

GREEN NEIGHBOURHOOD

MAKING HONG KONG MORE LIVEABLE

Professor John NG

Director and Chairman of Green Labelling Committee



HONG KONG GREEN BUILDING COUNCIL

www.hkgbc.org.hk

Our Vision

To help save the planet and improve the wellbeing of the people of Hong Kong by transforming the city into a greener built environment.

Our Mission

To lead market transformation by advocating green policies to the Government; introducing green building practices to all stakeholders; setting design, construction and management standards for the building profession; and promoting green living to the people of Hong Kong.





392 SHARES f t + Smog linked to third of deaths in China, study finds



Smog linked to third of deaths in China, study finds

Research puts air pollution on a par with smoking as threat to human health

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COMMENTS: 8



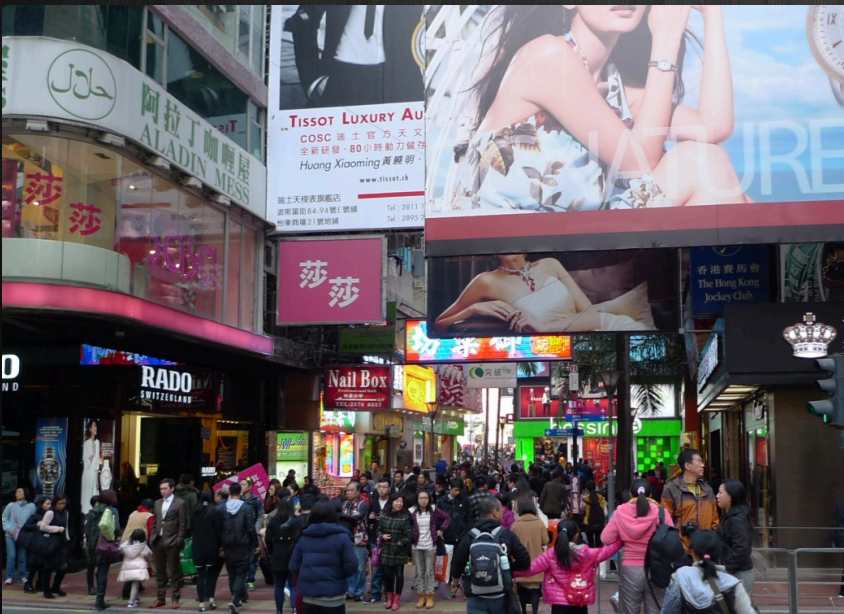
Source: <http://www.scmp.com/news/china/society/article/2056553/smog-linked-third-deaths-china-more-deadly-smoking-study-finds>

LIVEABILITY AND BUILT ENVIRONMENT



BENEFITS

- High levels of urban amenities and social infrastructure
- Mixed use, with various housing and commercial types and tenures
- Efficient and cost-effective public transport and high urban mobility
- Efficient forms of infrastructure, including ICT, energy supply and distribution networks
- Fine-grained urban morphology of street networks
- A strong sense of community
- An active public realm

