The Bio Silo x Pangaia

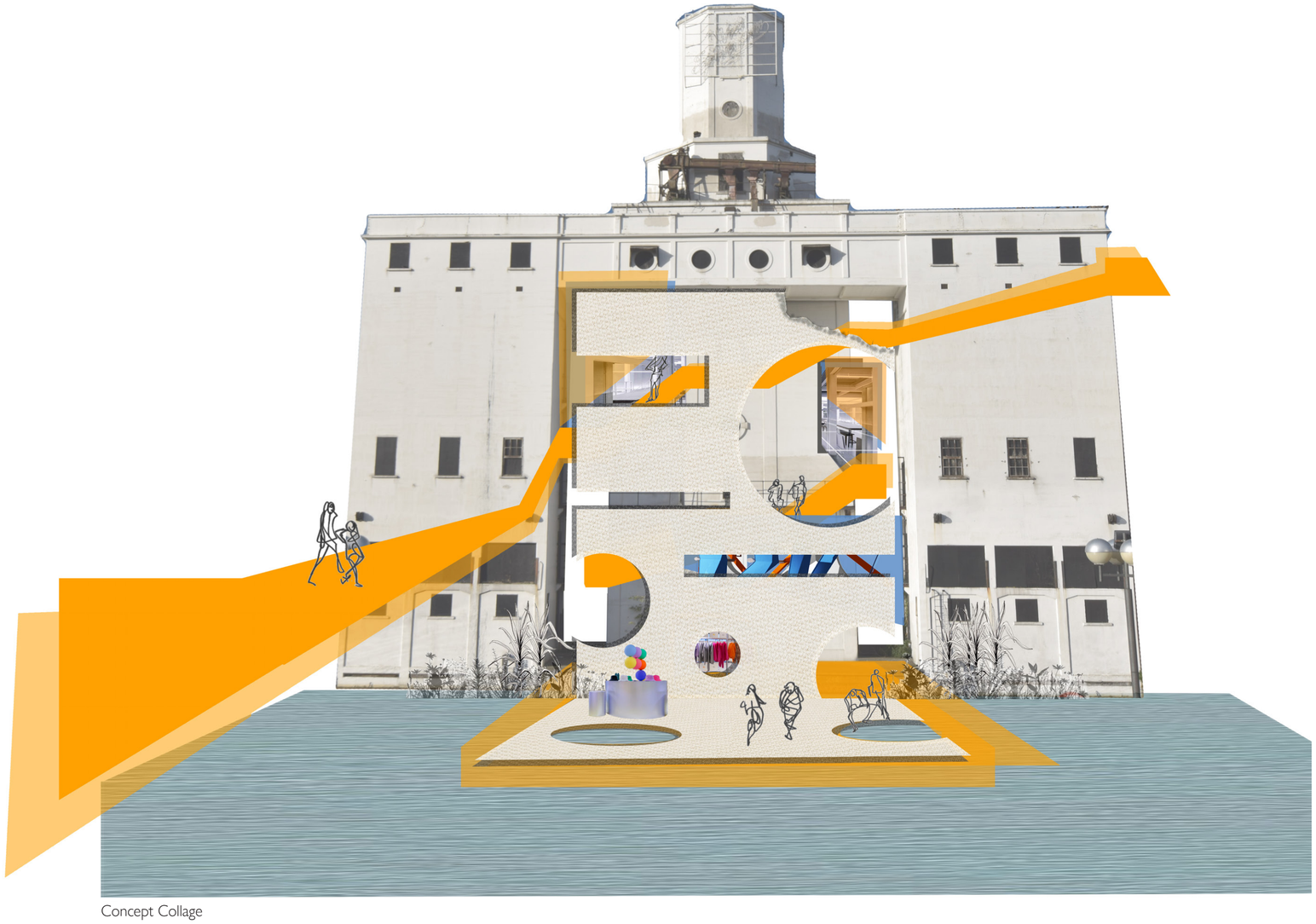
Giving back to the earth more than we take.

The Bio Silo x Pangaia is a hybrid educational and inspiring journey focused on Bio-Materials and their importance in the fashion and design industry. The site is located in Silvertown, Newham at the abandoned grade II listed building “Silo D”, next to the Royal Docks.

