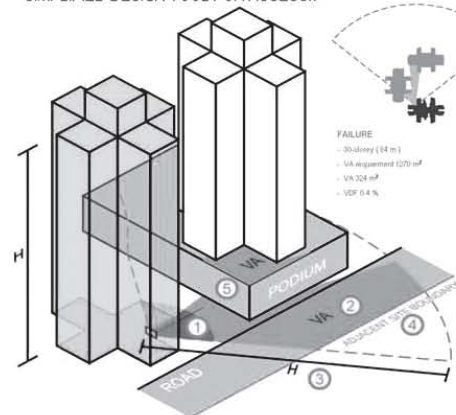


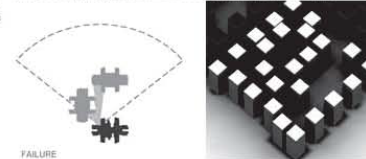
environmental & sustainable design unit

Vicky Cheng (ex-MPhil student 2002-04)
Ankur Gadi (Research Assistant)
Ryan Li (Research Assistant)
Mu Jun (MPhil student)
Edward Ng *
Wu Wei (ex-PhD student 1999-2003)

VISIONARY AREA FIVE RULES SIMPLIFIED DESIGN TOOL FOR ASSESSMENT



VISIONARY AREA
DF 0.3% - 0.4% (VDF 8%) FOR HABITABLE ROOM IN 10% WINDOW GLAZING AREA



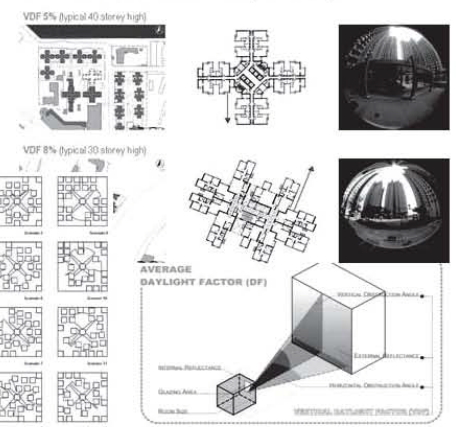
FAILURE
- 30storey (94 m)
- VA requirement 1270 m²
- VA 704 m²
- VDF 0.4 %

HEIGHT OF BUILDING

RULE 4
Count VA to the **boundary of adjacent property**. Include permanent open space, etc.

RULE 5
If a **low building** in front of the window with a vertical obstruction less than say **30°**, count area

AVERAGE DAYLIGHT FACTOR & VERTICAL DAYLIGHT FACTOR
SAMPLES OF PERFORMANCE IN HABITABLE ROOMS (BOTTOM FLOORS)

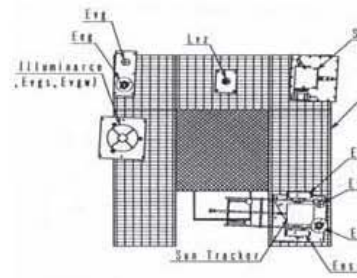


Edward Ng

REVIEW OF REGULATIONS OF LIGHTING AND VENTILATION FOR HEALTHY LIVING

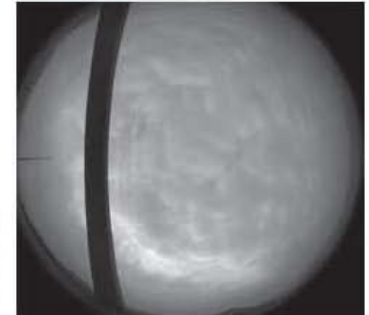
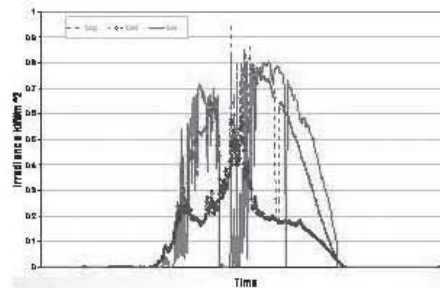
The Building Regulations for Natural Light and Ventilation in Hong Kong is 50 years old. This Buildings Department HKSAR funded study aims to scientifically understand the issues and to advance design regulations based on a performance base approach.

