



Entropi

SIXTH SEMESTER

Bachelor project

Crematorium

Site: Limhamnns limestone quarry, Malmö

Entropi is a bachelor project created during 10 weeks in the studio "Architecture in the Contemporary". Using Rhinoceros and the plugin Grasshopper the main purpose has been to explore how digital tooling can contribute to an experimental process with testing new ways of creating architectural and structural elements, leading to an innovative design. The result is a crematorium with calm inner spaces and a contrasting chaotic outer structure.

Limhamns limestone quarry

The location of the crematorium is in Limhamns limestone quarry, situated in the outskirts of Malmö.

Between 1866 and 1994 limestone was mined from the quarry. Today the large site is an abandoned landscape that has been taken over by nature. You can still experience the industrial history of the quarry. Concrete, steel and entire buildings is as much a part of the place as the reeds, bushes and trees.





The site

The crematorium is situated in the quarry's south west corner, overlooking the east side. It sits amongst trees and bushes, close to two ponds. An already existing road behind the building brings the visitors down the 65 meters from ground level to the bottom of the quarry



Thoughts about the task

To lose a close family member or friend is one of the most overwhelming experiences in life. To accept that you're not going to see them again seems impossible.

I wanted to address the feeling of acceptance. The walk towards the crematorium is going to mirror the chaotic state the mourners are in, but when they enter the chaos, they should find themselves in a calm and open space, surrounded by the outer chaos. The chapel and ceremonial halls shall function as a place of reflection, letting you accept that you're in the middle of a chaotic period of life.

Creative process

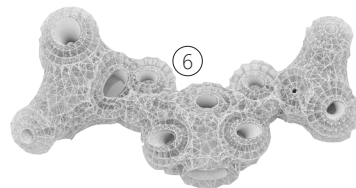
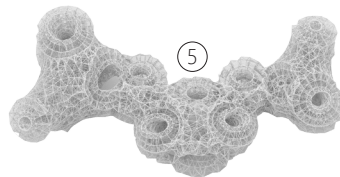
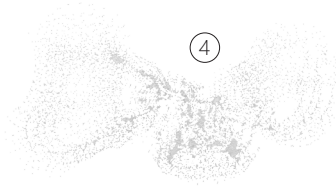
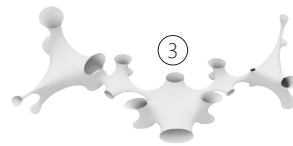
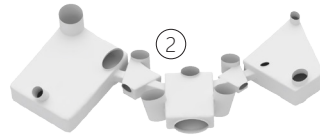
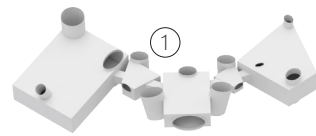
The project began with exploring both calmness and chaos. At first a model of stretched fabric was created. The goal was to address the feeling of calmness. Later on a collage was made during three days. The creation was based on impulses without any idea about the final result. This to address the feeling of chaos..



