a single enterprise model. In the reason for the establishment of the new bank, it was announced that a structure would be created that would incorporate all the positive

and negative experiences of the past, both to address the current concerns of private capital and to enable the implementation of state management (Tuna, 2009, 59). Founded on July 11, 1933 by the Laws with No. 2262 and No. 2263, Sümerbank was transformed into a State-Owned Enterprise on June 17, 1938 by the Law with No. 3460, and it was to be a powerful institution in the Turkish industry (Bigat, 2017, 54).

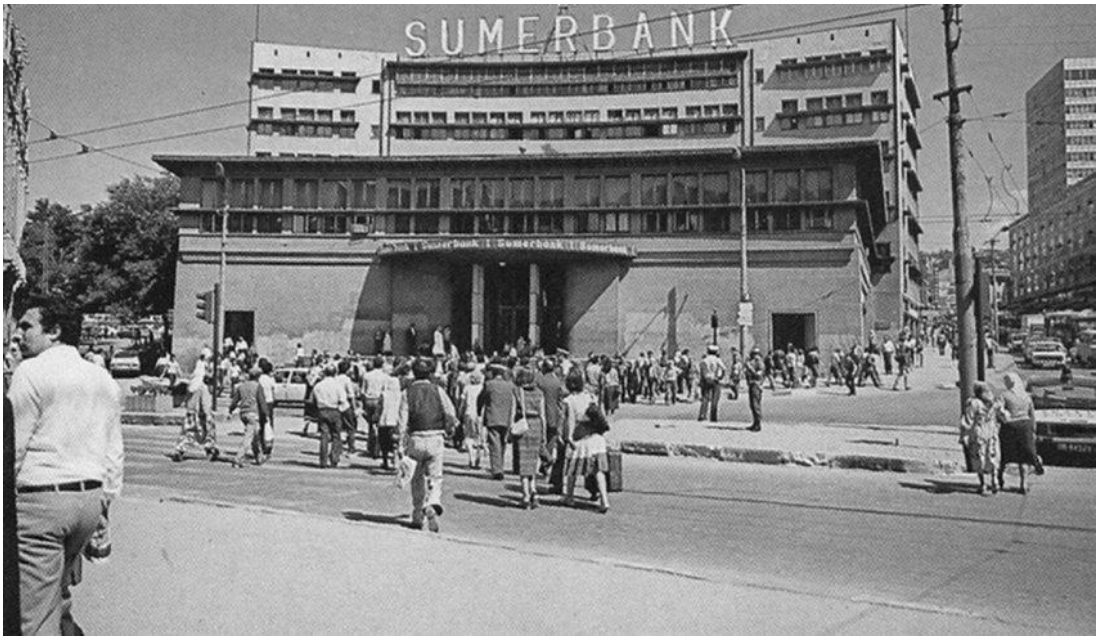

Figure 3.5. Sümerbank Headquarter Building in Ankara *(*Source: https://tr.pinterest.com/pin/368098969515648742/?lp=true, accessed on 13.02.2019*)*

Sümerbank has also finalized the direction the industry would follow. With the Sümerbank Law, the subject of industrialization related to raw materials, which is always emphasized, has become an official principle. State business was first concentrated on agriculture-based industries, then export-based industries were developed.

Sümerbank's main function was to implement state manufacturing industry and investment programs and to operate the state factories to be established. In this context, the duties assigned to Sümerbank by the Establishment Law were as follows:

- to operate factories from the State Industrial Office, to manage state partners in private sector according to the provisions of the Trade Act,
- to prepare, establish and manage the research and projects of all industrial enterprises to be established with state capital,
- to educate personnel needed at both their own factories and other factories in the country, to open schools for this purpose, to teach students in the country and abroad,
- to provide loans to industrial institutions and to carry out activities in the field of banking,
- to determine measures for the development of the national industry and to submit reports on the subjects requested by the Ministry of Economy (Toprak, 1988, 31).

The industrial investments that Sümerbank was to participate in and which were given priority in terms of the country are listed as follows:

- Branches of the industry whose raw materials are grown in the country, but whose production is not sufficient,
- Industrial branches that increase their value by processing unprocessed export goods,
- Industrial branches whose raw materials are not available in the country, although they are consumed to a large extent in the country, but whose raw materials can be grown throughout the country if they are established.,
- Industrial branches whose raw materials are not available at home, which are not possible to grow, but whose production will bring significant gains to the country.

After the proclamation of the Republic, there was a sudden increase in the number of facilities that could be described as factories or production centers. While there were 130 factories in Turkey before 1927, this number reached to 2200 in 1932. The textile industry was established in Turkey with a loan from the USSR (Peri, 2002, 25).

Sümerbank's factories were key institutions for instilling the values and habits of the new ideology among the Turkish people in a wide geography of Anatolia as well. Through Sümerbank factories, settlements and sales offices, both models and material tools were provided for the construction of a modern Turkish nation in Turkey's textile industry (Himam, 2006, 14).

3.3. Spatial Analysis of Nazilli City

Nazilli is the district in Aydın Province in the Aegean region of western Turkey (Figure 3.6.). Nazilli is located on the Aydın-İzmir railway, close to raw materials, water and energy sources, and is able to respond to the needs of an industrial organization other than the source of labor power. However, for the young Republic of Turkey, there were important political reasons besides the technical production needs in the selection of places for the factories to be built in Anatolia. After the World War I, one of the first regional congresses for national independence was organized in Nazilli. Among the reasons for the selection of Nazilli district for the establishment of the Sümerbank Factory can be considered the adherence of this district to the ideology of the Republican regime. Moreover, the local people saw the factory as a reward to the people of Nazilli in exchange for their commitment to the National War of Independence.

Figure 3.6. Location of Aydın Province and Nazilli District in Turkey (Source: https://docplayer.biz.tr/docs-images/44/7141569/images/page_1.jpg, accessed on 13.02.2019)

Nazilli, the economy of which is based on fig and cotton agricultural production, was a small town that started to develop after the opening of the Aydın-İzmir railway in

1866. Production and wealth increased due to increased transportation capacity and marketing opportunities, and owing to administrative and banking facilities such as Nazilli Municipality, which was established in 1881, and the Ottoman Bank Branch, which was opened in 1884 (Doğan, 2003). The main reasons for the establishment of the Sümerbank Factory in Nazilli were the city's railway connection, climatic conditions, being in the center of the cotton region, soil yield, being one of the transportation centers in the region, the presence of coalmines nearby, and the fact that the Büyük Menderes River was near the city.

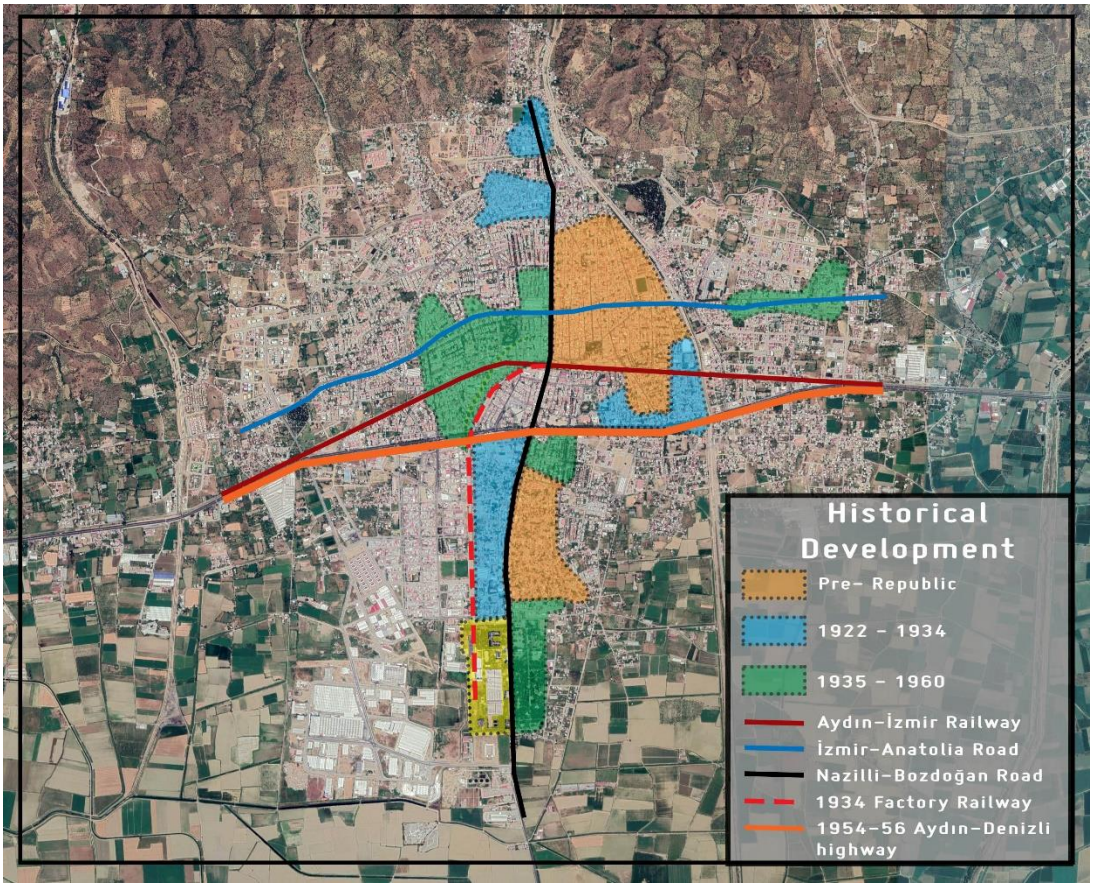

Figure 3.7. Map Showing the Transport Lines and Historical Development of Nazilli District (Adapted from Aldan, 1990)

Nazilli is divided into two sections, The North and South, by railway. The city was formed by merging two villages called Nazlıköy and Pazarköy during the Ottoman

period. The railway and station building led to development in the northern parts of Nazilli, which later became the center of the town in the nineteenth century.

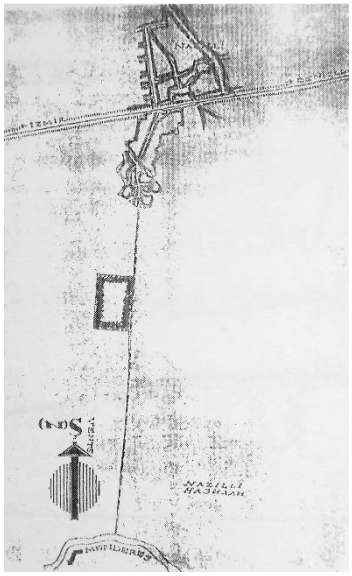

Figure 3.8. Map from the 1933 Report of Expert Group (Source: Doğan, 2003, 22)

Before factory construction came to the agenda, a partial development plan was prepared and implemented for northern parts of Nazilli, for the area on the north of the Aydın-İzmir railway, which was completely demolished by the Greek Army during the War of Independence. In 1987, a booklet titled "*Nazilli: Dün, Bugün Yarın*", prepared by the Nazilli Municipality, stated that Nazilli was one of the first cities that had an urban plan. According to the booklet, an urban plan prepared by the engineer Musa Kazım was implemented in the northern parts of Nazilli, for the area on the north of the Aydın-İzmir railway, in 1923. After the construction of the Sümerbank Factory in 1937, Fenni İnşaat Company prepared the urban plan of the southern part of Nazilli, for the area on the south of the Aydın-İzmir railway. Sümerbank Factory was also instrumental in the subsequent planning decisions. The western side of the railway connection of the factory was selected as an organized, small industrial site (Peri, 2002, 22).

Two important elements in Nazilli's development were the railway and Sümerbank Factory. There was an improvement in agricultural production with the ease of transportation and the factory's agricultural improvement works. Sümerbank Nazilli Textile Factory supported the standardization of agricultural raw material, one of the themes of the five-year plan, and subsequently became the main customer for the cotton-producing farmers. Nazilli was known for its printed cloth fabric produced in the factory, and it was known by its popular name "Nazilli Basması" (Nazilli printed cloth fabric) (Peri, 2002, 25).

With the establishment of Sümerbank Nazilli Textile Factory, employment opportunities were created and city's population grew. Şengül (2001, 72) mentions that small cities such as Nazilli, Kırıkkale, and Ereğli became the fastest growing cities of that period. The factory employed 2400 workers in its first year. The managers, engineers and supervisors who came to work in the factory were usually from outside Nazilli, along with workers from neighboring cities such as Denizli and Muğla and from countries such as Greece and Bulgaria. In addition, health and hygiene measures were taken against plagues, and especially malaria cases had been eradicated. Sümerbank Nazilli Textile Factory directly supported some facilities that would affect its employees in the city, and played a role in Nazilli's modernization. For example, the factory helped lay the road that cut through the factory settlement, and provided financial assistance to Nazilli for the establishment of a hospital. In addition, the cultural life of the city also benefited from the factory, as the local people were allowed to participate in the factory's cultural activities such as cinemas, theatres or concerts (Peri, 2002, 26).

3.4. Factory Site in Nazilli City

Good relations with the USSR provided credit and technical infrastructure support for industrialization, which was one of the important steps of the war of economic independence. With the loans received, the textile industry was established, and one of these factories became the Nazilli Factory. The design and construction of the

Nazilli Factory were carried out by the Soviet Union, and the machines needed in the production were supplied. The design and construction of the Sümerbank Nazilli Textile Factory, which were financed by the Soviets, as well as being undertaken by them, make this factory campus different among the industrial structures of the Republican period (Peri, 2002, 26).

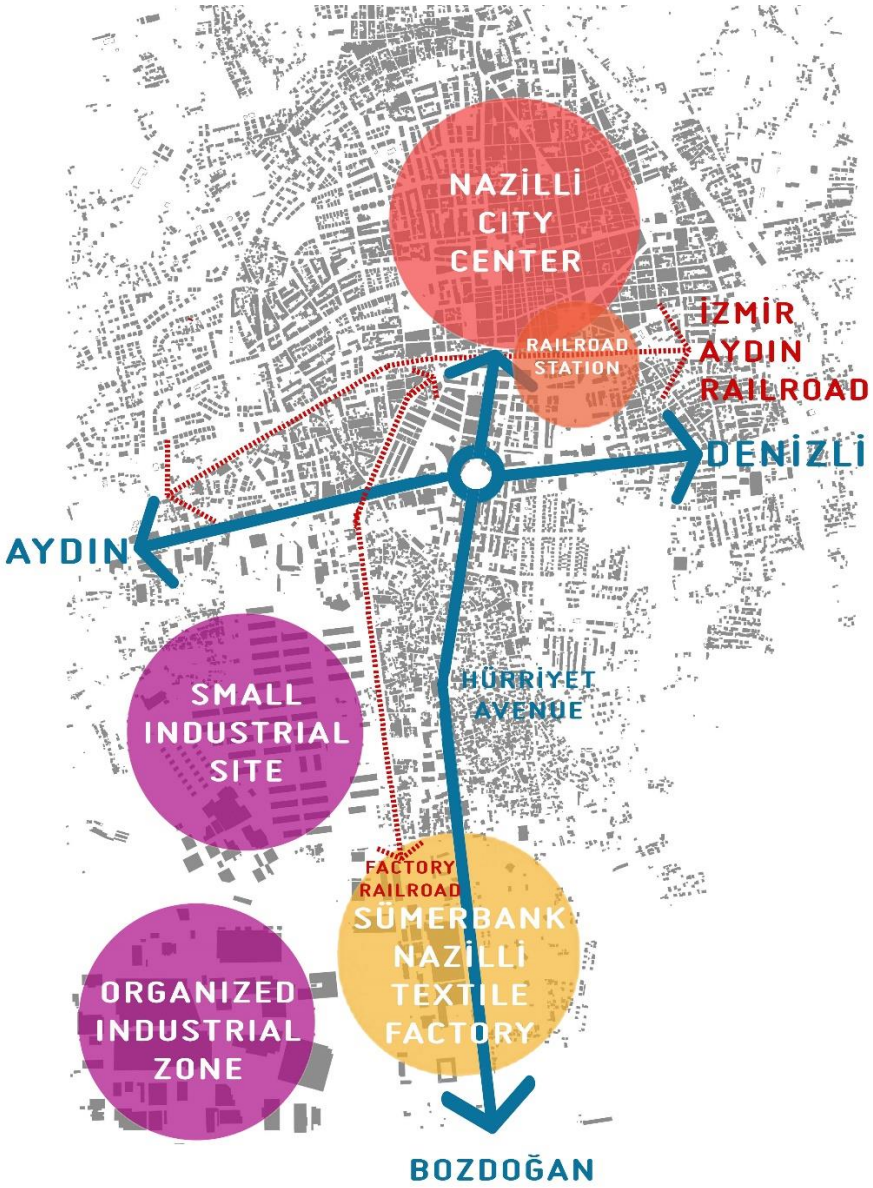

Figure 3.9. Conceptual Spatial Diagram of the City of Nazilli (Drawn by the Author)

Sümerbank Nazilli Textile Factory was designed in 1933 under the industrial program laid out in the reports prepared by Soviet experts. The program, provided by the Ministry of Economy of the Republic of Turkey in 1933, begins with a general description of the situation during the period. One of the sections in the report is devoted to the location selection criteria for industrial enterprises. Raw materials, water, energy and coal resources and labor supply were to be the main determinants of the field for the most rational and efficient operation (Doğan, 2003).