CIE International Daylight Monitoring Station



**CIE International
Daylight Monitoring
Station**

Research

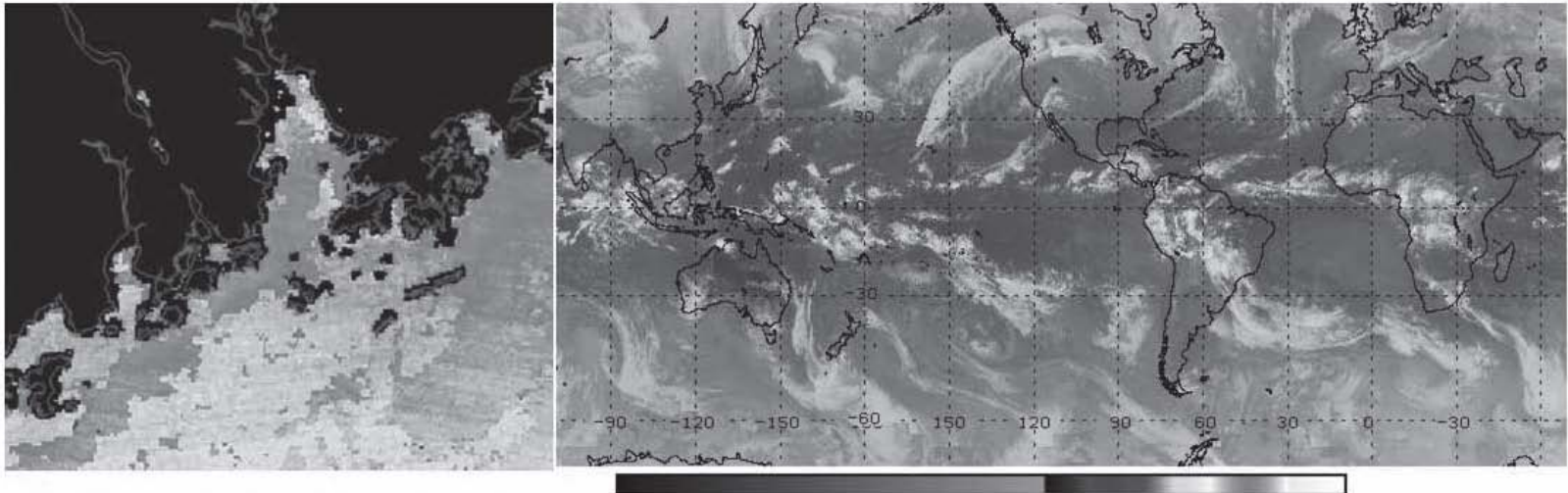


The Unit operates and manages one of the 20 CIE Research Class Daylight Monitoring Station in the World. This CIE Station provides fundamental data for a better understanding of our sky and solar resources, renewable energy, as well as natural lighting studies and design. The project is RAE funded.

