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Evaluation of an Urban Transformation Area from the Perspective of Urban Landscape Planning and Design: The Case of Sular Vadisi Nature Park in Bursa

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Abstract

Sular Vadisi Nature Park in the Yıldırım District of Bursa Province initially began as an unhealthy settlement area. Over the years, due to migration, it transformed into a slum district. Following a decision made by city authorities for urban transformation, the area has been completely cleared of slum neighborhoods and converted into a suitable location for recreational activities. This study evaluates the contribution of the Sular Valley Nature Park, established near the city's historic center, to the urban landscape in the context of urban transformation and urban landscape planning components. Through the research, the urban transformation process of the area is revealed, and the usage status of the recreational regions is determined, addressing the transformation from an urban planning perspective. An assessment has been made to evaluate whether an appropriate study has been conducted in line with its objectives. As a result of the study, it was found that the goals defining the ideal future of the Sular Valley Project were not clearly established, and long-term objectives for the transformation project and planning strategies for other regions of the city were not explicitly defined. The connection of the area, which transformed with the city's green infrastructure, could not be established. However, the relationship with neighboring settlements and the provision of open spaces and recreational facilities for users has been significantly improved.

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Highlights

Landscape planning strategies of urban transformation areas

Bir kentsel Dönüşüm Alanının Kentsel Peyzaj Planlama ve Tasarım Açısından Değerlendirilmesi; Bursa Sular Vadisi Doğa Parkı örneği

Özet

Bursa ili Yıldırım İlçesi Sular Vadisi Doğa Parkı'nın bulunduğu bölge başlangıçta sağlıksız bir yerleşim bölgesi iken, uzun yıllar süren göçler sonrasında gecekondu bölgesi haline gelmiştir. Şehir yetkilileri tarafından alınan dönüşüm kararı sonucunda bölge gecekondu mahallelerinden tamamen kurtulmuş ve rekreasyonel etkinlikleri için bir uygun bir yere dönüştürülmüştür.

Bu çalışmada şehrin tarihi merkezinin yakınında kurulan Sular Vadisi Doğa Parkı'nın kentsel dönüşüm ile birlikte kentsel peyzaja katkısı, kentsel peyzaj planlama bileşenleri açısından değerlendirilmiştir. Araştırma ile Sular Vadisi Doğa Parkı kentsel dönüşüm alanında alanın kentsel dönüşüm sürecini ortaya koyarak rekreasyon bölgelerinin kullanım durumlarını belirleyerek, yapılan dönüşümün kentsel planlama açısından ele alınmıştır. Amacına uygun bir çalışmanın gerçekleşip gerçekleşmediğini değerlendirilmesi yapılmıştır. Çalışmanın sonucunda sular vadisi projesinin ideal geleceğini tanımlayan ve planlama sürecinin temelini oluşturan hedefler kararlaştırılmamış, kentin diğer bölgelerine yönelik planlama stratejileri ve dönüşüm projesinin uzun vadeli hedefleri net olarak tanımlanmadığı görülmüştür. Dönüşüm ile fonksiyonu değişen alanın kentin yeşil altyapısı ile bağlantısı net bir şekilde kurulamamıştır. Ancak kendi içerisinde ve hemen yakınındaki yerleşimlerle ilişkisi daha iyi sağlanmış, kullanıcıya açık alanlar ve rekreasyonel imkânlar sunmuştur.

Anahtar Kelimeler

Kentsel Peyzaj Planlma, Peyzaj Tasarım, Kentsel Dönüşüm

Öne Çıkanlar

Kentsel dönüşüm alanların peyzaj planlama stratejileri

1. Introduction

Urban areas are complex and dynamic systems that undergo transformation and change under physical, social, environmental, economic, political, and ideological factors. While these changes can sometimes enhance the living environment and quality, they are also subject to various transformations and challenges. The collapse of urban systems manifests as economic, social, environmental, and physical deterioration [1]. Contemporary urban spaces are continuously facing transformation and change through various intervention tools. Urban regeneration is one of the most effective intervention tools to alter and transform urban areas. Urban regeneration can be defined as an integrated vision and action aimed at solving urban problems and producing lasting solutions [2]. Turok (2007) describes the concept of urban regeneration as a goal to create sustainable, livable, healthy, and modern cities [3]. He outlines the content of urban

