Summary of Decisions of the Structural Engineering Committee
SEC Meeting 1/2015 held on 3.2.2015

(a) <u>Case 6/2015</u>

Issue: Methodology Report for Wind Tunnel Test

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

(1) <u>Topographic Model</u>

Model 1:3000

(2) <u>Proximity Model</u>

(i) Model Scale: 1:400

(ii) Extent of model: all known existing and proposed surrounding buildings and structures within a radius of 500m from the subject site will be modeled

(3) <u>Wind Climate Study Results</u>

(i) Typhoon wind model: wind speed and wind direction from simulated storms is supplied by Applied Research Associates (ARA). The typhoon simulation by ARA resulted in 99986 storms over a simulated duration of 34602 years.

(ii) The typhoon wind climate model produces a predicted mean-hourly wind speed of 59.5 m/s at 500 m height for a return period of 50 years.

(iii) Predication using the typhoon wind climate will be carried out using the "Storm Passage Method".

(4) <u>Possible Removal of Surrounding / Adjacent Building</u>

42 building groups were proposed to be removed in the Proximity Model.

(5) <u>Wind Pressure to be adopted in design</u>

The following in the superstructural design were proposed:

(i) The finally adopted peak design combined wind moment will not be less than 70% of the peak design wind moment as derived from Table 1 of the Code of Practice on Wind Effect in Hong Kong 2004 (the Wind Code).

(ii) If the peak design combined wind moment determined in the wind tunnel test is found greater than the peak design wind moment derived from Table 1 of the Wind Code, the peak design wind moments determined in the wind tunnel test will be adopted for design.

(iii) The level-by-level wind loads adopted for design will be based on the peak design combined wind moment determined from (i) and (ii) above.

(iv) The peak building acceleration assessment on human comfort under wind loads will be based on the requirement from the Code of Practice for Structural Use of Concrete 2013 where peak acceleration at the top occupied floor of a non-residential building is limited to 0.25 m/s^2.

Decision: Having noted the background information and arguments together with RSE's supervision arrangement, members endorsed the recommendation.