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Re-envisioning Byblos Waterfront

Connecting City-Waterfront

MONA ZEIN

CONTENTS

INTRODUCTION

Existing Problems

Byblos was the ancient Phoenician port city of Gebal, called Byblos by the Greeks on the coast of the Mediterranean sea in what is, today, Lebanon. According to the historian Durant, "Byblos thought itself the oldest of all cities; the god El had founded it at the beginning of time, and to the end of its history it remained the religious capital of Phoenicia." Because papyrus was one of the principal articles in its trade, the Greeks took the name of the city as their word for book - biblos.

Later on, commercial and service oriented activities grew re-enforcing its position as a pole of attraction for the area. On the other hand, this growth translated into rapid urbanization.

While the city as a whole expanded and grew, the invasive development on the coast of Jbeil mainly for touristic purposes, pushed the inhabitants to move the inside of the city leaving the waterfront.

This caused a major problem that consists of the disconnection of the city of Byblos from its waterfront.

Design and Research Questions

What are the different typologies of the waterfront?

Is the waterfront public or private?

What are the different types of users?

What types of activities are currently happening in the city and on the waterfront?

How is the relationship between people and the waterfront?

What are the different reasons causing the disconnection between the city and the waterfront?

How could the connection between the city and the waterfront be established?

How accessible is the waterfront?

What role does visual accessibility play?

How will people be introduced to the coast?

METHODOLOGY

The very first step of this project was having an **overview** of the city, its context and history by looking at archival documents and doing online research as well as looking for photographical documentation.

Later on, the **literature review** and theoretical framework were conducted through both online and archival resources such as books and aricle. Then notions were derived from this literature review.

Then, **case studies** were researched and analysed by examining landscape architecture and urban design projects with similar themes. This phase consisted of online research mainly.

Next, site **inventory and analysis** of the site were conducted. Data was collected and mappings of existing conditions were produced, in addition to in depth analysis of the most important notions by research, observation, interviews, and photographical documentation.

Later on, **SWOT Analysis** was conducted by analysing and maping the Strengths, Weaknesses, Opportunities, and Threats of the site.

In the next phase, a clear **project statement** was defined.

Then, a large scale **Strategy** was visualized and mapped including the spacial relationships, the programm, and activities.

Finally, a **design** was developed in the intervention area.

NOTIONS

Theories about Ways to Help Connect

The lost connection between a community and its waterfront can be reclaimed through building a physical exchange between water and earth.

Landscapes and public spaces become driving forces to defining the waterfront not only as a working machine (having services and industrial activities), but as an actual space of urban identity, connected to the city.

Role of the History in Disconnecting

The disconnection between a waterfront and a city originates from the way the city developed through time. A short description of the city's historical and spatial development is needed in order to understand the connection between the city's structure and its history.

REVIEW

Case Studies

Background
Project Name: Harborfront
Location: Copenhagen, Denmark
Year: 2013

Aim
As the development along the harbor seperated the people from the water, this project aims to regenerate public life along the water by providing meaning to the place.

Strategy:
1. Interventions that create a dialogue with the history of the place.
2. The project creates a new type of public space with the city, characterized by its own identity.

Process:
Copenhagen's harborfront has been developed through a long process divided into several phases, focused on different areas.
They took into consideration accesses, relaxation areas, sitting areas, circulation, and vegetation.

Background
Project Name: OPORTO River Edge
Location: Portugal

Aim
Connecting the city of Oporto to its waterfront by connecting the river edge to its waterfront

Impact
Social Layer: Social interaction by creating:

> Seating areas
> Activities: Sport activities along the river: Walking, jogging, sport classes
> Pedestrian links between the city and the river

Background
Project Name: Toronto Central Waterfront
Location: Toronto

Aim
Build connections from Toronto's diverse neighbour-hoods towards the waterfront by creating:

> A continuous water's edge promenade, with a series of pedestrian bridges
> A series of floating elements that offer new public spaces in relation to the lake, and the cultures of the city

Background
Project Name: Belgrade Waterfront
Loction: Belgrade, Serbia

Aim
Connecting the post - industrial riverfront of Belgrade with the city through the:

> Relocation of transportation infrastructures lost during the war
> Connection of green spaces

Byblos or Jbeil is a coastal city located about 42 Km North of Beirut.

Byblos is considered one of the oldest cities in the world mainly due to the superposition of archeological levels on one spot spending 8000 years of history.

The site of Byblos was discovered in 1860 by Ernest Renan during a French survey. Since 1920, it was excavated by the Egyptologist Pierre Monet and then from 1924 by Maurice Dunand for over 60 years.

CONTEXT
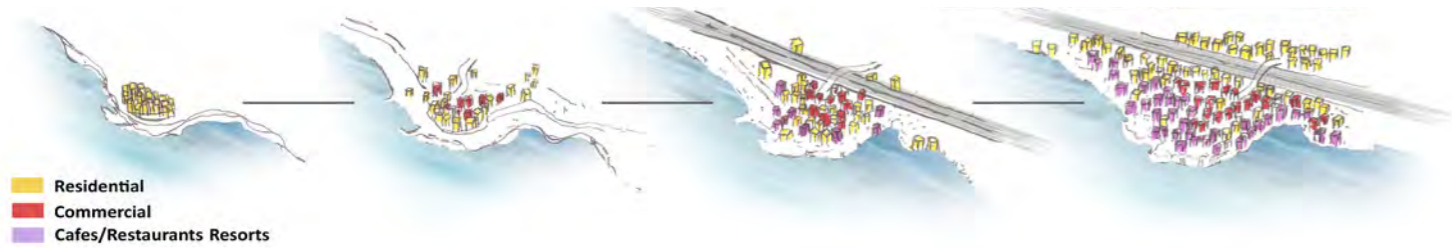
Site Inventory

Historical Overview

Back in the time, Byblos was mainly a small settlement area for fishermen. After that commercial activities started taking place mainly with Egypt, by importing handmade goods, the city expended and started having some commercial shops within it.

After that the highway was constructed to facilitate the circulation between the Capital and byblos from one hand and Byblos and the North from the other hand, a disconnection was created between the waterfront and the city. The city being a major attraction point due to its strategic location on the coast started attracting local and extern visitors. Thus services such as restaurants, cafes, hotels and resorts started taking over the city's waterfront. Therefor, residents, annoyed from the busy coastal city Byblos was becoming, they started moving away to the other side of the highway, reinforcing the disconnection between the city and the waterfront.

Physical Disconnection

The disconnection isn't only on the level of the city to the waterfront, but also within the waterfront itself.

The waterfront is fragmented due to the existing natural topography (cliffs) or the presence of man-made constructions (resorts).

