



Hong Kong Planning Standards and Guidelines Recreation, Open Space and Greening

Chapter 4



Planning Department

The Government of the Hong Kong
Special Administrative Region

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With a view to taking forward the strategic direction of enhancing the liveability of our compact high-density city, the Planning Department has refined and updated the definition, provision standard, general criteria on countability, locational guidelines, design guidelines and implementation of open space, together with other corresponding updates. The original Section 1 on 'Recreation and Open Space' is restructured into two standalone sections; and the original Section 2 on 'Greening' is renumbered.

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RECREATION, OPEN SPACE AND GREENING

1. Recreation

1.1 Recreation – An Essential Land Use

- 1.1.1 Pressure for land is extreme in Hong Kong and it must be recognized that there are competing demands for land. However, Government acknowledges that recreation stems from a basic human need for activities which are essential to the mental and physical well-being of the individual and the community as a whole. It therefore encourages participation in recreational pursuits and seeks to ensure that appropriate opportunities are available to meet the needs of the people of Hong Kong. Recreation is accepted as an essential activity for which land must be allocated. However, it is also recognised that much active recreation can be provided for without the need to set aside exclusive land areas. For example, sports centres are already being provided in multi-use buildings, and greater use is being made of marine areas.

1.2 Scope and Purpose

- 1.2.1 Recreation ranges from home entertainment such as playing mahjong and watching television, through passive activities such as strolling and playing tai-chi in the morning, to active games and competitive sports. This section is concerned with those aspects of recreation which :
- (a) require special facilities to cater for widespread public demand; and
 - (b) require land areas to be allocated in town plans.
- 1.2.2 The planning standards and guidelines set out later in this section have been formulated to provide an equitable basis for the reservation of land for recreation facilities; and to guide the planning, distribution and, where appropriate, design of these facilities.
- 1.2.3 The standards set out in this section are based on a range of population thresholds and are applied simultaneously with those for the provision of open space as set out in Section 2 of this Chapter in planning work.
- 1.2.4 The standards set targets which may not be achieved all at once, nor uniformly throughout the Territory. Areas of new development should be planned to meet the standards, whereas old, developed areas should be planned to pursue incremental improvements towards the standards through such means as urban renewal.

1.3 Study of Leisure Habits and Recreation Preferences

- 1.3.1 Planning standards and guidelines for recreation facilities were last formulated in the late seventies and approved in 1981¹. Since then, there have been significant changes in the demographic structure and socio-economic characteristics of the population in Hong Kong. Fertility is declining; households are becoming smaller; average education attainment is getting higher; the society is becoming more affluent; and, above all, the population is ageing.
- 1.3.2 Under the Metroplan Selected Strategy endorsed by ExCo in September 1991, a broad framework for recreation facilities has been formulated with the objective of improving the quality of the living and working environment in the Metro Area. In 1992, a Foundation Study for a Recreation Land Use Strategy was commissioned as an integral part of the Territorial Development Strategy Review to provide a framework to guide the future provision of land for recreational purposes.
- 1.3.3 In view of the changing circumstances, and to take into account the proposals in Metroplan and the Territorial Development Strategy Review, in late 1995 consultants were commissioned to undertake the ‘Study of Leisure Habits and Recreation Preferences’ to assess the leisure habits and recreational preferences of the people of Hong Kong and to formulate planning standards and guidelines to meet their needs.

1.4 Key Trends in Recreational Pursuits

- 1.4.1 As part of the study, a survey was undertaken which has identified the following key trends in recreational pursuits :
 - (a) The most popular types of recreation and leisure habits are activities undertaken at home such as watching TV, near home such as going to playgrounds, walking and jogging, and active sports such as swimming and badminton;
 - (b) There is a substantial demand for more passive open space² near home as a result of the ageing population, and for an improvement in the quality of facilities (e.g. planting, new equipment and lighting);

¹ The planning standards and guidelines approved in 1981 had included for both recreational facilities and open space. The planning standards and guidelines for open space were reviewed under the “Reimagining Public Spaces in Hong Kong – Feasibility Study” completed in 2023. The revised planning standards and guidelines are included in Section 2 of this Chapter.

² Passive open space: generally refers to parks, gardens, sitting-out areas, waterfront promenades, paved areas for informal games, children’s playgrounds, jogging and fitness circuits etc., where people can enjoy the surroundings in a leisurely manner. Games facilities are normally not provided.

- (c) The overall provision of recreation facilities is felt to be generally adequate, although 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; and
- (d) There is also an increasing popularity of water sports.

1.4.2 These findings provide a good basis for the updating of the planning standards and guidelines. In the planning and provision of recreation facilities at the strategic, district and local levels, reference should also be made to these findings.

1.5 Principles of Recreation Planning

1.5.1 The following four principles, namely Quantity, Quality, Good Practice and Vision, have guided the study mentioned in para. 1.3.2 above. These are also relevant considerations in the planning and provision of recreation facilities at the strategic, district and local levels :

- (a) **Quantity** : Sufficient recreation facilities should be provided to meet the demand for the most popular activities, the ‘core activities’, within each planning district. Should there be scope, the range of facilities should be widened to enable provision be made for special activities.
- (b) **Quality** : Recreation facilities provided should be of a high quality, in terms of facilities, layout and design, which meet the needs and aspirations of the users. They should also meet environmental standards, and contribute to good civic design.
- (c) **Good Practice** : To provide easy access, encourage optimum usage and enable complementary improvements to the environment, recreation facilities should be provided within an integrated framework incorporating continuous pedestrian and/or cycle links. In pursuing this objective, it may be necessary in some situations to exceed the minimum limits set for the standards of provision. Where possible, opportunities should be provided within the framework for development by the private sector for a wider range of facilities. The framework, as well as individual components, should be periodically reviewed to take into account any possible changes in the users’ characteristics and needs. Where appropriate, flexibility should be exercised in the application of the standards and in the provision of recreation facilities to meet the specific needs of the users.
- (d) **Vision** : Planning requires vision, so does the planning for recreation facilities. In deriving a vision for the district, we may need to consider such attributes as the function(s) of the district (e.g. whether it is principally a residential and/or tourist area); location and physical characteristics; population structure and socio-economic 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 uses; accessibility of facilities; scope for private development; scope for special facilities; and provision and accessibility of facilities for special groups such as persons with disabilities.

1.6 Definitions

1.6.1 The following are definitions of some technical terms which are used in the section :

- (a) **Recreation Space :** This refers to the indoor purpose-built venues within which recreation facilities are provided, either by the public or private sector. In the urban areas, building coverage may be up to 100%; in the rural areas, sites dedicated to recreation uses may have a lower coverage.
- (b) **Population Standard :** The number of facilities required for a given population, usually expressed as a ratio e.g. 1 per 10 000 persons.
- (c) **Space Standard :** The area required to provide a facility, usually expressed in terms of m² or hectare.
- (d) **District Level Provision :** The term district refers to provision based on a District Council area.
- (e) **Core Activities :** Recreation facilities of greatest popularity to cater for the widest range of population, listed in this section as core activities, and should be provided within open space or indoor recreation venues.
- (f) **Urban Fringe Park :** A term used for sites at the urban edge areas which have potential for a wider scope of recreation development within a landscape setting.

1.7 Hierarchy of Recreation Facilities

1.7.1 In considering the function, nature, form and intensity of development for recreation facilities, and the appropriate zoning on outline zoning and outline development or layout plans, it is useful to have regard to the hierarchy of recreation facilities as summarized in Figure 1 and briefly described below :

- (a) **Urban Areas :** Including the Metro Area and the New Towns which are more intensively developed. Recreation facilities should be easily accessible from home; and, where applicable, from the workplace.
- (b) **Rural Areas :** Including the vast stretches of flat land and valley floors in the rural New Territories which contain dispersed settlements. Recreation facilities may need to be concentrated in the more developed areas.
- (c) **Countryside and Coastal Areas :** Including the hill slopes, country parks and coastal areas which are unique natural resources to provide a natural environment for recreation. Coastal/water recreation areas define waters which are suitable for water sports. Recreation use should be of low intensity and compatible with the rural character and the natural environment, and should not cause adverse impacts on neighbouring uses.

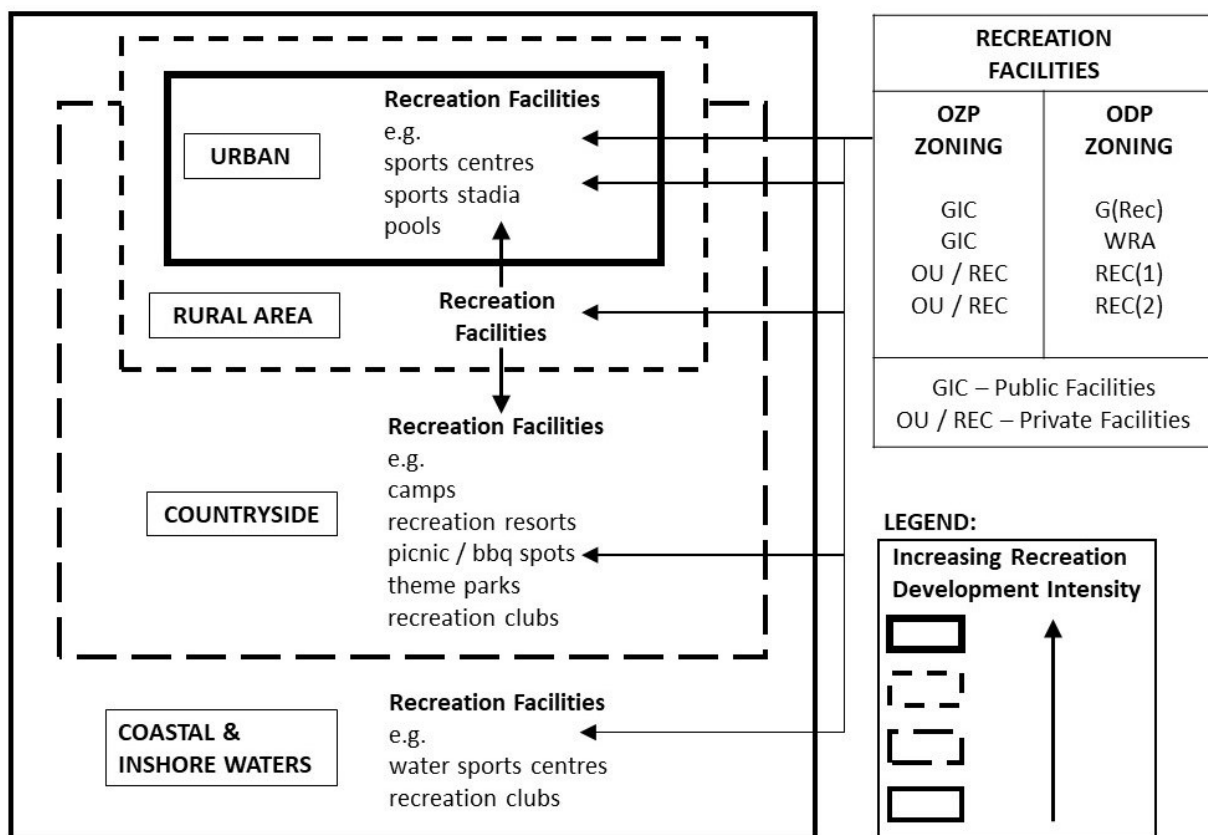


Figure 1 Hierarchy of Recreation Facilities with Corresponding Zonings

1.8 Standards for Provision of Recreation Facilities

- 1.8.1 Recreation facilities are provided either outdoors within open space³; or indoors such as within recreation buildings or complexes, or in designated areas within composite developments. The standards set out in this sub-section cover recreation facilities that are provided both indoors and outdoors. They also include facilities for popular recreation activities which are termed as ‘core activities’.
- 1.8.2 Standards for recreation facilities are applied simultaneously with the standards for open space as set out in section 2 below.

Core Activities

- 1.8.3 ‘Core activities’ are those recreation activities for which facilities are provided by the Government in accordance with stipulated population-based standards within each district. The purpose is to ensure a balanced provision of public recreation facilities that enables a variety of recreational pursuits for all age groups. These facilities are intended to cater for both beginners and occasional players, and for those who wish to develop their skills in a more competitive environment of organized sports. A list of the ‘core activities’ is provided in Table 1 below :

Table 1 : Core Activities

1.	Badminton	9.	Volleyball
2.	Squash	10.	Football
3.	Table Tennis	11.	Mini-soccer
4.	Fitness/Dance	12.	Rugby/Baseball/Cricket
5.	Gymnastics	13.	Athletics
6.	Swimming	14.	Roller Skating
7.	Tennis	15.	Jogging
8.	Basketball	16.	Children’s Playground

Standards for Core Activities

- 1.8.4 There are three elements in the planning standards for the provision of facilities for the core activities, as follows:
- (a) Population standards, based on which the number of facilities required is calculated. The population standards for individual core activities are set out in Table 2: Standards of Provision for Core Activities;

³ Where substandard recreation facilities are located in an area identified or reserved for open space, the facilities themselves, such as soccer kick-about areas or substandard basketball or volleyball courts, would normally not be countable towards the standard of provision for recreation facilities, and they should be considered as ‘bonus’ provision.

- (b) Space standards, based on which the land area required for core activities is calculated. The space standards for individual facilities are set out in Table 3: Standard Dimensions of Facilities for Core Activities; and
 - (c) Standards of provision for purpose-built recreation facilities for providing venues for a combination of indoor core activities. The standards for purpose-built recreation facilities are set out in Table 4: Standards of Provision for Recreation Buildings.
- 1.8.5 To assist planners in assessing the total space required by core activities in a district, the following calculation method is suggested:
 - (a) first, identify the base population;
 - (b) second, calculate the area required for purpose-built recreation buildings; and
 - (c) third, calculate the area required for outdoor core activities.
- 1.8.6 Where sites are available for purpose-built recreation buildings, and where the area available for active open space⁴ is broadly equivalent to or exceeds the area required by outdoor core activities, then the plan should be viable. A sample calculation is shown at Appendix 1 : Typical Calculation of a District Requirement for Recreation Facilities.
- 1.8.7 In practice, it will seldom be possible to plan for a whole district at one time; planning for smaller populations of 30 000 - 50 000 are more common. A mechanical application of the standards for recreation facilities to a series of smaller populations may result in under-provision of facilities. When planning recreation facilities, it is therefore necessary to:
 - (a) consider wider district needs while assessing the needs of a particular sub-district; and
 - (b) be flexible and ensure that the planned facilities may also cater for the needs of adjacent district population, hence there may be a need to exceed the minimum standards for the sub-district.