regeneration as the renewal of unused, unhealthy, and illegal building areas in the city and the transformation of structures affected by natural disasters into alternative uses. Additionally, he emphasizes the importance of accurately identifying urban functions and transforming them within a planning framework, defining this process as urban infrastructure renewal. Preventing the unconscious expansion of cities into the surrounding natural and rural areas and restoring deteriorated, ruined, and shabby old urban fabrics has become necessary in modern cities. Urban regeneration projects are a significant step in reclaiming urban fabrics that have shown signs of decay. These projects also highlight the importance of green spaces as a critical design tool for enhancing urban quality of life [4]. Urban regeneration is not only a process of renewing the space itself but also involves the area's economic, social, and physical reproduction. It encompasses a general expression of approaches to developed areas, including interventions such as renewal, redevelopment, revitalization, conservation, improvement, rehabilitation, cleansing, reproduction, organization, and gentrification [5-7]. In studies conducted alongside urban areas, various policies related to health, safety, satisfaction, welfare, and the physical environment are developed, and concepts such as "quality of life," "environmental quality," "livability," and "sustainability" are frequently used [6].

The environmental issues resulting from rapid and irregular urbanization highlight the importance of open urban and green spaces, emphasizing the need for a planned intervention. Planned urban green spaces, or landscape planning, are crucial in creating healthy urban areas. The goal is establishing healthy, sustainable living environments with high visual quality [9]. Urban landscapes are significant cultural formations where natural and cultural processes intersect [10]. Urban landscape planning is realized by managing green space systems within the city. Urban landscape planning aims to establish and maintain an optimal relationship between people, society, and nature [11]. Approaches to urban landscape planning consider the city as an ecosystem, recognizing the heterogeneity and dynamism of urban areas, as well as the interaction of human and bio-physical processes in these spaces. These approaches also emphasize the importance of ecological processes, connectivity, spatial renewal, and the principles of interdisciplinarity and participation, all of which inform ecological principles in urban landscape planning.[12]. In landscape planning approaches within urban areas, fundamental principles such as publicness, social-spatial equality, social justice, accessibility, sustainability, ecological balance, and carrying capacity are addressed. Additionally, the efficient use of energy, utilization of renewable energy sources, establishment of a balance between conservation and use, as well as spatial integration, change, and transformation are also considered [9]. Urban regeneration is evaluated holistically in economic, social, spatial-physical, organizational, legal, and managerial issues. This scope examines urban-physical capacity, specialized design areas, landscape values, and planning design subtopics about spatial and physical matters [6].

Urban landscape refers to the conscious arrangement of the urban environment. In urban landscape design, data related to physical structures and socio-cultural constructs are significant and essential [13]. Structures and organizations define the urban landscape. Almost every city has places where communities can live, work, and play [14,15]. Through landscape planning studies, spatial production should establish relationships

between abstract-concrete and filled-empty, creating a specific pattern. Considering property relations, a distinction between private and public spaces should be made, incorporating a defined organizational structure and hierarchy while accommodating aesthetic and functional concerns, all of which should guide the design. The essential elements in landscape design include landforms, plant materials, structures and buildings, paving, structures resulting from land characteristics (such as stairs, walls, ramps, etc.), and water features [9]. This study focuses on the Sular Vadisi area, located south of the historical city center and adjacent to Uludağ. Over time, this area has transformed into an unhealthy squatter settlement due to migration, becoming a part of the city's recent history. The aim is to eliminate the area's shanty houses and transform them into a part of the urban landscape for recreational activities. This study aims to examine the relationship between the urban transformation process of Sular Vadisi Nature Park and urban landscape planning and usage.

