Düzce University
Journal of Science & Technology

Research Article

Landscape Design Proposal in Public Spaces: A Case of Düzce Uzun Mustafa Neighborhood

Özlem ÖZKAN ÖNÜR [a], Eda KAYA,[b] Özgür YERLİ [b,*]

[a] *Department of Architecture, Faculty of Engineering and Architecture, İstanbul Niişantaşı University, İstanbul, TURKEY*
[b]*Department of Landscape Architecture, Faculty of Forestry, Düzce University, Düzce, TURKEY*
* *Corresponding author's e-mail address: ozguryerli@duzce.edu.tr*
DOI: 10.29130/dubited.1522861

ABSTRACT

Public spaces are considered a critical process that determines the initial spatial perception of an individual in their environment and shapes their experiences and memories. These spaces include public buildings, open areas, and locations that are in constant interaction with the surroundings. The analysis of the landscape features of the physical environment aims to create an interaction between different uses in urban landscape design and to transform a busy street into a livable area. The surroundings of public buildings such as the Düzce Governorship Meteorology Directorate, Düzce Vocational School, and library in the Uzun Mustafa neighborhood of Düzce have passive urban open and green areas. In this study, the mentioned areas were evaluated, the landscape features of the physical environment were analyzed, and revision proposals related to urban landscape design were made. By utilizing the satellite image and zoning plan of the study area, it was aimed to eliminate elements that cause confusion in human psychology according to urban and landscape features. In the method of the study, internal and external factors were considered based on the project design processes of the area, and a SWOT analysis was conducted to minimize the impact of weaknesses and elements that pose threats in the area. As a result, this study aimed to create a more livable space that meets the needs of users in areas with passive, unused or undesigned surroundings of public buildings and to contribute more effectively to the daily life of the community in spaces with different functions.

Keywords: *Düzce, Environment, Landscape design, Public spaces, Urban.*

Düzce Uzun Mustafa Mahallesi: Kamusal Alanları Yeniden Canlandırma İçin Peyzaj Tasarım Önerileri

ÖZ

Kamusal alanlar, bireyin yaşadığı çevredeki ilk mekân algısını belirleyen ve deneyimlerini, anılarını şekillendiren kritik bir süreç olarak kabul edilir. Kamu binaları, açık alanlar ve çevre ile sürekli etkileşim halinde olan mekanlar bu alanları oluşturur. Fiziksel çevrenin peyzaj özelliklerinin analizi, kentsel peyzaj tasarımında farklı kullanımlar arasında bir etkileşim yaratmayı ve yoğun bir caddeyi yaşanabilir bir alan haline getirmeyi hedefler. Düzce Uzun Mustafa mahallesindeki Düzce Valiliği Meteoroloji Müdürlüğü, Düzce Meslek Yüksek Okulu ve kütüphane gibi kamu binalarının çevreleri pasif kentsel açık ve yeşil alanlara sahiptir. Bu çalışmada, bahsi geçen alanların değerlendirme çalışmaları yapılarak fiziksel çevrenin peyzaj özellikleri analiz edilip kentsel peyzaj tasarımına ilişkin revizyon önerilerinde bulunulmuştur. Çalışma alanının uydu görüntüsü ve imar planından yararlanılarak kentsel ve peyzaj özelliklerine göre insan psikolojisinde karmaşaya sebep olan unsurların giderilmesi amaçlanmıştır. Çalışmanın yönteminde, alanın proje tasarım süreçlerine dayanarak iç ve dış faktörler göz önünde

Received: 26/07/2024, Revised: 18/10/2024, Accepted: 25/11/2024

bulundurulmuş, zayıf yönler ve alanda tehdit oluşturacak unsurların etkisini minimalize etmek için SWOT analizi yapılmıştır. Sonuç olarak bu çalışma ile mevcutta pasif, kullanılmayan ya da çevresi tasarlanmamış kamu yapılarının bulunduğu alanlar için kullanıcı ihtiyaçlarına yönelik daha yaşanabilir bir mekan oluşturulmuş, farklı işlevlere sahip mekanlarda toplumun günlük hayatına daha etkili bir şekilde katkı sağlanması hedeflenmiştir.

Anahtar Kelimeler: *Düzce, Çevre, Peyzaj tasarım, Kamusal alan, Kent.*

I. INTRODUCTION

The term "public" generally means "open to general use", so it refers to public spaces, urban areas that everyone can access and use [1]. The concept of public space is used to help develop the design, management, and usage of spaces [2]. Public spaces are areas where the lifestyles of communities are determined and where social interaction is central. The streets, squares, and parks of a city shape social life and at the same time create common living spaces through play and relaxation areas. These spaces are formed through places where people can meet their recreational needs and interact. Therefore, it is expected that landscape design studies in these areas will have the capacity to meet the needs of users from all segments of society [3]. While emphasizing the importance of public spaces, public welfare, visual enhancement, environmental health, and economic development are identified as the most important goals [2]. In this context, the planning and management of public spaces aim to create a sustainable and livable public living space, not only by organizing physical spaces but also by organizing the social and cultural fabric of society. This perspective requires a more comprehensive understanding to be adopted in the design and management of public spaces [4]. The creation of perceptible and aesthetic spaces is realized with the designer's foresight. In the outdoor design of public institutions and organizations; it is necessary to take into account the preservation of environmental character, the provision of inside-outside space relationship, the continuity of urban fabric, accessibility, symbol creation, formality, perceptibility, visuality, and aesthetics [5].

When landscape design is done in public buildings and their surroundings, the diversity of users, the wide age range, and economic reasons restrict the design [6-7]. The more the complexity of the structure to be designed and its context increases, the challenges faced by the designer also grow proportionally. This complexity is not only related to the functions of the structures or the environmental factors designed, but also to the complexity of urban scale designs. Urban design is a process that shapes the physical features of a certain environment and expands the physical list of structures [8]. The site selection of the area chosen for design, examination of ecological features, determination of the traditional architectural approach, creation of the needs program, design of floor plans and facades, walls, windows, decorations, and landscape arrangement principles can be evaluated as a whole [9]. The designer also needs to consider the factors affecting the physical qualities of a certain environment on a broader scale. Public buildings and their surroundings are seen as common areas that not only meet people's daily needs but also carry out cultural activities and bring society together [10]. Public spaces, an environment where unique human phenomena such as values, culture, language are brought to life; are subjects that bring together in a common denominator in an economic, political and social context [11]. Humanity has strived for years with the desire to beautify, improve, and make the space they live in more livable. Landscape architecture studies aim to create more livable environments for people, adhering to this philosophy. Historical developments have shown that humans have gone through many changes and development processes to reach different goals. Landscape architecture is a discipline that plays a critical role in shaping the design in terms of the space and purpose of the area to be designed. This discipline conducts various studies in rural and urban areas [12]. Urban areas are largely defined by buildings but are regions that extend beyond buildings. These areas emerge as a result of collective living and include different types of spaces [6].

