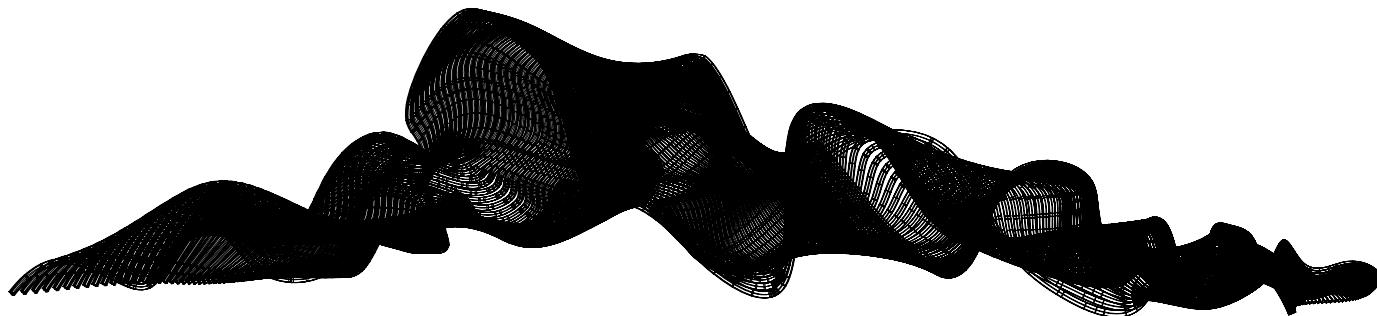


WAVE



*Bachelor Project in Architecture
by Linnea Fällman*

*Course: Contemporary Architecture AAHF30
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Course Assistant: Gediminas Kirdeikis*

Faculty of Engineering, Lund University

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Drone view from north west

01 INTRODUCTION

This project was designed as part of the Bachelor Studio Contemporary Architecture at the Faculty of Engineering at Lund University.

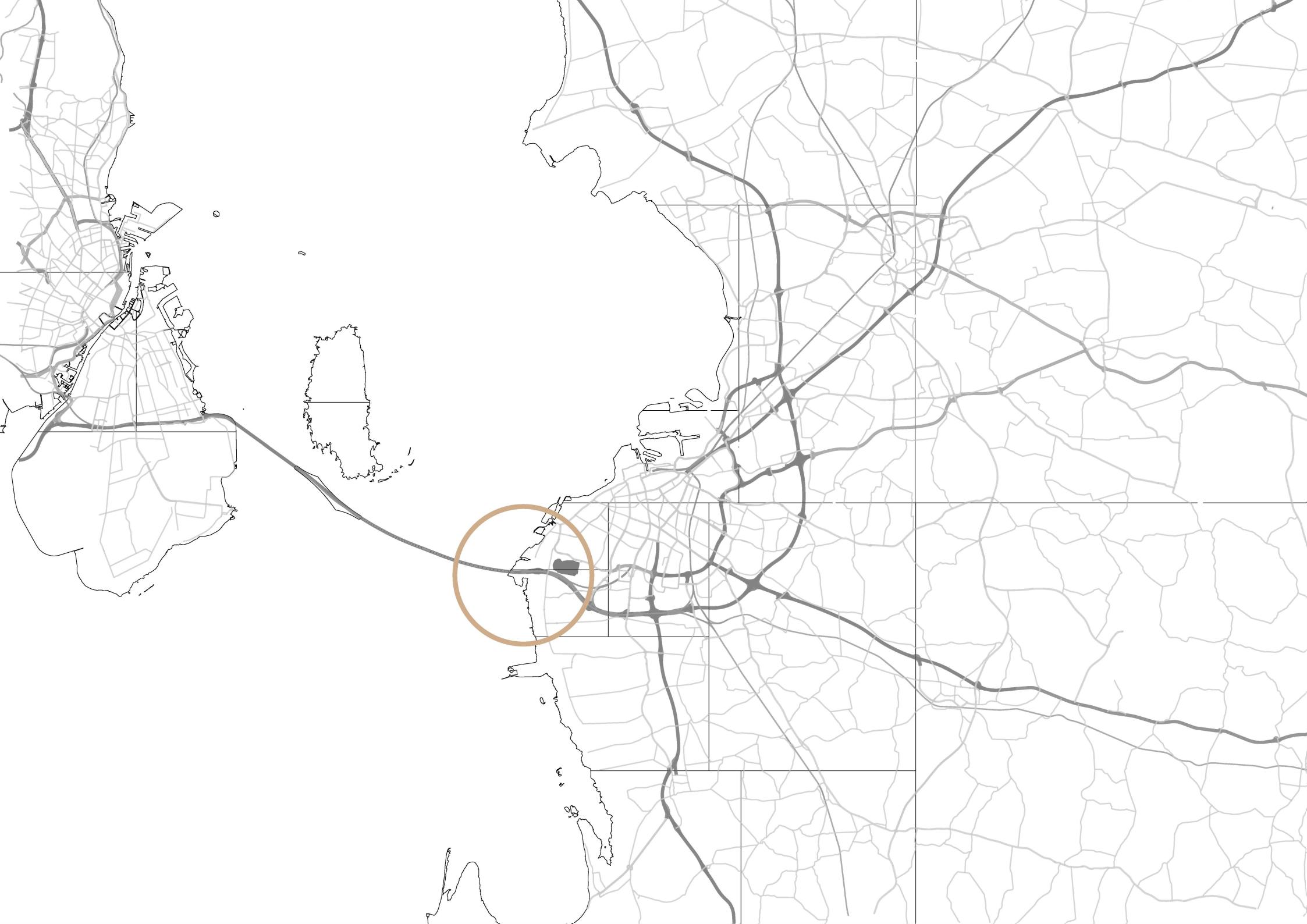
The aim of the course was to explore different ways in which architecture can embody and visualise both poetic and technical qualities. I did this by designing a crematorium with associated chapels, cremation room and columbarium.

The design process has been guided by ideas inherent to the mood flow of grief; the ups and the downs, irregularity and varying degrees of tangibility. I started off with a 3D printed model, which came to serve as a concept piece for the rest of the project. Thereafter I explored different structures by working in Rhino and Grasshopper.

This documentation begins with a short introduction to the site, followed by the design process and thereafter the final architecture proposal. The report is finalised with a brief reflection.

