

ROOTS

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AAHF30 | ARCHITECTURE IN THE CONTEMPORARY | SPRING 19

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View of the crematory seen from the entrance pathway.

INTRODUCTION

In the bachelor studio Samtid (Architecture in the Contemporary), ROOTS was created. The course has focused on spatial experiments and 3D modeling, in programs like Rhinoceros and Grasshopper, which therefor has been big parts of the project.

The main task was to design a crematory in Limhamns lime quarry in Malmö. Since a crematory is a very special building that deals both with practical- and cermonial spaces, a lot of effort has been made to put the two different functions of it together as one.

CONTEXT

Map over the quarry in Malmö.



Limhamn Lime Quarry.

ROOTS became a crematory situated in the south east corner of Limhamn Quarry, Malmö. The quarry is about 1300 meters long, 800 meters wide and 65 meters deep and consists of a couple of plateaus. The project is buildt on top of the last plateau that is almost 20 meters high, and decends down to the bottom of the quarry.



PROCESS

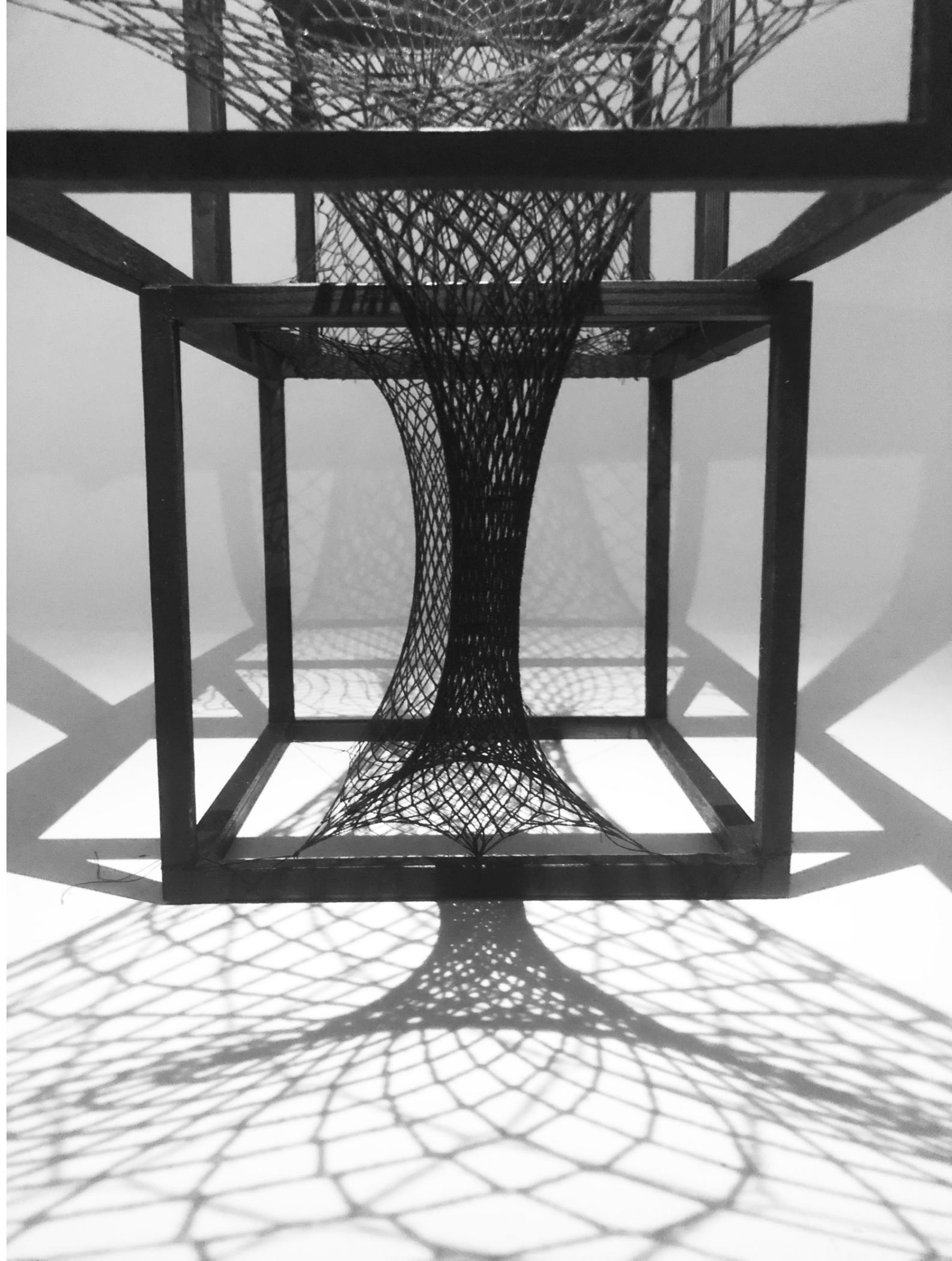
Through form finding with a mesh model (see next pages), different ways of how a unified structure could embrace new shapes and forms was explored.

The initial idea with the model was to explore how a climbing structure could connect floors, walls and ceilings, and further on how such an interlaced structure could evolve into natural light sources.

By connecting mesh fabric with threads to a framework with different forces, abstract shapes took place and inspired to the final result of the project.

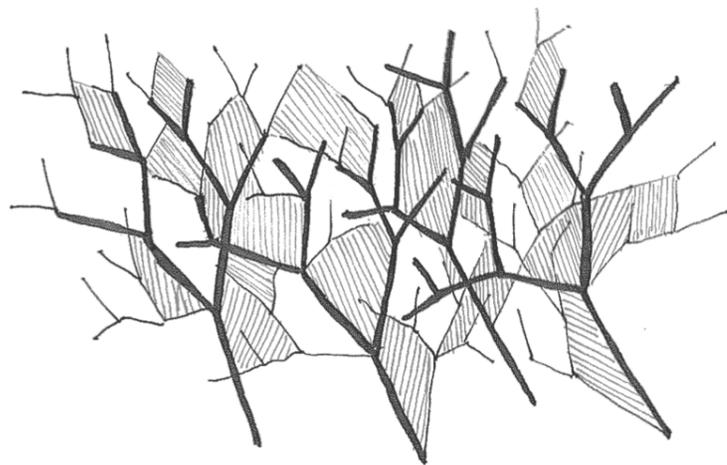
Mesh model





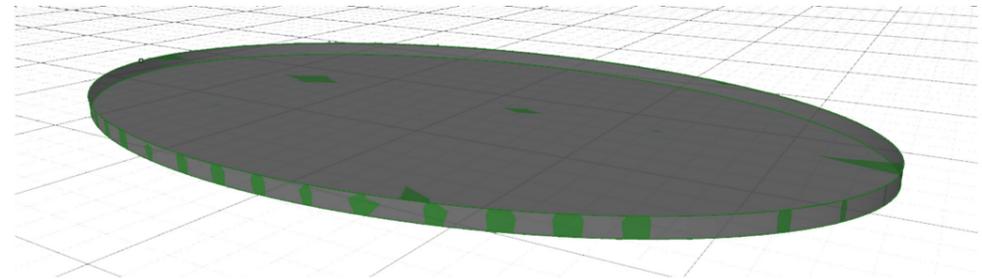
STRUCTURE DEVELOPMENT AND GRASSHOPPER

Early sketches of how I imagined the structure to look like.

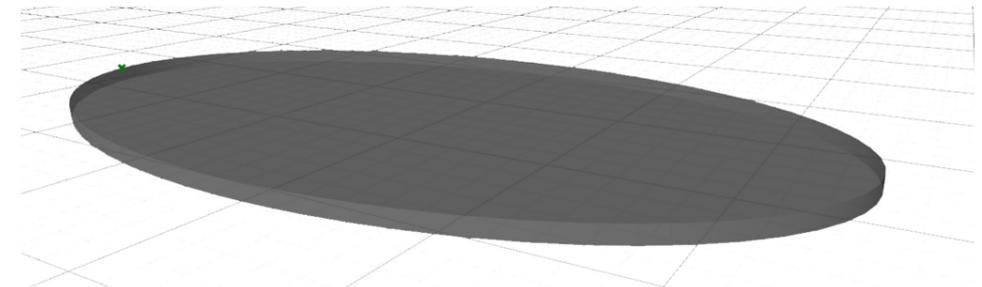


Script used in Grasshopper to create the pervasive structure.

