

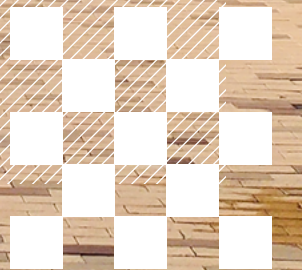
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An Urban Experiment to Explore Great Public Space Design

探索優質公共空間的城市實驗



Hong Kong Public Space Initiative
拓展公共空間



Background

Provision of quality public space is integral to the living quality of a city, particularly in a compact city like Hong Kong. There are some public space design guidelines available locally such as *Hong Kong Planning Standards and Guidelines (HKPSG)* and *Public Open Space in Private Development (POSPD) Design and Management Guidelines*, which serve as a set of principles and criteria for public space design practitioners. Apart from these local guidelines, there are numerous guidelines across the world, such as *Urban Design Compendium (UK)*, *Active Design Guidelines (US)* and *Design Guidelines and Good Practice Guide for Privately Owned Public Spaces (Singapore)* (Please refer to Appendix), providing guidance in designing public spaces.

When implementing actual public space development projects, it is not simply about reading guidelines. In this chapter, HKPSI shares our experience of urban experiment for studying critical design elements of Kwun Tong Promenade contributing to a great public space in reality. It also demonstrates that site context-oriented design elements are critical considerations in enhancing public space's quality and users' satisfaction.

背景

優質的公共空間是理想城市生活不可或缺的要素，尤其對於如香港般人煙稠密的城市。香港有《香港規劃標準與準則》及《私人發展公眾休憩空間設計及管理指引》，為設計師提供適用於香港公共空間設計的準則和標準。而外地也有不少類似的指引，例如英國的《Urban Design Compendium》、美國的《Active Design Guidelines》、新加坡的《Design Guidelines and Good Practice Guide for Privately Owned Public Spaces》(請參照附錄)。

不過，當實際進行公共空間的發展項目時，並不能只是紙上談兵，就此拓展公共空間會於本章與讀者分享較早前團隊於觀塘海濱花園進行的城市實驗，透過實驗研究塑造理想公共空間的重要設計元素，當中會發現如設計能考慮到不同地區的特色而加以發揮和利用，便能大大提高公共空間的質素和使用者的滿意度。

Our Urban Experiment

Based on HKPSI's previous experience in conducting community projects relating to public spaces, we have the assumption that a good public space design will facilitate diverse activities, foster human interactions and enhance sense of belonging, and it always echoes the local context of the site. This experiment is to study how different kinds of activities are carried out, in a harmonious or a conflicting way, at the experiment site, and analyse their relationships with the surrounding physical settings taking consideration of human and nature factors.

(1) Experiment Site

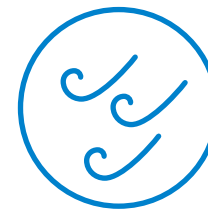
We conducted the experiment in the "Sensory Garden" of Kwun Tong Promenade, which is located underneath the Kwun Tong bypass and is far away from the residential area. The area offers a wide variety of facilities, including a multi-purpose plaza, seaside boardwalk, performance area, children's playground, elderly fitness area, and so on. An area near the secondary entrance of the Promenade was selected to be the major set-up area with the following characteristics:

城市實驗

拓展公共空間根據以往在本港所進行有關公共空間的社區項目的經驗，相信好的公共空間設計能促進不同的活動發生，從而增進人與人之間的交流並加強人們對地方的歸屬感。這種設計通常都能回應地區的特色。這次實驗主要研究不同類型的活動如何能和諧地或有衝突地同時在實驗場地進行，再加上人和自然環境因素的考慮，分析它們與周邊環境設計的關係。

(1) 實驗地點

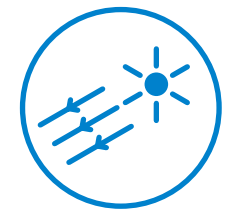
是次實驗地點為觀塘海濱花園的感官花園，地點位處觀塘繞道之下，遠離住宅區。感官花園提供多元化的設施，包括多用途廣場、海濱步道、表演場地、兒童遊樂場及長者健身角等。我們揀選了近海濱花園次入口的區域為實驗地點，該地方有以下幾項特點：



Good ventilation
良好的通風



A rain-proof shelter
可避雨的地方



Natural daylight
有自然光



(2) Key Study Elements

Key study elements were grouped into the three main dimensions: (a) human dimension, (b) physical environment, and (c) nature.



