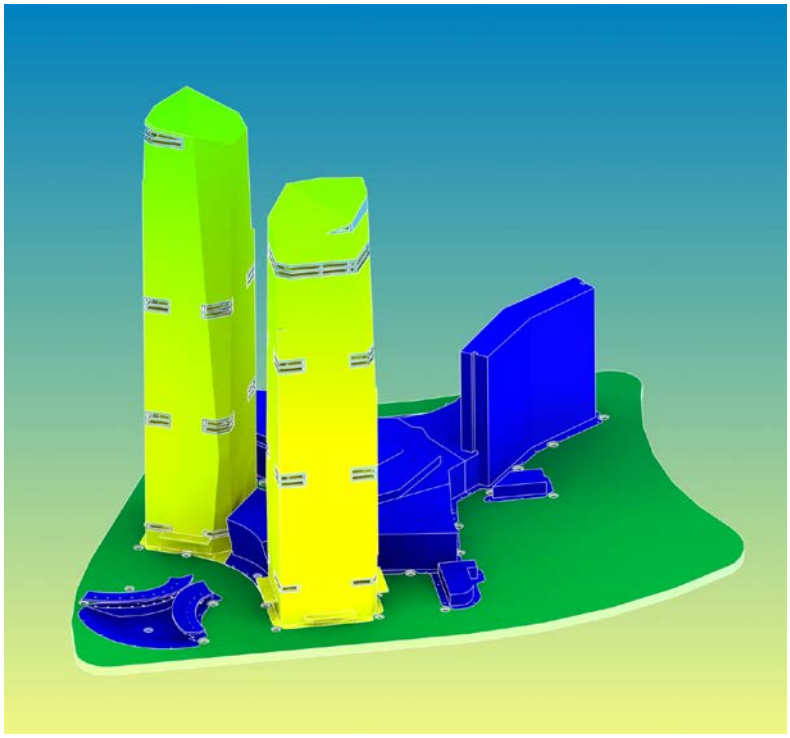
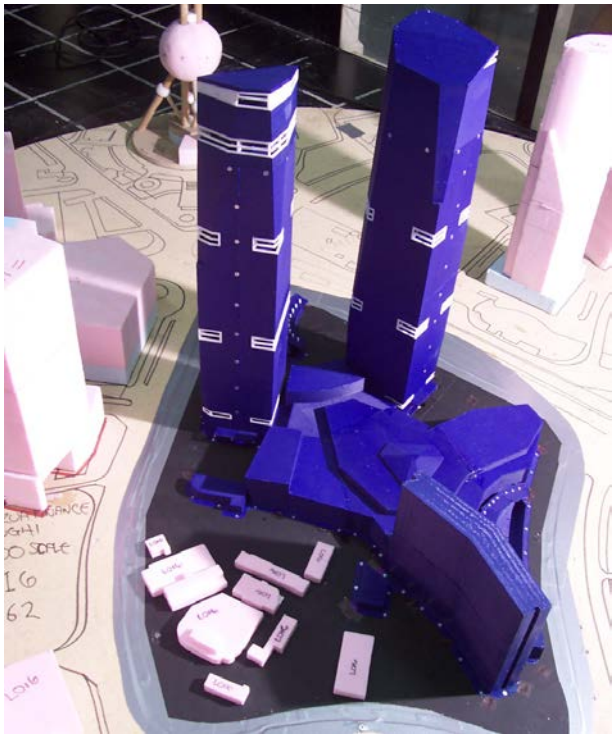
Shanghai Lujiazui Finance and Trade, Shanghai, PRC

Wind Engineering Study



Computer Rendering of Pressure Model



Photograph of Pressure Model

Client	*Structural Engineer*	*Architect*
Maunsell Structural Consultants	Maunsell Structural Consultants	Benoy Architects
Height	*Year Tested*	*Model Scale*
Office Towers – 260, 250 metres Hotel Tower – 85 metres	2005	1:400

The Project

The original design for this project, tested in 2003, consisted of two 350 metre tall office towers sitting atop an extensive low-rise structure.

The refined project geometry, tested in 2005, consists of the two office towers now measuring 250 metres and 260 metres in height as well as an 85 metre tall hotel tower connected by an extensive low-rise structure. At pedestrian level the project features some canopied and sunken garden areas.

The Wind Tunnel Studies

The wind engineering studies for Shanghai Lujiazui Finance and Trade included a study of the wind-induced structural loads and responses, local cladding pressure loads and a study of the pedestrian level wind speed environment.

The study of overall structural loads and responses was determined for the office towers and hotel tower using the force balance technique.

A study of wind-induced cladding pressures was carried out for 1287 measurement locations distributed over the two towers, the hotel tower and the low-rise.

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The Boundary Layer Wind Tunnel Laboratory

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