2. Material and Method

The primary material for this study is the Sular Vadisi Nature Park Urban Regeneration area, located on 14. Okul Street in the Yeni Mahalle neighborhood of Yıldırım district, Bursa. The Sular Vadisi Nature Park Urban Regeneration Project, implemented by the Yıldırım Municipality, is the focus of this research. This area is situated in the Bursa city center, near the historically significant Balabancık Street and its surroundings, a region characterized by high commercial activity (Figure 1). Sular Vadisi Nature Park covers a total area of 28,000 m² and is located on 14. Okul Street in Yeni Mahalle. It interacts with the surrounding neighborhoods of Mollaarap, Karamazak, Piremir, Namazgah, Teferrüç, Umurbey, and Kurtoğlu. Within Sular Vadisi Nature Park, 144 squatter buildings were expropriated and demolished, giving way to the park's development, which features water themes and green space amenities.

In the study, the material for the section on institutional foundations includes research on the transformation of implemented cities, strategic approaches to urban landscape planning, the urban regeneration process, the historical development of urban regeneration processes both globally and within the country, methods of urban regeneration, and examples of urban regeneration from around the world and Turkey. This material comprises research papers, theses, presentations, and thesis studies from university libraries. The materials used in the findings section include literature, maps, photographs, information obtained from the Yıldırım Municipality, field visits and notes taken, photographs, and information from the internet. Additionally, other materials consist of: - The District Zoning Plan obtained from the Yıldırım Municipality Planning Department, - Research on the geographical location, historical development, and cultural heritage of the study area, - Notes and photographs taken during fieldwork to analyze the condition of the study area,- Images or data obtained from internet searches.

The research methods involved data collection, analysis, and evaluation studies. Data on this topic were obtained through a literature review. Methods for data collection regarding the area included literature searches, obtaining information and documents from relevant

institutions, field observations, interviews with officials, and photographing the study site. In the data analysis phase, notes from fieldwork, photographs taken, and literature data were evaluated.

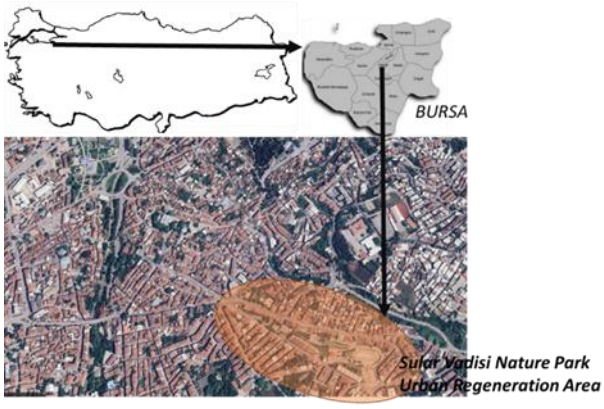

Figure 1. Location of the study area

The research method was addressed in five stages: 1. The Urban Regeneration Process of the Area, 2. Definition, Purpose, and Objectives of the Project, 3. Urban Regeneration Planning Decisions, 4. Issues Addressed in Urban Regeneration (Economic, Social, Spatial-Physical, Organizational, Legal-Administrative), 5. Assessment of the Current State of the Area—Evaluation of Urban Landscape Planning and Design Approaches Based on Implemented Practices (Table 1). According to these stages, the method reveals the historical process and current status of Yıldırım Sular Vadisi Nature Park. The practices based on urban regeneration carried out in this area were evaluated. Finally, landscape planning and design approaches for identified urban regeneration areas were assessed through a table based on literature studies.

Table 1. Evaluation of Landscape Planning and Design Approaches in Urban Regeneration Areas [6,12,16,17].

