

Tidal horizon

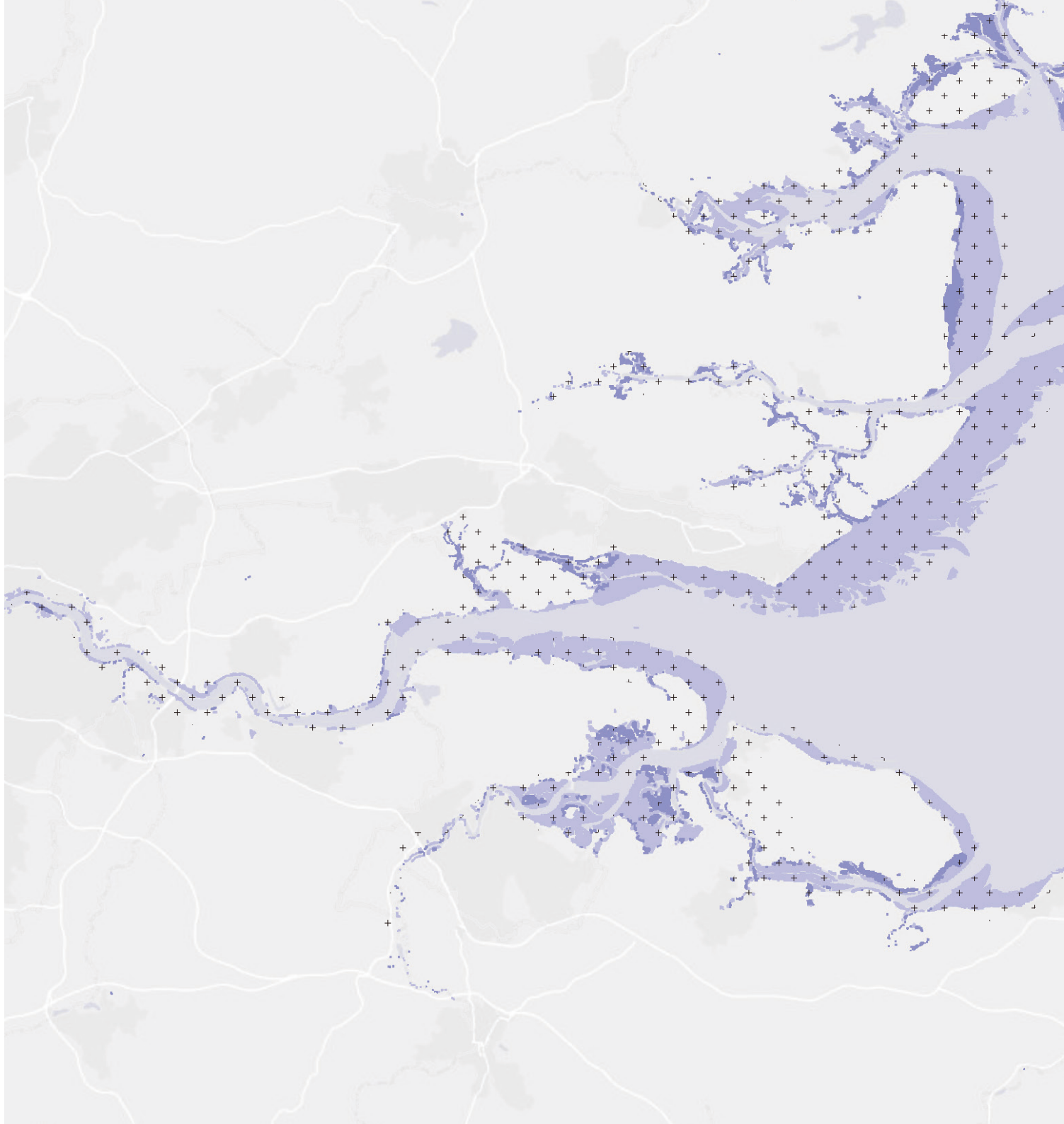
by Siyuan Liu

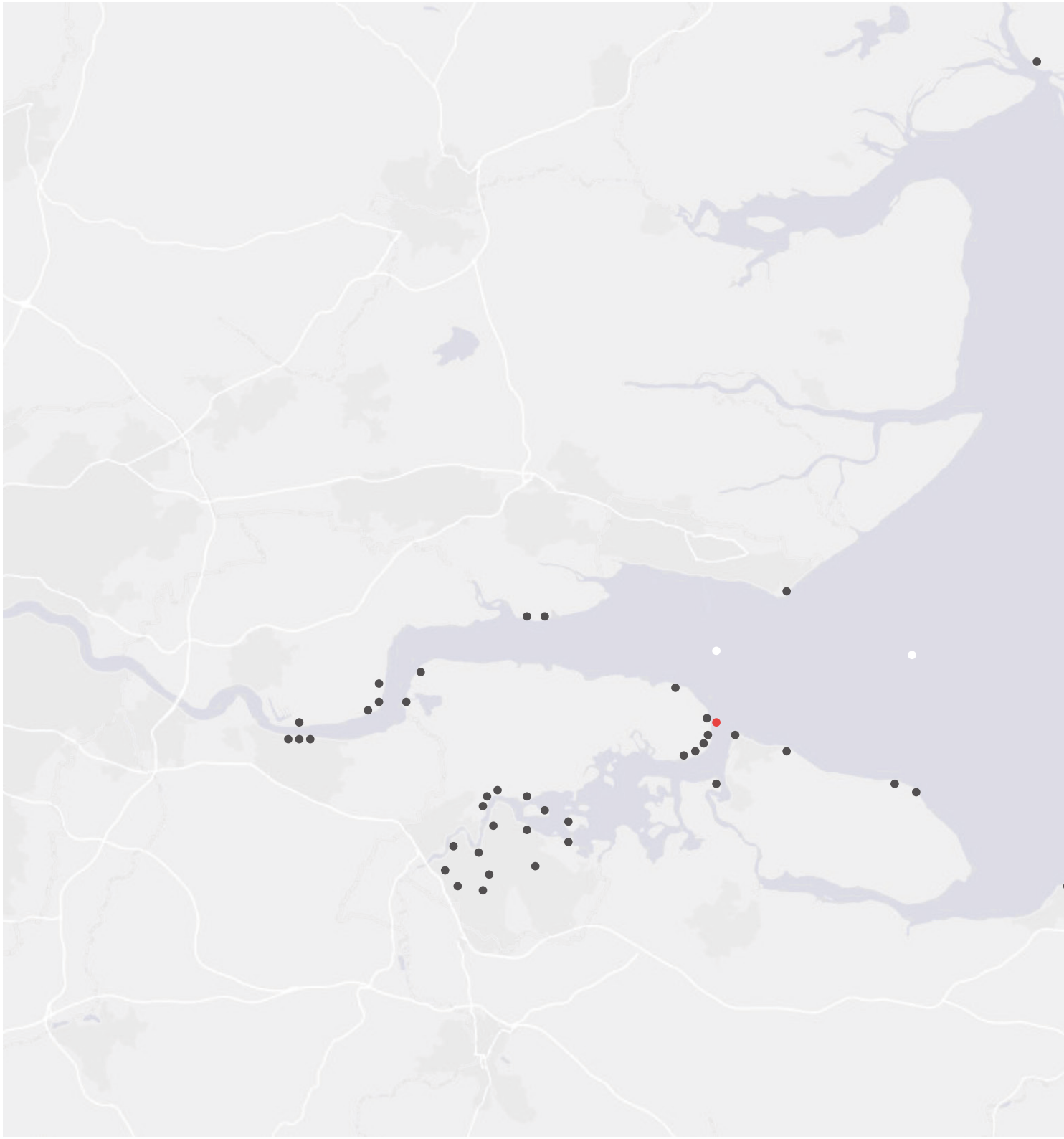


North sea



Thames Estuary



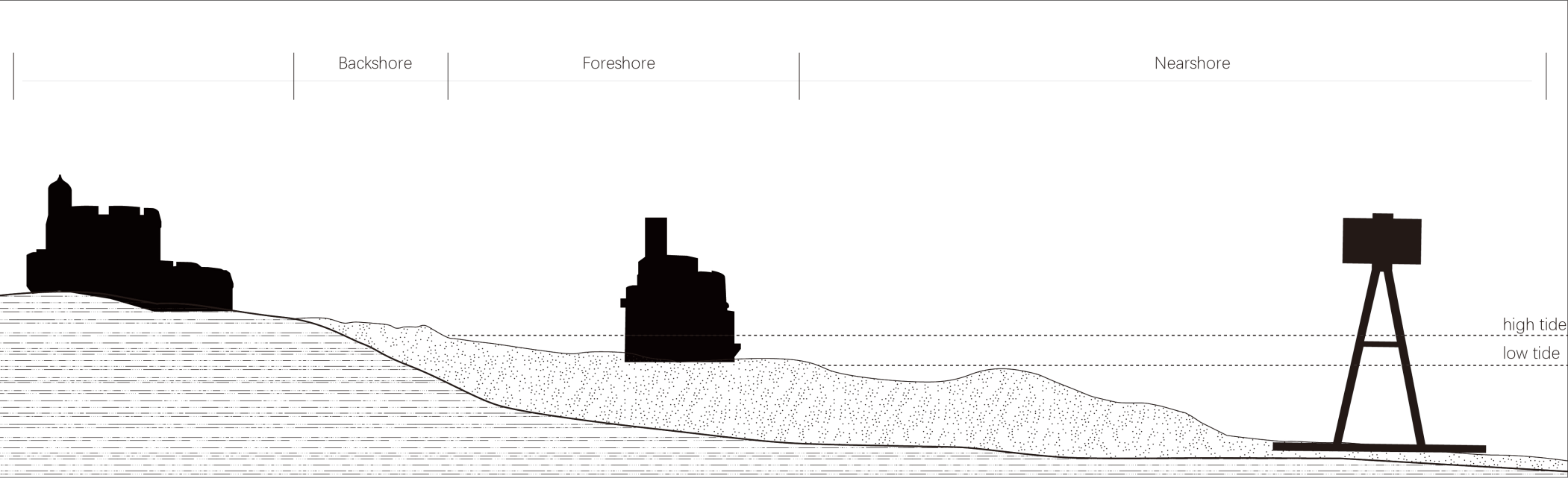


Research questions - Territorial Scale

How to emphasis the dynamic changing landscape features in the coastal area in architectural way, to rebuild the physical and psychological relationships between people and the local nature environment, to raise people's attention and thinking about the potential relationships between regional ecology and human's future life?

Sub-questions

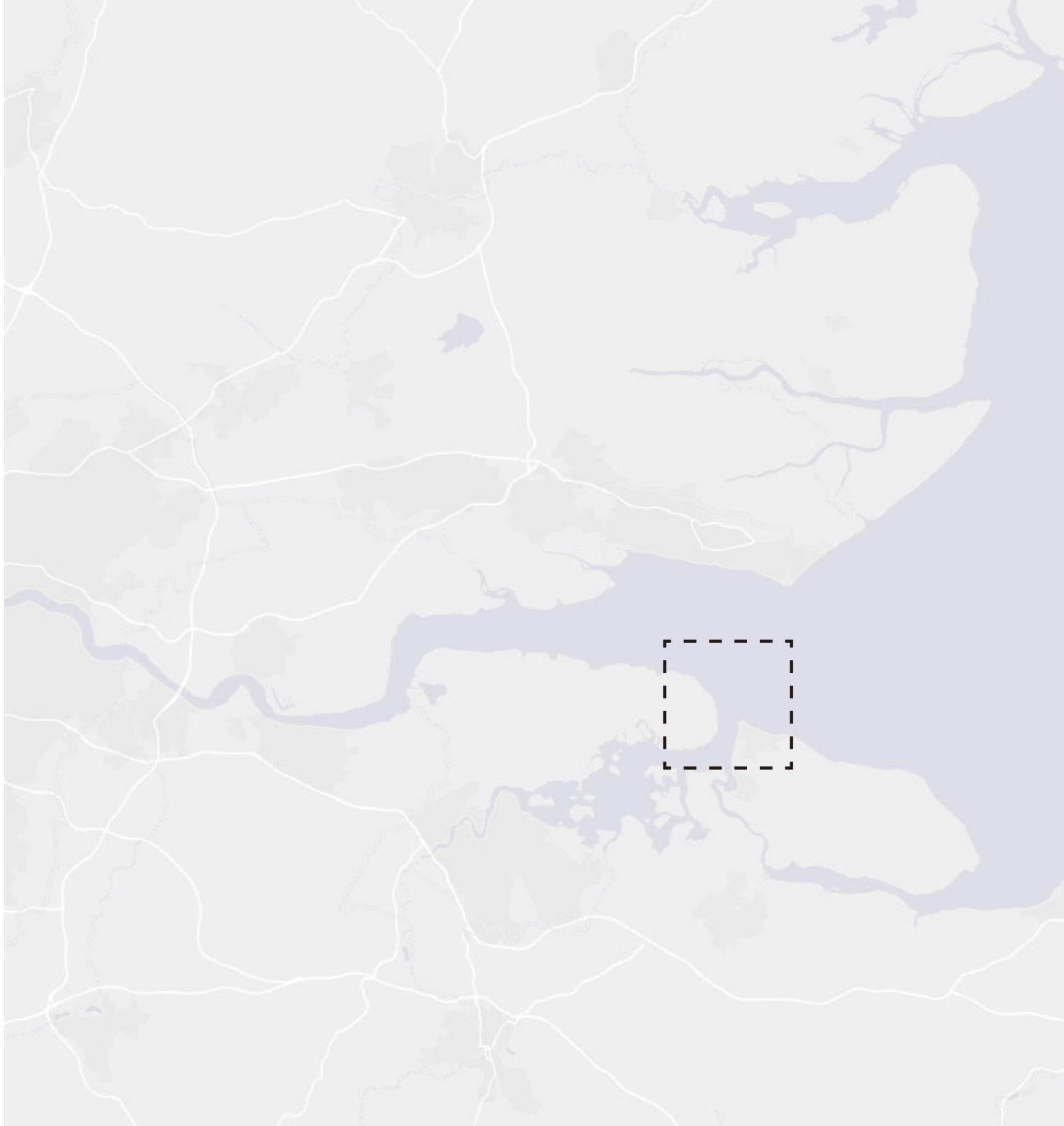
1. How to rebuild the architecture value of coastal fortification heritage in Thames estuary with a new spatial meaning?
2. Taking advantage of the exhisting regional landscape, how to reuse the architecture value of coastal fortification heritage to rise visitor's awareness of ecological regionalism ?



