SHNAKHAT E(ISSN) 2709-7641, P(ISSN) 2709-7633
Vol:3, ISSUE:3 (2024) PAGE NO: 455-466
Publishers: Nobel Institute for New Generation
http://shnakhat.com/index.php/shnakhat/index

Cite us here: Hina Marvi1, Sabeen2, Shaheer Khan3, & Irum Arisar4. (2024). Abounded Urban Wasteland and Under-Utilized Open Urban Space Along Road-Way: Flyovers as Catalysts for Change. *Shnakhat*, *3*(3). Retrieved from https://shnakhat.com/index.php/shnakhat/article/view/371

Abounded Urban Wasteland and Under-Utilized Open Urban Space Along Road-Way: Flyovers as Catalysts for Change

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Abstract
In urban cities, open spaces often act as physical barriers and are frequently neglected, leading to unattractive and underutilized areas. Among these, spaces beneath flyovers stand out due to their large, unutilized spans that have, over time, become misused and overlooked. These spaces, particularly in rapidly growing cities like Karachi, have the potential to significantly impact the city's aesthetics, both directly and indirectly. The research highlights the importance of transforming such spaces beneath flyovers into productive urban areas that serve the community, offering opportunities for social engagement, recreation, and various public activities. This study focuses on the area beneath the flyover on Gulshan Road, Karachi, exploring its potential for revitalization. By investigating the underpass area's social and environmental dimensions, the research aims to demonstrate how reclaiming these spaces can enhance urban sustainability and aesthetics. Flyovers, while essential for traffic management, often result in deserted and unattractive environments underneath, contributing to a city's fragmented urban fabric. The study seeks to provide insights into how these neglected spaces can be reimagined as vibrant, functional areas that contribute positively to both city life and the environment. By addressing both social interaction and environmental improvements, this research underscores the critical role that rethinking open spaces.
Keywords-Abounded Urban Wasteland and Under-Utilized Open Urban Space Along Road-Way: Flyovers as Catalysts for Change

plays in urban planning. It highlights the importance of integrating community needs and ecological sustainability into the design and redevelopment of underutilized areas, offering a model that can be applied to other similar spaces in urban environments
Key Words: Open spaces, Underneath Flyover, Urban environments, Community benefits, social impact.

Introduction

The utilization of dead spaces beneath bridges presents an opportunity to integrate nature and economic activities into the fabric of surrounding communities. These underutilized areas, often overlooked and neglected, hold immense potential for revitalization through thoughtful, comprehensive design (Adams, 2016) . By transforming these spaces, cities can not only enhance their functionality but also improve safety, accessibility, and the overall aesthetic appeal of the area. Incorporating green spaces, public amenities, and economic hubs beneath bridges can breathe new life into these forgotten areas, turning them into vibrant, dynamic zones that contribute positively to urban life (Abbas & Hyowon, 2015; Joan & Ester, 2018).

Moreover, reimagining these spaces offers a solution to the problem of wasted urban land, transforming what was once considered a burden into a community asset. By addressing both social and environmental concerns, the revitalization of these areas can foster a sense of belonging and connectivity among residents, creating spaces that encourage public interaction, leisure, and local commerce. This, in turn, contributes to the sustainability of urban environments by providing multi-functional areas that serve both ecological and social purposes. As highlighted in (Saima, et al., 2022) , the strategic redesign of such dead spacey prevents their underutilization so enhances the social fabric of urban neighbourhoods, offering a platform for community development and economic growth. This approach ensures that no space in the city goes to waste, and every available area can be leveraged for the benefit of society at large.

Community Disconnection

Under-utilized spaces have the potential to create significant physical and social divides within communities, acting as barriers that hinder interaction and social cohesion. These neglected areas often become eyesores, fostering feelings of disconnection among residents and limiting their engagement with the surrounding environment. Instead of serving as communal spaces that bring people together, they become voids in the urban landscape, contributing to the fragmentation of neighbourhoods. This physical divide can lead to a deeper social

divide, as residents may feel isolated or disconnected from one another, reducing opportunities for shared experiences, collaboration, and a sense of belonging.

