

METAL FRUIT EXPERIMENT

MAKING PROCESS



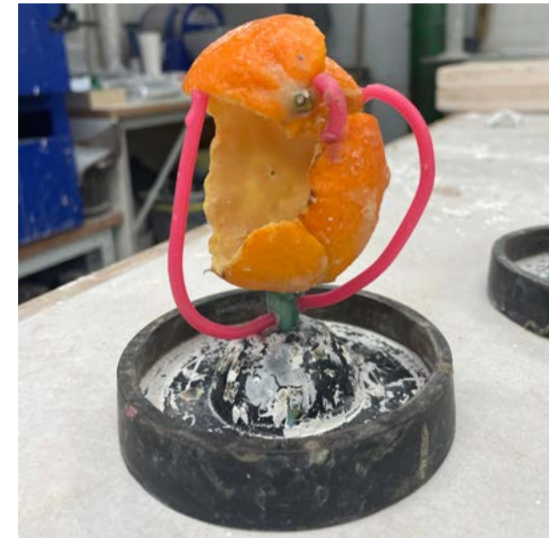
I experimented with food waste by turning the waste into metal. I used an avocado, egg shell, banana peel and orange skin.



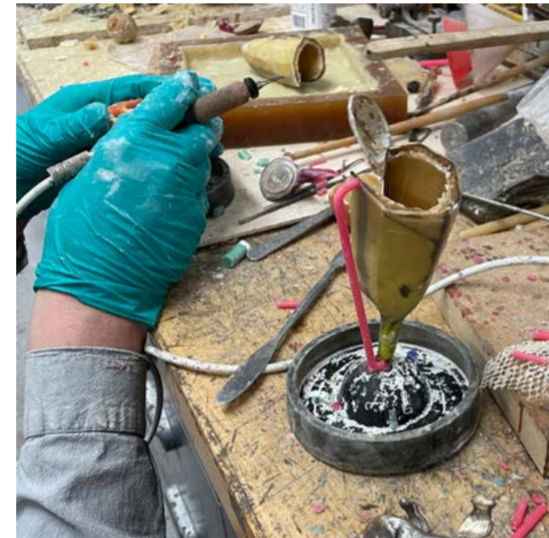
Firstly, I covered the waste in hot wax and waited for it to harden up.



The fruit coated in wax.



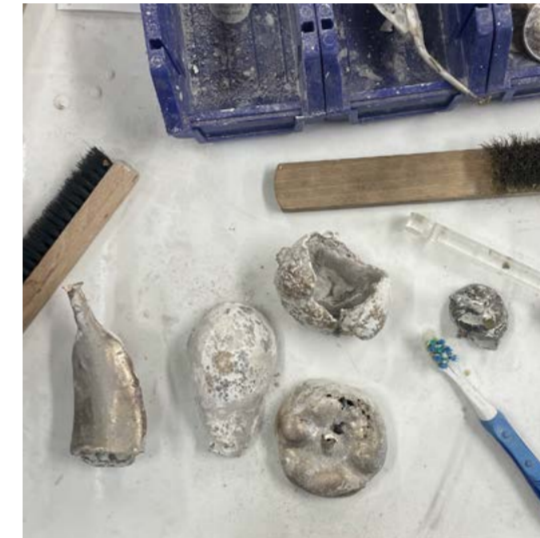
Next, I burnt sticks of wax to the food waste, to hold it up on the stand, so it can get cast.



I then weighed the fruit to find out how much paste is needed. I did this by subtracting the weight of the fruit by the weight of the stand.



To mix the paste, I added powder water ratio and blended it. I then put the fruit in a machine which sucked all the air bubbles out of the mixture. Then poured the mixture into the cylinder with the waste in.