The project works in collaboration with Pangaia, a brand known for their ethos to give back to the earth more than they take. They are constantly working to discover and innovate new materials to develop their products and reduce waste. The proposal aims to bring awareness to the importance of bio-materials and innovation.

Spatially, the Bio Silo follows a wrap around journey which weaves in and out of the building. Upon entry of the space the guests are welcomed with a Pangaia merchandise shop which opens out over to the dock, as well as a central lift which takes the guests to the top of the scheme where the journey begins. As the guest makes their descent down and around they weave through a series of Bio-Materials educational and immersive experiences. The spaces include a grape leather production facility open to explore and produce grape leather for the production of Pangaia’s grape leather trainers, 2 bio-materials workshop labs used to accommodate workshops for visitors to learn about and produce their own bio-materials, a bio-materials library, an immersive grape leather installation, and a biodegradable wall produced from bio-materials extended over the adjacent dock open as a platform to walk and sit on.

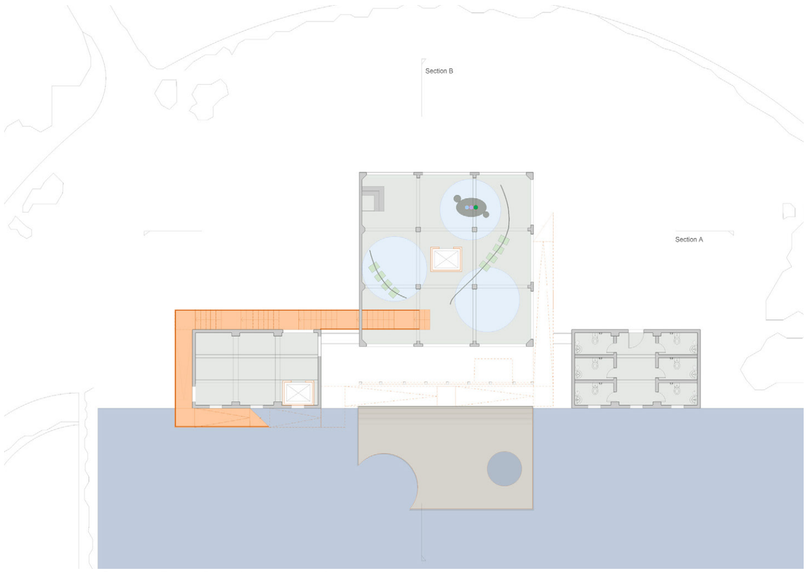
My main aspiration for this project was to design an earth positive scheme. I have incorporated circular concepts in my project using waste products from local establishments to give a second life. In the surrounding area there is the Tate & Lyle factory known for their sugar production. Globally for every tonne of sugarcane crushed there is 280kg of by-product also known as bagasse. Therefore, to give life back to the sugar cane waste the back façade of the proposal is created from the bagasse, the bagasse wall panel contains sugar cane seeds which over the course of a year the wall will slowly degrade and regrow into the adjacent dock which will in due course be farmed and sourced back to the Tate & Lyle Factory. In the hopes to encourage circular economy and Bio-Materials.