Components of Urban Landscape Planning	**Criteria**	**Evaluations**
Contributions of Urban Landscape Planning to the Area	Transportation	Accessibility to the Area (Relationship with the City)
	Ecologically-Based Approach	Green Corridors, Green Infrastructure Systems
	Preservation of Important Values for the City	Contribution to Urban Ecology
	Availability of Open Green Spaces	Mosque, Historical Houses, Statues, Monumental Trees, etc.
	Sustainability of Natural Structures	Integration of the Area with the City's Green Infrastructure
Landscape design	Internal Accessibility	Pedestrian Accessibility, Bicycle Accessibility, Parking Facilities
	Activity Areas	Seating and Rest Areas, Dining Areas, Viewing Areas Children's Play Areas
	Homogeneous Distribution of Open-Green Areas Within the Site	Balance Between Hard and Soft Surfaces Within the Site
	Use of Plant Materials	Identification of Existing Plants

	Use of Water Features	Adequacy of Water Surfaces Homogeneous Distribution of Water Features Within the Area Continuity of Water Features
	Amenities (Seating Units, Shelters, Trash Bins, Lighting Fixtures, etc.)	Maintenance, Availability
	Energy-Efficient Solutions in Landscape Design	Energy-Efficient Solutions in Amenities
Socio-Economic Structure	User Profile	Intensity of Area Usage, Usage Conditions of the Area
	Presence of Activities that Enhance Standard of living wthin the area	Existence in the area
	Effects on Urban Welfare and Quality of Life	Existence in the area
	Impacts on Economic Development	Existence in the area
	Safety	Usage of the Area

3. Findings

To evaluate the Urban landscape planning approach applied to the study area, the urban regeneration process occurring in the Sular Vadisi region, the definition, purpose, and objectives of the project created through urban regeneration, and the urban regeneration planning decisions that integrate urban landscape elements have been addressed. Furthermore, topics considered in this study's urban regeneration context have also been discussed.

3.1. Urban Transformation Process of the Area

The scope of the urban regeneration project in the area is established in a location lagging behind modern service standards. The low urban quality of the region and the high level of visual pollution have led to the area becoming a deteriorating urban environment, highlighting the necessity for the transformation of the Sular Vadisi region. This need has been evaluated through an urban landscape planning Approach (Figure 2).

Figure 2. Transformation process of the study area [18-20]

3.2. Definition, Purpose, and Objectives of the Project

The project area is located in the Sular Vadisi region of Yıldırım district in the city center of Bursa, specifically on Balabancık Street. Sular Vadisi Nature Park covers approximately 28,600 m² and aims to enhance the value of the surrounding neighborhoods, including Mollaarap, Karamazak, Piremir, Namazgah, Teferrüç, Umurbey, and Kurtoğlu.

The implementation of the project is intended to transform Sular Vadisi Nature Park into a focal point for the surrounding neighborhoods of Kurtoğlu, Umurbey, Namazgah, Yenimahalle, Karamazak, Piremir, and Teferrüç, providing direct services to approximately 70,000 to 80,000 residents in the area. Several selection criteria were considered when determining the Sular Vadisi Urban Regeneration project area. These include the location of the area in the city center, the absence of recreational spaces accessible to residents, the prevalence of squatter settlements, security issues, and the need for green Spaces. In light of these deficiencies and challenges, the purpose of the Sular Vadisi Nature Park Urban Regeneration Project, as stated by the Yıldırım Municipality, is to transform unhealthy squatter neighborhoods into livable urban areas, to create socio-cultural and recreational spaces within the city [21].

3.3. Urban Regeneration Planning Decisions

In areas where urban density is high, the status of these areas has been changed to "Park and Green Space" and "Municipal Service Area" through revisions made by the relevant municipalities. According to the planning decisions within the urban regeneration process, this area has been defined as a "Park and Green Space and Municipal Service Area" in revising the 1/25000 scale Central Planning Area Master Development Plan. In the approved plan amendment, upon reviewing the higher-scale planning decisions related to the planning area, it has been determined that the city center will be decentralized, and decisions for low-density residential areas will be established. The reasons for this plan amendment have also been articulated, which include [22]:

- The overall density in the city is excessively high, leading to a significant demand for amenities,
- There are structures built in riverbeds and flood areas,
- The buildings are vulnerable to earthquakes, with some reaching the end of their physical lifespan. In contrast, others have lost earthquake resistance due to unhealthy materials and poor artistry,
- There has been a significant amount of illegal construction in the area, which not only negatively impacts developed parcels but also hinders the development of vacant parcels by zoning decisions. Illegal construction can sometimes block access to other parcels, forcibly intervene in properties, or obstruct the realization of amenity areas by occupying spaces intended for such purposes,
- In the 1/100,000 Scale Bursa City Master Plan for Residential and Social Amenities conducted by Bursa Metropolitan Municipality, it was determined that in Yıldırım District, there is only 0.57 m² of green space, 0.64 m² of primary education facilities, and 0.2 m² of places of worship per person, which is significantly below the standards specified in the regulation,

As a result of these reasons, the plan amendment has been approved. Following the plan change, the "Yıldırım Municipality Yeni Mahalle Sular Vadisi Nature Park and Recreation Area Urban Design, Architecture, and Landscape Planning Project" has been prepared by Yıldırım Municipality. Plan Decisions: According to the plan amendment made in the planning area [22]:

- The area designated for the mosque has been expanded with existing records and structures surrounding the mosque area,
- The "Municipal Service Area" to the north of the mosque area has been defined as having the functions of "Neighborhood Office, PTT, Public Education Center, Local Center.",
- The "Municipal Service Area" on the southern boundary of the planning area has been defined with the functions of a "Social and Cultural Center," and construction conditions have been established. The northwest boundary of the Municipal Service Area has been aligned with the boundaries of the River Rehabilitation Basin Plan.,
- The "river rehabilitation area," incorporated into the plan due to a letter from the Metropolitan Municipality General Directorate of Water and Sewerage Administration to Yıldırım Municipality, has been removed as a result of the plan amendment, and the boundaries related to the lines have been transferred to the plan change,
- The planned park area has been increased, and the potential uses within the park area have been delineated through planning notes,

Planning Notes for Park Areas (22): In park areas, facilities such as open and closed parking, underground parking, childcare areas, electrical units, water reservoirs, and material storage may be included. The park area may also accommodate public parking, restrooms, childcare facilities, administrative offices, a prayer room, a technical room, and a generator room beneath the ground.

4.4. Issues Considered in Urban Transformation (Economic, Social, Spatial-Physical, Organizational, Legal-Administrative)

Sular Vadisi Nature Park, known as the Cultural Park of Yıldırım District, is one of the projects aimed at adding value and vision to the district. In this project, 144 squatter buildings were expropriated and demolished, giving way to the Sular Vadisi Nature Park, which features water themes and green area amenities. Spanning a total area of 28,000 square meters, the park is designed with 70% green-themed spaces. Within the park, various units have been planned, including an artificial pond, terraced seating areas, viewing terraces themed after Garden of Babylon, shaded seating/resting areas, resting corners along the paths, pools, waterfalls, children's play areas, walking trails, a mosque, an Ottoman fountain, a municipal service building, an outdoor gym area, and a model petting zoo. Sular Vadisi Nature Park has been selected as an essential social space where residents and families of Yıldırım can spend time, serving as an urban transformation area. According to information obtained from discussions held at Yıldırım Municipality, the decision-making mechanism for the transformation project is Yıldırım Municipality. Following the plan amendment decision of the Bursa Metropolitan Municipality Council dated 29.05.2015, the urban transformation project was decided upon and implemented by the Yıldırım Municipality. The total contract amount for the project has been signed at 24,750,000.00 TL. As part of the project, the following areas have been defined: total parking area: 1,630 square meters; children's play and sports area: 383.58 square meters; walking paths: 6,865.91 square meters; total green areas: 9,853.31 square meters; natural

lake area: 1,525 square meters; terraced gardens (Garden of Babylon) total area: 3,206.88 square meters; and total service building area: 1,426.92 square meters.