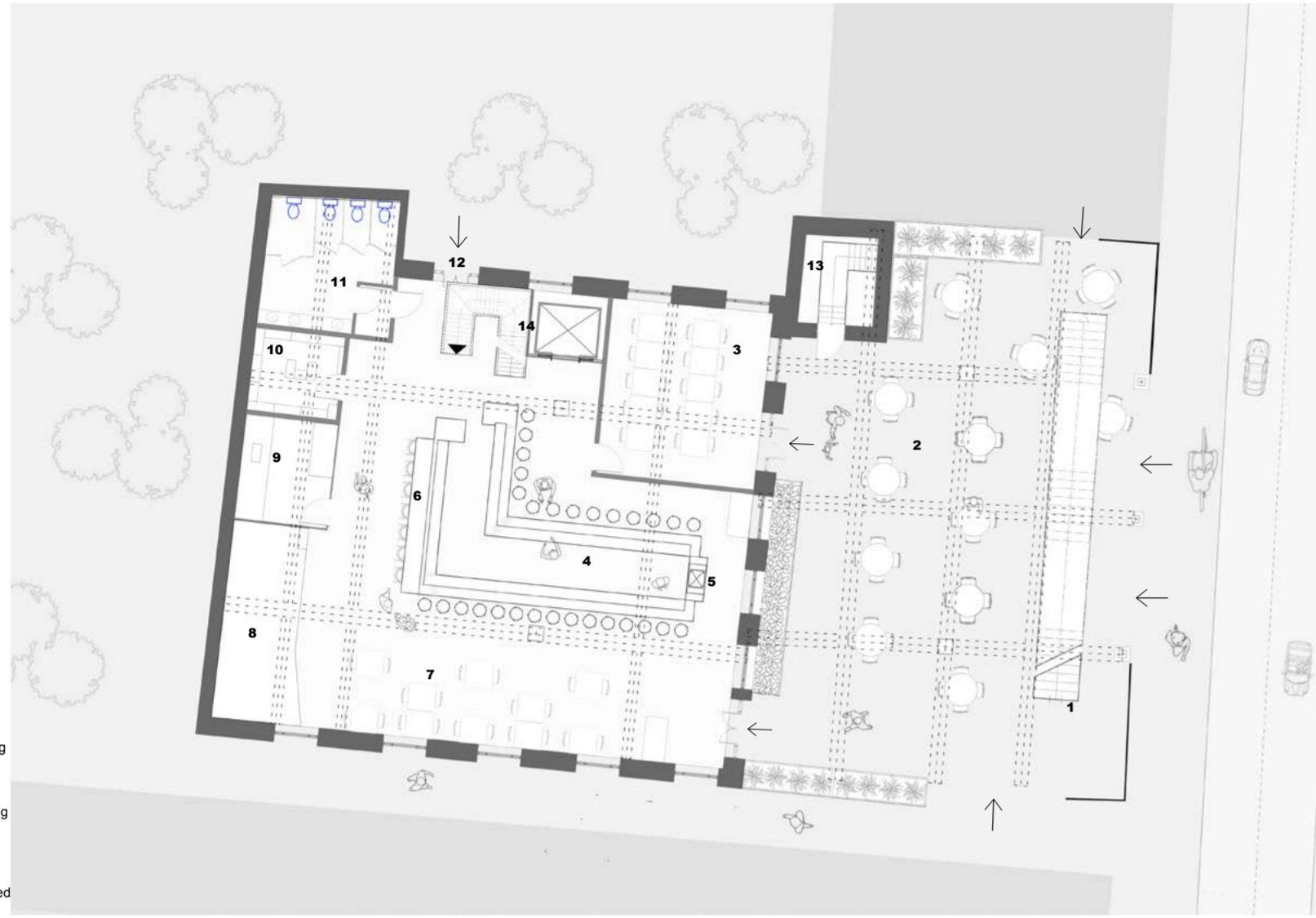
Finally, I left the fruit in a machine to harden the mixture, took it out the mould then began to clean the casting off the metal.



The meaning behind the concept was to focus on perception, using the illusions of the lightness of fruit and contrasting it with the weight of the metal highlight the importance of food waste and how negatively impactful it is on the environment and ourselves. I want to use this experiment to remind and educate people on food waste and how we can reduce the issue. I will incorporate this into my design as a message of the implications of food waste.



