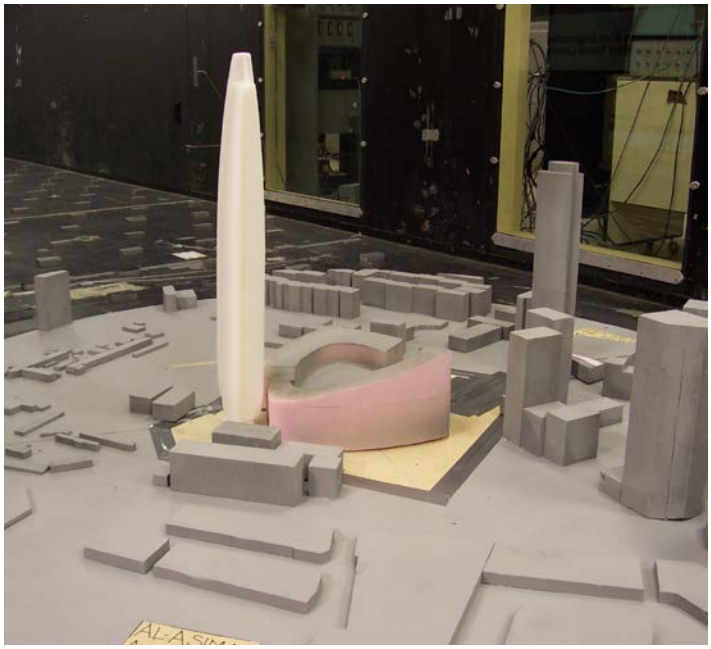
Al Asima, Kuwait City, Kuwait

Wind Engineering Study



Force Balance Model

Pressure Model

Client Salhia Real Estate Company Kuwait City, Kuwait	*Structural Engineer* Ove Arup & Partners London, England	*Architect* Kohn Peterson Fox London, England
Height 325 m	*Year Tested* 2007	*Model Scale* Pressure Model 1:400

The Project

The Al Asima Project consists of a 325 m tall office tower and an extensive podium resembling a stadium. The tower is located at the lower right corner of the site.

The project is located in downtown Kuwait City, to the southwest corner of the intersection of Almutannabi Street and Al-Shouhada Street.

The Wind Tunnel Studies

The wind engineering studies for the Al Asima Project included wind-induced structural loads and responses of the tower, local cladding pressure loads as well as pedestrian level wind conditions.

The study of overall structural loads and responses were determined for the office tower using the force balance technique. A desk-top study of the preliminary structural loads was also performed.

A study of wind-induced cladding pressures was carried out for 946 measurement locations distributed over both the tower and podium.

Pedestrian level wind speeds were determined at 57 locations on the podium and around the project site. A flow visualization study was also conducted to investigate the overall airflow characteristics and to locate regions of flow separation, re-attachment and vortex formation.

The Boundary Layer Wind Tunnel Laboratory

Western

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