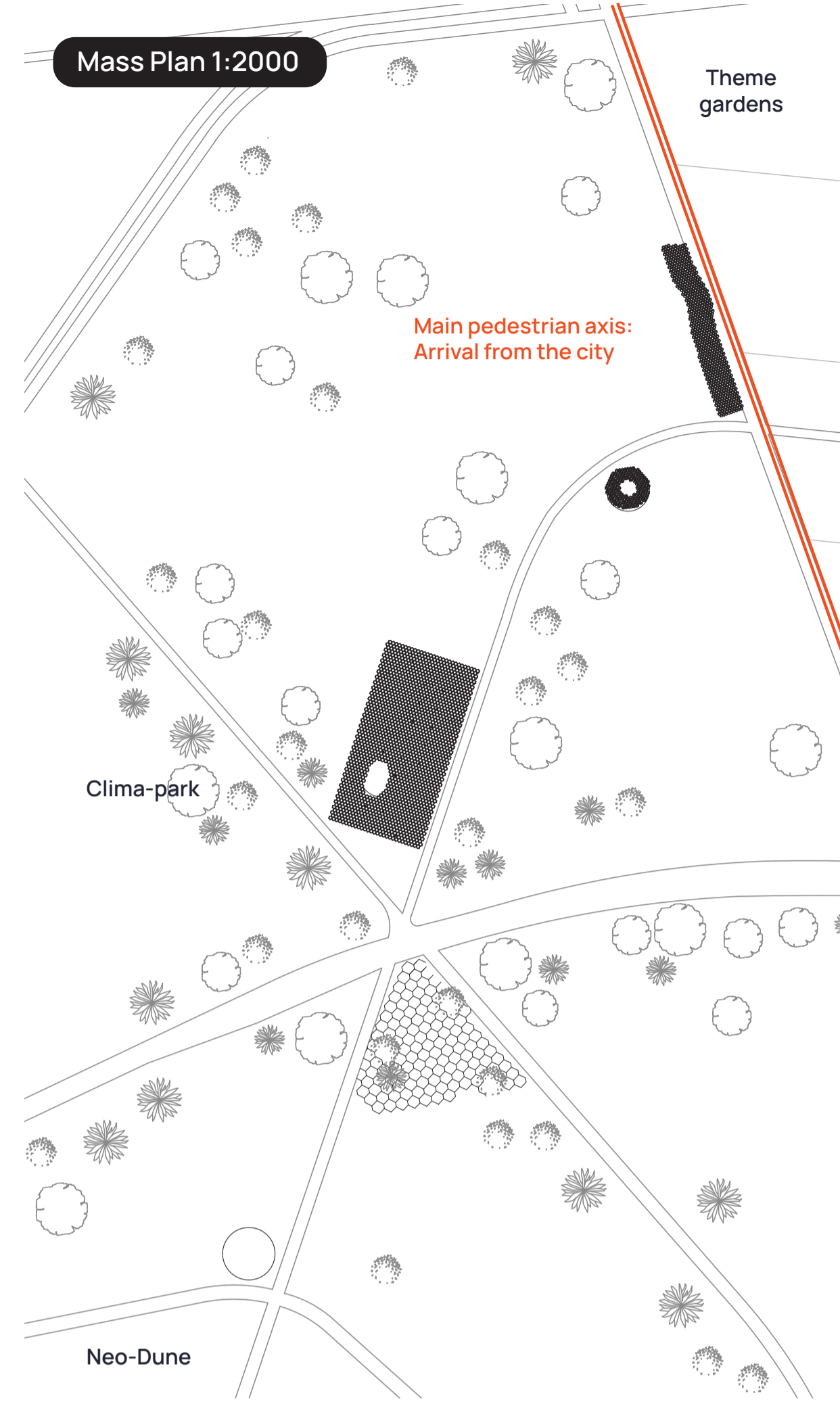