02 THE SITE

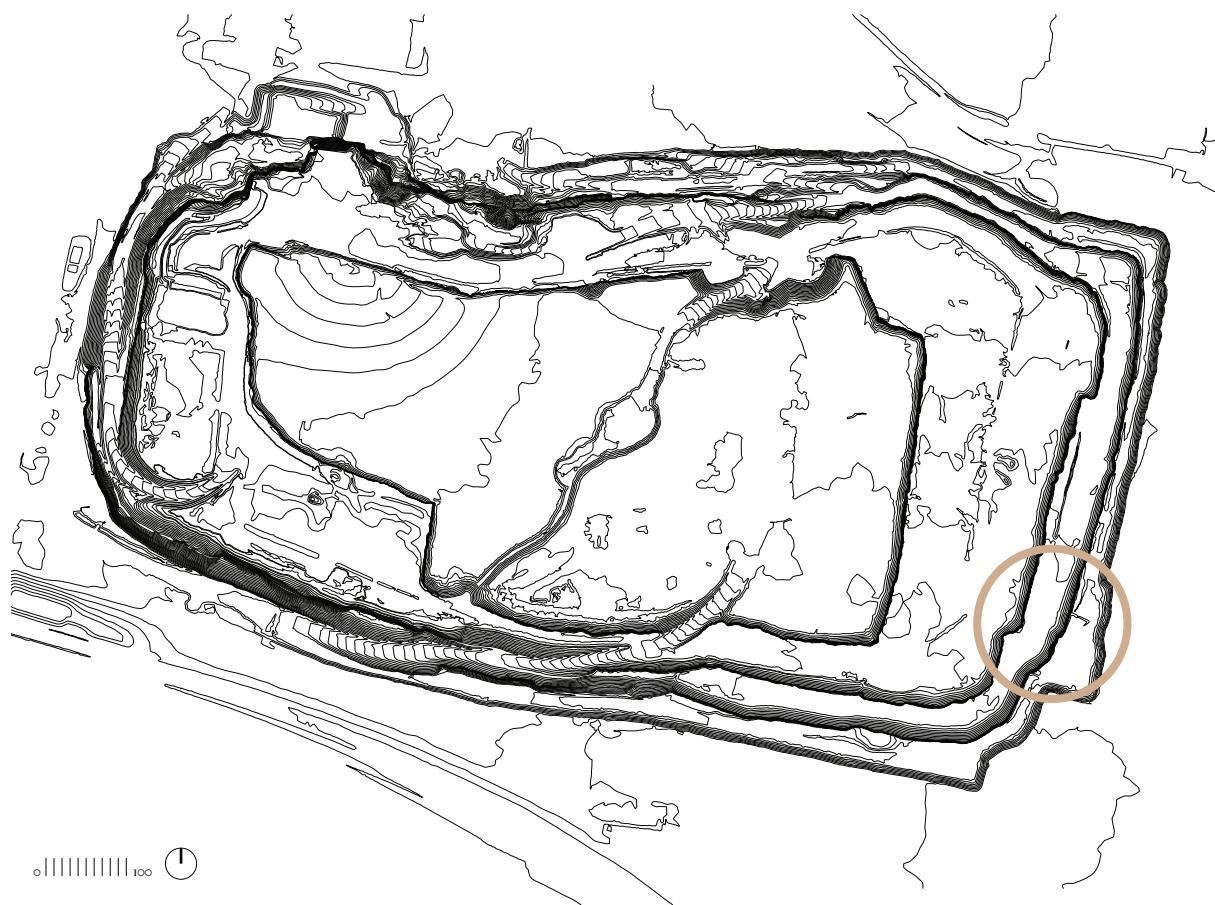
The project is situated in the old limestone quarry in Limhamn, on the outskirts of Malmö, Sweden. With a width of over a kilometer and a maximum depth at approximately minus 70 meters the excavated site displays a variety of biotopes and conditions. No longer in mining use, the quarry has served as a nature reserve for the past two decades thanks to its collection of rare flora and fauna.



2.1 The Visit

I first visited the quarry during a snow storm in February of 2018. The sight was bad, a thin fog hung in the air and the soundscape of the city above became increasingly distant as our group descended down into the excavation. It was hard to separate the white walls of the quarry from the giant pieces of ice clinging to its sides. I was inspired by the ambiguity of the site and the fleeting sense of reality that its conditions brought.

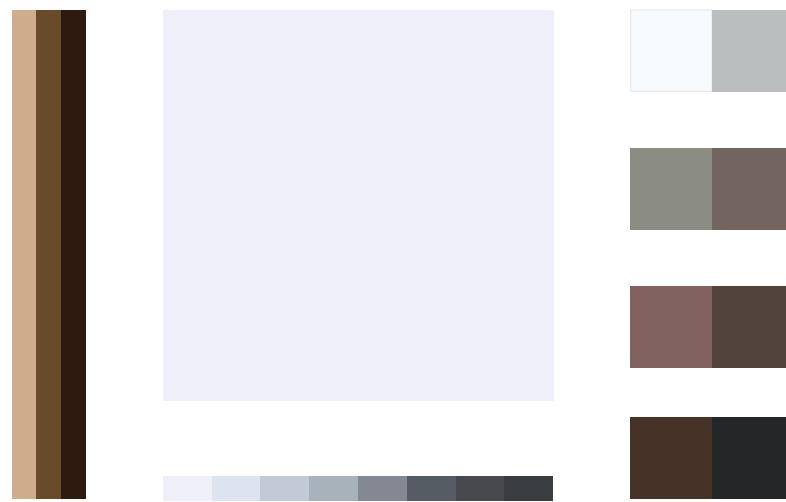
Most of the quarry was reachable by some kind of road, except for the south-east corner. The plateaus became steep and narrow as you approached it and no old buildings or machinery remained here. The apparent remoteness and the clearly exposed raw layers of limestone displayed here made me choose this part of the site for my proposition. Its barrenness represented an aura of the quarry I found fascinating.



*Site plan with proposed
insertion*



2.2 The Swatches



*Swatches pipetted from
photos of the quarry*

03 THE PROCESS

Throughout the project, my main tool was Rhinoceros in occasional combination with Grasshopper. I started with collecting inspiration from existing works of both art and architecture which I found enriched my concept. I then experimented with 3D printing and different beam structures, before settling on the final product.

