

Walkability categories and indicators – Professional Checklist

Study area is defined as 500m radius around a mass transit station

If the study area contains different areas with extremely dissimilar building morphologies and walking environments, separate assessments should be conducted for each area in order to obtain a more accurate overall picture.

Categories/Indicators are colour coded to reflect 4 aspects of the user’s walking experience:

p	Possible to Walk	The requisite level of pedestrian facilities and conditions which make it possible for everyone to walk. These are basic, necessary conditions for walking.
e	Efficient to Walk	Conditions required for pedestrians to get from origin to destination efficiently and easily.
c	Comfortable to Walk	Qualities required for pedestrians to feel comfortable and at ease.
i	Interesting to Walk	Qualities required for pedestrians to stay in the space and use it for recreational and social activities.

		Design Category/ indicator	Assessment points	Benchmarking	Yes	No	N/A	Constraints / Opportunities & Comments
1	1	Accessibility & Connectivity						
		<i>To ensure that all people have equal, easy and well-defined access to public areas, the built environment should have the highest standards of access and inclusion, in particular for the ground floor (i.e. street level).</i>						
1A	p	Ground level	The ground level pedestrian network is complete and continuous.	It should be possible to reach every part of the neighbourhood by travelling at ground level on dedicated pedestrian pavements, pedestrian-only paths, or shared streets.				
1B	e	Subways	The area limits the use of subways	Subways should only be used for one of the following reasons: 1. To provide access to an underground mass transit station To cross a pre-existing barrier such as a railroad track or expressway. For new projects, any railroad tracks and expressways should be located on the edge of the development or sunken.				
1C	e	Footbridges	The area limits the use of footbridges	Footbridges should only be used for one of the following reasons: 1. To provide access to an overground mass transit station 2. To improve access on steep slopes. 3. To cross a pre-existing barrier such as a railroad track or expressway. For new projects, railroad tracks and expressways should be located on the edge of the development or sunken. Exceptions can be made for Central Business Districts, like in Central, where ground floor and 1 st floor each have many different destinations and bridges would be a convenient connection between the 1 st floor destinations.				
1D	p	Barrier Free Access	The design of the linkages and public space exceeds the minimum standards of statutorily required elements.	All sidewalks, walkways and crossings in the meet local statutory requirements for barrier-free access. Additionally, least 75% of the footpath segments, walkways and crossings exceed the minimum standard.				
1E	e	Traffic signals	Pedestrians do not have to wait long periods to cross the road.	For signalised intersections: 1. Short green-red light cycles of 60-90 seconds, unless to enable pedestrians to cross wide roads in one go. 2. There are few or no staggered crossings. 3. Green signal should give people adequate time to cross. Factor green time				

				<p>based on walking speed of 1 m/s. Factor in slower walking times at intersections around kindergartens, primary schools, hospitals and centres for the elderly.</p> <p>For unsignalised intersections: People should not have to wait more than 30 seconds on average for a gap in the traffic to cross. If traffic volumes are too high, convert to signalised crossing.</p>				
2	2	Physical and Visual Permeability						
		<i>In order to accommodate different types of walking activities and to provide as many direct routes as possible, it is essential that the built environment is very permeable for pedestrians.</i>						
2A	e	Maximum block length	The dimensions of a street block are short to medium in length	<p>90% of blocks should be 150m or less in length.</p> <p>Blocks are defined by streets or roads with open vehicular or pedestrian access.</p>				
2B	e	Intra-block permeability	Street blocks provide opportunity for extra permeability	Blocks longer than 250m should provide mid-block shortcut. Shortcuts must be open to the public for at least 15 hours a day.				
2C	e	Density of pedestrian crossings	There are pedestrian crossings at every leg at every intersection.	<ol style="list-style-type: none"> Every intersection has legal pedestrian crossings on every leg, either signalised or unsignalised. Exceptions: <ol style="list-style-type: none"> If blocks are very short, then there does not need to be a crossing at every intersection on arterial roads. However there should be 1 crossing at least every 150m. If a block is over 250m long, a mid-block crossing is provided. Crossings over arterial roads are signalised. Crossings over local distributors do not need to be signalised if traffic volumes are low enough, but pedestrian crossing should be facilitated in some way with zebra crossings, kerb bulb-outs etc. 				
3	3	Public realm amenities						
		<i>Every public space requires basic public realm infrastructure and amenities to enable people to spend time outside as long as they choose to.</i>						
3A	c	Provision and design of seating	There are adequate and well-located seating opportunities.	<p>Opportunities for seating are maximized at:</p> <ol style="list-style-type: none"> Places where people are likely to gather or wait, including public transport stations and bus stops, outside public toilets, popular meeting points. On long slopes or staircases Along essential and popular pedestrian routes, e.g. between housing estate & MTR station; or major shopping streets. In public open spaces. <p>There should be a variety of well-positioned and comfortable primary and secondary seating.</p> <ol style="list-style-type: none"> Seating should not obstruct the footpath. Seating should be clearly visible from the pedestrian footpath and should be positioned to offer a good view of nearby activities. There is a variety of primary seating (benches, chairs) and secondary seating (ledges, steps). At least 30% of the seating should have back rests and armrests. 				
3B	c	Waste management	There are adequate and well-maintained recycling boxes and rubbish bins.	<ol style="list-style-type: none"> Rubbish or recycling bins should be located a. every 100m. There should be at least 1 recycling bin for every 3 rubbish bins. Waste bins should be emptied often enough to prevent overflow. 				
3C	c	Public toilets	Public toilets are well-located and clean.	<p>Adequate public toilets should be located at public transport interchanges and major pedestrian attractors such as shopping malls, major shopping streets and tourist attractions</p> <p>Public toilets should include at least 1 disabled accessible stall and at least 1 baby changing area</p>				

