

AMERICAN UNIVERSITY OF BEIRUT
UNDERGRADUATE CAPSTONE PROJECT
IN
LANDSCAPE ARCHITECTURE

SUBMITTAL FORM

IN THE PIPELINE

by

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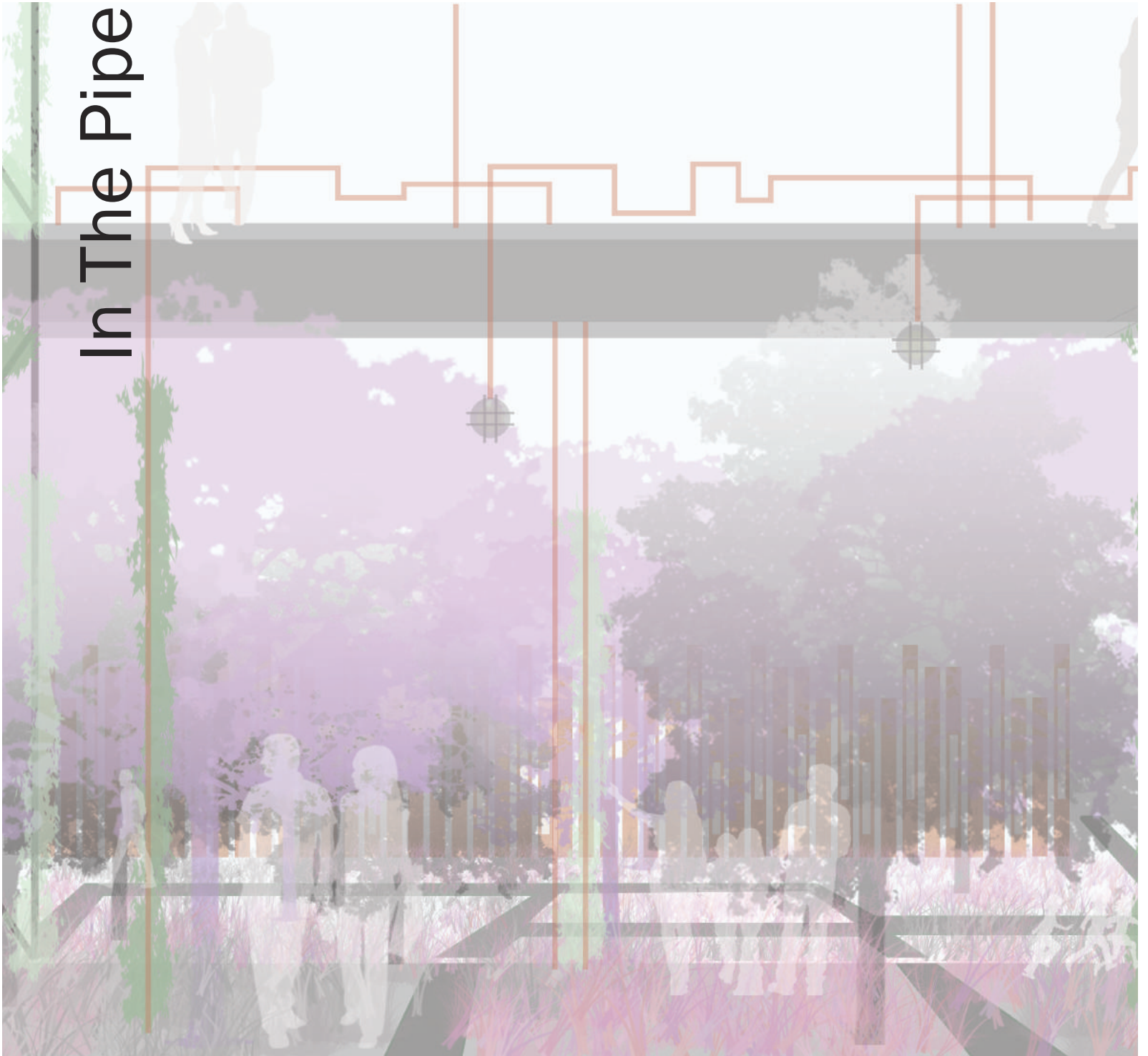
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Final Year Project
Fourth Year 2015-2016

Raya Rizk
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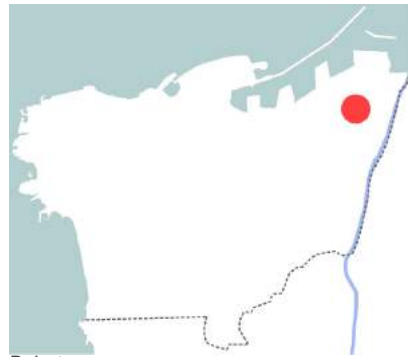
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01 | Initial Thoughts

01.1 | Introduction



Lebanon



Beirut



Mar Mikhael

I first came across the brewery in the summer of 2015, the two building complex had empty spaces that seem to be scarce in Beirut. Therefore, it was the perfect opportunity to transform the old Brewery, La Grande brasserie du Levant, into a network of activities. More specifically, a vertical park.



Building 2



Building 1

01.2 | Industrial Past



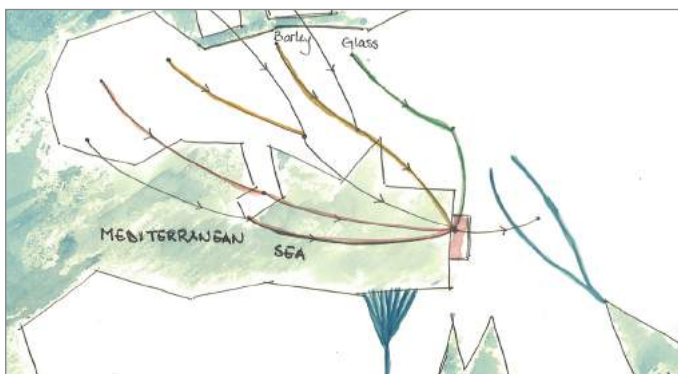
Golden Era



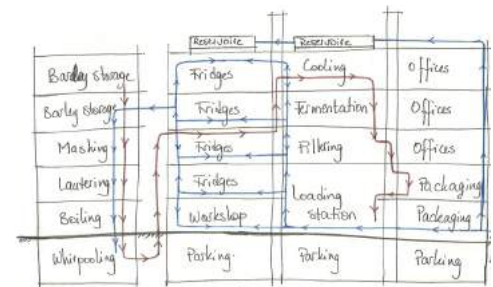
Brewery after closing | Pictures Taken by Hind Fatayri



Current State of Brewery



Global Trading

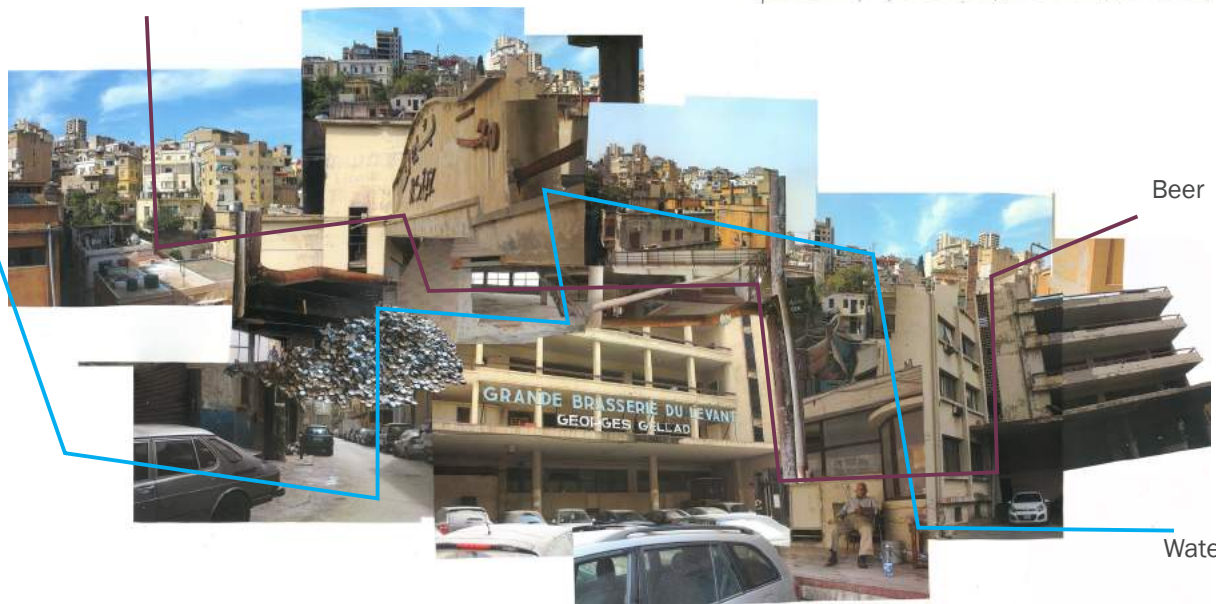


Beer

Water

Beer

Water



Pile of bottle caps.



Glass bottles thrown on the roof.

After conducting some research, it turned out that the brewery has a great history and an important industrial past which had been forgotten. This made the brewery even more interesting, as it is a hidden treasure in the middle of a hectic city, and more specifically crowded neighborhood.

