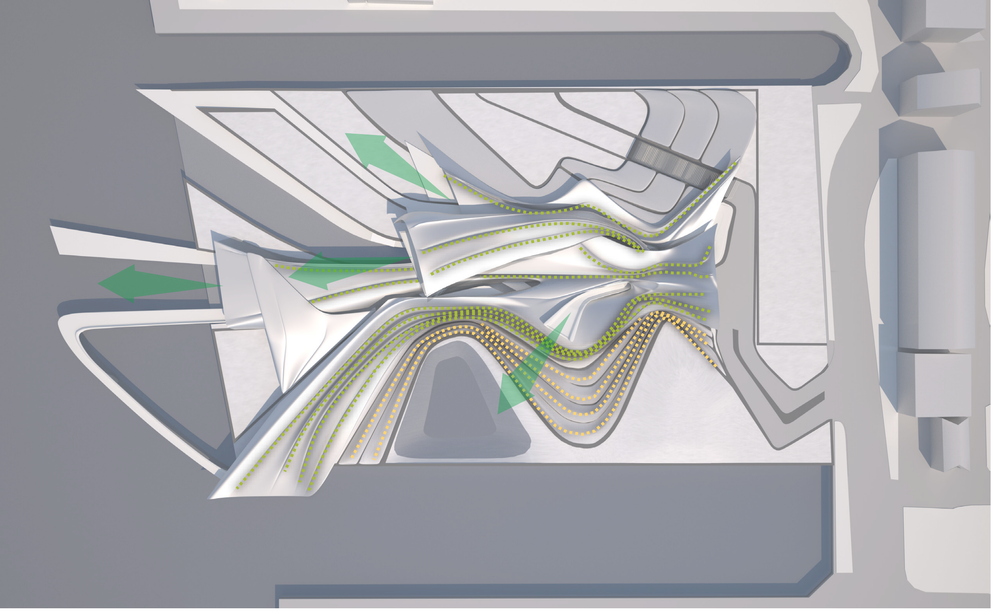

tag **ROOF**

ALGAE

STRUVITE

Using algae to cover the roof at parts in turn boosts biofuel production. Sealed containers of photo bioreactors integrated into the roof will help produce biofuels and sequester carbon. As the algae grows it absorbs C02 from surrounding air which can then be stored. Using an integrated based photo bioreactor on a building can play an enormous role in absorbing carbon. The photo bioreactors are transparent containers containing algae which remove carbon dioxide from the air by using incoming sunlight and conducting photosynthesis, absorbing carbon and producing oxygen.

The incorporation of this technology secures further alleviation of ongoing emissions in Copenhagen.

A system of double layer complex elements and components with variable degrees of aperture and depth create different types of lighting conditions, varying by the location of the algae at any moment.

In order to maximise the solar generation capacity, the collection devices need to be arranged with optimal orientations to the changing positions of the sun throughout the day and year.

The activities of the different parts of the program are zoned according to solar and wind exposures. Spaces are further articulated with smaller scale light diffusing components to achieve a range of lighting conditions. These help activate a variety of cultural and educational programmes that are made accessible through a bridging over parts of the site that have access to the viewing platforms.

funktioner & rute **FUNCTIONS & ROUTING**

A hierarchy is developed that uses the building's volume, the landscape, and the water as parameters that define spaces. The flows and transitions these elements undergo are determined by locations and programmatic aspects.

The landscape is created by extending the park onto the façade through a system of continuous terraces, ramps, and circulation paths that merge the viewing platforms with the experience of nature and the city, integrating Refshaleøen into the urban tissue of Copenhagen.

Walkways designate a series of different programmes and there is a constant interweaving of indoor and outdoor spaces. An undulating skin mediates environmental forces through self shading and the channelling of air movement. The skin is calibrated by a combination of smooth and articulated surfaces.

overgange **TRANSITIONS**

1 **ENTRANCE**
2 **RECEPTION**
3 **RESEARCH CENTRE**
4 **OFFICES**
5 **AMFITHEATRE**
6 **CANOPY**
7 **COURTYARD**
8 **VIEWING GALLERY**
9 **RETENTION VESSELS**
10 **PARKING**
11 **WATER TAXI TERMINAL**