In addition to being close to raw materials and the market, Nazilli's existing transportation network had been an opportunity that the state had taken into consideration in its choice of location. The Aydın-İzmir railway is the oldest railway line owned by the country during the period. Completed in 1886, the Aydın-İzmir line and the İzmir-Kasaba line were financed by private enterprise for commercial purposes (Hulagü, 2010, 9). In the past, the routes leading to the ports of Kuşadası, Çesme and İzmir in the east-west direction had turned to the north-south direction with the railways, and had started to be turned towards the nearest railway station. (Yapucu and Özgün, 2011, 546) The Aydın-İzmir railway line had a distinct importance for the region and the country's economy in terms of connecting İzmir and its hinterland. Railway is the most preferred means of transportation by the states due to its cheapness and reliability. Therefore, the effect of the Aydın-İzmir railway line was foreseeable in transporting the products produced in the factory to be established and in minimizing the cost of transportation. Apart from the railroad, the city is also connected to the neighboring towns with transit roads. Although there were frequent transportation problems on transit roads, intercity road works continued in the region. With the establishment of the factory, roads could be improved and the transportation of products could be easier (Bigat, 2017, 106-107).

For the factory to be opened, a high degree of energy would be needed for heating, illumination and production activities. Presence of sufficient coal in the vicinity of Manisa, Muğla and Denizli, especially in Aydın, eliminated the energy supply problem for the factory. With the start of the construction of the factory, the energy

and steam needs of the factory would be met with the thermal power plants that would be installed in it. In addition, Nazilli's electricity needs would be solved to a great extent when the electrical energy produced would be sufficient outside the factory in the following years (Bigat, 2017, 107).

Another criterion that was effective in choosing the location of the factory was the potential of the labor force for the efficient execution of production activities. The population structure of the region is considered to be in good condition, because it would provide jobs for many people in the region where the factory was to be established. Although Nazilli suffered a loss of population due to various problems in the reconstruction process of the city after the national struggle, according to the data for the year 1928, the total population of the district with its villages was 49,796. In addition, Nazilli was a place where workers could be provided in case of need due to the presence of cities such as Denizli, Muğla, Afyon and İzmir around it (Doğan, 2007, 10). With the news that the factory was to be established in Nazilli, Nazilli started to receive migration. After the groundbreaking ceremony, a group of 2,400 workers from Nazilli and the surrounding provinces came to work in the construction. By 1937, this number had reached to 4,000. With the opening of the factory, the population had increased day by day, this is clear evidence that Nazilli was the right decision for the labor force (Table 3.1.).

Table 3.1. *Population Growth of Nazilli by Years (Source: Öreroğlu, 2004)*

Years	**Population**	**Years**	**Population**	**Years**	**Population**
1927	9,325	**1950**	25,106	**1970**	45,159
1935	12,005	**1955**	31,487	**1975**	52,156
1940	16,478	**1960**	36,660	**1980**	60,003
1945	18,986	**1965**	41,330	**1985**	77,627

The factory area chosen by the expert group is 1,825 meters to the railway station and about 2,250 meters to the Büyük Menderes River. The relationship of the factory with the railway and Büyük Menderes River was the focus of these reports prepared by Soviet experts. Another important point is the sensitivity to the factory's polluting

effects. The area would be advantageous as the westerly winds that dominated the city would keep the factory in a harmless state for the city after commencing its operations. These early observations and decisions in the report also shaped the overall layout of the settlement and its changes over the years.

Türkstroy Company was founded in 1934 by the Republic of Turkey and the USSR for the purpose of planning and establishing the Sümerbank factories in Kayseri and Nazilli. According to the factory status plan prepared by Türkstroy, all units were connected by means of decks and landscaping arrangements made in the areas between buildings and roads (Güneş 2007, 35).

On August 25, 1935, the foundation of the first textile factory to be established in Turkey within the framework of the first five-year industrial plan was laid in Nazilli. With the laying of the foundation of the factory, Nazilli's economy began to revive. A working group of 2,400 people from Nazilli and its environs were formed during the construction of the factory. With the mobilization of the Nazilli people, the construction of the factory was completed with the most advanced technology of the period within as short as 25 months with the technical support of up to 4,000 workers and Soviet engineers (Bigat, 2017, 108).

On October 9, 1937, Mustafa Kemal Atatürk inaugurated Sümerbank Nazilli Textile Factory with a grand ceremony. In addition, İsmet İnönü, Celal Bayar, Afet İnan, Fevzi Çakmak and many other important figures have witnessed the size and magnificence of this first textile factory established in Turkey. People who received the news that Atatürk was coming to Nazilli started to wait around Nazilli station at midnight on October 8, singing anthems and folk songs. Atatürk was greeted at Nazilli Textile Factory station by Safa Bey, chairman of the Sümerbank Assembly, General Director Suffier, Factory Manager Fazlı Turga, General Inspector of the Thrace Region Kazım Dirik, newspaper representatives and people gathered there with great cheer. Atatürk came to the factory site by train with those who accompanied him, came to the administration building by walking among the people's display of love, then

went to the upper balcony of this building, greeting the people and watching the ceremonies from here. After the opening, Atatürk held a meeting with factory officials in one of the rooms in the administration building, which is today preserved as the "Atatürk Museum" in the same building (Figure 3.10.). In memory of this meeting, meeting table, seats, telephone and glass negatives related to the opening are preserved here, the inscription placed on the right side of the entrance door of the factory administrative building in memory of the day. A description reading; "*Atatürk, according to the first industrialization plan, opened the first Turkish Textile Factory founded by Sümerbank. 9 October 1937*" is included in the statements (Figure 3.11.) (Bigat, 2017, 140-143).

Figure 3.10. Atatürk and his colleagues at the Opening Ceremony of Sümerbank Nazilli Textile Factory (Source: https://isteataturk.com/Kronolojik/Tarih/1937/10/9/Ataturk-Celal-Bayar-ve-Afet-Inan--Sumerbank-Nazilli-Basma-Fabrikasinin-acilisinda-09101937/36/Full, accessed on 15.02.2019)

Figure 3.11. Inscription Placed On The Side Of the Entrance Door on the Opening Day of Nazilli Sümerbank Textile Factory (Source: Author's personal archive)

In early reports, dimensions of the area of Sümerbank Nazilli Textile Factory measure 350 x 600 meters, and corresponds approximately to 210,000 m² (Figure 3.12.). According to the 1937 Plan, the residential area has a total area of 297,875 m² (factory area with an area of 213,875 m² measuring 295 x 725 meters and residential area with an area of 84,000 m² measuring 120 x 700 meters). While in the initial plans of the factory the names of the buildings were written in Russian and German, in later plans, the names of the buildings in the residential section were written in Turkish. It is therefore thought that the residential area built on the edge of the Nazilli-Bozdoğan road, which runs through the east front of the factory site, was drawn on a copy of the original drawing from Türkstroy during construction. Therefore, the Nazilli-Bozdoğan road divides the settlement and separates the residential area from the factory. In addition, the 1945 plan shows that an area measuring 120 x 150 meters and corresponding to 18,000 m² of surface area for the primary school was added to the north side of the residential section. In the plan dated to 1953, it is seen that the total area has increased to 420,000 m² with 104,000 m² of small workers' houses added to the factory compound in 1947.

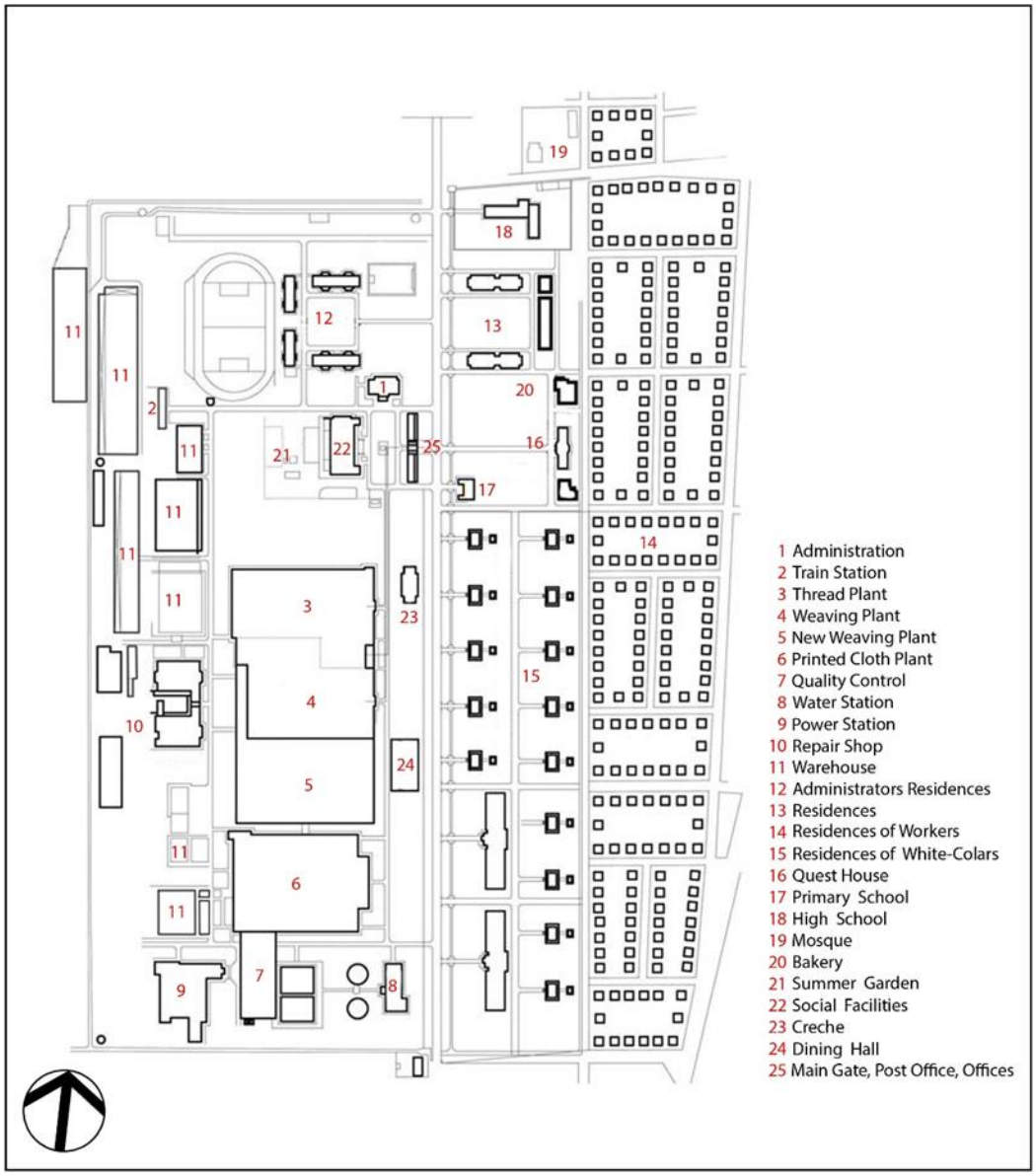

Figure 3.12. Site Plan of Sümerbank Nazilli Textile Factory (Adapted from Uzunoğlu, 2008, 95)

3.4.1. Architectural and Technical Features of the Factory Site

The factory building, which was designed and built by Soviet experts, consists of spinning weaving, textile and cotton gin units (Figure 3.13.). One of the most important issues in factory spaces, a well-illuminated production place was provided

with the northern light with the help of a curvilinear roof system as an architectural solution (Figure 3.14.) (Peri, 2006, 25). With the saw-pattern roof system, it is possible to make the most use of natural light. This semi-vault and the northern light window are insulated with reinforced concrete and bituminous material. In this way, fire risk is reduced, and construction is accelerated thanks to the standard mold system. The space between the curved roof and the column seen in the architectural sections was used for ventilation and mechanical systems (Figure 3.15.) (Peri, 2006, 25).

Figure 3.13. General View of Sümerbank Nazilli Textile Factory (Source: http://sumerbank.blogspot.com/2008/, accessed on 15.02.2019)

Figure 3.14. Construction of The Curved Roof And The Column (Source: https://tr.pinterest.com/pin/427701295855019089/?lp=true, accessed on 15.02.2019)

Figure 3.15. Image from the Construction Process (Source: Bigat, 2017, 127)

The factory building is a functional building with its layout, plain facade and rational plan scheme. A new technology, reinforced concrete system, was used in the construction of the factory, which was prepared by Türkstroy. The factory campus had some functions such as sports fields, local cinema, dining hall, health facilities, which were considered for employees' off-work time. Planning has basically enabled the integration into each other of on-the-job and off-the-job life at an optimum level (Zeybekoğlu, 2002, 43). The factory, which was open to the public with its facilities, had a sports field in the plan of 1942, next to the cinema located in the canteen building. After this date, with the addition of different functions such as swimming pool, skidding area and open air cinema in 1953, the factory became suitable for entertainment purposes. Besides, there were also recreational and service areas such as track, skidding field, pools, sports field, nursery, open-air cinema, primary school.

The yarn weaving factory, which was 153.86 meters long and 116.30 meters wide, and the textile factory, which was 110 x 86.82 meters in size, were different structures in the first years, and were later merged. The warehouses consist of two buildings with dimensions 32 x 38.5 meters and 56 x 38 meters. In these warehouses, raw materials are stored, and products are stowed. Additional warehouses and storehouses were added over time. There is a masonry administrative building with plan dimensions of 27.46 x 12.84 meters in the campus. The round-shaped windows of the building are

remarkable. The building that stands out from the entrance block both defines the entrance and forms the balcony on the first floor. The metal railings in structure reflect the machine aesthetic of the 1930s. Apart from all these production buildings and administration buildings, entrances of the factory campus are also very important (Figure 3.16). The entrance gate of the factory is 63.84 meters long and has a very impressive structure. Also, in the entrance mass are offices, dispensaries and control rooms (Peri, 2006, 25-26).

Figure 3.16. The Entrance Gate (Source: Bigat, 2017, 172)

This factory is a complex with all kinds of units. There are important places that support social change through industrialization except for the buildings and the units associated with them (Peri, 2006, 26). Among these, the structures, which will be called workers' houses, are very important in meeting the need for housing of the employees. The lodgings to the east of the factory were built as single-storey units in green texture. In addition to the lodgings in the first years of establishment of the factory, the houses built in 1953 were the first examples of public housing implemented here. These structures, which differ from traditional residential typology, are in relation with the simplicity of plan schemes and the modern architectural discourses of the era. The outer apartments have traces of the rational functionalist attitude of the period. The same understanding is observed in the individual housing

units built in the 1950s. These individual green units are also noted for their clarity of the situation plan and for their design on one floor and in a dense green texture. These dwellings, which are residential units formed completely in line with the needs of the employees, also constitute Nazilli's first example of public housing (Zeybekoğlu, 2002, 46).

