

HKGBC Guidebook on Urban Microclimate Study

Technical Seminar & Launching Event

16 January 2018

2:30pm - 5:35pm

(Registration starts at 2:15pm)



HKGBC will upload 3 CPD credits to individual account for BEAM Pro & BEAM Affiliate.

BEC Auditorium
G/F, Jockey Club Environmental Building
77 Tat Chee Avenue, Kowloon Tong



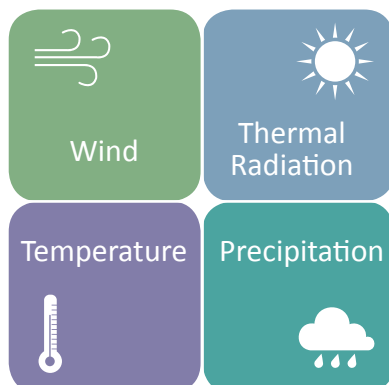
Guest of Honour
Mr WONG Kam-sing, GBS, JP
Secretary for the Environment

Executive Summary

The HKGBC Guidebook on Urban Microclimate Study provides the knowledge of and inspiration for urban microclimate design. In the Guidebook's easy-to-understand chapters, the science and principles of urban microclimate studies are introduced, 31 strategies to optimise the microclimate conditions are stipulated and good practices— both local and overseas— are reflected on. Recommendations for further studies and policy adjustments are made at the end.

The full version of the Guidebook can be accessed at <https://www.hkgbc.org.hk/eng/guidebooks.aspx>.

31
urban
microclimate
strategies in 4
categories



Jointly organised by CIC and HKGBC



PROGRAMME

2.30pm

Welcoming Remarks by
Mr CHEUNG Hau-wai, SBS,
HKGBC Chairman

2.40pm

Keynote Speech by
Mr WONG Kam-sing, GBS, JP,
Secretary for the Environment

3.00pm

Photo Taking

3.05pm

Introduction of the Guidebook
by **Professor Edward NG**
Lead Consultant, CUHK

3.35pm

Case Sharing 1
Kai Ching Estate

3.55pm

Coffee Break

4.10pm

Case Sharing 2
Double Cove

4.30pm

Case Sharing 3
Zero Carbon Building

4.50pm

Panel Discussion

5.30pm

Closing Remarks by
Dr Benny CHOW,
Steering Committee Convenor
cum HKGBC Director

Case Sharing

Jointly organised by CIC and HKGBC



Mr YIM Yu Chau, Stephen *Chief Architect, Housing Department, HKSAR*

Mr. Stephen Yim Yu Chau is a Chief Architect of the Development & Construction Division in Housing Department of HKSAR Government. He has been in charge of the development and standards, project design and contract management of public housing developments adopting micro-climate studies, carbon emission estimation and community engagement etc. for sustainability. Being an Authorized Person and a Registered Architect in Hong Kong, he is a Faculty Member as well as BEAM Pro of Hong Kong Green Building Council. He is also the Executive Committee Member as well as GBL Manager of China Green Building (Hong Kong) Council.

Synopsis

Global warming has become a long-term challenge to the whole world. Hong Kong is renowned for its hyper-density, with high-rise design for apparently any use, including commercial, office and domestic uses. The facing challenges include how to maintain a livable but very compact built environment for over 7-million population on a mere 1,100 square kilometers of land in total. Hong Kong Housing Authority (HKHA) provides affordable subsidized rental housing for about 30% of its population. In 1999, HKHA established its Environmental Policy, which “promotes healthy living, green environment and sustainable development” in the provision of public housing and related services. In 2001, HKHA pioneered in the application of micro-climate studies in site planning and design process of high-rise public housing (normally 40 domestic storeys) to enhance the environmental performance. From 2004 onwards, we started to adopt micro-climate studies in all new public housing projects, and by now we have over 100 public housing projects completing the studies to enhance estate design. At the Technical Seminar and Launch Event for HKGBC Guidebook on Urban Microclimate Study, I shall share the HKHA’s experience in urban micro-climate study taking Kai Ching Estate as an example.