Major Facilities

- 1.8.8 Six of the core activities are best provided indoors, namely badminton, squash, table tennis, fitness/dance, gymnastics and swimming. Some outdoor facilities may also be provided indoors such as tennis, basketball and volleyball. The venues for indoor core activities are

⁴ Active open space: generally refers to outdoor recreation facilities, mainly for the core activities including games facilities.

sports centres, leisure centres or purpose-built facilities within composite developments. Leisure centres are proposed as a new facility to cater for family-based recreation needs. Sports and field events are provided in sports grounds. Besides, activities like rugby/baseball/cricket are proposed to be accommodated in multi-purpose grass pitches. In addition, standards are also proposed for sports stadium and water sports centre to cater for the needs of specific sports and water-based recreation.

Sports and Leisure Centres

1.8.9 Sports Centres cater for a range of core activities including badminton, squash, basketball, table tennis, fitness, dance and gymnastics. Where the venues provided within are also used for some outdoor activities, they are regarded as a 'bonus' provision. There are two such types of centres, their standards for provision and range of facilities available are summarised in Table 4, and a brief description is given below :

- (a) **Sports Centre** : The standard of provision is one centre per 50 000 to 65 000 residential population. In the main employment areas of Central & Western District, Wanchai District and Yau Tsim Mong District which have a large daily influx of workers from all over the Territory, one additional centre should be provided in each district on top of the provision required by the residential population.
- (b) **Leisure Centre** : Leisure Centres are intended as venues for family leisure. It is a facility proposed for development in the urban areas and the New Towns as an alternative to Sports Centre. It should not, however, replace the additional Sports Centre which is required for provision in the employment districts. The standard of provision for Leisure Centre is 1 centre per 50 000 population. A wider range of recreation activities beyond core activities such as bowling green, children's playroom, indoor golf, rock climbing, leisure pools, coffee corners and restaurants are provided.

Multi-Purpose Grass Pitches

1.8.10 Multi-purpose grass pitches are intended for a variety of sporting uses, in particular for conducting the core activities of rugby, baseball and cricket. As the use of grass pitches is more flexible than hard-surfaced pitches, they can also be used for other sport activities such as football matches and football training. The standard of provision is one multi-purpose grass pitch per district. The site area required is 1.2 ha.

Sports Complexes/Sports Grounds

1.8.11 A Sports Complex is a sports ground which is developed together with other outdoor and/or indoor sports facilities such as tennis courts, basketball courts and squash courts. A Sports Ground contains facilities for all athletic track and field events on an infield grassed area which is

also suitable for high graded soccer matches. The running track should be 400m long, and of an all-weather construction. Spectator accommodation is provided for a capacity of up to 10 000 people.

- 1.8.12 At present, although sports grounds are sometimes also used for professional and higher-graded soccer matches, their main function is mainly to provide venues for educational institutes e.g. primary and secondary schools, to hold sporting events.
- 1.8.13 In the urban areas and the New Towns, the standard of provision is one Sports Complex/Sports Ground per 200 000 - 250 000 population. The site area required is a minimum of 3 ha. The site should be flat, generally north-south oriented and conveniently served by public transport. Due to its inaccessibility to the general public, the football pitch within a sports ground is not countable towards core activity provision.

Stadia

- 1.8.14 There are three types of Sports Stadia, each with different functions, as follows :
 - (a) **Indoor Multi-Purpose Stadium** : This is a multi-purpose air-conditioned building which has a central arena surrounded by spectator seating. The arena should accommodate sporting events as well as cultural shows and entertainment. Other activity areas may also be provided. Indoor multi-purpose stadium should be provided on the basis of need, and there is no standard size for the site area. There are currently two indoor multi-purpose stadia to serve the Territory, and they are Hong Kong Coliseum and Queen Elizabeth Stadium.
 - (b) **Indoor Sports Stadium** : Indoor sports stadium, a dedicated indoor facility for organised training and for territorial and international competitions, should also be provided on the basis of need. A new facility may be required to satisfy the requirements of the National Sports Associations (NSAs). Whether or not a new indoor sports stadium is the best form of provision to meet the needs of the NSAs, and other aspects relating to the possible implementation of the concept i.e. project feasibility, design, management, capacity of stadium, search for a suitable site etc., should be subject to further investigation. The site area is to be determined by Culture, Sports and Tourism Bureau (CSTB)/Leisure and Cultural Services Department (LCSD) in consultation with the NSAs.
 - (c) **Outdoor Stadium** : This should be of an international standard and contain one grass football pitch surrounded by a 400m running track, with spectator seating for 10 000 - 50 000 population. Outdoor stadia are intended for high-level football matches and international standard athletic competition. They can also be used for other large-scale open-air entertainment and

activities. Provision of outdoor stadium should similarly be based on need.

Swimming and Leisure Pool Complexes

- 1.8.15 In the urban areas, the New Towns and the rural townships, the standard of provision is one Swimming Pool Complex per 287 000 population i.e. 1m² water surface area per 85 persons. A site area of 2.0 ha is required, subject to actual site situation.
- 1.8.16 The standard of provision for leisure pools is one Leisure Pool per district. An area of between 0.6 to 2.0 ha is required, subject to actual site situation. The minimum water area should be 900m² for an operational capacity of 3m² water surface per person. Leisure pools may be implemented by re-fitting part of existing Swimming Pool Complexes or by providing leisure pools within Leisure Centres (see para. 1.8.9 (b) above).
- 1.8.17 The alteration of existing Swimming Pool Complexes to include leisure pools should still retain at least one standard swimming pool per district, where swimming courses, training and school competitions can be held. Where resources permit, new pools should be heated to promote year round swimming habits.

Water Sports Centres

- 1.8.18 It is now a Government policy to encourage the development of water sports facilities. No set standard of provision can be set as the sites where such facilities can be developed vary, as do the water conditions for different water sports. Sites suitable for beginners and enthusiasts should be sought for canoeing, dinghy sailing, rowing and windsurfing. Development of safe facilities should include an Environmental Impact Assessment (EIA) of both land based facilities and the area of inshore waters. Water Sports Centres are currently provided by LCSD at Tai Mei Tuk, Chong Hing, Wong Shek, St. Stephen's Beach and Stanley Main Beach.
- 1.8.19 Other organizations such as some NSAs and the Hong Kong Tourism Board, have proposed additional centres for water sports. Initiatives for development by private agencies should be encouraged in water areas that are suitable and safe for the activity proposed. The inshore water recreation areas where facilities and activities may be located are shown in Figure 2.

Non-Core Activities

- 1.8.20 Non-core activities are specialist types of recreation which have lower demand. They include such activities as golfing, horse-riding, wall climbing and mountain biking. The provision of facilities for non-core activities should be guided by demographic trends and the availability of suitable sites. There are no planning standards and guidelines for the provision of non-core activities. Nonetheless, the provision of a

wide variety of recreation facilities apart from the core activities is encouraged by the Government. Proposals for such developments should be assessed on their individual merits.

Table 2 : Standards of Provision for Core Activities

Core Activity	Population Standard	Remarks
<u>Indoor Provision</u>		
Badminton ²	1 per 8 000)	- Provided in sports centres, leisure centres or purpose-built facilities in composite developments
Squash	on a district need basis)	
Table tennis ²	1 per 7 500 or) 2 per 15 000)	
Fitness/Dance	1 per sports centre	- To be accommodated in the multi-purpose arenas in sports centres
Gymnastics	1 per district	
Swimming		
Swimming pool complex	1 per 287 000 or 1m ² water per 85	
Leisure pool	1 per district	
<u>Outdoor Provision</u>		
Tennis ¹	2 per 30 000	- Minimum 2 courts
Basketball ^{1&2}	1 per 10 000	
Volleyball ¹	1 per 20 000	
Football	1 per 100 000	- Football pitches within sports grounds do not count towards standard due to their inaccessibility to the general public
Mini-soccer		
5-a-side ³	1 per 30 000)	- Provision for both facilities
7-a-side ³	1 per 30 000)	
Rugby/Baseball/Cricket	1 per district	- To be accommodated in multi-purpose grass pitches
Athletics	1 per 200 000 - 250 000	- To be accommodated in sports ground/sports complex
Roller skating	300m ² per 30 000	
Jogging track	500m - 1 000m per 30 000	- May be provided in district open space or as part of pedestrian circulation system
Children’s playground ^{2&4}	400m ² per 5 000	

Notes:

¹ Facilities which may also be provided indoors. However, indoor provision within Sports Centres on a share facility basis is normally considered as a bonus and does not count towards the HKPSG. In the absence of outdoor space, indoor provision within dedicated, purpose-designed, facilities may be countable.

² Facilities which are normally provided in public housing developments as outdoor provision. Informal facilities such as kickabout areas or basketball shooting areas, and courts of minor substandard size may be acceptable and countable towards the standard of provision for recreation facilities in public housing developments which have obvious site constraints.

³ Optional facilities to be provided in public housing developments where site conditions permit.

⁴ Facility to be integrated with open space/play areas for all age groups and persons with disabilities to foster a sense of community in public housing developments.

Table 3 : Standard Dimensions of Facilities for Core Activities

Core Activity	Court Size(m)	Margins				Authority
		Side to Wall (m)	Base to Wall (m)	Court to Court (m)	Clear Height (m)	
Badminton	13.4 x 6.1	2.0	2.0	2.0	9.0	IBF
Squash	9.75 x 6.4	-	-	-	5.64	WS
Table Tennis						
(ITTF)*	14.0 x 7.0	-	-	-	4.05	ITTF
(National)	14.0 x 7.0	-	-	-	4.05	
(Recreation)	7.0 x 4.6	-	-	-		
Tennis*						
(Competition)	23.77 x 10.97	3.66	6.40	4.27	9.1	ITF
(Recreation)	23.77 x 10.97	3.66	6.40	3.66	9.1	
Basketball*	28.0 x 15.0	2.0	2.0	2.0	7.0	FIBA
Volleyball						
(IVBF)	18.0 x 9.0	5.0	8.0	5.0	12.0	IVBF
(National)	18.0 x 9.0	5.0	8.0	5.0	9.0	
(Recreation)	18.0 x 9.0	3.0	3.0	3.0	9.0	
Football						
(Min)	100.0 x 64.0	6.0	9.0	-		FIFA
(Max)	110.0 x 75.0	6.0	9.0	-		
7-A-Side Soccer						
(Mini-Soccer)						
(Min)	61.26 x 36.57	5.0	5.0	-	-	
(Max)	76.80 x 56.69	5.0	5.0	-	-	
5-A-Side Soccer						
(Min)	28.0 x 18.0	-	-	-	6.7	
(Max)	36.0 x 30.0	-	-	-	6.7	
					(rebound wall 1.22)	
Multi-purpose Grass Pitch	120.0 x 100.0	-	-	-	-	
Gymnasium						
(FIG)	73.0 x 33.5	-	-	-	7.6	FIG
(National)	50.0 x 25.0	-	-	-	7.6	
Athletics Complex	2.0 ha - 3.0 ha	-	-	-		
Fitness Room	80m ² - 210m ²	-	-	-	3.5-4.0	
Dance Room	80m ² - 210m ²	-	-	-	3.5-4.0	

Notes:

* - An attempt should be made to provide up to full competition standard. If there are site constraints, at least one of each type of court should be up to competition standard, and the full sized court should be specified in the layout plan.

IBF - International Badminton Federation
WS - World Squash
ITTF - International Table-Tennis Federation
ITF - International Tennis Federation
FIBA - International Amateur Basketball Federation
IVBF - International Volleyball Federation
FIFA - Federation Internationale de Football Association
FIG - Federation Internationale de Gymnastique

Table 4 : Standards of Provision for Recreation Buildings

Built Facility	Provision Standard	Site Area [#]	Remarks
Sports Centre	1 per 50 000 - 65 000	0.6 ha (i.e. 100m x 60m)	With*: 8 x badminton, or 2 x basketball, or 2 x volleyball 2 x tennis plus 3 x Squash Courts 1 x Activity/Dance 1 x Fitness Training
Leisure Centre	1 per 50 000	0.6 ha (i.e. 100m x 60m)	May be provided as an alternative to Sports Centre*
Sports Ground/Sports Complex	1 per 200 000 - 250 000	3.0 ha	400m track (all weather), grass infield for athletics (field events), seating capacity for about 10 000 spectators in standard designed sports ground
Swimming Pool Complex - standard	1m ² water per 85 persons or 1 standard complex per 287 000	2.0 ha for a standard complex	Usually with pools of 50m and/or 25m long*
Swimming Pool - leisure	min. per 900m ² pool size 1 per district	0.6 ha - 2.0 ha subject to advice from LCSD	In addition to swimming pool complex*
Indoor Stadium - multi-purpose	Territorial facility based on need	To be determined at detailed design stage subject to advice from LCSD/Arch SD	Two existing i.e. Hong Kong Coliseum and Queen Elizabeth Stadium.
Indoor Stadium - sports	Territorial facility based on need	To be determined at detailed design stage subject to advice from CSTB/LCSD in consultation with the NSAs	There may be a need for one such facility, but project feasibility and implementation aspects subject to further study.
Outdoor Stadium	Territorial facility based on need	4.5 ha - 6.0 ha	
Water Sports Centre	No set standard	To be determined at detailed design stage subject to advice from LCSD/Arch SD	New provision, to be located at suitable inshore recreation areas and subject to EIA

