

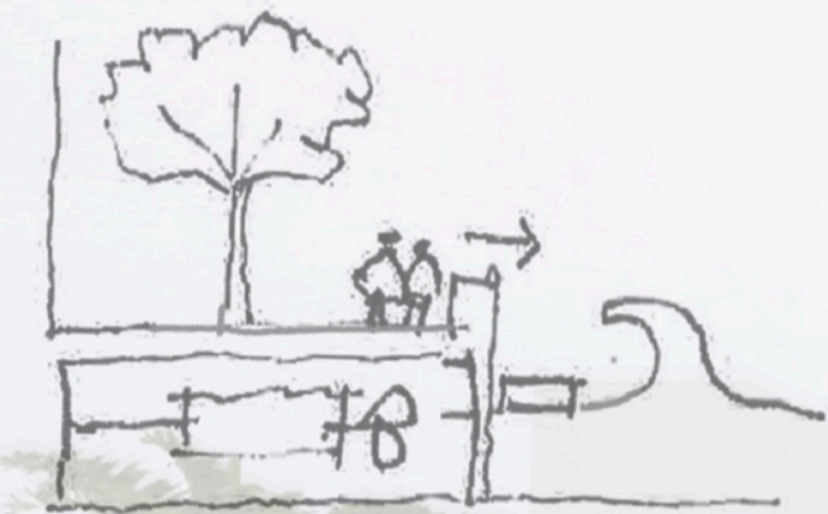
SOLAR TOWERS

The five solar towers sited opposite the heliostat forest high temperature receiver equipment at the upper level. While this zone is clearly off limits to the public, lower levels can safely be accessed via internal stairs to get an elevated perspective of the activity below.

Made from pre-cast elements for simplicity and efficiency of construction, they are industrial-looking but sculptural at the same time. Formed as a series of extruded ribs, spiralling upward, each rib is interspaced with openings and planting.

WAVE POWER GENERATION

Once waves have been produced, a significant amount of energy (in the form of return water flow under the boardwalk) is generally lost in similar wave producing sites. In this case a series of simple weirs and low head hydro-turbine devices are proposed to 'reclaim' some of this energy back to the system. Visible through openings in the boardwalk, this could be an engaging, demonstration of natural energy transformation for visitors to the site.



WAVE GENERATION

ENVIRONMENTAL IMPACT STATEMENT

For this proposal, natural power generation in the form of (CSP) solar towers and low head hydro generation will produce clean energy with zero emissions. Embodied energy in construction is minimised by using long lasting, recycled or reclaimed, robust materials where possible. Concrete elements will use Fly ash cement (a silica-based waste-product of coal burning power stations) instead of regular cement.

Given the scale of proposed development in the general area, earth spoil from excavation of the site will likely be utilised on neighbouring sites thus minimising waste. The lagoon will be supplied from existing groundwater; filtered but without need for desalination.

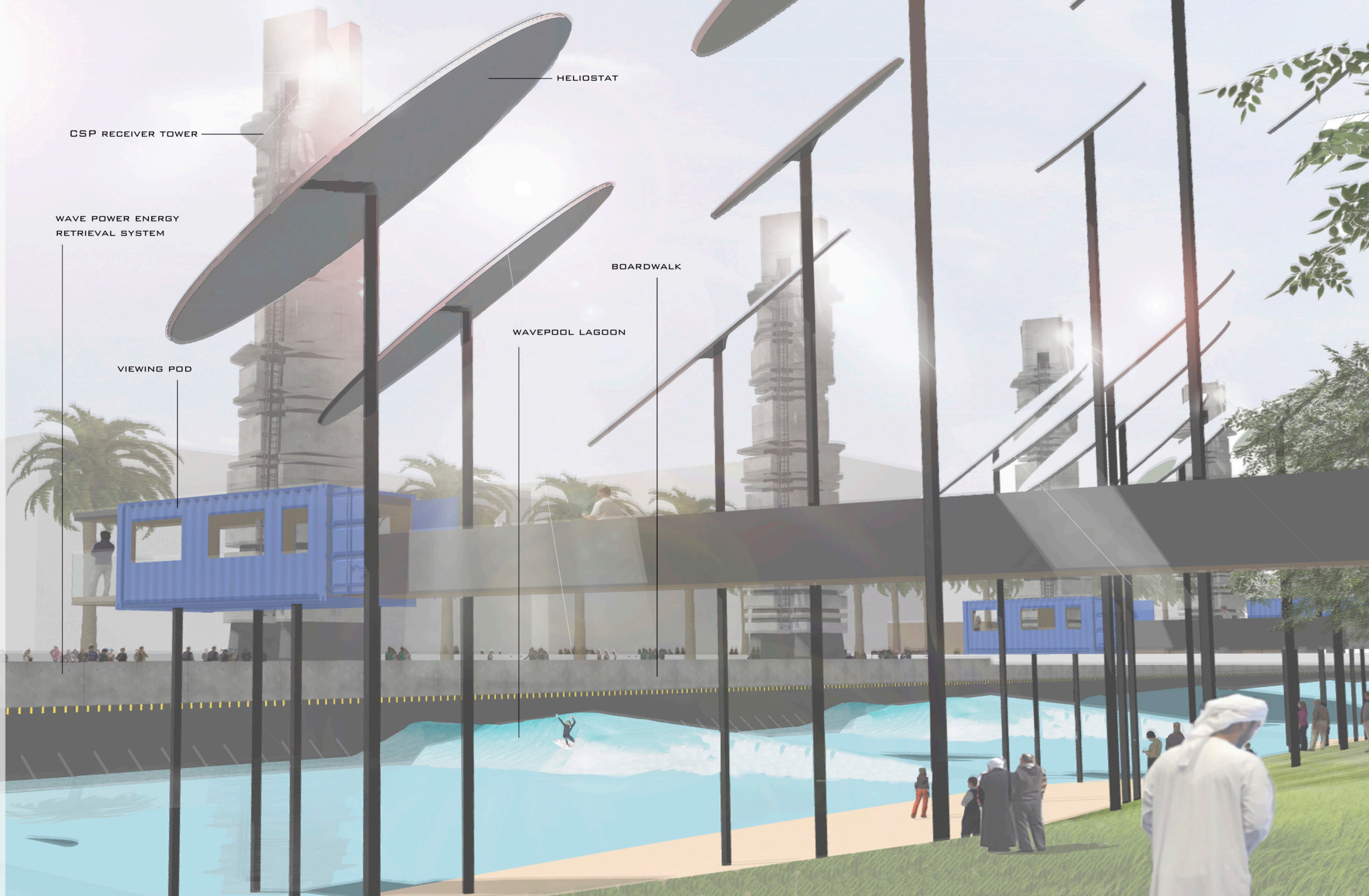
Wildlife would be encouraged to share use of the site as much as possible, however bird casualties around towers have been an issue raised amongst existing CSP solar tower plants in the past. In order to reduce this problem autonomous bird-detering drones could be used around the immediate receiver area.