3.1 The Inspiration



Expose Exposed
by Cha Jong Rye



Harbin Opera House
by MAD Architects

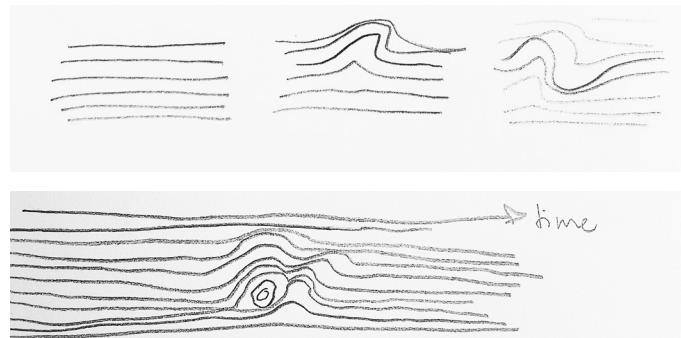


Transparency & Movement

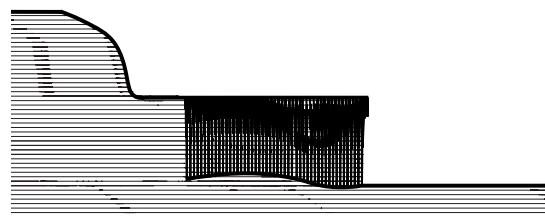


3D Printed Model

3.2 The Concept

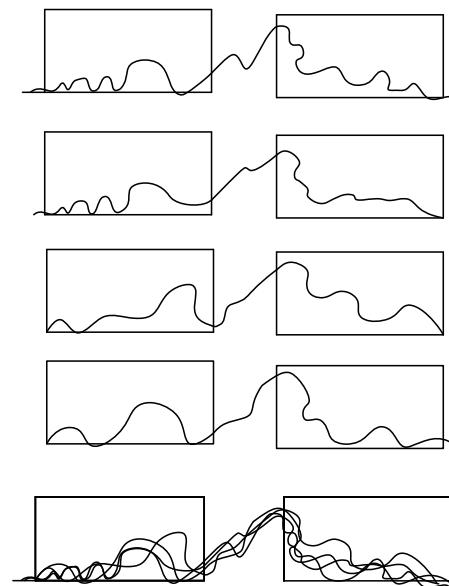


*The emotional landscape,
disturbed by a ripple of waves*

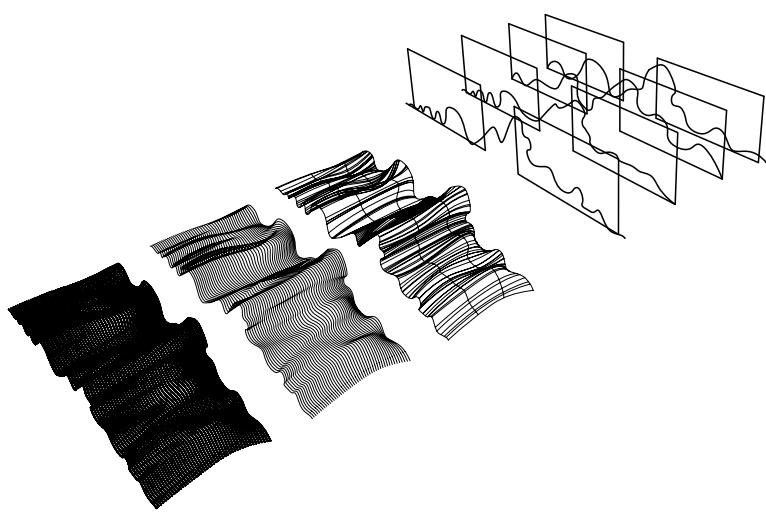


*Architecture as a
continuation of landscape*

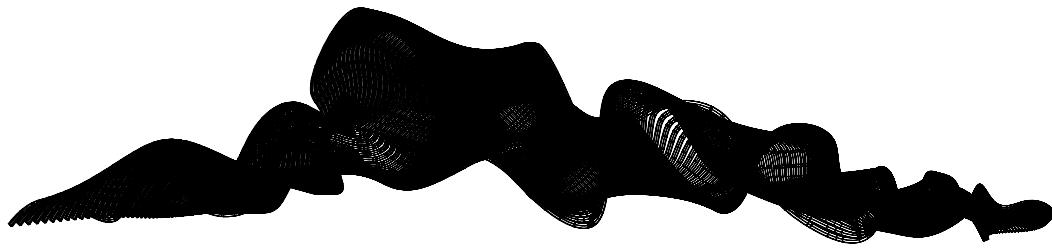
