Active Design Guidelines

Neighbourhoods and buildings for healthier lifestyle

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INTRODUCTION

What is Physical Activity

Physical activity is more than exercise.

The World Health Organization defines physical activity as any form of bodily movement that uses energy.[1] It includes exercises and other activities that can be done as part of work, sports and leisure or transport (walking and cycling), as well as every day and household tasks.

Regular physical activity or being active is not only associated with improved physical, mental and social well-being. It also contributes to sustainable development in the community (such as energy saving, cleaner air and alleviating the effects of climate change),[2] and can boost the immune system and defend the body from infectious diseases.[3] In order to promote, enable and increase physical activity, a multi-sectoral approach is required with collaboration of different disciplines and sectors (such as medical health, urban planning and transport).

Active Design

Built environment, in which we live, work and play, plays an important role to provide everyone with more opportunities to be active in order to increase physical activity. We propose to incorporate “active design” considerations in shaping the built environment to promote physical activities and health through responsive urban design and building design, such as providing inviting streetscapes for pedestrians and cyclists and making stairs more visible and attractive. By interventions in the design of built environment, human behaviour could be changed such that people are induced to engage in more physical activities in their daily life bringing about active lifestyle in the communities.

Active design encourages...


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EXERCISE

such as jogging or participating in team sports


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RECREATIONAL ACTIVITIES

such as playing or going for a walk along the promenade


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FUNCTIONAL ACTIVITIES

such as walking or cycling to travel between destinations


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INCIDENTAL ACTIVITIES

such as taking the stairs instead of the escalator

The Active Design Guidelines

The Active Design Guidelines (Guidelines) seeks to create a built environment that enables people to incorporate regular physical activity into their daily life. It creates preconditions for allowing people, regardless of age or fitness level, to make alternative choices throughout their day in pursuit of an active lifestyle. Various user groups may have distinct needs in physical activity. The creation of awareness of the benefits of physical activity and active lifestyle would induce behavioural change within the public. It goes hand-in-hand with the provision of a diverse set of opportunities in achieving a health-inducing built environment within the public realm.

Although there is no lack of active design guidelines in other cities, "active design" is a relatively new concept in Hong Kong. Our intention is to provide a set of guidelines for Hong Kong to promote and raise awareness of the active design concept. The Guidelines is an advisory document and is non-regulatory for reference of development-related sectors/organisations both within and outside the Government. It serves to help built environment professionals in understanding and applying the active design concept. It presents different active design ideas and examples to enrich the design thinking process and to bring active design considerations into the early and subsequent stages of the planning and development process.

Project proponents are encouraged to incorporate as many relevant active design objectives as possible into each project, and to incorporate at least some objectives into every project. The more active design objectives are met, the more likely a project will be able to increase the daily physical activity level of a user, and thus the greater the project's potential impact on better health.[4] The receiving community can be engaged at an early stage in the planning and design of active features, such as active destinations and active spaces / facilities, to ensure that any user-specific or activity-specific elements will meet actual needs and foster a sense of ownership.

The Guidelines are divided into the neighbourhood and building levels with four topics for each level. Each topic has a set of objectives followed by individual guidelines. Local and overseas examples and case studies are included to demonstrate the application of the guidelines and objectives. Information about relevant prevailing guidelines, regulations and references is included in the endnote for the convenience of readers. At the end of the Guidelines, a checklist is provided to serve as a quick reference tool and assist the users in the identification of relevant objectives.

ENDNOTE

1. World Health Organisation (2020) Fact-sheet for Physical activity, online and accessed on 24.12.2021 https://www.who.int/news-room/fact-sheets/detail/physical-activity

2. Department of Health (2018) Fact-sheet for Target 3: Reduce physical inactivity, Hong Kong: HKSAR Government

3. According to the Centre for Health Protection, those who were consistently physically inactive were about 2.3 times, 1.7 times and 2.5 times as likely to be hospitalised, admitted to intensive care unit and die from COVID-19 compared with those who were consistently meeting physical activity guidelines respectively. They also had 20% and 32% increased risk of hospitalisation and death due to COVID-19 than those who were doing some physical activity respectively.

   Centre for Health Protection, Department of Health (2021) Non-Communicable Disease Watch (August 2021) - Physical Inactivity During the COVID-19 Pandemic, online and accessed on 12.12.2022 https://www.chp.gov.hk/files/pdf/ncd_watch_august_2021.pdf

4. Physical inactivity is one of the leading risk factors for non-communicable diseases (including obesity, heart diseases, cerebrovascular disease, diabetes mellitus, hypertension and some types of cancers) mortality. According to the World Health Organisation, non-communicable diseases are responsible for approximately 70% of all deaths worldwide ((2021) Fact-sheet for Non-communicable diseases, online and accessed on 24.12.2021 https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases). In Hong Kong, about 55% of all registered deaths and about 104 600 potential years of life lost before age of 70 were related to non-communicable diseases in 2016 (The then Food and Health Bureau and Department of Health (2018) Towards 2025: Strategy and Action Plan to Prevent and Control Non-communicable Diseases in Hong Kong, Hong Kong: HKSAR Government).

ACTIVE DESIGN GUIDELINES AT NEIGHBOURHOOD LEVEL

Active design at the neighbourhood level requires consideration of the provision of active destinations to accommodate both intentional and unintentional activities as well as the access to such destinations. The availability of active destinations and the ease of access thereto will ultimately help shape the public's awareness of living in an active city with plenty of opportunities to engage in physical activity.

The neighbourhood also provides opportunities to facilitate unintentional physical activities through walking or cycling to general destinations. The ease with which one can find active and general destinations, the journey encountered en route to such destinations and the creation of a compact, convenient and enjoyable urban setting have a significant impact on the likelihood of people choosing to walk or cycle over other modes of transport and thus help incorporate physical activity into their daily routines.

ACTIVE DESIGN GUIDELINES AT NEIGHBOURHOOD LEVEL


1 ACTIVE CITY
2 ACTIVE DESTINATIONS
3 ACTIVE WALKING JOURNEY
4 ACTIVE MOBILITY

1 ACTIVE CITY

- **1.1** Create preconditions to encourage walking in neighbourhoods and precincts
- **1.2** Create activity clusters through co-location of land uses
- **1.3** Shape waterfront areas as iconic features of an active city
- **1.4** Promote access to the natural green and blue assets

2 ACTIVE DESTINATIONS

- **2.1** Create active destinations that can accommodate a variety of activities
- **2.2** Design inclusive and inter-generational activity areas
- **2.3** Design active destinations to be usable during all times and seasons
- **2.4** Create opportunities for spontaneous activities

3 ACTIVE WALKING JOURNEY

- **3.1** Create a safe and inclusive pedestrian environment
- **3.2** Create pedestrian environments that are comfortable and attractive during all times and seasons
- **3.3** Encourage sustained walking journeys
- **3.4** Encourage the use of more physically challenging routes along outdoor stairs and ramps

4 ACTIVE MOBILITY

- **4.1** Connect and expand existing pedestrian and cycling networks
- **4.2** Provide supporting infrastructure along pedestrian and cycling routes
- **4.3** Create convenient ways of transitioning to active modes

1 ACTIVE CITY

Active design seeks to shape urban environments that encourage more physical activities as part of a daily routine. The first step to creating an active city is to create a vision of how active design objectives can be incorporated holistically during the early planning and design stage.

This topic explores how clustering and co-location of land uses and developments can create preconditions for walkable and cyclable neighbourhoods. It considers how waterfront areas can become iconic features as part of an active city's identity. Access to natural green and blue assets such as waterfront and country parks are also considered.

OBJECTIVE 1.1

Create preconditions to encourage walking in neighbourhoods and precincts

OBJECTIVE 1.2

Create activity clusters through co-location of land uses

OBJECTIVE 1.3

Shape waterfront areas as iconic features of an active city

OBJECTIVE 1.4

Promote access to the natural green and blue assets

OBJECTIVE 1.1

Create preconditions to encourage walking in neighbourhoods and precincts

a **Plan or redevelop residential and commercial precincts to include diverse land uses within a convenient walking distance.**

b **Create a permeable urban fabric with short block length, frequent street intersections and intervening public spaces to enhance legibility and encourage walking.**

c **Place active destinations and active routes adjacent to complementary land uses.**

d **Respect walking patterns and improve pedestrian routes existing in a neighbourhood as part of redevelopment or urban renewal to enhance walkability.**

e **Prioritise pavement space over the provision of on-street parking and explore the introduction of car-free areas.**

Designing street intersections in regular intervals can improve permeability and encourage walking

》》 Refer to **1.1b**

TIPS for 1.1a

Convenient walking distance is stipulated in the Transport Planning & Design Manual (TPDM). (1)

TIPS for 1.1b

Short block length is stipulated in the TPDM. (1)

TIPS for 1.1d

Planning and design tools such as pedshed analysis can be used to identify pedestrian barriers and rectify any shortcomings.

Diverse land uses within convenient walking distance

Tai Ho Road, Tsuen Wan,
Hong Kong

Refer to **1.1a**

Enhanced walking environment

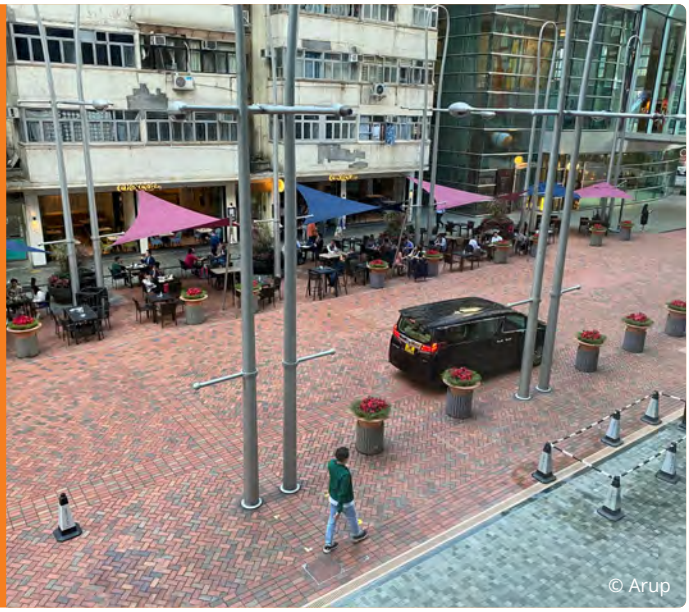
Back Alley Project, Kwun Tong,
Hong Kong

Refer to **1.1d**

Pedestrian priority area

Tong Chong Street, Hong Kong

Refer to **1.1e**



OBJECTIVE 1.2

Create activity clusters through co-location of land uses

a **Co-locate recreational buildings with open spaces to form a distinct and interconnected activity cluster can enhance the appeal or popularity of a precinct.**

b **Locate sports and recreational facilities of educational, institutional or residential developments at-grade.**

Future potential shared use of facilities such as those in schools can be increased when considering the potential for direct public access without compromising the privacy and safety of occupants.

c **Provide open spaces at a visible and accessible location with compatible land uses, such as al fresco dining, that can provide natural surveillance.**

Open spaces that people feel safe are likely to have higher utilisation rates.

Co-location of open spaces with recreational buildings

Refer to **1.2a**

Co-location of sports facilities and open space

Siu Sai Wan Sports Ground and Siu Sai Wan Promenade, Hong Kong

Refer to **1.2a**

Place sports or recreational facilities at-grade for future potential public access

Tai Kok Tsui Catholic Primary School (Hoi Fan Road), Hong Kong

Refer to **1.2b**

Al fresco dining provides natural surveillance to nearby open spaces

Stanley Plaza, Hong Kong

Refer to **1.2c**

OBJECTIVE 1.3

Shape waterfront areas as iconic features of an active city

a **Design continuous waterfronts for multiple active uses with seating or resting areas.**

b **Provide focal points along the waterfront to create instantly recognisable destinations.**

Attractive focal points such as water features, gardens with specimen trees, thematic plantings or art installations that are unique to a specific active destination can increase the profile thereof.

c **Encourage diverse and vibrant temporary activities and events along the waterfront.**

d **Make waterfront areas accessible via public transport and prioritise pedestrian and cycling connections to and along promenades.**

e **Use signage, paving design and wayfinding to indicate when waterfronts are within walking distance.**

The provision of focal points along the waterfront enhances the recognition of waterfront areas

Refer to **1.3b**

TIPS for 1.3b

Visual access to the harbour is encouraged under Principle 7 (Accessible Harbour) of the Harbour Planning Principles. (2) Focal points or features within these visual corridors will be highly visible to the public.

TIPS for 1.3c

Collaborating with local artists and creatives will enhance the artistic merit of proposals. Engaging local communities will help ensure proposals are contextually appropriate.

Waterfront with seating area and cycling track

Tsuen Wan Waterfront Cycle Track, Hong Kong

Refer to **1.3a**

Focal point along waterfront

Hong Kong Observation Wheel, Central Harbourfront, Hong Kong

Refer to **1.3b**

Events at waterfront promoting a healthy lifestyle

IRIS Yoga and Wellness Festival at Central Harbourfront, Hong Kong

Refer to **1.3c**

OBJECTIVE 1.4
Promote access to the natural green and blue assets

a **Enhance blue and green links to country parks and coastal areas to form part of new developments.**

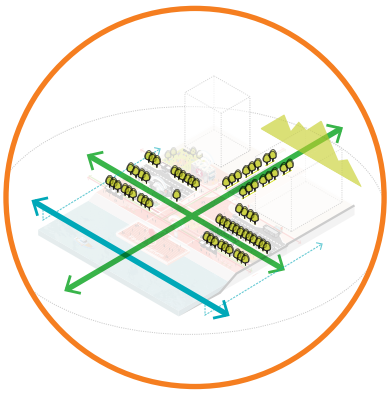
Blue and green links can be enhanced by incorporating walking, jogging or cycling routes to provide an active access of reaching desirable destinations.

b **Improve public transport access of new developments or redevelopments located in relative proximity to natural areas.**

Accessibility can be improved through providing facilities such as sheltered public transport stops, wayfinding with smart route displays and supporting facilities for passengers (including people with disabilities and the elderly).

c **Promote public transport routes that provide convenient, affordable or universal access to country parks and coastal areas.** (3)

Make use of signage, discounted transport fares or awareness campaigns at public transport interchanges to attract people to visit natural assets.



The provision and retention of key links between country parks and coastal areas improve orientation

Refer to **1.4a**

Accessible waterfront areas served by public transport

Refer to **1.4b**

TIPS for 1.4a

Blue and green links refer to features such as streams, rivers, natural areas, open spaces with greenery, urban parks or tree-lined streets that "link" urban area / new development areas to country parks and coastal areas.

