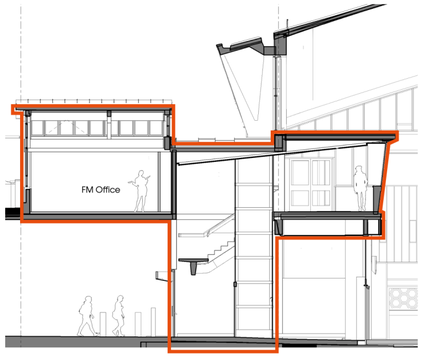
CONTROL TOWER

Client: Museum of London

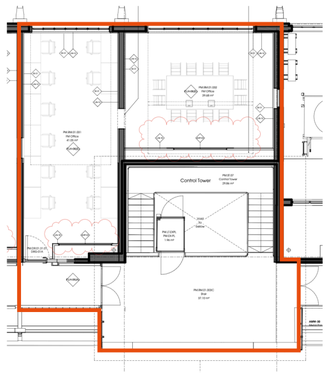
Project Architects: Stanton Williams Architect

Brief: Your challenge this term is to re-design and renovate the historic ‘Control Room’ which projects into Farringdon’s Smithfield Poultry Market as part of the new Museum of London. The original lookout room was a surveillance area for managing and monitoring the busy market. It’s not always just the meat that’s been butchered at Smithfield. “On market-days the passengers are in danger of being run over, trampled down, or tossed up by the drivers or “beasts”; at night, rapine and murder prowl in the lanes and alleys in the vicinity.” Things sometimes got so out of hand, the market was provided with its own police force and police station, hence the control room.

