



# **Programme for the Green Deck**

(Final Report)

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Programme for the Green Deck (Prepared by Prof. Jachna, Timothy Joseph) EXECUTIVE SUMMARY of progress to date  
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The following steps have been carried out:

1. Reviewing and extracting out the pertinent points and information for defining design guidelines, from the eight research reports on various technical and functional aspects of the “Green Deck”, as well as a reports regarding health-related services, the potential for land exchange with open space generated from the “Green Deck”, evaluation of efficiency on air pollution control techniques for Green Deck, etc.
2. Transcription and translation of the recordings from CPA Department of eight public/professional consultation forums on the “Green Deck” and taking the suggestions and ideas gathered from green groups, NGOs, Harbourfront Commission, HKIP, HKIA, HKIUD, HKIE, HKILA, Civic Exchange, the PolyU community and the general public. Review of these transcripts to extract implications for design guidelines.
3. Literature review on the principles of green urbanism and urban design guidelines in Hong Kong, as well as “green functionalism” and “green infrastructure” approaches from the United States and Germany, etc. Moreover, review of precedents regarding recent best practices for public open space design, and specifically with consideration for the unique history, culture and society of Hong Kong.
4. A preliminary coding the programmatic elements and generating a framework of social, economic and environmental sustainability aspects. Identification and draft profiling of stakeholders and their potential roles. Furthermore, mapping the district’s, health-related, elderly, child care, family and rehabilitation services.
5. The ongoing process is to capture the concept of quality of urban life for trying to define the position and principles of “Green Deck” project. And focusing on the nested systems which can be divided into urban level, neighborhood level and programmatic level so as to articulate the role of “Green Deck” (PolyU, Hung Hom, MTR, East TST, HK Coliseum) in terms of social, spatial, economic and functional dimensions, as well as in terms of provisions and functionality of the project relative to each of the defined core user groups (local elderly, local families, commuters, PolyU community, TST businesspeople, tourists, etc.)

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# PRINCIPLES

This part lays out the foundational principles on which the brief is based.



## A. Introduction

*"Neighbouring the heavily-loaded Cross Harbour Tunnel, PolyU has long witnessed problems in the vicinity — poor air quality, overloaded footbridge, poor connectivity within the district and lack of open space. The University has thus proposed the construction of a Green Deck over the Cross Harbor Tunnel plaza to tackle these problems. Linking Hung Hom MTR Station Podium on the west and PolyU campus on the south east, the proposed 43,000 sq. m. deck area can accommodate a wide variety of recreational, cultural and sports facilities while solving existing problems in the district. This proposal will not only provide people with a green open space to unwind from the hustle and bustle of city life, but also help foster sustainable development through a number of research projects undertaken by PolyU experts".*

(Green Deck website <http://www.polyu.edu.hk/cpa/Excel@PolyU/2014/05/connections.html>).

The document at hand is a draft brief for the proposed Green Deck project, an initiative of the Hong Kong Polytechnic University to contribute to the university's aim of promoting sustainable urban development and contributing to the well-being of Hong Kong citizens and the quality of life and urban public space in our city.

This document seeks to make a first step towards articulating the details of the facilities, functions and character of this project, as a new public space for Hong Kong. This brief takes a human-centred approach to this task, delineating the relationship between the Green Deck and its intermediate and immediate urban context before expanding upon a programme of uses derived from an analysis of the primary groups of people who should benefit from this project, their needs and desires, and opportunities to make substantive improvements to the quality of their lives.

This draft brief does not aim at precise quantification of the facilities suggested, in terms of absolute size, number or amount. Such specifications will require more in-depth studies into the demand, need, appropriateness and feasibility of each of the components, involving representatives from the respective user groups, government agencies and private sector operators, and is beyond the scope of this research.

The recommendations of this brief are based in the principles of green urbanism and convivial public space, aiming to contribute to the creation and sustainment of a grand new public space that is a realm of "free movement, easy access and free association" (Olmsted), within the vision of a city that is smart, sustainable and walkable. The vision is for a type of "urban acupuncture" – a strategic intervention at a critical location in the local microclimate, the urban fabric and the local community that can have broad holistic benefits to the city at large.

The brief adopts the position of "green functionalism," including a belief in a democratic planning process in which a strategy for participation between "design professionals, scientists, decision makers, and stakeholders and integrates and inclusive diversity of human perspectives and values," as well as an ethos of building with nature "a connection between ecology and economy"

In terms of "triple bottom line" (Elkington, 1997) of social, environmental and economic sustainability, this programme for the Green Deck is based on a threefold vision:

*SOCIAL VISION: the Green Deck will be a new public space for the local community and other groups of users that will make the surrounding districts into the best-served place in Hong Kong in terms of facilities for social activity, recreation and community activities, while providing links and cohesion between surrounding districts.*

*ENVIRONMENTAL VISION: The Green Deck will be a "green machine" that will improve the environmental quality of the area, contribute to sustaining the local ecosystem and provide a platform for learning, demonstration and development of green living practices, technologies and urban development.*

*ECONOMIC VISION: The Green Deck will be a shining new asset to the neighbourhood and the city that will raise the value of surrounding property, generate opportunities and impetus for urban developments in the area, sustain itself economically in the long run, add value to surrounding businesses and provide a platform for new business opportunities.*

The following sections detail the principles on which the programme is based, both in terms of general principles of good design for such spaces (those of Green Urbanism and of Convivial Public Space) and specific principles for Hong Kong (namely, the principles of Hong Kong spatial practice and the Hong Kong Government's urban design guidelines, including stipulations for the use of local vegetation).

## B. Global Principles

### I) Principles of Green Urbanism

The principles of green urbanism can be formulated as a set of principles, parameters and guidelines designed to minimize and alleviate the potential detrimental effects of urbanization on the natural ecology, while optimizing design quality and livability, economic growth, cultural diversity and social prosperity to engender urban environments that promote a healthy and equitable society. It can also be seen as a conceptual framework for retrofitting and improvement of existing cities, districts and communities, and revisiting approaches to the design and construction of urban developments. In general terms, these principles can be seen as universal, but the specificity of their application will necessarily vary from context to context, and from situation to situation. In general, green urbanism involves:

1. Responding well to climate, **eco-system**, location, orientation and context (**neighborhood layout**), optimizing natural assets (e.g. sunlight and wind flow)
2. Being a self-sufficient energy producer through utilizing **renewable energy** for zero carbon emissions
3. Taking the concept of **waste** into consideration, as they are based on a **circular closed-loop eco-system** with significant recycling, remanufacturing and composting.
4. Urban water management
5. Integrated landscape, gardens and green roofs to maximize biodiversity and mitigate the UHI effect.
6. Providing easy accessibility and mobility, are well **inter-connected**, and provide a low-impact transport system so as to achieve a balance of residences and employment.
7. The construction using **regional, local materials** with less embodied energy (sustainability) and applying prefabricated modular systems to increase **long-term durability** of buildings; reduce waste and minimize packaging.
8. Using **deep green passive design strategies** and solar architecture concept for buildings.
9. Special concern for **affordable housing, mixed usage** programmes, and a healthy **community** (for the poor, rich, young, old, and workers of all walks of life, and also provide secure tenure)
10. Enhancing a city's or region's **identity**, unique character and valued urban heritage
11. Using multi-disciplinary approach, best practice for **urban governance** and sustainable procurement methods

1) Balancing community needs with development, public consultation exercises and grassroots participation 2) Empowering and enabling people to be actively involved in shaping their community 3) Accelerate behavioral change, waste reduction and the uptake of renewable energy, increase cultural diversity and economic opportunity, activate community purchasing power for green energy and sustainable products, which applying methods of “**environmental budgeting**”.

**12.** Equipping the city with **education and training** for all in sustainable urban development. The various aspects of this principle include: technical training and upskilling, research, exchange of experiences, knowledge dissemination through research publications about ecological city theory and sustainable design.

## 2) Principles of Convivial Urban Space

As a bridge between theory and practice, there are various aspects of the design and management of public spaces that affect how successful or problematic they may be. This section covers some of these ‘principles and underpinning’. The following ten recommendations of urban design are mostly directly applicable to public spaces.

1. Thou shalt consider places before building.
2. Thou shalt have the humanity to learn from the past and respect the context of buildings and sites.
3. Thou shalt encourage the mixing of uses in towns and cities.
4. Thou shalt design on a human scale.
5. Thou shalt encourage the freedom to walk about.
6. Thou shalt cater for all sections of the community and consult with them.
7. Thou shalt build legible environments.
8. Thou shalt build to last and adopt.
9. Thou shalt avoid change on too great a scale at any one time.
10. Thou shalt, with all the means available"

**The problem of unacceptable stuff in the public realm can be categorized under seven headings:**

clutter (general uncoordinated street equipment, signs and furniture) / confusion and contradiction / duplication of equipment / illegibility(literally) / redundancy / un-coordination

### **The psychology of public space:**

- **Territoriality:** One of the most fundamental human traits is the need to mark and claim territory. This is potentially problematic in public open space, because in theory it belongs to no one. But more often there is a kind of accommodation between various groups and interests, which at best for lively, varied and intriguing occupation of space, allowing people to observe diversity and difference without having to get directly involved in it.

- **Interpersonal distance:** Indeed people who sit right next to strangers, when there is opportunity to do otherwise, are treated with suspicion and discomfort by those already occupying the space.

- **Distribution:** Locations where one can observe others without being exposed from all sides oneself oneself are preferred. This may explain the enduring attraction of ledges and the avoidance of backless benches in the centre of public spaces.

- **The need for different types of observation and communication:** A good public space will offer the chance for the whole range of activities (who will want to be further away from others, who are hoping to have some kind of casual interaction) to occur and this has implications for the arrangement of places to sit or linger.

- **Interpretation, legibility and coherence:** mostly through visual interpretation of the cues a space gives us, in terms of its built form and the kind of activities going on

- The connection of **sense of safety, intrigue and curiosity and aesthetic.**

### **Aesthetic — sensing the character of an area movement, comfort and reassurance, natural element**

- In relation to non-visual aesthetic experience this will include the feeling of surfaces underfoot, the air or wind against our skin, and the effort of passing through a space, particularly if this entails climbing or descending. Reassurance and comfort is mostly minimizing opportunities for crime and antisocial behavior and providing appropriate spots in which to linger, sit, eat, drink and converse. We generally feel comforted by experiencing natural elements in the landscape. Natural elements are also experienced through hearing, touch and smell.

## C. Local Principles

### 1) Principles of Hong Kong public spatial practice

The following is excerpted from the Hong Kong Planning Standards and Guidelines, Chapter 4

#### HK Planning Standards and Guideline — Recreation, Open Space and Greening

This section is concerned with those aspects of recreation which require special facilities to cater for widespread public demand, and land areas to be allocated in town plans. It provides an equitable basis for the reservation of land for recreation facilities and open space, and to guide the planning, distribution and, where appropriate, design of these facilities.

##### Key Trends in Recreational Pursuits

- There is a substantial demand for more passive open space near home as a result of the aging population, and for an improvement in the quality of facilities (e.g. planting, new equipment and lighting); There is a demand for more of the popular facilities such as swimming pools and sports centres, and for a greater variety of recreation activities; There is also an increasing popularity of water sports.

##### Principles of Recreation and Open Space Planning

- **Quantity:** meet the demand of 'core activities'.
- **Good Practice:** (easy access, optimum usage and enable complementary improvements) an integrated recreation and open space framework incorporating continuous pedestrian and/or cycle links.
- **Vision:** location and physical characteristics; population structure and socioeconomic characteristics; recreation potential and opportunities particularly any attractive recreation spots; level of existing facilities and areas of shortfall; flexibility in the use of facilities including dual or multiple use; accessibility of facilities; scope for private development; scope for special facilities; and provision and accessibility of facilities for special groups such as the disabled.

##### Ratio Between Active and Passive Open Space (3:2)

**Locational Guidelines for Open Space:** (preferably within a radius of not more than about 0.4km)

##### Special Needs for the Disabled and the 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; safe crossings. **Sports and Leisure Centres:** (badminton, squash, basketball, table tennis, fitness, dance and gymnastics)

##### Recreation Facilities for the Elderly

- Elder people often have less sensitive vision, hearing and touch abilities. The installation of exercise facilities should place signage, handles, handrails, knobs, and grab bars etc. at appropriate locations. Good texture material for ground surface should be used for Tai Chi exercise.
- Sufficient sitting facilities, under shade and/or shelter, should be provided close to exercise area not only for resting of the elderly but also facilitating their social interaction.
- Barriers in accessibility to the exercise facilities such as narrow and uneven footpaths, indirect or gradient routing, presence of obstacles etc. should be avoided. An inclusive design approach that emphasizes a common access for all should be adopted. Some detailed principles and recommendations of such an approach to free barriers are contained in the handbook 'Universal Accessibility'.

##### Functions of Greening

- provide food and shelter for wildlife; maintain the ecology of the area and conserve wildlife

## **HK Public Space Initiative**

Hong Kong Public Space Initiative ("HKPSI") is a charitable non-profit organization for organizing research, education and community engagement programs. The ideal public space that they defined in HK should be paid more attention to the social dimension, to be specific, is the accessibility, environment, facilities, public utilization and sociabilities. And the same as the significance of public space, the quality of community life is their focal point.

### **Accessibility**

- convenient geographical location, availability of transport links, high visibility to the public, clear entrance and the provision of barrier-free access.

### **Environment & Facilities**

- appropriate recreational facilities and performance venues (seating, lighting, running paths, shading and water); ample bright lightning, open, security, hygiene and comfort.

### **Public Utilization**

- public spaces should become a "place" instead of merely a "space". As such, design and management of public space should be flexible and people-oriented. In fact, public space resembles the blood capillaries of a city, bringing nutrients to different parts and connecting them with life.

### **Sociability**

- Social network in the internet is dominating the social life of many, the significance of public space as a place for physical social life is becoming even more prominent.
- Accommodating voices of people from all walks of life; eliminating obstructions that discourage interactions; providing venues for performances, exhibitions and recreational activities which all encourage sociability, etc.

### **Significance of Public Space**

- extending our living environment (individual dimension) ; strengthening community bonding (community dimension); balance urban development (city dimension)

## **Quality More Important than Quantity**

- As the uniqueness of public space is its public nature, the role of public space is irreplaceable in our city. As such, the most fundamental purpose of public space is to effectively catalyze public life to happen. It is hence imperative that the design and management of public space has to be people-oriented, encouraging public use.
- In order to uphold our status as a world-class city, Hong Kong should pay close attention to the quality of our public spaces, encouraging public life, not only attracting foreigners to visit and invest in Hong Kong, but also becoming a desired living place for residents.



## 2) Hong Kong government urban design guidelines

The following excerpts from the Hong Kong government urban design guidelines are relevant to this project

### HK Planning Standards and Guideline — Urban Design Guidelines

It covers both the major general urban design issues and air ventilation to shape a better physical environment in aesthetic and functional terms and at macro and micro levels. It concerns about the total visual effect of building masses, connections with people and places, creation of spaces for movements, urban amenities and public realm, and the process for improving the overall townscape.

#### For General Urban Design Consideration

##### Marco Level (manmade)

- Contribution to the cityscape in terms of adding legibility and creating high quality city environment; Compatibility with landscape and development pattern; Compatibility with overall height profile / massing; Contribution to the local character.

##### Intermediate Level (man-made)

- Compatibility with **street pattern**; Visual impact and suitability of **landmark feature**; Compatibility with overall height profile and massing

##### Micro Level (man-made)

- Contextual and functional appropriateness at street level; Contribution to pedestrian-friendly environment; **Human scale** and quality enhancement

#### For Specific Major Urban Design Issues

##### Waterfront Sites

creating a quality harbor-front (Victoria Harbour) through encouraging **innovative building design** and a variety of **tourist, retail, leisure and recreational activities**, and providing an **integrated network of open space and pedestrian links**.

##### Notice for Functional diversity

**1)** sites along the waterfront should be reserved for cultural, tourism-related, recreational and retail activities. **2)** activities' recommendations: visual interest and low-key activities. **3)** the diversity utilization of continuous waterfront promenade (e.g.

strolling, jogging, cycling, fishing, sitting, etc). Strengthening the vitality of the waterfront (e.g. landscaping areas, sitting out areas, lookout areas, boardwalks, and small piers, etc)

##### Vehicle and Pedestrian Circulation (maximize accessibility to waterfront)

#### Public Realm

At the level of street, the retail frontage should be encouraged in areas with high pedestrian flows, and human scale design need to be taken into consideration. For the open space, it is essential to create orientation and visual linkage to direct pedestrian to open space. Meanwhile, heritage conservation needs to be paid high attention to (scale, color, materials or architectural design on old and new buildings).

#### For Specific Major Land Uses

##### Air Ventilation (District level)

- settling breezeways **along major prevailing wind directions** and air paths intersecting the breezeways should be provided; linkage of roads, open spaces and low-rise buildings to form breezeways

##### Street Widening / Building Setback / Varying Height Profile

##### Air Ventilation (Site level)

- **Terraced Podium Design**: be adopted to direct downward airflow to the pedestrian level and providing setback parallel to the prevailing wind
- **Staggered Building Blocks Arrangement** — gaps between building blocks to enhance air permeability
- **Stepping Height Profile** — to divert winds to lower levels
- **Cool Materials** — characterized by high solar reflectivity and/or high emissivity, should be used in the pavements, streets and building façades to decrease absorption of solar radiation

#### For Commercial Zone

- Creating the commercial image in residential areas through using commercial centre to create identity for residential area and district character; allowing alternative routes to create great pedestrian movement.

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### **3) Local Vegetation**

The following are excerpted from the Hong Kong Government's recommendations for using local vegetation in landscape projects in the SAR

#### **Guidelines on Use of Native Species**

- These are the recommended native plant species for use in planting on man-made slopes. This guideline aims to promote the use of native plant species in public works projects, by recapitulating major factors to be considered in their application with regard to the basic principles and constraints in using native plant species.

#### **Recommended Native Plant Species for Use in Planting on Manmade Slopes**

- **Native species** with strong pioneering characteristics, ornamental value, fast growing or easy-to-maintain qualities, ability to establish in harsh conditions and higher ecological value (to enhance biodiversity, natural succession, and sustainability of slope vegetation covers); **Planting right species at the right place** which can be contributing to sustainable landscape and cost effectiveness.

#### **Benefits**

- Using native plant species: **enhance the ecological functions of the plantation; help restore local biodiversity**; connect existing woodlands; provides movement corridors for urban wildlife; minimize the risk of introducing accidentally invasive exotic species to the ecosystem; bring local plants closer to people for demonstration of the value of biodiversity
- Diverse ecological communities (**local fauna**) comprising native species are generally more ecologically sustainable which further enrich the plant biodiversity and serve as a catalyst for ecological rehabilitation.

#### **Overview**

- It is often impractical to plant native species for regeneration in urban planting sites, heavily eroded sites or other disturbed areas because of intense human disturbance, unsatisfactory soil and unsuitable microclimates (e.g. Acacia spp. and Eucalyptus spp.). Alternatively, mixed planting of suitable combination of native and exotic species according to specific site conditions can also be considered at the initial stage.

## **PROGRAMME**

This section presents the general guidelines that should underlie the design of the Green Deck. It is split into sub-sections on General Guidelines, Organizing Principles, the Green Deck within the Local Context, and the internal programming of the project, subdivided by user groups

## A. General Guidelines

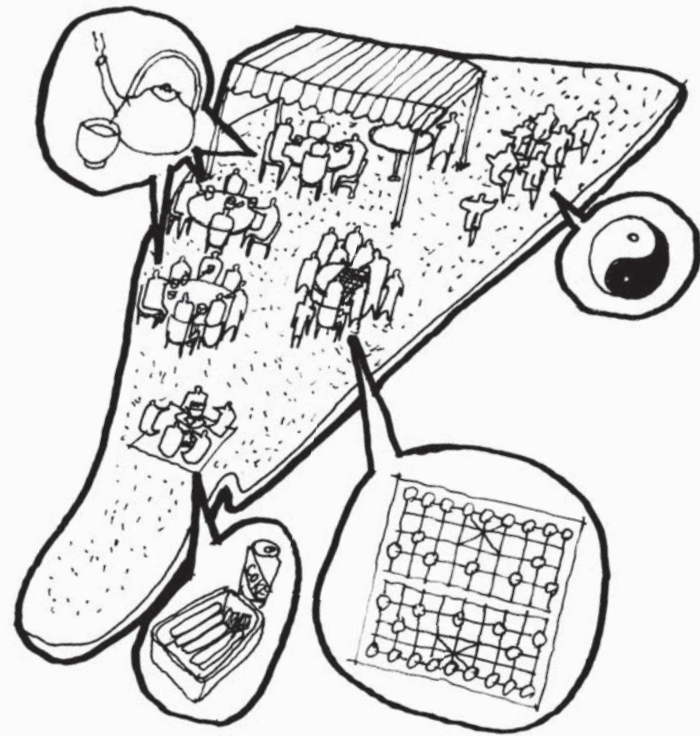
The primary characteristic of the Green Deck will be in its literal “green-ness.” This project will first and foremost be a verdant oasis that stands in stark contrast to its concrete and steel surroundings. At least 80% of the upper level of the deck should be covered in vegetation. This should include accessible green (lawns and groves) as well as protected green (habitats and ornamental plantings). The green space of the deck should be open and not over-programmed. There will be lawns to walk on and play on, dense planting of shade trees to shelter paved areas. Groves of trees will be interspersed with network of paths and clearings rather than being off-limits. Planting and maintenance strategies should be planned to anticipate and accommodate this. The Green Deck will use local vegetation in a wide variety, to provide an ecologically native environment that also contributes to promotion and sustainment of biodiversity. The definition of the spaces and paths should be achieved primarily by vegetation rather than architectural or other man-made interventions. The entire deck should have a “botanical garden” character. Activities such as community gardening and volunteer plant caretaker programmes will be encouraged to give local people a sense of stewardship of this green environment.



### Guideline 1: GREEN

The Green Deck will provide a variety of spaces for people to come together. Each of the spaces and facilities should be designed in a way that contributes to people being able to gather, both within their groups and to meet and interface with other groups of people, while allowing each group to have its defensible space. Great public spaces are also places to “see and be seen.” Senior citizens value vantage points from which to watch a variety of human activities unfold. Particularly for younger people (especially women) in their 20s to 30s, public space is used to “perform a public identity,” in places such as cafes that extend their inner life out into the public realm. Indoor and outdoor spaces that can be used for gatherings and events of the local community will enhance local people’s feeling of identification, pride and “ownership” of the place.