Concept Collage

Sections

Climate Emergency + Sustainability

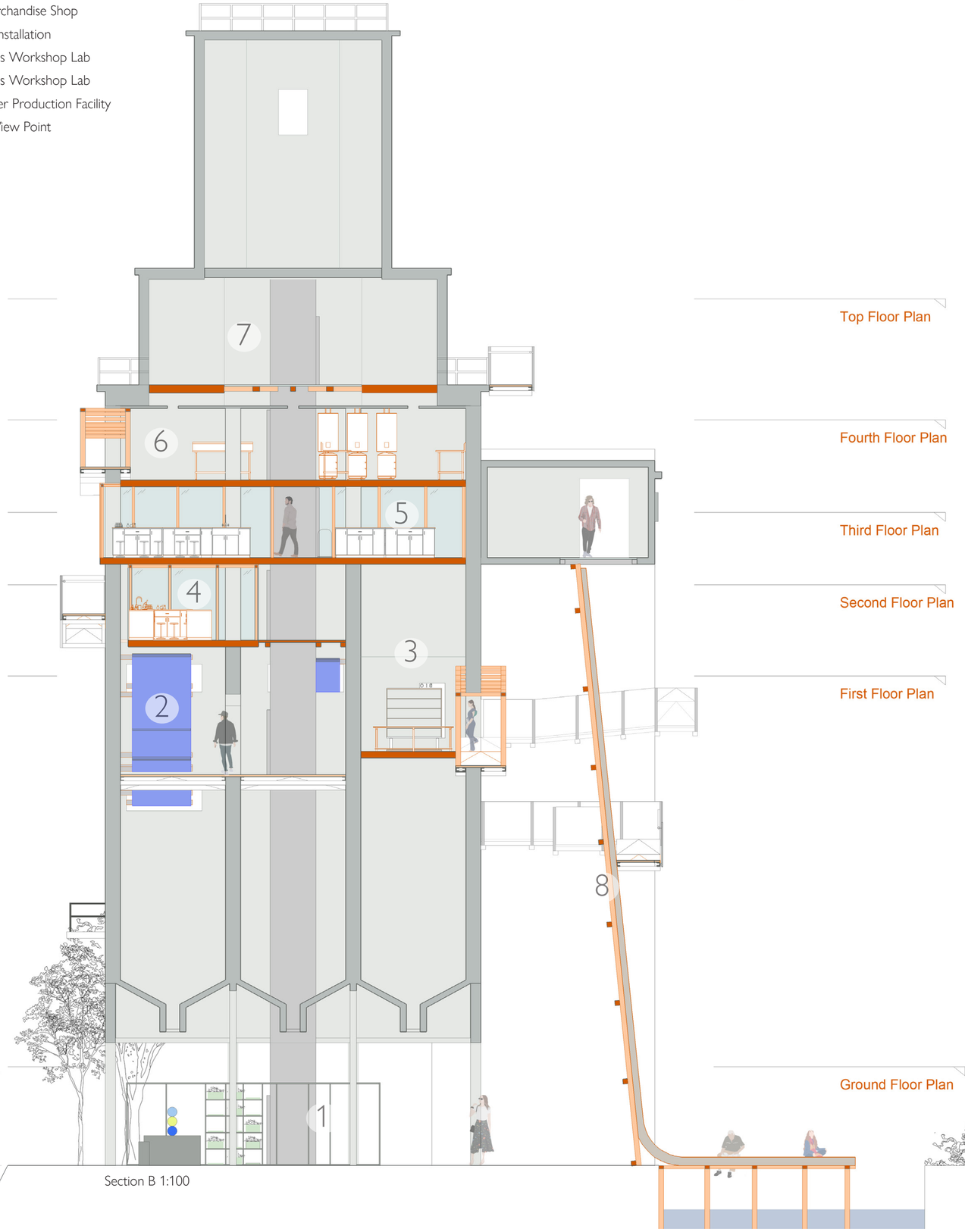


Ground Floor Plan (not to scale)

1 Pangaia Merchandise Shop
2 Immersive Installation
3 Bio-Materials Library
4 Bio-Materials Workshop Lab
5 Bio-Materials Workshop Lab
6 Grape Lather Production Facility
7 Top Deck/View Point
8 Bagasse Biodegradable Wall