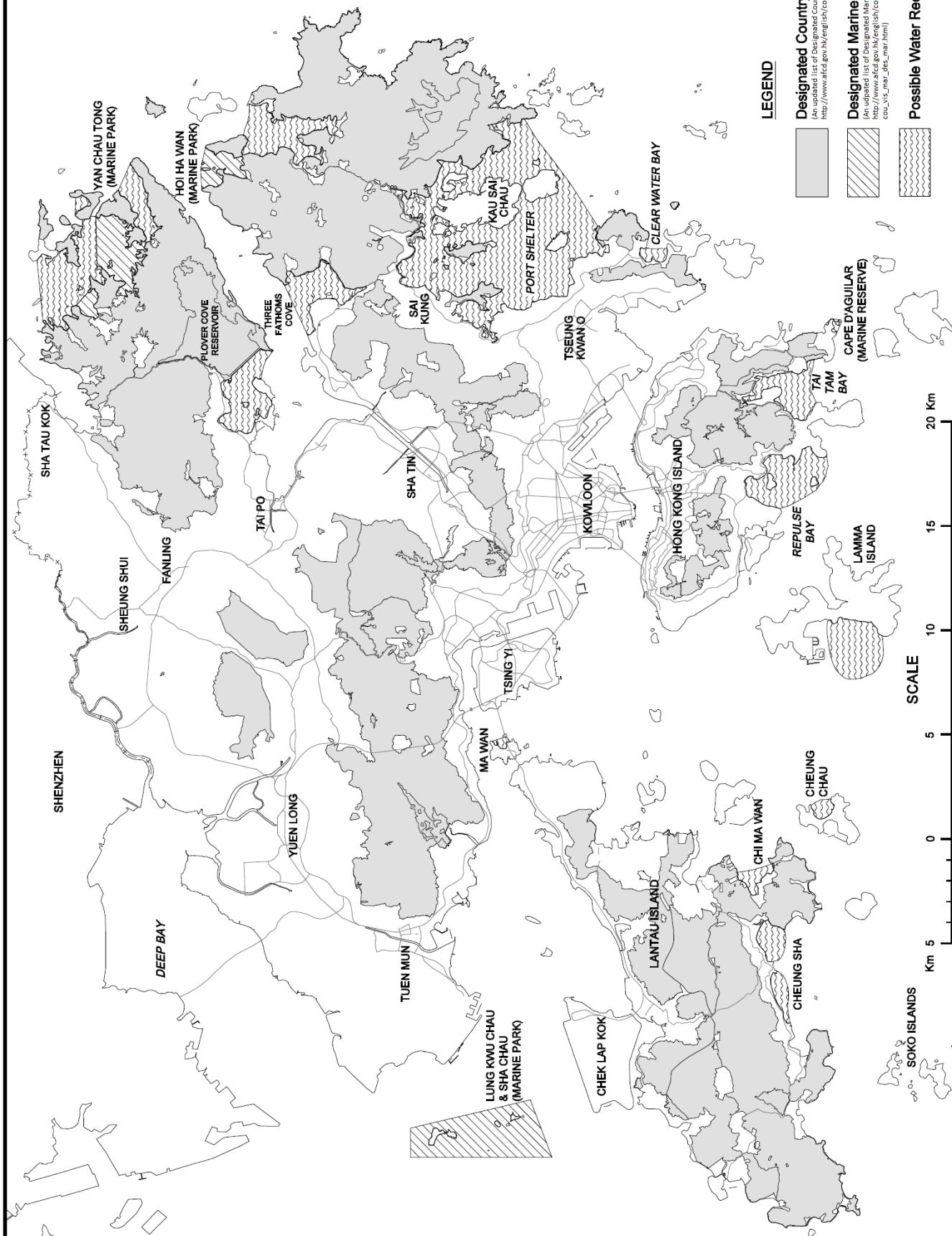
Notes:

* Provision level of activities to be determined on an individual district-by-district basis.

[#] Site area for reference only and should be applied with a degree of flexibility according to actual site situation.



MIRS BAY



LEGEND

Designated Country Parks

(An updated list of Designated Country Parks can be accessed at:
http://www.afcd.gov.hk/english/country/cou_lee/cp_sa.html)

Designated Marine Parks and Reserve

(An updated list of Designated Marine Parks and Reserve can be accessed at:
http://www.afcd.gov.hk/english/country/cou_vis/cou_vis_mar_des/cou_vis_mar_des_mar.htm)

Possible Water Recreation Areas

SOURCES

AGRICULTURE, FISHERIES AND
CONSERVATION DEPARTMENT
(COUNTRY AND MARINE PARKS AUTHORITY)

PLANNING DEPARTMENT

PLAN No. M / SP / 14 / 93

DATE 18. 3. 2014

Potential Water Sports Recreation Areas



FIGURE
2

1.9 Calculation Towards Recreation Facilities Standards

- 1.9.1 In determining the countability of recreation facilities towards meeting the stipulated standards, reference to the following criteria should be made:
- (a) The land should be zoned or reserved for recreation uses;
 - (b) The provision should meet the space standard for the facility, taking into account actual site situation;
 - (c) The facility should serve a clearly identifiable residential or worker population;
 - (d) The facility should be accessible to the population it is meant to serve; and
 - (e) The facility should be managed and maintained by a responsible agent, including a Government department or a private body.
- 1.9.2 It is common nowadays that recreation facilities (e.g. swimming pool, tennis court, table tennis court, etc.) are provided in private residential developments to cater for the need of their residents. These private recreation facilities should be taken into account in assessing the local needs of a district if they can meet the countability criteria (except criterion (a)) listed in para.1.9.1 above. LCSD should be consulted on this aspect.
- 1.9.3 The following are some common situations where recreation facilities may be provided but do not normally count towards the planning standard:
- (a) Outdoor core activities sharing the venues provided within Sports Centres. However, in the absence of outdoor space, indoor provision within dedicated, purpose-designed, facilities may be countable;
 - (b) Core activities provided as part of non-recreational developments such as facilities provided in school compounds which are not freely accessible to the population; and
 - (c) Recreation facilities such as recreation clubs, which are provided by the private sector and to which free access is normally restricted to members of the clubs.

1.10 Zoning for Recreation Facilities

- 1.10.1 Three statutory zones are used for recreation facilities, namely “G/IC”, “OU (Sports and Recreation Club)” and “REC” (see Table 5). The “G/IC” zoning is normally used for land where purpose-built recreation facilities are provided by the Government. The “OU (Sports and Recreation Club)” zoning is normally used for purpose-built recreation facilities developed by the private sector which are only accessible to members of the respective clubs. The “REC” zoning is used in the rural areas for land intended for the development of recreation facilities by the private sector. The forms of development should follow the requirements of the respective outline zoning plans.

Table 5 : Statutory Zones for Recreation Facilities

Statutory zone	Annotation	Planning intention
Government, Institution or Community	GIC	Purpose-built recreation buildings for public use with up to 100% site coverage, with possible sports-related mixed uses
Other Specified Uses	OU (Sports and Recreation Club)	Purpose-built recreation building developed by the private sector for members use
Recreation	REC	Large-scale low intensity recreational use developed by the private sector

- 1.10.2 For administrative plans, a more detailed zoning classification for different types of recreation facilities is applied having regard to the nature of the use, building intensity and location of the facilities. Recreation buildings and facilities provided by the Government should be designated “Government (Recreation)” (“G(Rec)”). Other recreation facilities provided can either be designated “Recreation (Category 1)” (“REC(1)”) where the recreation facilities require higher building site coverage of up to 50% such as recreation clubs or theme parks; or “Recreation (Category 2)” (“REC (2)”) where the recreation facilities require unique and extensive sites with much lower site coverage of below 10% such as golf courses, marinas, or sailing clubs. Table 6 shows the different zones normally used for recreation facilities on administrative plans.

Table 6 : Non-statutory Zones for Recreation Facilities

Non-statutory zone	Annotation	Planning intention
Government (Recreation)	G(Rec)	Purpose-built recreation buildings for public use with up to 100% site coverage (e.g. pools, sports centres, stadia)
Recreation (Category 1)	REC(1)	Recreation use up to 10 to 50% site coverage (e.g. recreation clubs, theme parks)
Recreation (Category 2)	REC(2)	Developments in areas with unique recreation potential, with up to 10% site coverage (e.g. golf courses, marinas)
Water Recreation Areas	WRA	Recreation areas developed along the coast for water-based recreational activities.

- 1.10.3 The corresponding recreation zonings used on statutory and administrative town plans are summarised in Table 7 below :

Table 7 : Corresponding Statutory and Non-statutory Recreation Zones

Facility	OZP	ODP
Government Developed		
Sports Ground/Complex	GIC	G(Rec)
Stadium (Indoor or Outdoor)	GIC	G(Rec)
Sports Centre	GIC	G(Rec)
Swimming Pool	GIC	G(Rec)
Water Recreation Centre	GIC	WRA
Private Sector Developed		
Sports and Recreation Club	OU	REC(1)
Theme Park (e.g. Ocean Park)	CDA, OU	REC(1)
Marina	OU	REC(2)
Water Sports Facilities	OU	REC(2)
Golf Course	OU	REC(2)
Rural Recreation, Holiday Resorts, Land Based Clubhouse etc.	REC	REC(1) / REC(2)

- 1.10.4 It should be noted that the statutory zonings indicated in Tables 5 and 7 are for general reference only. The most appropriate zonings for recreational developments should be determined having regard to specific planning circumstances.

- 1.10.5 Where the planning intention is for conservation of the countryside and coastal areas, it may not be appropriate to zone for recreation use. Statutory zones for conservation purpose restrict development and, generally, exclude recreation facilities. Further information on conservation zones should be referred to Chapter 10 of the HKPSG on 'Conservation'.

1.11 Locational Guidelines for Recreation Facilities

- 1.11.1 Generally, good quality sites are required for recreation facilities.
- 1.11.2 Wherever possible, sites for recreation facilities should be located close to major transport routes and interchanges as good access encourages use of the facilities. This is particularly important where a wide catchment area is served. Special arrangement may be necessary to ensure easy access for special groups such as persons with disabilities.
- 1.11.3 At the initial site identification stage, environmental issues should be considered as the environmental quality of a site, such as the air and noise aspects, can affect its suitability for recreation use. Conversely, the proposed recreation use may create environmental problems for adjoining developments, for example, outdoor stadia and ball courts close to housing. Reference should be made to Chapter 9 of the HKPSG on 'Environment' for further details on the environmental requirements.
- 1.11.4 Special consideration should be given to facilities which attract large crowd of spectators such as stadia. Traffic impact assessment may have to be undertaken at the planning stage for this type of development.
- 1.11.5 For development of recreation facilities within coastal areas, different impact studies on environment, traffic, and probably ecology may be required to establish the suitability of a site for the intended use. Where the recreation facility requires waterfront access, a minimum water depth and special facilities such as piers, pontoons and sea walls, may be required. The facility may also require hardstandings for boat storage, workshops and slipways which, in turn, may require good road access and parking for vehicles.

1.12 Recreation Facilities for the Elderly

- 1.12.1 With an ageing population and an increasing trend of elderly participation in recreation activities, there is a growing need in Hong Kong to provide exercise facilities for the aged. Indoor facilities such as badminton courts, table tennis rooms, multi-purpose activity rooms, and fitness rooms should be designed to cater for users of all ages including the elderly. Appropriate outdoor facilities such as fitness stations with equipment suitable for use by elderly, Tai Chi areas with rain shelter and seating, etc. should be incorporated in gardens and parks where they make frequent visits.

1.12.2 In planning exercise facilities for the elderly, the following integrated design principles should be considered:

- (a) Elderly people often have less sensitive vision, hearing and touch abilities. For exercise facilities, signage, handles, handrails, knobs, and grab bars etc. should be installed at appropriate locations. The material for the ground surface for Tai Chi exercise should generally be leveled, well drained, finished in firm and slip-resistant materials.
- (b) Sufficient sitting facilities, under shade and/or shelter, should be provided close to the exercise area not only for resting purpose but also for facilitating social interaction among the users.
- (c) Barriers against 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 handbooks 'Universal Accessibility: Best Practices and Guidelines' and 'Universal Accessibility for External Areas, Open Spaces & Green Spaces' prepared by Architectural Services Department (ArchSD), which can be accessed via the following webpage links: <https://www.archsd.gov.hk/en/ua/index.html> and <https://www.archsd.gov.hk/en/ua2/index.html>

1.12.3 Some good practices on provision of outdoor elderly exercise facilities are provided in Figure 3 for reference.

1.13 Use of Reservoirs for Recreation

1.13.1 There may be some potential to use some of the reservoirs for recreational purposes. However, such activities should not conflict with the main function of the reservoirs for the storage and supply of water. Also, as most reservoirs are located within Country Parks, any proposed recreational activities should also be compatible with the country park setting. Decommissioned reservoirs should be considered as a resource for modest scale, managed, water-based activities such as rowing, sailing and fishing.

1.13.2 Any proposal to use reservoirs for recreational purposes should be accompanied with supporting studies to assess the feasibility and environmental impacts of the proposal.

1.14 Recreation in the Countryside

1.14.1 The countryside comprises the areas within designated Country Parks, areas outside Country Parks but not within the coverage of the Rural Outline Zoning Plans as well as the rural-urban fringe areas. The development of recreation facilities in these areas differ greatly from those provided in the urban areas and, hence, the planning standards for

recreation facilities as set out in the foregoing sub-sections do not apply to the countryside.

- 1.14.2 The main function of Country Parks is to provide, through proper management, for relatively intensive recreational use such as barbecue and picnic activities as well as extensive use by hikers and ramblers, whilst at the same time protecting the vegetation cover and wildlife and conserving the scenic value of the countryside. Recreation facilities in Country Parks include picnic sites, barbecue spots and play areas which are gathered into 'honeypot' arrangements. Visitor centres, toilets and car parking are also provided. In addition, there are facilities which take advantage of the extensive areas of the countryside including campsites, walking trails and look-out points. Country Parks have added considerably to the recreational outlets for the people of Hong Kong and, to some extent, have alleviated the pressures on land for organised games and formal recreation.
- 1.14.3 The rural-urban fringe areas may be reserved for specialised recreation facilities such as urban fringe parks and theme parks. Any proposed recreational development in these areas should blend in with the natural terrain and vegetation. Environmental impact assessment and landscape plans will be required as part of the development proposal.
- 1.14.4 In the countryside, the relative merits of development versus conservation should be considered, and care should be taken to protect countryside areas from intrusive development. Proposals for recreation such as holiday camps, hotels and golf courses, usually seek sites which contain scarce natural features such as scenic inlets and beaches. These proposals should be accompanied with studies such as visual, ecological and/or environmental impact assessments to demonstrate their feasibility. Recreation facilities should be separated from areas zoned for conservation to reduce the potential impacts caused by the recreation use.

1.15 Implementation in Provision of Recreation Facilities

- 1.15.1 Many different bodies are involved in the organisation and provision of a wide range of recreation activities. The Sports Commission under CSTB is tasked to advise the Administration on the policies, strategies, implementation framework of sports development in Hong Kong; and the provision of funding and resources in support of sports development in Hong Kong, taking into account the inputs from various stakeholders in sports through partnership and collaboration. LCSD is primarily responsible for the development and management of public open space and purpose-built recreation facilities. The Agriculture, Fisheries and Conservation Department (AFCD) manages Country Parks, Special Areas, Marine Parks and Marine Reserves. The Social Welfare Department and the Education Bureau organise education and training camps. Outside the Government, recreation facilities are provided and/or managed by commercial organisations, management committees (in residential developments), sports associations and recreation clubs.