## Guideline 2: SOCIAL



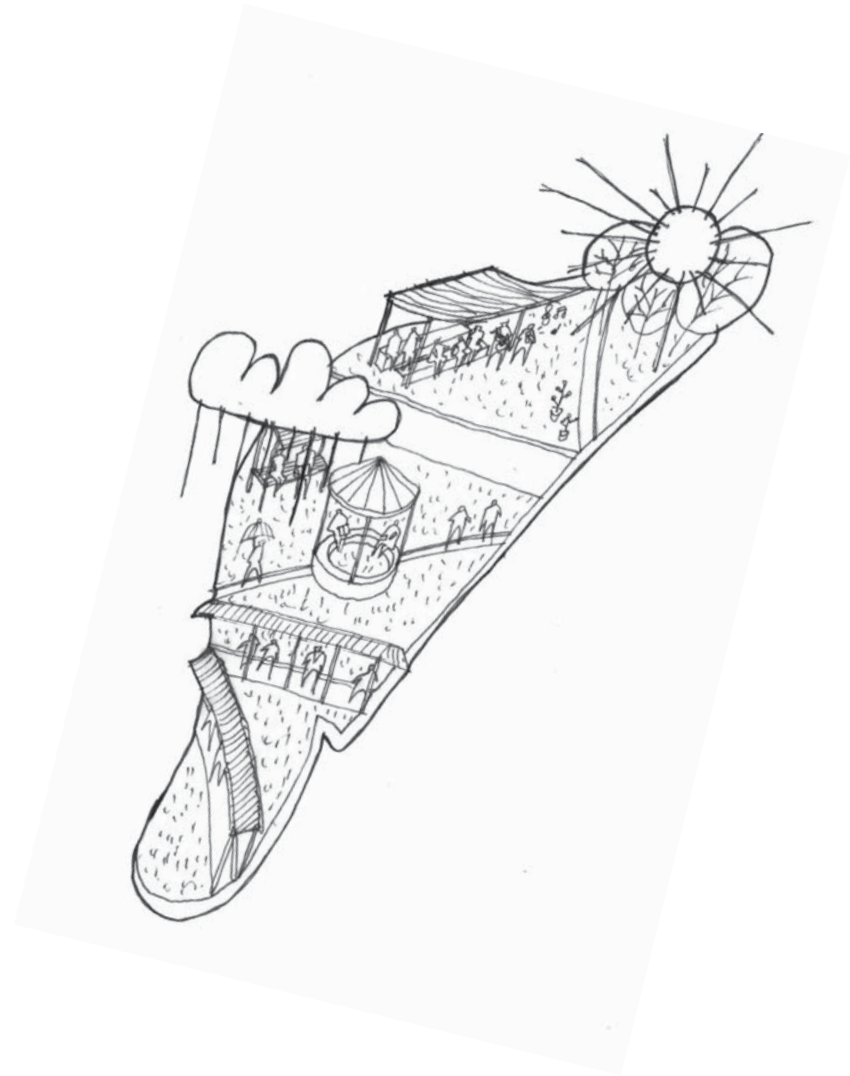
A wide variety of technical innovations and design and construction technologies will be mobilized in the design and construction of the Green Deck that will make it a world-class demonstration project for sustainable urban development. Accordingly, the Green Deck as a whole, and each of its component parts, will be designed with the intention of raising awareness and understanding of “green” issues, behaviour and technology. The Green Deck will be a place for the demonstration, facilitation and enacting of green practices. An ongoing programme of initiatives, competitions and events will be organized to showcase sustainable developments. Systems, facilities and programmes will be instated to facilitate reducing, reusing, recycling and up-cycling of materials in the local communities. A life-cycle plan for all elements of the Green Deck should be proposed; meaning that disassembly and reuse of elements should be planned, including providing for the possibility of upgrading technologies with better performing, more sustainable ones as they become available. As described in more detail under the discussion of the “tourists” user group, various elements and initiatives will be instated to turn the space of the Green Deck into a living demonstration of “eco-culture.”

### Guideline 3: SUSTAINABLE



A convivial public space for Hong Kong must be designed with a consciousness of the particularities of the local climate, which in Hong Kong is characterized by rain and/or strong sun for much of the year. The park should offer various types of shelter throughout, including covered paths and gathering spaces, laid out in a way such that a contiguous network of sheltered paths and a collection of sheltered spaces allow some uses on the deck to continue rain-or-shine. Sheltered spaces on the upper level should have a high degree of openness to the outside. The design of the upper level should be laid out in a way that acknowledges local prevailing wind patterns in allowing for cross-ventilation, while sheltering from sun and rain. Fully enclosed interior spaces should be integrated into the middle level of the deck wherever possible, to avoid the construction of large buildings at the upper park level. The middle level of the green deck will be an indoor space, but should still be afforded views and access to the green upper level - sheltered but not separated/ alienated from the green.

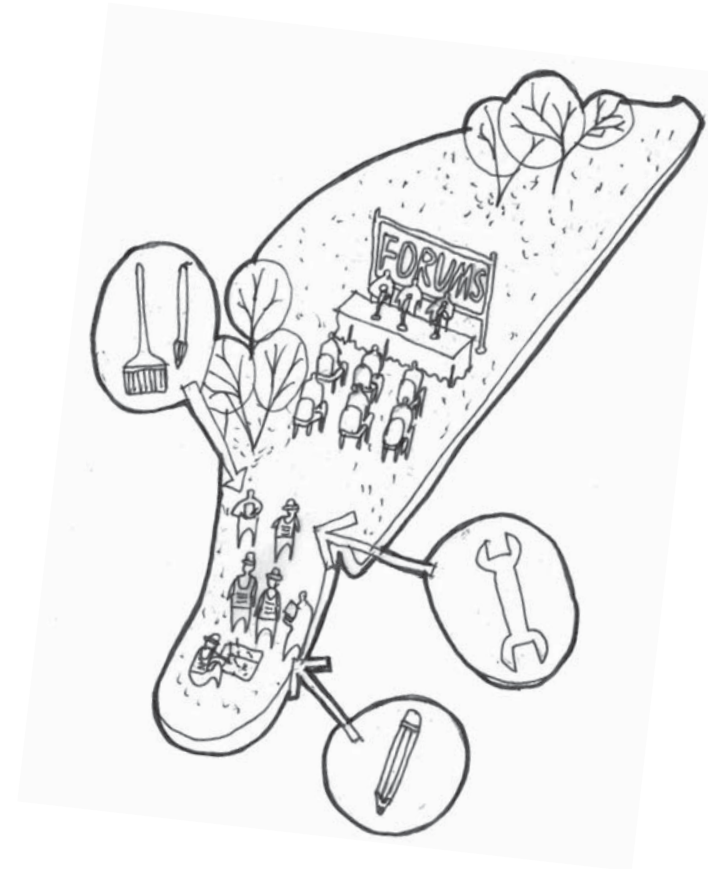
#### Guideline 4: SHELTER





An integral part of the design for the Green Deck will be an ongoing scheme for involvement of end-users and other stakeholders in defining the details of the design and facilities, during the design process and also on a continuous basis after the project is constructed. Strategies for monitoring and adaptation of facilities and uses should be planned-in from the beginning. This should include ongoing forums and stakeholder engagement and co-design. There is a need to work with local managers (management committee composed of different stakeholders) in the design for long-term manageability, and responsiveness to the changing needs of society.

### Guideline 5: PROCESS-ORIENTED





The variety of users and uses of the Green Deck will be enabled by a careful planning of a network of paths linking its various spaces and facilities. Paths should be planned in a hierarchy, with a main path offering the “boulevard” experience, circuits linking the various functions. Whereas the paths through the central level of the deck should follow a logic of efficient movement of pedestrian flows, the paths of the upper deck will be planned as experiences, meandering, providing moments of discovery, variety and arrival. Paths should be laid out with a logic of separation of spaces of slow and fast movement. Paths with different characters and speeds should be separated, with bicycles and running tracks separated from walking paths, paths with major flows of tourists or event audiences separated from paths for local people’s activities, hectic commuter paths separated from slow leisure paths, etc. The Green Deck will be a new link in the pedestrian and bicycle path network of the area, so that the paths of this public space will also be embedded as a landmark and a node in a wider web of alternative ways through the city. The different relations of different user groups to the paths of the Green Deck are discussed in more detail in the following section.

### Guideline 6: PATHS



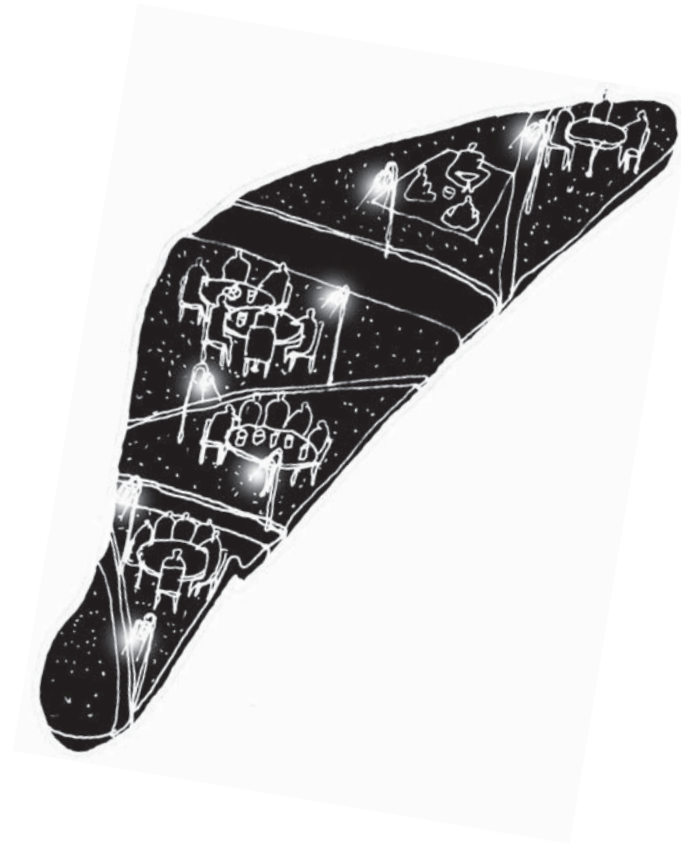
Convivial public space should allow for multiple ways of “being in” (and especially “being together in”) the space, not just “passing through. Accordingly, a range of suitable sitting opportunities should be offered. Seating arrangements should be planned by the principles of “refuge and prospect”, i.e. that people feel most at ease in a situations where they are sheltered and protected but are afforded an open view of their surroundings. People tend to like to observe rather than be observed (particularly from behind), and seats without a wall or other barrier behind them are likely to be underused. Sitting places should thus enable passive (outward) viewing of the cityscape, of the nature in the green park, of other people. There will also be more introverted seating clusters for people wanting to gather in groups, flexible / mobile seating that can be moved around, and seating for audiences of (both formal and impromptu) events. Beyond purpose-designed benches and seating, the landscape of the Green Deck should also afford grassy areas for relaxing and a variety of impromptu seating and lying possibilities, such as ledges, fences, stones, etc. that can be appropriated as seating / leaning / lying areas. Some groups and sub-groups of the users of the Green Deck (such as senior residents, children’s caretakers, domestic helpers, etc.) will have particular needs and preferences in terms of seating, as outlined in more detail in the following section.



## Guideline 7: SEATING

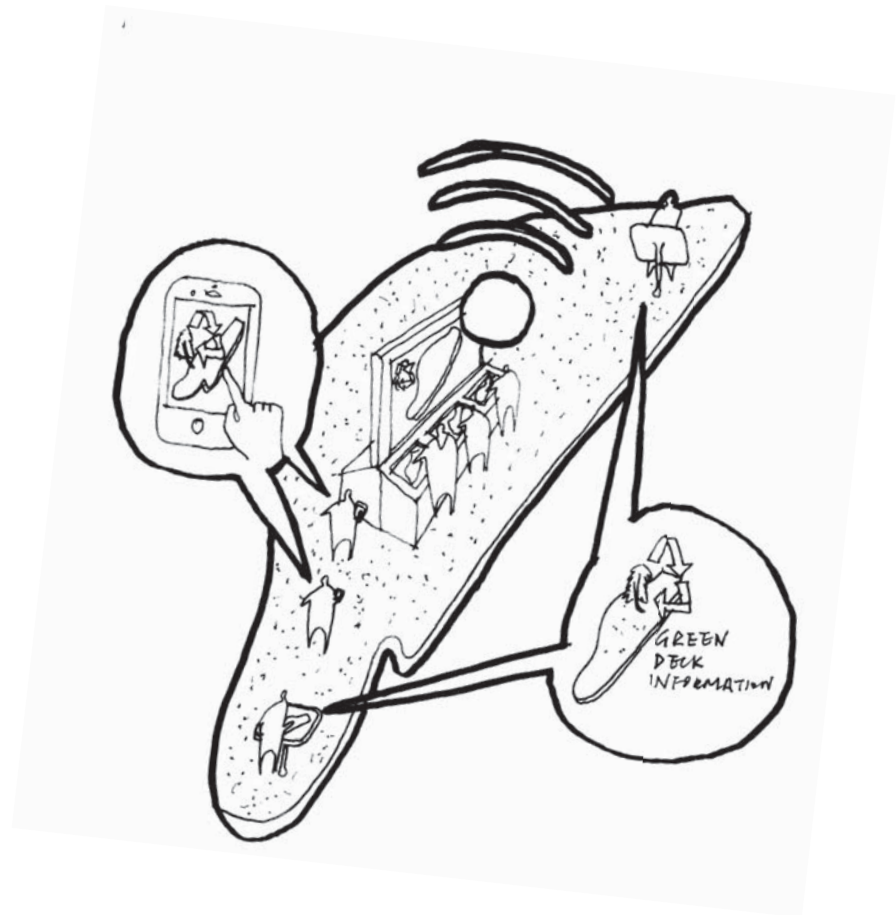
As a pivotal public space in Kowloon, forming a link between homes, workplaces, tourism attractions and places of recreation and relaxation, the Green Deck must be “open all hours,” in step with the 24-hour city of Hong Kong. Key areas and paths through the upper green level of the Deck will be well-lit, and enlivened through the encouragement of night-time activities, so it doesn’t become a “dead” space at night, and can continue to offer a safe and pleasant link between surrounding districts at all hours. Allowing views into the spaces of the Green Deck from the buildings surrounding it can encourage “eyes on the street” that can increase security.

### Guideline 8: 24-HOUR SPACE



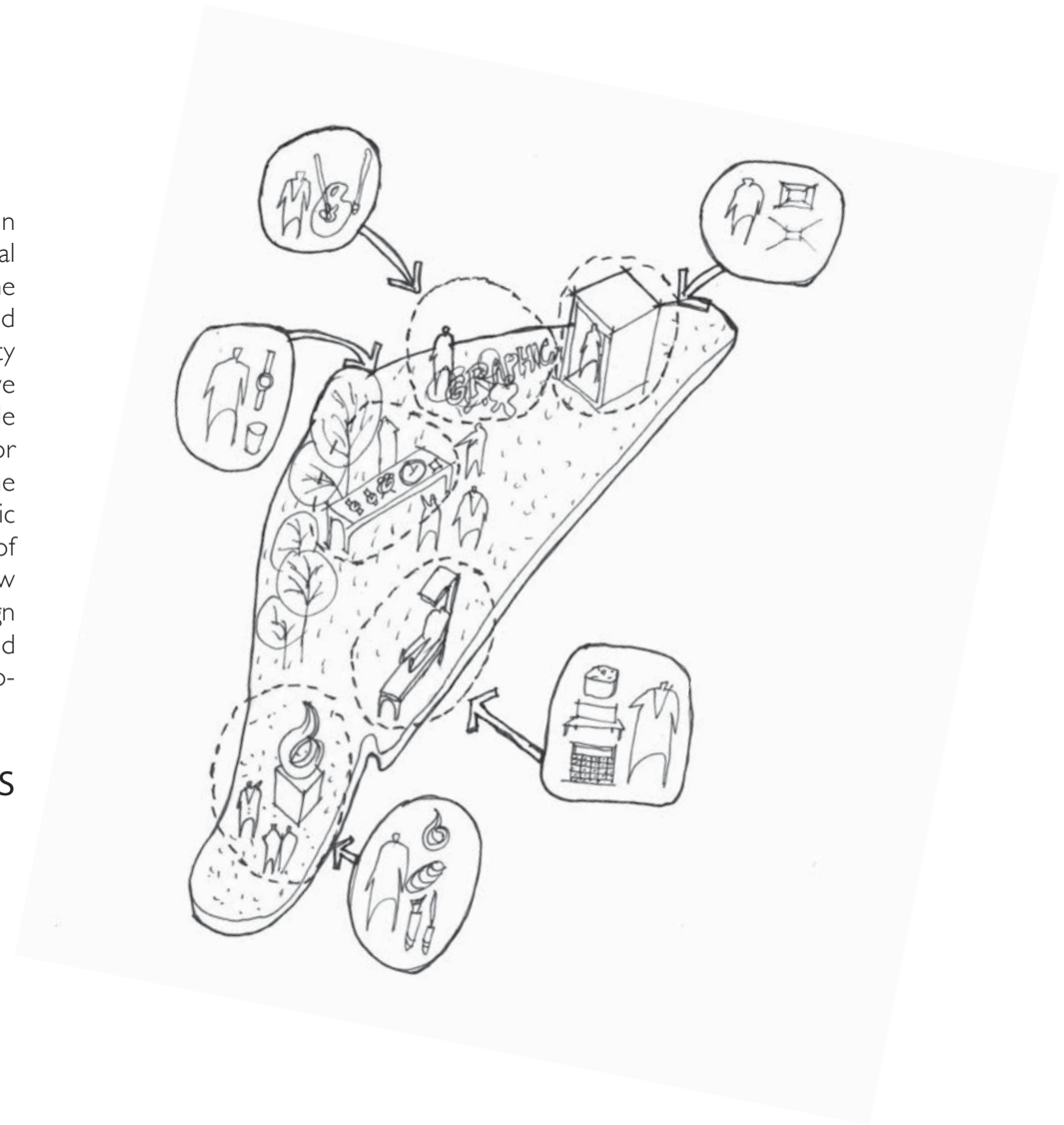
As a 21st-century urban public space, the digital dimension will be an integral facet of the Green Deck. The Green Deck will be a free government wi-fi hotspot. Digital information screens and interfaces of various types will be located throughout the park, to facilitate people in using the park, understanding and learning from the environment and technical innovations of the project, adapting and appropriating the spaces of the Green Deck to meet their needs, informing themselves about green technologies and sustainability, etc. A website will be maintained to support all of these uses, and an ongoing series of apps will be developed to add increasing possibilities to the ways in which people can use and experience the Green Deck.

### Guideline 9: DIGITAL DIMENSION



The Green Deck is conceived as a large project, within which many diverse small projects are embedded. Individual designers will be engaged to take on sub-projects within the Green Deck initiative, to bring in a variety of approaches and collaborators. Each of these projects is also an opportunity for a design competition, to invite a variety of innovative and focused ideas. Examples of such sub-projects include the children's playgrounds, the skate park, the seating (for which different designers could be engaged to design the seating for different areas), the programmes of events, iconic roof structures, etc. Additionally, an ongoing programme of competitions and commissions will continue to add new public sculptures and other artworks to the space. A design competition would also be appropriate to achieve a bold and iconic sustainably designed piece of architecture for the eco-culture pavilion (described in the next section).

### **Guideline 10: NESTED DESIGN PROJECTS**



## B. Organizing Principles

### General organizing principle (section)

The Green Deck is to be conceived in three layers: an upper level which will be an open green park; a middle level for circulation, retail and mechanical functions, and a lower zone for the existing Cross Harbour Tunnel Toll Plaza. Thus, the Green Deck will in effect be a layering of three different programmes with different purposes and functions. The top park level will be a convivial public space for the community (introducing a central new social, cultural and ecological entity to the city), the central level a commercial and functional level (creating a money-making economic face for the site) and the bottom level a transport level (continuing and augmenting the site's function as a major node in the flow of the urban metabolism).

The layering of programmes in this way will allow each of the three levels to fulfil its purpose optimally, without unwanted interference between the three different programmes. Buffer zones where the three programmes meet should be introduced in a reasoned and strategic manner. For instance, waiting and boarding areas for buses will span between the middle and lower levels to enable pollution-free waiting in close proximity to retail amenities and views to the park. Cafes and restaurants can span from the commercial area to the park, in order to provide appropriate amenities that contribute to the quality of the experience of both levels.

A porous design that lets daylight and ventilation into the lower levels, as well as allowing penetration of green into middle level. A sunken plaza(s) or garden(s), etc. can help to link the upper and middle levels and bring light and ventilation into the lower level as well.

### General organizing principle (plan)

The upper level of the Green Deck will be broadly organized in functional / thematic clusters of uses and facilities. Each of these clusters will be a spatially compact and functionally coherent group of functions serving a particular societal purpose, including:

**Sports cluster:** a collection of indoor and outdoor sports courts, fields and amenities. The main users of this cluster will be members of the local community, with members of the local business and academic community as secondary users

**Service cluster:** a concentration of public service amenities primarily targeted at serving members of the local community

**Eco-culture cluster:** centred on a new scientific and cultural institution around ecology and sustainability - the Eco-cultural Centre - which will be the nucleus of the Eco-cultural landscape - a network of artworks, installations and educational and interpretative elements throughout the Green Deck.

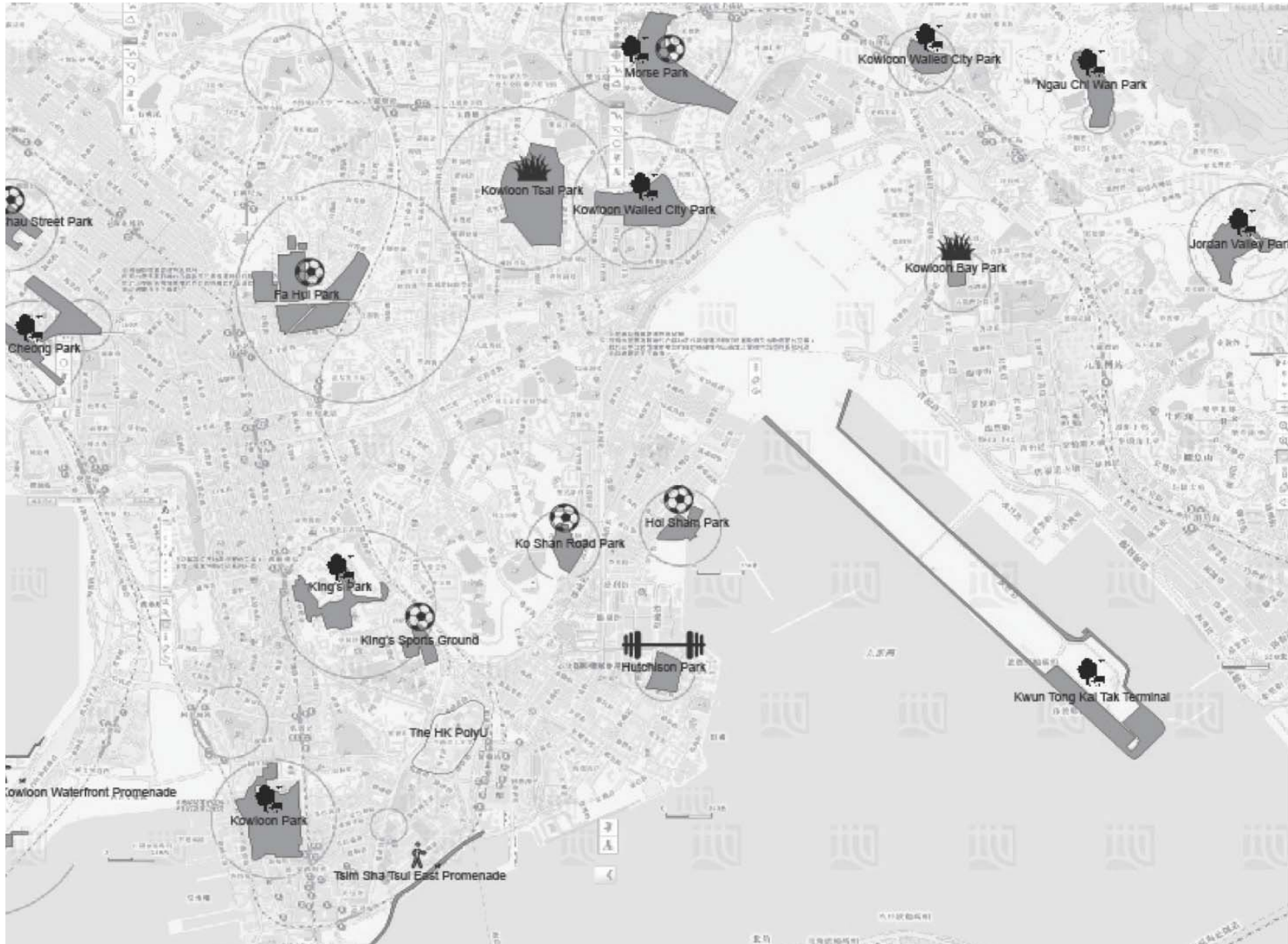
**Tourism cluster:** group tourists would be the largest group of users of this cluster. It will also serve to spatially and temporally concentrate the flows of large-volume, short-term tourist visitors to the Green Deck, to avoid an impression of the place as a whole being "overrun" by these groups. Secondary points of interest for independent tourists will exist throughout the Green Deck.

**Event cluster:** a zone of indoor and outdoor spaces of different sizes and characters, to support a comprehensive variety of different events, contiguous with the existing Hong Kong Coliseum.

