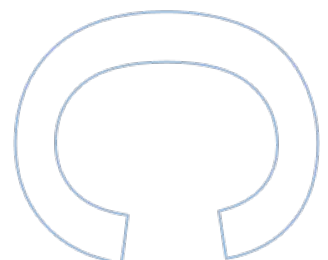
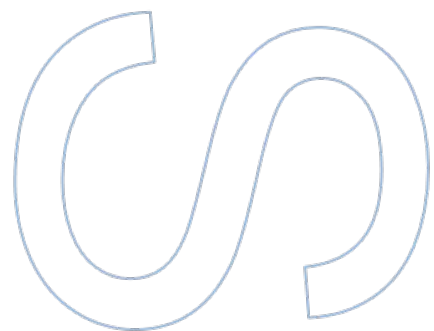
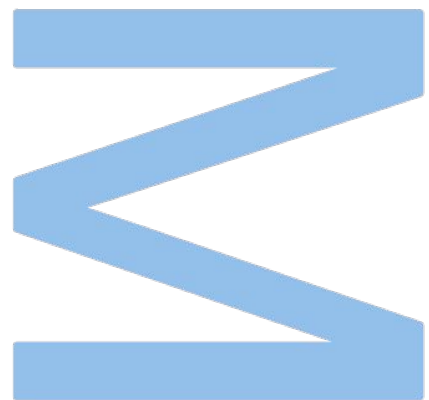


Urban Parks and Green Corridors

The Hibiya and Pocket Park in Tokyo

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Master in Landscape Architecture
Department of Geosciences, Environment and Spatial Plannings
Faculty of Sciences of the University of Porto
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Internship report carried out as part of the
Master in Landscape Architecture
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Abstract

Green spaces play a crucial role in shaping urban quality of life, offering not only leisure areas and spaces for social interaction but also contributing to the preservation of cultural and historical heritage. The connection between a large historic park and a modern pocket park in Tokyo presents a unique opportunity to explore how different types of green spaces can coexist and enrich the urban landscape. This project aims to create a link between these two types of spaces through a green line, improving the existing situation and promoting a harmonious integration that respects both the past and the present.

The large historic park of Hibiya, with its rich cultural and landscape heritage, represents a vital element of the city's identity. On the other hand, the modern pocket park of Toranomon reflects current urban design trends and the growing need for compact and sustainable spaces in densely populated areas. Integrating these two spaces not only preserves and enhances the historical heritage but also addresses contemporary needs for functionality and accessibility.

This thesis addresses the importance of considering not only individually designed spaces but also their interaction with the surrounding environment. The goal is to explore how the creation of a green line can serve as a link between the historic park and the pocket park, promoting aesthetic and functional cohesion that benefits the community. The proposed approach aims to transform users' daily experience by offering a space that is both historic and innovative, sustainable, and accessible.

Throughout this thesis, strategies for integrating these two spaces will be analyzed, discussing how the green connection can improve user experience and urban environment quality. Emphasis was placed on the importance of an approach that considers the surroundings and the functionality of the spaces, highlighting how the revitalization and connection of different types of green spaces can contribute to a more cohesive city.

Resumo

O espaços verdes desempenham um papel crucial na configuração da qualidade de vida urbana, oferecendo não apenas áreas de lazer e convívio social. Contribuem também para a preservação do património cultural e histórico. A interligação entre um grande parque histórico e um moderno *pocket park* em Tóquio oferece uma oportunidade única para explorar como diferentes tipos de espaços verdes podem coexistir e enriquecer a paisagem urbana. Este projeto visa criar uma conexão entre esses dois tipos de espaços através de uma linha verde, melhorando a situação existente e promovendo uma integração harmoniosa que respeita tanto o passado como o presente.

O grande parque histórico de Hibiya, com a sua rica herança cultural e paisagista, representa um elemento vital na identidade da cidade. Por outro lado, o *pocket park* moderno de Toranomon reflete as tendências atuais de design urbano e a necessidade crescente de espaços compactos e sustentáveis em áreas densamente povoadas. A integração desses dois espaços não apenas preserva e valoriza o património histórico, mas também responde às necessidades contemporâneas de funcionalidade e acessibilidade.

Esta tese aborda a importância de considerar não apenas os espaços projetados individualmente, mas também a sua interação com o ambiente circundante. O objetivo é explorar como a criação de uma linha verde pode servir como um elo entre o parque histórico e o *pocket park*, promovendo uma coesão estética e funcional que beneficia a comunidade. A abordagem proposta visa transformar a experiência diária dos utilizadores, ao oferecer um espaço que seja ao mesmo tempo histórico e inovador, sustentável e acessível.

Ao longo desta tese, serão analisadas as estratégias para a integração desses dois espaços, discutindo como a conexão verde pode melhorar a experiência do utilizador e a qualidade do ambiente urbano. Foi enfatizada a importância de uma abordagem que considere a envolvente e a funcionalidade dos espaços, destacando como a revitalização e a conexão entre diferentes tipos de espaços verdes podem contribuir para uma cidade mais coesa.

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Chapter 1

Introduction

Rapid urbanization in large cities like Tokyo has brought significant challenges, among which the need to maintain and expand green areas that provide ecological, social, and well-being benefits stands out. In response to this demand, urban regeneration initiatives and the creation of green spaces become crucial for the sustainable development of metropolises.

During my internship at two renowned Japanese companies, Nikken and FOLK, both located in Tokyo, I had the opportunity to participate in important projects focused on the revitalization of urban spaces. At Nikken, I contributed to the regeneration project of the Historic Hibiya Park, an iconic green space that plays a vital role in Tokyo's urban life. The project aimed to restore and revitalize the park, enhancing its functionality, accessibility, and preserving its historical and cultural value. At FOLK, I worked on an urban transformation project, where the demolished Sasanoya building will be converted into a pocket park. This concept aims to breathe new life into small, underutilized spaces within the urban fabric to create accessible green areas that can be quickly implemented and offer significant benefits to the community.

1.1 Objectives

The objectives of this thesis are the following:

1. Personal project for the regeneration of Hibiya Park, as an alternative to the one developed during the internship at Nikken. This project aims to transform Hibiya Park into a space where everyone has access, regardless of age, gender, or physical condition.
2. Personal project for a Pocket Park in Toranomon, as an alternative to the one developed during the internship at FOLK. This project aims to connect people with nature, promoting well-being and quality of life.

3. Development of a green connection strategy that integrates Hibiya Park and the future Pocket Park, creating an ecological corridor that connects these green spaces efficiently and harmoniously. The proposal aims to create a sustainable planning model that can be replicated in other densely populated areas, promoting the interconnection of green spaces and maximizing their benefits for the urban environment and the population.

The first two projects were defined by the companies where I completed my internship (Nikken and FOLK), where the importance of establishing a connection between the two green spaces in question became evident.

1.2 Relevance of the study

The revitalization of urban spaces, with a focus on sustainability and social inclusion, represents an urgent and relevant challenge for contemporary cities. In this context, the present work contributes to the discussion by presenting a project that integrates the preservation of historical heritage with the creation of new green spaces. The revitalization of Hibiya Park and the creation of the Pocket Park demonstrate how it is possible to reconcile the appreciation of the past with the demands of the present, transforming urban areas into more pleasant places while enhancing the ecology of the spaces.

By connecting these two projects through a network of green spaces, the aim is to promote urban quality of life, encourage outdoor activities, and strengthen environmental value.

The results of this project can serve as a starting point for other urban revitalization projects, demonstrating the importance of considering and connecting historical, social, environmental, and aesthetic aspects in the creation of public spaces. Additionally, the work proposes public policies that encourage the creation of greener, fairer, and more inclusive cities.

Chapter 2

Japanese Landscape Architecture: Theories and Concepts

Timeless principles, based on respect for nature, can help us design gardens in harmony with the natural environment and human nature. These principles are intuitive, highlighting natural elements such as winding rivers or old, twisted trees. Natural proportions have a powerful aesthetic effect, creating harmony and depth. In Japanese gardens, these proportions are used as guides, adapted according to the context.

2.1 Organic design

The S-shaped layout, present in nature and gardens, softens the zigzag pattern, creating mystery and depth. This form invites exploration and is used in pathways and tree placement, allowing for the enhancement of local materials [6], as can be seen in Figure 2.1¹.

In Japanese landscaping, no will is imposed on the material; rather, the inherent beauty within it is revealed. This difference compared to classical European designs originates from the patterns of beauty formed in Japan, developed based on animism and the syncretism of Shintoism and Buddhism. The fundamental concepts are as follows [3]:

Sabi: Literally, it means "rust," the allure of antiquity, the mark of time. Sabi is the connection between art and nature. Thus, beauty is synonymous with naturalness; charm with traces of age.

Wabi: This is a bridge between art and everyday life, valuing the beauty of the ordinary and simplicity. Wabi is characterized by the absence of showiness and pretentiousness.