St. Mawes Castle

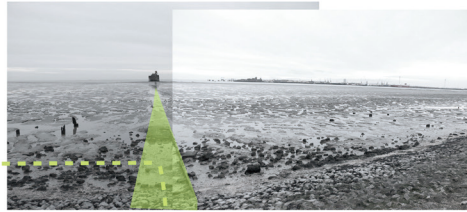
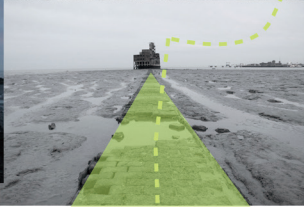
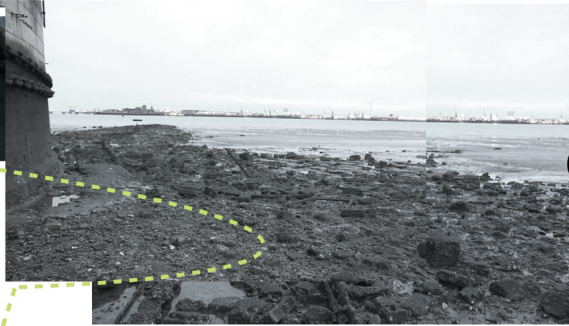
grain Tower

Red Sand Fort









17:10 PM



16:12-16:50 PM



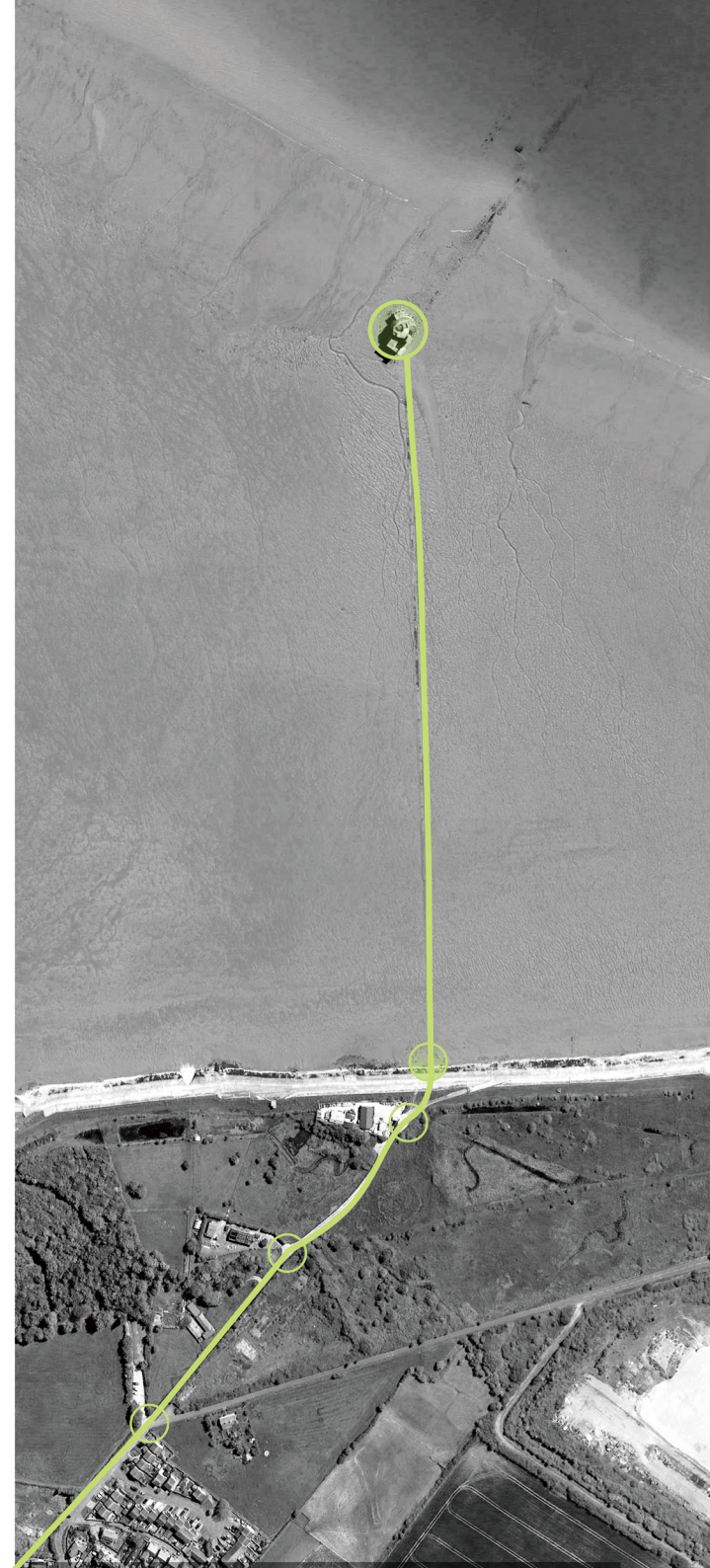
16:11 PM



16:09 PM



16:06 PM





"After endless mountains and rivers that leave doubt whether there is a path out, suddenly one encounters the shade of a willow, bright flowers and a lovely village."

----- You Lu, *Tour in Shanxi village*, Southern Song Dynasty



prologue

stage

climax

ending

aftertaste

Research questions - architecture scale

In combination with the dynamic tidal flat environment, how to realize the dynamic switching of narrative scenes by means of architecture, to stimulate visitors' thinking about the relationship between themselves(human) and regional landscape environment (the tidal mudflat and abandoned fortification architecture), to realise emphasis of the meaning of ecological regionalism?

Sub questions:

- 1 How to complete the visiting experience by borrowing the existing local landscape elements, to construct the multi-layered relationship between human and changing landscapes?
- 2 How to construct narrative scenes in the way of montage, to inspire visitors to imagine the unpresented scene to inspire people to think about the impact and role of individuals on regional landscapes?
- 3 How to reorganize the spatial experience of the Grain tower and translate the new meaning of Grain tower for human history, ecological environment, and future?



Horizon



Heritage



Tide



Horizon



Time



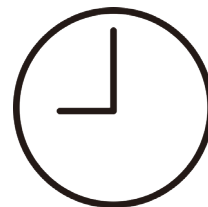
Heritage



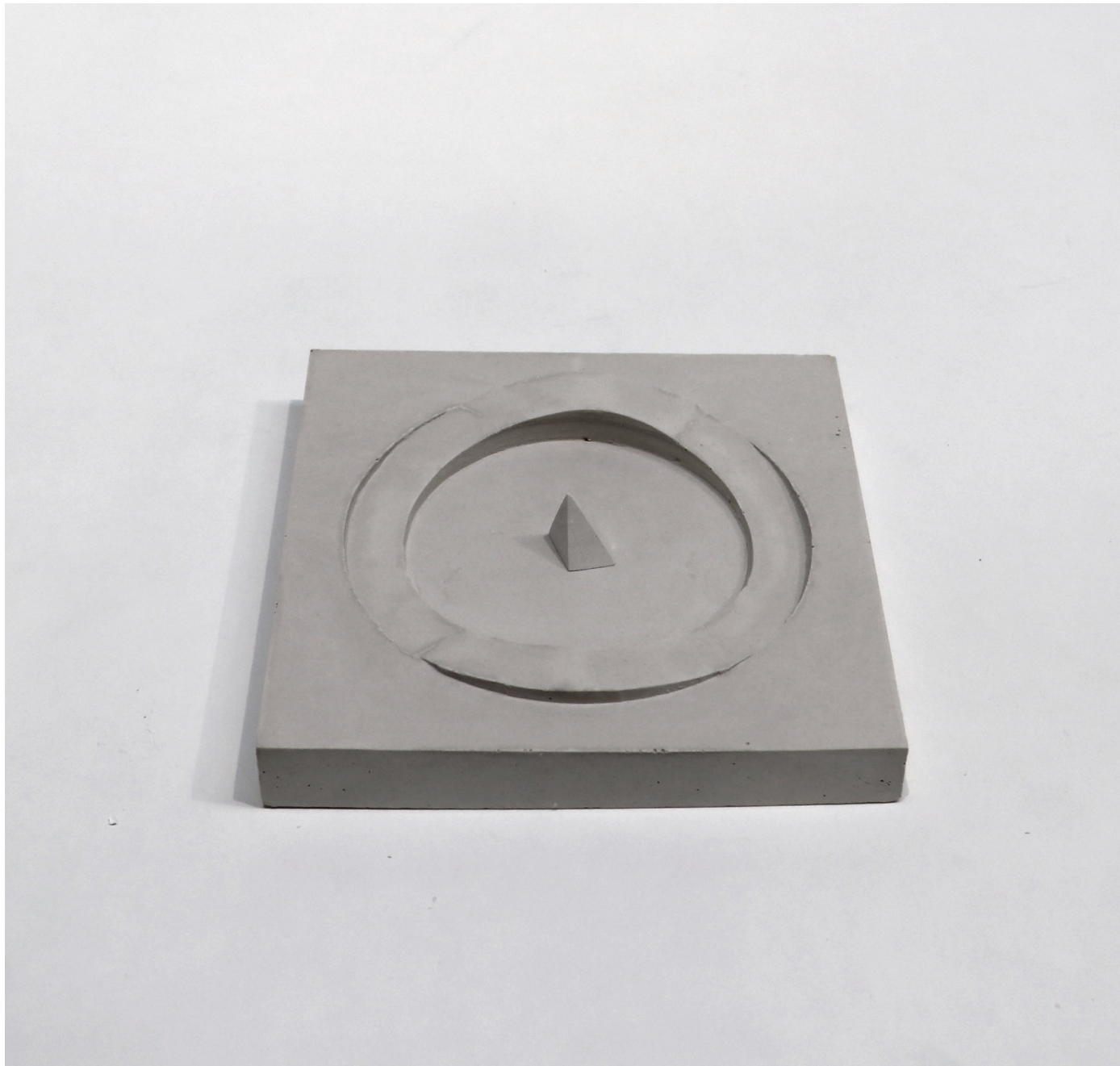
Tide



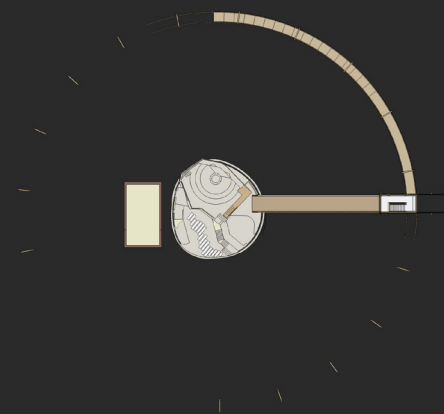
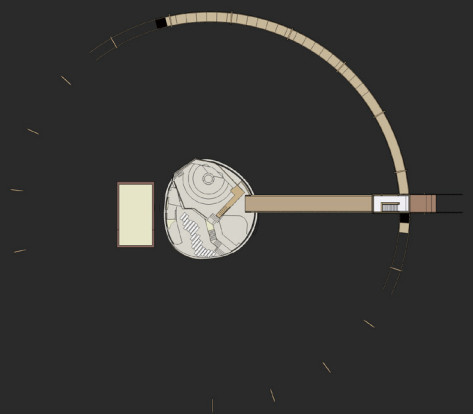
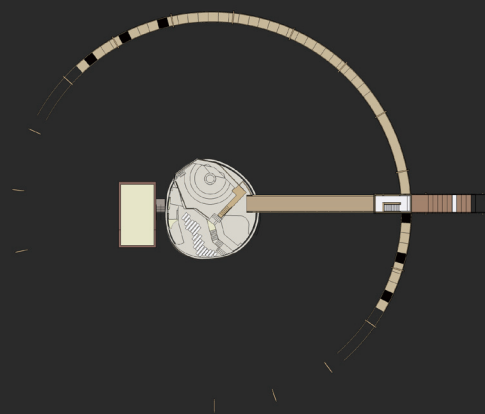
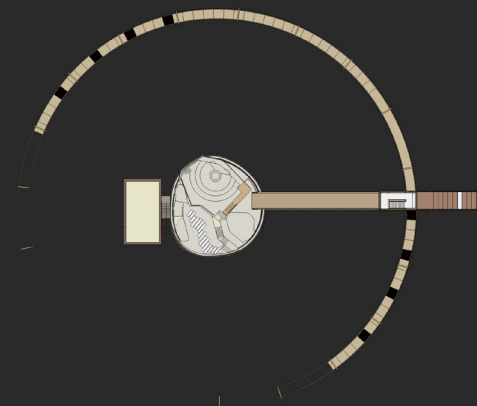
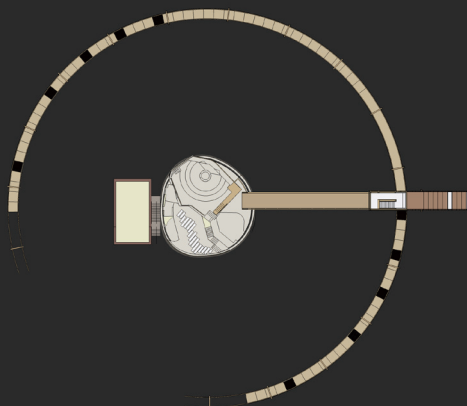
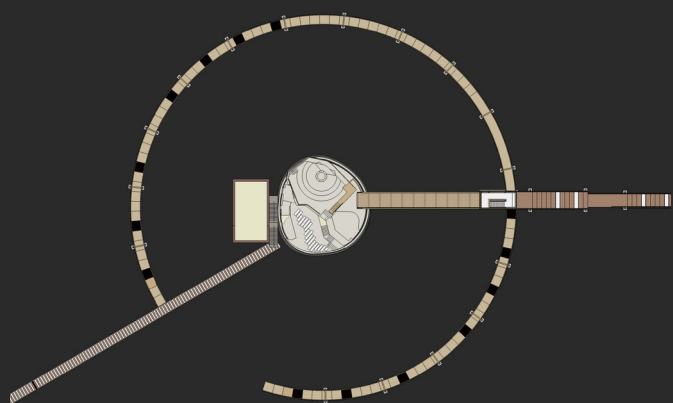
Tide

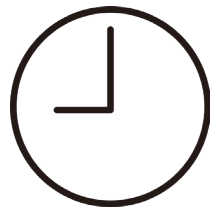


Time

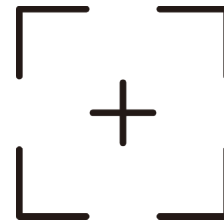


"The Tide Clock"





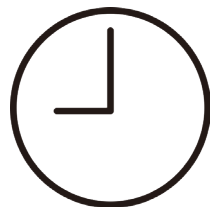
Time



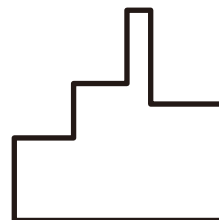
Horizon



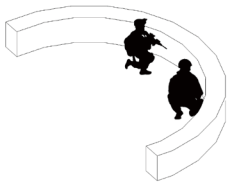
Image from: Sergei Eisenstein, sequences diagrams for Alexander Nevsky and Battleship Potëmkin.



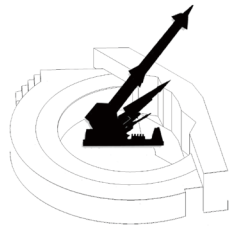
Time



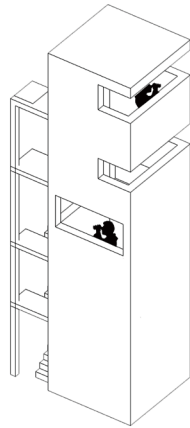
Heritage



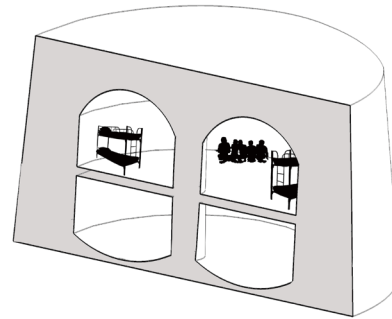
Shelter



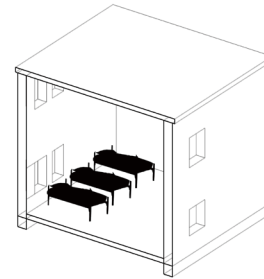
Gun floor



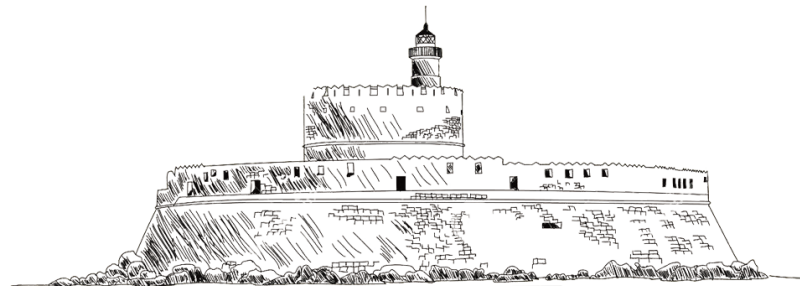
Observatory tower



Barrack&Storage



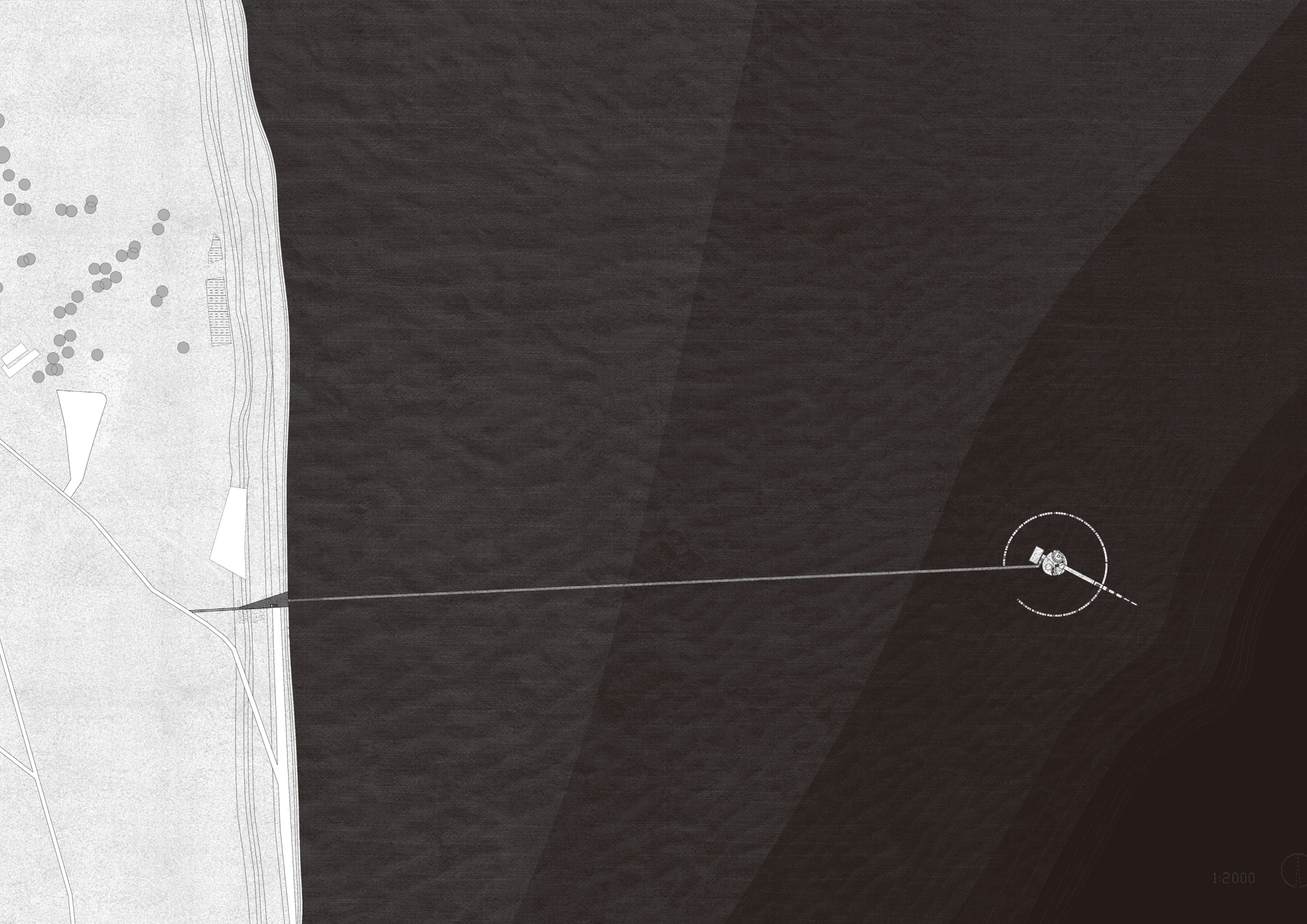
Barrack



As an abandoned fortification, the meaning of Grain tower is transforming through time, in history, the tower has worked as defence battery for nation's territory, and for today, the new meaning of the tower is translated to defence for the territory defined by the ecosystem, the tidal flat.