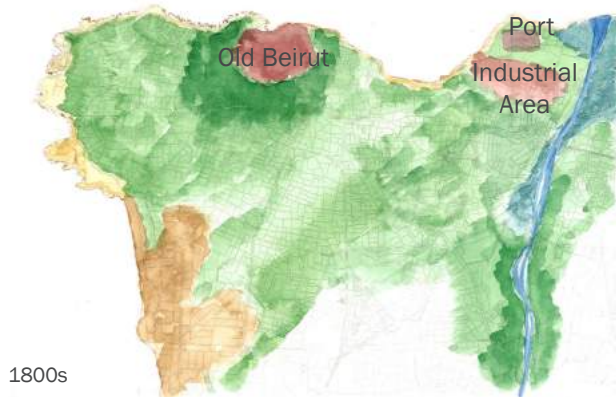
02 | Problem & Project Statement

02.1 | Remnant Green Patches

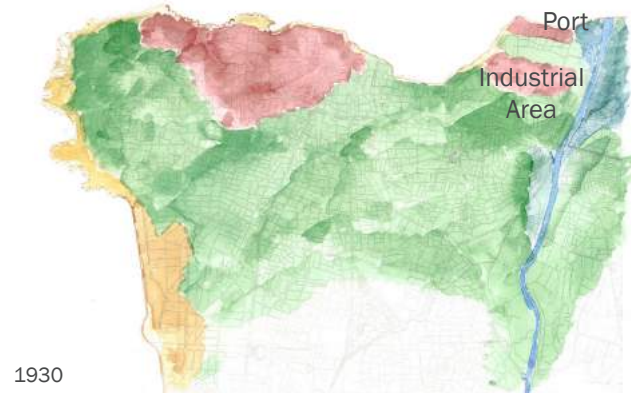


Urbanization

Scale 1:80,000



1800s



1930

Remnant Green and Public Areas

Taking a step back and studying the both the neighborhood of Mar Mikhael and the city of Beirut, a couple of threats were quite obvious and unavoidable.

One of the most visible threats, is the lack of public and green spaces at both scales: Beirut and Mar Mikhael.

It seemed appropriate to compensate for the lack of space and greenery by creating a public park, with stacked gardens connected by climbers.



Remnant Green Patches in Beirut

Scale 1:80,000



02.1 | Remnant Green Patches



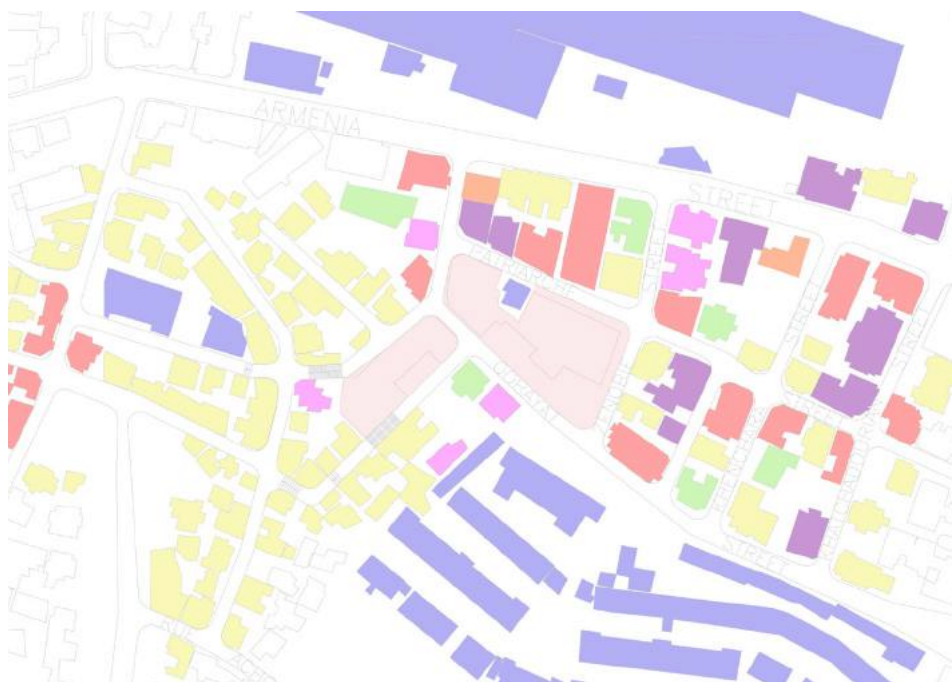
Scattered Greenery in Neighborhood

Scale 1:3,500

Open, public and green spaces seem to be a necessity that neighborhood residents are silently demanding. Their shy attempts to decorate the high concrete walls with potted plants is a common sight, especially along the stairs that surround the upper building of the brewery.



02.2 | Real Estate Pressure



Diverse Activities of Area

Scale 1:3,500



Institutional



Entertainment



Services



Commercial

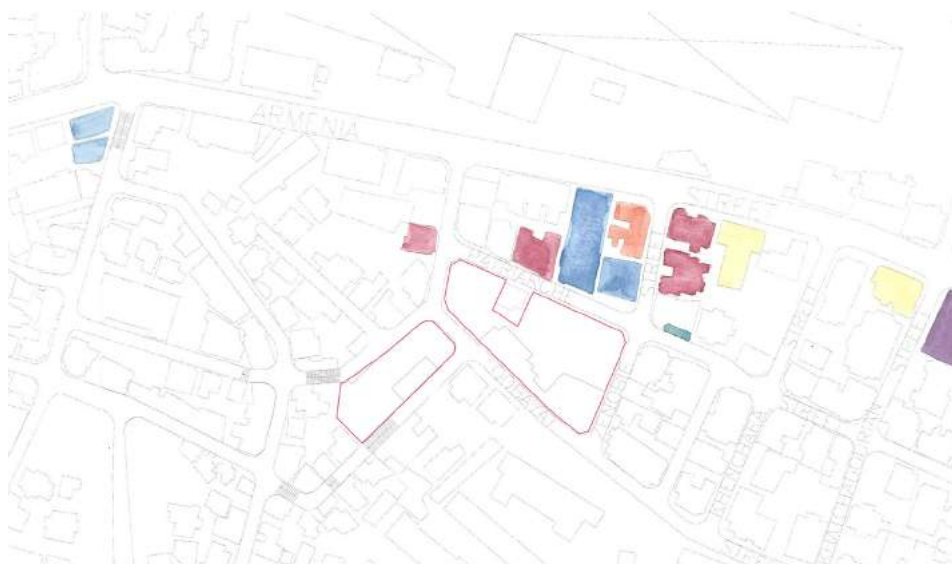


Manufacturing



Residential

- New Buildings
- Vacant Buildings
- Relocated shop
- Under Construction
- Buildings to be emptied
- Pubs



Real Estate Pressure

Scale 1:3,500

A second imposing and evident threat is the real estate pressure. New developments have been gradually taking over the blocks along Armenia Street relocating many residents and businesses. The brewery itself has failed to escape this pressure.

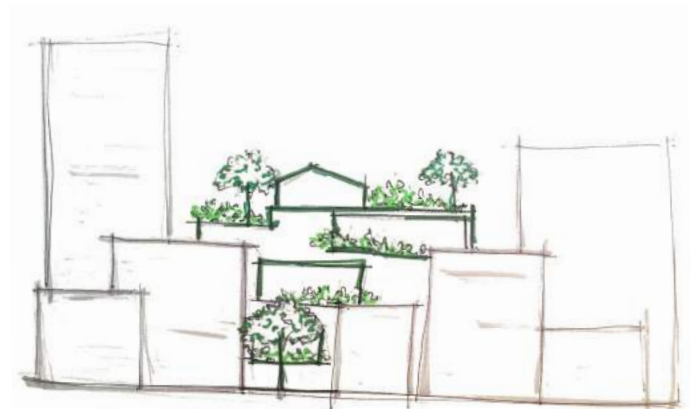
The neighborhood takes pride in their self-sustaining community as it offers all the different activities within walking distance.

02.3 | Project Statement

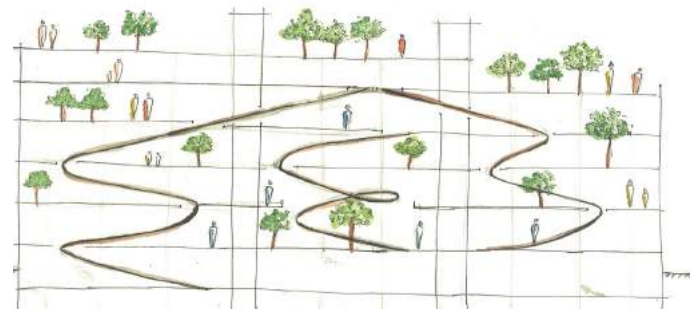
Most building in Mar Mikhael, as well as the brewery, are part of our architectural heritage, and it is our duty to preserve them. This is why the question of how to create a balance between public and private came to mind.

This balance in question means incorporating all of the needs and demand of both the neighborhood residents, as well as the daily visitors. This would not only mean design a vertical park for daytime, but creating a network of activities which would attract visitors from all over Beirut and beyond.

The initial idea was to punctuate through the thick and polluted urban fabric, and creating a breathing lounge right at the heart of the heart of the neighborhood. The idea gradually developed, incorporating many different activities, in order to cater for as many people as possible.



