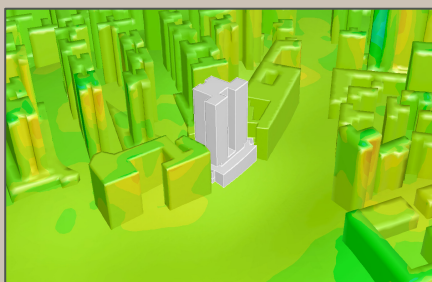
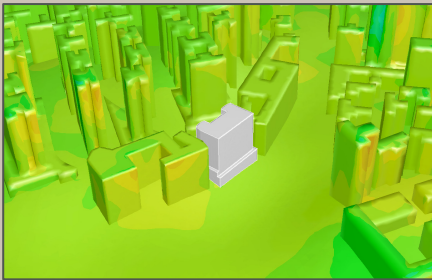
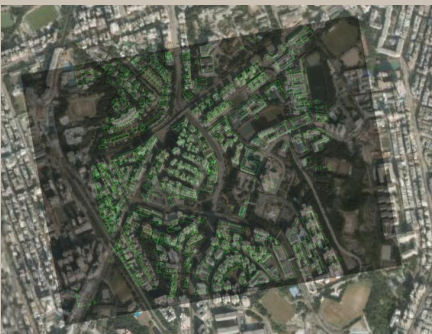


“Where will our knowledge take you?”

Computational Fluid Dynamics (CFD) In Built Environment



Velocity magnitude contours on the building surfaces. Development site with the existing building (Top) Development site with the new building (Bottom).



Aerial photo shows the new building development (in the centre) and neighbouring buildings. The computational model boundary is shadowed

Wind Engineering (Air Ventilation Assessment in HK)

BMT WBM engineers were engaged to provide leading Hong Kong architects with CFD expertise at the concept design stage of a residential tower. The proposed development will replace an existing 10 storey educational building for an 18 storey, 3 car park levels single tower residential building. The development site is located at the periphery of a major wind corridor and is surrounded by medium and tall buildings. BMT WBM was requested to investigate local air ventilation performances, environmental wind levels and associated impact on pedestrians.

BMT WBM has significant expertise in assessing the impacts of new building developments on the local wind environment and provides services ranging from initial design reviews to alternative design recommendations and appraisals by using sophisticated analysis techniques.

BMT WBM conducted a detailed AVA analysis through the use of CFD. The investigations utilized complex methodologies which took into account wind from 16 different directions in and around the proposed development.

BMT WBM's independent analysis provided its client with critical data which enabled them to better understand the impacts the proposed design on the surrounding environment. Furthermore, BMT WBM engineers provided informative data which allowed the client an opportunity to alter their initial design to achieve more favourable result.

After redesigning the floor plan and widening the gap to the neighbouring building, the architects had achieved a suitable design with a much improved air ventilation performance and wind environment for pedestrian.

Computational Fluid Dynamics (CFD) In Built Environment

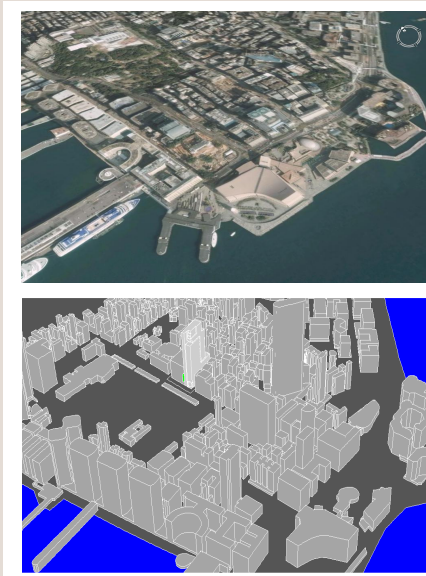
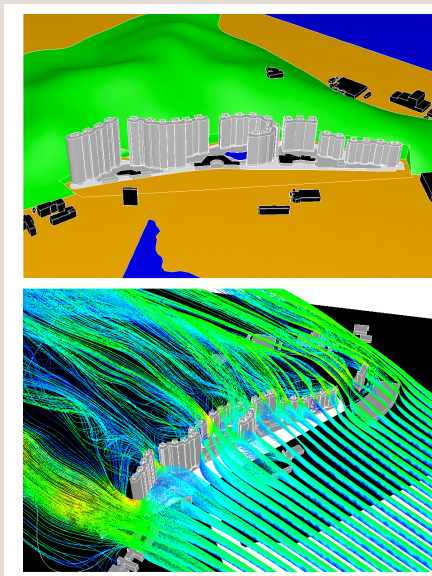
Air Ventilation Assessment Projects

Air Ventilation Assessment(AVA) Projects in Hong Kong

- Long Ping Station Southern site development, Hong Kong
- Revelopment of Ming Wah Dai Ha Project at Shau Kei Wan, Hong Kong
- New Acute Hospital in KaiTak, Hong Kong
- Immigration office building in Tseung Wan, Hong Kong
- D&C for Rank and File Quarter for Immigration Department at W Yi Hop Road, Kai Chung, Hong Kong
- New commercial redevelopment at Granville Road in Kowloon, Hong Kong
- Planning Consultancy for Redevelopment of Ming Wah Dai Ha project at Shau Kei Wan, Hong Kong

AVA Projects in Macao

- Residential Development at Lot P of New Reclamation Area in Areia Preta, Macau
- Residential Development in Taipa, Macau
- AVA study for LKF Square development in Macau
- Residential Development At R. De Luis Gonzaga Gomes, Macau
- Composite Development At Estrada De Seac Pai Wan, Cotai, Macau



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