The functions, facilities and character of each of these clusters and their sub-components is discussed in more detail in the Programme section of this brief, in which a set of indicative uses is proposed. These uses are intended as indicative rather than comprehensive. The detailed articulation of the facilities of each of these clusters will require a concerted process of co-definition with the local community and other relevant

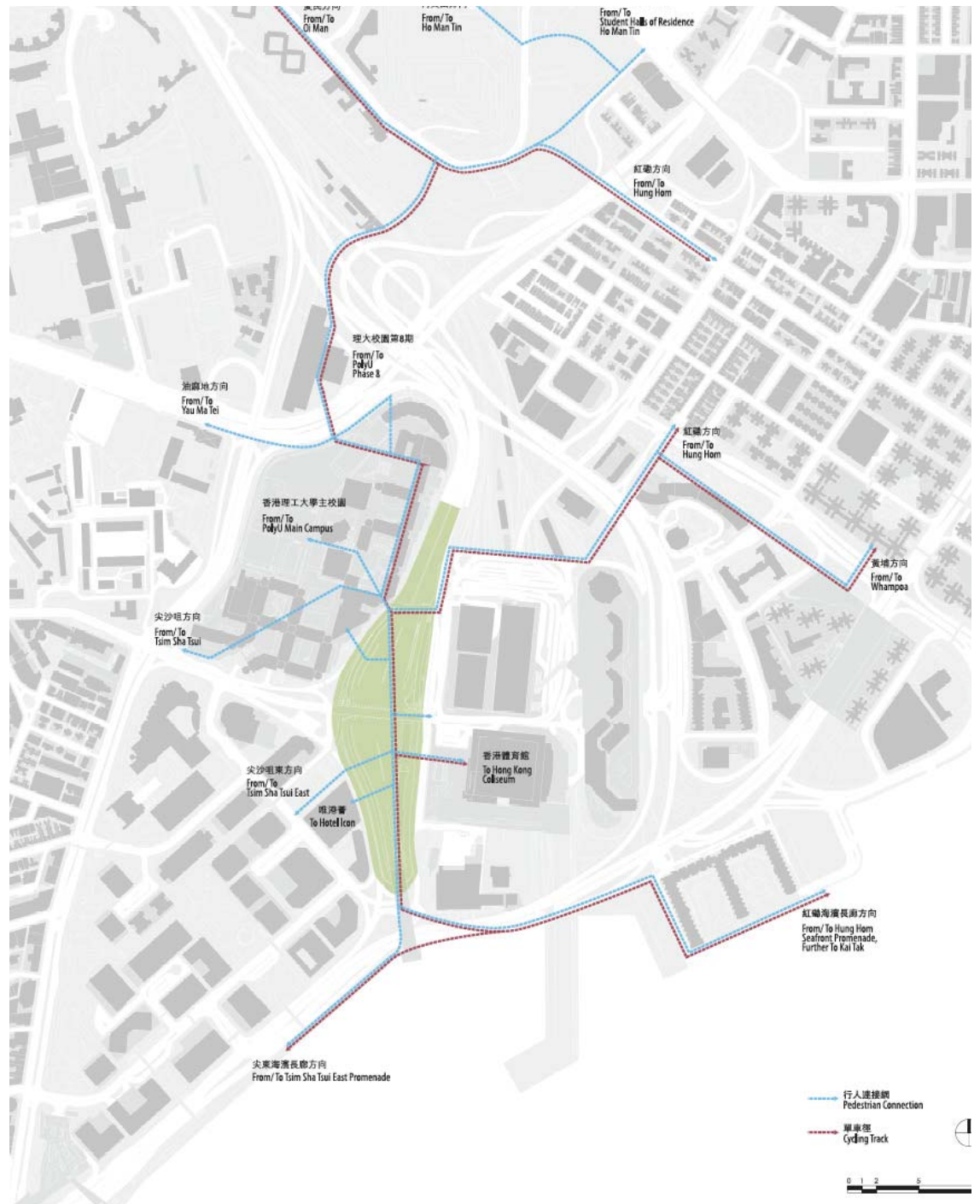


## C. The Green Deck Within Kowloon



The plan on the previous page gives an overview of the existing parks in the greater Kowloon area, including the major facilities provided by each of the surrounding public green spaces. Additional information on existing public amenities is compiled in a series of maps in Appendix D of this document.

The plan to the right illustrates the proposed links and extensions to the local pedestrian and bicycle circulation networks that will be created by the Green Deck. Recommendations on the integration of these paths into the Green Deck are given in various of the preceding and following sub-sections of this section.

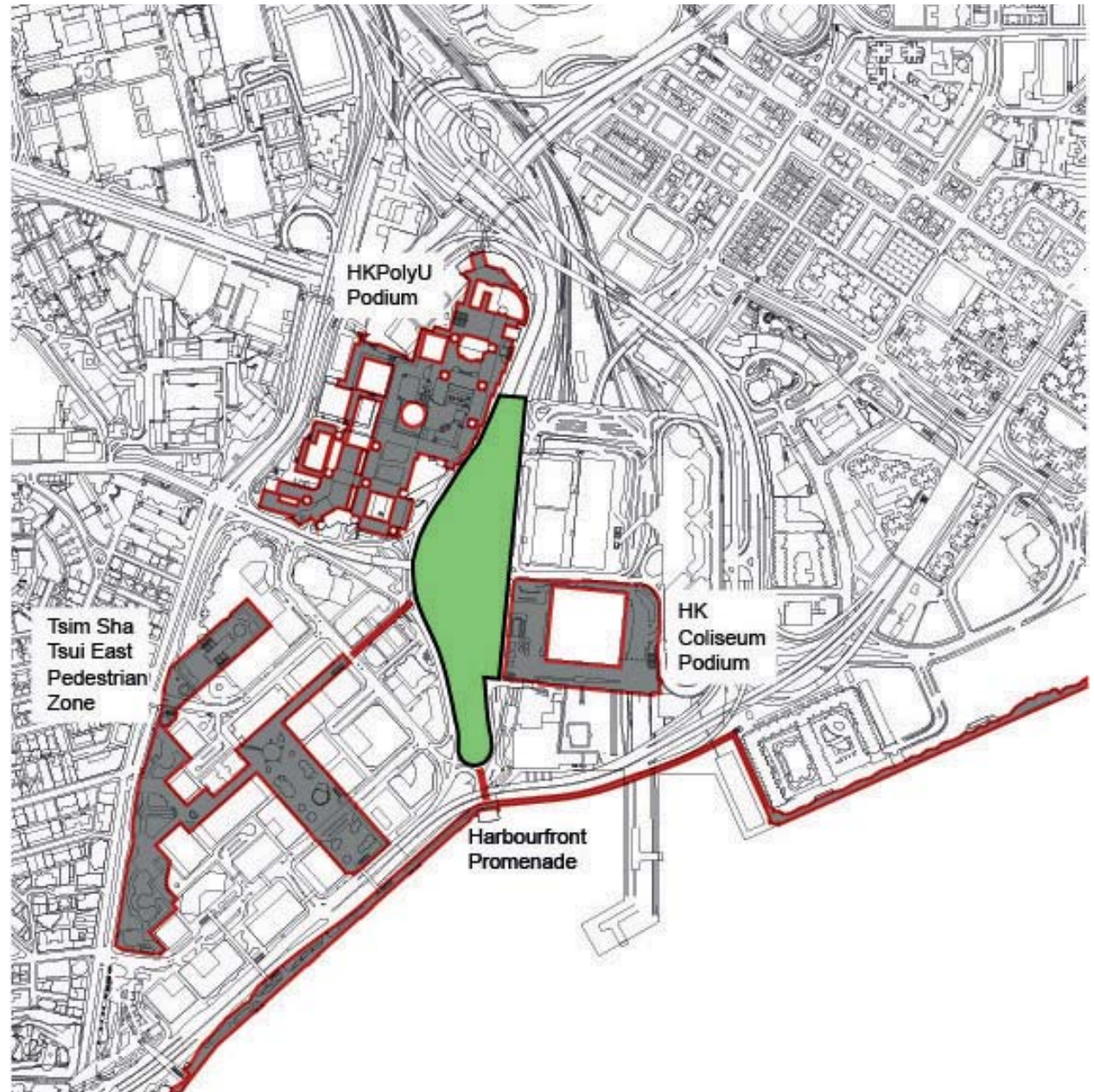




## D. The Green Deck Within the Immediate Context

There are four existing outdoor public spaces of significant size in the immediate vicinity of the Green Deck site: the pedestrianized zone of Tsim Sha Tsui East, the harbour front promenade, the Hong Kong Coliseum podium and the Hong Kong Polytechnic University campus podium. However, there is only the most tenuous of spatial and functional continuity or even accessibility between these spaces, such that the public space of the eastern Kowloon Peninsula remains disjointed and fragmented. The most obvious barrier to the integration of these spaces is the chasm presented by the Cross Harbour Tunnel Toll Plaza, the proposed site of the Green Deck.

The Green Deck will fill this gap between these four existing spaces to create an expansive and diverse continuum of public space that will allow for connections and synergies between the existing spaces, while also filling in for the individual and collective functional deficiencies of these spaces (for instance, little existing provision for sports, play or exercise, no significant-sized green areas, no community amenities...). The relationships that should be established between the Green Deck project and each of these four spaces is detailed below.



### **Tsim Sha Tsui East Pedestrianized Zone**

#### *Existing Character:*

A web of pedestrianized streets and outdoor public spaces (with internal shopping passageways within the majority of the commercial buildings as a secondary circulation network) permeates the district of Tsim Sha Tsui East, centred on the public square of Centenary Garden and with Granville Road as its main axis. These streets and squares are lined with a typical Hong Kong commercial mix of restaurants and shops and populated with trees, fountains and street furniture. These spaces are for the most part hard-surfaced and most of the surrounding activities are commercial in nature.

#### *Relation to the Green Deck:*

The Green Deck will become an extension of this web of spaces, spatially and functionally fusing with these streets and squares in two ways. Firstly, it will offer green public space with opportunities for exercise and recreation (in contrast to the paved, commercial character of the existing spaces). Secondly, a path from the pedestrianized Granville Road, across a new expanded raised pedestrian walkway and through the middle level of the Green Deck to Hung Hom Station will become a continuous retail and gastronomy avenue linking the existing and augmented transport hub seamlessly with Tsim Sha Tsui East and Centenary Garden, increasing economic synergy and integration (see also the sub-sections on Local Business Community and Tourists and Leisure Users for more details on the proposed relations between the Green Deck and this space).

### **The Harbour Front Promenade**

#### *Existing Character:*

This waterfront walk affords views of one of the world's most famous and breathtaking urban panoramas – that of the Hong Kong skyline across Victoria Harbour. There are street-level seating and viewing sites at various intervals. The promenade begins at its western end with a concentration of transportation, attractions and activities including the Star Ferry pier, the Harbour City shopping centre, the Hong Kong Museum of Art, Cultural Centre and Space Museum, continuing past the Avenue of Stars and several restaurants, cafes and bars, but losing definition, amenities as it approaches its eastern terminus, ending unceremoniously at a maintenance centre and storage yard under a flyover.

#### *Relation to the Green Deck:*

As a counterpoint to the western end, the Green Deck will provide an analogous cluster of activities including transport (Star Ferry at the west, Hung Hom Station at the east), and culture (Hong Kong Museum of Art, Cultural Centre and Space Museum at the west, and the new Eco-cultural Centre and Eco-cultural landscape on the Green Deck at the east, with links to the History and Science museums), and will provide a green counterpoint to the Harbour City shopping centre. The connection between the Green Deck and the promenade will need to be artfully designed to bridge or skirt intervening roads in providing a grand and generously proportioned link (see also the sub-section on Tourists and Leisure Users for more details on the proposed relations between the Green Deck and this space).

### **The Hong Kong Coliseum Podium**

#### *Existing Character:*

The flat concrete paved plane on which the Hong Kong Coliseum sits is a desolate and neglected public space for most times of most days of the week and year. Recent additions of shading devices have not helped to attract significant numbers of people to a space that is isolated from flows of people and urban amenities and devoid of reasons to linger. On days when there are events in the Coliseum, the space serves primarily as a holding zone for queues of people entering or exiting the venue, and short-term occupation before or after events. This space has no adjacent or contiguous shops, restaurants or facilities for public activities of any kind, and is thus an empty and cut-off fragment of space.

#### *Relation to the Green Deck:*

The upper level of the Green Deck will meet the podium of the Coliseum to form a continuous expanse of urban space, such that this space and the Green Deck will become contiguous, forming a generous expanse that will allow integration of the events of the Coliseum into the broad leisure offerings of the Green Deck. Commercial retail and gastronomy spaces at the middle level of the Green Deck will serve event audiences. Expanded and multiple pedestrian paths at this level should be designed to efficiently channel the concentrated pedestrian flows from the Coliseum (and new event venues) and the transport hubs (see also the sub-section on Event Attendees for more details on the proposed relations between the Green Deck and this space). The Coliseum podium will thus become a pivotal space via which the currently isolated Hung Hom Station forecourt and the Metropolis shopping/residential development will have a direct interface with this public space continuum.

### **The Hong Kong Polytechnic University Campus Podium**

#### *Existing Character:*

The podium of the Hong Kong Polytechnic University is the primary circulation level of the campus and an expanse of public space with attractive and well-established plantings of trees and shrubs. It is open to the general public and is used freely by a relatively small number of members of the public, mostly seniors in the morning hours for exercise (tai chi, etc.) or relaxation. In areas that are protected from the sun and rain, a wide variety of student activities enliven the podium in the evenings, including groups practicing drama, singing, dancing, martial arts and other dynamic and social activities. There are frequent exhibits occupying small or large areas of the campus, attracting members of the general public as well as PolyU staff and students. The PolyU podium is raised above ground level and separated from its surroundings by a ring of busy streets and highways, giving it an “island” character with little organic connection to other public spaces or streets.

#### *Relation to the Green Deck*

The upper (park), middle (commercial / circulation) and lower (transport) levels of the Green Deck should all have connections to the PolyU podium level. The interface between the Green Deck and the campus should be developed in a way that encourages flows between the two spaces and presents a welcoming face of the university to the public, encouraging the university to be perceived as “part of the neighbourhood” (in distinction to its present island character) by both the university community and local residents. Retail and gastronomic offerings at the middle level of the Green Deck will benefit from close proximity to the campus, as the most accessible commercial offerings for the university community (see also the sub-section on the Academic Community for more details on the proposed relations between the Green Deck and this space).



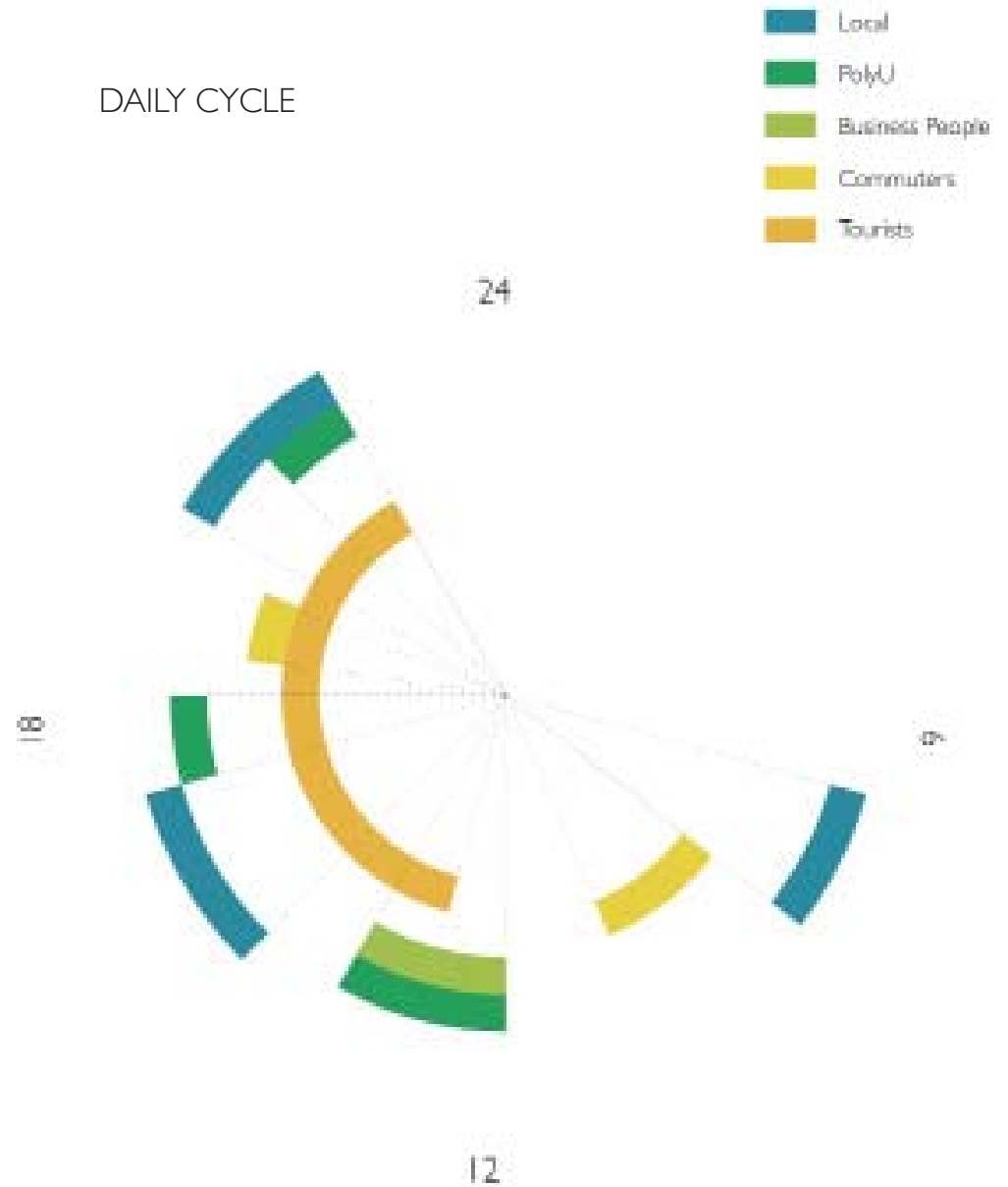
## E. The Users of the Green Deck

In this section, the proposed programme for the Green Deck is described in detail, with reference to six broad segments of society who represent the major groups of eventual users of the Green Deck. These groups are: Local Residents, Tourists and Leisure Users, the Local Business Community, Commuters, Event Attendees and members of the HKPolyU Academic Community.

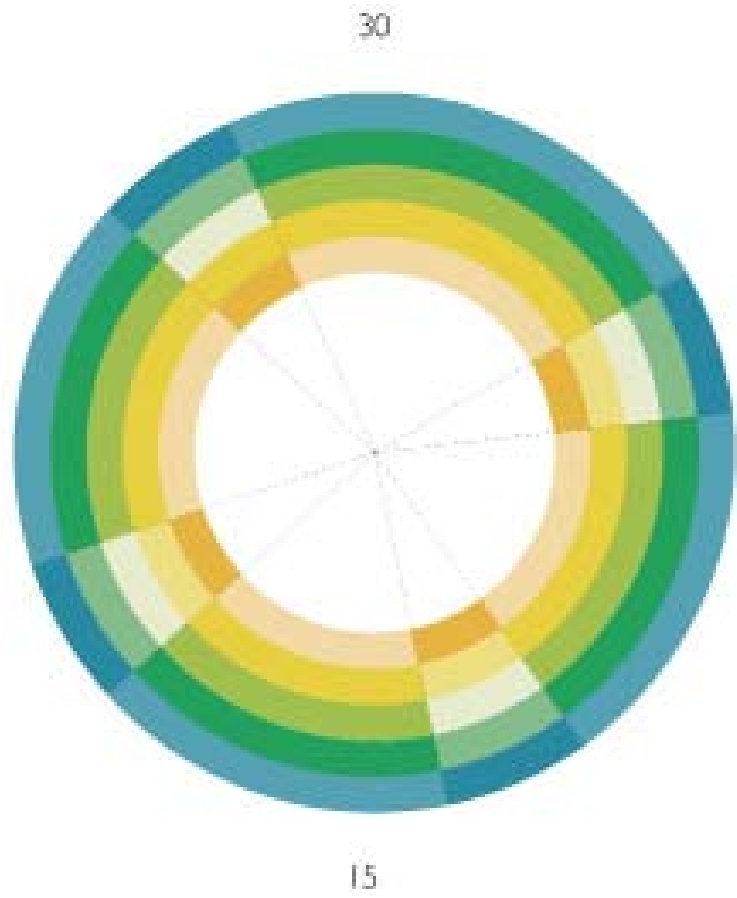
The accompanying three diagrams illustrate the expected broad patterns of use of this public space (primarily the upper park level: the use of the middle and lower level would be highest at morning and evening commuting times) by these different groups, over a typical day, month and year (for these diagrams, event attendees can be considered as related to tourists).

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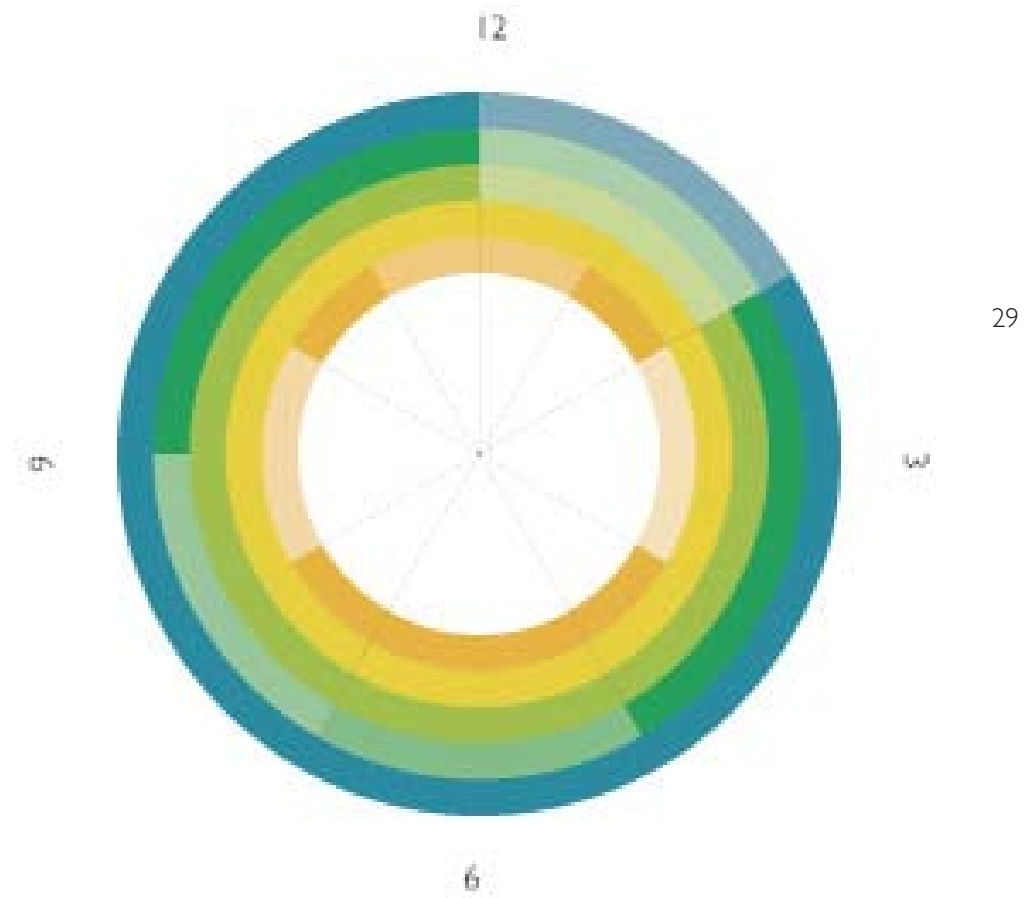
DAILY CYCLE



MONTHLY CYCLE



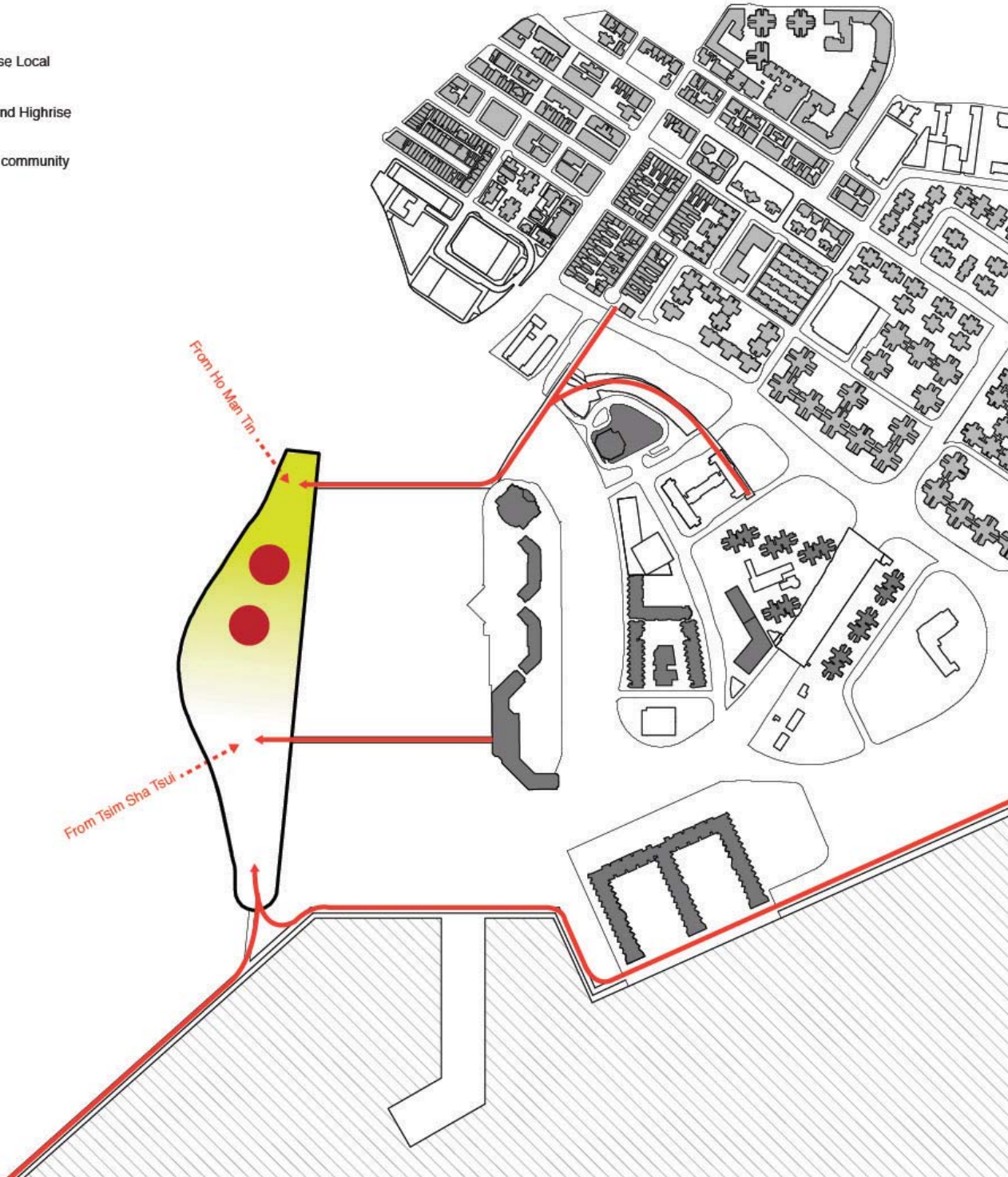
YEARLY CYCLE





- Mid Rise Local
- High End Highrise
- sport / community

1) User Group: LOCAL RESIDENTS  
Representative area: HUNG HOM



**Vision:** For local residents, the Green Deck will become the primary outdoor community space of Kowloon, providing spaces and facilities for all nature of public activities across the full range of demographics.