Incorporating Vegetation to the City



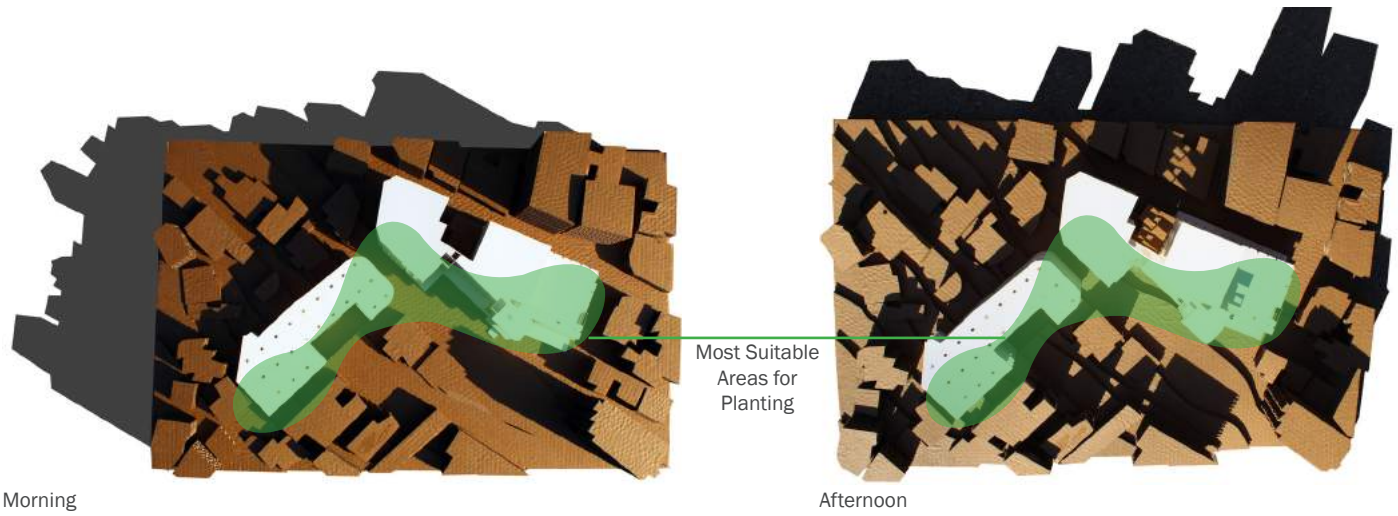
Main Path Breaking through Rigidity of Building



Main Entrance to Vertical Park

03 | Opportunities

03.1 | Impressions on Site



Most Suitable Areas for Planting

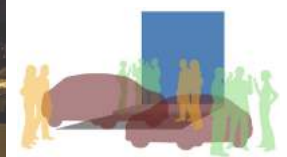
The brewery's southern facades are completely exposed to direct sunlight all daylong, which made both entrances and courtyards most suitable for planting any type of vegetation.

Pedestrian Circulation Day

Scale 1:5,000



Night



The brewery cuts through both Mar Mikhael and Geitawi, which are known for narrow streets and alleys. This is why, most people opt to circulate by foot. As the sidewalks are taken over by parked cars, pedestrians have taken over the roads.

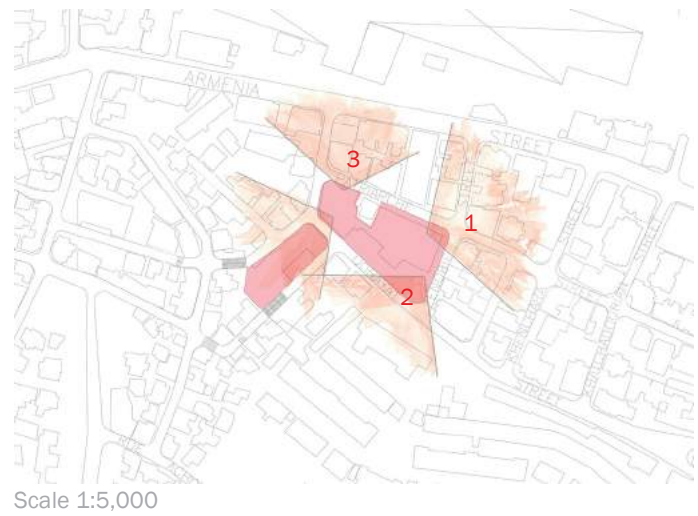
As for the main road of Mar Mikhael, Armenia Street currently holds the city's trendiest nightlife. It attracts visitors, from all over Beirut and beyond, every single night. This shows to prove, that food and entertainment are two major attractions in Lebanon.

03.2 | Viewsheds



The brewery takes over entire blocks which indicate different viewsheds from every angle. It has large terraces, clear rooftops, and wide windows at every floor. That said, it is a great opportunity to maximize the use of these views.

These viewsheds overlook the Beirut Port, the sea, the barracks and its French architecture, the colorful neighborhood of Geitawi and the high buildings of Beirut in the background.



1



2



3

03.3 | Open and Vast Floor Plans

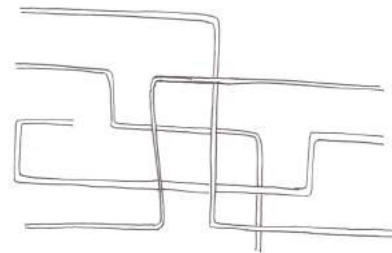
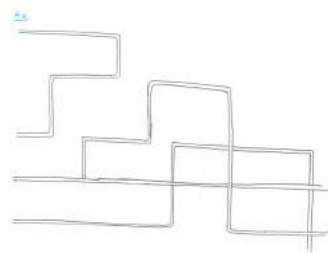
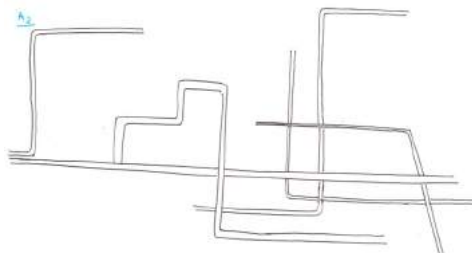
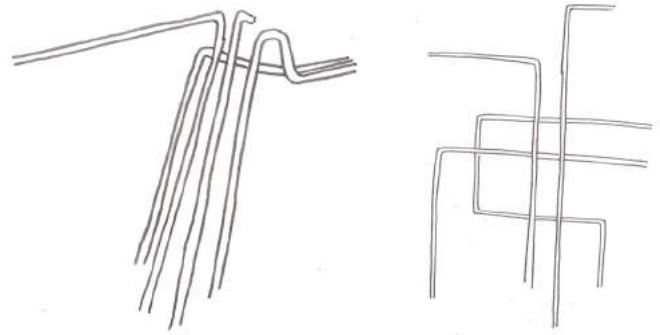
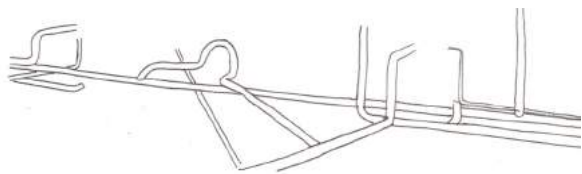
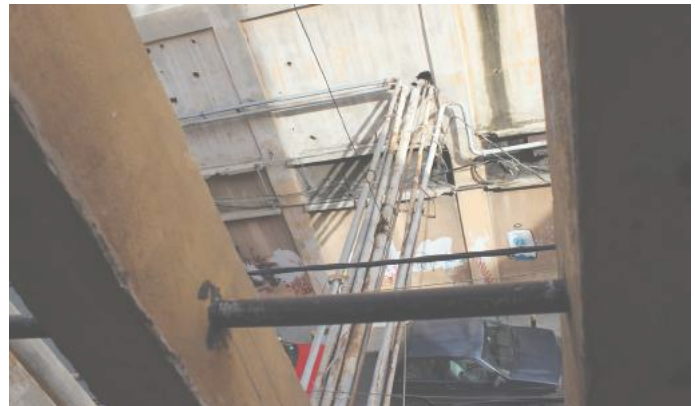
One of the first and most important aspects of the brewery that what most appearant is the open and vast floor plans. it is not common to find such a massive and empty two building complex completely in Beirut. And in an extremely tight urban fabric it was only suitable to appropriate the brewery to the public.

However, that would only respond to most of the issues of the areas but help release the stress by incorporating vegetation, as well, by thinking of practical solutions to inevitable daily problems.