The study area has a dense historical development. Most of the structures in the northwestern part of the region have been illegally constructed in recent times. According to the Sular Vadisi Urban Transformation Project, squatter areas have been demolished, and the project area is situated within the city as a socio-cultural and recreational space. This area, defined by urban transformation, has functional zones for socio-cultural and recreational purposes. These zones include areas for social activities, seating areas around the pond, recreational and viewing areas, terraced seating areas, Garden of Babylon - viewing terraces, children's play areas, walking paths, a mosque, and a service building [23]. Sular Vadisi Nature Park has been designed and implemented as a neighborhood park to serve approximately 70,000 residents. The area served by the project has been determined based on the population ratios of the surrounding neighborhoods. Users engage with the recreational space and interact with one another [21].

5.5. Evaluation of the Current Condition of the Area – Assessment of Urban Landscape Planning and Design Approach Based on Implemented Applications

The first four points illustrate the formation process and current status of the Sular Vadisi Urban Transformation Project. At this stage, the area designated as green and park space within the urban transformation area has been assessed under the urban landscape planning and design framework. The contributions of this area to urban transformation objectives and landscape have been examined based on urban landscape planning and design principles.

Contributions of Urban Landscape Planning to the Area:

- Transportation: The area lacks a rail system for transportation, provided instead by public transport, private vehicles, or pedestrian access.
- Ecologically Based Approach: A green infrastructure system has been designated in the area, contributing to urban ecology due to the absence of city parks in the surrounding neighborhoods.
- Preservation of Important Values for the City: Since the project area emerged from demolishing squatter settlements, significant values for the city were not preserved. However, the mosque within the area has been preserved and evaluated within the project framework.
- Existence of Open Green Spaces: The integrity of green space within the city's green infrastructure could not be achieved due to numerous developments in the vicinity.
- Sustainability of the Natural Structure: No areas within the natural landscape character require protection or rehabilitation. The area does not relate to the natural landscape character.

Landscape Design:

- Internal Transportation: There are no bicycle paths within the area. The allocated parking space is insufficient for users. While pedestrian access exists, the area's

topography features tiered transitions. These tiered transitions are addressed along the pathway with stairs, but adequate space for ramps has not been provided, compromising comfort on pedestrian pathways. The design does not consider all users.
- Activity Areas: The project area includes rest areas, children's play areas, and dining areas, creating spaces for users to engage in various activities.
- Homogeneous Distribution of Open Green Spaces:The balance between hard and soft surfaces within the area has not been achieved.
- Use of Plant Material: While suitable plants for the area have been used, non-native plants have also been selected.
- Use of Water Elements:The water feature is designed as a pool in the central part of the project area and as a valley in another section, creating a homogeneous effect and ensuring continuity.
- Amenities:Urban furniture (seating units, trash bins, lighting elements) is present in the area, and there are no issues regarding maintenance or accessibility. No canopy elements have been observed.
- Energy-Efficient Solutions in Landscape Design: No energy-efficient solutions have been identified in the amenities.

Socio-Economic Structure:
- User Profile:The area, evaluated as a neighborhood park, comprises a user profile of residents from surrounding neighborhoods visiting with family members. It serves both the neighborhood and surrounding settlements.
- Existence of Activities that Enhance Living Standards: The area features rest areas, dining spaces, social amenities, children's parks, green spaces, and water features that enhance living standards.
- Effects on Urban Welfare and Quality of Life: The transformation of the previously squatter area has provided positive impacts that enhance the living standards of the surrounding community.
- Economic Development Effects: Approximately 70,000 to 80,000 individuals in the area for recreational activities at different times throughout the week contribute economically to the project area and the commercial spaces nearby.
-Security: Social and physical measures are not taken during night use and entrance and exit of the area
The Current Condition of the Area – The Urban Landscape Planning and Design Approach Based on Implemented Applications (Figure 3) has been evaluated in Table 2.