Furthermore, the presence of these neglected spaces can contribute to a negative perception of the neighborhood as a whole. When such areas are left in disrepair, it reflects poorly on the community's identity, leading to a decline in local pride and diminishing residents' willingness to invest in or care for their surroundings. This lack of pride often translates into lower levels of community involvement, with people becoming less likely to participate in neighborhood activities or contribute to its improvement. Over time, this can result in a cycle of neglect, where under-utilized spaces not only remain unaddressed but also exacerbate broader issues of social fragmentation, isolation, and disengagement. By addressing these spaces and transforming them into functional, inviting areas, cities can foster a renewed sense of community, encourage social interaction, and restore pride in the neighborhood.

Environmental Impact

Neglected spaces might accumulate litter and debris, contributing to environmental pollution and harming local ecosystems. Under-utilized spaces could have been potential areas for green infrastructure, contributing to urban biodiversity and air quality improvement (Chan & Lee, 2008; Davidson & Wilson, 2009; Dempsey, et al., 2011).

Addressing these issues often involves community engagement, urban planning, and investment in revitalization projects. Converting abandoned and under-utilized urban spaces into vibrant, well-maintained areas can positively impact the community by improving aesthetics, enhancing safety, boosting property values, and fostering a stronger sense of community pride and identity.

Economic Deterrence

Nearby businesses often face significant challenges when open spaces in their vicinity are unattractive, neglected, or perceived as unsafe. These poorly maintained areas can drastically reduce foot traffic, as people may avoid walking through or spending time near them, fearing for their safety or simply finding the environment unappealing. As a result, businesses in these areas experience a decline in customer visits, which directly affects their revenue and long-term viability.

Additionally, the presence of abandoned or underutilized spaces can deter potential investors from considering the area for new business ventures or development projects. Investors and entrepreneurs are typically drawn to vibrant, active neighborhoods where they can expect a steady flow of customers and a thriving local economy (Ullah, et al., 2018). However, when faced with dilapidated or unsafe surroundings, they may view the area as unprofitable or too risky for investment (Abed, 2023). This lack of interest from investors perpetuates a cycle of economic stagnation, as the area fails to attract new businesses or development

that could otherwise rejuvenate the local economy (Armin , et al., 2021; Ismu , et al., 2024).

In the long run, this can lead to broader economic decline, as job opportunities dwindle and property values decrease. Without a concerted effort to improve the physical environment and make it more inviting, these neglected spaces can become a significant barrier to economic growth and revitalization (Heather & Kristin, 2014) . Conversely, by transforming these areas into attractive, well-maintained spaces, local authorities and stakeholders can create a more conducive environment for business, fostering economic development and community prosperity (Ancell & Thompson-fawcett, 2008).

Missed Opportunities

Abandoned spaces could have been transformed into parks, playgrounds, or community gardens, enhancing the overall quality of life for local residents (Marvi, et al., 2021) . Such spaces also can create an eyesore, diminishing the aesthetic appeal of the area and affecting the overall perception of the neighborhood (Planning Commission, Islamabad, 2011; Peerzado & Magsi, 2019).

Motivation

The motivation behind this research lies in its potential to revitalize urban spaces, addressing the growing environmental, economic, and social challenges that are becoming more pronounced in densely populated areas. As cities continue to expand and become overcrowded, the absence of essential amenities, lack of open green spaces, and the presence of underutilized or abandoned areas contribute to a decline in the quality of life (Marvi, et al., 2024) . These issues, coupled with undesirable spots and deteriorating working conditions, highlight the urgent need for comprehensive solutions.

In examining the underlying causes of these issues—such as overcrowding, lack of public amenities, and poor urban planning—the research offers insights into how cities can mitigate these problems through innovative design and thoughtful urban interventions. Ultimately, this research seeks to create a blueprint for addressing the growing urban challenges of the modern age, providing strategies for sustainable development that balance the needs of the environment, economy, and society.