- 1.15.2 Apart from the Government, other specialist bodies and private organisations also play a significant part in recreation facilities provision. Specialist bodies usually represent a particular sport or activity. Commercial enterprises provide recreation facilities which meet the demands of the market place. These organisations differ in the way that they obtain resources and in the origin of their authority to operate facilities. Resources may be obtained from public money, as subscriptions to join clubs or as fees for the use of facilities. Authority to operate the recreation facilities may be governed by specific legislation or by contracts.
- 1.15.3 Recreation space which is provided outside the public domain as mentioned in para.1.15.2 above is a ‘bonus’ on top of the minimum standards stipulated in this section. This bonus recreation space reflects the demand for a wide range of recreation facilities in Hong Kong. Planners should seek to meet all predictable demands for recreation space for both public use and specialist needs with policy support. Generally, public bodies and the larger specialist bodies plan their needs through development programmes. Planners should ensure that in the planning of these facilities, co-ordination is maintained with concerned bodies. Commercial bodies are more difficult to predict due to their need to respond quickly to changing market conditions. Nonetheless, major operators may be able to provide some advance indications of their land requirements.
- 1.15.4 The Government will remain as the major provider of public recreation facilities. However, the role of the private sector is expected to increase and presents a significant opportunity to provide innovative recreation facilities. The standards and guidelines for public recreation space should be interpreted in spirit and not be applied mechanically and as absolute standards. In this way, the public and the private sectors can continue to respond to the need for innovation and change.



Sufficient Sitting Facilities with Shelter Protection



Fitness Station with Fitness Equipment for the Elderly



Fitness equipment for abdominal crunch



Fitness equipment for rotatory cuff



Tai Chi area with rain shelter and seating

Figure 3 Illustrative Examples of Elderly Recreation Facilities

2. Open Space

2.1 Open Space to Enhance Liveability

- 2.1.1 Open space is vital to a city's liveability, public health and well-being. It provides urban dwellers with an outdoor venue for activities and enjoyment, as well as close connection with nature which benefits both physical and mental health.
- 2.1.2 The "Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030" (Hong Kong 2030+ Study) envisions to enhance the overall liveability of our compact high-density city and enhancing the quantity and quality of open space. In response to the public aspirations for more open space, the Hong Kong 2030+ Study recommends an enhanced open space provision per person to not less than 3.5m².
- 2.1.3 To achieve the planning vision, the "Reimagining Public Spaces in Hong Kong – Feasibility Study" (the Study) was commissioned to assess the key issues, trends and public aspirations pertinent to the planning of open space in both Hong Kong and other international cities, and to review the concept and definition, planning standards, calculation and design guidelines of open space. The Study's findings provide a good basis for revamping the planning standards and guidelines for open space development.

2.2 Scope and Purpose

- 2.2.1 The planning standards and guidelines set out in this section are to guide the planning and design of open space in the development areas⁵. They encompass different aspects of open space, inclusive of definition, classification, planning standards, calculation, locational guidelines and design framework.

2.3 Key Trends and Public Aspirations of Open Space

- 2.3.1 According to the United Nations Human Settlements Programme (UN-Habitat), public spaces are "places which are accessible and enjoyable by all without a profit motive"⁶. They range from streets, spaces between buildings, urban plazas, parks and playgrounds, sitting-out areas, podiums and rooftops to public facilities.
- 2.3.2 The Study has identified the city trend with transformation of various forms of unused public spaces (such as streets, small pocket sites, under-utilised space including alleys and spaces under the flyover) into

⁵ Country parks are designated for the purposes of nature conservation, countryside recreation and outdoor education, and governed under Cap. 208 Country Parks Ordinance, and is not countable towards open space provision.

⁶ UN Habitat. City-Wide Public Space Strategies: A Compendium of Inspiring Practices.

appealing open spaces, on temporary or permanent basis through innovative solutions such as time sharing of space.

- 2.3.3 Besides, more emphasis have been put on the architectural and spatial integration of outdoor and indoor spaces of commercial, residential and mixed-use developments. This has resulted in both horizontal and vertical integration of open spaces in the public realm and within developments, enriching overall users' experience.
- 2.3.4 Other design trends include flexible and adaptive design; inclusive design; environmental-friendliness including smart, green and resilient design; diverse and experiential elements; art and aesthetics; and playable design, and public participation in design and management.
- 2.3.5 These trends of open space developments indeed are responding to the rising public aspiration for quality open spaces. The general public also recognise the equal importance of small accessible open spaces, medium/large parks and public spaces serving open space functions. They aspire for more flexible and adaptive designs, sufficient greenery, together with better management for open space.

2.4 Principles of Open Space Planning

- 2.4.1 The following four principles are relevant considerations in the planning and provision of open space:
 - (a) **Vision** : Open spaces as essential and integral component of public realm should be planned and incorporated into the comprehensive public space network of the city, connected with links and streets, various destinations and activity nodes. Open spaces should also form a collection of outdoor recreational and leisure venues of varying sizes and forms to serve the users.
 - (b) **Quality** : Open space should be of high quality, in terms of facilities, layout and designs in response to their site contexts, functions and sizes, which meets the needs and aspirations of the users. They should also meet environmental standards, and contribute to civic design.
 - (c) **Quantity** : Sufficient open space should be provided to meet users' needs and aspirations as well as to enhance the overall liveability in our compact, high density city.
 - (d) **Good Practice** : Provision of open space should strive for key objectives such as achieving good accessibility, optimum usage, environmental improvement, indoor/outdoor interactions, inter-generational/all-inclusive uses and active lifestyle.

2.5 Definitions of Open Space

2.5.1 There has been a rich diversity of open space, ranging from conventional public parks, playgrounds and sitting-out areas to temporary open spaces in the public realm. Open spaces can be provided by various parties ranging from Government departments, non-government organisations to private sector, and they can be provided in the form of standalone open space or integrated delivery with public, private, community and heritage facilities.

2.5.2 To meet the public aspiration for a diversity of quality open space, open space generally refers to accessible outdoor spaces within existing/proposed built-up area with recreation and amenity value for users' enjoyment. It includes the following typologies:

- (a) **Regional Open Space :** Generally larger sites (preferable size $\geq 5\text{ha}$) provided at prominent locations in the urban areas, at the urban fringe areas or in proximity to public transport facilities including railway stations and public transport interchanges. They provide facilities with a greater scope accommodating active and passive recreational uses, and serve the wider recreational needs of the territorial population and tourists.
- (b) **District Open Space :** Generally medium-sized sites (preferable size $\geq 1\text{ha}$) providing facilities for active and passive recreation to serve the district population.
- (c) **Local Open Space :** Generally smaller sites (preferable size $< 1\text{ha}$) which are more passive in nature providing sitting-out areas to serve the neighbourhood population. It includes both public and ancillary open spaces.
- (d) **Public Open Space :** Open space where the general public are entitled to access, use and enjoy. It includes both designated, purpose-built and incidental open spaces.

- (e) **Public Open Space in Private Developments (POSPDs) :** Open space in private development under private management where the general public are entitled to access, use and enjoy. They have been registered mainly under the list of POSPDs maintained by Lands Department (LandsD).
- (f) **Incidental Open Space :** Generally refers to public spaces that are not purposely built or designated as open space, yet their physical context, attributes, design and functions have allowed them to augment their functions as open space venue.

2.6 Planning Standards for Provision of Open Space

- 2.6.1 The standard for provision of open space throughout the territory is a minimum of 35 ha per 100 000 persons (i.e. 3.5m² per person).
- 2.6.2 Given the unique circumstances of existing built-up areas in terms of available developable land, development density and land use pattern, the provision standard of open space may not be achievable all at once, nor uniformly across every district. Gradual improvements towards the targets should be pursued through means such as comprehensive urban redevelopment projects by Urban Renewal Authority, or public/private sectors. The provision standard of 3.5m² per person should be encouraged as far as practicable. While an incremental approach would be taken to meet the provision standard in the existing built-up areas, emphasis should equally be placed to improve the quality of existing open spaces to enhance public enjoyment and well-being.
- 2.6.3 In public housing developments and private comprehensive residential developments, ancillary open space of a minimum of 1m² per person should be provided to serve their own residents.
- 2.6.4 In industrial, industrial-office, business and commercial areas and other comprehensively planned employment nodes, the standard of provision is a minimum of 5 ha per 100 000 workers i.e. 0.5m² per worker, and should mainly be used for the enjoyment of workers. For employment nodes located in close proximity to residential areas, the above provision of open space may not be required as a “time-sharing” approach can be adopted for enjoyment of the public open spaces by residential and employment population at different times.
- 2.6.5 With a view to enhancing the quality of living/working environment, private sectors are encouraged to provide sufficient ancillary open space benchmarking on the above provision standard to meet the recreational needs of its own occupants.

2.7 Calculation Towards Open Space Provision

2.7.1 The following are the general criteria for deciding whether an open space can be countable towards the standards of provision:

- (a) should normally be open-air outdoor space serving general public, including outdoor communal space within private development serving its own residents or workers;
- (b) should be accessible, including open space both at ground and above ground level;
- (c) should be functional and usable for active recreation (e.g. ball courts and pitches) and/or passive recreation (e.g. sitting-out areas and landscaping areas); and
- (d) should have the terrain suitable for access and use.

2.7.2 Some specific situations are subject to evaluation on individual case basis. References for consideration are set out below.

2.7.3 **Covered Areas:** In response to climate change and public aspirations for more sheltering and vibrancy, covered areas may be counted as open space under certain circumstances, subject to its scale, design and function, etc. The general considerations for evaluation on a case-by-case basis may include:

- (a) Covered area forming an integral component, design or extension of an open space may be counted as part of the open space.
- (b) For sizable open spaces, areas occupied by ancillary facilities and structures with specified functions contributing to the amenity, recreation value, sheltering and vibrancy of an open space, such as pavilions, sheltered seating, kiosks and small cafes, etc. may be counted as open space⁷.
- (c) Space beneath a viaduct, highway or footbridge structure with sufficient headroom clearance allowing comfortable pedestrian movement, sunlight penetration, and natural air ventilation, and whose primary function is for active or passive recreation may be counted as open space.

2.7.4 **Water Bodies:** Water bodies and water features with recreation and amenity value within a land-based open space can be counted. The open water part of revitalised channels may also be counted as open space depending on its design and function. For beaches, the land area demarcated by high water mark can be countable.

⁷ These facilities and structures will be subject to the building site coverage guidelines as set out in Table 9 unless otherwise specified.

- 2.7.5 **Ancillary and Incidental Facilities within Open Space:** Facilities including but not limited to pedestrian routes, cycle paths, emergency vehicular access and ancillary roads serving an open space can be countable.
- 2.7.6 **Slopes within Open Space:** It is recognised that the sloping parts of a site may not be useful for recreational use, and may have issues of accessibility, limited functions and utilisation due to the terrain or level differences and therefore, depending on site circumstances, the following slope correction factors should be applied when calculating the provision standards:

Table 8 : Slope Correction Factors

Slope Gradient	% to count as standard	Remarks
Slope < 1:20	100%	Site allowing unassisted barrier free access ⁸ . Slope correction factor not required.
Slope between 1:20 and 1:5	60%	-
Slope between 1:5 and 1:3	30%	-
Slope > 1:3	Nil	Site beyond the maximum gradient for natural slope/berm for planting/vegetation, which provides limited amenity value and less possible for natural greening, should not be counted as open space.

2.8 Open Space Classification

- 2.8.1 Open space can be classified into Local Open Space (LO), District Open Space (DO) and Regional Open Space (RO) to facilitate the siting and design.

⁸ Buildings Department, Design Manual on Barrier Free Access.

Table 9 : Open Space Classification

Type	Site Particulars	Function
LO	<ul style="list-style-type: none"> • Preferable Size < 1ha, where possible at least 500m² • Building Site Coverage ≤ 5% 	<ul style="list-style-type: none"> • Neighbourhood open space near/within residential developments or workplaces accessible by walking and primarily for passive recreation. • Serve as an immediate extension of the personal space from users' residence or workplace to promote active/healthy lifestyle. • Serve key social function for people in the neighbourhood to relax, interact and play. • Important open area outlets especially in existing built-up areas to add breathing, ventilation and green space for public wellness.
DO	<ul style="list-style-type: none"> • Preferable Size ≥ 1ha • Building Site Coverage ≤ 10% 	<ul style="list-style-type: none"> • More sizable open spaces where people are willing to travel a certain distance to visit.
RO	<ul style="list-style-type: none"> • Preferable Size ≥ 5ha • Building Site Coverage ≤ 20% 	<ul style="list-style-type: none"> • Contain a wide range of facilities with active and passive recreation opportunities. • Serve the recreational needs of the district population, territorial population and tourists. • RO is intended to function as large 'green lungs' within built-up areas.

2.8.2 Covered areas of ancillary facilities within public open space should be countable towards building site coverage calculation as set out in Table 9 above. However, the provision of green and amenity features to address the hot and humid climate of the city that enhance users' comfort, such as pavilions, shelters, covered seating, covered walkways,

etc. is encouraged. These facilities provided in a reasonable scale may be disregarded from building site coverage calculation.

- 2.8.3 The specified building site coverage guidelines and considerations are intended to provide a general reference for design of public open space. For open space within private development, the definition and site coverage calculation for open space as a development control parameter should follow the provisions of the Buildings Ordinance administered by the Building Authority.

2.9 Locational Guidelines for Open Space

- 2.9.1 Open space should be planned in its own right and in the right location to serve its intended population taking into account the following considerations.

- (a) **Accessibility** – Generally, at-grade open space is more preferred than elevated open space for better accessibility, visibility and greening opportunities.
 - (i) LO must be conveniently located to serve its intended users. It should preferably be located within 400m from its nearby residences or workplaces, which is equivalent to about a 10-minute walking distance. In public housing developments and in private comprehensive residential developments, LO may be provided at ground or above ground level.
 - (ii) DO and RO should be easily accessed along street frontages, and preferably within 400m from public transport facilities including railway stations and public transport interchanges to facilitate patronage by the territorial population and tourists. They should be located where there is sufficient flat land to accommodate active recreation facilities and be easily accessible. Natural areas suitable for recreation facilities may also be included as part of DO or RO.
 - (iii) It is important to improve the connectivity among public open spaces, especially the pocket open spaces, so that they form a network of open space to serve the neighbourhood more effectively. An open design without fences/gates can help to enhance connectivity and accessibility.
- (b) **Compatibility and Synergy** – Open spaces must be compatible with adjacent uses and their surrounding site context.
 - (i) They should be located away from potential nuisance, such as sources of air and noise pollution. The environmental guidelines as set out in Chapter 9 of the HKPSG on ‘Environment’ should be applied in designing open space.