The calm model



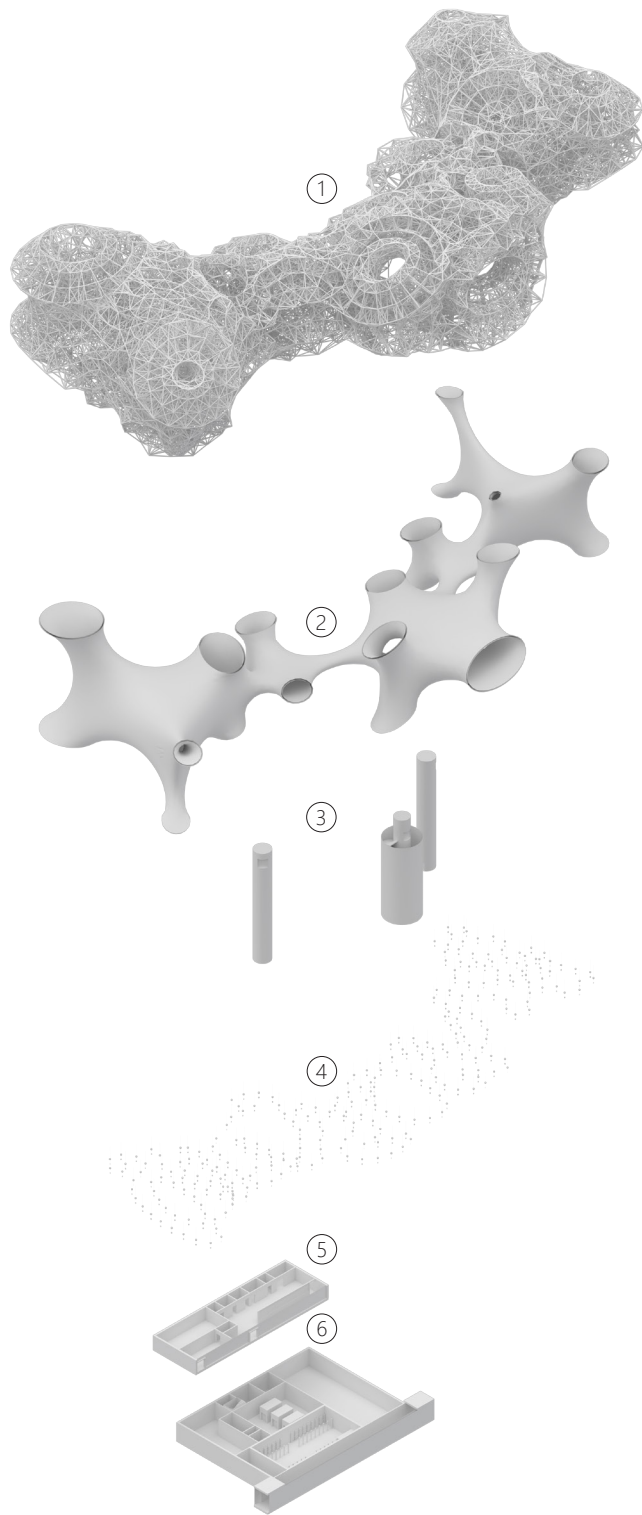
The chaotic collage



Digital process

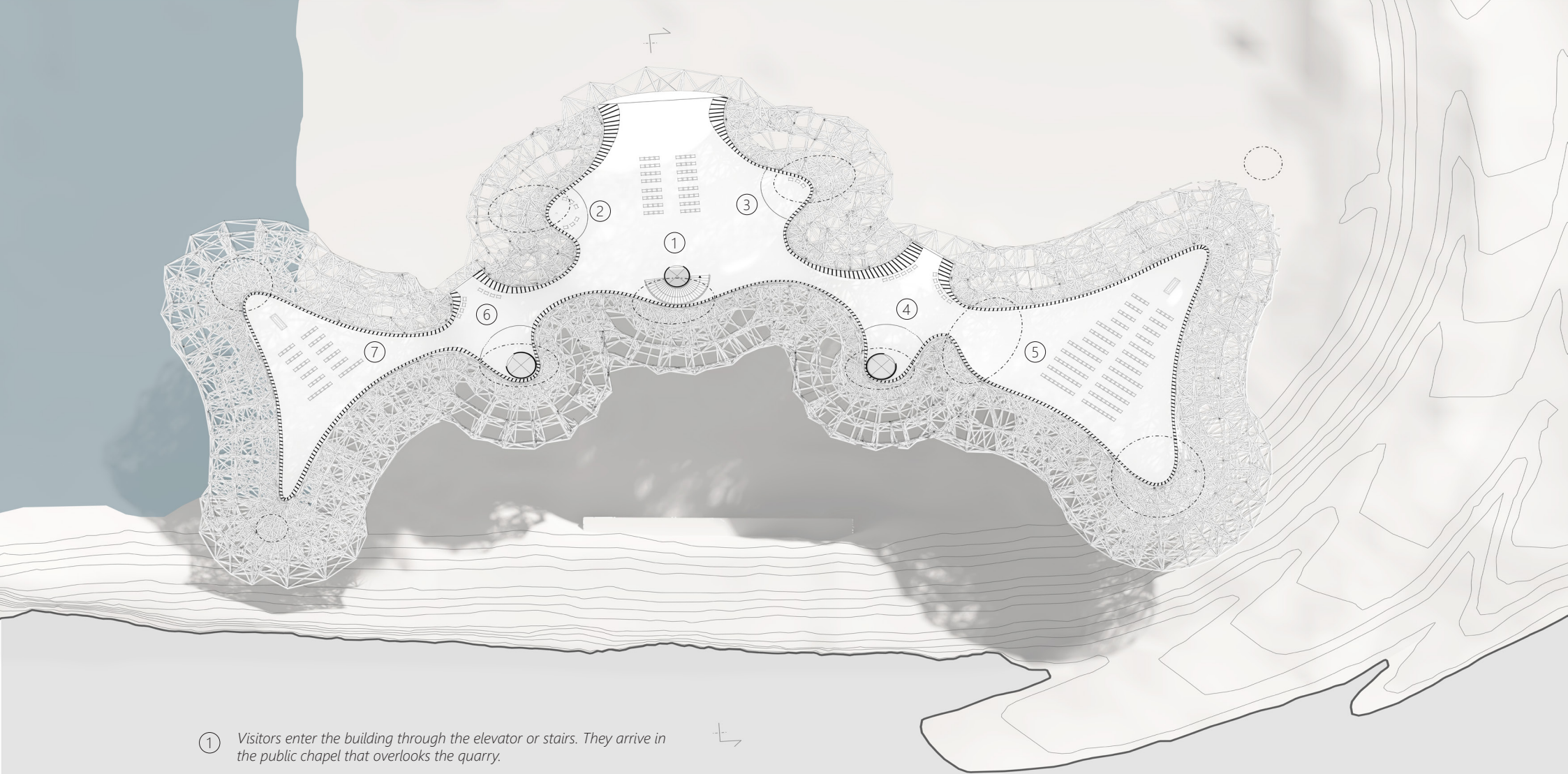
With the model and the collage as inspiration a structure was made in Rhinoceros and Grasshopper. The calm cocoon forms the inner spaces. The fabric is suspended within the large, chaotic structure that creates the buildings outer expression.