PART II.

Design

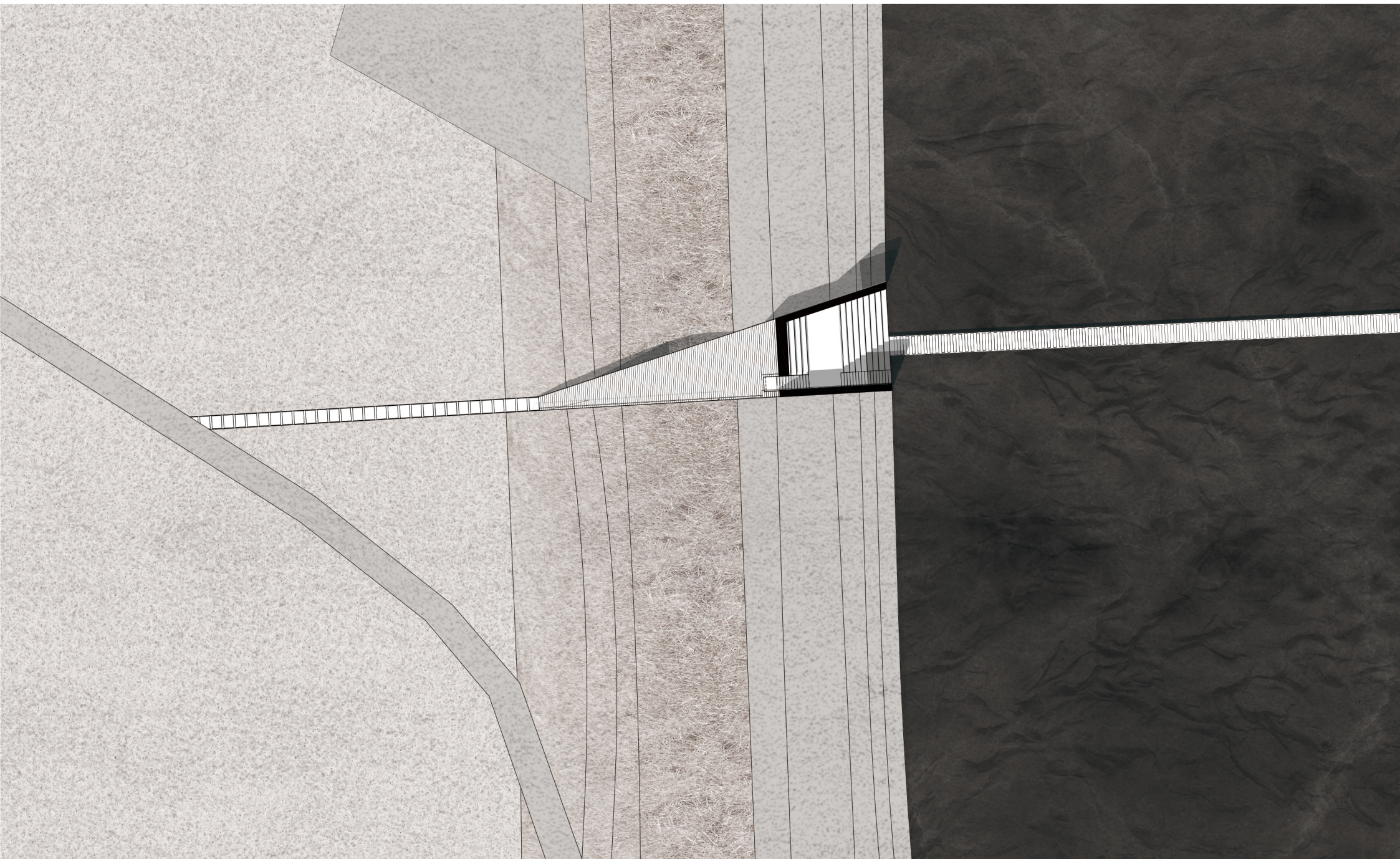


Prologue





Waiting Stage



Prologue chapter plan 1:500



Waiting Stage







Waiting Stage

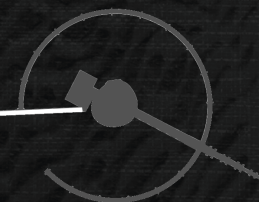


01.02.2018 - 01.03.2018



Ending ----- Starting

Causeway



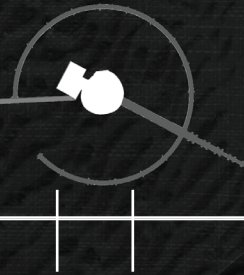


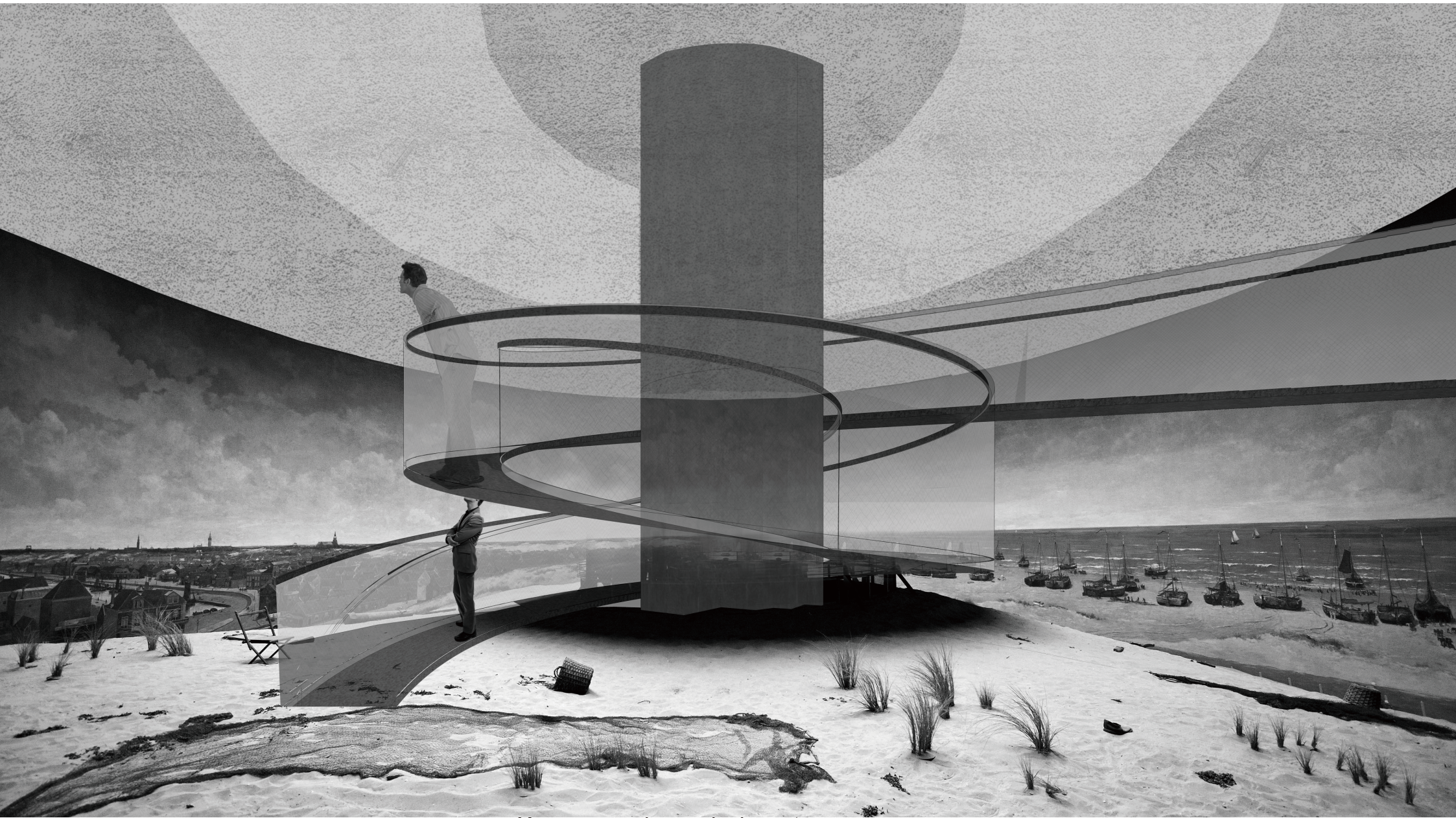




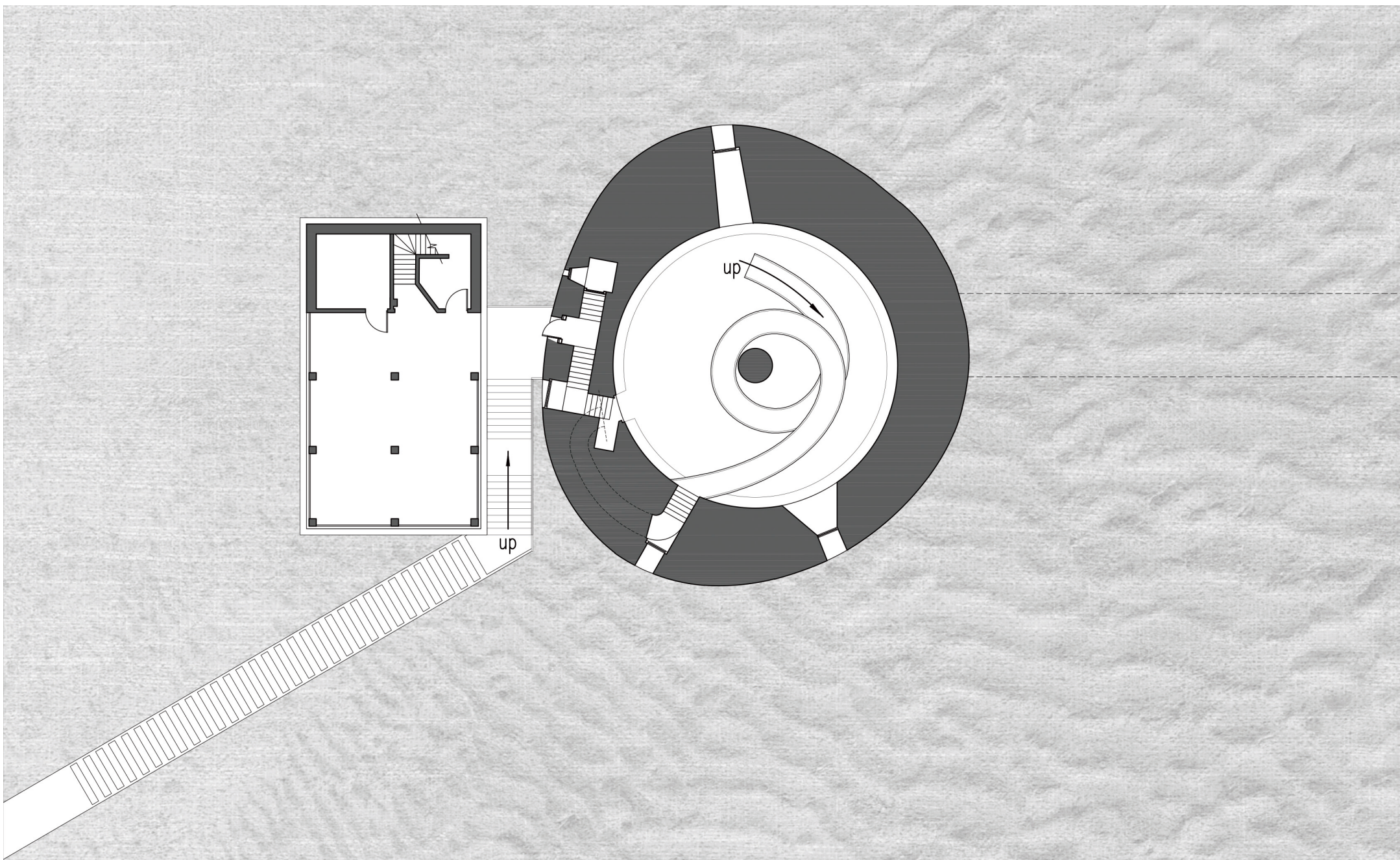


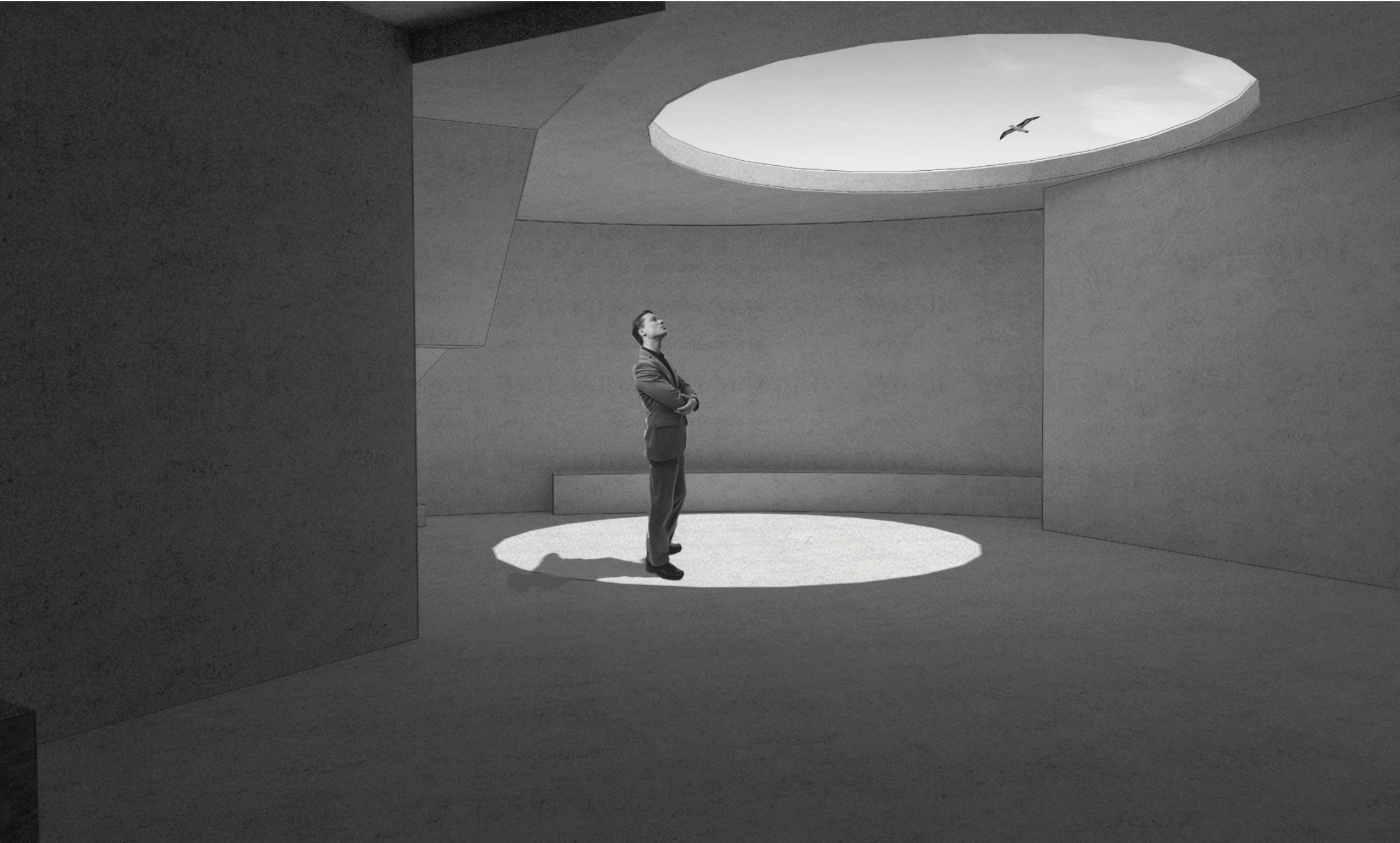
Tower

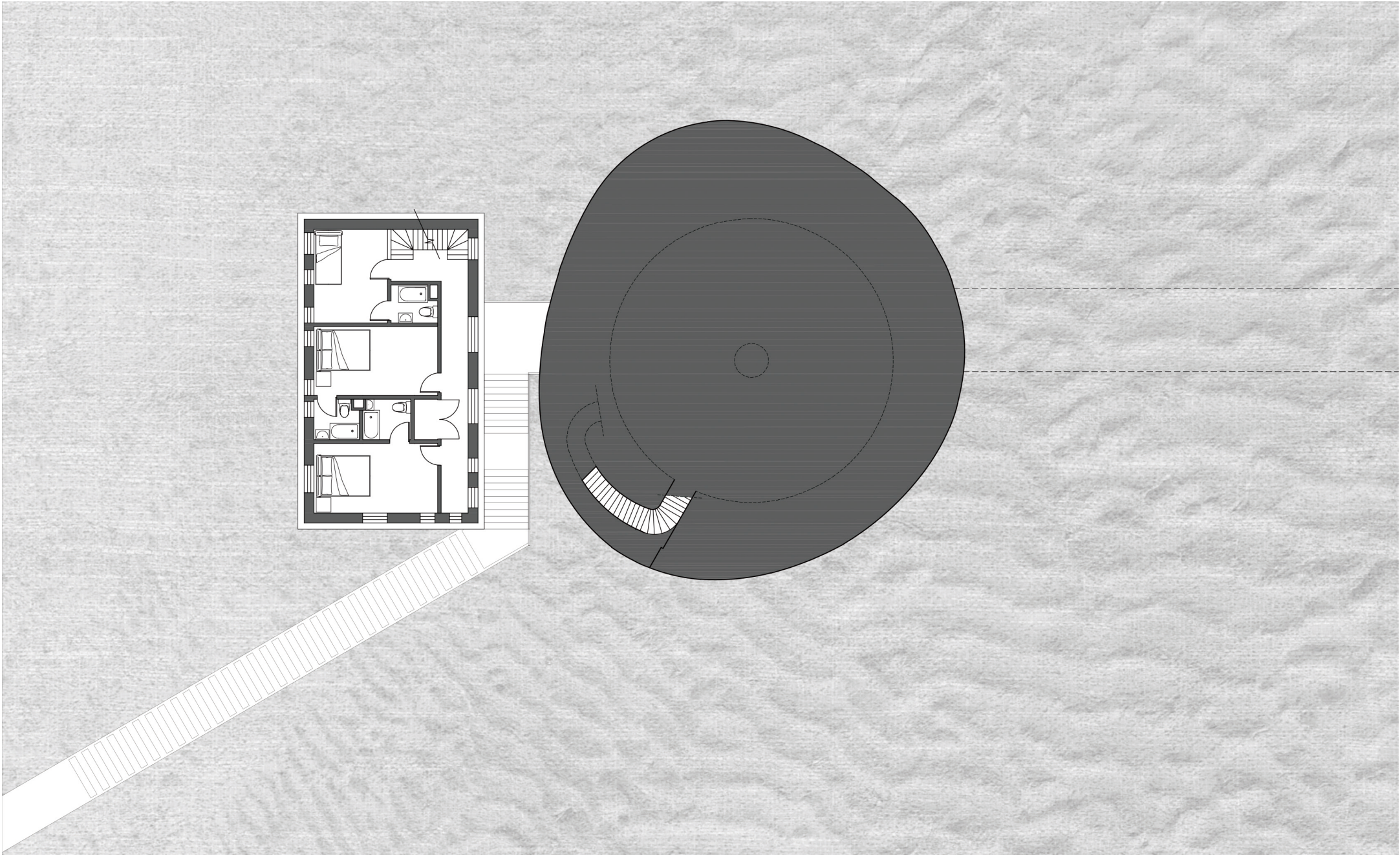




Panorama knowledge storage space

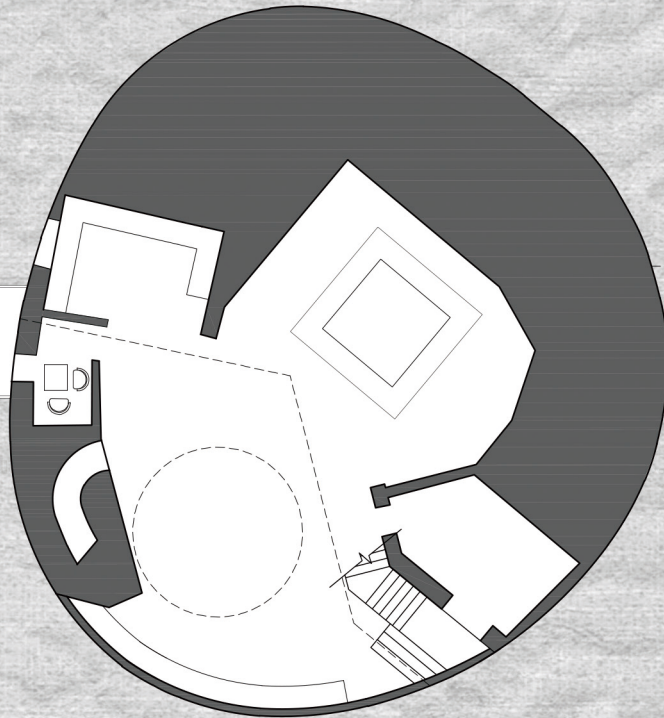
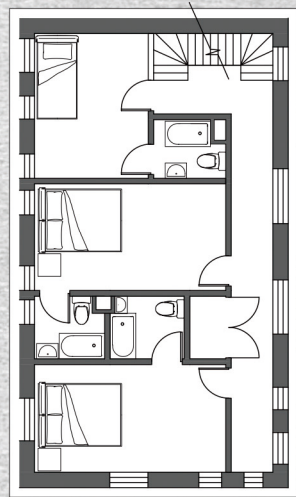








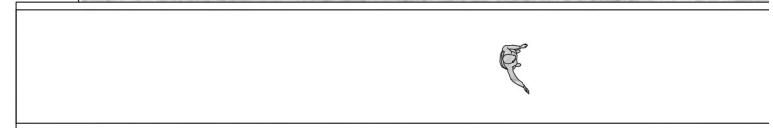
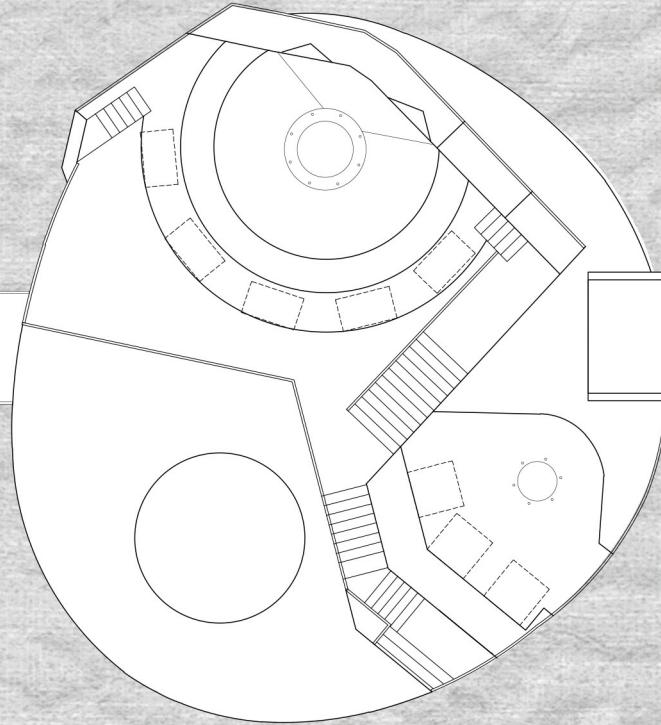
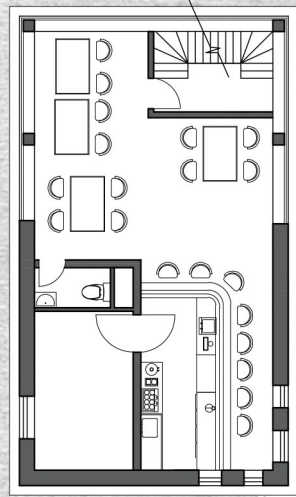
Meditation room