- (ii) Open space venues which may attract a large patronage, and facilities within open space that may create potential nuisances should be carefully located/designed to minimize impacts on nearby residents.
 - (iii) Public open spaces should be planned and sited to create synergy through an open space network with different themes and good connectivity to complement each other.
- (c) **Optimisation of Unused Public Space** – Beautification and facelifting of unused public space for leisure, recreation and amenity purpose (such as sitting-out areas) should be promoted as far as possible. This is especially important for existing urban areas where comprehensive planning of open space framework would be more constrained.

2.10 Design Guidelines of Open Space

2.10.1 To create quality open space that can attract people to walk, stay and enjoy, the following broad design principles and guidelines should be considered:

- (a) **Place-making and Functions** – Open space should consider site context, local identities, user characteristics and seek opportunities to augment overall place-making impact through holistic consideration of the uses and design of its adjoining spaces to promote synergy and vibrancy. It should flexibly provide active and passive functions within open space, and encourage active frontage with visual connections to pedestrians at street level for vibrancy. Open spaces could also be created on a temporary or time-sharing basis for public recreation or social activities.
- (b) **Play, Flexible and Active Design** – Open space design should cater for more flexible and adaptive uses to create more possible usages. A range of dynamic play options should be considered. Multi-purpose and spontaneous play space design for shared use by people of different ages and abilities should be provided. Active design considerations should also be adopted to encourage physical activities to promote health and wellbeing (e.g. provision of cycle path, stairs and ramps, where appropriate).
- (c) **Inclusive and Inter-generational Design** – The needs and activities for people of different ages, ethnicity and abilities should be considered in designing the space and types of facilities within an open space, which can also foster a sense of community. Co-sharing of open space among different users should be encouraged where appropriate.
- (d) **Safety and Comfort** – Good visibility by way of adequate lighting, clear demarcation of access routes free of physical

barriers and universal design, and adequate protective devices should be provided to enhance safety. Adequate shading, greening, water features, seating, and suitable choice of colours, materials and design of facilities should also be provided to enhance comfort.

- (e) **Accessibility and Permeability** – The open space should promote seamless connection with the adjoining footpaths/destinations to enhance accessibility, walkability, interactions and vibrancy. Fence-free design for open space and promenade should be considered as far as practicable to promote visual permeability. Besides, physical permeability within the site should also be provided through proper design of a walking route which is connected, safe, enjoyable and legible. Sense of openness should be provided within an open space to promote air and natural light penetration.
- (f) **Greening, Smart, Biophilic and Resilient Design** – Sufficient greening, in particular tree planting and activity lawns should be provided. Guidelines on greening provision in open spaces are set out in the Greening section of this Chapter. To embrace sustainability and adapt to climate change, it is also encouraged to deploy smart, biophilic and climate-resilient initiatives in the design process, such as co-use of space for recreational ground and flood relief, provision of retention ponds and bioswales. Reference should be made to the prevailing Drainage Services Department (DSD) Practice Note on Guidelines on Application of Floodable Area and Drainage Facility Co-Use in Drainage Management.

2.11 Implementation in Provision of Open Space

- 2.11.1 Many different bodies are involved in the provision of a wide range of open space. The LCSD is primarily responsible for the development and management of public open space. Other departments such as Environmental Protection Department and DSD, etc. would provide and manage public open spaces at their facilities when opportunities arise. Open spaces are also provided in private development and redevelopment projects and/or managed by commercial organisations and management committees (in private residential developments). Some open space could also be implemented through public-private collaboration.
- 2.11.2 **Collaboration:** Different government departments involved in the open space design, management and maintenance should pay concerted efforts from project inception to operation. Relevant management departments/parties should be closely involved and duly consulted in the planning process so that they may take up and manage the open space in a timely manner.
- 2.11.3 **Public Participation:** Open space could be co-created with the community to meet local needs and aspirations. Stakeholders

involvement in the design stage is encouraged, e.g. through collaborative workshop or design competition of open spaces.

- 2.11.4 **Management and Maintenance:** The management and maintenance of open space venues should be in pursuant to relevant laws and regulations. For public open space provided by the private sector, the implementation mechanism should be carefully deliberated with respective bureaux and departments to avoid passing the financial responsibility to individual owners/occupiers/residents⁹. Besides, advance opening of open space within a development should be encouraged to facilitate early enjoyment by the public, if possible.
- 2.11.5 **Information Transparency:** The opening hours, information dissemination and routing should be publicised. Some context- and place-specific users' signages could also be introduced to allow more flexible use in temporal and spatial terms. Proper channels for user feedback collection could facilitate better communication between users and the managing agent.

2.12 Related Reference Materials

- 2.12.1 The Government will remain as the major provider of public open space. However, the role of the private developers and other organisations involved in development projects is expected to increase and presents a significant opportunity to provide open space with innovative and integrated design forming an interconnected network of public realm. The standards and guidelines for open space should be interpreted in spirit. In this way, the public and the private sectors can continue to respond to the need for innovation and change.
- 2.12.2 In planning and designing of open space, concerned government departments should duly consider the principles and guidelines as set out in a number of prevailing government publications, guidelines, circulars, etc. These documents would also provide a good reference for other private practitioners and relevant organisations involved in open space development. Some related reference materials for the planning and design of open spaces can be found in Appendix 2.

⁹ Development Bureau. Refined administrative arrangement for provision of POSPDs as set out in the discussion paper CB(1)930/09-10(03) for the Legislative Council Panel on Development dated 26 January 2010 "Provision of Public Open Space in Private Developments"
https://www.devb.gov.hk/en/issues_in_focus/provision_of_public_facilities/index.html

3. Greening

3.1 Planning for a Greener City

- 3.1.1 Hong Kong has about 73 300 ha of woodland, shrubland and grassland accounting for about 66% of the total Territory's area. Much of this is however contained in the higher ground or mountainous countryside mostly in the New Territories.
- 3.1.2 Notwithstanding the seemingly large land coverage of vegetation in Hong Kong, the built-up townscape of Hong Kong is dominated by concrete landscape with little greenery, particularly when viewed at the street level. Planning for a greener townscape has been hindered by spatial limitations governed by urban development with greater emphasis given to population and economic growth. Even the countryside may be denuded of vegetation and vulnerable to development pressures for more housing, employment, transportation network, infrastructure and other development needs. Planning for a greener city is therefore much needed to enhance the quality of our living environment.
- 3.1.3 About 24% of the total Territory's area can be classified as built-up area and potential development area. Developments within these limited land resources have necessarily resulted in a compact urban form with limited scope for provision or preservation of greenery. Development plans would need to be responsive with greater sensitivity to the balance between hard-surfaced built-up area and green area.
- 3.1.4 Given many existing constraints and land shortage, it is natural that there would be greater scope to incorporate greening in new development areas than in existing urban areas. As a matter of fact, greening and landscaping have already been widely incorporated in the planning of new towns and new development areas where landscape master plans are usually prepared at the early planning stage. The difficult part is in the urban areas where competition of land uses is keen and land cost is high thus limiting the scope for greening, except where there is opportunity for comprehensive redevelopment.

3.2 Greening Policy

- 3.2.1 In the Chief Executive's 2007-08 Policy Address, it was committed that Development Bureau (DEVB) would continue to pursue the development and implementation of Greening Master Plans (GMPs) for the Hong Kong Island and Kowloon, and actively study the possibility of developing GMPs for the New Territories. Moreover in the 2009-10 Policy Address, Government undertook to set up two new offices under DEVB, namely, the Greening and Landscape Office and the Tree Management Office (see para. 3.9.1 below), to co-ordinate the efforts in greening and tree management, while departments concerned would improve tree risk assessment arrangements, step up training, and promote community involvement and public education.

- 3.2.2 It is the Government's greening policy to enhance the quality of our living environment through active planting, proper maintenance and preservation of trees and vegetation. The target is to bring noticeable improvements in urban greenery, to enhance the existing green areas and to maximize greening opportunity during the planning and development stages of public works projects. Private sector and community involvement will also be encouraged to further promote greening.
- 3.2.3 A holistic and balanced approach should be adopted to strengthen the commitment to greening. Every practical opportunity should be explored for provision of greenery, in particular, tree planting in the feasibility, planning and design stages of any proposed development. Notwithstanding, at least equal, if not higher, priority should be given for greening when compared with other technical requirements in works projects. Project proponents should be more sympathetic to allow greater flexibility for preservation and planting of tree and vegetation.

3.3 Scope and Application of Planning Guidelines on Greening

- 3.3.1 While the following paragraphs set out broad planning guidelines and concepts to serve as a general checklist in planning and assessing development proposals to incorporate greening objectives, users may need to refer to the more detailed guidelines or specifications available in other technical sources as listed in the Reference in Appendix 2 where appropriate.
- 3.3.2 The standards and guidelines for greening should be applied flexibly having regard to the constraints and opportunities and resource implications. This is particularly important in existing built-up areas where land may not be sufficient to meet rigid standards and guidelines on provisions. They should therefore be interpreted in spirit and the actual implementation would need to take into account other relevant considerations and special circumstance.

3.4 Terms and Definitions in Greening

- 3.4.1 Greening can be interpreted within the broader definition of landscape, a word which originates from "painting" and generally refers to the appearance of the land cover. It includes components such as shapes, textures and colours, and their combinations to create distinctive patterns and pictures.
- 3.4.2 Landscape is made up of two broad components, namely the hard and soft landscapes. Landscaping is the efforts and works to conserve and beautify natural and man-made scenery and landscape resources. Hard landscaping refers mainly to the humanly moulding of the engineered constructs of landscape, and natural rocks and boulders etc. while soft landscaping means natural vegetation or planting of trees, shrubs, grasses, flowers, horticulture and other greening works including sometimes soiling materials.

- 3.4.3 Whilst greening literally seems to mean only green plantation, e.g. trees and grasses, for the purpose of flexibility and wider application of the guidelines in this section, greening is interpreted in a broader sense to include planting of trees, shrubs, grasses, flowers or other flora types of vegetation within public space or public/private developments.

3.5 Functions of Greening

- 3.5.1 Green landscape, natural or man-made, contributes to the quality of environment and enhances quality living in many ways:

- (a) Greening functions as urban lung to offer visual and psychological comfort and relief, which are vital to the health and well-being of people in a high-density and congested environment.
- (b) Greening adds aesthetic quality to the urban design for creation of a more pleasant cityscape.
- (c) Greening adds human dimension to a city where high-rise developments dominate in scale and proportion.
- (d) Greening increases the permeability of space to maintain a balance of void and mass for visual contrast in the concrete cityscape.
- (e) Greening defines space among buildings and can be used to delineate vistas to form interesting view corridors.
- (f) Green buffers can screen unsightly views and soften harsh and degraded surroundings.
- (g) Trees and flowers provide sense of seasonal change that enhances the visual interest of the city scene and vibrancy of the city life.
- (h) Vegetation improves microclimate by, for instance, providing sun shades and windbreaks, absorbing heat and reducing the ambient temperature of hard surface, lowering solar radiation intake at the ground surface, and enhancing the humidity and air movement. Tree planting at grade is particularly effective in promoting thermal comfort at the pedestrian level.
- (i) Vegetation helps contain flying dust and counters the effects of environmental pollutants. It consumes carbon dioxide emissions and enhances the supply of oxygen, and hence helps break down noxious gas emitted from vehicles or industrial activities.
- (j) Landscaped earth bunds can be used as a form of traffic noise mitigation measures.
- (k) Vegetation cover acts as hydrological balancing reservoir by retaining the rainwater flow in heavy rain for release in dry

weather days and helps moderate soil erosion and enhances slope stability.

- (l) Suitable trees and plants of indigenous species will provide food and shelter for wildlife (e.g. insects and birds) and hence enhance bio-diversity in the area and conserve wildlife.
- (m) Varied landscapes along major highways can reduce visual monotony, enhance the quality of the road environment and promote traffic safety.

3.6 General Principles of Greening

- 3.6.1 To achieve the objective of making Hong Kong a greener city in the long term, greening principles should be actively pursued as a development and environmental management goal in the planning process rather than applied retrospectively as a remedial or cosmetic measure.
- 3.6.2 Concerted efforts should be made to incorporate as many greening opportunities as possible during the early stage of planning new development/redevelopment areas and infrastructure projects. Landscape master plans, planning briefs or lease conditions should make adequate provision for greening and be included as part of the major development/redevelopment process.
- 3.6.3 Where available the landscape strategies and plans prepared at strategic, sub-regional and district levels including GMPs should be referred to as a guiding framework for deriving the greening principles to be applied to specific development areas and projects.
- 3.6.4 Although limited land availability and high land cost may be the constraints in the provision for greening, the opportunities to reserve new space for greening should be maximized with a view to ensuring more flexible choices and designs of greenery for greater variety of functions to suit particular conditions rather than adopting standardization.
- 3.6.5 Greening works should be carried out not at the expense of undermining safety to people and vehicles and stability to underground works or building structures. On the other hand, greening opportunities should not be unnecessarily suppressed just for the ease of management and maintenance. Each case should be considered on its merit and an approach balancing all factors should be adopted.
- 3.6.6 Due to the long lead time for plant growth and maturity, implementation of greening works should be programmed in advance of the completion of development project as far as possible.

3.7 Planning Guidelines on Greening

3.7.1 Site Development

- (a) Greening and tree planting should be considered at an early planning stage of the site development. The character of the planting should reflect the location and characteristics of the site. If appropriate, a landscape master plan should be prepared to guide development of a framework for tree planting and soft landscape works in the development. A sample landscape master plan is at Figure 4.
- (b) Existing vegetation should be preserved as far as possible and integrated into the development scheme. Adequate measures for protection of existing vegetation during construction works such as fencing around the trees, avoiding ground compaction in the root zones and keeping toxic materials and fire away from the tree, should be planned before commencement of construction works, especially mature trees. Details should be referred to the prevailing Guidelines on Tree Preservation during Development on the Greening website (<http://www.greening.gov.hk>).
- (c) If applicable and feasible, trees and shrubs should be planted along the periphery of sites. For tree planting, a 3m wide planting strip and a minimum 1.2m soil depth (excluding drains) should be reserved. For other plantings, a minimum of 1m wide planting strip is recommended¹⁰.
- (d) Landscape buffers can also be provided to screen service areas such as refuse collection point, loading and unloading area. Planting should wherever possible be encouraged around buildings, on podia, rooftops, and building façades, which are easily visible.
- (e) On vacant sites not immediately required for development within the short term, consideration should be given to provide temporary greening or to make available for tree nursery which can be easily transplanted to suitable locations subsequently upon development of the sites.