Shibui: It is what a person with good taste would call beautiful. It combines the beauty of simplicity with that of naturalness. It takes into account the inherent beauty of the

¹Image obtained from https://www.japan-guide.com/blog/koyo17/171124_kanazawa.html



Figure 2.1: Organic design of the Kenrokuen Park, Kanazawa (image source: Japan Guide).

object's purpose, the material it is made from, with minimal processing and maximum practicality. It emphasizes that continuity in art is reflected not in form, but in content.

Yugen: It incorporates the skill of suggestion or subtext, the beauty of restraint.

These are concepts used in Japanese landscape architecture, which were developed in the original design of Hibiya Park.

2.2 Urbanization of Tokyo

Tokyo's urbanization is a complex process, characterized by a combination of planning and organic growth. The city, which is now one of the largest urban centers in the world, has undergone various transformations throughout its history, shaped by factors such as natural disasters, wars, and technological advancements. (Figures 2.2² and 2.3³).

Many areas of Tokyo have grown spontaneously, with the construction of small houses and buildings over time. This characteristic gives the city a unique atmosphere, with a

²Image obtained from <https://maps-tokyo.com/maps-tokyo-old/old-tokyo-map>

³Image obtained from <https://earth.google.com/web/@0,-2.3,0a,22251752.77375655d,35y,0h,0t,0r/data=CgRCAGgBOgMKATA>



Figure 2.2: Tokyo map, 1849 (source: engraving by Otojirō Fujiya).



Figure 2.3: Tokyo map, 2021 (source: Google Earth).

blend of old and new. It can also bring urbanization problems, leading to some spaces lacking any form of organization due to insufficient planning.

Despite organic growth, Tokyo has also experienced periods of more formal urban planning, especially after World War II. Reconstruction and development plans aimed to create a more efficient and modern city.

Tokyo is one of the most densely populated cities in the world. This high density has recently driven the creation of tall buildings, efficient transportation systems, and complex infrastructure.

Green spaces in Tokyo are a fundamental part of the city's identity. They provide locals and visitors with areas to relax, engage in outdoor activities, and enjoy nature.

2.2.1 Challenges and the Future of Tokyo's Urbanization

Tokyo's urbanization remains a dynamic process, with new challenges constantly emerging. The city faces issues such as an aging population, increasing social inequality, and risks of natural disasters. To address these challenges, Tokyo is investing in sustainable technologies, promoting innovation, and seeking creative solutions to improve the quality of life for its residents.

Tokyo is a city with a population classified as “very high” density (5,000 or more inhabitants per square kilometer) [1]. According to a 2024 study by National Geographic, Tokyo is the most populated city in the world. “The bustling capital of Japan continues to blend the traditional with the ultramodern, creating the paradox of preserving its temples and traditional markets nestled between towering skyscrapers. This city holds the top spot in the ranking of the world's most populated cities, with over 37 million residents. Additionally, Tokyo stands out for its size, covering 2,194 square kilometers”.

The central part of the city has about 20 percent of green spaces and a tree coverage of 14 percent. The city has seen an improvement in the average health of its urban vegetation compared to the global average and also relative to the previous year [4, 5].

Due to its population density, Tokyo faces several challenges. The streets are narrow, forcing cars, cyclists, and pedestrians to share the same space. The lack of space results in residential buildings being constructed on extremely small plots of land. Tokyo's architecture reflects this spatial scarcity, with buildings featuring common facades that conceal narrow interiors and innovative architectural solutions. Therefore, the city is an example of how physical limitations can drive creativity and efficiency in space usage. In summary, Tokyo is a metropolis where the lack of space is a constant reality, shaping daily life and the city's architecture [8].

Thus, Tokyo's development combines a series of solutions with some issues that are not completely resolved. It is known that the lack of green spaces in densely populated urban

areas is associated with a range of difficulties, such as decreased air quality, increased temperatures, loss of biodiversity, and a decline in public health, including mental health. The absence of contact with nature in urban environments can lead to stress, anxiety, and other health problems [8].

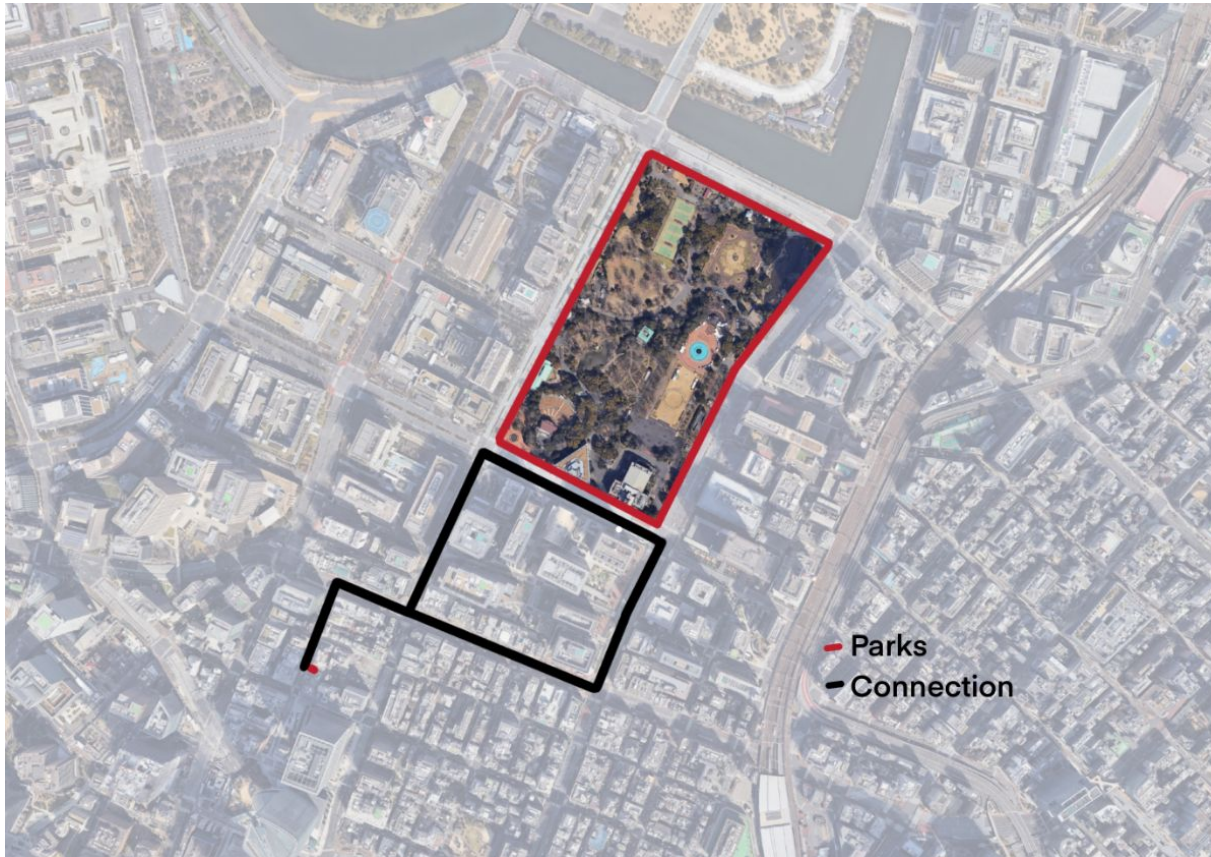


Figure 2.4: Areas of intervention (base of the image: Google Earth).

It is in this context that the redevelopment projects for Hibiya Park and the creation of the Pocket Park are situated. It is extremely important to think about and plan all existing green spaces and find ways to connect them. In this scenario, I propose linking these projects through a green line, which will serve as an extension and integration of these two areas, represented by black lines in the Figure 2.4.

Chapter 3

Methodology

The methodology used in this work includes an analysis of the specific characteristics and needs of each space, as well as the intermediate areas that will serve as green connectors. Approaches involving studies of the local community are adopted to ensure that the proposed solutions meet the needs and expectations of the users. Ideas presented in successful projects from other cities have been considered to inform and enrich the green connection proposal.

This thesis is expected to contribute to the field of sustainable urban planning by offering practical and theoretical insights into the creation and interconnection of green areas in densely populated urban environments. By developing a green connection strategy between Hibiya Park and the FOLK Pocket Park, this work aims to demonstrate how strategic interventions can transform the urban landscape, promoting enhanced quality of life, sustainability, and resilience in cities.

3.1 Used tools

The base of the projects was obtained from the site *Cadmapper*¹. Cadmapper is an online tool that allows for the rapid creation of city and terrain models for use in CAD (Computer-Aided Design) software. The platform generates files with maps that include various urban features based on real data. Although Cadmapper provides a quick and practical base, the dimensions and details generated may not be entirely accurate, which could affect the precision of measurements and dimensions of elements. Contour lines could not be determined; however, it is important to note that the selected project area is relatively flat.