				Cleanliness – cleaning schedule matched to projected level of usage				
3D	i	User-friendliness of public realm	Open spaces, street furniture and public art is designed to encourage usage and interaction	<ol style="list-style-type: none"> Use of railings should be minimized unless highly essential for safety Seating in public spaces should be comfortable and flexibly arranged to enable sitting in groups of different sizes Public art should allow/encourage play or interaction, e.g. watching, listening, sitting, playing, splashing. Little to no defensive design e.g. spikes, anti-homeless surfaces, unsittable ledges, fenced off areas (unless there is risk of serious injury, e.g. a cliff). 				
4	4	Scale & Density						
		<i>In general, people prefer to walk in areas that are not desolate or otherwise inactive. Density of people and activities is key to achieving a vibrant environment with enough destinations to make walking worthwhile.</i>						
4A	p	Building density	The building density in GFA is medium to high.	More than Plot Ratio 5 on average throughout neighbourhood.				
4B	p	Population density	The population density is medium to high.	Minimum of 9000 people per km ² (Approx. the density of Shatin District)				
4C	e	Density location	The density is highest at public transit nodes.	<p>At least PR 8 immediately on top of rail stations, stepping down to at least PR5 on average through the neighbourhood, 500m radius from station.</p> <p>Major shopping, commercial, and cultural facilities are located within 500m of the rail station or transit interchange, i.e. within the site area.</p>				
5	5	Variety & Diversity						
		<i>A mono-functional place is only attractive to a few people. Variety of activity and destination will ensure that different people have a reason to go to the area, enhancing the vibrancy of the area.</i>						
5A	i	Lot size	There is a variety of lot sizes. There are few or no lots with frontage over 50m long.	<p>Measured by length of a building plot's frontage along the public pedestrian footpath:</p> <p>A variety of lots widths ranging from 4.5m (width of an old Tong Lau) to under 50m (short side of a block in MK)</p> <p>Very few or no lot frontages over 50m.</p>				
5B	p	Variety of zoned land uses	The zoning allows for a wide range of uses at ground level and at least two levels above ground floor.	<p>Zoning consists mainly of the following types:</p> <p>Residential (A) "R(A)" Residential (B) "R(B)" Other Specified Uses "OU" (Mixed Use) Comprehensive Development Area "CDA" Commercial "C"</p> <p>Unless the zoning category itself allows for mixed uses (e.g. residential on upper floors, commercial on lower floors), no single zoning category should occupy more than 40% of the site's built-up area.</p> <p>The site should also include Government, Institution and Community (GIC) and/or Open Space (O) zoning.</p>				
5C	i	Variety of activities and uses	The neighbourhood provides a wide variety of fine-grained activities and uses	<p>The following parameters should be considered:</p> <ol style="list-style-type: none"> All building entrances within 750m walking distance of an indoor or outdoor wet market or dry goods market (not supermarkets). All building entrances within 1km walking distance of a retail cluster (shopping streets or mall) with at least 40 distinct retail outlets selling comparison shopping goods such as clothing, appliances, electronic devices, etc. No more than 50% of retailers or dining establishments are chains. Within area, dining options of different price ranges available, meals between <\$30 to >\$300 per person. At least 1 area with legal outdoor dining provision. At least 1 public park of at least 1 ha in size; or at least 1 public 				