The El Raval district of Barcelona, once synonymous with crime and poverty at the end of the 20th century, has transformed into a cultural hub through the local government's urban regeneration projects. El Raval, revitalized by the restoration of historic buildings, the opening of art galleries, the

establishment of museums, and the presence of universities, has become an attractive destination for both tourists and locals. Projects such as Park Güell and the Barcelona Pavilion have also contributed to this transformation by emphasizing the importance of public spaces [27]. Urban regeneration refers to planned interventions aimed at halting physical, social, and economic decline in cities and revitalizing urban life. This process particularly targets rejuvenating outdated or dysfunctional urban areas, improving environmental quality, and strengthening social structures. Urban regeneration repurposes urban spaces while preserving historical fabric, restores economic vitality, and enhances societal benefits.

Successful urban revitalization examples from around the world demonstrate the multifaceted nature of this concept:

- The Edinburgh Design Guidance has provided a revitalization that respects cultural heritage by focusing on new development areas in the city. By prioritizing local context and urban character in design processes, it aimed to improve public spaces to meet user needs.
- The Bath Pattern Books managed the revitalization process by preserving the historical and architectural heritage of public spaces, focusing on creating sustainable, accessible, and livable spaces. In this process, the cultural fabric of the city was preserved while being enriched with modern design principles [28].
- The Blyth Urban Design Guide developed a revitalization strategy that made the city more attractive by preserving the visual and functional characteristics of the historic city center. This process, carried out in collaboration with local people, also improved the social and economic structure of the city [29].
- The Tonsley Urban Design Protocol presented an approach aimed at increasing the active use of urban space. Making public spaces more accessible and vibrant for social and cultural interaction was one of the main goals of this revitalization process.
- The Hong Kong Urban Design Guidelines developed a revitalization process aimed at increasing pedestrian mobility and the sustainability of public spaces. This process demonstrated how public space quality can be improved in a high-density city.
- The Cambridge Urban Design Guide presented a heritage-sensitive urban revitalization strategy by focusing on historic buildings and streetscapes. This guide developed proposals that increase the functionality of public spaces while preserving the city's identity.
- The San Francisco Urban Design Guide aimed to create a more livable environment that meets user needs by improving the urban fabric and public spaces. In the revitalization process, it was aimed to establish strong connections between indoor activities and public spaces.

These examples demonstrate that urban revitalization is a comprehensive process that encompasses not only physical but also social, cultural, and economic dimensions [30]. The more complex the structure to be designed and its contexts, the greater the challenges faced by the designer. This complexity is related not only to the functions of the structures or the designed environmental factors, but also to the complexity of urban-scale designs. Urban design, in particular, is a process that challenges the physical characteristics of a specific environment and is not limited to merely expanding the physical list of structures. This, when expressed in academic terms, requires the designer to address the factors affecting the physical qualities of a specific environment in a broader scope. For example, the Rector's Residence Design Process and Architectural Project at Bartın University Campus was approached holistically. In this process, fundamental stages such as site selection, examination of ecological features, determination of the traditional architectural approach, and creation of the needs program were completed [8]. Additionally, the design of floor plans and facades, walls, windows, decorations, and landscaping principles were considered as important parts of this whole [9]. In the study titled "Evaluation of the Front Garden Landscape Design Study of Erzurum Metropolitan Municipality Building in the Context of Design Principles", data collection, examination, and on-site observation studies were carried out following the literature review. After the current situation and analysis studies, evaluations were made within the framework of design criteria, emphasizing the importance of creating identity in urban design and designing areas suitable for the city [3]. In the examination study of the design process of the

pedestrian zone located in Düzce University Campus; steps such as identifying problems, collecting and analyzing the current situation and data, evaluating and correlating these analyses, creating stain diagrams in line with the main design principles, and finally producing preliminary, implementation, and detail projects were followed [13]. In studies evaluated within the context of Landscape Design Principles, after the literature review, data collection, examination, and on-site observation studies are carried out. After the current situation and analysis studies, evaluations are made within the framework of design criteria [3]. Steps such as identifying the problems, collecting and analyzing the current situation and data, evaluating these analyses and associating them with each other, creating stain diagrams in line with the design main principles, and finally producing field application and detail projects are followed. This process emphasizes the importance of creating identity in urban design and designing suitable areas for the city [13]. Advancements in transportation and communication technologies have left significant impacts on social structure and urban space with the evolution of the global economic order. However, these developments have led to the fragmentation of public life and increased physical distance between individuals. Social media platforms have accelerated this process by creating virtual gathering spaces and moved individuals' social interactions to the virtual environment. This situation has contributed to the increase of closed residential areas and social segregation. Additionally, the Covid-19 pandemic confined people to their homes last year and this situation has made the need of society for quality public spaces more evident. Therefore, the importance of public spaces and the contribution they provide to social unity has gained more importance with the new normals. It emphasizes the need for cities to consider these changes and needs when designing public spaces. Detailed proposals and evaluations related to this subject have been determined by the authors and presented in Table 1.

Table 1. *Landscape design suggestions and principles in public building environments [14],[15].*

	Principles	**Landscape Design Proposal in Public Building Environments**
1	Land Use Planning	Planning of general land use, creating balanced housing, commerce and green spaces
2	Accessibility	Enhance accessibility to public spaces by adding wheelchair-friendly paths, ramps, and seating areas
3	Green Spaces	Creating extensive green areas that include various plant species, trees, and grass areas, encourages the public to become intertwined with nature
4	Ecological Balanced Design	Use of landscape elements that are respectful to natural ecosystems, support biodiversity, and are compatible with local flora
5	Reducing Carbon Footprint	Strategies that include afforestation projects, carbon emission reducing design elements, and sustainable transportation alternatives
6	Social Participation	Strengthening social ties by creating multi-purpose public spaces that can meet the needs of various communities
7	Sustainable Material Use	The preference of recyclable materials and the use of environmentally friendly building materials
8	Active and Passive Fields	Designing active usage areas such as sports fields, walking paths, and passive usage areas such as rest and seating areas in a balanced way.

Table 1 (cont). *Landscape design suggestions and principles in public building environments [14],[15].*

9	Child-Friendly Design	The addition of landscape elements that encourage the participation of children, with playgrounds, entertainment, and education elements
10	Health	The creation of areas that encourage physical activity, such as outdoor sports fields, health tracks, and yoga areas
11	Healthy Nutrition and Agriculture	Creating small agricultural areas within the neighborhood to provide access to healthy food and agricultural products
12	Security	Providing security measures, lighting systems, and safe walking areas in public spaces
13	First Aid Points	To ensure quick intervention in emergencies, it is necessary to identify and equip first aid points within the neighborhood
14	Disaster Preparedness and Safe Shelters	Planning of safe shelters to ensure they are prepared for disaster situations
15	Public Hygiene and Cleaning	Provision of public toilets, garbage bins, and regular cleaning services

This table states the fundamental principles that influence landscape design proposals around public buildings. In land use, strategies such as promoting mixed uses and focusing on access to public transport are highlighted. In public spaces, the importance of social interactions, accessible housing, tolerance, and dialogue are emphasized. In transportation, factors such as encouraging the use of public transport, walking and cycling, healthy living design, and traffic safety are prioritized. In the health category, protecting public health is important. In safety, the protection of fundamental rights and freedoms and the provision of general security are emphasized. In the design category, respect for local culture, aesthetic values, and the transfer of traditional architectural styles to future generations gain importance. In the field of education and culture, a broad perspective is offered, such as preserving traditions and involving children in urban planning processes. The combination of these principles ensures that cities are sustainable, diverse, and human-centered.