Plan 3F 1:200



Reconnect with the outside world

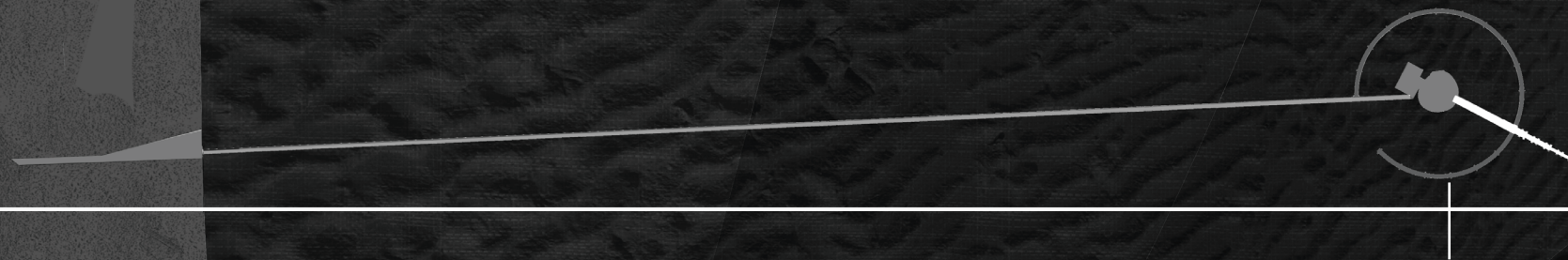


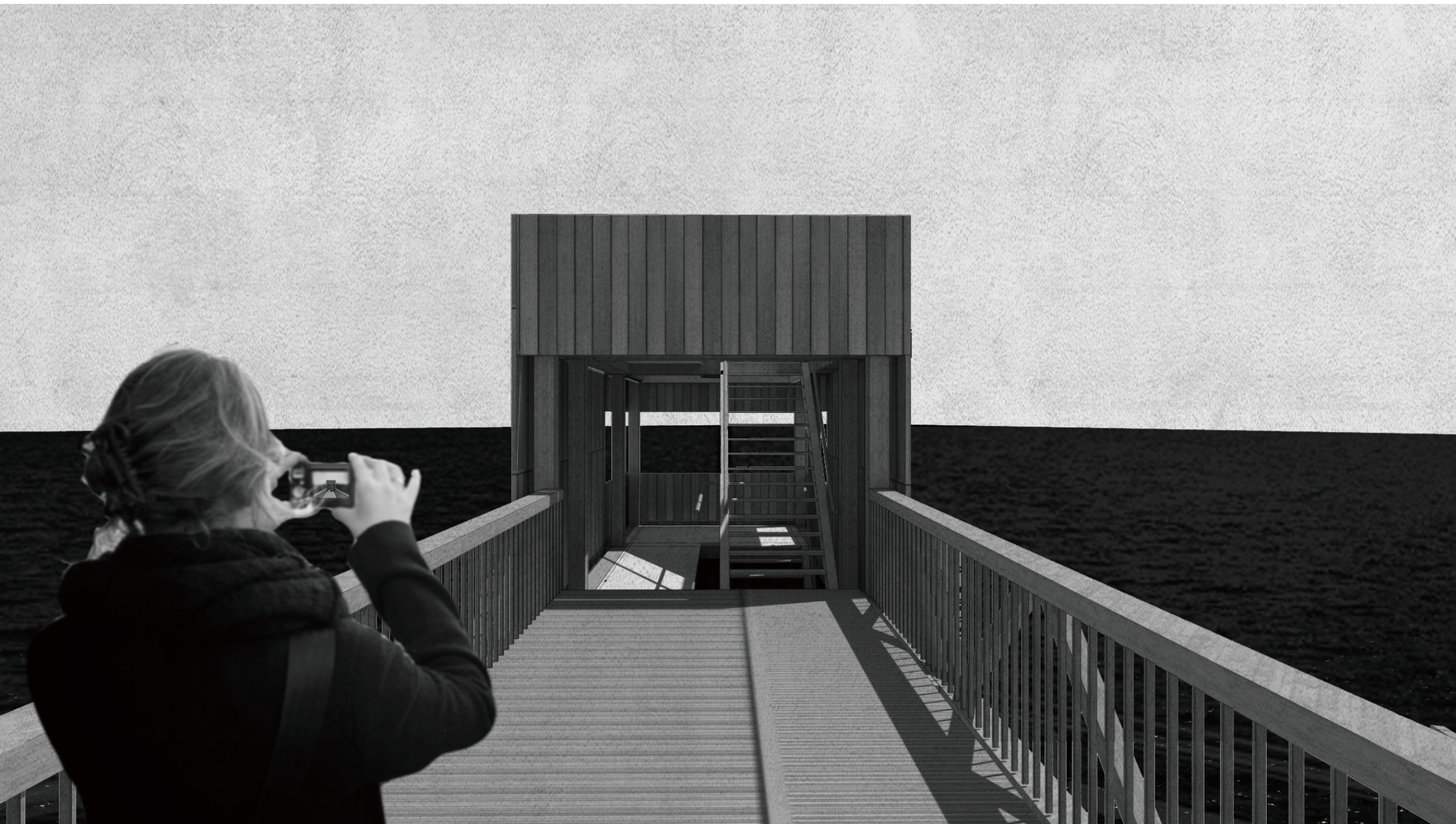
Plan 4F 1:200



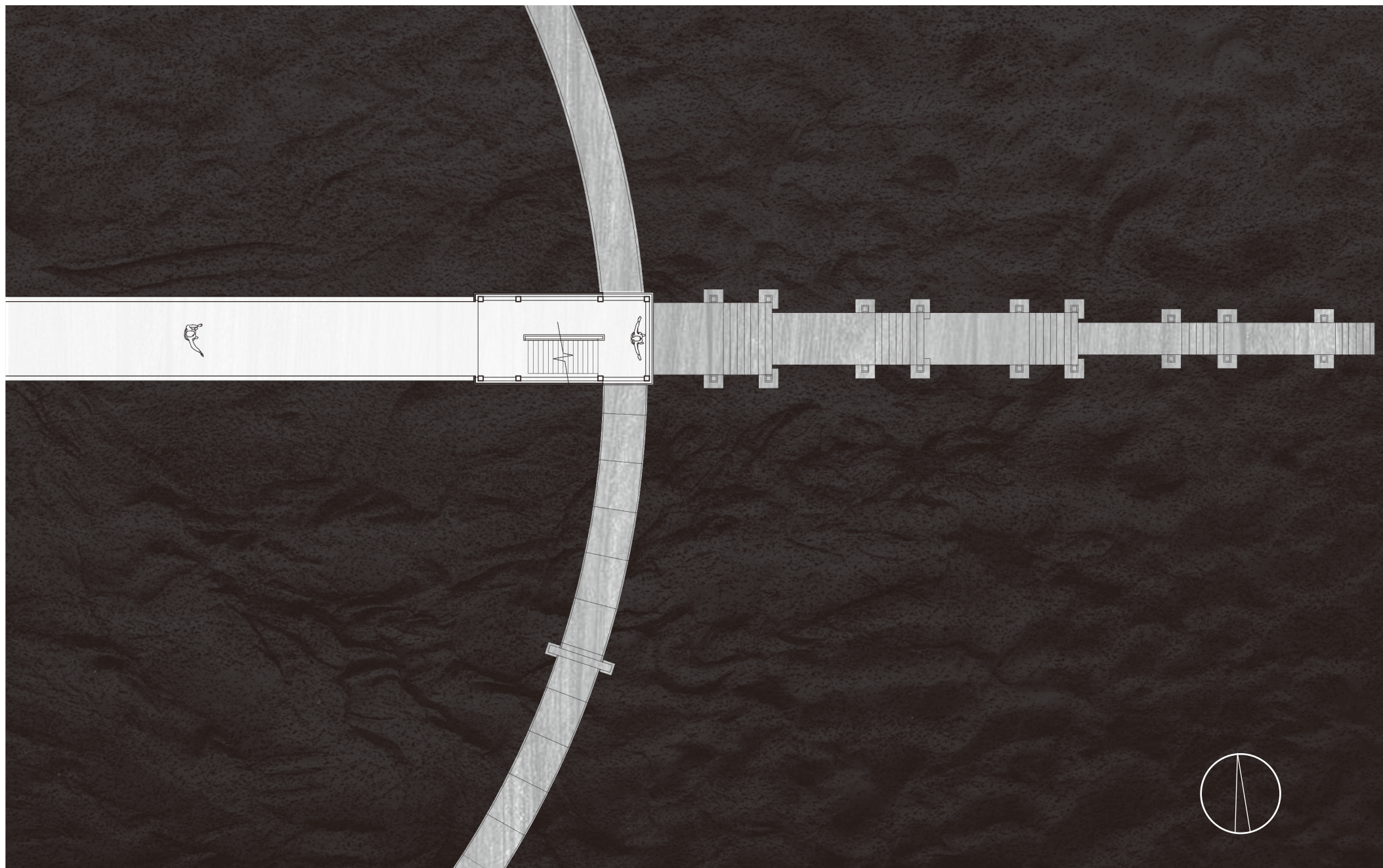
Barrack room

Tower II



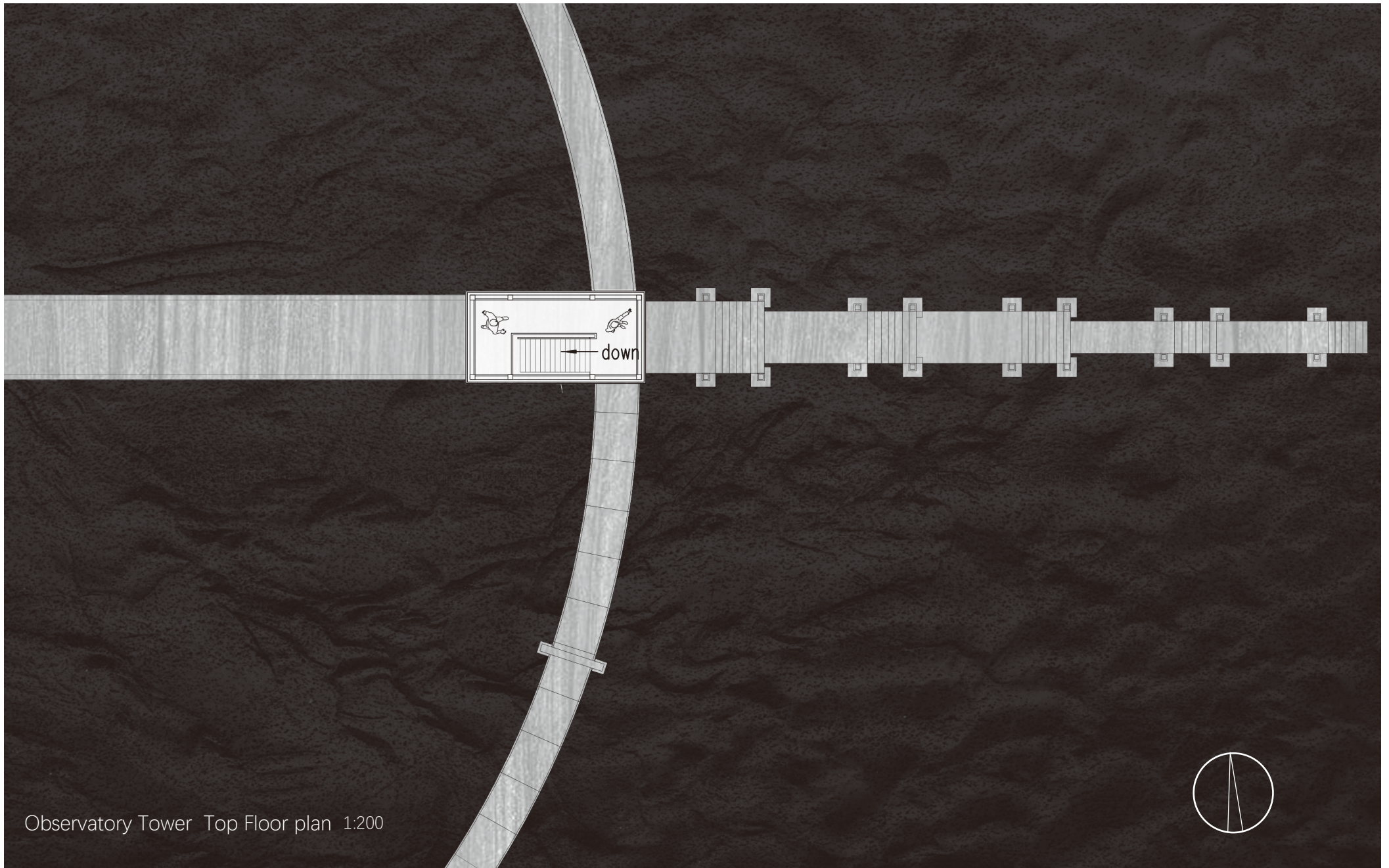


Bridge to nature





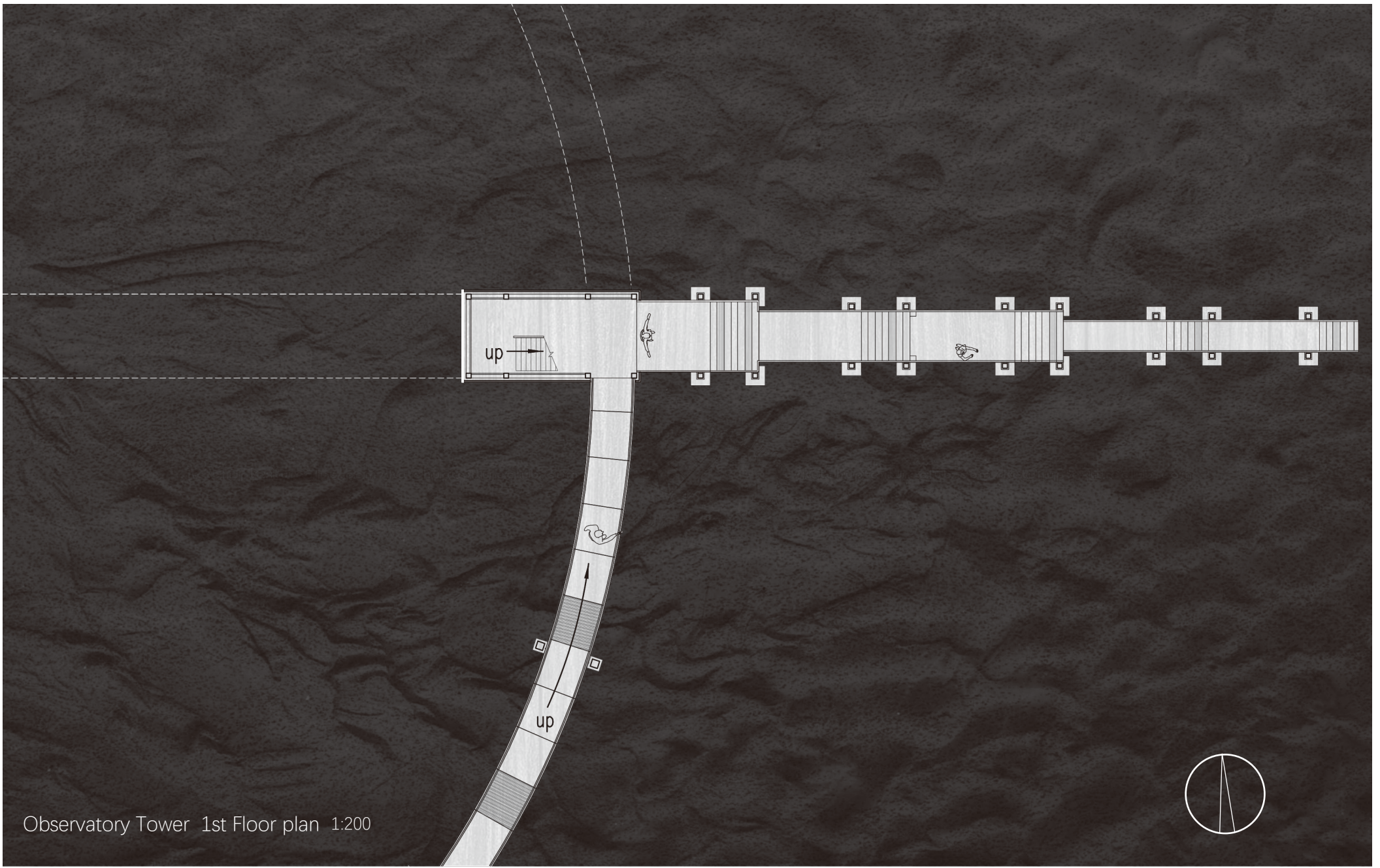
Nature Panorama Platform



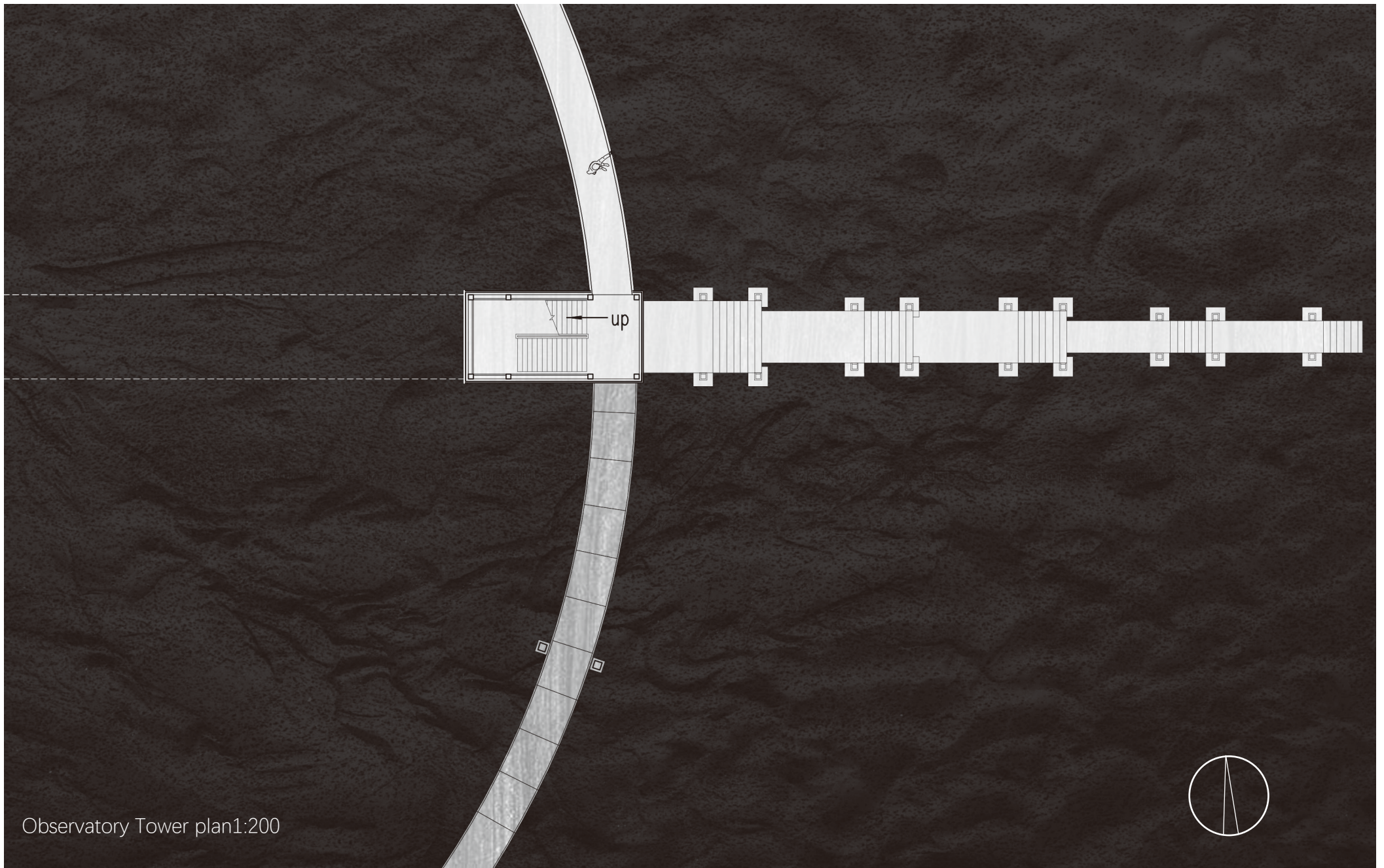