TIPS for 1.4c

Awareness campaigns can make use of special posters(4) or initiatives highlighting universally accessible Country Park Trails, e.g. TrailWatch app.(5)

Existing green and blue link integrated into pedestrian and cycling network

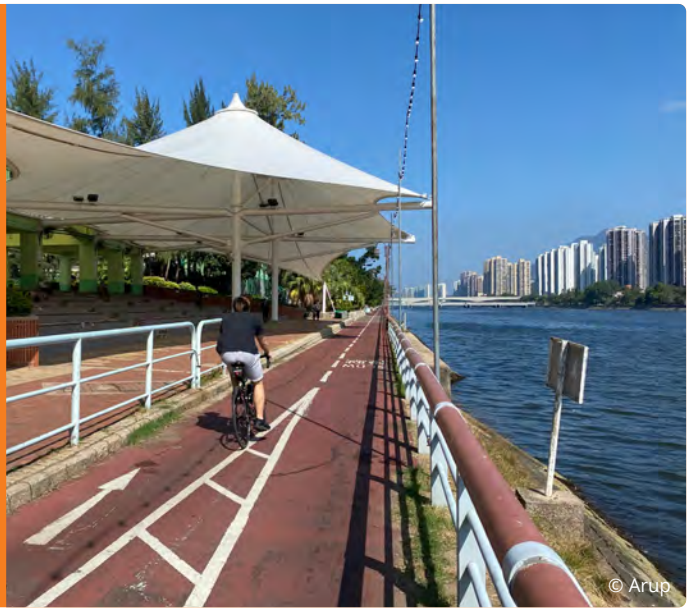
Yeouido Hangang Park, Seoul, South Korea

Refer to **1.4a**

Provision of pedestrian and cycling connections to blue and green asset

Shing Mun River near Sha Tin Park, Hong Kong

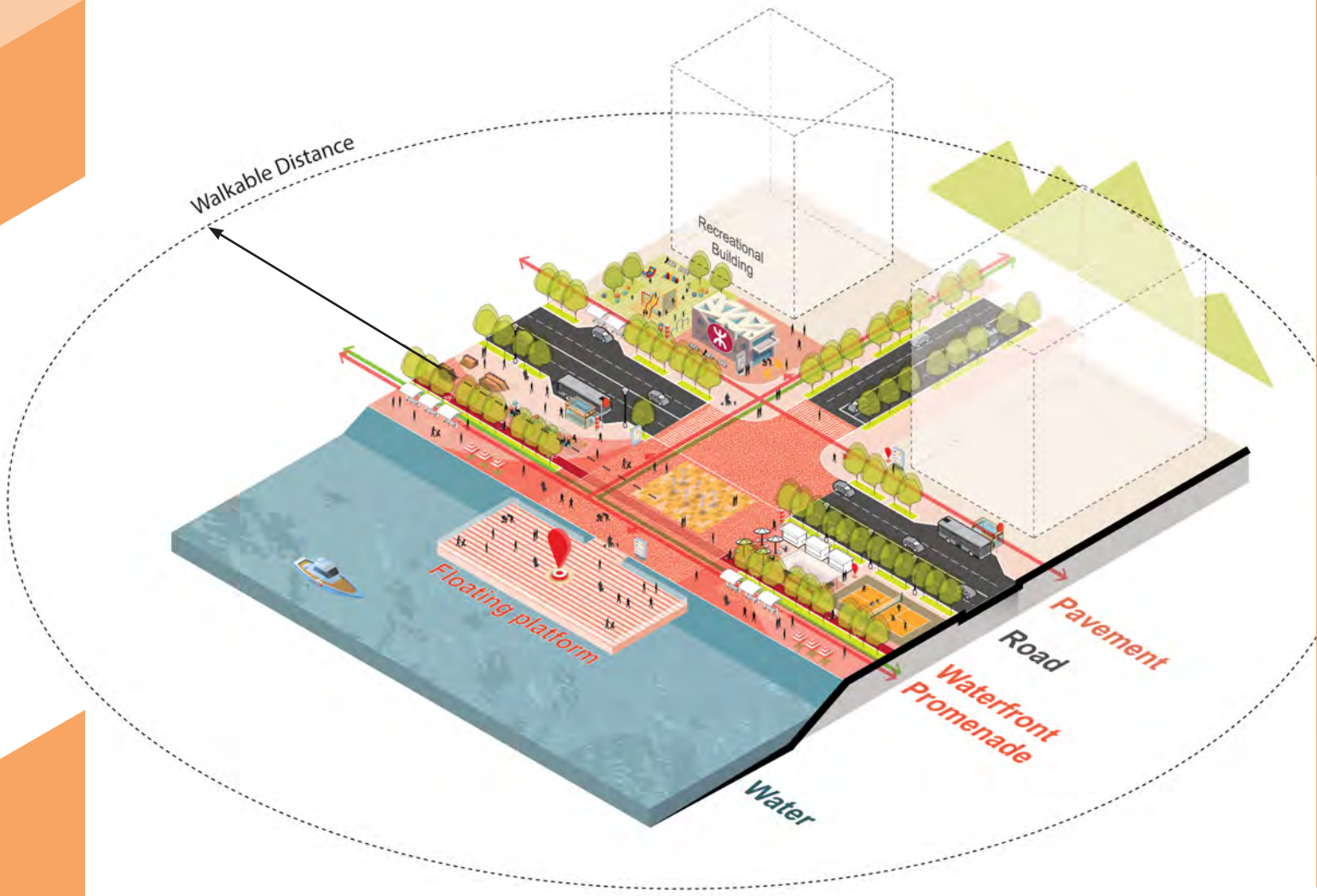
Refer to **1.4a**



Provision of smart route display to improve public transport access

Bus waiting time display at Happy Valley Racecourse / Morrison Hill Road bus stop, Happy Valley, Hong Kong

Refer to **1.4b**



ENDNOTE

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2 ACTIVE DESTINATIONS

This topic outlines the prerequisites for creating flexible active destinations that can accommodate a range of physical activities and recreational uses. It considers how playful, inter-generational and inclusive design with weather protection and outdoor thermal comfort contribute to an appealing active destination. By promoting safety, age-friendly and universal access, it enables people of all ages and abilities to adopt an active lifestyle.

OBJECTIVE 2.1

Create active destinations that can accommodate a variety of activities

OBJECTIVE 2.2

Design inclusive and inter-generational activity areas

OBJECTIVE 2.3

Design active destinations to be usable during all times and seasons

OBJECTIVE 2.4

Create opportunities for spontaneous activities

OBJECTIVE **2.1**

Create active destinations that can accommodate a variety of activities

a **Include unobstructed areas to allow activities to take place.** (1) (2)

Many forms of popular exercise have no specific requirement other than space.

b **Incorporate lawns and green spaces.**

Natural spaces without paved surfaces such as lawns are ideal for various physical activities and can allow freedom of movement and explorations that encourage unstructured play.

c **Select suitable flooring for paths and activity zones for various recreational uses.** (3)

d **Provide multi-functional facilities for maximum flexibility in doing exercise.**

e **Provide supporting facilities to make exercising more convenient.**

Changing rooms with showers and lockers, toilets, drinking fountains, cycle parking racks, etc. cater for the needs of active users.

f **Retrofit underutilised spaces into new active destinations.**

Underutilised spaces such as spaces under bridge can be transformed into, for example sports ground or tai chi garden.

Incorporating lawns in active destinations for accommodating multiple activities such as running, playing ball games and kite-flying.

K11 Musea, Tsim Sha Tsui, Hong Kong

© Otto Ng of LAAB Architects

Refer to **2.1b** & **2.1c**

TIPS for 2.1d

Backless benches can be used for seating as well as exercise.

TIPS for 2.1e

Provision of free Wi-Fi access can stimulate people using fitness apps.

Unobstructed area permits various activities

Stanley Plaza, Hong Kong

Refer to **2.1a**

Flexible lawn area and installations for exercise

Central and Western District Promenade, Hong Kong

Refer to **2.1b** & **2.1d**

Supporting facilities for exercise

Central and Western District Promenade, Hong Kong

Refer to **2.1e**

OBJECTIVE 2.2

Design inclusive and inter-generational activity areas

a **Mix elderly activity zones and children's play areas to foster interaction across ages.**

b **Position passive areas adjacent to active areas to encourage the use thereof.**

c **Design play elements to be structurally sound for different age groups.** (4)

Design play equipment for the young and young-at-heart that can be shared by different users for recreational and exercise purposes.

d **Promote inclusive design to address the needs and preferences of different demographic groups such as elderly and people with disabilities.**

Provide barrier-free access to activity areas, seating with back support, non-slip surfaces, supporting railings and inclusive signage that are conveniently positioned relative to entrances and activity areas.

Elderly activity zones and children's play areas side by side

Refer to **2.2a**

Seating with back support

Refer to **2.2d**

TIPS for 2.2a

Mixing uses aiming for different age groups may create more opportunities for inter-generational interaction, such as mixing tai chi platforms or elderly fitness corner with children's play areas, depending on the type of activities and case-by-case evaluation. Ground markings can be used to indicate multiple uses.

TIPS for 2.2d

The provision, positioning and design of toilets require special attention as this can affect the desire of the elderly and people with disabilities for physical activity and their ability of independence.(5)

TIPS for 2.2d

The use of pictures, info-graphics, large-font text and audible signage as well as suitable position of the signage can contribute to inclusiveness.

Inter-generational play equipment

Yi Pei Square Playground, Tsuen Wan, Hong Kong

Refer to **2.2c**

© Leisure and Cultural Services Department

Equipment for play and exercise

Fitness trail in Kowloon Park, Hong Kong

Refer to **2.2c**

© Jockey Club Design Institute for Social Innovation, PolyU

Inclusive element incorporated in playground design

Tuen Mun Park Inclusive Playground, Hong Kong

Refer to **2.2d**

© Leisure and Cultural Services Department

OBJECTIVE 2.3

Design active destinations to be usable during all times and seasons

a **Consider climatic pre-conditions to improve outdoor thermal comfort.**

Consider prevailing wind directions and sun exposure in the design and positioning of active destinations.

b **Design sheltered areas.**

To make the space usable throughout the seasons, include areas that are sheltered from sun, rain and wind.

c **Select suitable trees and plants that can provide shade.** (6) (7)

Good landscape design with appropriate tree species can improve the microclimate and encourage activity during hot summer days.

d **Select landscape and greenery that can retain sightlines for natural surveillance and enhance the sense of security.**

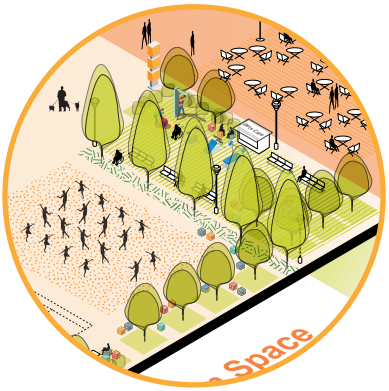
e **Use high albedo materials that help cool down activity spaces.**

High albedo surfaces such as wooden boards, light colour granite and glass can be considered.

f **Select porous materials that are fast draining for flooring of paths, play areas and activity areas.**

g **Use appropriate lighting to improve night-time use and enhance the ambience.**

Even lighting levels can make a space feel safe without dazzling glares.



Appropriate landscape and greenery could retain sightlines for natural surveillance

Refer to **2.3d**

TIPS for 2.3a

Strategic placing of waterbodies or water spray can further improve the outdoor comfort levels.

TIPS for 2.3d

Select appropriate plant species and conduct appropriate vegetation maintenance works to avoid obstructing sightlines.

Trees and plants provide shade and improve outdoor thermal comfort

Cycle track near Shing Mun River, Hong Kong

Refer to **2.3c**

High albedo surfaces used for pavement

Aldrich Bay Promenade, Hong Kong

Refer to **2.3e**

Good lighting enhances active destinations and encourages use at night

Sun Yat Sen Memorial Park, Hong Kong

Refer to **2.3g**

OBJECTIVE **2.4**

Create opportunities for spontaneous activities

a **Use different surface materials, colours and patterns to encourage spontaneous activities.**

b **Incorporate elements with aesthetic values that can attract people to spontaneously visit an active destination.** (4)

Unique landscape, greenery, water features or interactive art can be used to draw people into an active space.

c **Consider how sensory experiences relating to sound, smell, sight and touch can be used to encourage spontaneous activities.**

d **Use signage to convey the presence of a sensory experience.**

People with greater sensory sensitivity may wish to avoid certain sensory experiences and should be given the choice to do so.

Use signage to convey the presence of a sensory experience

© Shelagh Smith

Refer to **2.4c** & **2.4d**

TIPS for **2.4b** & **2.4c**

Engage local communities in the selection and positioning of elements or sensory experiences and consider reflecting unique historical or cultural elements of the area.

TIPS for **2.4c**

A walking trail that passes through a fragrant garden with colourful thematic planting and birdsong can encourage people to take additional steps.

Signage and flooring material encourage physical activities

Siu Sai Wan Promenade, Hong Kong

Refer to **2.4a**

© Arup

Colourful ground painting promotes spontaneous activities

Wan Chai Promenade, Hong Kong

Refer to **2.4a** & **2.4b**

© Arup

Water feature encourages spontaneous activities

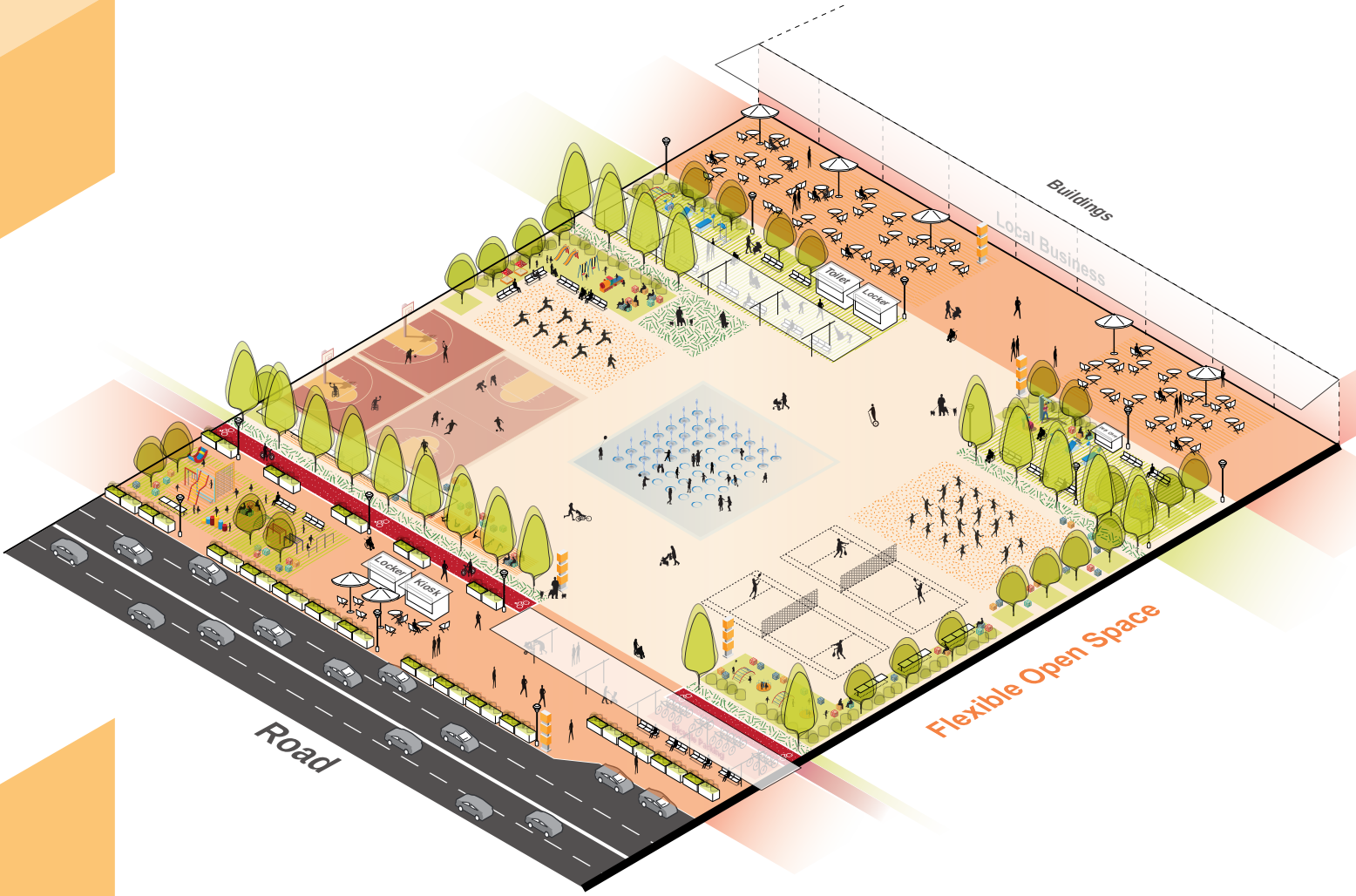
Madrid Rio Park, Madrid, Spain

Refer to **2.4b**


© Arup

2 ACTIVE DESTINATIONS

Creating locations accommodating a wide range of physical activities



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3 ACTIVE WALKING JOURNEY

This topic seeks to build on the culture of walking and encourage people to walk more often for sustained distances and along more physically challenging routes. It considers how the pedestrian environment can be safe and sheltered, and the ease with which pedestrians can navigate the pedestrian realm and orientate themselves. To increase their physical activity levels, pedestrians are encouraged to take advantage of Hong Kong's varied topography and walking along more physically challenging routes via outdoor stairs.