In this study, landscape design suggestions for the public buildings surrounding the Uzun Mustafa neighborhood in Düzce City (Turkey) have been made. These suggestions aim to enhance the quality of life for the residents of the neighborhood, increase social interaction, and create a public space that can meet various needs. It also focuses on organizing green spaces, social activity centers, transportation facilities, safe routes, and various public services by supporting the sustainability of the neighborhood. It aims to improve the safety, health, and living standards of the neighborhood residents by emphasizing the importance of critical issues like health, safety, and land use. With the implementation of these suggestions, it is expected that the Uzun Mustafa neighborhood of Düzce City will become a livable environment and provide a public space that can meet the various needs of its residents.

A detailed analysis of the current situation has been conducted for the revitalization of public spaces in Düzce Uzun Mustafa Neighborhood. During this process, elements such as the physical infrastructure of the neighborhood, its social structure, economic situation, and the use of public spaces have been examined. It is emphasized that the area needs revitalization due to the decrease in its attractiveness, the dysfunctionality of public spaces, and infrastructure problems. Proposals for the neighborhood include increasing green spaces, strengthening infrastructure, and implementing economic and social revitalization projects. Taking into account the views of local residents during this process is also of great importance.

Lynch Analysis is a method used in urban design to make cities more legible and understandable. It is based on Kevin Lynch's five key concepts: Edges, Districts, Paths, Nodes, and Landmarks.

- Edges: These are boundaries that separate different areas. Clarifying these boundaries in design facilitates wayfinding.
- Districts: These are urban areas with similar characteristics. In design, the identity of these areas is strengthened.
- Paths: These are the main lines along which people move. They are organized to improve transportation and accessibility.
- Nodes: These are important points where paths intersect. These areas are significant for social interaction and wayfinding.
- Landmarks: These are distinct structures that define the city and aid in wayfinding. They are emphasized in design.

Lynch Analysis contributes to making spaces more functional and user-friendly in urban design by using these elements. As shown in Figure 1, the relationship of Kevin Lynch analysis to the field of study is given.

Figure 1. *Relating Kevin Lynch analysis to the field of study*

II. MATERIAL AND METHOD

A. PHYSICAL STRUCTURE OF DÜZCE PROVINCE

The province of Düzce, located between two metropolitan cities, is surrounded by the provinces of Bolu in the east, Sakarya in the west, and Zonguldak in the northeast. The boundaries of Düzce province are formed by Hendek district in the west, Kocaali district in the northwest, Alaplı district in the northeast, the Black Sea in the north, and the Elmacık Mountains in the south, and it is surrounded by mountain masses. Its total area is 2492.44 km², located between 40°50' north latitude and 31°40' longitude. Its coastline to the Black Sea is approximately 30 km. Kaplandede Mountain is located in the north, Orhan Mountain in the northeast, Bolu Mountains in the east, Elmacık Mountains in the south, Çamdağ in the west, and Muhapdede Mountain in the southwest. The elevation of the hills located here reaches up to

1830 meters at most. The highest point of the field is Kardüz Peak (1830 m) located on the Elmacık Mountains that form the southern border, and the lowest point is Efteni Lake (109 m) located in the southwest [16]. The map provided in Figure 2 illustrates Düzce's location in Turkey and its borders with neighboring provinces.

Figure 2. *Location of Düzce province [17].*

B. UZUN MUSTAFA NEIGHBORHOOD

According to the 2022 ADNKS (Address Based Population Registration System) population census results, the population of Uzun Mustafa neighborhood in the central district of Düzce province is 5,901. Of this population, 2,801 are male, and 3,100 are female. Uzun Mustafa neighborhood is located in Düzce province, in the Aziziye (Günlü) district connected to the center of Düzce. The location of the neighborhood map has ‘‘40° 50' 37.8996’’ North and ‘‘31° 8' 52.2528’’ East GPS coordinates.

The distance from Uzun Mustafa neighborhood to the city center of Düzce is approximately 1 kilometer. As shown in Figure 3, the location of Düzce/Uzun Mustafa neighborhood, the satellite images of the neighborhood in Figure 4, and photographs from Uzun Mustafa neighborhood can be seen in Figure 5.

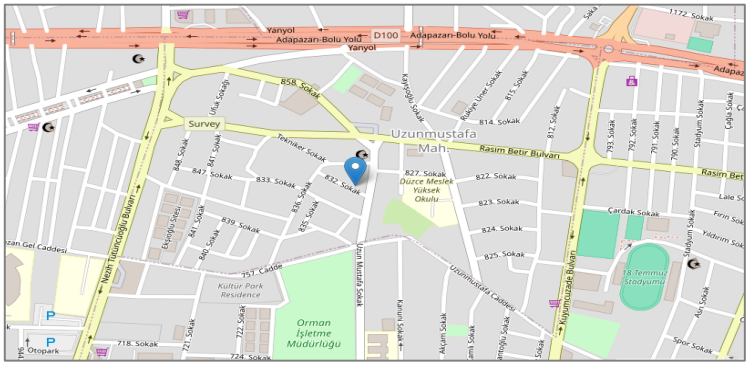

Figure 3. *The location of Düzce/Uzun Mustafa neighborhood in Düzce province [19].*

Figure 4. *Satellite images of Düzce/Uzun Mustafa neighborhood in Düzce province [18].*

Figure 5.*Views of Düzce/Uzun Mustafa neighborhood in Düzce province.*

The material of the study includes landscape design suggestions for the Düzce Governorship Meteorology Directorate building, High School and library building located in Uzun Mustafa neighborhood of central district of Düzce province. After a literature review, data collection, review and on-site observation studies were conducted, photographs of the area were taken and evaluations were made. Based on the data obtained from the relevant institutions and organizations, and the results of on-site observations obtained during field studies, the determination, interpretation and application of the functional approach criteria considered in the landscape design process of these structures were examined. Aesthetic criteria considered in the design of the area, public space design principles and basic design principles were evaluated.

A landscape design for the working area has been created using AutoCAD. This design was developed taking into account the topography of the area, existing vegetation, and environmental factors. Additionally, SketchUp software was used to provide a three-dimensional visualization of the project and enable a more realistic presentation of the buildings.

The study was carried out in five stages:

- In the first stage, data related to the research topic was obtained by scanning the literature.
- In the second stage, a land survey was conducted to examine the current situation of the research area and its surroundings, and it was evaluated within the framework of landscape design principles.
- In the third stage, the image map of the area was prepared based on the criteria used in Lynch's visual analysis.
- In the fourth stage, the strengths and weaknesses of the area, as well as threats and opportunities, have been identified through a SWOT analysis.
- In the fifth and final stage, proposals have been presented that will improve socio-cultural life and ensure cultural continuity based on urban landscape design principles.

Firstly, literature data related to the subject and field were evaluated using various resources. In parallel with literature studies and field observations based on on-site detection; the current situation analysis has been made regarding the fill-gap analysis, floor heights analysis, urban equipment areas analysis, building material analysis, transportation analysis, focus points analysis, and landmark analysis for the sample area. A need program has been created together with the analysis of the current situation and problems. After the concept study, a design idea supported by various drawings and visuals was determined.

