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2020 Senior Seminar Reasaerch Fall
Instructor: Lina Ahmad and Marco Vinicio

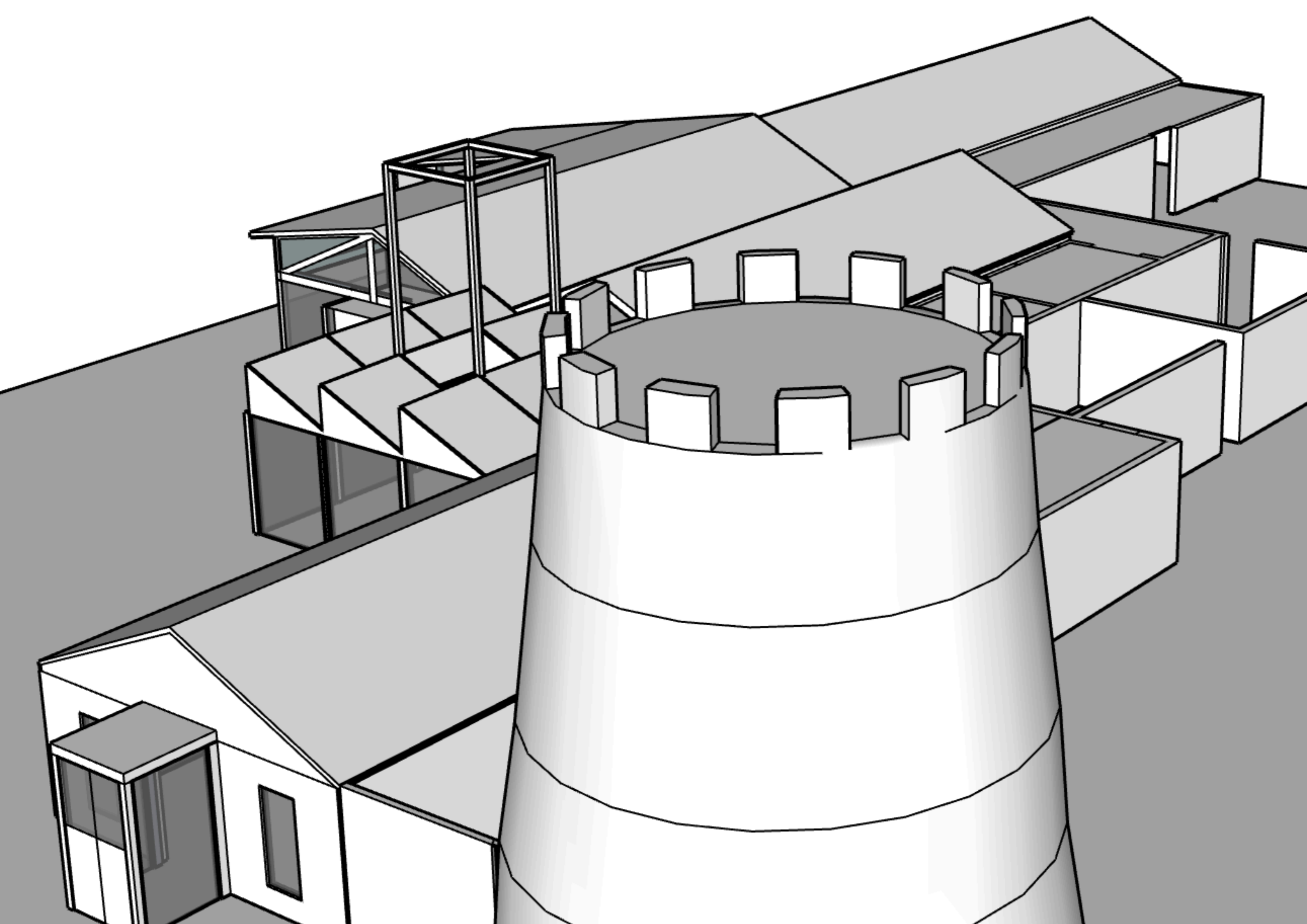


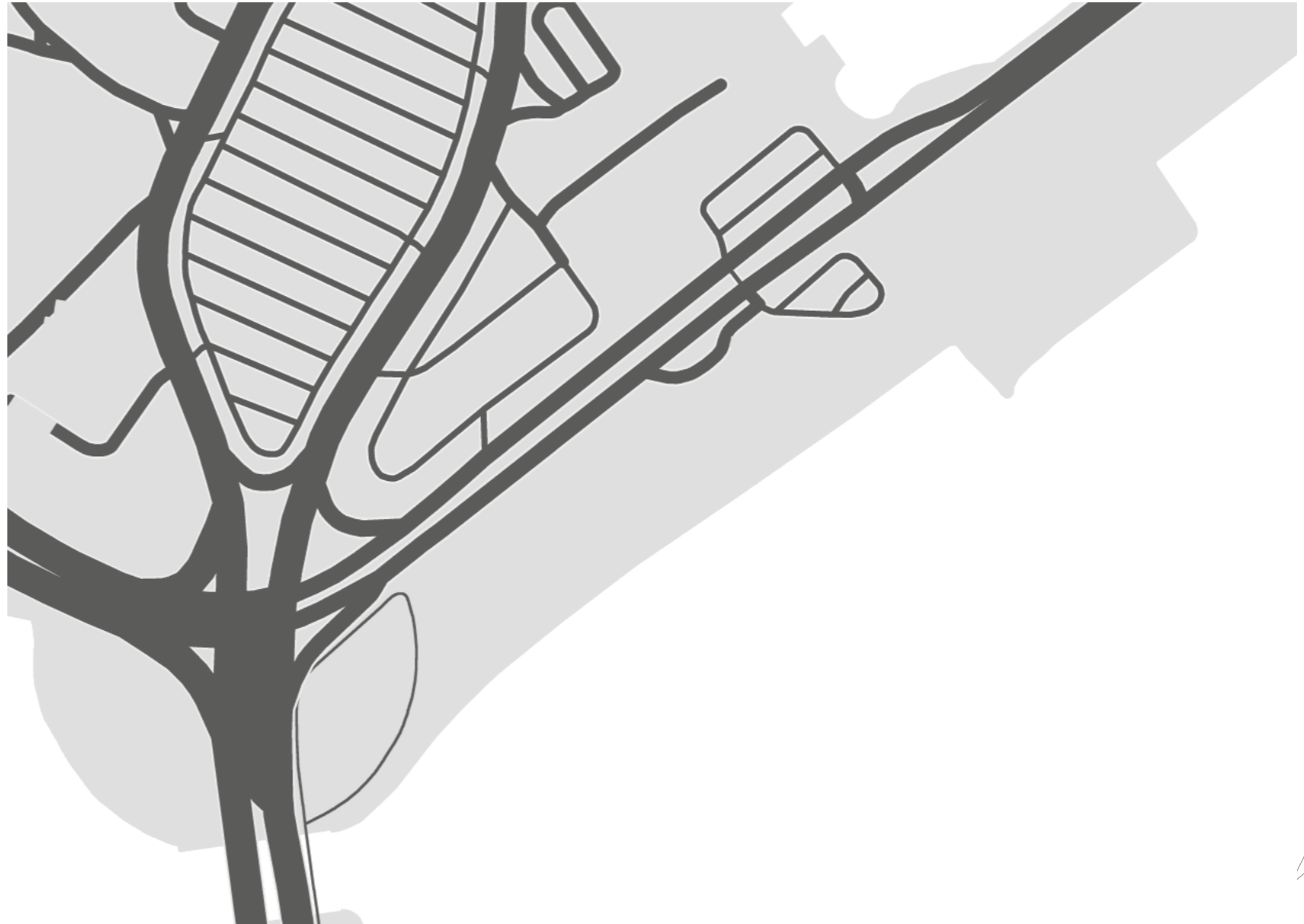
TABLE OF CONTENTS

ABSTRACT	4
INTRODUCTION	6
MY SENIOR PROJECT	8
BACKGROUND TO MY SENIOR PROJECT	10
LITERATURE REVIEW	12
CASE STUDIES	16
SITE ANALYSIS	30
PROPOSEL DESIGN	56
DESCRIPTION OF THE SEINOR PROJECT	58
CONCEPT STAGE	61
INTERIM DESIGN STAGE	70
DEVELOP DESIGN STAGE	78
PHYSICAL MODEL	98
REFERENCES	105

ABSTRACT

Since ancient times, agriculture has been the main factor in the renaissance of societies and civilizations around the world. Agriculture expresses the power of a place, a community's way of life and its environment. Through my project, I wanted to communicate the importance of local agriculture, mostly organic plants, food, and historical plant in UAE.

My project will show how the plants' nursery shop space looks different from advanced design through the research I did. To present and exploring the location and redesign the area located in Abu Dhabi Bill's Farm and Simitch restaurant in 26 Al' Alam St - Al Marina - Abu Dhabi to plants nursery shop. This site is the perfect space to apply my project. The research helps me understand the problems and the situations of my site to gain all the solution to redesign space.



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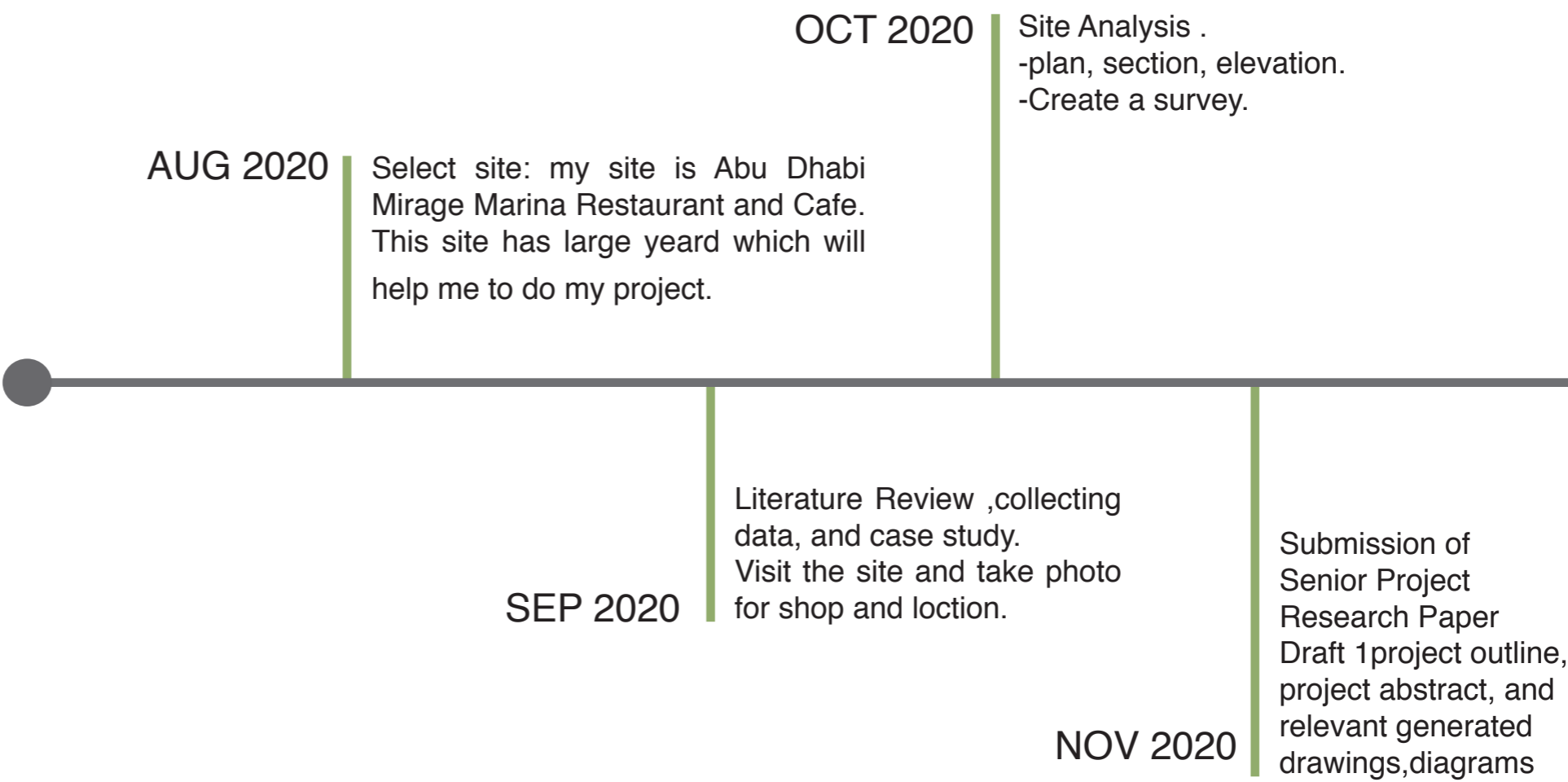
SITE PLAN



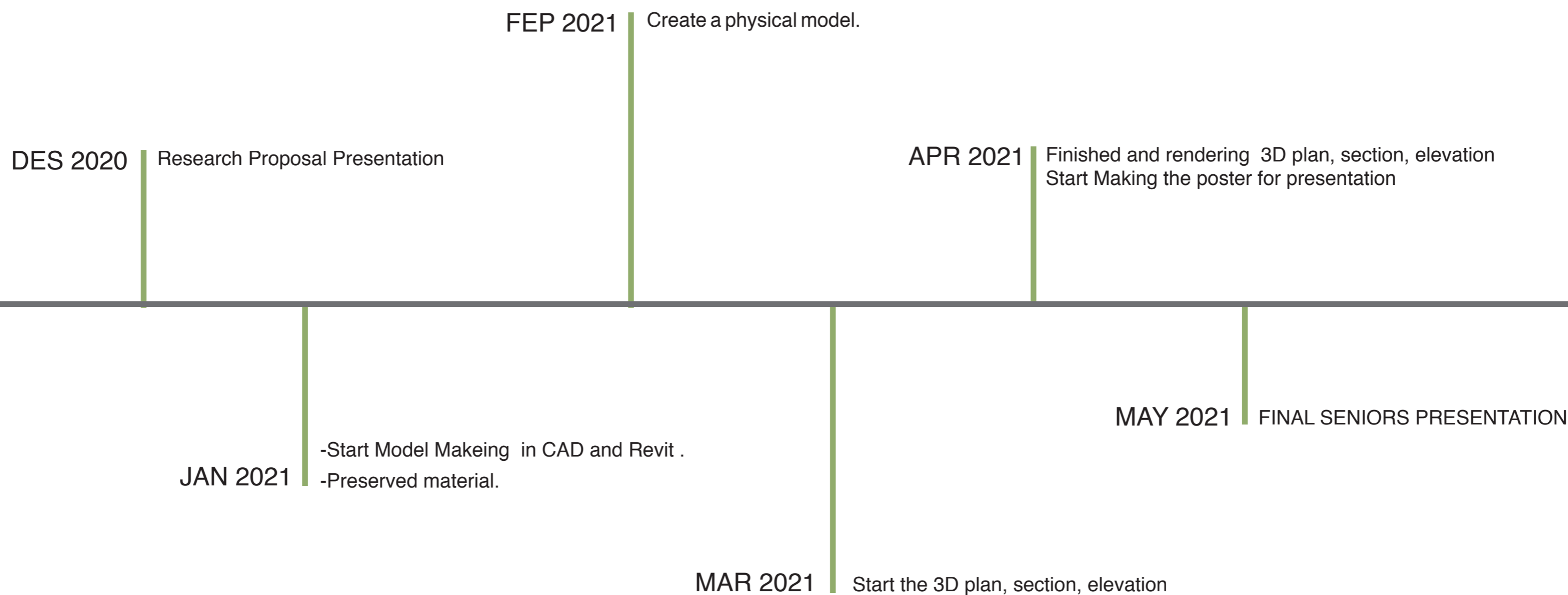
INTRODUCTION

I have realized the importance of agriculture to Emirati life and society. Sheikh Zayed instilled in us a love of agriculture and taught us always to be connected to agriculture, as it is a renaissance for the country’s civilization. I found in agriculture a generous spirit that provides people with all daily needs.

Sheikh Zayed always showed and focused on agriculture, because he was aware of its moral and material value for the people of the Emirates.



TIME LINE



BACKGROUND

TO MY SENIOR PROJECT

Organic food and Plant nursery shop

The project is about a Plant nursery shop that affords an organic Vegetable, Fruit, and Ornamental Plant. The customer can pick the vegetable, fruit, and ornamental Plant from the nursery immediately or shop from Store shelves. I choose this idea because we don't have in the Abu Dhabi plant nursery shop that shows the customer how plants growing up in a normal way without chemical substances that effects our health and food.

Besides, I would like to a different design for the plant nursery shop to let people enjoy their shopping time. Also, organic food is important for people who care about their health so, the way of present this shop is the most important to attract people to visit your shop and inspire them more about Plant nursery.



Moreover, We realize that the UAE supports all financial, social, and a lot of different fields, as is the condition of agribusiness too. In addition, it is a source for food which's support and save Food security to grow up with a knowledge of the community and the other generation about organic food.



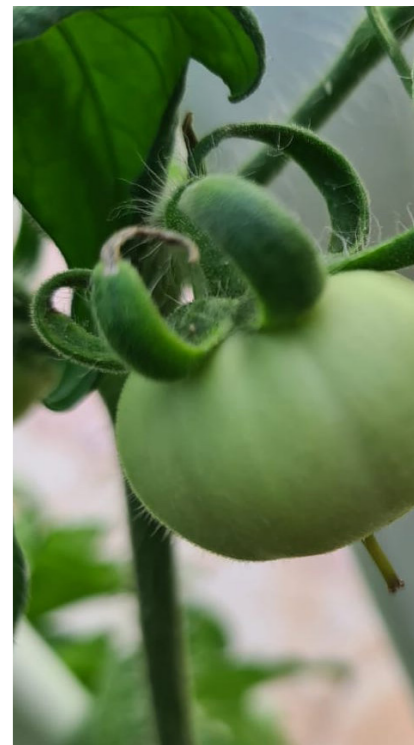
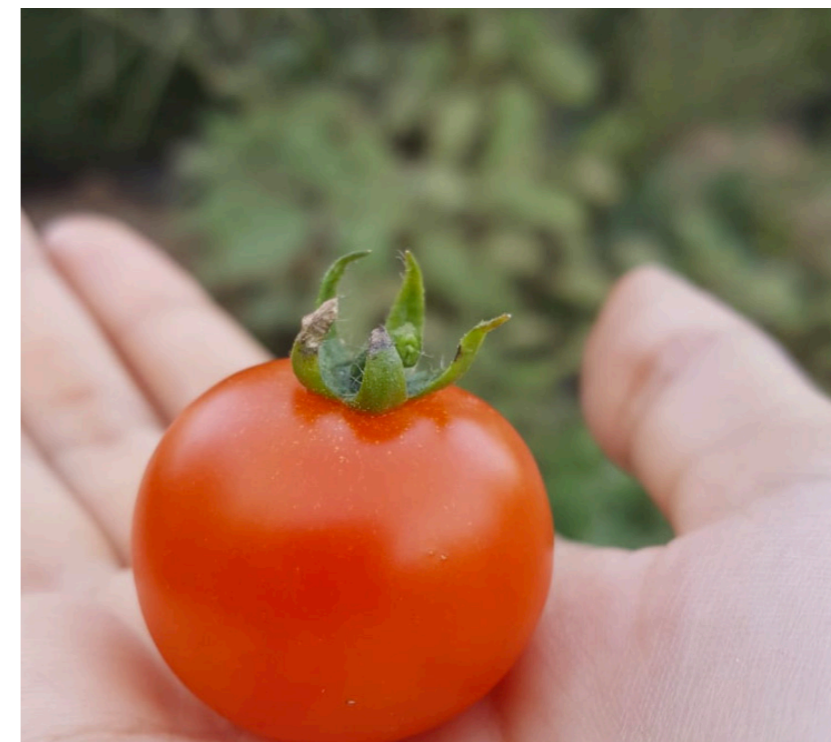


The project located in Abu Dhabi Bill's Farm and Simitch restaurant in 26 Al 'Alam St - Al Marina - Abu Dhabi. This project will be affordable to children from 10 to adult.

The United Arab Emirates is planning to establish a botanical nursery contain over 700 wild plant species found in the UAE. and more for some historical plants in the Emirates to save them from extinction and show the history of plants in the Emirates through a huge botanical nursery. I would like to achieve my aim, which is to keep our health, environment, and community safe from all damages.

The First influenced that let me decidetomakePlantnurseryshop was my grandfather because he loves farming and understands how vital agriculture to our life.

The whole family also loves agriculture and have great backgrounds about it. Also, what let me thinks more about this project is my mother. She is suffering from Immune diseases such as rheumatism so we need to take care in the quality of food to make improvements for her.

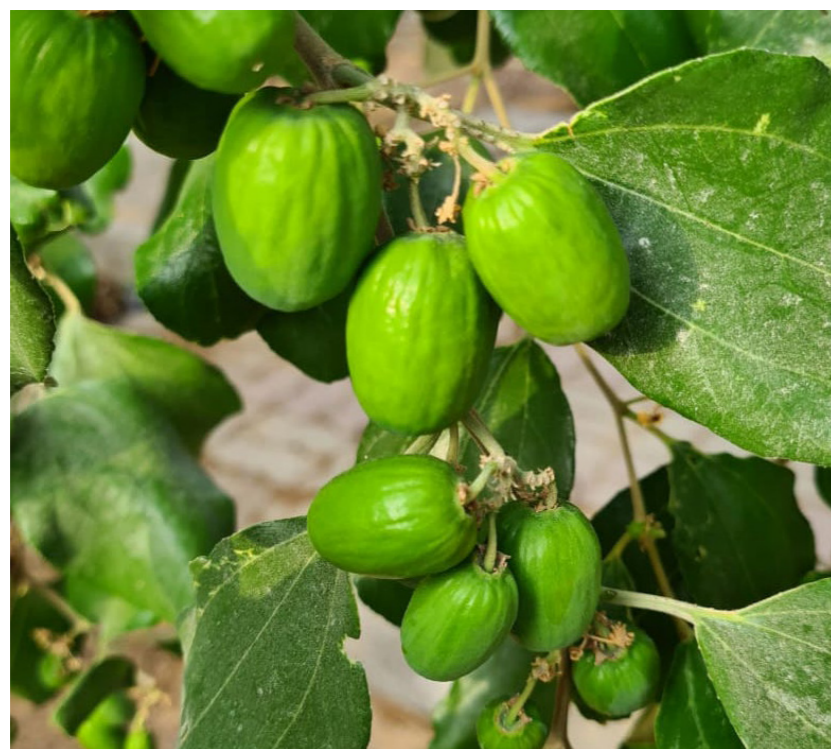




I choose the site near to the sea as it always has a low temperature instead put it in the middle of the city, which is still higher. The challenge in my site was the location as it is so far from my home but what encourages me is we will move soon to Abu Dhabi.

The concept of nature is simple, and I depend on my project to create a place full of natural style by using the basic material. Such as wood metal glass.

Within the search, I chose GARS as my shop name. GARS is an Arabic word that means planting some things somewhere like putting seeds in the right place in the soil. I ask my grandfather what GARS could tell, that he said that when you instil beautiful values in the soul of a child, he becomes a beautiful person in the outside and inside and it is the same with the plant if we instil them correctly we will gain better health and life.



LITERATURE REVIEW

Agriculture is significant to our world to keep Earth safe and livable. Agriculture has been the main trend in the development of sedentary human society. People work from ancient with Agriculture because they understand how essential to human health and the environment as “it’s more than a job, it is a way of life” Matt Ballou, Texico Jerseys. The way of farming history started millennia ago in different ways and types. Agriculture has a great impact, as it gives a beautiful and sustainable environment to the country that provides many lost resources and preserves the culture, economy, and healthy. As the UAE aims to attain and retain the highest standards of national food security. I decide to make a plant nursery shop in UAE and discuss the questions of my research.

Retrieved December 08, 2020, from .albayan.ae/



Turning the desert into a green was a vision of Sheikh Zayed. “Whenever I met him, he always talked about agricultural projects. He kept asking: ‘What should we do next? What do you have on the agenda? I’m keen on seeing trees, flowers and vegetables everywhere’,” said Al Yousefi. Sheikh Zayed always supported all the farmers and hire expert’s people’s like Abdul Hafeez Yawar Khan Al Yousefi in agriculturist (Khan.2015).After that Agricultural development began in the introduction of oil resources greatly changed agriculture, and the British, working with important local allies, laid the groundwork for agricultural growth and modernization in the 1940s.

Retrieved December 08, 2020, from emaratalyoun.com

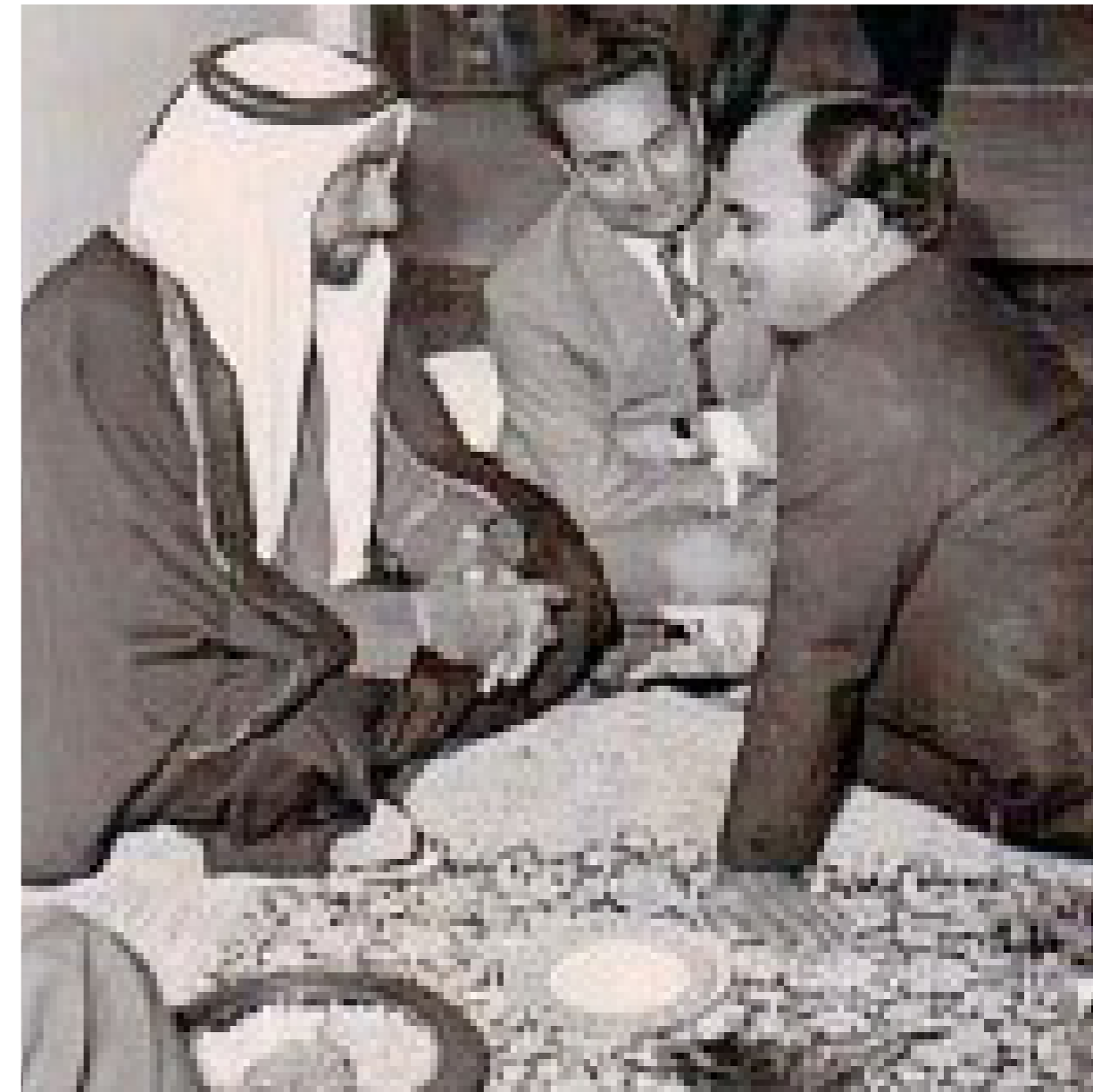


Starting in the 1940s, the transformation of local power relations took place in the light of the preparation for agricultural production and the mobilization/ exploitation of the capital needed by this. Although traditional agriculture was small in area and more cooperative, modern agriculture was more widespread, technologically advanced, and demanded centralized control of land resources and extension of transport routes and available water supplies, which are more plentiful (Joseph, S. (2018).

Moreover, the UAE encourages citizens to have their farms by granting free plots to UAE citizens with “drilling water wells for free, providing interest-free agricultural credit lines, and protecting small farmers from international competition” (Joseph, S. (2018). Also, the country is now promoting and broadly embracing sustainable farming practices aimed at protecting the environment, expanding Earth’s natural resource base, and preserving and improving soil fertility.