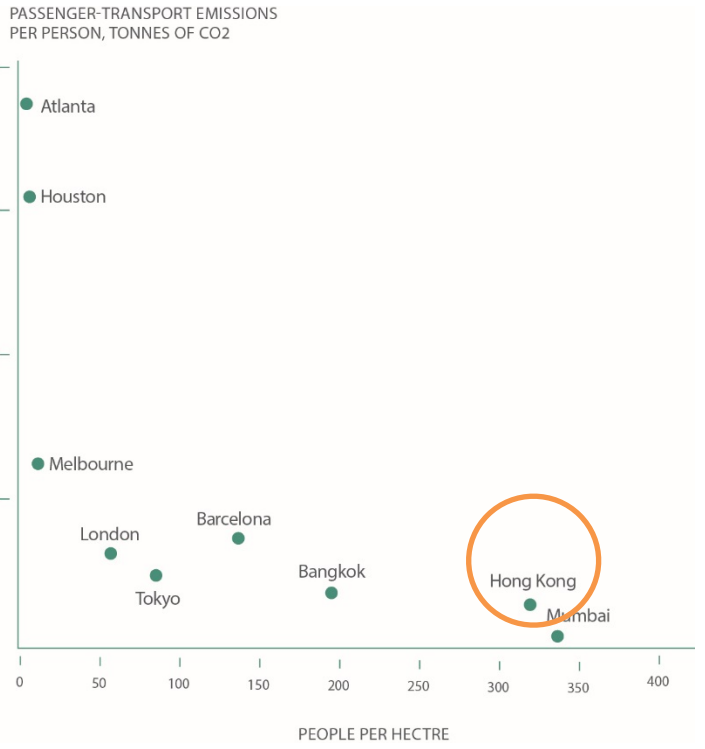
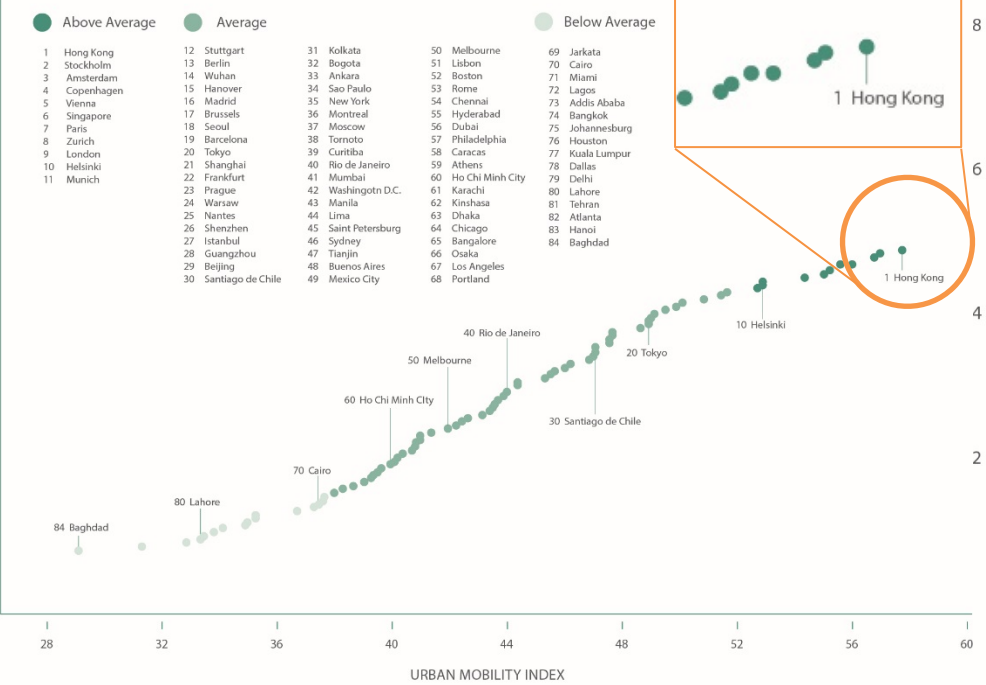




EFFICIENT PUBLIC TRANSPORT

Low Energy + High Urban Mobility

RANKING



12.6M

passengers by public transport daily (2016)

5.2M

passengers by metro and light rail daily (2016)

5.7M

passengers by buses daily (2016)

(Data from Transport Dept.)

Urban Mobility Index 2.0 by Arthur D. Little (2013): Future of Urban Mobility

Relationship between urban transport emissions and population density by the Economist

CHALLENGES



Source: <http://mypollutionfacts.com/5-myths-you-should-bust-about-the-air-pollution-in-hong-kong/>

Source: <http://www.ejinsight.com/20150106-is-traffic-congestion-an-insoluble-problem-in-hong-kong/>

CHALLENGES

- address liveability/sustainability/low carbon living
- combat climate change



Waste

Sustainable Lifestyle (CA2)
Building Reuse (MWA1)
Integrated Waste Management (MWA3)