Table 2. Evaluation of the urban landscape planning and design approach of the study area

Components of Urban Landscape Planning	Criteria	Evaluations	Competence
Contributions of Urban Landscape Planning to the Area	Transportation	Accessibility to the Area (Relationship with the City)	+
	Ecologically-Based Approach	Green Corridors, Green Infrastructure Systems	+
	Preservation of Important Values for the City	Contribution to Urban Ecology	+
	Availability of Open Green Spaces	Mosque, Historical Houses, Statues, Monumental Trees, etc.	-
	Sustainability of Natural Structures	Integration of the Area with the City's Green Infrastructure	-
Landscape Design	Internal Accessibility	Pedestrian Accessibility, Bicycle Accessibility, Parking Facilities	-
	Activity Areas	Seating and Rest Areas, Dining Areas, Viewing Areas, Children's Play Areas	+
	Homogeneous Distribution of Open-Green Areas Within the Site	Balance Between Hard and Soft Surfaces Within the Site	-
	Use of Plant Materials	Identification of Existing Plants	-
	Use of Water Features	Adequacy of Water Surfaces Homogeneous Distribution of Water Features Within the Area Continuity of Water Features	+
	Amenities (Seating Units, Shelters, Trash Bins, Lighting Fixtures, etc.)	Maintenance, Availability	+
	Energy-Efficient Solutions in Landscape Design	Energy-Efficient Solutions in Amenities	-
Socio-Economic Structure	User Profile	Intensity of Area Usage, Usage of the Area	+
	Presence of Activities that Enhance Standard of Living Within the Area	Existence in the area	+
	Effects on Urban Welfare and Quality of Life	Existence in the area	+
	Impacts on Economic Development	Existence in the area	+
	Safety	Usage of the Area	-

(a) Hard ground density of the project area

(b) Appearance of plants that do not belong to the region in the project

(c) Use of water element in the project

(d) Some plants used in the project

Figure 3. General situation of the study area (a) Hard ground density of the project area (b) Appearance of plants that do not belong to the region in the project (c) Use of water element in the project (d) Some plants used in the project

4. Discussion and Conclusion

In Our Country, rapid population growth continues due to migration from rural to urban areas. This excessive population growth lays the groundwork for changes in social structure and leads to settlement issues. Today, the patterns and trends of settlement that have persisted for over half a century make improvements at all scales inevitable for various reasons.

Urban transformation projects have been carried out in many parts of the world, including Norway's Fjord City, Barcelona's Poblenou Project, and Ankara's Portakal Çiçeği Valley and Dikmen Valley. It has been observed that the presence of green spaces holds great significance in all examined urban transformation projects. All urban transformation initiatives that involve change, reorganization, and renewal emphasize using open and green spaces to enable cities to develop more healthily. Evaluating these projects reveals that approaches are considered within their own boundaries and in relation to their surroundings. Similarly, the importance of open and green spaces, as well as their ecological compatibility with the city's natural structure, has been supported in these projects. It has been noted that a holistic approach, rather than a fragmented one, is essential in urban landscape planning, as evidenced by the projects under review. Solutions that cater to the recreational needs of users and simultaneously strengthen the

city's image have also been evaluated within urban transformation projects. Developing planning and design proposals that meet users' recreational needs has emerged as a significant goal [6, 24-30].

Urban transformation must sustainably and comprehensively rehabilitate problematic structures, particularly in the face of the physical destruction of historical centers, while reintegrating informal settlements and abandoned urban areas into the city through redevelopment [26, 31].In this context, the Yıldırım Sular Vadisi Nature Park Urban Transformation Project has been evaluated regarding its contributions to urban landscape planning. The Sular Vadisi Project is an excellent example of other planned projects in Bursa, functioning as a buffer zone between various neighborhoods in the city. Such urban transformation is implemented as a buffer zone to eliminate mutual negative impacts between different types of land. The Sular Vadisi has been cleared of unplanned construction, and its transformation into an ecological corridor is a significant foundation for this project.