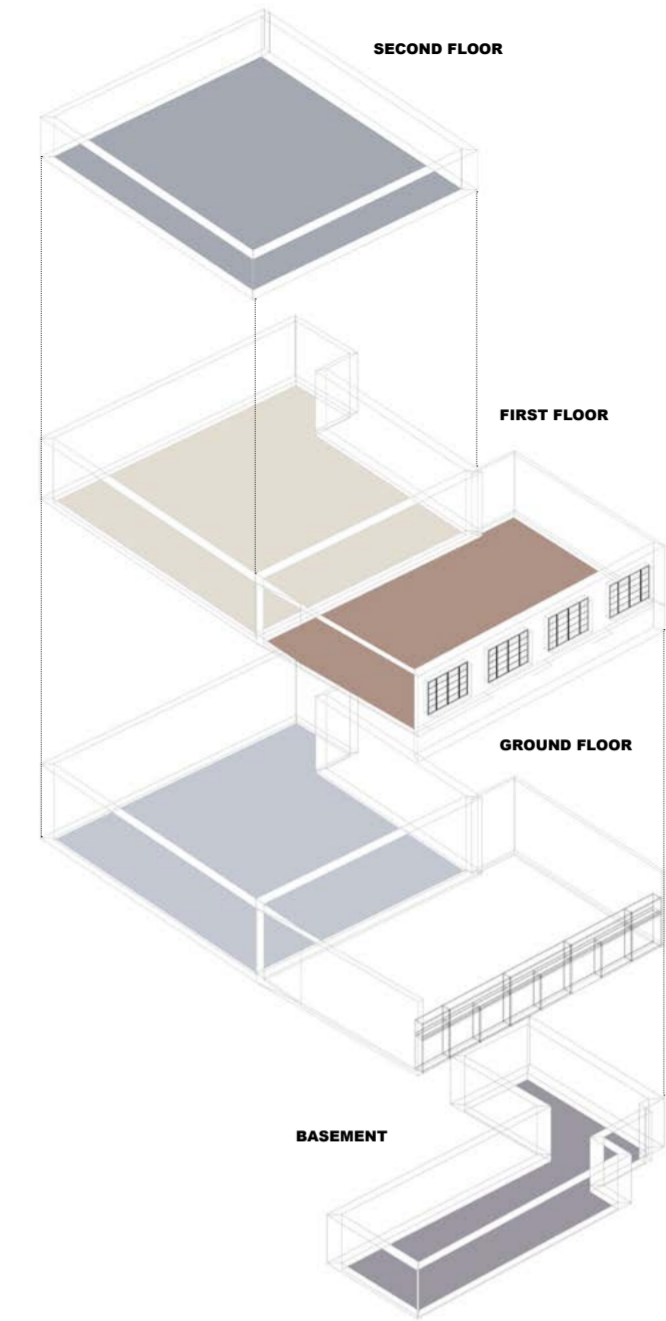
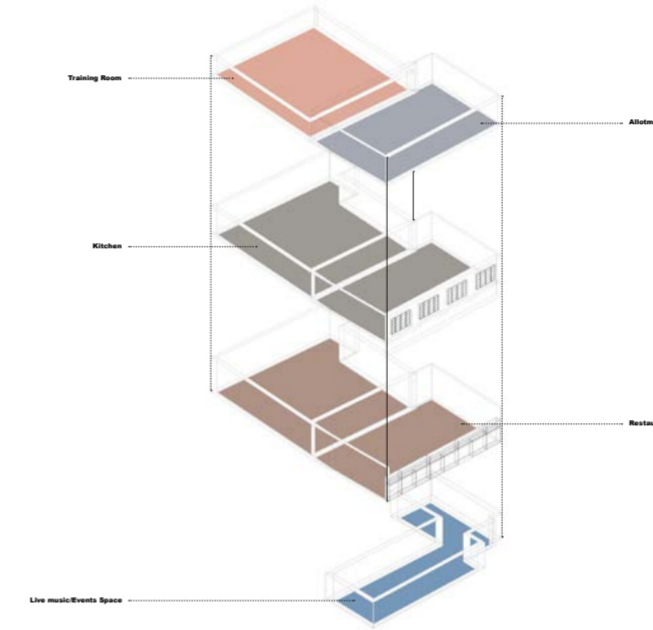
GROUND FLOOR PLAN