Renewable Resources Mapping in South China

**Renewable
Resources Mapping
in South China**

Research



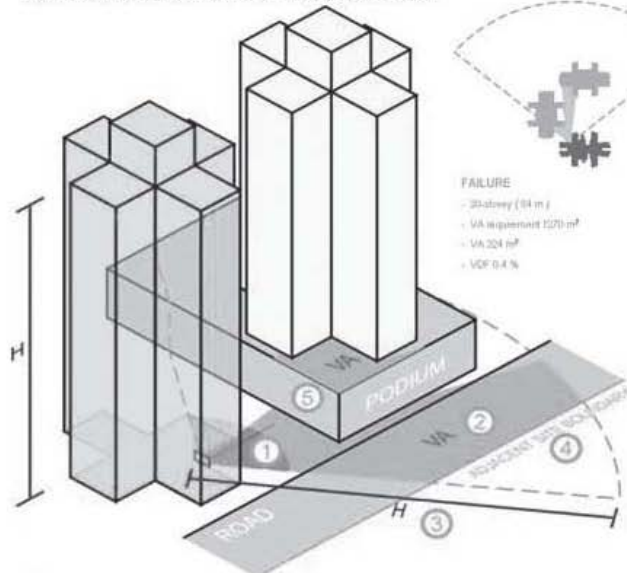
Renewable energy is our future. This Innovation and Technology Funded study investigates the availability of wind, biomass and Solar energy potentials in South China. The project utilizes advanced satellite imaging (MODIS) and modeling technology, calibrated against ground monitoring stations, and simulated mesoscale wind diagnostic modeling. This joint university and institution study aims to develop a reference map for designers, engineers and policy makers.

Review of Regulation of Lighting & Ven- tilation for Healthy Living

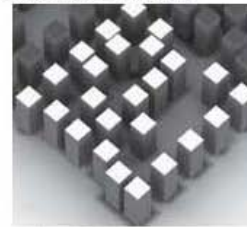
Review of Regula- tions of Lighting and Ventilation for Healthy Living

Research

VISIONARY AREA FIVE RULES SIMPLIFIED DESIGN TOOL FOR ASSESSM



VISIONARY AREA
DF 0.3% - 0.4% (VDF 8%) FOR HABITABLE ROOM IN 10% WINDOW GLAZING AREA



FAILURE
- 23-storey (84 m)
- VA requirement 1270 m²
- VA 204 m²
- VDF 0.4 %

- 40-storey (110m)
- VA requirement 2257 m²
- VA 2052 m²
- VDF 0.2 %

10% height of building

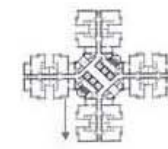
RULE 4
Count VA to the **boundary of adjacent property**. Include permanent open space, etc.

RULE 5
If a **low building** in front of the window with a vertical obstruction less than say **30°**, count area

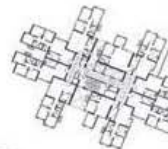
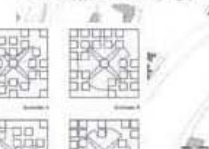


AVERAGE DAYLIGHT FACTOR & VERTICAL DAYLIGHT FACTOR SAMPLES OF PERFORMANCE IN HABITABLE ROOMS (BOTTOM FLOORS)

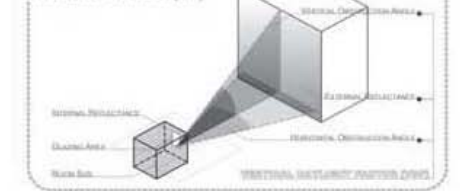
VDF 5% (typical 40 storey high)



VDF 8% (typical 30 storey high)



AVERAGE
DAYLIGHT FACTOR (DF)



The Building Regulations for Natural Light and Ventilation in Hong Kong is 50 years old. This Buildings Department HKSAR funded study aims to scientifically understand the issues and to advance design regulations based on a performance base approach.