Lack of public space

Placemaking and Local Character (CA6)
Accessibility to Open Space, Green Space and Blue Assets (SA2)
Quality Open Space (SA7)
Visual Quality (OEQ4)

Source: <http://hk.apple.nextmedia.com/supplement/special/art/20140817/18833298/>



Air pollution

Wind Environment (EA2b)
Tree Coverage (OEQ2a)
Air Quality of Open Spaces (OEQ5)

Source: <http://mypollutionfacts.com/5-myths-you-should-bust-about-the-air-pollution-in-hong-kong/>



Traffic congestion

Shaded or Covered Pedestrian Routes (CA3d)
Pedestrian-oriented and low carbon transport (SA3)

Source: <http://www.ejinsight.com/20150106-is-traffic-congestion-an-insoluble-problem-in-hong-kong/>

The Economist

Intelligence Unit

43rd out of 140 cities

EIU Liveability Ranking 2016 (Global)

- ✓ Climbed 3 places due to increased instability elsewhere
- ✗ Low score in culture and environment

MERCER

70th out of 230 cities

Mercer's Quality of Living Ranking

- ✗ Air pollution
- ✗ Heavy road traffic

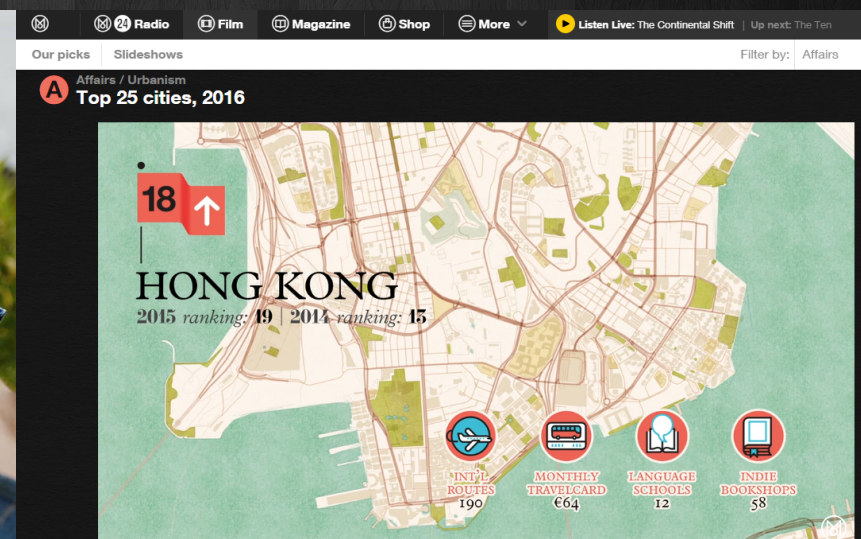
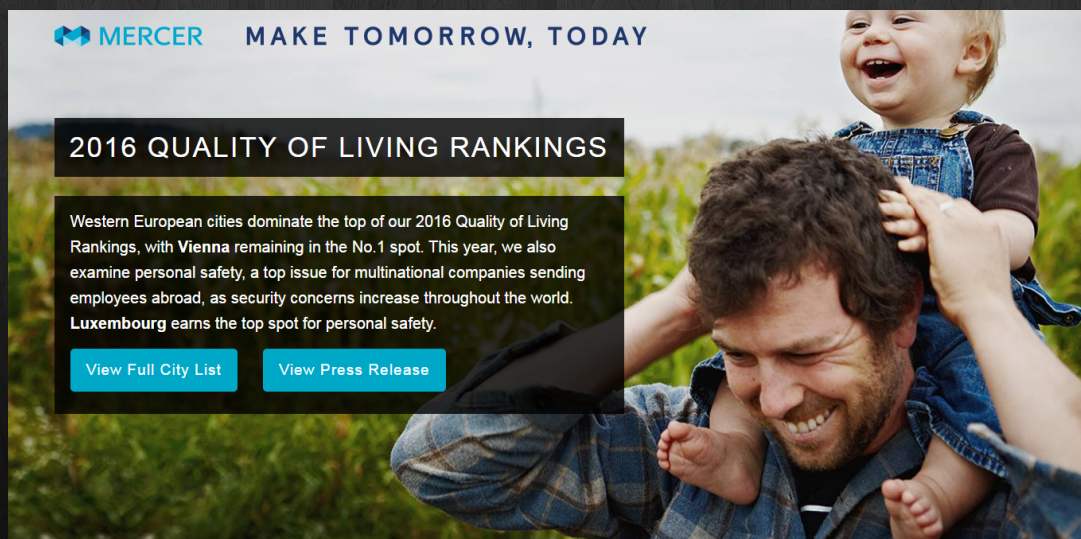
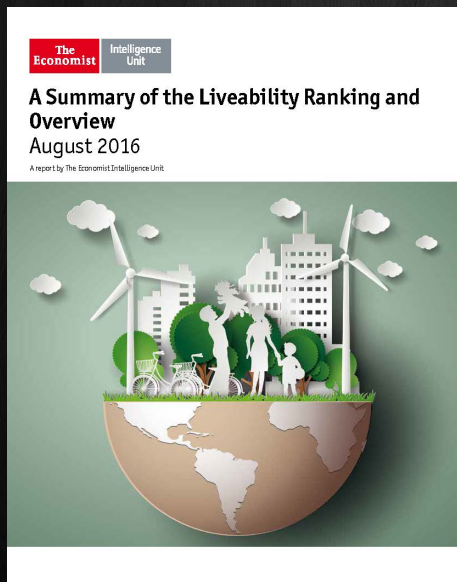
LIVEABILITY