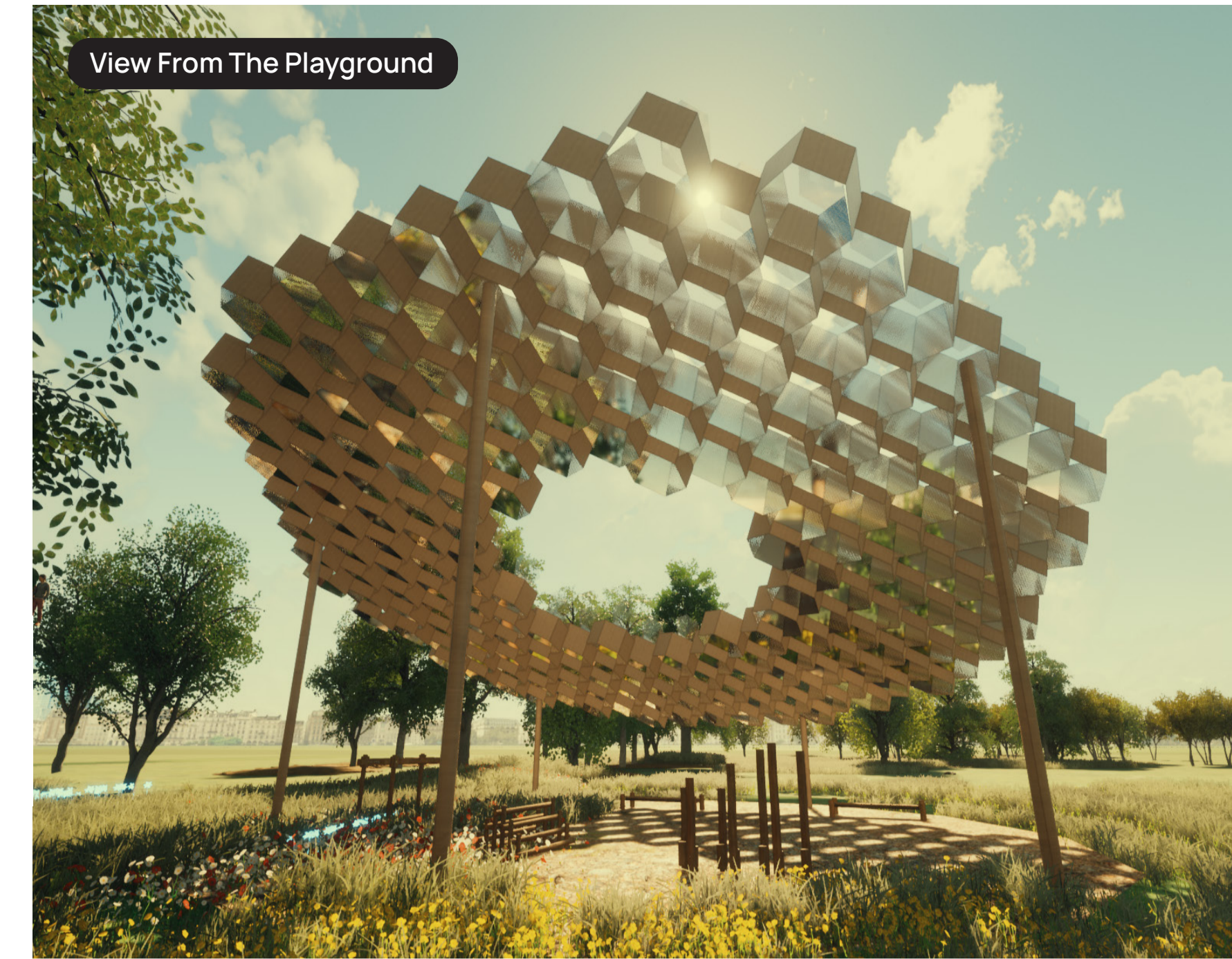