Physical Accessibility

Also, concerning the physical accessibility, the waterfront is accessible at certain defined access points; the accessibility is limited in certain areas due to the presence of private resorts and restaurants; and it is not accessible at certain areas due to the presence of natural constraints (cliff, steep slopes) or due to the presence of man-made construction (retaining walls).

Visual Accessibility

As for the visual accessibility, certain areas of the waterfront are not visually accessible due to the presence of high invasive vegatation or due to the presence of blocking residential buildings or restaurants.

Concerning the visual accessibility from the city to the waterfront, there are few views of the waterfront at very specific points of the city.
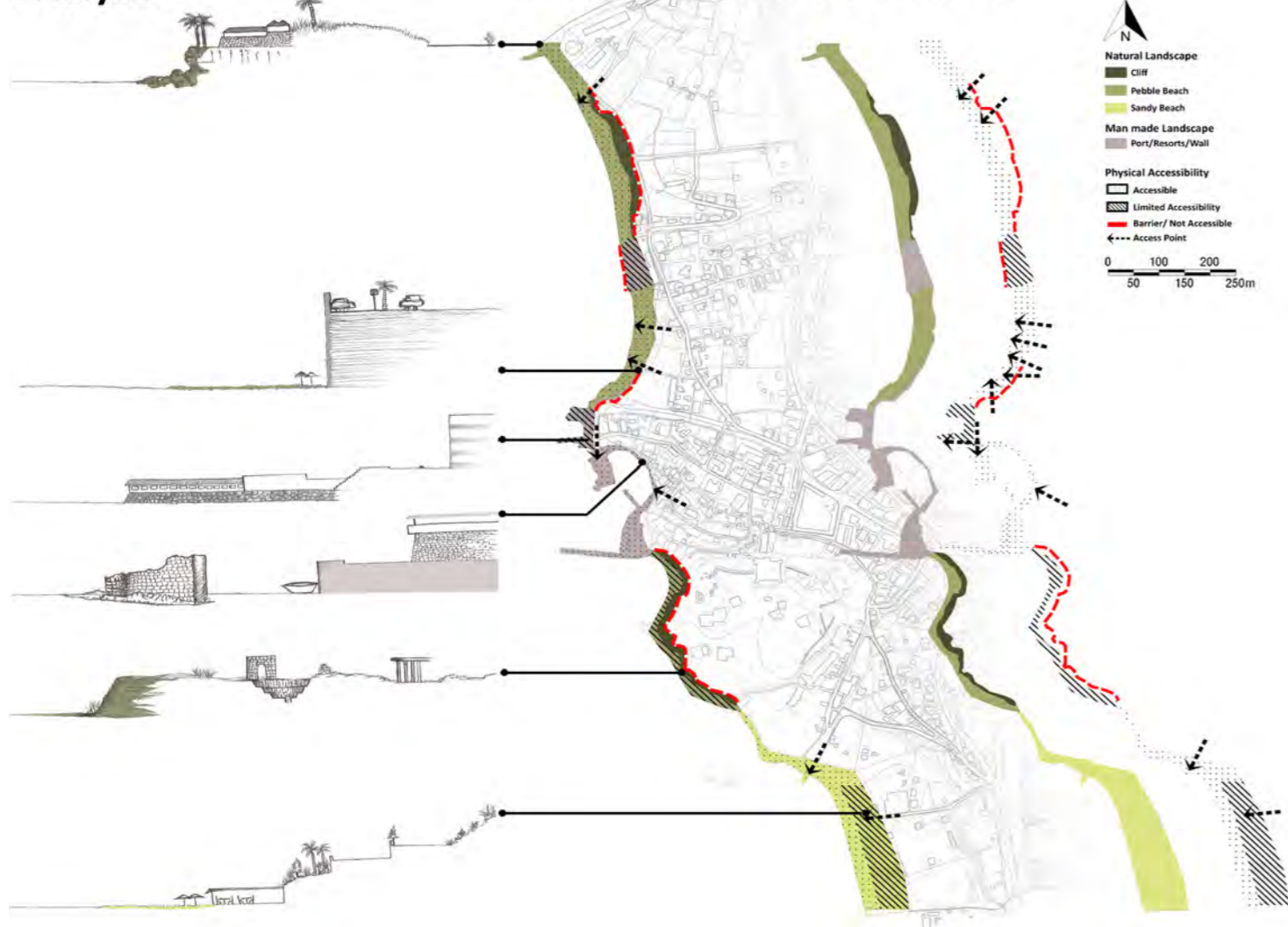
Social Layer

The human concentration is mainly important at the landmarks or attraction points of the city including the the public beaches, the old port, the old souks, and the touristic services such as resorts and restaurants. This concentration varies between the day and the night, depending on the available activities.