3.3 The Rhino & Grasshopper Process



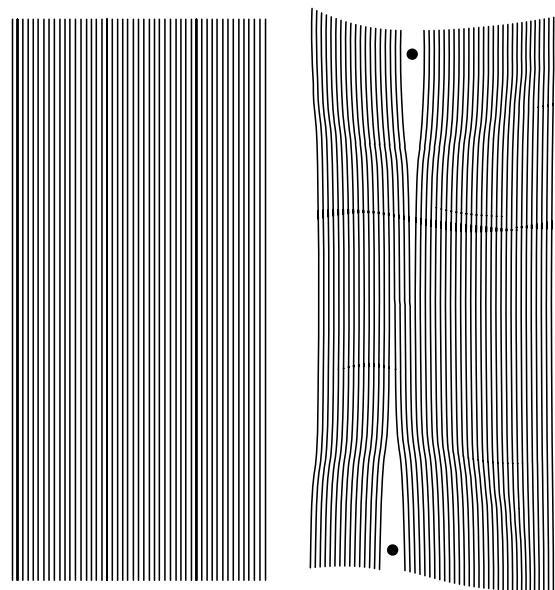
Section curves



*Aligning, lofting &
contouring curves*

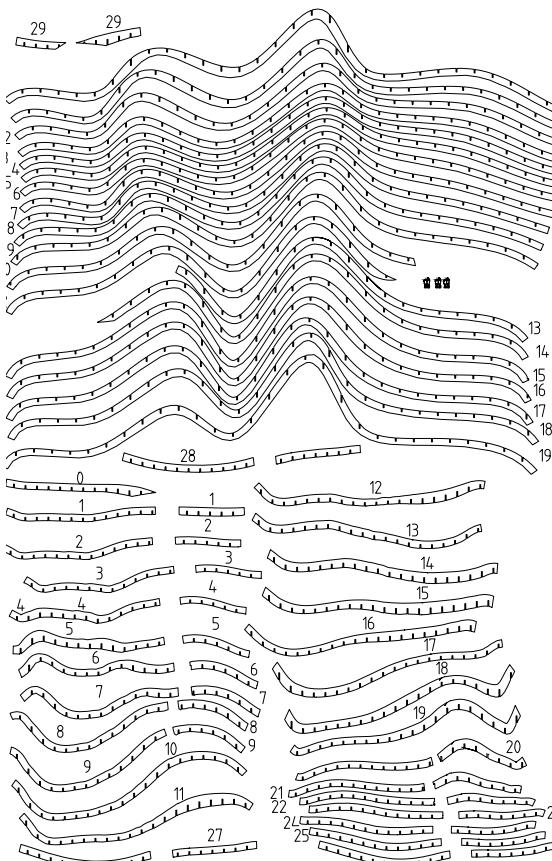


3D Structure Beams

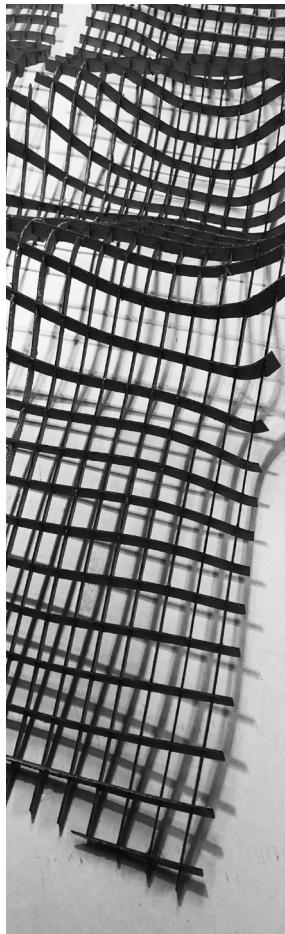


*Creating entrance openings
using repelling points in
Grasshopper*

3.4 The Model



*The puzzle of the model
beams*



04 THE ARCHITECTURE

The vertical edge of the naked cliff provides a potential connection to the exposed