

Case 34/2018

Issue: Methodology Report for Wind Tunnel Test

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

(1) Topographic Model

Model scale: 1: 4,000

(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 500m 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, conducted by Applied Research Associates, Inc. (ARA).

(4) Removal of adjacent buildings that could provide significant shelter

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

(5) Design Wind Loads Adopted in Cladding Design

The following in design of the exterior claddings, curtain walls, canopies, etc. were proposed:

(i) The finally adopted peak design wind pressures will not be less than 70% of the maximum design wind pressure based on code calculation in the most critical direction as derived from the design values given in the Code of Practice on Wind Effects in Hong Kong 2004 (the Wind Code);

(ii) If the peak design wind pressures determined in the wind tunnel test are found greater than the maximum design wind pressures based on code calculation in the most critical direction as derived from the design values given in the Wind Code, the peak design wind pressures determined in the wind tunnel test will be adopted for design; and

- (iii) The RSE will apply Occupation Permit (OP) for the proposed development after completion of the construction of all the two high-rise towers (i.e. Block 1 and Block2). If the actual number of high-rise towers to be constructed is lesser, RSE will conduct another wind tunnel test to verify whether the original wind tunnel test results used in the design of the exterior claddings, curtain walls, canopies, etc. of the development are still applicable prior to the Temporary Occupation Permit (TOP) application.

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