For the execution of this project, the following tools were also used: project design with AutoCAD², elaboration of the *master plan* and diagrams with Photoshop³ and ProCreate⁴,

¹<https://cadmapper.com>

²<https://www.autodesk.com>

³<https://www.adobe.com/products/photoshop.html>

⁴<https://procreate.com>

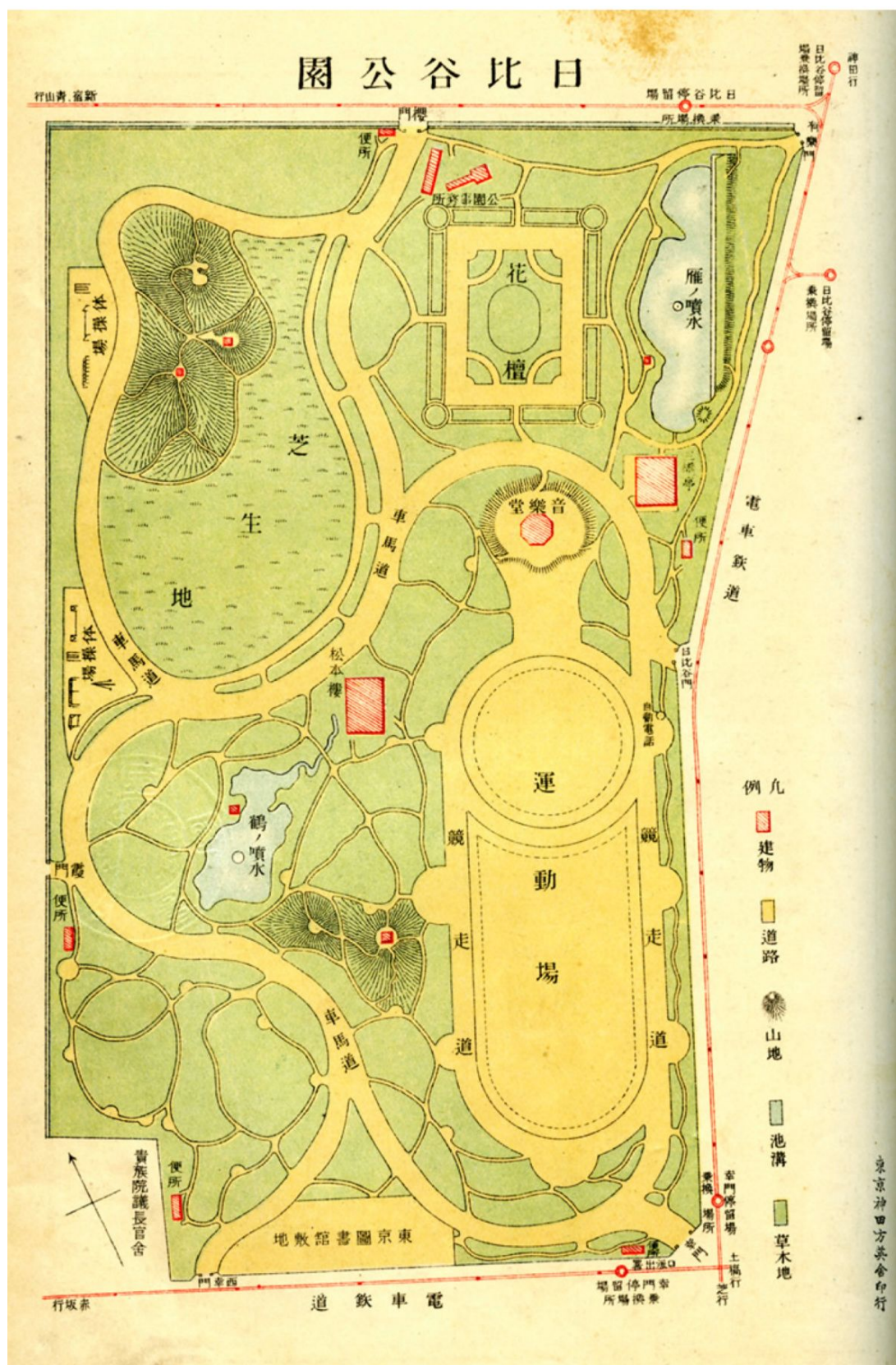


Figure 3.1: Original Plan of Hibiya Park (source: Hoeisya).



Figure 3.2: Current map of Hibiya Park (source: Tokyo as it is).

obtaining base images of the sites with Google Earth Engine⁵. Note that the base for the map design of Hibiya Park does not allow for the accurate acquisition of current data; the base maps are merely an estimate of the existing situation. The obtained base maps are available in figures 3.1⁶ and 3.2⁷.

⁵<https://earthengine.google.com>

⁶Image obtained from <https://thetokyofilesurbandesign.wordpress.com/wp-content/uploads/2016/07/hibiya-park-original-plan.jpg>.

⁷Image obtained from <https://tokyo-as-it-is.localinfo.jp/posts/2728242/>.

Chapter 4

Projects

4.1 Project 1 - Hibiya Park

In this section, we describe the project developed for Hibiya Park, based on the work carried out during the internship at Nikken.

4.1.1 Location

Hibiya Park is located in the Chiyoda district, in the heart of Tokyo, Japan. It is situated near the Imperial Palace. The park is surrounded by areas of great historical, political, and economic significance. To the east of the park is the Marunouchi commercial district, a major financial center in Tokyo, while to the west is the Kasumigaseki government district, where many of Japan's ministries and government agencies are located. This strategic location gives Hibiya Park a unique significance, both as an urban green space and as a point of convergence for various cultural and social activities.

4.1.2 Analysis of the Park

Hibiya Park has an extremely important history that reflects Tokyo's transformation over the centuries. During the Edo period (1603-1868), the land was owned by feudal lords, the Mōri and Nabeshima clans. As Japan modernized in the late 19th century, the site was transformed into a military parade ground. However, the true potential of the area was realized in 1903, when it became Japan's first public park in the Western style. Inaugurated in 1903, the park covers an area of approximately 16 hectares, maintaining a balance between preserving its historical richness and meeting the needs of visitors. It is widely used by both local residents and tourists. Its central location and proximity to the Imperial Palace make it a popular destination for walks, picnics, and community events. The diversity of its landscaped areas, lakes, and open spaces provides visitors with a range of experiences,

from tranquility and contemplation to recreational and cultural activities.

Hibiya Park stands out as a green refuge amid an excessively urbanized city. More than just a leisure space, the park plays a crucial role in preserving local biodiversity. It thus becomes an oasis of wildlife in the heart of the metropolis.

4.1.3 Historical context

Hibiya Park was designed by Sekirou Honda and has become a model for other landscaping projects in Japan, demonstrating the importance of an integrated and multidisciplinary approach to urban planning. The park represents a milestone in the history of Japanese landscaping, marking the transition to a more modern and functional style inspired by European models.

4.1.3.1 Education of Sekirou Honda

Seiroku Honda's education played a crucial role in the design of Hibiya Park and its influence on Japanese landscaping. His time at the Horto Akademie in Tharandt, Germany, and at the University of Munich provided him with a solid foundation in forestry and economics, areas of knowledge that proved fundamental to his later work [2].

At Horto Akademie, a German forestry school located in Tharandt, Honda had the opportunity to familiarize himself with local forestry principles, which emphasized sustainable forest management and the creation of harmonious landscapes. Later, while studying economics at the University of Munich, Honda expanded his understanding of urban planning and resource management, gaining a broader and more strategic perspective. His study trips across Europe, the United States, and Canada, after completing his doctorate, were crucial for him to learn about various landscaping approaches, which allowed him to adapt the best practices to the Japanese context. His training in forestry influenced his choice of plant species and spatial organization of the park, aiming to create a natural and harmonious environment. Additionally, the economic knowledge he acquired at the University of Munich enabled him to develop a project that met the needs of the urban population and contributed to the city's development. His integrated vision, combining knowledge in forestry, economics, and urban planning, allowed him to consider both aesthetic and functional aspects in his project.

4.1.3.2 Public Urban Parks in Tokyo

The history of public parks in Japan began in 1873, when the Western concept of "public park" was introduced to the country. That same year, the first five parks were created in Tokyo: Ueno Park, Asakusa Park, Fukagawa Park, Asukayama Park, and Shiba Park.

Their locations were chosen primarily for economic reasons, due to the low cost of land acquisition, rather than from an urban planning perspective. They essentially represented a new designation of land within existing shrine or temple grounds as “public parks.” Thus, the spatial composition of the first public parks retained strong elements of traditional Japanese gardens.

Sakamotocho Park, inaugurated in 1889 in Tokyo, was the first public park created within the context of urban planning, with a focus on public health and the well-being of residents in a dense urban area. Although the layout suggested Western influences, with open areas, the park preserved traditional Japanese characteristics, including hills, pergolas, and typical plants such as cherry trees and maples, which highlighted the atmosphere of a garden from before the Meiji Restoration (1868-1889).

Hibiya Park was the first to be developed in the context of modernization as an independent project. After being officially designated in 1893, a decade of debates took place regarding its design, until the park’s opening in 1903. Experts from various fields at the time, including the renowned gardener Yoshichika Kodaira, the naturalist Yoshio Tanaka, and the landscape architect Yasuhei Nagaoka, presented a series of project proposals for the park [7]. However, none of these projects was approved, as finally it was the proposal of Seiroku Honda that was accepted. Its design reflects his ideas in the pursuit of modernization for a country seeking to adapt Western models to the Japanese context.