Human Dimension
人／使用者

(2) 主要研究元素

主要研究元素可歸類為三大類：(a) 人／使用者、(b) 場地環境、(c) 自然環境。



Physical Environment
場地環境



Nature
自然環境



Human Dimension 人／使用者

| | |
|--|------------------------|
| • Type of user (age, gender, relation, nationality) | 使用者背景 (歲數、性別、關係、國籍) |
| • Living place (distance, mode of transport) | 居住地方 (距離、交通方法) |
| • Needs / Reason for visit | 來訪需要／原因 |
| • Frequency of visit | 來訪次數 |
| • Preference | 喜好 |
| • Activities | 活動 |
| • Duration of stay | 逗留時間 |
| • Social interaction | 社交互動 |

We interviewed some of the existing users of that public space. Surprisingly, we found out that: 團隊訪問了該公共空間中一些現有使用者，得到以下有趣發現：

Living Place 居住區域

70%

do not live in Kwun Tong
並非住在觀塘



Travelling Time 前來此公共空間需時

40%

spend **>30 minutes**
on transportation
花**超過 30 分鐘**在交通上



Reasons for Visit 來訪原因

80%

gather with friends and family
與親朋好友**相聚**



Length of Stay 逗留時間

70%

stay for **more than an hour**
逗留**超過一小時**





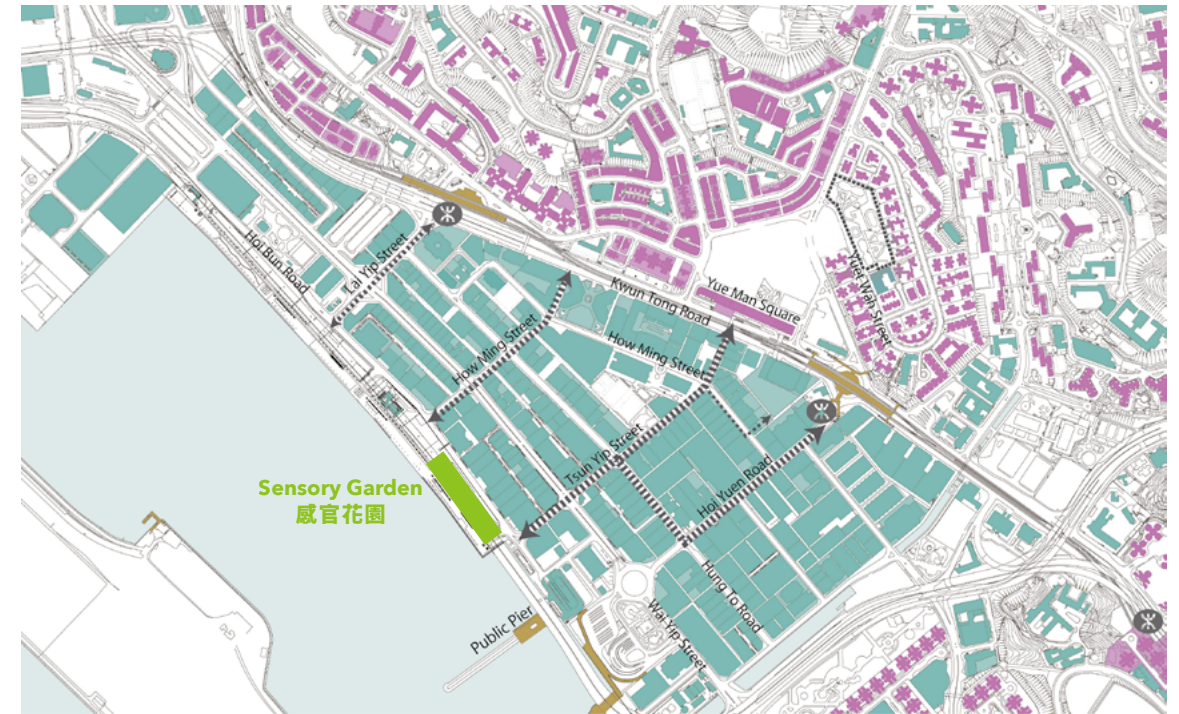
Physical Environment 場地環境

- | | |
|---|----------------------------|
| ■ Location | 地點 |
| ■ Facilities | 設施 |
| ■ Surrounding uses | 周邊用途 |
| ■ Design (e.g. shelter, seating, paving, landscape, public arts, etc.) | 設計 (如遮蔭、座位、路磚、園景、公共藝術等) |
| ■ Lighting | 光線 |
| ■ Accessibility | 暢達性 |
| ■ Functions | 功能 |
| ■ Openness | 易見度 |
| ■ Scale | 規模 |
| ■ Division of space | 空間劃分 |

The following highlights our findings on physical environment:
以下是團隊在研究場地環境後得出的一些發現：



Location 地點



Legend 圖例

| | | | | |
|-------------------------|-------------------------|--|---|-------------------------------|
| | | | | |
| Experiment Site 實驗地點 | Residential Area 住宅區 | Non-residential Area (incl. industrial, commercial, GIC) 非住宅區 (如工業、商業、政府、機構、社區用地) | Major Transport Hub (incl. MTR Station, Ferry Pier) 主要公共交通點 (包括港鐵站、渡輪碼頭) | Pedestrian Connection 非住宅區 |

Below are the location characteristics of the experiment site:

- located at the waterfront area;
- adjacent to main industrial area;
- about 10-minute walk from railway stations;
- one of the major public spaces in the district but with some distance from the major residential area;
- lack of other recreational, entertainment and retail facilities in the surroundings.