CONTEXT
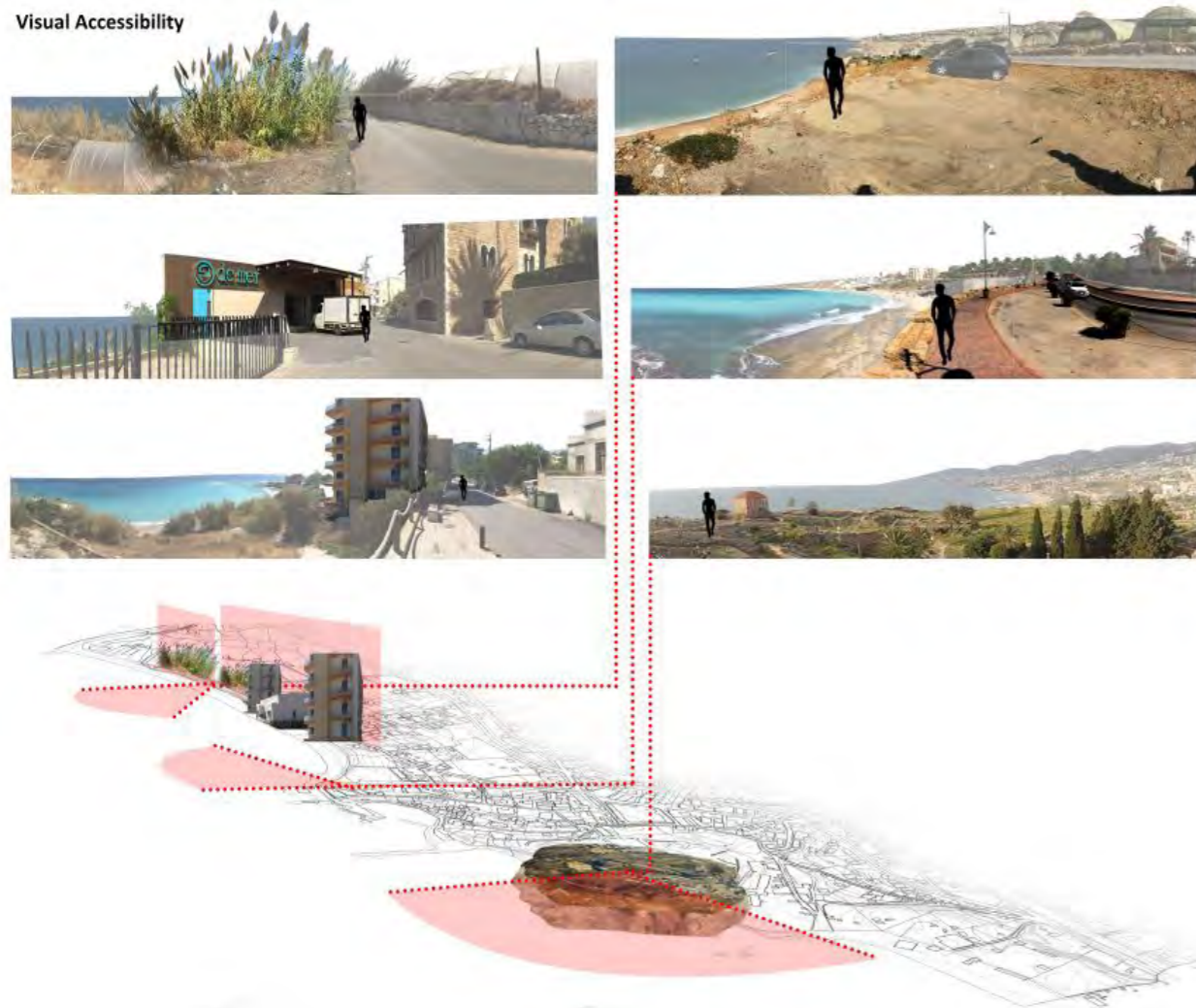
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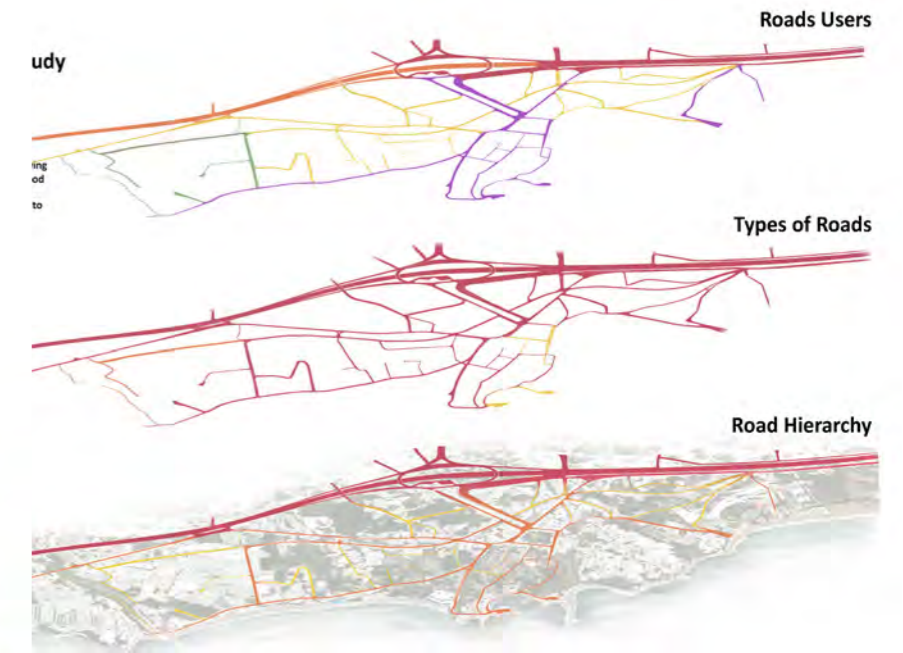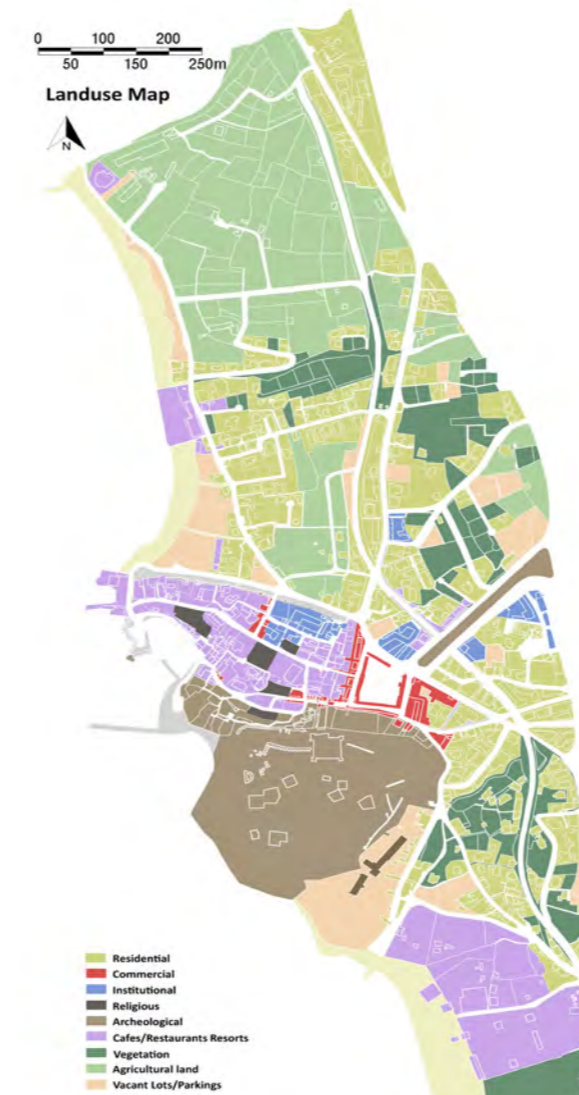
Analysis
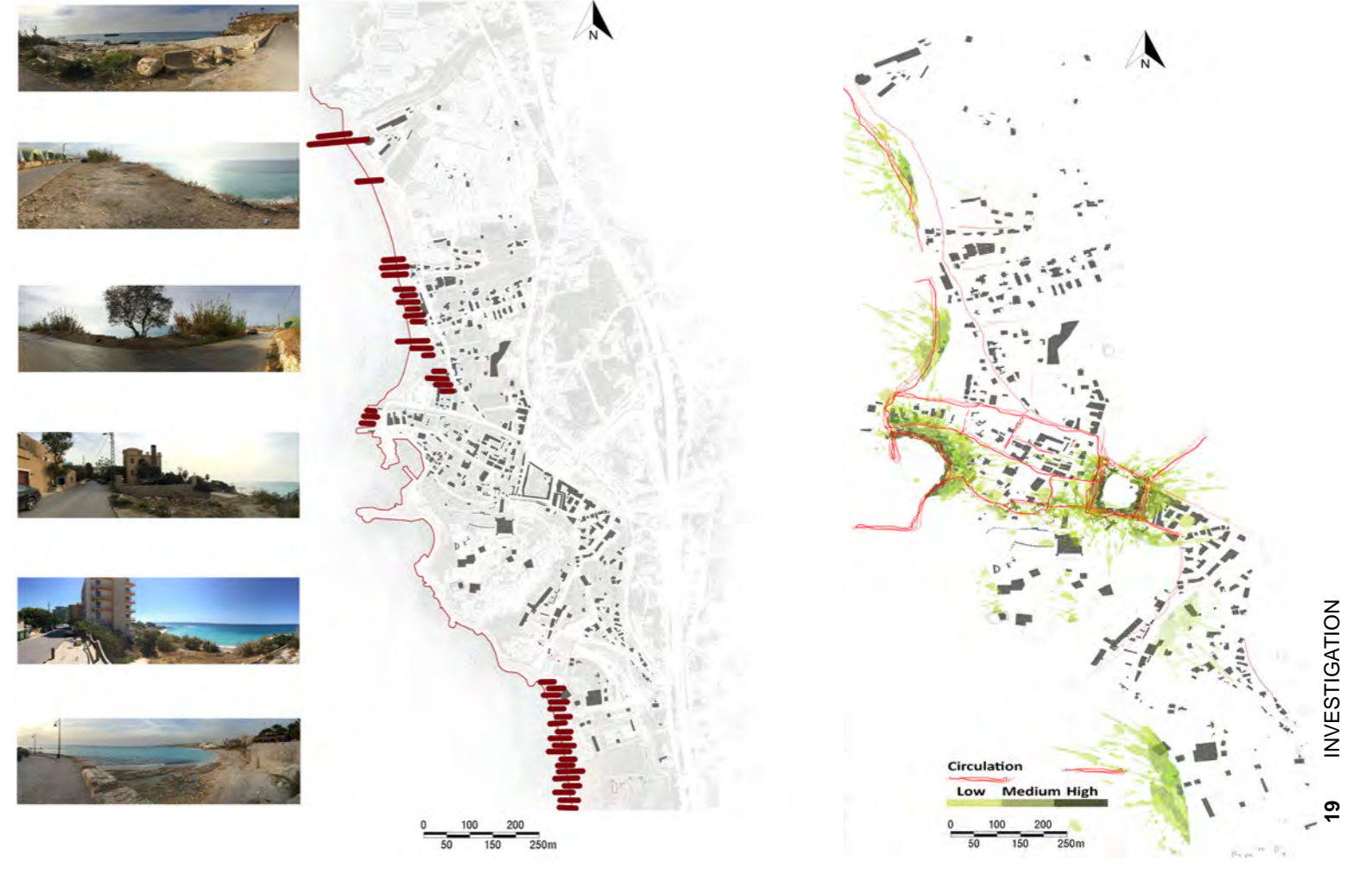
Landscape Typology and Physical Accessibility