Figure 3.17. Site Plan of Sümerbank Nazilli Textile Factory (Source: Uzunoğlu, 2008, 100)

Housing units in Sümerbank Nazilli Textile Factory consist of 16 chief houses, 64 married officer houses, 2 employee pavilions, a single worker block, 14 apartment blocks built in 1941, 6 “tip9” row houses built in 1942 and 205 small houses built in 1944. In total, 355 houses and 2 singles’ pavilions were built to address the housing needs of workers (Figure 3.18., Figure 3.19. and Figure 3.20.) (Peri, 2006, 26).

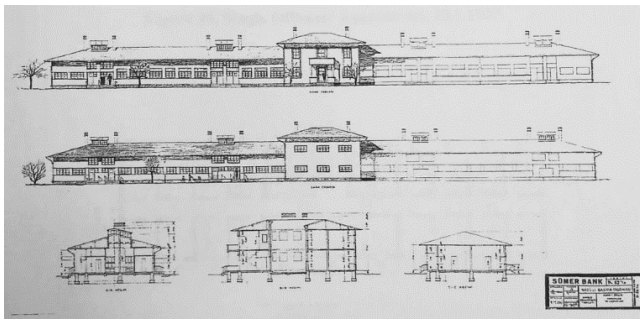

Figure 3.18. Singles’ Pavilion (Source: Doğan, 2003, 59)

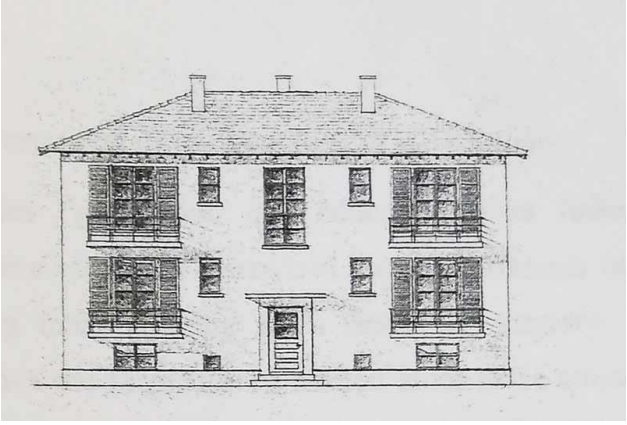

Figure 3.19. Type A2 Workers' Apartment (Source: Doğan, 2003, 64)

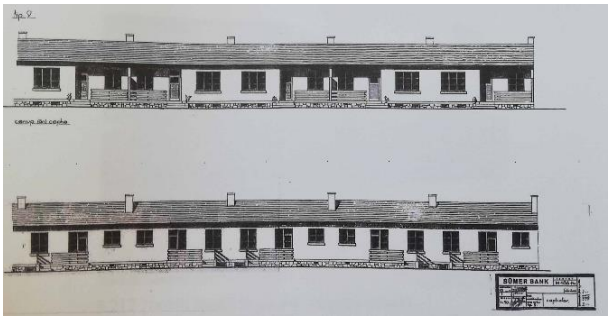

Figure 3.20. Type 9 Workers' Houses (Source: Peri, 2002, 207)

Another important part of production is the central power station, situated in the south-western corner of the region, as the reports of Soviet experts suggest (Figure 3.21.). In order to ensure an uninterrupted supply of energy needed in the factory campus, energy generation had been started. This power plant also generated electricity for the city after an extra grandstand with a power capacity of 2,500 kW was implemented in 1946. The factory's power plant remained Nazilli's main source of electricity until the date Kemer Hydroelectric Power Station became operational in 1958. The two tall chimneys of the power plant in Nazilli, which have a floor area of about 2,000 m², became the symbol of factories in Turkey's industrialization, and were called the National Chimneys (Figure 3.22.). Repair shops, water tanks, garages and buildings,

where chemical processes would take place, are other buildings directly related to production in these complexes (Peri, 2006, 25-26).

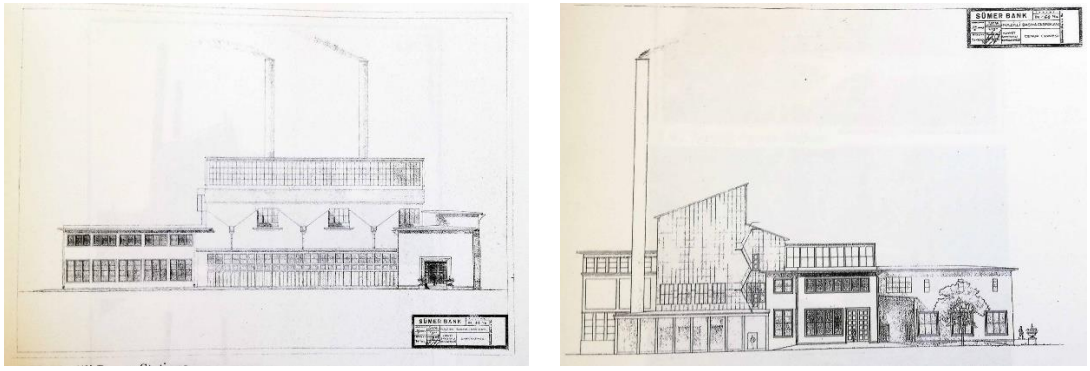

Figure 3.21. Factory's Power Station (Source: Peri, 2002, 207)

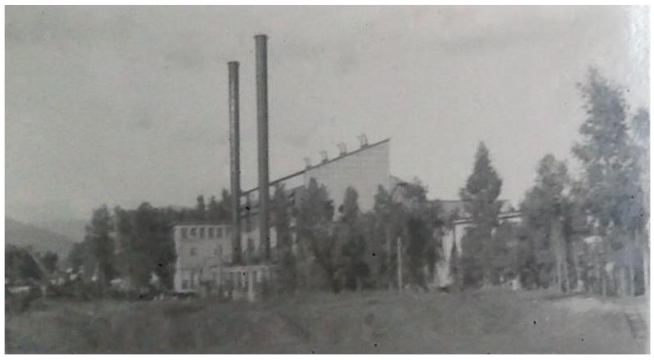

Figure 3.22 National Chimneys (Source: Bigat, 2017, 173)

Other structures with significant social impact besides housing are sports facilities and social purpose buildings. The factory included a basketball court, a football field and an athletics track. It is also known to have a football team of his own. It is striking that all these sports activities are used to transform the Turkish peasant, who is culturally foreign to them and who comes from the agricultural sector, into the industrial worker. Another transformative group of buildings in the complex are movie theatres, canteen buildings and mess halls. The factory, which gave importance to assembly and worker training, also had undertaken important tasks as stated by the authors of the period. "*A*

state-built radio, where state propaganda is performed in" became the propaganda center of the new regime and places where social communication is possible (Peri, 2006, 26).

The factory also had a special shelter built for the factory manager. Since it was just before World War II, the Russians thought that such a sanctuary might be necessary for the factory. In the event of a possible war, the factory would be able to manage the operation in this sanctuary, where the manager could take a few of his assistants with him. In those years, magneto phones were placed in the sanctuary (Doğan, 2007, 49). In addition, water pipes circulating through all ceilings of the building are formed from heat-sensitive sections to operate in case of possible fire events.

The history of a country is reflected in its buildings in some way. Destroying this historic heritage is much easier than preserving it. These factories, which used to operate three shifts a day and produce a large part of the needs of the country, have created a source for Turkey's current success in textiles, while there were a few weaving factories in the country that were not enough to meet the needs of the country. In addition to being one of the most modern textile production centers of the early republic, Sümerbank Nazilli Textile Factory was an example of social education and the creation of a new citizen in a modern country (Peri, 2006, 26).

There are pedestrian routes within the factory, and these routes are separated from the Nazilli-Bozdoğan Highway. The routes have a dense green texture, coherent with landscaping arrangements inside the factory.

The plan of the entrance section of the factory consists of the entrance building, administration and refectory buildings respectively. These buildings, which are arranged according to a symmetrical layout around a courtyard, stand out as plain buildings reflecting the rational and functional architectural attitude of their period with their jambedded windows, stairs leading to the entrances, near metal balustrades and horizontal lines (Peri, 2006, 26).

3.4.2. Railway Heritage and the "Gıdı Gıdı" Train

The factory was established as a campus with all work, living and leisure facilities, and all of its components were planned with the utmost care to all details. It was connected to the Aydın-İzmir railway by a two-kilometer railway connection built by Sümerbank. In order to minimize the cost of transportation, an iron railway was built between the Nazilli Railway Station and the factory, so that heavy inputs such as coal could be transported cheaply. In addition, commuter train services called "Gıdı Gıdı" were launched for the transfer of factory workers from the city center to the factory (Figure 3.23.) (Dilek, 2006, 90). After 1942, small railway stations were built inside both the city and the factory campus for the Gıdı Gıdı Train. The railway was situated on the western side of the factory site, parallel to the Bozdoğan road. In the following years warehouses, a railway station, fire stations and repair shops and workshops were added between the western boundary of the site and the railway facility. Again, this section has mostly been changed over time to address the needs of increased capacity and changing technology. Another transportation route was the Bozdoğan road, which remained unpaved until the 1950s.

Figure 3.23. "Gıdı Gıdı" Train (Source: Bigat, 2017, 202)

“Gıdı Gıdı” is the name given by the Sümerbank staff to the service vehicle that carries Nazilli Sümerbank Textile Factory workers to the factory and to their homes after work, with the analogy made by the sounds the vehicle would make while operating. As such, Gıdı Gıdı is the only scheduled train of our country that did not belong to TCDD (Figure 3.24.). Nazilli Textile Factory was active from 1937 until 2005, and the train made its last journey in 2005. It had served hundreds of families, mainly workers, living in workers’ houses in the campus (Avşaroğlu, 2010, 161).

Figure 3.24. Aerial View of Gıdı Gıdı Train and Factory Railway (Source: https://www.youtube.com/watch?v=-OUW_-LmWVw, accessed on 23 March 2019)

Sümerbank Nazilli Textile Factory’s location was determined according to the country’s and the people's benefits. It, established in Büyük Menderes Basin and ranked second after Çukurova in cotton production by accounting for 46% of the country's all production, is one of the concrete examples of this choice of location. The region developed with the factory; the workers' housing had soon become a prestigious venue; and Sümer quarter had become a region where people would come to cool off and visit on summer evenings (Avşaroğlu, 2010, 162).

The miniature train, which connects Nazilli city center with the factory and is inspired by the sound it produces, called Gıdı Gıdı by the local people, is one of the first of the rail public transportation operated in our country. Operation hours of Gıdı Gıdı were

known by everyone; even the local people would not use the clock properly. When Gıdı Gıdı would whistle its horn, the time would be known (Avşaroğlu, 2010, 163).

Gıdı Gıdı started operating again on February 19, 2016, after restoration, assembly and maintenance works on its locomotive and wagon (Figure 3.25.). Gıdı Gıdı's maintenance is now done by Adnan Menderes University. Today, once a year, it travels under the supervision of Cihan Toka, the last machinist of Sümerbank, to commemorate the arrival of Atatürk to Nazilli (Bigat, 2017, 201).

Figure 3.25. ”Gıdı Gıdı” Train in the present day (Source: Author’s personal archive)

3.4.3. Socio-Cultural Activities in Sümerbank Nazilli Textile Factory

Any progress made in the field of industry can lead to the creation of an industrial society. In this sense, a factory, any industrial enterprise or an operation can give tranches of the industrial society (Türkdoğan, 1981, 33). The economic struggle of societies from the past to the present affects the social situation and structure of them. With industrialization, a new model of industrial people was formed in societies. Socialization is an important factor in shaping the type of society we live in. It can be stated that the principles of populism were active in our economic life after 1923 and

those of statism after 1932. In this context, Atatürk's economic policy was aimed at bringing the nation to the level of modern civilization (Aysan, 1995, 71). In determining populist economic policies, it was decided to identify the basic economic needs of the people and to meet these needs. One of the most important aspects of the populist and statist economic policies implemented for this purpose is the social factory project. Factories are not only an industrial branch of production, but also cultural institutions of education, science, arts and sports. All men and women working in these factories shall enjoy the rights of the workers determined by law. In this direction, social factories with hospitals, schools, lodgings, libraries, theatres and movie theatres, sports facilities, research and development departments were established (Bigat, 2017, 178).

The social factory project is the implementation of the total development strategy in the field of industry. Basic information on literacy, science, culture, arts, sports, agriculture, health and economics were given, and practical training was conducted in these institutions (Meydan, 2015, 662).

Sümerbank Nazilli Textile Factory is one of the most important applications of the social factory project. Sümerbank Nazilli Textile Factory, the first textile factory of the Republic, had responsibilities such as spreading the culture of the Republic and organizing activities in social, cultural and social fields as well as economic development and provision of basic services such as education, health care and electricity (Bigat, 2017, 179).

In the words of Şevket Süreyya Aydemir; "*State enterprises are large facilities. These are sprinkled in the interior of Anatolia.*" (Aydemir, 2011, 353). Some time after the establishment of each facility, their surrounding areas become separate cities. Sümerbank Nazilli Textile Factory, which was not made up of stone blocks, was a human-centered enterprise. The factory had been equipped to meet the needs of the employees, and the services provided in this context had been developed to include the region for the employees as well. This development can be listed as employment

provision, infrastructure services, culture, education, health care and sports services (Güneş, 2007, 961).

Established approximately three kilometers away from the city center, the factory had become a new city with houses, apartments, hospitals and canteens, sports fields and cinemas to accommodate, rest and meet the needs of all workers, officers and technicians. Sümer District had become an ideal part of the Aegean region with its crowded population. If the state of the southern part of Nazilli region before the factory is considered, it could be stated that this was a radical change for Nazilli.

3.4.4. Effects of Sümerbank Nazilli Textile Factory on the City of Nazilli

In order to understand the effect of the factory on Nazilli, it would be useful to remember the state of the city before the factory's establishment. The city of Nazilli, which survived the effects of two major fires, was one of the cities that experienced the Greek Army occupation quite heavily. Besides the long occupation period, the destruction brought upon by the Greeks left the city in ruins. After the withdrawal of the Greeks, local people, the municipality and the city's volunteers started the reconstruction activities in the city. Nazilli, which partially survived the destruction of the war with modernization efforts, gained a modern appearance with the establishment of Sümerbank Nazilli Textile Factory. This process started with the decision to open the factory in Nazilli, and continued in the following years (Bigat, 2017, 245).

Figure 3.26. Nazilli city in the 1940s (Source: https://www.facebook.com/pg/basmafab/photos/?tab=album&album_id=873677226089109, accessed on 27 March 2019)

In the nineteenth century, the plague and malaria caused by the flooding of Büyük Menderes River forced the population of Nazilli to emigrate. Factory had an important role in the successful conclusion of the fight against malaria. The hospital within Sümerbank Nazilli Textile Factory operated for the people of the region as well as for the workers. Since Nazilli did not yet have a modern health care facility, the fight against malaria was also carried out with the help of the hospital of the factory. Despite the lack of personnel, the factory hospital worked with sacrifice, and was successful in ridding both the workers and the town of this disease (Bigat, 2017, 245-247).

It is almost impossible to come across anything in Nazilli's development where there are no traces of the factory. Job opportunities provided by the factory led the people in the city to demand to live in the southern part of Nazilli, for the area on the south of the Aydın-İzmir railway. The southern part of the city was beginning to become a populated area. The neighborhood where the factory was founded has been called Sümer quarter since this date. This is only one of the permanent traces the factory has left to the city. The fact that this region, which was about to be abandoned before the factory, became a small city created by the factory with its new shape over time proves that Sümerbank gave life to the southern part of Nazilli (Bigat, 2017, 248).