The analyses have guided the design by revealing the problems in the study area. In this context, urban foci, green spaces, pedestrian axes, and design axes have been examined and the elements guiding the project have been determined. The findings of these analyses are included in the conclusion section of the study. Within the scope of the findings obtained, a SWOT Analysis was conducted to identify the strengths and weaknesses, as well as opportunities and threats related to the field. SWOT analysis is a method used to analyze internal and external factors on a subject related to a region or institution and to reveal its current situation [20],[21]. These factors are classified into four groups as strengths, weaknesses, opportunities, and threats.

In similar studies serving as examples for this study, the same method was used, field analyses were conducted to evaluate the data, existing problems were identified, suggestion ideas (concepts) were developed, and the creation of field diagrams, pre-project and application projects were realized [3],[9],[22], [23].
The stages of the method followed for the revision of urban landscape design in this study are listed below.

- In the first stage of the study, after the literature review on urban landscape design, on-site examination and detection studies of the Long Mustafa neighborhood were carried out and photographs of the area were taken. Later, the zoning plan for the study area was obtained from Düzce Municipality.
- In the second stage, a SWOT analysis was conducted with the aim of putting forward suggestions for the revision of the landscape design of the Uzun Mustafa neighborhood.
- In the final stage of the study, problems related to public buildings and their surroundings in the neighborhood of Uzun Mustafa were identified, and evaluations were made by bringing suggestions in the context of appropriate landscape design.

II. FINDINGS AND DISCUSSION

A. SWOT ANALYSIS RESULTS

A SWOT analysis has been conducted considering the internal and external factors of the workspace, to minimize the impact of the weaknesses in the area and the elements that will pose a threat in the field. SWOT analysis is an analysis made to increase the strong aspects and opportunities provided by the field [24]. The data belonging to Uzun Mustafa neighborhood has been synthesized and the SWOT analysis has been carried out by the study team.

Strong sides (S);

- The work area being located in the city center in terms of location
- Having training areas in the workspace for the region
- Being a convenient area in terms of transportation
- The natural landscape and green areas of Uzun Mustafa neighborhood
- Active participation of neighborhood residents can increase the likelihood of success for joint projects and initiatives.

Weak points (W);

- Due to the high human circulation in the regional workspace, there is noise pollution.
- Solutions can be focused on problems such as inadequate infrastructure, roads, water and energy, in addition to frequently experienced water and energy outages.

Opportunities (O);

- The presence of shopping points in the immediate vicinity of the workspace for the region
- Having health centers in the workspace
- Being in an area open to projects and initiatives compatible with environmental and social sustainability principles
- Opportunities to organize local workshops, activities, and programs to address educational and cultural deficiencies in the neighborhood can be evaluated.

Tehditler (T);

- Being an earthquake risk area
- Vulnerability to climate change, floods and other natural disasters
- Rapid urban expansion and housing constructions can threaten natural areas.

As a result of the SWOT analysis, it has identified the strengths and weaknesses, opportunities and threats of the study area according to its urban and landscape features. Especially among the strengths, the presence of green spaces and natural landscape features occupy an important place; among the weaknesses, however, traffic intensity and inadequate green infrastructure stand out. The analysis results will allow for the development of revision suggestions that are appropriate to aesthetic, functional, social, cultural, and psychological demands in urban landscape design.

The area designated as Uzun Mustafa neighborhood is one of the largest and most important neighborhoods of Düzce province. The area is located in the city center, but because the area has not been given the necessary importance, the presence of many factors causing visual pollution has revealed that the area is not in good condition. When the steps in the specified method are followed, gathering areas suitable for the area, community center, sports area, park for children, facade design suggestions for public buildings such as Düzce Governorship Meteorology Directorate and Düzce Vocational High School and library building have been presented. A design plan has been created for landscaping works for public building environments in a way that will meet the needs of the users. This plan aims to provide a healthy and safe living space and to create a sustainable environment with sufficient social facilities. Also, the design of landscape structural elements such as garbage containers to be suitable for the

environment, and the visual pollution will not be caused by such as taking electric boxes underground will provide visual aesthetics to the region. In order to design it in accordance with the surroundings of the region, firstly, the green area analysis and road analysis studies of the working area Düzce / Uzun Mustafa neighborhood were carried out. Figure 6. The road and green area analyses of the Study Area Düzce / Uzun Mustafa neighborhood are given.

Figure 6. *Road and green area analysis of the working area Düzce/Uzun Mustafa neighborhood*

Green spaces are a comprehensive system that controls the development of the city in the urban fabric, takes on unifying and distinguishing functions, ensures the integrity of the city in general, and adds value to the city in ecological, aesthetic, recreational and economic aspects. Green spaces, which are a basic need for cities, should be provided in accordance with the principle of integrity and continuity. The findings of this study are in line with definition of roads as one of the elements that form the image of a city [25]. According to Lynch, the definitive characteristics of certain roads can strengthen the city's image or sometimes gain importance for structural reasons. In addition, identifiable and continuous paths are considered as a functional necessity. The outputs of this study meet the requirements and functions mentioned by Lynch. The study area is an important part that ensures the integrity of the open-green area system in its immediate vicinity. In accordance with this approach, the aim of the landscaping of the area is to create gaps that will support structural elements by preserving existing plant structures and to meet the need for shaded areas. This plant tissue aims to meet user needs by integrating with large hard grounds created in the field of urban landscape design. Along with mass green areas, clean grass areas are also included in the plant design. By bringing a landscape design proposal over the existing situation plan, the new situation plan of the area has been created as shown in Figure 7.

Figure 7. *Landscape design proposal plan views for the study area Düzce/Uzun Mustafa neighborhood*

The study area is located in Düzce/Uzun Mustafa neighborhood, where the rebuilt library building currently has no landscaping. Therefore, suggestions such as seating areas have been made as landscape building elements for the back garden of the building aimed at students and reading areas. As shown in Figure 8, views of the library and its surroundings, and in Figure 9, a landscape design proposal plan is given for the location of the library and its surroundings.

Figure 8. *Views of the library and its surroundings located in the Uzun Mustafa neighborhood in the workplace in Düzce*