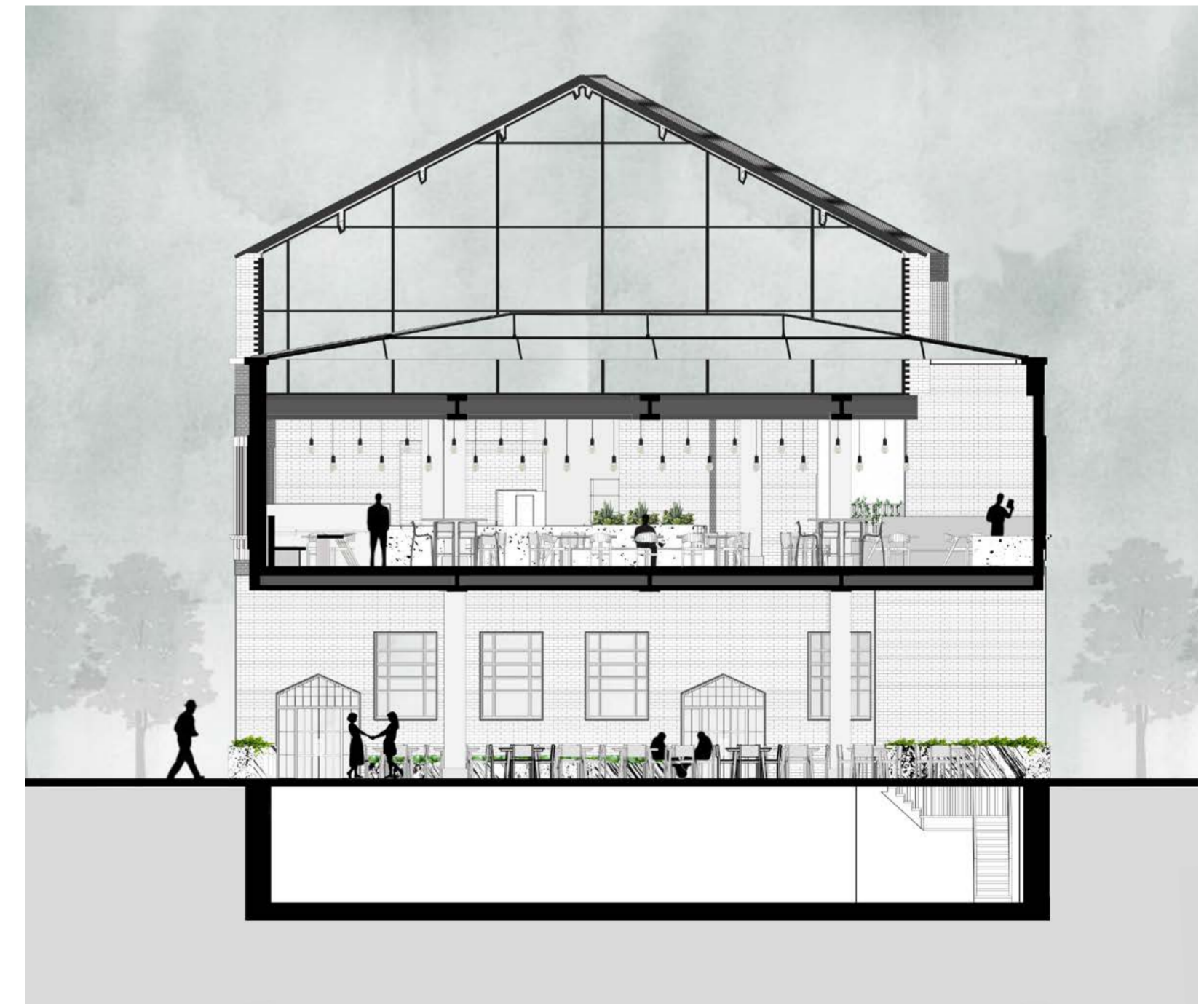
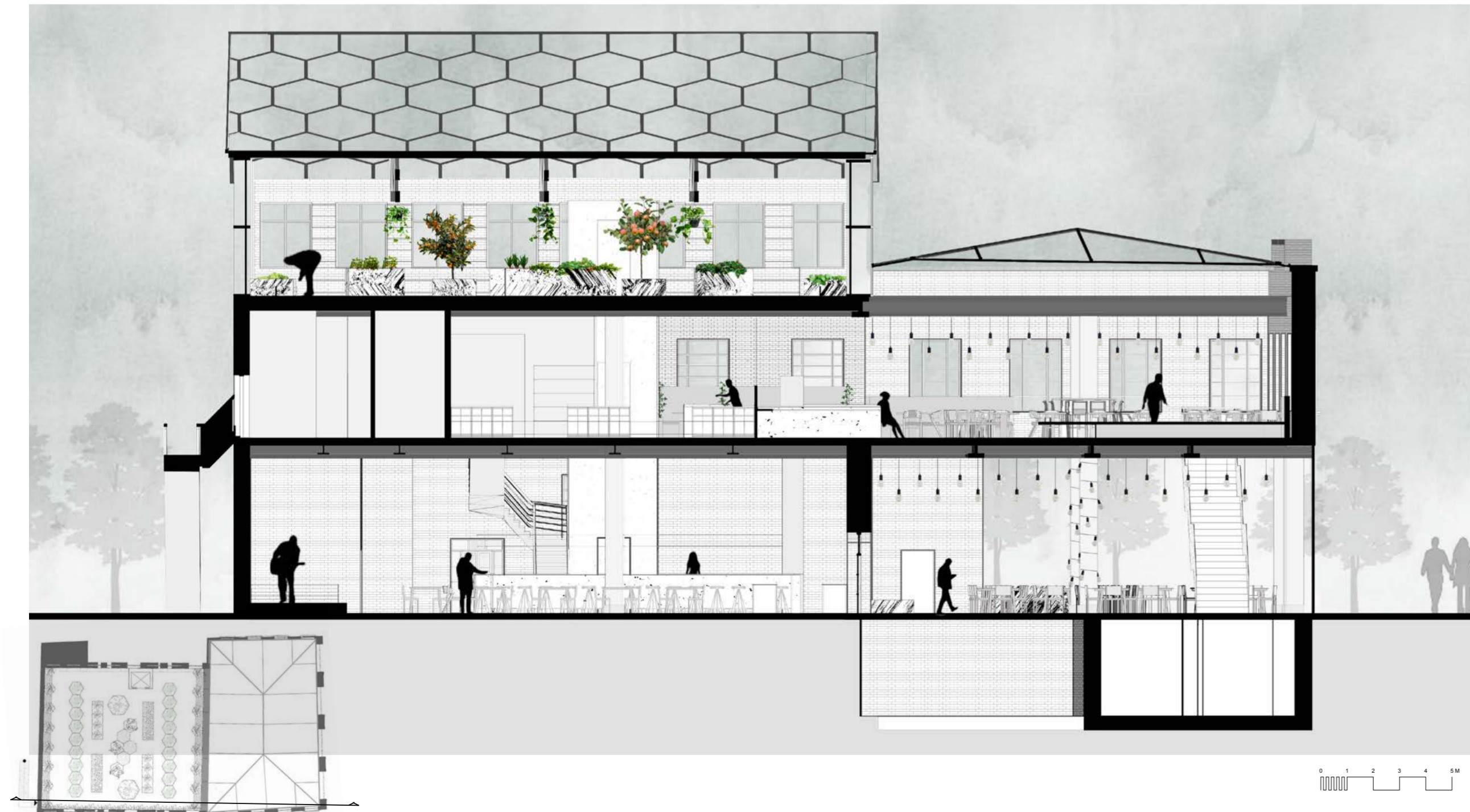
- 1. Main Staircase
- 2. Outdoor Seating
- 3. Private Seating
- 4. Bar
- 5. Food lift
- 6. Bar/food Seating
- 7. Seating
- 8. Events Stage
- 9. Food Prep
- 10. Storage
- 11. Toilets+Disabled
- 12. Fire Door
- 13. Stairs to extra storage + water tank (Basement)
- 14. Stairs + Lift