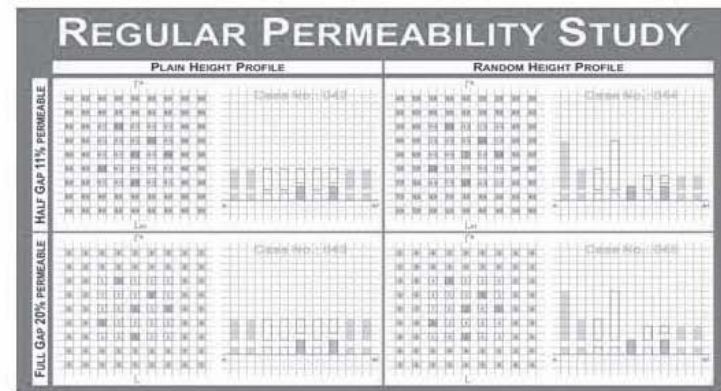
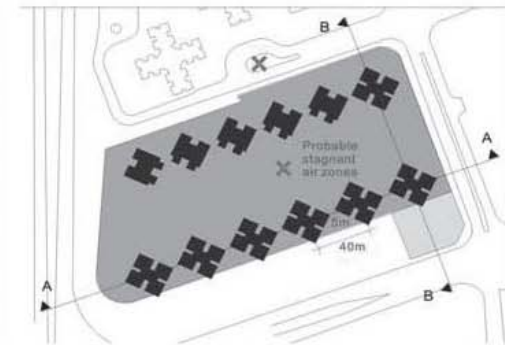
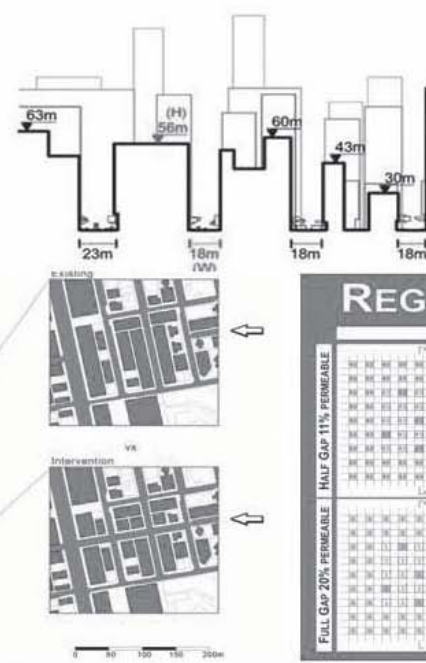
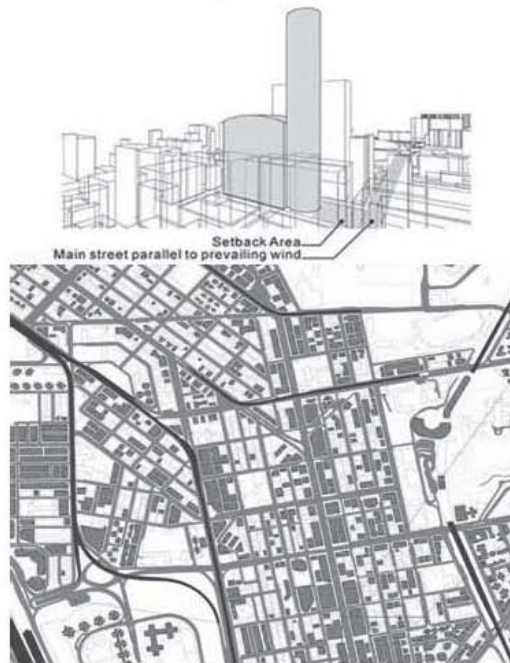
Air Ventilation Assessment System for Urban Planning