				<p>sports/recreation facility; or at least 1 centrally located public piazza.</p> <p>7. At least 3 different GIC community facilities, e.g. public medical clinic, post office, library, school, nursery, elder care centre.</p> <p>8. Few or no residential units on ground floor</p> <p>9. Few or no car parks on ground floor of podiums</p>				
5D	i	Housing mix	The area has mixed-income housing.	More than 15% but no more than 50% of residential units consists of public rental housing (including HK Housing Society flats).				
6	6	Legibility & Orientation						
		<i>A densely built-up environment can easily be disorienting. Signage can help way-finding while built structures can contribute to making an more legible by providing clearly defined spaces, visual landmarks and so on. Efforts should be made to provide overview for enhanced orientation.</i>						
6A	e	Signage	Way-finding is made easy with special signage boards showing maps as needed	<ol style="list-style-type: none"> Wayfinding signage is clear and easily understood. Signage is sited prominently and in predictable locations Signage in an area should be consistent and coherent and provide enough information for people to find their destination. Signage should provide people with the information when and where they need it, and should not confuse people with too much information. 				
6B	e	Orientation	Open views provide opportunity to orientate oneself.	<ol style="list-style-type: none"> The area's layout is simple and easy to understand There are enough visual environmental cues to help people identify their current location. (Other than signage or public art, memorable shops, buildings or intersections may function as landmarks.) Clear sightlines enable people to see which direction they are travelling in 				
6C	c	Human scale	Built environment should be defined and detailed at the pedestrian scale	<ol style="list-style-type: none"> The lower 3 floors of buildings are not over-dimensioned and have façade details appropriate to pedestrians travelling at walking pace. The dimensions, angles and sightlines of roads and public open spaces are at a human scale. Street furniture such as lighting and signage are proportioned for pedestrians. 				
7	7	Streetscape & Visual Quality						
		<i>People respond positively to beauty, aesthetics and high visual quality. Although beauty is subjective, measures can be taken to enhance the spatial quality of a built environment.</i>						
7A	c	Cleanliness	The area is well-maintained and not in disrepair.	Pavements, street furniture and plantings are well-maintained. Litter is cleared promptly.				
7B	c	Greening and biodiversity	The opportunity for presence of trees, plants and water is maximized.	<p>Planners should maximize opportunities for:</p> <ol style="list-style-type: none"> Shade trees. Existing ones should be well-maintained and preserved; new trees should be planted where possible. Opportunities for shrub planting and vertical greening should be maximized in places where planting trees is not possible due to spatial constraints and underground utilities. Biodiversity should be considered when planting trees and shrubs. Native species should be prioritized and a wide variety of species should be planted. There is direct pedestrian access and clear sightlines to any natural bodies of water in the area 				
7C	i	Active and transparent frontage	The area is not marred by blank walls or inactive frontages	<p>There is little or no inactive frontage at ground level for more than 20 metres at a stretch.</p> <p>Inactive frontage is defined as a building façade which is:</p> <ol style="list-style-type: none"> Opaque. Pedestrians cannot see inside the building because there are no windows at eye level. Impermeable. There are few or no physical entrances in the building façade 				
7D	i	Public open space	There is adequate and accessible public open space for circulation, leisure as well	The amount of public open space in the site exceeds the Planning Department's target of 2 m ² per person. POS should be located at grade or at the primary pedestrian circulation level				