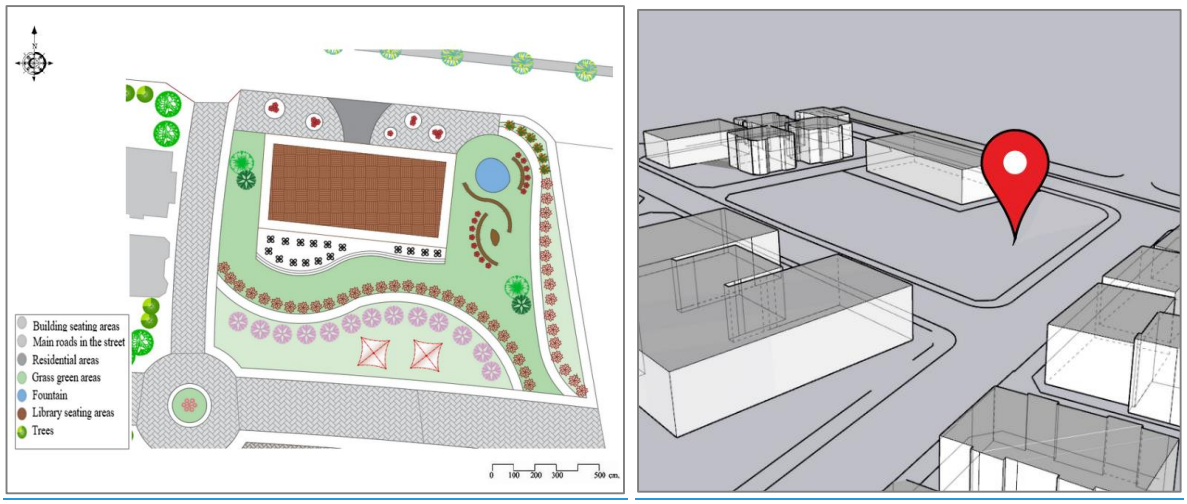

Figure 9. *Landscape design proposal for the location and surroundings of the library located in the working area Düzce/Uzun Mustafa neighborhood*

As presented in detail in Table 2, the various uses and specific growth characteristics of coniferous and deciduous ornamental plants native to Düzce province have been comprehensively addressed. In light of this information, it can be recommended to plan and position these plants in the study area in the most strategically and aesthetically appropriate manner. This planning process can be carried out by considering factors such as the plants' natural habitats, their adaptation to climate conditions, visual effects, and contributions to landscape design. Thus, a landscape arrangement that is compatible with Düzce's local ecosystem, sustainable, and visually attractive can be achieved.

Table 2. *Düzce Ornamental Plants and Their Features*

Leafy	*Prunus cerasifera pissardii nigra*		Garden, park, landscape	Medium height, wide crown
	Liquidambar orientalis		Landscape, decorative shade	Medium-large size
	Prunus serrulata		Garden, ornamental plant	Medium height, flowering
	Lagerstromia indica		City gardens, parks	Small tree, colorful flowers

Table 2 (cont). *Düzce Ornamental Plants and Their Features*

	Cornus alba		Hedge plant, landscape	Bush form, durable
	Buxus sempervirens		Shaping, hedge plant	Slow growing, compact
	Chaenomeles japonica		Decorative garden plant	Small size, flowering
	Lavandula officinalis		Ornamental plant, scented	Low-stature, bushy
	Syringa vulgaris		Decorative, flowering plant	Medium height, abundant flowers
Needle	*Picea pungens glauca*		Landscape, ornamental plant	Large, pyramidal
	Cedrus deodora		Landscaping, large gardens	Fast growing, large size
	Pinus mugo		Rock gardens, hedge plant	Small size, compact
	Berberis thunbergii		Landscape, hedge plant	Small, colorful leaves

The Düzce Vocational High School located in the study area has an incongruous appearance both in terms of facade appearance and its surroundings. Therefore, a landscape design plan has been proposed by performing facade renovation on the structure and adding a parking lot, seating areas, and landscaping to its surroundings. The appearances of the Düzce Vocational High School building and its surroundings are shown in Figure 10, the location of the structure and the facade design are given in Figure 11, and a landscape design proposal plan for its surroundings is given in Figure 12.

Figure 10. *Views of Düzce Vocational High School and its surroundings located in the working area Düzce/Uzun Mustafa neighborhood*

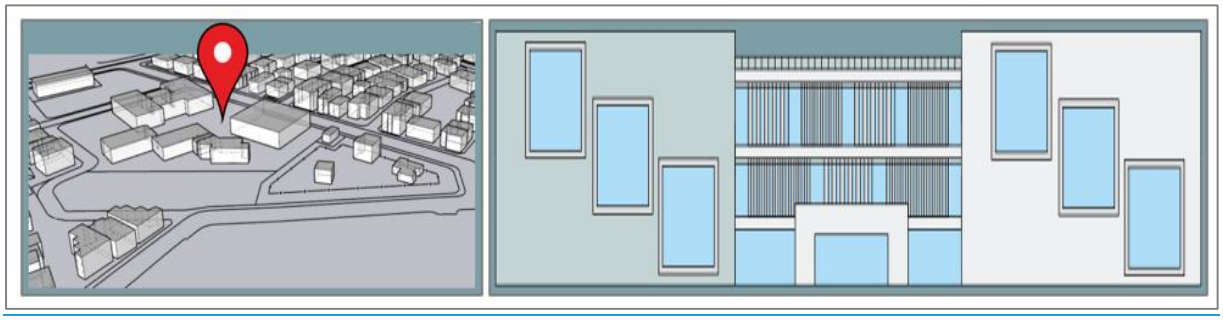

Figure 11. *The location of Düzce Vocational High School located in the working area Duzce/Uzun Mustafa neighborhood and views of its surroundings*

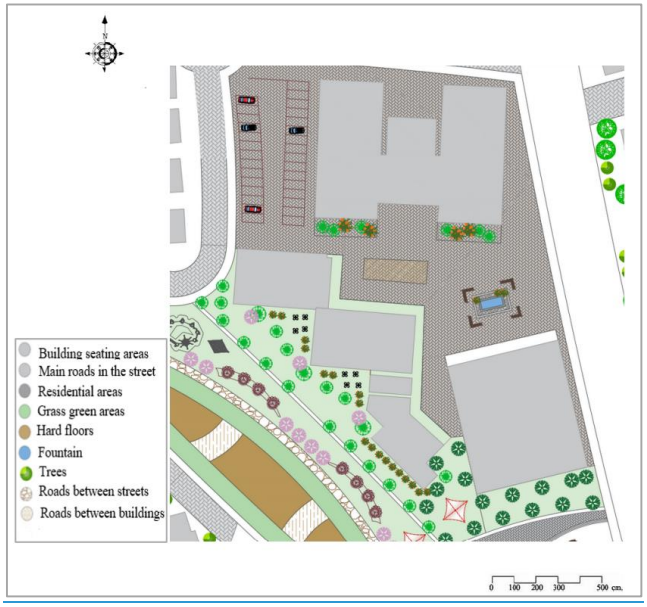

Figure 12. *Landscape design suggestion for Düzce Vocational High School located in the Uzun Mustafa neighborhood, the study area in Düzce*

The building of the Düzce Governorship Meteorology Directorate, located in the work area, has an inconsistent appearance both in terms of facade appearance and its surroundings. Improvements have been made on the facade of the building and it has been handled together with its surroundings. For this area, a landscape design proposal plan has been created by making a parking lot, seating areas, and landscaping. As shown in Figure 13, the building of the Düzce Governorship Meteorology Directorate, located in the Düzce/Uzun Mustafa neighborhood, the facade design proposal of the building and its location, in Figure 14 the plan appearance of the landscape design proposal for the surroundings of the building has been given.