Observatory Tower Top Floor plan 1:200



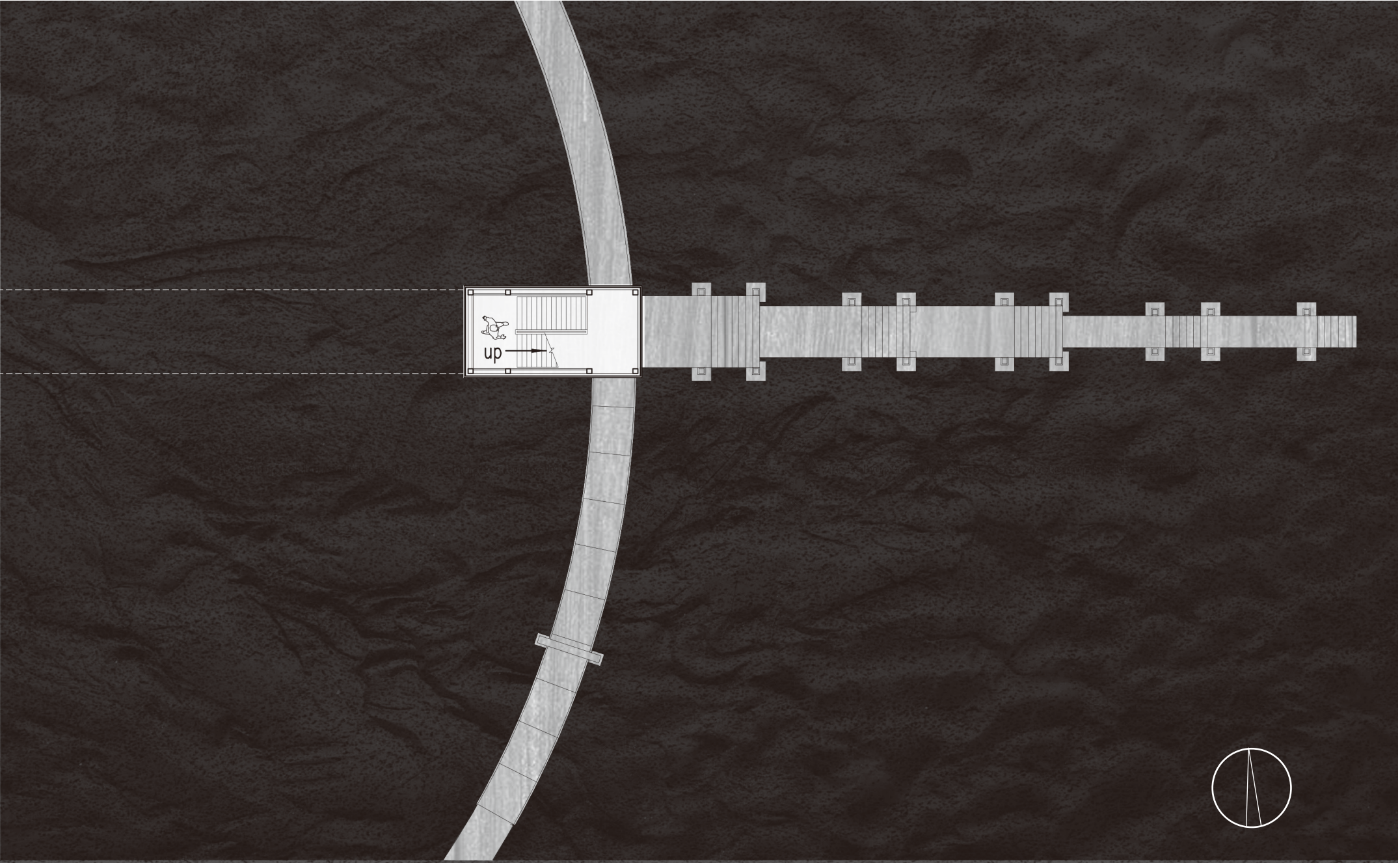
Nature Panorama Platform



Observatory Tower 1st Floor plan 1:200



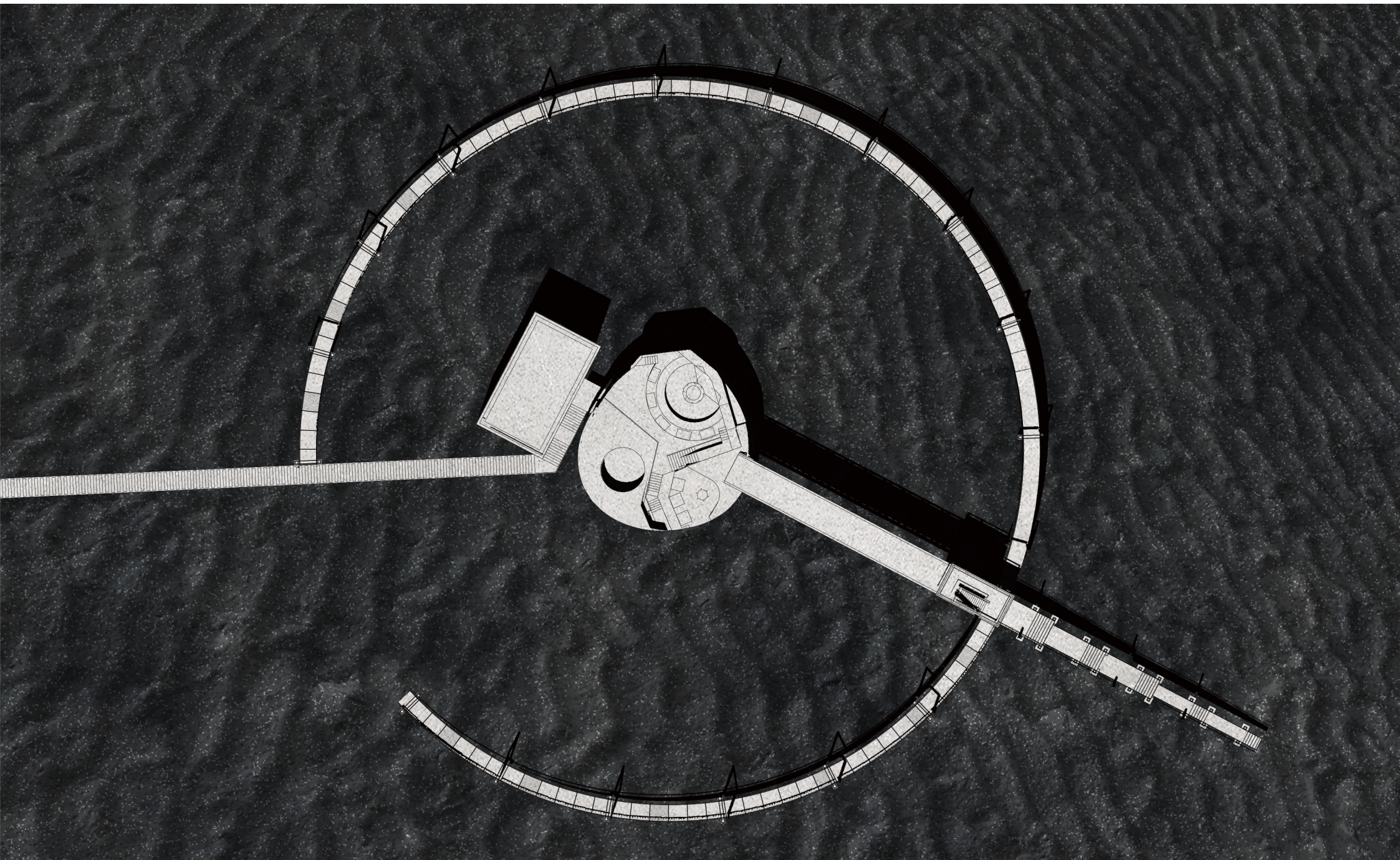
Observatory Tower plan1:200





Wander & Return

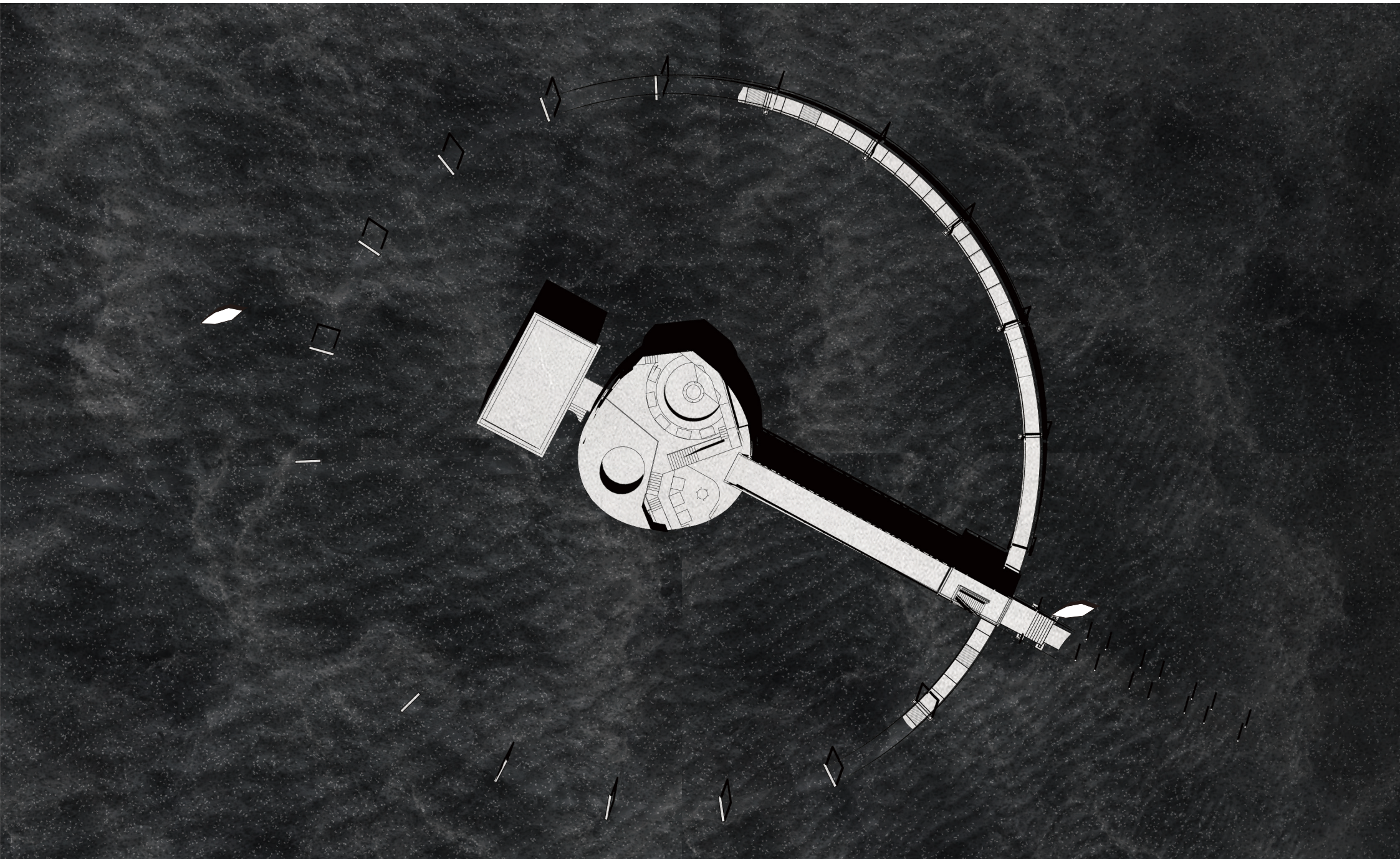




1:500 PLAN LOW TIDE





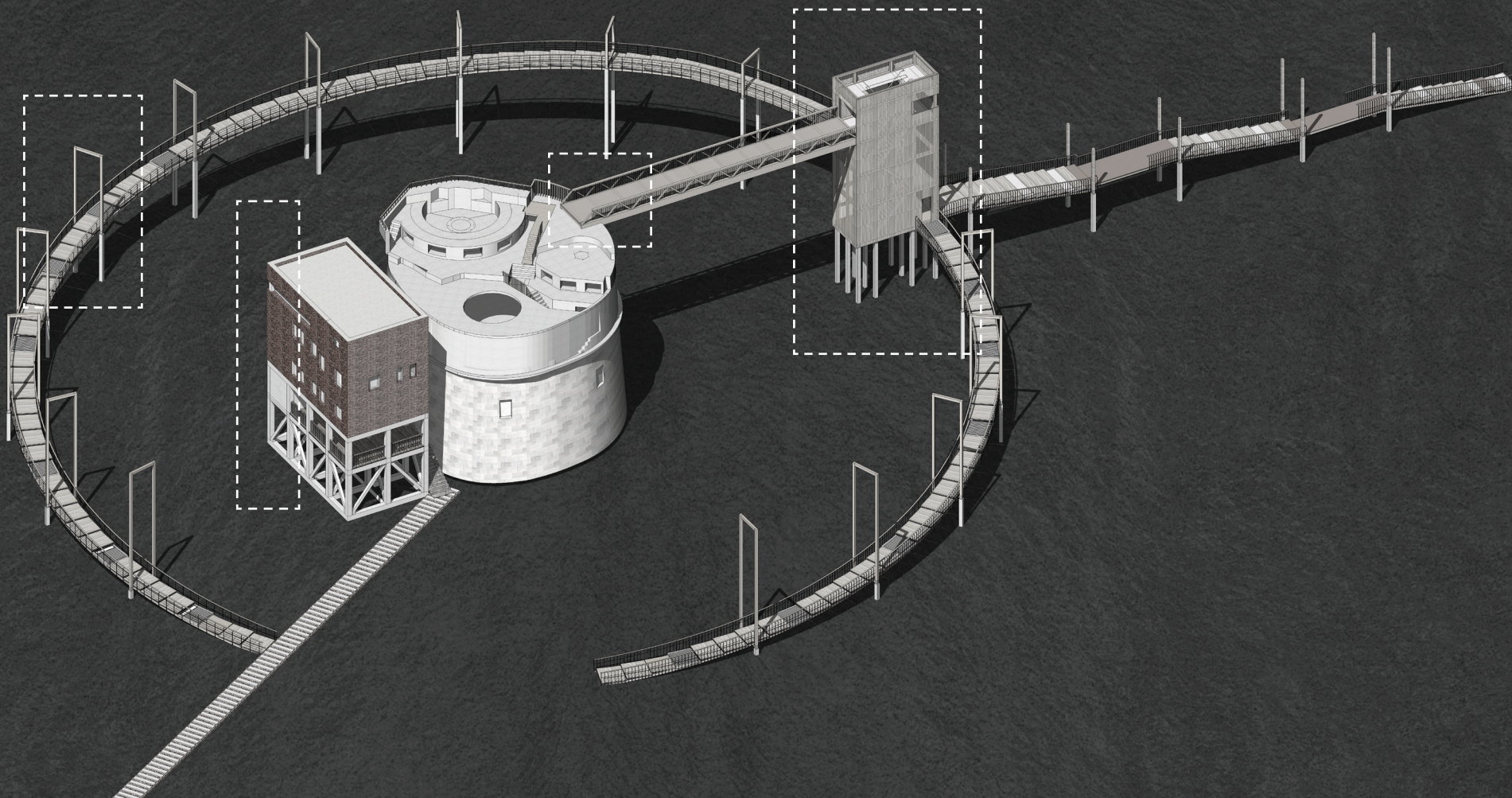


1:500 PLAN HIGH TIDE



PART III.