04 | Concept Development

04.1 | Inspiration and Thinking Process

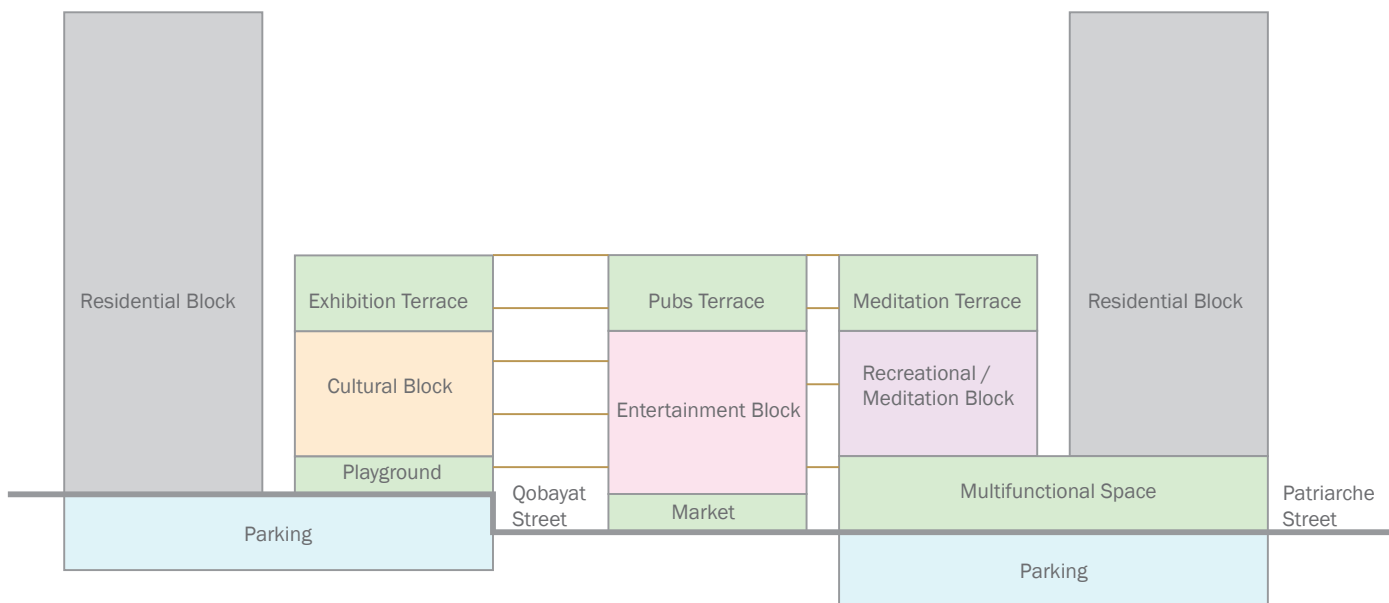


Concept Plan | Projecting pipelines on plan

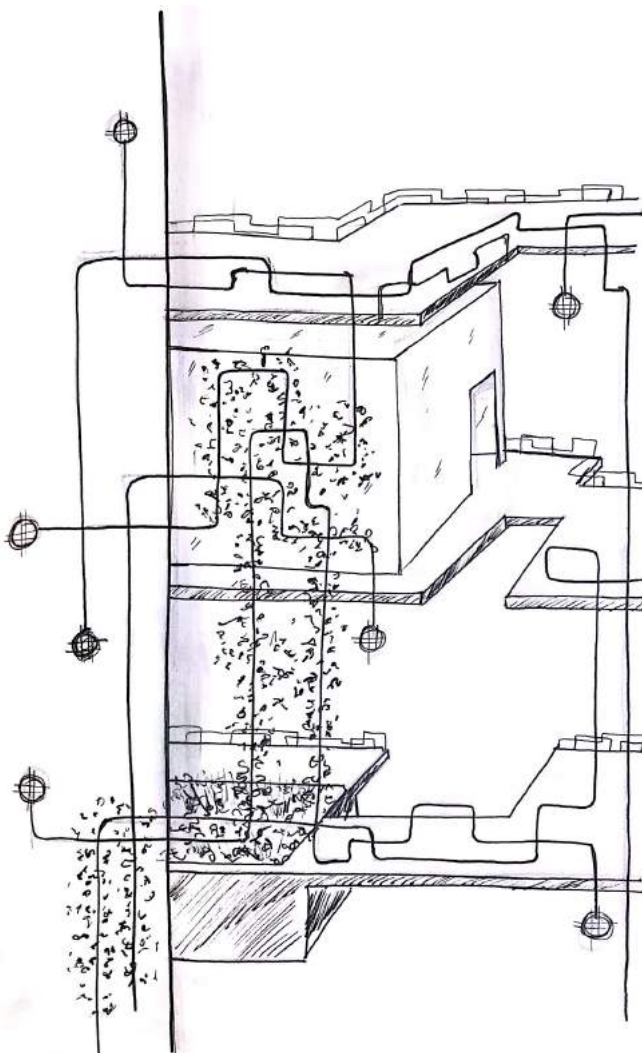
The brewery had been completely cleared out for decades, and the only remaining elements were the scattered pipes all over the site. This is why, they were the inspiration to the main concept.

Taking the images of the pipe, analysing and abstracting them, the main geometries were formed. These same lines were projected onto the plans to guide the creation of the main path and each floor.

04.2 | Concept



Concept Section | Organization of Activities



Once the main lines were set, it was only a matter of balancing public and private. The two buildings were divided into five blocks, where the private residential blocks were at the extremities and the public blocks at the core. Both buildings have underground parking to accommodate both public and private use.

There are three main central blocks, which functions are projected up to the rooftop:

- Cultural, where a permanent museum and exhibition spaces are found;
- Entertainment - a block full of pubs and restaurants which will serve as the initial attraction and the continuous source of income;
- Recreational - A safe and large enough to gather all activities occurring in the neighborhood.

At each entrance at the ground levels, there is a market (located at the corner closest to Armenia Street), a playground (located slightly higher than the road) and a multipurpose reception area (located right at the heart of the project).

The main element of the project is a network of pipelines that run across one corner to the next, which serves several functions, from support for climbers, lighting fixtures, handrails and irrigation and electrical pipes. Another interesting feature of this pipeline is that it transforms into bridges which connect both buildings above the street, allowing for a continuous flow of people.

05 | Program Development

Plan 1	Parking Market Seating Area	1,620 m ² 325 m ² 280 m ²	Building 1
Plan 2	Parking Seating Area	1,100 m ² 330 m ²	Building 1
	Courtyard Senior's Corner Multifunctional Amphitheater	1,150 m ² 120 m ² 1,150 m ²	Building 2
Plan 3	Playground Courtyard	520 m ² 250 m ²	Building 1
	Pubs Gym Activities Area	370 m ² 450 m ²	Building 2
Plan 4	Permanent Museum	300 m ²	Building 1
	Pubs Terrace	330 m ² 70 m ²	Building 2
Plan 5	Art Gallerie Exhibition Café	300 m ² 130 m ²	Building 1
	Restaurant Gym Equipment Terraces	280 m ² 1400 m ² 55 m ²	Building 2
Plan 7	Multifunctional Quiet Space	360 m ²	Building 1
	Pub and Restaurant Terrace Meditation Rooftop	300 m ² 450 m ²	Building 2

06 | Design Development

06.0 | Layout Plans



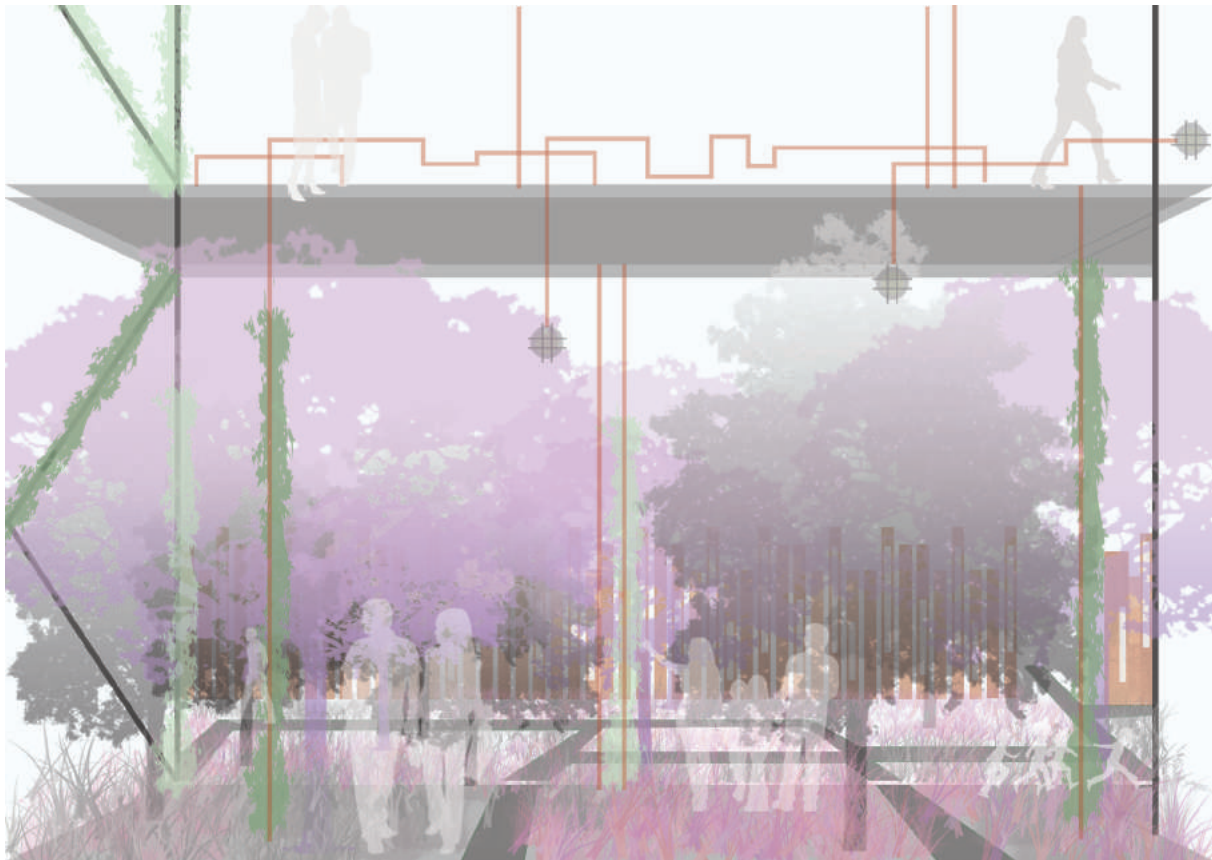
Design Guidelines

- Work on the skin, keeping the skeleton intact, in order not to destroy architectural significance
- Cut slabs on the southern facades in order to benefit on the sun exposure
- Draw lines based on the pipe layouts:
 - Follow beams, columns, walls, ceilings to create the design lines;
 - Two opposite directions ;
 - Different diameters which serve for different functions (Paths, vegetation, irrigation, lighting);
 - Flow of resources which could translate into a flow of people;
 - Straight pipes and curved right angle which change perspectives wherever you stand.