By encouraging agricultural activities that are profitable, environmentally friendly, and healthy for ecosystems, it also helps to preserve farms, land, and cities. For example, any of the methods under sustainable agriculture include vertical farming, hydroponics, organic farming, and managed environment farming with limited inputs to raise local fruits and vegetables (Sebugwaawo. (2020).

Retrieved December 08, 2020, from thenationalnews.com



Retrieved December 08, 2020, from pressreader.com



Retrieved December 08, 2020, from khaleejtimes.com

Retrieved December 08, 2020, [youtube.com/watch?v=a_StirGEwLQ](https://www.youtube.com/watch?v=a_StirGEwLQ)



Besides, Agriculture in the Emirates was using the old Aflaj system.



This system works by equitably distributing water between the house and agricultural areas. This system was working more in Al Ain and this transportation helped farmers save water in emergencies and during periods of drought. But over time they realized that perhaps “losses in transportation from the source to the Sharia, such as leakage, leakage or cracks in the canal,” which made it a poor system in light of the development of that period (Remmington, G. (2018).

There are new systems to make plant nursery useful such as, Xeriscaping is the process of landscaping or gardening that reduces or eliminates the need for supplemental water from irrigation (Hoke, .1991). Secondly, Hydroponics use another system which is gardening without soil by using mineral nutrient solutions in an aqueous solvent. Hydroponics provides many perks, one of which is a reduction in water demand for agriculture (Bortman, 2003). The Compost is an organic matter which was broken down in a process called composting

This approach recycles different organic materials that are sometimes called waste products and creates a soil conditioner (Gorringer, H. (2016).

According to (Organic Food. (2019) “Organic food is a labeling term used to identify foods that have been produced and processed using natural, environmentally friendly, and ecologically balanced techniques”. The impact of organic food and plants nursery on humans is significant and positive. People will be reducing stress, eating healthfully, doing physical exercise, and connecting with others. That will not just affect one or small groups, but it will change the whole society to a better life. People will understand how agriculture and the environment can change a lot inside and outside. (Gillihan,.2019).

Plant nursery and organic food will be raising awareness in the community to preserve their health, life, and environment. Positive ideas about agriculture will help society overcome many problems in economic and save the agriculture history of UAE.

The last system is container gardening or pot gardening is the practice of growing plants, including edible plants, exclusively in containers instead of planting them in the ground. A container in gardening is a small, enclosed, and usually, a portable object used for displaying live flowers or plants for example raised beds (Erler, C. T. (2003)

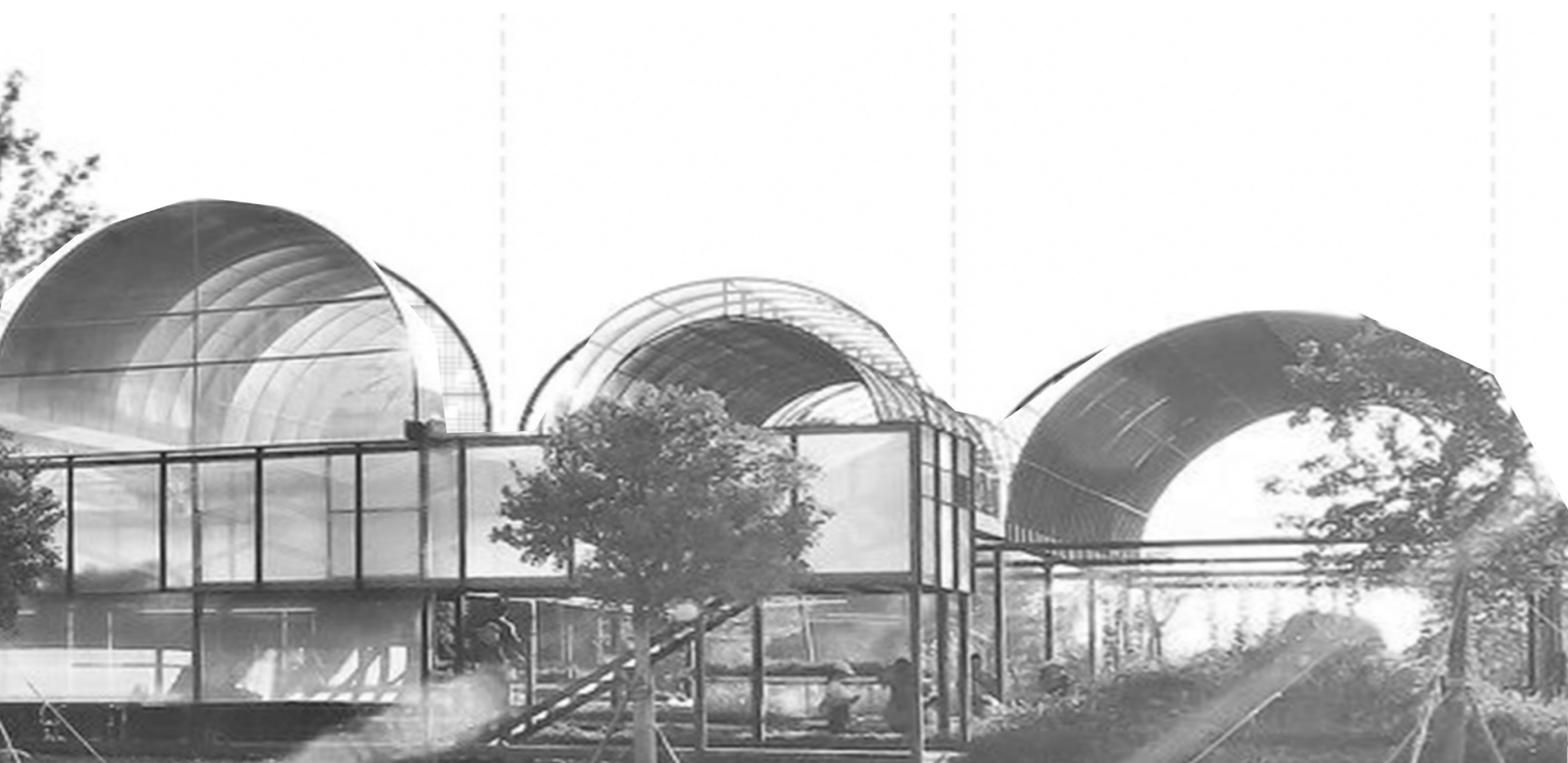
CASE STUDIES

Greenhouse2 Grass Field BIAS Architects
PAVILION .XINWU DISTRICT, TAIWAN (ROC)
Area: 336 m²
Year: 2019

The first case study was about Greenhouse2 Grass Field by BIAS Architects in TAIWAN. This project was an Expo. Then they turned it to Greenhouse2 the new project shows a simple design of a greenhouse that contains a Mixed grassland, Grass carpet wildflower gallery, dining table and, Kitchen, Herbivore, Wolf tail meadow, Tissue culture laboratory. The program has an aim which is “it has been a venture into the way in which the things of human life emerge out of nature and then goes back to nature.”

Moreover, the program encourages people to understand their environment as Greenhouse2 Grass Field they chose the location of the site in the center of nature and the. Which is will help the plant and the environment to have blanched wether. Also, the space of the location was served at all the facilities.







The first program was an Expo. Then they turn it to Greenhouse.

why they turn it to Greenhouse?

“Going through these magical greenhouses, we experience a living environment where plants cohabitate with humans and learn the subtle equilibrium of life and agriculture.”

Glass
Stainless Steel
Wood
Bricks

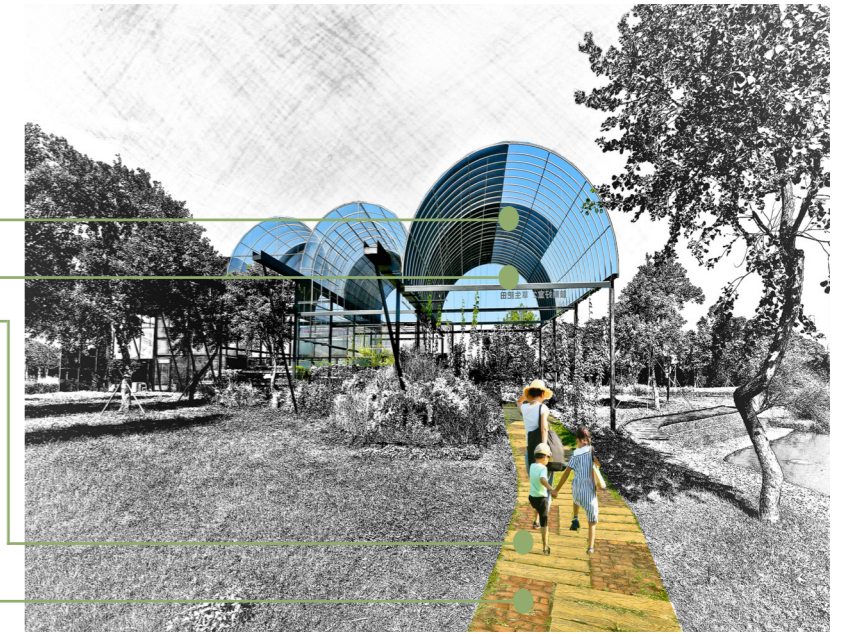


Figure 5

SYSTEM

Hydroponics is a type of Horticulture and a subset of hydro-culture, which is a method of growing plants, usually crops, without soil, by using mineral nutrient solutions in an aqueous solvent. ... Hydroponics offers many advantages, one of them being a decrease in water usage for agriculture.

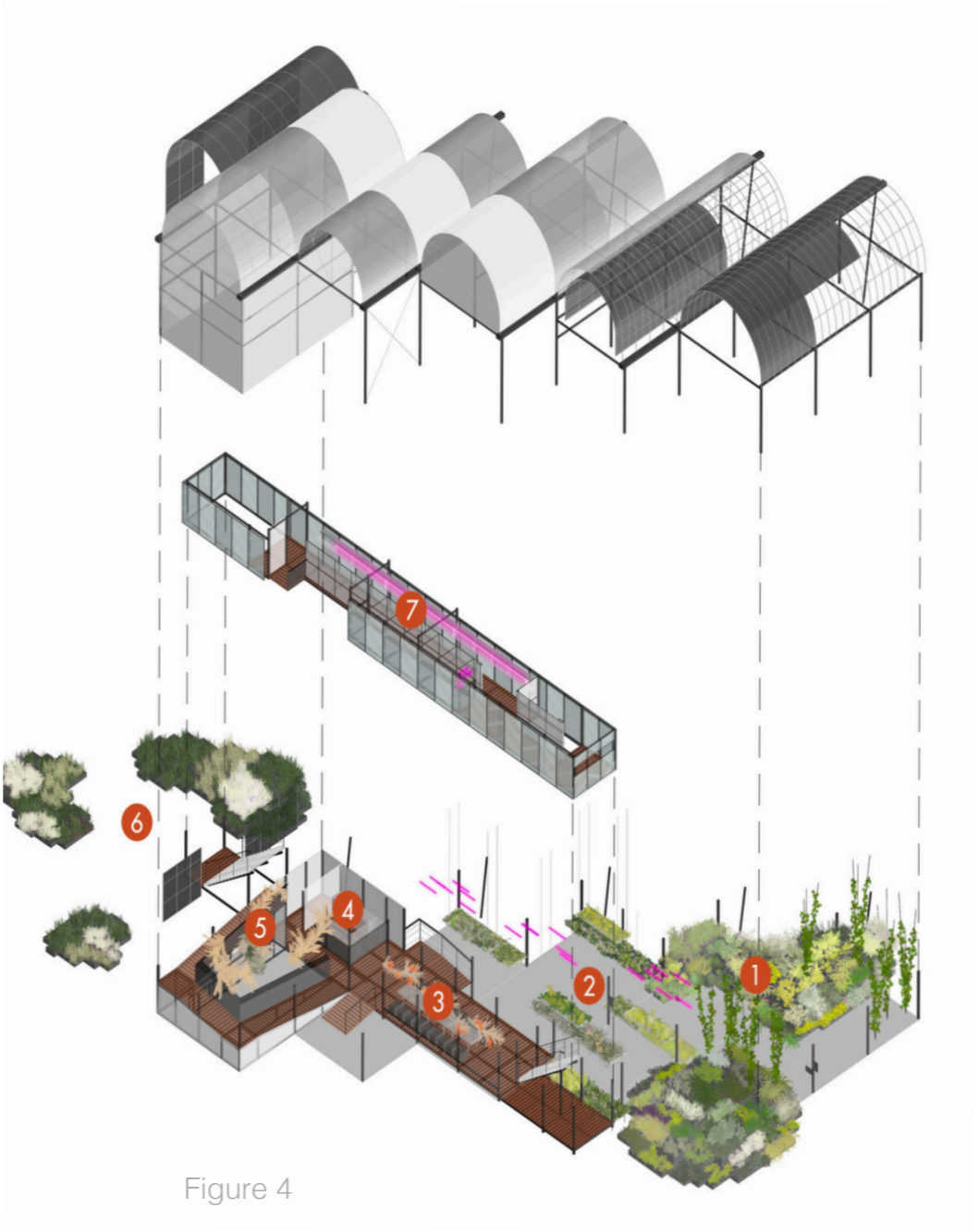
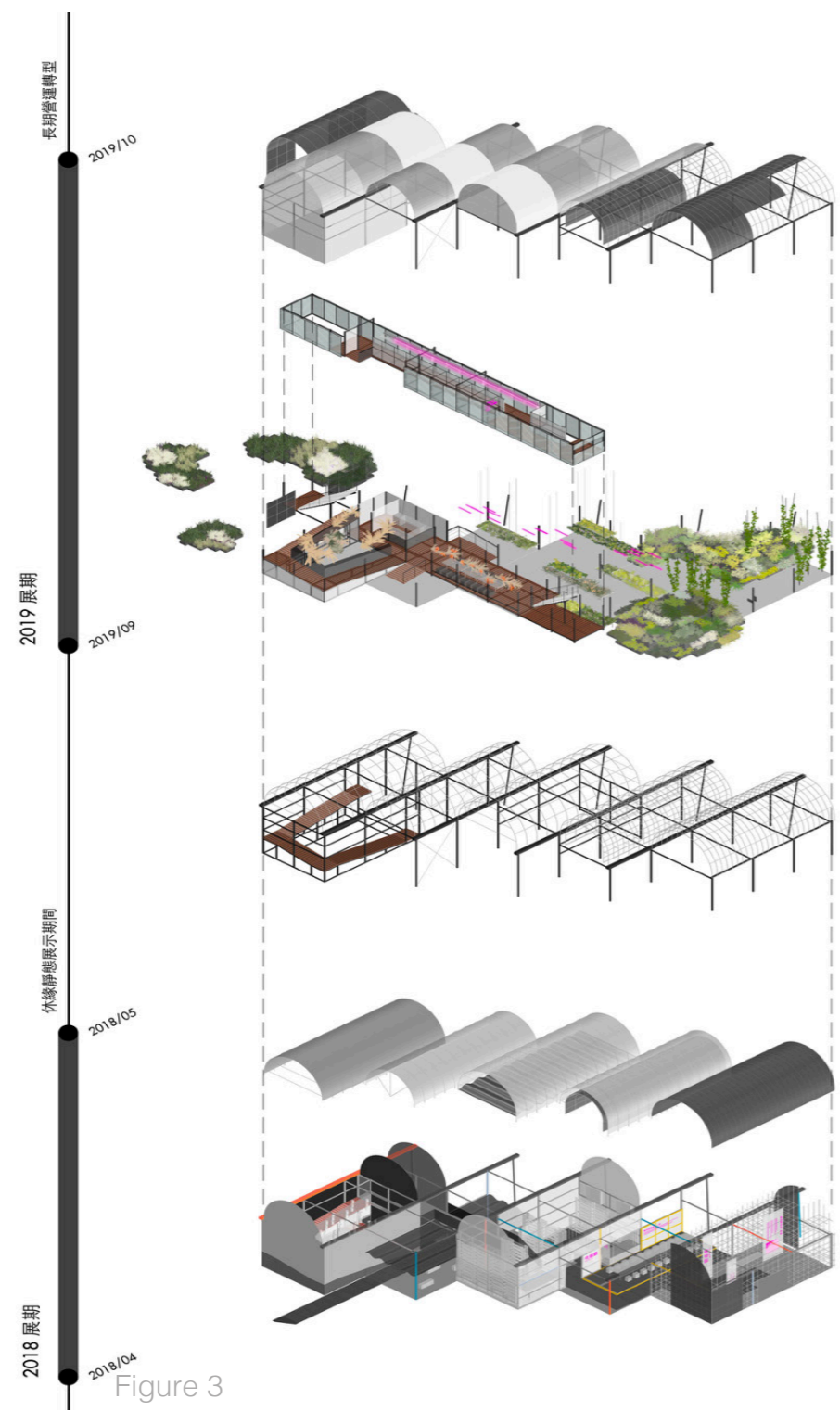


Figure 1



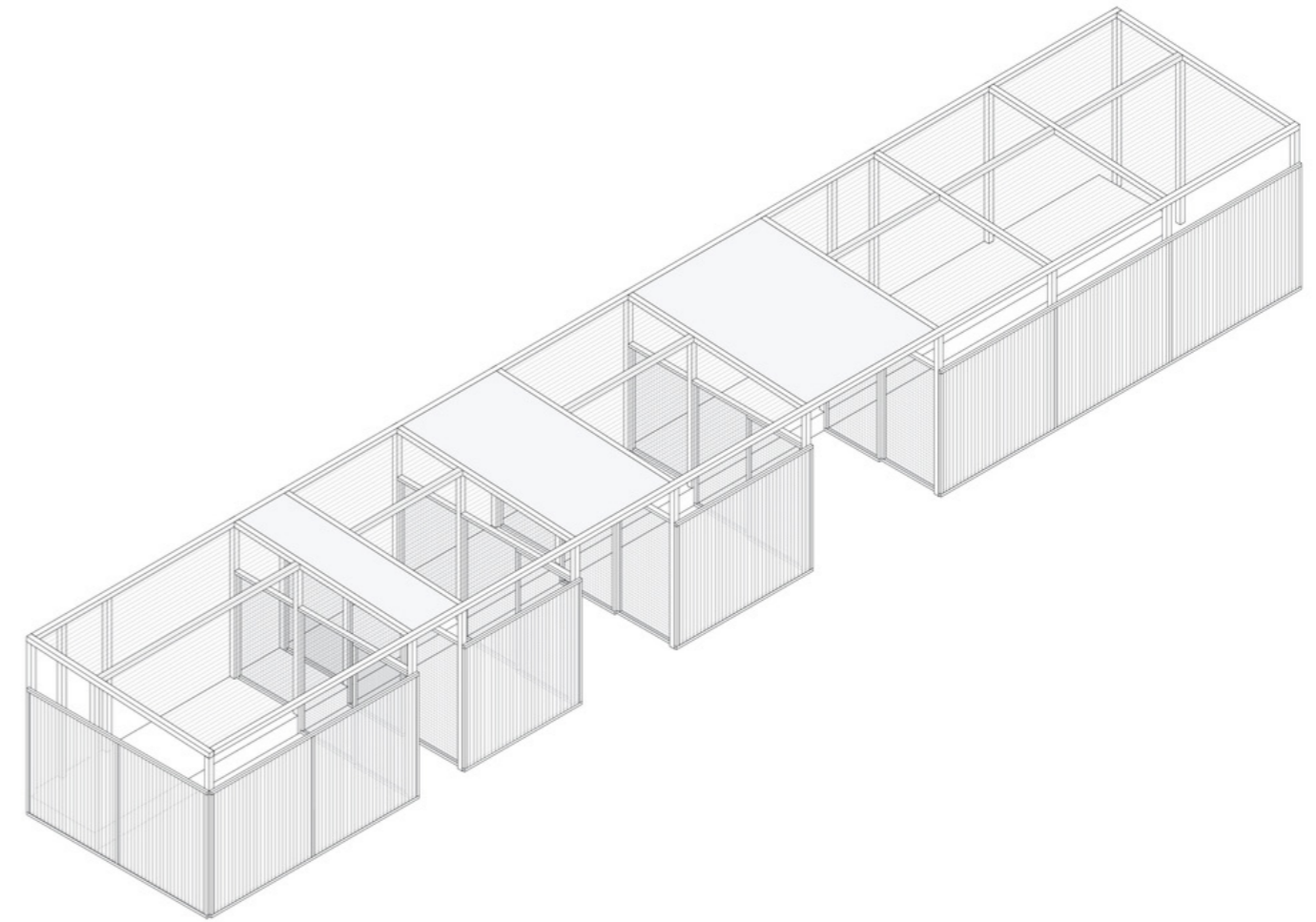
Figure 2

- AXONOMETRIC**
- 1 - mixed grassland
 - 2-Grass carpet wildflower gallery
 - 3 - dining table
 - 4 - Kitchen
 - 5 - Herbivore
 - 6 - Wolf tail meadow
 - 7 - Tissue culture laboratory

The second case study in Santa Monica Greenhouse is a rectangle building by Cactus Store in Los Angeles. This program is also about Greenhouse but differently the project here depends only in the sunlight from morning till evening. The material they choose is glass, steel, and concrete floors. The roof is solid/void, transparent/opaque is further reinforced by the roof, which has translucent panels above the planted areas, and solid steel above the pathways. This program used Container gardening system.

The greenhouse's exterior-facing facades are constructed of tinted, double-walled polycarbonate which, depending on the time of day and angle of view, offers a diverse spectrum of reflections, colors, and opacity. To allow clarity and airflow through the project, an untreated steel mesh is used on the interior faces, and the main structure is a mixture of 3 "and 1.5" raw steel tubes to hold all structures and sliders within a single line.

The steel can rust with time, mixing it with the color of the polycarbonate panels and producing a more monolithic look.

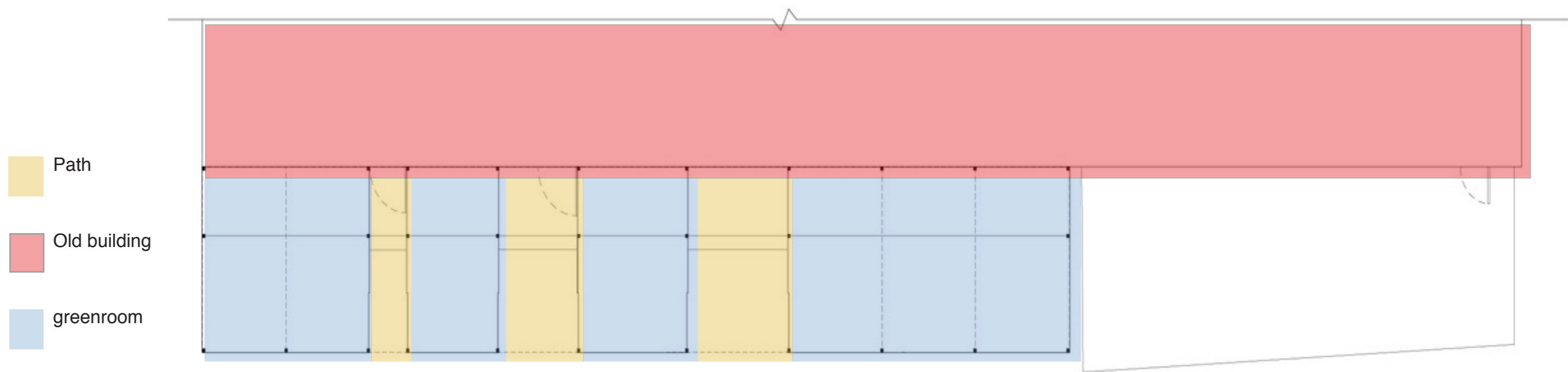


AXONOMETRIC

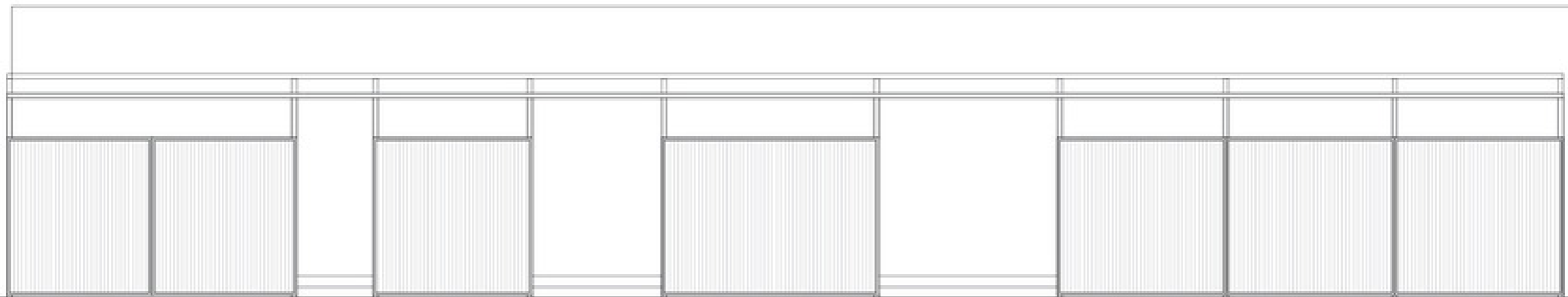
Figure 1

**Santa Monica Greenhouse /
Part Office + Cactus Store
Architects: Part Office
Area: 1070 ft²
Year: 2020**





Plan of Santa Monica Greenhouse
Figure 2



SECTION
Figure 3



Figure 4&5



Glass
Steel
Mash perforated iron
Cemented Floor

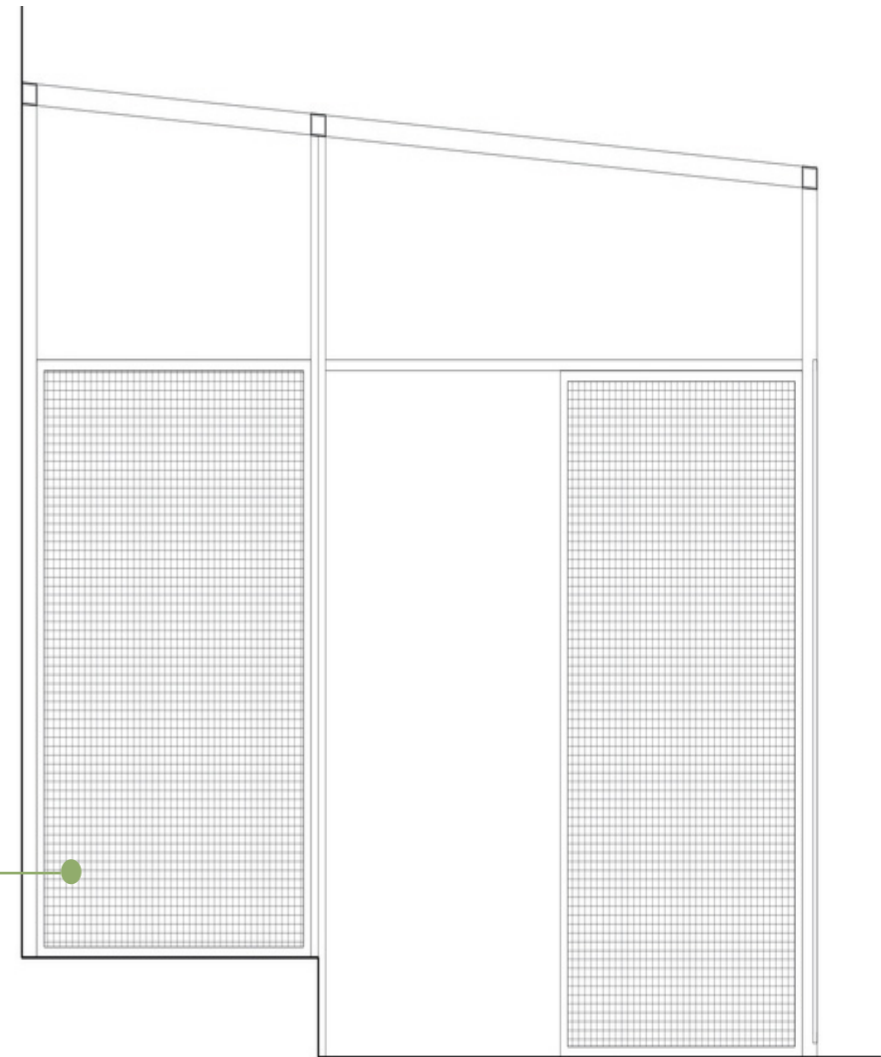


Figure 6

SYSTEM

Container gardening or pot gardening is the practice of growing plants, including edible plants, exclusively in containers instead of planting them in the ground. A container in gardening is a small, enclosed and usually portable object used for displaying live flowers or plants.

Figure 7



SAFEZONE SHELTER / SHMA COMPANY LIMITED

INSTALLATIONS & STRUCTURES, TEMPORARY
INSTALLATIONS, SUSTAINABILITY & GREEN DESIGN

KHET BANG RAK, THAILAND

Architects: Shma Company Limited

Area: 150 m²

Year: 2020

Thirdly Safezone Shelter by Shma Company Limited in Khet Bang Rak, Thailand. This shelter help to reduce air pollution in Thailand and save the plant. The pavilion was designed in a futuristic organic form, inspired by "cloud," representing a clean, refreshing atmosphere, while also creating a pleasant microclimate by equipping vegetation and engineering technology together.