Section A 1:200

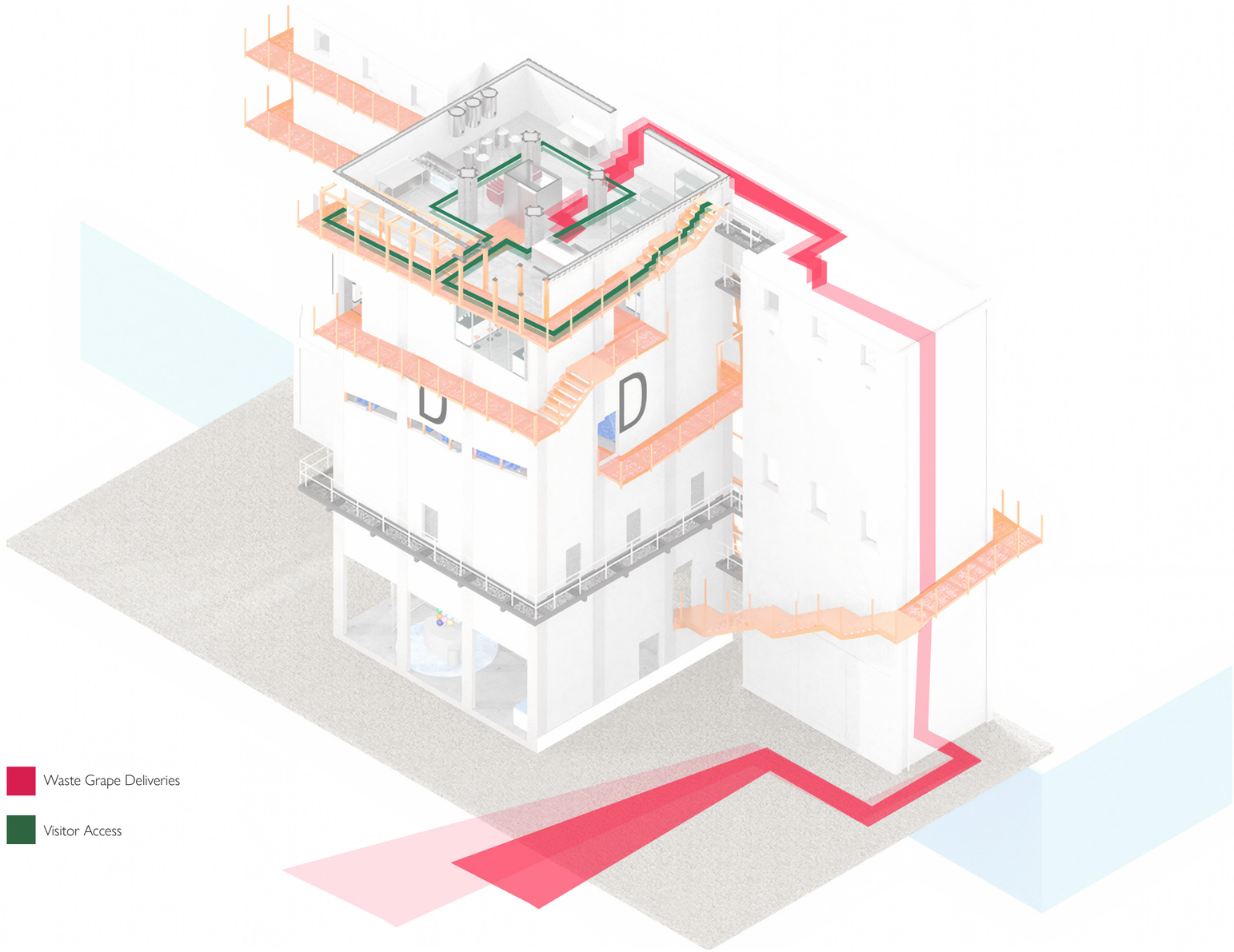
1 Pangaia Merchandise Shop
2 Immersive Installation
3 Bio-Materials Workshop Lab
4 Bio-Materials Workshop Lab
5 Grape Lather Production Facility
6 Top Deck/View Point