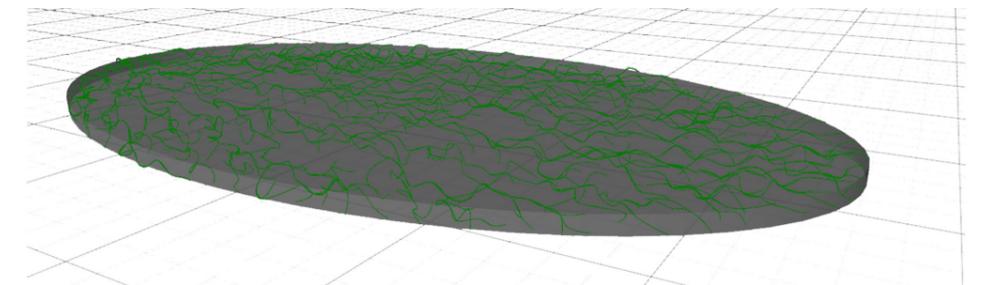
1. Create structure for surface



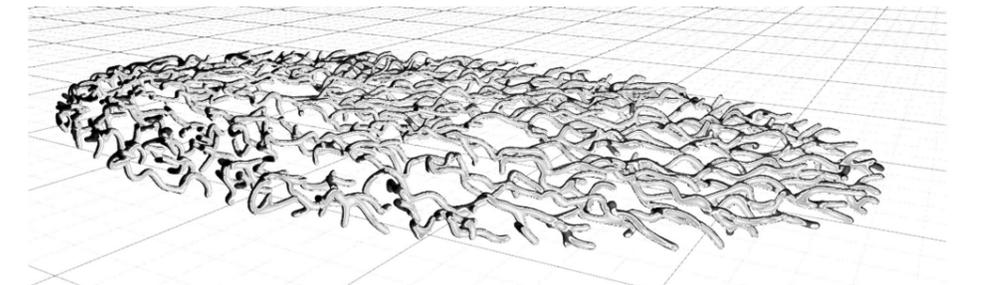
2. Create point and place for start of branching



3. Run script

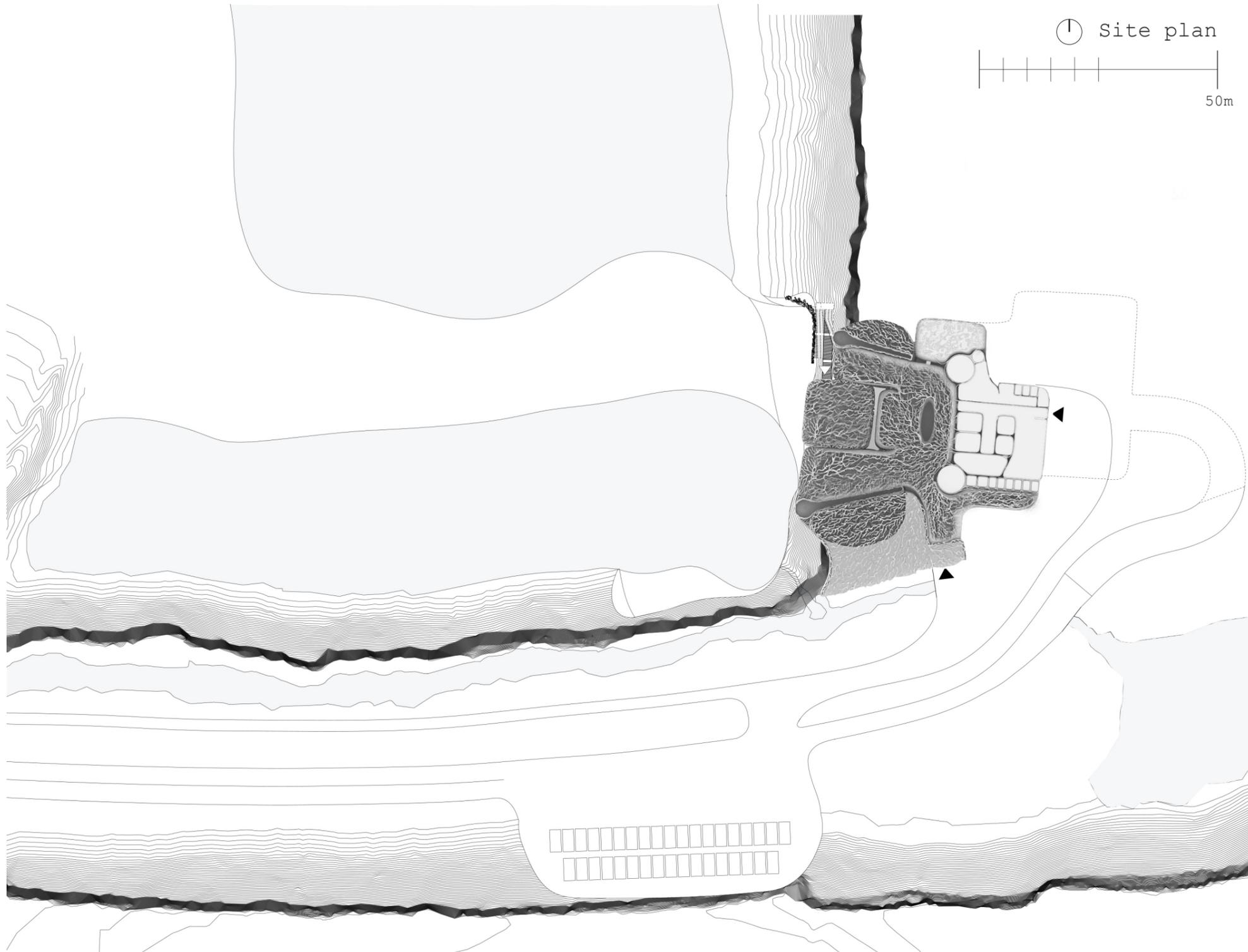


4. Bake structure



THE RESULT

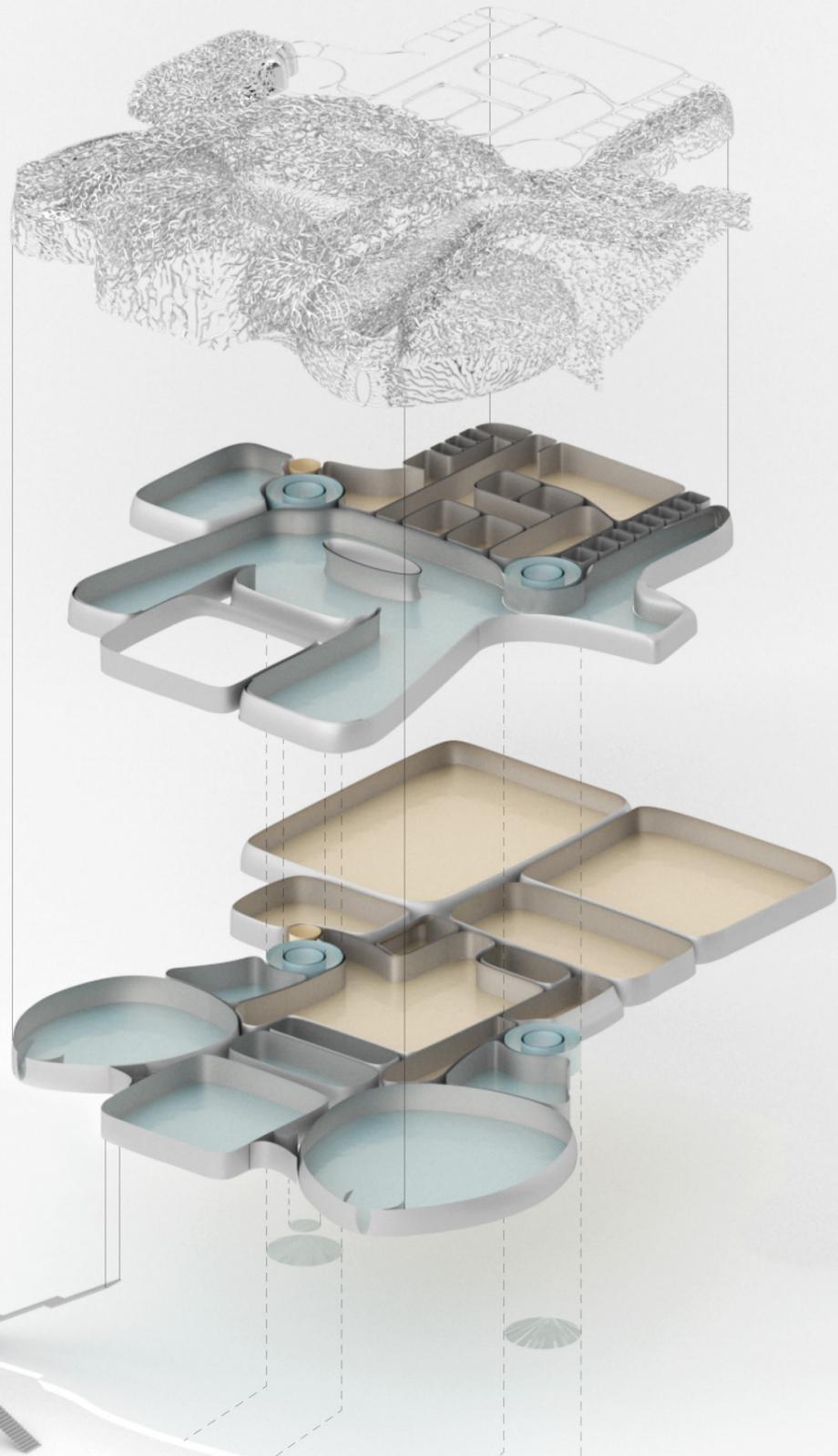
To contrast a place that is surrounded by so much death, the inspiration became life itself. A growing structure - like nature - reaches from the bottom of the quarry, continues up and becomes all the structural elements of the building.