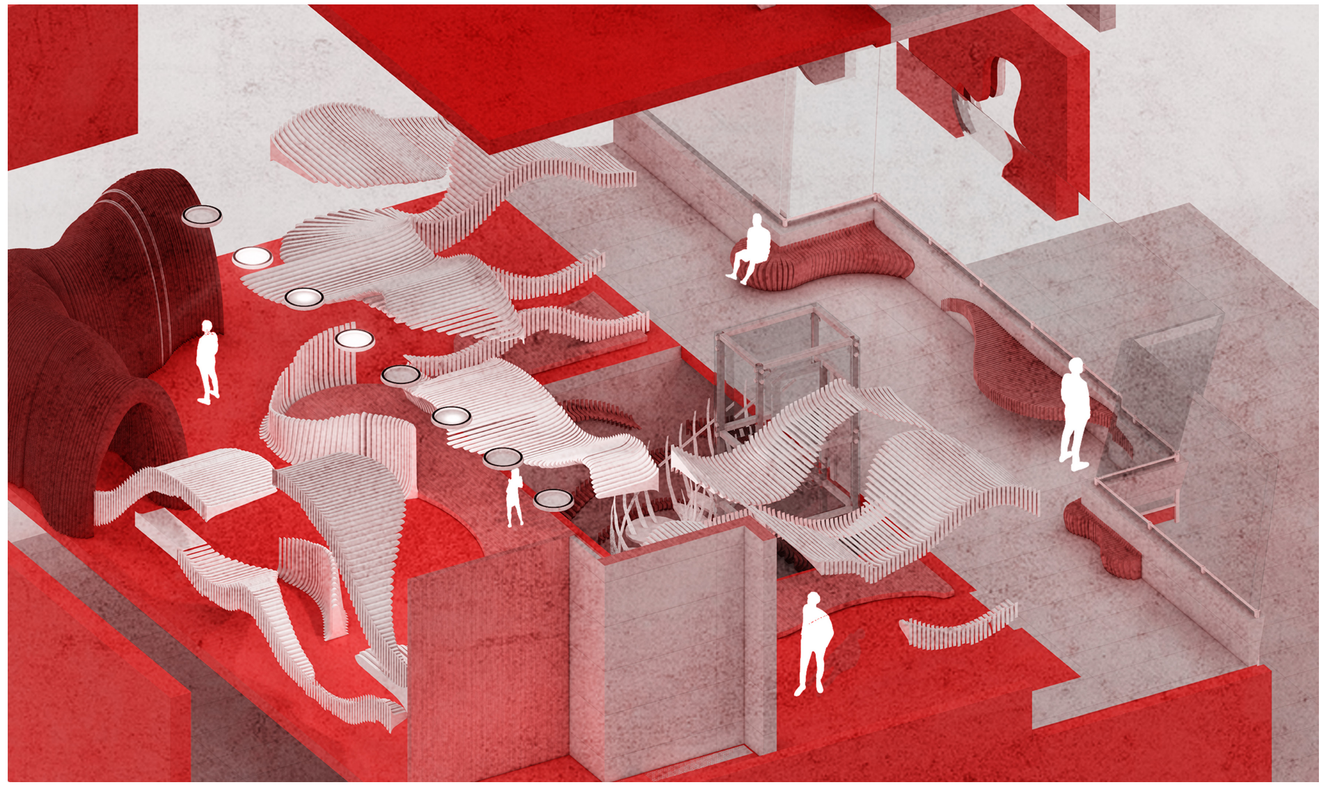
Existing site plan



Section cut through the site

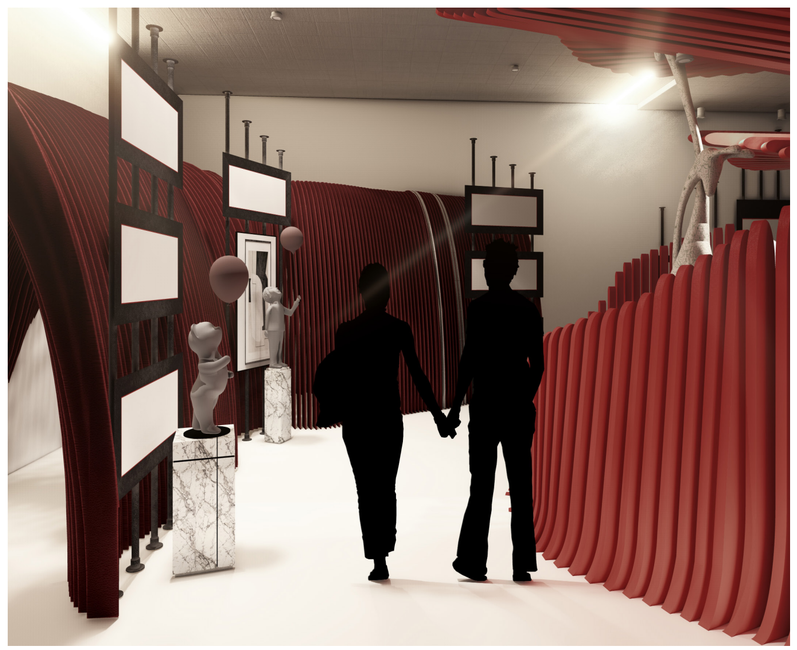


Ground floor plan



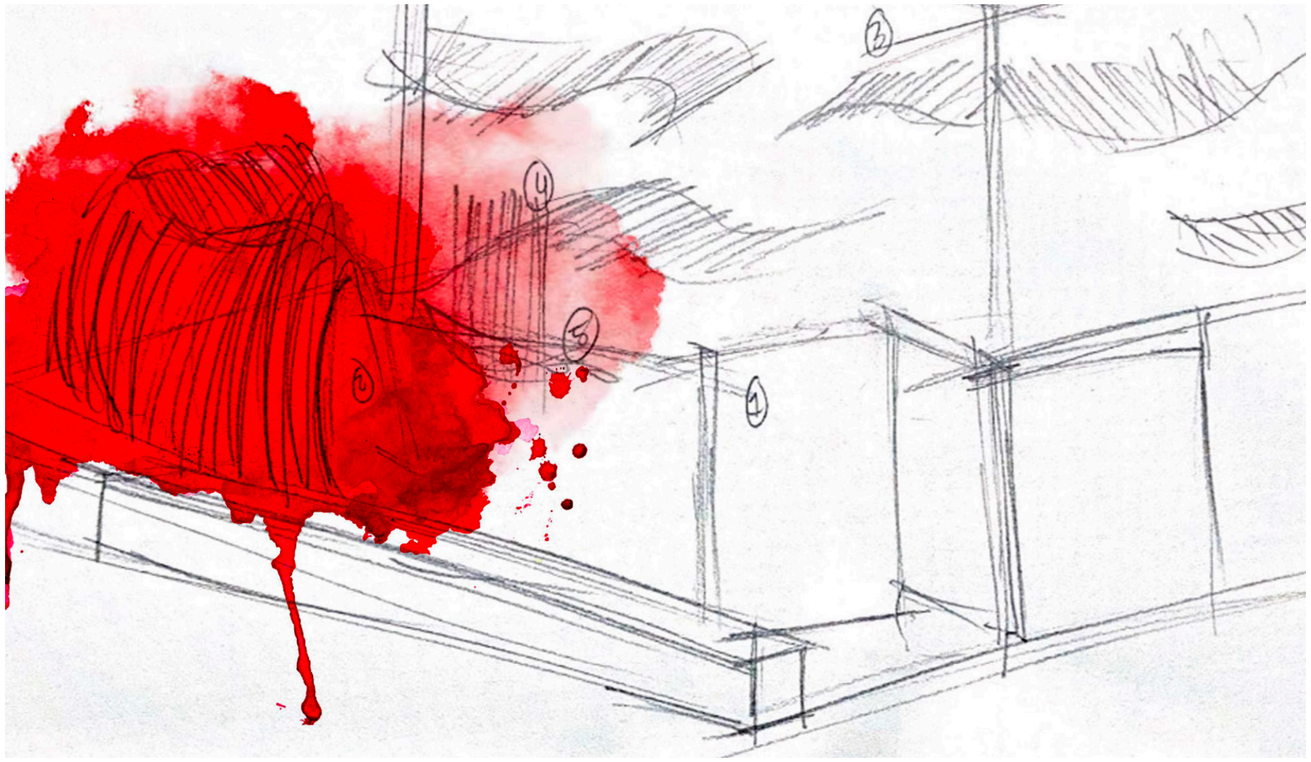
Exploded Isometric

Visuals



The tunnel

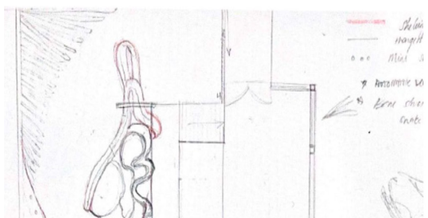
Site analysis

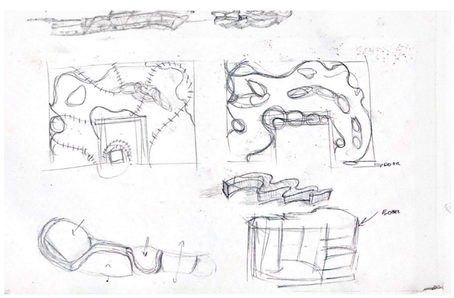