“ In addition, natural scents from plants, and experimental music - made up of nature-like sounds (breeze, water, birds) is employed to provide a soothing experience while walking inside the pavilion. In order to revitalize Bangkok into a sustainable city that every inhabitant can take a deep breath.”



Figure 7



Figure 1



Figure 2



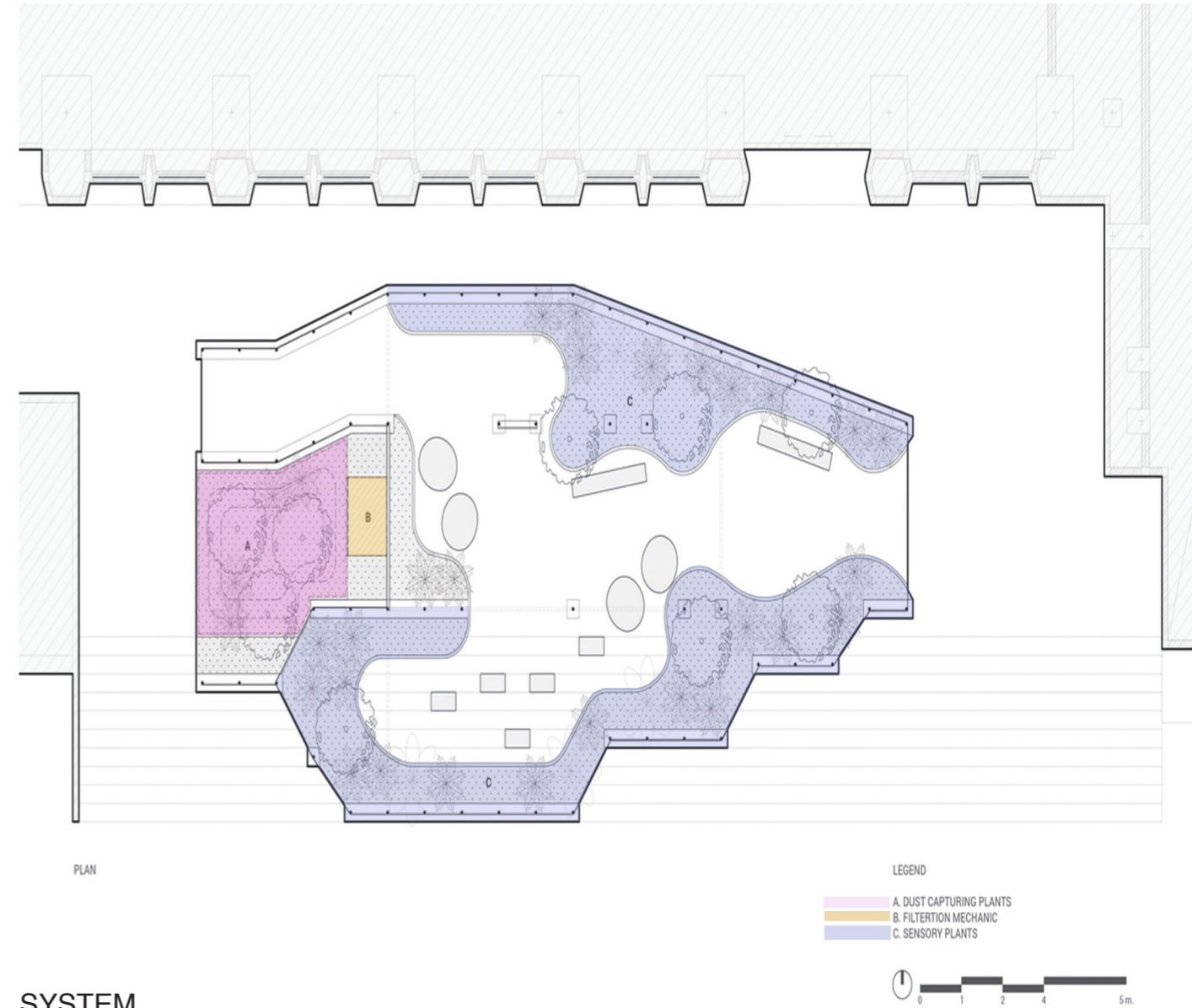
Figure 4&5



Stainless Steel

Fabric

Wood



SYSTEM

Xeriscaping is the process of landscaping or gardening that reduces or eliminates the need for supplemental water from irrigation.

ZOINING

Figure 3

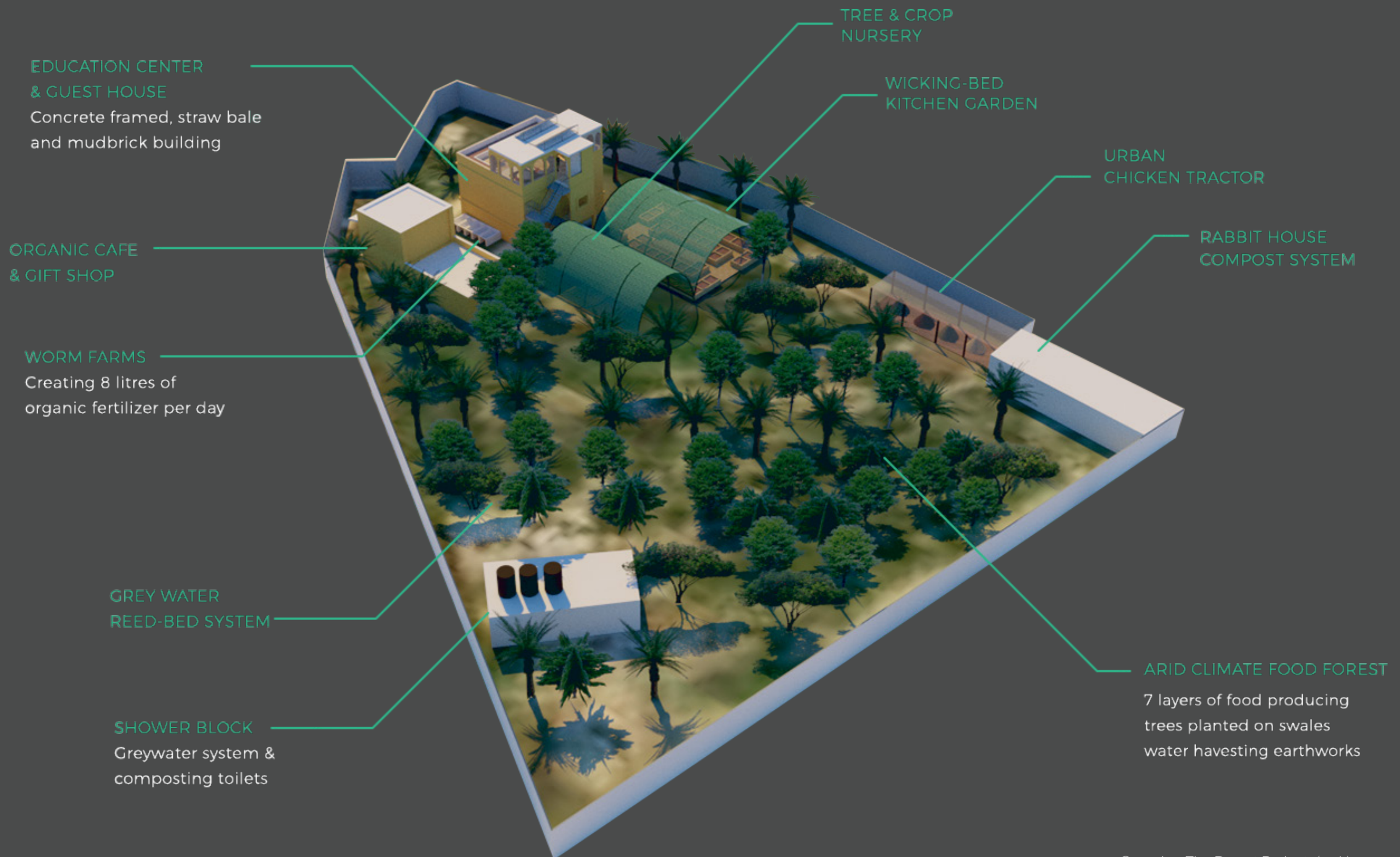
Figure 6

GREENING THE DESERT PROJECT

The site is located in the Shouneh Janobieh (i.e. South Shouneh) district of Al Jawfa in western Jordan, in the Dead Sea Valley, just 10 km north of the Dead Sea and 6 km east of the Jordan-Palestinian border, immediately east of the West Bank.

The project site shows energy-efficient adequate housing with natural cooling systems and an attachment to the plant nursery, solar fuel, solar hot water, recycling of biological waste water disposal, dry compost toilets, earthworks for rainwater collection and various immersive plant, animal and tree systems for local food production and processing. The demonstration house acts for the project and the local Permaculture community as a classroom and administration office.





GARS

SITE IDENTIFICATION

Bill's Farm



Alhusan Entrance

SIMITCH

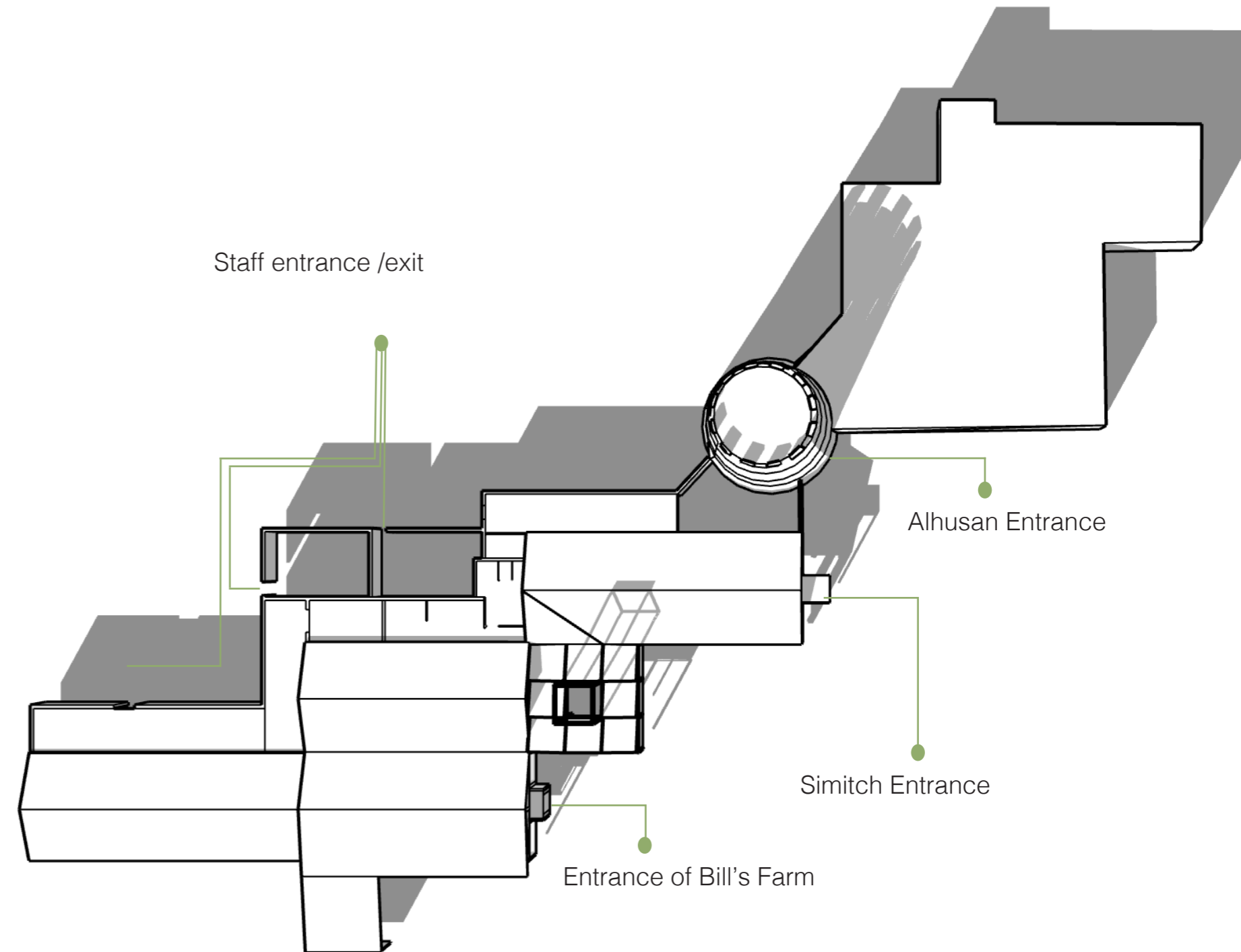


SITE ANALYSIS

SITE INFORMTION & HISTORY

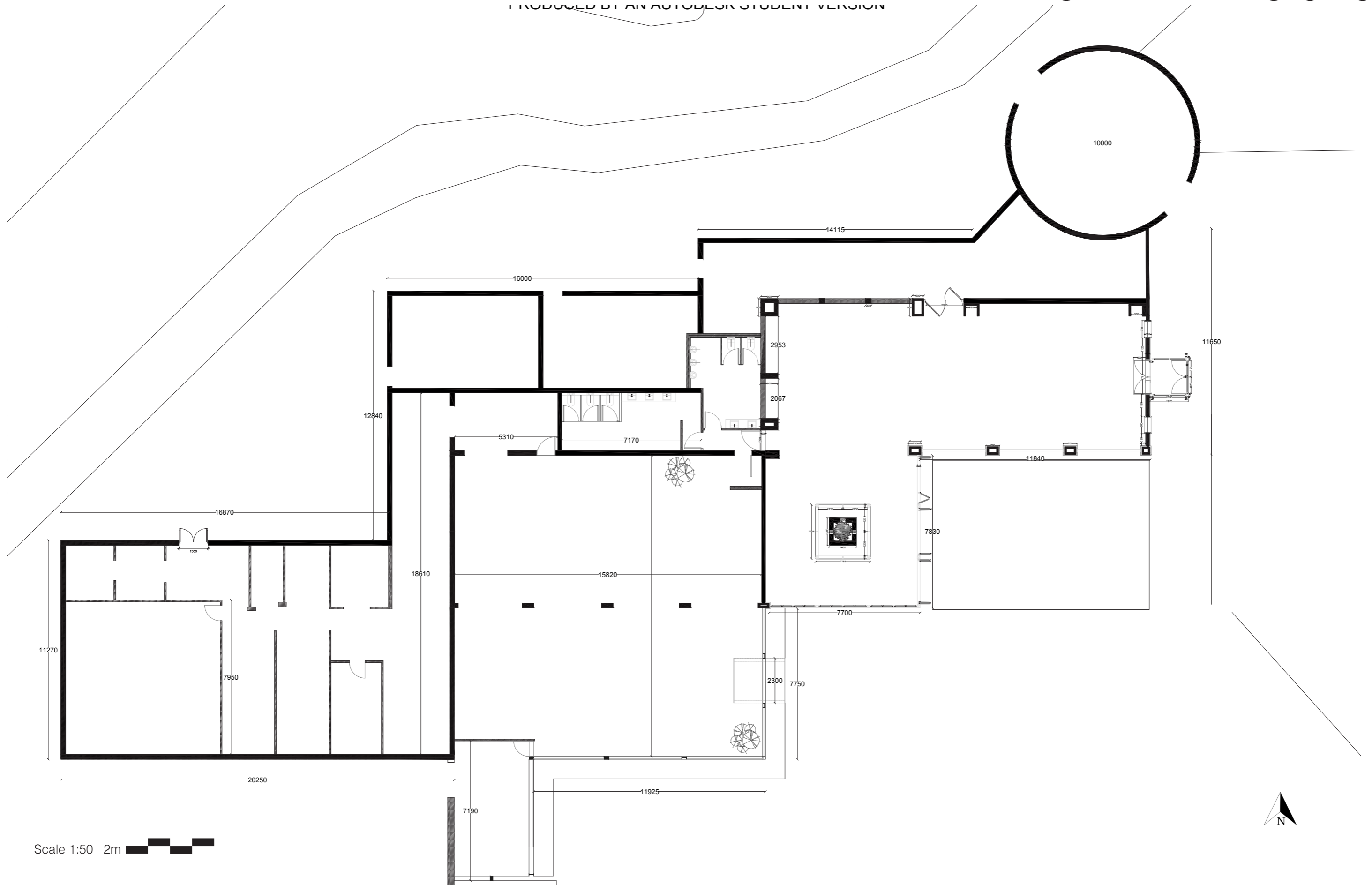
Bill's Farm and SIMITCH Restaurants located in Marina Mall Area, Wave Breaker - Abu Dhabi. Both Restaurants afford area for outdoors with a view of the sea in front of each restaurant. The site contains all the nature's elements. Also has a beach and many green areas with different types of plants around the restaurants. The Bill's Farm restaurant established in 2014 and SIMITCH Restaurant in 2018. The designer of The Bill's Farm is George Aramouni and Simitch restaurants by Georges Elias Chidiac. The site is mostly crowd on weekends.

I choose this site because it serves the idea for my project. The location is near to Marina Mall we need 2min (800m) by car and from Marina Village. 6min (2.0) which encourages people to visit and buy from the organic food shop. Moreover, the beach and many green areas with different types of plants show that the site is good to be for farming and the beach will help to low the temperature in the site. Even the site structure offers the same design of the greenhouse and Plants nursery, but the roof has to be transport glass to allow the sunlight coming inside the site.