Natural Landscape
- Cliff
- Pebble Beach
- Sandy Beach

Man made Landscape
- Port/Resorts/Wall

Physical Accessibility
- Accessible
- Limited Accessibility
- Barrier/ Not Accessible
- Access Point

0 50 100 150 200 250m

Access Points to the Coast

0 50 100 150 200 250m

Users / Density

Residents

Tourists

Farmers

0 50 100 150 200 250m

Visual Accessibility

Visual Accessibility

0 50 100 150 200 250m

Circulation
Low Medium High

0 50 100 150 200 250m

Back in the history, the residents of the city of Byblos used to have a strong relationship to their coast, where the city mainly consisted of a residential habitat for fishermen.

Due to the development of the city of Byblos through-out time, residents started loosing this relationship they had to the coast.
This was mainly caused by the city development and change in landuse.
Residents were pushed to the inside of the city by the busy life that started taking place and ended up settling on the coast.

The aim of this project is to reconnect the city of Byblos to its waterfront, and regain this direct interaction people had with the sea.

PROPOSAL

SWOT Analysis

Strengths:

• Defined access points to the waterfront through gates, stairs, and slopes
• Easy urban mobility
      Presence of pedestrian friendly areas (Roman road, old souks, port area)
      Generally short walkable distances from the city to the waterfront
• Topography providing scenic views in some areas, thus providing visual connections to the waterfront
• Existing scattered green patches between the city and the waterfront
• Large agricultural lands

Opportunities:

• Existing pedestrian friendly areas can help having more of them by extending them and therefor connecting the city to the waterfront
• Visual connections can act as attraction points that will emphasize the connection between the city and the waterfront
• Existing green patches, linked together, can help connecting the city to the waterfront
• Agricultural lands can help attract people by providing markets and regain the cultural agricultural practices that were considered to be the 1st activities Jbeil was known for back in the history

Weaknesses:

• Marine roads acting as disconnecting agents
• Inaccessibility to certain areas on the waterfront due to natural obstacles (cliffs) and man-made constructions (resorts, retaining walls)
• Buildings and restaurants located on the waterfront create visual disconnection to the waterfront
• Lack of green open spaces
• Lack of parking spots

Threats:

• Rapid privatization of the coast due to the rapid implementation of resorts
• Inaccessible areas on the waterfront have a major role in disconnecting, and limit many social practices, thus creating lack of social interaction on the long term.
• Limited number of open spaces and parking spots forces people to gather in very specific areas which will lead to demographic issues especially that there's a considerable number of users

0   100   200
  50   150   250m

Strategy & Program

The design strategy consists of different areas of intervention along the coast. These aras are extentions of alleys that consist of fingers linking the city to the waterfront. These alleys are considered to be strategic ones that help bringing people from the city to the wateront. The first one passes through agricultural lands. One of its extremities falls in the residential area while the other falls on a high cliff overlooking the see. The secnd one passes through a highly residential are. What is interesting about this alley is that within it, one doesn't feel like he is in a coastal area due to the density of buildings blocking the view, but once he reaches the end, the view to the sea suddenly opens up. So the idea here is to extend this surprise effect towards the waterfront.

Since it is characterized by its panoramic view and by being one of the highest points of the city, the intervention area in front of the agricultural area will consist of a walkway going from the highest point of the cliff to the lowest point reaching the shoreline,

On the other hand, the intervention area in front of the residential area will consist of a park for residents that will be an extention of the existing open spaces between the buildings.

These two intervention areas will be linked through a walking trail that will allow users to access and closely experience the different aspects of the shoreline.

Since the city of Byblos is characterised by short walking distances, and due to the lack of parking spots, a bike lane that passes through both, the main residential nodes and the intervention areas will be implemented. It will help and facilitate the movement of people from the city to the waterfront, more specifically from where they live to the intervention areas on the coast. The bike lane will not only have a functional aspect by bringing people to the coast, but will also provide users with different experiences especially that it will pass through the main landmarks of the city. These experiences coul be agricultural lands, archeological sites, historic old port, old cultural souks..

