

(a) Case 2/2014

Issue: Methodology Report for Wind Tunnel Test

Recommendation: To accept the following methodology and parameters proposed for wind tunnel test of the proposed development:

- (1) Topographic Model  
Model scale: 1: 4000
- (2) Proximity Model
  - (i) Model scale: 1: 400
  - (ii) Extent of model: all known existing and proposed surrounding buildings and structures within a radius of 500 m from the subject site will be modeled.
- (3) Wind Climate Study Results  
Directional characteristics of typhoons affecting HK based on a Monte Carlo simulation of storms passing within 250km of HK.
- (4) Possible removal of adjacent buildings that could provide significant shelter  
Thirty-six building groups were proposed to be removed in the Proximity Model.
- (5) Wind Loads Adopted in Superstructure Design  
The following in superstructural design were proposed:
  - (i) The finally adopted design wind loads will not be less than 70% of the design wind loads as stipulated in Table 1 of 2004 wind code;
  - (ii) If the wind loads determined in the wind tunnel test are found greater than the design wind loads as stipulated in Table 1 of the 2004 wind code, the wind loads determined in the wind tunnel test will be adopted for design; and
  - (iii) The peak building acceleration assessment on human comfort under wind loads should be in accordance with the Code of Practice for Structural Use of Concrete 2013 clause 7.3.2. Limiting maximum peak acceleration at the top occupied floor of an office building to  $0.25\text{m/s}^2$  should be adopted.

Decision: (a) Having noted the background information and arguments, members endorsed the recommendation subject to refinement in the determination of the buildings to be removed in the Proximity Model.