SPACE ALLOCATION

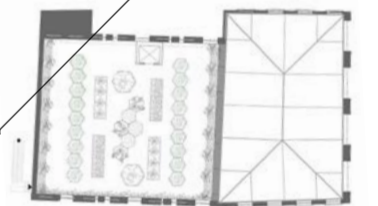
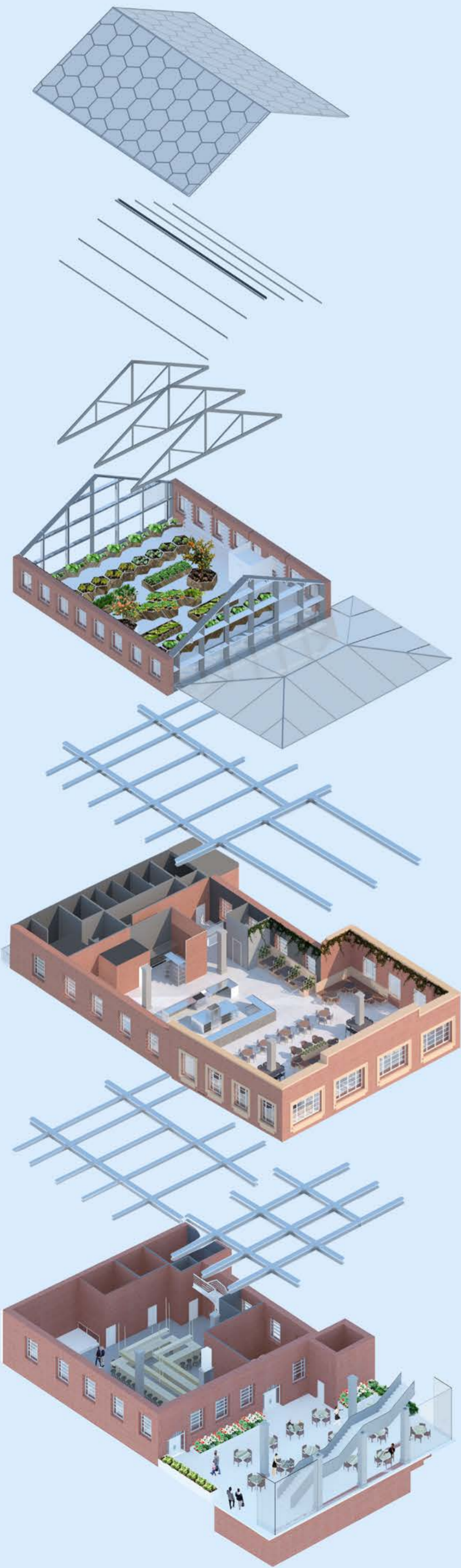
EXPLORATION



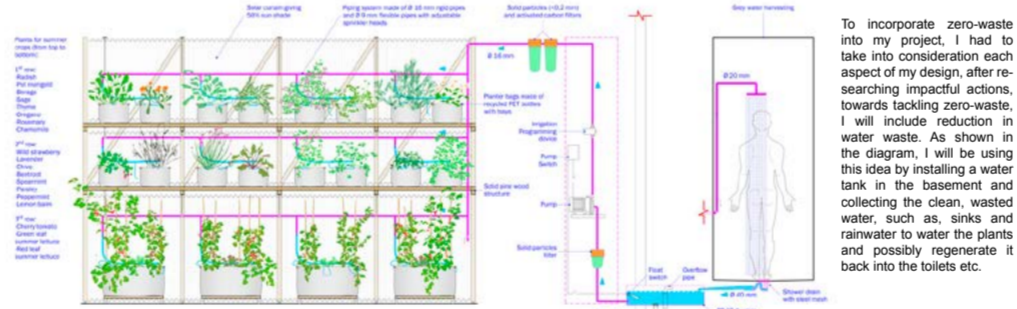
- Blue: Allotment
- Brown: Restaurant BOH
- Grey: Restaurant seating
- Dark Blue: Bar + events space
- Light Blue: Water tank + storage