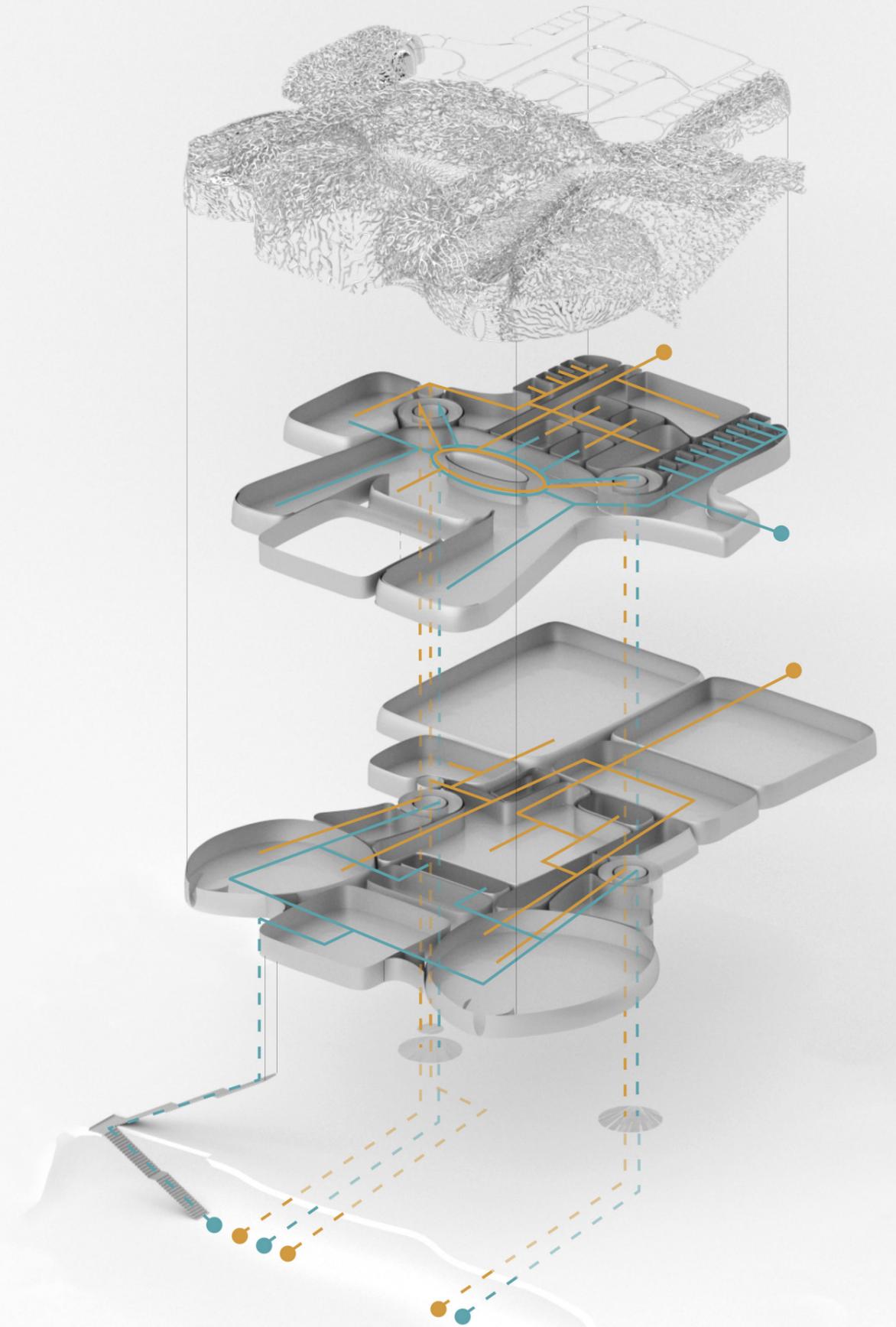
FUNCTIONS AND CIRCULATION

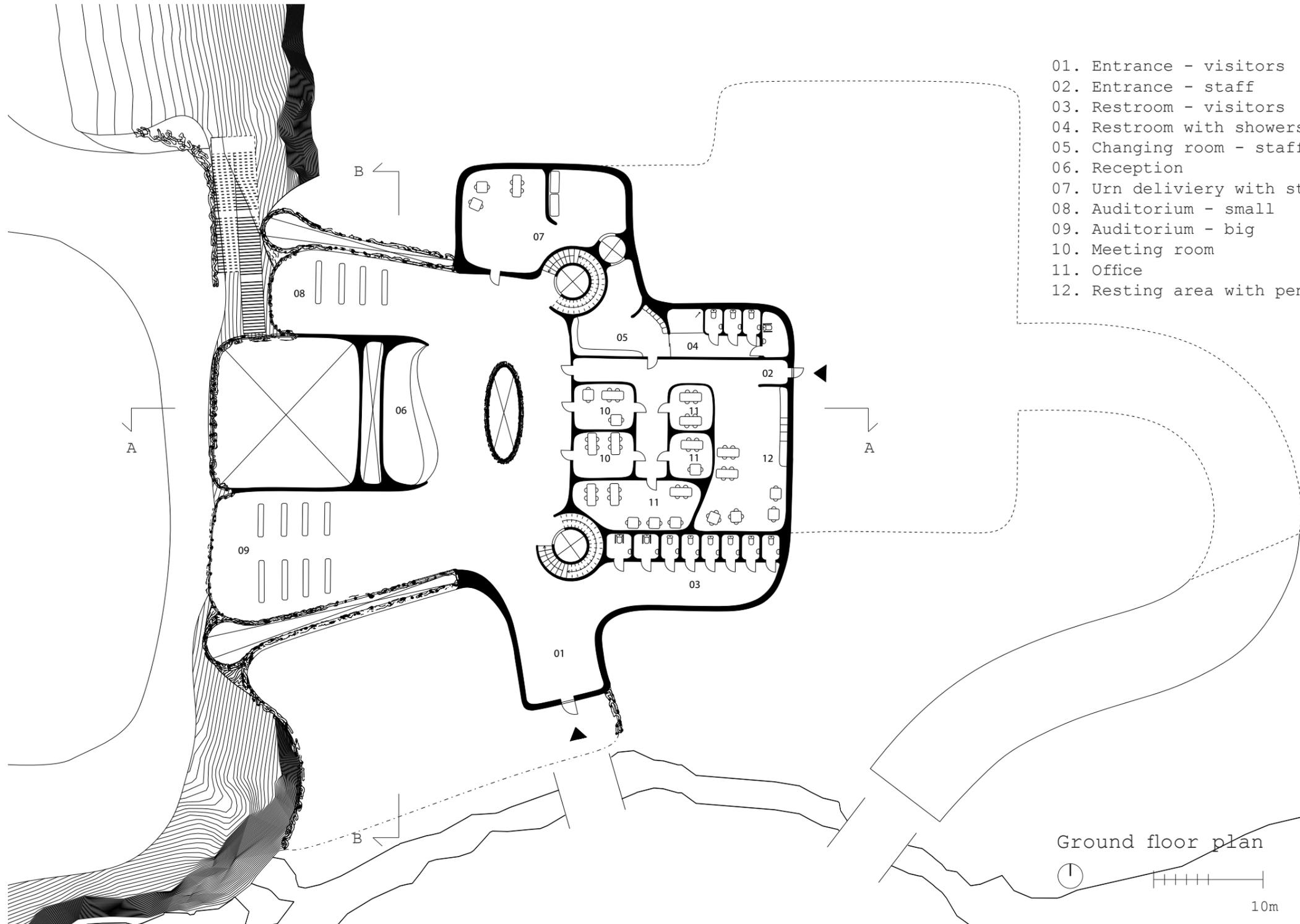
In my opinion, a crematory is a building that could be seen as two different bodyparts of the same body. We have the spirituality and the machinery - life and death.