OBJECTIVE 3.1

Create a safe and inclusive pedestrian environment

OBJECTIVE 3.2

Create pedestrian environments that are comfortable and attractive during all times and seasons

OBJECTIVE 3.3

Encourage sustained walking journeys

OBJECTIVE 3.4

Encourage the use of more physically challenging routes along outdoor stairs and ramps

OBJECTIVE 3.1
Create a safe and inclusive pedestrian environment

a **Embed inclusive design in pedestrian environment.**

Provision of dropped curbs, non-slip surfaces and wider traffic islands to enhance the accessibility for wheelchair users, elderly pedestrians and those with strollers. (1)

b **Provide sufficiently wide pavement that can accommodate dual direction pedestrian flow.**

Sufficient pavement space allows overtaking and accommodates pedestrians walking at different speeds.

c **Accommodate pedestrian routes at-grade and avoid excessive change of levels.**

d **Design inclusive signage and wayfinding to cater for people with different abilities and needs.**

Font sizes, colour language and translation devices contribute to a more inclusive environment.

e **Provide street furniture and pocket spaces that can serve as resting areas.**

The provision of resting areas can give elderly pedestrians confidence to undertake longer journeys.

f **Use street furniture and landscape strips to create buffer between pedestrians and vehicles.**

The position of greening and street furniture can provide a natural barrier between pedestrians and vehicles

Refer to **3.1f**

TIPS for **3.1d**

"Braille Neue" on Page 79 can be used to cater for people with or without visual impairment.

TIPS for **3.1e**

Planter walls integrated with seating can be a space-efficient way of supplementing resting areas whilst enhancing the aesthetic and thermal qualities of the pedestrian environment.

Inclusive pedestrian crossing with dropped curbs

Paris, France

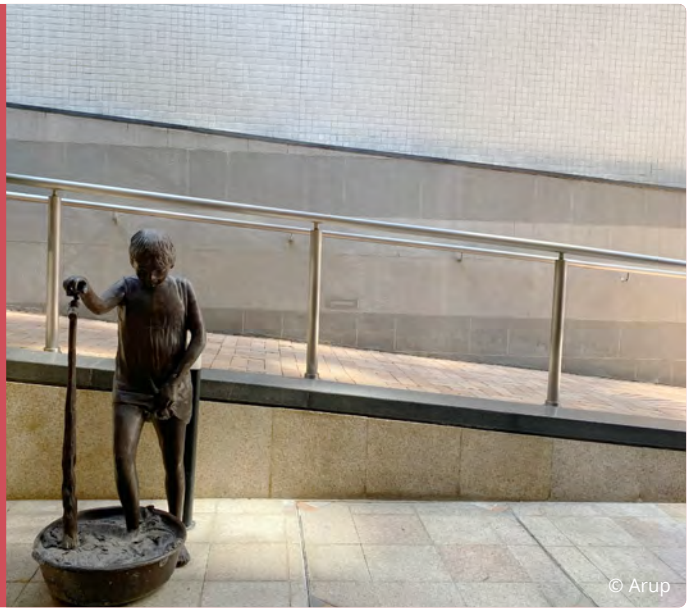
Refer to **3.1a**

© Vlad B / Unsplash.com

Ramp with appropriate inclines and good flooring and railing materials

The Nova, Third Street,
Hong Kong

Refer to **3.1a**



© Arup

Pavement with sufficient width and seating

Melbourne, Australia

Refer to **3.1b** & **3.1e**

© Mitchell Luo / Unsplash.com

OBJECTIVE 3.2

Create pedestrian environments that are comfortable and attractive during all times and seasons

a **Provide trees and thematic plantings that provide shading and water features for cooling to enhance the outdoor thermal comfort and aesthetic of the environment.** (2) (3)

b **Use non-slip and porous paving materials that are fast-draining in wet weather.**

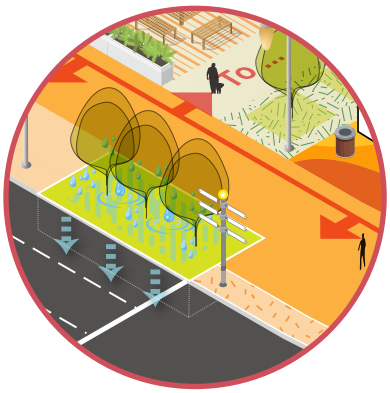
c **Use appropriate lighting to highlight places of interest and enhance the sense of safety.**

d **Use high albedo materials to reduce radiant temperature.**

e **Provide continuous building canopies (as appropriate), covered walkways and sheltered seating as a form of weather protection for pedestrians.**

Integrate tree canopies into prominent pedestrian routes to improve the comfort level

Refer to **3.2a**



Provide water retention areas to respond to extreme weather with heavy rainfall

Refer to **3.2b**

TIPS for 3.2c

Balanced lighting levels can avoid dazzling glare and illuminate people's faces to provide a sense of safety.

CROSS-REFERENCE for Guideline 3.2e

Consider continuous building canopies (as appropriate) and connected covered walkways to provide a weather protected passageway between destinations, please refer to **Guideline 5.1b**

Suitable trees provide shading to pedestrian environment

La Salle Road, Hong Kong

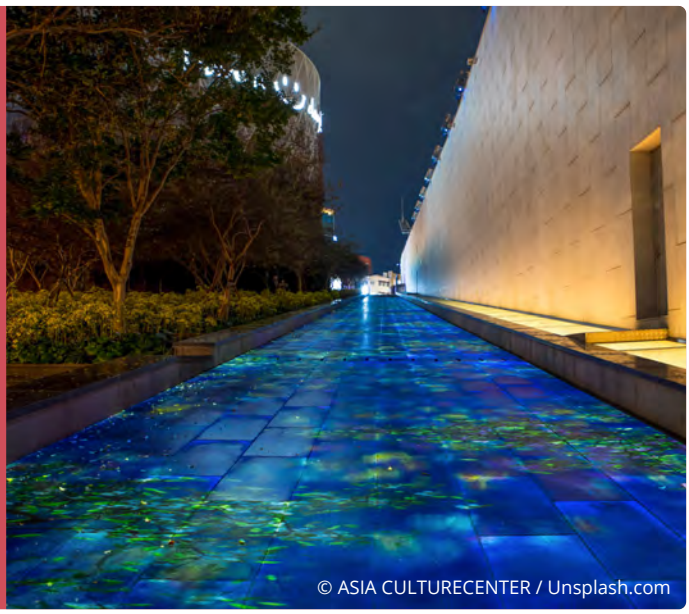
Refer to **3.2a**

© Development Bureau

Combination of trees and lighting enhances the attractiveness of pedestrian environment

Asia Culture Center, Chungjang-dong, Gwangju Metropolitan City, South Korea

Refer to **3.2a** & **3.2c**



© ASIA CULTURECENTER / Unsplash.com

Lighting creates a pleasant night-time walking experience

Nanjing Road Pedestrian Street, Shanghai, China

Refer to **3.2c**

© Krzysztof Kotkowicz / Unsplash.com

OBJECTIVE 3.3
Encourage sustained walking journeys

a **Shape the pedestrian environment to reflect unique characteristics of an area.**

The visual interest and attractiveness of the pedestrian environment can encourage people to walk more.

b **Use signage or floor painting to create awareness of nearby points of interests.**

Stimulating the curiosity of pedestrians can encourage spontaneous exploration, resulting in sustained walking journeys.

c **Use signage or paving design to convey walking distance and duration to prominent destinations.**

Providing walking distance, direction and duration to prominent destinations through attractive signage and ground markings can encourage pedestrians to extend their walking journeys.

d **Explore smart initiatives to encourage pedestrians to visit destinations further afield.**

Providing interactive wayfinding services can inform people of interesting or relevant routes and places nearby while enhancing the efficiency of street navigation.

Use of visual cues to create awareness of nearby points of interest

Refer to **3.3b**

The "HKeMobility" mobile application provides user-friendly information on walking routes. The walking route search function also offers barrier-free route options for people with viusal or mobility disabilities.

Refer to **3.3d**

TIPS for 3.3a

The selection of distinct colours, materials and forms of street furniture; creation of attractive focal points (e.g. 'Instagram-able spot); incorporation of local artworks and sculptures; references to historic buildings and landmarks; or creation of thematic routes can create attractive and interesting journeys.

Art installation and unique features make pedestrian environment more interesting

Avenue of Stars, Tsim Sha Tsui, Hong Kong

Refer to **3.3a**

Signage indicating direction and time to reach destinations

Star Ferry Pier, Tsim Sha Tsui, Hong Kong

Refer to **3.3b** & **3.3c**

Smart and interactive wayfinding services encourage pedestrians to extend their journeys

The Shops at Clearfork, Fort Worth, Texas, United States

Refer to **3.3d**

OBJECTIVE 3.4

Encourage the use of more physically challenging routes along outdoor stairs and ramps

a **Reconnect pedestrian networks or building entrances to existing outdoor stairs and ramps directly and enhance stair/ramp environment to encourage higher usage.**

b **Consider how outdoor stairs and ramps can be design features to enhance the attractiveness to the surrounding community.**

c **Make use of Point of Decision Prompts (PODP)**

PODP creates awareness of the presence of outdoor stairs and encourage pedestrians to take the more physically challenging route via an outdoor stairs.

d **Consider placing outdoor stairs at strategic locations to enhance connectivity and stair usage between existing and new neighbourhoods.**

Providing an attractive stair design may encourage usage

Refer to **3.4b**

TIPS for **3.4a**

Use elements such as street lighting, greening, artwork, street furniture, decorations, themed stairs or ludic / playful interventions to make new stairs interesting or provide a "face-lift" to existing stairs.

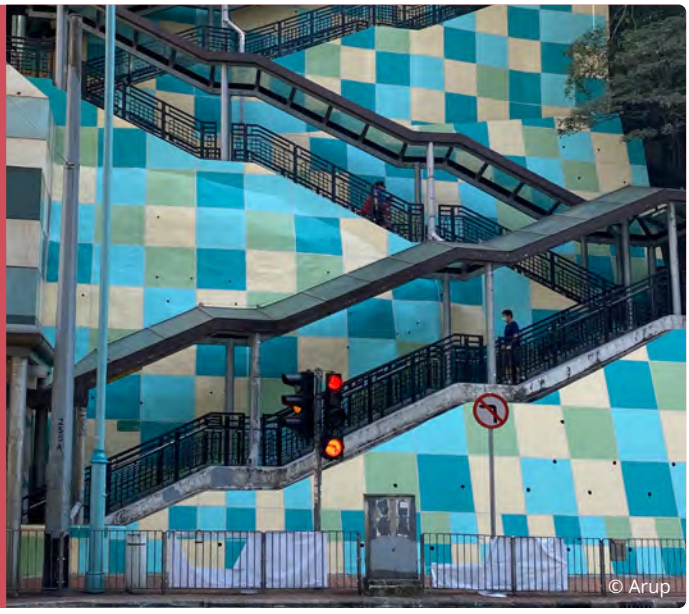
CROSS-REFERENCE for **Objective 3.4**

For further guidance on how stairs can be made more inclusive, refer to **Objective 7.3.**

Attactive design of staircase

Pedestrian Connection, Fortress Hill, Hong Kong

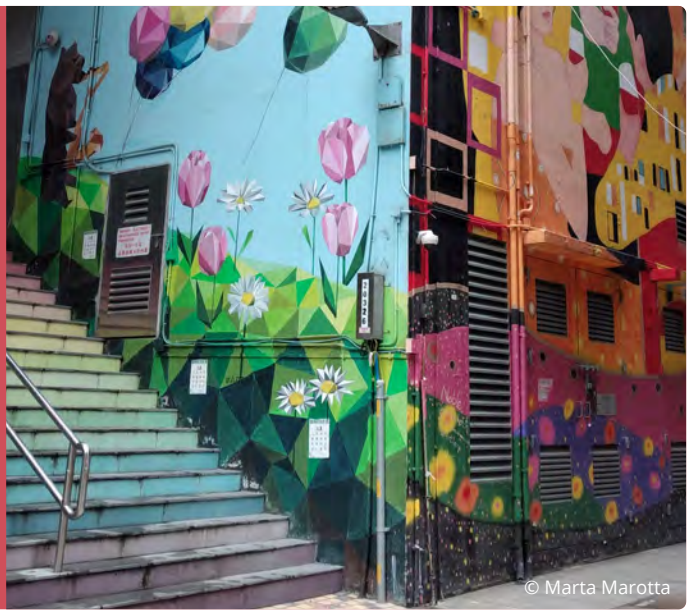
Refer to **3.4b**



Artistic impression enhances the walking environment near outdoor stairs into a local interest point

ArtLane, Sai Ying Pun, Hong Kong

Refer to **3.4b**



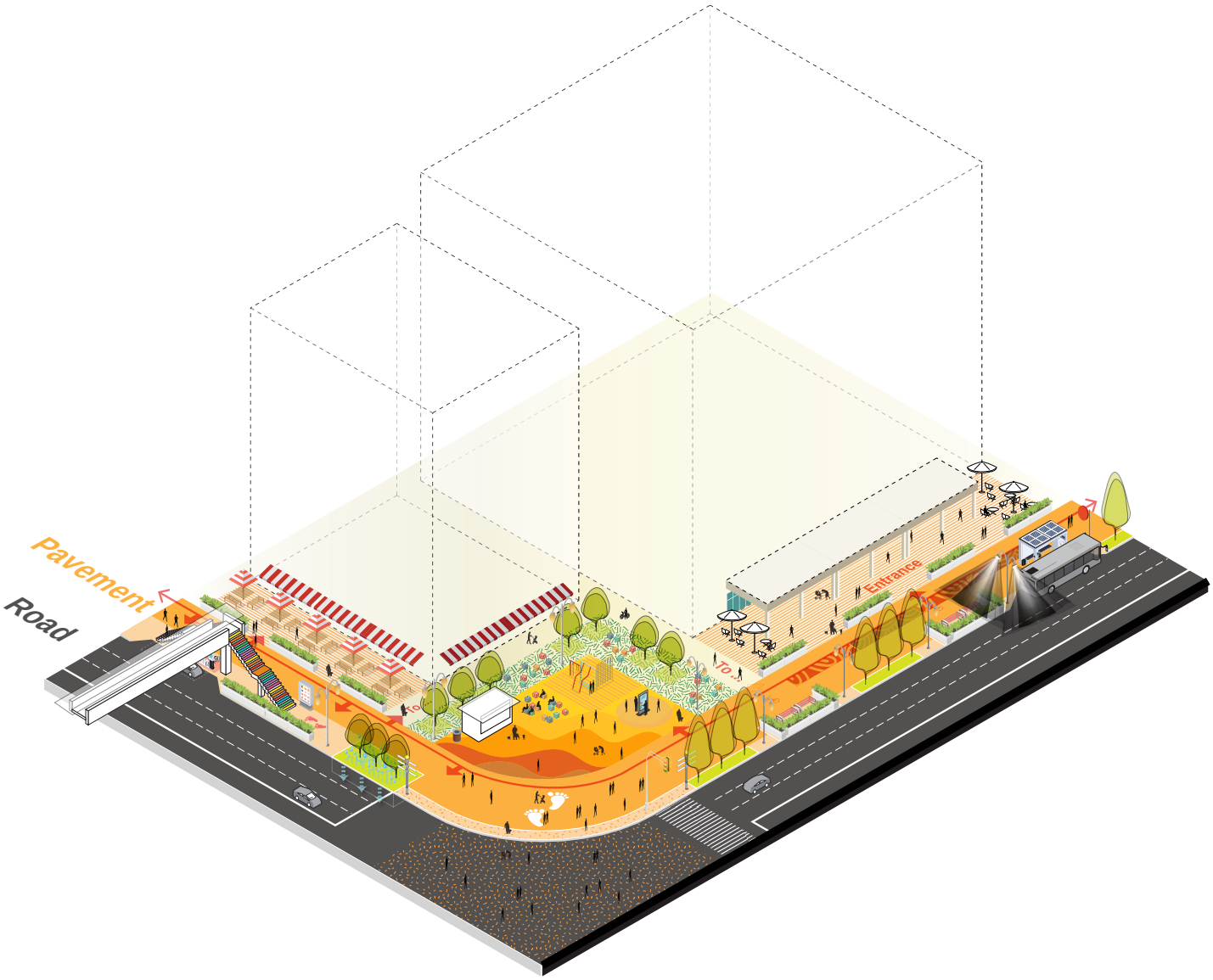
PODP directs pedestrians to take a more physically challenging route via an outdoor stairs

Simulated PODP at Tung Chung Waterfront Road, Tung Chung, Hong Kong

Refer to **3.4c**

3 ACTIVE WALKING JOURNEY

Encouraging more people to walk more often and longer



ENDNOTE

1. Buildings Department (2008): Design Manual: Barrier Free Access 2008, online and accessed on 28.12.2021 https://www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/BFA2008_e.pdf

2. Greening, Landscape & Tree Management Section, Development Bureau (2018) Street Tree Selection Guide, online and accessed on 28.12.2021 https://www.greening.gov.hk/filemanager/greening/en/content_118/Full_report.pdf

3. Civil Engineering and Development Department (2004) Greening Master Plans, online and accessed on 28.12.2021 https://www.cedd.gov.hk/eng/topics-in-focus/greening/index.html

4 ACTIVE MOBILITY

Incorporating active mode of transport as part of daily routine can increase physical activity levels. This topic considers that with the appropriate infrastructure and supporting facilities, how walking and cycling can be part of daily commutes and first/ last mile journeys to public transport nodes. In addition to encouraging active mode of transport, this topic also creates preconditions for encouraging recreational cycling.