Nazilli gave emigration due to the negative aspects of the city before the establishment of Sümerbank. According to the 1927 census, the population of Nazilli District was 49,872, of which 9,325 were urban population and 40,547 were rural population. In 1935, the urban population was 12,005, while the rural population was 18,854, with a total of 30,859 (Erkaya, 1989, 21). As soon as the news of the textile factory to be built here began to spread, it begun to receive migration and there had been a wave of migration from the region to the district in order to work in the construction activities and to have a business. This change, which began in 1936, would increase rapidly in the opening year of 1937 and its continuation, and the population of Nazilli rose to 36,992 in 1940 (Erkaya, 1989, 21). Undoubtedly, the labor force created by Sümerbank would be the chief factor affecting the population of the district. As the economic power of the factory would increase, the population of the district would

increase at the same rate, and the textile factory would have a direct impact on the number of people living in the region. When the facilities for workers in Sümerbank started to be constructed, the factory began to attract population migration from the region.

Nazilli, known to have a population of less than Aydın and Denizli in 1935, would outpace the population of Aydın in the 1940 census and come close to the population of Denizli.

With the increase in the population of the town every day, the municipality had accelerated the zoning efforts, and had been obliged to take some measures. The decision was made to demolish and rebuild the buildings by the state; 100 houses and 50 shops were rebuilt in the city centre in one year, and new houses were built in accordance with the factory buildings. The existing power station was found insufficient and the new power center was opened by the municipality. For this installation, the walls of the sports field in the area were completed, and the ruined buildings in the southern part of Nazilli, for the area on the south of the Aydın-İzmir railway, were once more taken under state control. A new park called İstiklal Park was established. The first statue of Atatürk was made in Nazilli, and arrangements and decorations were started to be made around the Statue of Atatürk. The Old Market was demolished, and a new wholesale market hall was decided to be built on its place. In addition, new houses to be built in a modern style was planned. From northern parts of Nazilli to southern part, for the area on the south of the Aydın-İzmir railway, it was decided to build elegant two-storey houses on both sides of the avenue leading from the station to the textile factory (Anadolu Newspaper, September 20, 1938, 5; cited in Bigat, 2017). In 1938, on the grounds that the existing sports field in the district was narrow, it was decided to construct a new sports field with the required funds to be allocated from the budget of the municipality. The roads leading from Nazilli City Centre to the districts were arranged and paved with asphalt. The ornamentation of this road with trees has also been an example of environmentalism activities in the city. The construction of pavements which started with the planning activities was

accelerated. An embankment was built to prevent flooding. With the opening of the factory, the earnings of the tradesmen increased, and many hotels and restaurants were opened. This enabled Nazilli to gain a modern city appearance. Evidently, the factory has not only contributed to the neighborhood where it was founded, but also the entire Nazilli (Bigat, 2017, 249-250).

The factory provided facilities not only for cotton producers but also for the civil servants and workers employed. Before the factory was opened, it was marketed 200 modern seed sowing machines to grow the cotton needed by the factory. In addition, it was another contribution of the factory to the city that the qualified personnel trained in the factory created new factories and thus, revitalized the private sector. As the principle of statehood was tried to be applied, Sümerbank set an example for private initiatives at this point, and pioneered the initiatives (Bigat, 2017, 250).

Another need due to the rapid increase in the population was the secondary school. The secondary school was moved to its new building in 1947-1948 with the contribution of the municipality and Sümerbank. It was also decided to build a new primary school in the southern part of Nazilli in 1938. The factory pioneered contemporary education through its support to schools (Bigat, 2017, 251).

Nazilli was one of the first cities in the Republic to have electricity. However, the city was unable to fully meet its electricity needs due to inadequate infrastructure. A project was prepared by Nazilli Municipality to meet this need. The Ministry of Economy approved this project and it was decided to provide electricity to the city from the power plant of Sümerbank Nazilli Textile Factory (Anadolu Newspaper, September 20, 1938, 4; cited in Bigat, 2017). In this way, Nazilli had received electricity at a very low price compared to other cities. It was also important for the factory to show its contribution to the municipal development, even if indirectly, by correcting the construction works with the profit that the municipality would make from the electricity. By 1947, two thermal power plants supplying for the energy and steam needs of Nazilli Textile Factory were in a position to provide electricity to the

entirety of Nazilli. Thus, one of the basic needs of the people of the district was met by the factory.

Sümerbank Nazilli Textile Factory became a symbol of modernity in the district. Special trips had been prepared for students of primary and secondary school age from both Nazilli and surrounding regions to see Sümerbank Nazilli Textile Factory (Bigat, 2017, 253).

3.4.5. Socio-Cultural Effects of Sümerbank Nazilli Textile Factory

In addition to achieving economic prosperity and meeting the basic needs of the city, the factory also affected the people of the district socially, and was the decisive factor in the transformation of the city into one with a modern life. Due to the economic difficulties, health problems and the inability to meet the needs such as electricity and water essentials experienced in Nazilli, adequate sociocultural activities could not be organized before the factory was opened. The emphasis of the factory on training activities had also led to an increase in training activities in the district. Considering that education is the main factor that directly affects cultural life, the opening of schools, the increase in the literacy rate of the population and the increase in the educated population of the city directly affected the development of the district. Sümer Primary School, which was opened in 1946, provided education and training activities in Nazilli for many years, and closed in 2014. The public houses and libraries were full, and the reading rate increased year by year. The public house library met the need of the citizens who learned how to read and write, and the library became richer by the day (Anadolu Newspaper, January 27, 1938, 5; cited in Bigat, 2017). In Sümer Children's Library established by the factory, students had the opportunity to read books as well as study and do homework.

The people of Nazilli, who were not able to participate in social and cultural organizations before the factory was built, started to organize events themselves in addition to the entertainment activities organized by Sümerbank Textile Factory. In Nazilli, where men and women did not attend to any meetings together until the middle

of the 1930s; ball, dance and party events held in Sümerbank brought women to prominence in social life (Güneş, 2007, 963). Women were trained in courses within the factory to work in the yarn section before the factory started working (Akşam Newspaper, July 17, 1937, 2; cited in Bigat, 2017). After the opening of this section and other sections, many female workers continued to work with the same rights as male workers, and took their place in economic life. In addition, many women who studied sewing in courses within Sümer Public House have opened their own sewing houses or have been able to tailor independently. In this way, the Nazilli woman was able to provide her own economic well-being, and an important step was taken in the name of social equality. It was thanks to the factory that women gained a place in social life as well as in business life, and they were able to participate in all kinds of activities together with men. This is a living example of the value given by the Republican regime to women. Nazilli thus became one of the first places where Turkish women gained a place in economic and social life.

Designers working in the factory would go to the city centre from time to time, and make enormous paintings and exhibit their paintings to the public. This is a branch of the fine arts, which is an activity that increases interest in painting, but it is important for designers to sell their paintings and give their income to families in need to instill outreach (Bigat, 2017, 255).

Another activity of Sümerbank was the fashion shows held in the factory. In particular, the factory produced a variety of clothing introduced to the consumer with fashion shows. The clothes would be exhibited in the hall, sometimes by people selected from factory workers and sometimes by professional models (Doğan, 2007, 164).

An important problem was providing managers for factories to be opened both in Nazilli and in other provinces of the country. For this purpose, the state sent 75 Turkish engineers to Moscow to have industrial education. These engineers were expected to work as experts and foremen in the Sümerbank factories when they would return.

Sümerbank's role in creating the working class and collective working principle in the modern sense is important. Even when the factory was still under construction, the workers were expected to follow a daily work routine in which every stage -from waking up to leaving work was realized at the same time in harmony. Therefore, they started to learn working in a collective manner. This system continued when the factory started working. All the workers working in the construction activities had their meals at the large restaurant located in the factory at very reasonable prices. The operation of the unprocessed farmlands with a cotton growing station enabled the opening of new farmlands for the citizens who made a living by farming. Thus, while the factory was yet to be built, the culture of industrialization and industrial labor spread to the city (Cumhuriyet, December 21, 1936, 5; cited in Bigat, 2017).

3.4.6. Facilities Provided by the Factory to Its Workers

Workers employed in Sümerbank Nazilli Textile Factory were granted rights to receive overtime pay and premiums; in addition, awards were given when they showed expertise in any subject.

Sümerbank Nazilli Textile Factory was more than an economic enterprise. The factory, the aim of which was to spread the culture of the Republic, provided various facilities to its workers and the people of the city for the ideal of creating modern citizens. Vocational and technical training, daycare and school, bakery, a cooperative that provides food and clothing to meet the needs of dining hall, canteen, baths, mosque, guest house, supermarket (ekonoma), radio station, cinema, public house, holiday camp, balls, dances, parties and sports clubs are just some of the amenities provided for the employees.

Workers' Saving and Aid Fund: Workers' saving and aid fund have been created to identify the distress of workers. This fund helped workers with savings, loan requirements, purchase of items in installments, while providing cash assistance in cases of death, illness and dismissal. The factory also had an insurance system of its own (Meydan, 2015, 668).

Food Services: Workers, civil servants and contract personnel were provided with one meal free of charge each day, provided that they did not fall below 2,500 calories (Aydın Newspaper, December 4, 1945, 1; cited in Bigat, 2017). Special meals were also issued for employees who were sick.

Housing Services: It has been an issue that the factory has stood on with importance. Apartments, family houses and single worker pavilions were built inside the factory. Besides, lodgings for workers and civil servants were built to the east of the factory's compound. In addition to the lodgings, the houses built by Sümer Workers' Building Cooperative in 1953 constitute the first example of the type of public housing in the region (Zeybekoğlu, 2002, 44).

Transportation Services: A train line for workers with specific operating hours has been established, so that workers and materials can be transported easily from and to the factory area. The Gıdı Gıdı train, which was originally used to carry supplies to the factory, was then rearranged for carrying workers with seats placed in it, and made many trips during work days. In time, the Nazilli people as well as the factory workers benefited from the Gıdı Gıdı train, which became the symbol of Nazilli (Bigat, 2017, 200-203).

Occupational Clothing : While the workers were given work clothes twice a year by the Factory, some workers, such as servants, guards, firemen or machinists, were also given special summer and winter clothes or shoes. In addition, Sümerbank fabrics were distributed to employees twice a year as a salary premium and on holidays (Aydin newspaper, January 1, 1942, 1-2; cited in Bigat, 2017).

Canteen and Bakery: The bread, which is one of the basic needs, baked in the bakery in Nazilli Textile Factory could be purchased by the scorecards opened on behalf of the worker, while the total price was deducted from the employee's salary. Besides, there was a canteen where factory workers could meet their basic needs without needing to go to the city (Figure 3.27.) (Bigat, 2017, 204).

Figure 3.27. Canteen (Source: Bigat, 2017, 231)

Health Care Services: While there had been no hospitals in Nazilli, a forty-bed hospital was built in the factory campus considering the accidents. The hospital of the factory had an X-ray imaging machine, surgery facilities; dentistry, external and internal medicine, infectious diseases and obstetrics departments. There was also a laboratory and pharmacy. Apart from the employees, Nazilli people also benefited from the factory's health care services. The factory doctors also served and helped the public to defeat the malaria disaster in Nazilli. There was also a two-bed infirmary and a mobile hospital vehicle belonging to the Sümerbank Foundation. The mobile hospital vehicle visited the factories at regular intervals, and made sure that all Sümerbank personnel were able to detect early diagnosis of diseases (Bigat, 2017, 205-207).

Nursery School: The capacity of the nursery, which took care of the children, consisted of 40 children and 26 beds. The number of beds in the nursery had increased in the following years; since the 50's, the nursery has served with an average capacity of 70 beds, and nurses and carers have served in the nursery (Doğan, 2007, 136). In this nest where children of all ages were able to stay, children were divided into different groups according to their age, and special treatment was given to each group.

All the needs of children such as food, clothing, play time, sleep were carefully provided by special carers. The nursery gave great importance to the health of the children, and sick children were treated with the help of nurses who were employed in the nursery. In addition, clothing for young children was provided from the factory itself. In addition to the free nursery service for children of working mothers, child allowance is also given because they have children (Doğan, 2007, 136, cited in Bigat, 2017, 207-210).

Supermarket (Ekonoma): Ekonoma is one of the important part of the culture of industrialization that emerged by the state. It operated social facilities in many industrial establishments. Established to meet the basic needs of the workers such as food and clothing, this business has become a cooperative in the following years where all kinds of needs can be met. In this respect, it can be regarded as one of the well-established examples of cooperatives in our country, and even as one of the smaller, more local applications of today's supermarkets in those years (Doğan, 2007, 146).

Turkish Bath: The Turkish bath was built by the Russians in order to address the personal hygiene needs of the workers in the factory construction, and was later opened to the use of factory workers. It also served the Nazilli people as well as the workers. The factory bath has been very influential in the development of modern bath and toilet culture in Nazilli.

Radio Station: Along with broadcasts about the issues concerning the employees of Sümerbank Nazilli Textile Factory, the radio station made music broadcasts with world classics. In addition, the works of the music group established within the factory would be listened to through radio broadcasts. There was also a piano in the factory for workers who knew how to play (Güneş, 2007, 971).

Education Services: The five-class literacy course at Sümerbank Nazilli Textile Factory taught the workers to read and write, because of the low overall literacy rate in the country after the Alphabet Revolution, and then the workers were given elementary school diplomas. Today, Sümerbank Nazilli Textile Factory offers support

and contribution to education in the context of social responsibility by many enterprises or conglomerates, since the end of the 1930s (Doğan, et al., 2011, 189). The factory had made concrete contributions to the Alphabet Revolution and the establishment of Republican culture.

In vocational and technical courses, whose aim was to create a more experienced and more knowledgeable working class, each worker was given basic information to learn about his / her field. With the system of training from master to apprentice, it was ensured that the workers were not inadequate during the work, and that the work would not be disrupted. In addition, a group of workers specialized in the field had been created (Meydan, 2015, 667). Another method used was radio broadcasts with 15-minute conferences on issues of concern to workers.

In addition, the General Directorate of Sümerbank built Sümer Primary School in order to teach the children of Nazilli Textile Factory members. The Children's Library was opened in 1959 and in 1961, film projector was bought. In 1965, a land of 375 m² belonging to Sümerbank in the east of the school was given to the school yard, and a part of it was allocated to be used as a school workshop. The needs of the school were largely met with the support of the factory. Sümer Primary School, which was renovated in 2013, was closed due to lack of students after this date. No educational activities are currently being carried out in Sümer Primary School (Bigat, 2017, 214-217).

Founded in 1959, the Children's Library was built with the contributions of Sümerbank Textile Factory and local institutions. All needs of this library had been met by the factory (Aydın yearbook, 1973, 23-24; cited in Bigat, 2017). The Children's Library was established next to the Sümerbank lodgings and Sümer Primary School. The books were classified by the open shelf system according to The Dewey Tens classification (Doğan, 2007, 114). Periodicals could also be found in the library, which had a large book archive. The Children's Library had served Nazilli for 37 years; became non-serviceable due to lack of staff in 1996, and closed completely in 2003.

Some of the books were moved to Nazilli Public Library and some were lost (Doğan, 2007, 115-118).

Sümer Foundation: It was founded in 1981 to provide scholarships to successful children of families in need. The foundation provided scholarships to thousands of young people with workers' and civil servants' dues, and Nazilli's dignitaries also provided support (Doğan, 2007, 121). The Sümer Foundation still continues its activities today.

Sümerbank Textile Factory Mosque: The mosque, which was built on an area of 2,136 m² with different architectural and ornamental features, was opened for worship in 1955 and has a capacity of 300 people. The mosque, which includes the imam and muezzin house, a library, a bathing cubicle, a shop, a large courtyard and a closed fountain and toilet, is still in use (Figure 3.28.) (Doğan, 2007, 140).