Honda’s vision integrated ideas of landscaping and urban planning. His design for Hibiya Park demonstrates a concern with spatial organization, functionality, and aesthetics. The division of the park into areas with specific functions, such as the riding arena, botanical garden, and sports field, was a novelty for the time and reflected the influence of European aesthetics.

The park was designed to meet the leisure and recreational needs of an emerging middle class in Japan, becoming a model for other landscaping projects in the country and contributing to the formation of a modern national identity. The selection of plants and the organization of the space aimed to create a pleasant and healthy environment for visitors.



Figure 4.1: Lake in Hibiya Park (source: author).

Although Hibiya Park was strongly influenced by European models, especially German, it is essential to highlight that elements of Japanese culture were incorporated into the design, creating a synergy between the contemporary and the traditional. These areas with a Japanese layout include significant water features, including the two existing lakes in the park (see Figures 4.1, 4.2). The paths have an organic layout with a natural appearance, where most of the tree vegetation is concentrated, and consequently, the areas with the highest ecological interest.

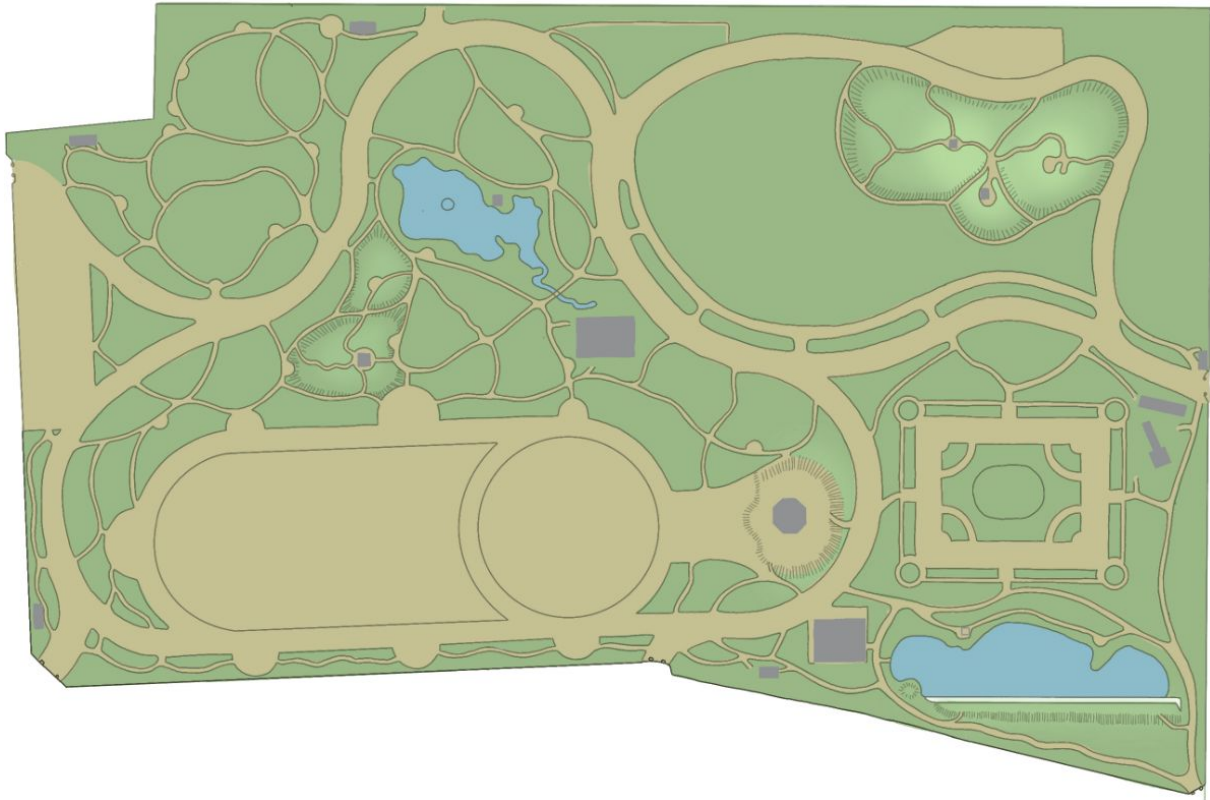


Figure 4.2: Original design of Hibiya Park

4.1.4 Project

Throughout its history, Hibiya Park has undergone various transformations shaped by social, political, and cultural factors. Initially conceived as a space for leisure and contemplation, the park has been expanded and remodeled on several occasions, with the addition of new facilities and infrastructure to meet the needs of a continually growing population [9].

Its versatility has allowed the park to adapt to different uses over time. In addition to being a place for relaxation and nature appreciation, it has evolved to include stages for cultural events, political demonstrations, and sports activities, becoming a meeting point for the community.

Wartime conflicts also left their marks on the park. During World War II, Hibiya Park served as a shelter for the population, suffering significant damage due to bombings. After the conflict, the park was rebuilt and adapted to the new needs of the population, emerging as a symbol of hope and renewal, with the influence of popular culture being a determining factor in this evolution. The current layout of the park is shown in Figure 4.3.



Figure 4.3: Current Design of Hibiya Park

4.1.4.1 Problems

Although the park is efficient in many aspects, there are areas that could be improved to optimize the visitor experience. In particular, the park's pathways have design issues that hinder the flow of people. Additionally, a number of structures have been added over time, causing the park to lose its original character, as shown in Figure 4.8. The most renowned structure within the area is the Shisei Kaikan, an iconic Gothic building constructed in 1929. Another significant landmark is the Open-Air Concert Hall, originally built in 1923. Due to various factors, it was closed and subsequently rebuilt in 1954. The entire structure underwent another reconstruction in 1982. In addition to these key buildings, the site features several other amenities, including tennis courts, restaurants, libraries, and more.

Another critical issue is the aging vegetation (see Figure 4.4), which presents potential risks due to its fragility. Old trees and plants, while contributing to the park's history and aesthetics, can become hazardous if not properly maintained or replaced. Therefore, the renewal of vegetation is a priority for the safety of visitors.



Figure 4.4: Ageing Vegetation in Hibiya Park (source: author).

Additionally, although recognized as a Western-style park, the park suffers from a lack of character and identity in some elements of this new style introduced at the time. Furthermore, some infrastructures, such as kiosks, are quite degraded.

The tennis court (Figure 4.5), located in a central area of the park, raises questions of inclusivity. Although it is a facility appreciated by visitors, its use based on payment gives the park a less inclusive appearance. As a public space, it is important that all areas and activities are accessible to all visitors, regardless of their financial capacity.

H



Figure 4.5: Hibiya Park Tennis Court (source: author).



Figure 4.6: Fencing Around the Playground in Hibiya Park (source: author).



Figure 4.7: Children's Playground in Hibiya Park (source: author).

There is the presence of a playground (Figure 4.7) enclosed in an open space (Figure 4.6), raising questions about whether this physical enclosure promotes a lack of accessibility for both children and adults to the space. On one hand, the fence can ensure children's safety and facilitate supervision by adults; however, this physical barrier may also isolate children from the rest of the open space, limiting their interactions with the environment and with other people.



Figure 4.8: Section of Hibiya Park.

4.1.4.2 Design Concept

The initial goal was to create a modernized garden; however, the frequent alterations have led to the loss of the original design and its history. As this is a historic park, marked by various events, we believe it is important to preserve the park's original character, as it is still seen today as an example of how landscape architecture was introduced and evolved in Japan. Highlighting certain features could enhance the park, giving it a more unique appearance. To this end, the original 1903 plan by Seiroku Honda was used.

The study presented in [10] shows that the least appreciated area by the public is the zone referred to as the “clearing.” Initially, it was indeed a clearing. However, it has undergone changes and is now a conventional playground, enclosed, with limited access and a rather hidden entrance. This demonstrates that some of the changes made to the park have not always yielded the best results.

Next, the points to be restructured or maintained will be outlined according to the park's sectional layout presented in Figure 4.8.

Amphitheater: The proposal involves reconfiguring the entrance based on the 1903 layout, expanding the permeable area and vegetation. The Hibiya Amphitheater, inaugurated



Figure 4.9: Ageing Vegetation in Hibiya Park (source: author).



Figure 4.10: Fencing in Hibiya Park (source: author).

in 1923, is one of the city's most active and historic cultural spaces, widely used for outdoor events, especially in spring and summer. With around 40 to 50 major events per year, the venue has become essential to the city's cultural life. Although redesigning the area without the amphitheater would be ideal due to its negative visual impact on the entrance, the best option is to preserve the structure, given its cultural significance (Figure 4.12)(Figure 4.11).



Figure 4.11: Music Hall.



Figure 4.12: Entrance and Amphitheater (Open Air Music Hall).

Japanese style gardens: The proposal for this area involves maintaining the original 1903 layout and functionality of the space, preserving features that provide a good experience for users, such as the curvature of the paths. The tree vegetation is well-developed, and to ensure a healthy space, it is essential to regularly assess the condition of the vegetation, replacing plants with others of the same species when necessary, in order to preserve the natural heritage (Figure 4.13).



Figure 4.13: Japanese style gardens.