MONOCLE

18th out of top 25 cities

Monocle's ranking of the Most Livable Cities

- ✓ Good business environment
- ✓ Vibrant city life



The ups and downs of our annual global ranking covering the world's most livable cities – who's in and who's out?

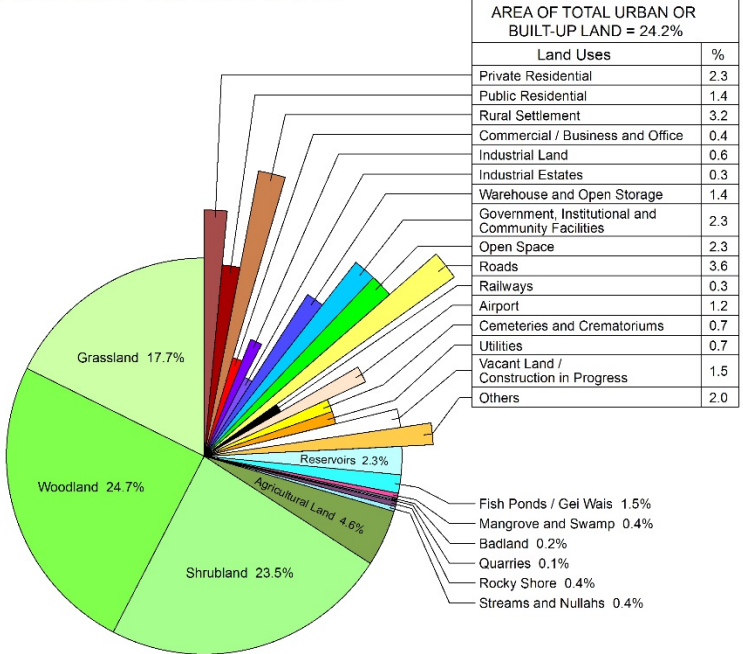
Film-maker Pauline den Hartog Jager

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HIGH DENSITY



LAND AREA ANALYSIS



Total land area = 1,110 km² (including about 4 km² of Mangrove and Swamp below the High Water Mark)
 Vegetated area cover about 78.7% of the land area of Hong Kong
 Country Parks, Special Areas and Mai Po Ramsar Site cover about 41.8% of the land area of Hong Kong

