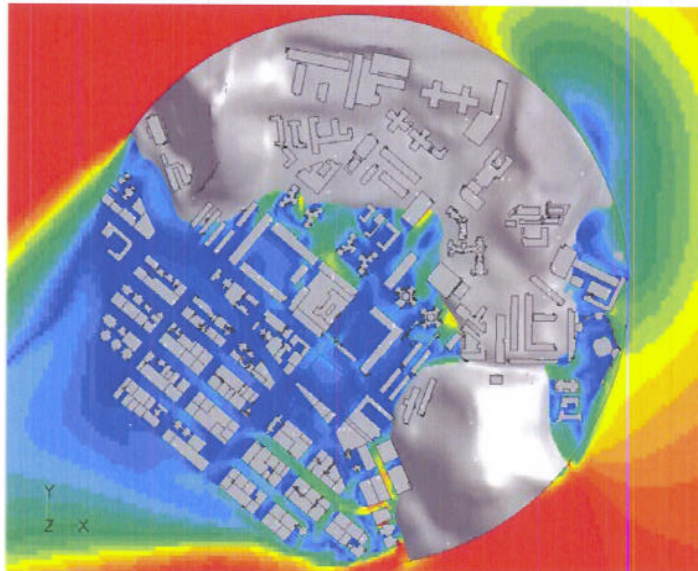


Air Ventilation Assessment Report



**Air Ventilation Assessment Report (Expert
Evaluation and Initial Study) -
Proposed Housing Development at
Shek Kip Mei Estate (Executive Summary)**

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Executive Summary

HKSAR Housing Department has appointed the Center for Housing Innovations, the Chinese University of Hong Kong to carry out the Expert Evaluation and Initial Study Stages of the Air Ventilation Assessment (AVA). The objective of this study is to complete the air ventilation assessments for the current design scheme of the vicinity of the Proposed Residential Development of Shek Kip Mei Estate, Sham Shui Po, Hong Kong.

The proposed development is located at the old district of the Kowloon area bounded by Pak Tin Street, Berwick Street, Nam Cheong Street and Tai Hang Sai Street. To the north of the Shek Kip Mei development is the Pak Tin Estate. It consists of 40 storeyed high-rise residential development, including Tai Tin House, Lai Tin House, Wan Tin House, Shing Tin House and Cheung Tin House. To the northwest of the Shek Kip Mei development, the land topography gradually rises to a hill area. To the southeast of the Shek Kip Mei development, the land topography is also gradually developed to a hill area. To the southwest of the Shek Kip Mei development, it consists of a large area of low-rise residential development of the old district.

The Site Spatial Average Velocity Ratio (SVR) and the Local Spatial Average Velocity Ratio (LVR) are 0.12 and 0.14 respectively. The SVR is 0.02 smaller than the LVR, which is similar to most of the AVA studies in HK.

Design merits related to the air ventilation of the current approved scheme have been implemented:

1. As the major annual prevailing winds are dominated by both the East and East North East wind directions, the current building block disposition has been aligned in response to the localized wind environment.
2. Large building gaps have been reserved for increasing the wind permeability, as well as natural daylighting, of the building cluster. Three major large building gaps have been incorporated, namely Block 2-3 (~60m), Block 4-5 (~60m), and the setback of Block 6 (~30m). The computational fluid dynamics simulation results demonstrated the effectiveness of the natural wind corridors preservation.