- ① A form was created based on desired spaces. One public chapel in the centre and two ceremonial halls. The form also contains desired qualities such as light from above in the ceremonial halls and panoramic windows in the chapel.
- ② The shape is brought into Grasshopper where it's made to get rounded corners.
- ③ With the openings as fixed points the shape gets stretched out, resulting in a cocoon shape reminding about the early model of suspended fabrics.
- ④ From the surface of the cocoon anchor points are offset.
- ⑤ Between these points pipes are created, creating the exterior structure, reminding about the chaotic collage.
- ⑥ The cocoon and steel structure are combined, creating a calm inside with a chaotic outside.

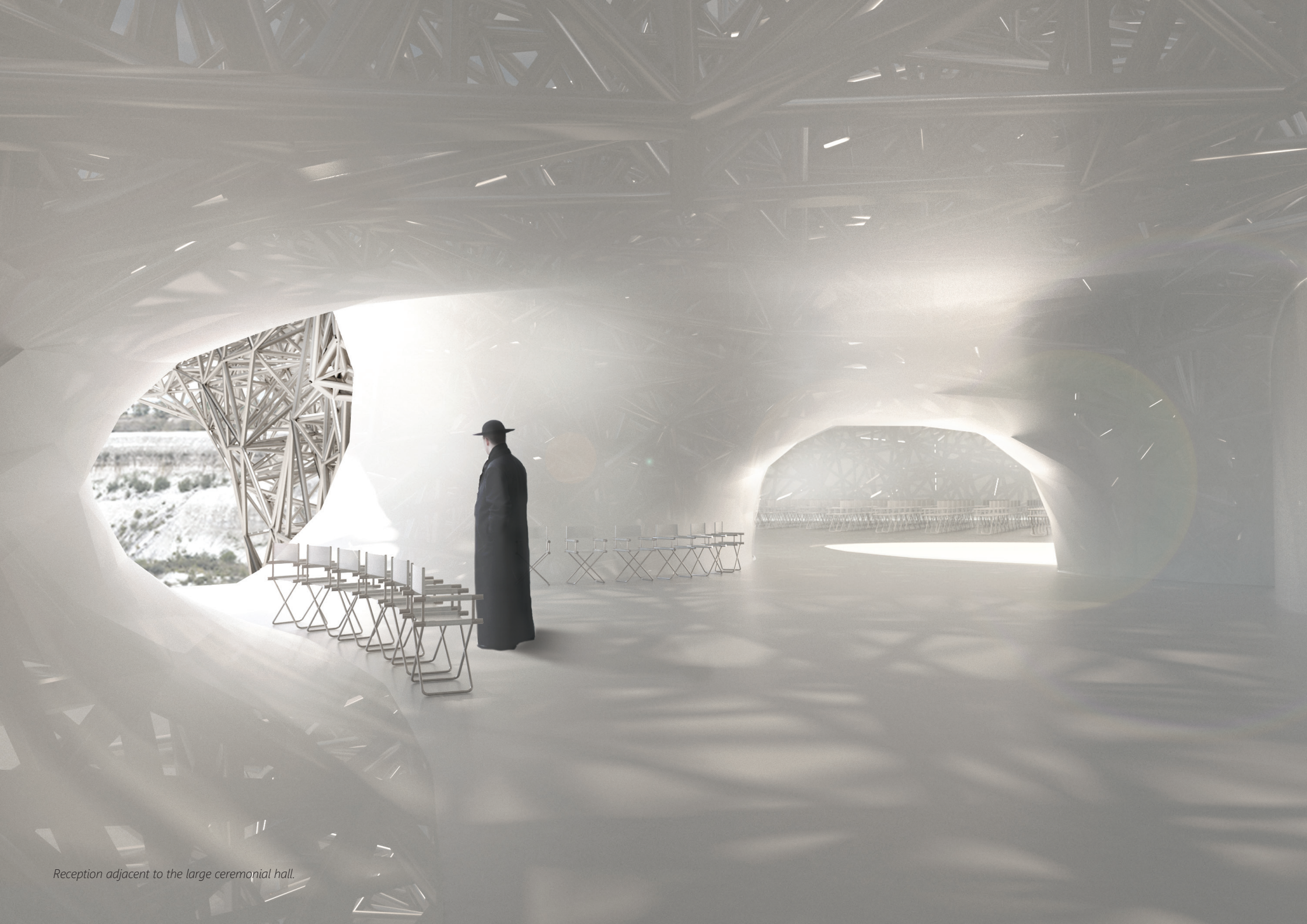


Final building

- ① *The outer steel structure supports the inner fabrics.*
- ② *A two layered cocoon forms the chapel and ceremonial halls.*
- ③ *Concrete pillars carry the structure whilst providing elevators and stairs.*
- ④ *The columbarium with hanging urns is located underneath the structure.*
- ⑤ *Staff area, toilets and coffin delivery is located on ground level.*
- ⑥ *Cold storage, cremation room and urn storage is placed under ground.*



- ① Visitors enter the building through the elevator or stairs. They arrive in the public chapel that overlooks the quarry.
- ② Urn delivery separated with a curtain from the chapel.
- ③ Smaller room for prayer also separated from the larger room.
- ④ Reception area for mourners before they enter the large ceremonial hall. The coffin is brought up via the elevator.
- ⑤ The large ceremonial hall.
- ⑥ Reception area and elevator for the small ceremonial hall.
- ⑦ The small ceremonial hall.