The nearest residential area to the Green Deck is in Hung Hom district, which is bordered by Victoria Harbour to the south and King's Park to the west. Residents of adjacent areas of Tsim Sha Tsui and Ho Man Tin will also benefit from the project's facilities.

The Hung Hom residential area can be split broadly into two parts: a zone of mid-to-high-rise public housing and low-to-mid-rise older buildings generally to the north and west, and another zone of high-rise higher-income housing developments generally to the south and east. This latter zone is home to a considerable number of expatriates, particularly Japanese.

The Green Deck will be the closest public green area for most of the southern part of Hung Hom, as the only current park in the district – Hutchison Park – is located in the north of Hung Hom. An existing network of footbridges and tunnels links the residential parts of Hung Hom to the Green Deck site. Residents have expressed the desire for a "greater variety" of facilities in public parks, beyond the standardized provisions.

### Approach

Members of this group will approach the site primarily by foot, via existing footbridges and tunnels, or via the PolyU campus podium or waterfront promenade. The enhanced connectivity brought by the Green Deck should also encourage these same groups to arrive by bicycle via new cycle paths.

### Programme elements for local people:

Indoor spaces – these uses will be arranged in concentrated "clusters" of facilities accessible from both the middle (circulation) level and the upper (green park) level of the Green Deck:

#### Community cluster / civic centre

- a library branch, as either an extension or re-location and expansion of the existing Cheong Wan Road public library
- community hall for public gatherings and initiatives
- special services for disadvantaged segments of society (such as pre-school children with disabilities) not served by current provisions in the community
- government service / information facilities, such Environmental Protection

Department customer service / information centre

- an intergrated "wellness centre", to promote health and fitness
- associated rest rooms, concessions areas

#### Sports cluster

- indoor sports facilities (such as squash, badminton, swimming pool, gym, general purpose activity halls). The exact mix of these activities should be determined through a process of stakeholder collaboration between government and local residents
- associated locker; shower; rest rooms, chill-out, concessions areas
- Outdoor spaces:**
  - full-sized football field with spectator area, associated locker rooms and showers
  - outdoor sports courts (tennis, basketball, badminton, etc.), to be determined by government-resident stakeholder collaboration process
  - dog run – contained outdoor zone where dogs can run free, with associated rest/ socialization areas for the dog owners
  - an open lawn for relaxation and unstructured activities
  - various outdoor spaces, sheltered from the sun and rain by natural or man-made elements, allowing a variety of opportunities for individual and social enjoyment of the place
  - among these spaces, a public square that can support community gathering, discussion and performances. Should allow for a stage-audience set-up but not be over-structured so as to exclude more informal, non-hierarchical types of gathering
  - plots for urban farming and gardening
  - other sports, play, and recreational facilities as detailed under the sub-groups below

#### Retail and gastronomy:

- concessions, cafes and restaurants – a variety of gastronomic offerings should be available to users of the park, with outdoor seating areas that contribute to the conviviality of the place, but not to the extent that free public seating is excluded or marginalized from any given area of the park
- appropriate retail outlets to serve the local community should be located at the middle level of the Green Deck, convenient to the main paths of approach from residential areas but not facing onto the park itself.

Beyond the general provisions for local residents, several sub-groups of the local community merit particular consideration in the design of the Green Deck, including: younger children and their caretakers, older children, youth, women, the elderly and



domestic helpers. The following paragraphs briefly outline the characteristics and needs of each of these groups, as well as particular considerations for facilities that should be taken into account to accommodate each sub-group.

### ***Sub-group Younger Children (and their caretakers)***

Younger children will tend to be curious and exploratory in their use of space. At the same time, they are the group most in need of supervision and protection. They require spaces that provide rich opportunities for discovery and a diverse range of activities. Both structured and unstructured play must be accommodated. These children will always be accompanied by a caretaker, and the spaces intended for these children should be designed in tandem with appropriate spaces of rest and socializing for these caretakers.

#### **Particular programme elements for younger children and their caretakers:**

- playgrounds with purpose-designed equipment (as a nested design project), with suitable seating for parents and guardians clustered around, in a way that allows them to also have social interaction
- nature experience zone(s) that allow children to interact and play with natural elements in an open-ended, exploratory way
- retail (concessions / cafes) as well as non-retail sheltered seating groups for caretakers, closely clustered with the playgrounds and nature experience zone(s)

### ***Sub-group Older Children***

Older children make the most active use of the landscape, and are most likely to be adventurous and inventive in their use of space. Open, less structured areas for play are appropriate for them. Spaces for these children also need the possibility of parental proximity but not as close or constant supervision. Interesting, undulating, varying topography is interesting for these children.

#### **Particular programme elements for older children:**

- large open grassed field for unstructured play
- (associated with the grassed field), natural and man-made elements within and around the play area should be designed to allow this group of children to hide, climb, construct and improvise in their play
- Eco-cultural landscape (see following section for more complete description of this element) - to the greatest extent possible, the artworks and installations of this element should encourage dynamic interactivity and exploration by older children, to encourage play as a learning experience
- paved bicycle practice zone

### ***Sub-group Youth***

This sub-group is the most likely to use facilities for outdoor field and court-based sports. They will also use the public space of the park for social activities among their peer group.

#### **Particular programme elements for youth:**

- skate park (as a nested design project), with a spectator area
- indoor and outdoor sports courts and fields, particularly basketball courts
- football field
- social gathering areas adjacent to each of these uses, with seating, lockers, etc.

### ***Sub-group Women***

Security is a particular consideration for female users of public space. Though this sub-group is placed within the section on local residents, women constitute about half of nearly all of the user groups of the Green Deck discussed in this brief, and these considerations should be seen as supplementary to the general recommendations for each user group, to ensure that the particular considerations for the female members of each group are taken into account.

### ***Sub-group Seniors***

Elderly residents have the greatest amount of free time of any user group, and the most limited financial means (time-rich, money-poor). They will typically spend more time in public space than other user groups, and will use the space more regularly at different times of the day, week and year. This group has the highest propensity of using parks as social gathering places. Signage and fixtures throughout the park should be designed with awareness of the elderly, as well as others with less sensitive senses of vision and touch.

#### **Particular programme elements for seniors:**

- senior-suitable exercise equipment and activity zones
- tai chi areas, to allow multiple groups to practice simultaneously. Shelter from sun and rain.
- Paths: the paths used by seniors in their day-to-day use of the park should be designed to be well-lit in the early morning hours, avoid steep slopes, obstacles or unnecessarily long distances or winding or narrow paths

Elderly residents will be among the most prevalent users of seating in parks on a day-to-day basis, and they will tend to occupy this seating for a longer time than members of other groups. This necessitates certain considerations:

- Seating for resting should be spaced regularly along all walking paths
- Seating groups for social interaction in groups of 2-6 individuals should be provided at covered locations off of main circulation routes
- Seating for elderly should provide vantage points from which activities of others (children, tourists, etc.) can be comfortably observed

links for pedestrians and bicycles to Hung Hom and other surrounding residential areas

### **Sub-group Domestic Helpers**

Members of this group will be among the caretakers accompanying young children in the park and will also enter or cross the middle and top levels of the Green Deck on a daily basis in the course of running errands. However, this group's most intensive and extensive use of public space is very concentrated on their free day, which is typically Sunday. The Green Deck should provide spaces that make these members of Hong Kong society feel as welcome participants of public space, including providing sufficient space for ordered group seating in attractive and comfortable settings in a way that does not block circulation of other users of the space.

### **Particular programme elements for domestic helpers:**

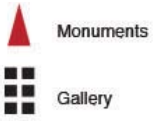
- The design should provide sheltered spaces that will be dedicated for the use of this sub-group on Sundays, and are suitable for other users and uses at other times of the week. Groups of 2-8 or occasionally larger should be accommodated
- allow for temporary businesses such as money remittance and food to be conducted in the park, that can pop-up on the weekend and disappear at other times
- the increased demand for trash collection and female toilets during weekends should be anticipated in the design

### **Participation / partnerships:**

- Public participation exercises should be conducted to co-determine the detailed programming and design of the spaces and facilities for local people, to select the designs for sub-projects such as playgrounds, etc.
- Community groups should be involved on a continual basis in the management and ongoing planning of the Green Deck as a whole, and the running of programmes such as community gardening
- Studies and focus groups should be conducted to determine the expected usage rate of infrastructure and sports facilities, service objects, etc., in order to more precisely specify and size the amenities to be provided

### **Potential spin-off projects:**

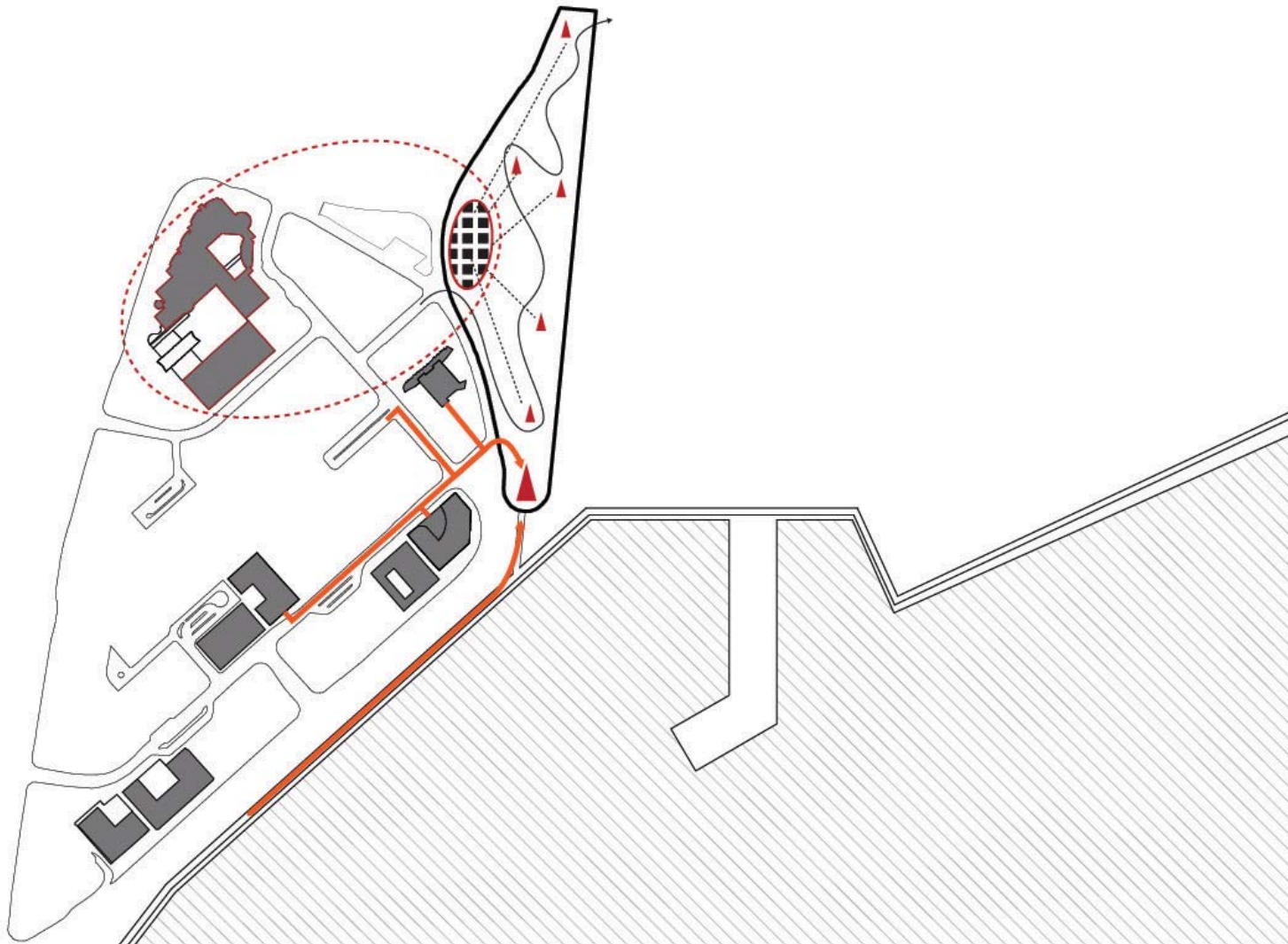
- The Green Deck project invites the development of new footbridges and other



## 2) User Group: TOURISTS

Representative area: TSIM SHA TSUI EAST

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**Vision:** For tourists, the Green Deck will be one of the iconic “must see” experiences of Hong Kong, and will reward those willing to spend more time and attention with rich experiences in the culture of sustainable development

Tsim Sha Tsui East has one of the highest concentrations of large hotels in Hong Kong, particularly along Mody Road. The Hong Kong Science Museum and Museum of History are also located in this area, near the western edge of the proposed Green Deck. Through new pedestrian bridges, the design should provide organic links to the upper green level of the deck from Mody Road (the main hotel thoroughfare of the area), as well as enabling access from the “eco-cultural” offerings of the Green Deck (the Eco-cultural Centre and the Eco-cultural Landscape, as described below) to the Hong Kong Museum of Science and the Hong Kong Museum of History, forming an extended cultural cluster.

The Green Deck will also introduce a strong and worthy eastern terminus to the tourist experience Tsim Sha Tsui waterfront promenade, which is anchored at its western end by a strong cluster of tourism attractions and activities, continues past the Avenue of Stars but gradually and indistinctly dissipates toward its western end. As a counterpoint to the western end, the Green Deck will provide an analogous cluster of activities including transport (Star Ferry at the west, Hung Hom Station at the east), and culture (Hong Kong Museum of Art, Cultural Centre and Space Museum at the west, and the new Eco-cultural Centre and Eco-cultural landscape on the Green Deck at the east, with links to the History and Science museums), and will provide a green counterpoint to the Harbour City shopping centre.

The design should acknowledge the role of the Green Deck as a lynchpin in the tourism infrastructure of Tsim Sha Tsui, encouraging a more fluid, integrated and even distribution of tourism flows throughout the Kowloon Peninsula. Connectivity with the surrounding tourism infrastructure will be achieved by:

- Mody Road access to the Green Deck: A new grand stair/ramp as a northerly extension of the hotel avenue of Mody Road up to the Green Deck for pedestrians
- Cheong Wan Road access: A similar construction linking the Green Deck (particularly the Eco-cultural Centre described below) to Cheong Wan Road as an extension of the Tsim Sha Tsui East museum and cultural cluster

Relevant groups of tourists for this site can be divided into four sub-groups: mass tourists, independent tourists, special interest tourists and local tourists. These sub-groups are distinct from one another in terms of their behaviour and motivations, as

detailed below:

### **Sub-group Mass tourists**

This sub-group of tourists travels in large groups, following predetermined itineraries anchored by the places that are considered the most “iconic” sights and experiences of the destination. By far the largest number of such tourists in Hong Kong come from the Chinese mainland. Convenience and efficiency are of paramount importance.

The tourist experience for this group will be concentrated on one particular “highlight” that will be one of the “must do” moments of a visit to Hong Kong, as well as a cluster of other extension uses surrounding and supporting it. The design of the highlight and the other elements of this cluster should provide multiple iconic “photo moments” for the tourists, that will give these tourists a sense of arrival and fulfilment, that lends itself to being captured photographically and shared. These will also be the “postcard shots” that will embed the Green Deck in the mainstream shared consciousness as an emblem of Hong Kong.

The highlight of the Green Deck for these tourists will be a viewing platform that provides the “highest public waterfront vantage of the harbour in Hong Kong,” as well as providing a vantage from which the Green Deck itself can be captured photographically in its entirety. It can be experienced as a single moment by those being dropped-off by tour bus, or as the point of final arrival for groups walking along the waterfront promenade: providing a missing terminus for the promenade experience that begins at the Star Ferry and Harbour City.

The attraction and facilities for this group should be concentrated at the Southern end of the Green Deck, in order to allow for easy access and egress and efficient, compact crowd control, as well as to prevent these large and often boisterous groups from overrunning other areas of the park.

### **Approach:**

These groups will typically be dropped-off by tour bus at the site perimeter, or will enter the site by foot if their itinerary combines the Green Deck with an adjacent attraction, or if the tour is staying at one of the many nearby hotels in TST East. Existing drop-off points in the vicinity are located at the TST East Harbour front Promenade and at the Science Museum Road / Mody Road Intersection. The design should include a coach drop-off point. A pedestrian bridge from Mody Road will allow foot access from groups staying in TST East Hotels or walking from the several coach parking/drop-off points in this area.

### Programme elements for mass tourists:

- The outlook platform – will be the highlight and the singular “iconic” moment for these tourists. Access to the public platform should be free of charge. The design of the platform should offer a broad front towards the harbour to allow unobstructed views to a large number of visitors simultaneously. A terraced or tiered design can be considered to optimize areas with a good view. Crowd control and queuing will be important considerations in the design of this element.
- The platform should also support a number of gastronomic facilities from which the view can be enjoyed and retail shops appropriate to tourism uses
- Access from the drop-off point to the viewing platform, as well as the queuing area, souvenir shops and concessions serving the mass tours, should not impede access to the platform for other users of the Green Deck. In view of this, the raised zone affording good views of the harbour should include zones separate from the flows of mass tourists to avoid potential space-use conflicts

### Sub-group Independent tourists

Tourists in this sub-group travel alone or in small groups. They do not follow fixed itineraries and are more spontaneous and individual in their travel behaviour. Independent tourists to Hong Kong are more ethnically mixed than the mass tourists, including visitors from Western countries as well as other Asian nations. A growing number of Chinese tourists are also arriving as independent tourists.

More so than mass tourists, this group seeks a feeling of engagement with local people and the local culture - an “engagement with the Other.” This group will seek opportunities to strike out beyond the tourist “attractions” frequented by mass tourists and special interest tourists to explore the city. These tourists will thus be likely to penetrate areas of the Green Deck that are “off the beaten path.” The design of the Green Deck should thus anticipate multiple “paths of discovery” for these visitors, piquing, and rewarding, their curiosity. Providing opportunities for them to non-intrusively “happen-upon” the different activities of the local people and the university academic community.

### Approach:

Members of these groups are likely to arrive by bus or MTR, or by foot from nearby attractions or hotels via TST East or the Harbour front Promenade.

### Programme elements for independent tourists:

- paths of discovery - the network of paths that link the various parts of the Green Deck should be conceived as a “path of discovery” for these tourists, through which they come into contact with points of interest detailed elsewhere in this brief, especially some activities of local people, as well as the various elements of the “eco-cultural landscape” outlined under the following sub-group, special interest tourists.
- Gateways - For some members of this group, the Green Deck will also serve as a natural link that will enable them to venture beyond the usual tourist areas of Tsim Sha Tsui and Tsim Sha Tsui East. In this context, because of its position as a link between the currently disjointed surrounding neighbourhoods, the design of the Green Deck should incorporate “gateways” to each of the surrounding areas, which would be points of information access and orientation for tourists (and indeed local people) to lead them into the surrounding area.

### Sub-group Special interest tourists

Special interest tourists travel as individuals, or as members of small organized or independent groups. Their travel behaviour is motivated by their knowledge and interest in a particular topic or area of knowledge or activity, and their desire to seek out places and experiences that allow them to engage and learn about this particular area of interest. The Green Deck will target to attract tourists with a special interest in green and sustainable culture, technology and practices, through a suite of attractions constituting an “Eco-cultural landscape” centred on an “Eco-cultural Centre”, as detailed below.

### Approach:

These tourists will approach the site via the same paths as the individual tourists. There would also be occasional bus tours or walking tours bringing special interest tourists to the site.

### Programme elements for special interest tourists:

- The centrepiece of the Green Deck for this group of users would be the Eco-cultural centre, which will be a venue for exhibitions and learning on issues of sustainable development, incorporating components from the technical, cultural and artistic perspectives. This museum-like institution should be aimed at allowing a multi-dimensional, critical and reflective appreciation of issues in the mutually dependent relationship between humans and the planet, particularly in the Anthropocene era, in which the natural and the technical/cultural are deeply intertwined. The programme of this museum-like institution will include elements

such as:

- A permanent collection and temporary exhibits of visual, digital and sculptural artworks addressing and exploring issues of sustainability and the relationship between humans and the natural environment
  - Regularly updated exhibits and installations on sustainable development, “green” technologies, ecological perspectives on culture and technology and related topics, accessible to a general audience (including children and youth) but also offering more informed amateurs opportunities to deepen and broaden their knowledge and engagement with these issues
  - A centre for sustainable development studies (see also the section Academic Community below), with an associated archive and calendar of events
  - Special events of the eco-cultural centre will make use of various facilities of the “eventscape,” described below
  - A visitor interpretation centre for the green deck
- Furthermore, the entire top level of the Green Deck will be conceived as an Eco-cultural landscape, consisting of elements such as:
    - Public sculptures throughout the park, engaging and exploring ecological and sustainability issues, as an outdoor extension of the art collection of the Eco-cultural Centre
    - An ongoing programme that pairs an artist or designer with each of the “green” technical innovations integrated into the Green Deck (“wind-catchers” to aid in ventilation of the lower levels, solar collectors and other alternative energy elements, pollutant absorbing materials, reused, recycled and upcycled materials, an air quality monitoring station, etc.), to work with the respective engineers, scientists and technical experts, to conceive of each of these innovations as the beginning of a piece of public art or design, developing ways of raising the public’s interest, understanding and engagement with these technologies and their role in sustainable urban development
    - Interactive installations, site interpretation systems and other such elements that will aid the public in understanding, interpreting and learning from the surrounding natural environment will be integrated into the landscape of the Green Deck
    - The eco-cultural landscape will be an ongoing project, with new elements and initiatives being introduced continually

### **Sub-group Local tourists**

Aside from those from abroad or the Chinese mainland visiting Hong Kong, the Green Deck should also appeal to people from all 18 districts of the SAR, as a hub of recreational activities in Hong Kong, where local people will like to spend their weekends and holidays. All of the facilities and attractions listed under the other three sub-groups of tourists should also attract local people.