Legend:
- Intervention Sites
- Bike Lane
- Walking Trail
- Vegetation
- Agricultural Lands
- Archaelogical Sites

0   50   100   150   200   250m
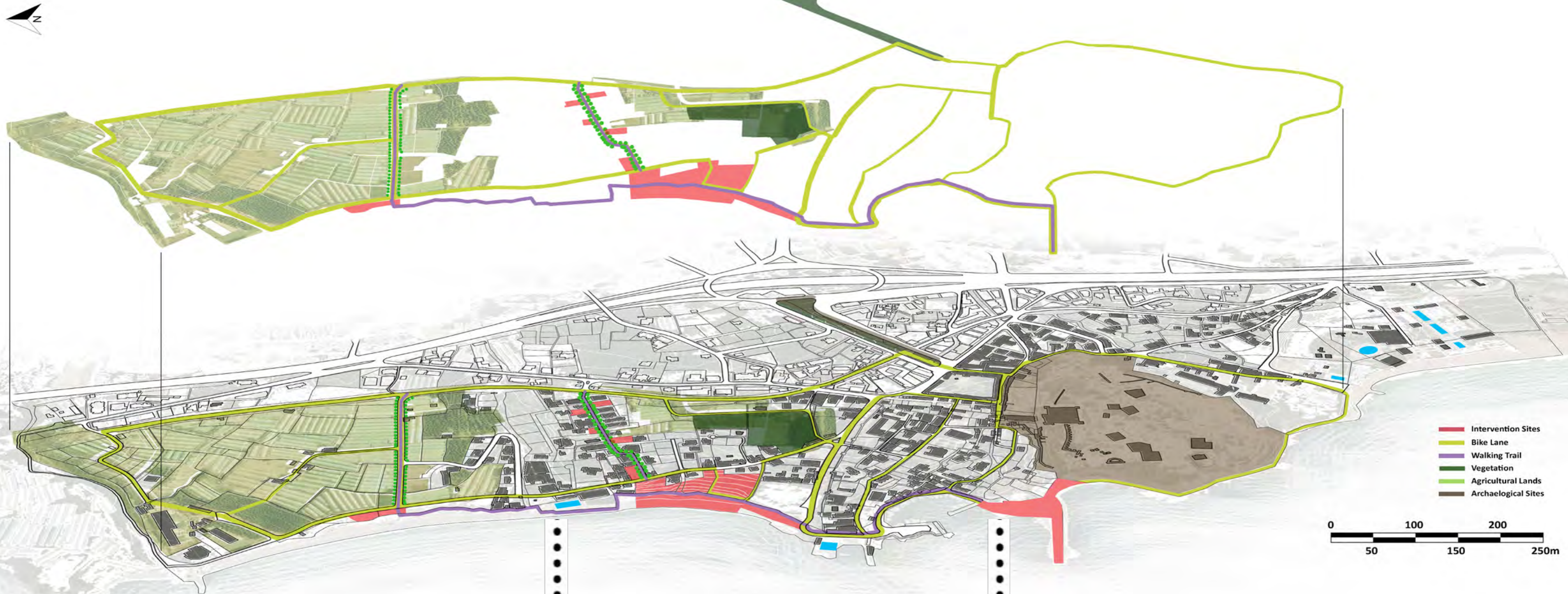
Agricultural Area   **Residential Area**   **Archeological / Touristic Area**