Building 1 | Basement 2 | Building 2 | Basement 1

Scale 1:800



Building 2 | Inside looking out to courtyard



Building 1 | Basement 1 | Building 2 | Ground Floor

Scale 1:800



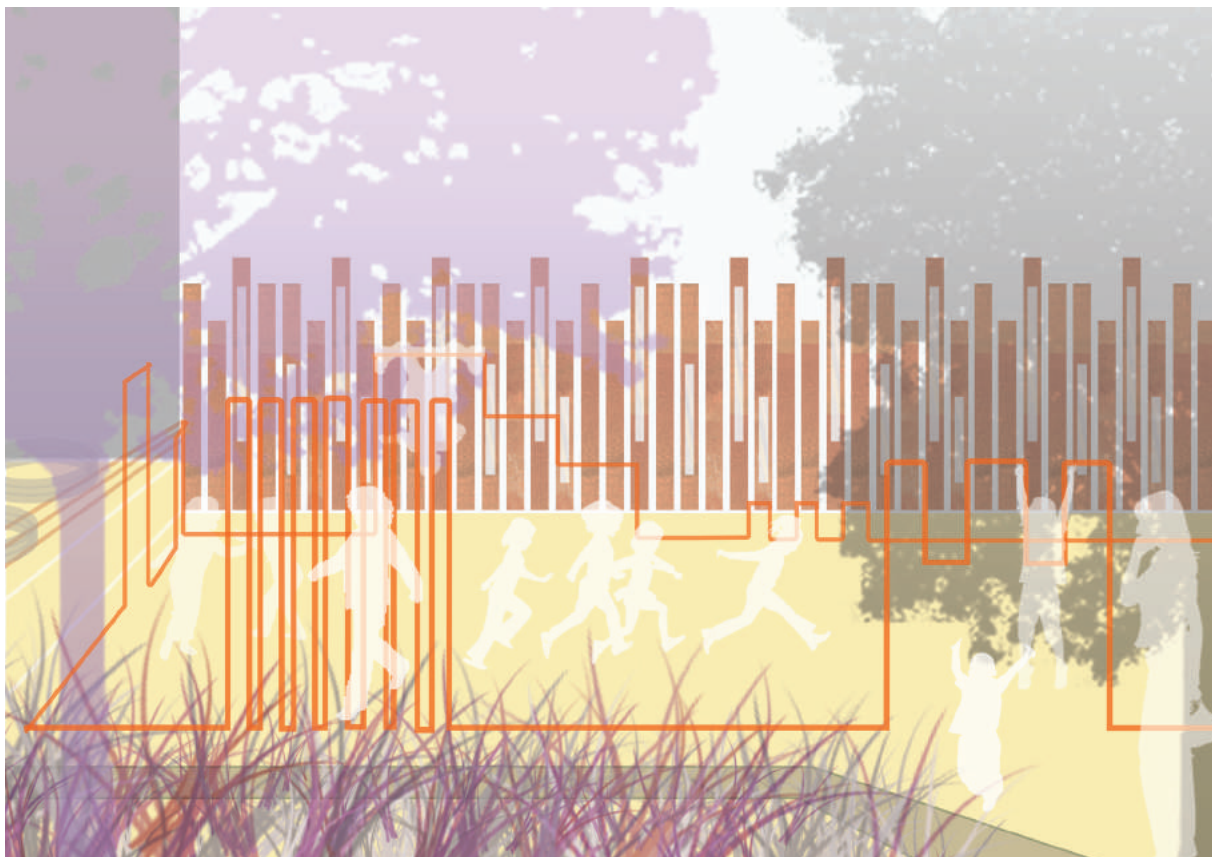
Section BB'a

Scale 1:200



Building 1 | Ground Floor | Building 2 | 1st Floor

Scale 1:800



Building 1 | Playground view from courtyard



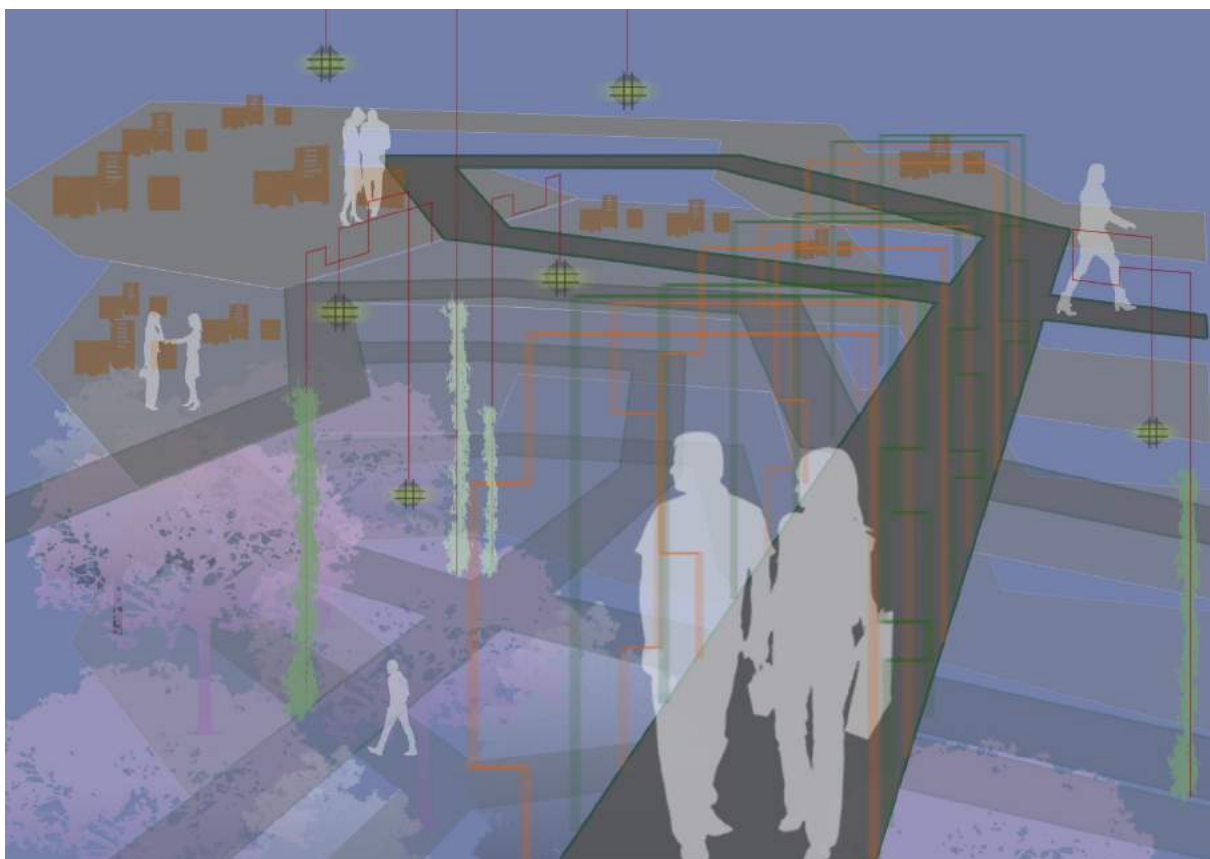
Section CC'