Building Technology



Main Materials



IPE Wood

Long-term contact with seawater Part:

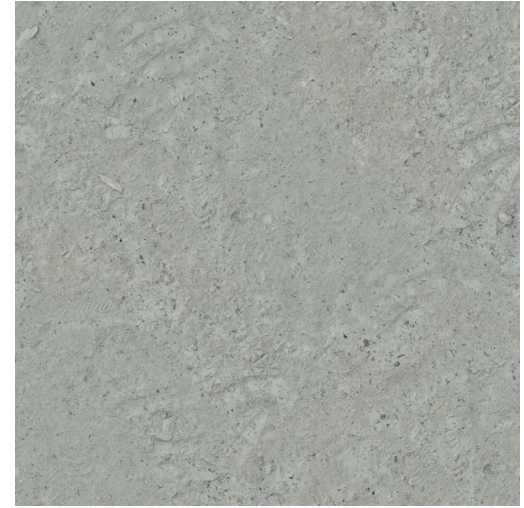
- Ring pier structure and pavement
- Ending chapter pier structure and pavement
- Additional deck in terrace floor in barrack building



Beech laminate wood

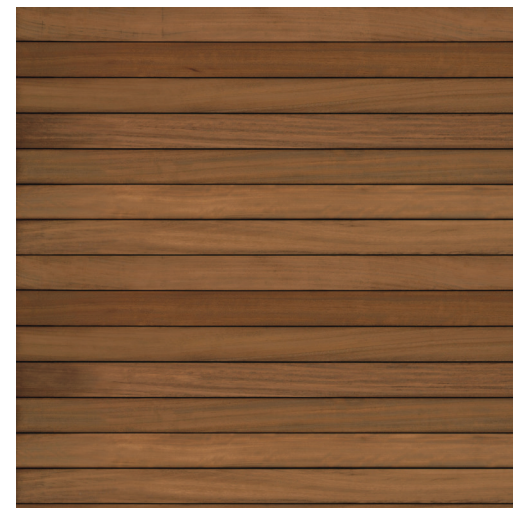
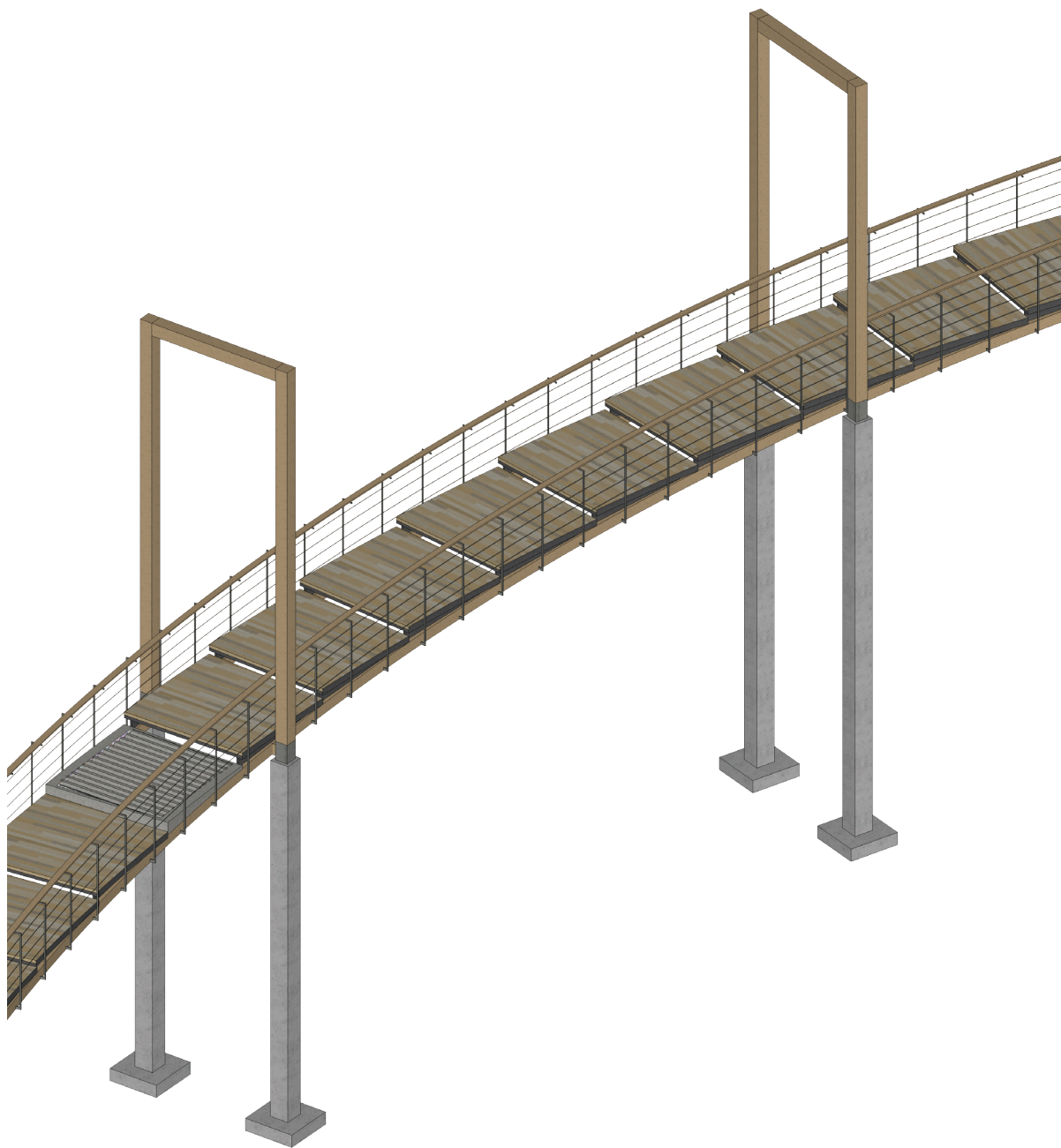
Detached to sea water :