7.3M
inhabitants

59.3M
tourist visited HK in 2016

1,100 km²
total land area

27,379
persons / km²
of built up area



LARGE BLUE-GREEN SPACES

24
country parks
1,000
local species

43%
GREEN AREA
under statutory protection



BEAM Plus
綠建環評

NEIGHBOURHOOD V1.0

https://www.hkgbc.org.hk/eng/ND_Intro.aspx

a fundamental block of a city

- Assess sustainability performance/green, low carbon living/resilience
- Evaluate at the early stage of a development project
- Systematic and integrated framework
- Meet unique Hong Kong context
- Voluntary and encourage efforts to improve quality of neighbourhood

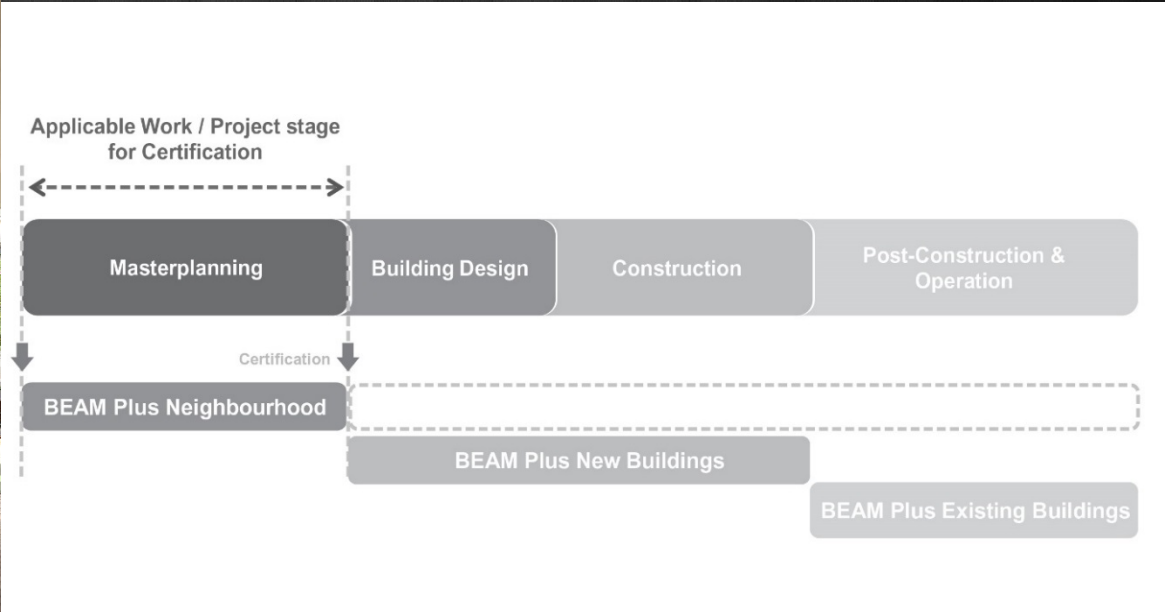
BEAM Plus Neighbourhood Version 1.0

A rating tool for sustainable communities



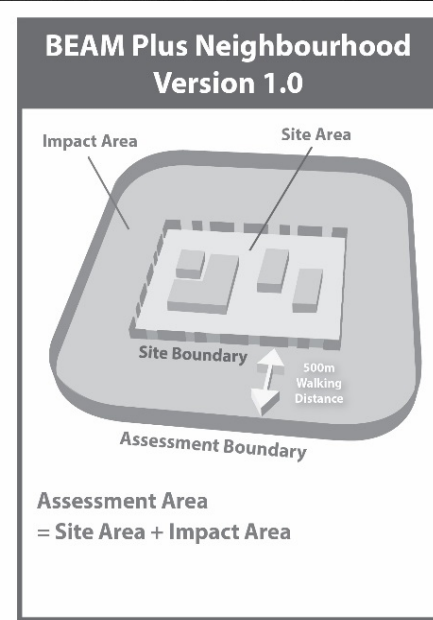
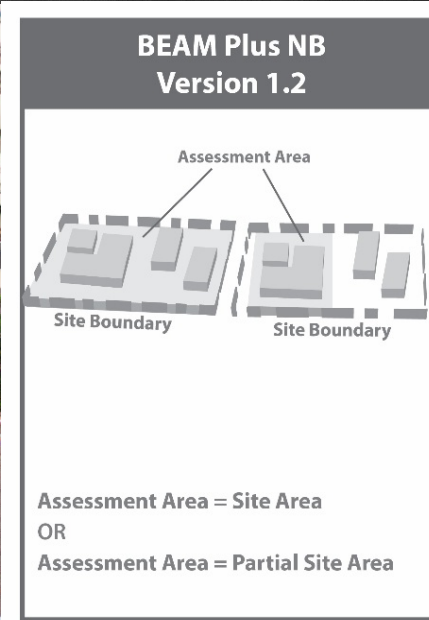
Emphasise on space between buildings