SITE DIMENSIONS

PRODUCED BY AN AUTODESK STUDENT VERSION



Scale 1:50 2m

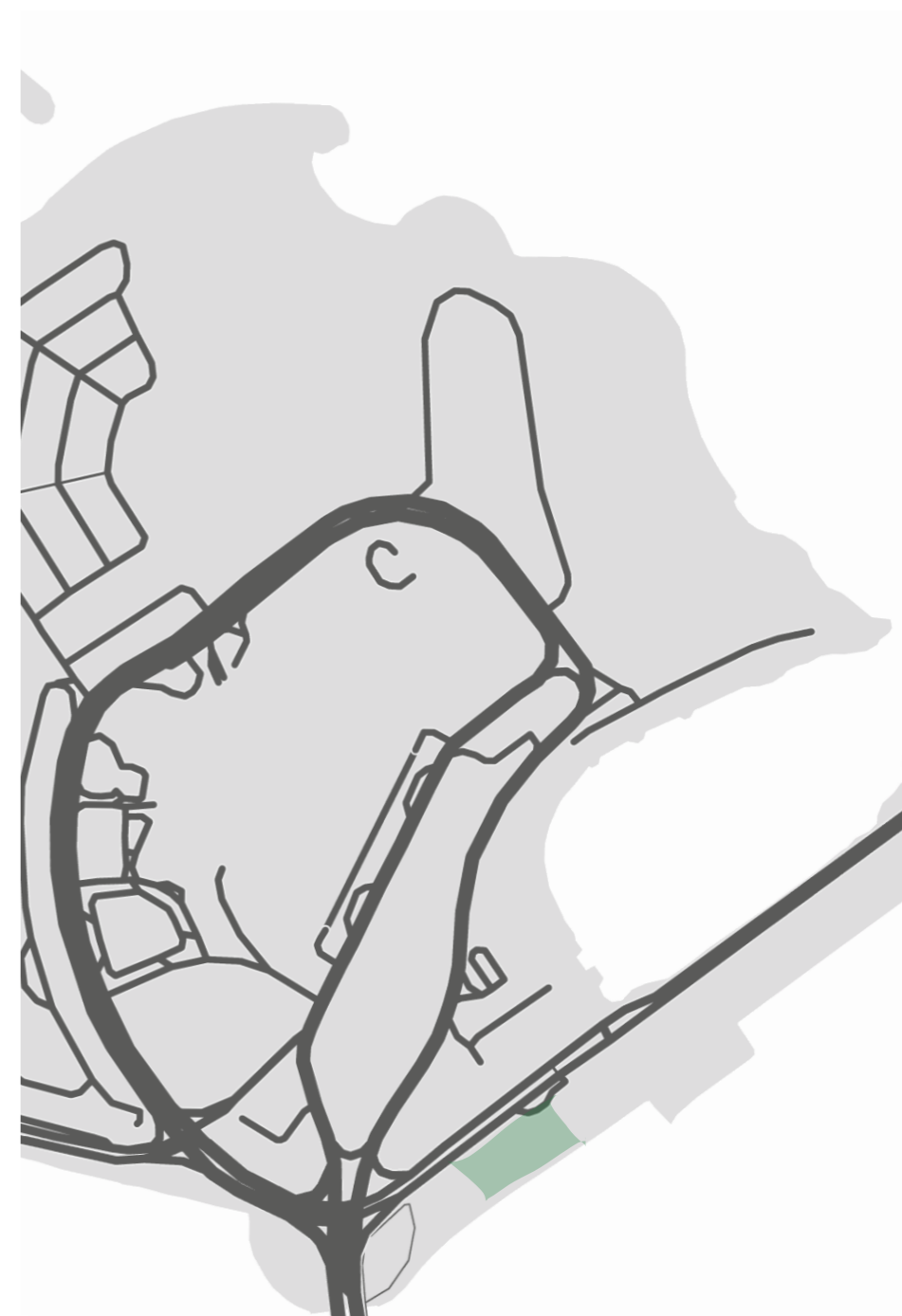
SITE IDENTIFICATION

SITE VIEW FROM MARINA EYE



SITE

MAP LOCATION

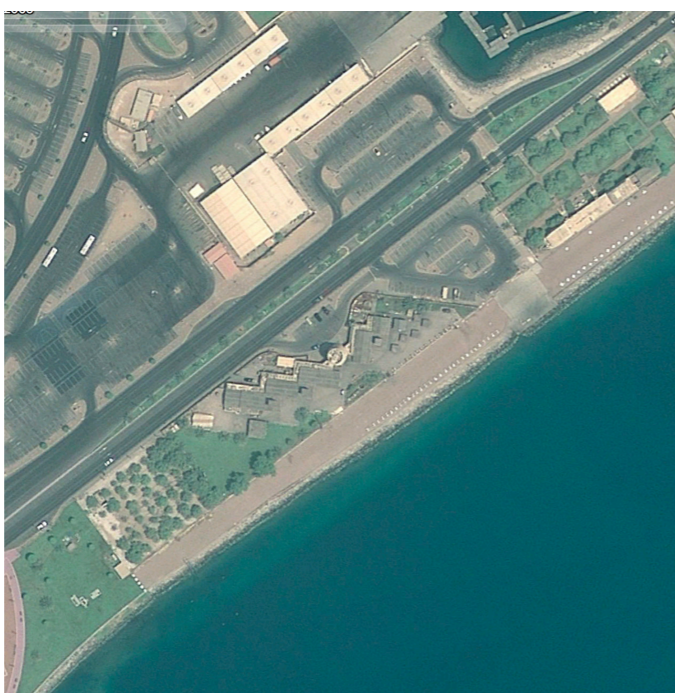


SITE MAP ANALYSIS

SITE PLAN FROM 2007 - 2019



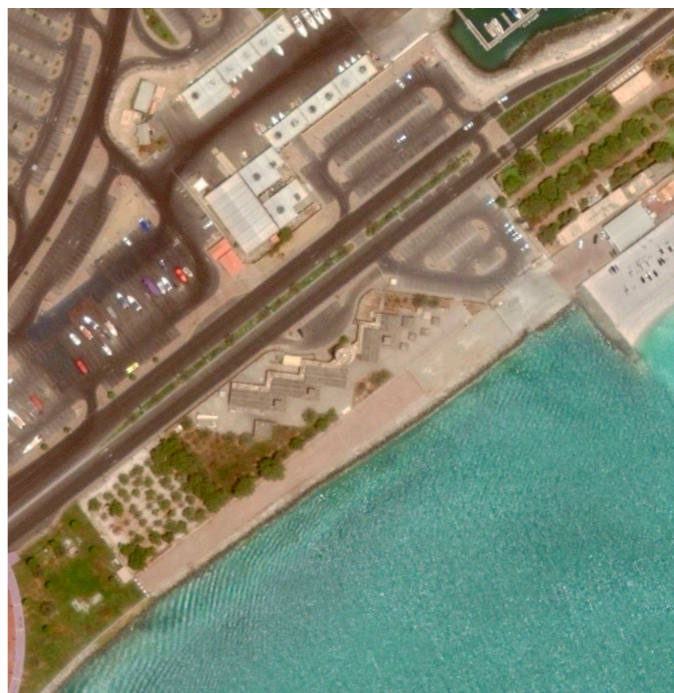
2007



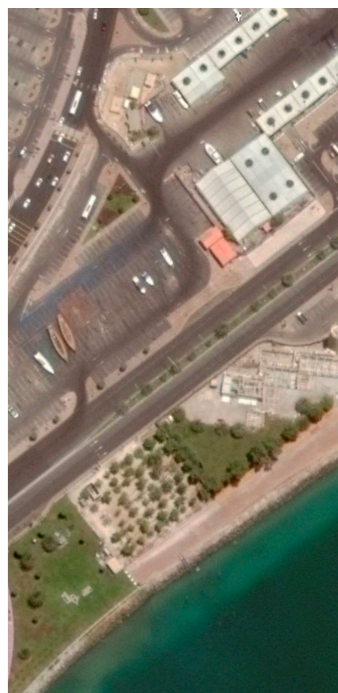
2009



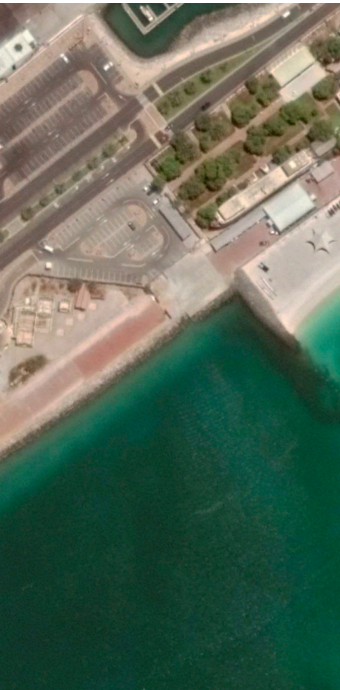
2010



2012



2014



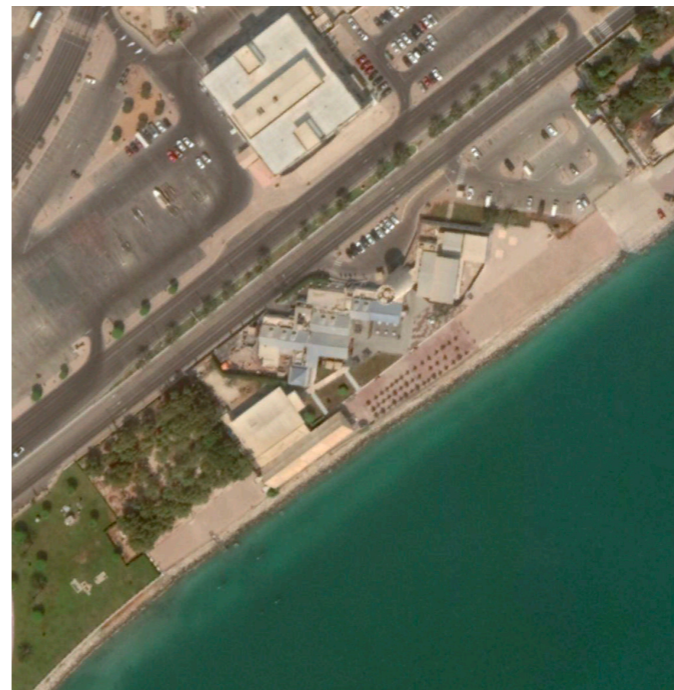
2016



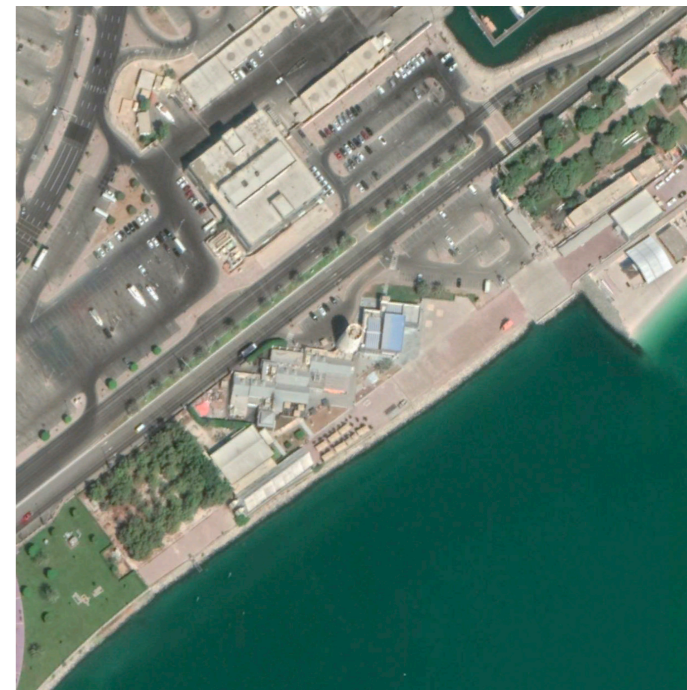
2017



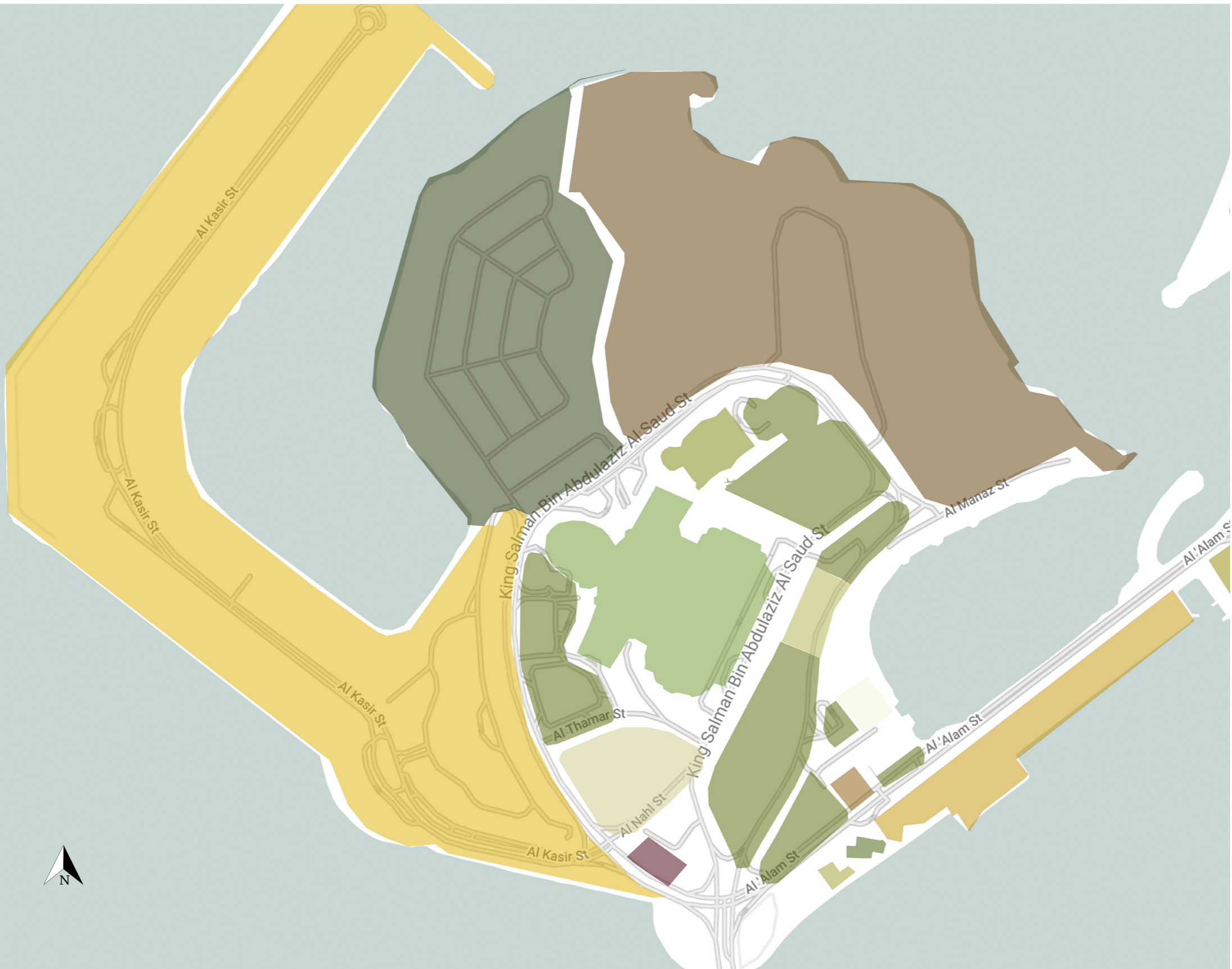
2018



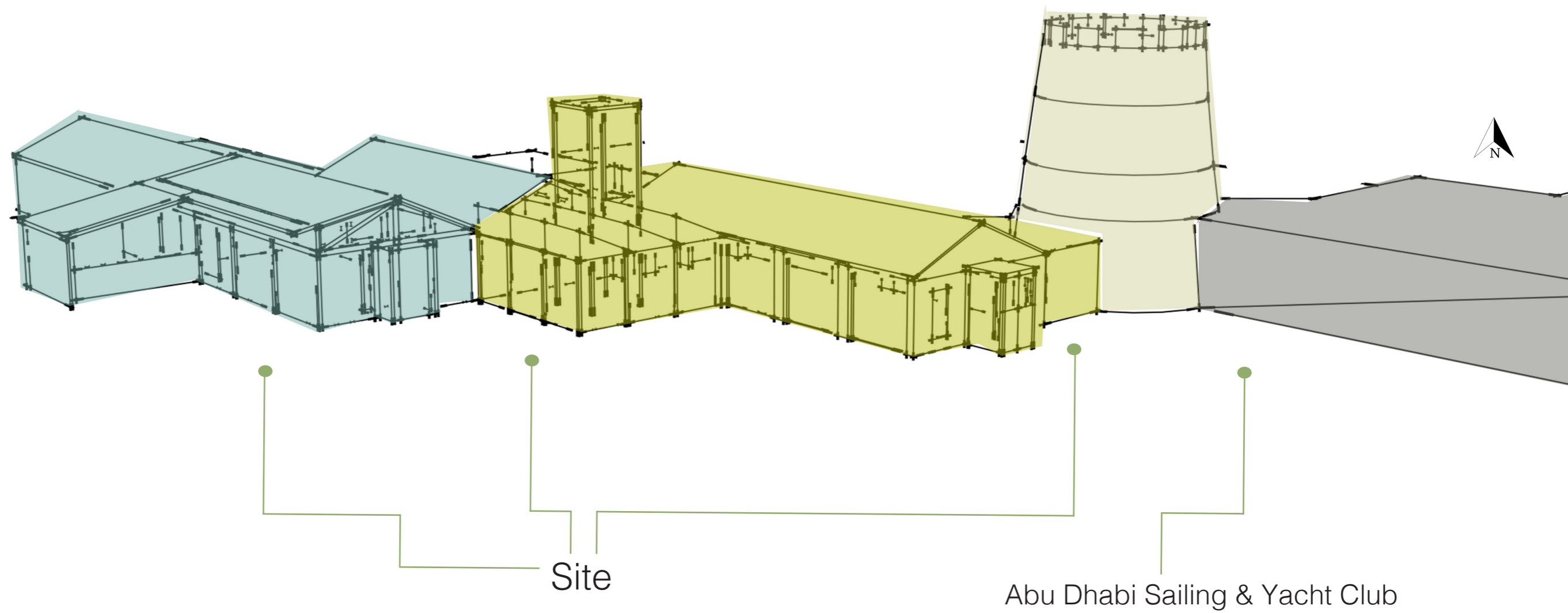
2019



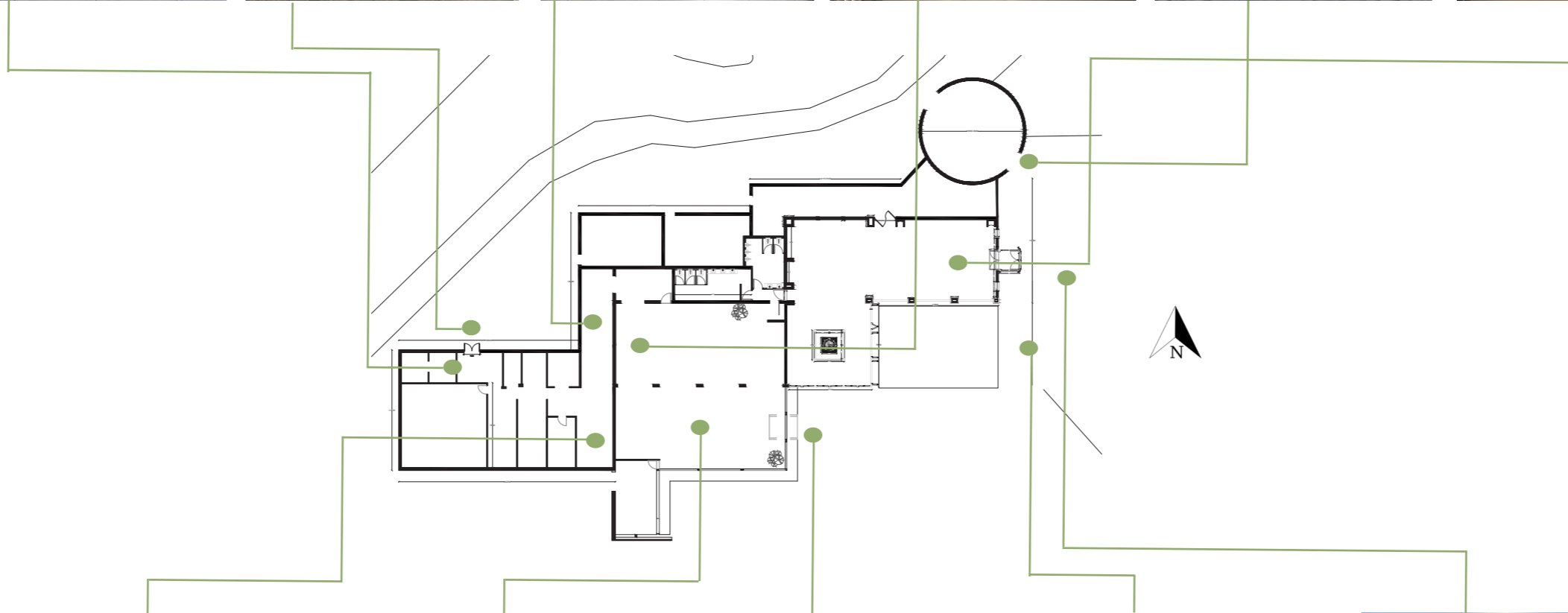
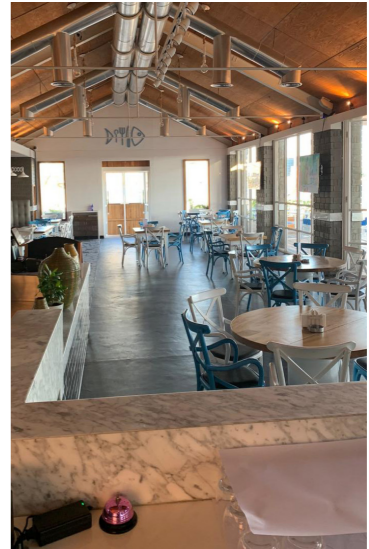
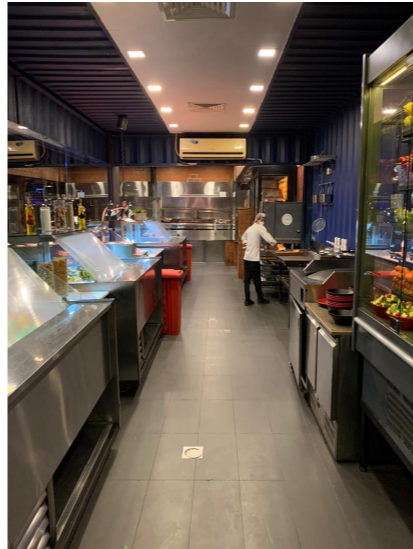
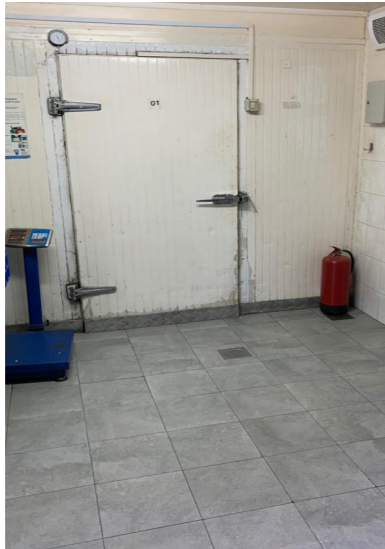
AROUND MY SITE



- Marina Sunset Villas
- Marina Village
- Fairmont Marina Abu Dhabi
- Marina Mall Parking
- Marina Mall
- Home Centre
- Marina Eye
- Abu Dhabi Sailing & Yacht Club
- Heritage Village
- Abu Dhabi Theater
- Havana Cafe
- Casper & Gaminis
- Nirvana Travel & Tourism
- Empty space
- Site ,Bill's Farm,







Type of plant in the site & Green area nearby the site



Petunia



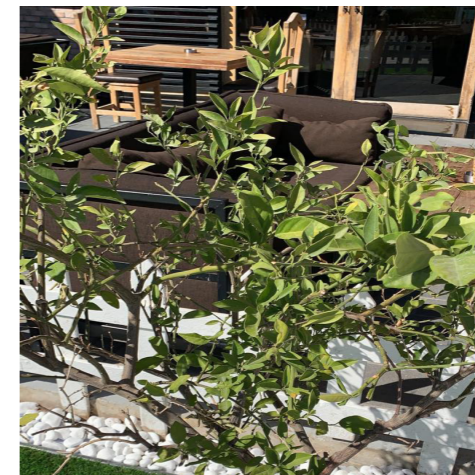
Boston fern



Cape Jasmine



Zanzibar gem



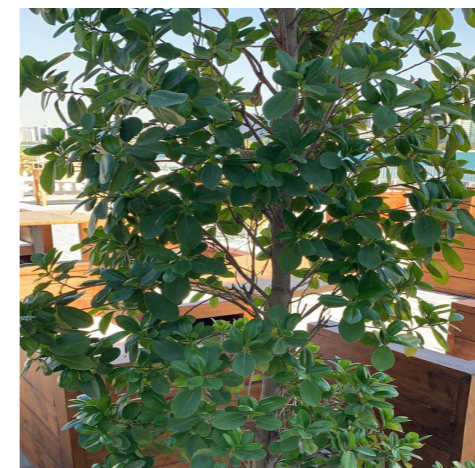
Lemon



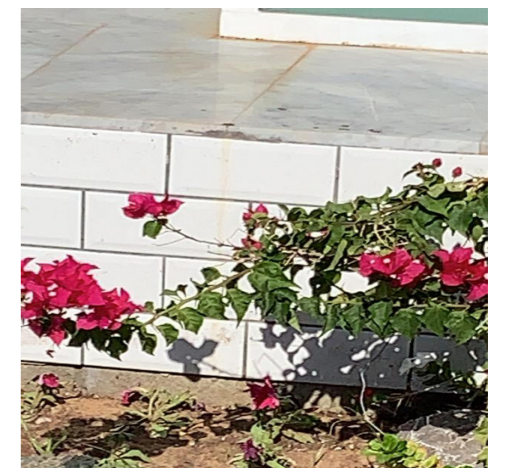
Soga Plam



Olive



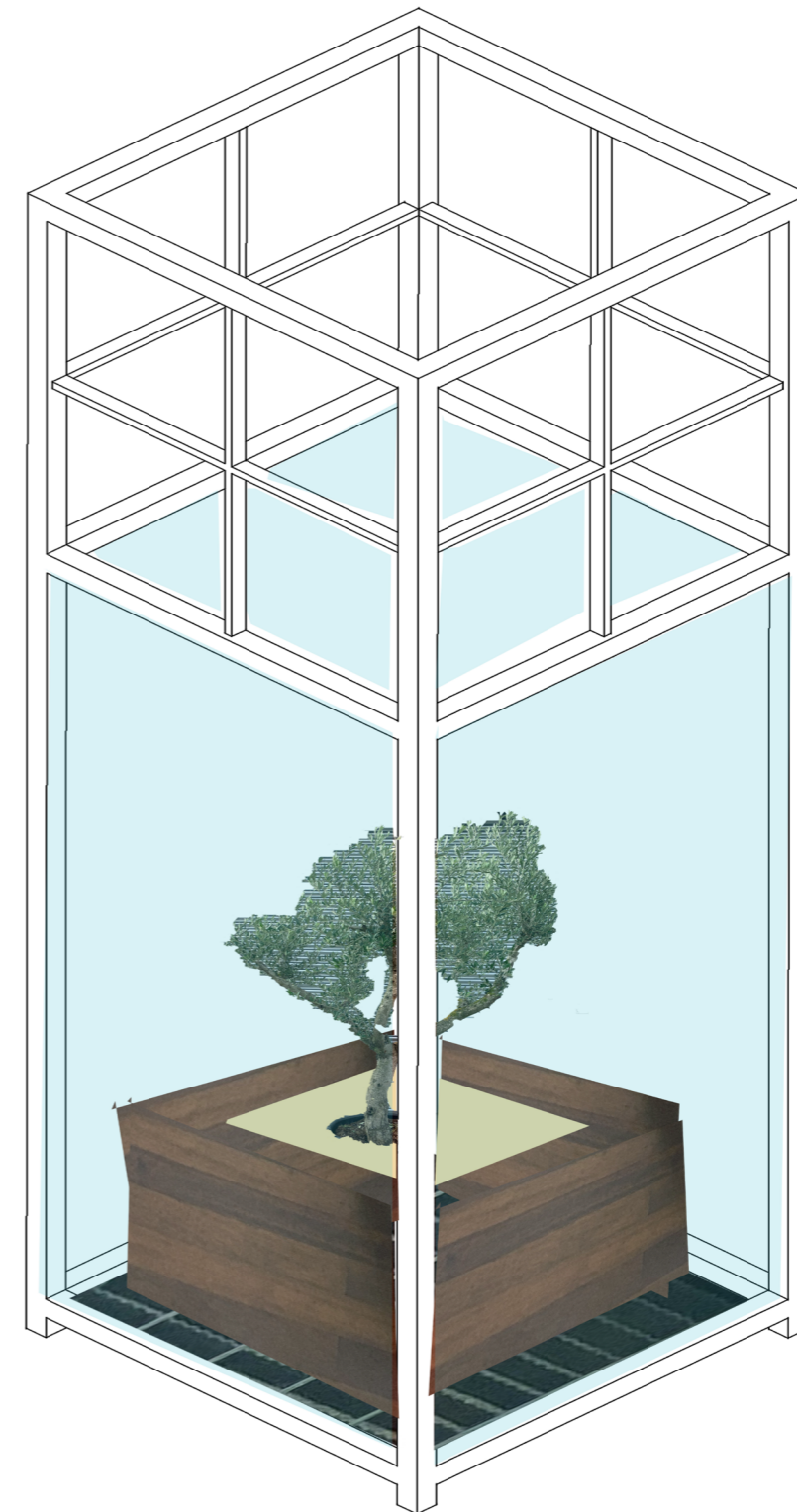
Curtain fig



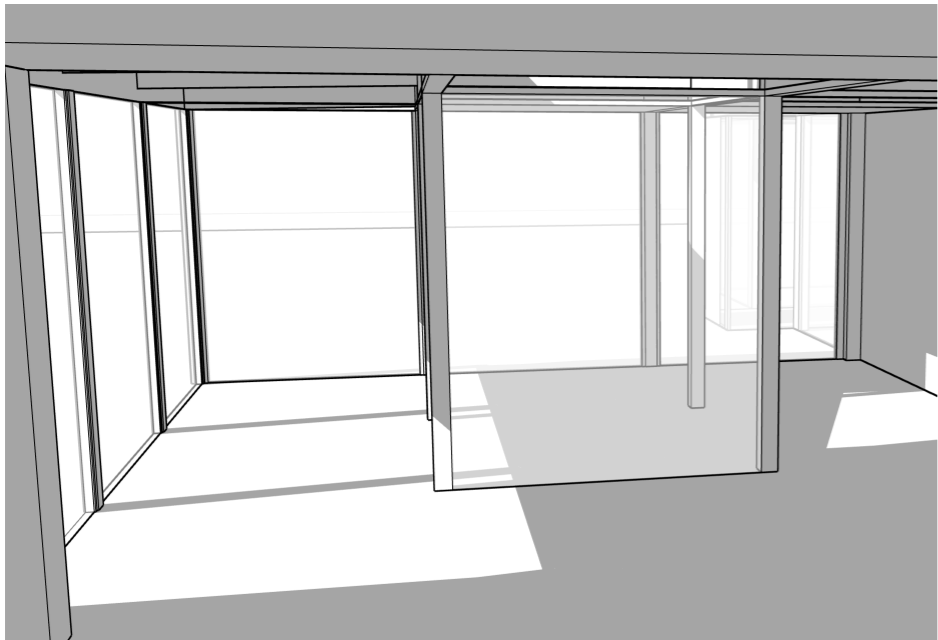
Paper Flower



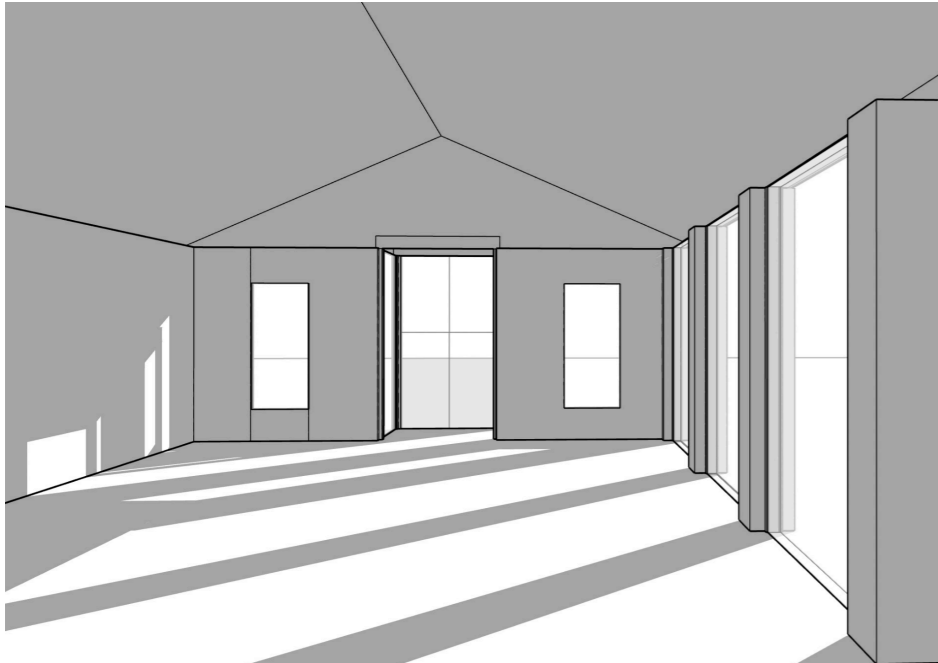
SITE



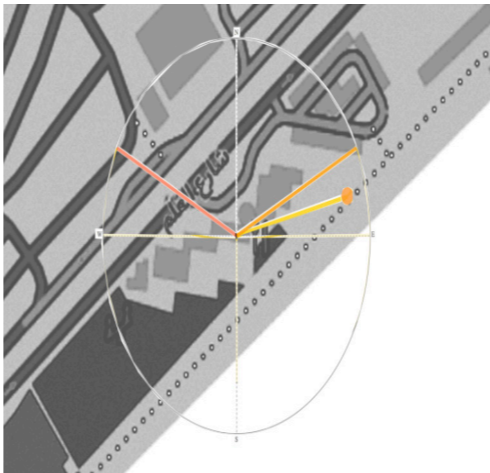
SUN PATH



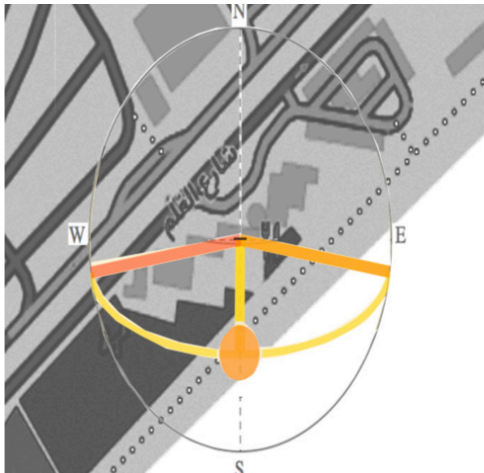
Summer_ April_9 AM



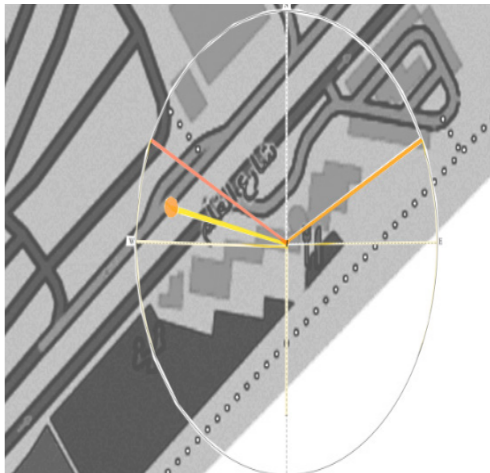
Winter _ December_9 AM



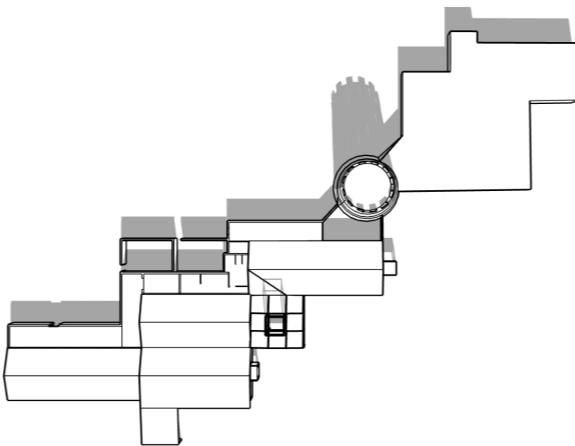
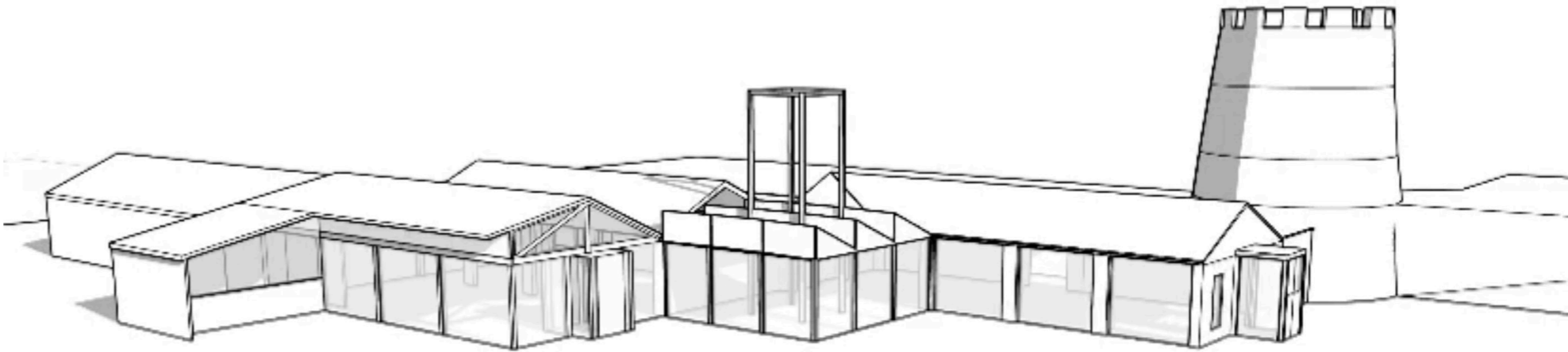
8:00 Am