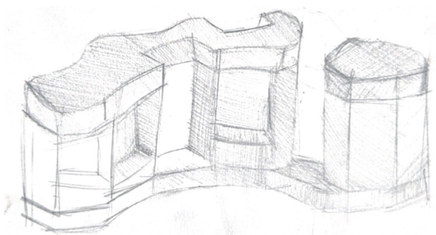
Design Development - Sketches

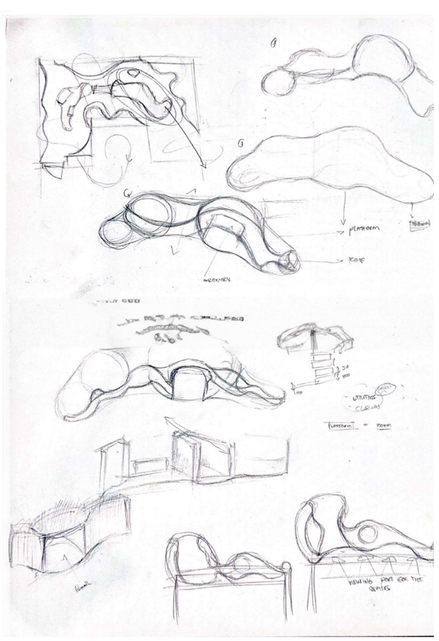
In the initial concept development, the project aimed to create an interactive exhibition where visitors could experience being inside an animal's body. The planning phase involved experimenting with various layouts. Initial sketches concentrated on the anatomy of a chicken, specifically its digestive system, before moving on to explore the bones. Additionally, varying heights were incorporated by adding a platform to emphasize the interactive aspect of the exhibition and setting up booths to illustrate the confined space within the intestine.