OBJECTIVE 4.1

Connect and expand existing pedestrian and cycling networks

OBJECTIVE 4.2

Provide supporting infrastructure along pedestrian and cycling routes

OBJECTIVE 4.3

Create convenient ways of transitioning to active modes

OBJECTIVE 4.1

Connect and expand existing pedestrian and cycling networks

a **Connect new developments with existing pedestrian networks and active destinations.**

New projects offer an opportunity to enhance pedestrian and cycling networks by providing connections between destinations frequented as part of a daily routine.

b **Where new developments are located in proximity to an existing or planned cycling route, allow sufficient space provision to connect the cycling network in future.**

c **For developments within walking distance to public transport hubs, give priority to active modes of transport.**

Active modes such as walking and cycling can be prioritised through space allocation and by slowing down vehicular traffic. Such prioritisation should consider spatial, technical and maintenance issues.

d **Create multi-level pedestrian networks connecting commercial, residential, recreational and community uses.**

Add pedestrian walkway and cycle track to new infrastructure, such as vehicular bridges, to connect and expand the existing pedestrian and cycling networks

© Planning Department

Refer to **4.1a**

TIPS for 4.1c

This may include shared use of road, designation of pedestrian priority area / part-time pedestrianisation, expanding pavement width and cycle track markings (e.g. LED).

Provide pedestrian subways and walkways to enhance connectivity

Lee Tung Avenue, Wan Chai, Hong Kong

Refer to **4.1a**

© Arup

Vehicular traffic calming measure through curb-buildouts and narrowing of carridgeway to prioritise pedestrians

Hankow Road, Tsim Sha Tsui, Hong Kong

Refer to **4.1c**

© Arup

Road markings that indicate priority is given to active modes of transport

Traffic calming project on the outskirts of Komae Station, Tokyo, Japan

Refer to **4.1c**

© Clark Parker (The Tokyo Files)

OBJECTIVE **4.2**

Provide supporting infrastructure along pedestrian and cycling routes

a **Provide rest areas, cycle parking and bike repair stations at suitable locations.**

The provision of supporting facilities such as seating, drinking fountains, washrooms, kiosks as well as cycle rental and accessories shops can encourage walking and cycling.

b **Use innovative design to combine supporting infrastructure with rest stations.**

This will increase the convenience for certain active commuters and avoids visual cluttering or obstructions in constrained pedestrian environments.

TIPS for **4.2b**

Resting area can be combined with bike repair station for higher impact.

Provide rest areas near pavement and cycle track

Refer to **4.2a**

Provide cycle parking and bike repair stations along cycling track

Refer to **4.2a**

Provision of cycle parking adjacent to public toilet along cycle track

Tung Chung, Hong Kong

Refer to **4.2a**

Attractive cycle parking complemented with maintenance tools such as bike pumps

New Town Plaza, Shatin, Hong Kong

Refer to **4.2a**

Resting area combined with bike repair station

Beli Manastir, Croatia

Refer to **4.2b**

OBJECTIVE 4.3

Create convenient ways of transitioning to active modes

a **Design safe, convenient and attractive routes connecting to public transport facilities.**[(1)]

To encourage the use of active modes of transport in conjunction with public transport.

b **Provide suitable supporting facilities at public transport nodes to facilitate switching to an active mode of transport during daily commutes.**[(2)]

c **Provide an active mode alternative to escalators/ lifts in connecting neighbourhoods with transport hubs.**

Encourage the use of public transport modes by enhancing accessibility and linking to frequently visited locations (e.g. shopping malls) with nearby public transport stations

© Arup

Refer to **4.3a**

TIPS for 4.3b

Supporting facilities such as benches, cycle parking[(2)] and storage facilities at public transport nodes that connect to cycling routes can add convenience to active commuters.

TIPS for 4.3c

Strategically placing Fare Savers such as next to stairs.

© Arup

Adding benches and weather protection to public transport stations to enhance commuting experience

Central Station, Amsterdam, The Netherlands

Refer to **4.3a**

© Fons Heijnsbroek

Provision of a bike repair station near major transport hub

Paddington Station, London, United Kingdom

Refer to **4.3b**

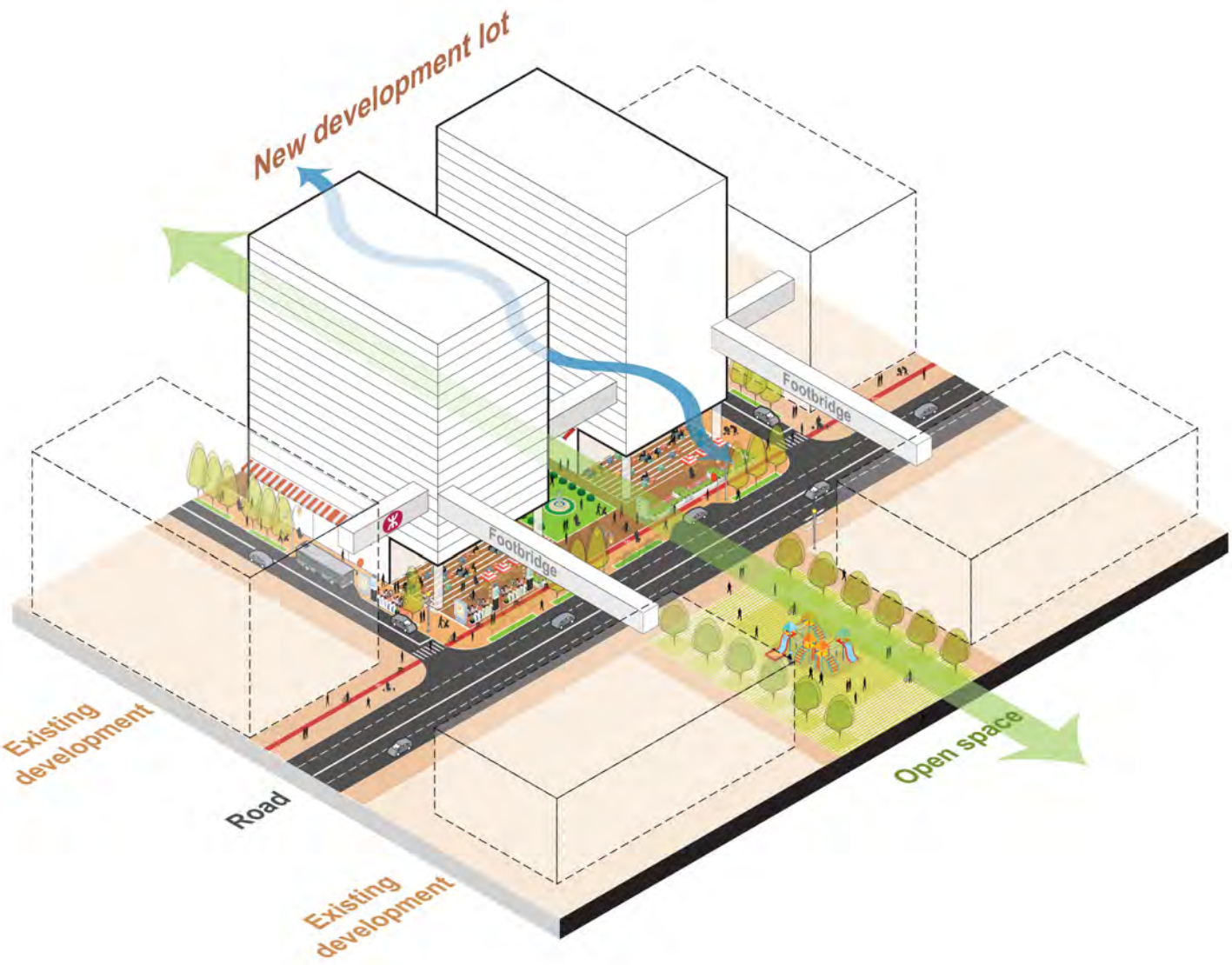

© Cyclehoop

Station exit that provides an active alternative to escalator for next stage of the journey

Near MTR Fortress Hill Station, Hong Kong

Refer to **4.3c**


© Arup



ENDNOTE

1. Planning Department (2021) Hong Kong Planning Standards and Guidelines (Section 4.1.13 of Chapter 8), online and accessed on 28.12.2021 https://www.pland.gov.hk/pland_en/tech_doc/hkpsg/full/pdf/ch8.pdf

2. Transport Department (2021) Transport Planning and Design Manual Chapter 2 Volume 9, Hong Kong: HKSAR Government

ACTIVE DESIGN GUIDELINES AT BUILDING LEVEL

Active design at the building level refers to interventions relating to a building and development. It requires holistic consideration of the provision and positioning of active spaces and facilities together with active routes within building at early planning and design stage to encourage occupants more movement throughout the day. It also considers how building frontages can contribute to a vibrant and safe pedestrian realm.

ACTIVE DESIGN GUIDELINES AT BUILDING LEVEL


5 ACTIVE BUILDING FRONTAGE
6 ACTIVE SPACES AND FACILITIES
7 ACTIVE ROUTES
8 STRATEGIC POSITIONING OF BUILDING FUNCTIONS
GROCERY
RESTAURANT
CAFE

5 ACTIVE BUILDING FRONTAGE

- **5.1** Encourage building façades that enhance the pedestrian experience
- **5.2** Encourage permeable building façades
- **5.3** Create vibrant pedestrian environment

6 ACTIVE SPACES AND FACILITIES

- **6.1** Provide active spaces at the building level
- **6.2** Provide facilities that encourage an active lifestyle
- **6.3** Locate spaces and facilities for optimal use and flexibility

7 ACTIVE ROUTES

- **7.1** Promote interesting and active routes
- **7.2** Encourage a more active use of building connections
- **7.3** Design inclusive stairs to cater for different users' needs
- **7.4** Use wayfinding to encourage the use of active routes

8 STRATEGIC POSITIONING OF BUILDING FUNCTIONS

- **8.1** Strategically place frequently visited destinations to encourage walking
- **8.2** Cluster complementary building functions to encourage physical activity

5 ACTIVE BUILDING FRONTAGE

Active building frontages with vibrant ground-level activities have a high degree of impact on the quality of the pedestrian environment and pedestrian experience. This topic discusses the positive impact of visually permeable façades in contributing to a vibrant and safe street environment. Façades that look onto active destinations or vibrant streets can also serve as a visual reminder of active destinations. These elements play a role in creating preconditions for the "Active Walking Journey" as well.

OBJECTIVE 5.1

Encourage building façades that enhance the pedestrian experience

OBJECTIVE 5.2

Encourage permeable building façades

OBJECTIVE 5.3

Create vibrant pedestrian environment

OBJECTIVE 5.1

Encourage building façades that enhance the pedestrian experience

a **Position buildings and façades to maximise air ventilation and permeability of the pedestrian environment.**

b **Incorporate building overhangs (1) and tree shading to create a weather-protected pedestrian environment.**

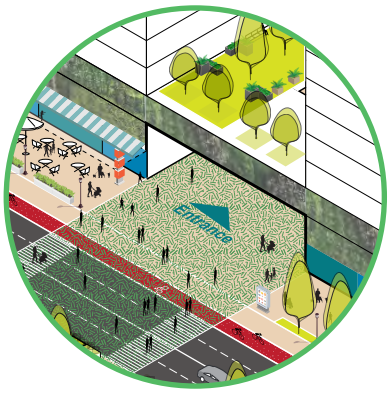
Select designs that do not require supporting structures and keep pavement areas unobstructed.

c **Make the pedestrian journey along the building façades appealing and interesting to encourage walking.**

Active street environment can be achieved by having more building entrances / openings / pocket spaces; public accessibility; or articulating building entrances and façades to contribute to street legibility.

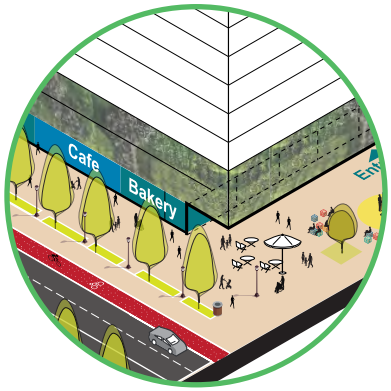
d **Select façade designs and treatments that reduce pedestrian heat stress.**

Tree planting, green walls, water features and building materials with high albedo effect can contribute to reducing pedestrian heat stress.



Articulate entrance areas and connect them to pedestrian routes to encourage walking

Refer to **5.1c**



Use green façades to reduce heat-island effect at pedestrian level

Refer to **5.1d**

TIPS for 5.1c

Exploring changes in architectural expression and placing physical breaks in form of entrances, stairs, setbacks and uses can help break up long building façades.

Unobstructed space underneath canopy without supporting structures

Harbour North, North Point, Hong Kong

Refer to **5.1b**

Building façades contribute to street legibility

Shanghai Street, Hong Kong

Refer to **5.1c**

Green façades help cool the pedestrian environment

PARKROYAL COLLECTION Pickering, Upper Pickering Street, Singapore

Refer to **5.1d**

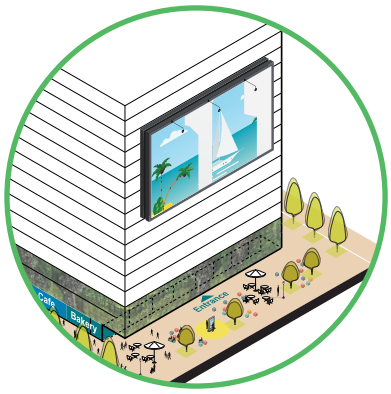
OBJECTIVE 5.2
Encourage permeable building façades

a **Arrange building openings to be street-facing to enable natural surveillance onto the street.**

b **Place window openings towards attractive vistas of open space and vibrant streetscape to attract occupants to step out and enjoy these places for a walk or other physical activity.**

c **Position media walls, advertisements and signage boards away from building entrances to maintain visual permeability at lower building levels.**

Provide glass façade and openings to connect indoor and outdoor space.



Position media walls and signage boards to avoid blocking visual connectivity at lower building level

Refer to **5.2c**

TIPS for 5.2a

Design fences and walls at suitable height to balance the need for surveillance and other security measures.

