

TECHNICAL MANUAL

1 / Site

The site is in an industrial area in Copenhagen. Our intention is to maintain and amplify the industrial aspect of the place.

2 / Situation

What further enhances the site is this urban 's horizontality in contradiction with the verticality of the industrial elements present, such as cranes or smokestacks.

Refshaleon North East West side is in the water , surrounded and perched by water.
In this transparent and clear water there are thousands of microorganism.

3 / Objective

The main objective of our reflection is that the site can create its own energy through micro algae recovered items in natural seawater.

4 / Architecture ecosystem

The process begins with the recovery of sea water, especially composed by thousands of microorganisms to create biomass. Material from which we can extract biofuel or coal.

Several preliminary steps including those for the creation of micro algae from tube bioreactors and filtration are deployed for the creation of energy.

This table connotations which are both playful and scientific reflect the poetic image of an outdoor laboratory .

The solution naturally moves from a transparent tube to another, a crane from a crane in accordance with the mechanism and the sequence of different stages of recovery to final processing.

Each photobioreactors 8m in height and 0.6 m width is composed of a volume of 4.8 m3 or 4800 liters of sea water and 960 grams of biomass. For 1 barrel of oil green we need to create 416 tubes.

Finally, the architectural feature that we have implemented is based on the verticality that promotes rapid growth of micro algae.

Cranes, the intelligent structures are either fixed or mobile , those mobiles are used for the distribution of final result.

The vertical side of the crane enables the distribution and enchainment process while the horizontal side serves as a connection between the cranes.