To be as respectful as possible for the mourners who visit the crematory, I wanted to separate the different functions of the building so that contact with death would be minimal. To do this, the staff areas are placed in the east of the building, and the visitors area in the west. Next page will show a diagram of this and also the circulation through out the crematory.



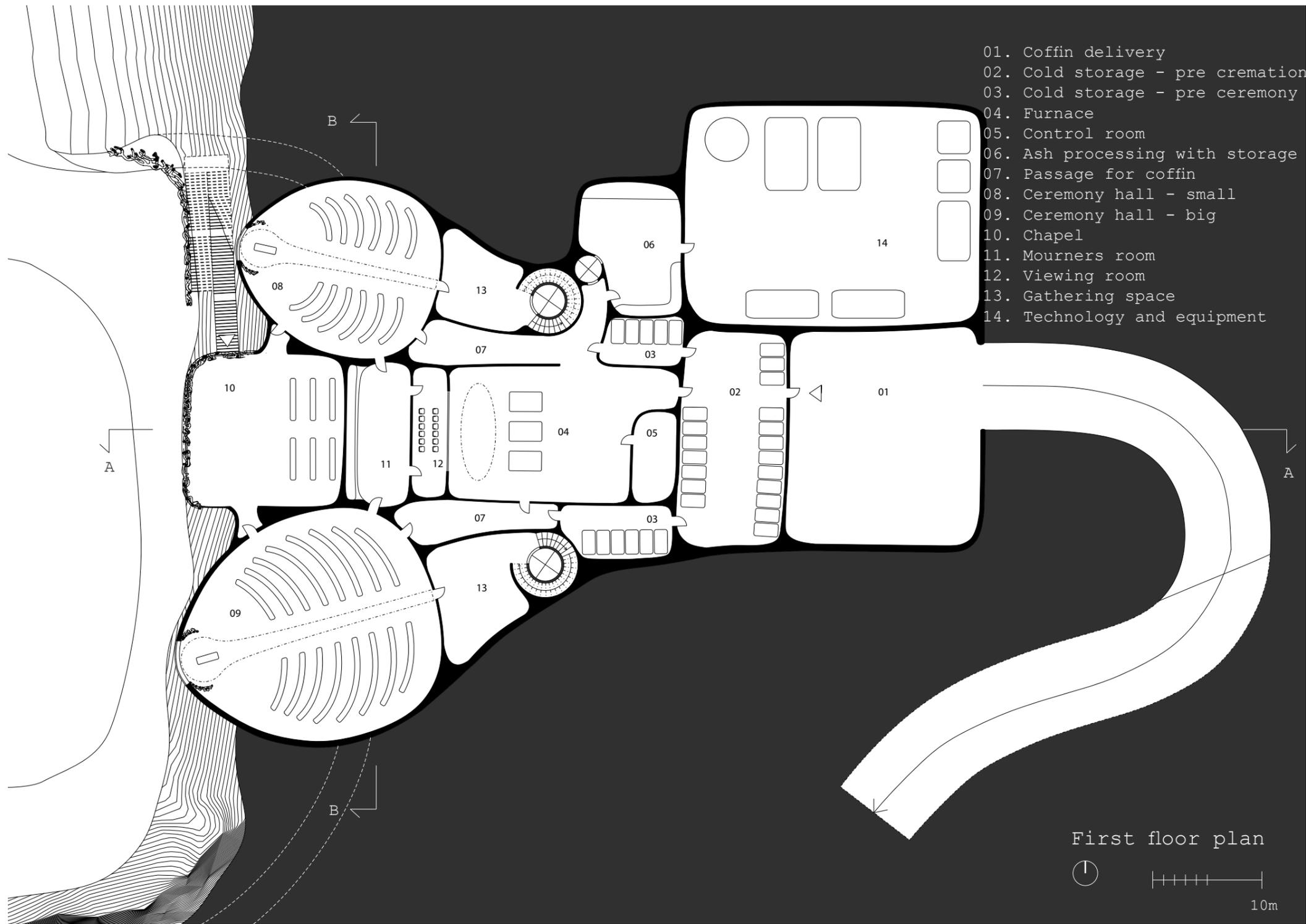
■ Staff
■ Visitors







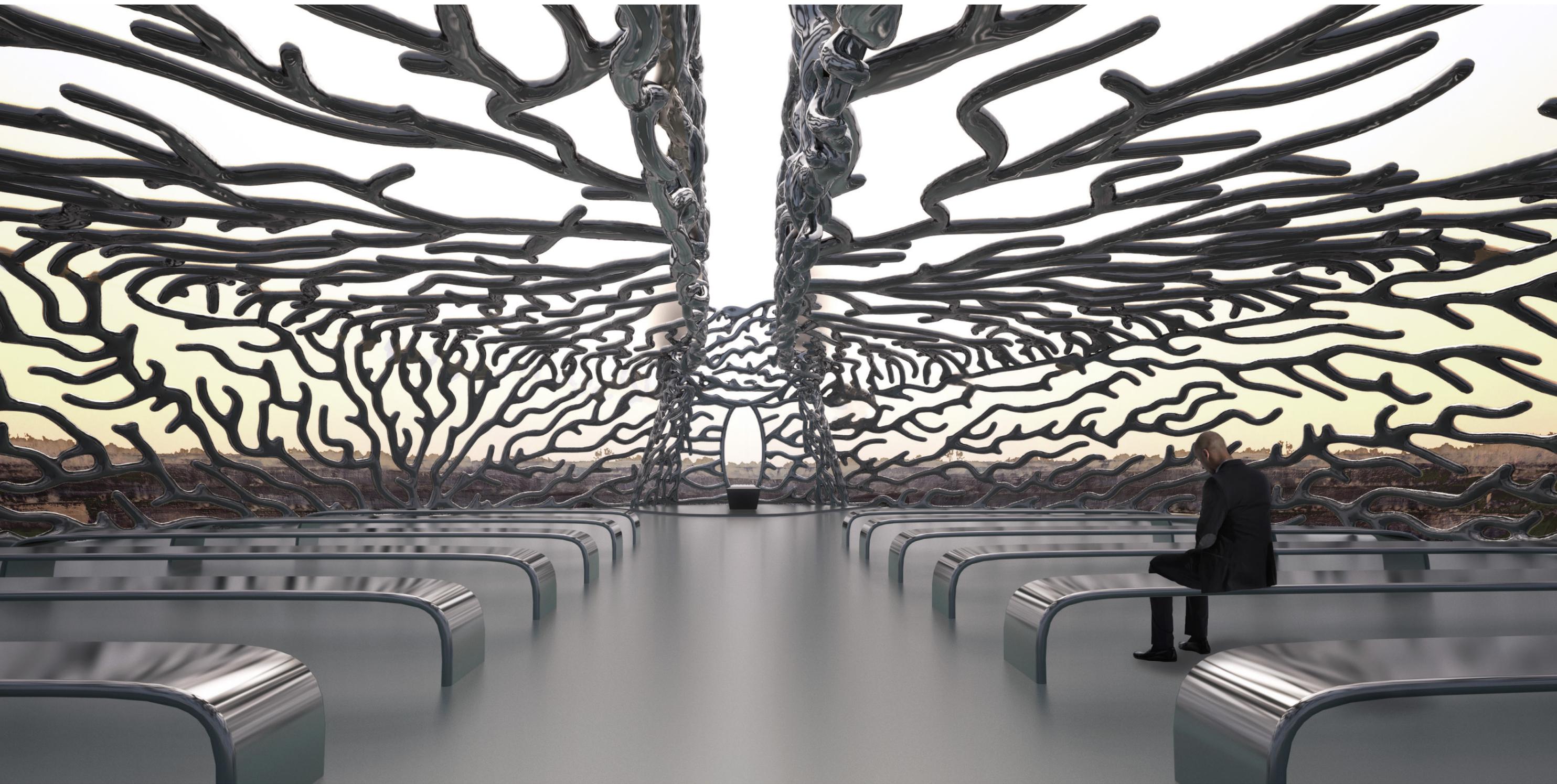
View from the public entrance overlooking the reception and auditorium.