Tower heights of 40m are somewhat higher than surrounding buildings which means potential issues of glare from receivers is minimised. Receivers are also baffled to the south so light from the towers would only be visible from the lagoon side of the site during daylight hours and well above eye-level.

Consistent with the site zoning "Park and open spaces" HELIO-SURF-FOREST provides a focal point to a spine of adjacent green space linked and accessible from all directions. Shaded lawn, trees, beach, water and boardwalks invite multiple recreational uses and embraces the public realm.



VIEWS

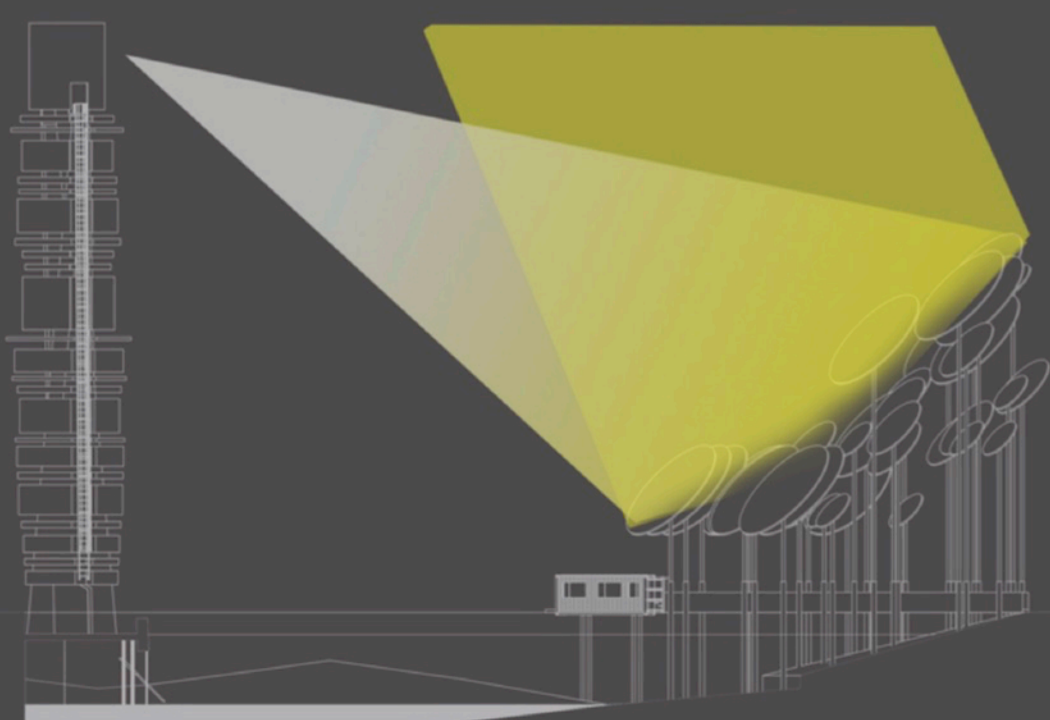


HELIOSTAT
CSP RECEIVER TOWER
WAVE POWER ENERGY RETRIEVAL SYSTEM

VIEWING POD

BOARDWALK

WAVEPOOL LAGOON



SUN
HEAT STORE
DAY & NIGHT
SURF LIGHT

ENERGY GENERATE
POWER DRIVE