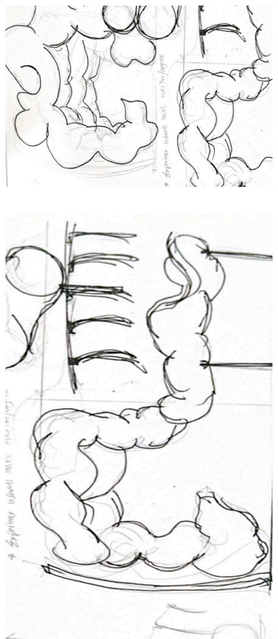
Conceptual Collage

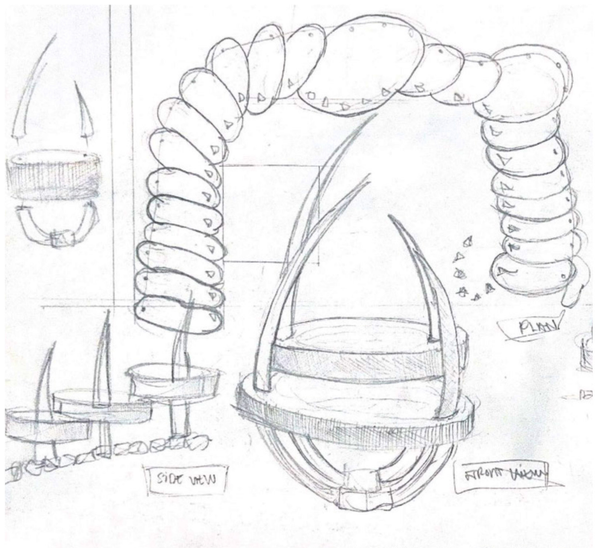


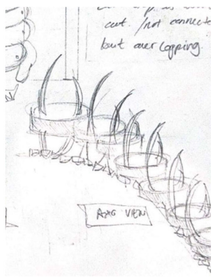






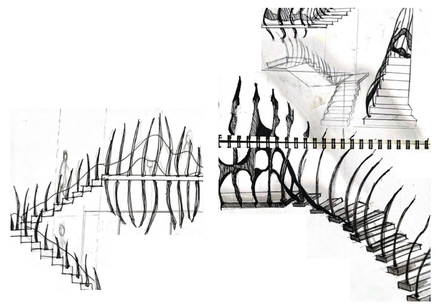






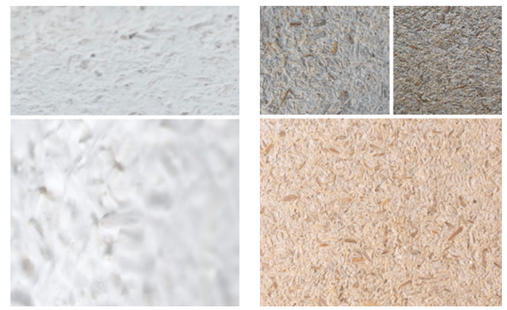
Ground floor

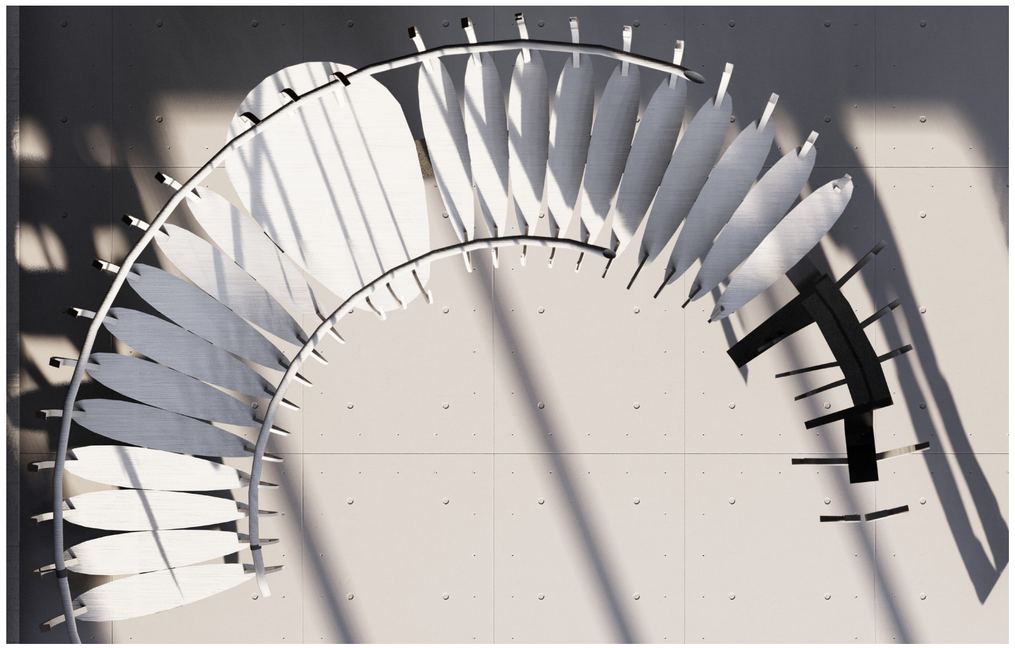
The final concept involved removing the entire control tower to introduce a new staircase design inspired by collages featuring intestine motifs. This design incorporated bones as railings, serving a protective function similar to how bones protect animal organs.