Figure 3.28. Sümerbank Textile Factory Mosque (Source: Bigat, 2017, 219)

Sports Activities: Another kind of activity held in Nazilli Textile Factory for employees to spend their time outside work was sports activities. Shortly after the factory was established, it was decided that the sports club of the factory would become operational. The factory had a tennis court, a boxing ring, a football field with a furnished heating system, a volleyball court and a swimming pool at the site of the

sports club. The workers were thus able to participate in sporting activities, and became acquainted with modern sport activities. Founded in 1937, Sümerspor had successfully operated in many branches such as football, athletics, volleyball, basketball, cycling, wrestling and boxing (Figure 3.29.) (Bigat, 2017, 220-227).

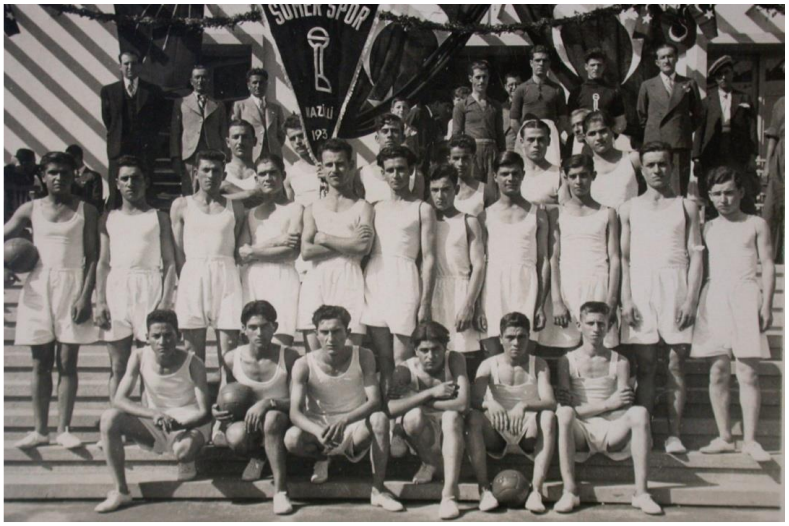

Figure 3.29. Sümerspor (Source: Bigat, 2017, 221)

Celebrations, Balls and Parties: Public holiday ceremonies previously held in Nazilli by the Public House started to be held in factory with the opening of Sümerbank Nazilli Textile Factory. The factory band and Sümerspor also performed in official ceremonies (Yeni Asır, May 24, 1938, 5; cited in Bigat, 2017).

Another group of events held at the factory was the balls. On the anniversaries of the factory's opening, employees would begin preparations for the ball, and these anniversaries would be celebrated splendidly. The public was socialized with the balls, dances and parties organized in the factory, especially women came to the fore.

At 12 o'clock on the night of October 8 to October 9 every year, a humour newspaper called Gıdı Gıdı Newspaper would be published and distributed to the invited guests attending the balls. The cartoons in the newspaper were drawn by factory designers.

Sümerspor players also organized demonstrations at the balls that took place in the canteen hall (Doğan, 2007, 174).

The factory management also allocated a movie theater to use for engagement and wedding ceremonies of single employees or children of married ones. These ceremonies were mostly performed collectively.

Figure 3.30. Celebrations, Balls and Parties (Source: Bigat, 2017, 227-233)

Public House, Theatre and Cinema Screenings: In addition to the parties and balls organized for factory workers, theatre and film screening was also performed. Sümer Public House, the majority of its participants working in the factory, would have quite a large contribution in theatre performances. Sümer Public House, which aimed to raise awareness of the public in many fields/subjects, had become one of the unique features of Nazilli Factory, because it is the first and only Public House opened within a factory (Güneş, 2007, 130). The representation group of the Public House in the factory exhibited the plays prepared in and out of the factory, and provided the recognition and cultivated the love of theatre in the region.

Figure 3.31. Theatre and Musical Group (Source: Bigat, 2017, 235, 260)

In addition, scheduled film screenings would be organized for the workers with the film projector brought from America for the factory. In addition to the factory workers, Nazilli people also socialized by participating in the activities held in the factory, and became acquainted with many artistic activities such as cinema, theatre, concerts and exhibitions.

Holiday Camp in Kuşadası District: Workers and civil servants working in the factory would need rest and holidays after long periods of intense work tempo, and in 1956, a holiday camp was established in Kuşadası to address this need (Figure 3.32.). The camp was built on an area of 100,000 m², which had a 1-kilometer-long coastline and was 7 kilometers away from Kuşadası (Bigat, 2017, 236-237).

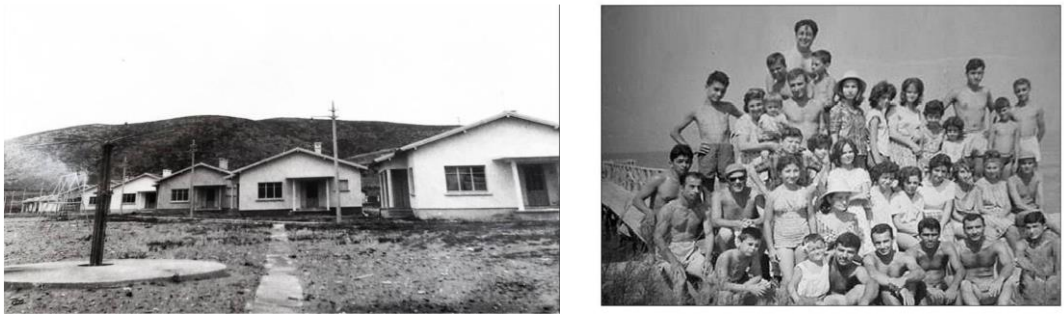

Figure 3.32. Holiday Camp in Kuşadası District (Source: Bigat, 2017, 237, 238)

3.4.7. Closure of the Factory

With the decision of the High Council for Privatization dated to 14.11.2000 and numbered 2000/83, it was decided to transfer Sümerbank Nazilli Textile Factory to Adnan Menderes University. According to this decision, the factory was first cut out of production on 30.04.2002, and the closing balance of the factory was issued on 31.07.2002. On 31.07.2003, the factory was transferred to the University.

The main reasons for the closure of an institution that was one of the 100 largest enterprises in the country at one time were the inability to adapt to technology and changing market conditions, problems arising from the management system, the

violation of the wage-productivity principle due to the increasing pressure of labor unions, the transition to a free market economy and the effects of globalization (Doğan, 2007).

By the 1970s, competing businesses switched to manufacturing with wide-width and automatic looms, while Nazilli Textile Factory was trying to manufacture with machines bought in the 1930s. In the mid-1980s, Nazilli Textile Factory displayed a makeshift business with old machines, new machines and machines brought from other factories. While the factory could not keep up with the changing technology, market conditions and consumer tastes were changing rapidly. The factory products, which used to be very attractive to consumers for many years with their quality and price, were beginning to lose their superiority, especially starting from the 1980s, due to outmoded technology and increasing costs (Doğan, 2007, 675-678).

One of the problems arising from the centralized management system was the frequent changes in the executive staff. In the sixty-six-year history of the factory, a total of 28 managers served. In its 1979 report, the Board of Supervisors emphasized that frequent changes of executive staff were one of the important factors in the financial damage of the institution and pointed out the importance of long-term positions of executive staff in order to make the factory better in financial position in the future (Doğan, 2007, 678-679).

In addition, the transition to a free economy in the early 1980s and the subsequent globalization brought the factory into a stalemate in competition. The limits of trade left the factory face to face with the realities of worldwide competition and international market conditions. As a result, the series of problems accumulated over the years brought the factory to an end with the globalization process that took the world under its influence (Doğan, 2007, 680-682).

3.5. Sümerbank Nazilli Textile Factory Treated as Lost Industrial Space

Sümerbank Nazilli Textile Factory was an important element of public life, providing the basis for the formation of modern life practices in Nazilli and its vicinity, as well

as an urban space where the ideology of the Republic was embodied and reflected in the space.

After its closure, the factory campus was not well-integrated to the Nazilli city spatially, socially, culturally and economically. Therefore, the campus, its facilities and structures could be described as lost spaces.

From a different perspective, it can also be suggested that the factory is an urban space now with its new function as a university and park, and therefore, it cannot be considered a lost space for these reasons. However, due to reasons such as separation from the urban context, physical functional elements and their relationship with the city, inability to establish economic and sociocultural relations with the city as in the past, lack of use of structural spaces and restriction of physical access, the factory campus is considered as a lost space in this study. In addition, the decision makers' efforts to find different scenarios for the factory after its closure also support the view that it is a lost place.

After the factory was closed, the area with the factory and social structures were transferred to Adnan Menderes University, while the housing units of the employees were transferred to the Nazilli Municipality. However, the process after the factory was closed and transferred to institutions could not be managed in a planned manner.

Figure 3.33. Photo from the Factory (Source: Author's personal archive)

Some parts of the buildings of Sümerbank Nazilli Textile Factory, which is located in a third-degree natural site and the structures of which were registered (Figure 3.34), were left to rot, while some parts of it were demolished.

Figure 3.34. Registered Industrial Heritage Buildings

The lodgings in the area which were transferred to Nazilli Municipality were demolished, trees in the area were preserved, and Sümer Park was opened and today it functions as a recreation area (Figure 3.35. and Figure 3.36.). The area used as Sümer Park is surrounded by walls and its connection to the production area is lost .

Figure 3.35. Present Buildings and Structures, and Demolished Buildings

Figure 3.36. Past Uses of Existing Buildings

Today, only a certain part of the buildings in the area that was transferred to Adnan Menderes University are still in operation as offices and classrooms, while most of

them are left empty in a disrepaired and obsolete state (Figure 3.37.). In addition, due to lack of maintenance, there are problems that pose a danger to life safety.

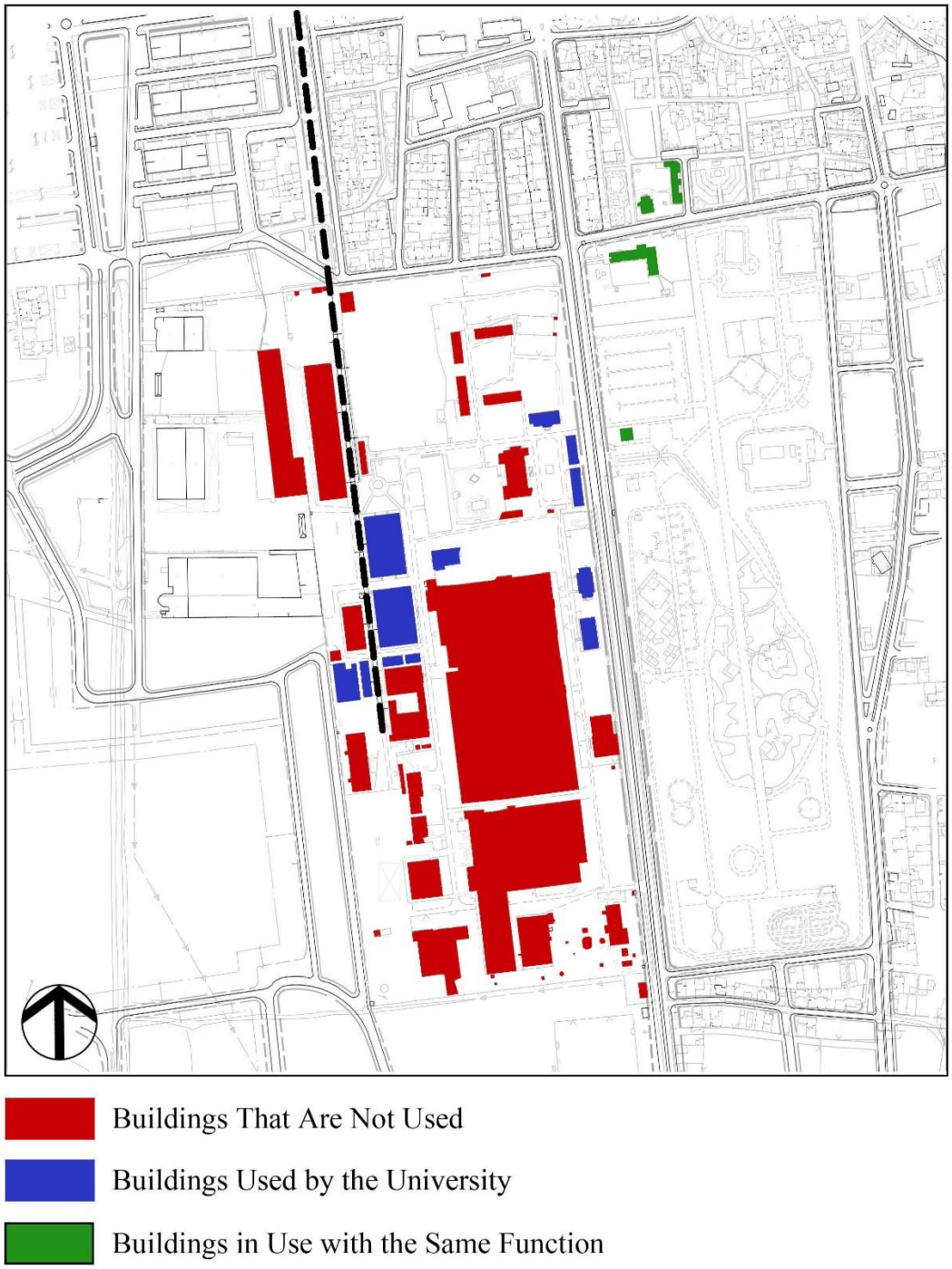

Figure 3.37. Present Situation of Buildings

The campus is surrounded by walls and trees, today it is in an isolated state from its vicinity with unused security shacks and surrounding walls (Figure 3.38.). In this way, it has a structure that interrupts city and does not have a positive effect on city dweller.

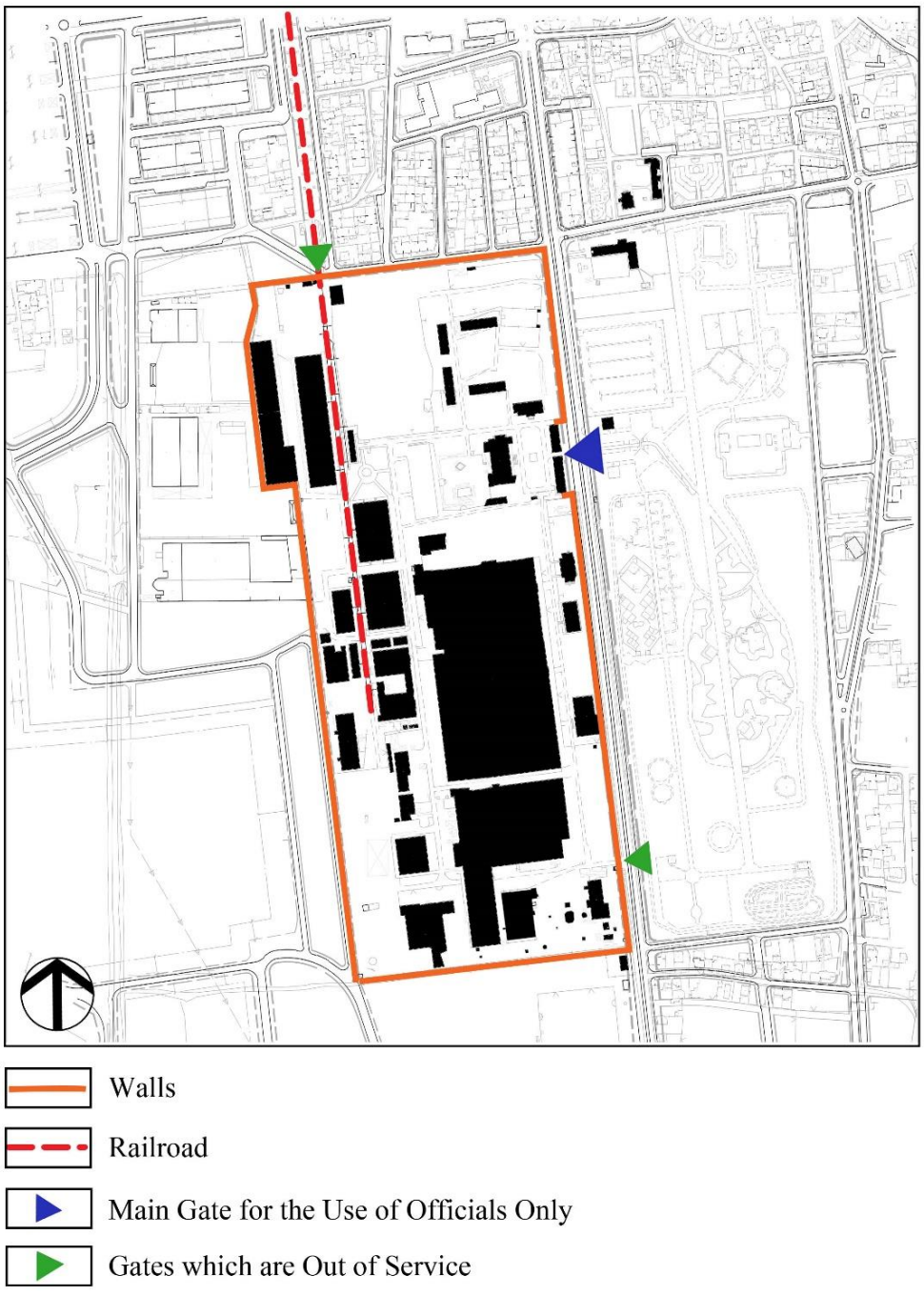

Figure 3.38. Borders and Gates (Drawn by the Author)

Since new functions cannot be installed on the majority of the structures in the production area and these structures thus have lost their social meaning; even if the buildings remained the same, they remained a large gap on the urban space used by specific short-term users. In addition, the open areas of the factory are neglected and disorganized. The university structures and uses have a dispersed structure that is not integrated with the campus and cannot be included in the spatial composition and configuration of the campus (Figure 3.39.).