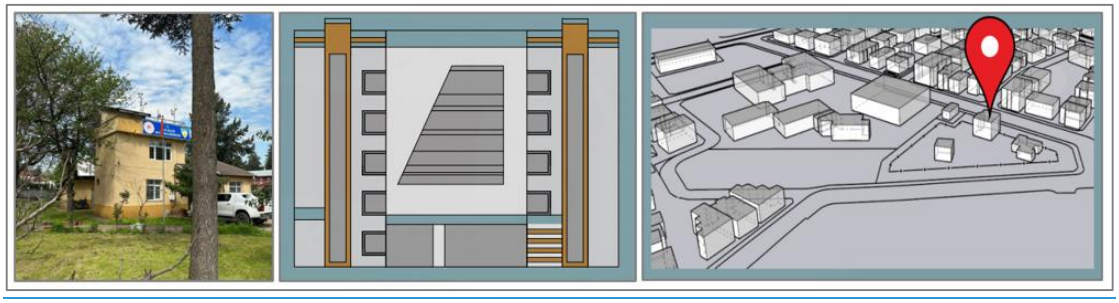

Figure 13. *The building of Düzce Governorship Meteorology Directorate, located in the Uzun Mustafa neighborhood of the study area Düzce, the facade design proposal of the building and its location*

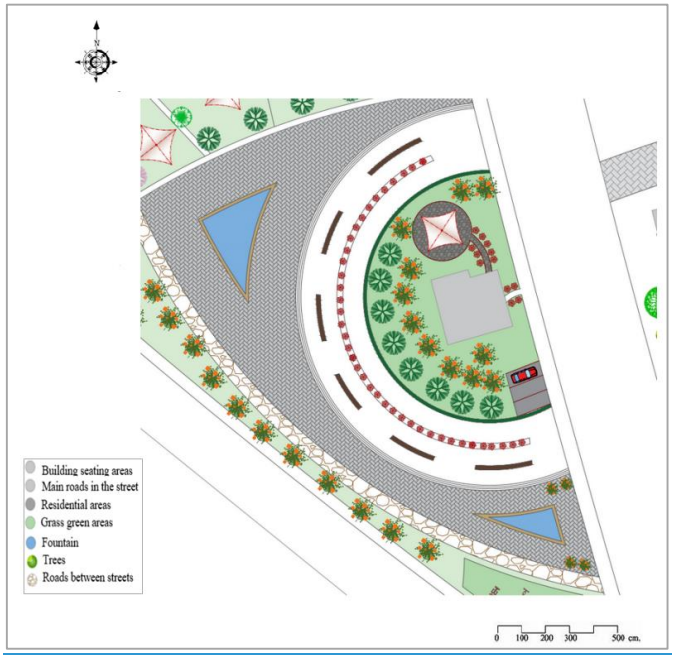

Figure 14. *The plan view of the landscape design proposal for the area around the Düzce Governorship Meteorology Directorate, located in the Uzun Mustafa neighborhood of the study area Düzce*

It is proposed to use the vacant spaces of the working area Düzce/Uzun Mustafa neighborhood and establish a community center where shops, playgrounds, sports areas, parks, and cafes are all together, aiming to bring people together. Considering it next to the Vocational High School and the library will also provide a positive development for students. The facade appearance of the community center designed for Düzce/Uzun Mustafa neighborhood in the work area is shown in Figure 15. The location of the community center and the plan view of the landscape design proposal are given in Figure 16.

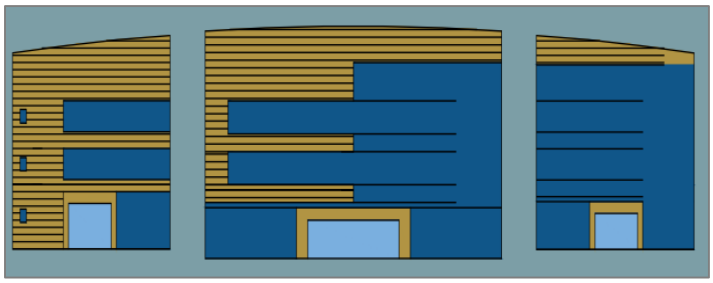

Figure 15. *The facade view of the community center designed for the work area Düzce/Uzun Mustafa neighborhood*

Figure 16. *Location and landscape design proposal plan view of the community center designed for the working area Düzce/Uzun Mustafa neighborhood*

Safe park areas have been designed for children living in the region to play comfortably, and these areas are shown in Figure 17. The plan view of the children's park designed for the work area Düzce/Uzun Mustafa neighborhood is given.

Figure 17. *Plan view of the children's park designed for the work area Düzce/Uzun Mustafa neighborhood*

Due to the earthquake risk of this area within the boundaries of Düzce/Uzun Mustafa neighborhood, assembly areas have been designed for the local people to ensure their safety. As shown in Figure 18, the location and plan view of the gathering areas designed for the Düzce/Uzun Mustafa neighborhood and the plan view of the gathering areas are given in Figure 19.

Figure 18. *The location of the assembly areas designed for the workspace in Düzce/Uzun Mustafa neighborhood*

Figure 19. *Plan views of the assembly areas designed for the working area Düzce/Uzun Mustafa neighborhood*

In the workspace, seating areas have been created to meet people's relaxation needs and strengthen social bonds. These areas are arranged so that users can comfortably spend time and chat. The flower beds, which are landscaping elements, are designed to improve the overall atmosphere of the environment, adding peace, tranquility, and aesthetic beauty to the surroundings. These flower pools should offer visitors a visual feast by being adorned with colorful flowers suitable for the season and should also provide a sense of natural freshness. Thus, the workspace has been enriched both functionally and aesthetically, becoming a place that can respond to the physical and spiritual needs of users. Figure 20

shows the flower pool and seating areas, Figure 21 shows the flower pools, and Figure 22 provides images of the seating elements.

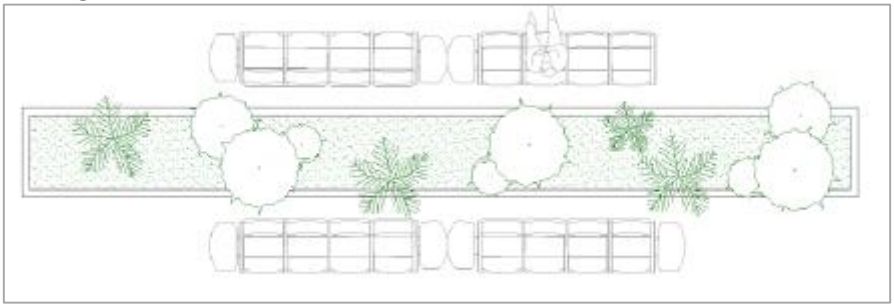

Figure 20. *Views of the designed flower pool and seating areas in the Düzce/Uzun Mustafa Neighborhood study area*

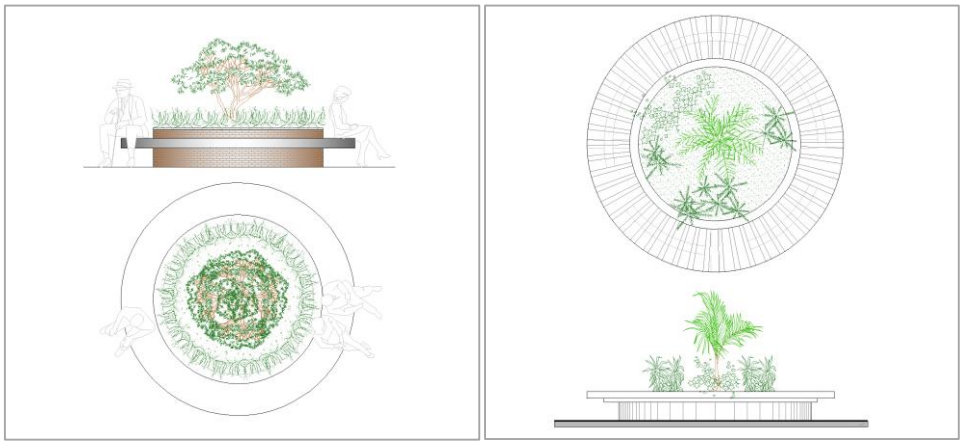

Figure 21. *Views of the designed flower pool in the Düzce/Uzun Mustafa Neighborhood study area*