layers within the earth. I wanted to make use of this to illustrate a raw sense of connection with one's inner self. As such, the architecture flows from within these exposed layers and embraces the visitor, urging them too to peel back a few layers and let go.

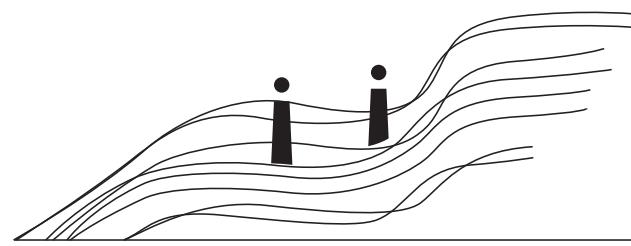


1 Columbarium
2 Memorial Garden

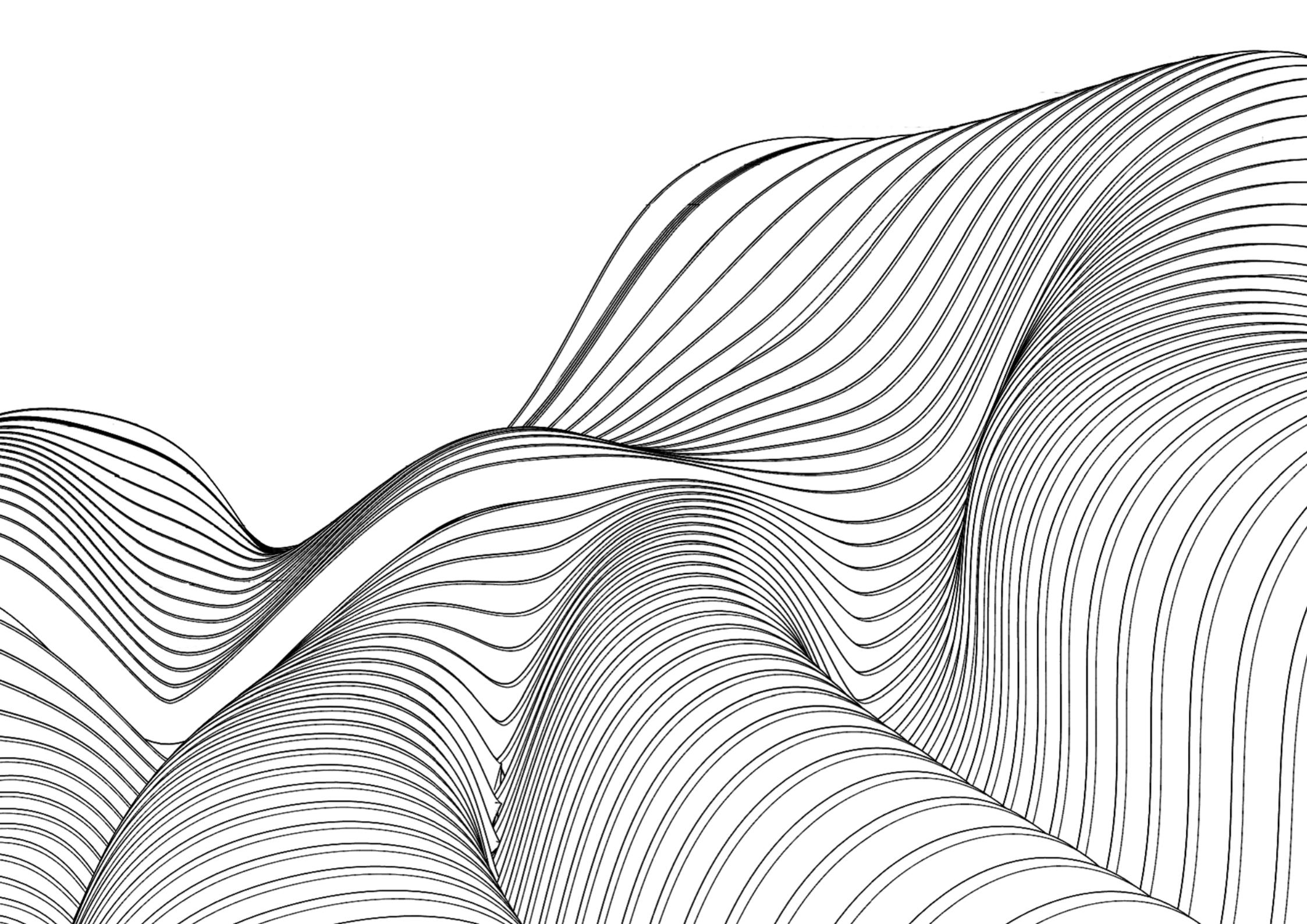
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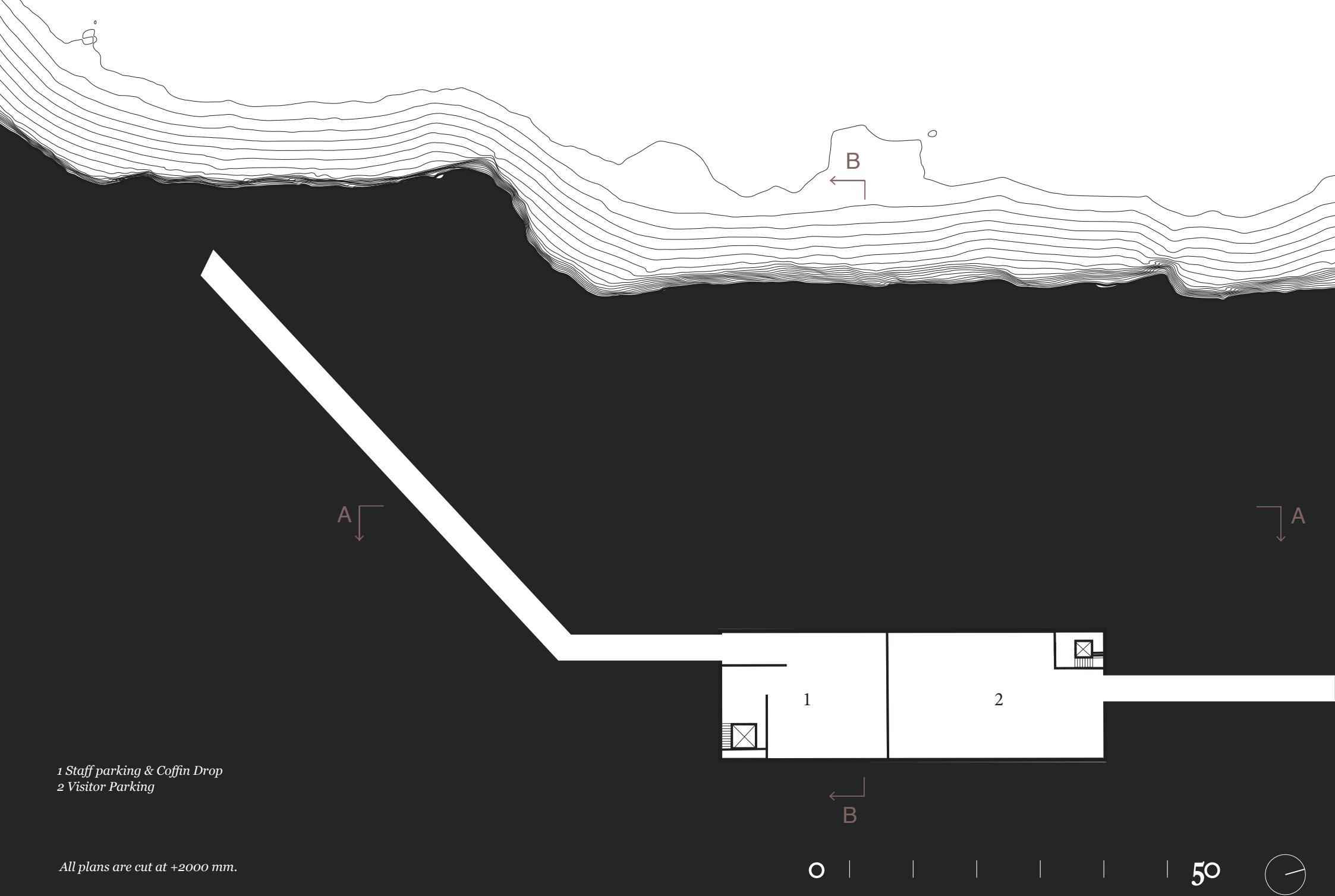