Materials

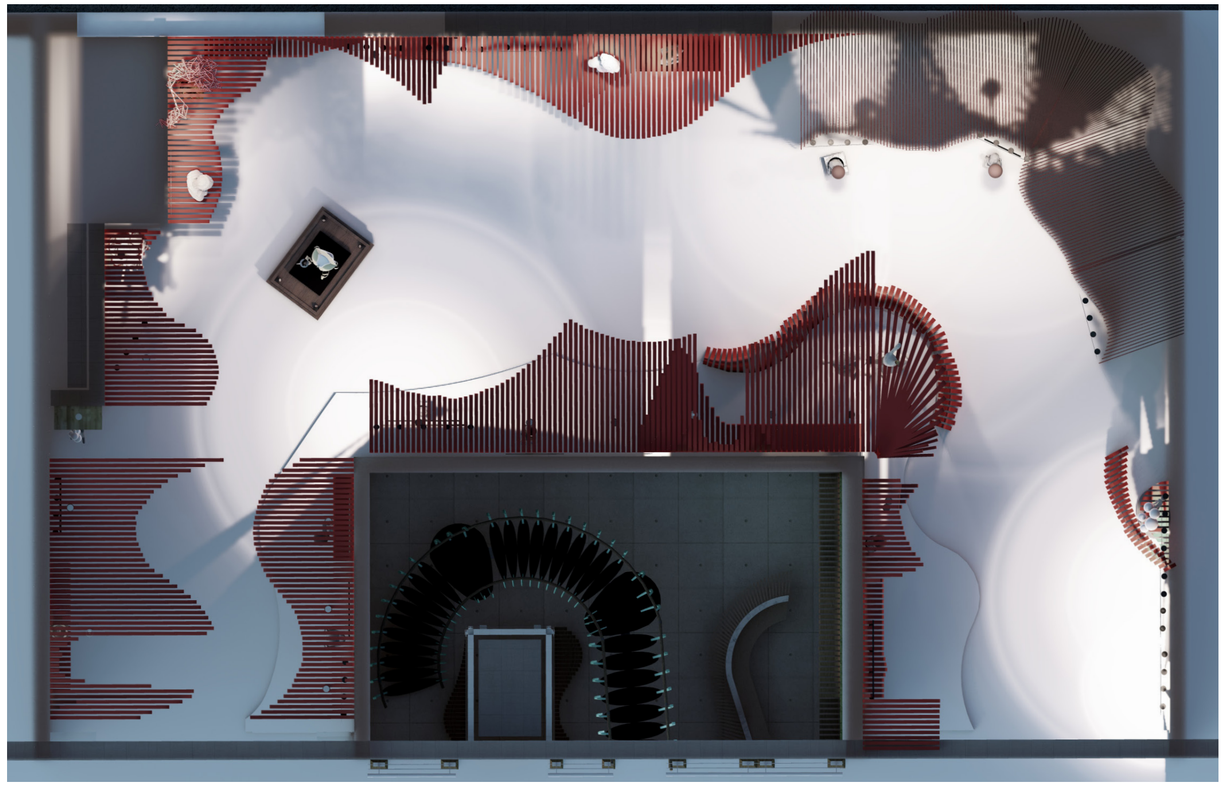
Mycelium panels are a type of biomaterial made from the root structure of fungi, specifically mycelium, which is the vegetative part of a fungus consisting of a network of fine white filaments. These panels are created by cultivating mycelium on agricultural waste products like sawdust, straw, or other organic substrates. As the mycelium grows, it digests the waste and binds the substrate together into a dense, solid form.