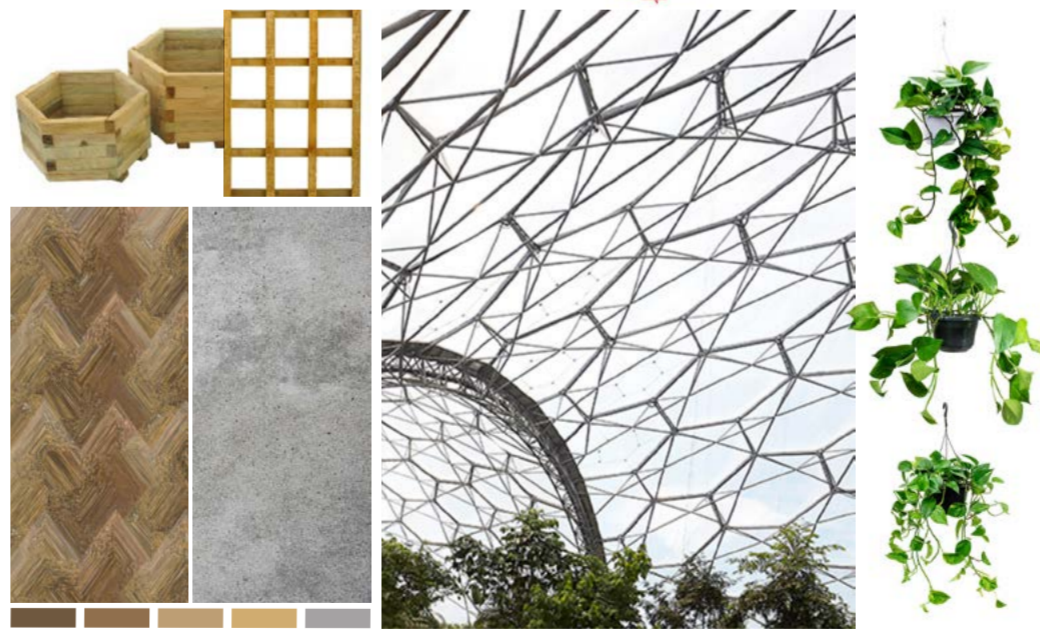
SECOND FLOOR VISUAL



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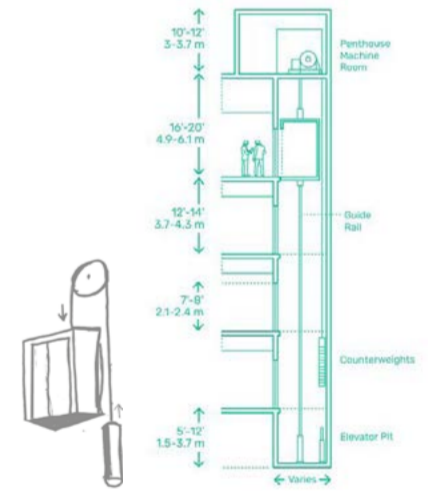


To incorporate zero-waste into my project, I had to take into consideration each aspect of my design, after researching impactful actions, towards tackling zero-waste, I will include reduction in water waste. As shown in the diagram, I will be using this idea by installing a water tank in the basement and collecting the clean, wasted water, such as, sinks and rainwater to water the plants and possibly regenerate it back into the toilets etc.



For the lift, I will be using a counterweight to balance the weight and by using gravitational potential energy from people's mass, it can be converted into chemical energy which will be able to power certain spaces, products, and/or devices. I have worked out the counterweight of an average lift that can carry five people at a time, for reference I used percentage of a phone charge to show how it can work in reality.

Mass of lift (Kg)	1360
Mass of Average person (Kg)	62
Number of people using the lift (AVG)	5
Mass counter weight (Kg)	1444
Distance travelled (m)	11.9
Lift acceleration (m/s/s)	0.71
Energy generated (J)	1914.76
Percent of Iphone charged (%)	6.6
Time taken for lift to go down (s)	5.78
Time taken for lift to go back up (s)	9