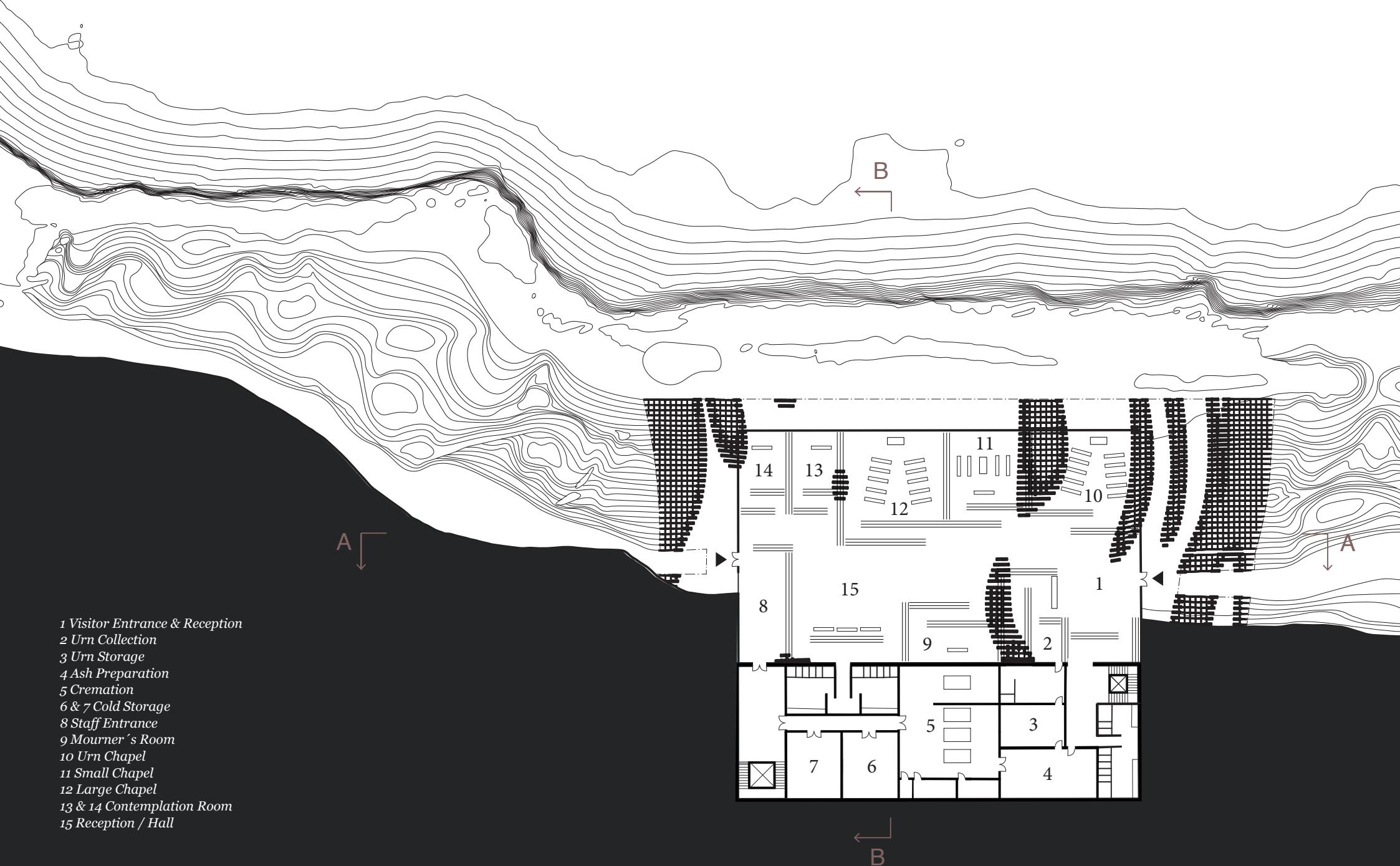
4.1 The Entrance



*Embraced by the landscape
//
swallowed by the emotional flow*





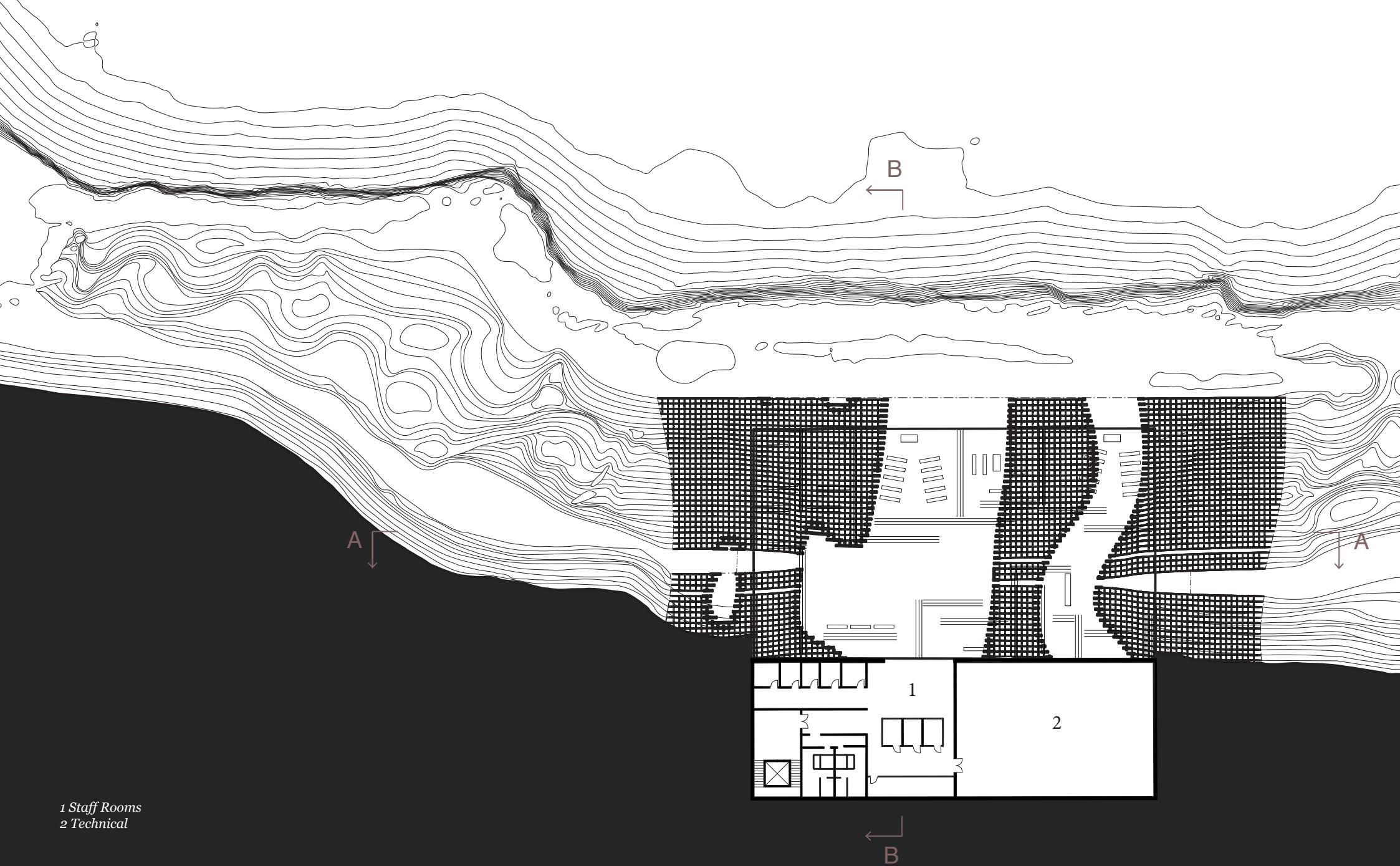


All plans are cut at +2000 mm.