Indeed, attractiveness to local people can be seen as somewhat of a gauge of appropriateness for the attractions provided. This group of visitors will not be attracted by hackneyed, stereotyped synthetic experiences of their city aimed at outside visitors.

### **Programme elements for local tourists:**

- The Green Deck will be a launching point, destination and way station for weekend and holiday walking and biking tours for local tourists, who will be principal users of the bike-ability hub described under the Commuters section.
- local tourists will be the primary patrons of most of the events taking place in the various spaces and facilities of the “eventscape” as described under the section on the Event Attendees user group

### **Participation / partnerships:**

- A credible, knowledgeable and empowered entity must be formed to manage, curate and set strategy and policy for the Eco-cultural Centre and Landscape. This should be a cultural institution in its own right and not simply a section of an existing governmental department

### **Potential spin-off project:**

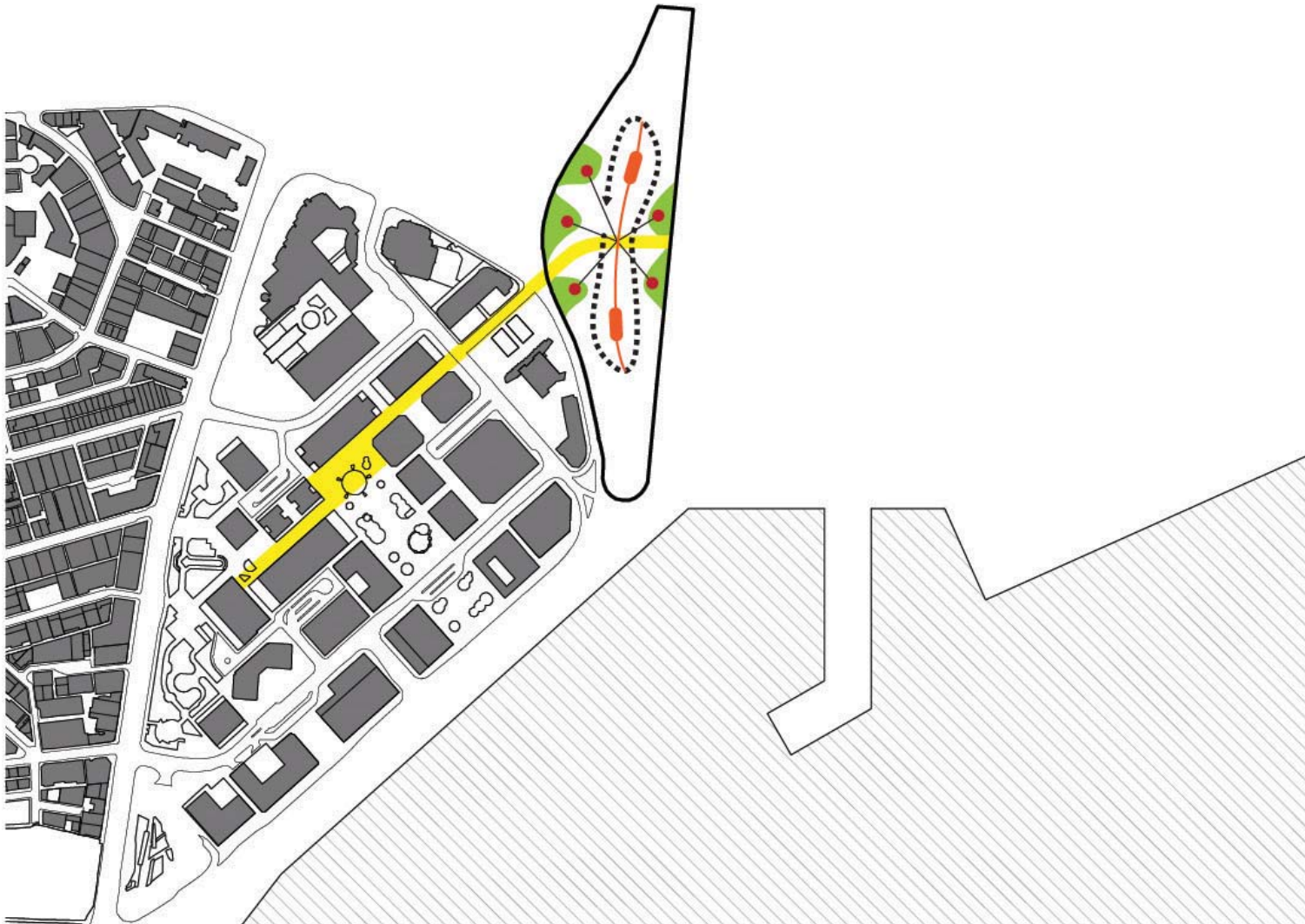
- Functional and aesthetic improvement works to Cheong Wan Road, as the main artery linking the new cultural/education cluster of the existing Hong Kong Science Museum and Hong Kong History Museum with the new Eco-cultural Centre and Eco-cultural landscape of the Green Deck



- Cafe
- Pocket Park
- Sport Facility
- Retail linkage

### 3) User Group: LOCAL BUSINESS COMMUNITY

Representative area: TSIM SHA TSUI / TSIM SHA TSUI EAST



**Vision:** For the local business community, the Green Deck will present opportunities and encouragement to adopt elements of a more healthy and balanced way of life into their daily routine.

Tsim Sha Tsui and its extension East Tsim Sha Tsui, primarily commercial areas at the epicentre of Kowloon, are situated just off the southwest border of the Green Deck site. Together, these districts house a multitude of businesses – offices, shops, hotels, restaurants, markets, building sites, workshops, homes, etc. – which are the daily workplaces of tens of thousands of people.

Hong Kong is known for its high-anxiety and high-stress work culture, with long hours and performance pressure, exacerbated by the dense and constrained environments and fast pace that characterize the workplace conditions. This can lead to feelings of depression, distance and isolation and a breakdown of healthy social relationships.

As a “lung of the city” and a convivial urban space the open, green, social environment of the upper level of the Green Deck will provide a counterpoint to the dense urban environment within which it is embedded, and it should perform a similar function in the lives of the working people of the area, providing facilities to encourage and facilitate the use of the short breaks and transitions (in the morning when arriving for work, at lunchtime and in the evening when leaving work) in the day of a typical Hong Kong working person for a diversity of exercise activities and other healthy pursuits.

The primary contributions of the Green Deck to a more healthy lifestyle will be in providing opportunities for contact with nature, social interaction, individual and group exercise and the purchase and consumption of healthy food

### Approach

The current footbridge in the extension of the pedestrianized northernmost segment of Granville Road will be a main channel for this user group to access the Green Deck, as will the new access points (at Mody Road and Cheong Wan Road) listed under Tourists, above.

### Programme elements for local business community:

- a jogging track loop making a circuit of the upper park level of the Green Deck, with a link to the existing harbour front track
- the sports grounds and courts mentioned above under Local Residents will also be usable by the local business community, as will the tai chi area. These are areas in which local business and residential communities will come into contact

- showers and locker rooms specifically for this group will be clustered near their primary point of access to the Green Deck near the south of the site
- sheltered meeting areas suitable for running or exercise groups to meet should also be located near this end
- small annexes off of the circulation paths and large spaces of the Green Deck should be provided to give individuals and pairs space for more private contemplation and discussion, yoga or tai chi practice, etc.
- “the grove” – a place where an outdoor space offering ample seating areas for individuals and small groups, with natural or man-made shelter from sun and rain being provided for the majority of the seating places. The grove should be easily accessible from the southwest edge of the Green Deck and should be suitable for the consumption of food purchased on site as well as brought by the users
- Healthy food concessions, bordering on the grove
- the path from the pedestrianized Granville Road, across a new expanded raised pedestrian walkway and through the middle level of the Green Deck to Hung Hom Station will become a continuous retail and gastronomy avenue linking the existing and augmented transport hub seamlessly with Tsim Sha Tsui East and Centenary Garden, increasing economic synergy and integration.
- Eco-market: A zone of the middle layer of the Green Deck will host a market of small stalls run by local entrepreneurs and producers, offering goods that contribute to a healthy lifestyle and support local “green” enterprises and organisations. Goods offered will include organic locally-grown produce, products that demonstrate, support or enable sustainable practices in the home and at work, etc.

### Participation / partnerships:

- an independent entity with an agenda rooted in sustainability will need to be formed / engaged to manage and run the eco-market

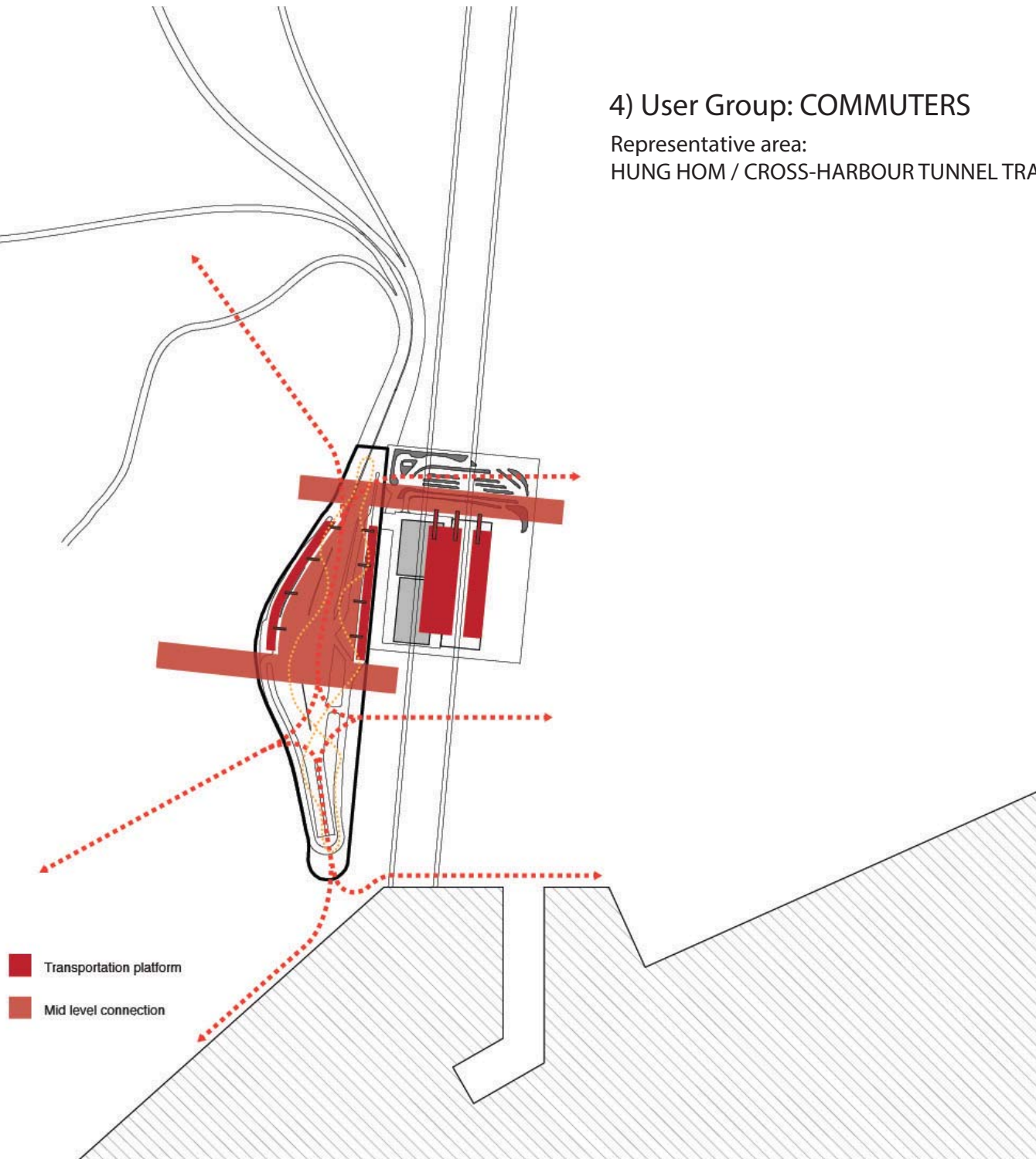
### Potential spin-off projects:

- opportunities for various improvements and augmentations to the pedestrian street of Granville Road and the footbridge leading from here to the Green Deck would emerge with the extension of this artery as a retail and gastronomy avenue through the middle level of the Green Deck to the transport hub
- with the conversion of the site from the noisy eyesore of the Cross Harbour Toll Plaza to the peaceful green vista of the Green Deck, a densification and upgrading of development at the Tsim Sha Tsui East border with this site could be undertaken to optimize benefits from the improved urban condition



#### 4) User Group: COMMUTERS

Representative area:  
HUNG HOM / CROSS-HARBOUR TUNNEL TRANSPORT INTERCHANGE



**Vision:** *The Green Deck will humanize the commuter experience and appropriate these moments of transition as an opportunity to make contributions to commuters' quality of life and well-being. Commuters passing through the Green Deck will be presented with a "fast-track" version of the experience of the place, able to partake of the cultural, ecological and health benefits of the project on-the-go, with Hong Kong convenience and efficiency.*

Commuters are not a distinct and exclusive group of users, but rather a persona that is assumed by members of all of the other user groups addressed in this brief in their daily cycles of moving into, out of and through this area. Tens of thousands of people per day arrive, depart or change between transport modes at Hung Hom station. The numbers of commuters passing through this location will increase dramatically with the upgrading of Hung Hom station with two new platform levels and expanded facilities, and its enhanced connectivity to both the New Territories and Hong Kong Island via the Shatin-Central link. This location will become one of Hong Kong's most extensively and intensively connected public transportation nodes.

Also included in this category of users will be the increasing number of pedestrians and cyclists who will be encouraged by the new dimension of connectivity brought by the Green Deck.

### Approach

This group will arrive at Hung Hom Station by MTR or long distance train, at the Cross Harbour Toll Plaza bus interchange (under the planned Green Deck) by bus, or at the forecourt of the Hung Hom train station by bus, taxi or private car. Commuters doing an intermodal exchange (especially between bus and MTR or vice-versa) and those fanning out from the interchange to their workplaces or homes, will traverse the Green Deck site.

### Programme elements for commuters:

- Efficient paths through the middle level: Paths connecting the various transport modes with one another and with the points of access to the surrounding districts should be laid out in a rational manner so as to optimize the speed and volume of flows of pedestrians. The width of the main pedestrian paths, linking the Cross Harbour Toll Plaza bus waiting rooms, the MTR and Hung Hom Station, the PolyU campus, the Hong Kong Coliseum and East Tsim Sha Tsui should have a minimum width of 10.5 meters.
- Alternative paths through the park: Notwithstanding the above requirement, for each of these routes, a clearly apparent alternative route, passing through the

- green areas of the deck, should be available, to offer choice to commuters.
- Bus passenger waiting zones should be located at the central level of the Green Deck. The detailed design of the project should propose a spatial and operational strategy that will enable commuters waiting for buses at the Cross Harbour Toll Plaza bus interchange to wait in an area sheltered from the weather as well as from the fumes and noise of the buses
- appropriate retail should be clustered near the waiting areas. setting a very close proximity between the passenger waiting area, the pedestrian passageway and the shops, encouraging those who come, wait or leave the public space to purchase goods from the shops
- green market A place along the commuter interchange routes, in the spirit of a street market, making it convenient for commuters to consume products that contribute to their health and well-being, as well as promoting sustainable practices.
- eco-culture-on-the-go: in the intermodal moment of passing through or over the Green Deck to or from the various transportation modes, commuters must have contact with the "eco-cultural" aspects of the Green Deck described in earlier sections. The eco-cultural landscape detailed under the Tourist part should permeate the commuting experience as well, with artworks, cultural experiences, interactive installations, and learning opportunities designed to be appreciated and apprehended by people in the fast-moving, goal-directed, mass-mind mode of the commuter
- green-on-the-go: Commuters should also have contact with the "green" element of the Green Deck, meaning that commuter paths should not be buried away from sunlight and views to the outside but should be offered multiple vantages of the landscape of the park, through artful handling of the interpenetration of the upper and middle levels through courtyards and other design devices.
- the Green Deck will also serve as a bike-ability hub for the greater Kowloon area, with convenient access to bus, pedestrian and train transport, to ease intermodal transfer and encourage bicycle use in conjunction with bus or train, including facilities such as
  - a sheltered and secure bicycle parking and maintenance area
  - bicycle rental
  - bikeability information and support centre and bike-friendly communal area for bicyclists, meeting point for bike clubs
  - appropriate concessions and retail
  - two-way bike lanes separate from automobile and pedestrian traffic should be provided for all bicycle through-paths

**Participation / partnership:**

- work with bike organizations in the development and running of the bike-ability hub

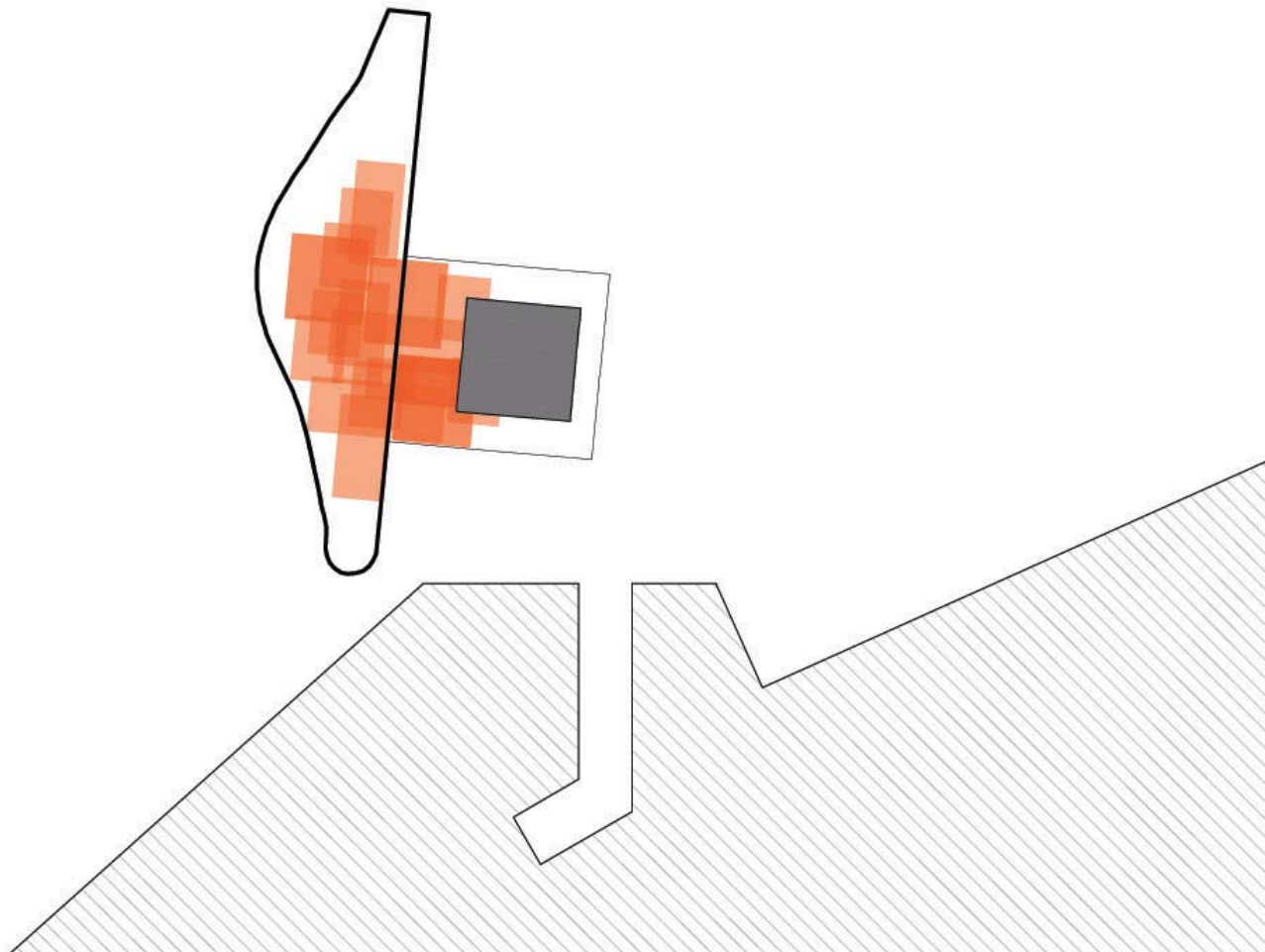
**Potential spin-off projects:**

- in providing a link and a hub in the currently fragmented and underdeveloped bike path system, the Green Deck could provide impetus for the continual development of a bicycle and pedestrian path network to link Tsim Sha Tsui to the new CBD at Kai Tak, further to Kwun Tong and beyond
- the Green Deck project will provide the opportunity to rationalize and modernize the toll plaza model (such as changing where and how motorists pay, widening bus lanes, etc.) to speed up traffic and reduce pollution and congestion in the toll plaza area

Events

## 5) User Group: EVENTS ATTENDEES

Representative area: HONG KONG COLISEUM



**Vision:** For event attendees, the Green Deck will provide Hong Kong's most accessible, diverse and extensive "eventscape," with a flexible array of event spaces and support facilities for large and small, high-profile and low-key public events of all kinds

The existing Hong Kong Coliseum is the city's second largest indoor events venue (the other being located far outside the city centre at the Asia-World Expo Centre adjacent to the airport), but it is limited in the nature of events for which it is suited (large-scale, stage-centred indoor events). The completion of the Shatin-Central rail link will further raise the accessibility of this node from all points of Hong Kong, increasing its attractiveness as a locus for events of all types. The Green Deck will surpass Victoria Park, the current venue of most large-scale outdoor public events, in terms of geographic centrality and accessibility.

The Green Deck project thus foresees the extension and diversification of the event support facilities at this node, to create a diverse and extensive "eventscape," capable of hosting indoor and outdoor, formal and informal, long-term and short-term, large-scale and small-scale events of different types, attracting attendees from all segments of Hong Kong society as well as extending and augmenting the already discussed attractions for tourists from greater China and abroad. These indoor and outdoor spaces should be clustered with the existing Hong Kong Coliseum. Event hosting will be a major source of revenue generation for the Green Deck.

### Approach

Members of this group generally arrive this site by public transport (MTR or bus), with a minority using private cars or taxis. Local residents will arrive by foot via existing or new footbridges. Some tour groups will arrive by coach.

### Programme elements for event attendees:

- "Fairground" – an open outdoor space that can adapt to accommodate a large variety of different open-air events, as well as accommodating temporary or moveable structures to house indoor events. A primary design challenge of this element will be to achieve a high degree of flexibility of use in this space for different types of event uses, such as:
  - markets and fairs involving arrays of stalls
  - spectacles and shows involving complex staging and an audience
  - outdoor exhibits involving objects of interest and flows of people
  - carnivals and celebrations involving dynamic masses of people
  - etc.

- The grand canopy: A core area protected with a roof that will constitute a distinctive design element of the place (see the *Mercat dels Encants* in Barcelona or the *Metropol Parasol* in Sevilla), and the design should integrate strategies for the expansion of the covered area through temporary sheltering devices, extension/expansion of the permanent sheltering element, etc., to provide an integral sheltered area for larger events (in conjunction with the fairground)
- a venue for outdoor performances and music events: this can be integrated into the planning of the fairground and/or grand canopy or a purpose-made separate structure
- Several clearings or outdoor "rooms" that provide spaces and support for smaller event units, enabling
  - multiple smaller events running simultaneously in different spaces
  - composite events consisting of discrete but linked sub-events
  - niche functions as ancillaries to large events held on the fairground
- Significant backstage, storage, delivery, and other "back of house" infrastructure will be required for these facilities
- All of these spaces should be designed so as to provide for an extension of the uses for the various sub-groups of local people during non-event times
- The football field and other sports courts and fields (listed under Local Residents) may be occasionally used for sports-related events
- The programme of events will be an important intangible design element of this aspect of the Green Deck. In keeping with the character of the place, the programming of the events should emphasize events that reinforce:
  - the role of the Green Deck as a new public event epicentre for Hong Kong, hosting events such as the Chinese New Year, Mid-Autumn Festival, SAR Day, etc. The viewing platform (described under the Tourists section, above) provides an unparalleled vantage for viewing fireworks and other displays on or over Victoria Harbour
  - the mission of the Green Deck to promote practice and knowledge of sustainable urban development and broader ecological awareness. This should become the centre of Hong Kong Earth Day events, as well as the venue for an ongoing programme of events to encourage and facilitate sustainable awareness and practices in Hong Kong, such as a waste expo, green design fair, sustainable lifestyle festival, etc.