Former sports area and small amphitheater (Small Music Hall: This area, originally designated for sports, had its layout changed to straighter lines, resulting in the loss of the circular features. The proposal is to recreate a design that recovers the original layout by permeabilizing more (like the project that is being made by Nikken's office), including the circular features, in order to respect the initial concept. Although the entire original plan shape cannot be restored because of its use, the circular finish will allow for a layout that honors the original design (Figure 4.14), (Figure 4.15).



Figure 4.14: Former sports area.



Figure 4.15: Former sports area and Music hall (from 1903, current situation and proposal).



Figure 4.16: Fountain in Hibiya Park (source: author).

Additionally, the fountain, which is currently painted light blue, (Figure 4.16), should be renovated to provide a more attractive and unique appearance, as it stands out as an important element of the park (Figure 4.17). In this work, I propose placing mosaics in the fountain with a pleasing coloration. The mosaics will be arranged in an “Asanoha” pattern, a traditional Japanese design.

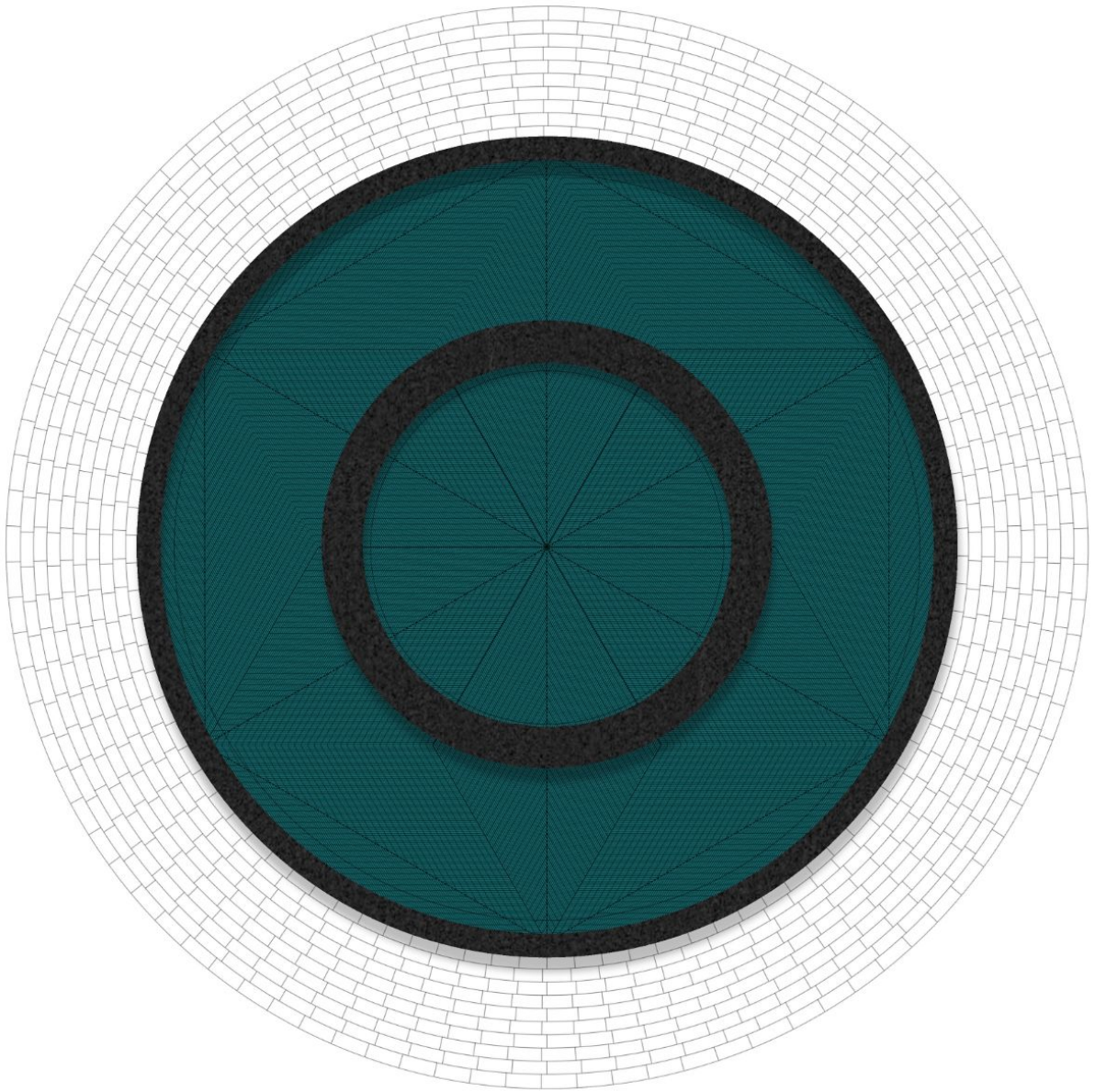


Figure 4.17: Fountain proposal.



Figure 4.18: Hibiya Park Small Music Hall (source: author).

The proposal for the smaller amphitheater in the park involves removing the current structure and recreating the original configuration, which consisted of a natural elevation of the terrain without permanent construction. The existing amphitheater (Figure 4.18), currently closed to the public, will no longer have restricted access. It will be replaced by a greener structure that promotes social interaction and maintains the amphitheater's functionality. The proposed amphitheater, although not entirely naturalized, features a greener structure that supports not only its use as an amphitheater but also as a gathering space for groups, such as for picnics. Additionally, we propose removing the surrounding fences to allow free access to everyone at any time. The gazebo will be preserved.



Figure 4.19: Flower Garden of Hibiya Park (source: author).

Flower Garden: For this area, I propose to maintain the formal flower layout, which reflects the originally planned Western design for the project. This space is highly appreciated by visitors, offering a versatile color palette throughout the year, as well as recreational areas. Despite the rigid design language, the contrast with the rest of the park provides an interesting diversity for users (Figures 4.20 and 4.19).



Figure 4.20: Flower garden.

Clearing area: For the clearing area, I propose relocating the tennis court and recreating the space with elevations according to the new location of the court (the proposal of the relocation and the placement goes according to the proposal by Nikken office too). Additionally, an appropriate play area for children will be created, incorporating the terrain's elevations and depressions to make use of existing features. Trees from the park, which may need to be removed for safety reasons, will be used to construct natural structures, such as benches, and to create elements that children can interact with, as illustrated in Figure 4.21.

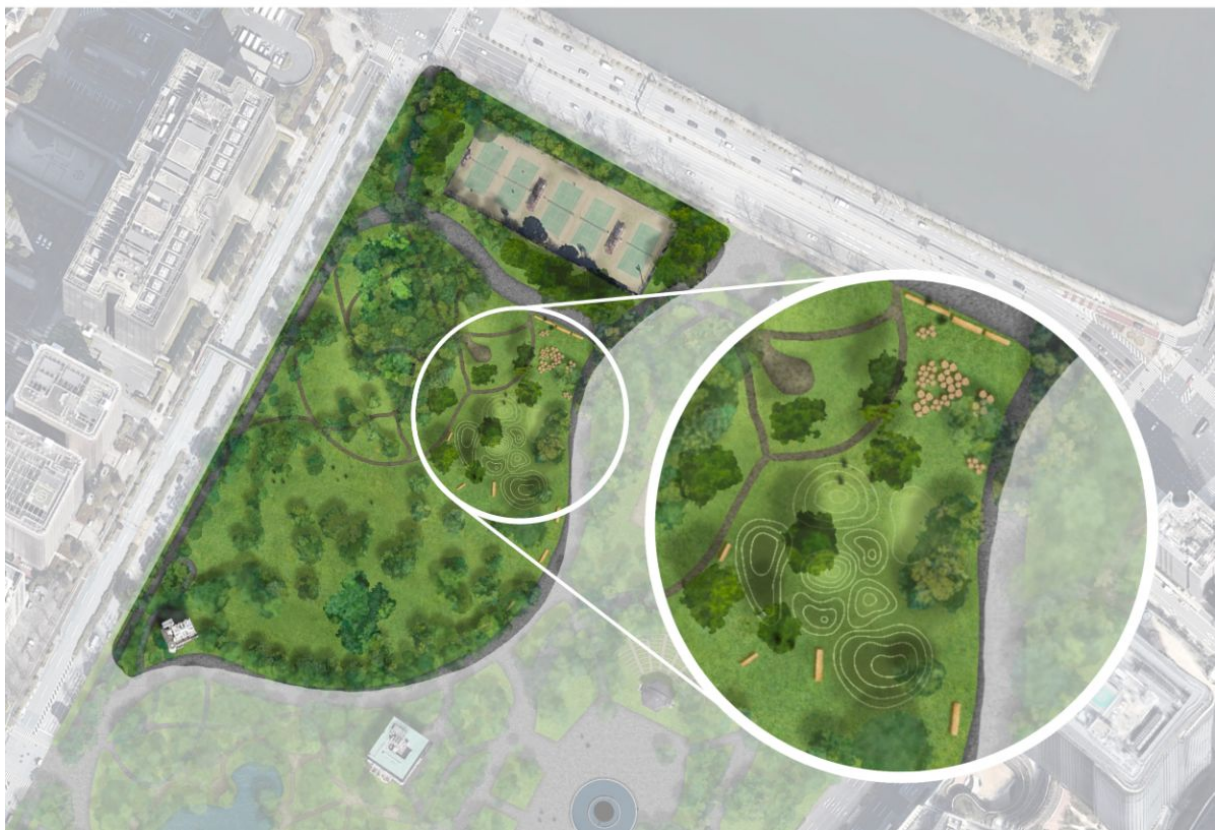


Figure 4.21: Clearing.