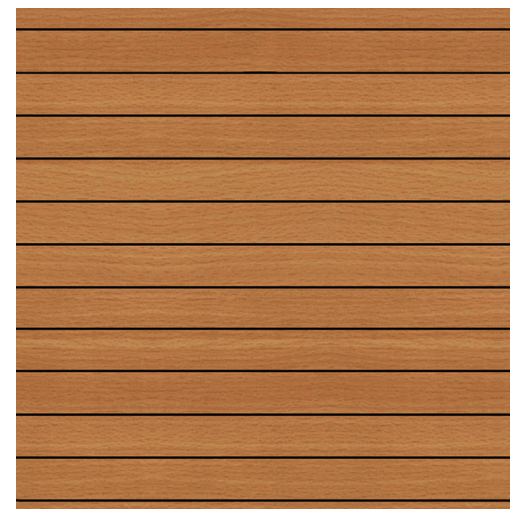
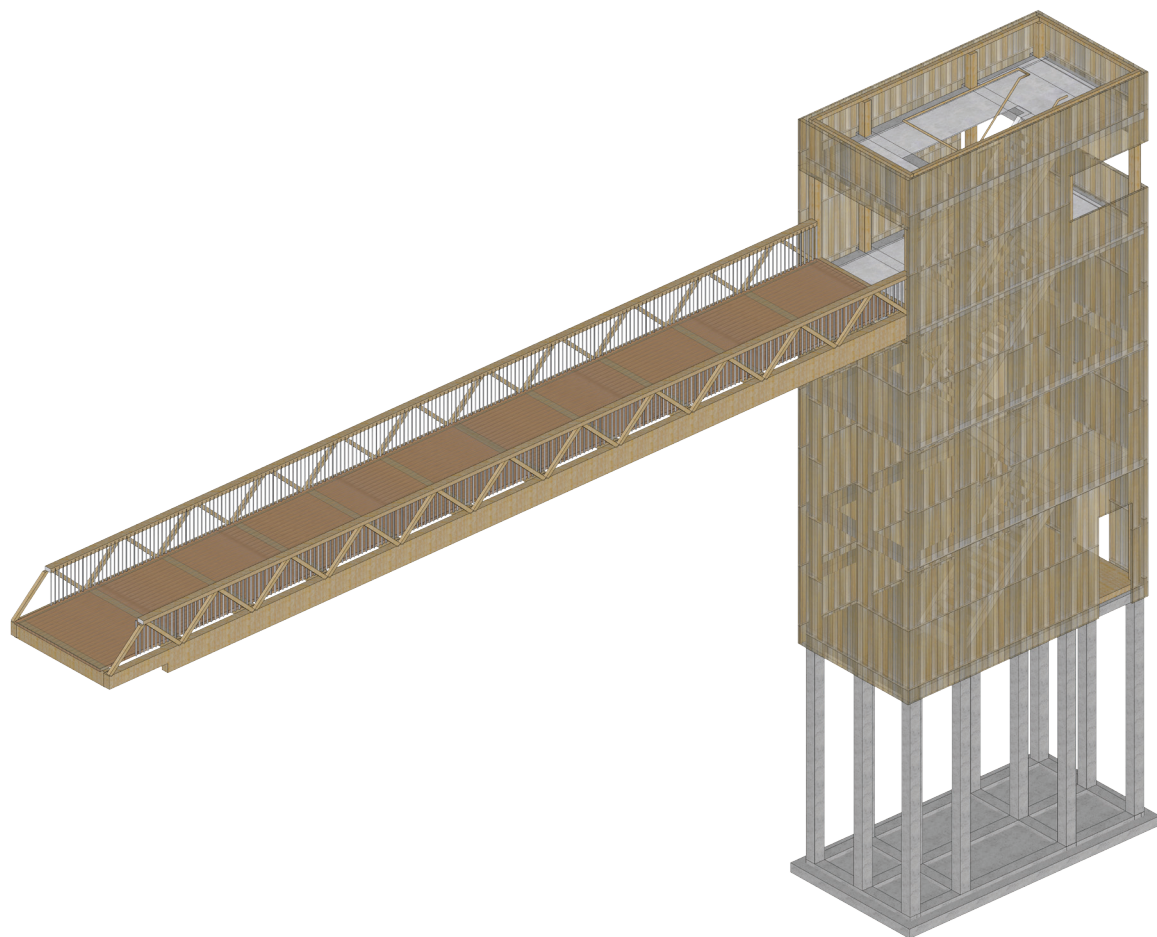
- The observatory tower structure and cladding
- The bridge connect the old tower and additional tower



Concrete

- foundation and part of structure of additional intervention
- inland tide clock room and waiting stage



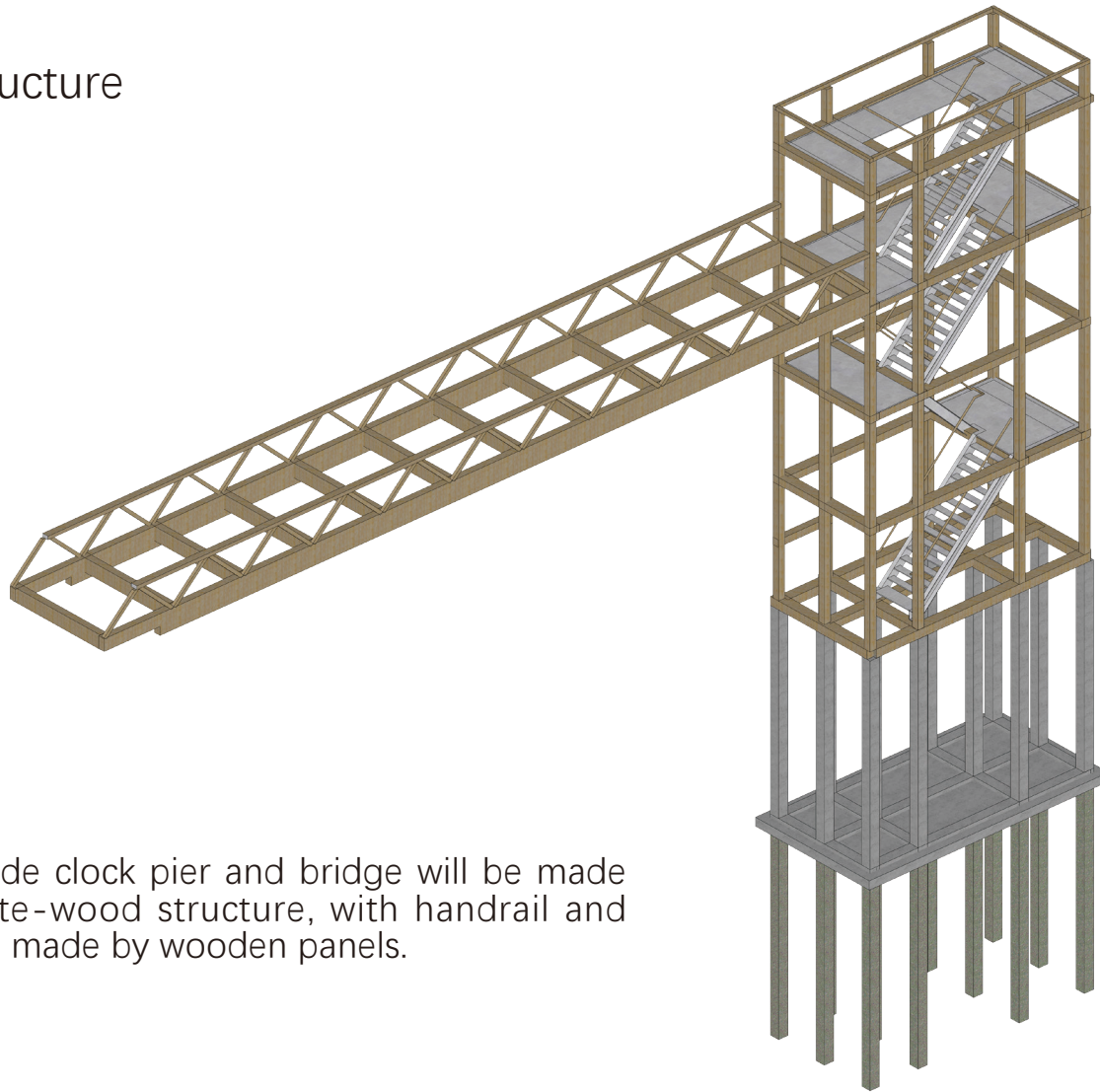




Let the wood age to grey.

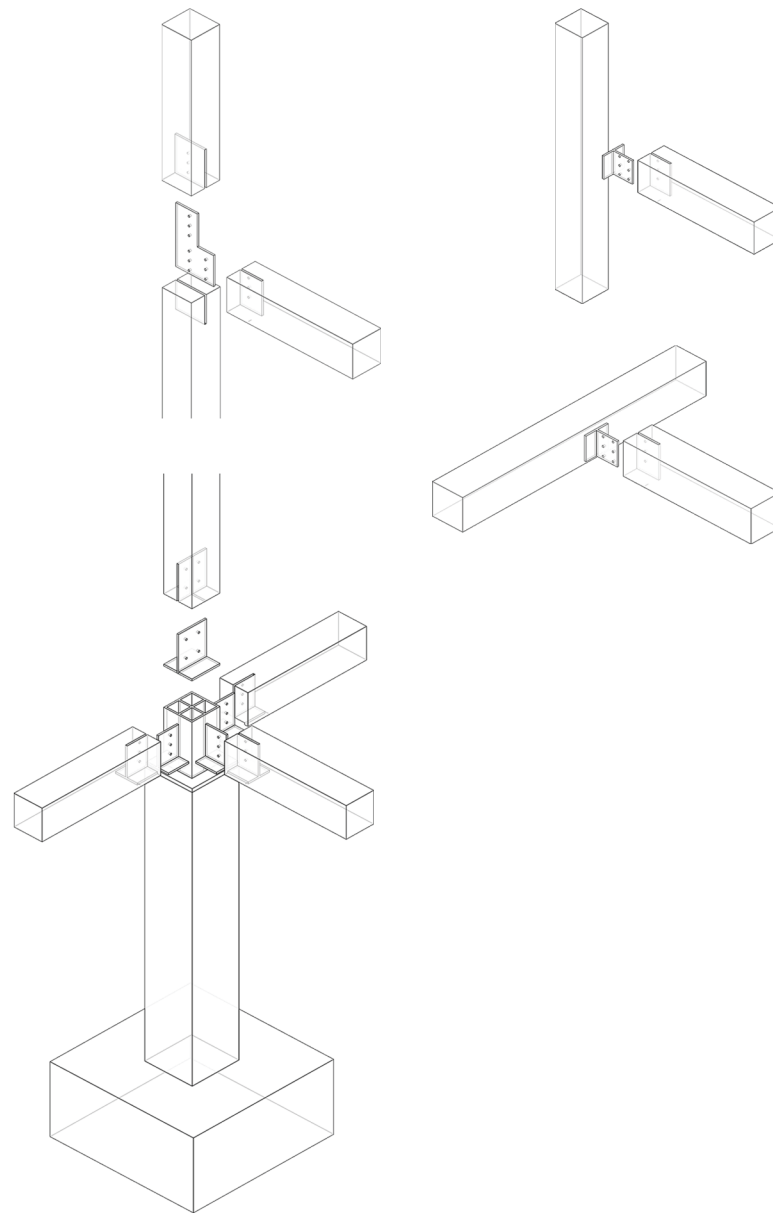
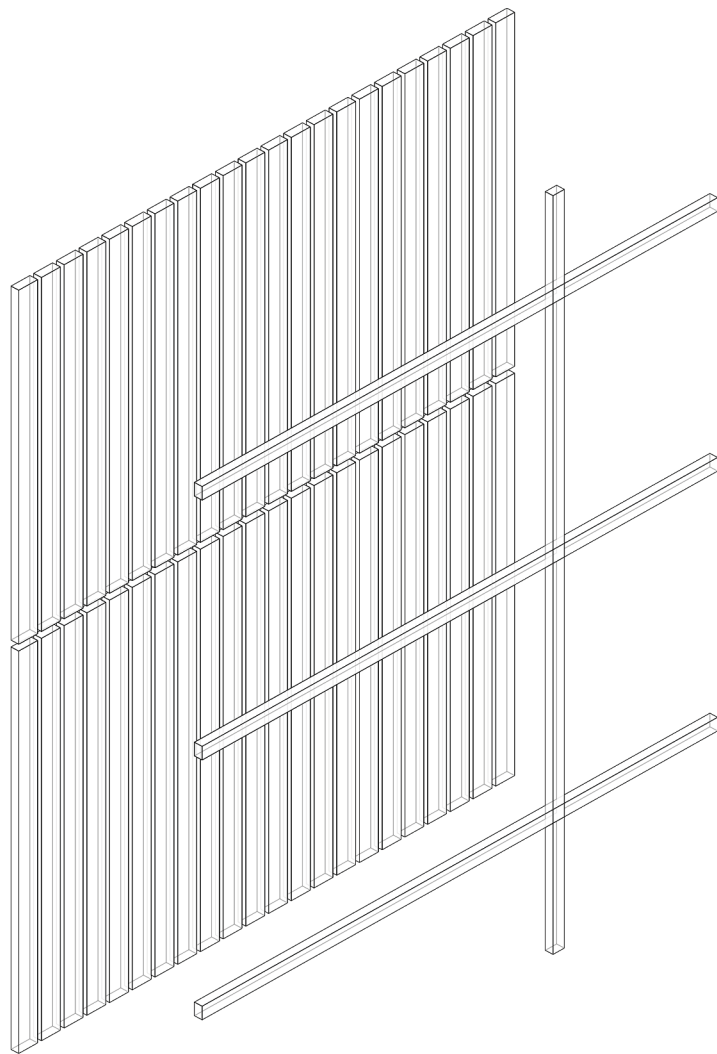
Building Technology