Scale 1:200

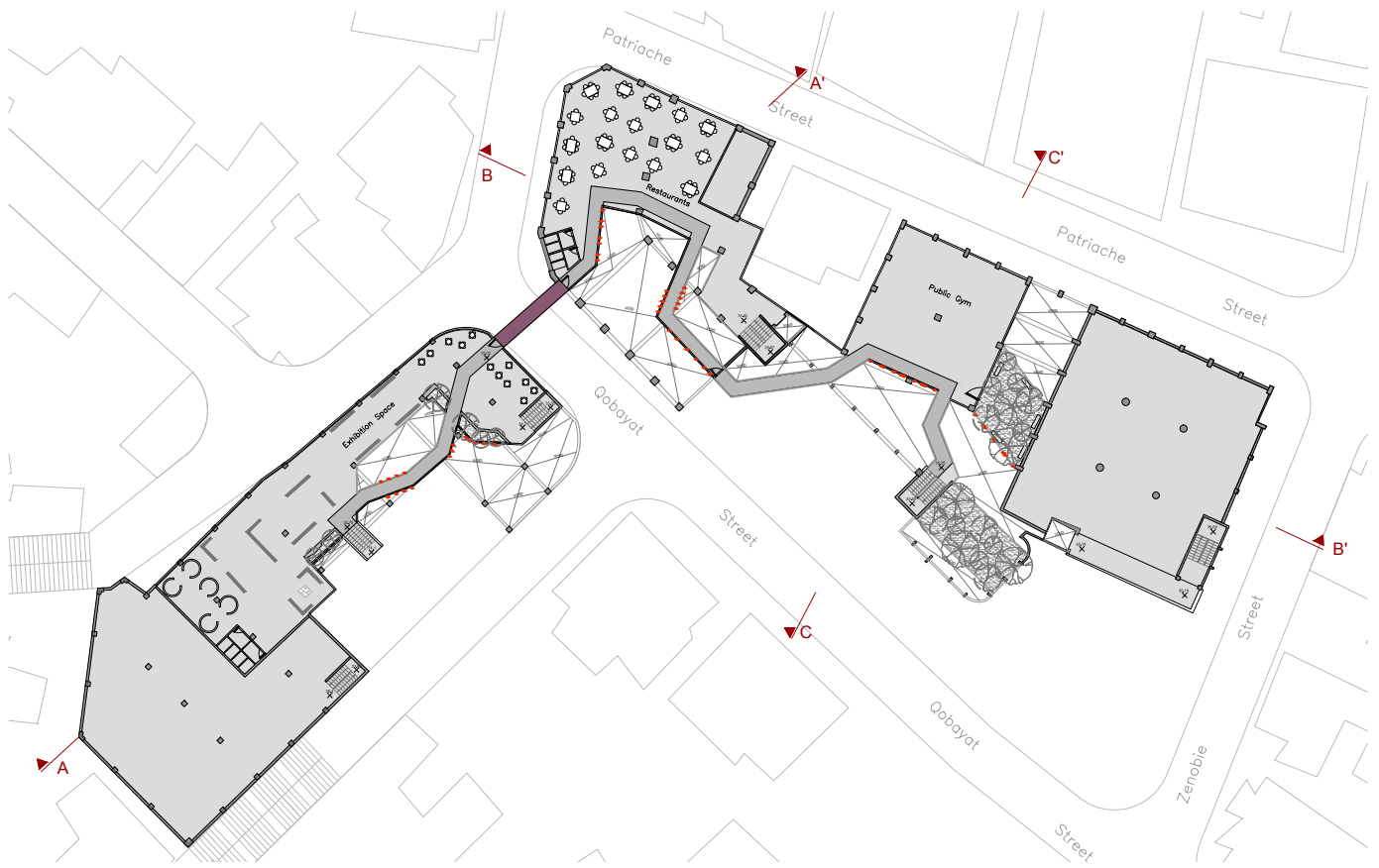


Building 1 | 1st Floor | Building 2 | 2nd Floor

Scale 1:800

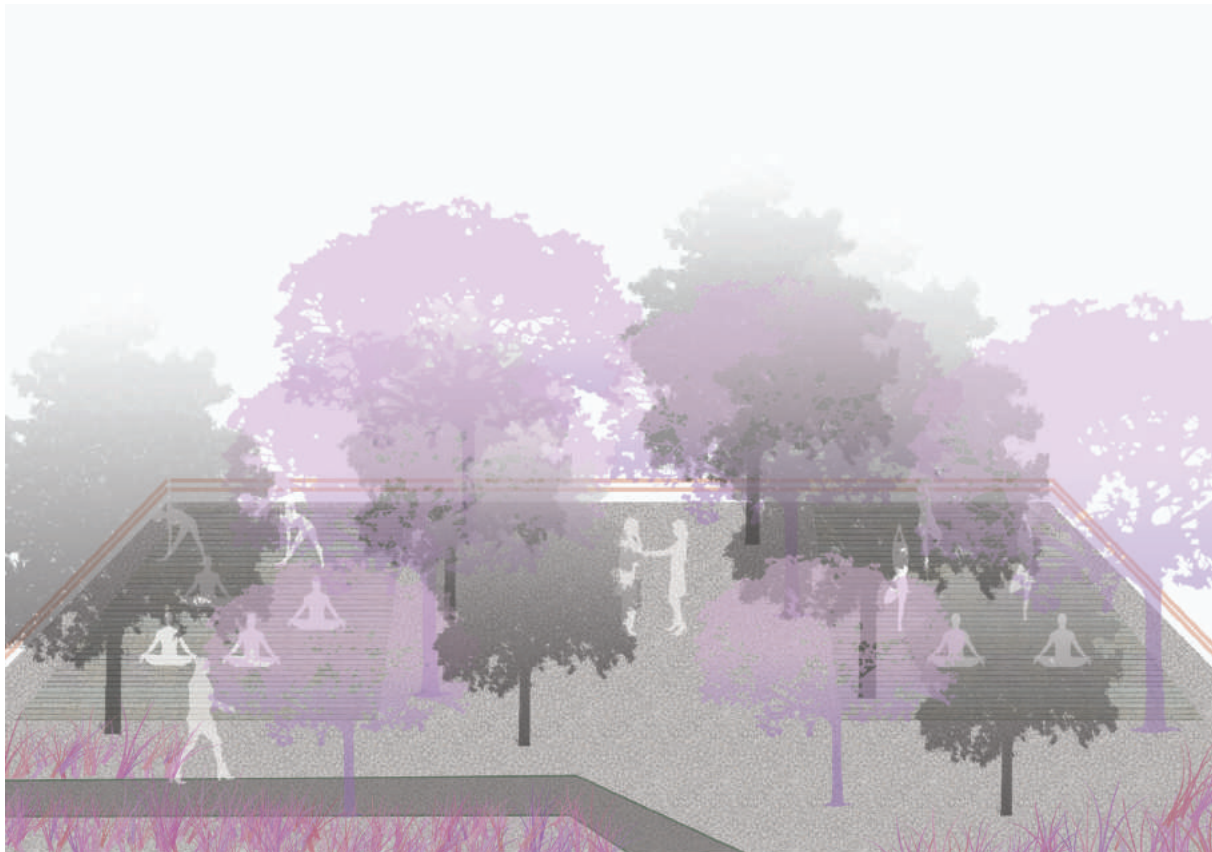


Building 2 | View of pubs and restaurants from Building 1



Building 1 | 2nd Floor | Building 2 | 3rd Floor

Scale 1:800



Building 2 | Meditation / Recreational Rooftop



Building 1 | 3rd Floor | Building 2 | 4th Floor

Scale 1:800



Buildings 1 & 2 | Rooftop

Scale 1:800

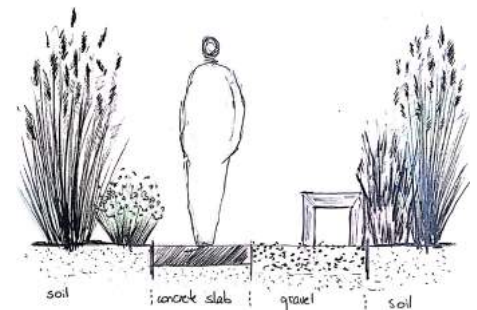
07 | Detailed Design

07.1 | Hardscape, Softscape and Material Plans



Building 1 | Basement 1 | Building 2 | Ground Floor

Scale 1:800



Planting Palette

Trees



Jacaranda mimosifolia
Jacaranda
Deciduous H: 8m - S: 8-10m



Conocarpus erectus
Button Mangrove
Evergreen H: 8m - S: 6m



Quercus suber
Cork Oak
Evergreen H: 15m - S: 8m



Melia azedarach
Bead Tree
Deciduous H: 8m - S: 6m

Ground Covers



Cotaderia selloana 'pulmia'
Pampas Grass
Deciduous H: 1.5m - S: 1.5m



Muhlenbergia capillaris
White Cloud
Evergreen H: 1.2m - S: 1m

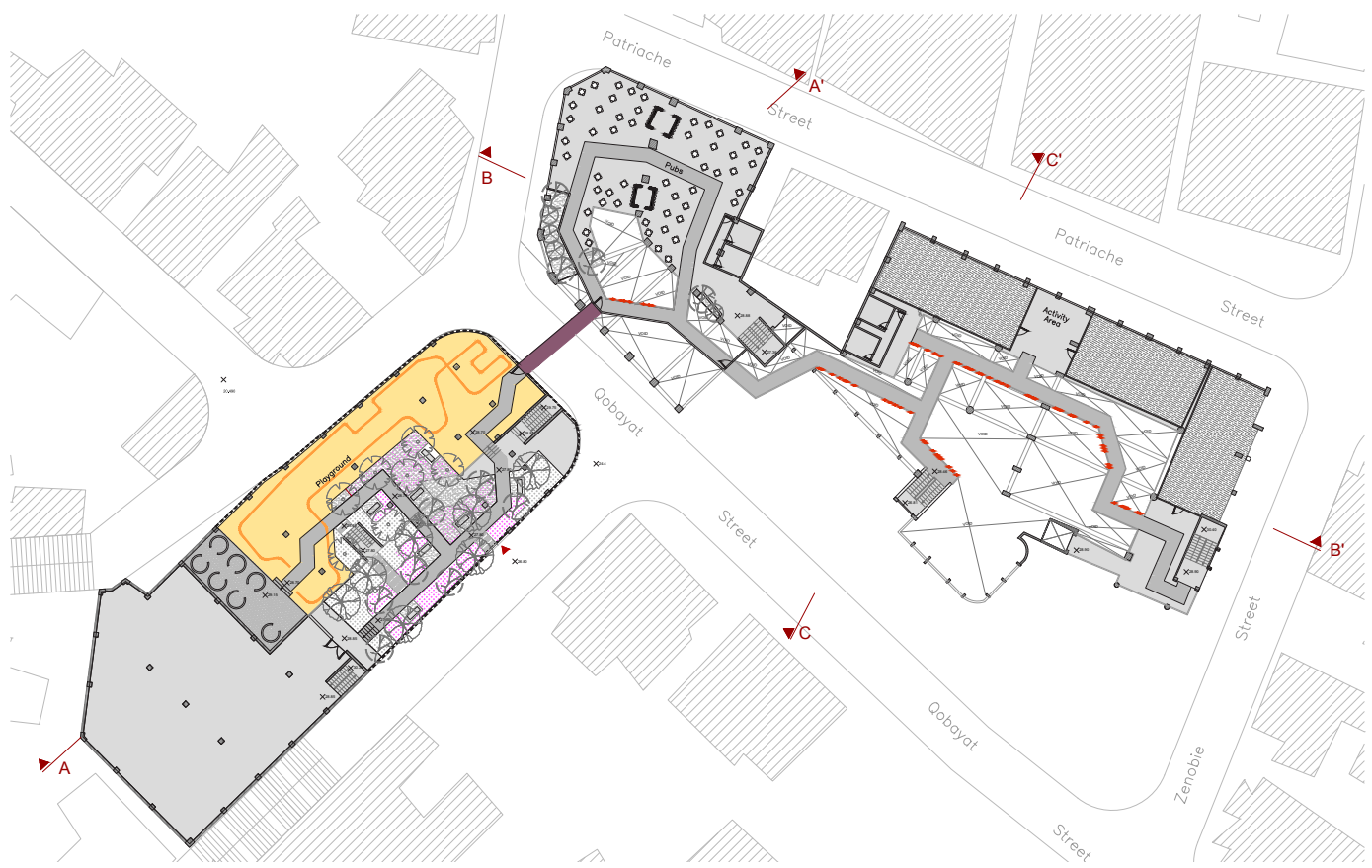


Cotaderia selloana rosea
Pampas Grass
Deciduous H: 1.5m - S: 1.5m



Muhlenbergia capillaris
Pink Cloud