**Participation / partnerships:**

- A close partnership with the management of the Hong Kong Coliseum will be necessary in realising this vision

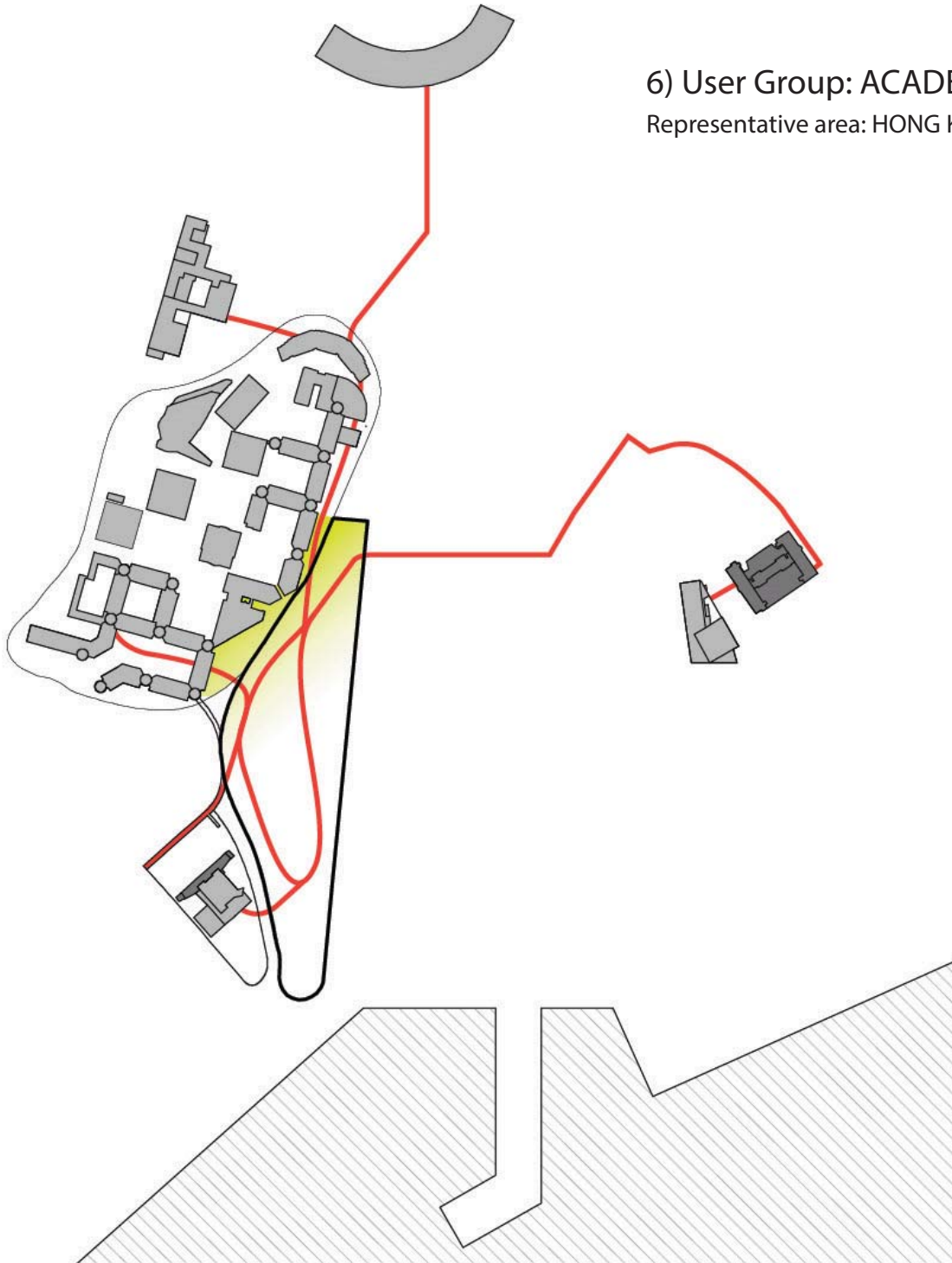
**Potential spin-off projects:**

- A conference centre on the site of the Hung Hom station adjacent to the Green Deck would further enhance and diversify the event-hosting facilities at this node. The conference centre will provide facilities for meetings and conference events of different scales. A feasibility study should be conducted to determine the appropriate size, location and detailed internal programme of this component.
- Adaptations and extensions to the Hong Kong Coliseum to meet the “eventscape” of facilities on the Green Deck would increase the possibility of synergy between the various event components, and a re-design of the existing podium surrounding the Coliseum would be merited in order to achieve a smooth integration of these uses.



## 6) User Group: ACADEMIC COMMUNITY

Representative area: HONG KONG POLYTECHNIC UNIVERSITY CAMPUS



**Vision:** For the PolyU academic community, the Green Deck will be a place of outreach, interface and engagement with the local community and the city at large, and a show window of the university to the community and a catalyst for the ongoing development of a sustainable urban development focus in the PolyU's knowledge creation and public engagement.

The Green Deck concept originated as an initiative of the academic community of the Hong Kong Polytechnic University to apply the collective, multi-disciplinary knowledge and expertise of this educational institution to make a positive intervention in the University's immediate urban context and improve the quality of life of the communities in its neighbourhood. The PolyU's relationship with the Green Deck as an urban public space will continue very much in this same vein, as a platform for the outreach and interface of the university with the local society.

The students and academic and non-academic staff members of the PolyU constitute the University community. The PolyU has the most centrally located university campus in Hong Kong, yet exists in somewhat of an "island" condition, cut off from the surrounding urban districts by major roads and highways on all sides. The Green Deck will supplant the most disruptive of these thoroughfares – the Cross Harbour tunnel toll plaza to the east of the campus – with a new urban space that will open the possibility of new types and degrees of interface between the university and the urban community that it serves.

### Approach

The majority of members of the PolyU academic community will cross the Green Deck in their arrival and departure from the campus, coming from or going to the Hung Hom MTR station or the Cross-harbour Tunnel Toll Plaza bus interchange, or by foot from the student halls of residence or other nearby residential areas. Besides the morning and early evening rush hours, the PolyU also has a second substantial batch of evening students arriving between 5:30 and 6:30 pm and departing at 8:30 or later. Members of the public attending university events will arrive and depart by similar means. The PolyU campus will abut the Green Deck to the west, and members of this user group will enter and leave the deck at many points along the border between the podium (+2) level of the campus (the main pedestrian circulation level) and both the middle and upper levels of the Green Deck.

### Programme elements for academic community:

- The Yard: a space at the interface between the podium level of the PolyU campus and the upper level of the Green Deck, serving as a welcoming threshold to

the university for the public and a sort of "porch" to the campus from which members of the university can view and access the park. Bridging the gap between the campus and the deck, this space must have a minimum breadth of 50 meters, and must have the feel of a public space, not just a pedestrian bridge. Events and initiatives in which the university interfaces with the public can be located here, and the arrangement and facilities of the place should anticipate this. Steps, ramps, slopes, etc. will be necessary to mediate the height difference between the PolyU campus podium and the top level of the Green Deck.

- Study garden: an outdoor space providing spaces suitable for individual and group study, which will welcome people from the surrounding residential community and secondary schools as well as PolyU students and staff
- The grove, detailed under Local Business Community, will also provide a welcome space for meals and refreshments in the open air
- PolyU staff and students will share the already-mentioned sports facilities with Local Residents, optimizing the use of these facilities to serve different sectors of society. The number and size of these facilities should be determined accordingly, so as to avoid use conflicts. This will in part compensate for the outdoor sports facilities (including tennis courts, a football field and indoor sports courts, that have been replaced with recently constructed buildings on campus (as well as making up for a current lack of such public amenities in the surrounding neighbourhood)
- the network of cycling paths and pedestrian paths that will link the Green Deck to the surrounding neighbourhoods and beyond will be serve to increase connectivity between the main campus and its outlying satellite functions such as the student housing and Hong Kong Community College in Hung Hom, the new campus extension planned for Ho Man Tin and the School of Hotel and Tourism Management in Tsim Sha Tsui East.
- the Eco-cultural Centre and the Eco-cultural landscape, as described earlier under Tourists and Leisure Users, will be both learning resources for students of the university and an outlet for the public dissemination of the research of the university relative to sustainability, "green" design and technologies and sustainable urban development.

### Participation / partnerships:

- The Hong Kong Polytechnic University will continue to be a partner in the overall development of the Green Deck, particularly in realizing opportunities for engaging the public and society. The PolyU will be a core stakeholder in the development of the Eco-cultural Centre and Eco-cultural landscape and will continue to apply its knowledge and expertise in the continual improvement of

this urban place.

**Potential spin-off projects:**

- to achieve a closer integration with the Green Deck, reciprocal campus development measures may be undertaken on the PolyU campus
- the development of the bicycle and pedestrian network that spans the Green Deck to join the various components of the PolyU will be an ongoing project in itself.

## F. The Programme

### TABLE OF ALL USER GROUPS

Local Residents

Group(s)	Name	Description
<b>Local Residents (general)</b>	Library Branch	as either an extension or re-location and expansion of the existing Cheong Wan Road public library
	Community Hall	for public gatherings and initiatives
	Special Services for Disadvantaged Segments of Society	for disadvantaged segments of society (such as pre-school children with disabilities) not served by current provisions in the community
	Government Service / Information Facilities	Environmental Protection Department customer service / information centre
	Integrated Wellness Centre	to promote health and fitness
	Associated Rest Rooms, Concessions Areas	<ol style="list-style-type: none"> <li>(Local Residents)</li> <li>(Local Business Community): sheltered meeting areas (suitable for running or exercise groups to meet should also be located near this end)</li> </ol>
	Indoor Sports Facilities	<ol style="list-style-type: none"> <li>(Local Residents): (such as squash, badminton, swimming pool, gym, general purpose activity halls). The exact mix of these activities should be determined through a process of stakeholder collaboration between government and local residents</li> <li>(Youth): particular basketball courts</li> </ol>
	Associated Locker, Shower, Rest Rooms, Chill-out, Concessions Areas	<ol style="list-style-type: none"> <li>(Local Residents)</li> <li>(Local Business Community): specifically for this group will be clustered near their primary point of access to the Green Deck near the south of the site</li> </ol>
	full-sized football field	with spectator area, associated locker rooms and showers
	Outdoor Sports Courts	<ol style="list-style-type: none"> <li>(Local Residents): (tennis, basketball, badminton, etc.), to be determined by government-resident stakeholder collaboration process</li> <li>(Youth): particular basketball courts and football field</li> <li>(Elderly): the Tai Chi area, to allow multiple groups to practice simultaneously. Shelter from sun and rain.</li> <li>(Local Business Community) as will the tai chi area. These are areas in which local business and residential communities will come into contact</li> <li>(Academic Community): PolyU staff and students will share the already-mentioned sports facilities with Local Residents, optimizing the use of these facilities to serve different sectors of society. The number and size of these facilities should be determined accordingly, so as to avoid use conflicts. This will in part compensate for the outdoor sports facilities (including tennis courts, a football field and indoor sports courts, that have been replaced with recently constructed buildings on campus (as well as making up for a current lack of such public amenities in the surrounding neighbourhood)</li> </ol>

## TABLE OF ALL USER GROUPS

### Local Residents

50

	Dog Run	contained outdoor zone where dogs can run free, with associated rest/socialization areas for the dog owners
	Open Lawn	for relaxation and unstructured activities, especially for older children, the large open grass field
	Outdoor Space	sheltered from the sun and rain by natural or man-made elements, allowing a variety of opportunities for individual and social enjoyment of the place
	Public Square	support community gathering, discussion and performances. Should allow for a stage-audience set-up but not be over-structured so as to exclude more informal, non-hierarchical types of gathering
	Urban Farming and Gardening	
	Concessions, Cafes and Restaurants	<ol style="list-style-type: none"> <li>1. (Local Residents): a variety of gastronomic offerings should be available to users of the park, but not to the extent that free public seating is excluded or marginalized from any given area of the park.</li> <li>2. (Younger Children): retail as well as non-retail sheltered seating groups for caretakers, closely clustered with the playgrounds and nature experience zone(s)</li> </ol>
	Retail	<ol style="list-style-type: none"> <li>1. (Local Residents): appropriate retail outlets to serve the local community should be located at the middle level of the Green Deck, convenient to the main paths of approach from residential areas but not facing onto the park itself.</li> <li>2. (Commuters): appropriate retail should be clustered near the waiting areas. setting a very close proximity between the passenger waiting area, the pedestrian passageway and the shops, encouraging those who come, wait or leave the public space to purchase goods from the shops</li> </ol>
<b>Local Residents (younger children)</b>	Playgrounds with Purpose-designed Equipment	(Younger Children): with purpose-designed equipment (as a nested design project), with suitable seating for parents and guardians clustered around, in a way that allows them to also have social interaction
	Nature Experience Zones	allow children to interact and play with natural elements in an open-ended, exploratory way
<b>Local Residents (older children)</b>	Grassed Field	associated with natural and man-made elements within and around the play area should be designed to allow this group of children to hide, climb, construct and improvise in their play
	Eco-cultural Landscape	to the greatest extent possible, the artworks and installations of this element should encourage dynamic interactivity and exploration by older children, to encourage play as a learning experience
	Paved Bicycle Practice Zone	

## TABLE OF ALL USER GROUPS

Tourists

<b>Local Residents (youth)</b>	Skate Park	as a nested design project, with a spectator area
	Social Gathering Areas	be adjacent to each of these uses, with seating, lockers, etc.
<b>Seniors</b>	Exercise Equipment and Activity Zones	
	Paths	be designed to be well-lit in the early morning hours, avoid steep slopes, obstacles or unnecessarily long distances or winding or narrow paths
	Seating	<ol style="list-style-type: none"> <li>1. Seating for resting should be spaced regularly along all walking paths</li> <li>2. Seating groups for social interaction in groups of 2-6 individuals should be provided at covered locations off of main circulation routes</li> <li>3. Seating for elderly should provide vantage points from which activities of others (children, tourists, etc.) can be comfortably observed</li> </ol>
<b>Domestic Helpers</b>	Sheltered Spaces	be dedicated for the use of this sub-group on Sundays, and are suitable for other users and uses at other times of the week. Groups of 2-8 or occasionally larger should be accommodated
	Temporary Business	such as money remittance and food to be conducted in the park, that can pop-up on the weekend and disappear at other times
	Trash Collection and Female Toilets	(during weekends) should be anticipated in the design
<b>Mass Tourists</b>	Outdoor Platform	<ol style="list-style-type: none"> <li>1. (Mass Tourists): will be the highlight and the singular “iconic” moment for these tourists. Access to the public platform should be free of charge. The design of the platform should offer a broad front towards the harbour to allow unobstructed views to a large number of visitors simultaneously. A terraced or tiered design can be considered to optimize areas with a good view, Crowd control and queuing will be important considerations in the design of this element.</li> <li>2. (Events Attendees): the role of the Green Deck as a new public event epicentre for Hong Kong, hosting events such as the Chinese New Year, Mid-Autumn Festival, SAR Day, etc. The viewing platform (described under the Tourists section, above) provides an unparalleled vantage for viewing fireworks and other displays on or over Victoria Harbour</li> </ol>
	Gastronomic Facilities and Retail Shops	
	Drop-off Point	to the viewing platform, as well as the queuing area, souvenir shops and concessions serving the mass tours, should not impede access to the platform for other users of the Green Deck. In view of this, the raised zone affording good views of the harbour should include zones separate from the flows of mass tourists to avoid potential space-use conflicts



## TABLE OF ALL USER GROUPS

### Tourists

<b>Independent Tourists</b>	Paths of Discovery	through which they come into contact with points of interest detailed elsewhere in this brief, especially some activities of local people, as well as the various elements of the “eco-cultural landscape” outlined under the following sub-group, special interest tourists
	Gateways	the Green Deck will also serve as a natural link that will enable them to venture beyond the usual tourist areas of TST and TST East. In this context, because of its position as a link between the currently disjointed surrounding neighbourhoods, the design of the Green Deck should incorporate “gateways” to each of the surrounding areas, which would be points of information access and orientation for tourists (and indeed local people) to lead them into the surrounding area.
<b>Special Interest Tourists</b>  <b>centrepiece (Eco-cultural centre)</b>	Permanent Collection and Temporary Exhibits	regarding visual, digital and sculptural artworks addressing and exploring issues of sustainability and the relationship between humans and the natural environment
	Regularly Updated Exhibits and Installations	on sustainable development, “green” technologies, ecological perspectives on culture and technology and related topics, accessible to a general audience (including children and youth) but also offering more informed amateurs opportunities to deepen and broaden their knowledge and engagement with these issues
	Centre	for sustainable development studies(see also the section Academic Community below), with an associated archive and calendar of events
	Special Events	eco-cultural centre will make use of various facilities of the “eventscape”
	Visitor Interpretation Centre for the Green Deck	
<b>Special Interest Tourists</b>  <b>Eco-cultural landscape</b>	Public Sculptures	throughout the park, engaging and exploring ecological and sustainability issues, as an outdoor extension of the art collection of the Eco-cultural Centre
	An Ongoing Programme	<ol style="list-style-type: none"> <li>1. (Special Interest Tourists): that pairs an artist or designer with each of the “green” technical innovations integrated into the Green Deck (“wind-catchers” to aid in ventilation of the lower levels, solar collectors and other alternative energy elements, pollutant absorbing materials, reused, recycled and up-cycled materials, an air quality monitoring station, etc.), to work with the respective engineers, scientists and technical experts, to conceive of each of these innovations as the beginning of a piece of public art or design, developing ways of raising the public’s interest, understanding and engagement with these technologies and their role in sustainable urban development</li> <li>2. (Event Attendees): This should become the centre of Hong Kong Earth Day events, as well as the venue for an ongoing programme of events to encourage and facilitate sustainable awareness and practices in Hong Kong, such as a waste expo, green design fair, sustainable lifestyle festival, etc.</li> </ol>

## TABLE OF ALL USER GROUPS

### Local Business Community

	Interactive Installations, Site Interpretation Systems and Other Such Elements	will aid the public in understanding, interpreting and learning from the surrounding natural environment will be integrated into the landscape of the Green Deck
<b>Local Tourists</b>	A Launching Point, Destination and Way Station	for weekend and holiday walking and biking tours for local tourists, who will be principal users of the bike-ability hub described under the Commuters section.
	Eventscape	local tourists will be the primary patrons of most of the events taking place in the various spaces and facilities of the “eventscape” as described under the section on the Event Attendees user group
<b>Local Business Community</b>	Jogging Track Loop	making a circuit of the upper park level of the Green Deck, with a link to the existing harbour front track
	Small Annexes	off of the circulation paths and large spaces of the Green Deck should be provided to give individuals and pairs space for more private contemplation and discussion, yoga or tai chi practice, etc.
	“The Grove”	<ol style="list-style-type: none"> <li>1. (Local Business Community): a place where an outdoor space offering ample seating areas for individuals and small groups, with natural or man-made shelter from sun and rain being provided for the majority of the seating places. The grove should be easily accessible from the southwest edge of the Green Deck and should be suitable for the consumption of food purchased on site as well as brought by the users</li> <li>2. (Academic Community): will also provide a welcome space for meals and refreshments in the open air</li> </ol>
	Healthy Food Concessions	bordering on the grove
	Retail and Gastronomy Avenue	the path from the pedestrianized Granville Road, across a new expanded raised pedestrian walkway and through the middle level of the Green Deck to Hung Hom Station will become a continuous retail and gastronomy avenue linking the existing and augmented transport hub seamlessly with Tsim Sha Tsui East and Centenary Garden, increasing economic synergy and integration.
	Eco-market	A zone of the middle layer of the Green Deck will be given over to a market of small stalls or units run by local entrepreneurs and producers, offering goods that contribute to a healthy lifestyle and support worthwhile local “green” enterprises and organisations. Goods offered will include organic locally-grown produce, products that demonstrate, support or enable sustainable practices in the home and at work, etc.
	The Yard	a space at the interface between the podium level of the PolyU campus and the upper level of the Green Deck, serving as a welcoming threshold to the university for the public and a sort of “porch” to the campus from which members of the university can view and access the park. Bridging the gap between the campus and the deck, this space must have a minimum breadth of 50 meters, and must have the feel of a public space,

## TABLE OF ALL USER GROUPS

### Academic Community

<b>Academic Community</b>	The Yard	a space at the interface between the podium level of the PolyU campus and the upper level of the Green Deck, serving as a welcoming threshold to the university for the public and a sort of “porch” to the campus from which members of the university can view and access the park. Bridging the gap between the campus and the deck, this space must have a minimum breadth of 50 meters, and must have the feel of a public space, not just a pedestrian bridge. Events and initiatives in which the university interfaces with the public can be located here, and the arrangement and facilities of the place should anticipate this. Steps, ramps, slopes, etc. will be necessary to mediate the height difference between the PolyU campus podium and the top level of the Green Deck.
	Study Garden	An outdoor space providing spaces suitable for individual and group study, which will welcome people from the surrounding residential community and secondary schools as well as PolyU students and staff
	Cycling Paths and Pedestrian Paths	will link the Green Deck to the surrounding neighbourhoods and beyond will be serve to increase connectivity between the main campus and its outlying satellite functions such as the student housing and Hong Kong Community College in Hung Hom, the new campus extension planned for Ho Man Tin and the School of Hotel and Tourism Management in TST East.
	Eco-cultural Centre and the Eco-Cultural Landscape	be both learning resources for students of the university and an outlet for the public dissemination of the research of the university relative to sustainability, “green” design and technologies and sustainable urban development.
	Efficient paths through the middle level	Paths connecting the various transport modes with one another and with the points of access to the surrounding districts should be laid out in a rational manner so as to optimize the speed and volume of flows of pedestrians. The width of the main pedestrian paths, linking the Cross Harbour Toll Plaza bus waiting rooms, the MTR and Hung Hom Station, the PolyU campus, the Hong Kong Coliseum and East Tsim Sha Tsui should have a minimum width of 10.5 meters.
	Alternative Paths through the Park	a clearly apparent alternative route, passing through the green areas of the deck, should be available, to offer choice to commuters.
	Bus Passenger Waiting Zones	be located at the central level of the Green Deck. The detailed design of the project should propose a spatial and operational strategy that will enable commuters waiting for buses at the Cross Harbour Toll Plaza bus interchange to wait in an area sheltered from the weather as well as from the fumes and noise of the buses
	Green Market	A place along the commuter interchange routes, in the spirit of a street market, making it convenient for commuters to consume products that contribute to their health and well-being, as well as promoting sustainable practices.