Section B 1:100

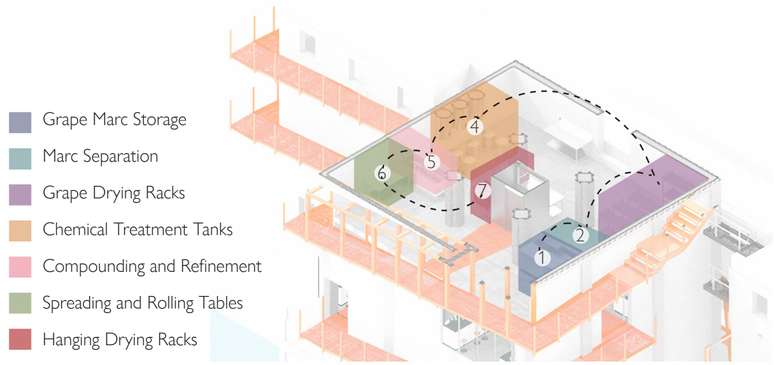
Grape Leather Study

Climate Emergency + Sustainability

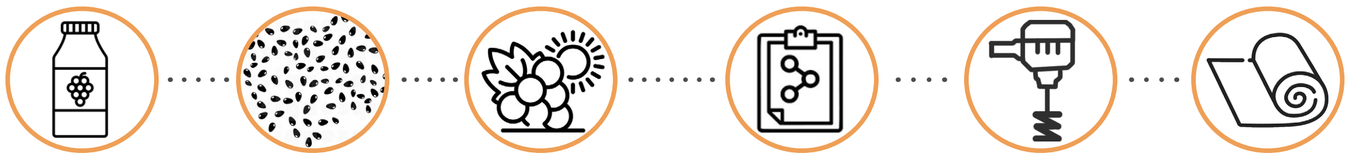


Grape Leather Facility Circulation

Wine Grape By-product Sourcing Map



Grape Leather Facility Diagram



Grape Leather Production Process

Bagasse Material Study

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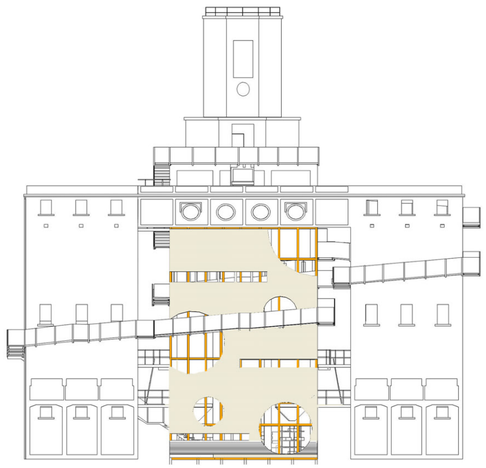
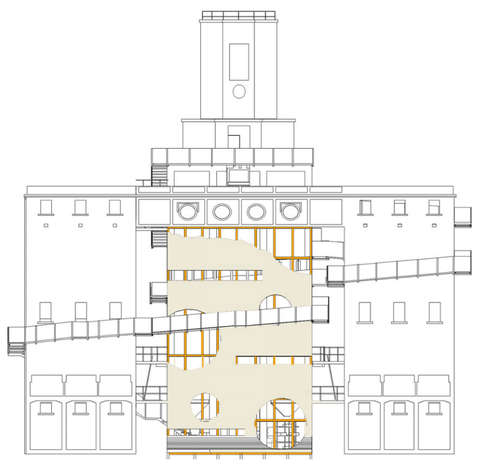
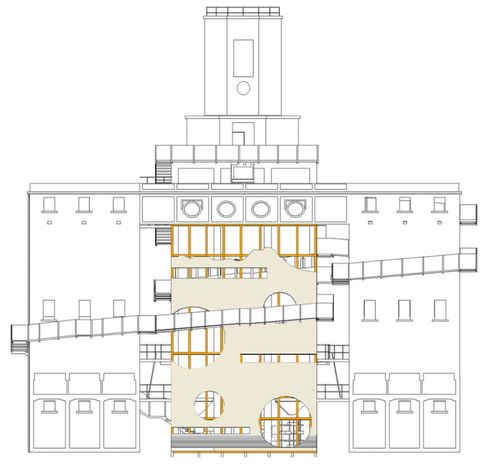
The use of bagasse brings awareness to the use of waste products to create new life. As the wall slowly degrades the skeleton of the structure will become more and more exposed as well as revealing the exterior of Silo D. Once the wall has fully eroded a new set of panels will be put in its place to repeat the cycle.