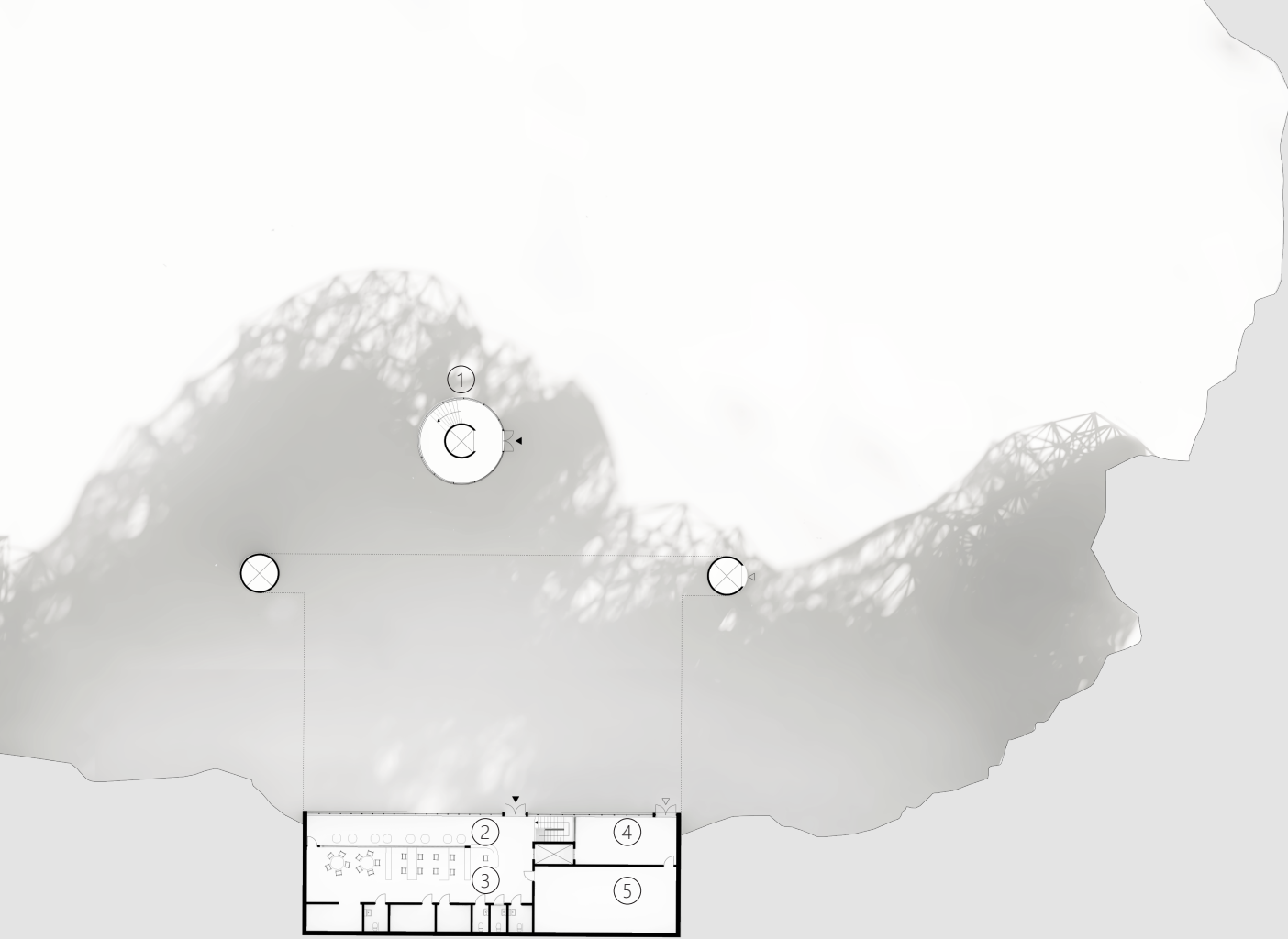
Reception adjacent to the large ceremonial hall.



The small ceremonial hall.

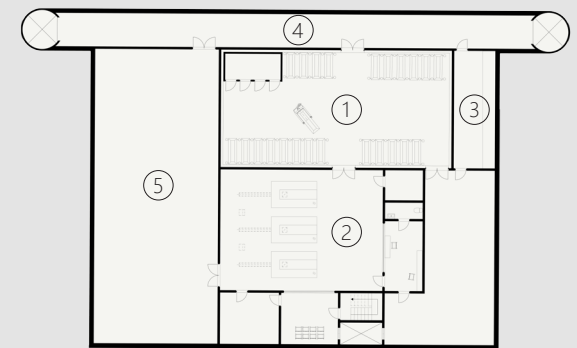


- ① *The public chapel.*
- ② *Elevator and stairs that brings the visitors up to the chapel and ceremonial halls.*
- ③ *Elevator for the coffin before and after the ceremony.*
- ④ *Administration offices, toilets and coffin delivery.*
- ⑤ *Cold storage, coffin preparation, cremation room and urn storage.*



- ① Stairs and elevator for the visitors.
- ② Lounge area for visitors and staff with panoramic windows overlooking the square beneath the structure.
- ③ Staff working spaces.
- ④ Coffin delivery.
- ⑤ Changing rooms for the staff.