## TABLE OF ALL USER GROUPS

### Commuters

Commuters	Eco-culture-on-the-go	in the intermodal moment of passing through or over the Green Deck to or from the various transportation modes, commuters must have contact with the “eco-cultural” aspects of the Green Deck described in earlier sections. The eco-cultural landscape detailed under the Tourist part should permeate the commuting experience as well, with artworks, cultural experiences, interactive installations, and learning opportunities designed to be appreciated and apprehended by people in the fast-moving, goal-directed, mass-mind mode of the commuter
	Green-on-the-go	Commuters should also have contact with the “green” element of the Green Deck, meaning that commuter paths should not be buried away from sunlight and views to the outside but should be offered multiple vantages of the landscape of the park, through artful handling of the interpenetration of the upper and middle levels through courtyards and other design devices.
	Bike-ability Hub  <i>(for the greater Kowloon area, with convenient access to bus, pedestrian and train transport, to ease intermodal transfer and encourage bicycle use in conjunction with bus or train)</i>	a sheltered and secure bicycle parking and maintenance area
		bicycle rental
		bikeability information and support centre and bike-friendly communal area for bicyclists, meeting point for bike clubs
appropriate concessions and retail		
	two-way bike lanes separate from automobile and pedestrian traffic should be provided for all bicycle through-paths	
Event Attendees	Fairground  <i>(an open outdoor space that can adapt to accommodate a large variety of different open-air events, as well as accommodating temporary or moveable structures to house indoor events. A primary design challenge of this element will be to achieve a high degree of flexibility of use in this space for different types of event uses)</i>	markets and fairs involving arrays of stalls
		spectacles and shows involving complex staging and an audience
		outdoor exhibits involving objects of interest and flows of people
		carnivals and celebrations involving dynamic masses of people
	The Grand Canopy	A core area protected with a roof that will constitute a distinctive design element of the place (see the <i>Mercat dels Encants</i> in Barcelona or the <i>Metropol Parasol</i> in Sevilla), and the design should integrate strategies for the expansion of the covered area through temporary sheltering devices, extension/expansion of the permanent sheltering element, etc., to provide an integral sheltered area for larger events (in conjunction with the fairground)
Avenue for Outdoor Performances and Music Events	be integrated into the planning of the fairground and/or grand canopy or a purpose-made separate structure	

## TABLE OF ALL USER GROUPS

Event Attendees

Clearings <i>(Several clearings or outdoor “rooms” that provide spaces and support for smaller event units)</i>	multiple smaller events running simultaneously in different spaces
	composite events consisting of discrete but linked sub-events
	niche functions as ancillaries to large events held on the fairground
Back of House	Significant backstage, storage, delivery, and other “back of house” infrastructure will be required for these facilities
Conference Centre	A conference centre on the site of the Hung Hom station adjacent to the Green Deck would further enhance and diversify the event-hosting facilities at this node. The conference centre will provide facilities for meetings and conference events of different scales. A feasibility study should be conducted to determine the appropriate size, location and detailed internal programme of this component.

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# APPENDICES

# APPENDIX A

## Synopsis of Implications of the Green Deck Technical Research Project Reports

A place for learning and acting on ecological principles (itemize each odd the technical initiatives / research projects here), also a place where green practices are encouraged and supported, use of recycled and “up-cycled” materials.

### Featuring the “Green Machine”

#### lower deck

- Decoration of “Green Deck”: The bottom of deck, the external walls and the facades are decorated by high-technical materials, like the sound absorbers of microperforated panel and rigid walls for the sake of reducing the noise intruding into PolyU podium level and the utilization of materials equipped with NO<sub>2</sub> removal ability so as to strengthen the living quality of human beings.

#### mid level

- Creating the Comfortable Atmosphere for the Waiting Space: Wind catchers (go through all levels) and air conditioners are settled for air ventilation and pollutants removal.

#### upper level

- Low Energy Architectural Complex Assumption: Making optimal and maximum utilization of renewable energy, such as solar and wind energy. Besides, solar photovoltaic modules are applied into the construction of architectural complex.

#### integral

- Recycle and Maintenance Protection: The colored recycled glass obtained from crushed post-consumer beverage glass bottles is utilized for cement-based construction. In addition, the specific optimal mix design was proposed to be selected according to the effectiveness of the self-cleaning properties, antibacterial and antifouling properties. Furthermore, the structural implementation, especially the steel structure can guarantee the maintaining process.
- centralized waste treatment ; the best use of natural resources; recycled water management

### Advanced Materials

sound absorbers / rigid walls / new material with NO<sub>2</sub> removal ability / colored recycled glass/ architectural glass screed / steel structure / solar photovoltaic modules / renewable energy applications / centralized treatment of pollutants

- economic: reduction of transportation cost through utilizing local and regional materials
- environmental: cutting down the waste and pollution by high-technical materials and being dedicated to energy efficiency
- social: be beneficial to people’s health (improving the living quality of nearby residents and save medical cost)

### Specification of materials

#### noise mitigation measures

- using sound absorbers (micro-perforated panel absorbers, 2-inch thick fiberglass panels) are added to the bottom of the deck and on the external wall; the lower level of deck is proposed to be fully enclosed by rigid walls so as to further reduce the noise intruding into PolyU podium level; new material with NO<sub>2</sub> removal ability
- utilizing colored recycled glass as a sand replacement for the production of selfcompacting white cement mortar (with self cleaning and anti-pollution effect for the removal of air pollutants); the cementitious part is suggested to paved with an architectural glass screed which is costed within a thin layer of photo-catalyst; It is recommended that PCS7-coating has more promising application potentials under various tests.

- In the Green Groups, NGO & PolyU forum, the expert said that the structural implementation (steel structure) can guarantee the maintaining process.

#### natural and mechanical ventilation

- wind catchers are used for gathering the fresh air to pass through the open staircases to the ground level to remove the noxious gases.

#### solar and wind energy resources

- several air conditioners are proposed to avoid higher space temperature in waiting lobbies; solar photovoltaic modules are recommended to be added into the structure design; PV modules are assumed to be installed facing south with a tilted angle of about 23° with horizontal surface

## APPENDIX B

### Synopsis of Consultation Sessions

#### Consultation Session a. VIPs & General Public (14-01-2015)

##### [Pollution Control]

**Q:** *The problems that source of pollution brings about whether due to the unequal distribution of traffic flow or not. Should the most effective method to reduce pollutants in this region is to make more vehicles drive into western tunnel through policy modification?*

**A:** The objective of “Green Deck” is to connect each community closely, increase the greening area, reduce the reverse impacts on surrounding environment and public awareness caused by toxic emission. Additionally, split flow traffic could reduce the source of pollutants directly to some extent, but cannot bring about the straightforward help into dredge stream of people and enhance greenery activity space as well.

**Q:** *As the policy maker, will it be more efficient if utilizing the 5 billion HKD into the enhancement of transport means instead of bigscale greening construction?*

**A:** The value of “Green Deck” not only focuses on land expansion, but only **strengthening the link with communities**, reducing noise so as to purify atmosphere. (huge construction value)

**Q:** *Is there any other available method which can replace the “Green Deck” project and achieving the same efficiency?*

**A:** “Green Deck” project is the most effective path to purification treatment through centralized source of pollutant treatment and prevent the possibility of diffusion.

**Q:** *Actually, drivers probably go even farther than pedestrians, so can the “Green Deck” project be beneficial to drivers?*

**A:** One of the objective of “Green Deck” project is to gather gas emissions together which generated by vehicles and then doing the purification treatment process by purpose built wall materials and artificial air system for the sake of improving the air quality in Toll Plaza validly. Moreover, it can reduce the influences on drivers with respect to noise interference by means of adding the relevant noise absorbents.

##### [Flow Control (stream of people)]

**Q:** *Will the “Green Deck” project cause the problems, such as increasing the numbers of campus’ population? And whether it will damage the right of use of PolyU students or not.*

**A:** Perhaps the number of people in campus will increase. Meanwhile, it'll be benefit a

lot to students and staffs here, for instance, utilizing the large scale greenery rationally which brings merits to campus and nearby communities as well, in other words, it'll reach win-win effect.

**Q:** *Various pedestrian networks have been produced in the existing proposed “Green Deck” project. However, the beginning and ending part do not link with the crowded region. Thus, it seem to be inconvenient if it connects together through walk form. Is there any other thorough cycling transport system preferential offered for citizens? Otherwise various pathways connecting the middle level are of no avail. So can PolyU take the lead opening campus plat form for trial implementation?*

**A:** The Management Committee of Hong Kong Polytechnic University devote their efforts to campus expansion planning all the way, and the cycling path will be under consideration in the coming future so as to strengthen the synergy effect of “Green Deck” project, as well as enhancing the **connecting** acreage and circulated property.

##### [Space Allocation]

**Q:** *Numerous elderly live in the surrounding areas, will it reduce the living space of them thereby if the proposed project realized which causes number of young people rush into this regions?*

**A:** The greenery area generated through this project is aimed to utilize freely for public. And the next stage is to plan different public space which catering to citizens' requirements through doing more researches on the distribution of nearby communities and weigh the profits carefully.

**Q:** *Does the pedestrian path has perfect system for citizens to move up and down easily? Otherwise, the public will only use the midlevel pedestrian way and the upper one will be overlooked. Thus, can the greenery facilities be settled extendedly in the midlevel space if possible which will benefit more people?*

**A:** There are some pedestrian ways for connecting the upper and mid - level space together, for instance, a sunken square is designed in the case of bamboo forest garden which connecting upper and lower layers. And it is also equipped with **vertical greening walls** which extends the green plants to lower region.

**Q:** *During the exhibition of the “Green Deck” project, the relevant models only focus on the proportion of greenery area which means it ignored the applications of other void. Hence it would like to be difficult for participants to opt the best one of their own thoughts according to the afforest acreage only.*

**A:** The “Green Deck” project is still in the first planning, proposed stage. And the next

step is to plan different public space which catering to citizens' requirements through doing more researches on the distribution of nearby communities and weigh the profits carefully. Thus, a more clear and impeccable planning will be produced for references at that time.

### [Economic Effectiveness]

**Q:** *Except the actual expenditure (50 billions HKD), is there any other environmental cost? For example, it perhaps causes huge inconvenient and economic losses if the cross harbour tunnel in Hung Hom is closed for the sake of Green Deck construction.*

**A:** Currently, the architecture is advanced which can be constructed gradually just like staking blocks. And it can drop the impacts on the transportation if this project only constructs **at night**. Additionally, the project aims at reducing the surrounding pollutants through the greening space, so it can improve individuals' living quality and save the expenditure on medical care services at the same time.

## Consultation Session b. Green Groups, NGO & PolyU (29-01-2015)

### [Pollution Control]

Give brief introduction of people participated in this forum and explain "Green Deck" project is not only for the expansion of PolyU, but also for the community and Hung Hom and TST particularly.

This forum is aimed to **problems solving** and show the **rationality** behind. **1)** Improvement of environmental quality (in the coming 40 years, regular traffic, pollutants). **2) View-connection** between Hung Hom and TST district. **3) Public open space.** (because the reclamation is not allowed nowadays and we only can use the city centre) — How do we find more public open space for gaining more benefits and balance the coming challenges?

### Q & A

**Q:** *Regarding the waiting area, can it be settled in the different areas?*

**A:** The first layer is designed for being the **waiting lobbies and air-conditioning** is proposed to be utilized for environmental improvement. Moreover, the different choices of greenery is only the primary thinking of this project which make easier for **gaining more backup and financial support** from the government.

**Q:** *How long will the project takes because we've already had the proposed project? Because the congested area is what we need to bear most of the day, especially in peak hours. How can this project make it times worth?*

**A:** The project is a large-scale one, it is not easy to use public money because the deck will be built over public land. What we should do now is to convince the government that the nature is worthy to utilize public money and the benefits could be generated, isn't limited to PolyU community, is for all living surrounding areas (residents, transport users, footbridge users). Hence, this project at least needs to take 5 years to complete everything (2 years for construction) due to the land issue, planning issue, public consultation, environmental assessment, town planning principle, transportation analysis, etc. all the parts are not easy to reach. We are eager to create a **triple win situation (us, government, community)**. At this early stage, we truly require the community support and this project is also a sustainable development, thus, the social, economic and environmental dimensions will be contained in this project.

**Q:** *What the biggest challenges you will meet (for all recommended different green space)?*

**A:** The first step is to engage the community, because we want to know how the public will treat this project (the most important thing is to recognize the public thinking). So far, **most people support the 90% greenery space** and our FCE experts also set about researching on the high technical dimension, such as zero-carbon issue, etc. All the design features are under proposed planning stage, it is hoped that other positive thoughts can be generated from the **society**.

**Q:** *If you can guarantee what we worth, I'll sign for it.*

**A:** Usually we have impact assessment, for the construction, environmental, traffic impact assessment and so on, the proposed "Green Deck" is not demolish the original so as to build the new one, we do the things like enhancing the diversity of public areas, broaden the footbridge, etc. Also, the models here are just to show to people what it might be like.

**Q:** *Water feature is a significant node in "Green Deck" project which can relax people and improve heat island effect, hence, one suggestion is that the project is so large, can it create different areas for having special features for different people? Such as playground for young people, bicycle for adult and teenagers and Taiji zone for elderly (different entertainment for different age groups).*

**A:** All the things you mentioned have been put into the proposed project already, and regarding how was the "Green Deck" project lower the temperature around, we have several research reports in different fields.

**Q:** *What is the associate of maintaining the greenery? New York city is a good example for us to learn from and the detail technical aspects of our green deck which needs to do*

the further exploration.

**A:** Regarding the artificial design, we try to **utilize the structural implementation (steel structure) which can be beneficial to save time for construction and only do it at night.** And we never stop exploring, numerous rational and nice ideas and thoughts have been generated by individuals.

**Q:** After installing the “Green Deck” project, people perhaps feel more comfortable and better, so how can we have close connections all the way?

**A:** **Education process has already started,** as well as the professional communities, especially the **local one (real local community).**

**Q:** About the expenditure, is there any other influences on different greening rate?

**A:** The proposed cost is only the construction fee, excluding the greenery cost. The first thing we need to do now is to make more people recognize our attention through exhibitions and forums. Because this project caters to the historical background, the PolyU campus has been built earlier than Toll Plaza. The exiting situation will only become worse if we do nothing. However, more tests need to be operated under bad weather conditions, such as **electronic system.**

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- Rational utilization of recycled water which can lower the running cost and become more sustainable.
- Giving space for local communities to proceed various activities which can make them support this project heavily. And the community nursery garden is a good idea for benefit residents here.
- Is there any other attractive points for people using the new mid - level bus waiting lobbies instead the original one? — culture, humanity, art are required to blend into it.
- In the long run, can this project supply energy in other regions after 5~6 years?
- More value - added dimensions are on the planning stage, exhibitions, art galleries can be put into the upper level as well.

### Consultation Session c. Harbourfront Commission (02-02-2015)

The objective of “Green Deck” project is to develop the campus such a way that benefit to the community as well. Air quality, noise situation and heat island effect are concerned in it. Additionally, not only the campus, but also related issued in the neighborhood which could promote a healthier lifestyle. PolyU have had several researches on the “Green Deck” project (pedestrian traffic, centralized treatment of pollutants, reduction of heat island effect, etc)

## Q & A

**Q:** Think about the position of the brand in this project and this has to be driven in a holistic way. Taking the linkages into consideration because various challenges facing HK.

**A:** The land itself is not a universal land, it's public land, and the facility here be would be public facilities to be shared by all the people including local citizens and visitors, there is no especial target for users. And 5 billion dollar would be just our own assumption that has not been included in the calculation of construction cost. In other words — **a limited coverage.** Many consumptions have been generated: office and hotel buildings, waterfront, etc. Hence, at this point we just assume that in the future these would be real estate potentials. The **top** plan is the park, and then we have **middle** section there, middle layer, which we have planned for circulation and air treatment machines for now, but they could be converted for some commercial use perhaps in the future. And of course the **ground level** would remain to be travel links for cars using the harbor tunnel.

**Q:** Can we **improve the connectivity by building wider foot bridge as landscape deck?** Hence, people would not just consider it as foot bridge, consider as landscape deck so that would improve the connectivity between the Hung Hom station and the PolyU (because it's really a good opportunity for us to demonstrate three dimensional planning with the improvement of the transportation network).

**A:** This is what we want to do, and so as the government. The first thing is to know where we want to get and what potential benefit it could generate. Not only for PolyU community, but also for the **larger community** around us and maybe entire HK, because these will also improve two reasons, our team want to **express our attractive spots** to all the 18 districts, where can you find all the attractions in Hung Hom? Thus, it seems to be an opportunity that present itself to us, but in fact the problem was the lifetime conflict. Currently, we want to **turn around the negative aspects into positive assets** for the whole city.

**Q:** For the lowest deck, is the ventilation system suitable for the whole nearby area? For the congestion road situation, will it change by the completion of CSL? For the top deck, the activities need to be interfaced well with harbor front.

**A:** In order to reach the idea of zero carbon scheme, at least we need 70% greenery and in the meantime, leaving 30% for other technical part. For different zone planning, we have the primary thinking in mind and some relevant research studies have been published, and some are on going. We agree that the **ventilation** will be a great challenge which need to have holistic thinking on it because it serves for the entire community. And we still seek further innovative idea now.

**Q:** I want to ask some questions about the practical aspect. After installing this project, the public will ask how about the short-term impact? Will it affect the exiting very congested road or exiting traffic?

**A:** It will not be a big problem even if it links with the tunnel because we can proceed construction at night. And the only problem is to build these pillars in the middle.

**Q:** SCL will be open around that 2020. Maybe at that time the cross harbour tunnel will be enhanced to some extent and it's best time to do the construction period.

**A:** Each stage consumes lots of time to tackle and what we should do is to move this project forward stage by stage which help to make it practically.

**Q:** SCL will be open around that 2020. Maybe at that time the cross harbour tunnel will be enhanced to some extent and it's best time to do the construction period.

**A:** Each stage consumes lots of time to tackle and what we should do is to move this project forward stage by stage which help to make it practically.

**Q:** How these landscapes need to be connected to the Harbourfront? Because now we can only see a general guild line of it.

**A:** We're not allowed any commercial dimension into the boundary of the harbourfront. And it is the early stage that we would like the public to respond what the idea would be beneficial to them as well, and even to seek which plan is the most worthy one for the community and us.

**Q:** How much efforts you will do before it becomes the public project?

**A:** We are not sure about the role of PolyU in terms of this project which is determined by the government perhaps in the future. Now, we put a lot of efforts on it and it just a conceptual design and the specific urban or engineering design is not involved in it. Because we do not have resources to do all of these things. Significantly, we would like the **public to respond** what the idea would be and then chip in our development. Actually, it's a project for government to take the leading role.

#### **SUGGESTIONS:**

- Engagement of relevant agents, such as **MTR, Construction Industries**, etc.
- The entire benefits to the region is required to be explained in detail and it is vital to raise public awareness(chase them, teach them). Most significantly, we need **some principles** to deal with these problems at this stage although we do not have the final solutions.
- The **relevant construction principles, laws and regulations** need to be taken into consideration when dealing with the space or environmental problem, especially in

the mid - level.

#### **Consultation Session c. Harbourfront Commission (02-02-2015)**

- Focus on the **connection** of different groups (TST East, Hung Hom), and the entertainment and leisure zones, sports zones and so on will be involved in and the HK Coliseum which make this project being a huge **public** one.
- **Mid-level bus waiting area: three different levels** have been designed for keeping pollutants away form the bus waiting lobbies. Meanwhile, commercial elements are under consideration.
- **green deck level — waiting areas — roadway** (save the existing transportation system).

This idea perhaps improves pedestrians' services a lot due to time saving and in the proposal project design, this "Green Deck" is self-sufficient.

- **Circulation:** proposal for **cycle track** (from the seaside to different areas, TST, Hung Hom, even Ho Man Tin) which presents strong **connection** with each region.
- **Technical dimension:** green structural materials, noise control, air purge, natural ventilation, etc.

#### **SUGGESTIONS**

- **(HKIUD)** It is a project with fully perspectiveness and it can be easily taken over if the pollutants generated by transport means are able to deal with. Moreover, the opportunity is the possibility of the **transform of HK tunnel model** in the future. For instance, only charging when leaving the HK Island which would save waiting time in other two Toll Plaza (maybe offer more broaden roads for bus).
- **(HKIP)** For the conceptual dimension, it is recommended that we need to transfer more factors into the **positive** one, in other words, make the **potential damages into the beneficial** ones, and the "Green Deck" will be the leading role after installing. Besides, more **strong connections and greenery space** need to be develop all the way. And more challenges are involved in the fields of **technical possibility and greenery performability**.
- **(HKIA)** "Green Deck" project has long-term influences among the whole HK, what we should do is to utilize rationally of developing land and **strengthen the connections** between different districts. Significantly, this project can own **stage development, like trial**. Because it can convince the government easily if the first trial stage gain considerable returns (human beings, health aspect, land development). And then the remaining stages can be conducted smoothly.
- Adding **integrated design** features into surrounding regions, and the influences on the



neighborhood and space implementation are required to be considered. Also, it is vital to **add values on the exiting facilities.**

• We need to optimize the use of land and **present the greenery into various forms** because greening space is required to be planned rationally as well.

### Consultation Session d. Civil Exchange (06-02-2015)

Numerous students have increased continuously in recent years due to the update education model (3+3+4). PolyU is the university which owns minimum students' dormitories among whole HK. Besides, even the Ho Man Tin Hall which is far away from the main campus and has no shade for hiding if raining outside or being exposed to the sunshine. Hence, this "Green Deck" project is vital to promote owing to the concept of the sustainable development and the open campus plan is also beneficial to the entire public. Regarding the air quality, it is the issue left over by history because of the high density.

1. association of activity and inertia (community services, cultural activities)
2. separation of pedestrians and vehicles (utilization of mid - level)
3. cycle track (starting from the harbourfront to TST East, Hung Hom, even extended to the outside)

**AIR** (brief introduction and explanation of report)

1. Wind has been decreasing in urban areas since 1968, so settling the wind tower in the upper ground and other levels use wind catcher to gather.

**APSS (David Yip)** — **social benefit** in East TST, TST, Hung Hom

**Hung Hom: various social stratums** exists in this district and we need to meet their different requirements.

2. more elderly (support but afraid of having less public space if more and more tourists rush into and the facilities are too far to reach)
3. students here (support)
4. mid - level class: won't come except having special activities

**TST:** Kowloon Park located here and the elderly (won't use because of long distance and more tourists)

**EAST TST:** workers (need more leisure space here, support)

**POLYU:** students & staffs (support)

### Q & A

**Q:** *How to deal with the lower level? What's the attitudes towards the government?*

**A:** **Wind-catcher;** the government thought the idea is positive and innovative; and it

is hoped that it can possess more public and communities' support.

**Q:** *How many people can these three levels hold? How to balance the final end user of this project?*

**A:** Green Deck is a public project and we can improve the phenomenon of numerous tourists through **various attractive tourist attractions.** In other words, promoting the **multi-level** to rationally utilize one space.

**Q:** *What's the next step or the detail design of pedestrian network and cycle track?*

**A:** The most important thing is the **connectivity of the ground level.** And PolyU is suitable to be the central transportation network of "Green Deck" project.

**SUGGESTIONS:** How to keep the environment/ Different governmental department / **MTR** (big parter) — pedestrian flow into the station.

### Consultation Session f. HKIE (27-02-2015)

#### Levels

- Top: various ideas (zone planning: water feature, playground, gallery, theatre, etc)
- Middle: bus waiting areas (PolyU has been researching on this project for a long period) — Noise (absorbent)/ natural & mechanical ventilation (wind catcher)
- make the best use of natural resources (step by step) — the specific location of bus stations, the detail width of footbridge will be considered later.
- Focusing on the limitation and side effect which the "Green Deck" would bring about.
- The improvement of Hung Hom Toll Plaza (automation)
- The potential influences on Shatin to Central Link in the future and on the similar facilities within this district.
- Security & Connection & Cooperative effect

### Consultation Session g. HKILA (21-05-2015)

- Strong connections (even HMT districts)
- It is convenient for the students who living in the HMT dormitory to walk to campus and the "Green Deck" will be the landmark of this region if possible.
- Cycle track
- Showcase is necessary for the communities here to illustrate the sustainability lifestyle because their support is significant.

- Environmental project & Mid-level bus waiting lobbies (rainy weather).
- Conception design (land development, social project, green infrastructure)
- Refer to the successful relevant cases, such as UK Edging garden (appreciation of the society) or other sky gardens.
- Smart-city, walkable city, sustainable city (eye-catching and draw students' attention) and the stakeholders of bus companies need to be emphasized.