以下是實驗的地方特色：

- 位置海濱地帶
- 毗連主要工業區
- 距離鐵路站 10 分鐘步程
- 區內主要公共空間之一，但距離民居較遠
- 周圍缺乏文娛康樂和零售設施



Physical Environment 場地環境

Facilities 設施

Below are the facilities at the experiment site:

以下是實驗地方所提供的設施：



Decks, slides and climbers

平台、滑梯和攀爬架



Fixed benches: one-sided benches provide 30 seats for users

固定的長凳：單邊長凳提供 30 個座位予使用者

Design 設計

Major design features of the experiment site

實驗場地的主要設計特色



- 1 Shape of space:** irregular site boundary
空間的形狀：不規則邊界
- 2 Planting:** variety of plants
種植：多種植物品種
- 3 Paving:** mix of soft and hard paving
鋪地物料：混合應用軟硬物料
- 4 Height/space:** high ceiling and spacious
高度／空間：高樓底和有空間感
- 5 Lighting:** sufficient natural lighting
光線：充足自然光



Nature 自然環境

- ▲ Weather 天氣
- ▲ Time 時間
- ▲ Season 季節

Nature dimension involves some environmental factors that affect users' behavioural pattern. In general, nature factors are not controllable, such as weather, time and season.

自然環境包括一些影響使用者行為習慣的自然環境因素。自然因素一般不能控制，例如天氣、時間和季節。



(3) Analytical Framework

The three main dimensions are further classified as selected variable, dependent variable and uncontrollable variable under the below analytical framework:

(3) 分析框架

上述三大研究元素可再分類為選定變項、依變項和不能控制的變項：

Selected Variable 選定變項



In this experiment, the physical environment was altered to see how human interaction would change with it.

實驗會改變場地環境，以研究人與人之間的交流如何隨之改變。

Dependent Variable 依變項



Human interaction is affected by the physical environment and the uncontrollable variable.

人與人之間的交流會受場地環境和不可控制的變項影響。

Uncontrollable Variable 不可控制的變項

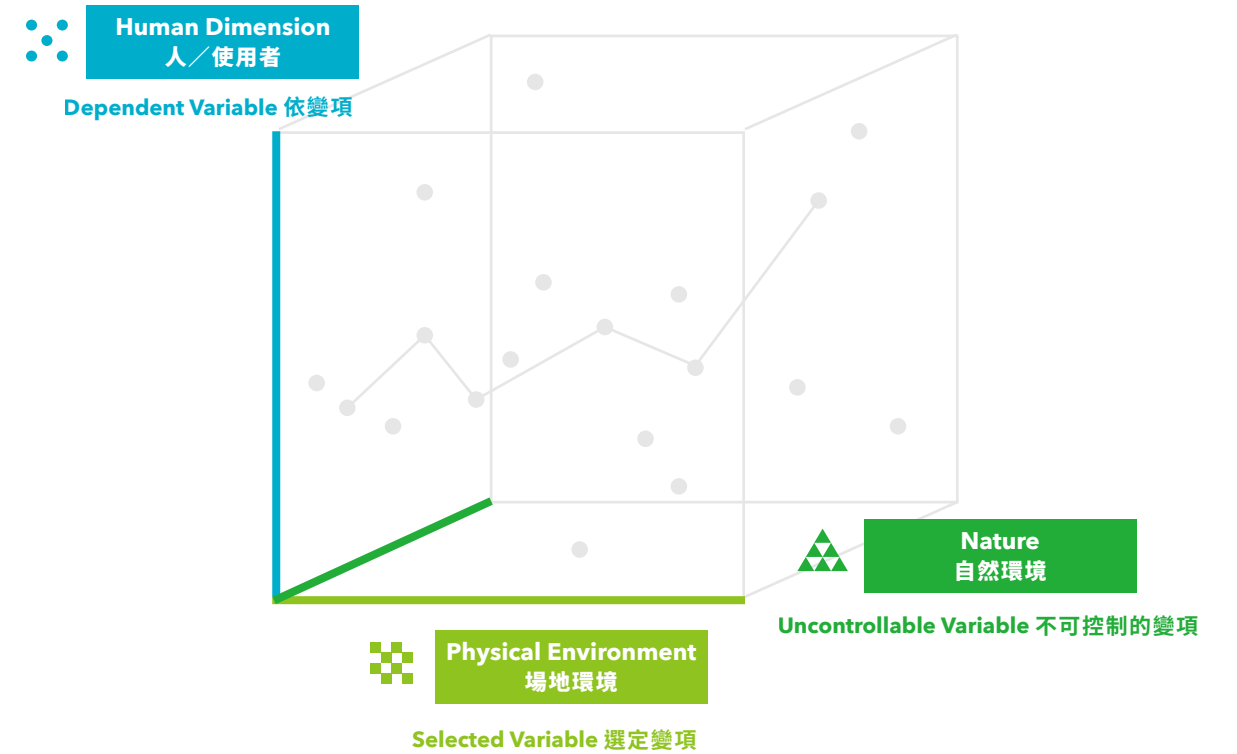


The weather and season cannot be controlled in the experiment. But their effect should be taken into account when analysing the dependent variable.