Windows that overlook the pavement to enable natural surveillance

Old Hill Street Police Station, Singapore

Refer to **5.2a**

Glass façade that allows occupants to see nearby open space and streetscape

Three Pacific Place, Wan Chai, Hong Kong

Refer to **5.2b**

Glass façade that visually connects indoor and outdoor activities

Taikoo Place, Quarry Bay, Hong Kong

Refer to **5.2b**

OBJECTIVE 5.3
Create vibrant pedestrian environment

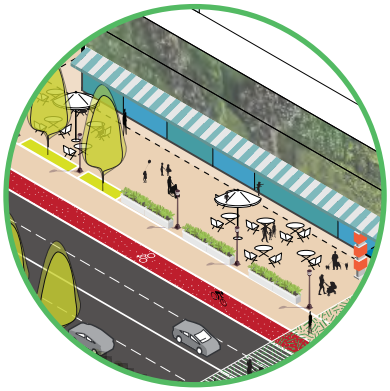
a **Prioritise vibrant street-level uses that can attract occupants and passers-by.**

Street-level commercial activities such as al fresco dining, artwork display, etc. can entice passive occupants to walk to a nearby destination.

b **Consider building setbacks to create space at street level for varied human activities.**

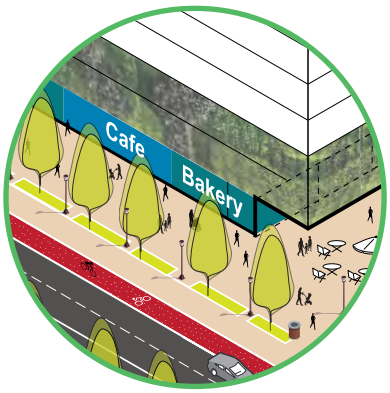
c **Encourage fine-grained uses and frequent shopfronts at street level.**

Neighbourhood shops such as cafes, bakeries and groceries contribute to human-scale street environment and provide greater variety of destinations to attract nearby building occupants.



Building setback at street level encourages outdoor activity

Refer to **5.3b**



Neighbourhood shops at street level contribute to human-scale pedestrian environment

Refer to **5.3c**

TIPS for 5.3b

Building setbacks and other types of non-building areas, ventilation corridors and / or emergency vehicular access at street level can contribute to a more generous and active pedestrian environment.

Al fresco dining at ground level enhances street vibrancy

The Hong Kong Museum of Art, Tsim Sha Tsui, Hong Kong

Refer to **5.3a**

Ground floor retail uses attract nearby building occupants and passers-by

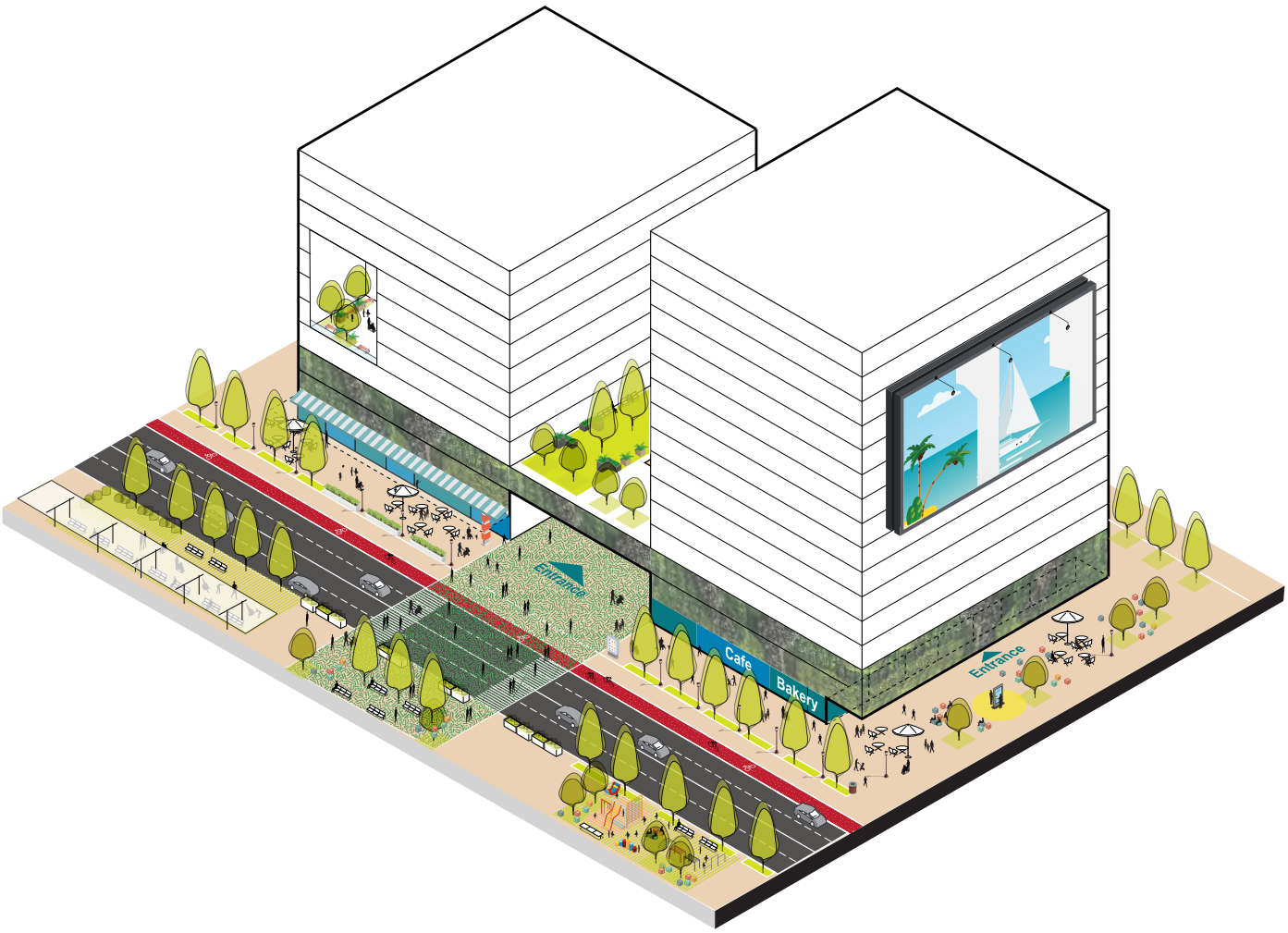
Lee Tung Avenue, Wan Chai, Hong Kong

Refer to **5.3a**

Placing supermarket at street level to encourage shopping trips instead of online shopping

Po Loi Street, Hung Hom, Hong Kong

Refer to **5.3c**



ENDNOTE

1. For the requirements of projections (including balconies, canopies, awnings and signboards etc.) over streets:

   - HKSAR Government (2020) Cap. 123F Building (Planning) Regulations - Regulations 7 and 10, online and accessed on 29.12.2021 https://www.elegislation.gov.hk/hk/cap123F?xpid=ID_1438402647285_002
   - Buildings Department (2020) Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-19 - Projections in relation to Site Coverage and Plot Ratio - Building (Planning) Regulations 20 & 21, online and accessed on 29.12.2021 https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP019.pdf
   - Buildings Department (2020) Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-126 - Erection of Signboards, online and accessed on 29.12.2021 https://www.bd.gov.hk/doc/en/resources/codes-and-references/practice-notes-and-circular-letters/pnap/APP/APP126.pdf
   - Other relevant regulations / practice notes

6 ACTIVE SPACES AND FACILITIES

Active spaces within building can refer to podium and sky garden, rooftop spaces, exercise and multi-purpose rooms. This topic discusses how provision of active spaces / facilities and supporting facilities can create preconditions for more physical activities and active commuting. It also considers flexibility of use, thermal comfort and inter-generational design in making the spaces at the building level for various physical activities.

OBJECTIVE 6.1

Provide active spaces at the building level

OBJECTIVE 6.2

Provide facilities that encourage an active lifestyle

OBJECTIVE 6.3

Locate spaces and facilities for optimal use and flexibility

OBJECTIVE 6.1
Provide active spaces at the building level

a **Provide attractive and accessible open space at the building level to encourage usage.**

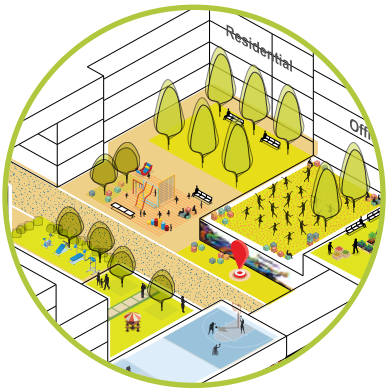
Quality open spaces with good views, natural ventilation and greenery that are protected from noise and pollutants.

b **Integrate multiple functions into active spaces with design elements to allow maximum flexibility in uses and meet different needs of users.**

c **Prioritise roof floors and podiums for recreational and physical activities.**

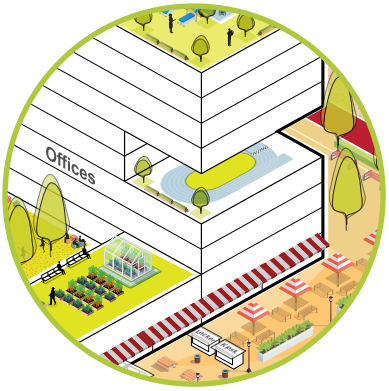
d **Create quiet areas within active spaces with landscape and greenery.**

Blending in quiet areas within active spaces could cater for occupants and visitors with a range of activity needs and encourage incidental activity.



Provision of open spaces for physical activities with greenery and protection from noise and pollutants

Refer to **6.1a**



Optimise access to physical activity by providing recreational areas on top or at refuge floor of building

Refer to **6.1c**

CROSS-REFERENCE for Objective 6.1

Guidelines for creating inclusive and intergenerational spaces under active destinations also have relevance to active spaces at building level. Please refer to **Objective 2.2.**

TIPS for 6.1a

Soundscape design tools can help control noise levels and maintain positive sounds in existing spaces. (1)

TIPS for 6.1b

Design ground markings that convey multi-functionality without creating barriers.

TIPS for 6.1c

Introducing urban farming or community garden in rooftop spaces can attract visitation and thus contribute to higher levels of physical activity through tending the plants.

Quality open space with good views

Tamar Park, Admiralty,
Hong Kong

Refer to **6.1a**

Multi-functional playground through ground markings

Kai Yip Road, Kowloon Bay,
Hong Kong

Refer to **6.1b**

Landscape and planting create a quiet corner beside a playground on rooftop

K11 Musea, Tsim Sha Tsui,
Hong Kong

Refer to **6.1d**

OBJECTIVE 6.2
Provide facilities that encourage an active lifestyle

a Provide cycle parking and supporting facilities to support active commuting.

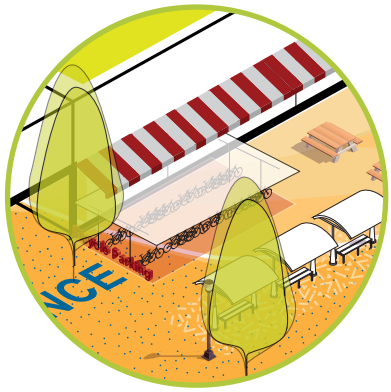
Providing occupants with supporting facilities, such as showers, toilets, lockers and changing facilities to facilitate active modes of transport.

b Provide active facilities such as workout area, gym, jogging track, etc. as iconic features with regard to tenant mix and age profile.

c Give priority to active facilities that are age-inclusive and accommodate recreational forms of exercise.

d Explore how spaces and facilities in existing buildings can be retrofitted to create active spaces and facilities.

Generally, industrial buildings have high floor loading capacity/headroom, and some school premises are provided with changing rooms and large activity space. Conversion into recreational spaces involving physical activities may be explored upon wholesale conversion of the existing building.



Provide cycle parking and supporting facilities to support active commuting

Refer to **6.2a**

Provide a mix of active facilities that is suitable for different ages

© Leisure & Cultural Services Department

Refer to **6.2c**

TIPS for 6.2b

Iconic features can be swimming pools, indoor running tracks or fitness rooms.

TIPS for 6.2c

A swimming pool designed with a shallow area and assisted entry points with non-slip steps and railings can cater for users swimming in laps, children wanting to splash and the elderly wanting to do water aerobics.

Changing rooms and lockers facilitate people to engage in physical activities and active modes of transports

End-of-trip facilities for Roden Cutler House, Sydney, Australia

Refer to **6.2a**

© Thomas Watson

Eco bike chargers at sky garden provide a convenient opportunity to exercise anytime

Hysan Place, Causeway Bay, Hong Kong

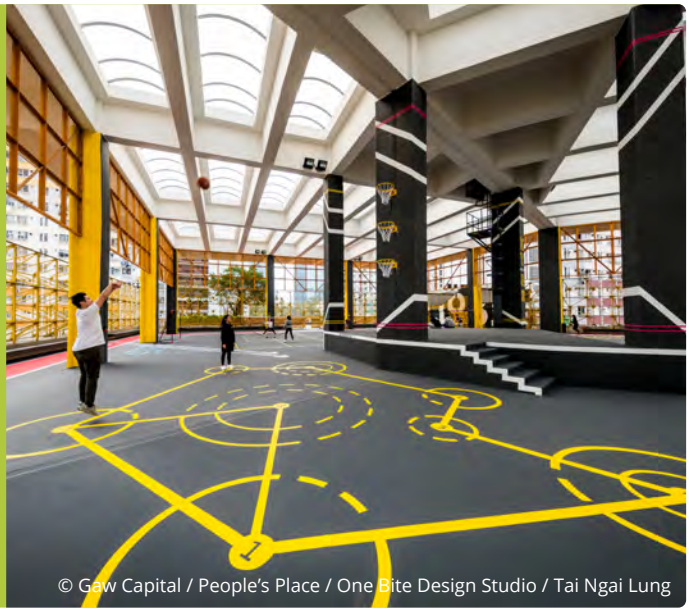
Refer to **6.2c**

© Arup

Ordinary basketball courts transformed into an active facility for different types of physical exercises

Kai Yip Road, Kowloon Bay, Hong Kong

Refer to **6.2d**



© Gaw Capital / People's Place / One Bite Design Studio / Tai Ngai Lung

OBJECTIVE 6.3

Locate spaces and facilities for optimal use and flexibility

a **In new buildings, position public open spaces to be visible from the pedestrian realm to encourage visit.**

b **Position physical activity spaces, active facilities and supporting facilities in visible, accessible and convenient locations.**

c **Position cycle parking and pedestrian access to be more convenient than vehicular access.**

Consider how other alternatives such as walking, cycling and public transit can be more readily available and convenient to occupants to reduce unnecessary travel by driving.

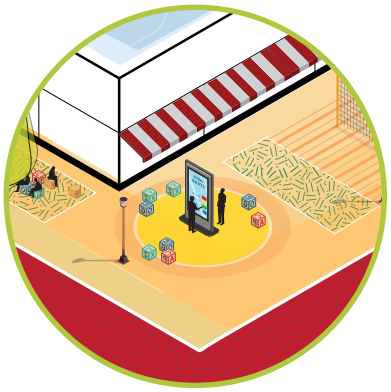
d **Use signage and wayfinding to create users' awareness of active spaces and facilities within building and direct users to the location thereof.**

e **Position private open spaces or facilities considering changing user pattern and how they can be utilised by the general public.**

By considering various future operational scenarios (private access only, semi-public access, public access), workspace or school playgrounds can be designed in a way that such facilities can be used by the general public after-hours.

Position public open spaces to be visible from the public realm

Refer to **6.3a**



Make use of signage and wayfinding to create awareness of activity spaces

Refer to **6.3d**

TIPS for 6.3a

The utilisation rate of active facilities can be increased by enclosure with glasses or lower balustrades which allows higher visibility.

TIPS for 6.3e

Demonstrate how public access will be possible without compromising the privacy, safety and intended use of the occupants.