Aims

The aim of study is to connect the community/people with the urban open spaces to enhance the city Aesthetics.

Objective

The primary focus of this research is highlighting the abundant spaces specifically underneath the flyovers. This research assess the impact of abounded space underneath flyovers along roadway, and investigate activities at public open spaces on pathways, pedestrian passages, under the flyovers.

Problem Statement

Due to the rapid urban expansion, the viaducts and bridges are leaving vast areas of dead spaces underneath; they are part of the urban space but unintendedly disconnected and unused. The dead spaces can also be used for incorporation of nature in it which is not applied and hence results in wastage of free spaces and also environmental pollution due to urbanization (Soomro, et al., 2021).

In many urban locations around the world, underutilized and vacant open urban spaces next to roads pose a serious problem (Marvi, et al., 2022). These abandoned areas, which are frequently the result of poor urban planning or economic downturns, have a significant negative influence on local populations, the environment, and the overall metropolitan landscape. The issue is not only that they are abandoned, but also the numerous negative consequences they have on the neighborhood.

Methodology

Quantities of looks identified with the present examination were surveyed before going any progression propel; every one of the papers was mulled over by taking related data and insights related keeping in mind the end goal to set the investigation. Streetscape methodology is worldwide useable wherever there is a need to do developments in terms of facilitating people Such as need for pedestrian facilities for walkers (Ewing, 2016). Streetscape refers to the design and condition of urban roads as it affects road users and nearby residents (Gopal, et al., 2022). In the streetscape methodology road dividers are designed for plantation, which is suitable for the weather of the site as well (Asaduzzaman, 2020). The highlights of the building, those adding to the decrease in vitality utilized were distinguished from the past investigations. Unstructured meetings of experts, planners and Environmentalists were likewise part of the concentration with a specific end goal to outlining factors (Rabia, et al., 2022). Surveys were then arranged by thinking about topped off online and additionally in hard shape (Rachel & Hubert, 2000).

Study Area

Gulshan Karachi flyover has been chosen as study area, as the Gulshan area is encountered with more than 841800 population, and that flyover is main crossing to the maximum number of users. The having the length 2254ft, and the width comprised of 93ft.

