

690 MILLION people currently suffer from food insecurity. The severe weather phenomenon has become "the new normal", posing challenges to the field of agriculture, impacting the eco-system, and affecting food quantity and quality. Not only food supply is estimated to decrease, but also the increase in population has resulted in a significant increase in food demands leaving many people with limited access to healthy food. The aim of the Green Land project is to educate and encourage people from different ages to grow their own daily needed food in their own environment. This attractively designed project is located in Leicester city on Upperton Road which makes it accessible for the locals and visitors from outside of Leicester city.

Encouraging individuals to plant their own food in their own space to reduce their carbon footprint. This will help to cut down food carbon footprints and greenhouse gas emissions. As people grow their food, not only toxic emissions will decrease but also food demand. This will make organic food exclusively available and affordable for a wide range of people. Thus, climate change issues are addressed in this project by human behaviour and reactions to secure food as their basic need. The building is designed to utilise natural resources, including daylight, natural ventilation and rainwater collection. Leftover food is composited to produce fertilizer and nutrients to grow food.



The green land

Explore.
Eat.
Interact.
Learn.

THE BUILDING HISTORY:

The Old Railway building was a wagon repair shop when constructed in 1897. The building was part of the Great Central Railway's London Extension line, which passed through Leicester city in the nineteenth century. After the closure of the GCR, the building became abandoned for a long time, and currently, it accommodates different functions including cafe and students' accommodation. The design features of the building have been mostly preserved during its historical development plans.



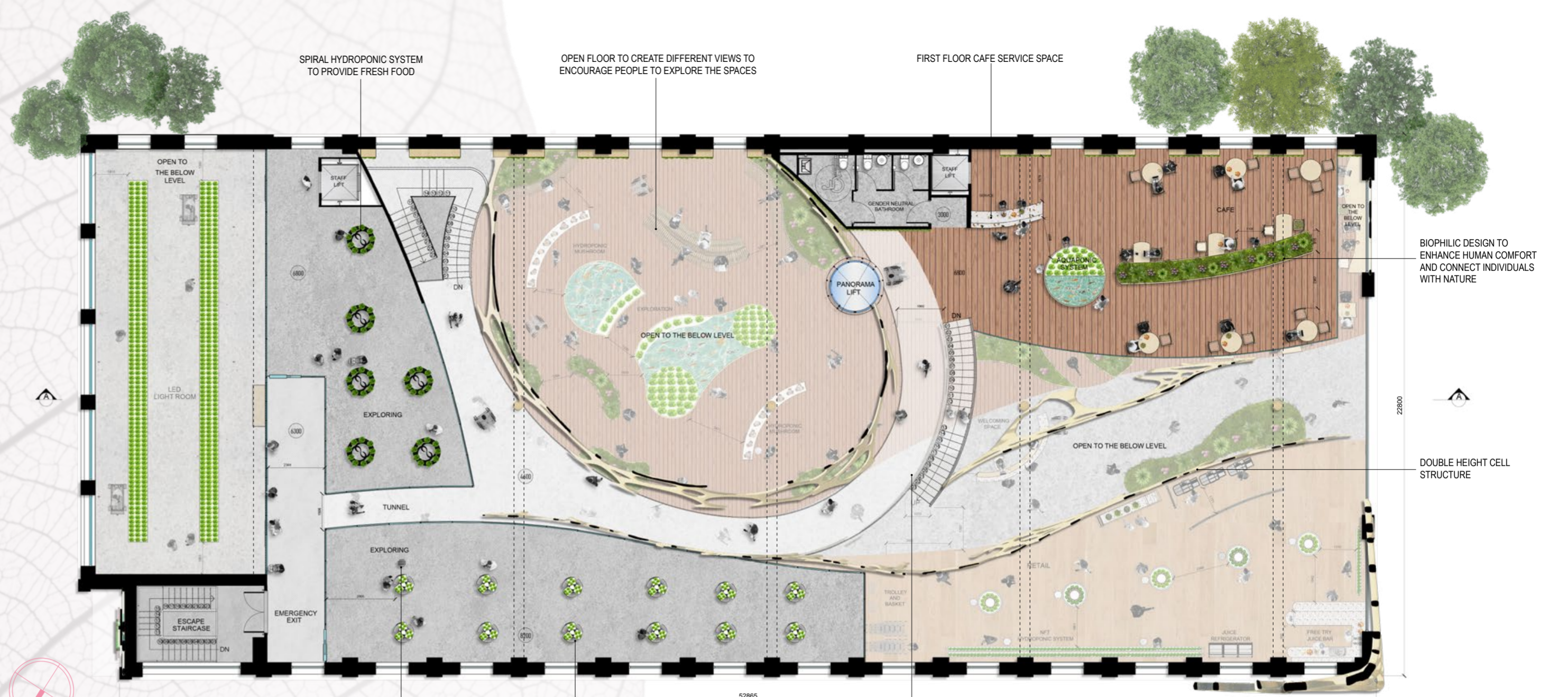
MATERIAL:

To promote sustainability, locally made materials were considered in the design of the interior space as an effort to reduce CO2 emissions.

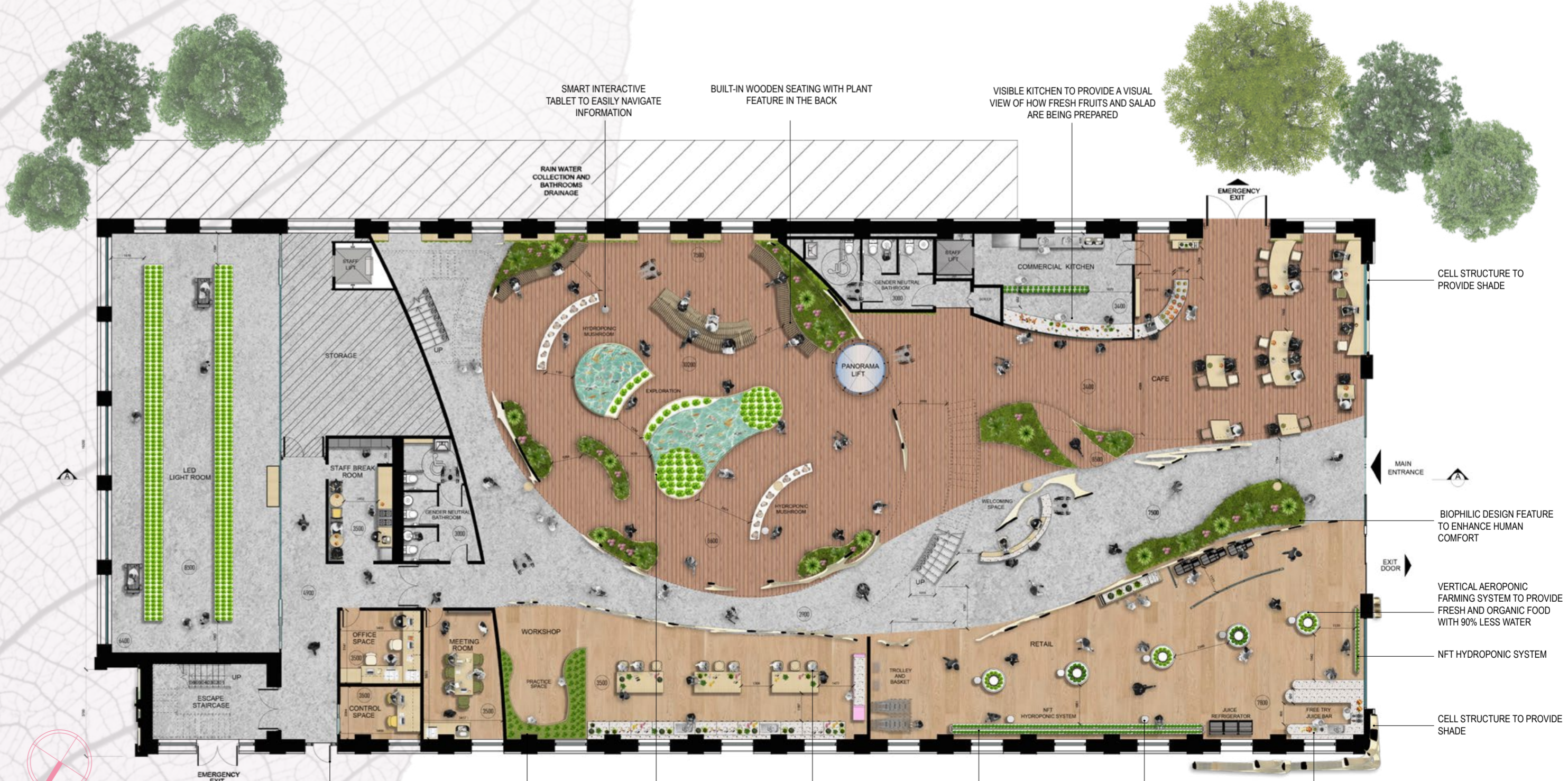


MATERIAL SPECIFICATION:

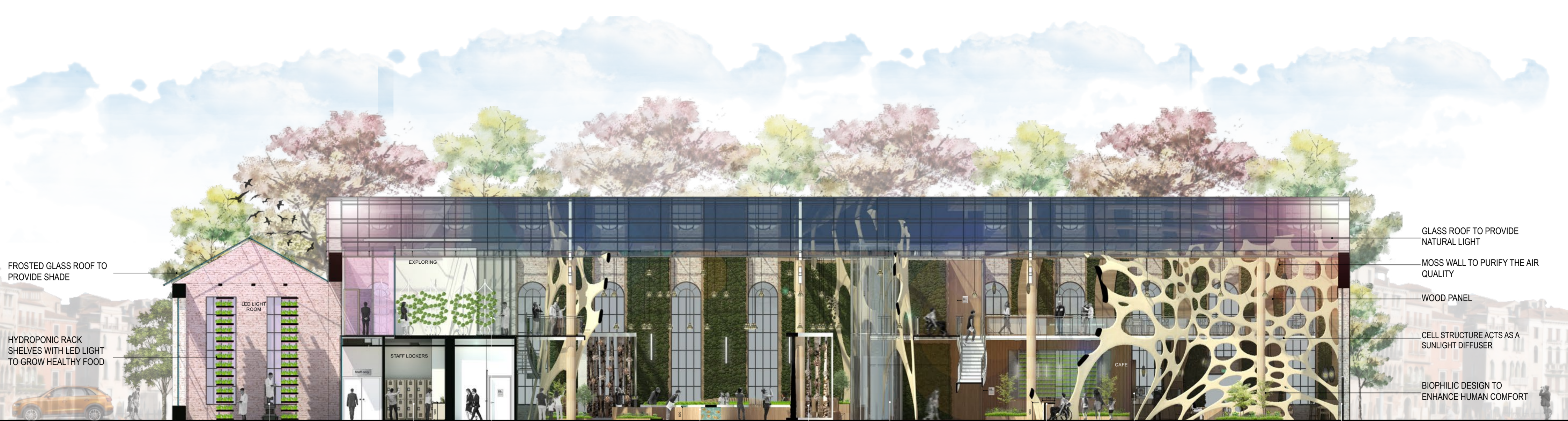
- 1. Seat Fabric
Manufacturer: Textile Express (local brand)
Colour: Dusky Pink
Finish: Organic and sustainable wool
Applied To: Café seating
- 2. Seat Fabric
Manufacturer: Textile Express (local brand)
Colour: Cream
Finish: Organic and sustainable wool
Applied To: Café seating
- 3. Seat Fabric
Manufacturer: Willowandhall (local brand)
Colour: Glade
Finish: Stain Resistance linen cotton, organic and sustainable
Applied To: Café seating
- 4. Seat Fabric
Manufacturer: Willowandhall (local brand)
Colour: Barley
Finish: Stain Resistance linen cotton, organic and sustainable
Applied To: Staff break room
- 5. Steel
Manufacturer: Abinteriors (local brand)
Colour: White
Applied To: Workshop stool base and LED light room rack shelves
- 6. Parfatted Metal-Flooring
Manufacturer: Mesh Warehouse (local brand)
Finish: White steel perforated metal
Applied To: 1st floor path and stairs
- 7. Concrete Floor (existing)
Applied To: Most of the ground floor spaces and first floor exploring space
- 8. Terrazzo
Manufacturer: Durat (local brand)
Product No: D100
Colour: White and beige
Applied To: Mushroom hydroponic, retail hydroponic system and aquaponic systems
- 9. Wood Slat
Manufacturer: Nature Wall (local brand)
Source: Oak sourced from sustainable forestry
Applied To: Reception desk, Pillars, café service area and retail free juice bar
- 10. Bun Moss
Manufacturer: Preserved Moss (local brand)
Category: 100% natural moss
Applied To: Interior east walls and structure
- 11. WOOD
Manufacturer: Chaunceys Timber Flooring (local brand)
Applied To: Organic cell structure & furniture
Source: Timber sourced oak from sustainable forestry
- 12. Wood Slat-Flooring
Manufacturer: Hawwoods (local brand)
Finish: Light brushed oak
Source: Timber sourced oak from sustainable forestry
Applied To: Ground and first floors