Geomorphological Behavior

Site 1:
Cliff Erosion Process

Cliff / Mother Rock

Weathered Rocks

Further Weathered Rocks

Gravel Deposition
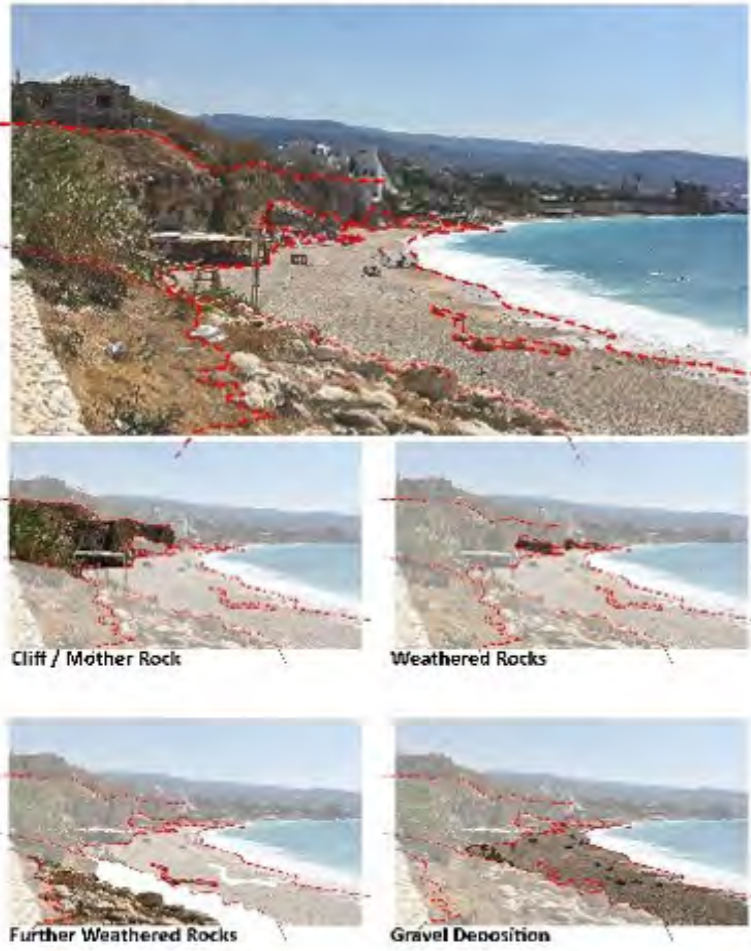
Site 2:
Water Runoff

Cliff Formation
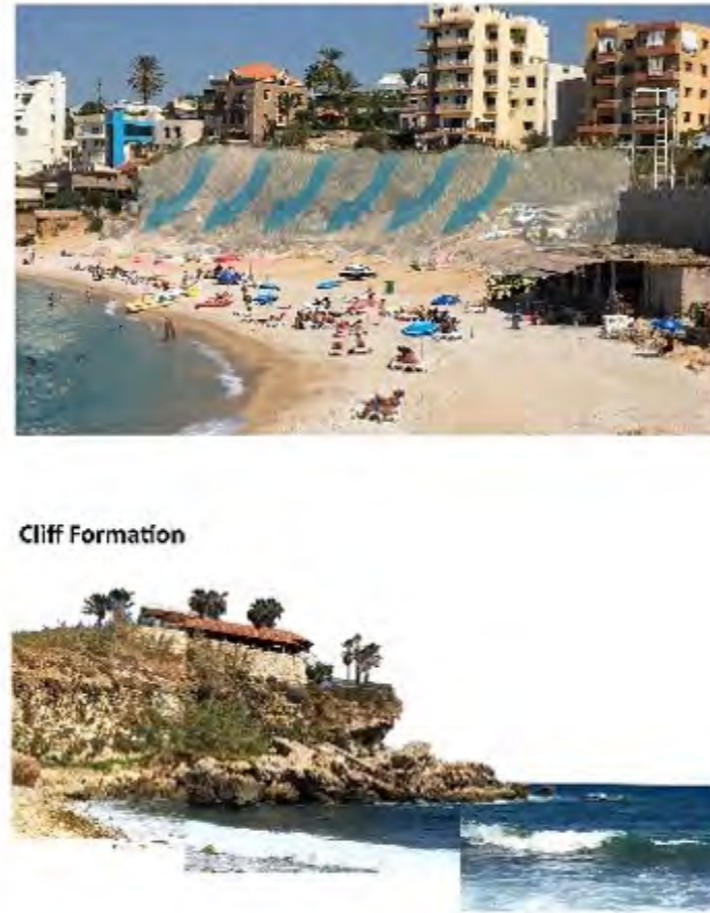
Site 3:
Archeology Erosion

The archaeological *tell* & its eroded western section on Chamiyeh Bay

20m elevation

Erosion caused by strong waves

Strategy

Intervention Sites
Bike Lane
Walking Trail
Vegetation
Agricultural Lands
Archaeological Sites

0   50   100   150   200   250m

Stabilization

3 2 1

Filtration

Permeation

Site 1:
The Stabilizing Cliff

- Overlooking Platform
- Gathering Areas
- Edible plants
- Wire Grid Stbilization

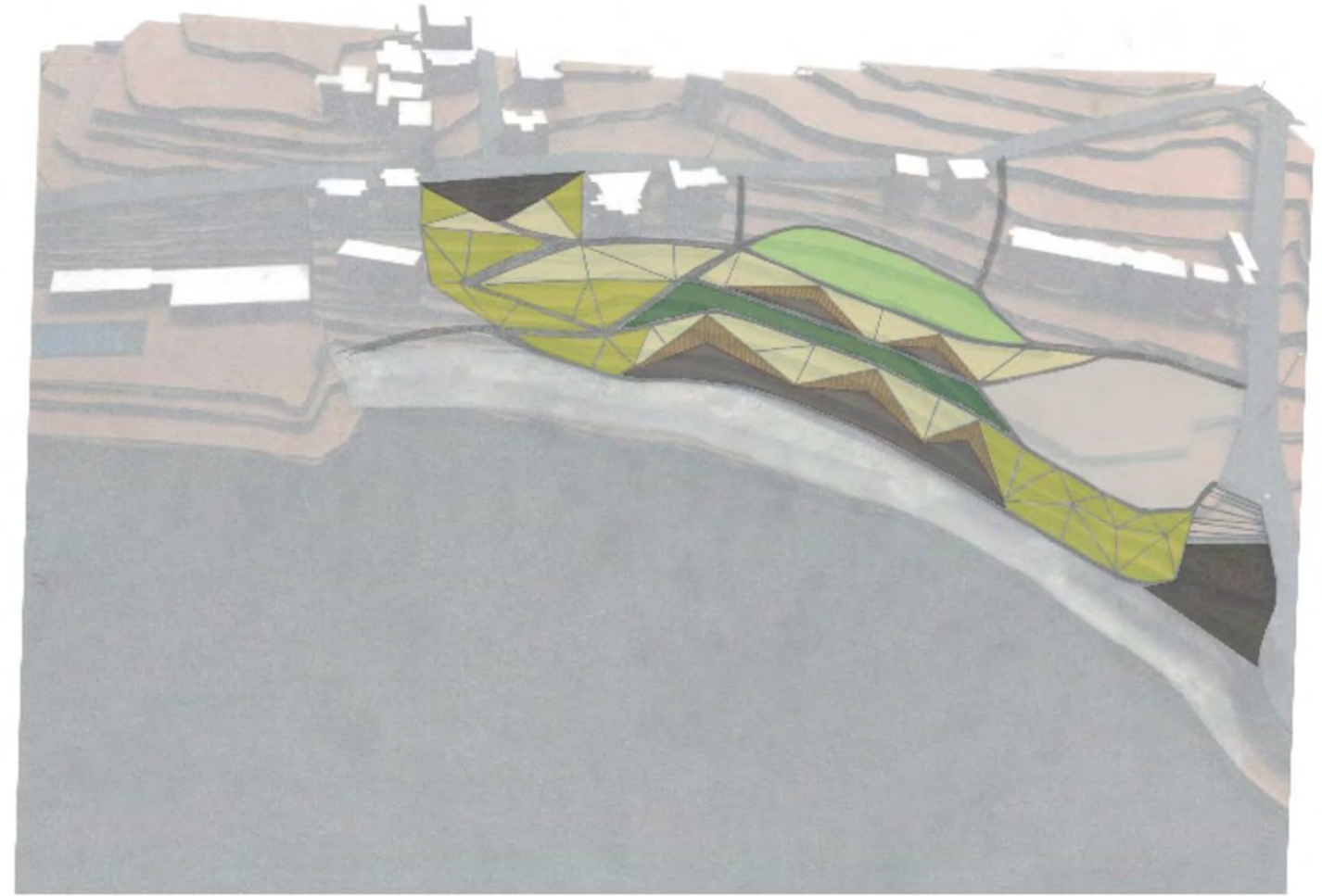# Site 2:
The Filtration Park

- Erosion Control Vegetation
- Water Filtration Vegetation
- Outdoor Sports Area
- Rain Garden
- Gathering Areas
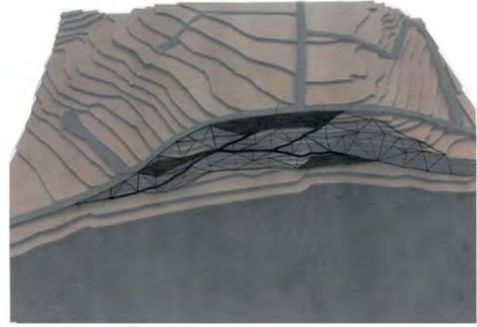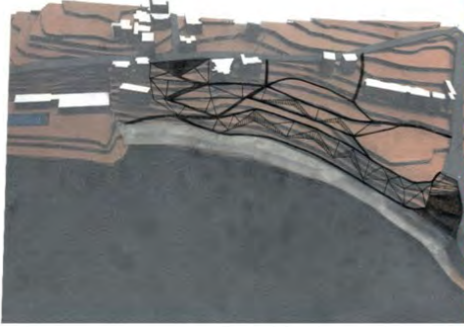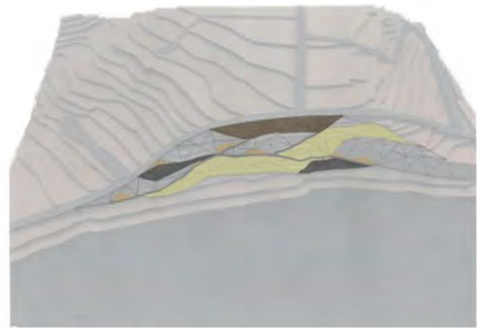- Walls Providing Enclosure
- Parking