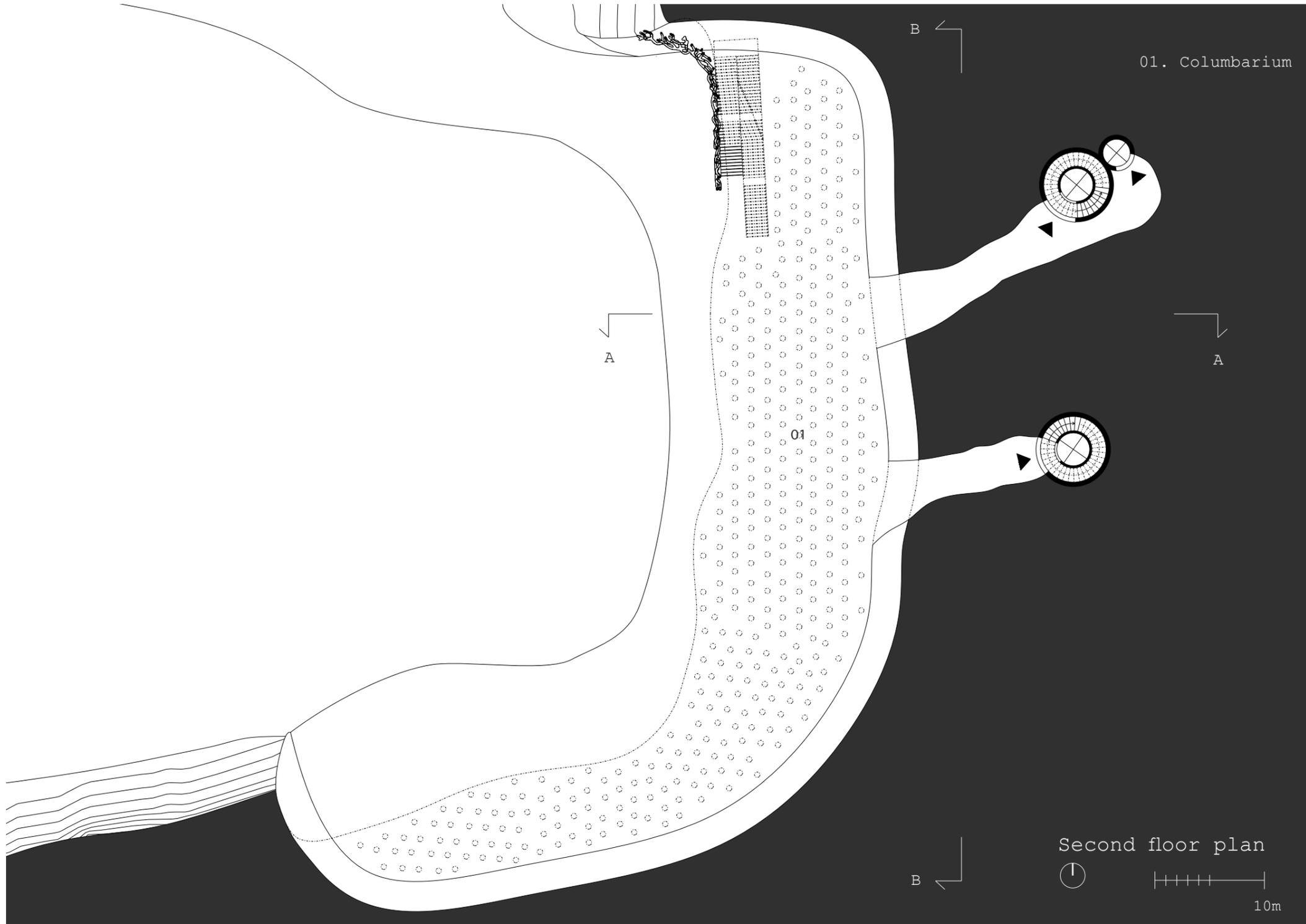
- 01. Coffin delivery
- 02. Cold storage - pre cremation
- 03. Cold storage - pre ceremony
- 04. Furnace
- 05. Control room
- 06. Ash processing with storage
- 07. Passage for coffin
- 08. Ceremony hall - small
- 09. Ceremony hall - big
- 10. Chapel
- 11. Mourners room
- 12. Viewing room
- 13. Gathering space
- 14. Technology and equipment