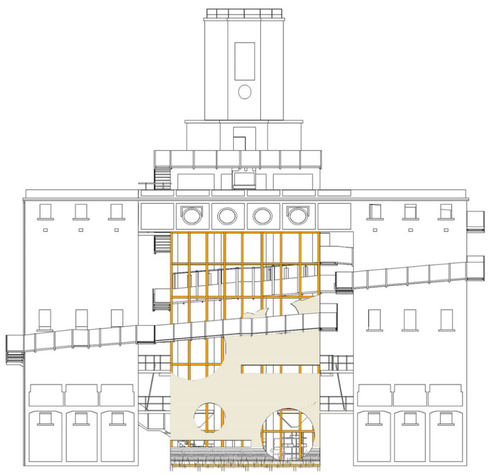
0 Weeks



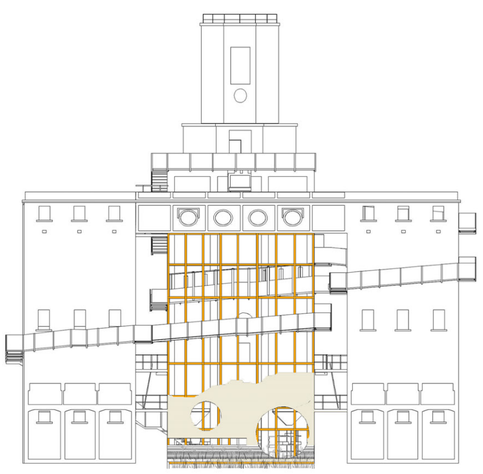
10 Weeks



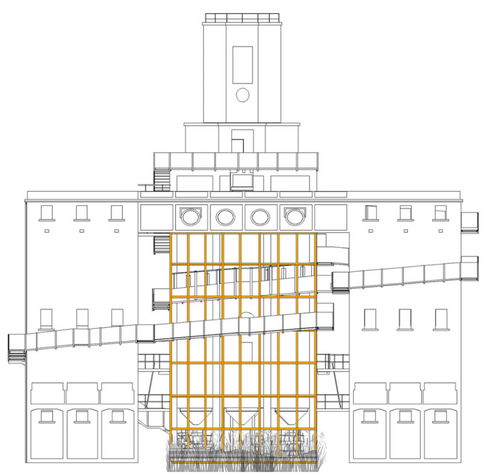
20 Weeks



30 Weeks

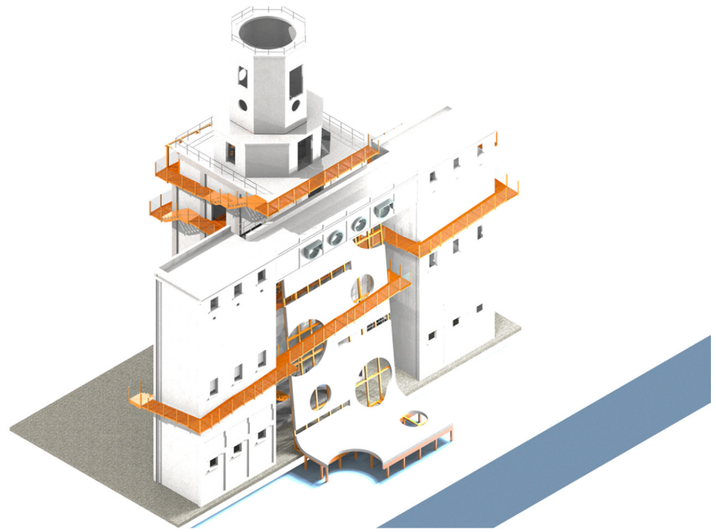


40 Weeks

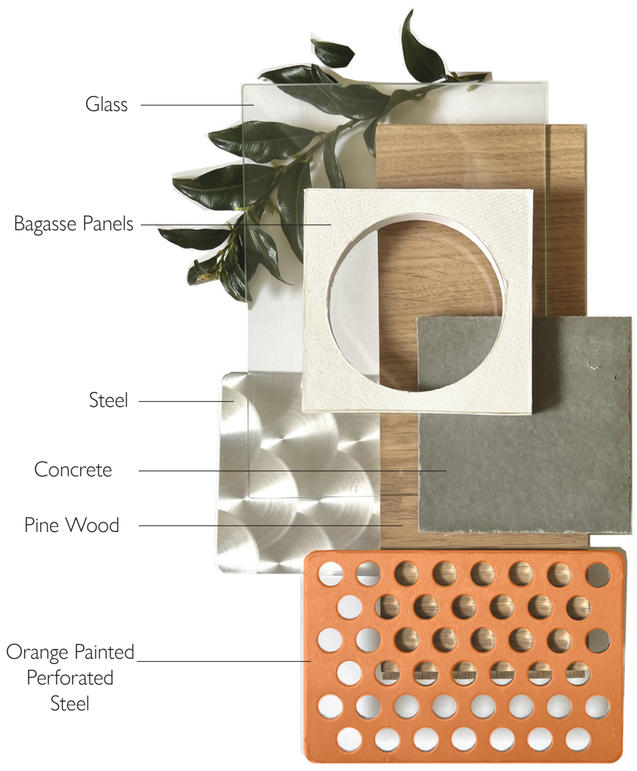


1 Year

Bagasse Degrading Diagram



