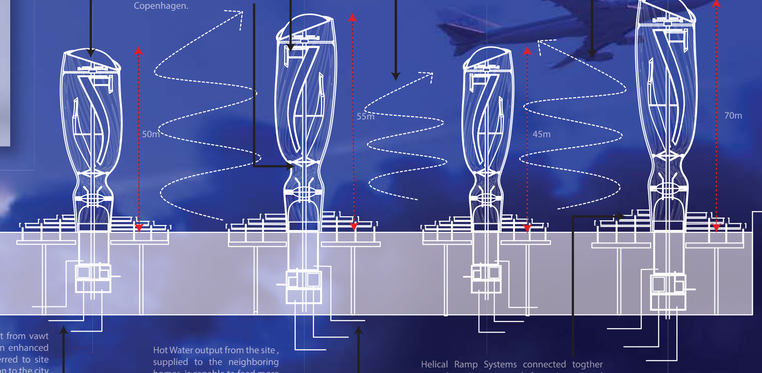
Hour Glass Concept emphasizes the quotient of timeless eternel beauty of Copenhagen

Rawlemon Spheres enhanced PV Cell Arrays, Darrieus type vawt system wind turbine & Fresnel lens equipped solar furnace , all these new technologies work togther collaboratively to produce clean energy and reduce carbon footprint in Copenhagen.

By observing the movement of schools of fish, CALTECH scientists have established that if the shape of small vertical-axis wind turbine blades resembles fish fins, when placed close to each other, they will complement each other and harness wind energy much more efficiently.vertical axis wind turbines are much more efficient when grouped together, because they do not interrupt the airflow. They are much smaller than traditional windmills. Similarly to the movement of school of fish, instead of reducingthe power coefficient, these wind turbines actually feed off each other, resulting in higher efficiency.



Green Garden terraces on site to reduce atmoshphere carbon footprint.

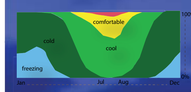
Rain water harvesting tank created to store excess water in the city. It can store 340 tonnes of exces water and the hour glass on top of it is capable of purifying water by solar desalination. The hot water thus produced can be used for home heating or to produce electricity, thanks to new photoelectric metal developed by Panasonic.

electric power output from vawt system and rawlemon enhanced pv cell arrays transferred to site substation and then on to the city electricity grid

Hot Water output from the site , supplied to the neighboring homes, is capable to feed more than 4000 homes.

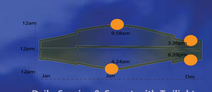
Helical Ramp Systems connected togther over the rain water tank for uninterrupted 360degree viewing of the installation for visitors.

Site Entry



Fraction of Time Spent in Various Temperature Bands

Over the course of a year, the temperature typically varies from 29°F to 71°F and is rarely below 18°F or above 78°F.



Daily Sunrise & Sunset with Twilight and Daylight Savings Time

The length of the day varies significantly over the course of the year. The shortest day is December 21 with 7:02 hours of daylight; the longest day is June 20 with 17:32 hours of daylight.

Dew Point Conditions

Over the course of a year, the dew point typically varies from 29°F (dry) to 71°F (comfortable).The time of the year between May 28 and October 6 is the most comfortable, with dew points that are neither too dry nor too muggy.

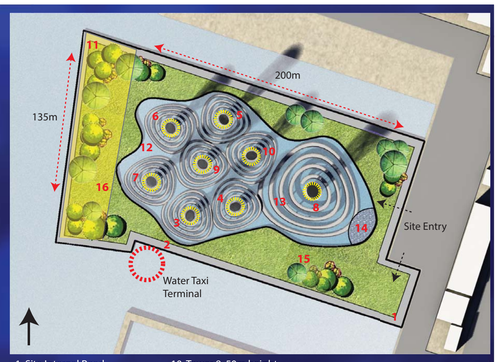
Wind Directions

Over the course of the year typical wind speeds vary from 4 mph to 21 mph (light breeze to fresh breeze), rarely exceeding 30 mph (strong breeze). The highest average wind speed of 14 mph (moderate breeze) occurs around January 3, at which time the average daily maximum wind speed is 21 mph (fresh breeze).

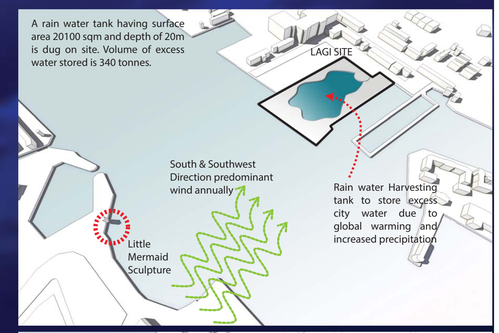
CONCEPT & BACKGROUND:
The land art project at Copenhagen gave us a novel platform to envision something which not only exudes mesmerizing radiance and beauty but, also is an efficient machine exemplifying green strategies with renewable energy generation procedures to the city and public. We take this opportunity to leverage the design to create new direction image for the future of Copenhagen. History of Copenhagen has shown how it has successfully fought the test of time over years of its development. In recent years, Copenhagen has adapted significant carbon neutral and green urban measures to be carbon free city by 2050. All of these initiatives symbolizes how the future of Copenhagen is already green and ecologically efficient, which leads us to delineate the beautiful city of Copenhagen as a timeless piece of artifact. It surely is poised to take on all ecological challenges not only in present but also for future. Having established that, our art form is developed from this notion of timelessness which Copenhagen and its people exemplify. Our land art form is symbolic of an hourglass which has been and will be a measure of time since generations. This is the oldest artifact which has seen many histories and memories but it's still there gauging time of those who are present. Undeniably, the hourglass thoroughly symbolizes the potential of Copenhagen to be a timeless or eternal abode which will persevere forever in the greenest, natural and most resourceful way.