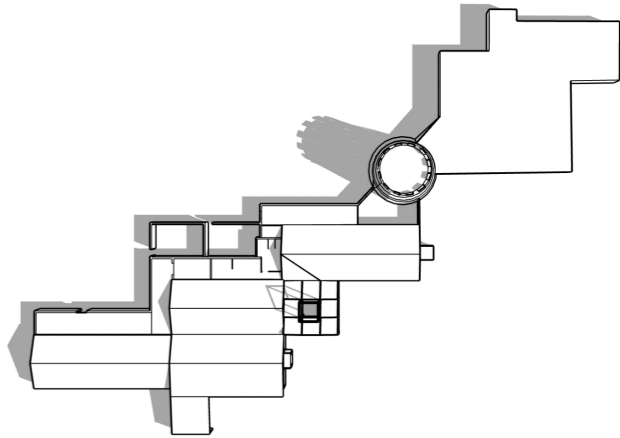
12:00 Pm



4:00 Pm



Winter _ December_12 PM



Summer_ April_6 AM

SUN LIGHT



10:20 AM



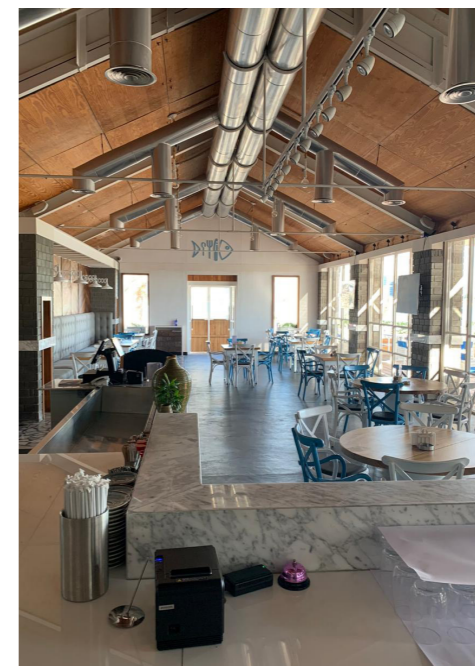
10:20 AM



12:20 PM



12:20 PM



3:15 PM



3:15 PM



5:10 PM



5:10 PM



6:05 PM



6:05 PM



7:35 PM



7:35 PM

GARS

NOISE



70 DAB

50 DAB

40 DAB

35 DAB

80 DAB

55 DAB

35 DAB

35 DAB



Furniture

Fabric

Wood table

Leather chair

Wood chair and table



Bill's Farm



Simitch

Glass

IBeam & steel

Black ceramic floor

Brown Brick wall

Black bricks

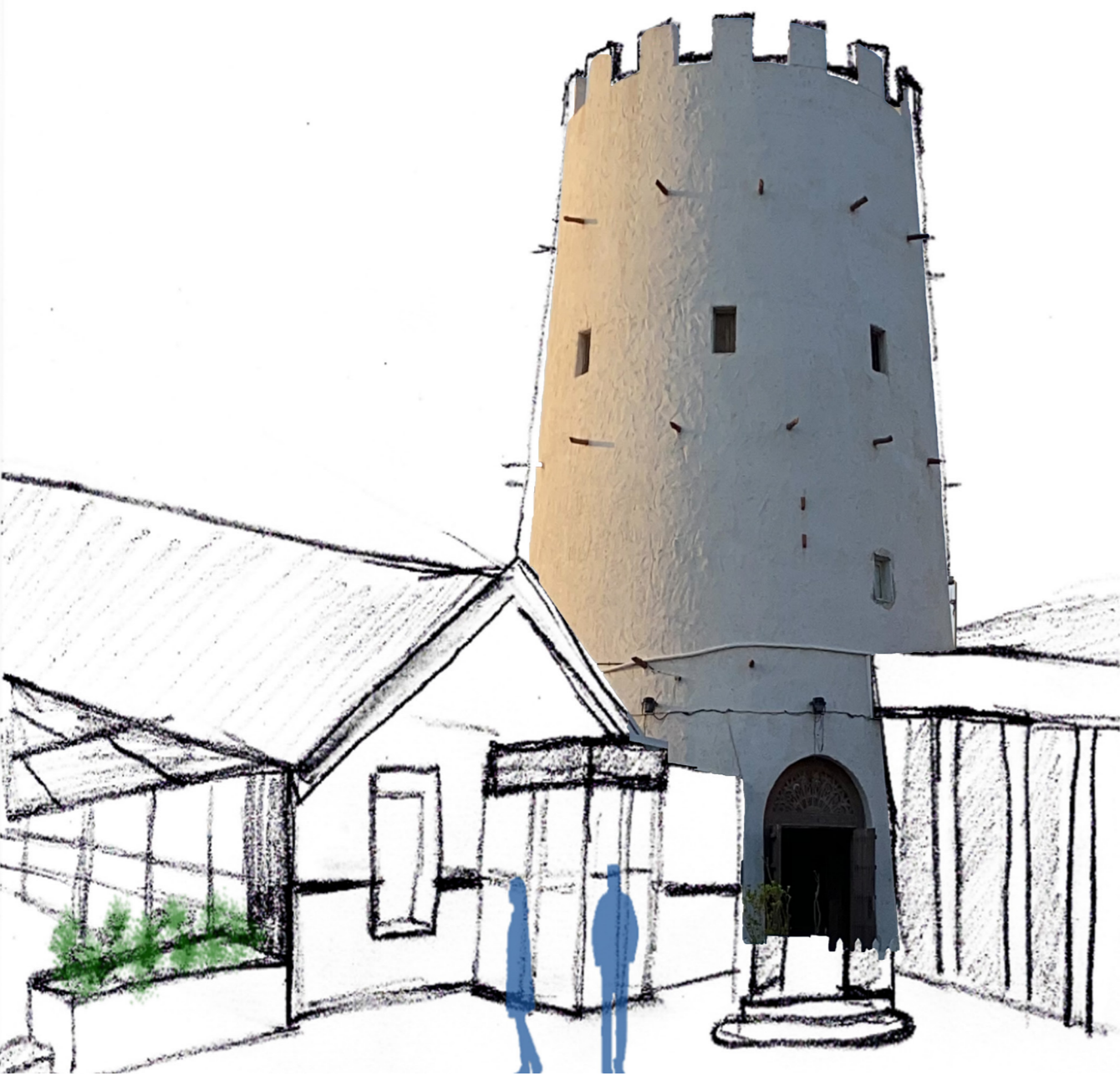
White marble backsplash

Epoxy

Concrete smooth finish

Material

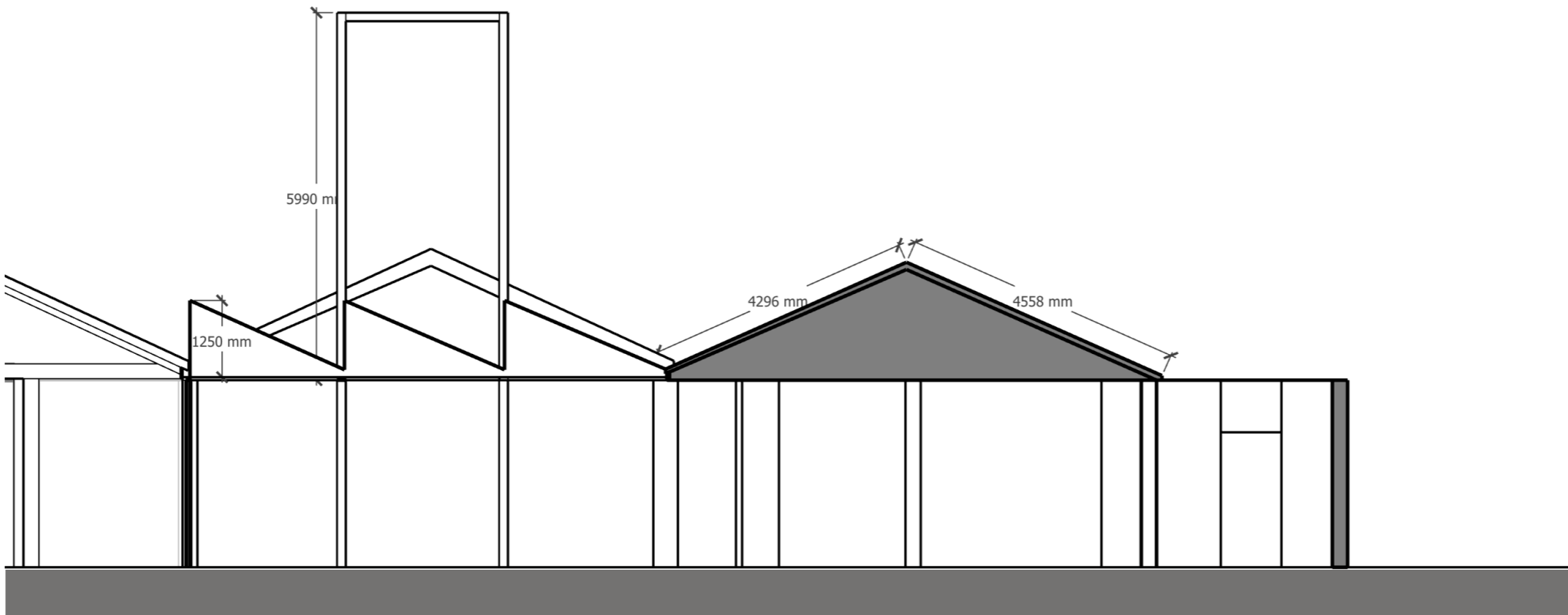
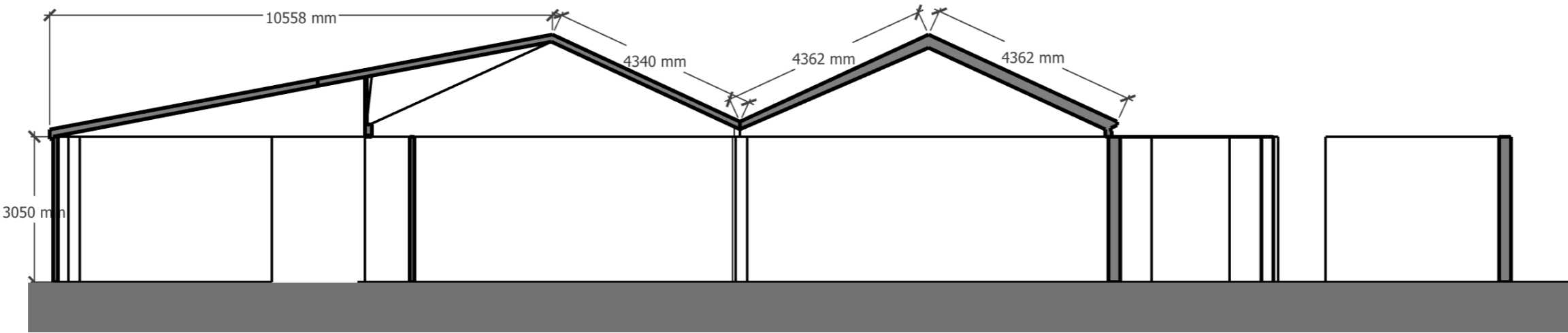
ALHUSAN



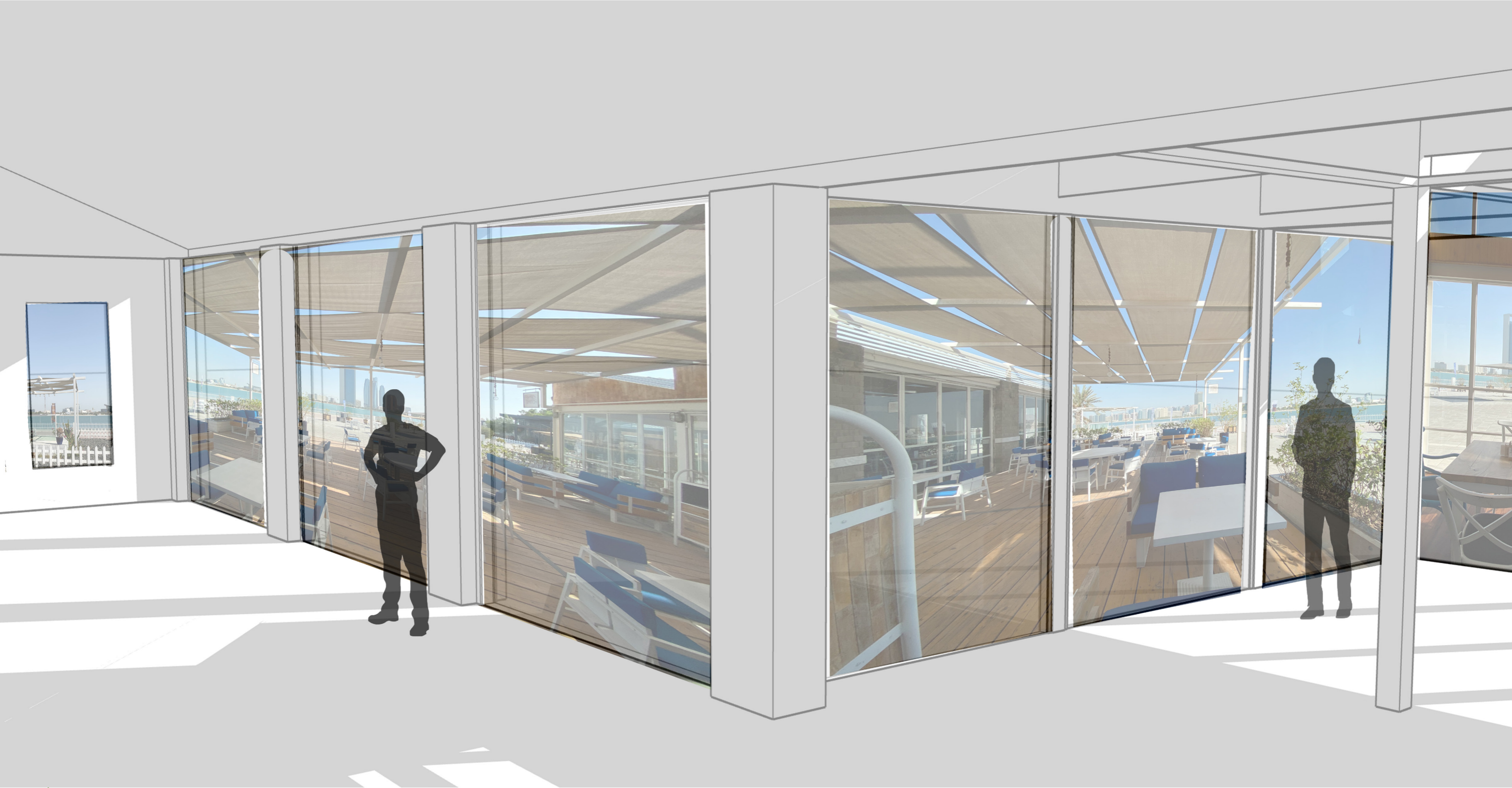
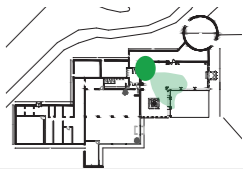
Abu Dhabi Sailing & Yacht Club

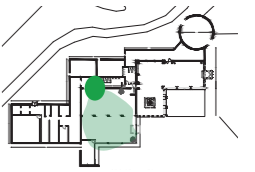
Simitch

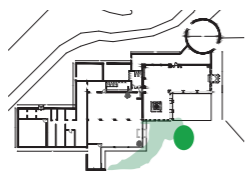
SECTION

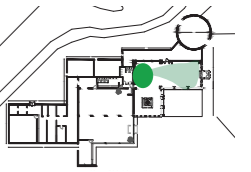


SCENES

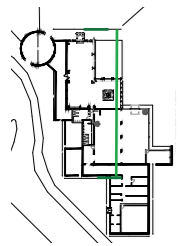




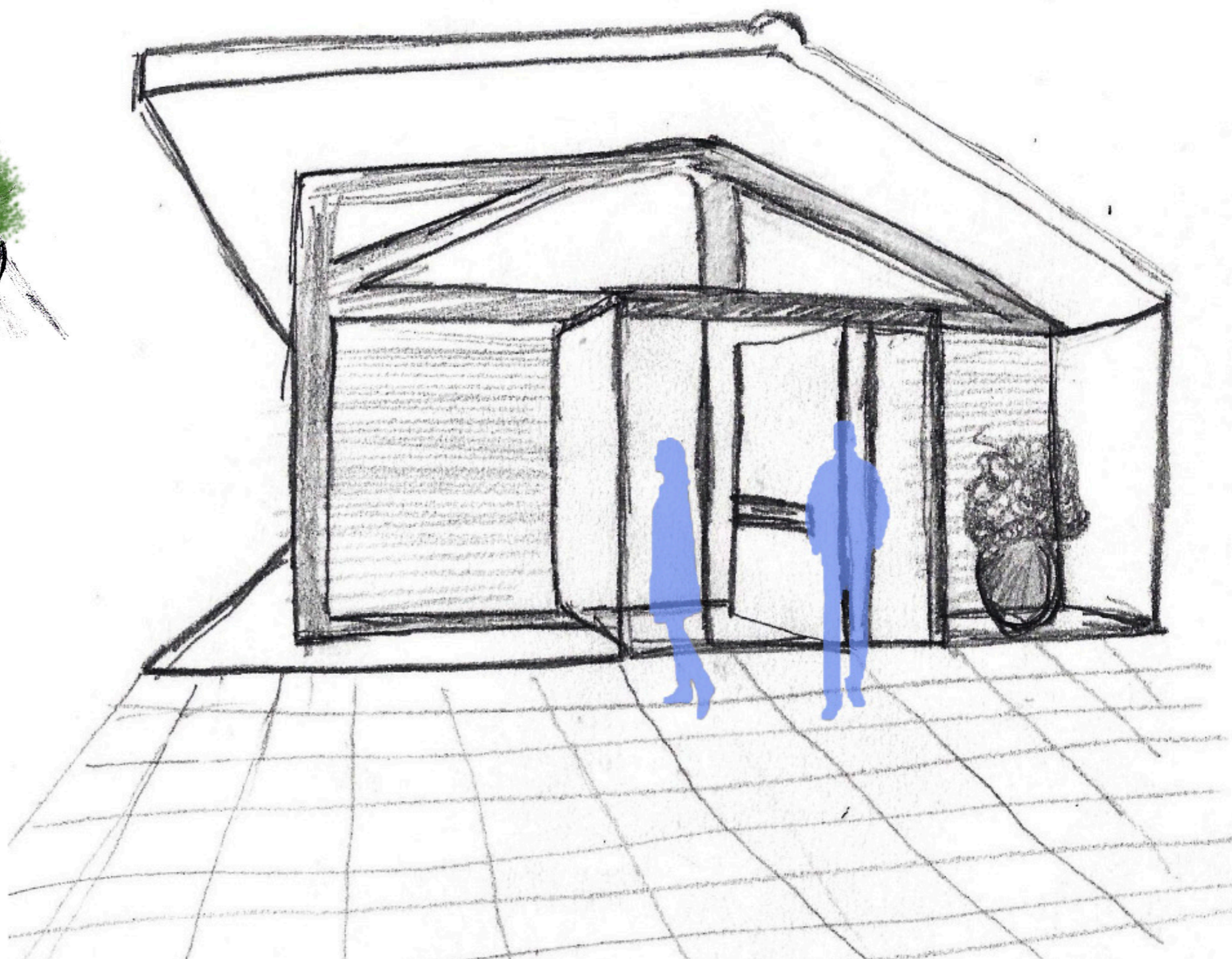
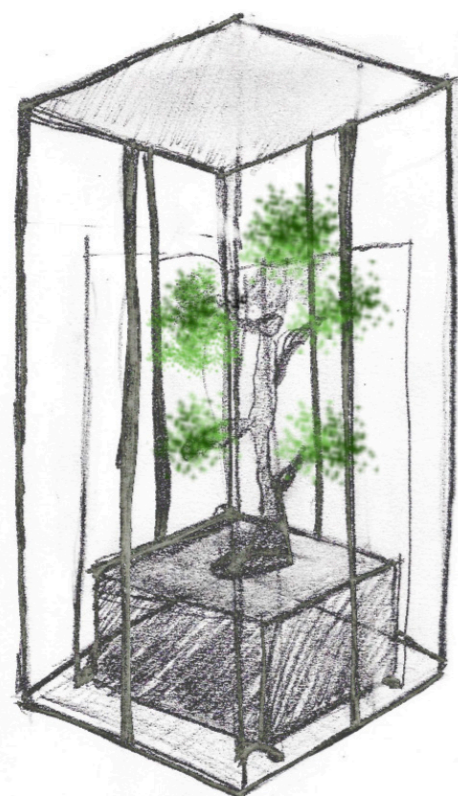
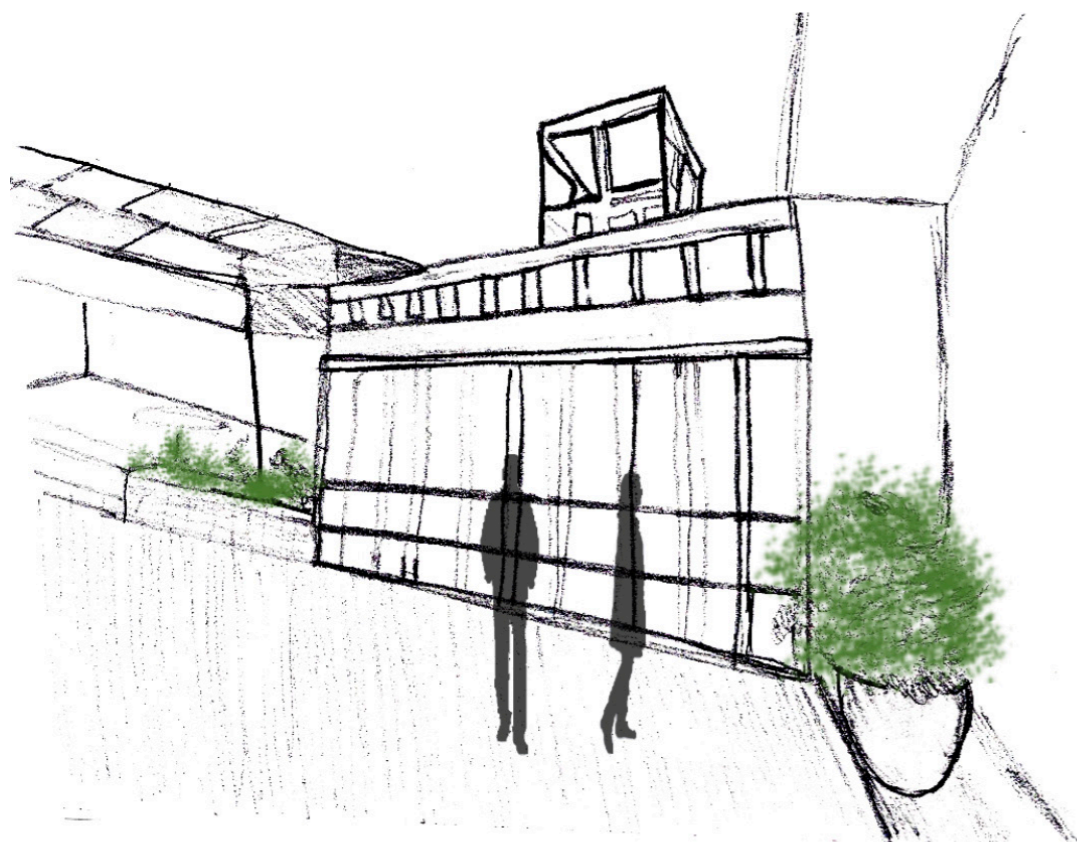




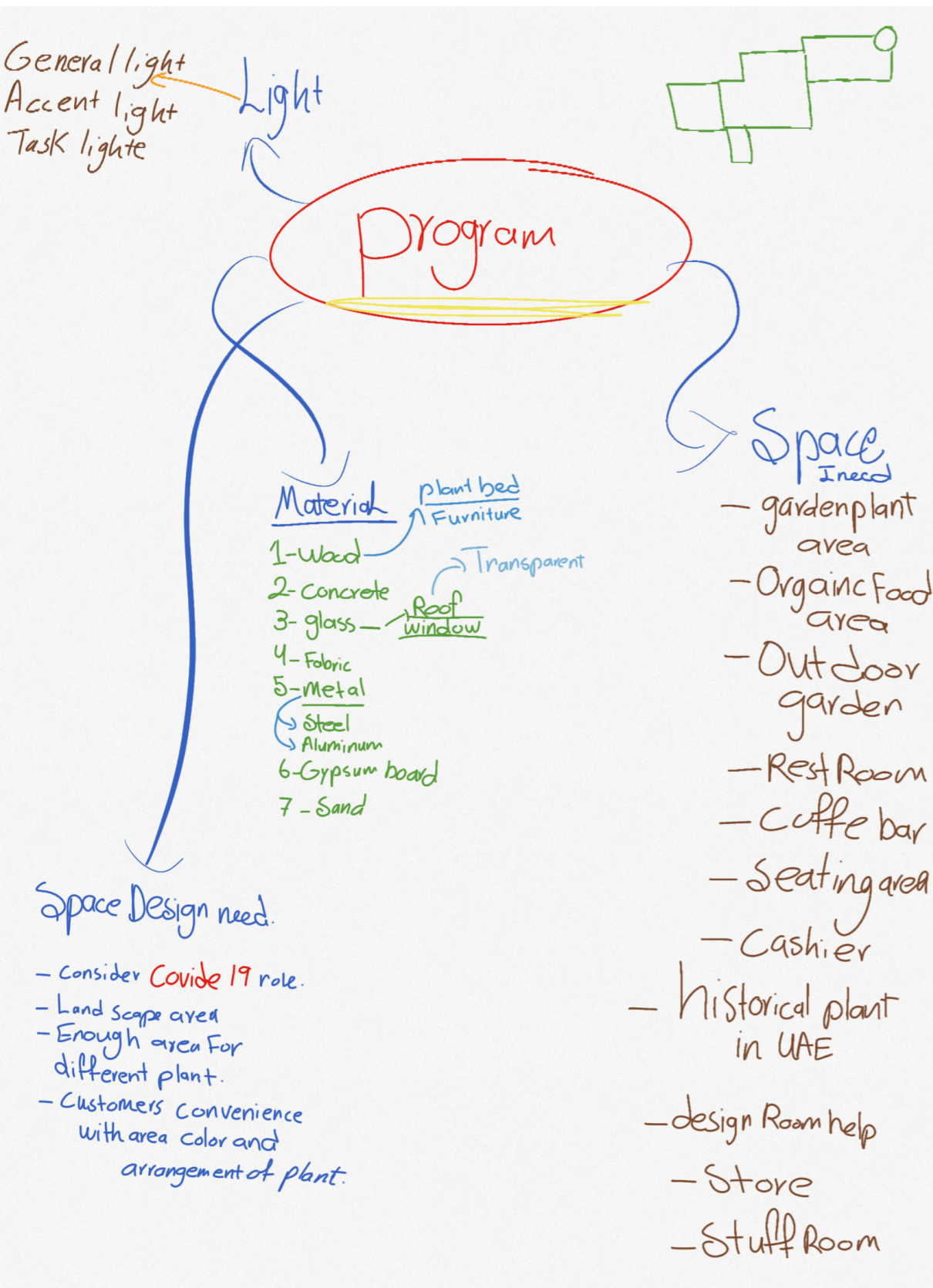
SECTIONAL PERSPECTIVE



SKETCHES



PROJECT PROGRAM

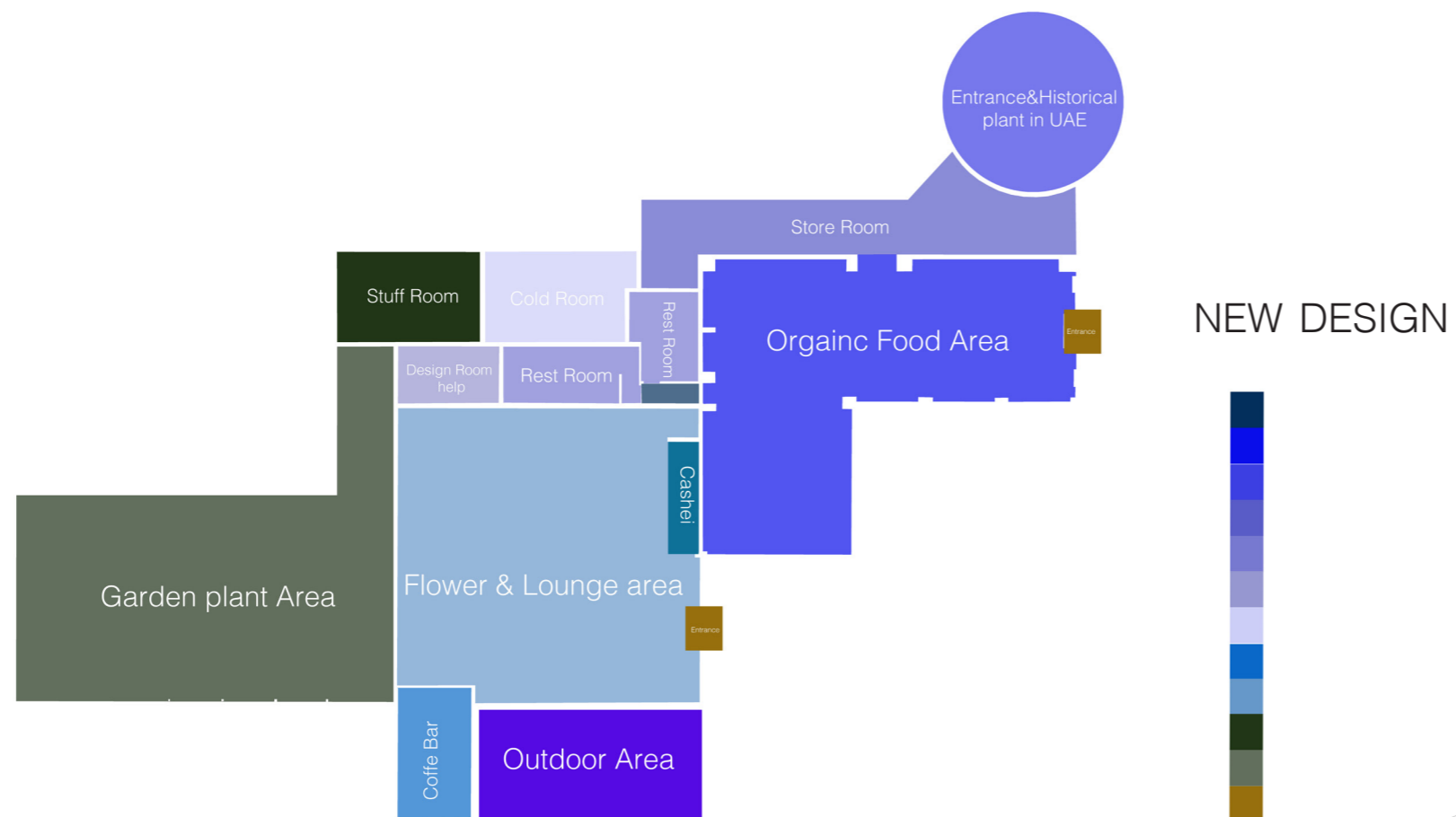


In my project program, I decided to have a different area that serves my idea and support the design experience. After the research, I explore the materials I need in my program. From measuring the space of my site, I can know what area I need to do my project program.

