

REFERENCE PROJECT

BETTER WIND COMFORT USING WIND STUDIES

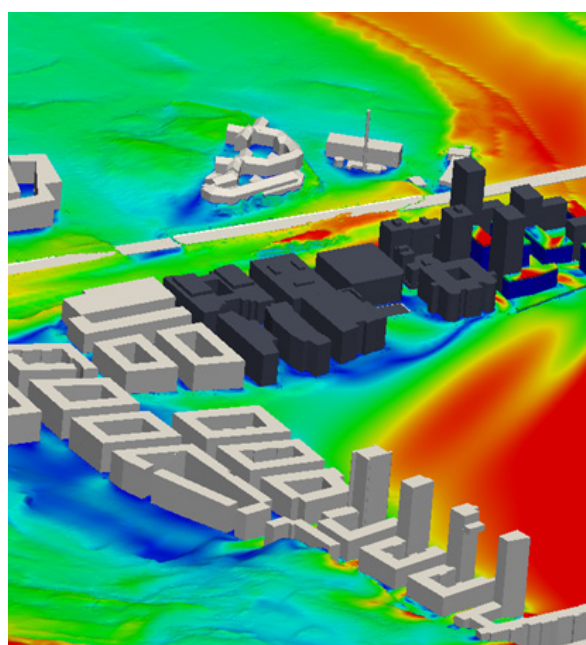
On behalf of JM AB, SMHI has performed a number of wind studies for planned development at Marieviks Udde in Stockholm. The results have been used in the design process of the area.

In order to be able to make an early assessment on how new buildings, including several high towers, would affect the local wind climate at Marieviks Udde on Liljeholmen in Stockholm, JM AB gave SMHI the assignment of performing a wind study in the area. SMHI also calculated wind and pressure fields to be used when designing the ventilation systems of the buildings.

Results from the wind comfort study showed that the wind would be enhanced at a number of locations within the area. JM therefore ordered a follow-up wind study where the design of noise protection and balconies was studied in detail.

A year later the plans for construction at Marieviks Udde had been revised. JM AB then commissioned SMHI to update the wind study.

CFD (Computational Fluid Dynamics) techniques were used when performing all wind studies. Buildings and local topography were taken into account and calculations were made for several wind directions. All calculations are based on wind statistics from Bromma Airport monitoring station.



The figure shows enhancement of the wind from north at 2 m above ground and above roof terrace, about the planned buildings at Marieviks Udde.

Delivered service: Wind comfort studies for new buildings at Marieviks Udde, Liljeholmen, Stockholm.

Time period for the project: December 2015 - June 2017

Customer: JM AB

Responsible project leader: Magnus Asp, SMHI

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