Exterior View of The Main Pavilion



Mass Plan 1:2000



View From The Playground

Kaleidoscopic Dune

LAGI 2022 Mannheim / Conceiving a modular system harnessing sun energy

The Spinelli barracks once used by the German Wehrmacht as a pioneer barracks and by the US army as a warehouse is to be dismantled and connect them to a continuous green corridor, which would improve the micro climate and supply fresh air in the surrounding districts in the long run. The aim of our design is to apply the principles of modularity, scalability with a focus on the renewable energy generation and sustainable sourcing of materials. Also, the design was based on the idea of reassembly so that it can be reassembled elsewhere without the need to be fabricated.

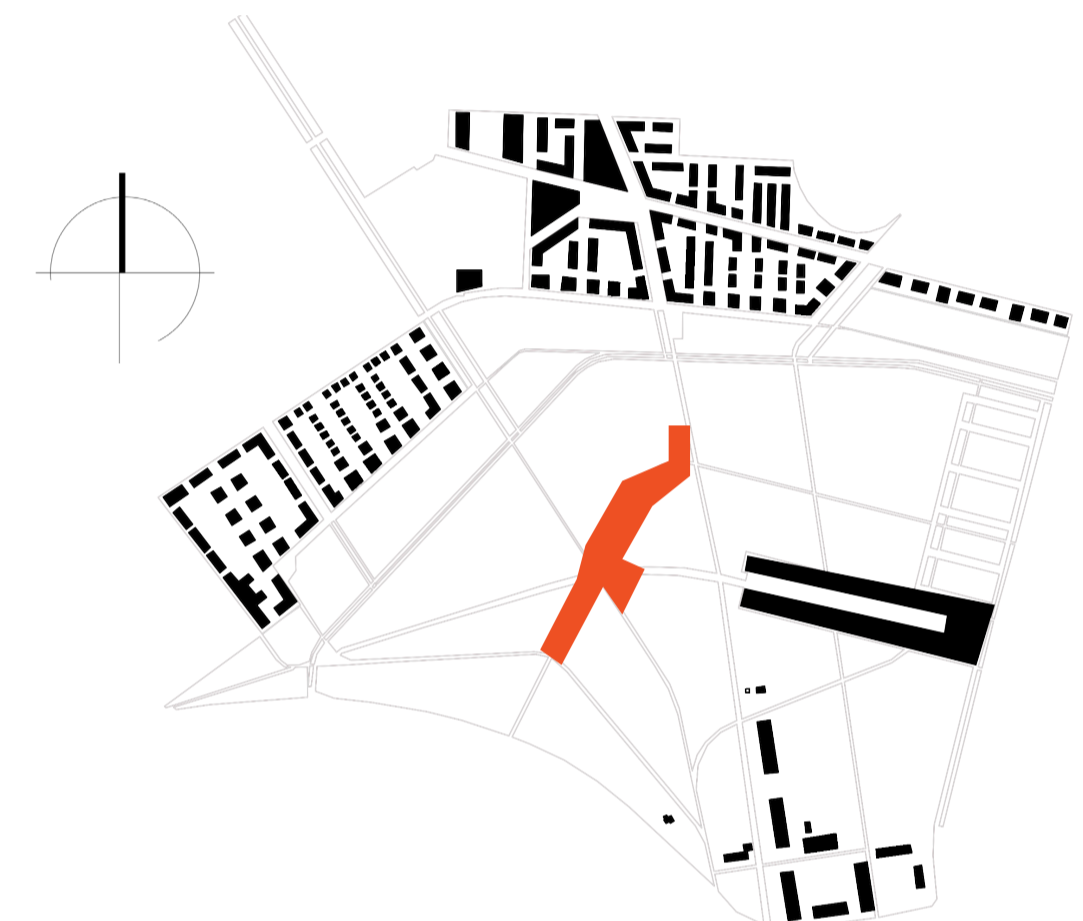
Our design was inspired by light and it is evident in the choice of our renewable energy technology, the inclusion of kaleidoscope and bioluminescent plants. A concentrating solar collector was chosen as it can give more energy output for the same photovoltaic cell area. The energy generated by the photovoltaic cells

will be used to power the pavilion and its equipments namely, light for the concert area, cell phone charging points, musical instruments, electric vehicle charging points. The remaining energy is then sent through the grid to be used by the city of Mannheim.

A Kaleidoscope is equipped to the wooden construction so that it gives a unique visual effect. Our design takes into consideration the location, locality, site history, future expectations so that a holistic solution can be proposed. Therefore, with the mission to inspire the community about renewable energy technologies, we propose this design with the technological inclusions. The yearly AC power output for our main structure is about 84.88 MWh.

In terms as of planning, the flexibility of our structure allows us to cater to the needs of both public and inhabitants, as the system is highly modular. We chose to focus our intervention on an axis that will be probably very used, as it deviate from the main pedestrian axis, linking the «Theme gardens» and «Neo-Dune»

We concentrate the more public functions: Concert/ exhibition / Event / Light Experimentation, as well as sitting areas / garden, at the center of the site, at the crossroad of all the directions. We dedicated smaller, more intimate area for the inhabitants, alongside this same road with private gardens, playground and observatory.



Intervention area:

We chose to intervene on a small area, located in the middle of the site, at the crossroad of all directions.

In addition, our project use bioluminescence plants to guide people navigate the area during the evening, linking the different pavilions. Those plants, created by a group of scientists, glow in the dark. It is originally found in insects, sea creatures, mushrooms. The light of the plants, naturally complement the lights of the kaleidoscopes.

Axonometry of the site