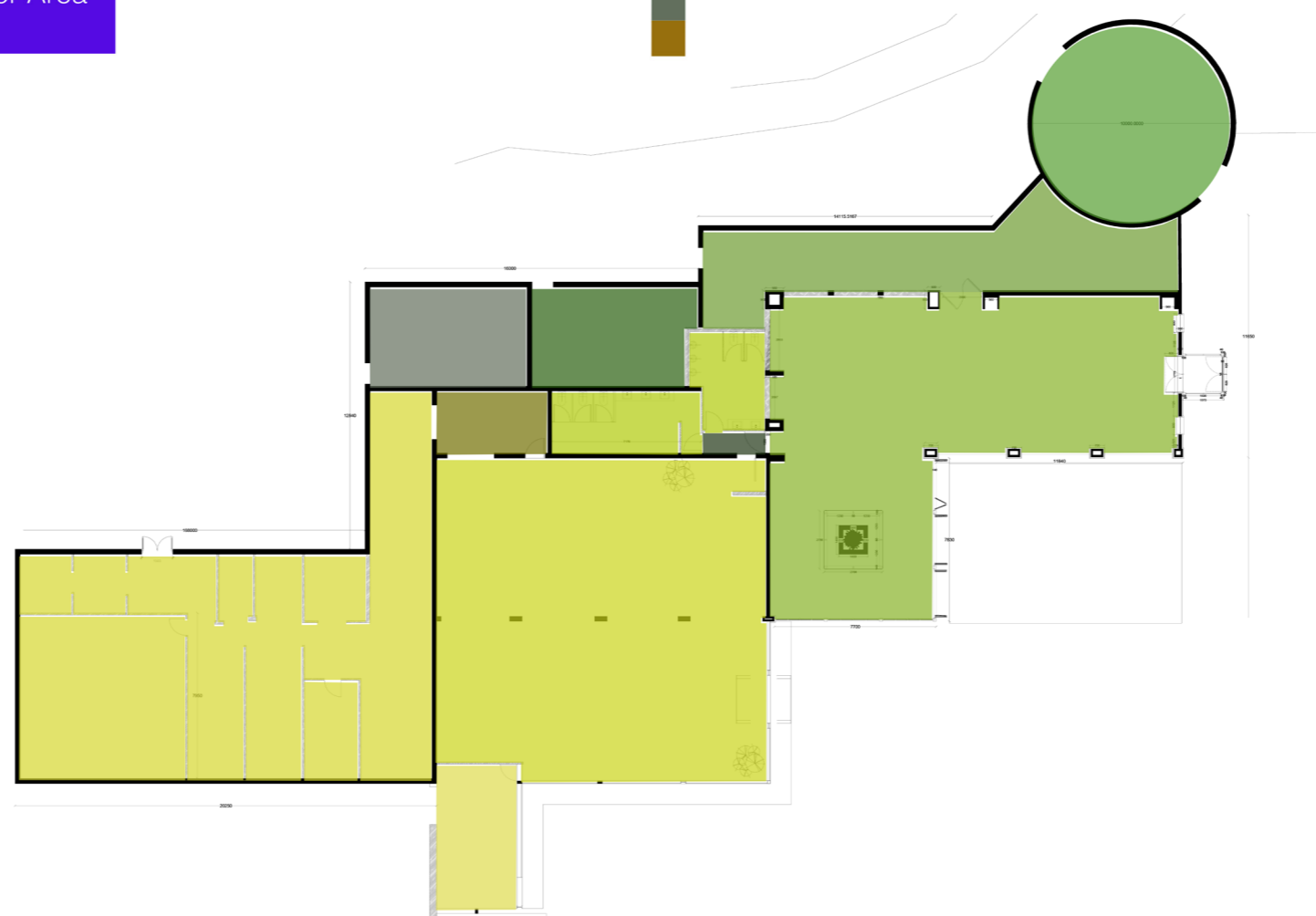
GARS shop is a plant nursery that contains Garden plants area, Flower & Lounge area, and Organic Food. Also, I add a big store behind Organic Food for all GARS shop and besides the Organic Food, the Cold room. I keep the restroom for the man and woman in the middle of the shop. Besides the toilet, I add a design room help for all GARS shop.

For the coffee bar, I connected with the front outdoor area. As we care about our garden, I make colossal space for the garden plant to have a variety choice. For the staff-room, there is access to this room from outside. The Entrance of Alahusan I will design it as Entrance & Historical plant in UAE.

ZONING



- Staff restroom
- Alhusan Entrance
- SIMITCH Kitchen
- SIMITCH
- Restroom
- Bill's Farm
- Kitchen outside
- Bill's Farm Kitchen
- Stor Bill's Farm
- Entrance between SIMITCH & Bill's Farm
- Back area tree&oil

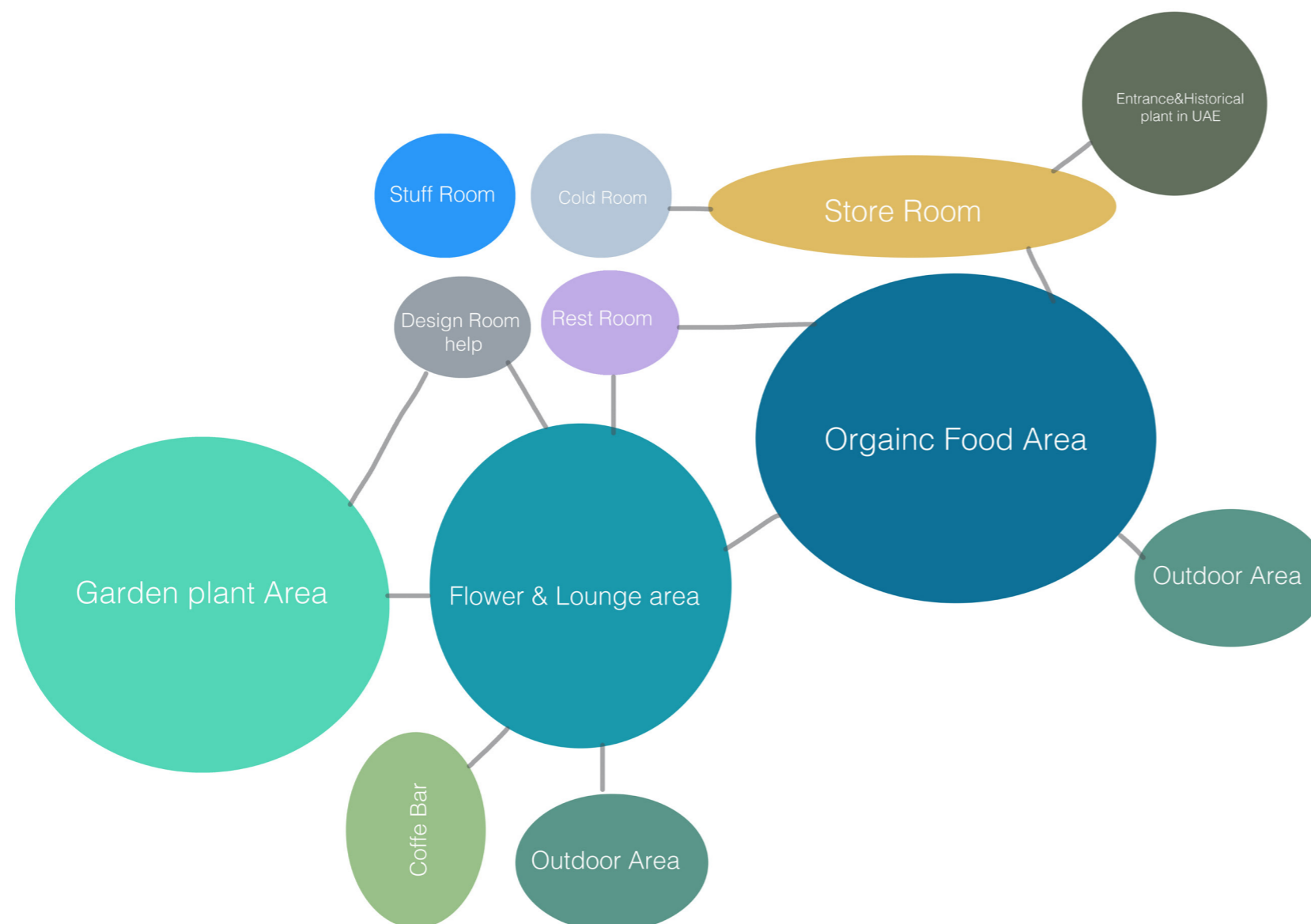


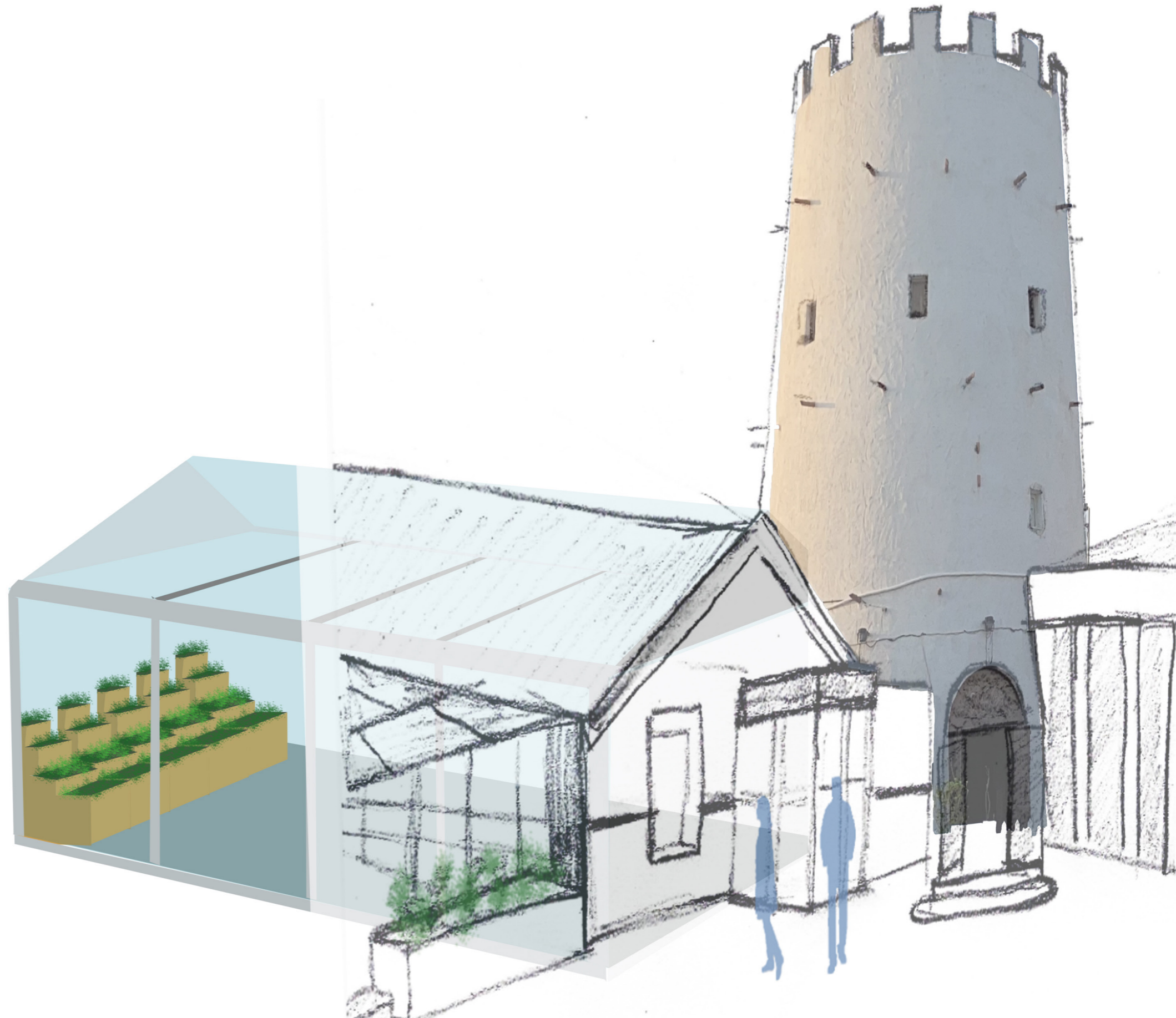
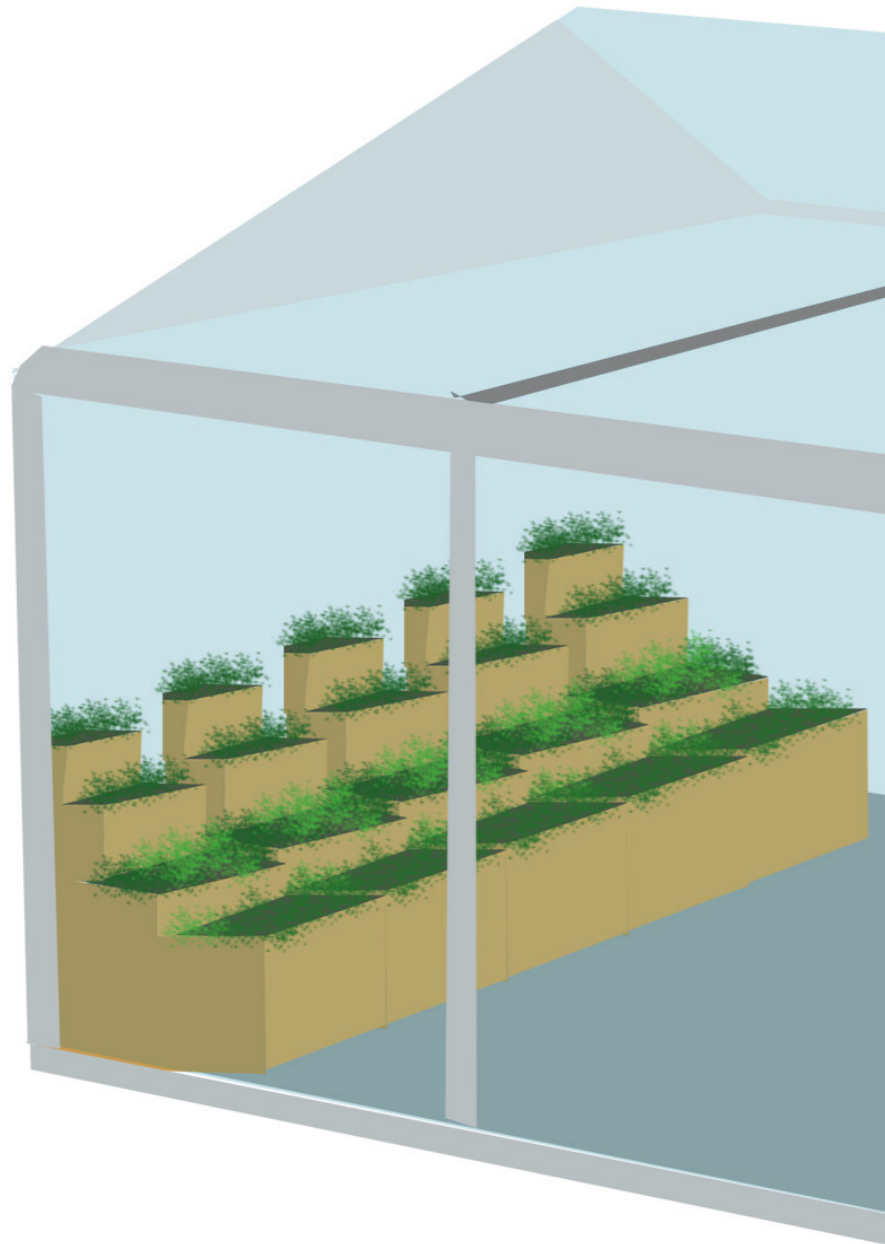
EXISTING DESIGN

BUBBLE DIAGRAMS

I believe that my project will give a new experience of Plant nursery shop from the design and the materials. Space will explore and barrow nature inside because of glass in the roof and windows.

The floor will also be wood to give the customer feels of walking on a farm. The research will also help me to improve and to image the location design.



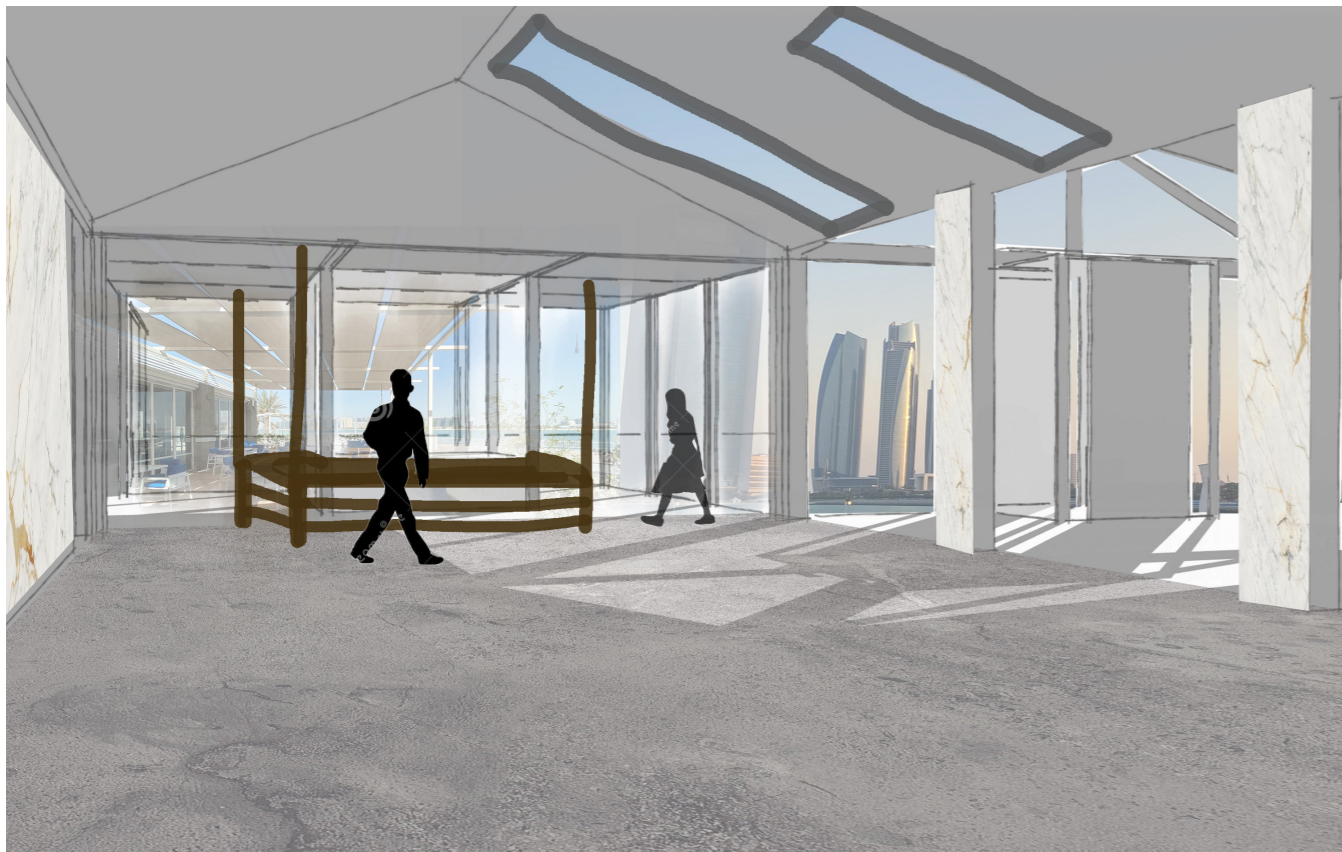




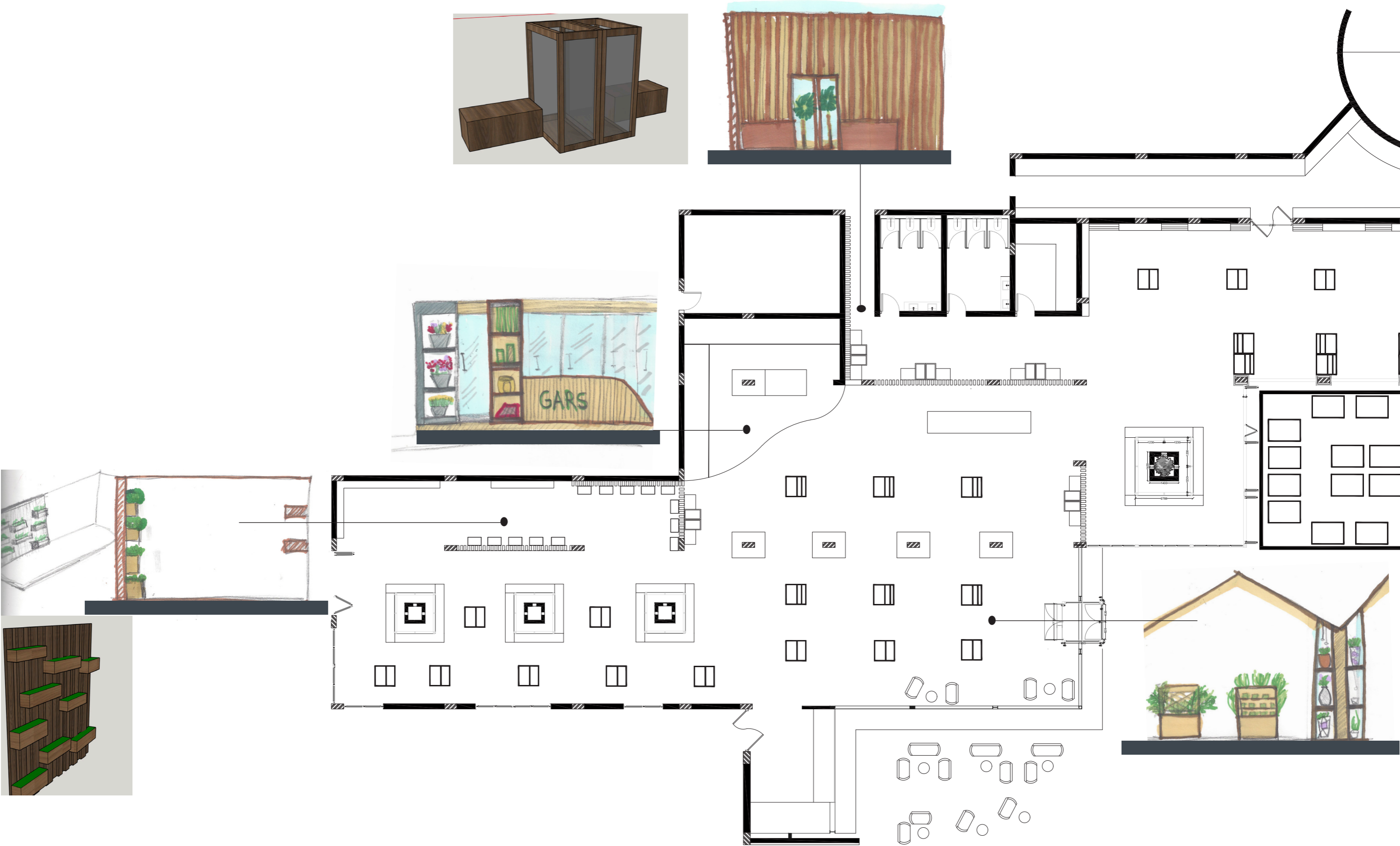
Concept stage

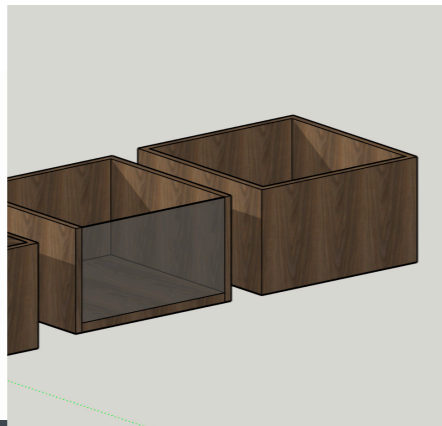
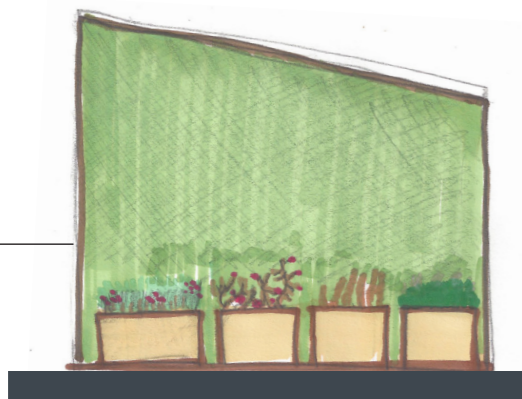
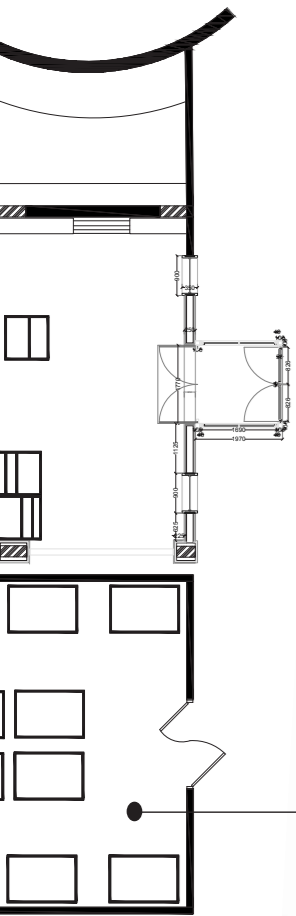
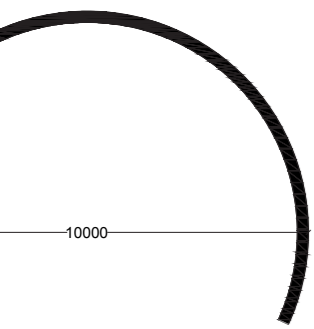
In the concept design stage, I understand the suitable concept designed for this project and how I will use the space function to apply my ideas. I divided the space into three sections. The first section for the organic food, section two was the flower lounge, and the last section is garden plants.

Moreover, to understand how I will use the space, I make different drawings to show the use of every area. Also, what is material should I put and design for every section.