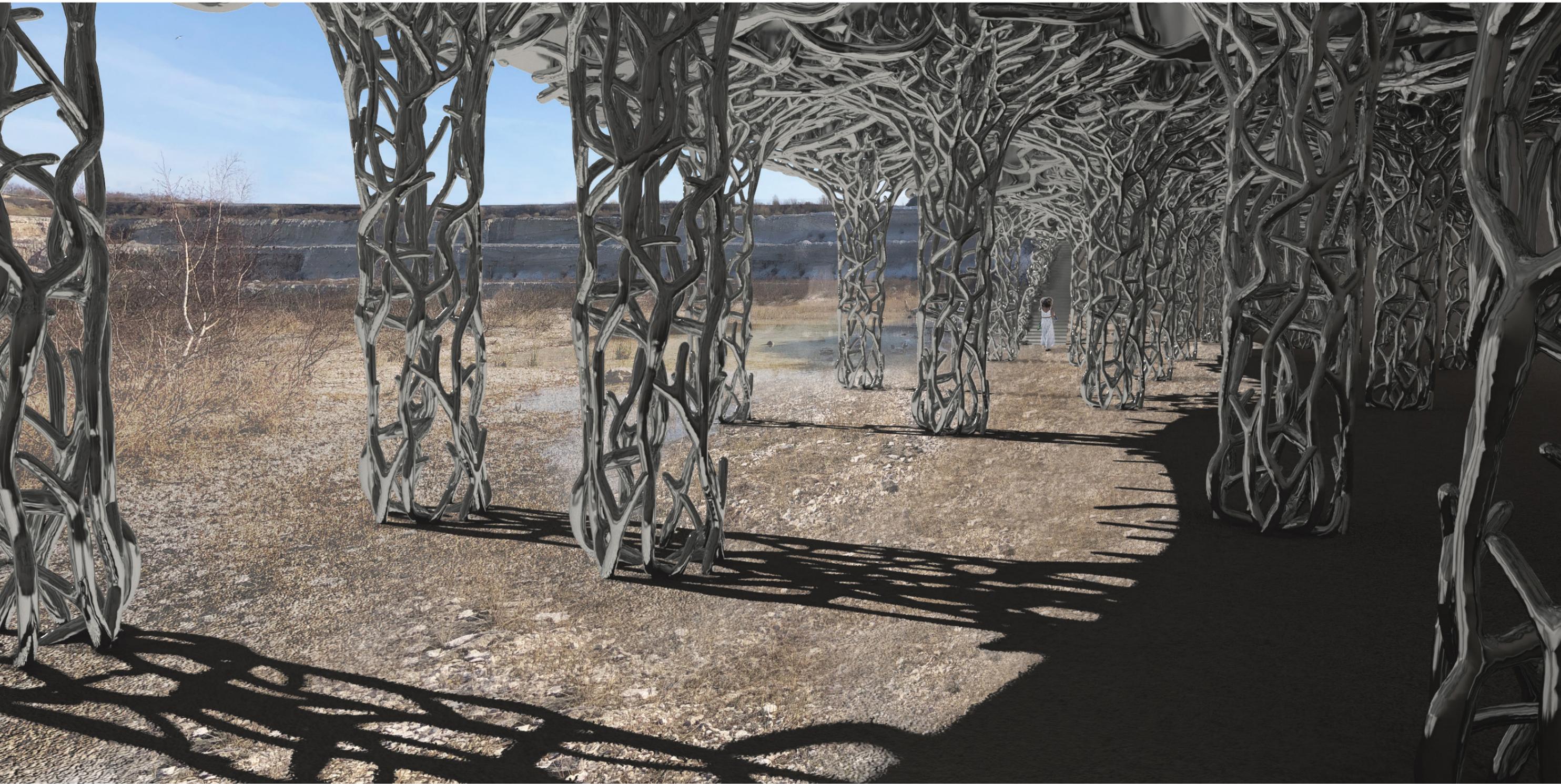
First floor plan





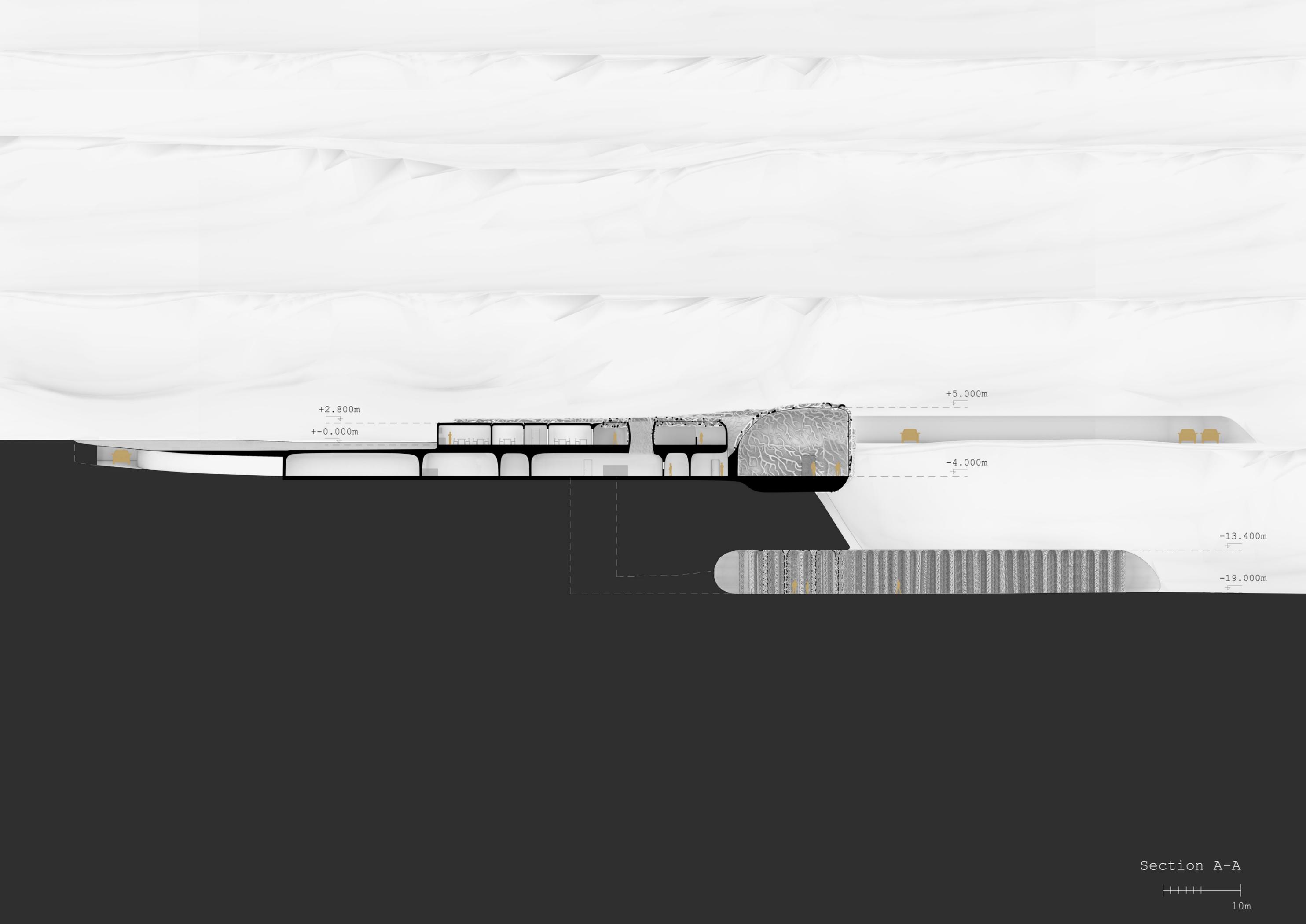
Interior view from the big ceremony hall.





View from the columbarium.

The growing structure works as supporting pillars, but also as placeholders for the urns. The intention is to create a feeling of resurrection, that emerges from the ones that are no longer with us.



