Architechnology
A workshop within the course AFO 106 - Space and technology

ROUGH WEATHER

An attempt at utilizing extreme wind conditions around high-rise buildings
A revolving megastructure in the Malmö harbor area
A zero-energy office and residential building

When erecting a highrise building you affect the local environment in many ways. One of the results of a new tall building is increased turbulence and changes in how the wind blows. This is often seen as a problem, affecting the people moving about outside the building. **Rough weather** is no solution to that specific problem but an attempt to make the increased turbulence result in something positive as well.


Sailing boats

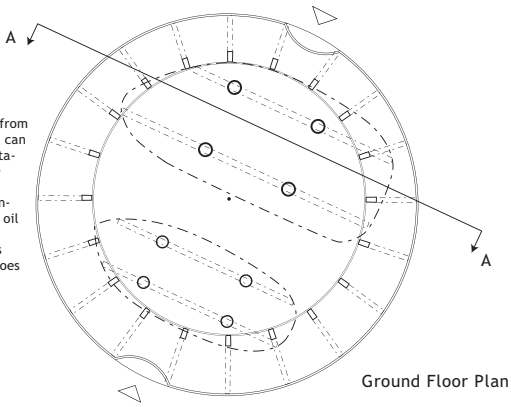

Revolving bridges


Wind turbines

Site plan 1:2000

All drawings are 1:500 if nothing else is noted.

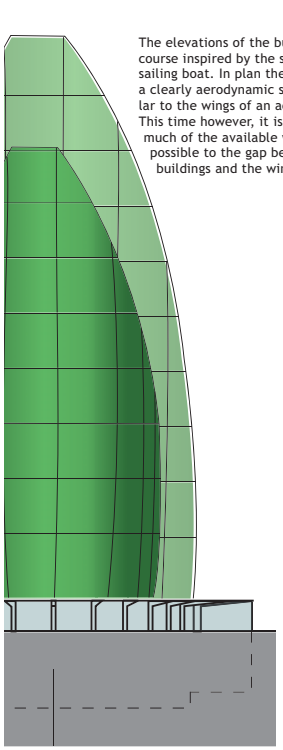

Photo from the point marked 'X' in the site plan.

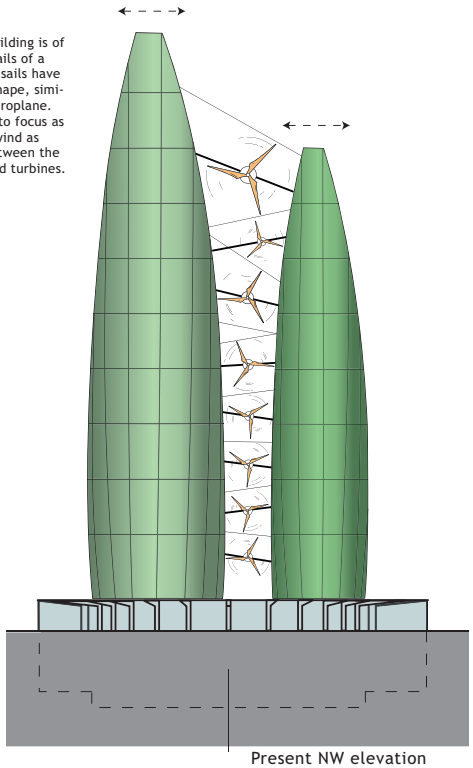


Ground Floor Plan

Since the wind does not always come from the same direction the whole building can revolve around its center axis. The rotation is handled by a massive turntable located underneath the ground floor. Here the building is placed on the turntable and via a thin layer of hydraulic oil it can be rotated almost without any friction at all. At ground level there is also a surrounding glass foyer which does not rotate.

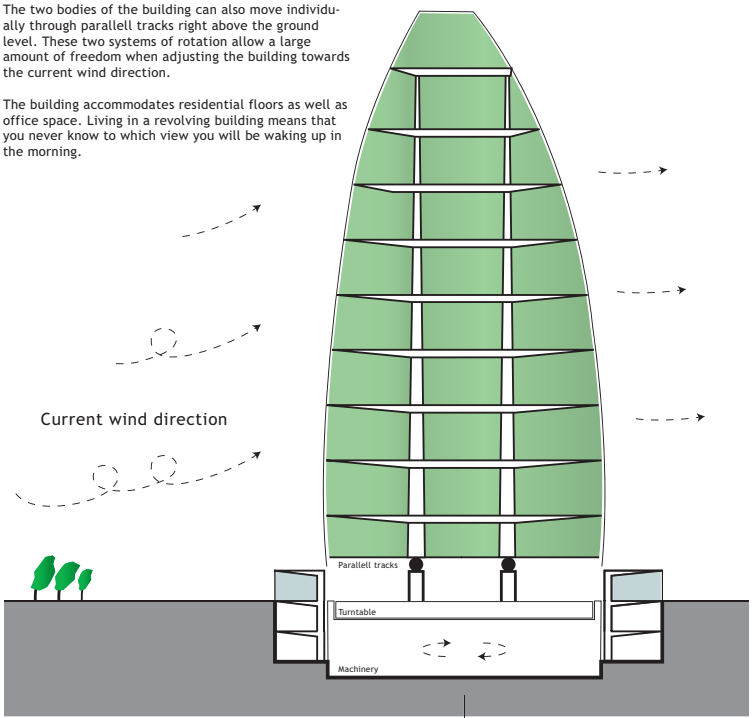
The elevations of the building is of course inspired by the sails of a sailing boat. In plan the sails have a clearly aerodynamic shape, similar to the wings of an aeroplane. This time however, it is to focus as much of the available wind as possible to the gap between the buildings and the wind turbines.


Present SW elevation

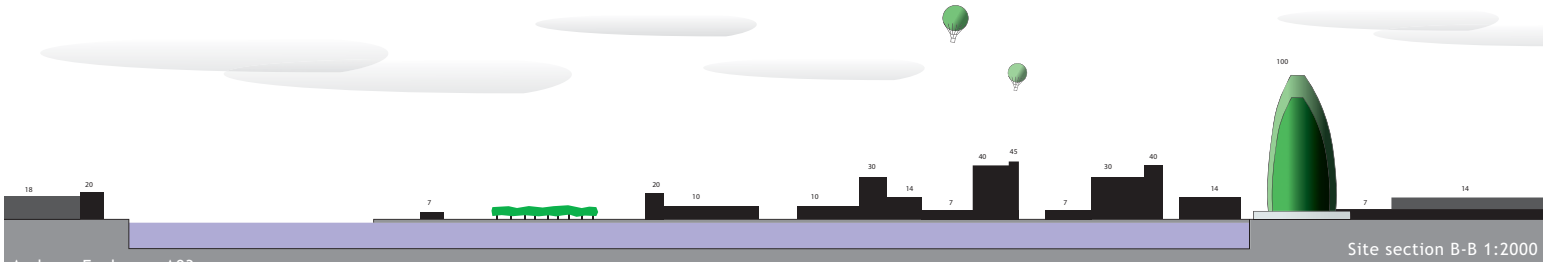

Present NW elevation

The two bodies of the building can also move individually through parallell tracks right above the ground level. These two systems of rotation allow a large amount of freedom when adjusting the building towards the current wind direction.

The building accommodates residential floors as well as office space. Living in a revolving building means that you never know to which view you will be waking up in the morning.



Section A-A



Site section B-B 1:2000
(With approx. building heights)

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