Air Ventilation Assessment System for Urban Planning

Research

Site Openness Ratio

Building Height to Street Width Ratio = $\frac{H}{W}$



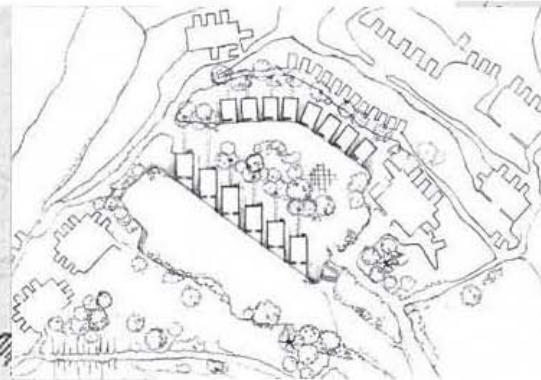
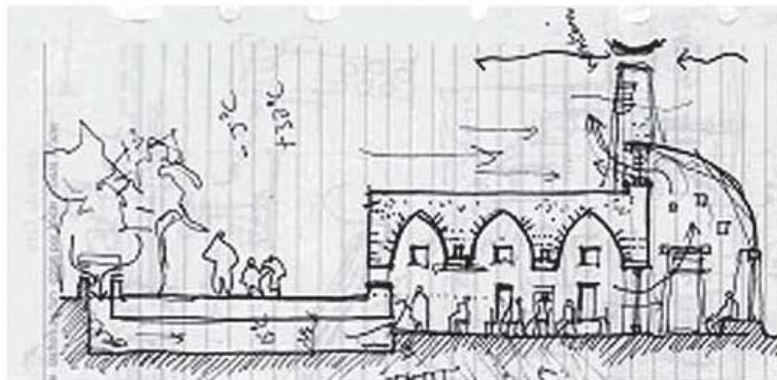
How to design and plan for better air ventilation in urban Hong Kong is the focus of this investigation. Better air movement through our urban fabric could improve thermal comfort and disperse air pollution. This is advantageous to our tropical high density living. The study, commissioned by Planning Department HKSAR aims to develop design guidelines and regulations for planners and designers.

A demonstration Eco-School in North West China



A demonstration Eco-School in North West China

Design



High Science and Low Technology is the spirit of this design-research investigation. A village school will be built in a village in Gansu, China. This Kadoorie Farm Charity funded project aims to demonstrate sound environmental and ecological concepts using local and traditional craft, material and technology. Post Occupancy Studies and On-Site monitoring complete the investigation.

The Unit is to conduct researches, promote advocacies and direct engagement in the shaping of urban spaces and communal *habitus* of Hong Kong, and Greater China;

-- to research on place-making design and planning

-- to strengthen public engagement in the design and management of the urban places and public spaces

-- to develop local economy and cultural development via the proper planning and management of public spaces

urban place research unit

Marta Bohlmark
Wallace Chang•
Jennifer Cheng
Charmaine Hui
Tse Yin Mo
Patrick Mok
Mathias Woo