			as a pleasant pedestrian experience	<p>POS should be located within sight of major nodes or paths of pedestrian activity</p> <p>No physical barriers to access or usage e.g. busy roads, level changes, difficult to find entrances.</p> <p>POS should be open to the public at least 15 hours a day.</p> <p>Usage regulations should be reasonable.</p>				
7E	c	Clutter and street management	Clutter and pavement obstructions are managed appropriately to balance pedestrian circulation needs with neighbourhood vibrancy	<p>1. Utilities and street furniture should be consolidated and rationalized to reduce clutter.</p> <p>2. There is a coherent policy or set of policies to regulate the 3 following categories of uses:</p> <p>a. Servicing, including goods unloading, goods storage, waste management. These activities are necessary but frequently detract from the quality of the public realm. They should be regulated to minimize obstruction and nuisance.</p> <p>b. Commercial activities such as promotion, advertising leafleting should be controlled to prevent nuisance and obstruction. Certain commercial activities which enhance an area's vibrancy such as outdoor dining, some shopfront displays, and licensed hawking should be accommodated where appropriate.</p> <p>c. Artistic, cultural, political and charitable activities should be permitted in public spaces, provided they do not cause danger to passers-by or violate noise ordinances.</p> <p>3. Enforcement of policies is adequate.</p>				
7F	i	Unique character	The neighbourhood is memorable and has a distinctive identity.	<p>The area has at least one building, street, or public space of major historical, cultural, or tourist significance; or with distinctive and unique activities or spatial features.</p> <p>The area is designed and managed in such a way as to facilitate public access and enjoyment of distinctive local places.</p> <p>The area's identity can be enhanced using urban design measures such as distinctive street furniture, planting and paving.</p>				
8	8	Microclimate & Environment						
		<i>People go outside for many reasons, one of which is to enjoy the natural elements and the environment. Efforts should be made to strike a balance between enjoyment and nuisance.</i>						
8A	c	Wind and ventilation	The area is adequately ventilated but does not have excessive wind turbulence or wind tunnels.	<p>The area has breezeways to facilitate dispersal of roadside pollution.</p> <p>Wind turbulence is not excessive.</p> <p>New districts are planned after conducting and taking into account an Air Ventilation Assessment.</p>				
8B	c	Shelter from and exposure to sun light	The area provides adequate shelter from the sun while at the same time allows for exposure to sunlight.	At least 75% of street segments have adequate shade while still allowing exposure to sunlight. Shade can come from trees, awnings, canopies, standing structures, building overhangs, and shadows cast by other buildings.				
8C	c	Shelter from rain	The area provides some shelter from rain, in particular at benches and other areas where people rest.	<p>1. Rain shelter should be provided over at least 30% of seating in POS. Shelter should be available over all on-street public transport stops (e.g. bus, minibuses, and tram stops) unless not possible due to site-specific considerations.</p> <p>2. Design guidelines for the area encourages developers to provide shade along their external façades through pavement setbacks and colonnades.</p> <p>3. Not all areas need to be shaded. Total rain protection would result in an area dominated by fixed structures which would adversely affect the visual quality of the area.</p> <p>4. Shade trees with dense foliage can also be considered partial shelter from rain.</p>				

8D	p	Drainage	The area has adequate storm water drainage	<ol style="list-style-type: none"> The area has adequate drainage during rainstorms Porous paving materials are used to reduce runoff Pavements are graded to avoid formation of deep puddles in heavy rain. 				
9	9	Safety & Security						
		<i>While walking in a city is not expected to be a sensory-free experience at all times. A person should not be exposed to excessive levels of pollution, while feeling safe and comfortable.</i>						
9A	c	Air pollution	There are policy measures to minimise exposure to roadside air pollution, including dust	<p>There are area-specific policies to reduce exposure to roadside air pollution including one or more of the following:</p> <ol style="list-style-type: none"> Full-time or part-time pedestrianized zone at least 400m long Low-emission zone (a charge for vehicles not meeting certain emission standards. For example Larger vans and minibuses that don't meet Euro 3; Trucks, buses, and coaches that don't meet Euro IV). Congestion charging, a charge for entering the central areas of a city. Euro 4 engines or better for franchised bus routes passing through the area. <p>For existing districts, average peak roadside PM2.5 does not exceed ambient air pollution levels measured at the nearest general air quality monitoring station by more than 20%.</p>				
9B	c	Noise pollution	Pedestrian space is not subjected to excessive noise levels.	<p>Predicted or actual L10(1h) peak traffic noise levels on most pedestrian routes does not exceed 70db, (See HKPSG), and 60db in major pedestrian destinations such as major shopping areas.</p> <p>Pedestrian space includes frequent opportunities to get away from traffic noise (e.g. quieter side streets, rest gardens, pedestrian priority areas etc.)</p>				
9C	p	Pedestrian-vehicle conflict	Pedestrian-vehicle interactions are mediated to promote safe pedestrian travel at ground level	<p>In general, the neighbourhood's road design gives priority to pedestrian circulation and promotes safe road crossing at ground level. The following should be taken into account the following:</p> <ol style="list-style-type: none"> Clear sight lines of oncoming traffic at all pedestrian crossings. Streets designed for operating speed of 50km/h and below on urban arterial roads and 30 km/h and below on local distributors. Narrow lane widths (~3.05m), small turning radii (1-5m) and traffic light timing should be used to promote slower driving in urban areas. Few to no slip lanes for left turns. Refuge islands provided where pedestrians must cross 3 or more lanes of traffic, or where pedestrians must cross a 2-way street in the absence of a signalized crossing. 				
9D-p	p	Traffic calming	Traffic calming measures are implemented to minimize pedestrian exposure to fast-moving traffic	<p>Traffic calming strategies are implemented on streets with high pedestrian activity including any of the following measures:</p> <ol style="list-style-type: none"> Road narrowing/crossing narrowing Speed tables or humps Vehicle restrictions Adjustment of traffic direction to prevent through-traffic Pedestrian priority zone/shared space 				
9E	p	Security from crime	There is adequate soft and hard surveillance especially at night	<p>Take into account the following considerations:</p> <ol style="list-style-type: none"> Mixed use should include some night time activities to promote natural surveillance, especially at night from sunset to 1 a.m. Area should contain an overall mix of activities attractive or useful to both genders and all age groups. Hard surveillance such as CCTV cameras, police patrols and security guards can enhance security, especially in problem spots, but should not be relied upon exclusively. Pedestrian routes, especially subways and footbridges, should be well-lit and lined with shops, overlooked by nearby activities, or reasonably well-used at all times. Avoid locating "blind" corners on pedestrian paths in quiet areas. 				
9F	p	Lighting	Pedestrian space benefits from good levels of light in day as	<p>Take into account the following considerations:</p> <ol style="list-style-type: none"> Lighting should meet the standards for adequate even, and glare-free 				