實驗中無法控制天氣和季節，但當分析「依變項」時，這些自然環境因素都應一同考慮。

Observe 觀察

how the human dimension changes against physical environment
人的因素如何因應場地環境而改變



Adding sport facilities, mobile library and movable screens
增添運動設施、流動圖書館和流動屏風



(4) Experiment Execution

1

Prior to commencing the experiment, we visited the site to understand its characteristics in terms of environment, design and users.

2

With a general understanding of the site context and its design characteristics, we conducted a series of "baseline study" (i.e. controlled experiment) before and after the experiment to explore the key user patterns at the experiment location – without the effect of our experiment set-up.

3

The focus of the baseline study was mainly the visitor flow of the space, where we attempted to gauge the flow of users across different time intervals, under different weather conditions.

4

We then conducted the experiment by launching a mobile library, providing users with a selected range of sports equipment, and setting up some movable screens that allowed users to adjust the shading and openness of their specific location in the experiment site.

(4) 進行實驗

在開始實驗前，先實地了解實驗地點環境、設計和使用者的特點。

透過對地點環境和設計特點的基本理解，團隊在實驗前後進行一系列的基線研究（即對照實驗），研究實驗地點在沒有實驗設置下使用者的主要行為模式。

基線研究針對空間人流，即估計在不同時間和天氣下的人流。

實驗計劃提供多項新設施，包括一個流動圖書館、一系列的運動設備，以及可供使用者在特定的實驗地點調節遮蔭和易見度的流動屏風。



Mobile Library 流動圖書館

- consisted of 3 movable bookshelf 'carts' with books that are categorised by topics and accessible from all sides of the carts (front, back, and sides)
 - encouraged users to write their thoughts on the books on sticky notes, and shared them with other users
 - provided various seating options for users, including floor mats, movable chairs, and a tent
 - observed the impact of the experiment on the human behaviour and conducted interviews with them
- 由三架手推車組成，書籍按主題分類，讀者可以從手推車的各面（前方、後方和側面）拿取書籍。
 - 鼓勵使用者在便條上寫下讀後感，並與其他使用者分享。
 - 不同的安坐設備（即地蓆、活動座椅和帳篷）可供選擇。
 - 觀察實驗對使用者行為的影響，亦會訪問使用者。



Sports Equipment 運動設備

- provided users with a range of sports equipment (e.g. badminton rackets, shuttlecocks, and jumping ropes)
- observed users' behaviour and how they utilised the equipment, and conducted interviews with them
- 一系列的運動設備（例如羽毛球拍、羽毛球、毬子和跳繩）可供使用。
- 觀察使用者行為，特別是使用者如何善用設備，亦會訪問使用者。



Movable Screens 流動屏風

- provided a few movable screens of different levels of visibility and openness-to-sky
- observed users' behaviour and how they utilised the equipment, and conducted interviews with them
- 提供流動屏風，供使用者自己調節想要的能見度和易見度。
- 觀察使用者行為，和使用者如何善用設備，亦會訪問使用者。



(5) Results and Findings

After analysing users' behaviour observed, visitor flow data collected and ethnographic user interviews result, we had the following findings/observations:

(a) Spending Longer Period of Time in the Public Space

Based on the usage data of mobile library and sports equipment, the experiment has attracted users to an additional 34.3 minutes as compared to their usual stay.



(5) 觀察及分析

經分析對所觀察到的使用者行為、收集到的人流數據及不同背景使用者的訪問結果，團隊有以下發現：

(a) 於公共空間逗留較長時間

根據流動圖書館和運動用品的使用率，與使用者平常的逗留時間比較，實驗能吸引他們平均多停留 34.3 分鐘。



(b) Users' Perception on Sense of Openness

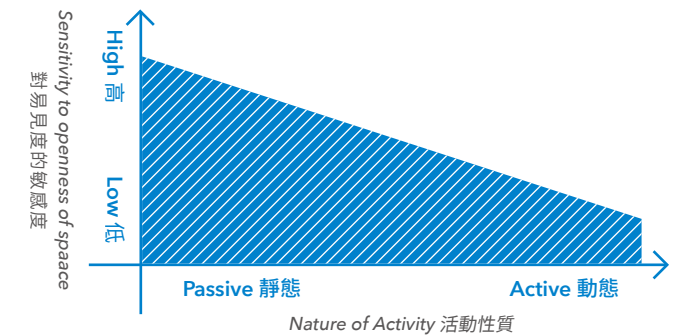
Based on the usage data of movable screens, we found that the sensitivity to the openness of space was related to the following factors:

Purpose of Visit 來訪目的

For park users engaging in passive activities, they would be more sensitive to the openness of space than those participating in active activities. 對於一些參與靜態活動的使用者，他們對空間易見度的敏感度會較參與動態活動的使用者為高。

(b) 訪客對易見度觀感

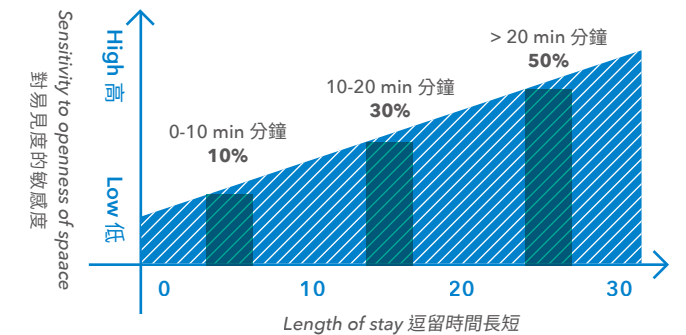
根據流動屏風的使用數據，團隊發現有以下三個因素與空間易見度的敏感度有關：



Length of Stay 逗留時間

If the users plan to spend longer time in the space, they would be more sensitive to the openness of space than those who plan to stay for a short time.