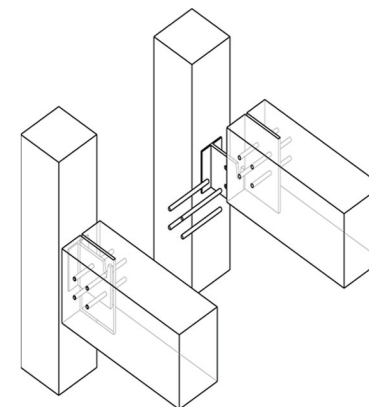
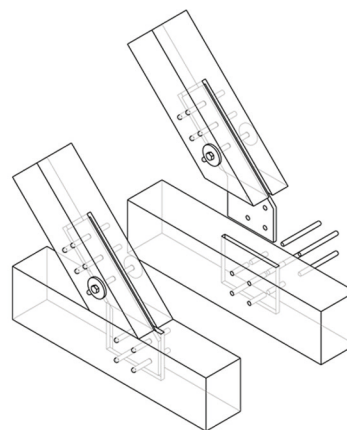
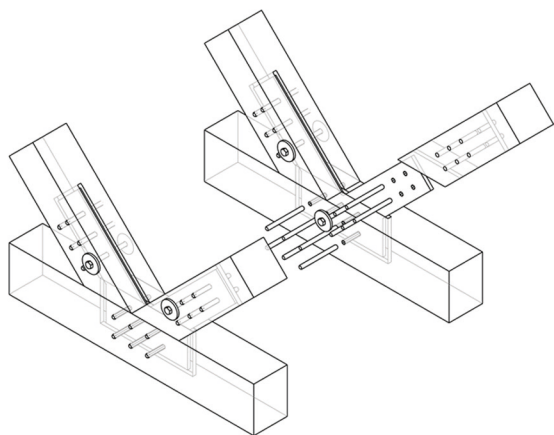
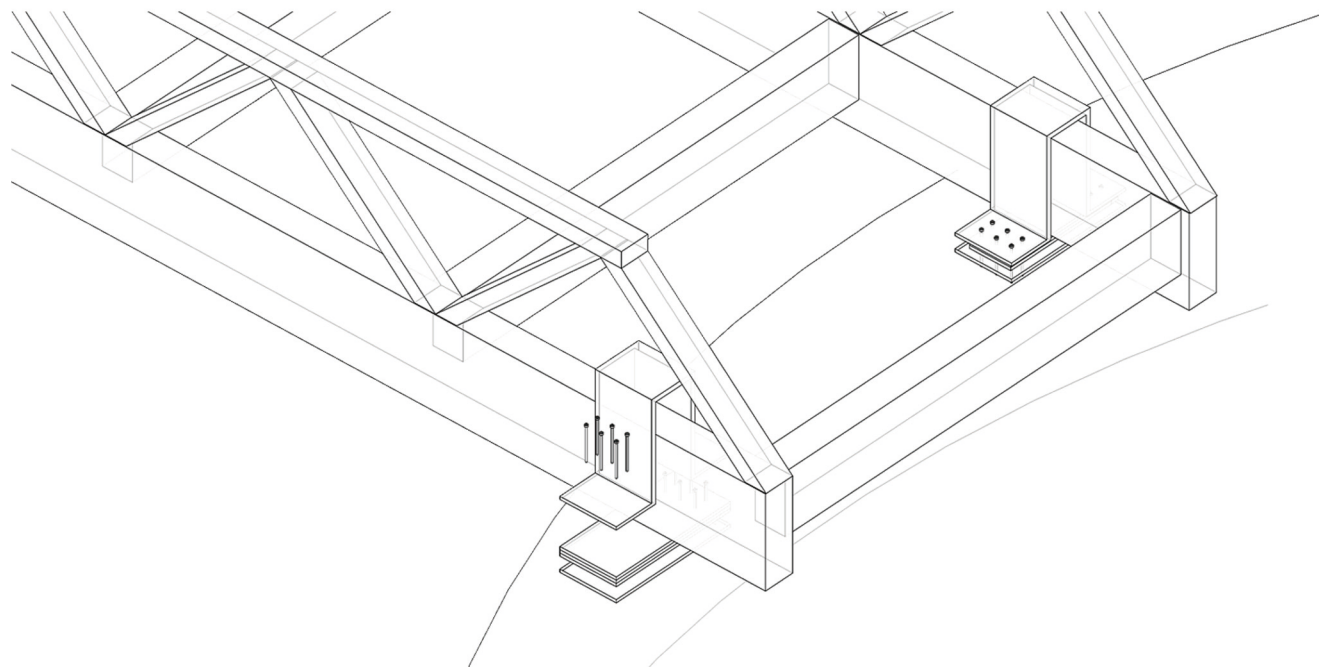
Structure

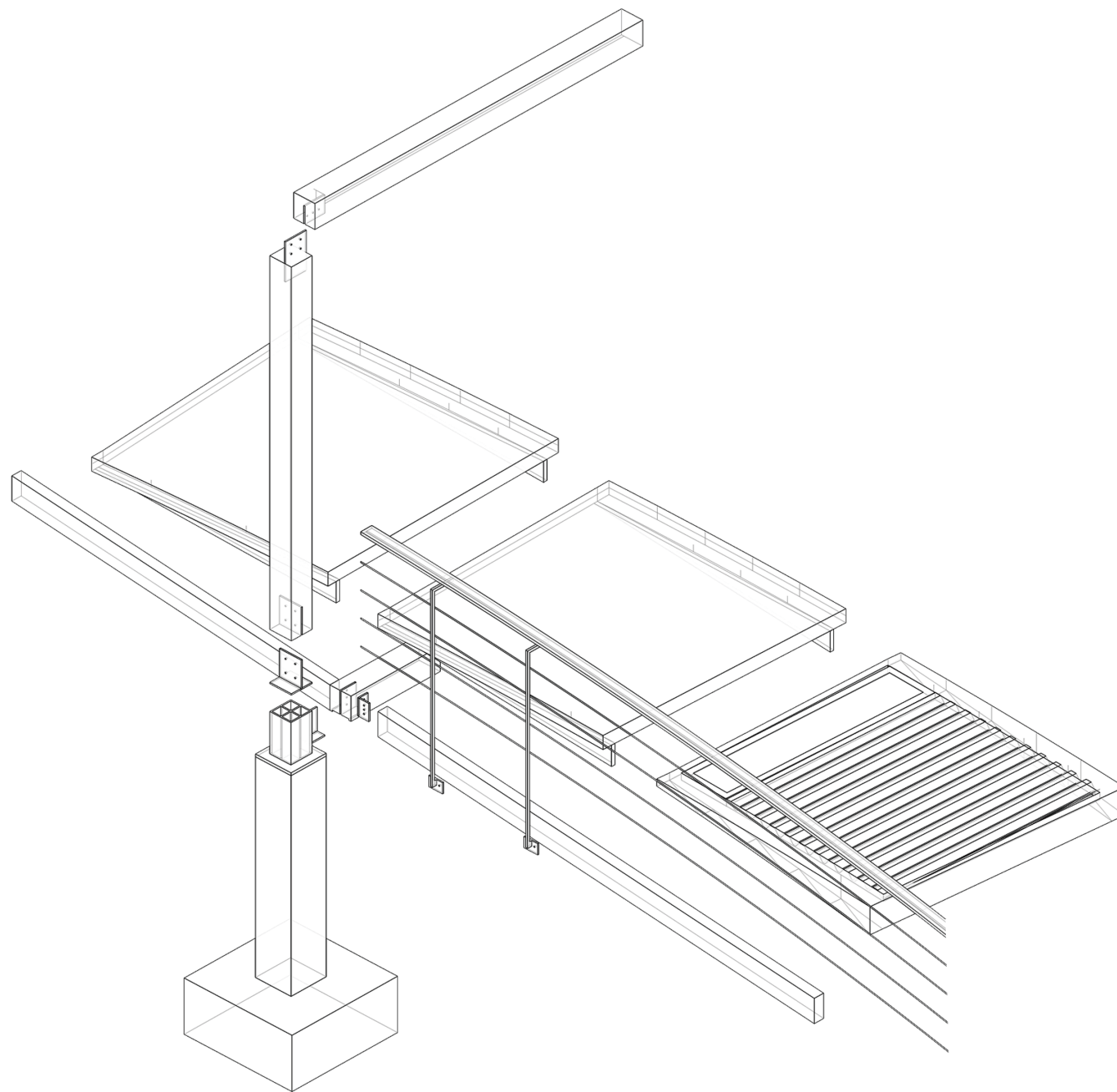


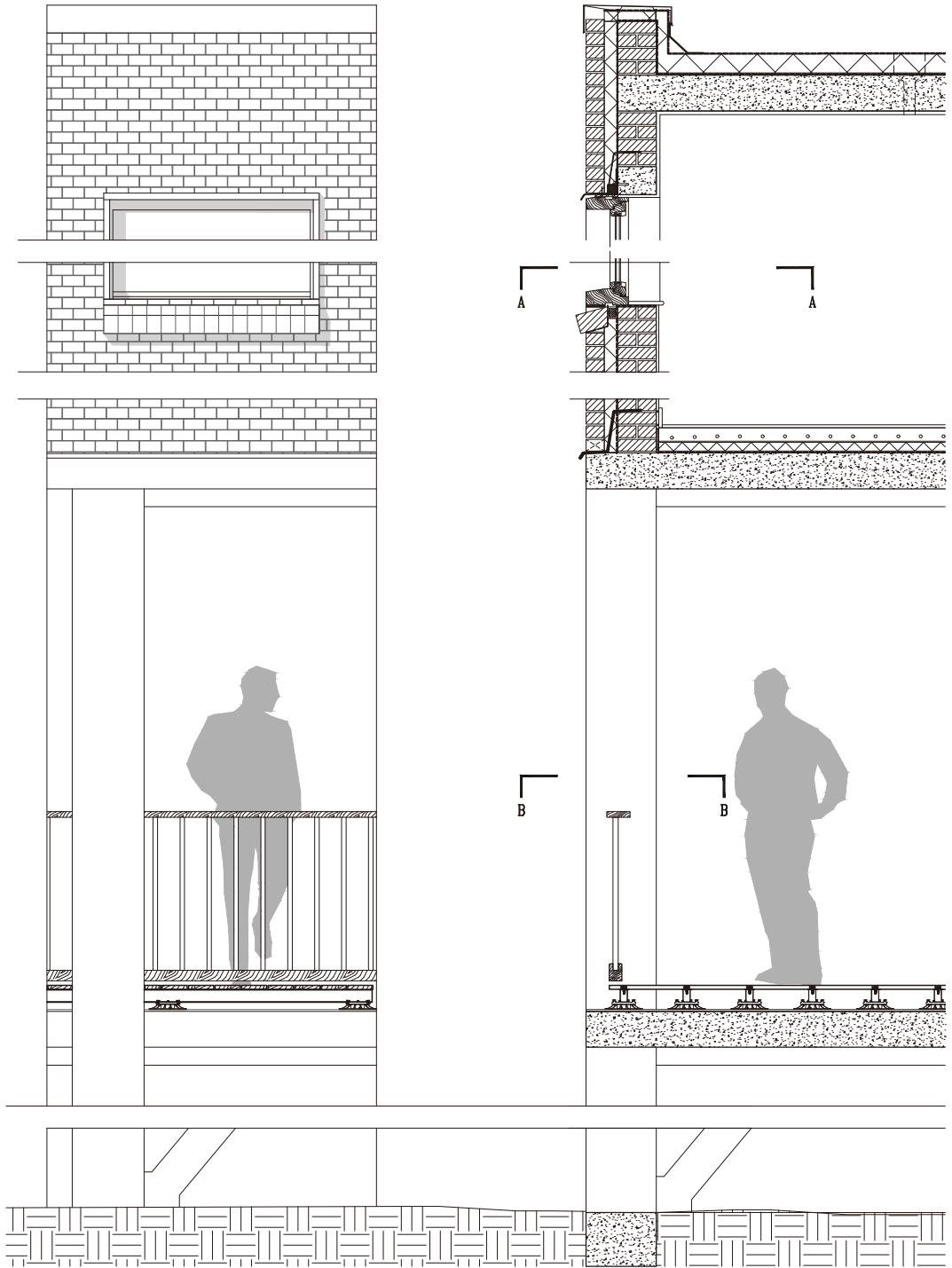
The ring tide clock pier and bridge will be made by concrete-wood structure, with handrail and stair board made by wooden panels.

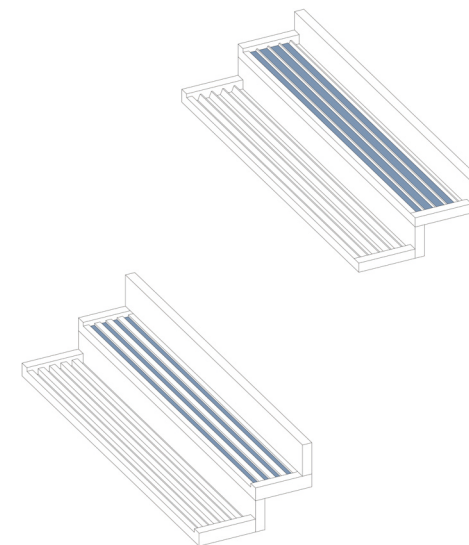
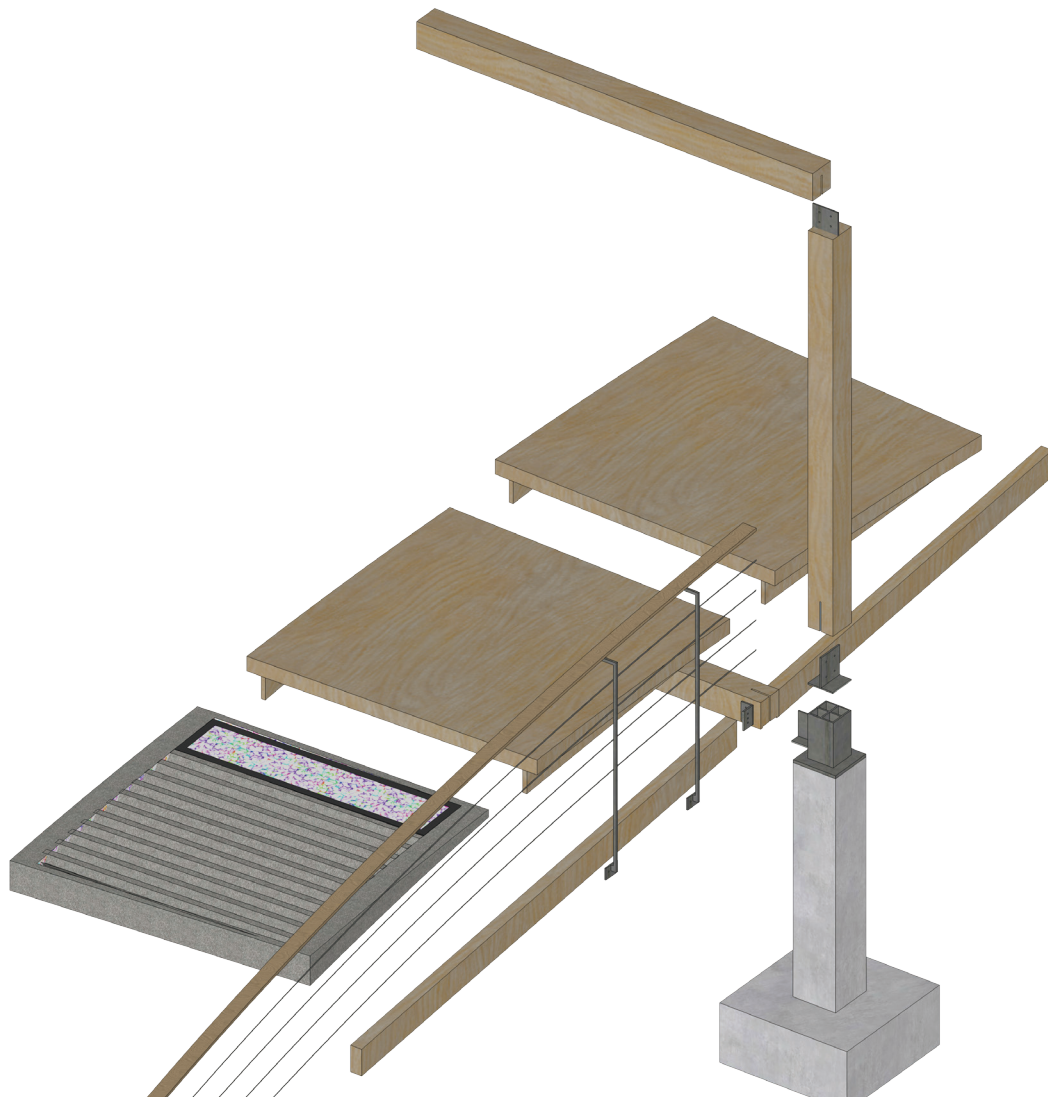












The step plate that work as the Tide Clock pointer are made by concrete with bumps, which will change the reflection of light when the steps are filled with water. So people can see the colour of the pointer to know the tide is going up or down.



Solar Powered Light Brick installed on the concrete plate