FIRST FLOOR PLAN SCALE: N/A



GROUND FLOOR PLAN SCALE: N/A



FROSTED GLASS ROOF TO PROVIDE SHADE
 HYDROPONIC RACK SHELVES WITH LED LIGHT TO GROW HEALTHY FOOD

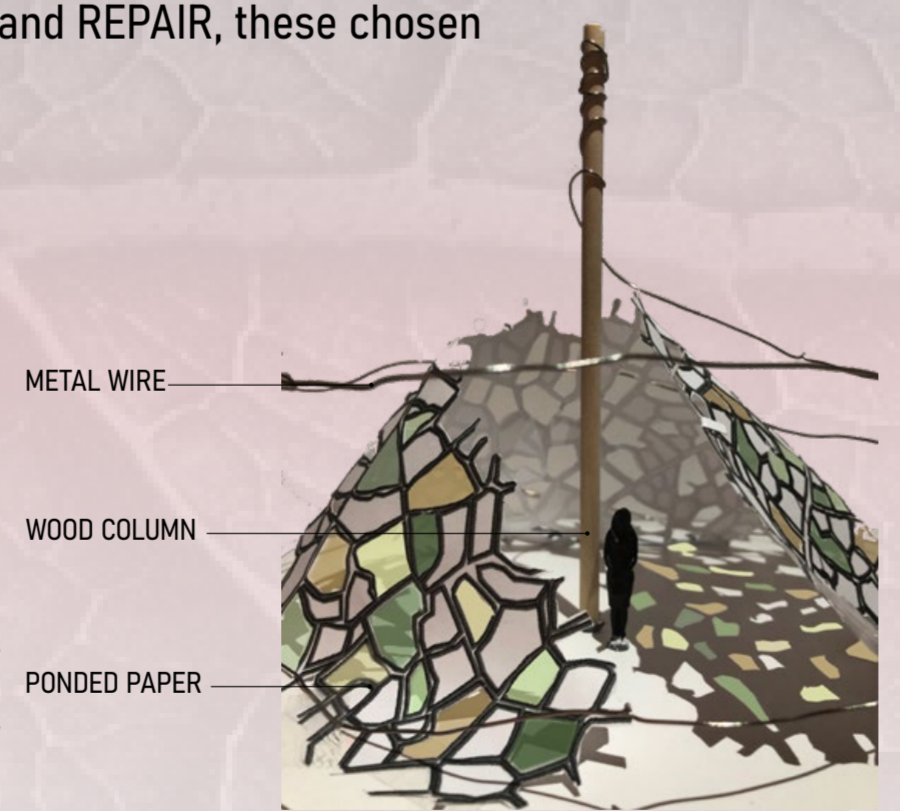
GLASS ROOF TO PROVIDE NATURAL LIGHT
 MOSS WALL TO PURIFY THE AIR QUALITY
 WOOD PANEL
 CELL STRUCTURE ACTS AS A SUNLIGHT DIFFUSER
 BIOPHILIC DESIGN TO ENHANCE HUMAN COMFORT

SECTION AA SCALE: N/A
 LATTER FOR MAINTENANCE PURPOSE
 STAFF BREAK ROOM
 SPIRAL HYDROPONIC SYSTEM
 AQUAPONIC SYSTEM TO EXPLORE AND PRODUCE HEALTHY FOOD
 MUSHROOM HYDROPONIC
 PANORAMA LIFT
 WELCOMING SPACE IS ACCESSIBLE FOR DISABLED
 GROUND FLOOR CAFE SERVICE SPACE
 MAIN ENTRANCE