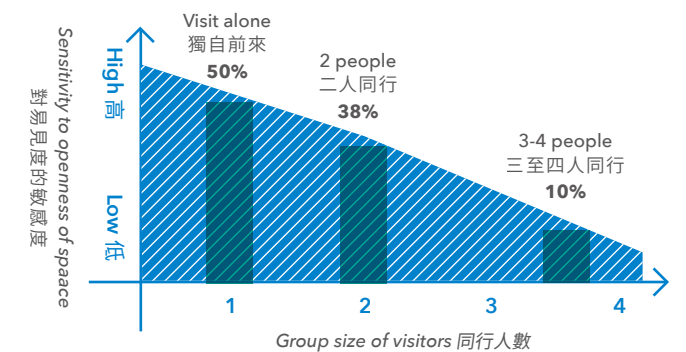
若使用者逗留時間較長，他們對空間易見度的敏感度會較逗留時間較短的使用者為高。



Group Size of Visitors 同行人數

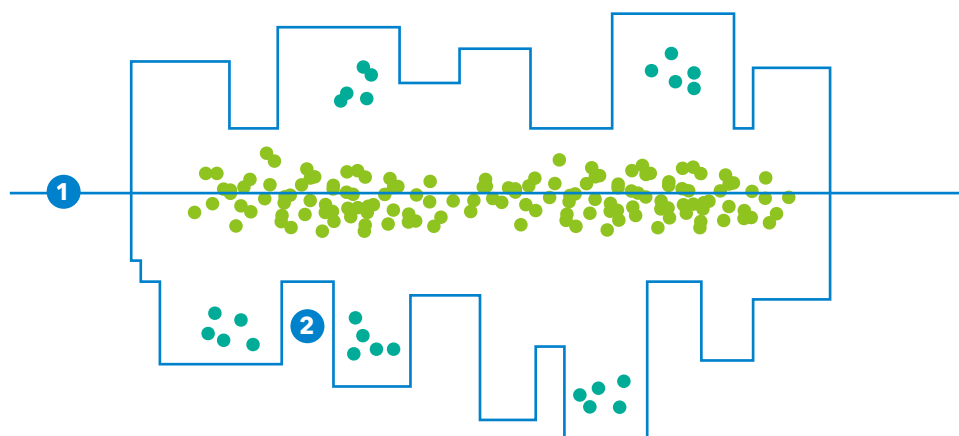
If the group size is bigger, the park users would be less sensitive to the openness of space.

若同行人數較多，使用者對空間易見度的敏感度亦較低。



(c) User/Activity Distribution Pattern and Observations

(c) 使用者／活動分佈及觀察



1 Major facilities such as children's recreational facilities are provided along the centreline of the space which attracts higher density of active users along the central part of the space. To allow active and passive activities to be carried out at the same time at the site, "pocket spaces" may help.

2 Many small and irregular "pocket spaces" are found around the boundaries of the experiment site. They create compartments apparently to allow different activities to be happened simultaneously in the area without interfering each other. e.g. reading groups were found next to the group playing badminton.

3 Thanks to the plants at the surroundings, they enable screening effect to reduce noise and air pollution generated by the roadside traffic. The plants also help to moderate microclimate and natural lighting that makes the site ideal for many types of activities. Flyover (Kwun Tong Bypass) acts as a huge shelter creating a considerable rain-proof space for various types of activity under different weather conditions, regardless of sunny or rainy weather. A huge covered outdoor public space is not common in Hong Kong and it has high potential for better use as it can provide a good venue suitable for many kinds of activities, no matter in sunny or rainy days. High ceiling with a huge cover allows sufficient natural lighting and ventilation during most of the time of a day. It creates comfortable microclimate for users.

1 場內的主要設施，如兒童遊樂設施集中於空間的中線，以致使用者較集中於中間區域。「口袋空間」有助動態和靜態活動同時進行。

2 很多小而不規則的「口袋空間」出現在實驗場地的劃定區域外圍界線附近。這些空間明顯地被劃分，讓不同活動於同一空間內同時進行，亦對其他群組沒太大影響，例如閱讀小組與打羽毛球的群組並存為鄰。

3 實驗地點周圍種滿植物，形成屏蔽效應，減少了來自路邊車輛的噪音和空氣污染。這些植物亦有助調節實驗地點的微氣候和自然光，使這片空間適合不同類型活動。天橋（觀塘繞道）成為巨型上蓋，製造大片有蓋地方，可在不受天氣影響下進行各種活動。如此大片的有蓋戶外公共空間，在香港並不常見，如此可見，類似的有蓋戶外公共空間有潛質加以運用，無論於晴天或雨天，都能為市民提供適合各類型活動的場地。高樓底讓場地大部分時間都可有充足的自然光和通風，形成舒適的微氣候。



4 It was found that some activities were more sensitive to provision of lighting (or natural lighting) and layout/types of seating. It was observed that people who were reading at the site moved around the area over different period of time during the day mainly due to the change of the angle and intensity of sunlight. At the same time, provision of suitable seating was also a critical factor for a longer stay. Intermix of fixed and flexible seating would cater for wider needs of users, especially for activities (e.g. reading) which might be more sensitive to environmental factors over the day.