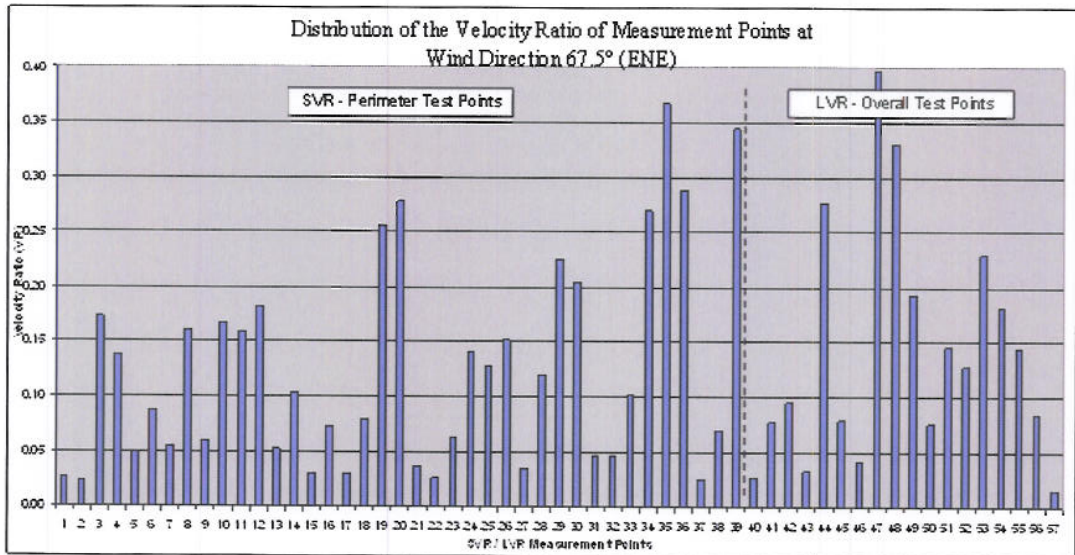


Figure: Chart showing the SVR and LVR distribution of the dominant prevailing wind direction, 67.5 degree (East North East), with an average weighting of 21.95%

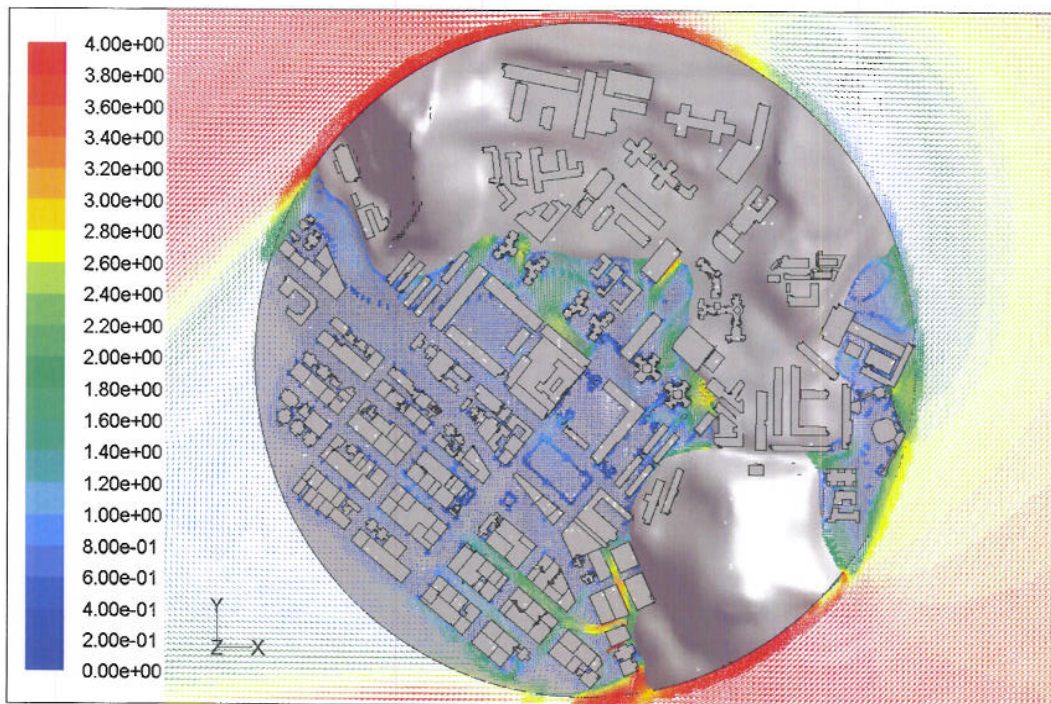


Figure: CFD simulation showing the wind velocity in the vicinity of the site with the dominant prevailing wind direction, 67.5 degree (East North East), with an average weighting of 21.95% (plan view)