3.7.2 Residential Development

- (a) Residential developments in Hong Kong are mainly typical high-rise and characterized by pencil blocks closely spaced from one another. Greening and landscaping works provide a serene and comfortable setting in human scale to minimize the unpleasant impacts of high-density developments.

¹⁰ For further information on soil volume requirements for tree planting, please refer to the prevailing Guidelines on Soil Volume for Urban Trees available on the Greening website (<http://www.greening.gov.hk>).

- (b) In public housing developments and private comprehensive residential developments, the minimum standard of 1m² per person of ancillary open space, which is primarily for landscaping and passive recreation use, should be provided. Ornamental planting should provide displays of foliage and flowers. As set out in the Guiding Principles on Green Coverage for Public Housing Developments jointly prepared by Planning Department (PlanD) and Housing Department (HD), public housing development should achieve an overall target of 30% green coverage. Subject to individual site characteristics and constraints, a lower percentage of green coverage could be considered on a case by case basis. Green coverage of at least 20% should be considered as a minimum unless constrained by special circumstances.
- (c) To encourage greening, communal sky gardens on residential buildings with greenery may enjoy exemption from Gross Floor Area (GFA) and/or Site Coverage (SC) calculations under the Buildings Ordinance (BO), Buildings Department (BD), LandsD and PlanD Joint Practice Note No. 1, Green and Innovative Buildings (JPN No. 1)).
- (d) Requirements of site coverage of greenery are imposed on all new land leases for private developments, and in planning briefs where practicable.

3.7.3 Industrial Development

- (a) Special industrial developments such as industrial estates and science parks are usually land extensive. These developments provide considerable scope for greening that can enhance their image as well as compatibility with the surroundings.
- (b) In planning for new industrial, industrial-office, business areas, or special industrial areas, a minimum standard of 0.5m² open space per worker for landscaping and passive recreation use should be provided.
- (c) Provision of communal podium gardens and sky gardens with greenery on industrial buildings may enjoy exemption from GFA and/or SC calculations under the BO (JPN No. 1 and Joint Practice Note No. 2, Second Package of Incentives to Promote Green and Innovative Buildings (JPN No. 2)).
- (d) More detailed guidelines and good practices for provision of planting in open space and landscape area, access road, pedestrian route and individual lot in industrial areas, industrial estates and science parks are provided in section 17 and Table 7 of Chapter 5 of HKPSG.

3.7.4 Commercial Development

- (a) Commercial area usually denotes an area highly concentrated of economic activities and a place for gathering. Integrating greening, landscaping and building design within an urban design framework is necessary to reinforce the identity of a prime commercial development, particularly in the Central Business District which is characterized by attractive buildings and landmarks of high quality, high standard of architectural design.
- (b) Opportunity to provide building setback or create piazzas for greening and passive recreational use should be included at the planning and design stages to enhance the attractiveness of the public place around the commercial development. Trees together with architectural features at the entrances to buildings can also strengthen the identity of the buildings.
- (c) In planning for new commercial areas, the minimum standard of 0.5m² open space per worker mainly for landscaping and passive recreation use should also be applied.
- (d) Similar to industrial developments, communal podium gardens and sky gardens with greenery may enjoy exemption from GFA and/or SC calculations under the BO (JPN No.1 and No. 2).

3.7.5 Private Developments

When granting GFA concessions in new building development, the Building Authority will, where appropriate, take into account the compliance with the Sustainable Building Design (SBD) Guidelines, including site coverage of greenery. The SBD Guidelines are set out in BD's Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) APP-152 – Sustainable Building Design Guidelines. Further details on the prerequisites for granting GFA concessions are set out in PNAP APP-151 – Building Design to Foster a Quality and Sustainable Built Environment.

3.7.6 Government Buildings

As Government is committed to promoting a quality living environment, it has long been taking the lead in promoting greening to the community. A set of guidelines setting out the standards and requirements on site coverage of greenery in new Government building projects and the related calculation methodology is given in DEVB Technical Circular (TC) on Site Coverage of Greenery for Government Building Projects. Project proponents responsible for Government building projects are encouraged to maximise greening opportunities of the sites.

3.7.7 Visually Sensitive Uses

(a) Quarries

- (i) Although the long term after use of quarries will vary from site to site, full landscape reinstatement including major re-contouring for mass tree planting and erosion control should be undertaken to restore the natural outlook of a vegetated slope.
- (ii) Existing quarry faces created during excavation should be re-graded to enable satisfactory re-vegetation and restoration to a natural outlook. Where feasible and desirable, a slope of maximum gradient 1:1.5 should be adopted to retain soft soil fill for planting purposes.
- (iii) Restoration works should be planned well ahead before the end of the quarry activities so that sensitive landscape treatment can be introduced. Detailed guidelines on landscape treatments on slopes, including tree planting, are given in para. 3.7.10 below.

(b) Utility Service Facilities

- (i) Some utility service facilities such as pumping stations, sewage treatment works and refuse collection points may be visually sensitive. Opportunities should be taken to provide skyrise greenery such as roof greening and vertical greening in addition to periphery tree planting and amenity buffer strips to screen off these facilities for them to be more visually agreeable and blend in with the surroundings.
- (ii) Overhead transmission lines are usually laid across natural hillslopes and peaks. Erection of pylons will damage existing vegetation. Such damages should be minimized through careful selection of sites. Landscape reinstatement should also be undertaken. Chapter 7 of HKPSG should be referred to for more details.

(c) Port Backup and Open Storage Uses

- (i) Stacks of containers, vehicle parts or construction materials at open storage sites are sources of visual blight in rural area. Landscaping at periphery of these sites can be used to effectively screen off the visual impacts of stacks.
- (ii) Preferably, a minimum 1m-2m wide planting strip should be provided at the periphery of the site. A wider strip is recommended at the side facing main road. A combination of trees (3m high), bamboos and shrubs and earth mounds could be used to provide a continuous screening belt. Wherever possible, tree pits are to be

provided at an interval of 4m-5m.

- (iii) The proposed plant screening however should not cause sight-line obstruction at the ingress/egress points of the site.
- (iv) An illustration on an example of landscape screening is provided in Figure 15.

3.7.8 Open Spaces

- (a) Open space in the form of parks, gardens, promenades and sitting out areas not only meets the recreation and leisure requirements of the population but also provides major opportunities for greening and a soft setting to improve the network of civic space within the district, especially in the urban areas.
- (b) The provision of open space is currently based on the minimum standards of 3.5m² per person. Sub-section 2.6 of this Chapter lay out the detailed standards for provision of open space.
- (c) Landscape plans should be prepared for parks, gardens, promenades and sitting out areas to maximize the greening opportunities. Large areas of hard surfacing are particularly inappropriate. Instead, trees should be extensively used to soften local environments.
- (d) As general guidelines for designing public open space, at least 20% of the land in active open space¹¹ should be for soft landscaping, half of which should be for planting trees. For passive open space¹², 70% of the land should be used for soft landscaping, out of which 60% should be used for planting trees. In some cases, these percentages may need to be adjusted taking into account practical circumstances, pedestrian volume, and the open space design. Moreover, for each district, a multi-purpose grass pitch of about 1.2 ha is required for sports uses.
- (e) Particularly in urban fringe parks, native plant species should be used to blend in with the surrounding woodland and natural landscape.

3.7.9 Roads and Highways

- (a) Opportunities should be taken to create avenues of trees and plants/green corridors along central dividers and pavements of road corridors/breezeways/air paths and in pedestrian areas in order to provide a more visually and climatically pleasant pedestrian environment.

¹¹ Active open space: please refer to relevant footnote under para. 1.8.6.

¹² Passive open space: please refer to relevant footnote under para. 1.4.1 (b).

- (b) Nevertheless, care should be taken to avoid the growing of trees and/or shrubs and other under-storey plants that obscures the visibility of road signs, traffic lights, CCTV, red light cameras, bus stops and intersections, etc. and sight-lines of pedestrians and drivers. Trees should be kept away from lamp posts, otherwise more frequent pruning of tree branches would be required to avoid obstruction of light.
- (c) On new roads, location of underground utility services and manholes should be away from planter beds and tree pits. Full co-ordination of laying underground utilities and planting should be carried out at the early planning stage to ensure sufficient paving space is reserved and to avoid problems of conflict during construction.
- (d) Lay-bys should be considered where appropriate at district distributors and local roads to facilitate maintenance access for amenity areas and roadside planting strips. In general, water points should be provided at 40m interval. However, for planting areas associated with busy roads that are bound by moving traffic without safe access from nearby footpath, automatic irrigation system should be provided.
- (e) Details in the design of roads and highways and the erection of traffic signs and light signals, noise barriers and related landscape works are given in relevant TCs, practice notes and guidelines available on the Greening website (<http://www.greening.gov.hk>); DEVB Guidelines on Greening of Noise Barriers; DEVB TC on Allocation of Space for Quality Greening along Roads; Highways Department (HyD) TC on Visibility of Directional Signs; and Transport Department's Transport Planning and Design Manual (TPDM), Volume 2, Highways Design Characteristics and Volume 3, Traffic Signs and Road Markings. Also, guidance on the provision of permanent planters with irrigation system on footbridges and flyovers is given in DEVB TC on Soft Landscape Provisions for Highway Structures.

3.7.10 Slopes

- (a) Slopes, natural or man-made, should preferably be covered by vegetation. The existing vegetation should be safeguarded and intensified through further tree and shrub planting where appropriate in order to enhance slope appearance and making the slope vegetation more ecologically sustainable. For man-made slopes, the use of vegetation cover should also be subject to slope safety considerations.
- (b) The type of vegetation chosen will be constrained by the soil depth of the slopes. On thin soil, grass, groundcovers and climbers should be considered. Deep soil can support larger shrubs and trees. Notwithstanding, only small trees preferably

of native species are recommended on roadside slopes not steeper than 35 degrees to reduce the risks of uprooting and hazards to the road users during strong winds.

- (c) Existing trees on slopes should be retained unless a genuine need to clear them could be demonstrated. Para. 3.7.1 above and sub-section 3.8 below regarding tree felling and transplanting should be observed.
- (d) In designing slope works, opportunities should be maximized to introduce planting at the toe, on the crest, on berms and in adjacent paved areas. Toe planters can effectively reduce the visual impact of steep slopes and unsightly slope works. Shrub and creeper planting in smaller sized toe planters can also provide a consistent treatment along the slope base. The minimum desirable width and depth of toe planter for tree planting is 1m x 1m. Smaller toe planter may be considered for shrub planting where space is limited. Crest planters and berm planters can also be incorporated at the top and intermediate levels of a slope to add greenery and to screen upper parts of the slope.
- (e) Soil pockets in coreholes can be provided on slopes with hard surface cover for growing of creepers and other climbers, grass and shrubs to create green spots. Whilst there are no minimum dimensions for soil pockets, larger pockets can retain more soil and will increase the chance of successful plant establishment.
- (f) Policy guiding the design, construction and maintenance of landscape works on slopes is provided in DEVB TCs on Improvement to the Appearance of Slopes and on Control of Visual Impact of Slopes. Details of technical designs are given in Geotechnical Engineering Office (GEO) Report on Application of Prescriptive Measures to Slopes and Retaining Walls, GEO Publication on Technical Guidelines on Landscape Treatment for Slopes, and Highway Slope Manual. For private projects, BD's PNAP ADV-23 – Improvement of Visual Appearance and Landscape Treatment for Man-made Slopes and Retaining Walls should be referred to. Reference can also be made to Appendix 2 for additional documents on the aspect of greening of slopes.

3.7.11 Drainage and Water Works

- (a) To avoid interference with the functioning of and damage to drainage and water works, an integrated design approach should be adopted to allow planting and service maintenance while eliminating the need for planting reinstatement works.
- (b) Drainage channels/systems should be planned with greenery and adopt environmental and sustainable design as far as possible and more trees should be planted alongside existing drainage channels/systems to enhance their amenity values. Existing natural streams should be preserved and drainage

channels/systems should be revitalized as far as practicable. Reference should be made to the prevailing DSD Practice Note on Guidelines on Design for Revitalisation of River Channel. Decking of drainage channels/systems should be avoided, otherwise the proposal of unavoidable decking of drainage channels/systems should be minimized and justified with detailed feasibility on a case by case basis to provide space for appropriate uses above. In such cases, the development should promote greening and allow for planting space as far as possible and DSD should be consulted.

- (c) In exploring the greening opportunities of water and drainage works reserves, the following guidelines should be applied where appropriate:
 - (i) Planting of trees or shrubs with penetrating roots should be avoided within 3m from the centre line of any existing or proposed watermains and 3m from the edge of drainage pipes. Clearance distance can be reduced to 1.5m if the size of watermains affected is below 600mm.
 - (ii) Rigid root barriers may be required if the clearance distance between the proposed tree and the pipe is less than 3m and the barrier must extend below the inverted level of the pipe.
 - (iii) Planting should be avoided within 1.5m around the covers of manholes, hydrant valves or Water Supplies Department (WSD)'s valves, or within 1m from hydrant outlet.
 - (iv) Tree planting may be prohibited at specific locations if the existing watermains and underground drainage pipes in the vicinity are found vulnerable to such tree planting.
- (d) Planting on the roof or near the edge of service reservoir walls should be carefully planned e.g. adopting alternative planting measures such as raised planters and turfing.

3.7.12 Skyrise Greenery

- (a) Skyrise greening encompasses all greening on buildings or other structures beyond the ground level, including roof greening, vertical greening, sky gardens, terrace planting, etc. Skyrise greening provides environmental benefits as well as enhancing aesthetic quality of our urban environment.
- (b) Roof greening is characterized by planting works on structural slabs, i.e. non at-grade planting, with main focus on the horizontal dimension. Typical examples include roof gardens, sky gardens, podium gardens, greening on top of noise enclosures, covered walkways, etc.

- (c) Vertical greening is formed by either planting at-grade or planting on elevated planters, with the aim of creating greenery mainly on the vertical surface of associated structures. Typical examples include planting of climbing and/or weeping plants along the edges of buildings or structures, planting of other suitable plants on stacks of modular planters or panels, or a combination of both.
- (d) There are different types of green roof systems and reference can be made to the ArchSD's Study on Green Roof Application in Hong Kong and the Greening website at <http://www.greening.gov.hk>.
- (e) A set of standards and requirements together with the method of measurement and calculation of site coverage of greenery including skyrise greenery for Government building projects are set out in DEVB TC on Site Coverage of Greenery for Government Building Projects.