The use of natural materials for furniture is a common strategy in various projects, including the Computer Science Department Garden at the Faculty of Sciences of the University of Porto and the Campo Alegre Botanical Garden by Paulo Farinha Marques, which served as the primary inspiration for this idea. Using logs from the park itself to construct benches is a sustainable and eco-friendly option that respects the historical and natural identity of the site. By utilizing existing resources, we reduce the carbon footprint and allow the material to naturally decompose, enriching the soil and contributing to biodiversity. This approach harmonizes with the natural environment, ensuring low visual impact and preserving the park's aesthetics. Additionally, it values the life cycle of the trees and promotes environmental education, reinforcing sustainable practices.

Finally, I have aligned the clearing area with the original plan by proposing the removal of the fence and the conventional playground to create a multifunctional space. The arboreal vegetation should be maintained, as it contributes to thermal comfort on warmer days (Figure 4.21).

The final result of my proposal is represented in the Figure 4.22.



Figure 4.22: Master plan of Hibiya Park.

4.2 Projct 2: Pocket Park

4.2.1 Location

Toranomon is an area located in the Minato ward of Tokyo, Japan. This region is known for being a major business hub and home to various companies, as well as housing numerous embassies and consulates. The area is also recognized for its hospitals, such as Toranomom Hospital, and urban development projects, including Toranomom Hills.

4.2.2 Site Analysis

The region offers a professional and sophisticated environment, with luxury offices and apartments occupying most of the area. The imposing skyscrapers, such as Toranomom Hills and the Sumitomo Mitsui Banking Corporation Building, define the city's skyline and attract professionals from various sectors. The area also boasts modern and efficient infrastructure, with easy access to public transportation, luxurious accommodations, and a variety of services to meet business needs.

On weekends, Toranomom experiences less activity and more tranquility. However, it attracts a different audience thanks to its cultural elements, such as Zojoji Shrine, a historic Buddhist temple with beautiful gardens, the Suntory Museum of Art, and the National Theatre of Japan.

In this scenario of constant transformation, the company FOLK proposes a project for the area where a building known as Sasanoya has recently been demolished (Figure 4.23). The demolished building will be replaced by a temporary park, which will serve as an experimental project. In the future, the entire block will be revitalized with the demolition of the existing small buildings. In their place, a megaproject will be developed: a large-scale building surrounded by green spaces, promising to reconfigure the urban landscape of the region. This project represents an opportunity to reimagine the future of Toranomom.



Figure 4.23: Site of the Pocket Park (source: Google Earth).

4.2.2.1 Problems

The space in question presents a series of challenges that must be considered for the development of an effective and pleasant project. The main issues identified are the lack of direct sunlight, excessive wind, and the absence of recreational areas.

The lack of sunlight impacts the quality of the environment, making the place uncom-

fortable. Strong winds, in turn, cause discomfort to visitors. The combination of these two factors results in an overall sense of discomfort and limits the use of the space.

The absence of leisure areas in the surrounding region further exacerbates the situation, highlighting the need to create a space that offers recreational and relaxation options for the community.

To address these issues, the project should seek solutions that make the area more welcoming, minimize the effects of wind, and create a pleasant environment with leisure options, despite the lack of natural light.

4.2.3 Project

4.2.3.1 Objectives

The goal for this area is to define the needs and expectations for creating a multifunctional space that meets both recreational requirements and the hosting of small events. The aim is to develop a pleasant, functional, and versatile environment capable of accommodating different audiences and needs.

4.2.3.2 Design Concept

This project represents an oasis of modernity in the urban environment, offering a green and restful space. Located in a densely populated area, the pocket park will provide a venue for gatherings, relaxation, social interaction, and events. The vegetation beautifies the space, acting as a natural barrier against noise and wind, significantly improving the comfort level in the area. In addition to the vegetation, the created elevations provide a more three-dimensional and sculpted perspective to the garden, helping to position the vegetation at a higher elevation and directing wind currents upwards. Its *rain garden* is characterized by a small bridge and contributes to the infiltration of rainwater, reducing surface runoff. This is a sustainable solution, combined with the use of eco-friendly materials and the promotion of biodiversity.

The curvilinear design of this project aims for a more organic and fluid appearance, contrasting with the rigid lines of the streets and buildings. This choice creates a more harmonious and inviting environment with an artistic touch. Strategically placed trees serve an essential function as wind and visual barriers, guiding the observer's gaze by creating appealing compositions. This more natural arrangement seeks to integrate the project into the existing urban context, promoting a dialogue between nature and the city. Finally, to create a leisure space, benches have been placed (Figure 4.24). A simulation of the project is presented in Figure 4.25.



Figure 4.24: Pocket Park Master Plan.



Figure 4.25: Simulation Pocket Park.

4.3 Project 3: Connection and Integration of Parks with Green Corridors

The proposal to establish a green corridor to connect the two parks, Hibiya Park and the Toranomom Pocket Park, and integrate existing small green spaces as well as future green spaces aims to promote urban sustainability and enhance the user experience. This connection will strengthen the city's green network, benefiting both the community and the environment.

The green corridor will be designed as a continuous ecological route, serving as a natural extension of the parks and existing small green spaces. This integrated green space will provide a pleasant route for pedestrians, allowing for a seamless flow between the two parks and other private green spaces along the way. In addition to the obvious health and recreational benefits, the green corridor will play a crucial role in enhancing urban connectivity, offering a pleasant alternative for daily commutes.

The green corridor project also aims at ecological regeneration of the area. Additional planting of vegetation and the creation of dense green zones along the corridor will help improve air quality, reduce the urban heat island effect, and enhance the habitat for some local species. The strategy proposes integrating empty areas with green spaces, improving maintenance of these areas, and creating uniformity between the two parks. It also suggests allowing community involvement in the creation of vegetation.

In the space analysis, three types of streets were highlighted with regard to their permeable areas. This analysis also allowed for the evaluation of the current state of vegetation. In terms of species variety and aesthetics, there is a noticeable lack of diversity and excessive pruning, with the natural growth of plants not being observed.

In many examples of street vegetation, excessive maintenance has been observed, characterized by drastic and frequent pruning, which compromises the health of the trees and detracts from their natural form and beauty. Choosing the right vegetation for the streets is crucial to ensure a harmonious appearance and the long-term health of the trees. The size of the chosen species should be considered to avoid excessive pruning and to ensure healthy and balanced tree development. Regular and preventative maintenance for all green areas is essential to preserve the quality and health of the plants.

4.3.1 Landscape Planning

Between the two project zones provided by the companies, there is a vast area that allows for a strategic connection between these two projects. As in many streetscapes in Tokyo, there is a noticeable lack of biodiversity.

For the streetscape project, the objectives were to maximize permeable areas and increase

biodiversity, thereby reducing the need for excessive maintenance. The aim was to utilize constrained empty areas by proposing suitable tree planting to enhance environmental impact and community benefits.

The proposal is to create landscaping guidelines that aesthetically unify the green spaces of the parks, while respecting the unique characteristics of each location (Figure 4.26). The selection of plant species will be made to ensure visual harmony and sustainability of the project, considering their water needs. It is important to integrate the green spaces with the public transportation network and other urban infrastructures, facilitating access and use by the community.

The implementation of this green connection strategy will contribute to improving the quality of life in this urban area by promoting sustainability, biodiversity, and the well-being of the population. Potential community involvement and efficient maintenance are essential for the long-term success of this initiative.