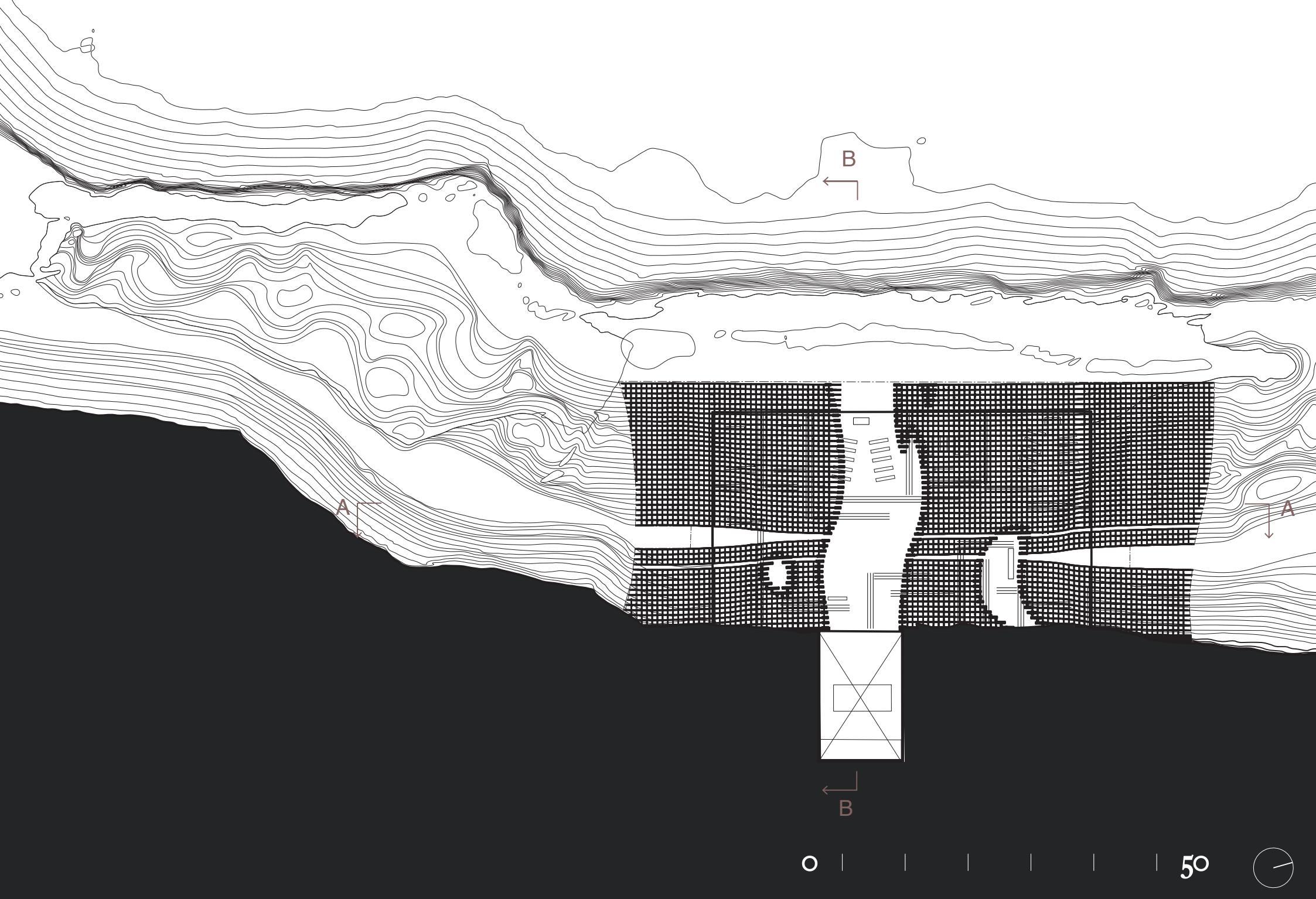
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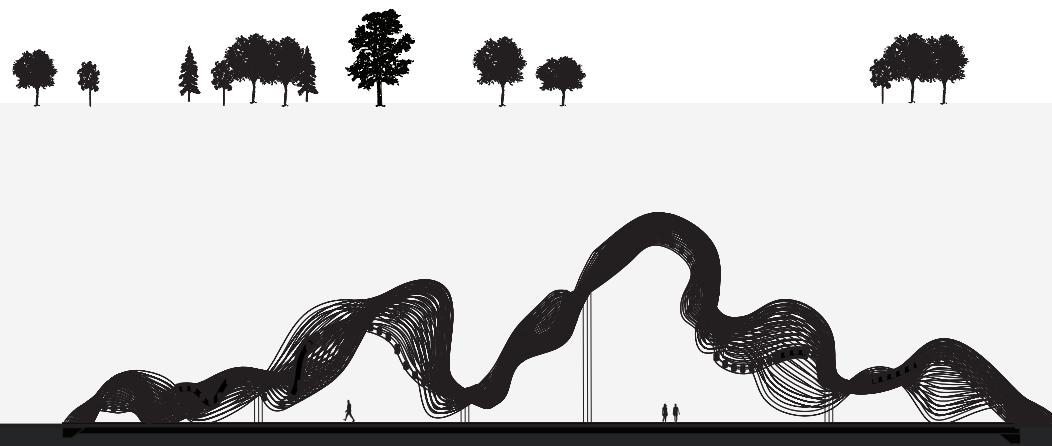


View of entrance and reception hall.



All plans are cut at +2000 mm.