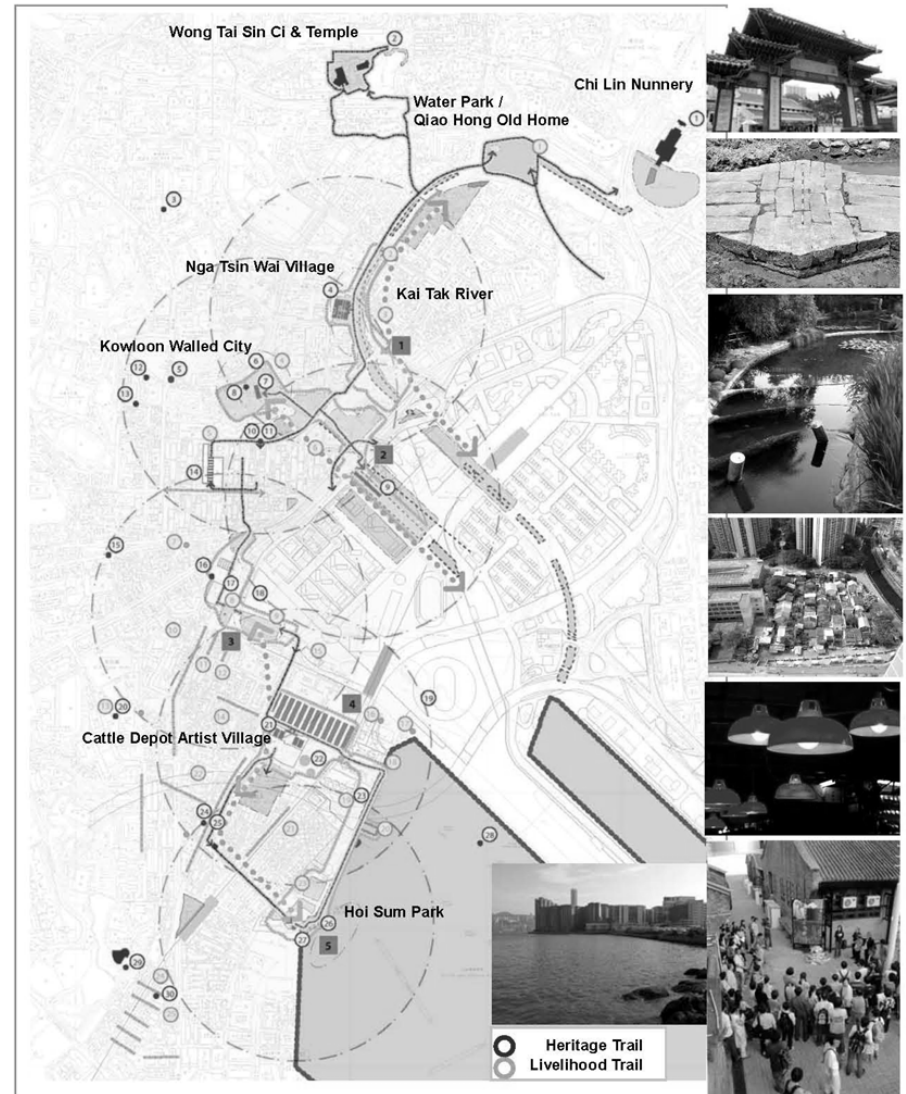
WALLACE CHANG PING-HUNG

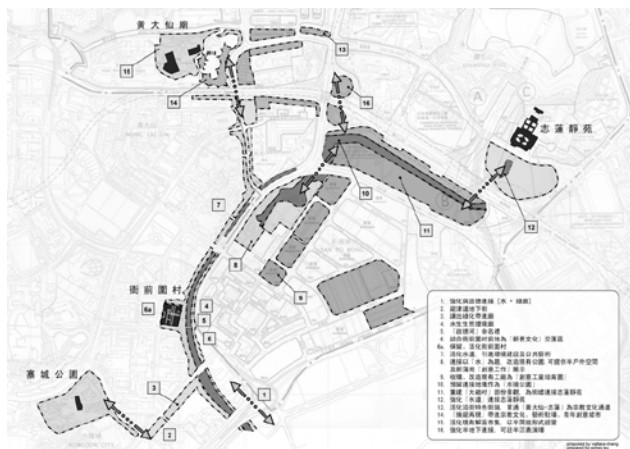
Both a theorist and practitioner in architecture, urban design and public art, Chang has an extensive interest in urban conservation, sustainable planning and vernacular architecture, particularly at the Pearl River Delta (PRD) region. He has realized a wide range of award-winning designs including public toilet, youth hostel, university activities center, residential clubhouse, conservation strategy and district planning projects, etc. Chang initiated a movement of participatory charrettes on sustainable planning and urban conservation in the PRD including Zhongshan (1999), Hong Kong (Tai-O) (2000) and Guangzhou (2002), East Kowloon (2006), Shenzhen (2007). Recently, Chang is researching on the Kai Tak River Urban Regeneration project.