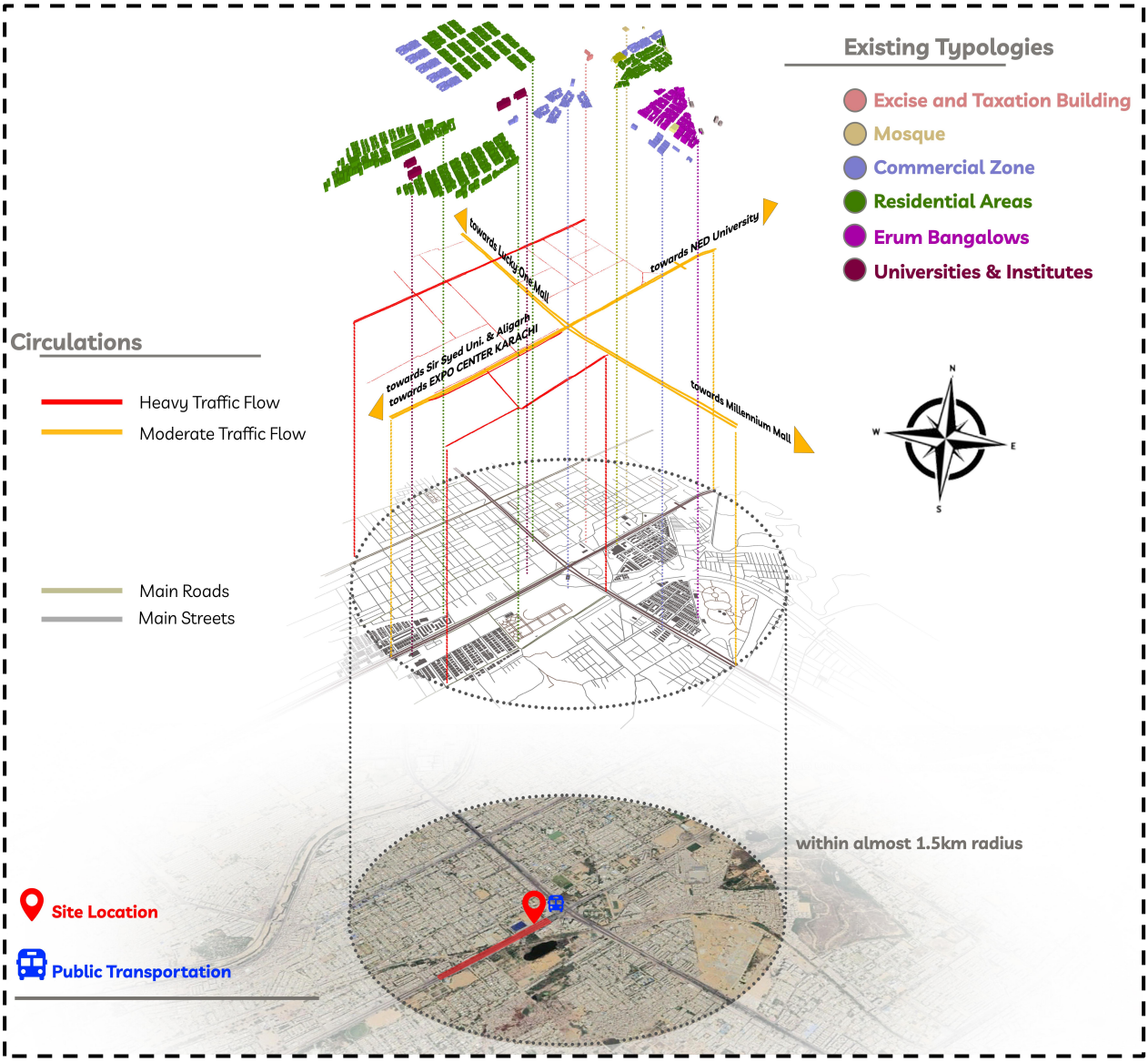

Figure: 01 Study Area (Gulshan Karachi flyover)

Results and Discussions

There were no age restrictions placed on respondents for the questionnaire; instead, participants were organized into six distinct age categories: under 18, 18 to 24 years old, 25 to 34 years old, 35 to 44 years old, 45 to 54 years old, and over 55 years old. This grouping allowed for a comprehensive understanding of perspectives across a wide age spectrum. In terms of educational background, respondents were classified as follows: 2.5% had completed elementary school, 10.8% had finished secondary school, 50.2% were graduates, 30.5% had completed postgraduate studies, and 5.7% had undertaken other forms of education, as detailed in Table 01.

Table: 1 Locale inhabitant in Karachi

Table 1. Study or work in Karachi

		Frequency	%age	Valid %age	Cumulative %age
Valid	Yes	139	88.5	88.5	88.5

No	18	11.5	11.5	100.0
Total	157	100.0	100.0	

The distribution of gender among participants was done randomly, ensuring equal and unbiased representation of all genders. This approach not only provided a balanced demographic profile but also allowed for the gathering of diverse viewpoints, which enhanced the overall robustness of the study's findings. The diversity in age, education, and gender offered a well-rounded foundation for analyzing the collected data, ensuring that insights from various societal segments were taken into account.

Site Features

The Gulshan Flyover is a key part of Karachi's bustling road network, located in an area that is characterized by a high density of commercial and educational activities along its immediate fringes. This makes the flyover not only a vital transportation hub but also a focal point in the daily lives of countless residents who rely on the surrounding businesses, shops, and educational institutions. Despite the vibrancy and busyness of the area, the space directly beneath the flyover has been left undeveloped and neglected, essentially turning it into a wasteland devoid of purpose or function.