4 部份活動較受光線（或自然光）及座位的類型和布置影響。團隊觀察到閱讀的人隨着時間，會按陽光的角度和強弱轉換位置。同一時間，合適的座位令使用者逗留較長時間。混合固定和流動的座位設計能切合更多使用者的不同需要，特別是如閱讀般較受環境因素影響的活動。



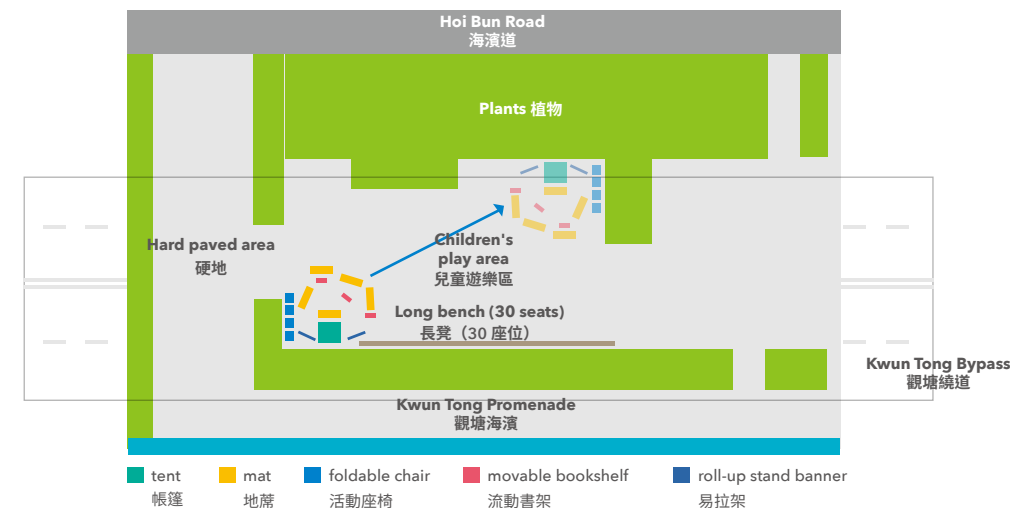
Original position
原本位置



Sunlight shining on original position
陽光照射到原本位置



Moved to another position
移師到另一位置



5 Various paving style and texture (hard and soft) can effectively divide the space apparently without using physical separators, e.g. children's recreational area is covered with soft pavement to ensure safety for the young users running and jumping on and off the equipment; adjacent hard-paved space is designed for passive activities such as walking or sitting.

6 Other users like parents coming along with their children always gathered in groups but did not take any seat. Two main reasons were identified: no suitable seating was available for group chatting and higher sight-level facilitated them to watch their kids at a certain distance.

7 Various modes of seating promote different ways of interactions among users. According to our observations, people sitting on the same floor mat or tent were more likely to have more interactions as users had a sense of sharing the same defined space. People choosing the fixed benches were often reading on their own, and involved less interaction with others.

8 Provision of movable furniture/equipment (we provided movable seating, sports equipment, books, movable screens in our experiment) enabled users to find their best way to use the space. Movable furniture also encouraged users to utilise the space creatively according to their needs.

5 運用地面不同風格和軟硬程度的鋪地物料，可在不需設置實體欄杆下亦可把空間清楚劃分成各個區域。例如為確保兒童在使用設施期間跑跳的安全，兒童遊樂場部分會鋪設軟墊。附近地方採用的硬地設計則適合步行或坐下等靜態活動。

6 其他使用者，例如與子女同行的家長，通常都聚集成群，但不會坐下。兩個主要原因是場地沒有適合的座位讓家長們坐下聊天，而且高視線水平有利他們在一定的距離看管子女。

7 不同座位類型會促進使用者不同形式的交流互動。根據觀察所得，坐在同一地氈或帳篷的人較有可能互相交流。坐在固定長凳的人較多自己閱讀，且較少與其他使用者交流。

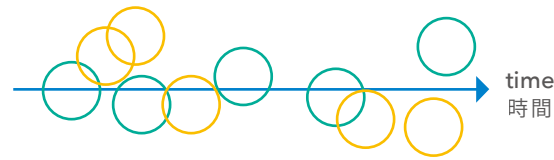
8 提供可移動設施（實驗提供了流動座位、運動用品、書本和屏風），可讓使用者自己找到使用空間的最佳方法。這些可移動設施亦鼓勵了他們善用空間，發揮創意，設計符合自己所需的空間。



1 Hard and soft paving
不同軟硬程度的鋪地物料

2 Different modes of seating – mats, tent, bench, movable chairs
不同的座位類型——地氈、帳篷、長凳、流動椅子

(d) Different Patterns of Social Interactions



Reading could allow interactions between multiple users or groups of users at the same time.
閱讀可同時讓多位／組使用者互相交流。

Reading 閱讀

For people visiting in groups (e.g. parents with kids), it was more likely to have inter-group interactions between users, where they would discuss books, or let their children interact with other kids in the space. They also preferred movable seating such as floor mats.