Gym facilities at highly visible location in office environment

Honestbee Office, Singapore

Refer to **6.3b**

Cycle parking in convenient location close to building entrance

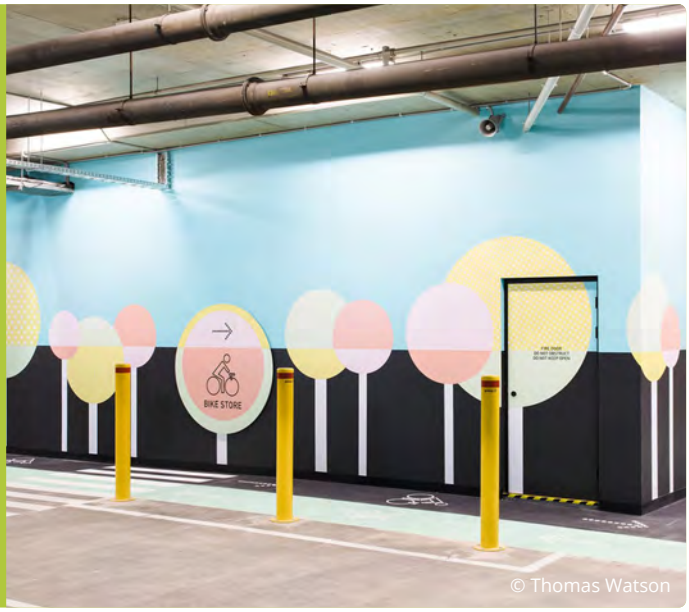
The Wings, Tseung Kwan O, Hong Kong

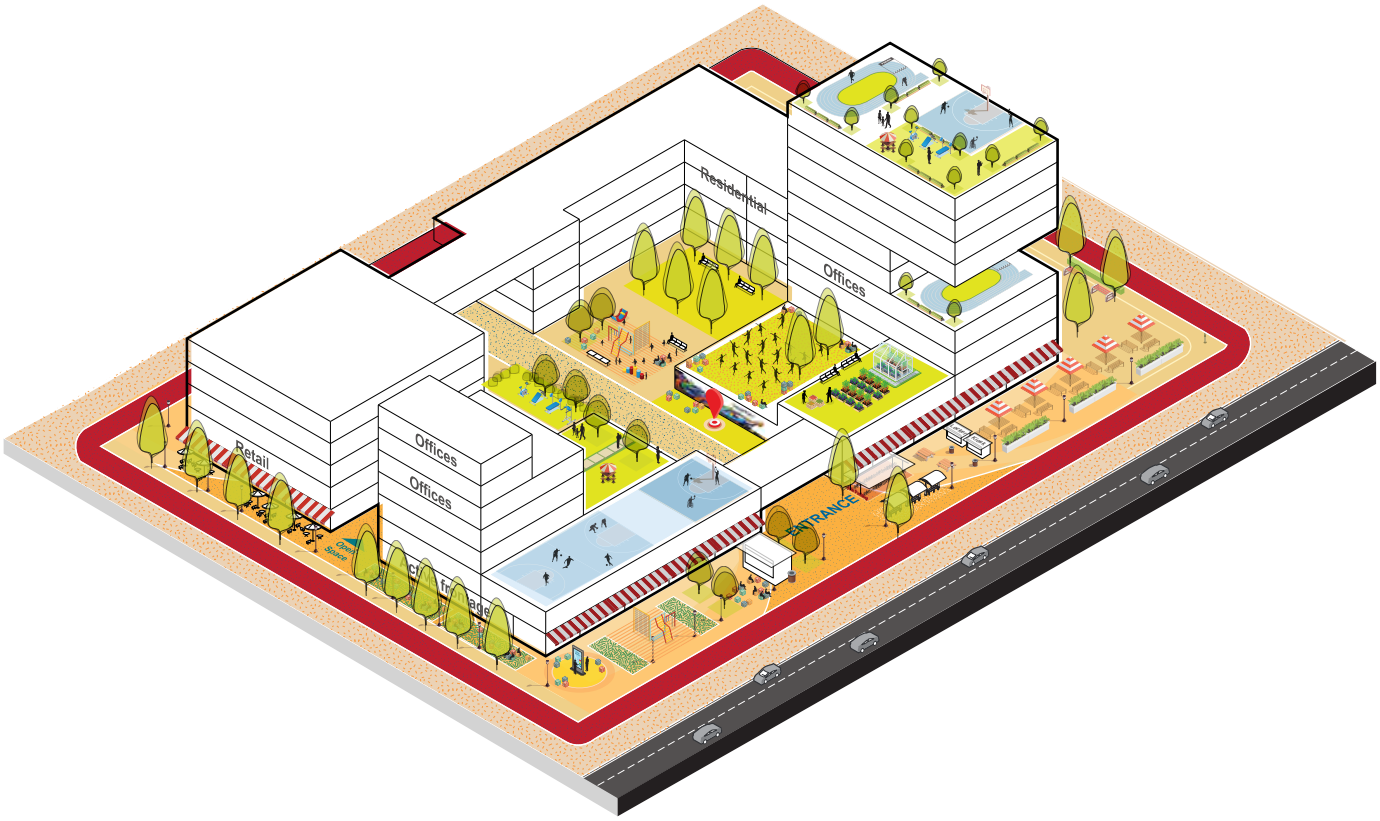
Refer to **6.3c**

Good signage to create awareness of availability of cycle parking area

BiC-Australia Headquarters, Melbourne, Australia

Refer to **6.3d**





ENDNOTE

1. Welsh Government (2018) Wales Noise and Soundscape Action Plan 2018-2023, online and accessed on 29.12.2021 https://gov.wales/sites/default/files/publications/2019-04/noise-and-soundscape-action-plan.pdf

2. Planning Department (2021) Hong Kong Planning Standards and Guidelines (Table 8 of Chapter 4 - Recreation, Open Space and Greening), online and accessed on 29.12.2021 https://www.pland.gov.hk/pland_en/tech_doc/hkpsg/full/pdf/ch4.pdf

7 ACTIVE ROUTES

Hong Kong is a vertical city defined by high-rise buildings. As many people live or work in multi-storey buildings, this presents opportunities to encourage occupants to take active routes between different destinations and levels within a building or development. This topic considers the integration of different building connections to create active routes within a building to encourage people to move more as part of daily intentional and unintentional physical activity.

OBJECTIVE 7.1

Promote interesting and active routes

OBJECTIVE 7.2

Encourage a more active use of building connections

OBJECTIVE 7.3

Design inclusive stairs to cater for different users' needs

OBJECTIVE 7.4

Use wayfinding to encourage the use of active routes

OBJECTIVE **7.1**

Promote interesting and active routes

a **Create stairs, steps, ramps(1), and sky-bridges as attractive architectural features to connect various functions and destinations.**

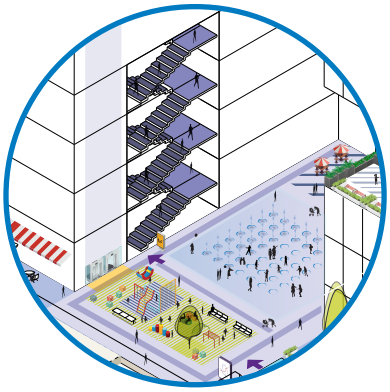
These building elements have the potential to accommodate unique and creative ideas contributing to higher activity levels of occupants and become symbolic features of the development.

b **Design stairs, steps and ramps not only fulfil basic requirements but also comfortable to use.**

Internal circulation routes should be wide enough to allow people to easily travel in two directions or abreast when accompanied by a carer.

c **Design healthy stairs for buildings.**

Such stairs should offer a safe and easily accessible alternative to lifts and escalators, create a logical link between publicly accessible areas while maintaining reasonable security, and be more attractive and user-friendly than standard fire-rated stairs.



Encourage the design and visibility of vertical connections within buildings

Refer to **7.1b**

Create active environments by creating healthy stairs

Refer to **7.1c**

Ramp as architectural feature taking advantage of natural light, internal vistas and outside views

Cocoon, Zurich, Switzerland

Refer to **7.1a**

© Evolution Design

Stairs as architectural feature that exceeds basic functional requirements

Tai Kwun Contemporary, Hong Kong

Refer to **7.1b**

© Arup

Visible fire-rated stairs with natural light and vistas offers easily accessible alternative to lifts

West Kowloon Government Offices, Hong Kong

Refer to **7.1c**

© Arup

OBJECTIVE **7.2**

Encourage a more active use of building connections

a **Position active routes in locations that are highly visible when entering the building.**

Stairs, sky-bridges or hallways should be as visible as elevators and escalator landing areas to encourage use thereof.

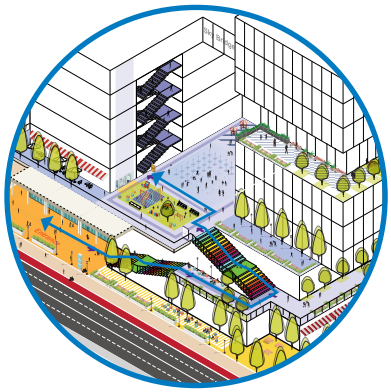
b **Consider the provision of integrated vertical circulation systems for travel between floors in buildings, without compromising barrier-free access.**

c **Position and design building connections that take advantage of natural light and vistas.**

Views from within, both to indoor and outdoor areas, often contribute to improved orientation within a building and promote more walking.

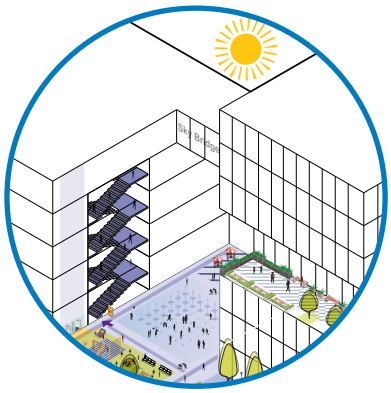
d **Use design to improve orientation and ambience in existing and new building connections.**

The connection between different functions shall be visible and the vertical connection such as stairs shall be placed at a prominent location.



Include stairs as part of the route to enter the building

Refer to **7.2a**



Allow natural light penetrate vertical connections, such as staircases

Refer to **7.2c**

TIPS for 7.2b

The use of a skip-stop elevator system could encourage stair use amongst able-bodied travellers. In such a system, most elevators stop only on designated floors.

TIPS for 7.2c

Replacing solid fire-rated doors with fire-exit compliant doors that have vision panels to visually connect the stair environment with the outside.

Stairs positioned in visible location at building entrance

Technological and Higher Education Institute of Hong Kong (Chai Wan Campus), Hong Kong

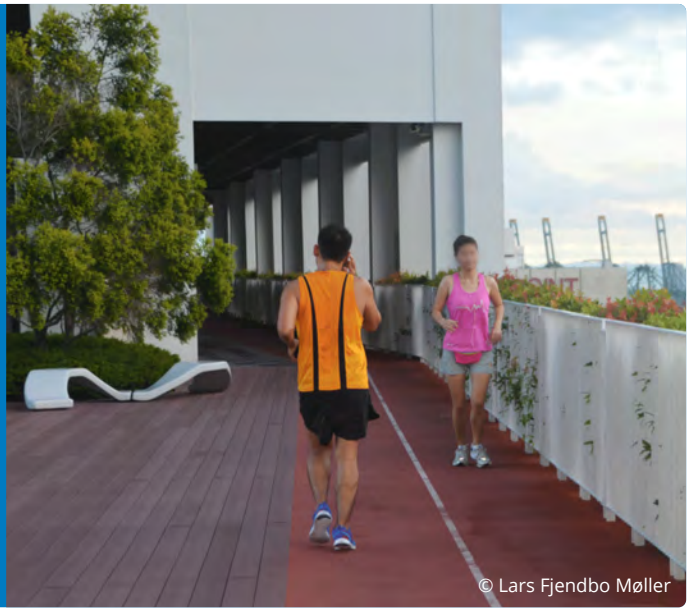
Refer to **7.2a**

© Arup

Sky-bridge designed with great views and natural light

Pinnacle@Duxton, Singapore

Refer to **7.2c**


© Lars Fjendbo Møller

Visible stairs with natural light improves orientation within building

Hong Kong City Hall, Central, Hong Kong

Refer to **7.2c**


© Arup

OBJECTIVE 7.3

Design inclusive stairs to cater for different users' needs

a **Design stair treads and risers with consideration of comfort, safety and user-friendliness.**[(1)(2)]

Apply inclusive design on handrails and intermediate landings.

b **Make use of slip resistant treads and nosings and contrasting colours for the safety of stair users.**

c **Include places for rest and breaks along stairs.**

Resting places along stairs help encourage people with different level of fitness to take the steps.

d **Introduce hand-railing systems that can support different user groups.**

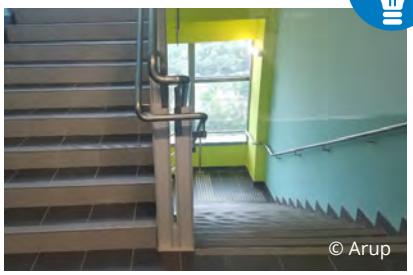
Provide interim resting spaces and include inclusive design elements when designing stairs

© Markus Birner

Refer to **7.3c**

TIPS for 7.3d

Hand railings at different heights can support different user groups.



© Arup

Gentle step risers and resting spaces enhance inclusiveness of the stairs

The Centrium Outdoor Stair, Central, Hong Kong

Refer to **7.3a** & **7.3c**

Use of different colour for stair tread, riser and nosing

PMQ, Central, Hong Kong

Refer to **7.3b**

An additional railing in the middle to improve safety

Yardbird, Wing Lok Street, Central, Hong Kong

Refer to **7.3d**

OBJECTIVE 7.4

Use wayfinding to encourage the use of active routes

a **Locate wayfinding systems at highly visible locations to show the location and alignment of active routes.**

Direct occupants to active routes if starting points of active routes are not directly visible from key location in buildings.

b **Place point of decision prompts (PODP) near lifts and escalators to motivate individuals to select active routes.**

Such motivational prompts should convey the benefits of taking an active route instead of a motorised route, e.g. health benefits or time saving compared to typical lift waiting times.

c **Make PODP and wayfinding legible and understandable for people with different needs.**

Place PODP near lifts, stairs and escalators to create awareness of active routes

Refer to **7.4b**

TIPS for 7.4a

Mobile phone apps and smart devices to show active routes or specific activities within a building or development.

© Arup

TIPS for 7.4b

Use colourful and informational prompt to encourage passengers to take the stairs instead of lifts or escalators.