'public realm' matters



Be a good neighbour

positive impact to occupants and immediate neighbour



What can a green neighbourhood do to improve liveability?

Embrace socio-economic elements



Community
Aspects
(CA)

New!



Site Aspects
(SA)



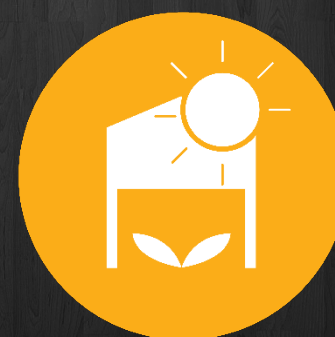
Materials
And Waste
Aspects
(MWA)



Energy
Aspects
(EA)



Water
Aspects
(WA)



Outdoor
Environmental
Quality
(OEQ)

New!



Innovations
and Additions
(IA)

practical benchmarking

Subsidised Sale Flats Development at Fat Tseung Street West



West Kowloon Cultural District



Transformation of EMSD Headquarters into a Green Building



COMMUNITY ASPECTS

- Community Engagement
- Sustainable Lifestyles
- Neighbourhood amenities
- Diversity of housing types
- Existing Communities and economy
- Place-making and local character
- Conservation of Cultural Assets



Community Engagement for Kwai Sing West Estate



Low Carbon Wedding Ceremony @ ZCB



Rooftop organic farm at Ng Yuk Secondary School



Revitalisation of Lui Sang Chun

sustainable lifestyle



Community gardening and local food
(Photo source: Green Hub Hong Kong)

救食平台
食物回收捐助聯盟
Food Donation Alliance
你救食，所以我夠食！

Food waste recycling programmes



Second hand market at
Community Green Station
(Photo source: Mingpao news)

OUTDOOR ENVIRONMENTAL QUALITY

-
-
-
-
-
-
-

Outdoor Thermal Comfort
Intra-urban Temperature and UHI Effects
Neighbourhood Daylight Access
Visual Quality
Air Quality of Open Space
Mitigation of Noise
Universal Access



outdoor thermal comfort



Covered walkways from buildings to amenities or public transport station



Tree coverage in outdoor open space



Shaded seating in public space

visual quality

- Visual quality study
- Solar Reflectivity study



SITE ASPECTS

- Access to green & blue assets
- Pedestrian-oriented & Low Carbon transport
- Site Design Appraisal
- Ecological value
- Quality public open space



Kowloon Station / Elements Mall shared podium garden



ZCB



Green Covered Walkway at Sau Mau Ping South Estate

quality open space

Urban liveability:

- Design measures
- Management
- Usage pattern
- feedbacks & redesign
- Potentials & local assets

Place-making:

- New interest/experience
- Longer stay, social interaction, engagement
- Relationship, community
- feelings & memories
- sense of place