結伴同行（如家長帶同小孩）的人會有較多群組間的交流，他們會討論書籍或讓子女與其他小孩互動。他們亦較喜歡如地蓆一類的流動座位。

(d) 不同的社交互動模式

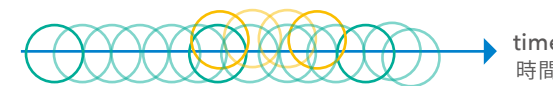


Two users or groups of users at the same time were required to play badminton.
打羽毛球同時需要兩位／組使用者。

Playing badminton 打羽毛球

It had a low level of flexibility as it had to be initiated and sustained by at least two users and no more than four users. It did not contribute to fostering inter-group social interactions in the space, as it was mostly performed by users who already knew each other and came as groups.

由於這項活動要二至四人發起及參與，故此較少彈性。同時，由於組隊的人大多早已認識，因此未能促進空間內群組間的交流。



Any users or groups of users could join shuttlecock-kicking anytime.
任何使用者或群組都可隨時參與踢毽。

Kicking shuttlecocks 踢毽

Users were found to have more interactions with other groups, even when they did not know each other (strangers). Users could easily find the right space without impacting other users. Furthermore, it was easier to be initiated anywhere, and could be joined by other users anytime.

觀察所見，使用者與其他群體（即陌生人）互動較多。使用者可以在不影響其他使用者的情況下，容易找到合適的空間。再者，踢毽容易隨處發起，其他人亦可隨時加入。



A rope could only be available for use by a user or a group of users at a time.
跳繩只可同時讓一位／組使用者使用。

Jumping ropes 跳繩

We observed a moderate level of interaction between users. They also tended to return the rope rather quickly and switched to other activities, because rope-jumping involved only one movement, and it was physically exhausting over time. When provided with both a short rope for solo-jumping and a long rope for group-jumping, most users preferred the short rope because it was easier to be initiated everywhere. As group-jumping took up a significantly larger space, it created concerns on the impact on other users, as well as children's safety.

觀察所見，使用者之間有中等程度的交流，並傾向盡快歸還繩子，轉為參與其他活動，因跳繩動作單一，長時間進行會容易疲累。當同時提供短繩供個人跳繩及長繩供多人跳繩，多數人會因較易隨時隨地開始而選擇短繩，相反多人跳繩需較多空間，會令人擔心影響其他使用者，或對兒童產生危險。

(e) Management's Intervention

It was observed that how people use the space was also subject to the management of the site. At non-peak hours, users enjoyed more freedom and playing badminton at the experiment site was allowed. During the peak hours, and playing badminton were advised to move to another site outside the study area which was under another management authority.



(e) 管理人員的干預

據觀察所得，市民如何使用場地亦受到場地的管理影響。我們發現在非繁忙時間，使用者可享受較多自由，可以在實驗場地打羽毛球。在繁忙時間，市民被要求轉到實驗場地以外，附近一個由另一機構管理的其他地方打球。



Conclusion

Throughout the six-month period, HKPSI went through the baseline study, experiment design and set-up, execution, on-site observation and user interviews. We analysed the data and information collected, based on the analytical framework, to examine the relationships between human, physical environment and natural dimensions in the context of public space design. The findings showed that design elements greatly affected how people use the space, such as the length of stay, spatial distribution of users, type of social interactions, etc. that forms the important part of the user experience in the public space. In the long run, great user experience could foster one's sense of belonging. Furthermore, the findings also highlighted that other factors including user demographics, purpose of visit, site context, etc. would affect how users perceived the design of the public space in different time periods and weather conditions. In other words, the outcome of the same design could vary from place to place. Being sensitive to the local context and paying attention to the design details are definitely vital criteria for creating a quality public space.

結論

在這六個月期間，拓展公共空間進行了基線研究、實驗設計和進行、實地考察，以及訪問使用者，並按照分析框架整理所收集到的數據和資料，探索在公共空間設計方面人、場地環境與自然環境之間的關係。實驗結果顯示，設計元素大大影響人如何使用空間，例如逗留時間、使用者的空間分布、社交互動的方式等，這些對於塑造公共空間的使用者體驗非常重要。長遠來說，良好的使用者體驗可增強歸屬感。此外，實驗結果亦突顯了其他因素，包括使用者背景、來訪目的、場地設置等，都會隨着時間和天氣，影響使用者對公共空間設計的觀感。換句話說，同一個設計，放置於不同地方，結果不盡相同。唯有多留意地區特色，並注重設計細節，才是建構優質公共空間的重要條件。