			well as at night.	<p>lighting in the HK Public Lighting Design Manual</p> <ol style="list-style-type: none"> 2. Lighting should be well-maintained – burned out bulbs should be promptly replaced. 3. In key commercial and recreational areas, visually attractive, pedestrian scale lighting should be used to enhance the atmosphere. 				
10	10	Transit & Pedestrian Friendliness						
		<p><i>Cities are complex places and people often use walking for only part of their trip. As such, people must share the available space with other modes of transport. While motorised traffic is by no means incompatible with pedestrian connectivity, access to public transport should be encouraged and made easy while access to private car should be discouraged.</i></p>						
10A	e	Space for pedestrians	There is a balanced allocation of ground level space to pedestrians and vehicles.	<p>Pavements are wide enough to accommodate the predicted pedestrian flow for the type of area according to guidelines in HKPSG.</p> <p>At pedestrian attractors of high place value (e.g. tourist attractions, street markets, major shopping areas, waterfront promenades), there should be enough additional pedestrian space to accommodate staying activities (such as sitting, street-food, busking) without causing major obstruction.</p>				
10B	e	Car parking	Public and private car parking is minimized, and charged, with the bulk of parking in a built structure, preferably underground.	<p>Public and private off-street parking should not exceed the minimum allowed under current planning guidelines.</p> <p>Along neighbourhood roads, kerb-side parking can be allowed.</p>				
10C	e	Public transport	Every place in the neighbourhood is reachable by public transport	<p>All building entrances are within 240-400m (3-5mins) actual walking distance of a public transport stop with direct service to a high capacity public transit station.</p> <p>All building entrances are within 800m actual walking distance (10 mins) to a high capacity transit station.</p>				
10D	e	Transfer between transport modes	Pedestrian transfer between different modes of public transport is straightforward and direct.	<p>At public transit interchanges, the walking distance between different modes of transport should be less than 5 minutes walk.</p> <p>The number of turns and level changes needed to make the connection is minimized.</p>				

Score Sheets

For different analytical purposes, scores can be calculated either by the 10 design categories or by the 4 user experience themes.

Score by Design Category

Design Category	Number of points for category (Award 1 point for each “yes”, 0 points for each “no”)		Number of applicable indicators (“Not applicables” subtracted)		Total number of indicators
	Area 1	Area 2	Area 1	Area 2	
Site Sub-areas:					
1. Accessibility & Connectivity					5
2. Physical & Visual Permeability					3
3. Public Realm Amenities					4
4. Scale & Density					3
5. Variety and Diversity					4
6. Legibility & Orientation					3
7. Landscape & Visual Quality					6
8. Microclimate & Environment					4
9. Safety & Security					6
10. Transit & Pedestrian Friendliness					4
	Total Score:	Total Score:	Total applicable subcategories:	Total applicable subcategories:	Highest possible score = 42

Score by “User Experience” Themes

Category	Number of points for category (Award 1 point for each “yes”, 0 points for each “no”)		Number of applicable indicators (“Not applicables” subtracted)		Total number of indicators
	Area 1	Area 2	Area 1	Area 2	
Site Sub-areas:					
1. Possible					10
2. Efficient					13
3. Comfortable					12
4. Interesting					7
	Total Score:	Total Score:	Total applicable subcategories:	Total applicable subcategories:	Highest possible score = 42

	Area1	Area 2
Adjusted score = (Total Score/Total Applicable Subcategories) X 42		

Walkability Ranking

Score	Walkability Ranking
37-42	Very good
31-36	Good
20-30	Average
11-20	Poor
0-10	Very poor