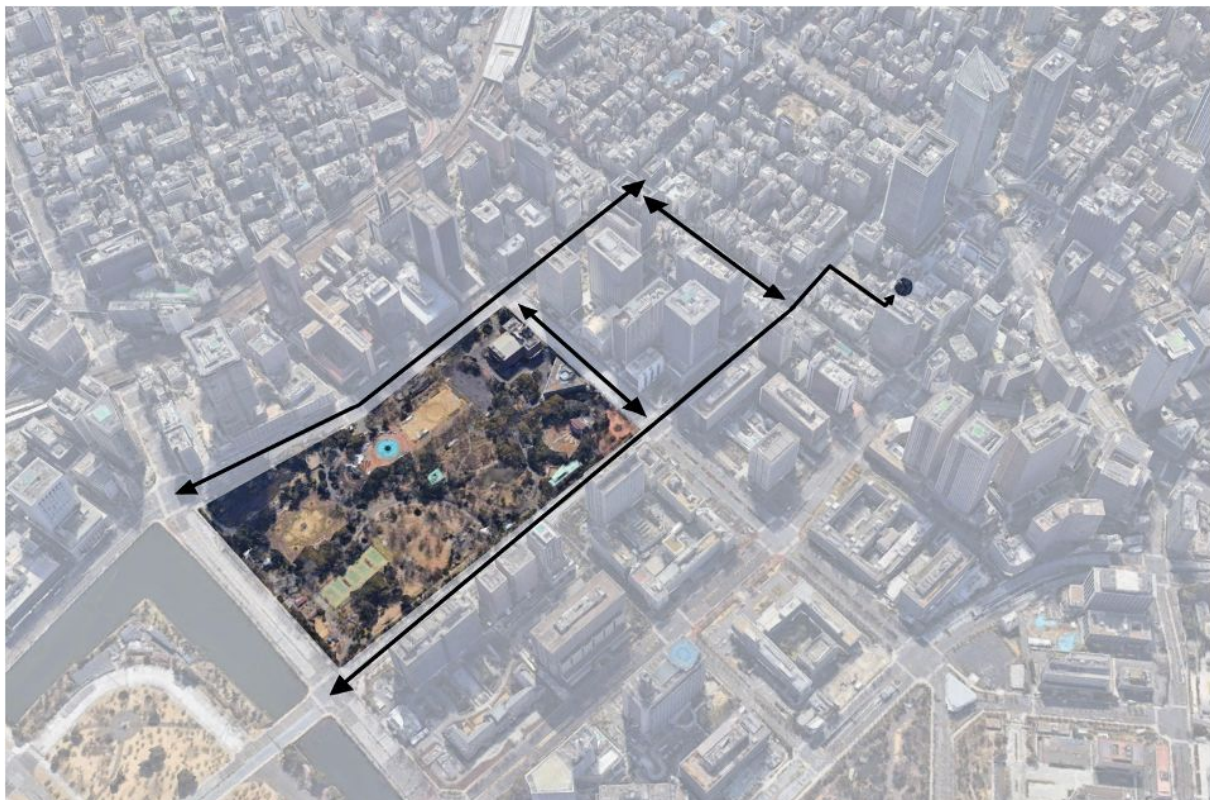


Figure 4.26: Connection Projects

4.3.2 Strategies for Each Type of Street

With the space analysis, three types of streets were proposed, as shown in the Figure 4.27, which are described below.

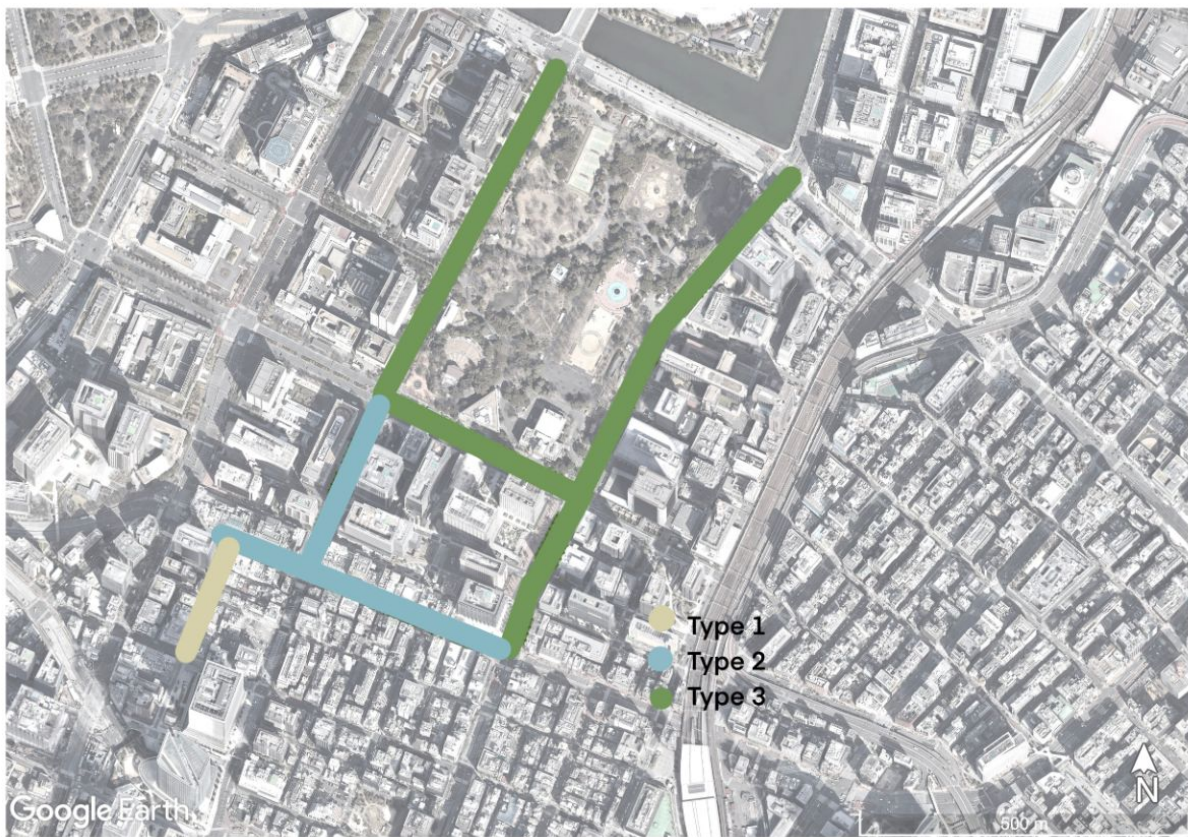


Figure 4.27: Mapping of Typologies

4.3.2.1 Type 1

This type of street is quite narrow. There is no space for tree planting; however, there is a row of posts separating the pedestrian area from the vehicular area. For this space, it is proposed to replace the row of posts with vegetation in pots. Although the ideal solution would be to permeabilize the space, the use of pots allows for better adaptability in case there is a need to move them. This type of street is closest to the Pocket Park; being an area that is also currently undergoing several modifications, a temporary and highly adaptable solution is ideal (see Figure 4.28).

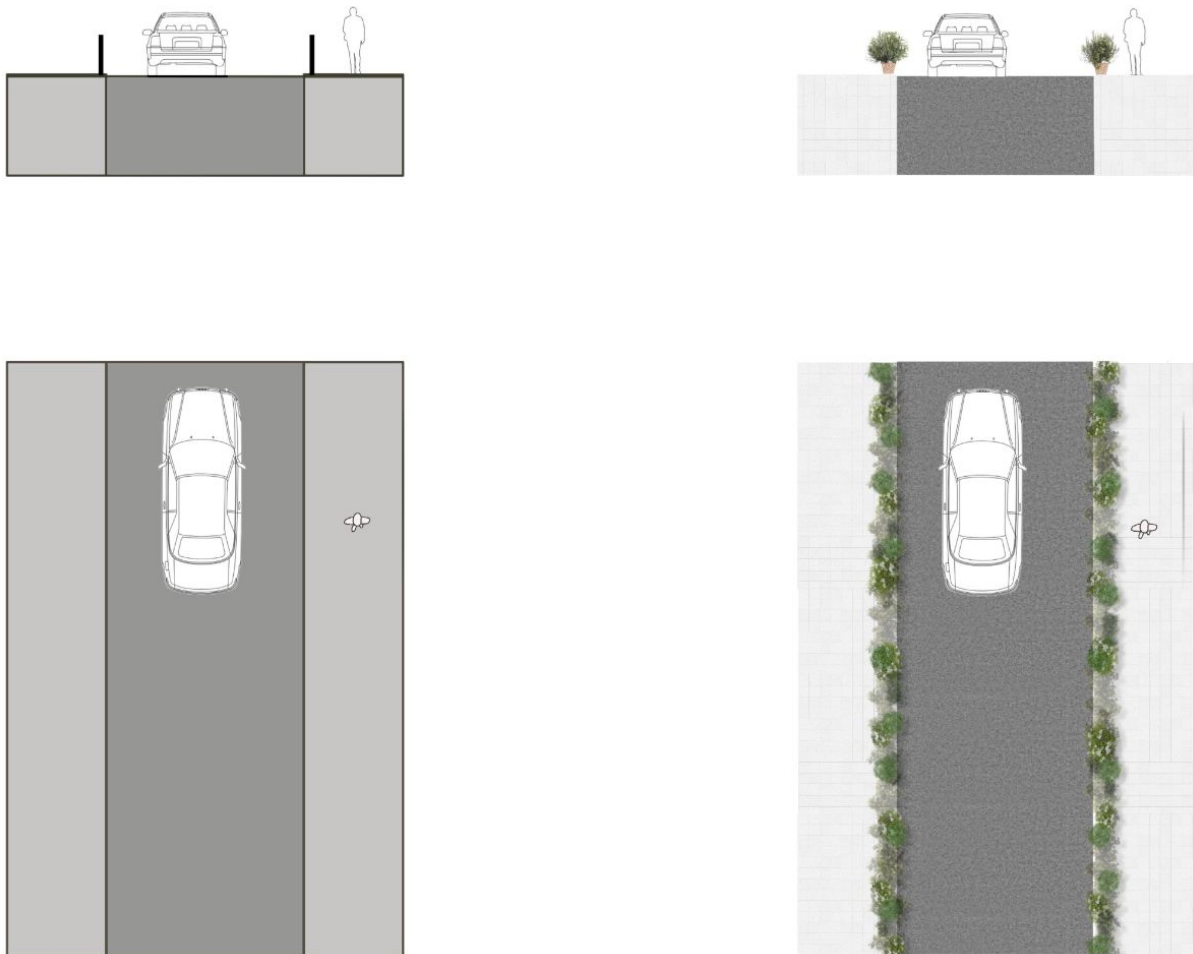


Figure 4.28: Roads do Type 1. (Left: current situation; Right: proposal.)