As illustrated in Figure 02, the areas surrounding the flyover are teeming with various activities, yet the underutilized space beneath the flyover remains starkly inactive and unused. This lack of foresight in urban planning has resulted in the wasteland beneath the structure, which holds significant potential for better use. Without any designated activities or functional spaces, the area has become an eyesore in an otherwise active part of the city. The absence of thoughtful design not only contributes to the wastage of valuable urban space but also fails to capitalize on opportunities for social, economic, or recreational development that could benefit the surrounding community.

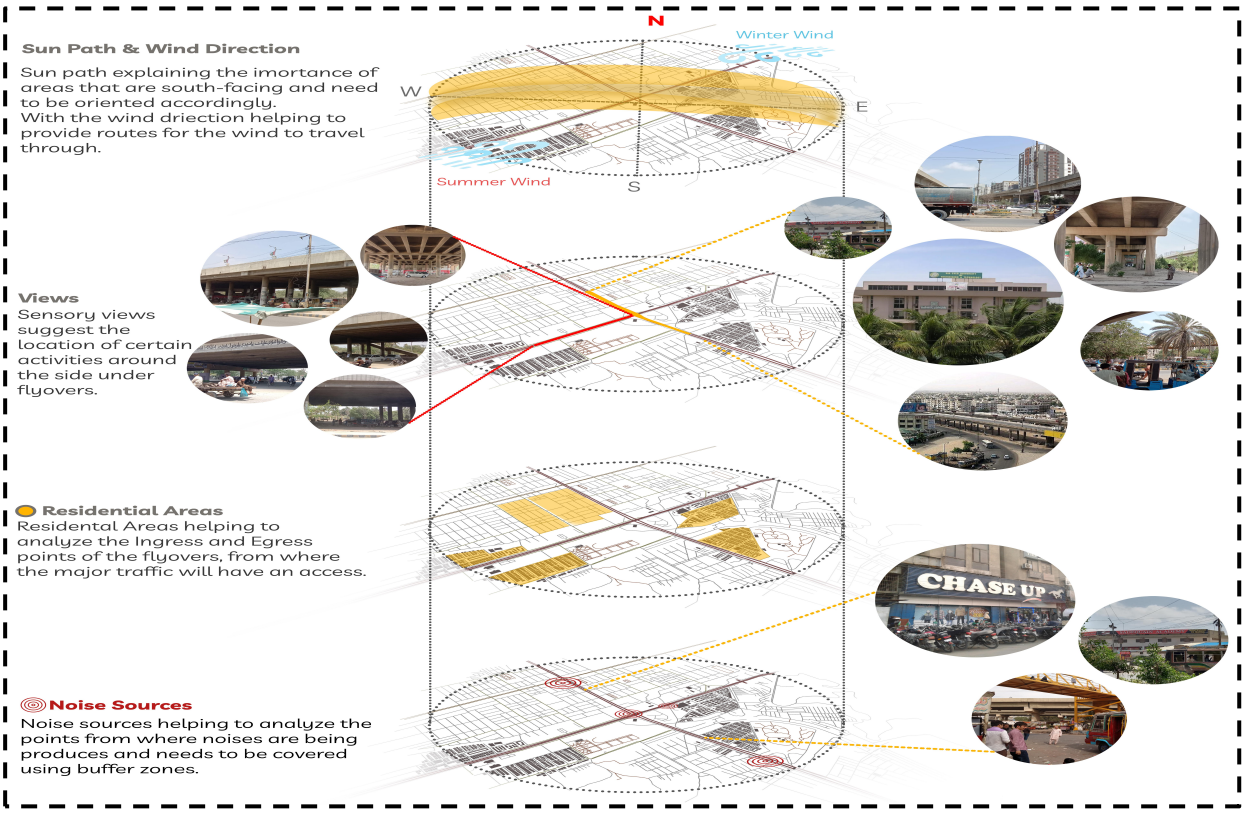

Figure: 02 Site Analysis

Community Participation

The questionnaire survey conducted among the common users of the study area reveals a compelling and enthusiastic interest in repurposing the currently neglected wasteland beneath the Gulshan Flyover for community activities. The data collected from this survey, as illustrated in Figure 03, demonstrates a clear and significant demand for transforming this underutilized space into a vibrant hub for various communal functions.