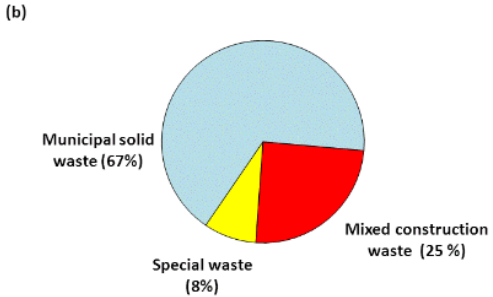
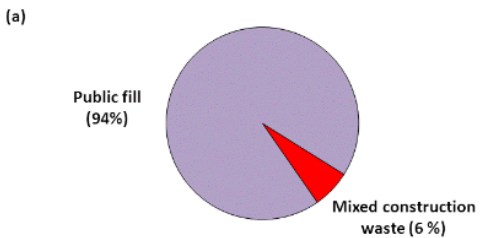


Urban Experiment in Kwun Tong in collaboration with HKPSI in Q3 2016

MATERIALS AND WASTE ASPECTS

- Adaptive re-use, reduction of demolition / construction waste
- Minimise cut and fill
- Integrated waste management

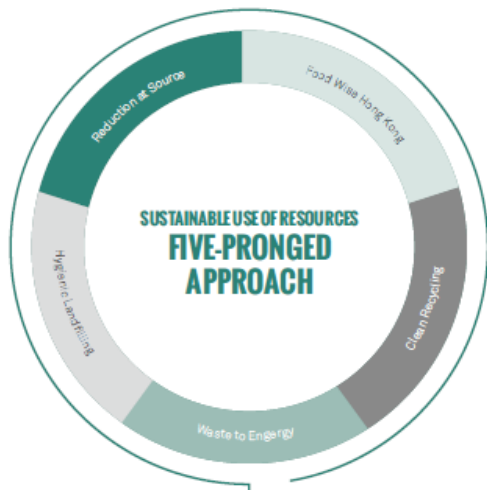
Construction Waste accounts for 25% of waste disposed at landfills in 2011 (data from EPD)



(a) Construction waste generated in 2011.
 (b) Composition of waste disposed of at landfills in 2011.



Energising Kowloon East Office built from recycled containers



10-YEAR REDUCTION TARGET
40%

WATER ASPECTS

- Water environment, conserve wetland and water bodies
- Stormwater management & retention on site
- Alternative water source





Buildings in Hong Kong account for **90% electricity & 60% GHG** consumption

ENERGY ASPECTS

- Certified sustainable buildings
- Passive design
- Energy efficient infrastructure
- Renewable Energy

CAPACITY BUILDING

- Education & training
- BEAM PRO (ND)



HKGBC
BEAM Pro
綠建專才
社區 ND

<https://www.hkgbc.org.hk/eng/bpndv1.0.aspx>



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Practitioners - Frequently Asked
Questions (FAQs)

BEAM PRO ND V1.0 DIRECTORY

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BEAM Pro accredited with qualification of BEAM Plus Neighbourhood V1.0

Title	Last Name	First Name	Area Of Practice	Organisation	Designation
Mr	BEE	Hai Chun	Architect	Simon Kwan & Associates Limited	BEAM Pro (ND)
Ms	CHAN	Hou Chi	Property Developer	Hong Kong Housing Society	BEAM Pro (ND)
Mr	CHAN	Kwok Leung	Environmental Consultant	Hyder Consulting Limited	BEAM Pro (ND)
Ir	CHEUNG	Wai Tong	Engineer	AECOM Asia Company Limited	BEAM Pro (ND)
Mr	CHEUNG	Chi Nam, Jason	Architect	Housing Department, HKSAR Government	BEAM Pro (ND)
Ms	CHOI	Sze Wing	Environmental Consultant	BMT Asia Pacific Limited	BEAM Pro (ND)
Mr	CHOI	Lok Tin	Engineer	Business Environment Council Limited	BEAM Pro (ND)
Dr	CHOW	Ka Ming	Environmental Consultant	Aedas Limited	BEAM Pro (ND)
Ir	CHUNG	Chi Leong, Colin	Engineer	Parsons Brinckerhoff (Asia) Limited	BEAM Pro (ND)
Mr	Duggie	Alexander M	Landscape Architect	Urbis Limited	BEAM Pro (ND)
Mr	HERBERT	John Anthony	Engineer	Kelcroft E&M Limited	BEAM Pro (ND)
Ms	HUI	Ming Wai Candy	Engineer	Meinhardt Infrastructure and Environment Limited	BEAM Pro (ND)
			Environmental	Business Environment Council	