3.7.13 Figures 5 to 16 provide some good illustrative examples of greening for various land uses.

3.8 Conservation of Vegetation

- 3.8.1 Conservation of existing vegetation and natural landscape is also an important element of greening. Site selection for development should avoid areas of existing vegetation and natural landscape which are worthy to be conserved. There are already a number of existing legislative and administrative measures that are relevant to the preservation of vegetation, namely, Country Parks Ordinance (Cap 208), Waterworks Ordinance (Cap 102), Forests and Countryside Ordinance (Cap 96), Town Planning Ordinance (Cap 131), Environmental Impact Assessment Ordinance (Cap 499), DEVB TC on Registration and Preservation of Old and Valuable Trees and tree preservation clause in land lease. The principles of conservation and measures of protection are detailed in Chapter 10 of HKPSG.
- 3.8.2 Trees perform most of the functions described in sub-section 3.5 above and are treasured by the community. Tree preservation is therefore as important as promoting new greenery. Every effort must be made to preserve as many trees as possible, individually and in cluster, in the planning, design and construction of any development projects, particularly those of unique or aesthetic character, historical significance, special ecological importance, and rare species.
- 3.8.3 There are occasions when major infrastructure works may be planned across countryside or new developments fall on sites with extensive tree covers. Care should still be taken to minimize the extent of works area and thereby maximizing the number of trees to be retained especially those mature trees that would withstand the environmental changes arising from the works and healthy young trees with good form which will grow into their new environment. Felling of such trees and

lopping of branches should be regarded as the last resort after the failing of other measures to preserve the trees.

- 3.8.4 To ensure no tree is felled unnecessarily, prior approvals for tree felling from relevant authorities are necessary. When trees cannot be retained in their original locations, they should be transplanted if feasible or new trees should be replanted within the site to compensate for the loss. In this respect, the prevailing DEVB TC on Tree Preservation should be referred to.

3.9 Achieving Greening

3.9.1 Co-ordination

To ensure effective co-ordination of the various efforts from different Government bureaux and departments, the Steering Committee on Greening, Landscape and Tree Management (SCGLTM) chaired by the Permanent Secretary for Development (Works) with membership from relevant bureaux and departments is responsible for setting the strategic direction and oversee the implementation of major greening programmes. To focus efforts on improving urban greenery, the Greening Master Plan Committee, chaired by the Director of Civil Engineering and Development and set up under the auspices of SCGLTM, is tasked to develop GMPs on a district basis across the territory. A GMP seeks to define the overall greening framework of an area by identifying suitable locations for planting together with desirable themes and species, thus serving as a guide to the planning, design and implementation of greening works for continuous and consistent results. In March 2010, the Greening, Landscape and Tree Management (GLTM) Section comprising the Greening and Landscape Office and the Tree Management Office was established under the Works Branch of DEVB to champion a new and strategic policy on greening, landscaping and tree management, with a view to achieving the sustainable development of a greener environment for Hong Kong.

3.9.2 Planting Agents

Government departments including HyD, Civil Engineering and Development Department, LCSD, ArchSD, DSD, WSD and Environmental Protection Department are responsible for landscaping and planting associated with their respective infrastructure, engineering and building works. AFCD is the agent for afforestation and planting of trees in country parks, special areas and selected areas of countryside outside country parks. Landscaping in public housing developments falls within the responsibility of HD. Moreover, the Home Affairs Department (HAD) will also arrange for planting works to be carried out under the Rural Public Works Programme and District Minor Works Programme as decided by District Councils and contributes through occasional planting programme.

3.9.3 Maintenance

Trees and plants will wither or poorly grow if they are left unattended, which are a wastage of resources and affect the appearance of the greened areas. Agents responsible for maintenance of plantings should therefore make sure that they would provide the proper facilities and draw up an appropriate programme for the maintenance of their planting areas. On the demarcation of management and maintenance responsibilities, the prevailing DEVB TC on Maintenance of Vegetation and Hard Landscape Features should be referred to.

3.9.4 Partnership Between Private and Public Sectors

Success in shaping a greener Hong Kong not only requires Government's greening initiatives in public works but also relies on support from the community and other key stakeholders in the development process. To encourage participation by the community, DEVB, AFCD, LCSD and HAD would arrange publicity programmes and tree planting activities to raise the public awareness on greening. To provide incentives to private sectors to incorporate more greening in their developments, Government has issued practice notes for guidance as stated in paras. 3.7.2 to 3.7.5 above. The roles of the building owners, developers, professionals, and non-governmental organizations from the private sector are important to provide positive contribution for creation of a greener environment for Hong Kong. Government would continue to work in collaboration with the private sector to implement the greening guidelines wherever opportunities arise.



Source : Town Planning Board Guidelines for Submission of Master Layout Plan under Section 4A(2) of the Town Planning Ordinance (TPB PG-No.18A)