Top view

1. Preparation:
Sterilize the organic substrate by pasteurizing it , boiling it in water for an hour and then draining it. Let it cool down completely.
2. Inoculation:
Mix the mycelium spawn with the cooled substrate thoroughly. Pack the mycelium-substrate mixture into the ballustrade & ellipse stair shaped mold firmly, ensuring there are no air pockets.
3. Incubation:
Add the wooden top before adding your mycelium to make a solid base layer before covering the mold,then plastic wrap or place it in a plastic bag to maintain high humidity. Poke small holes in the plastic for air exchange. Ideal conditions are around 24-27°C (75-81°F) and 80-90% humidity.
4. Harvesting:
Check for full colonization this can take 2-4 weeks, depending on conditions.
Carefully remove the chair from the mold. If the mycelium chair feels too fragile, allow it to incubate for a few more days.
5. Drying:
To stop the growth and solidify the structure, dry the mycelium chair using a low-temperature oven (below 80°C or 176°F) to slowly dry it out.
6. Finishing:
Depending on the desired finish, you can sand the surface lightly and apply a non-toxic sealant to protect against moisture and wear.

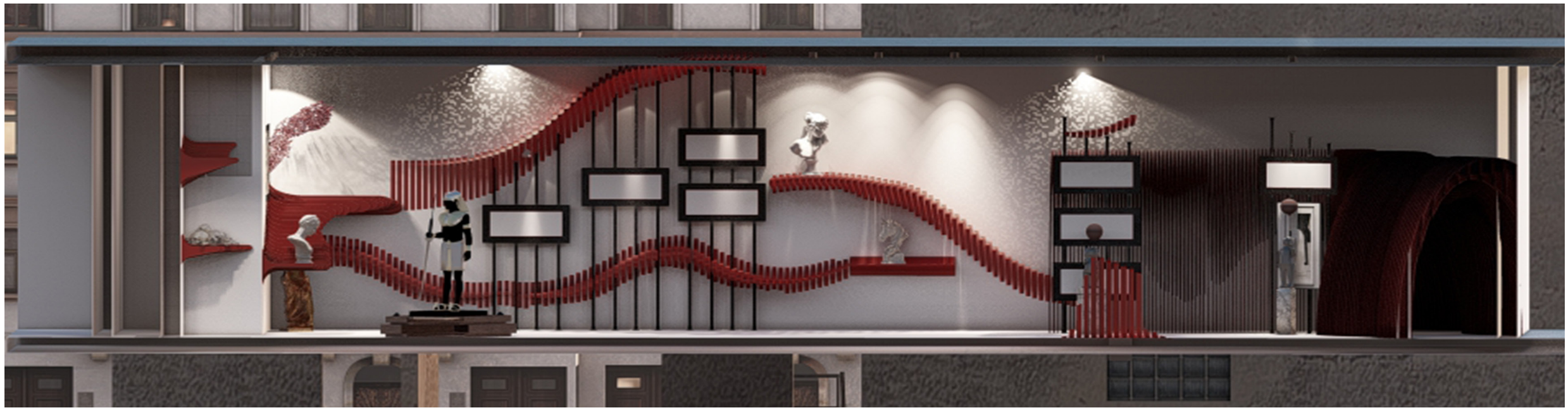


Top view

Ground floor

At this stage of development, a room was created in the corner of the exhibition to simulate the experience of moving through an intestine. The space begins wide and gradually becomes tighter towards the end, mimicking the natural progression of the digestive system. This design allows visitors to feel the transition from spacious to narrow, providing a hands-on experience that illustrates the complexity of the intestine.

Visuals



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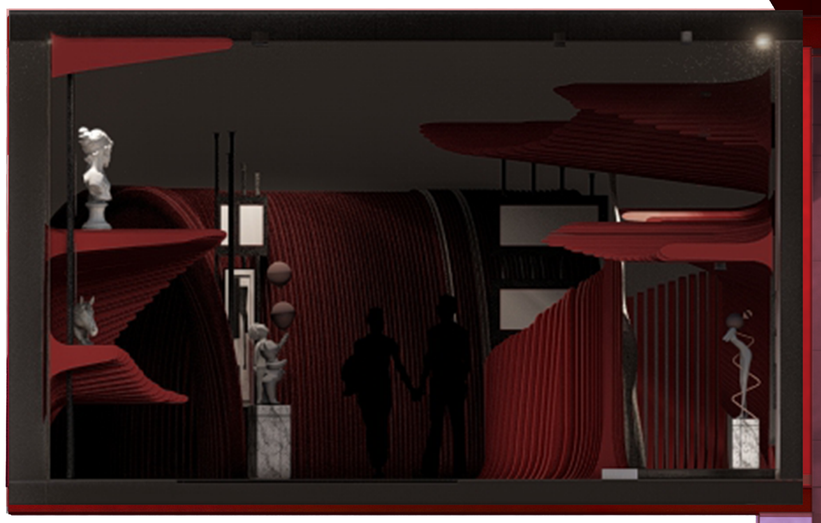