When evaluating the Yıldırım Sular Vadisi Urban Transformation Area from the perspectives of urban landscape planning, design, and socio-economic structure, the contributions of the urban transformation process to the urban landscape can be assessed through various criteria: transportation (the relationship between the area and the city), ecological-based approaches (green corridors, green infrastructure systems, contributions to urban ecology), protection of significant urban values (such as mosques, historical houses, sculptures, monuments, etc.), the existence of open green spaces (the integration of the area with the city's green infrastructure), and the sustainability of natural structures (areas that need to be preserved or rehabilitated within the natural landscape character). According to evaluations, the Sular Vadisi Urban Transformation Area supports pedestrian access for both public transport and private vehicles and surrounding neighborhoods. However, the transportation infrastructure is deemed insufficient due to its location in the old city center. Considering the area’s contribution to the urban infrastructure systems, it has been emphasized that it should be envisioned as an open and green area, supporting ecological approaches rather than transforming it into urban land. Preserving and revising the mosque and its surroundings add significant value in protecting important urban assets. However, the area is not well integrated with the city's green infrastructure nor exhibits coherence with the natural landscape character.

When assessing the area from a landscape design perspective, factors such as internal circulation, activity areas, the homogeneous distribution of open-green spaces, plant materials, water elements, amenities, and energy-efficient solutions were considered. The landscape design criteria of the Sular Vadisi Urban Transformation Project were adequate in terms of activity areas. Accordingly, landscape amenities are also sufficient, and water elements are deemed satisfactory. However, internal circulation is not aligned with design principles for all users; in some areas, ramps for individuals with disabilities have not been considered for stair use. The landscape design of the area has failed to achieve a balance between hard and soft surfaces. The transformation of Sular Vadisi from unplanned construction to an open green area has reduced construction density in the

Yıldırım district. However, it has been noted that the design phase was dominated by hard surfaces, which poses a disadvantage. Additionally, there is a lack of variety in current uses, and the use of native plant species is minimal. There are also no energy-efficient solutions in the landscape.

An analysis of the area transforming's economic, social, and physical conditions must be conducted, and planning should be based on this analysis. When making decisions for these areas, the socio-economic processes should be evaluated alongside the city's physical structure. A decision-making process designed to address urban transformation issues should facilitate feedback and collaboration between decision-makers and users while involving local communities, initiatives, and citizens in the implementation process. The urban transformation process observed in Sular Vadisi has primarily focused on the physical aspects of transformation, neglecting social and economic dimensions, which are crucial in this context. The presence of uses that prioritize public accessibility, activities that will enhance living standards, and their impacts on urban welfare and quality of life and their effects on economic development should also be evaluated. In the case of Sular Vadisi, it has been identified that the project contributes positively in this regard. Currently, access to the recreational area in Sular Vadisi is not monitored, and security measures should be implemented to ensure that area users feel safe.

As a result of this study, the goals that would ensure the sustainability of the Sular Vadisi Project and serve as a foundation for the urban landscape planning process have not been clearly defined. Strategies that align with planning strategies for other areas of the city and clearly outline the transformation project's long-term objectives have not been identified. The connection between the area, which has undergone a functional change due to transformation, and the city’s green infrastructure has not been explicitly established. However, its relationship with adjacent settlements has improved, providing users with open spaces and recreational opportunities. Restoring the city's lost open and green spaces to create natural, cultural, and social areas for urban residents is vital for both the city and its citizens. The green space system must be regarded as an integral part of the city, and urban landscape planning should be approached in a way that integrates other green spaces, users, and other areas of the town into a whole. In this context, the Sular Vadisi Project realized through urban transformation, has been evaluated in terms of urban landscape planning components. Designed as an urban recreation area, the Sular Vadisi Nature Park Urban Transformation Project serves as a space where citizens can meet their daily socialization needs. It represents a project that will serve as a reference for guiding the future economic, structural, and cultural potential and development dynamics of Yıldırım district. Examining urban landscape planning components in more detail can achieve integration with urban green infrastructure systems, ensuring sustainability. This will contribute to the social and physical integrity of the city. Furthermore, when viewed from this perspective, it is possible to develop various green infrastructure projects related to Sular Vadisi, thus ensuring coherence in green infrastructure and urban landscape systems, contributing to urban ecology.

Conflict of Interest
There is no conflict of interest regarding this article**.**

Author Contribution
Authors contributed equally.

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