Figure 3.39. Current Photo from the Factory (Source: Author's personal archive)

The chimneys of the factory, which are known as the National Chimneys, might have been stolen or demolished, and machines that can today be considered objects of industrial archaeology have decayed. An important part of the factory's readability in the urban landscape was lost after its chimneys were demolished.

The railway connection of the factory with Nazilli Railway Station was divided from various points and transformed into a pedestrian road by the Nazilli Municipality. As mentioned in the previous sections, the Gıdı Gıdı Train is restored and runs one day a year along a certain length of its route. As such, railway infrastructure is not used

efficiently. Not being constructed as a whole with environmental uses and open spaces, not being able to provide different functions to users, poor quality of materials and workmanship used, and not connecting the starting and ending points to any public space, the railway, which is functioning as a pedestrian path, does not operate efficiently to a satisfactory degree (Figure 3.40).

Figure 3.40. Current Photo of Railway Line and Station of the Factory (Source: Author's personal archive)

At this point, Sümerbank Nazilli Textile Factory is not an independent being as a space within the city. It is unable to meet the needs of the city and cannot protect its own system and infrastructure. The campus, which has lost its social, cultural and economic integration with the city, is a place that has not adapted to its environment and has problems of integration with the city. The city and the decision-makers were also unable to respond to the process after the factory's closing. At this point, this large collection of mass structures is used by specific users in a limited framework. Sümerbank Nazilli Textile Factory is now isolated from the urban space and in an idle

state within the city despite the strong connections the factory has had with the city, and the fact that the buildings allow for many functional and architectural uses, the diversity of the landscape elements of the campus, its location in social memory, and its history (Figure 3.41.).

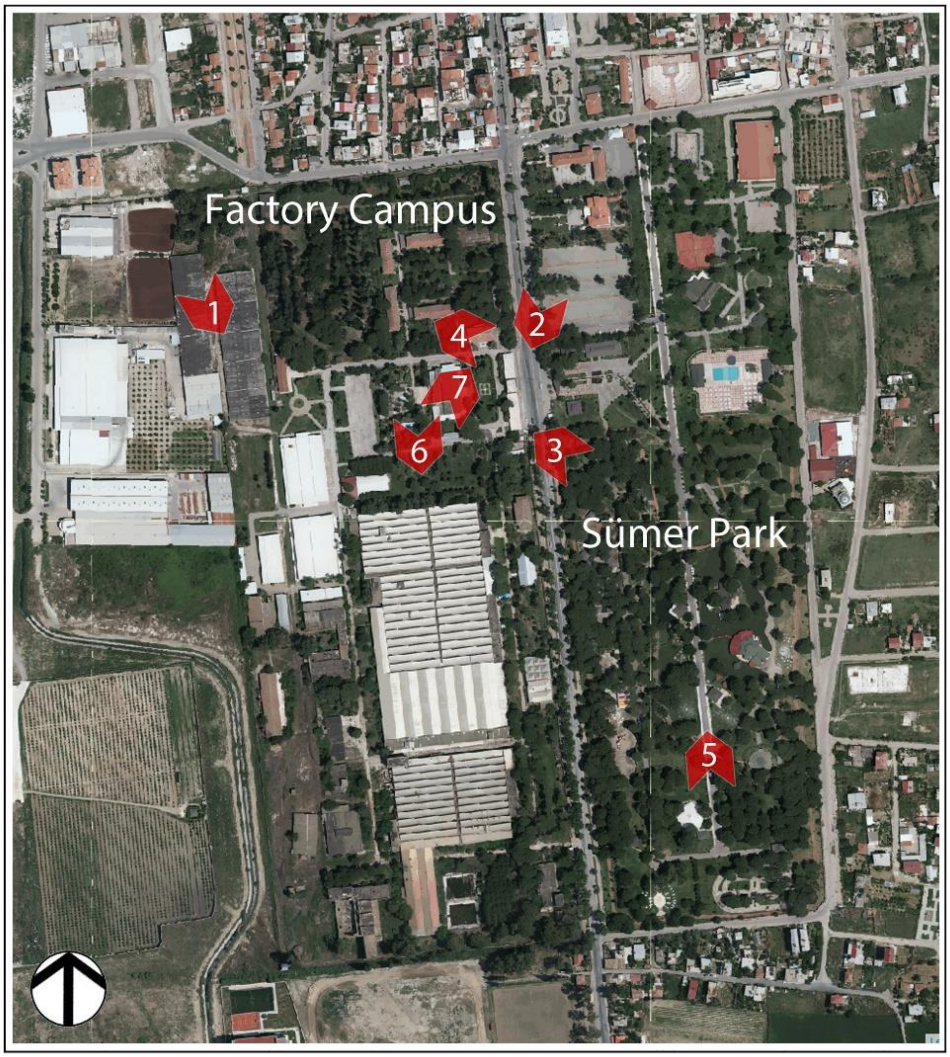

Figure 3.41. Aerial View of Factory and Sümer Park in 2018 (1: Plants, Warehouses, Train Station, and Social Facilities 2: The Entrance Gate, 3: The Entrance Gate, Social Facilities and Administration Buildings, 4: Administrators Residences, 5: Sümer Park, 6: Thread, Weaving, and Printed Cloth Plants, 7: Administration Buildings) (Source: https://www.youtube.com/watch?v=-OUW_-LmWVw, accessed on 23 March 2019)

3.6. Morphological Evaluation of Sümerbank Nazilli Textile Factory in Urban Context

For morphological evaluation, the area from the campus of Sümerbank Nazilli Textile Factory to the city center is selected (Figure 3.42.). In the evaluation, the area is

analyzed using satellite imagery and existing map data by using figure-ground, linkage and place theories.

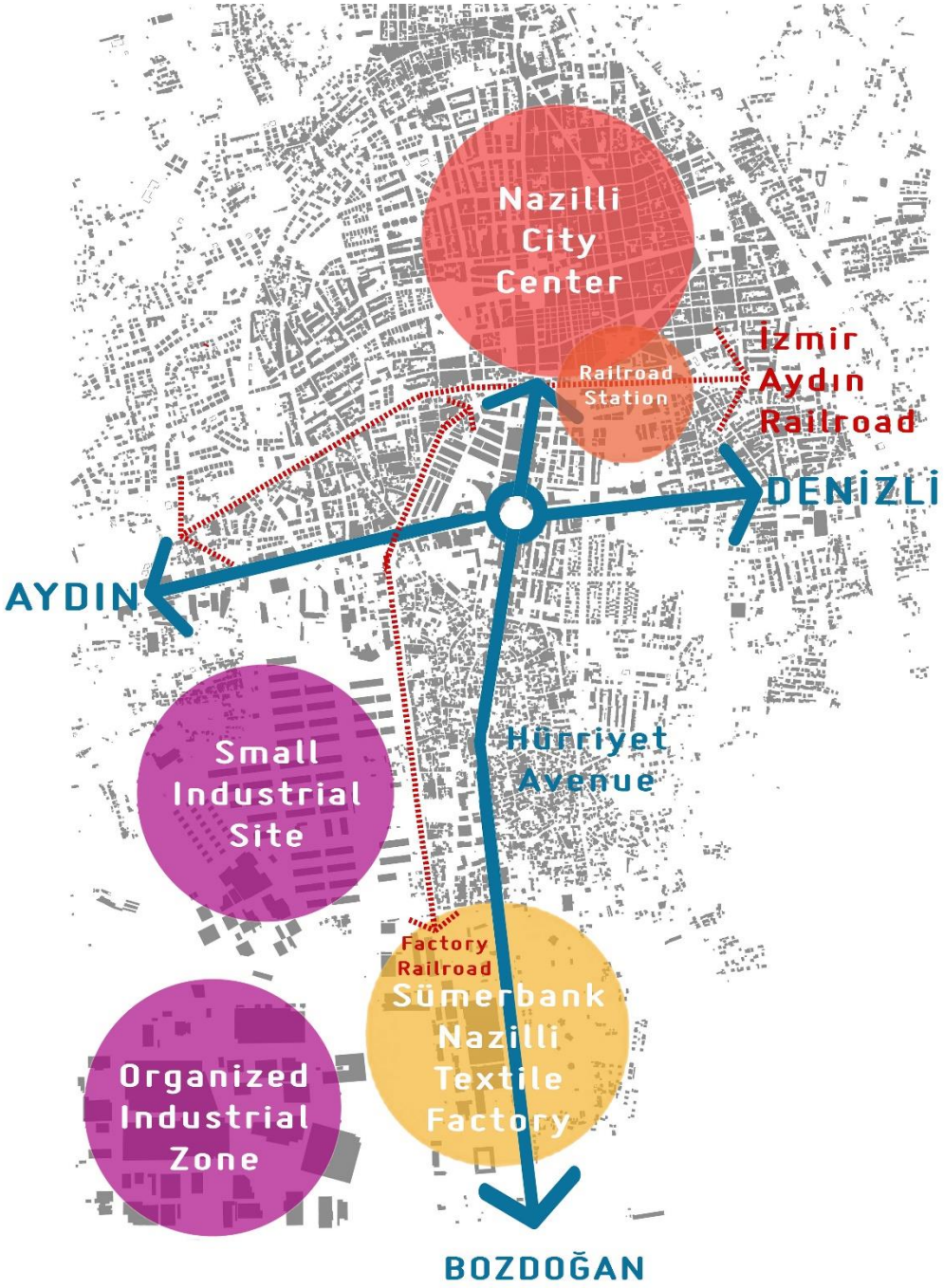

Figure 3.42. Conceptual Diagram of Nazilli (Drawn by the Author)

3.6.1. Implementation of Figure-ground Theory

Components of Trancik's (1986) examination of the figure-ground theory reveal important results on the location of Sümerbank Nazilli Textile Factory in the urban context (Figure 3.42. and Figure 3.43.).

Among the relations between urban solids and voids, the factory campus, which is used as a university space today, the old lodging area used as a park area, the railway connection of the campus with Nazilli Station and the connection of the campus with the city center via Hürriyet Avenue are noted.

Figure 3.43. Figure-ground Diagram of Sümerbank Nazilli Textile Factory (on the left), and Nazilli City (on the right) (Drawn by the Author)

Dimensions, design and spatial arrangement of the factory's production facility are different from the structures in the small industrial site and Organized Industrial Zone

located on the southwest of the city. In contrast to Sümerbank Nazilli campus, which is designed as an example industrial model, it is observed that there is no spatial integration between the small industrial site and the organized industrial zone, and that they cannot create an integrated system between each other.

Around the railway connection of the campus with Nazilli Station and the Hürriyet Avenue connecting it with the city center, there are urban solids, different urban textures and uses which differ in terms of size and shape (Figure 3.44.).

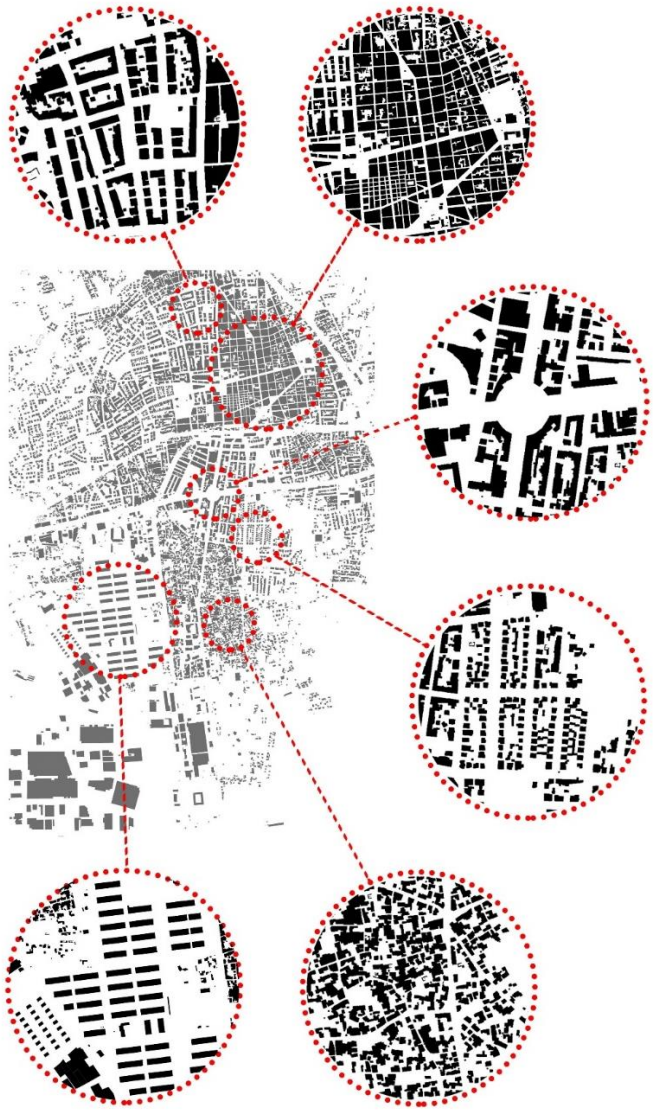

Figure 3.44. Different Urban Texture in Nazilli (Drawn by the Author)

The current situation has potential especially for the design of a railway link as an urban interface, and for the factory campus and the railway link to serve as a unifying glue in the urban fabric (Maki, 1964). In addition, the presence of public buildings, small foyer spaces, street and square networks and directional buildings on and near these spines, and especially the use of the railway connection as a linear open-space system and public park today provide valuable input for the integration of the campus into urban context (Figure 3.45.).

While there are low density settlements to the south and east of the factory campus, a dense and organic texture is observed to the north. In addition, the presence of roads that were opened in the north-south direction in time after the factory was opened indicates that the factory campus had attracted the city as an attraction point in the past.