Evergreen H: 1.2m - S: 1m

07.1 | Hardscape, Softscape and Material Plans



Building 1 | Ground Floor | Building 2 | 1st Floor

Scale 1:800

Materials and Furniture Palette



Stacked wooden pallets for seating



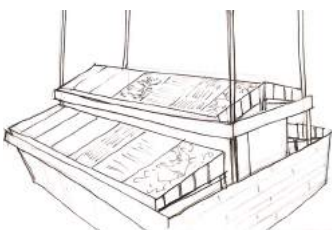
Bench and Gravel



Bar - Upcycled Pipes



Sail Shading Structure



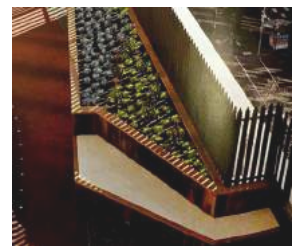
Market Kiosks



Gym Equipment

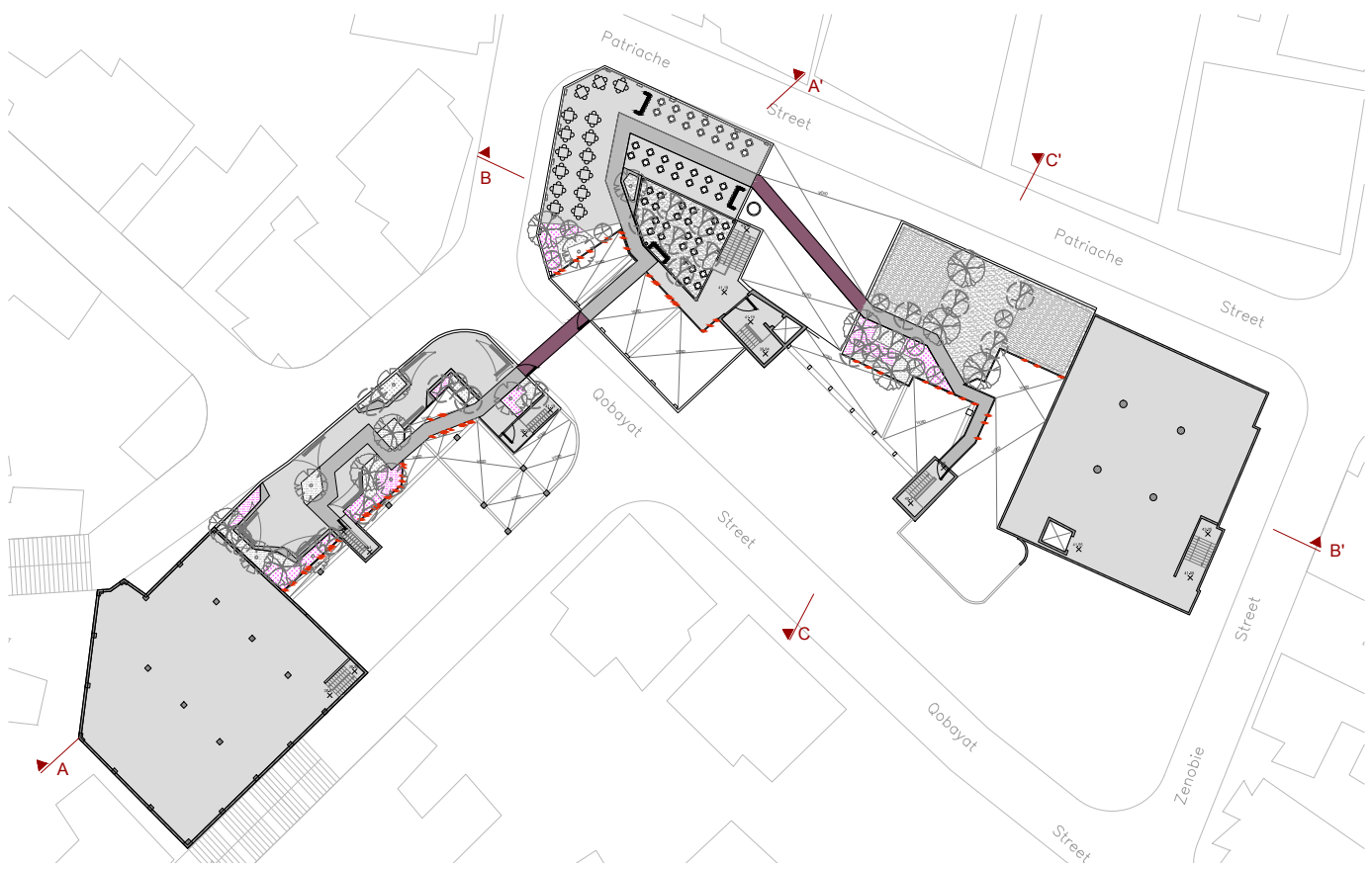


Bar Furniture - Upcycled Pallets



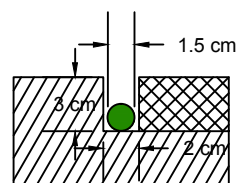
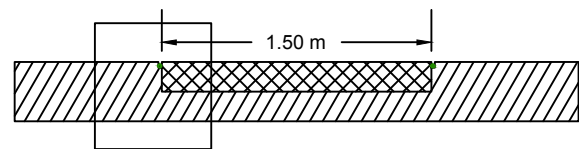
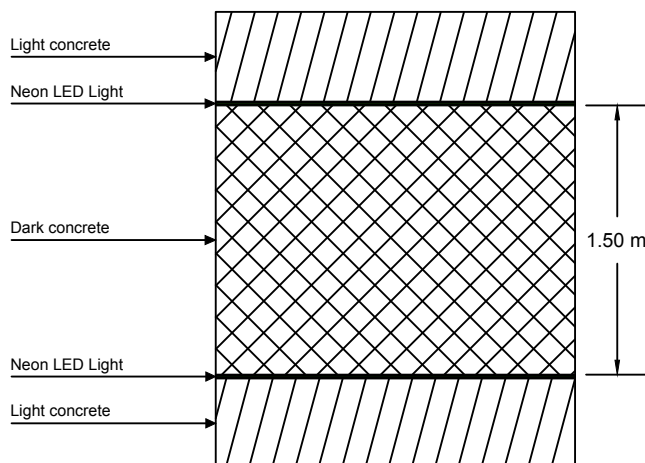
Bench and Planter

07.1 | Hardscape, Softscape and Material Plans



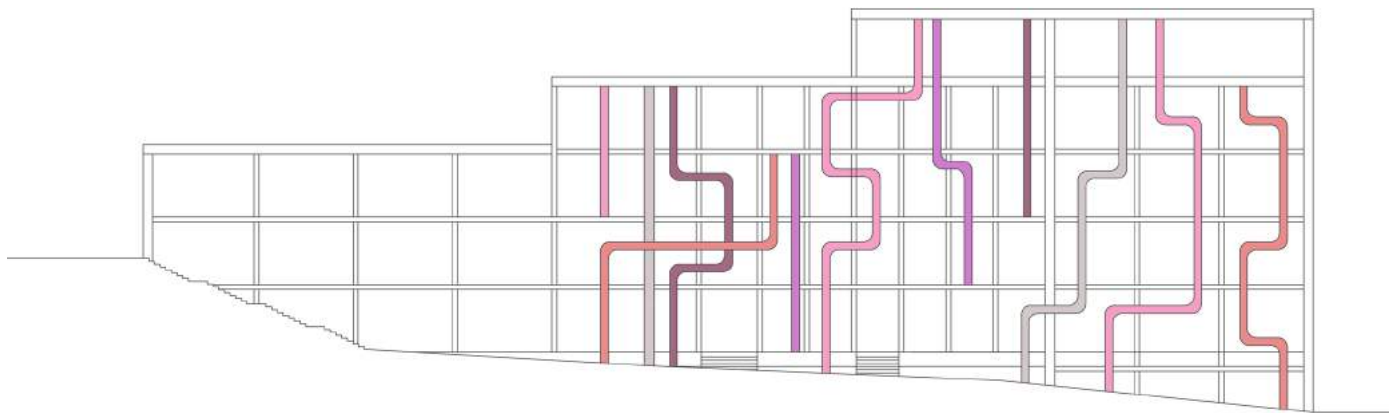
Buildings 1 & 2 | Rooftop

Scale 1:800



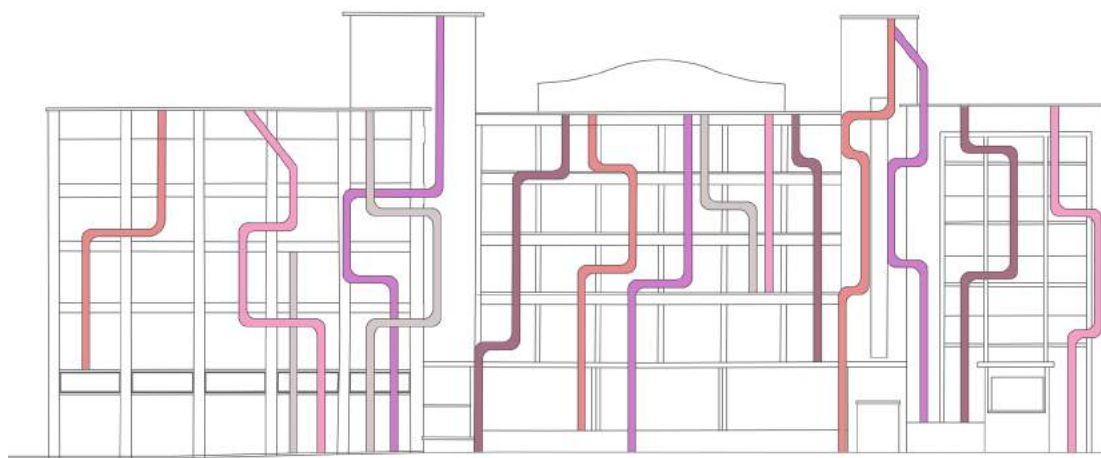
Detail of Main Path | Scale 1:100

07.2 | Facades



Facade | Building 1

Scale 1:200



Facade | Building 2

Scale 1:200



Jasminum polyanthum
Pink Jasmine
Evergreen
H: 6m - S: 4m



Antigonon leptopus
Coral Vine
Semi-Evergreen
H: 5-8m - S: 4m



Hardengerbia violacea
Purple Coral Pea
Evergreen



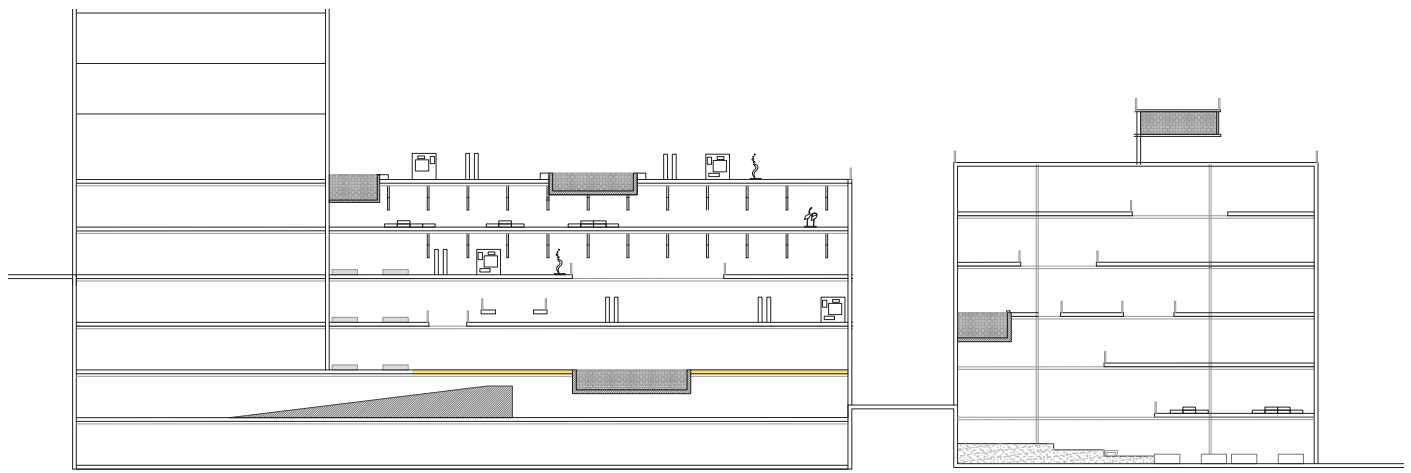
Bougainvillea glabra
Bougainvillier
Deciduous
H: 4m - S: 2m