Site 3:
The Permeated Edge

- Main Walkway
- Seating Area Facing the Pebble Beach
- Seating Area Facing the Archeological Site on the Top of the Cliff
- Seating Area Facing Archelogy in front of the Jetty

Site 1:

The Stabilizing Cliff

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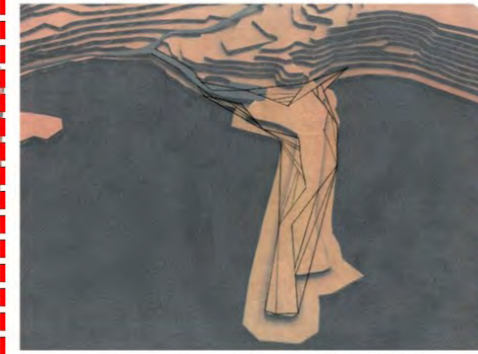- Walls Providing Enclosure
- Parking

Site 3:

The Permeated Edge
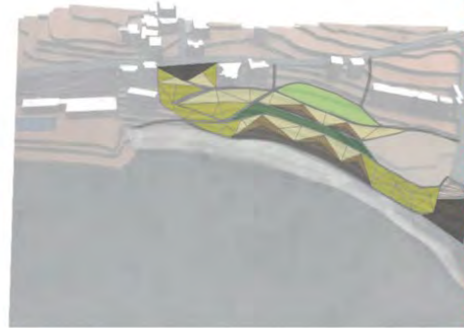

- Main Walkway
- Seating Area Facing the Pebble Beach
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Site 1:

- **Overlooking Platform**
- **Gathering Areas**
- **Edible plants**
- **Wire Grid Stbilization**

Site 1:
The Stabilizing Cliff
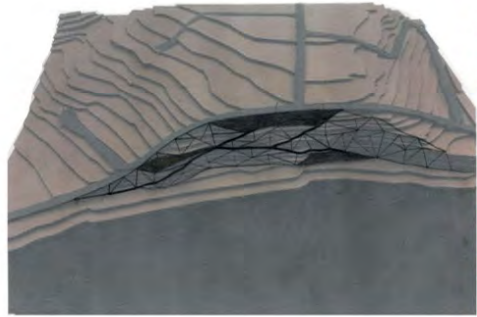
Site 2:
The Filtration Park
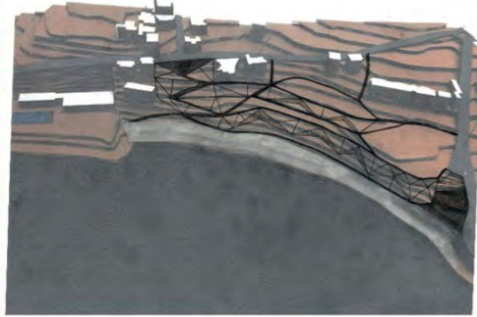
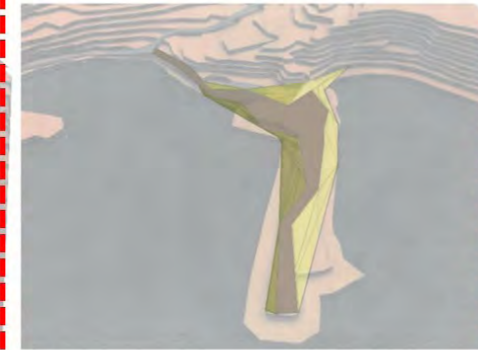## Site 3:
The Permeated Edge
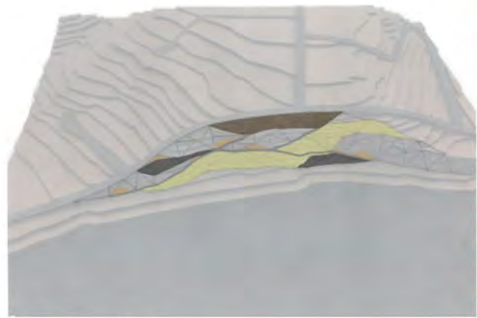
Site 1 legend:
- Overlooking Platform
- Gathering Areas
- Edible plants
- Wire Grid Stbilization