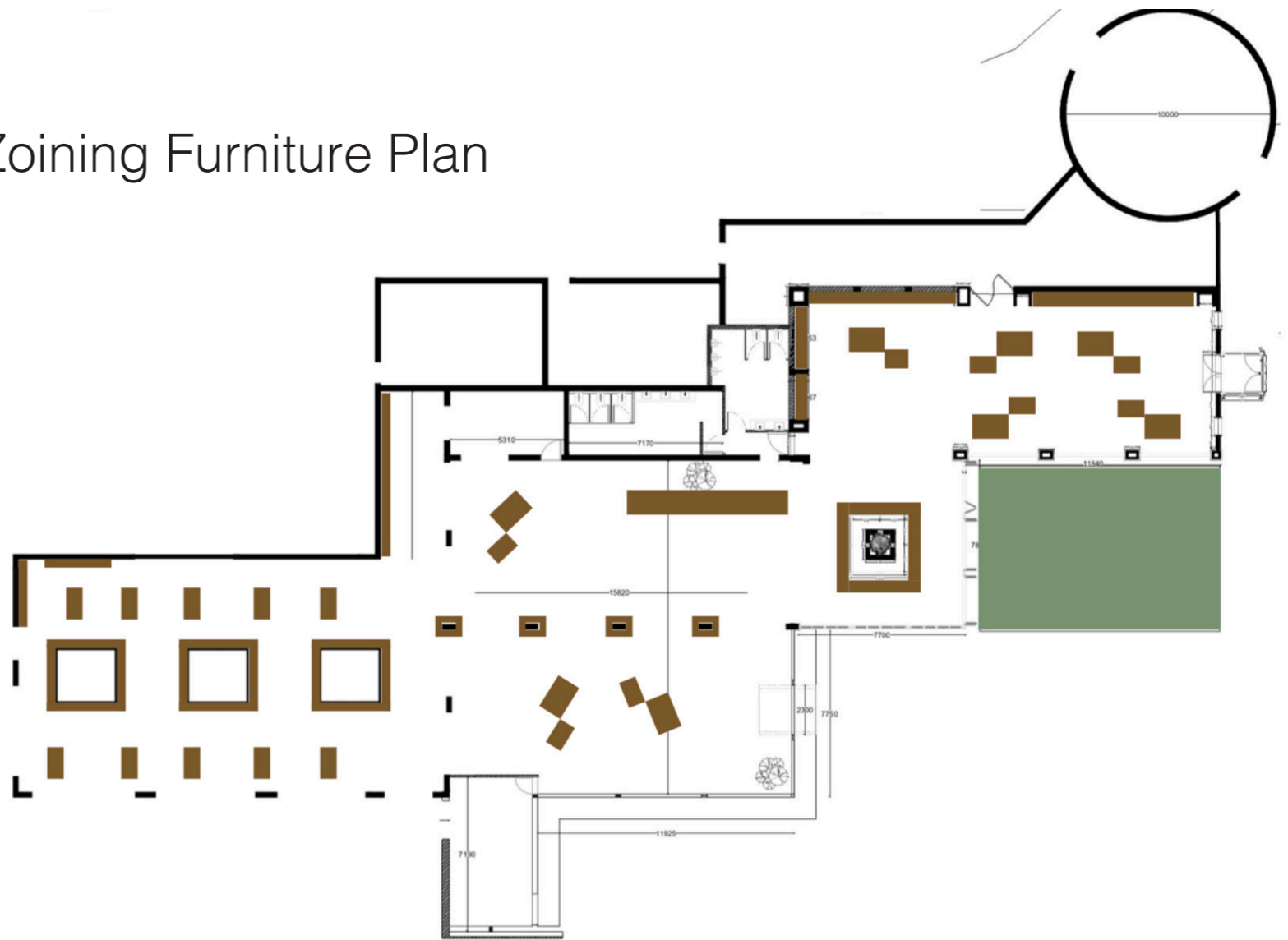


Concept stage Plan



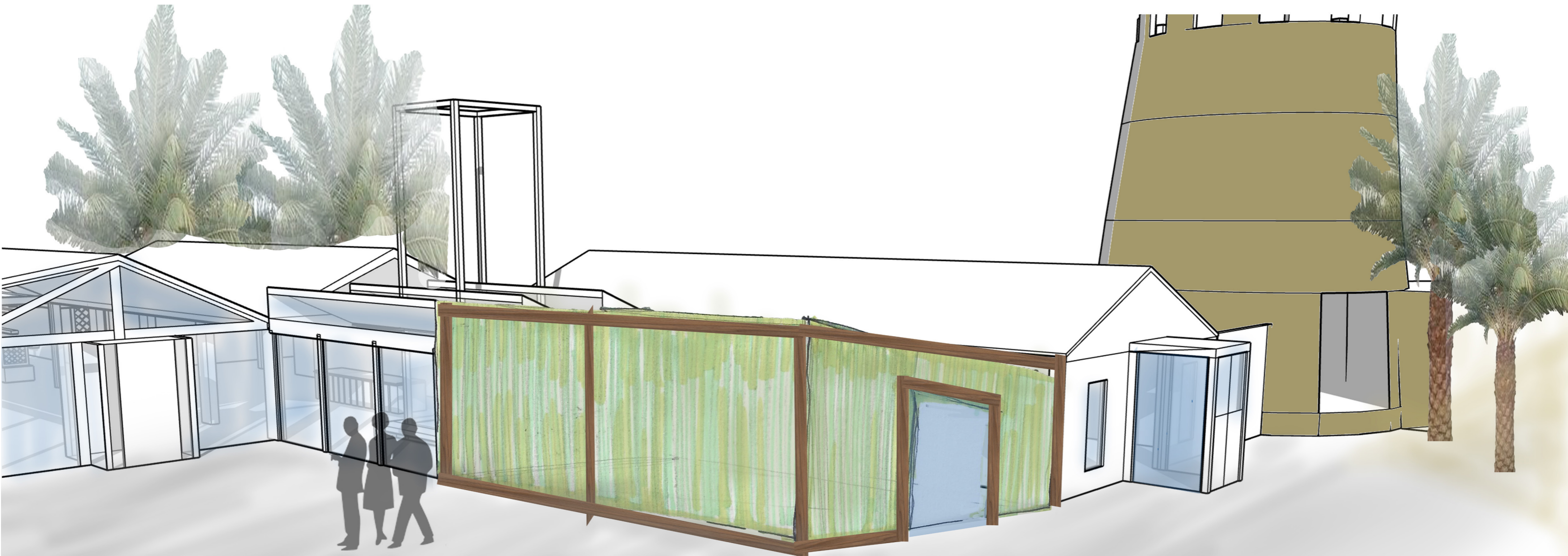


Zoining Furniture Plan



Concept stage

In this drawing, I planned to have a greenhouse beside my project, but I realized that I have to support all the local farmers' business with organic plants for food by putting their product in the GARS shop and choosing the best quality.



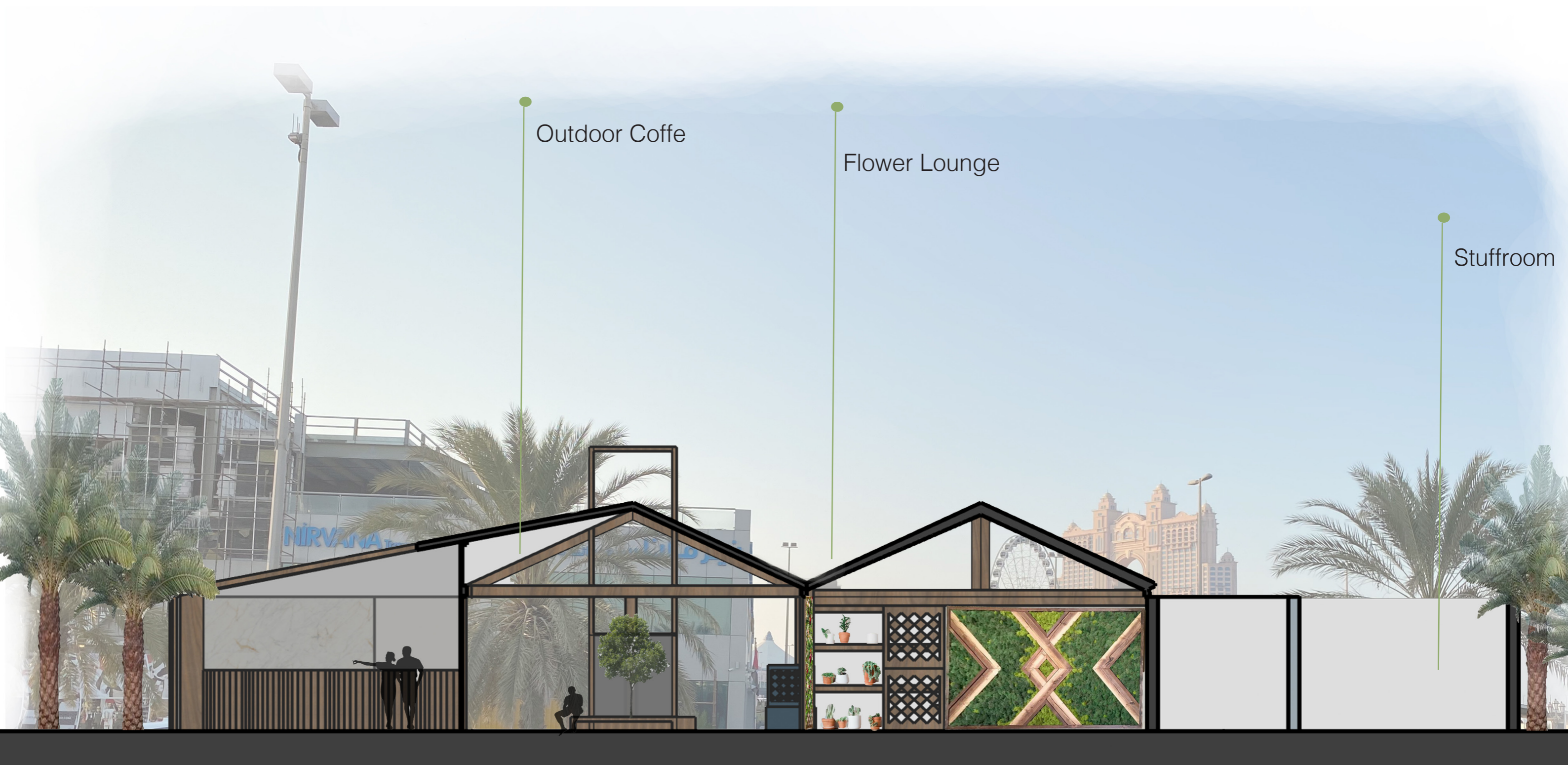
Mood bored



Inspiration



Concept Stage Section



Scenes



Outdoor Coffe



Storage

Storage shows some shelves from wood, and it will serve the three sections. Flower Lounge & Garden plants I use this type of furniture which is A container in gardening is a small, enclosed, and usually, a portable object used for displaying live flowers or plants, for example, raised beds (Erler, C. T. (2003)



Flower Lounge & Garden plants

Concept Stage Section

This section shows two sections of my project, the flower lounge and garden plant. I use the columns in the flower lounge to hold the flowers board and put the boxes with a different type of flower.



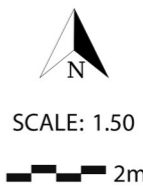


PalmBox

Garden plants

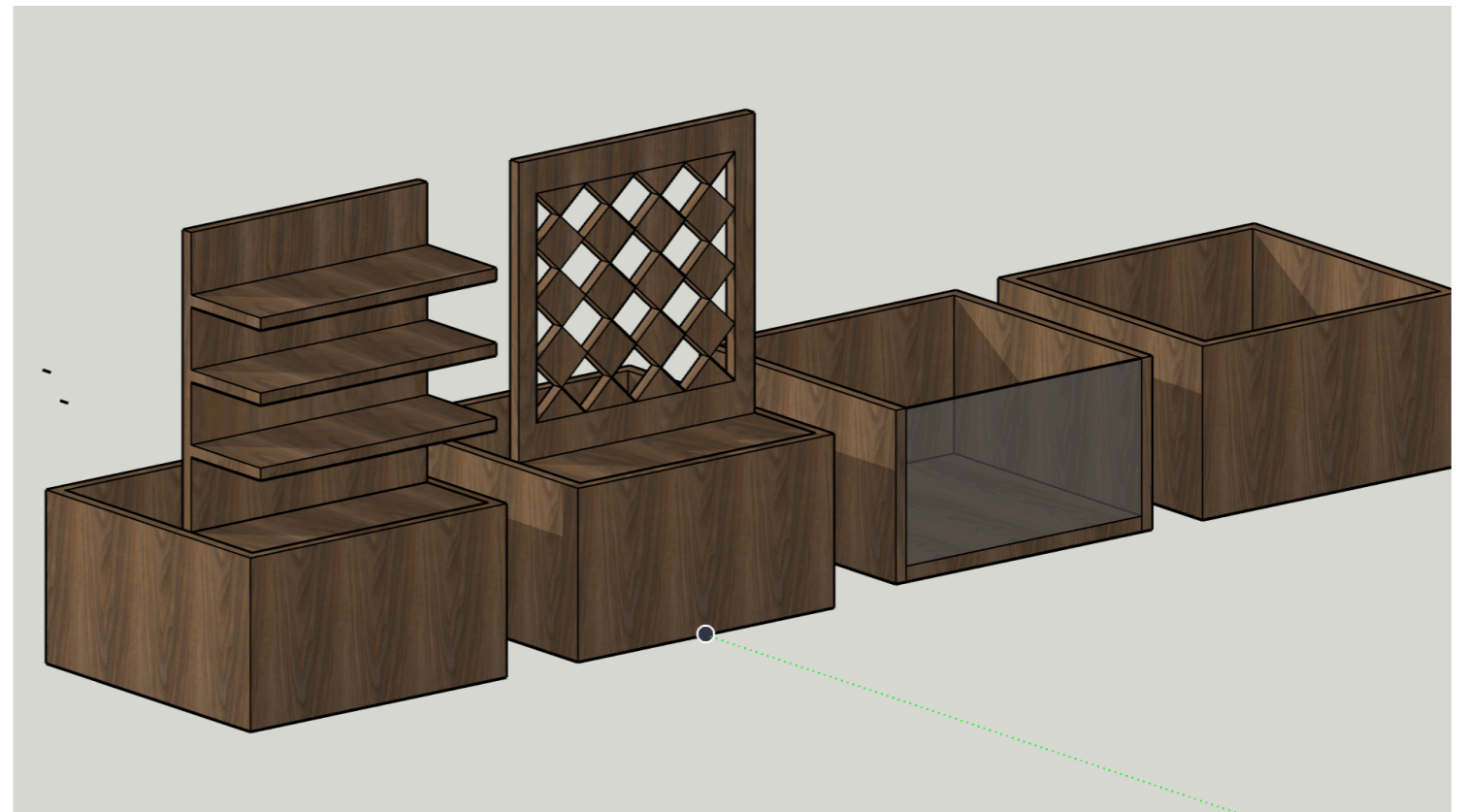
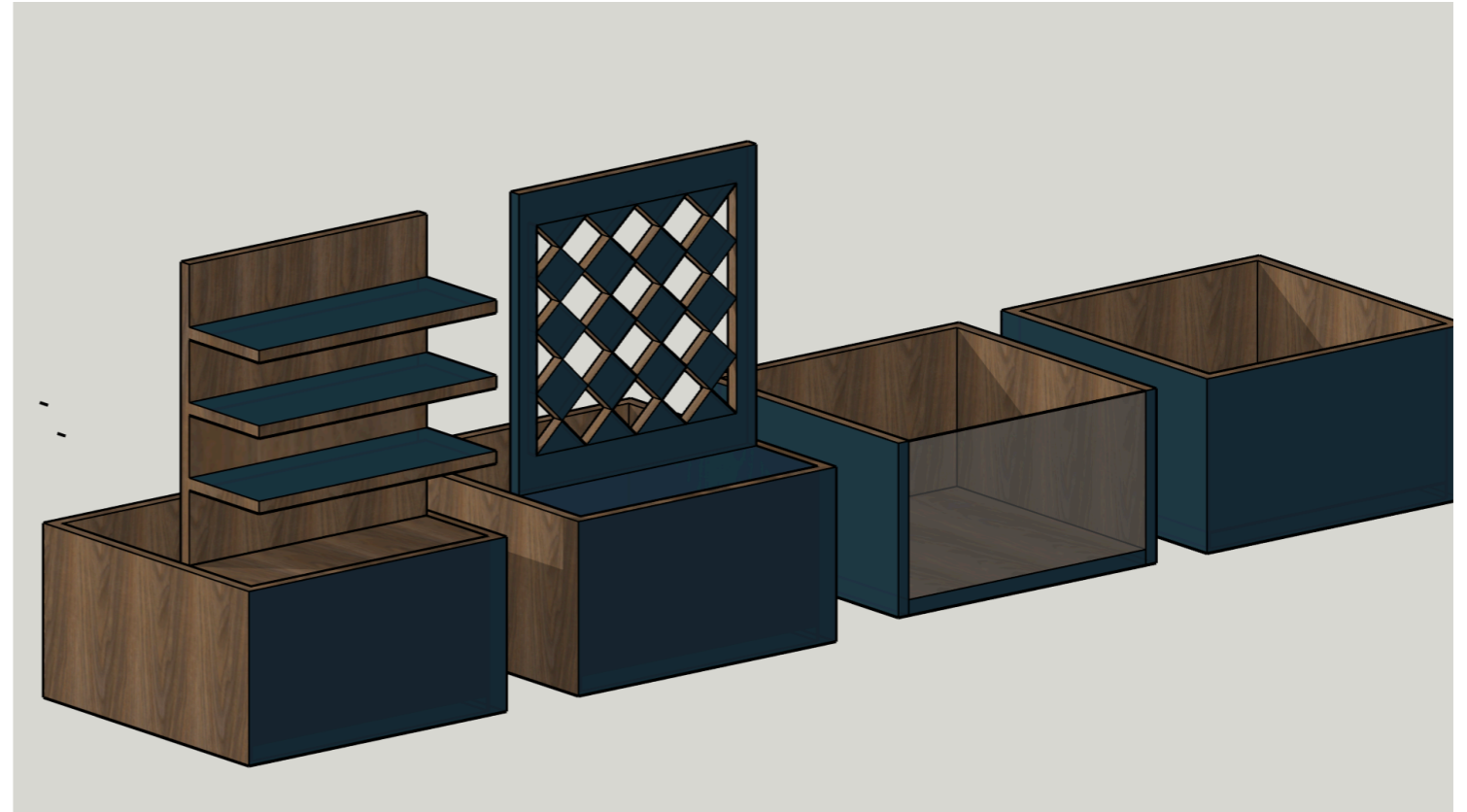


Ground Floor Plan



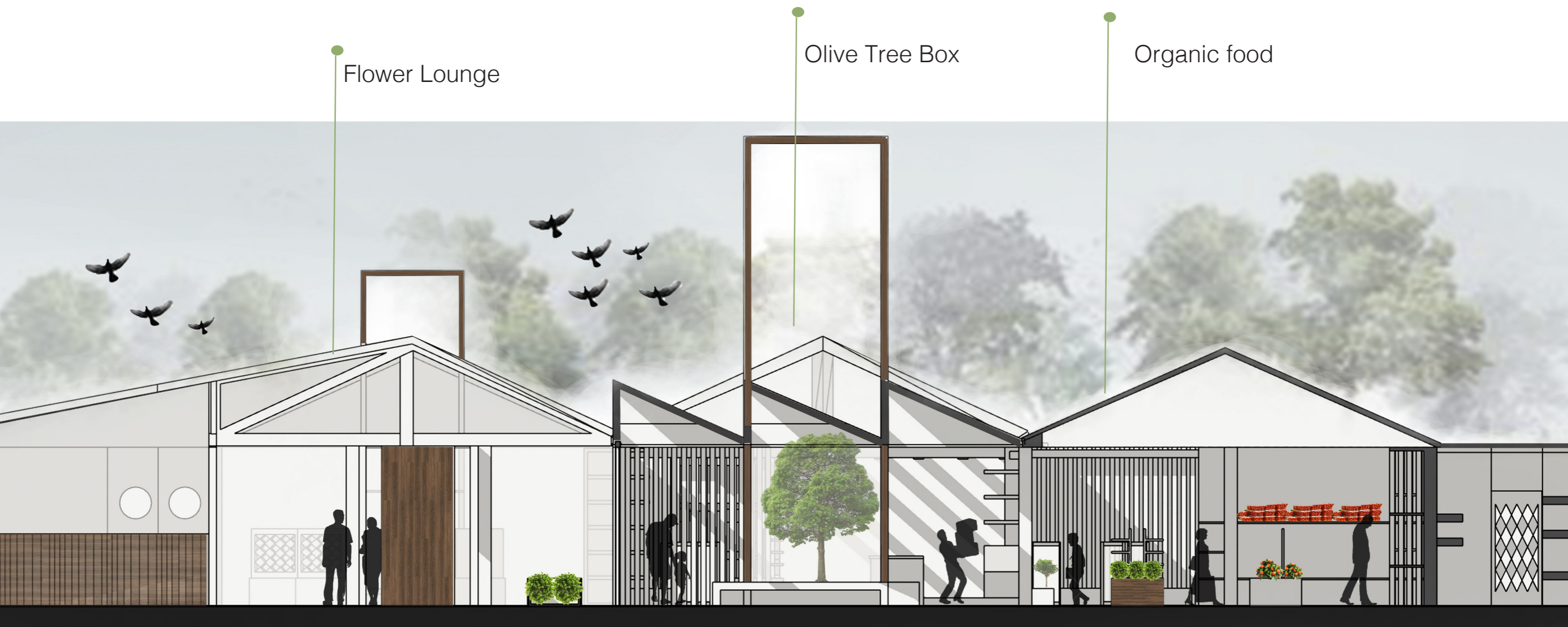
Interim Design Stage Furniture

This wooden box will have some of the products and the other for the plants. Some of them have a hole inside to put soil inside, and another box has only shelves.



Interim Design Stage | section

Interim Design Stage I start to create my design with final edits, so they are ready for the render stage. all the section will explain the element of my design. In addition, it will show how the customer can go through the site.





Raised beds

Shelves

Flower Lounge

Corridor

I used the columns on the site and cladding them with wood. Also, I add shelves for the flowers lounge section product.

In the decorative room for the flower lounge arrangement, I make a level up a step so people can see the difference between the lounge and the decorative room with a skylight roof.

Interim Design Stage | section



Garden plants

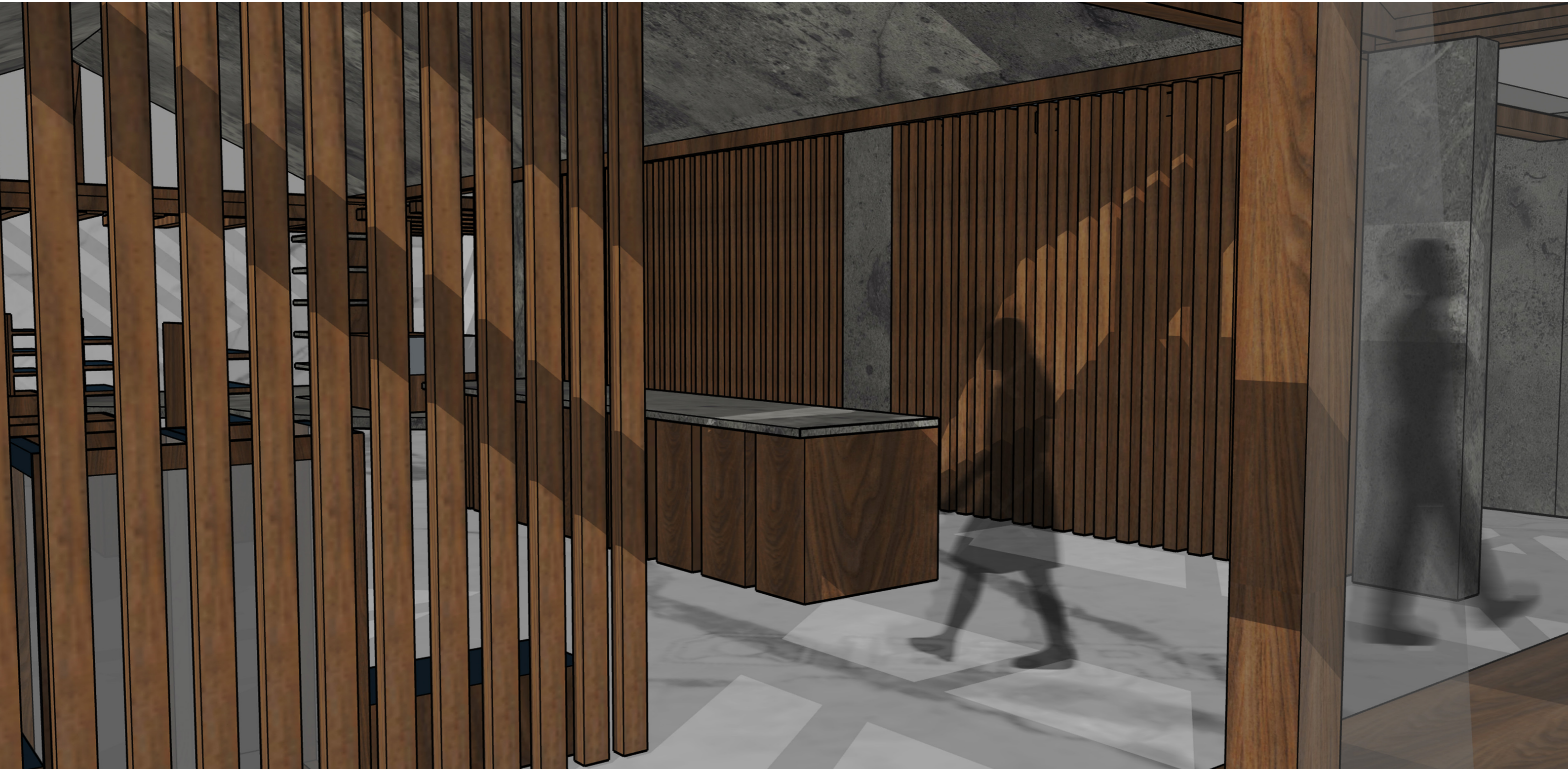
Shelves

Palm Box

Square chair

Flower Lounge

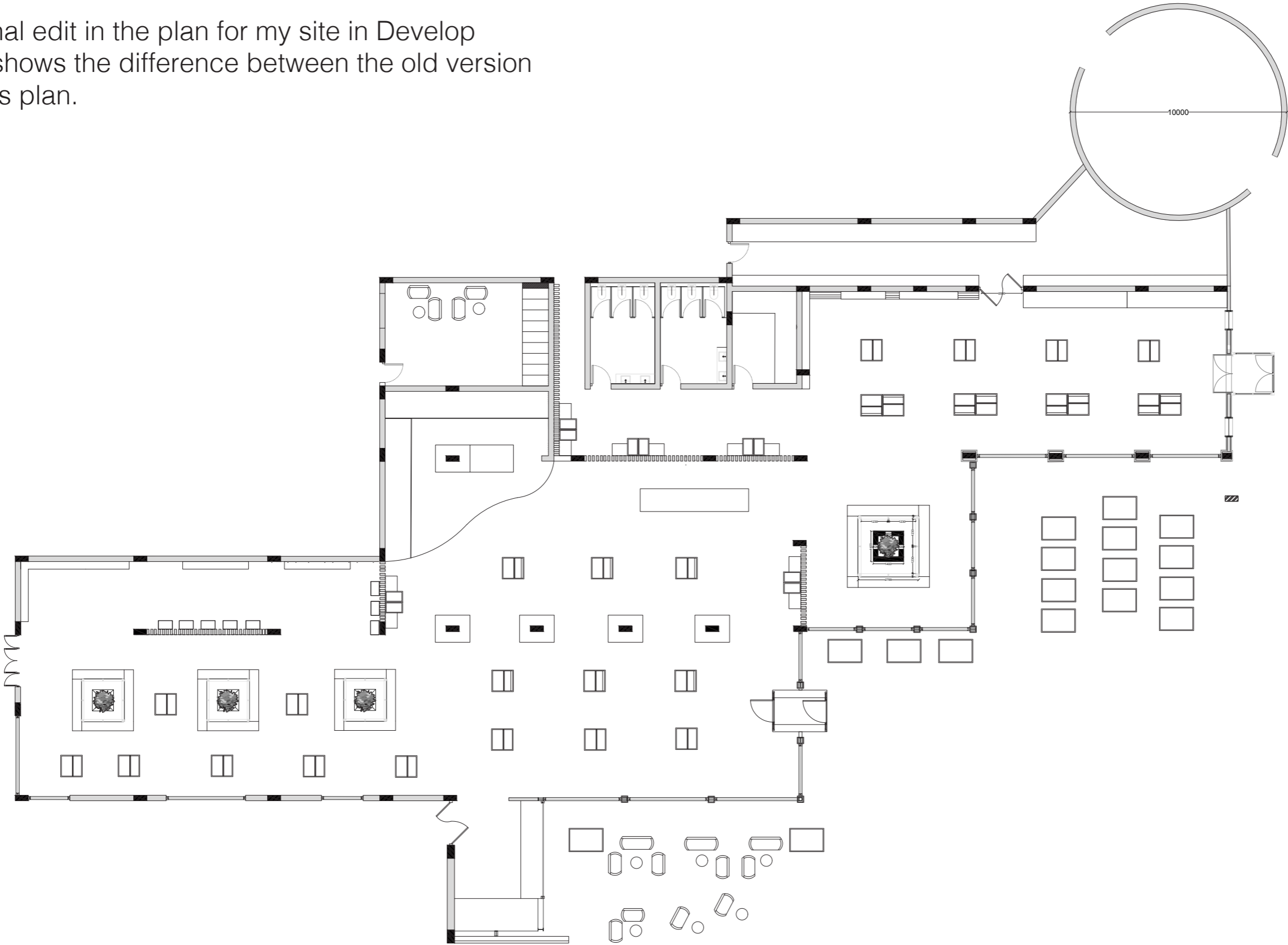






Develop stage | Plan

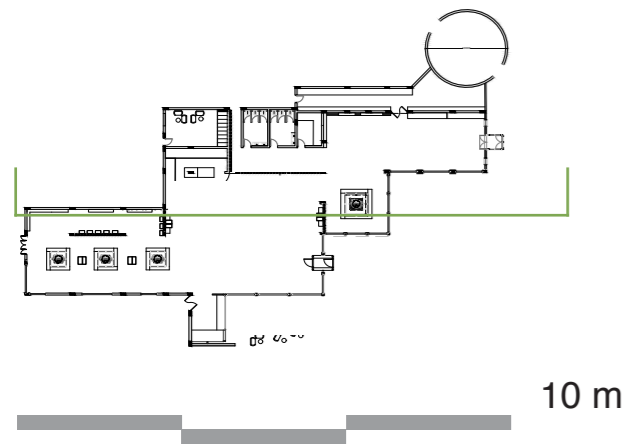
The final edit in the plan for my site in Develop stage shows the difference between the old version and this plan.