Building Block 1

Planning for a Liveable High-density City

A compact city

An integrated city

A unique, diverse and vibrant city

A healthy city

Leveraging green and blue assets

Reinventing public space and enhancing public facilities

Rejuvenating the urban fabric

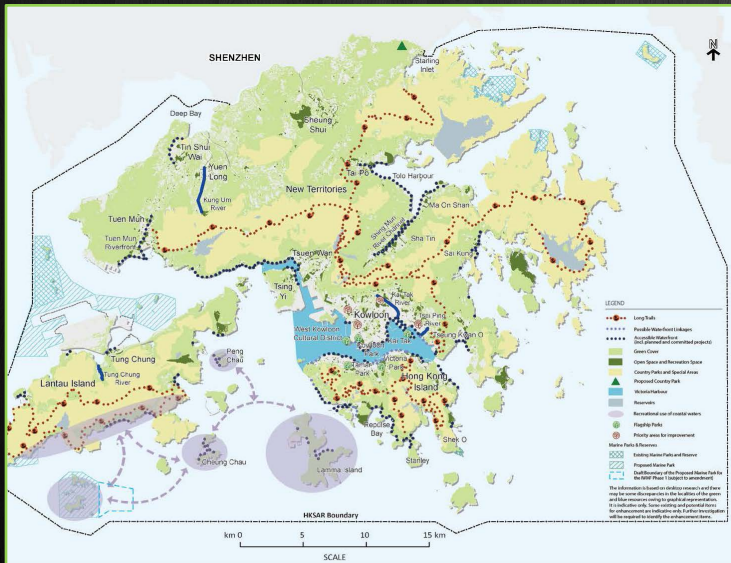


Fig. 18 Conceptual Spatial Framework for Green and Blue Space Planning

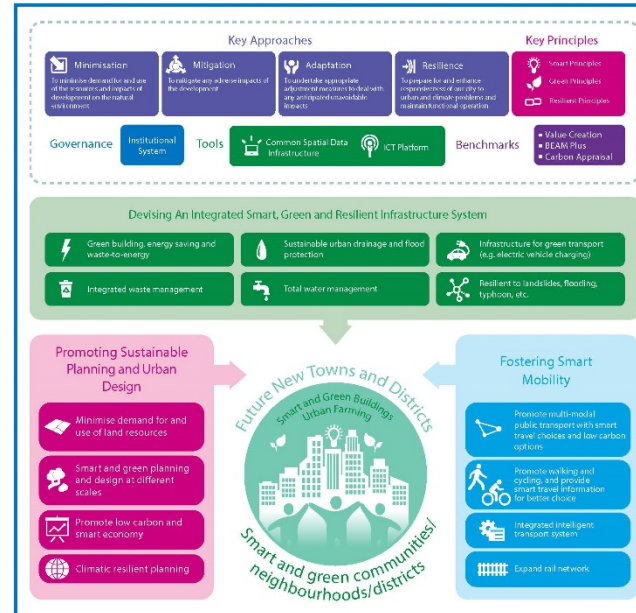


Building Block 3

Creating Capacity for Sustainable Growth

“The concept of a smart, green and resilient city should permeate all aspects of the built environment, from land use planning to transport, infrastructure and buildings to achieve a sustainable and future-proof city.”

Fig. 28 General Smart, Green and Resilient City Framework for the Built Environment



HK2030+



HONG KONG
2030+
Towards a Planning Vision and Strategy Transcending 2030

PUBLIC ENGAGEMENT

Thank you! See you at



5-7 June

WORLD Sustainable Built Environment Conference

www.wsbe17hongkong.hk

