



Study on Park Design from the Perspective of Spatial Structure and User Activity on TEN-SHIBA, Entrance Area of Tennoji Park

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1. Introduction

Recently, the regeneration of public spaces such as parks and streets with a focus on user activities has become popular. This study aimed to analyze the relationship between spatial structure and user activity and to indicate the prospect of park design. In this study, TEN-SHIBA, the entrance area of Tennoji Park, which was developed through a system introduced private-sector initiative.

2. Methodology

The spatial structure was analyzed by exploring the historical transition of the park, organizing design concepts based on interview surveys with park managers, and researching the landscape components through field surveys. User activity was divided into staying and moving, and it was surveyed from 8:00 to 19:30 in the autumn of 2020.

In terms of staying, the user attributes were divided into four categories (single, group, family, and couple) and the purpose of use into seven categories (resting, conversation, eating and drinking, entertainment, exercise, working, and walking). We plotted them hourly on a map and counted the data. In this analysis, the time zone was divided into four categories (morning, midday, afternoon, and evening). The relationship between the spatial structure and the user attributes and purposes of use by time zone was analyzed (Fig. 1).

In terms of moving, we surveyed the number of people flowing in and out at the connection points in the Shinsekai sightseeing area adjacent to TEN-SHIBA and the Abeno-Tennoji bustle area.

3. Results and Discussion

(1) Spatial structure

In 2012, the Osaka Urban Attractiveness Creation Strategy proposed the revitalization of the Abeno-Tennoji area as a priority area. The entrance area of Tennoji Park was required to be made more attractive through collaboration between the public and private sectors. The park consists of a planting space with a mixture of tall trees and shrubs on the east and west sides and a lawn space in the center. The parkway is equipped with benches and curbs and has environmental components

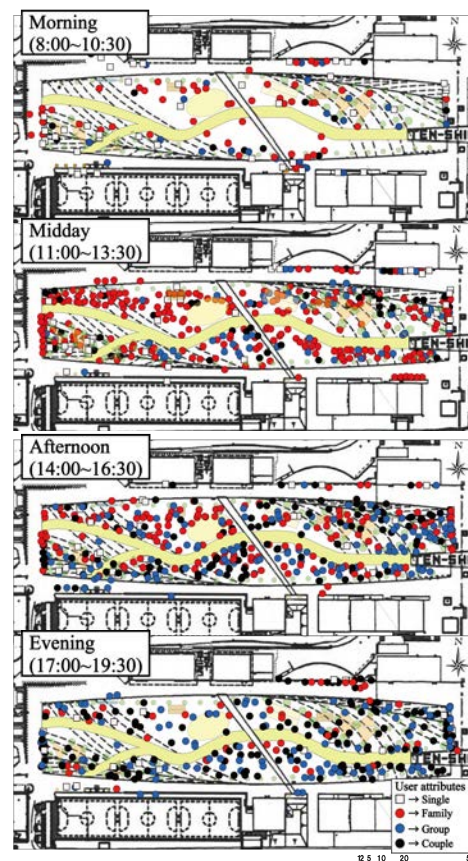


Fig. 1 Changes in staying activities

that can facilitate a variety of user activities, such as the location of commercial stores and sports facilities to the north and south across the parkway.

(2) User activity

In the east and west planting spaces, single users and families tended to stay approximately 40%–50% of the time in the morning and midday, and couples stayed approximately 50% in the afternoon and evening. Resting was observed at approximately 50% from morning to midday, and conversation was observed at approximately 60% from afternoon to evening, primarily as a static activity. In addition, families eating and drinking during the daytime lingered near tall trees.

In the lawn space, families tended to stay approximately 60%–70% of the time from morning to midday, and groups and couples stayed approximately 30%–40% from afternoon to evening. Throughout the day, the tendency for resting was approximately 40%, eating and drinking during the midday was approximately 50%, and talking in the afternoon and evening was approximately 40%, indicating a tendency to combine static activities (eating, talking, etc.) with dynamic activities (entertainment and exercise).

On the parkway, families tended to stay approximately 40% of the time. This suggested that the parkway can be a secondary space to accommodate people saturated in the planting and lawn spaces. In addition, resting was observed at approximately 60% throughout the day, and the parkway functioned as a casual place to stay.

Visitors near the Shinsekai sightseeing area were approximately 2,000, which was lower than in other areas. Therefore, in addition to enhancing the content to attract visitors around the Shinsekai sightseeing area, there also is the challenge of ensuring accessibility based on TEN-SHIBA.

Overall, people tended to be attracted to shaded, lawn spaces and curbs along the parkway on TEN-SHIBA. However, based on the social conditions of COVID-19, the arrangement of furniture and design of temporary structures should be considered to enable people to maintain their social distance (hereinafter called “SD”).

4. Conclusion

Based on the results, we indicated a planning method for the future park design of TEN-SHIBA (Fig. 2).

On the east and west sides, we propose the creation of a dense planting space for static activities. On the inside, a sparse planting space should be created for various activities such as eating, drinking, and resting. Additionally, smooth pavements should be maintained for the walkable flow of people. We propose to maintain a lawn space that can accept static and dynamic activities in the central area. In addition, reorganizing the tables with parasols and benches corresponding to SD may attract people to the parkway. Furthermore, to attract more visitors to the Shinsekai sightseeing area, the visibility of the pavements and planting should be improved and the vista views reorganized.

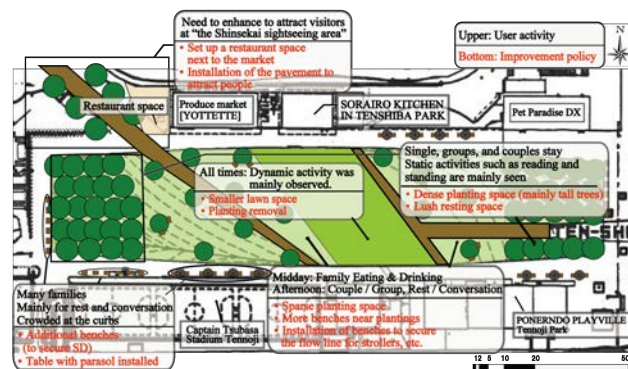


Fig.2: Planning method for the future park design