Respondents expressed a strong desire to see the wasteland converted into a multifunctional area that could serve a variety of purposes, including recreational activities, social gatherings, and local events. This response indicates a widespread recognition of the potential benefits that such a transformation could bring to the community. The feedback highlights a collective aspiration to improve the quality of local life by activating an area that is presently underused and lacking in engagement opportunities.

The survey results reflect a clear consensus among residents that this space could greatly enhance their daily lives by providing a designated area for leisure and social interaction. The interest shown by the community underscores the importance of involving local stakeholders in the planning and development process, ensuring that any redevelopment aligns with the needs and preferences of those who live and work in the vicinity.

In summary, the responses captured in Figure 03 illustrate a strong community interest in repurposing the wasteland beneath the Gulshan Flyover, highlighting a

valuable opportunity to revitalize the area and enhance local engagement through the development of inclusive and functional public spaces. This feedback serves as a critical foundation for moving forward with plans to transform the space in a way that maximizes its potential benefits for the entire community.

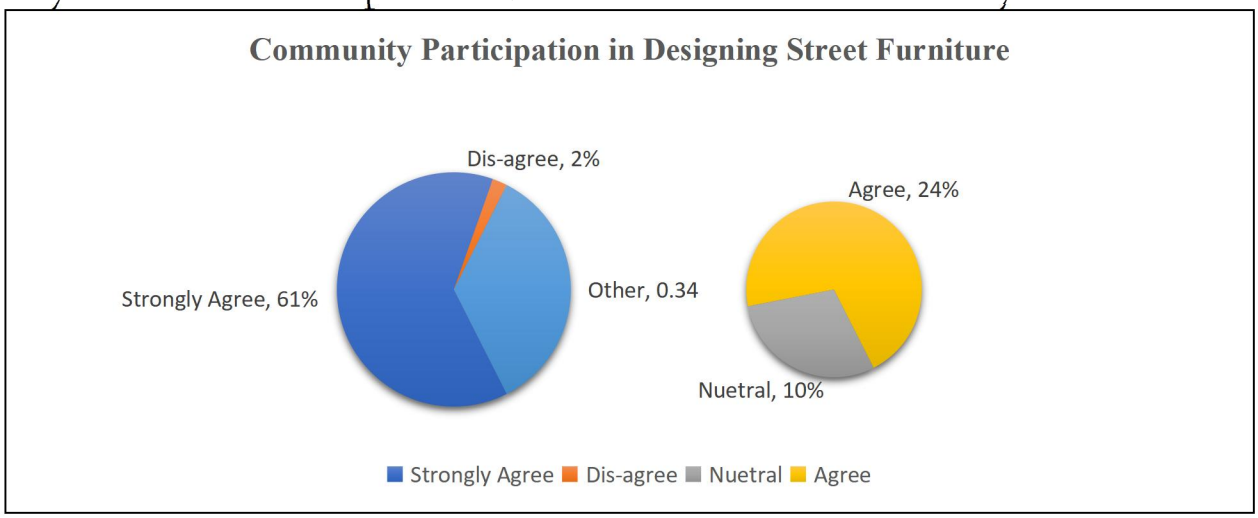

Figure 03 Community Participation

Figure 04 offers a clear depiction of local users' strong interest in enhancing the city's aesthetics. The responses reveal a significant desire among residents to improve the visual and environmental aspects of their urban surroundings. This includes a preference for integrating green spaces, public art, and well-maintained landscaping to create a more inviting and harmonious cityscape.