GARS



Develop stage | Section details



This section shows nearly all the different area. Moreover, the develop design for all the project GARS from the material used and how it will serve the customer. This section shows the mean material was used wood, especially Pinewood, cause it is a natural heat insulator.

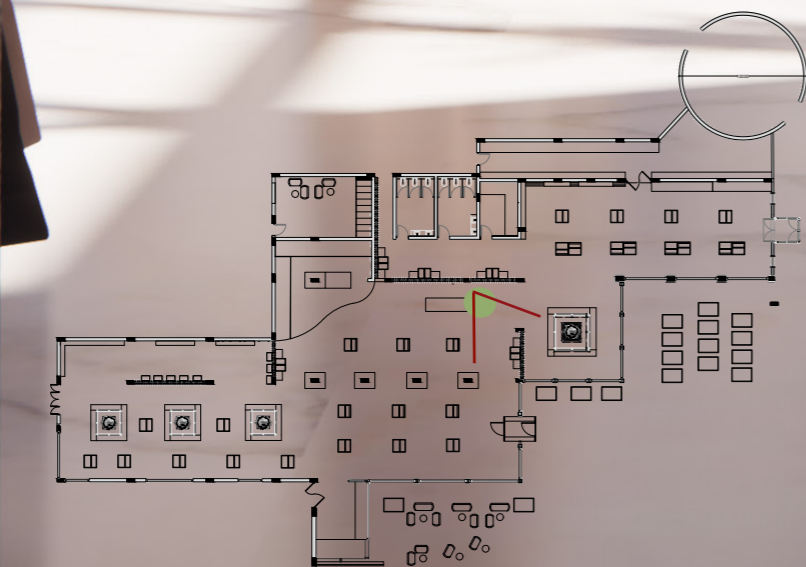
Garden plants

Flower Lounge



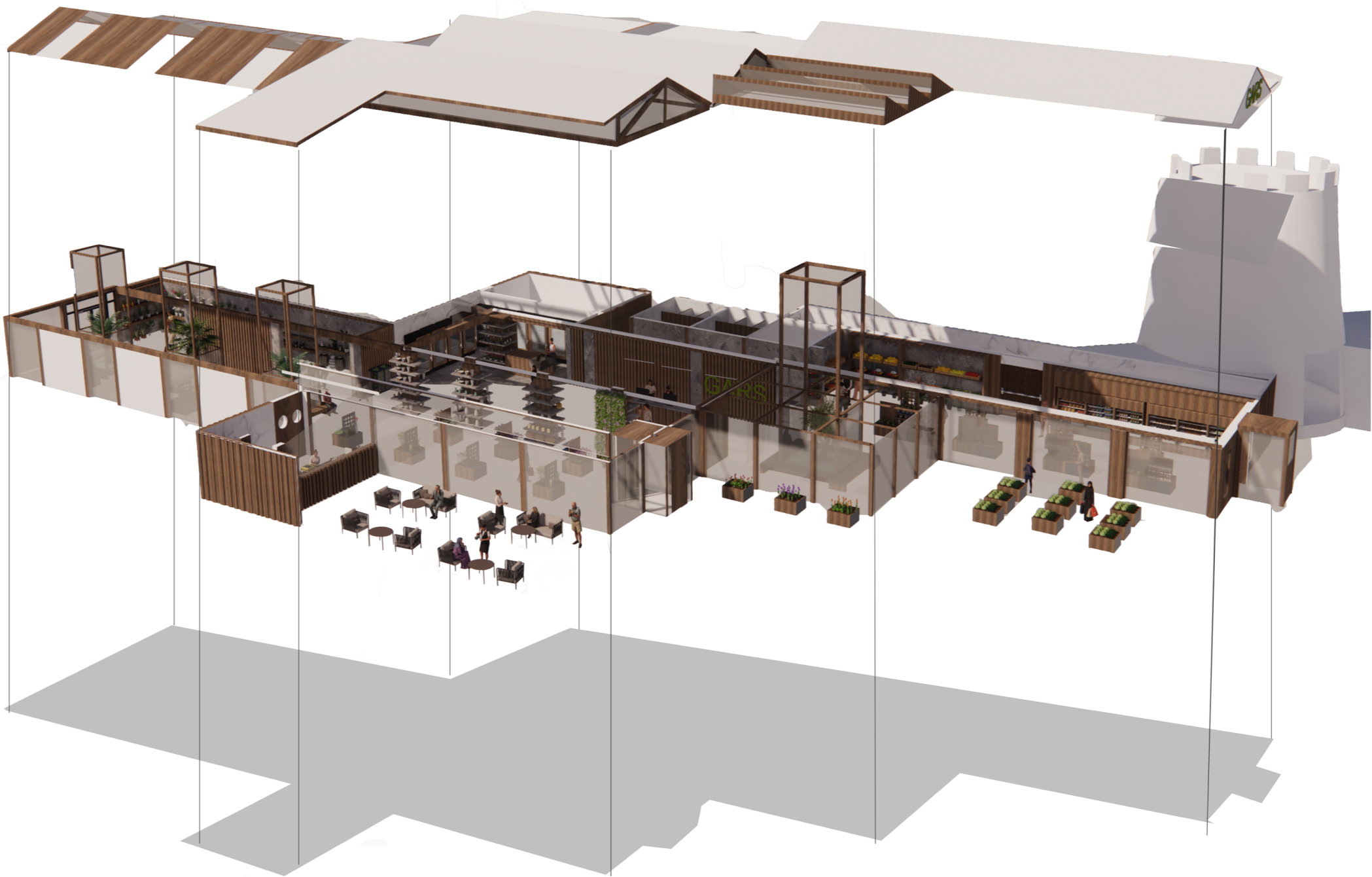


Organic food

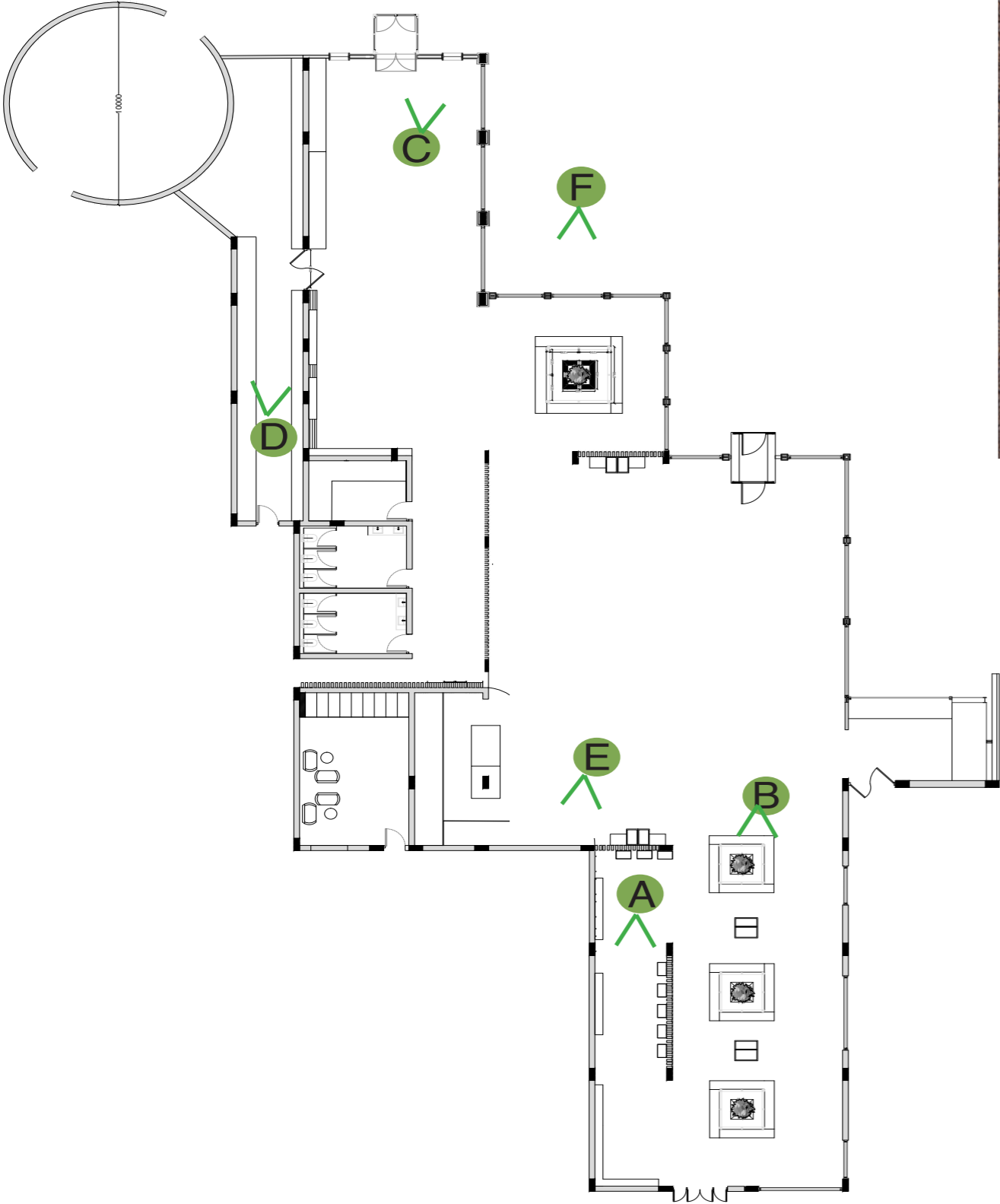


Develop Stage AXO

Olive Tree Box

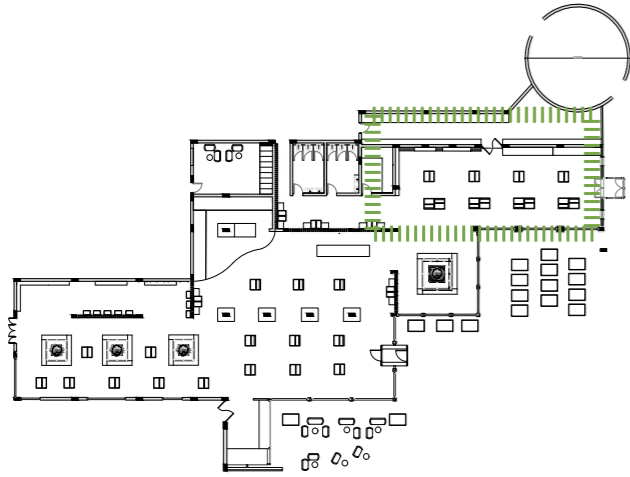


Develop Stage Scenes



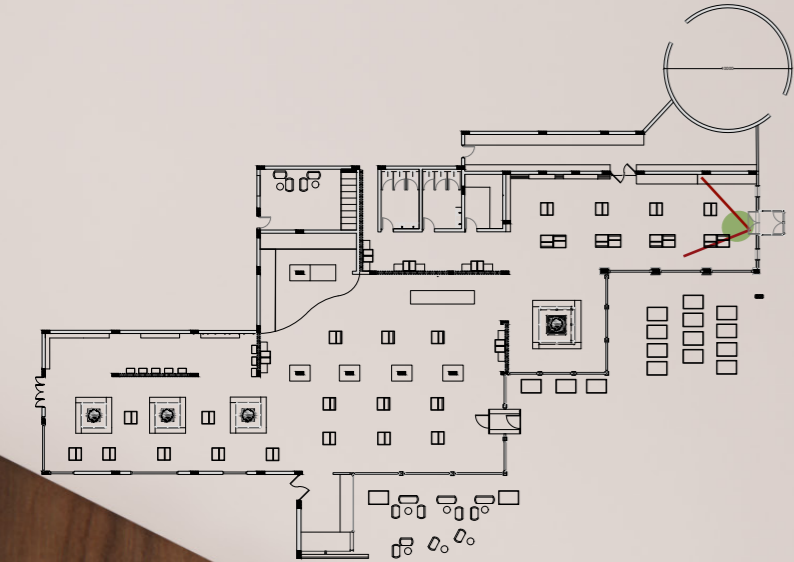


ORGANIC FOODS SHOP & STOR

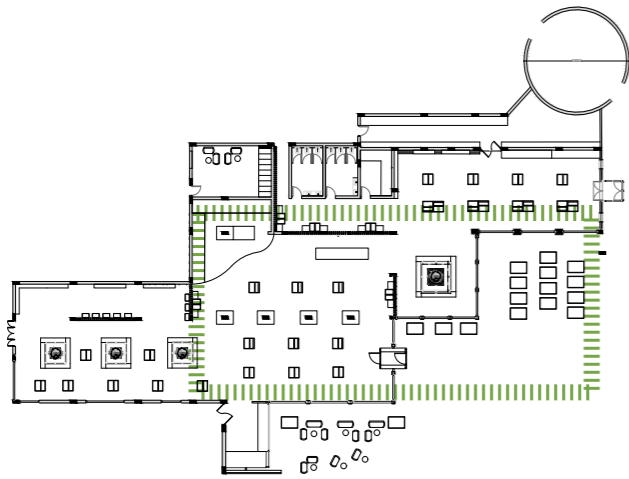


In the organic food area, I use wood and Natural Concrete Finish. There are different high of the shelves to show the products. On the ground floor, I use the marble to give the feeling of nature cause the marble is a type of stone. In addition, I was cladding the fridge with the same kind of wood in the column.





FLOWERS LOUNGE

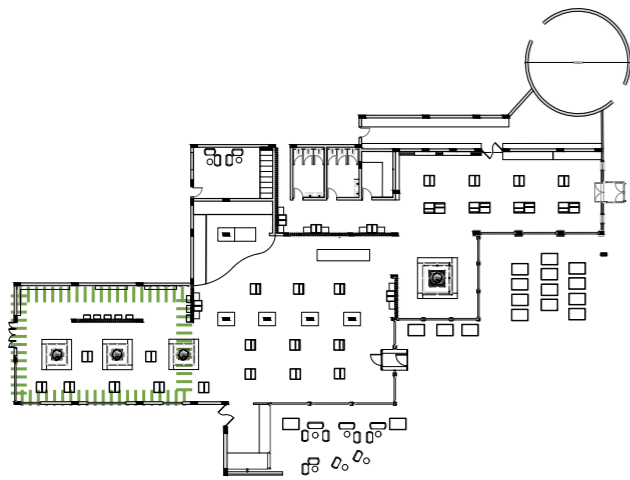


The Flower lounge is the largest space in my project as it contains three areas. First, the flowers arrangement. Second, the reception that serves all the shop. Behind the reception cashier, I made wood beams and columns to separate the corridor between the organic food and the reception. The last area is the large box of the olive tree. I keep the same existing design.





GARDEN PLANTS

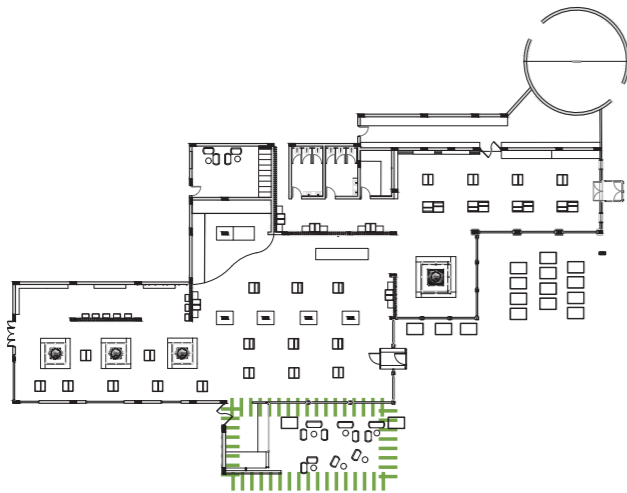


In the Garden plant area, use the same material steel, wood, marble, and glass. Garden plants contain two main areas. First, the three large box with palm and chairs. Second the small area for the product with an open skylight roof.



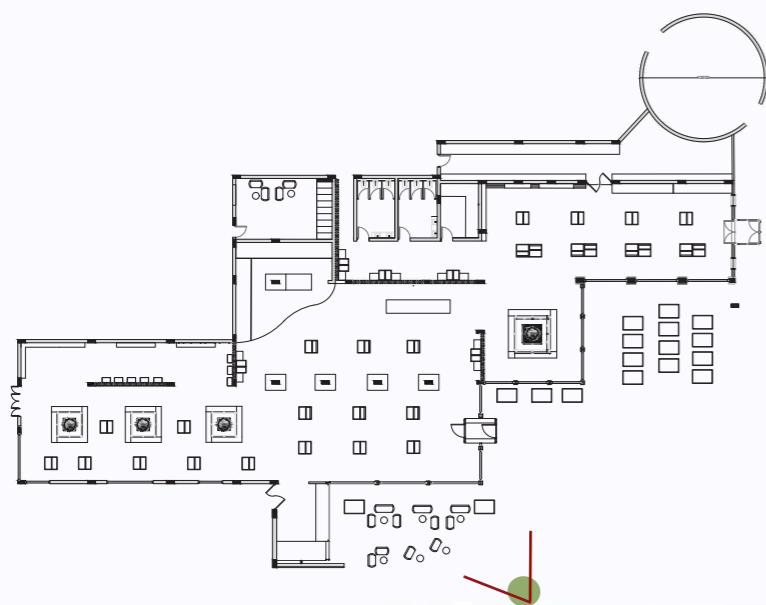


GARS OUTDOOR COFFEE



GARS outdoor coffee was an additional idea to give more energy to the place. Also, the coffee will serve all the shop. I keep the design simple as the GARS shop material.





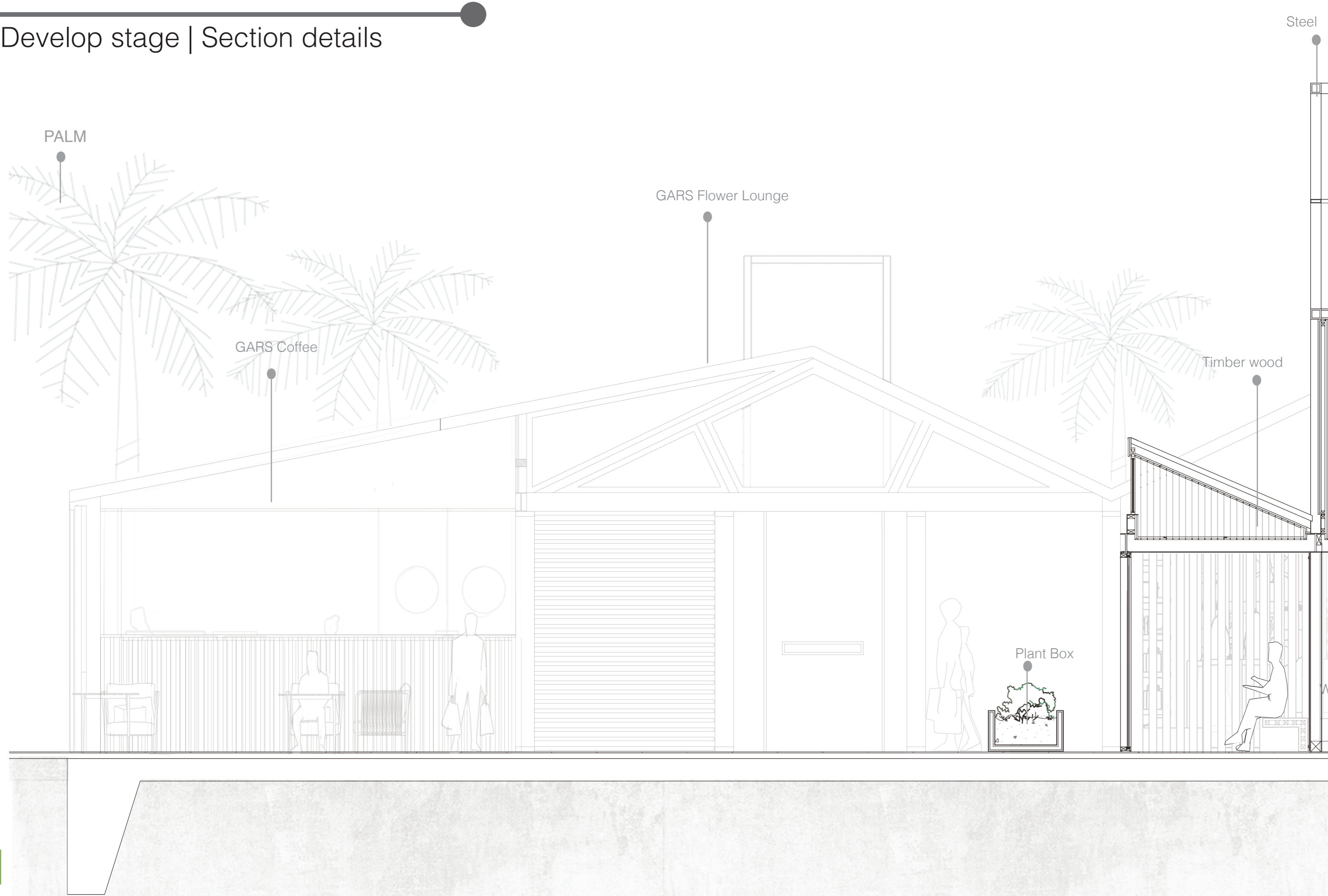
Develop stage | Section details

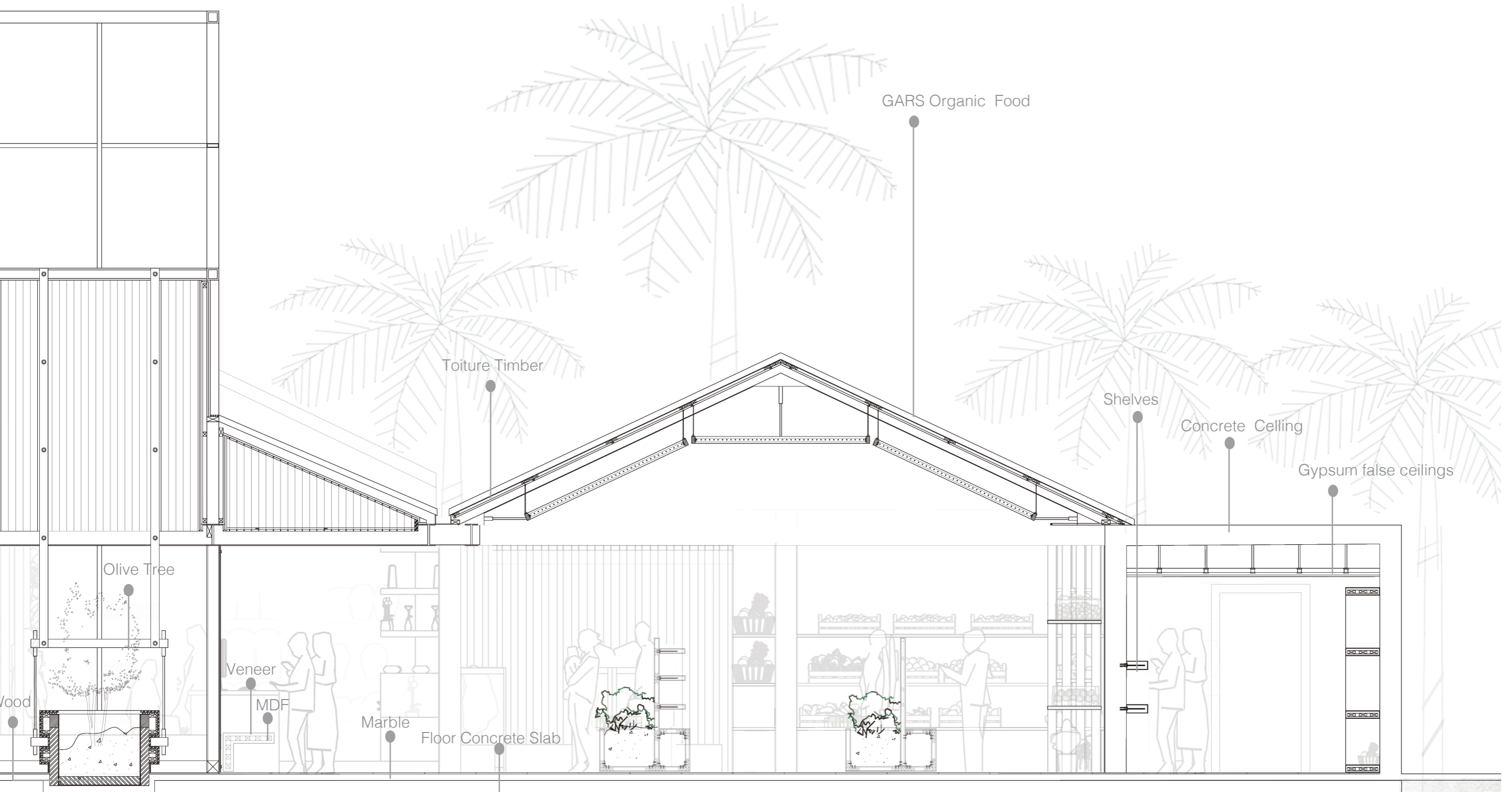
This section shows the Garden plant section that contains two main areas; the one with shelves has a different type and size of the plant, and the other area has three large boxes with palm in various sizes. Also surrounding this box, there is a square chair that allows people to sit and enjoy the view of the plant with a skylight.





Develop stage | Section details





Physical Model





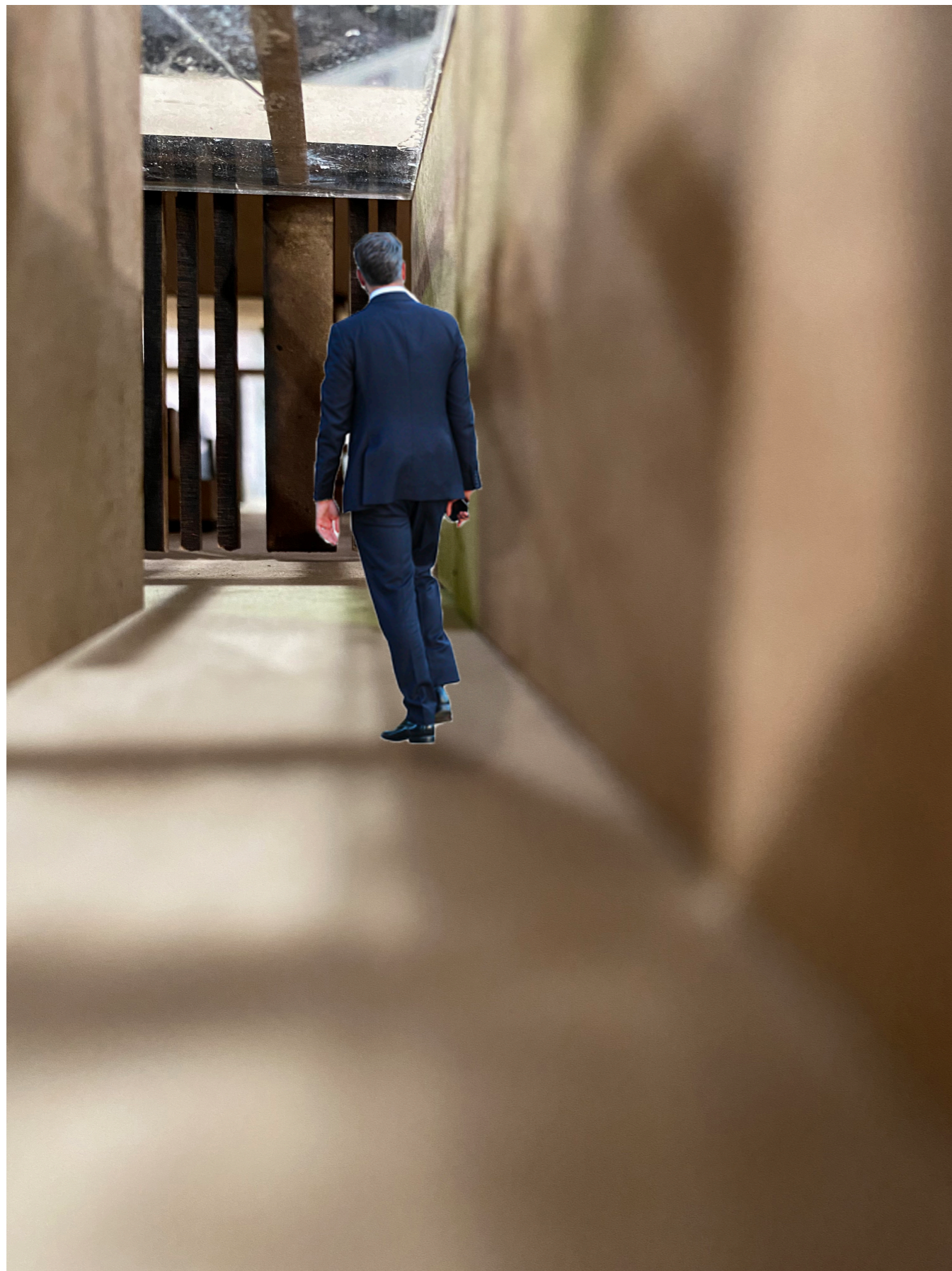
Physical Model





Physical Model







GARS

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