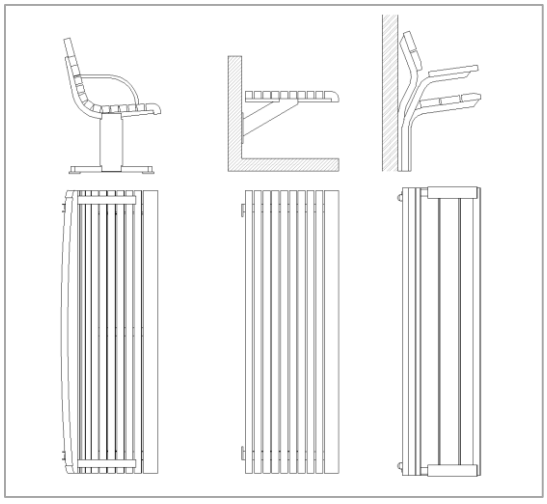

Figure 22. *Views of the designed seating areas in the Düzce/Uzun Mustafa Neighborhood study area*

Lighting used in landscape design should be applied in a way that reveals the architectural features, formation, and function of spaces. The visuals of landscape lighting elements given in Figure 23 designed to enable nighttime use and maintain the visual beauty created in spaces.

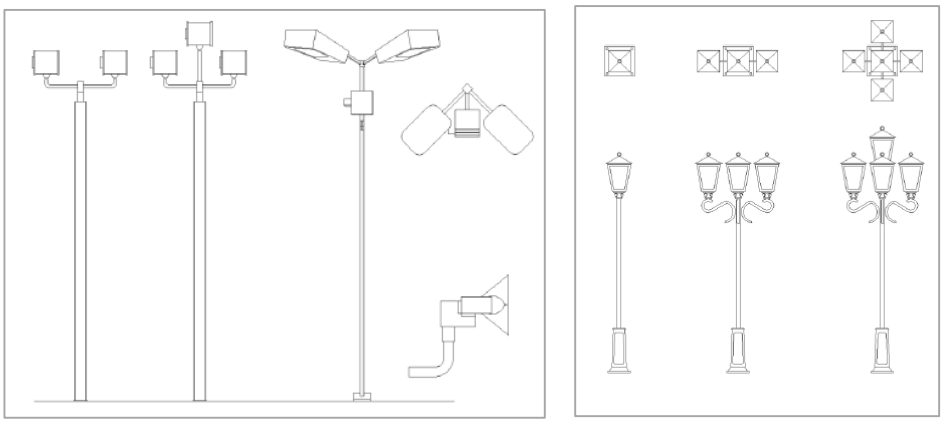

Figure 23. *Views of landscape lighting elements designed for the study area in Düzce/Uzun Mustafa study area*

New garbage containers have been suggested in order to aesthetically improve the environment with the aim of eliminating the visual pollution in this region as a work area. In Figure 24, the existing garbage containers are shown, while Figure 25 shows the appearance of the proposed new garbage containers.

a) ***b)***

Figure 24. ***a)*** *The Appearances of the garbage containers located in the working area in Düzce/Uzun Mustafa neighborhood* ***b)*** *The appearances of the proposed trash containers in the working area in Düzce/Uzun Mustafa neighborhood*

It is suggested to design the facades of electrical transformer buildings in accordance with the environment to improve the general appearance of the workspace, and to remove the electricity poles and lay them underground. The appearance of the electrical transformer buildings and electric poles causing visual pollution in the working area located in Düzce/Uzun Mustafa neighborhood are given in Figure 25.

Figure 25. *Appearances of transformer buildings located in the working area of Düzce/Uzun Mustafa neighborhood*

IV. CONCLUSION

The Uzun Mustafa neighborhood in the province of Düzce, holds an important position due to its location in the city center. However, observations and determinations show that the current situation of the neighborhood is not good, and sufficient services have not been provided to this area. The SWOT analysis conducted for Uzun Mustafa neighborhood reveals the strengths, weaknesses, opportunities, and threats of the neighborhood. This analysis forms an important and scientific basis for understanding the potentials and the challenges faced by the neighborhood. his carries the potential to increase the touristic attraction of the neighborhood and strengthen social bonds among local residents. Accessibility can support economic and cultural interaction by facilitating access for neighborhood residents and potential visitors. Infrastructure deficiencies and employment issues play a significant role among the weaknesses. Infrastructure deficiencies limit the quality of life and economic development of the neighborhood. Employment issues can hinder the economic empowerment of neighborhood residents, and this situation threatens long-term sustainability goals. Opportunities include the use of renewable energy, ecotourism, and education-culture programs. Ecotourism has the potential to increase tourism revenues while preserving natural beauties. Education and cultural programs can offer opportunities to develop the skills of local residents and increase social awareness. However, urban expansion, the effects of climate change, and economic uncertainty constitute the main threats faced by the neighborhood. Rapid urban expansion can threaten natural areas, and this situation can make it difficult to preserve the culture of the neighborhood and environmental sustainability.

The future success for Uzun Mustafa neighborhood will rely on a comprehensive strategic plan that will be shaped by the participation of local residents and stakeholders. By considering the needs, expectations, and suggestions of the residents, collaborating with various sectors, and effectively utilizing local resources, it is possible to maximize the potential of the neighborhood. In addition to this work, it is thought to select urban equipment elements (trash cans, lighting elements, bands, bollards, etc.) in accordance with the design. The Uzun Mustafa neighborhood has been subjected to irregular and unplanned construction, especially it does not carry intensity in terms of its historical texture. In this area, spaces with different functions can be proposed to create a more livable space for user needs. For example, by assigning various functions such as a library, workshop, exhibition area, it can be aimed to contribute more effectively to the daily life of the community. When the neighborhood is evaluated in terms of transportation, it has been detected that transportation is easy for vehicles but creates visual pollution due to heavy vehicle traffic and poses a barrier for pedestrians. Therefore, a pedestrian priority design approach has been adopted. Firstly, it is thought to reduce the road which is double-laned to a single lane and to expand pedestrian paths. Also, a disabled track is planned on the bicycle path and pedestrian path. As part of the pedestrian-priority design, plant arrangements that will separate pedestrian and vehicle roads and create shade and aesthetic contribution have been proposed. These arrangements will both add visual appeal to the street and ensure that pedestrians move safely. In conclusion, this study can be seen as an important step to understand the current situation of the neighborhood and guide its future development.

