**PAVILION 66**

On approach, walking along the beach, one sees slanted timber structures protruding from the water. It seems as if these structures are remnants of a structure once built. You notice something at the base of these structures, a walkway or platform. At the terminating point of the pier, you notice an entrance to **Pavilion 66** behind the Ferris wheel.

Moving through the gateway you immediately feel transported into another world. The sounds from the pier are dampened as you follow the walkway closer to the structures. You notice there are public space at the base of these follies: swimming pools and covered seated spaces...another public realm of the sea.

Beside the pool, a glint in the water: parabolic solar mirror structures nestled underwater adjacent to the walkways. This is where solar energy is collected. The collectors use very salty water as a heat transfer fluid, which then creates salt brine at the base. The excess salt is pumped towards the salt harvesting nodes or in this case evaporation pools. Water from the brine is evaporated to create mounds of salt. This salt is used in craftsman stalls, where cooking salt and bath salts are crafted by a salt artisan: a closed entropy, no part ever goes to waste. Salt scrub rooms are available for those who feel the need to relax with a beautiful view. Some of the salt is also added back into the parabolic structures, in order to achieve the correct concentration of salt.

The structure, reminiscent of an Alexander Calder mobile, uses the breakwater as a datum line from where the spaces and services are located. Circular elements become pools and origin nodes for the energy process. Lines become walkways – terminating in pools or look out spaces.

There are multiple nodes along the walkway. Moving from a large public space to smaller spaces. Each node provides a different view of the city, as well as views of the beautiful sunset. Route 66 receives the perfect public space. From Big Sky country to Deep Sea realm. Pavilion 66 is of the sea.

At night, the timber structures emit light, reflected in the ocean. You can relax on the beach and gaze at these intriguing structures for hours, lost in your thoughts, hypnotized by these simple elements. The light from the walkway draws attention to the fact that it was designed to imitate the most iconic landmark of Santa Monica, the Pier. These lights symbolise the energy that is generated from the installation.

The concept of countered entropy is evident in this design. It provides renewable energy to Santa Monica – stuck in a state of entropy burning fossil fuels. The land art is designed to be non-obtrusive, to celebrate nature and to retain the historical significance of the Pier, and its importance as the most iconic landmark of Santa Monica. Pavilion 66 does not try to compete with the Pier in any way, which renders it as a very sensitive solution to renewable energy as land art. It celebrates nature and generate power in a subtle way. Pavilion 66 is in essence an extension of the Pier, and becomes an extension of the famous Route 66.

Santa Monica could be explained by 8 neighbourhoods or attractions, all with their own personality and intrigue. Pavilion 66 could definitely be the 9th attraction, completely different from the others, with its own personality. It creates public spaces of relaxation, creating an escape from the hustle and bustle of the vibrant city.

MATERIALS:

The structure mainly comprises hardwood timber and safety nets. The timber elements will be visible, whereas the safety nets will mostly be underwater. The choice of materials is based on the Pier, in order to introduce a historical reference to the structure.

Timber creates a light weight, beach-like feeling to the structure.

TECHNOLOGY:

This design uses a hybrid system between the concentrated thermal solar system and salt gradient pool. Highly reflective mirror surfaces in a parabolic trough form, placed in a closed system will utilize the excessive salt water as a heat transfer fluid (salt will be added to start the system). The salt water will create brine, which is pumped to the public pools. The brine is cooled off, utilizing the geothermal pond effect. The coiled pipes are fixed to the walkways and the ambient temperature will cool the brine and make it usable in a public pool (the pool will be hotter than the ocean). The excess brine could be harvested and returned to salt after the water evaporated. The salt in the pools could be used as body scrubs. Some of the evaporated brine, which returns to salt, will be added to the solar collector system again. This forms a closed system. There is no need for any additional salt or electricity once the system is started.

It is estimated that the salt water could reach a temperature of 150 - 300 °C, this hot water is pumped to a pipe system, which runs a turbine generator. The generator converts the heat energy to electrical power. The power is stored and connected back to the grid. A small amount of the energy is used to power the pump system and evening lights of the structure. This design could roughly produce 750MW per annum with an overall solar collection area of 18175 m².

**ENVIRONMENTAL IMPACT STATEMENT**

A similar structure to the Pier is used. The structural columns will be installed into the breakwater wherever possible as well as into the seabed: causing as little disruption to the marine life as possible, when they are installed, but thereafter plants and fish can move freely between the columns. The movement of water is not restricted.

This design does not contain any moving structures that could potentially harm marine life or birds. The insertion of people in this environment might possibly have a negative effect, if they litter. It is trusted upon the people of Santa Monica to respect nature.

This public space adds to the cultural and social environment already established in Santa Monica. It creates a different, but exciting public space, where people can enjoy the sea water and learn about the value of salt. This renewable energy program has low start up and maintenance costs.