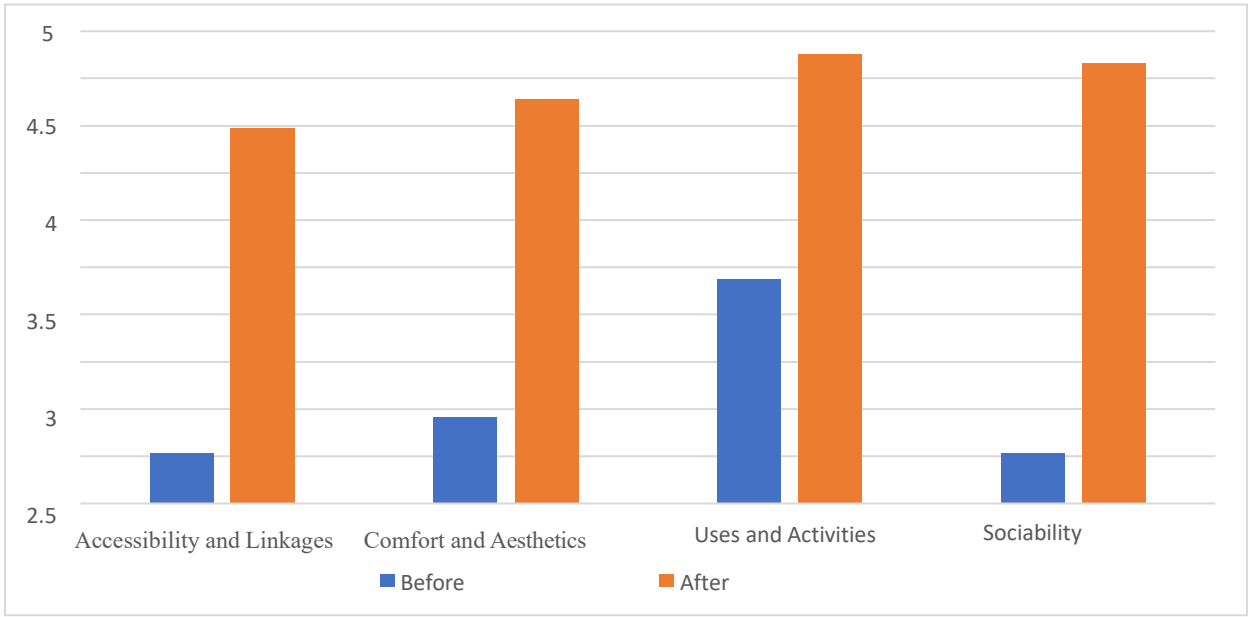

Figure: 04 Figure To promote city aesthetics Street Furniture importance

The feedback underscores a collective aspiration for an aesthetically pleasing urban environment, highlighting that such improvements are seen as crucial for elevating the quality of life. Enhancing the city's appearance is viewed as essential for fostering community pride, engagement, and attractiveness to visitors and

potential new residents. In summary, Figure 04 illustrates a widespread and articulated interest in urban aesthetic improvements, emphasizing the need to incorporate visual and environmental enhancements into city planning and development.

Conclusion

In conclusion, the multifaceted benefits of open spaces—encompassing parks, gardens, and green areas—are both profound and far-reaching. The positive impact of these spaces on health is well-documented, with evidence showing that time spent in such environments can significantly reduce stress, enhance mental well-being, improve cognitive function, and encourage physical activity, leading to an overall enhancement of quality of life.

Moreover, open spaces are instrumental in fostering social interaction and community cohesion. They act as vibrant gathering places where individuals can engage in recreational activities, organize events, and forge meaningful social connections. This not only strengthens community ties but also contributes to a more cohesive and supportive social fabric.

From an environmental standpoint, open spaces are crucial for preserving and improving natural ecosystems. They play a significant role in conserving biodiversity, providing green corridors for wildlife, mitigating the urban heat island effect, improving air quality, and managing stormwater runoff. These environmental benefits are essential for creating sustainable urban environments that support both human and ecological health.

Economically, the presence of well-maintained open spaces brings considerable advantages to communities. They enhance property values, attract tourism, stimulate local businesses through various activities and events, and improve overall living conditions. This, in turn, makes areas more attractive to skilled professionals and businesses, contributing to economic growth and prosperity.

In summary, the integration and thoughtful management of open spaces are fundamental to achieving holistic urban development. They offer significant health, social, environmental, and economic benefits, underscoring the need for their preservation and enhancement as integral components of thriving communities.

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