Figure 4 Sample Landscape Master Plan

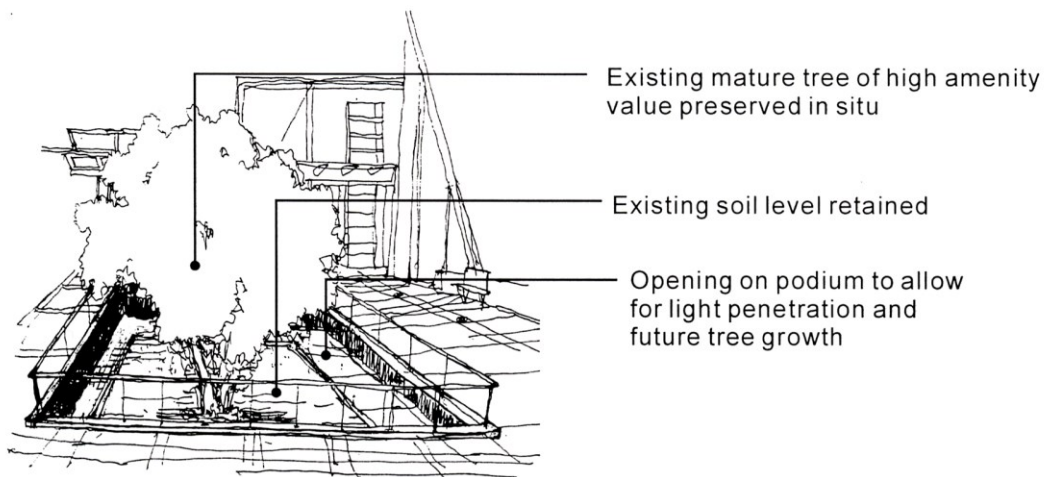


Figure 5 Preservation of Existing Trees on Developments Site

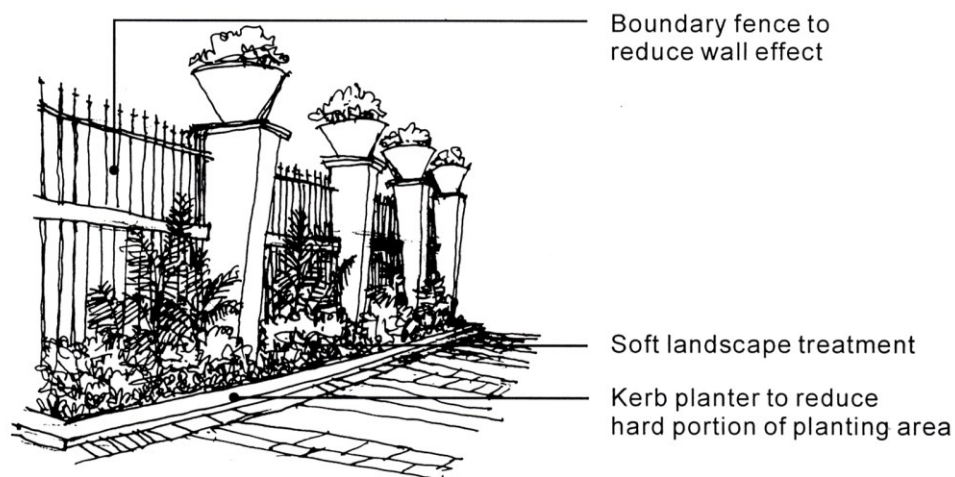


Figure 6 Greening Treatment at Periphery of a Development

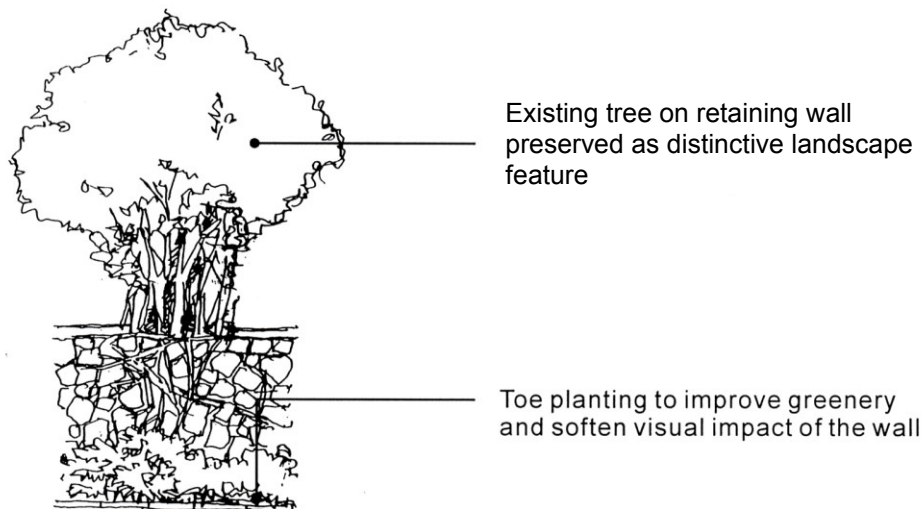


Figure 7 Greening Opportunities on Retaining Wall

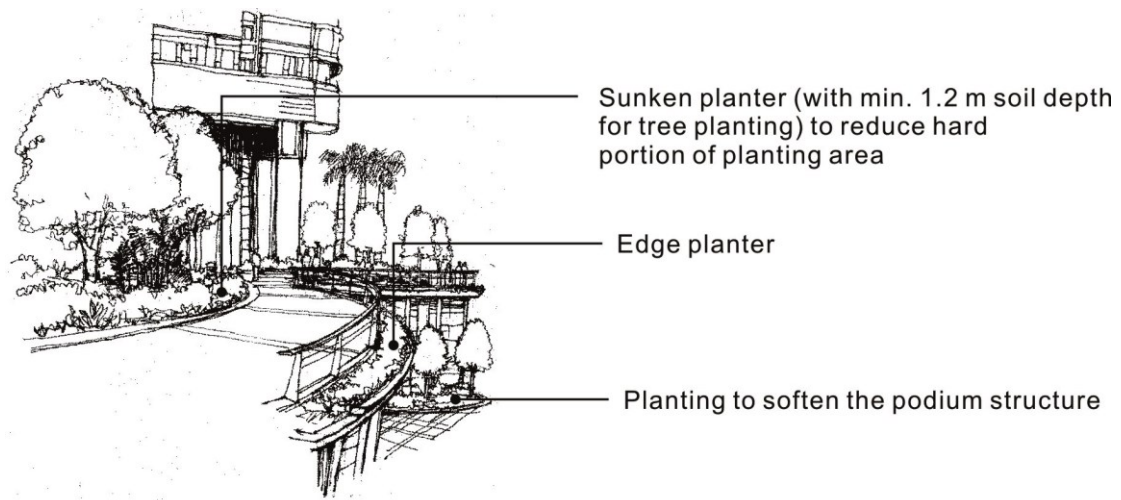


Figure 8 Greening Opportunities on Podium Garden

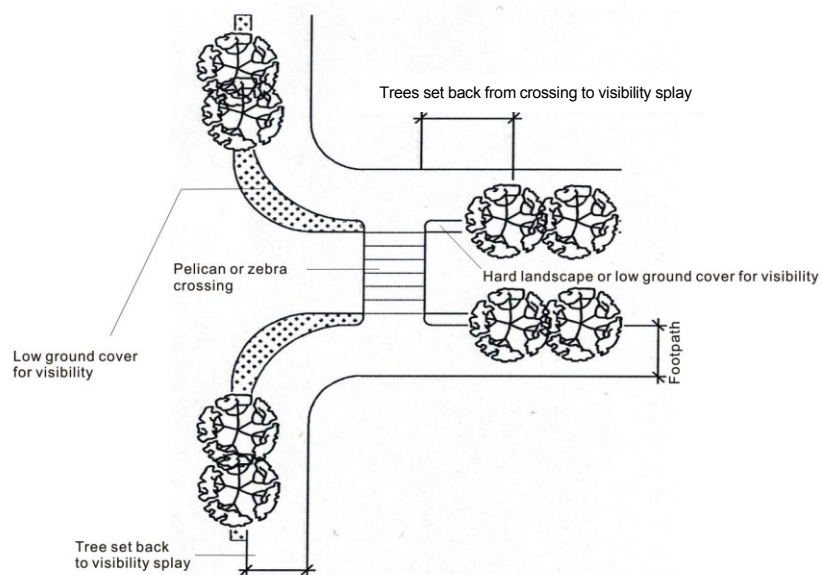


Figure 9 Planting at Road Junction

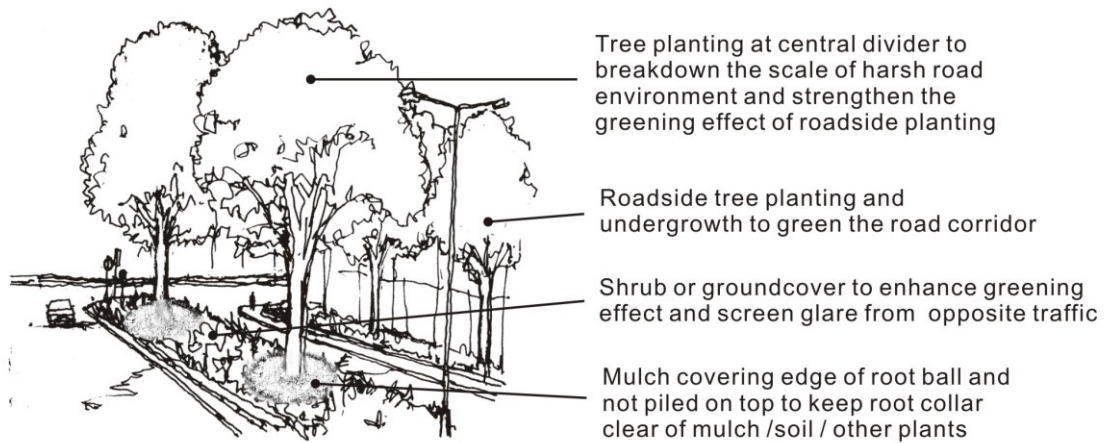


Figure 10 Greening Opportunities along Road Corridor

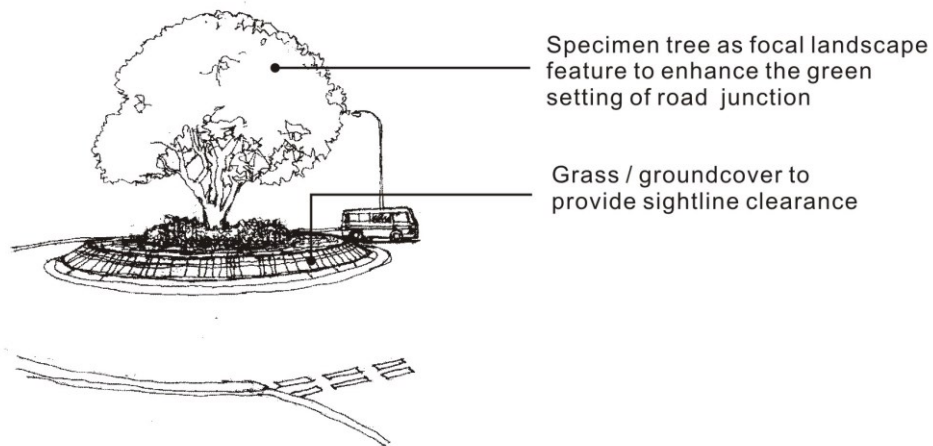
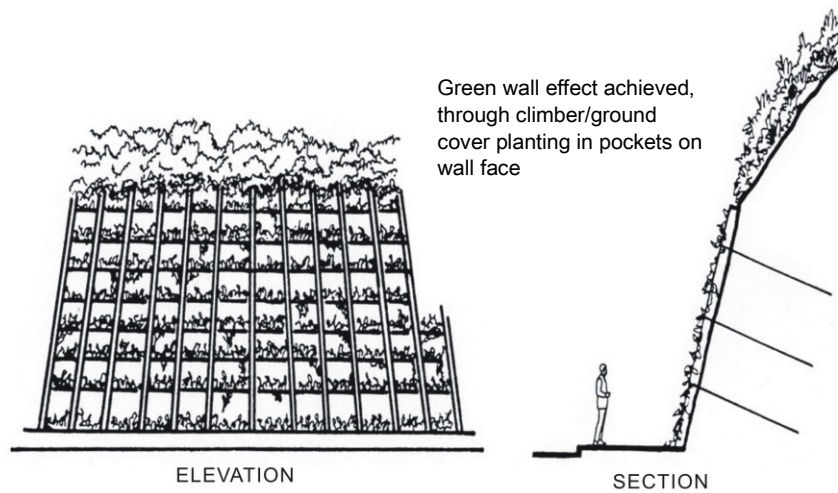


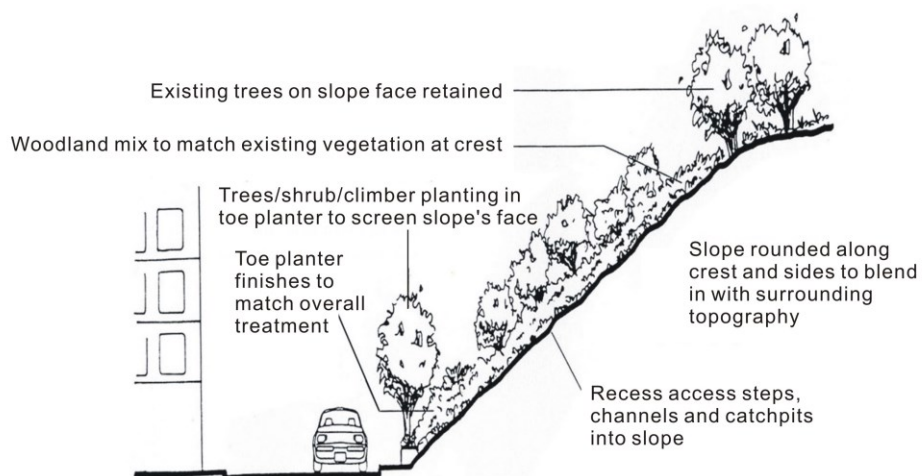
Figure 11 Greening Opportunities at Roundabout



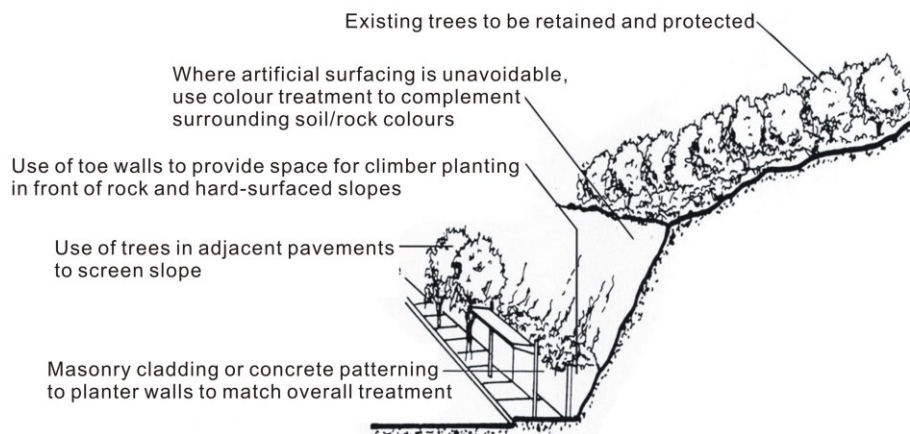
Figure 12 Greening Opportunities at Pedestrian Walkway



Retaining Structure



Soil Cut Slope



Rock Cut Slope

Source : Technical Guidelines on Landscape Treatment and Bio-Engineering for Man-made Slopes and Retaining Walls, GEO Publication No. 1/2011

Figure 13 Planting on Slopes

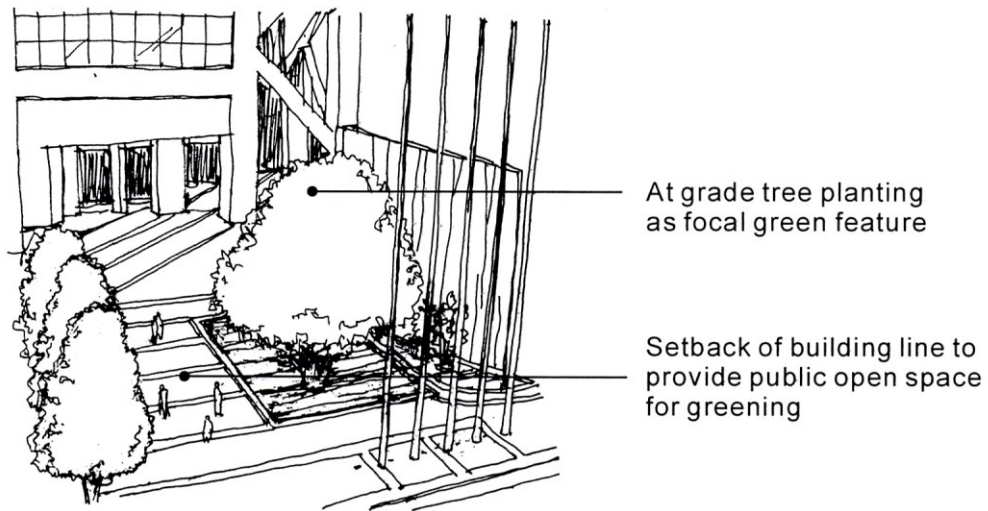


Figure 14 Greening Opportunities in Commercial Development

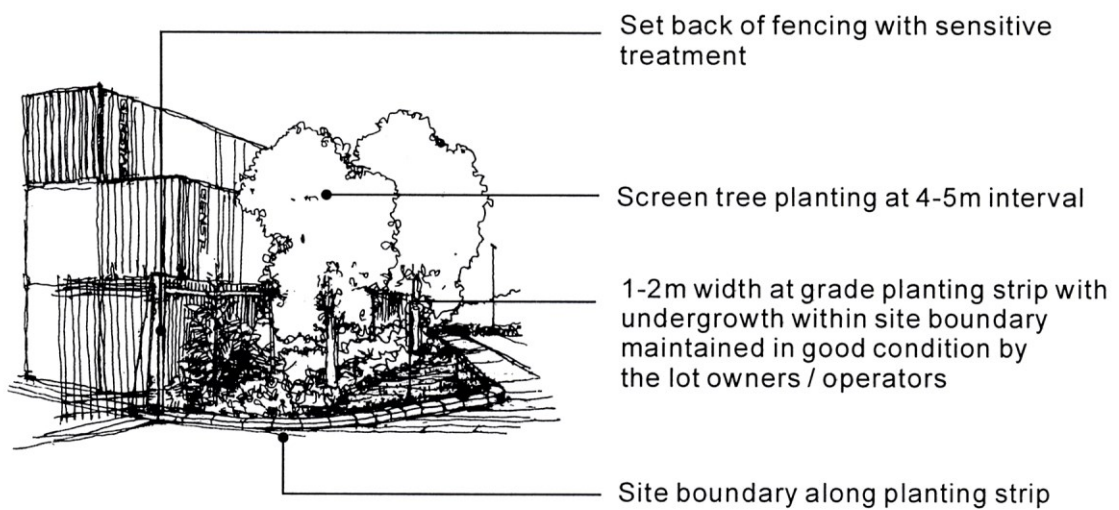
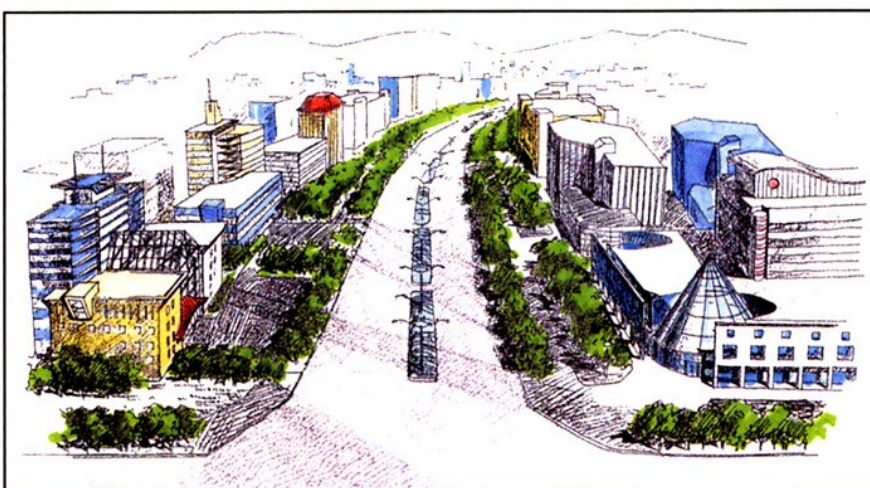


Figure 15 Greening Opportunities at Port Back-up / Open Storage Area



Source : Enhancement of Victoria Harbour : New Central Waterfront, Planning Department & Territory Development Department

Tree Planting along Promenade in the Proposed Marine Basin in Central Reclamation Area



Source : Study on the Provision of Industrial Premises & the Development of Planning Guidelines & Design Parameters for New Industrial Areas & Business Parks, Planning Department

Possible Green Landscaping along Main Road in Business Park



Source : Comprehensive Feasibility Study for the Revised Scheme of South East Kowloon Development, Territory Development Department

The Proposed Grand Commercial Boulevard Integrating Landscaping and Building Design in South East Kowloon Reclamation

Figure 16 Greening Concepts at Various Proposed Developments

Typical Calculation of a District Requirement for Recreation Facilities

1 Base population : 300 000 persons

2 Area required for built facilities

Built Facility	Population Standard	No. required	Space Standard (ha)	Recreation Space (ha)
Sports Centre (or Leisure Centre)	1:50 000-65 000	5	0.6	3.0
Swimming Pool (standard)	1:287 000	1	2.0	2.0
Swimming Pool (leisure)	1: District	1	0.6	0.6
Sports Ground	1:200 000-250 000	1	3.0	3.0
Total (ha)				8.6

3 Area required for remaining outdoor core activities (minimum required) for median district with a population of 300 000

Core Activity	Population Standard	No. required	Space Standard Per Unit (sq.m)	Recreation Area ² (ha)
Tennis	2:30 000	20	260.76	0.78
Basketball	1:10 000	30	420.00	1.89
Volleyball	1:20 000	15	162.00	0.36
Football	1:100 000	3	8 250.00	3.09
5-a-side mini-soccer	1:30 000	10	1 080.00	1.62
7-a-side mini-soccer	1:30 000	10	4 353.79	6.53
Rugby/Baseball/Cricket ¹	per district	1	12 000.00	1.50
Roller skating	per 30 000	10	300.00	0.45
Jogging	per 30 000	10	500-1 000m	1.50
Total				17.72

¹ These activities can be accommodated in multi-purpose grass pitches. The actual dimension will depend on site constraints (ideal dimension is 120m x 100m), but the width should not be less than 90m.

² A multiplier of 1.5 and 1.25 have been applied respectively for court/pitch of a size below and above 5 000 sq.m. The multiplier allows flexibility for margins and circulation space.

Note: The above is for reference purpose only. In practice, the planning standards and guidelines should be applied with a degree of flexibility, having regard to land use demands, local conditions, development constraints and resource availability, as stipulated in Para.5.4 of Chapter 1

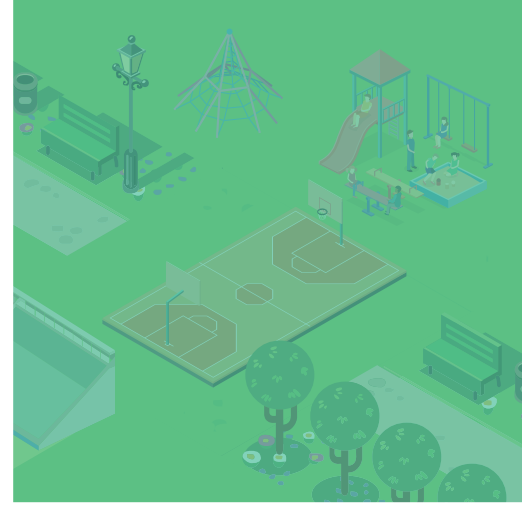
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Note : Users should refer to the latest version of the above documents



Recreation, Open Space and Greening