Kai Ching Estate



Mr Kevin NG

*Senior Deputy General Manager,
Henderson Land Development Co. Ltd.*

An architect by profession, Kevin has been handling green & sustainable developments since mid 1990’s. He is a LEED AP, GBL Manager & BEAM Pro and his knowledge of different green building systems had helped him to orchestrate successful collaborations to come up with a series of cost-effective green buildings with concerted efforts by the respective project teams – including all 5 Henderson projects accredited with CGBC “3-Star” rating and the first “LEED-ND” accreditation in HK for Double Cove, which was also the Winner of “Leadership in Sustainable Design & Performance” in Asia Pacific Awards organized by the World Green Building Council in 2016. Kevin considers that the role of developer is important in formulating strategies and making decisions regarding commercially viable and yet user-appreciated green features. Currently, he serve as a member of the Steering Committee for reviewing the BEAM Plus New Buildings guidelines.

Synopsis

Our vision for Double Cove is to set a new quality and sustainability benchmark for large-scale residential development in Hong Kong. The main focus is on creating a high quality resident-oriented development set within beautifully landscaped park and gardens in an enjoyable outdoor environment. This does not only give the development its unique sense of place, but it also creates a backdrop to the distinctively designed towers. The idea of “Living in a Park in a walkable community” becomes the main theme of the development and forms the key driver in many aspects of the design.

The masterplan concept is a response to the Site and the neighborhood, in particular to views of the harbour and the natural surroundings. The central park creates a major “Green Lung” within the development and also a visual relief for the surrounding development. Apart from the central raised park, access and views to nature and greenery play a major role in the masterplan. The towers are mainly arranged in pairs in two curvilinear “wings”, enclosing the park. This arrangement creates a series of view and ventilation corridors through the Site. The towers, descending in height towards Tolo Harbour, create a cityscape which is more in-keeping with the natural surroundings.



Ir Edward CHAN

*Senior Project Manager,
Henderson Land Development Co. Ltd.*

Ir Edward Chan is Chartered Engineer, Registered Professional Engineer, BEAM Pro, LEED AP, CGBC GBL Manager, a practicing professional project manager. Edward is an expert in building sustainability and has been involving in number of sustainable built environment projects over the past two decades across Hong Kong, China, Singapore, South Korea and Taiwan. Edward is Steering Committee member for the Major Revision of BEAM Plus 2.0 New Buildings, and was BEAM Plus Working Groups member for BEAM Plus 1.1, editor of China Evaluation Standard for Green Building GB/T50378-2006 Hong Kong version 1st-edition; research coordinator for the formulation of Buildings Department’s Comprehensive Environmental Performance Assessment Scheme.



Double Cove



Ir CHOW Lap-man

Chief Executive Officer, Construction Industry Council - Zero Carbon Building

Mr LM CHOW is the CEO of Construction Industry Council – Zero Carbon Building (ZCB). Prior to joining ZCB, Mr Chow was the former Senior Director – Marketing and Customer Services of CLP Power Hong Kong Limited. He has served the power industry in Hong Kong for 39 years. Mr Chow actively led the retail teams of CLP Power to uplift their customer services and provide technologies, tools and solutions to help customers save energy. Under his leadership, the account management teams offered tailor-made energy management solutions to many building operators. He also initiated many dedicated programs to share best practices for energy management of green buildings. Mr Chow was also the Director of HKGBC from 2013 - 2016.

Synopsis

As a showcase of zero carbon building design strategies and technologies, ZCB is a living demonstration of the environmental benefits that can result from the early integration of microclimate considerations, site planning and building design. Through a comprehensive microclimate study and thermal comfort analysis of pedestrian level conditions, ZCB adopted a number of planning and design strategies which not only enhances the thermal comfort of outdoor open spaces but also contributes to the reduction of the urban heat island effect and the environmental quality of the surrounding urban context. The use of real-time microclimatic data also optimises building operation and energy performance.

ZCB is also currently undertaking a collaborative microclimate pilot project with the Hong Kong Observatory and Energizing Kowloon East Office which demonstrates how live monitoring and display of microclimatic conditions will provide a big data analytic platform for citizen engagement, health management and smart urban living. Key microclimate factors considered in the design of ZCB and associated benefits are presented along with this sample pilot project which reinforces ZCB as an experimental test bed for green and smart technologies.



Zero Carbon Building