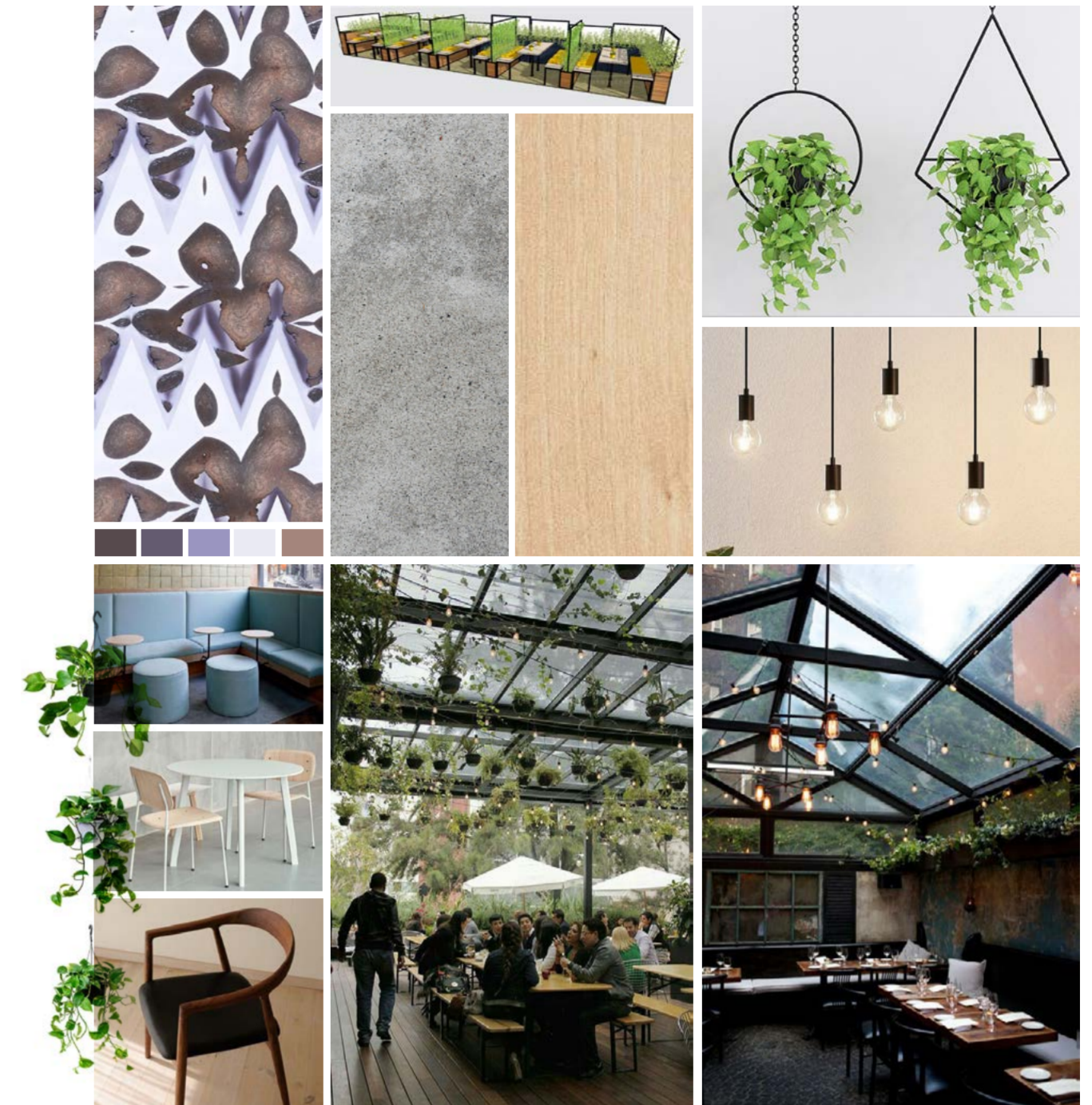
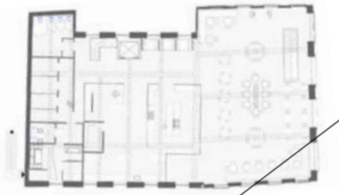
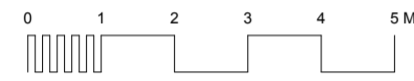


I intend to use carbon negative concrete and steel for the counterweight as it is a supportive and strong material.

CarbiCrete

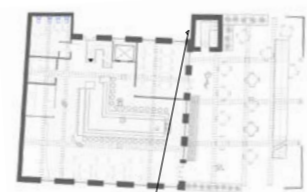
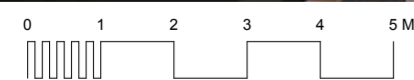


FIRST FLOOR VISUAL



For the first floor, I wanted to create an open and light space so replaced the original roof with a glass roof to offer the optimum amount of light. I also included hanging lights for night dining and a variety of plants to integrate biophilia, creating a space that promotes well-being.

GROUND FLOOR VISUAL



In the ground floor, I am including a food lift to transport food from the ground floor bar to the first floor restaurant, natural material for contribute to the zero-waste approach and inspiration from my food metal experiment. I wanted to create a welcoming yet luxurious environment so spotlights and hanging dim lights seemed appropriate.