3D Isometric



Material Palette

Interior Views

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Pangaia Shop - Ground Floor

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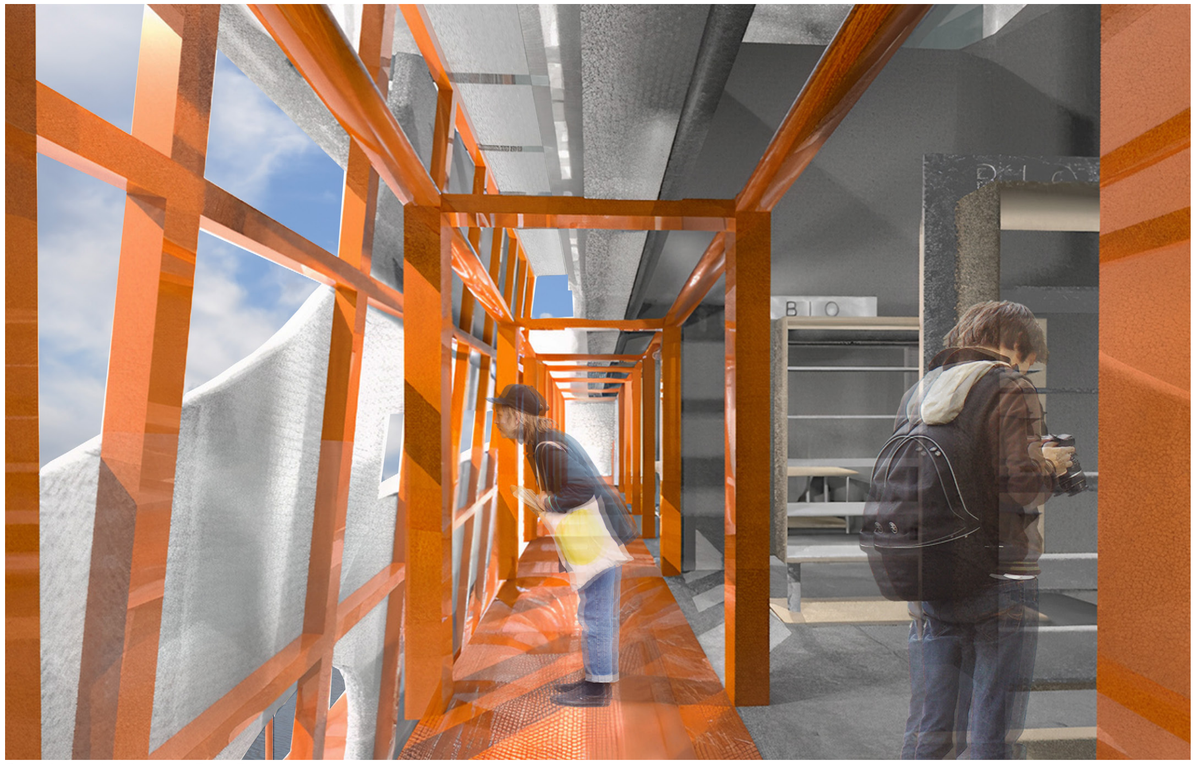

Bio-Materials Library - First Floor

Exterior Bagasse Panel - First Floor