V. REFERENCES

[1] N. Gürallar, ‘‘Kamusal alan kamu – kamusal alan – kamu yapıları – Kamusal mekan: Modernite öncesi ve sonrası için bir terminoloji tartışması,’’ *Mimarlık,* c.350, 2009.

[2] S. Carr, M. Francis L. G. Rivlin and A. M. Stone, *Public Space,* Published by the Press Syndicate of University of Cambridge, pp. 400, 1992.

[3] H. Turgut, ‘‘Erzurum Büyükşehir Belediye Binası Ön Bahçe Peyzaj Tasarım Çalışmasının Tasarım İlkeleri Bağlamında Değerlendirilmesi,’’ *Artvin Çoruh Üniversitesi Orman Fakültesi Dergisi*, c.12, s. 2, ss. 185-198, 2011.

[4] H. Lefebvre, *The Production of Space, Blackwell Publishing*, Londra.1991.

[5] Ö. Atabeyoğlu, ‘‘Erzurum Kentindeki Resmi Kurum ve Lojman Bahçelerinin Peyzaj Mimarlığı Açısından İncelenmesi,’’ Atatürk Üniversitesi Fen Bilimleri Enstitüsü Yüksek Lisans tezi, Erzurum, Türkiye, 2004.

[6] D. Yıldız, ‘‘Peyzaj ile Mimarlık-Kentsel Tasarım İlişkileri ve Mimari Tasarıma Etkileri,’’ İstanbul Teknik Üniversitesi Fen Bilimleri Enstitüsü Yüksek Lisans tezi. İstanbul, Türkiye, 1996.

[7] R. V. Sağlar, ‘‘Kamusal Mekânlar ve Tasarım İlkeleri,’’ İstanbul Teknik Üniversitesi Fen Bilimleri Enstitüsü Yüksek Lisans tezi, İstanbul, Türkiye, 1998.

[8] G. A. Sargın, ‘‘Kentsel programı tasarlamak,’’ *Planlama Dergisi*, TMMOB Şehir Plancıları Odası Yayını, no. 33, ISSN: 1300-7319, 2005.

[9] Çelikyay, S. ‘‘Bartın Üniversitesi yerleşkesinde rektör konutu tasarım süreci ve mimari proje,’’ *İnönü Üniversitesi Sanat ve Tasarım Dergisi,* c. 1, s. 1, ss. 11-22, 2011.

[10] S. Kostoff, *The City Assembled, Thames and Hudson*, London,1999.

[11] Ö. Yerli, ‘‘Bir yapının kamusal açık yeşil alan şeklinde tasarlanması,’’ *TMD Uluslararası Hakemli Tasarım ve Mimarlık Dergisi,* ss. 1-13, 2016.

[12] M. Carmona and S. Tiesdell, ‘‘Urban design reader, Architectural Press,’’ *Elsevier*, 2007.

[13] Z. Demir, H. Müderrisoğlu, Ö. Yerli, S. Özdede and G.A. Kesim, *Bartın Orman Fakültesi Dergisi*, I. Ulusal Batı Karadeniz Ormancılık Kongresi Bildiriler Kitabı, s.1, ss. 232-240, 2009.

[14] L. N. Groat, *Contextual compatibility in architecture: An Issue of Personal Taste?* Cambridge University Pres, pp. 228-253, 1988.

[15] G. Uzgören, M.Y. Erdönmez, ‘‘Kamusal açık alanlarda mekân kalitesi ve kentsel mekân aktiviteleri ilişkisi üzerine karşılaştırmalı bir inceleme,’’ *Megaron*, c.12, s. 1, ss. 41- 56, 2017.

[16] E. Koçak, *Düzce ilinin Cbs ve uzaktan algılama tabanlı tarım coğrafyası*. Ankara, 2023.

[17] (2024, May 20). [Çevrimiçi]. Erişim: https://www.milliyet.com.tr/egitim/haritalar/duzce-haritasi.

[18] (2024, May 26). [Çevrimiçi]. Erişim: https://www.google.com/search?q=google+earth+d%C3%BCzce+uzun+mustafa+mah.

[19] (2024, April 9). [Çevrimiçi]. Erişim:https://www.arasikackm.com/m/uzun-mustafa-mah-duzce.

[20] C. Cengiz, P. Keçecioğlu Dağlı, ‘‘Bartın geleneksel kent dokusunda yaya konfor düzeyinin saptanmasına yönelik bir çalışma,’’ *Bartın Orman Fakültesi Dergisi*, c.19, s.1, ss.19-31, 2017.

[21] B. Acarlı, T. Kiper, A. Korkut, “Kent meydanlarının fiziksel mekan kalitesi: İstanbul Taksim Meydanı ve yakın çevresi,” *Kent Akademisi*, c. 11, s.33, ss. 29-41, 2018.

[22] H. Çınar, ‘‘XVIII. Yüzyılın İlk yarısında Ayıntab şehrinin sosyal ve ekonomik durumu,’’ *Vakıflar Dergisi,* s.7, ss.117-138, 2007.

[23] Z. Demir, H. Müderrisoğlu, Ö. Yerli, S. Özdede ve G.A. Kesim, I. Ulusal Batı Karadeniz Ormancılık Kongresi Bildiriler Kitabı, *Bartın Orman Fakültesi Dergisi,* no.1, ss. 232-240, 2009.

[24] S. G. Bozkurt, "Gürün ilçesinin ekoturizm potansiyelinin incelenmesi,'' *Journal of the Institute of Science and Technology*, vol. 9, no. 4, ss. 2255-2265, 2019.

[25] K. Lynch, *Kent İmgesi*. Türkiye İş Bankası Yayınları. 2010.

[26] (10 September, 2024). [Çevrimiçi]. Erişim: https://www.google.com/search?sca_esv=9783522cabc36d5f&sxsrf=ADLYWIJmthpygvmzjsg6ROHkW07MW6U5dA

[27] A. H., Küçük, ''Kentsel dönüşüm boyutları: Barselona'da Raval bölgesi örneği,'' Yayınlanmamış Yüksek Lisans tezi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü.

[28] Bath & North East Somerset Council. (2015b). *Pattern book volume 2: technical and operational guidance.* [Çevrimiçi]. Erişim: https://www.bathnes.gov.uk/sites/default/files/sitedocuments/Planning-and-Building-Control/Planning-Policy/Evidence-Base/Urban-Design-Landscape-and-Heritage/bath_pattern_book_part_2.pdf

[29] Blyth Valley Borough Council. (2008). *Blyth urban design guide and public realm strategy*. [Çevrimiçi]. Erişim: https://www.northumberland.gov.uk/NorthumberlandCountyCouncil/media/Planning-and-Building/Conservation/DG-Blyth-Urban-Design-and-Public-Realm.pdf

[30] S. N., Yener Metin and S. Polat, ''Kamusal mekân kalitesini yükseltmek için kentsel tasarım araçlarından nasıl faydalanabiliriz?'' *Kent Araştırmaları Dergisi*, s.12, ss.115-145, 2021.

[31] S. N., Yener Metin and S. Polat, ''Kamusal mekân kalitesini yükseltmek için kentsel tasarım araçlarından nasıl faydalanabiliriz?'' *Kent Araştırmaları Dergisi,* s.12, ss.115-145, 2021.