East Kowloon Heritage + Livelihood Trail

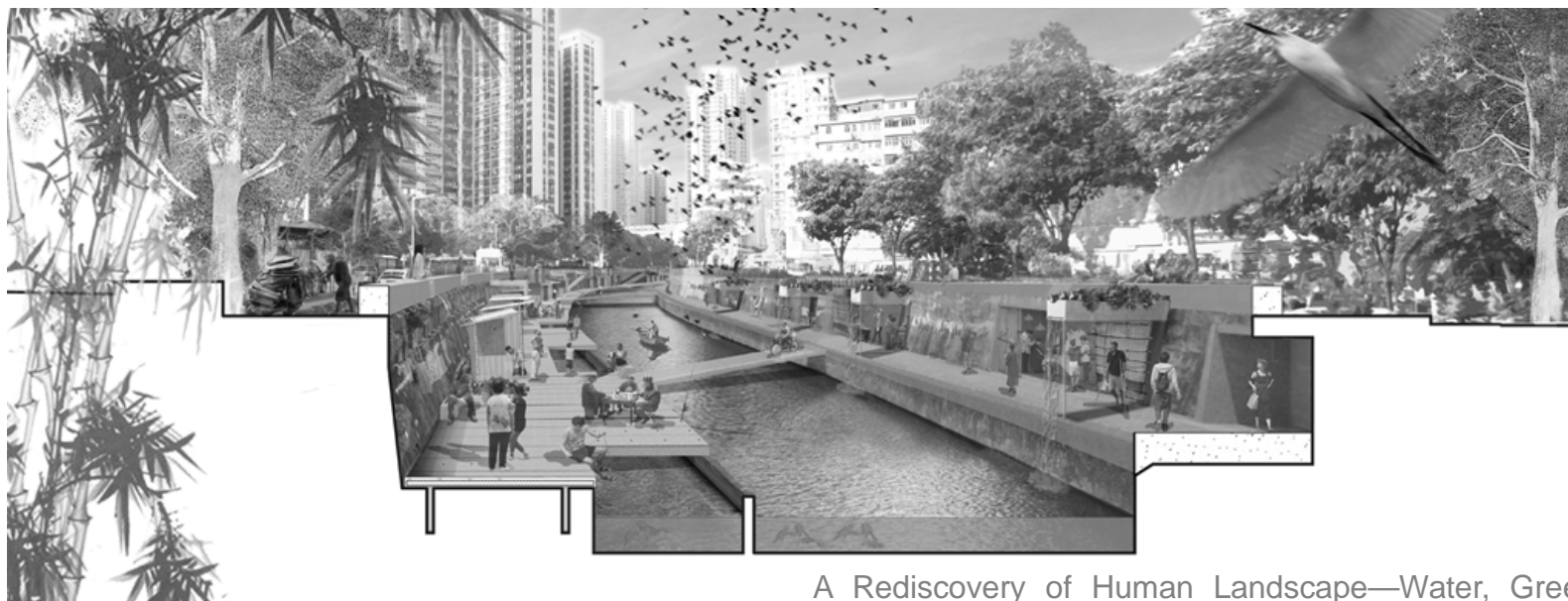


An Urban Connectivity Research study to link related districts of heritage and livelihood interests around Kai Tak Redevelopment in collaboration with Chinese Architectural Heritage Unit, commissioned by Development Bureau 2009-10.





Human Landscape— Kai Tak River



A Rediscovery of Human Landscape—Water, Green and Culture Regeneration Project of Kai Tak River, cultivation of ecology and culture 2007-09



Consultancy Study on [POSPD]



CASE STUDIES

02 Cheung Kong Center, 2 Queen's Road Central
長江集團中心, 2 皇后大道中, 中環

A Consultancy Study on Public Open Space in Private Developments—Design and Management Guidelines, in collaboration with Rocco Design, commissioned by Development Bureau 2009-10.

CRITERIA	PUBLIC GREEN	PLAZA	COURTYARD	POCKET SPACE	PROMENADE
Shape	Site- specific	Site- specific	Site- specific	Site- specific	Site- specific but Generally elongated
Street Frontage	Over 30% 13.5 m min width	Over 30% 13.5 m min width	Over 15% 6 m min width	Over 15% 6 m min width	N/A
Width / Length Ratio	Recommended 1:3 max	Recommended 1:3 max	Recommended 1:3 max	Recommended 1:3 max	15-20 m min width
Major / Minor Space	Site-specific but preferably 75% min. for major space	Site-specific but preferably 75% min. for major space	Site-specific but preferably 75% min. for major space	Site-specific but preferably 75% min. for major space	Site-specific but Generally elongated
Area	500 sqm min	500 sqm min	200 sqm min	100 sqm min	N/A
Visibility	Visible	Highly visible	Visible	Visible	Visible
Open To Sky	Open air	Open air	Open air	Open air	Open air
Slope / Gradient	Preferably on flat land	Preferably on flat land	Preferably on flat land	Preferably on flat land	Site-specific
Green Coverage / Planting Area	50% min	30% min	30% min	30% min	Site-specific