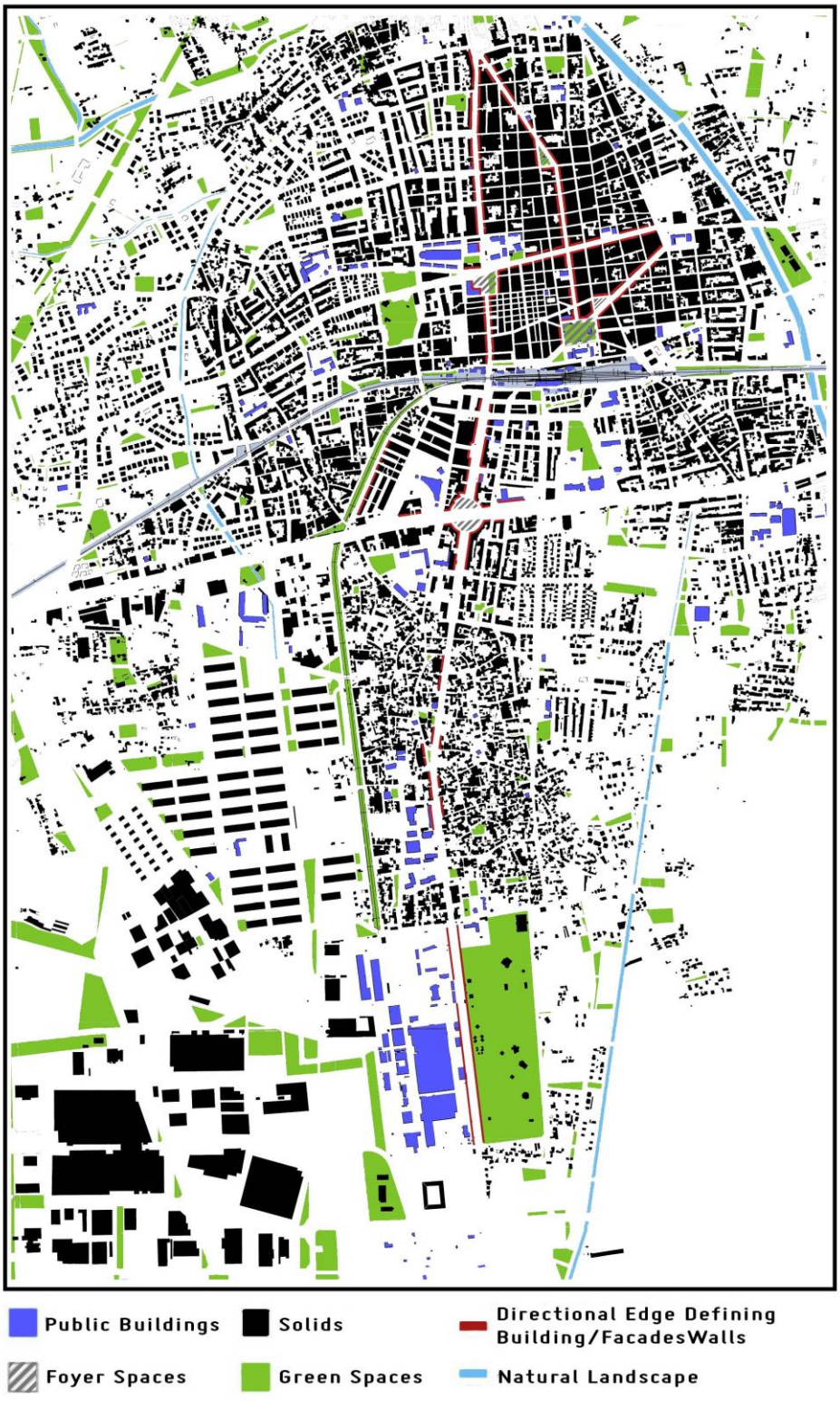

Figure 3.45. Types of Urban Solids and Voids in Nazilli (Drawn by the Author)

3.6.2. Implementation of Linkage Theory

Connection lines that could be formed with streets, lanes, pedestrian paths and/or open spaces are evaluated through the linkage theory to connect various urban elements in Nazilli and Sümerbank Nazilli Textile Factory (Figure 3.46.). In this context, circulation, connection and movement systems and main paths, the hierarchy between roads, the roles of open spaces as collectors, and continuities of roads and open spaces are evaluated by linkage theory.

Hürriyet Avenue serves as a collector road, while the railway and İzmir-Denizli Highway divide the city along the east-west axis. The fact that the factory campus is located on Hürriyet Avenue, the main axis of the city, offers significant potential to contribute to strong relations with the city. On the other hand, the railway connection of the factory can be considered as a collector linear open space that will bring together different urban components. At the same time, a strong pedestrian, public transport and linear open space axis can be created, if the divisions in the railway structure extending from campus to Nazilli Station are removed, and the passenger transport feature of the factory is activated by the Gıdı Gıdı train. Thus, there is potential to have a strong line and connection between the center and the south of the city. The railway link can also establish connection between city and industrial sites.

The presence of different buildings exhibiting cultural, social and economic characteristics on Hürriyet Avenue can be used to strengthen the relations that the factory will establish with the city center. There is an opportunity to construct different routes and links through Hürriyet Avenue.

While the main axes of the city are clearly observed, there is no observation of a hierarchy of roads functioning in a whole way. The railway route and the area used as a park today are seen as a linear open space system with the strongest reference in the city. Although there is no continuity and layout between the open spaces, there is potential for the inclusion of the railway route and the park area in a system of open spaces to be constructed within the city. There are continuous roads extending along

the horizontal axis between the railway route of the factory and Hürriyet Avenue and the small industrial site.

Today, relations with the industrial areas located to the west of the campus are weak due to the fact that the main entrance of the factory is on Hürriyet Avenue. In order to avoid this weakness, the railway route can be linked to industrial areas by being considered an opportunity.

The continuity of the street starting from the east of the area, where the factory's former lodgings are located and extending to Nazilli Railroad Station, is considered to have potential for the creation of linear open space system. There are opportunities to strengthen the north-south axis of the city and to incorporate east-west connections into an open space system through the construction of a system with the factory campus and railway heritage.

The factory campus, parking area, and railway route can be assessed for the strengthening of their existing connections, bringing together fragmented, divided, segregated, lost spaces in the city, and meeting them in a common area. The industrial heritage can serve as an interface between different uses and textures, and literally as “the glue of the city” by linking different uses of the city (Maki, 1964).

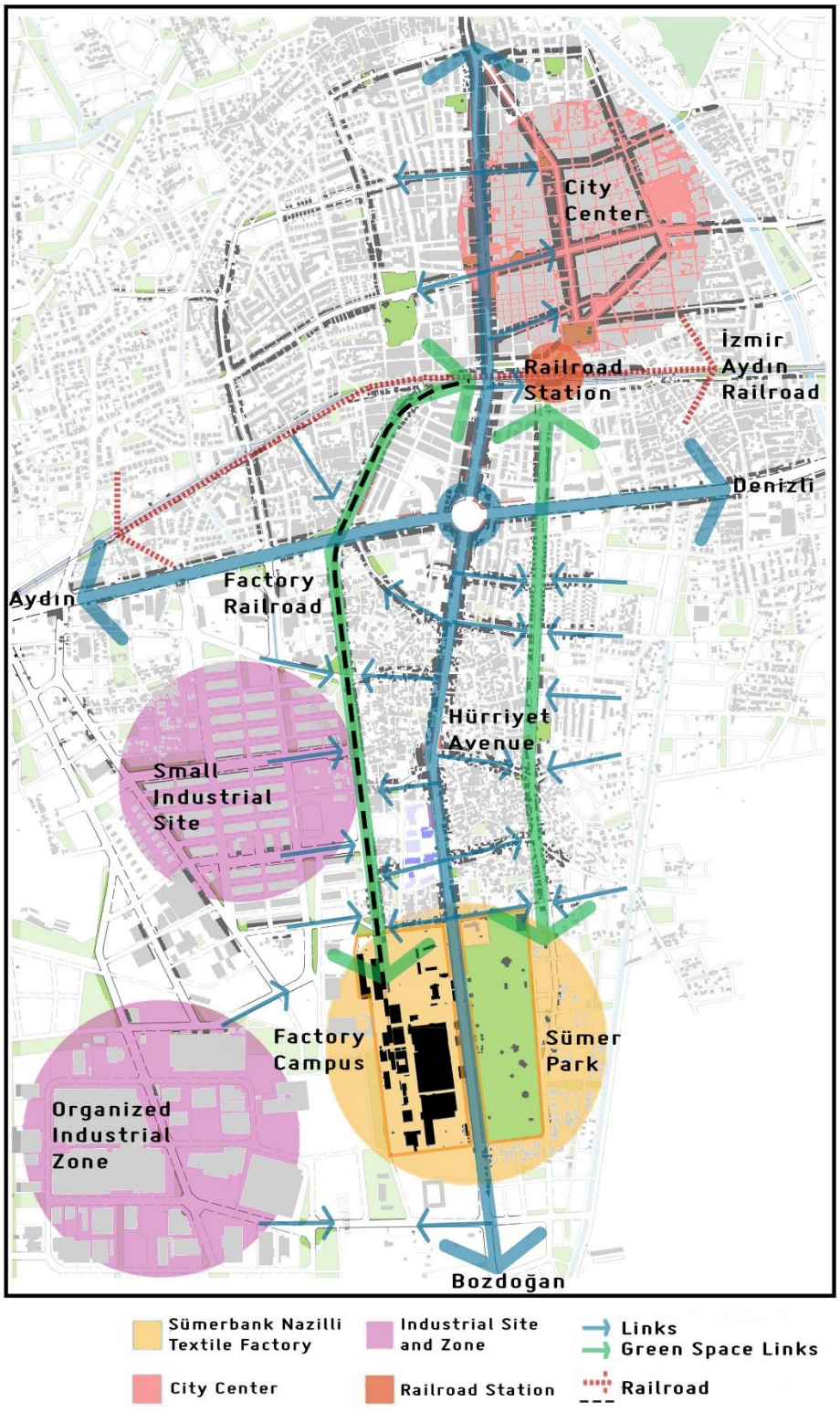

Figure 3.46. Implementation of Linkage Theory (Drawn by the Author)

3.6.3. Implementation of Place Theory

The values, potentials, opportunities and benefits of industrial heritage are examined through place theory in addition to basic urban design elements. The social, cultural, historical and spatial characteristics of an area must be integrated with personal experiences and natural environmental characteristics in the application of the theory. The integration of these features is associated with identifying the place-making features of the area and identifying the potentials, opportunities and benefits that may occur.

Protecting the values of industrial heritage in lost industrial spaces and ensuring the reproduction of the space are issues that need to be dealt with in a multidimensional and careful manner. The place needs to be set up as a continuous and permanent system where people can develop their social, cultural, political values and behaviors. This requires both a long-term study where different disciplines come together, and comprehensive and detailed analysis and knowledge. However, no functions or activities are proposed for Sümerbank Nazilli Textile Factory.

In this study, how Sümerbank Nazilli Textile Factory can be integrated into the urban context has been elaborated through highlighting its spatial and perceptual components. Spatial features, architectural elements, solid-void relationships and components of Sümerbank Nazilli Textile Factory have been analyzed together with its connection with the city. This analysis has aimed at revealing the potentials and possibilities for integration into the urban context. The multidimensional values of the factory have been identified, and the potentials, opportunities and benefits offered for integration and the reproduction of the space have been evaluated. Then, a spatial analysis has been conducted through the application of the figure-ground and linkage theories with these evaluations in mind, and potential connections have been proposed. It is thought that these assessments and proposals could provide significant inputs for the integration of Sümerbank Nazilli Textile Factory into urban context and the reproduction of the urban place.

Values, Opportunities, Spatial and Architectural Potentials of the Area for Conservation, Re-Utilization and Implementation of Place Theory

The Sümerbank Nazilli Textile Factory campus comprised production units and storage, management, lodging, social and cultural facilities. The railway connection of the campus with Nazilli Central Station and its relationship with Hürriyet Avenue, which functions as the spine of the city, lead to a morphological continuity and unity between the campus and the city. At the same time, the railway and Hürriyet Avenue links serve as collector roads running along a vertical direction that carry different urban uses, important public areas and public spaces, linking these uses and areas, along with the campus, to the city center.

Social and cultural facilities of the campus (housing, public house, primary school, sports field, nursery, hospital, cinema, canteen and bakery, bath, children's library, mosque, Kuşadası camp) provided a living space for employees. These social and cultural facilities and public spaces were used by employees, their families, and people living in Nazilli. As a result, the modern lifestyle in the ideals of the Republic was introduced to Nazilli and its vicinity. In addition, the contributions made to the city during the construction phase of the plant, such as the eradication of malaria disease, the reorganization of the city, and the provision of part of the electricity needs by the plant have added a modern atmosphere to the city.

Sümerbank Nazilli Textile Factory had made Nazilli a focal point, creating a prosperous environment in a city. The factory also developed in vocational and technical courses, literacy courses, activities of Sümer Public House, workers saving and aid fund, supermarket (ekonoma), public transport service by using Gıdı Gıdı Train, occupational clothing, preschool and nursing homes, bath, radio, theatre and cinema, sports events, balls, celebrations and parties, lodging services, social cohesion and the values that enhance memory. These values, which began to be forgotten after the closure of the campus, are waiting to be remembered and integrated into the city.

Values

The multi-layered values (Canaran, 2009) of Sümerbank Nazilli Textile Factory, which is registered as an industrial heritage (dated to and numbered 17.06.1998/7863 and 09.09.1998/7997) and which can be considered a lost industrial site today, are briefly explained below.

Sümerbank Nazilli Textile Factory is an example of how a factory can be more than just a production area, and how it can raise the social and cultural level of a society. In this respect, the ***socio-cultural values*** of the factory reflecting the evolution of a society can emerge as an opportunity to share a common value and identity that is disappearing in today's society.

The factory was inaugurated by Mustafa Kemal Atatürk, the founder of the modern Turkish Republic, and important political leaders; and it experienced many cultural, social and economic developments. The factory is the first factory in Turkey. Many written and visual objects, many ***historical values*** belonging to the design, construction, opening, production and closing periods of the factory are located today in the museum in the administration building and in the Ethnographic Museum of Nazilli Municipality. Also, the factory structures designed by Ivan Sergeevich Nikolaev and Türkstroy, the chimneys which are known as National Chimneys, the railway and the Gıdı Gıdı Train are historical values in their own right. It is important in this respect that the factory area and structures are registered, and the lots of the factory are declared a cultural heritage by the decision of İzmir Culture and Nature Protection Board II. All these historical values are important values that must be preserved and considered in order to preserve and renew the collective memory of our country, Nazilli and Sümerbank, one of the important enterprises of the time.

The factory has ***technological and scientific value*** reflecting the scientific and technical finesse and methods of the period with the architectural and engineering techniques and production machinery used in the construction of buildings made in cooperation with Turkey and the Soviet Union. A new technology; that is, reinforced

concrete system which was prepared by Türkstroy, was used in the construction of the factory. The opportunity to make the most use of natural light in the production area is achieved by taking the northern light with the form of a curvilinear saw roof, which is an architectural solution (Peri, 2006, 24). In addition, there was a power plant that provided electricity to Nazilli, while many provinces of Turkey did not have electricity as of that time.

During its operational period, different formats of education were kept together in the campus, where research was carried out to improve printing and production techniques, and designing products. In addition, vocational and technical courses and literacy classes were organized in the factory. In this respect, the campus has ***academic and educational values*** that need to be investigated in many aspects such as its values, characteristics, potentials and production techniques.

The factory buildings, designed by the architect Ivan Sergeevich Nikolaev, one of the important architects of the period and one of the representatives of the constructivism approach, have an architectural style based on certain standards and which prioritizes function and efficiency. It also contributes to the aesthetic quality of the urban landscape, while structures and manufacturing machinery have technical and aesthetic value. The structures are large and impressive in size and have character-defining ***architectural and aesthetic values***, architectural details and features.

The monumental values of the perennial trees on the campus, recreational open spaces for employees, the pool decorated with sculptures from the hands of workers, the buildings, the National chimneys that have been demolished and the power plants all contribute aesthetically to the urban landscape. The presence of parades, ceremonies, even weddings and engagements in open spaces in the historical process also makes cultural contributions. In addition to these aesthetic and cultural contributions, the railway route, which was designed as a linear line, has a ***landscape value***, becoming an element of the urban landscape.

