

Case 10/2021

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

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

(5) Design Wind Pressures Adopted in Cladding Design

RSE proposed the followings in design of the exterior cladding, canopy, balustrades and ceiling of the proposed development:

(i) The finally adopted peak design wind pressures for the above-mentioned cladding, canopy, balustrades and ceiling will not be less than 70% of the corresponding maximum design wind pressures 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 (Wind Code) ; and

(ii) If the peak design wind pressures for the above-mentioned cladding, canopy, balustrades and ceiling determined in the wind tunnel test are found greater than the corresponding 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 for those elements determined in the wind tunnel test will be adopted for design.

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