+2.800m
+-0.000m

+5.000m

-4.000m

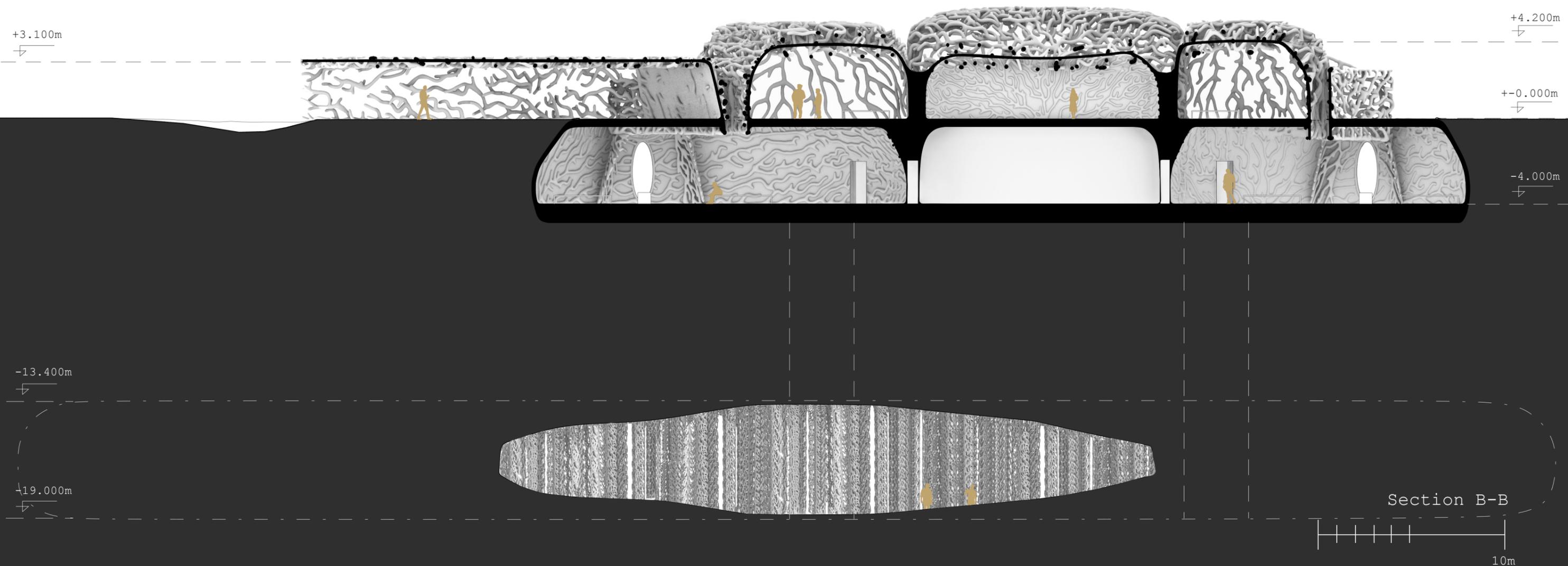
-13.400m

-19.000m

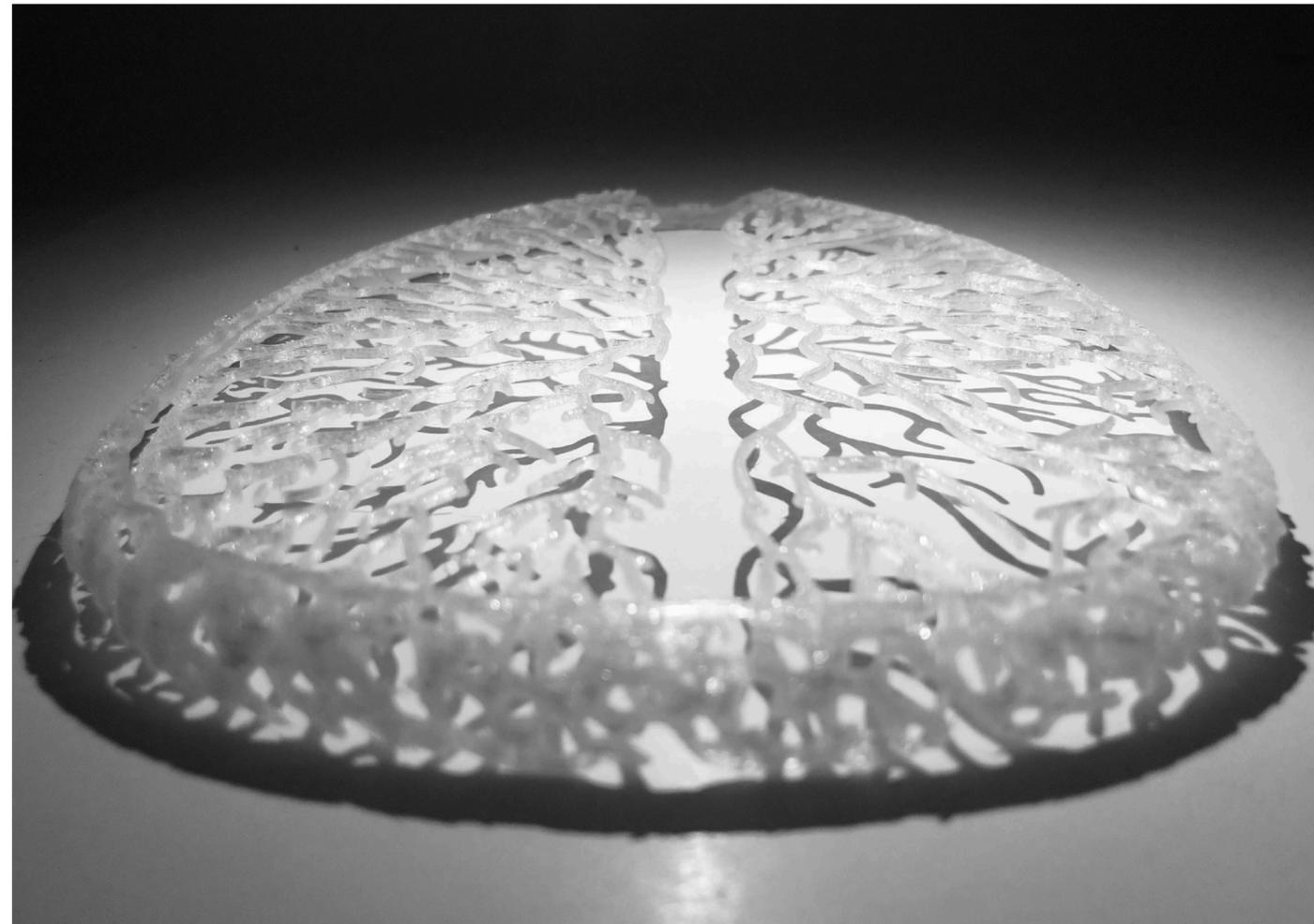
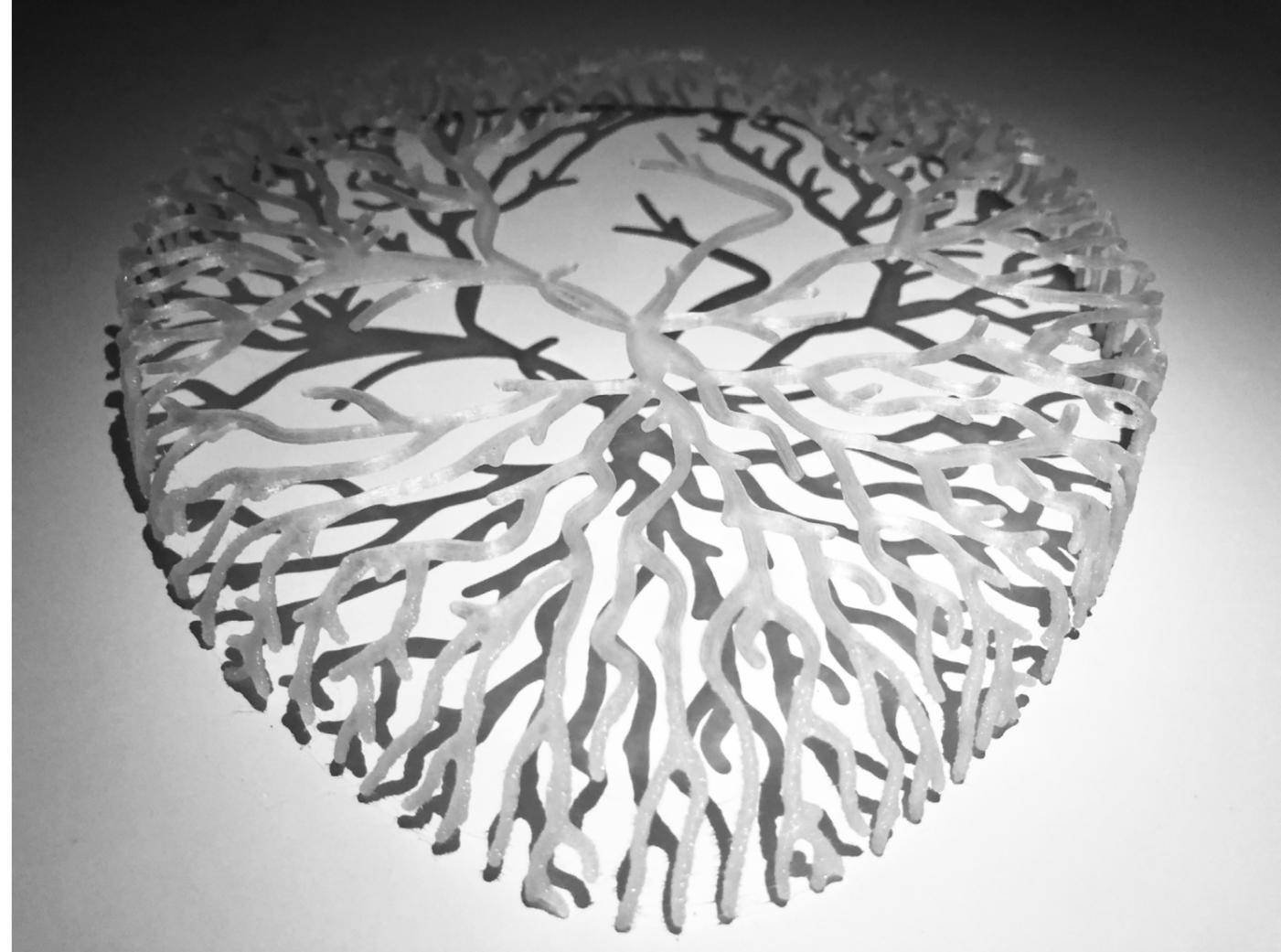
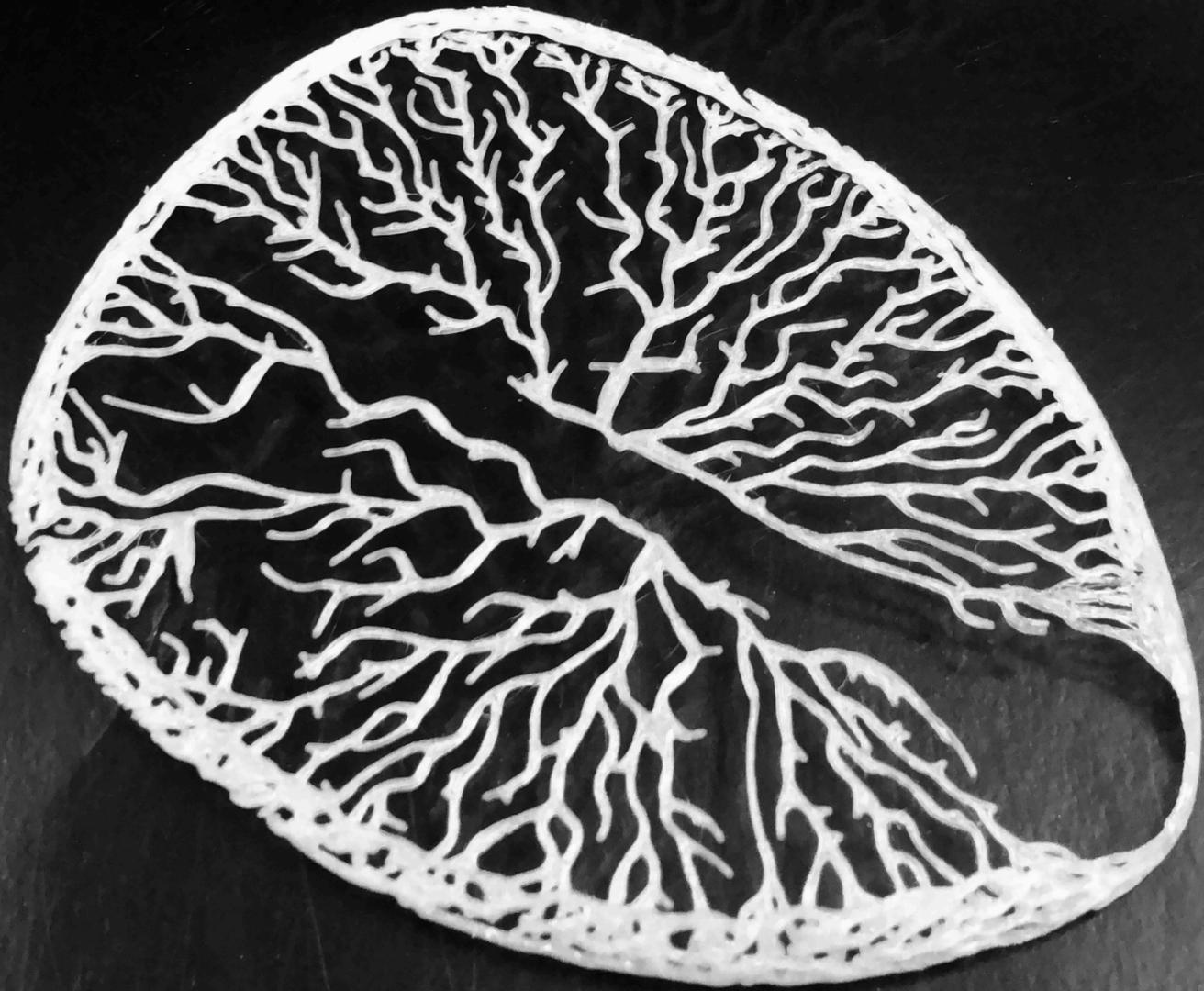
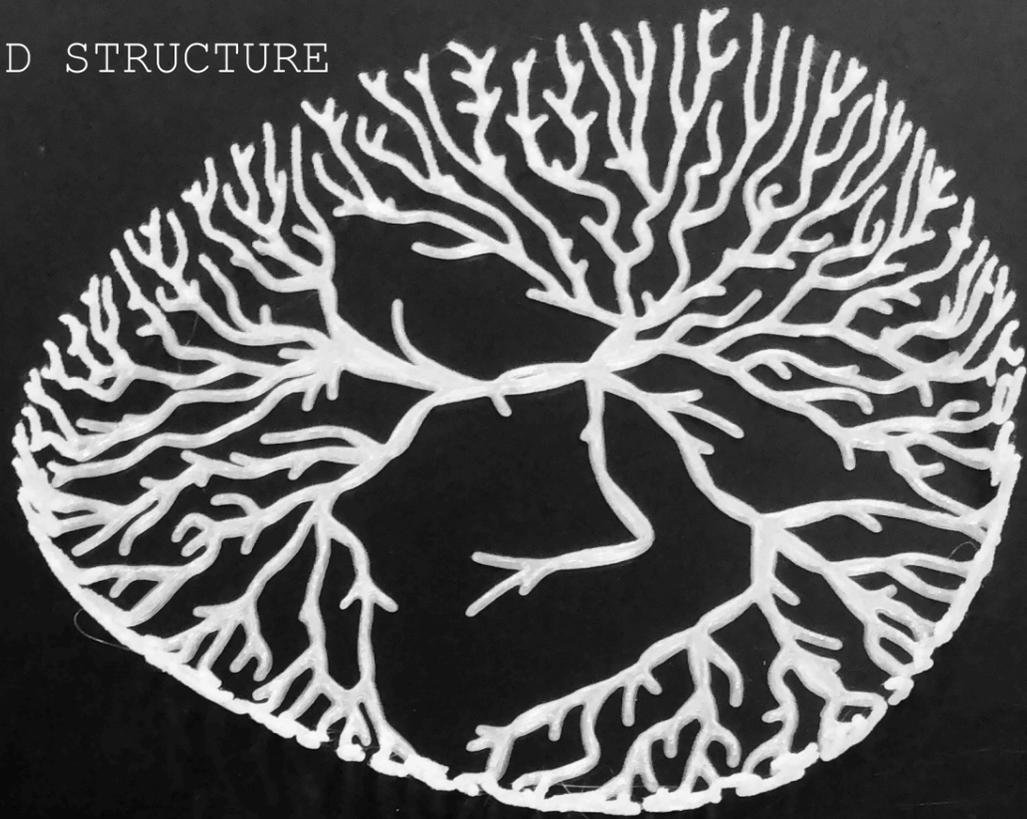
Section A-A