Trachelospermum jasminoides
Star Jasmine
Evergreen
H: 8m - S: 5m

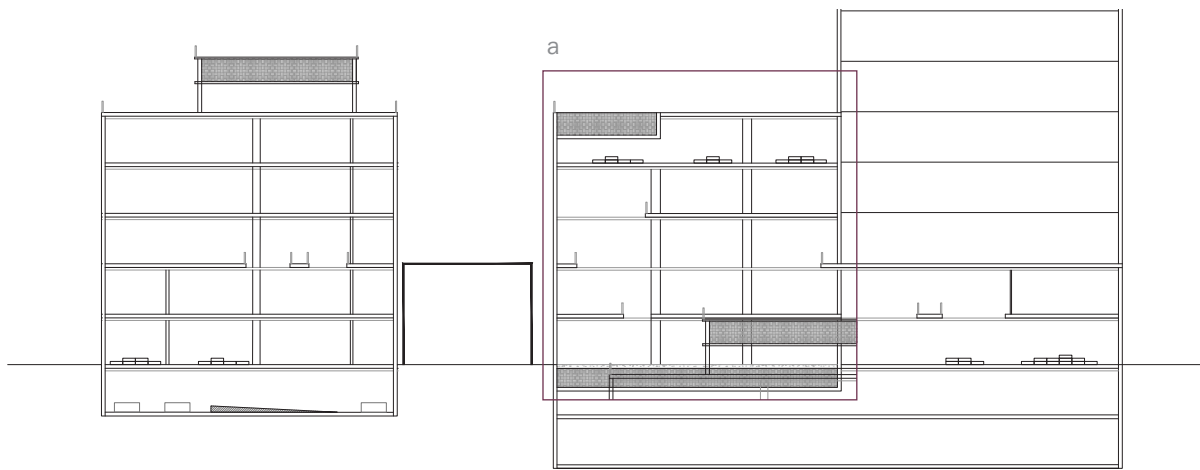


07.3 | Details



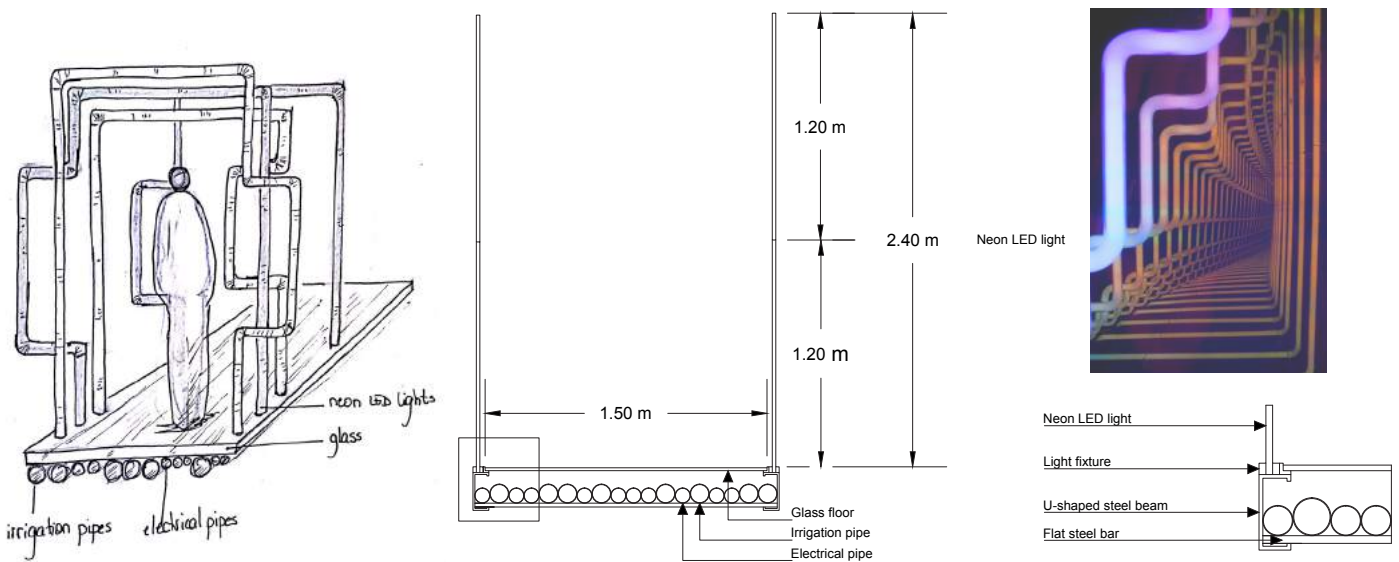
Section AA'

Scale 1:600



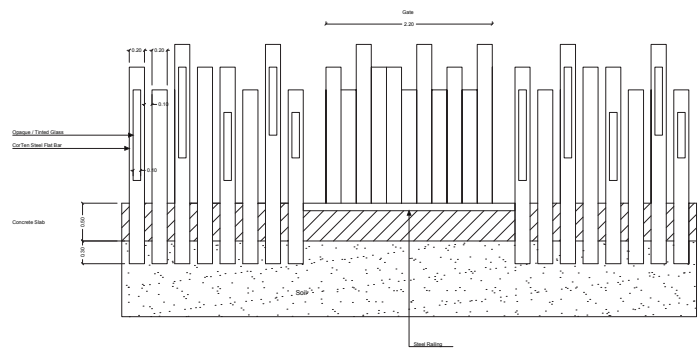
Section BB'

Scale 1:600

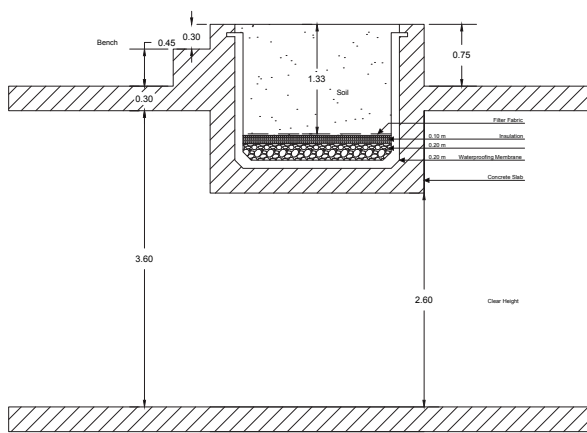


Detail of Bridge | Scale 1:40

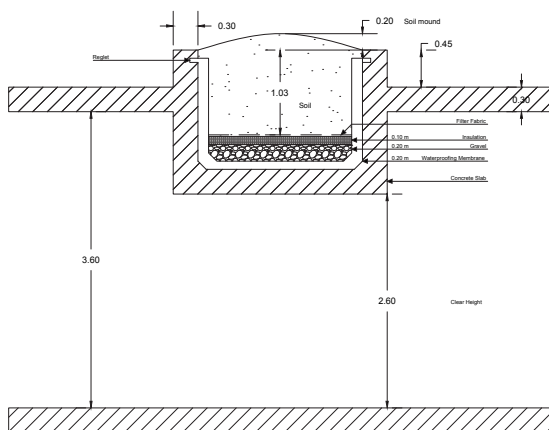
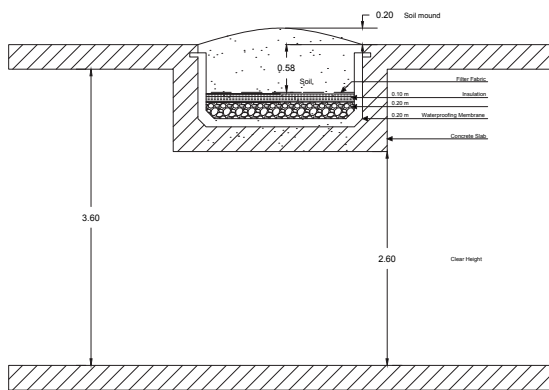
07.3 | Details



Detail of Fence and Gate | Scale 1:100



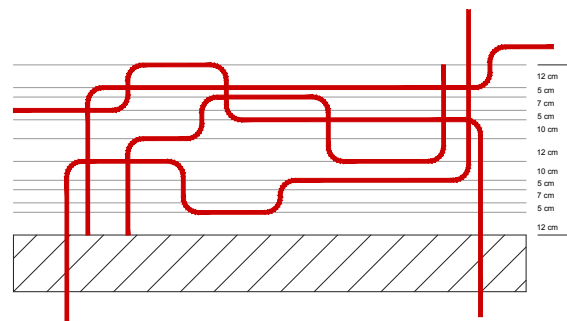
Detail of Half-Sunken Planter | Scale 1:200



Detail of Sunken Planters | Scale 1:200



Cor-Ten Steel | Fence



Detail of Handrail | Scale 1:40



Main Pipeline | Lighting and Handrail

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