© Arup

Distinctive wayfinding directs visitors to active route, destination and supporting facilities

Simulated signage near North Point Ferry Pier, Hong Kong

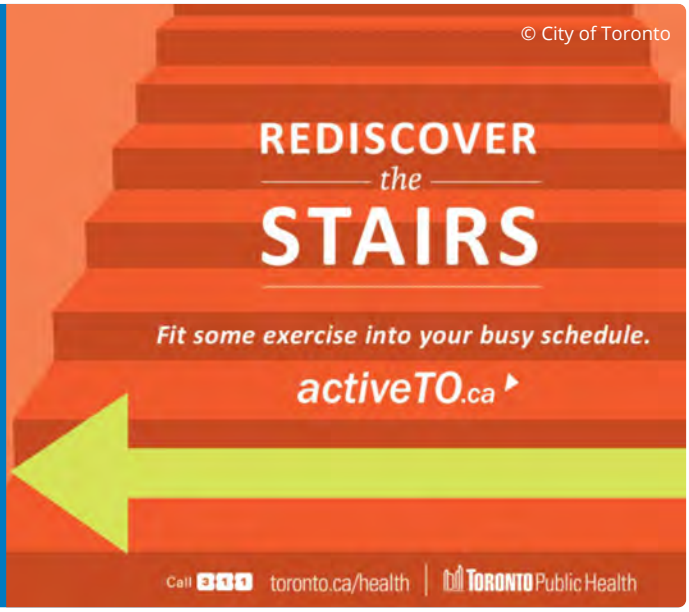
Refer to **7.4a**

© Arup

PODP makes occupants aware of active route alternatives and encourage the use thereof

Rediscover the stairs workplace toolkit, Toronto, Canada

Refer to **7.4b**



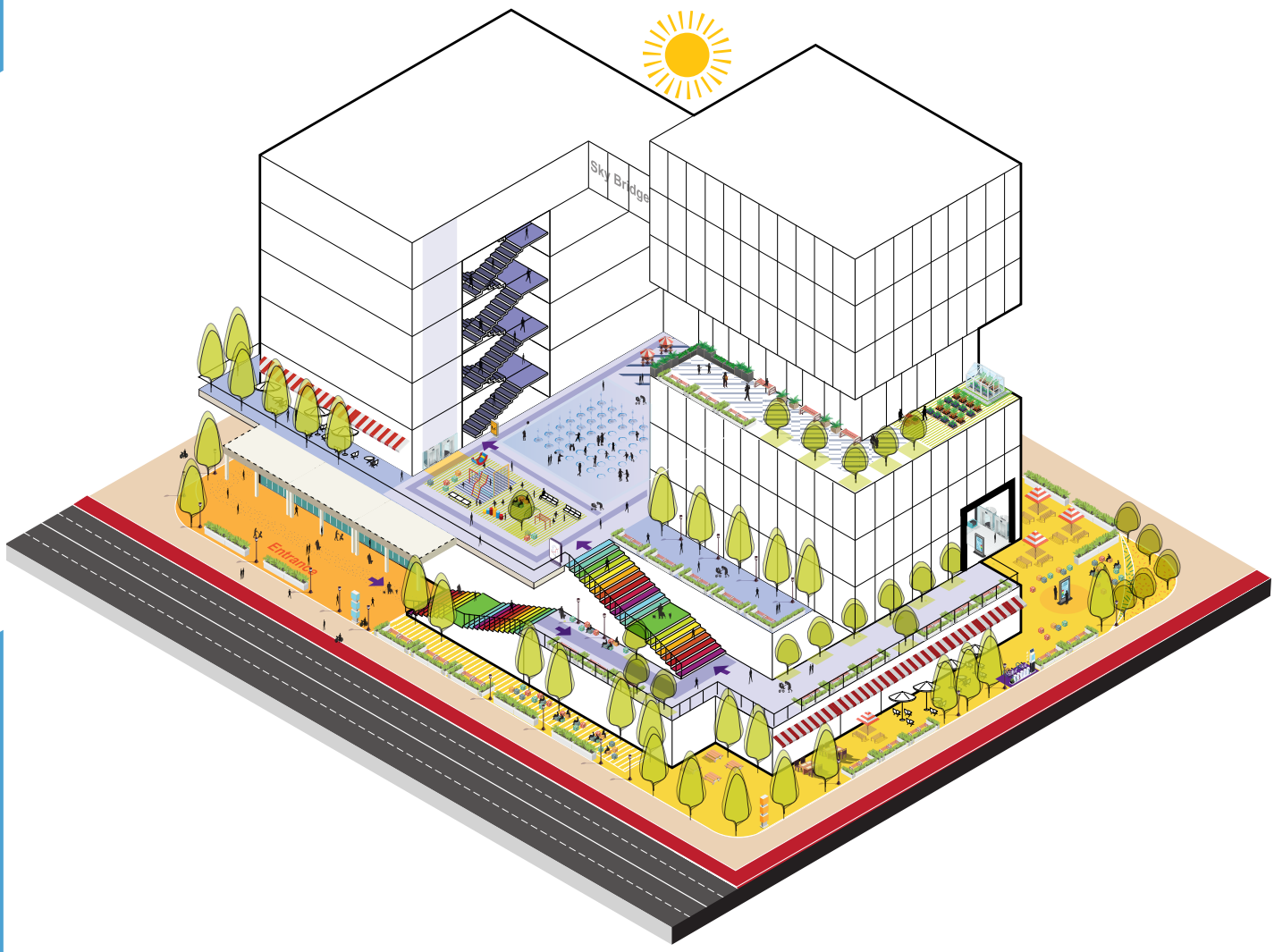
© City of Toronto

"Braille Neue" as a new font type that allows the visually impaired to find their direction

100BANCH, Shibuya, Tokyo, Japan

Refer to **3.1d** & **7.4c**

© Kosuke Takahashi ("Braille Neue" Designer)



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8 STRATEGIC POSITIONING OF BUILDING FUNCTIONS

In response to the health challenges associated with sedentary behavior and being physically inactive, this topic considers how the strategic and complementary positioning of building functions and social spaces can induce unintentional movements of occupants. The strategic positioning of certain frequently visited or popular destinations at the building level can help increase opportunity for incidental activity which can cumulatively contribute to greater physical activity level during the day. Complementary positioning of building functions together with provision of active routes can encourage physical activity.

OBJECTIVE 8.1

Strategically place frequently visited destinations to encourage walking

OBJECTIVE 8.2

Cluster complementary building functions to encourage physical activity

OBJECTIVE **8.1**

Strategically place frequently visited destinations to encourage walking

a **Strategically locate frequently visited destinations away from core areas of a building to encourage more movement.**

In office buildings, resting areas, social areas and pantries can be placed further away from work areas or on a different building level to increase the number of steps required to reach such destinations.

b **Arrange social spaces at locations that are reachable via an active route.**

Occupants will be motivated to take the active route to access the social space if such route and space are linked together and are highly visible.

c **Consider locating the principal building lobby above ground floor of buildings.**

d **Design with consideration of the building use and tenant profile when determining the positioning of building functions to encourage walking.**

Strategic location of frequently visited spaces and social spaces to be reachable via an active route

Refer to **8.1a** & **8.1b**

Lifting the principal lift lobby of buildings from ground level to the upper storey with visible stairs

Refer to **8.1c**

TIPS for 8.1c

Some buildings e.g. shopping centres, public libraries and office towers are suitable for adopting above-ground lobby design.

Social area in office environment positioned away from desks to encourage additional steps

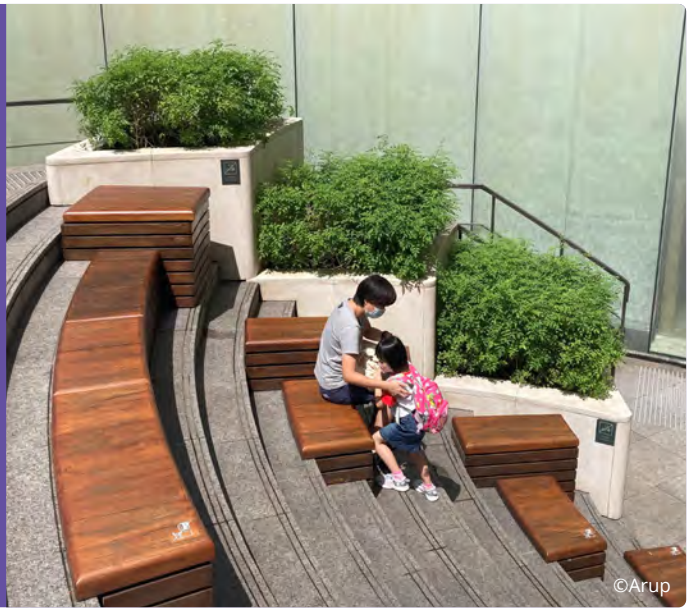
Festival Walk, Kowloon Tong, Hong Kong

Refer to **8.1a**

Co-locating with an open space increases the impact of an active route

K11 Musea Sunken Plaza, Tsim Sha Tsui, Hong Kong

Refer to **8.1b**



Connection with attractive social space increases impact of an active route

Festival Walk, Kowloon Tong, Hong Kong

Refer to **8.1b**

OBJECTIVE **8.2**

Cluster complementary building functions to encourage physical activity

a **Co-locate active opportunities with other space typologies.**

Positioning exercise facilities in the office environment close to the pantry, canteen or work space encourages their use during lunch breaks and creates more opportunities for spontaneous play or sports activities.

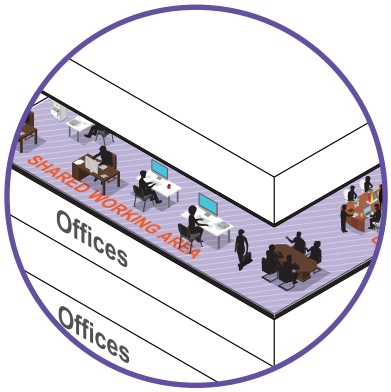
b **Integrate active design ideas with floor layouts.**

c **Transform monofunctional spaces and rooms to allow more flexible uses.**

Entrance lobbies, hallways, lift lobbies and transitional spaces can be an opportunity to introduce places for spontaneous activities and social interaction.

Co-locate recreational and activity spaces with other space typologies

Refer to **8.2a**



Use open office layout to encourage walking

Refer to **8.2b**

Co-location of basketball court, social spaces and meeting rooms

ING Bank, Istanbul, Turkey

Refer to **8.2a**

© Bakirkure Architects / Gurkan Akay

Integrate active design ideas with floor layout

Ku.Be House of Culture and Movement, Frederiksberg - Denmark

Refer to **8.2b**

© MVRDV / Ossip van Duivenbode

An entrance lobby that incorporates fun and playful elements

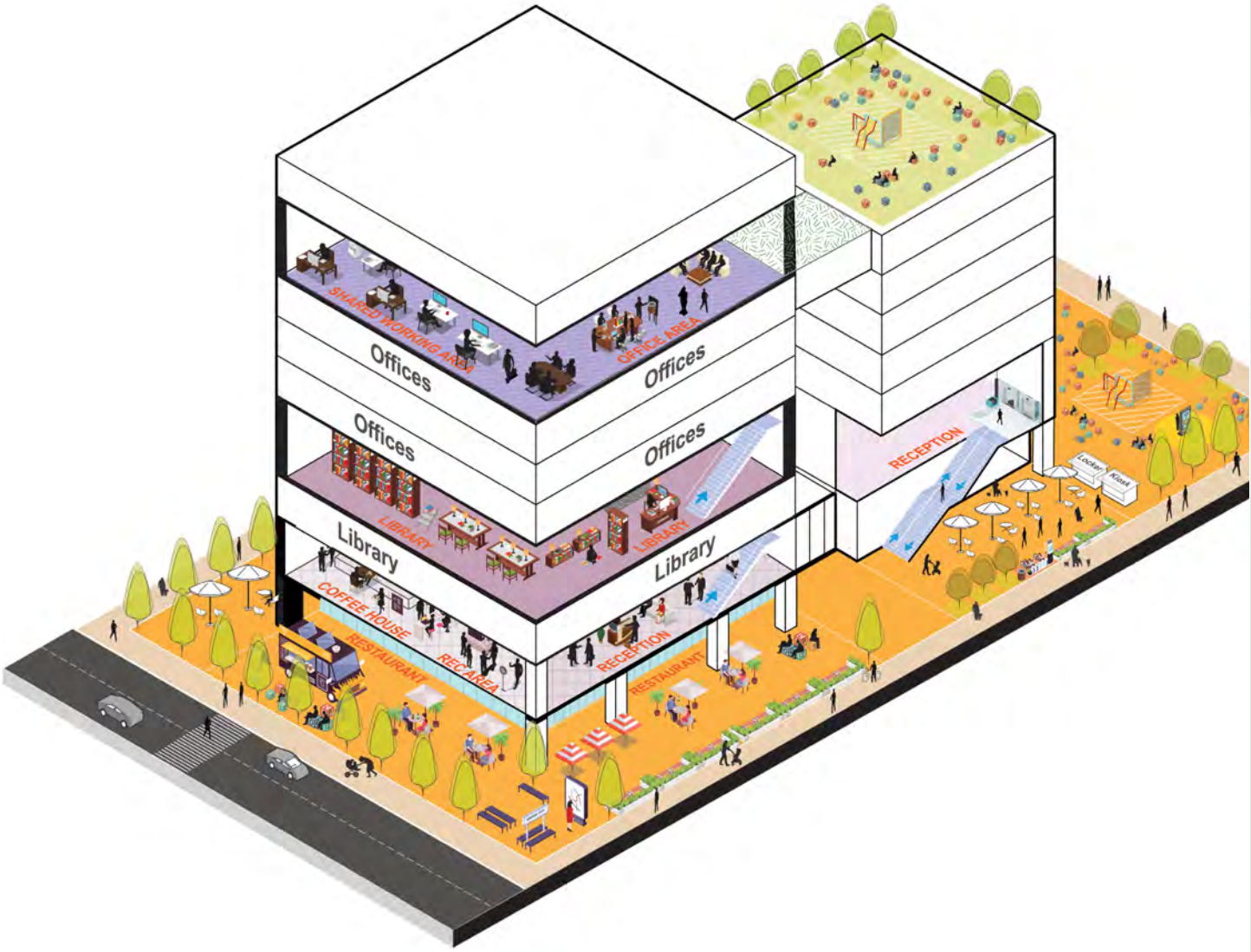
Ku.Be House of Culture and Movement, Frederiksberg - Denmark

Refer to **8.2c**

© MVRDV / Ossip van Duivenbode

8 STRATEGIC POSITIONING OF BUILDING FUNCTIONS

Increasing the activity levels of occupants through subtle changes



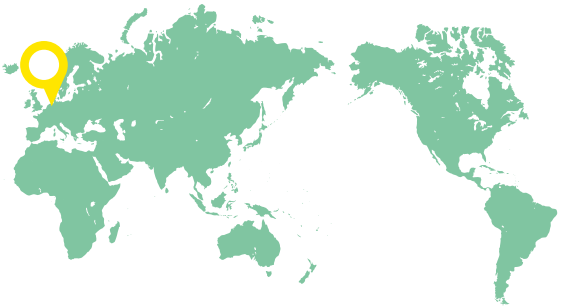
CASE STUDIES

Five case studies from different parts of the world have been chosen to demonstrate the application of active design features across multiple topics.

CASE STUDIES

1 ACTIVE CITY

4 ACTIVE MOBILITY



ZALIGE BRIDGE

LOCATION **Nijmegen, Gelderland, the Netherlands**

A pedestrian and cycling link connecting two important parts of Njimegen across the river Waal provides a convenient and short route to precincts even during seasonal flooding.

1.3 ☑ **SHAPE WATERFRONT AREAS AS ICONIC FEATURES**

Part of the bridge submerges when the river water starts to rise, and the stones on the side of the bridge become stepping stones for pedestrians to cross the river, creating a fun and unique experience.

1.4 ☑ **PROMOTE ACCESS TO THE NATURAL GREEN AND BLUE ASSETS**

The bridge provides convenient access to river Waal and the urban river park along it.

4.1 ☑ **CONNECT WITH EXISTING PEDESTRIAN AND CYCLING NETWORKS**

The bridge connects the existing pedestrian and cycling networks in the urban areas of both sides of river Waal.

4.2 ☑ **PROVIDE SUPPORTING INFRASTRUCTURE**

Stepping stones on the bridge can serve as seating when the water level is low.

Active mobility route accommodating cyclists and pedestrians. Stepping stones on the bridge can serve as seating.

© Next Architects / Jan Daanen

Active mobility route accommodating pedestrians during flooding through stepping stones. It is a low-impact intervention that creates a fun and unique experience for users during flooding.

© Next Architects / Jeroen Bosch

SHENWAN STREET PARK

LOCATION **Nanshan District, Shenzhen, China**

Shenwan Street Park lies on the urban public green axis of Shenzhen Bay Super Headquarters Base, forming an oasis in a high-density urban setting.

2.1 CREATE FLEXIBLE ACTIVE DESTINATION

The park includes paved and grassed areas with minimal barriers, and uses surface treatment and planting to define active spaces, as well as more contemplative, quiet corners which can be used by different user groups.

2.2 DESIGN INCLUSIVE AND INTER-GENERATIONAL PLAY AREAS

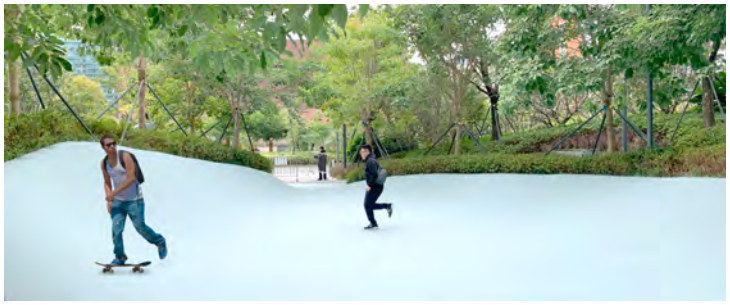
Barrier-free access and multiple benches ensure access and resting spaces for the elderly and serve as an example of inter-generational design. The waterfall created by the aqueduct also serves as a play spot for children.