10m

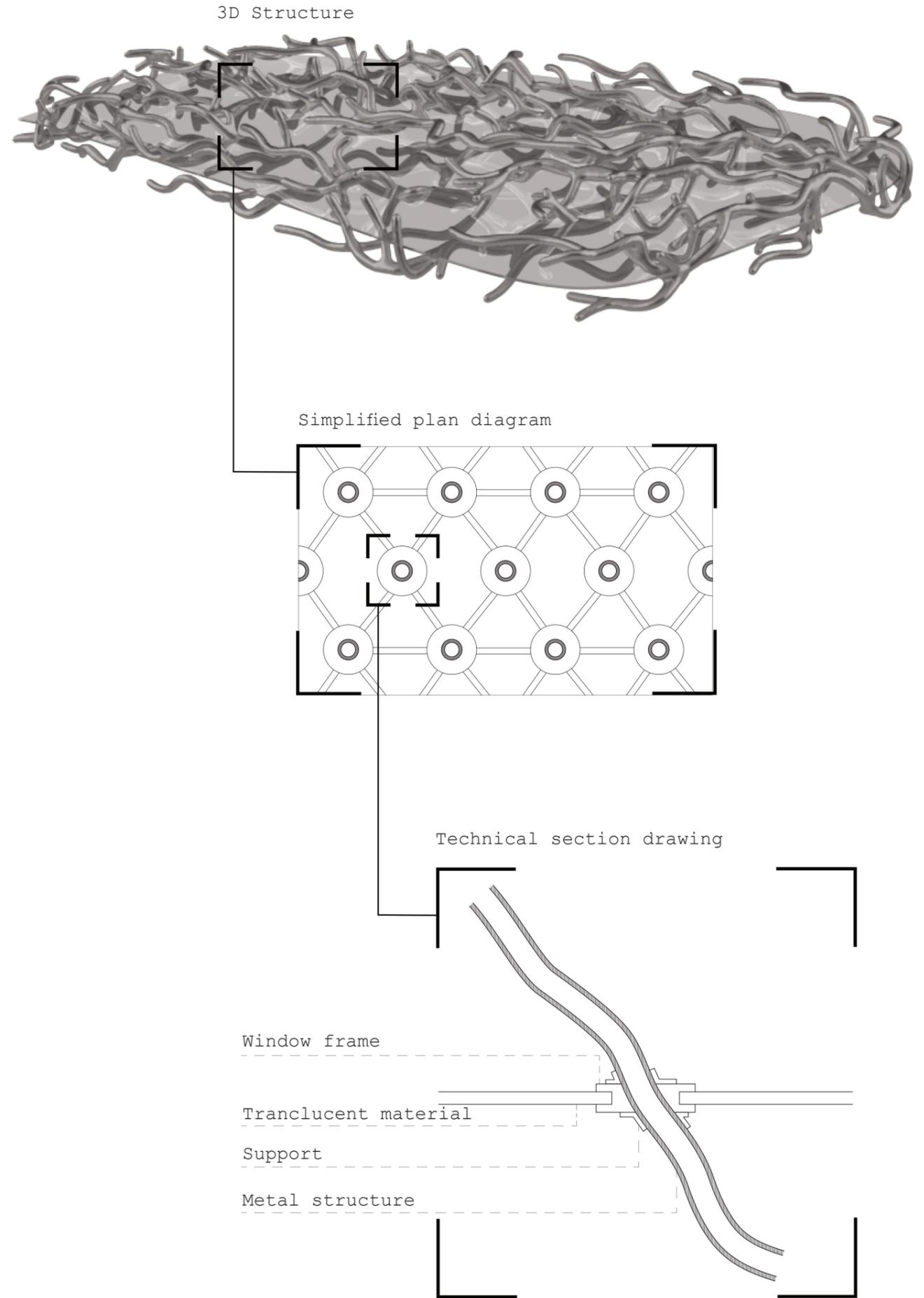


3D PRINTED STRUCTURE



TECHNICAL STRUCTURE DIAGRAM

The structure consists of metal pipes in an organic form, and a translucent glass material that is connected with frames as in the diagram to the right.



REFLECTION

It has truly been a challenge to design a project with a complete different approach than I've done in earlier projects. It has also been eye opening to get a glimpse of all the possibilities that actually exists for us as future architects.

My project has during this course developed into something that I'm very happy and proud of. It finally became what I had in mind in the first place, but at the beginning had a hard time explaining to others (and myself). I wanted the project to reflect new life and new beginnings, and in my opinion it does - the structure in itself but also how it all connects and interlace with eachother, like a system of growth that never ends. I don't think the outcome of the project would ever have been the same if we wouldn't have been pushed to think outside of the box the way we did.