Finding appropriate economic uses for the preservation and revitalization of Sümerbank Nazilli Textile Factory can give an economic advantage from the building scale to the urban area and society. The buildings and open spaces of the campus, volumes, dimensions and the way the buildings come together spatially contain ***economic values*** for different functions. In addition; historical, technological, scientific, architectural and landscape values on the campus are also values that contribute to the economic value.

The campus has ***resource value*** for different uses and applications through the improvement and revitalization of resources, materials and structures, and can provide economic efficiency.

Opportunities

The opportunities and benefits (Canaran, 2009) offered by Sümerbank Nazilli Textile Factory are summarized below:

Locational Advantages: The main spine of the city, Hürriyet Avenue, passes through the center of the campus, has its own railway connecting to Nazilli station in the center, is located at a strategic point close to the city center, and Hürriyet Avenue and its own railway route, industrial, commercial, residential, public buildings can be listed as locational advantages.

Catalytic Benefits: The factory that revived Nazilli in its early years can play the role of catalyzer, which can initiate a new transformation in itself and throughout Nazilli through new functions, conservation policies and the reconstruction of the social, cultural, economic and historical features it has presented to Nazilli in its past.

Public Realm: Social structures in the Sümerbank Nazilli Textile Factory, and public activities such as anniversary proms, New Year's Eve parties, and parades, which were organized for employees and the public on campus during the years of operation, can be re-constructed and revived. Buildings and empty spaces within the campus can be analyzed so that public and semi-public spaces can be designed. Sümer Park can be

reorganized in accordance with the concept of industrial heritage and made suitable for public use and activities. In addition, the public realm can be created by designing the railway route of factory as a public space that runs from the center of the city to the factory area, as in the example of the high line.

Identity and Collective Memory: Industrial heritage, which provides an opportunity for future generations to connect to collective history, functions as a concrete expression of identity. The preservation of heritage is therefore important for the users of the city to feel belonging, to form cities with identity and to keep the social memory alive.

Property Ownership: The ownership of the production units, administrative buildings and social structures of the factory belong to Adnan Menderes University and the ownership of the park area is held by Nazilli Municipality.

Sustainability: There are opportunities to revitalize buildings on campus according to the needs of the city through adaptive reuse. By analyzing these needs, a more economically sustainable practice may be preferred with lower costs than the construction of new buildings. In addition, the presence of mature trees in the campus and the traces of the campus' industrial heritage values for future generations provide opportunities for establishing a sustainable conservation and implementation approach.

Spatial Opportunities: Sümerbank Nazilli Textile Factory was designed by one of the famous architects Ivan Sergeevich Nikolaev and has industrial structures with unique architectural features that can provide high quality, flexible spaces. In addition, the management, production, storage, accommodation, social buildings and infrastructure buildings on campus, pedestrian and vehicle streams, entry and exit points are all design outputs that providesopportunities for new uses and different functions.

Structural Advantages: It provides structural advantages in adaptive reuse with applied construction techniques, especially in large volumes of production units and roof structure.

Visual Advantages: The half-vaulted roof of the factory and the chimneys called national chimneys were symbols of Sümerbank and Nazilli Municipality for some time. In addition, the impressive entrance structure, railway and Gıdı Gıdı train provide advantages in visual protection, reuse and application projects created by the presses known as Nazilli presses throughout almost in all parts of Turkey for a period.

Spatial and Architectural Potentials

Sümerbank Nazilli Textile Factory has been an important part of the modernization and industrial policies of the Republic.

Sümerbank Nazilli Textile Factory is one of the last surviving industrial legacies of the early years of the Republic, despite the division of ownership of its campus and the demolition of some of its structures. Its location and spatial advantage, the buildings and open spaces it contains, its symbolic and monumental features, and the fact that it is one of the examples of industrial architecture have large potential for new uses and functions. The Conservation Board listed it as an industrial heritage site in 1998, with its buildings being registered and declared a natural site before the factory was closed completely in 2002. The potential (Severcan and Barlas, 2007) of Sümerbank Nazilli Textile Factory, which is registered as industrial heritage and which can be considered a lost industrial site today, to be protected and re-functional according to the concept of industrial heritage, is briefly described below:

Location: Sümerbank Nazilli Textile Factory, which bears the traces of history, is located at a strategic point near the city center of Nazilli today. It was established on an area of 213,875 m² near Büyük Menderes River and on the Aydın Railway. Nazilli is situated at an important position with its proximity to the city centre, its connection to the city's major points and various urban uses, and its railway heritage. The main spine of the city and its connection with the İzmir-Aydin Railway, which is an

important mode of transportation for the Aegean Region, make the campus terrain a focal point. Bringing the campus to the city, it has potential for the formation and sharing of collective memory and social identity, and for the revival of urban centers and public life.

Open space: The vast open spaces covered by the campus offer potential for creating breathing spaces. The area used today as Sümer Park can be designed by taking into account the historical and cultural values carried by the workers' lodgings that were demolished in the past. Thus, the heritage characteristics of the factory campus can be kept alive in the collective memory.The spatial configuration consisting of production, management and social buildings, warehouses, railway stations and power plants has potential for the construction of public spaces. The circulation system of the campus, which is based on different user profiles, recreational outdoor spaces, and outdoor sports areas, can contribute significantly to people's physical and psychological well-being. It is possible to design the railway route as an open space system and public space that will run from the city center to the factory area, as in the example of The High Line Park (Section 2.2.5.2), along with the surrounding open spaces.

Building Stock: The campus contains yarn weaving and printing factories, administrative offices, warehouses, storehouses, a power plant, a management building, an impressive entrance structure, a quality control structure, a train station, canteen, cafeteria, protected white-collars' lodging buildings at the production site. These structures, due to their spatial characteristics, can be revitalized with many different uses.

Although there were different masses when the yarn weaving factory and the printing plant were first built in Sümerbank Nazilli Textile Factory, the structures related to weaving production, which were combined in the following years, are giant structures. The well-illuminated production site was provided by the removal of the northern light with its curved roof shape, which is an architectural solution, and was made with a reinforced concrete system (Peri, 2002).

Apart from the production units, warehouses, which are other buildings located on the factory campus, are structures with large spaces with connections to the railway. In addition, Sümerbank Nazilli Textile Factory has a power plant with a floor area of approximately 2,000 m², a symbol of the factories in Turkey's industrialization adventure. In addition to these buildings; repair shops, water tanks, garages and buildings where chemical processes take place are suitable for reuse. The administration building and its impressive entrance mass, which includes offices, dispensaries and control rooms, are among the important buildings on the campus that need to be protected. In addition, there is a basketball court, football field and athletics track, canteen buildings and dining hall buildings serving as a gathering area, civil servants' lodgings, which are important places that support social change through industrialization.

During the public procurement of buildings, with the spatial features of the campus and its social, cultural and historical values, cultural functions can be given to these buildings. Development of building stock as a public place is potential for the revival of economic, cultural and social life in the city. In order to protect these buildings and space, and for these to be incorporated into the urban landscape, huge empty monumental structures, open spaces and railway heritage have the potential to be publicly re-functioned.

Symbolic and monumental features: Sümerbank Nazilli Textile Factory, a symbol of a nation's development and modernization, is a symbol and monument in itself. The factory, which was inaugurated by Mustafa Kemal Atatürk, the founder of the modern Turkish Republic, experienced and witnessed many cultural, social and economic developments. The factory is the first Turkish printing plant in Turkey and has its own railway. The written, visual texts and objects, the chimneys called “national chimneys” and the power plant, railway and Gıdı Gıdı train have symbolic and monumental features in themselves. The preservation of these structures carries potential in terms of the formation of collective memory, strengthening of feelings towards the place, ownership of the place and formation of a social consciousness.

Architectural features: The factory structures designed by Ivan Sergeevich Nikolaev and Türkstroy have an architectural style based on certain standards, prioritizing function and efficiency. In addition, while contributing to the aesthetic quality of urban landscape, buildings and production machines have technical and aesthetic value.

The yarn weaving factory and printing plant at Sümerbank Nazilli Textile Factory are differentiated from other structures by the well-illuminated production place, curvilinear roof shape and the reinforced concrete system used in its construction. These structures have the potential to host many uses with their good light, large volumes and high ceilings.

The power plant with a floor area of about 2,000 m² could contribute to the readability and perceptibility of the city, if its two tall chimneys are rebuilt in their original form.

In addition, the canteen building, which was one of the important places for social interaction, can create alternative spaces for the increasingly lost public spaces today.

Sense of responsibility towards the public: Vocational and technical courses, literacy courses, organized events, workers' saving and aid fund, supermarket (ekonoma), transportation service, clothing allowances, nursery and nursing homes, baths, radio, theatre and cinema, sports activities, proms, services such as celebrations and parties, lodgings offered within the factory are values that indicate the factory's sense of responsibility towards the public and its employees. Today, the fact that the campus is owned by Nazilli Municipality and Adnan Menderes University allows it to be preserved and re-functioned for public purposes. Thanks to the public ownership, it is possible to increase the number of public spaces and to provide the public services that need to be offered more easily to the public.

CHAPTER 4

CONCLUSION

This study has aimed at understanding how industrial heritage can be conserved and reused and integrated into the city, and identifying how collective memory is reproduced while these areas assume new roles and functions. Industrial heritage sites are important components in cities as they are evidences of the industrialization processes of countries, and accompany social development. Different disciplines focus on how to preserve and reuse industrial heritage sites. Among such studies, the issue of how to integrate them into cities comes into the picture as a design problem to be elaborated through urban design approaches.

The first chapter of the study has portrayed the problem statement, scope, aim and methodology of this research. In the second chapter, the study has examined the concepts of lost space and industrial heritage, as well as three theories of urban design, namely; figure-ground, linkage and place theories, which help analyzing and understanding how industrial heritage can be integrated into the urban context. The third chapter, accordingly, has handled the case study, that is, Sümerbank Nazilli Textile Factory Campus, and evaluated it with the perspective provided by these three theories.

Summary and Findings of the Research

Firstly, the situation of old industrial spaces before their integration with the city has been evaluated with reference to the concept of lost space developed by Trancik (1986). Lost spaces are areas that were once used, but left dysfunctional or idle for different reasons, and cannot make a positive contribution to their surrounding area. Trancik's approach has been used in conceptualizing abandoned industrial heritage sites in this study. The study has evaluated the abandoned industrial spaces within the

urban context, which do not contribute to their surrounding area as lost industrial spaces. Lost industrial spaces can be seen as spaces that lost their function and have adverse impacts on their environment. But in this study, lost industrial spaces have been handled with a positive perspective. It has been assessed that values, spatial characteristics, architectural qualities, solid and void relationships of these spaces can positively contribute to urban identity and collective memory, and improve the urban quality of life. Therefore, they are considered to be important spaces for cities.

Subsequently, the emergence of the concept of industrial heritage, its development in conservation and planning literature, its values, potentials, opportunities and spatial components have been investigated. Examples of conservation and functional transformation of industrial heritage sites and abandoned railroads have been analyzed. These analyses reveal that industrial heritage offers opportunities for urban renewal, and has the potential to trigger development that will be reflected in the entire city as in the Bicocca project. In such processes, it is important to evaluate the history of the industrial area and handle it to create a bridge between the past and the present, bear the traces of the past and reflect it. In the Bicocca project, with the principle of carrying the traces of the industrial past to the present, the aims were creating a bridge between the past and the future and providing historical continuity, and implementations were realized accordingly. The existing texture of the industrial zone, building blocks and streets were conserved as in the past, and the area was perceived as a whole. Protected industrial structures were renovated and reused with various functions, while open spaces were rearranged so as not to lose their identity in their past. The High Line Project, meanwhile, has been shown to contribute to the city culturally, ecologically and economically, and improve the quality of life on the route by preserving the image of the railway in the city's memory and reusing it in line with today's needs.

Following that, the study has examined the three urban design theories presented by Trancik (1986) to analyze how lost spaces can be integrated into urban context and how an urban design approach can be applied in these processes. These theories are

figure-ground theory, which studies the relationship of urban solids and voids; linkage theory, which studies form and spatial formations as a whole; and place theory, which includes social and cultural values. At the end of the theoretical framework, a flow diagram has been developed that combines three urban design theories with the concepts of industrial heritage values, potentials, opportunities and benefits, and the lost space. This diagram can provide a basis for the integration of spatial and perceptual components of industrial heritage into an urban context.

Sümerbank Nazilli Textile Factory has been chosen as the case area of the research. The factory experienced and witnessed the industrialization process of the Republic of Turkey. It was designed as a factory model that reflected the ideologies of the Republic spatially, socially, culturally and economically. Sümerbank Nazilli Textile Factory, built within the scope of the first five-year industrial plan, is the first textile (basma) factory in Turkey. As one of the last surviving industrial heritage of the early Republican era, it was registered as cultural heritage with the decision of the Conservation Board in 1998, together with the Gıdı Gıdı train and railway route.

In the study, morphological and architectural features of factory campus, the Gıdı Gıdı train and railway route, socio-cultural effects of the facility on Nazilli city have been elaborated, and the reasons for treating it as a lost industrial space have been explained. The factory campus and the railway route have been examined according to the figure-ground, linkage and place theories.

The location of Sümerbank Nazilli Textile Factory and the railway connection in the urban context, its relationships with urban solids and voids have been analyzed through the figure-ground theory. As a result of this analysis, it has been observed that the factory's production facilities are different from other solids (volumes) in the surrounding area in terms of their sizes, architectural design and spatial sequences. Because it was a focal point in the past thanks to the city's main spine and railway link, it has strong relationships with the city center and different urban textures. In addition, the presence of public buildings, small foyer spaces, street and square

networks and administrative buildings in this strong network of relationships, and especially the use of the railway connection as a linear open-space system and public park provide valuable inputs for the integration of the campus into the present urban context.

Linkage theory focuses on lines that are formed with streets, lanes, pedestrian paths and/or open spaces. With regard to the linkage theory, the main paths, circulation, linkage and movement systems around the campus have been investigated, and the hierarchies and continuities of connections have been examined. The fact that the factory campus is located on the main axis of the city presents significant potential to develop strong relationships with its key points in different parts of the city. At the same time, there is potential to create an urban park, walkway, bike lane or public transport, if the divisions in the railway structure extending from the campus to the Nazilli Railway Station in the center are removed and the public transport feature of the factory is activated by the Gıdı Gıdı train. It is considered that this spine can be incorporated into the transportation and open space systems in the city. In addition, there is an opportunity to develop connections with other historical buildings and open spaces located on Hürriyet Avenue, which is the main spine of the city. It is thought that the street extending from the east of the area, where the old lodgings of the factory are located and which is used today as a park area for Nazilli Station, has the potential and continuity for the creation of a linear open-space system. The factory campus, park area and railway connection can serve as an interface for the city's fragmented, divided, segregated uses and areas to come together, and meet in a common space by strengthening its existing connection.

Applying the place theory; values, potentials, opportunities and benefits of industrial heritage have been studied in addition to the spatial and morphological analysis realized through figure-ground and linkage theories. The protection and revitalization of industrial heritage sites require long-term studies and comprehensive analysis produced by the collaboration of different disciplines and actors. For these reasons, this study does not propose specific functions or activities for the campus. The

function needs to be carefully determined in order to conserve and re-utilize industrial heritage. Practices that do not match the values of industrial heritage and that will completely change or damage the identity of the place should be avoided. According to the scale of the industrial heritage areas, it is often evaluated with functions to meet the needs of the city such as university, city park, museum, gallery and exhibition hall, library, theatre, cinema, concert area without disturbing the industrial identity of the space. The study has pointed out and analyzed its roles and contributions in the past, its spatial, morphological, architectural components, which can help provide a basis in exploring its integration into the urban context. The place theory has helped laying down the multi-dimensional values of the factory. Thus, it is concluded that a consistency can be achieved between the old values of the factory and the new values that will emerge according to the use and protection decisions. The thesis, consequently, draws attention not only to spatial theories of urban design, but also to the values, potentials, opportunities and benefits of industrial heritage for the integration of industrial heritage into the city.

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