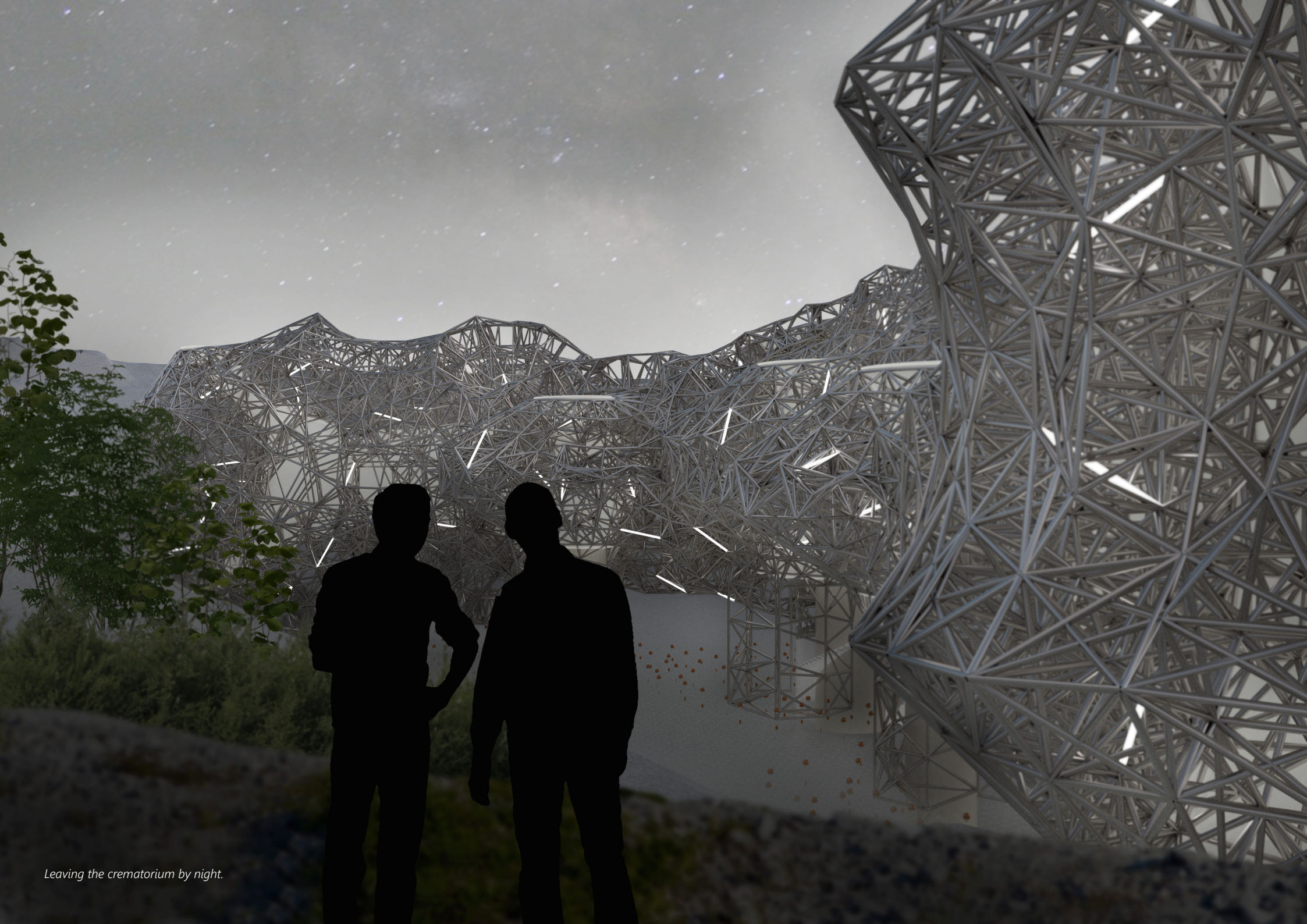
Plan 0



- ① Cremation room.
- ② Cold storage.
- ③ Flower storage.
- ④ Coffin preparation and elevators for bringing the coffin to the ceremonial halls.
- ⑤ Technical spaces.

Plan -1





Leaving the crematorium by night.