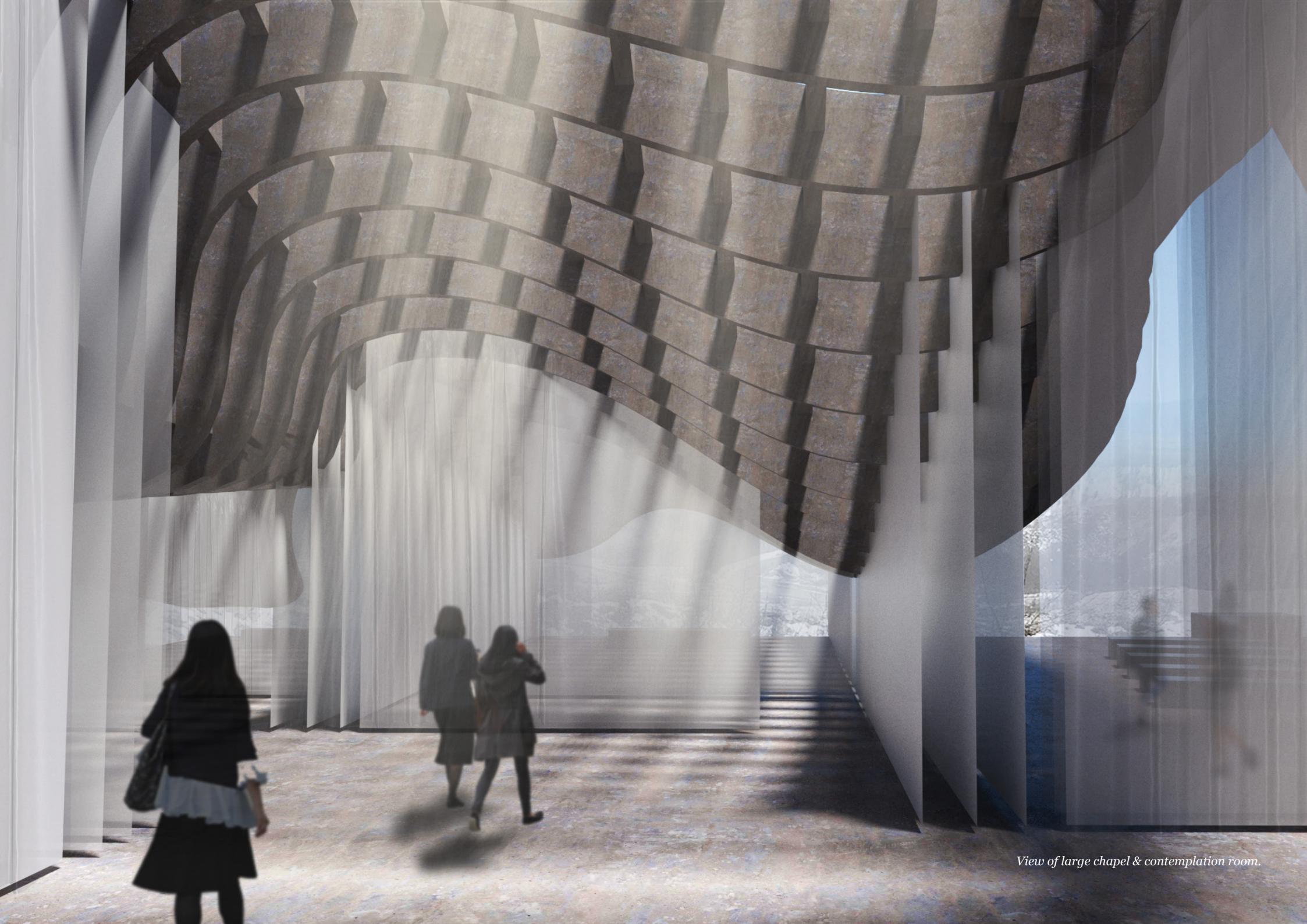
A - A

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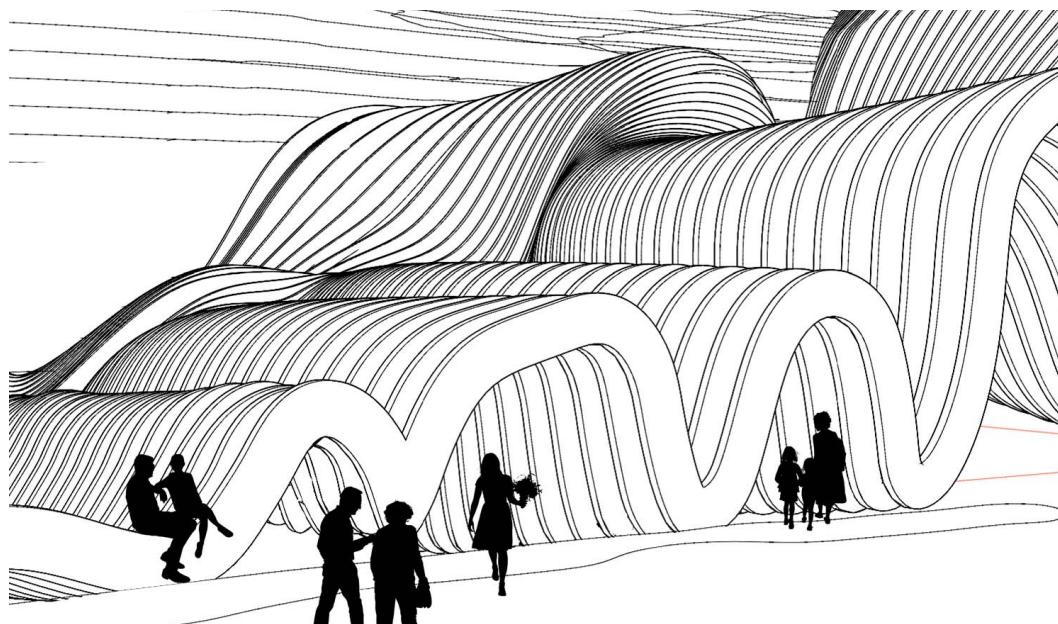
B - B

○ | | | | | | | 5°

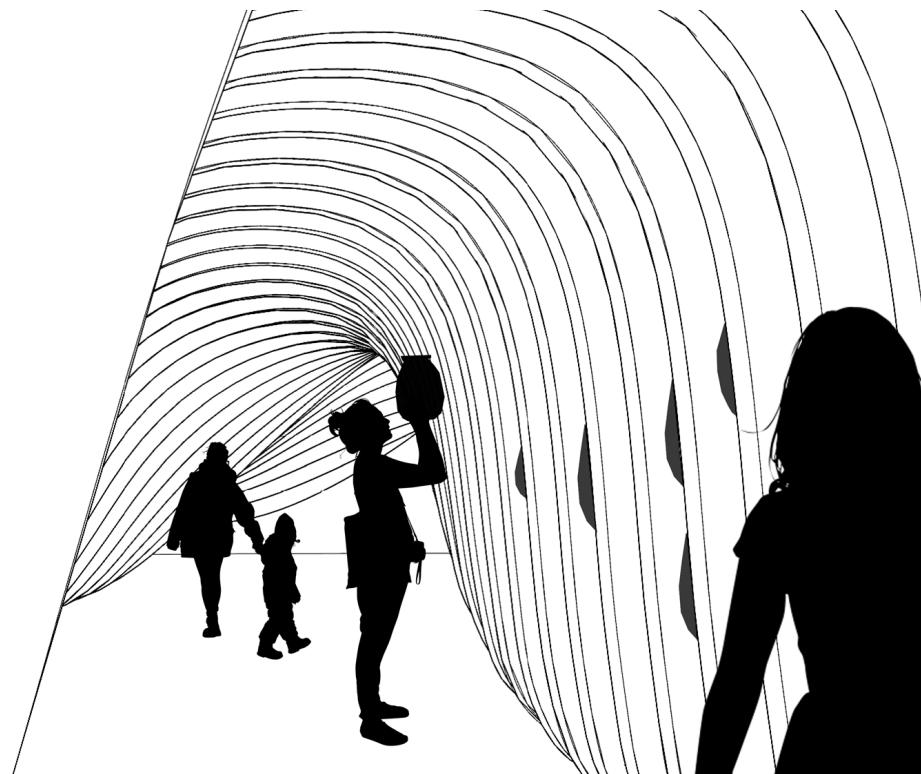


View of large chapel & contemplation room.

4.2 The Columbarium



*View of columbarium from
memorial garden.*



*Inside columbarium.
Urns are placed on shelves
between the beams.*

05 REFLECTION

As mentioned in the introduction, the main goal of this course was to explore different ways in which architecture can embody and visualise both poetic and technical qualities. In addition to this, we also had to get familiar with new software and implement those in our process.

In comparison to my previous projects, the process of this one has been much less linear. I usually grasp the overall form from the beginning and continuously improve it as the project flows. This time however, I found myself testing numerous complex and vastly different forms parallel to developing the concept. It was a new experience for me, and one I think I benefitted from in a project with such a complex program.

If I were to mention one thing I really got out of this course, it has to be the newfound confidence in using the course software. I would like to thank John Ross and Gediminas Kirdeikis for really encouraging us to explore the possibilities of these programs.