4.3.2.2 Type 2

The streets defined as Type 2 are wider compared to Type 1. For this type, the permeable area accessible to pedestrians is well-defined, as shown in Figure 4.29. To enhance the ecological interest of the space, the main proposal is to increase biodiversity. Currently, the number of species used is extremely limited. As shown in Figure 4.30, by increasing the number of species, not only does the space become more interesting by promoting variation in the landscape along the path, but it also makes the ecosystem more resilient, enhancing its ecological value.

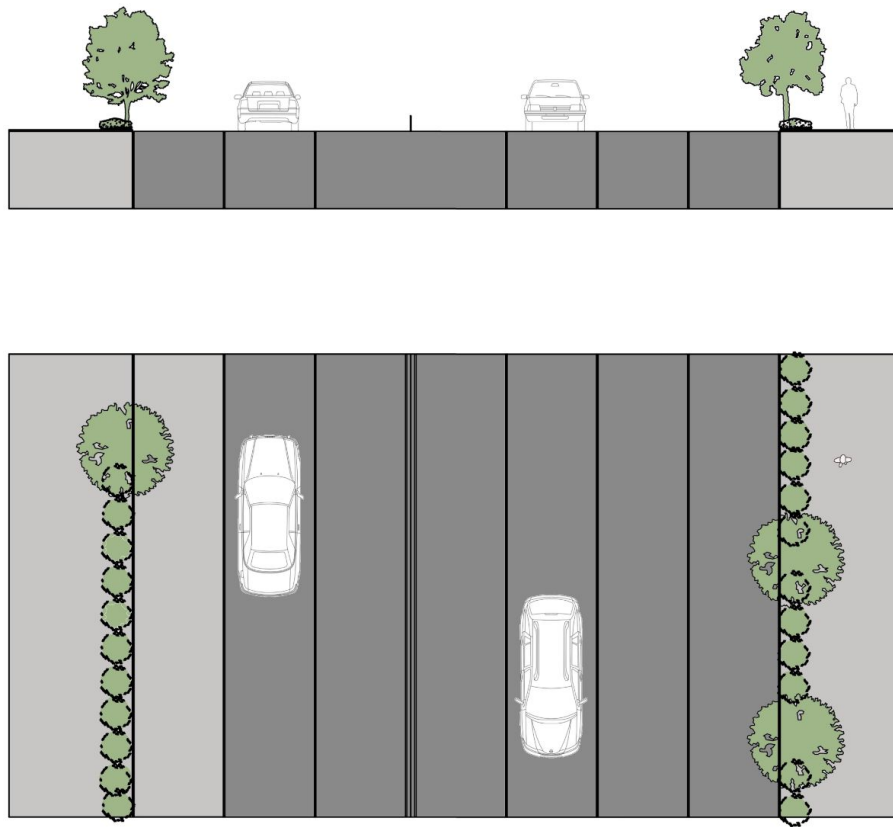


Figure 4.29: Road Type 2 (Current situation).

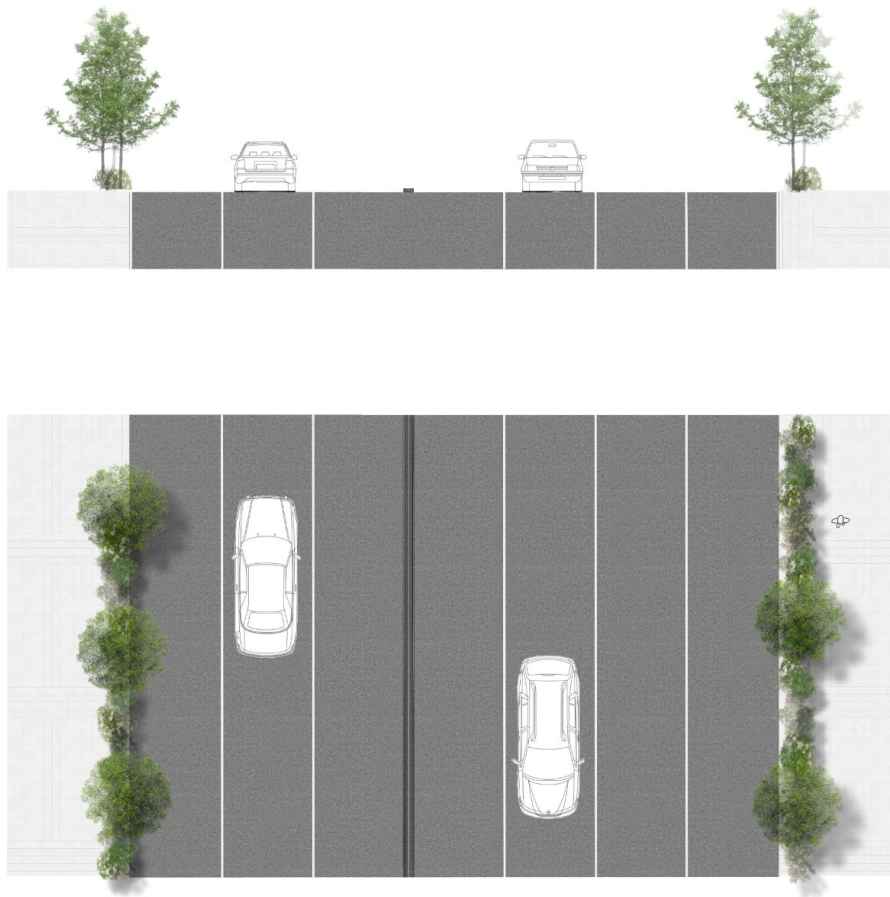


Figure 4.30: Road Type 2 (Proposal).

4.3.2.3 Type 3

Type 3 streets are where green space islands located between lanes of traffic will be used as a connection. These spaces have emerged due to modifications in traffic lane directions. Currently, the spacing prevents vehicle passage through protective barriers, or *guard-rails* (Figure 4.31). The idea is to replace these barriers with a permeable area and, where possible, increase the amount of tree planting (see Figure 4.32).



Figure 4.31: Road Type 3 (Current situation).

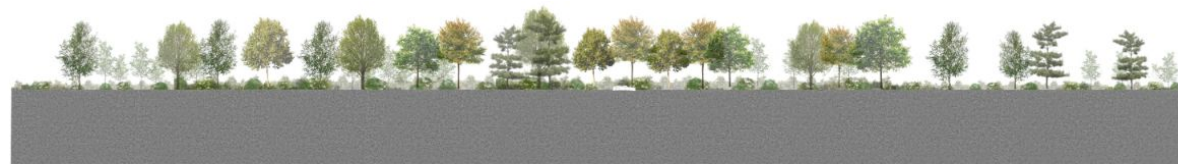


Figure 4.32: Road Type 3 (Proposal).

In certain areas where there isn't a green line but where there is potential for its inclusion, a green strip has been installed to separate pedestrians from vehicles.

In general, vegetation in this area should be allowed to grow more freely, not only for aesthetic reasons but also for the ecological value it provides to the city. Maintaining a variety of species is crucial to ensure rich and interesting biodiversity.

Chapter 5

Final Considerations

We begin this chapter with the presentation of the *master plan* of the project in Figure 5.1.



Figure 5.1: Master plan (all 3 projects).

This thesis explores the integration between the large historical Hibiya Park and a modern pocket park in Tokyo, proposing a connection through a green line that aims to enhance the existing situation and establish harmony between the designed spaces and their surroundings. This approach underscores the importance of considering not only the individual project spaces but also their interaction with the surrounding context and the

impact they can have on people's daily lives.

In designing and revitalizing green spaces, we aim to adopt a holistic view that encompasses both the created environment and the user experience. The integration of the two parks through a green line introduces modern and sustainable elements that address contemporary needs. This green line proposes both an aesthetic solution and a strategy to enhance accessibility, cohesion, and functionality between the spaces, fostering a more pleasant and cohesive environment for the area.

Considering the surroundings is essential to transform a space into something that truly resonates with the needs and aspirations of the people who use it daily. Creating environments that encourage social interaction, sustainability, and historical preservation contributes to building more integrated and vibrant communities. Thus, the proposed approach enhances the experience of park users and also reflects a commitment to sustainable urban development and the appreciation of cultural heritage.

In summary, the careful integration of historical and modern spaces through solutions like the green corridor demonstrates that by thinking comprehensively about projects and their surroundings, we can create spaces that are more functional, aesthetic, and enriching for people's daily lives. This project aims to serve as an example of how thoughtful vision and planning can transform and connect different aspects of a city, promoting continuity and innovation in landscape design.

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