THE DESIGN CONCEPT:

The concept was inspired by the idea of movement found in the complex pattern of leaves' veins as they contribute to the health of trees. This involves distribution and connection when considered as one object. This idea was reflected in the intended project by gathering people to connect them with nature through the design and then by distributing the essence of the project into their environment. To GATHER, DISTRIBUTE, and REPAIR, these chosen

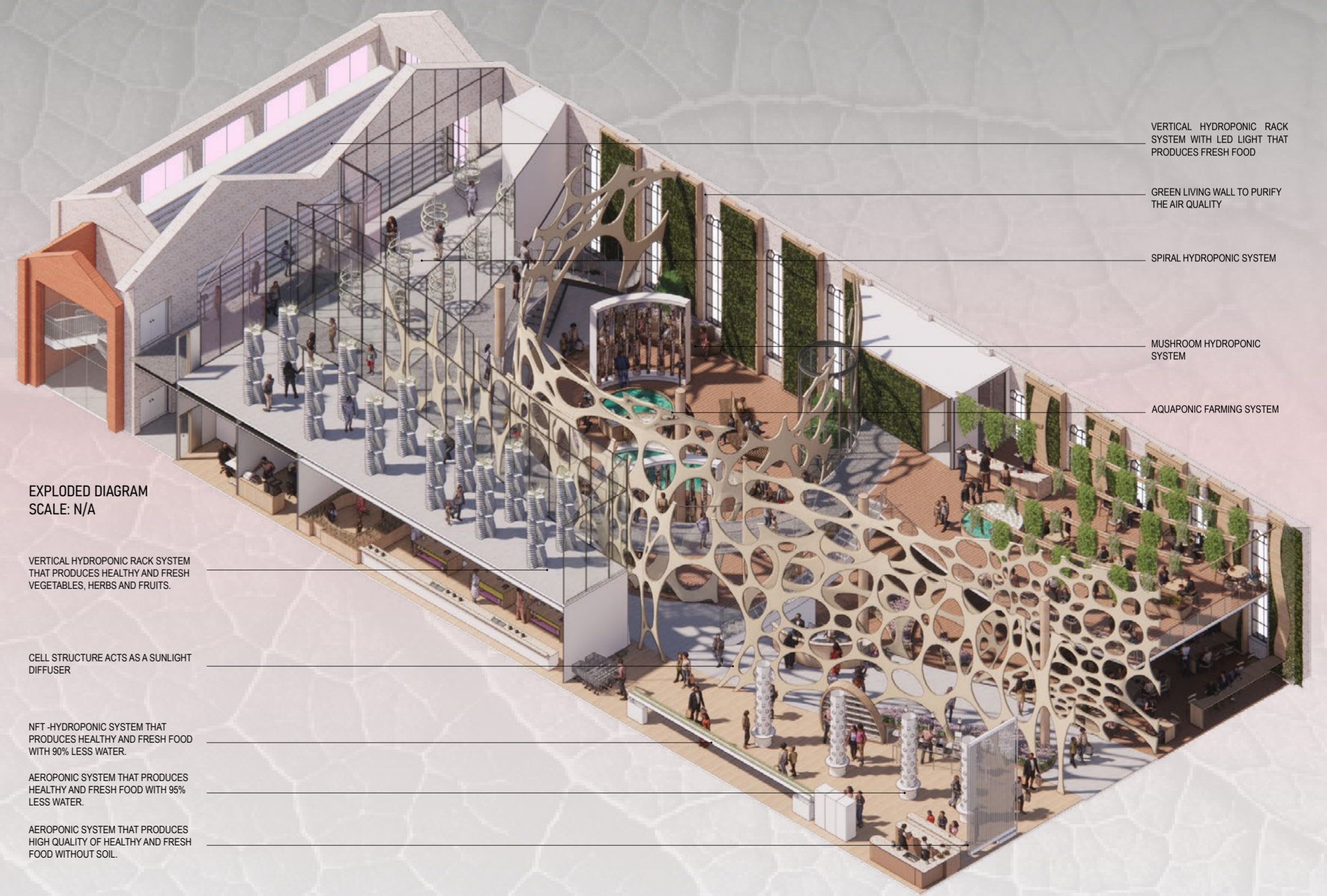
words represent people gathering to learn and solve current issues that the whole world is expressing. The ponded paper in the concept model image represents the idea of gathering people under the wood and wire structure. The wood column represents the sustainability and the community in which they are standing and gathering. The metal wire represents the power of people's voices in distributing sustainability ideas throughout the world.