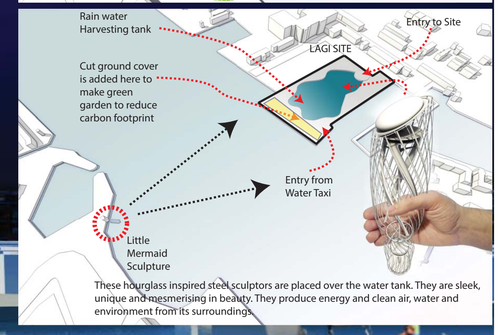
CLIMATE HAZARDS AND SOLUTIONS:
After studying Copenhagen Climate Plans and Sustainable Solutions Initiative and understanding the impending hazards that Copenhagen faces climatologically, it is established that highest priority is given to global warming and rising water levels in the city due to increased precipitation each year, storm water runoff and water coming down from glacier ice. Each year the volume of water increment is getting higher and higher and clearly the city is struggling to mitigate the causes of it. Our first strategy is to tackle this problem and so as to do the same, we dig a rain water harvesting tank which would potentially store rainwater, grey water and storm water runoff from the city. The tank we dig in the site is right at the center, inhabiting 402000 cubic meters or 340 tons of water. (Tank depth is 20m). The soil so derived after digging the site shall be utilized to create carbon mitigating green garden space all around the tank within the site boundary.
At the next step we implant the hourglass sculptural artifact into this rain water tank. The mesmerizes recycled galvanized steel masterpieces are so organized that the site houses 7 hour glasses , ranging in diameter from 8m-10m at the base and ranging in height from 40m to 60m . Along with these, there's one mega hourglass, which is the central focal point of the site, 14m in diameter at the base and 70m in height. These hourglasses are accessed by the visitor by artistically designed enigmatic helical ramps over the rain water tank, bringing in mesmerizing 360 degree viewing experiences of the installation. To aid in the sculptural quality of the form, there's ample scope to install a vertical sleek lighting element on a vertical axis wind mill installed inside the hour glass. When the windmill turns due to wind pressure, it creates a stunning kinetic lighting installation on site. It is noteworthy to mention that this is completely free of cost as no energy is needed to run it. At night with the reflection from water and from the highly polished sheen of the recycled galvanized steel, the composition of hourglasses in the site is inexplicable and pristine.

CURRENT SITE BEST CONDITIONS
In terms of the site advantages, we exploit the potential of excess grey and rain water available. We also exploit wind energy available which is good enough to run a compact vawt wind farm. With this design we are trying to clean environment by water desalination and reducing over 400 Tons of CO2 each month by planting over 200 indigenous trees on site. We also reduce urban waste by re using scrap metal from auto industry to make green art installation.

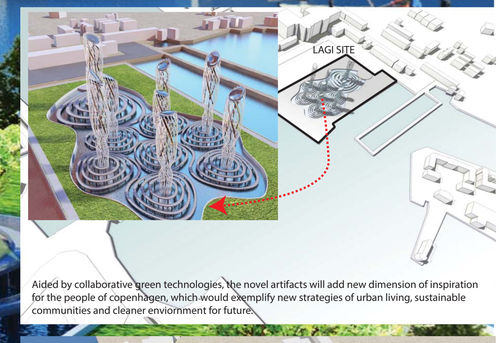


1. Site Internal Road
2. Water Taxi Exit/ Entry Point
3. Tower 1, 50m height
4. Tower 2, 45m height
5. Tower 3, 55m height
6. Tower 4, 65m height
7. Tower 5, 60m height
8. Tower 6, 70m height
9. Tower 7, 40m height
10. Tower 8, 50m height
11. Internal Green Garden and View Terraces
12. Internal Water Harvesting Tank from grey water and rain water collection.
13. Helical Pathway for Visitors to see the sculptural art from safe distance.
14. Entry Point into the Water tank Helical pathway.
15. Green Vegetation for Algae growth accounting for Artificial Photosynthesis.
16. Additional land filling from internal site cutting from the water tank.





These hourglass inspired steel sculptors are placed over the water tank. They are sleek, unique and mesmerising in beauty. They produce energy and clean air, water and environment from its surroundings.



Aided by collaborative green technologies, the novel artifacts will add new dimension of inspiration for the people of copenhagen, which would exemplify new strategies of urban living, sustainable communities and cleaner enviornment for future.

Hour Glass

timeless beauty for timeless COPENHAGEN