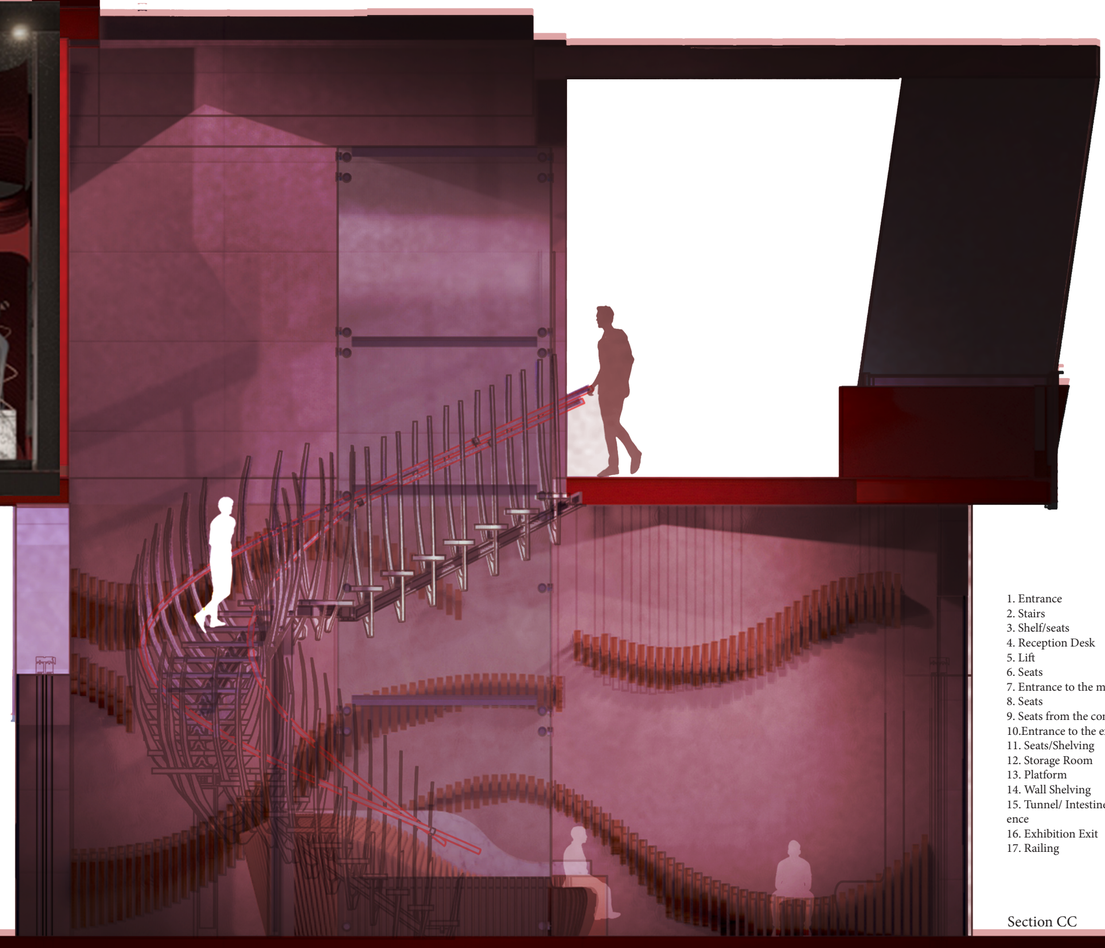

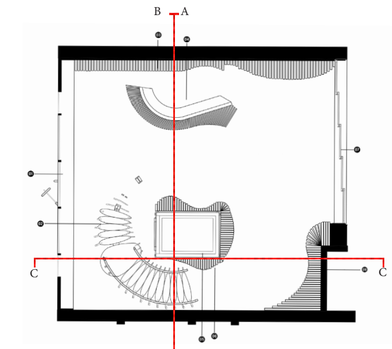

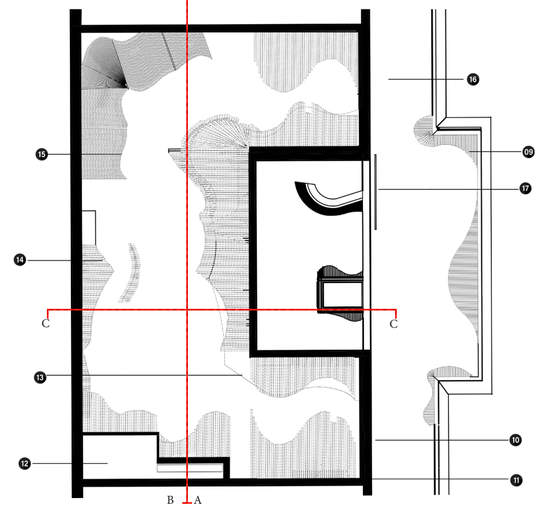

1. Entrance
2. Stairs
3. Shelf/seats
4. Reception Desk
5. Lift
6. Seats
7. Entrance to the museum
8. Seats
9. Seats from the control room
10.Entrance to the exhibition
11. Seats/Shelving
12. Storage Room
13. Platform
14. Wall Shelving
15. Tunnel/ Intestine experience
16. Exhibition Exit
17. Railing

Section CC

Section AA