CONCEPT MODEL

AXONOMETRIC VIEW:

This axonometric view shows the different types of urban farm systems that were used in the Green Land building.



EXPLODED DIAGRAM SCALE: N/A
 VERTICAL HYDROPONIC RACK SYSTEM THAT PRODUCES HEALTHY AND FRESH VEGETABLES, HERBS AND FRUITS.
 CELL STRUCTURE ACTS AS A SUNLIGHT DIFFUSER
 NFT-HYDROPONIC SYSTEM THAT PRODUCES HEALTHY AND FRESH FOOD WITH 90% LESS WATER.
 AEROPONIC SYSTEM THAT PRODUCES HEALTHY AND FRESH FOOD WITH 95% LESS WATER.
 AEROPONIC SYSTEM THAT PRODUCES HIGH QUALITY OF HEALTHY AND FRESH FOOD WITHOUT SOIL.

VERTICAL HYDROPONIC RACK SYSTEM WITH LED LIGHT THAT PRODUCES FRESH FOOD
 GREEN LIVING WALL TO PURIFY THE AIR QUALITY
 SPIRAL HYDROPONIC SYSTEM
 MUSHROOM HYDROPONIC SYSTEM
 AQUAPONIC FARMING SYSTEM

GROW & INTERACT



MEZZANINE SPACE: AN INTERACTIVE SMART TABLET PROVIDES INFORMATION ABOUT THE HYDROPONIC SYSTEM TO EDUCATE PEOPLE, AS WELL AS THIS SPACE, GROWS FRESH AND ORGANIC FOOD TO SUPPLY THE CAFE AND RETAIL AREAS. THE SPACE HAS PINK LED LIGHTS TO PROVIDE THE NEEDED LIGHT TO GROW HEALTHY FOOD.

LEARN



WORKSHOP SPACE: CHILDREN WILL EXPERIENCE LEARNING HOW TO PLANT USING DIFFERENT TYPES OF TECHNIQUES TO GROW FRESH AND ORGANIC FOOD WITH SOME GUIDANCE. THE SPACE PROVIDES AN INTERACTIVE ENVIRONMENT WHICH WILL ENCOURAGE KIDS TO LEARN AND PARTICIPATE IN THE ACTIVITIES.

EAT & SOCIALIZE



GROUND FLOOR CAFE: THE SPACE PROVIDES COFFEE, FRESH JUICE, AND HEALTHY DESSERT AS WELL AS ORGANIC SALADS THAT WERE ON-SITE GROWN AS WELL AS IT MAKES SURE THAT FOOD WASTE IS MANAGED IN A WAY THAT BENEFITS THE ENVIRONMENT.

EXPLORE



EXPLORATION SPACE: FAMILIES CAN EXPLORE THE DIFFERENT URBAN FARMING SYSTEMS THAT PROVIDE FRESH AND ORGANIC FOOD TO LEARN AND TO GET INSPIRED IN ORDER TO MAKE A STEP FORWARD TO SAVE THE ENVIRONMENT. THE SPACE PROVIDES A RELAXING ATMOSPHERE WHILE SETTING IN THE WOODEN SEATS AND LISTENING TO THE BURBLE OF WATER.

PURCHASE



RETAIL: THE SPACE PROVIDES FRESH, SEEDS AND ORGANIC FOOD WHERE INDIVIDUALS ARE ALLOWED TO PICK THEIR OWN FRESH FOOD DIRECTLY FROM THE HYDROPONIC SYSTEM. THIS WILL ENCOURAGE INDIVIDUALS TO GROW THEIR OWN FOOD IN THEIR OWN SPACE.



WELCOMING SPACE: PROVIDES AN INTERESTING AND WONDERING ASPECT OF THE PROJECT TO ENCOURAGE PEOPLE TO EXPLORE AND LEARN.



LINK & QR CODE:

<https://youtu.be/tiZcHJrixm0>