### Consultation Session h. APSS

(health-related services, recreation and sports facilities, leisure and cultural facilities)

#### ELDERLY SERVICES

- Care-and-Attention Home in Oi Man / Contract Home

#### CHILD CARE SERVICES

- child care centre in Ka Wai / 3 integrated Children and Youth Services Centres / 7 nursery schools

#### FAMILY SERVICES

- 2 integrated Family Service Centres (IFSCs)

#### REHABILITATION SERVICES FOR PERSON WITH DISABILITIES

- 2 Day Activity Centres / 2 Shelter Workshops / 2 hostels / Social & Recreational Centre for the disabled / No special service to target pre - school children with disabilities

#### RECREATION AND SPORTS FACILITIES

- sports grounds, sports centres, swimming pool / playgrounds / No Parks / the closest one are Kowloon Walled City Park & Kowloon Tsai Park in Kowloon City & Kowloon Park in Tsim Sha Tsui

#### LEISURE AND CULTURAL SERVICES

- Public Library / Hung Hom Public Library / Tsim Sha Tsui Public Library / Kowloon Public Library near Ho Man Tin
- HK Museum of History & HK Science Museum (Tsim Sha Tsui East) / HK Coliseum

(Hung Hom) Ko Shan Theatre & HK Cultural Centre

- 5 movie theaters / No community hall and civic centre / the closest ones are the Hung Hom Community Hall in Kowloon City & Henry G. Leong Yaumatei Community Centre

#### ENVIRONMENTAL RESOURCES AND CENTRES

- No air quality monitoring station / 5 environmental exhibition and resource centres & 9 environmental protection department (EPD) customer service counters / But only a mobile centre that visits here

## APPENDIX C

### Reference projects

[This section will discuss existing projects that can serve as points of reference for the three aspects of the “triple - bottom - line” aimed at by the Green Deck project. The below texts are in raw form and need to be condensed and supplemented with an overall summary of each aspect]

[each project will also be illustrated with a photograph]

#### Bottom Line #1) ECOLOGICAL

##### a. Gather People: Bridged Gardens, Tianjin

• Bridged Gardens, featured with Hilled Gardens, City Windows, Sunken Gardens, Terraced Water Front and a Skywalk, which all together created a composed band of landscape that provide multiple ecological, recreational and aesthetic services. A massive tree stands silently at the intersection of two ridges on a field with a small creek running through it, providing a perfect venue for young lovers to confide in each other in the soft glow of moonlight.

• **elderly and disabilities** — uniformly raising the soil level would have blocked the view to the waterfront lake edge from the city. The architect approached this problem by creating a series of city “windows” that “cut” into the raised level soil and gave form to a wave like skyline. At the valleys, the sunken gardens take place and at the crests the hilled gardens can be found.

• link the city into the nature gradually; a transitional space given to the community for recreation, exercise, education and cultural activities to enjoy.

• Five meters above the main garden level, observation walkways run the length of the site perpendicular to the Sky - walk and provide platforms for observation and connection to the various small gardens and the large park beyond. There are eleven terraced mounds, and stepped Corten steel planters on the lakeside of each mound feature one plant species each. Paths run between the lake and the terraces. Raise walkways at the water's edge create an eco - friendly waterfront, mixing Cartesian geometries with natural growth and allowing people to walk into the wetland and touch the Oriental cattails.

• The **sunken gardens**, 20 meters by 8 meters in size, are inspired by the local land patterns: water borders, crop fields, harvested farmlands, flowing rivers, marsh, meadow and pasture.

The designer re-interpreted these patterns with sustainable materials and contemporary designs that allow people to make playful use of the space.

##### b. Gather People: Long Sleeve Skywalk, Xuzhou

• Skywalk straddles several watercourses and an expressway (Xuning Road). It integrates complicated urban functions into a space that is meant to be poetic. It connects the focal point of the county, Harmony Square, to the Forest Plaza across the road.

• Urban furniture is integrated into the design of the skywalk. Public space is reconsidered, as is play equipment for children. Spaces merge and connect in three dimensions, creating a new kind of public realm.

##### c. Gather People: Dujiangyan Square, Chengdu

This project brief called for the square to provide an appealing public open space for local residents; to tell city's cultural and historical stories (especially about the irrigation works); and to become a tourist attraction.

• The central part of the square has a stone aqueduct that acts as a screen to create separate parts and help establish a human scale in the large space. Water is a main feature and is accessible to people with disabilities.

• The curving, faceted stone “water steps” form the main element in the square and attract children to play.

• A canopy made of copper-painted yellow on top, inspired by the yellow rapeseed flower of the region, becomes a setting for people's daily activities.

• A sunken amphitheater and three sunken pools are designed for people to enjoy various amusing water features. The fountains are designed for people to play in; seats are placed alongside canals. Many native camphor trees provide shade.

##### d. High Line

• seating design: radial bench, peel-up bench, catwalk allow visitors to ramp up and promenade above the main path of the High Line

##### e. College Green in Bristol: big lawn

## Bottom Line #2) SOCIAL

### a. East River Waterfront Esplanade

- The East River Waterfront Esplanade seeks to improve access to the waterfront, enhance pedestrian connectivity, and create waterfront amenities for public use and enjoyment. The existing esplanade is enhanced, new sections will be created, and several piers will be renovated and redeveloped.
- This bold and ambitious plan will revitalize the Lower Manhattan waterfront that currently suffers from weak connections, a lack of amenities, and underutilization. The project aims to improve the quality of life for local residents, workers, and visitors alike.

#### Key Features of the Esplanade

- **Sustainability:** The project will showcase NYCEDC's continued commitment to sustainability through a variety of initiatives regarding open space, air and water quality, energy, climate change, and congestion. For example, lighting will be upgraded to low energy, long life cycle fixtures; recycled materials will be used for the project wherever feasible; regional, low maintenance plants will be used for landscaping; and rainwater harvesting of storm water runoff to maintain the esplanade's various planted spaces.
- **Community Programming:** The East River Waterfront Esplanade provides **ample space** throughout for the community to gather and host events. Such spaces include a non-profit educational maritime pavilion on Pier 15, community space in the Rutgers Slip Pavilion, two step-down lookouts across from Wall Street and Rutgers Slip, respectively, and plentiful seating for pedestrians along the entire walkway.
- **Active Recreational Space:** In keeping with the long-term goals of the City, the East River Waterfront Esplanade project includes actively programmed space that the public can access year-round. Such features include two half basketball courts, a bocce/ petanque area, a dog run, and an open, elevated exercise area with publicly accessible equipment.
- **Continuous Bikeway:** The East River Waterfront Esplanade project will connect the Manhattan greenway for pedestrians and cyclists alike. Along currently funded sections of the project, cyclists will enjoy **two-way bike lanes fully separated from automobile and pedestrian traffic**. In addition, these lanes will be lit 24-hours per day via the FDR above.

### b. Public Space Improvement in Newcastle City Centre

- setting a very close proximity between the passenger waiting area, the pedestrian passageway and the shops, has created a public space that encourages those who come, wait or leave the public space to purchase goods from the shops.

### c. Redeveloping Old Eldon Square, Newcastle Upon Tyne

- **young people:** 1) give a minor or passive role in public consultation; 2) they are often reduced to playing a minor active role in specific projects that target the development of appropriate 'play spaces'.

### d. Case of Birmingham

- **young people and children**(potential safety hazard): integration into the townscape (mixed use design) with loose materials, such as natural elements, specifically, transitional fixed play attractions with water, sand, wood.

### e. Ciutat Vella, Barcelona

- shelter and protection approaches from partial screening right up to total enclosure and creation of a winter garden
- seating design: seats without a wall or other barrier behind them are likely to be understood

## Bottom Line #3) Economic

### Dongdaemun Design Plaza

#### Oullim Square

• Oullim Square is a place where design and creative culture are incorporated with everyday urban life. The DDP courtyard is where visitors can relax and communicate with others while enjoying diverse activities in Oullim Square and appreciating the architectural beauty of the DDP and the urban landscape of the Dongdaemun Area.

#### Description

• The largest square in the DDP courtyard, Oullim Square is located in the center of the DDP with easy accessibility to major DDP facilities. The square consists of the Miraero Bridge, a beautiful precast concrete bridge, the Design Market, a place for shopping and relaxation, and the excavated and preserved historical sites and relics that were discovered in the Dongdaemun area. It is a place where visitors can appreciate the various architectural elements of the DDP, and the building itself as a whole, while relaxing and communicating with others.

#### Uses and Purposes

Serving as an urban oasis and a breath of fresh air in a crowded downtown area, Oullim Square consists of various facilities

- Design Market: a place where visitors can shop, relax, and experience a range of different designs and design products
- Miraero Bridge: a major path to the main gate of the DDP in the Dongdaemun area
- Excavation sites: excavated historical sites that preserve traces of the national military institute, called Hadogam, that once existed on this location in the Joseon period (1392 - 1910)
- DDP Information Center: a site for customized information about the DDP

#### Conveniences

• Kiosks (10), water fountain (1), benches (15), trash cans (15), banner poles (26), including 22 on the Design Avenue and 4 on the Grass Hill

### Dongdaemun History and Culture Park

• It is an eco - friendly park where citizens can get a glimpse of the history of Seoul, communicate with others, and enjoy the landscape and park furniture.

#### Uses and Purposes

• The Dongdaemun History and Culture Park is where the history of Seoul and design are kept alive. It is a place where visitors can get a glimpse of the history of the Dongdaemun area, including the Seoul Fortress Wall, the former site of a national military institution from the Joseon period called Hadogam, and the former Dongdaemun Stadium. It also houses exhibition halls and event venues where visitors can experience design and culture as well as various facilities and spaces for relaxation.

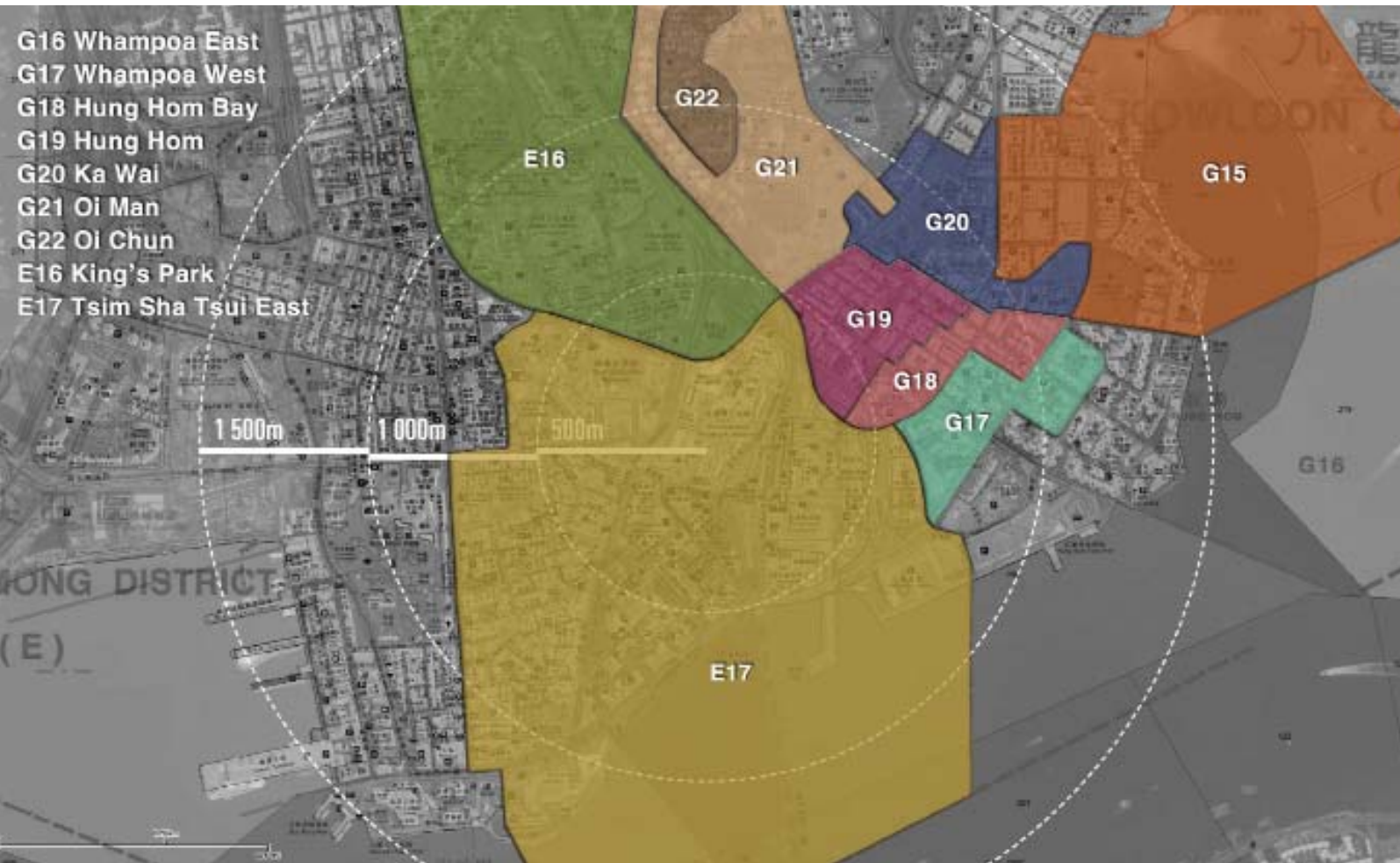
#### Conveniences

• Kiosks (10), water fountain (1), benches (15), trash cans (15 sets)

#### Gallery Moon

• (business / academic conference, shows, ceremony, art fair): exhibitions/events/tours — booking tours, space retails

## APPENDIX D



Surrounding districts



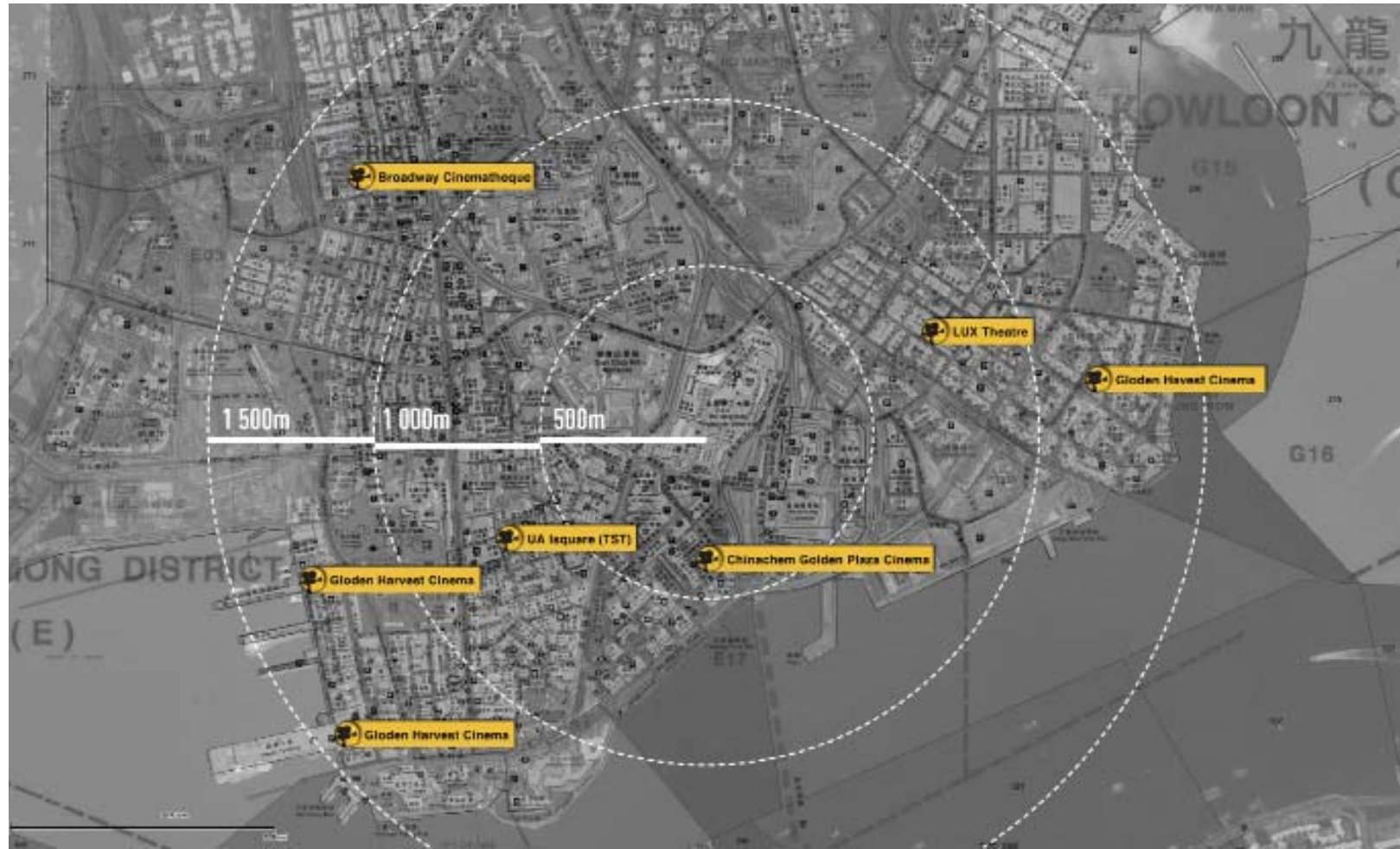
Schools



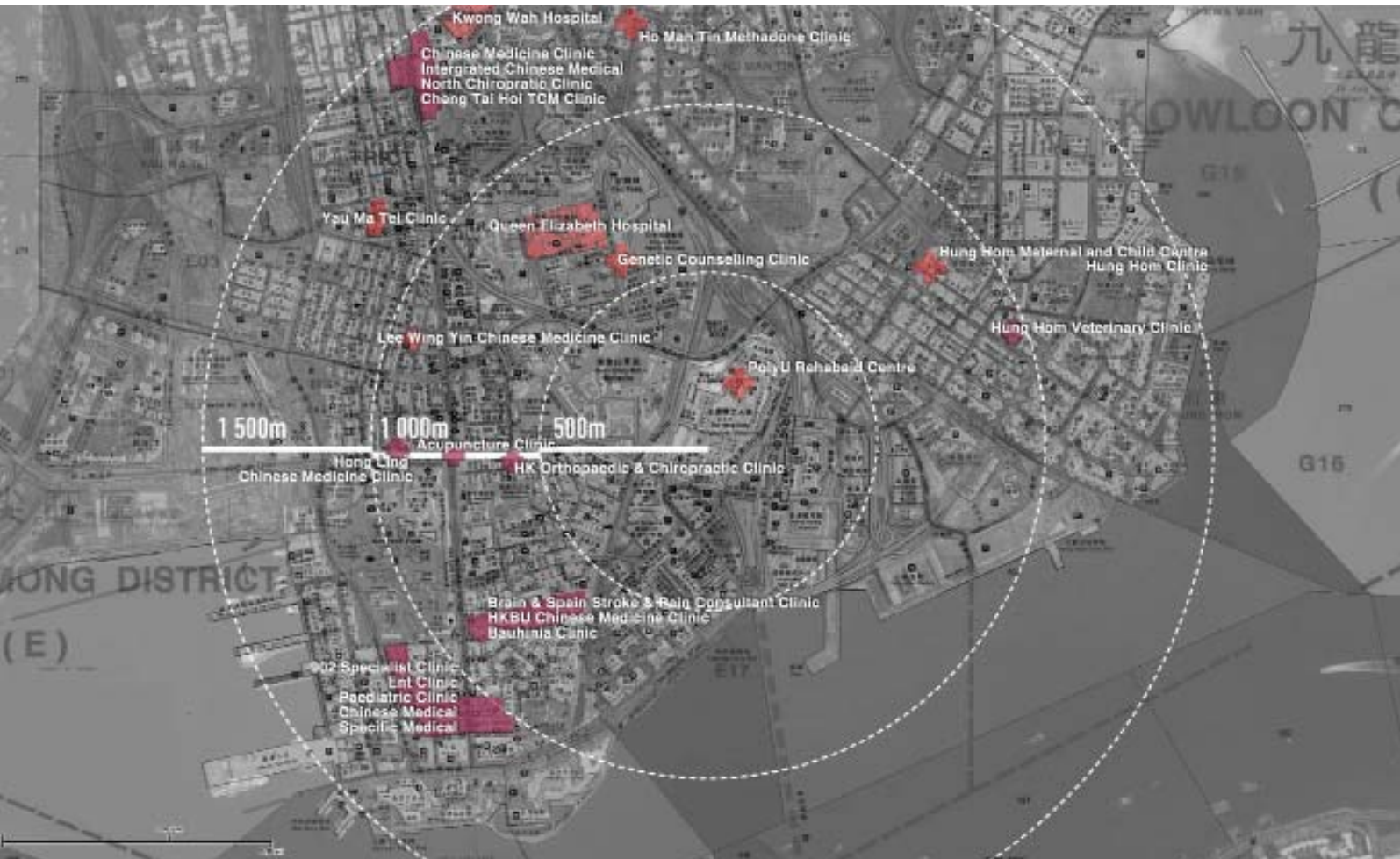


Parks

Cinemas

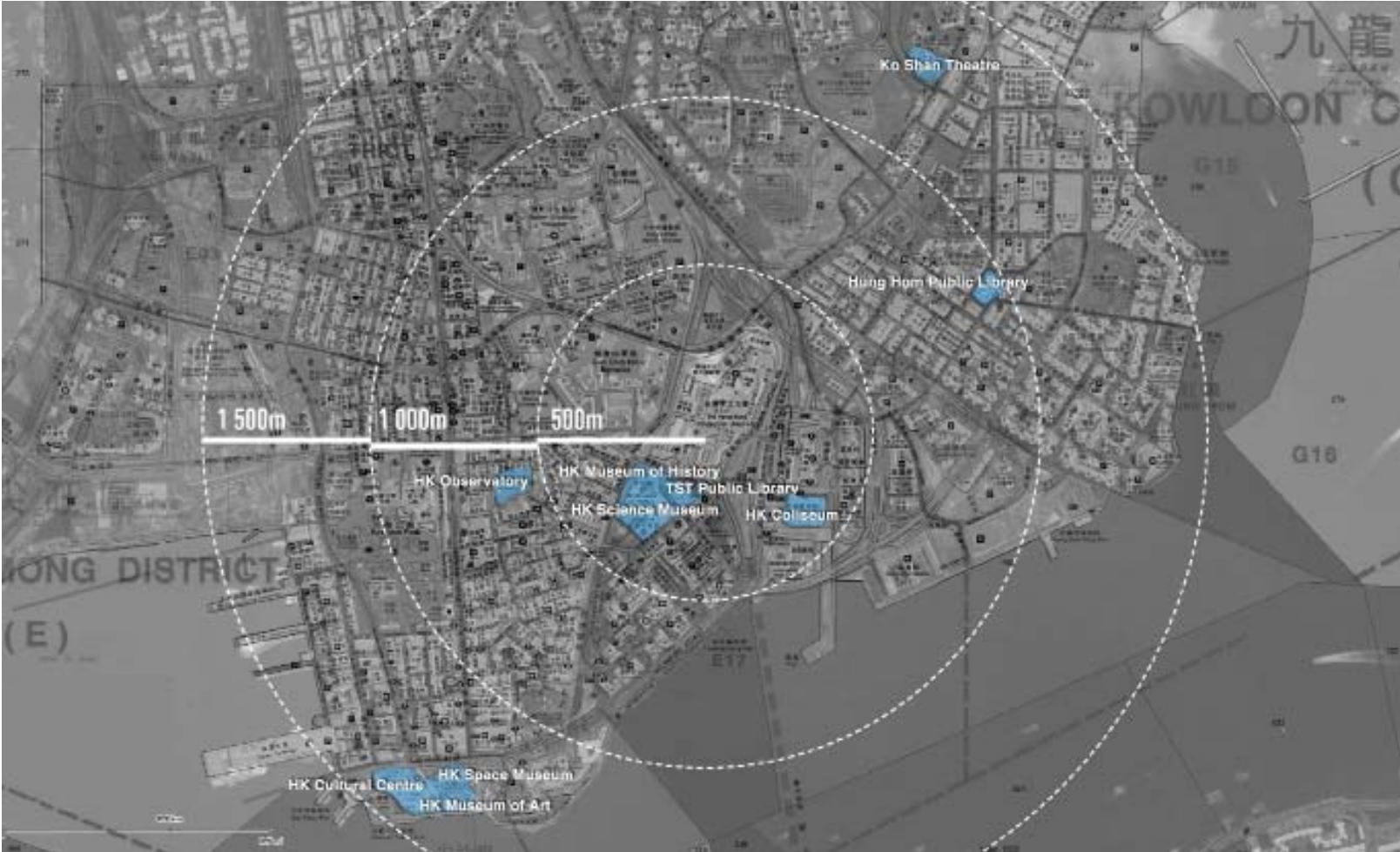






Hospitals and Clinics

Cultrural Institutions





Amenities for  
Disabled People