2.3 DESIGN ACTIVE DESTINATIONS TO BE USABLE DURING ALL SEASONS

Trees are used to create shaded areas so that people can still engage in activities or stroll comfortably during hot summer days. There are also shelters protecting visitors from the sun, rain drizzles and wind.

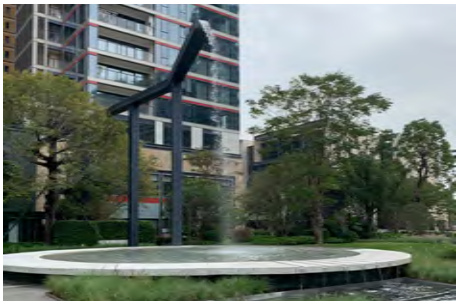
2.4 CREATE OPPORTUNITIES FOR SPONTANEOUS ACTIVITIES

There is a grand water feature serving as the park's focal point.



Skatepark appealing to the youth

© Arup



Grand water feature within the park

© Arup

Barrier-free grassed and paved areas with trees. The park simultaneously provides active space and quiet space as well.

© Arup

Sheltered resting spaces enable interaction across ages

© Arup

CASE STUDIES

3 ACTIVE WALKING JOURNEY

5 ACTIVE BUILDING FRONTAGE

LANEWAYS OF MELBOURNE

LOCATION **Melbourne City Center, Melbourne, Australia**

Melbourne's laneways are a revitalization project started in the early 1990s to improve walkability by creating pedestrian-priority spaces with limited vehicular traffic.

3.1 ☑ **CREATE SAFE AND INCLUSIVE WALKING ENVIRONMENT**

The walkways are mostly at-grade, well-illuminated and wide enough to accommodate dual direction pedestrian flow.

3.2 ☑ **CREATE COMFORTABLE AND ATTRACTIVE PEDESTRIAN ENVIRONMENT**

Custom-designed lighting is provided to enhance sense of safety.

3.3 ☑ **ENCOURAGE SUSTAINED WALKING JOURNEYS**

Cultural and artistic design is incorporated into several laneways to create visual interests.

5.1 ☑ **ENCOURAGE BUILDING FAÇADES THAT ENHANCE PEDESTRIAN EXPERIENCES**

Canopies are provided for some buildings along the laneways to improve pedestrian comfort.

5.2 ☑ **ENCOURAGE PERMEABLE BUILDING FAÇADES**

Ground entrances and buildings windows are mostly street-facing to enable natural surveillance onto the street.

5.3 ☑ **CREATE VIBRANT PEDESTRIAN ENVIRONMENT**

Cultural and art events and curb-side dining has created a vibrant interface between the laneways and its adjacent shops.

Cultural and artistic design to create visual interests

© Annie Spratt / Unsplash.com

The Central Place Lane is at-grade and wide enough to accommodate dual direction pedestrian flow. Custom-designed lighting is provided on top of the laneway. Curb-side dining is provided on both side of the laneway.

© Wayward Wanders

6 ACTIVE SPACES AND FACILITIES

7 ACTIVE ROUTES

PMQ

LOCATION **Aberdeen Street, Central, Hong Kong, China**

The PMQ is a historical building that was converted into a venue to support local designers and provide a platform for creativity and activity.

6.1 PROVIDE ACTIVE SPACES AT THE BUILDING LEVEL

PMQ is car-free and fully pedestrianised to offer a safe and protected space for all age groups. There is an open-air courtyard and a covered 'marketplace' at the ground level for holding various activities/events.

6.3 LOCATE SPACES AND FACILITIES FOR OPTIMAL USE AND FUTURE FLEXIBILITY

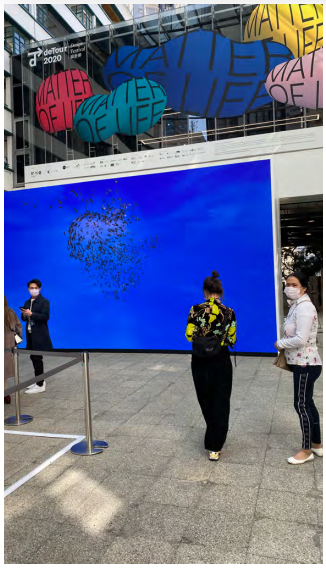
Roof garden on the 4/F and the landscaped area on lower ground are visible to pedestrians and visitors. The open-air courtyard and covered marketplace, which are located at the centre of the premises, is sufficiently visible, accessible and convenient.

7.1 PROMOTE INTERESTING AND ACTIVE ROUTES

The original stairs have been upgraded and made highly visible at the ground floor level. They are often used by tenants and visitors for vertical circulation.

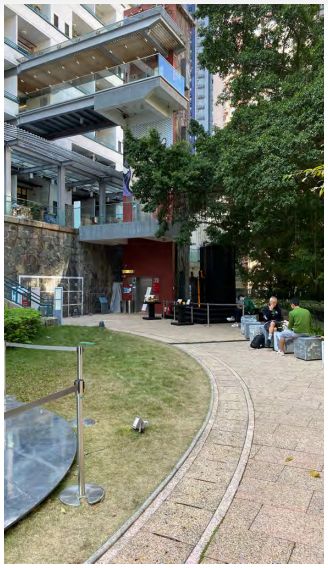
7.2 ENCOURAGE A MORE ACTIVE USE OF BUILDING CONNECTIONS

The event space on the 2/F and the roof garden on the 4/F act as sky-bridges to connect the two buildings and are highly visible, which encourage visitors to explore and move around the two buildings.



Event space on 2/F

© Arup



Barrier-free access and greenery near pedestrian routes

© Arup

Roof garden on 4/F that is highly visible to visitors on both sides of the building

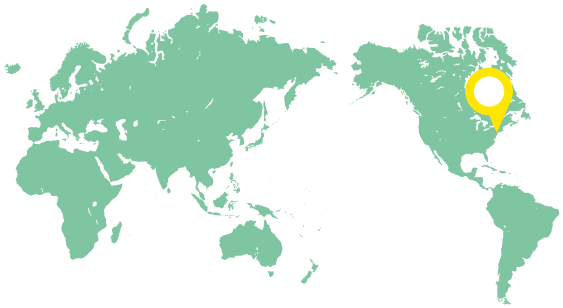
© Arup

Sky-bridge connecting the two buildings

© Arup

CASE STUDIES

8 STRATEGIC POSITIONING OF BUILDING FUNCTIONS



ALFRED LERNER HALL

LOCATION **Broadway, New York, USA**

Lerner Hall, which was opened in 1999, has served as Columbia University's Student Center on its Morningside campus. The building contains 250,000 square feet of space with a diverse offering of meeting, rehearsal and performance spaces, including computer rooms, a restaurant, a cafe, a sky-lit gallery exhibition space and more.

8.1 STRATEGICALLY PLACE FREQUENTLY VISITED DESTINATIONS TO ENCOURAGE WALKING

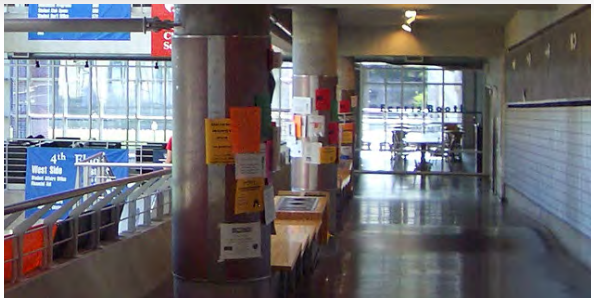
Shared functions, such as mailrooms, are located on the upper floors to encourage walking and other forms of active travel among building components. Frequently visited destinations, such as auditoriums and theatres, are intentionally placed on different floors to motivate students to walk more. Social spaces are placed next to the active route to increase its impact.

8.2 CLUSTER COMPLEMENTARY BUILDING FUNCTIONS TO ENCOURAGE PHYSICAL ACTIVITY

Open spaces are highly visible to students in classrooms. Walkways on the side of the building next to the glass facade allow for flexible physical activities and performances.

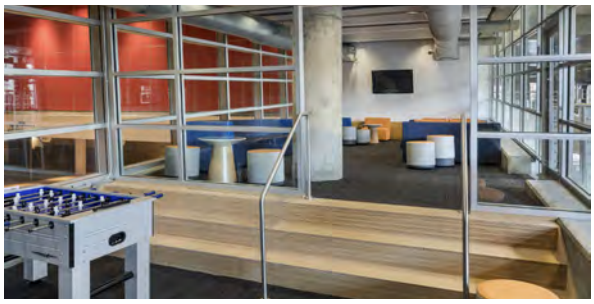
Highly connected atrium creates opportunities for social interaction between various functions in the building

© Lydia Gould / Bernard Tschumi Architects



Mailboxes are placed on the 4th floor to increase the number of steps required to reach such frequently visited destination

© Alex Terzich



Placing game facilities and social spaces in a well-lit and accessible locations allow spontaneous play and more frequent interactions between people.

© Andrew Rugge

CHECKLIST FOR ACTIVE DESIGN CONSIDERATIONS

This checklist is intended to be a quick reference tool that helps designers, planners and developers to ensure that guidelines relevant to their projects are considered.

This list is by no means exhaustive. It aims to assist readers to identify key aspects and ideas of creating an environment that provides more opportunities for active lifestyles and social interactions while promoting healthier lifestyle for Hong Kong people.

CHECKLIST
Neighbourhood Level

NEIGHBOURHOOD LEVEL

Have you considered the following in your planning / design / development?	YES	NO	N/A
ACTIVE CITY			
Do the design principles of the development include walkability enhancement? ››› **1.1 (Page 14)**	○	○	○
Does the development support a neighbourhood with a variety of facilities and uses provided within walking distance? ››› **1.2 (Page 16)**	○	○	○
For developments near a waterfront, is convenient access to the waterfront maintained? ››› **1.3 (Page 18)**	○	○	○
Does the development create highly recognised new iconic active destination? ››› **1.3 (Page 18)**	○	○	○
For development near country parks and coastal areas, is access with blue and green features incorporated? ››› **1.4 (Page 20)**	○	○	○
ACTIVE DESTINATIONS			
Is the design of open spaces flexible enough to accommodate a range of physical and recreational activities? ››› **2.1 (Page 24)**	○	○	○
Are lawns and green spaces being incorporated in the development? ››› **2.1 (Page 24)**	○	○	○
Are activity areas designed to be playful, inclusive and inter-generational and can they serve the need of multiple user groups? ››› **2.2 (Page 26)**	○	○	○
Can the newly designed active destinations be used during all seasons and throughout the day? ››› **2.3 (Page 28)**	○	○	○
Are the newly designed activity areas attractive and do they offer opportunities for spontaneous activities? ››› **2.4 (Page 30)**	○	○	○

NEIGHBOURHOOD LEVEL

Have you considered the following in your planning / design / development?	YES	NO	N/A
ACTIVE WALKING JOURNEY			
Are road layouts and transport planning prioritising pedestrians? ❯❯❯ **3.1 (Page 34)**	○	○	○
Are pedestrian environments safe, sheltered (e.g. with tree canopies) and attractive to encourage walking during all weather? ❯❯❯ **3.2 (Page 36)**	○	○	○
Are there features in the development that provide visual interests and create awareness of point of interests nearby? ❯❯❯ **3.3 (Page 38)**	○	○	○
Are street furniture, landscaping, landmarks, paving material, smart initiatives and signage used to encourage people to walk longer? ❯❯❯ **3.3 (Page 38)**	○	○	○
Are existing outdoor stairs and ramps enhanced and is the use of such stairs and ramps promoted? ❯❯❯ **3.4 (Page 40)**	○	○	○
ACTIVE MOBILITY			
Does the development connect to existing pedestrian and cycling networks or provide opportunities to expand existing networks? ❯❯❯ **4.1 (Page 44)**	○	○	○
Is provision made for supporting infrastructure that will encourage active mobility? ❯❯❯ **4.2 (Page 46)**	○	○	○
Does the design and planning of transport facilities create convenient ways to transit to walking and cycling from other modes of transport? ❯❯❯ **4.3 (Page 48)**	○	○	○

CHECKLIST
Building Level

BUILDING LEVEL

Have you considered the following in your planning / design / development?	YES	NO	N/A
ACTIVE BUILDING FRONTAGE			
Is the building frontage contributing to the comfort of pedestrian environment and street legibility? ⟩⟩⟩ **5.1 (Page 56)**	○	○	○
Are the building façades visually permeable, especially on the lower level? ⟩⟩⟩ **5.2 (Page 58)**	○	○	○
Do the street level uses create vibrancy and contribute to a human-scale pedestrian environment? ⟩⟩⟩ **5.3 (Page 60)**	○	○	○
ACTIVE SPACES AND FACILITIES			
Are there quality open spaces with greenery at the building level? ⟩⟩⟩ **6.1 (Page 64)**	○	○	○
Are active spaces and supporting facilities such as changing rooms and lockers located in prominent locations of the building? ⟩⟩⟩ **6.2 (Page 66)**	○	○	○
Is the tenant mix and age profile considered when designing active facilities in new buildings? ⟩⟩⟩ **6.2 (Page 66)**	○	○	○
Are private open spaces, recreational facilities and supporting facilities placed in locations with consideration that such facilities can be utilised by the general public? ⟩⟩⟩ **6.3 (Page 68)**	○	○	○

BUILDING LEVEL

Have you considered the following in your planning / design / development?	YES	NO	N/A
ACTIVE ROUTES			
Are stairs, steps, ramps and sky-bridges incorporated as architectural features in buildings to create interesting and active routes? 〉〉〉 **7.1 (Page 72)**	○	○	○
Is the design and positioning of the circulation system able to influence a more active use of building connections? 〉〉〉 **7.2 (Page 74)**	○	○	○
Are stairs designed to be inclusive and able to cater for the varying needs of different users? 〉〉〉 **7.3 (Page 76)**	○	○	○
Are signage, wayfinding and prompts used to make occupants aware of active route alternatives and encourage the use thereof? 〉〉〉 **7.4 (Page 78)**	○	○	○
STRATEGIC POSITIONING OF BUILDING FUNCTIONS			
Are frequently visited destinations positioned to encourage walking? 〉〉〉 **8.1 (Page 82)**	○	○	○
Are building functions clustered complementary to each other to encourage more physical activity? 〉〉〉 **8.2 (Page 84)**	○	○	○

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Stakeholders consulted

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GOVERNMENT BUREAUX / DEPARTMENTS
(IN ALPHABETICAL ORDER)

- Architectural Services Department
- Buildings Department
- Development Bureau
- Department of Health
- The then Food and Health Bureau
- The then Home Affairs Bureau
- Highways Department
- Housing Department
- Leisure and Cultural Services Department
- Social Welfare Department
- Transport Department

ORGANISATIONS, PROFESSIONAL INSTITUTES AND REPRESENTATIVES OF ACADEMIA (IN ALPHABETICAL ORDER)

- BEAM Society
- Chinese YMCA of Hong Kong
- Department of Building and Real Estate, The Hong Kong Polytechnic University
- Hong Kong Design Centre
- Hong Kong Green Building Council
- Hong Kong Housing Society
- Hong Kong Institute of Architects
- Hong Kong Institute of Planners
- Hong Kong Institute of Surveyors
- Hong Kong Institute of Urban Design
- Hong Kong PHAB Association
- Jockey Club Institute of Ageing, The Chinese University of Hong Kong
- Jockey Club Design Institute for Social Innovation, The Hong Kong Polytechnic University
- MTR Corporation Limited
- Playright Children's Play Association
- Real Estate Developers Association of Hong Kong
- School of Architecture, The Chinese University of Hong Kong
- Scout Association of Hong Kong
- St. James' Settlement
- Tung Wah Group of Hospitals
- Urban Renewal Authority