by Prof. Wallace Chang Ping Hung



"An iconic act of destruction is a marked retrieval of new memory."

In the last few years, the call for heritage conservation is by no means a mainstream opinion in the urban development, but gradually attracting an awareness of the community. Participating in the shaping of an independent history after 1997, Hong Kong people by default are obliged to uphold a sense of ownership of their cultural identity. Ten years have gone by, hiccups of the local economy and the recognition of advances and hard times have instilled into a maturing social personality of Hong Kong citizens. For those who seek no aspirations in Hong Kong have already started new lives elsewhere in Northern America or any other English-speaking places, but for those who determined to stay due to patriotic reasons or simply because of economic affordability, it is where they are born and keep staying is a foreseeable future. In return, this certainly of taking Hong Kong as one

However, the gap between the citizens and decision-makers in urban design is still unbridgeable, which is witnessed in recent incidents like H15 project, Star Ferry demonstration, and East Kowloon redevelopment plan. For these cases, urban memories are often intentionally erased for the reason of fast-track developments. When realistic situations are confronting immediate interests of different parties, it always comes to the same scenario where oppositionists are presumed, discussions between them and decision-makers present possible struggles. So, as architects, if our language to communicate is via spatial design, are we able to create dialogues to tackle issues in our city, i.e. design as a means of dialogue, or dialogue via architectural design?

To seek for the architects' role beyond that of service providers for developers, we can assume a more proactive position of 'social reformers' as suggested by Walter Gropius. This assumption has granted architects to bring forth a vision, a profession, and a passion to safeguard any urban development against the forces of expediency. On the one hand, the act is preventive against any unwise decisions due to administrative convenience; and on the other, the same act can be creative, for example, advisory and forward-looking proposals to arouse social concerns and advocacies. The passive position of architects in the last few decades in Hong Kong's urban development should come to an end as the new demands for active involvement in social movements are emerging, and much are yet to define.

After ten years of post-1997 governance, the Hong Kong 'old society' is still at its infancy stage. The self-consciousness of citizenship is growing but the embourgeoisement of public awareness is relatively excessive. The Public is either under-empowered or over-empowered by the political leaders. If the public cannot directly speak for themselves, any representation will likely lead to interest-driven agendas. So, in this situation, the general public should be allowed to channel their opinions through direct means and express their views in any better-vised, non-violent demonstration, destructive repression, or helpless distress to express their aspirations? From the author's direct involvement with Tai O Redbubing Council Group, H15 Concern Group, and Tai O Civil Alliance, the general public has strong opinions and their own agenda. Although these rational propositions are made in response to government's imposing plans. Although the propositions are making better sense to the good situations, bureaucratic red tapes, in the end, are making the public feel that they are in the immediate situation. Thus, in which way should the public present themselves and their opinions being well taken?

Design Together— Changdi, Guangzhou



**可持續發展的城市環境
設計工作坊暨國際研討會**
中國 廣州 長堤

URBAN ENVIRONMENTAL DESIGN
CHARRETTE IN THE PEARL RIVER DELTA
Changdi Guangzhou
People's Republic of China

15-16 April 2003
Venue: The Pearl River Delta Charrette Hall
1st Floor, 1st Floor, 1st Floor
1st Floor, 1st Floor, 1st Floor
1st Floor, 1st Floor, 1st Floor

ROCKEFELLER BROTHERS FUND

廣東省城