Appendix 附錄

Table 1: A Brief Summary of Public Spaces Related Design Guidelines in HKPSG
(Source: Planning Department 2015)

| Factors | Extracted Descriptions |
|----------------------------|---|
| Size / Configuration | <ul style="list-style-type: none"> Centralise active recreation facilities to confine noise impact and users' movement, and avoid locating them within close proximity to major roads Confine children's play area to allow easier parental supervision |
| Access / Location | <ul style="list-style-type: none"> Provide barrier-free facilities to allow access of the disabled |
| Public Seating / Amenities | <ul style="list-style-type: none"> Provide the following facilities to cater for the needs of the disabled and elderly: public toilets; shaded planting areas for walking and sitting; adequate lighting; emergency phones; handicapped facilities; visual-free walking areas; ramps with handrails in preference to steps; and car or bus dropping-off points near to venues. |
| Microclimate / Shade | <ul style="list-style-type: none"> Provide adequate lighting in shaded sitting-out areas |

Table 2: A Brief Summary of Public Spaces Related Design Guidelines in POSPD Design and Management Guidelines
(Source: Development Bureau 2011)

| Factors | Extracted Descriptions |
|----------------------------|--|
| Size / Configuration | <ul style="list-style-type: none"> Prefer a more defined space to a loosely defined one Prefer a higher "width/depth : length ratio" Provide not less than 75% of major space |
| Access / Location | <ul style="list-style-type: none"> Provide street frontage with at least the same width as the public open space to enhance visibility and popularity Provide universal access for the disabled and the elderly |
| Public Seating / Amenities | <ul style="list-style-type: none"> Provide seating with high visibility into and around the space to promote a sense of openness and safety Allow an appropriate balance between the clear space and other amenities Provide appropriate covered primary ($\geq 10\%$) and/or secondary seatings |
| Microclimate / Shade | <ul style="list-style-type: none"> Employ canopy and tree shading to create a more comfortable microclimate Select transparent materials for the canopy to provide weather protection on one hand and admit natural light on the other hand Allow 30-50% of the area for soft landscaping, half of which for planting large and shade trees Provide appropriate lighting which is coordinated with pedestrian lighting |
| Signage | <ul style="list-style-type: none"> Provide clear indications |

Table 3: A Brief Summary of Public Spaces Related Design Guidelines in Urban Design Compendium
(Source: English Partnerships and Housing Corporation 2000)

| Factors | Extracted Descriptions |
|----------------------|---|
| Size / Configuration | <ul style="list-style-type: none"> Provide: <ul style="list-style-type: none"> regional parks and open spaces (400 hectares) metropolitan parks (60 hectares) district parks (20 hectares) local parks (up to 2 hectares) linear open space (variable) |
| Access / Location | <ul style="list-style-type: none"> Place public spaces within three-to-five-minute walk (i.e. 250-400m) of the majority of homes Provide elderly- and disabled-friendly entrances, severance and gradients |
| Microclimate / Shade | <ul style="list-style-type: none"> Use deciduous trees to provide shade in summer and allow for sunlight in winter Avoid excessive overshadowing of buildings Provide shelter from uncomfortable cold draughts |
| Ecology | <ul style="list-style-type: none"> Preserve areas identified with higher ecological importance |

Table 4: A Brief Summary of Public Spaces Related Design Guidelines in Active Design Guidelines
(Source: City of New York 2010)

| Factors | Extracted Descriptions |
|----------------------------|---|
| Size / Configuration | <ul style="list-style-type: none"> Aggregate open spaces in one large area instead of dispersing into smaller pieces |
| Access / Location | <ul style="list-style-type: none"> Provide safe and visible bicycle and pedestrian routes to allow ten-minute walk accessibility Locate public spaces near buildings or existing recreational facilities to encourage development of new facilities |
| Public Seating / Amenities | <ul style="list-style-type: none"> Provide exercise facilities or walking paths in public spaces nearby the offices and commercial spaces Design open spaces to complement the local cultural preferences and to accommodate different age groups |

Table 5: A Brief Summary of Public Spaces Related Design Guidelines in Design Guidelines and Good Practice Guide for POPS
(Source: Urban Redevelopment Authority 2017)

| Factors | Extracted Descriptions |
|----------------------------|---|
| Size / Configuration | <ul style="list-style-type: none"> Provide large and regular in shape public space to serve as a meaningful space (i.e. $\geq 1\text{m}^2$ public space for every 50m^2 of total development GFA) |
| Access / Location | <ul style="list-style-type: none"> Allow open and unobstructed frontage, access and circulation for easy accessibility and high visibility |
| Public Seating / Amenities | <ul style="list-style-type: none"> Provide a variety of seating with a minimum requirement of 1 seat per 20m^2 to cater for the needs of users with different age groups and physical abilities Include other amenities to encourage the public use of space (e.g. public art, water features, urban furniture, services, etc.) |
| Microclimate / Shade | <ul style="list-style-type: none"> Provide artificial (with materials not result in additional heat retention) and/or natural shading (i.e. $\geq 50\%$ of total public space and public space seating should be shaded) |
| Signage | <ul style="list-style-type: none"> Install durable information plaque on which the text should be highly contrasting with the background colour at a visible location |