Site 2 legend:
- Erosion Control Vegetation
- Water Filtration Vegetation
- Outdoor Sports Area
- Rain Garden
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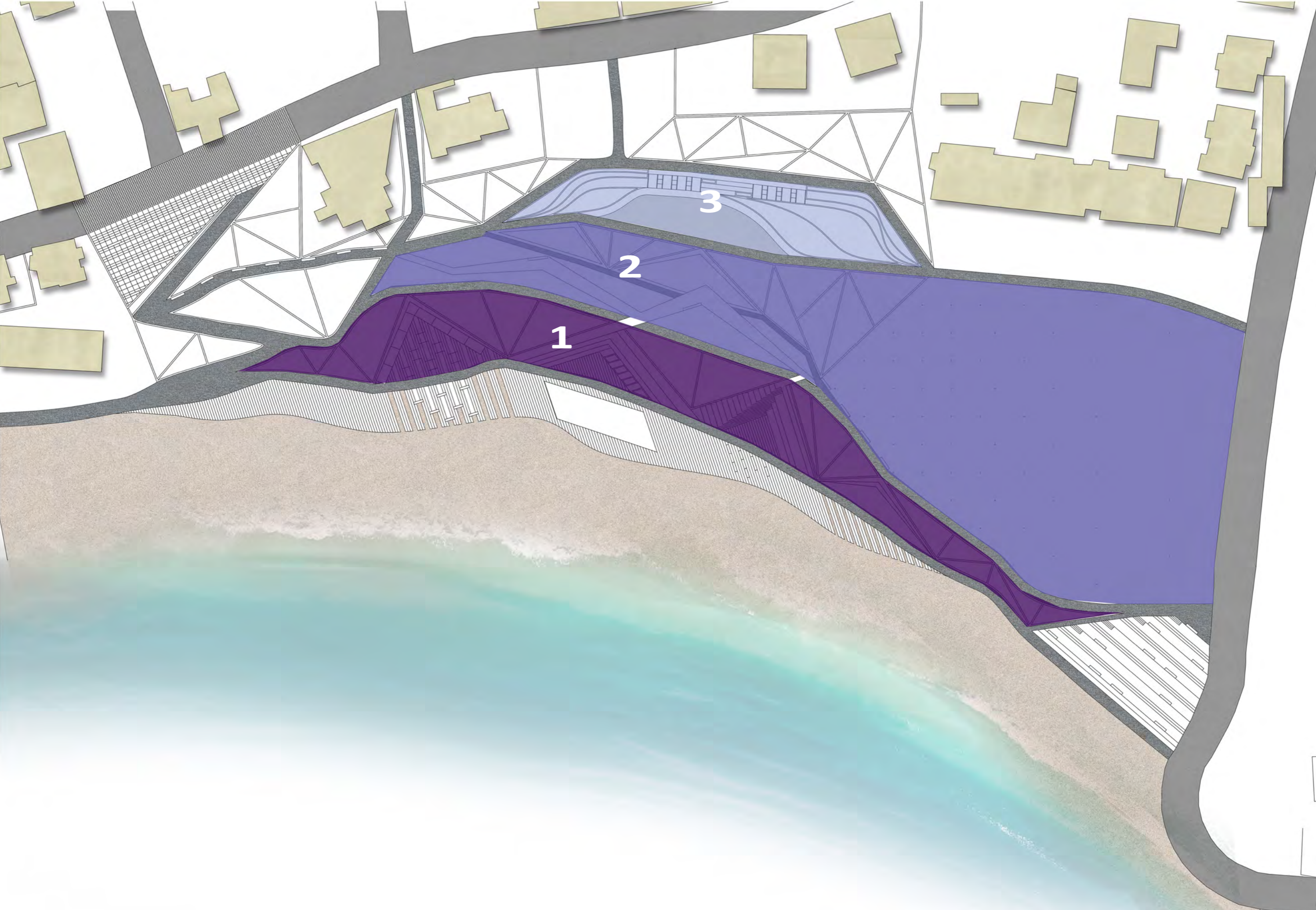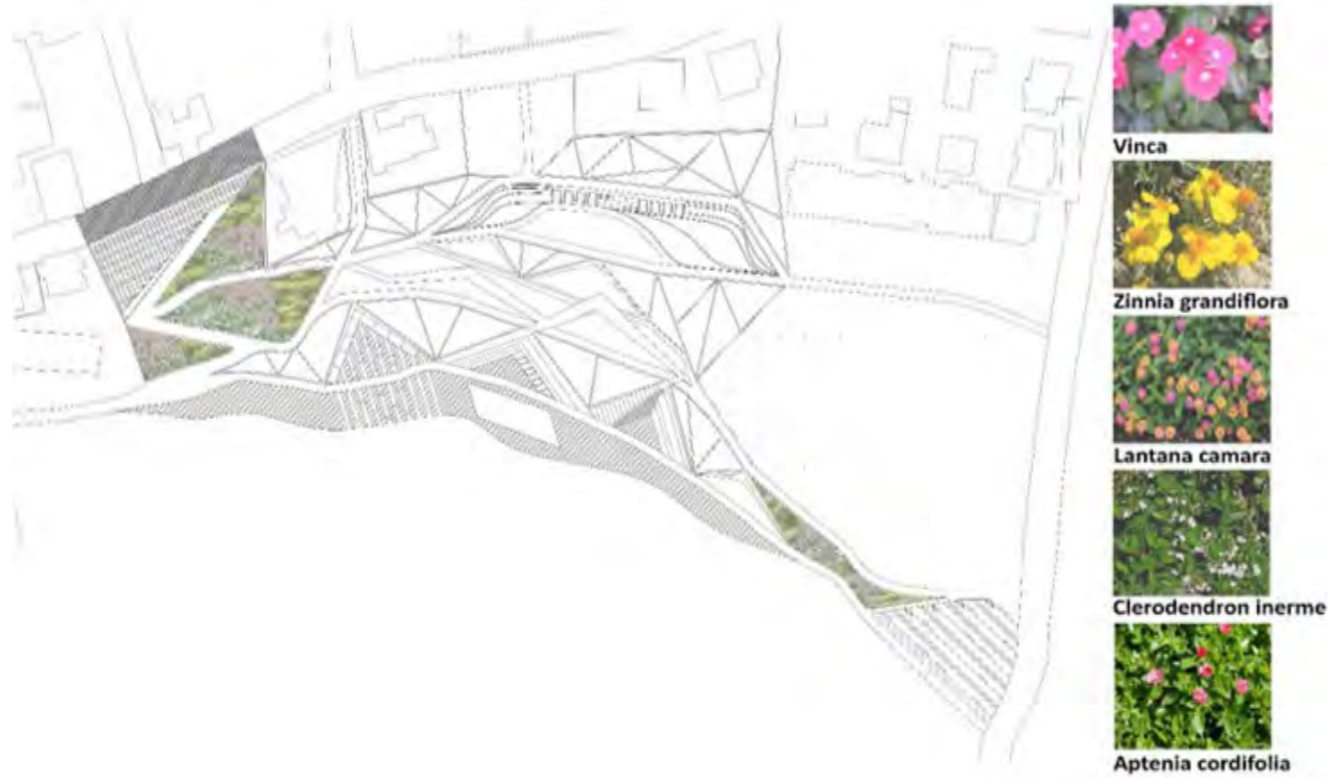- Walls Providing Enclosure
- Parking
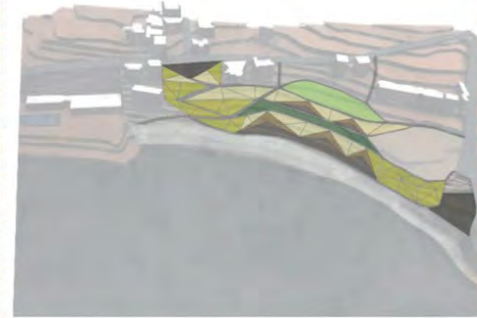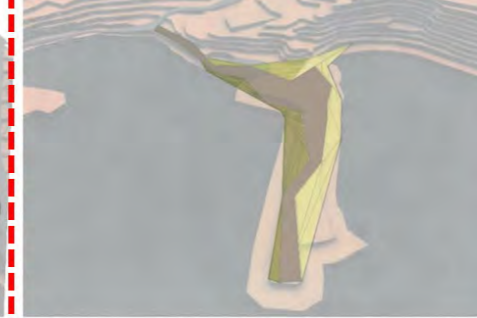
Site 3 legend:
- Main Walkway
- Seating Area Facing the Pebble Beach
- Seating Area Facing the Archeological Site on the Top of the Cliff
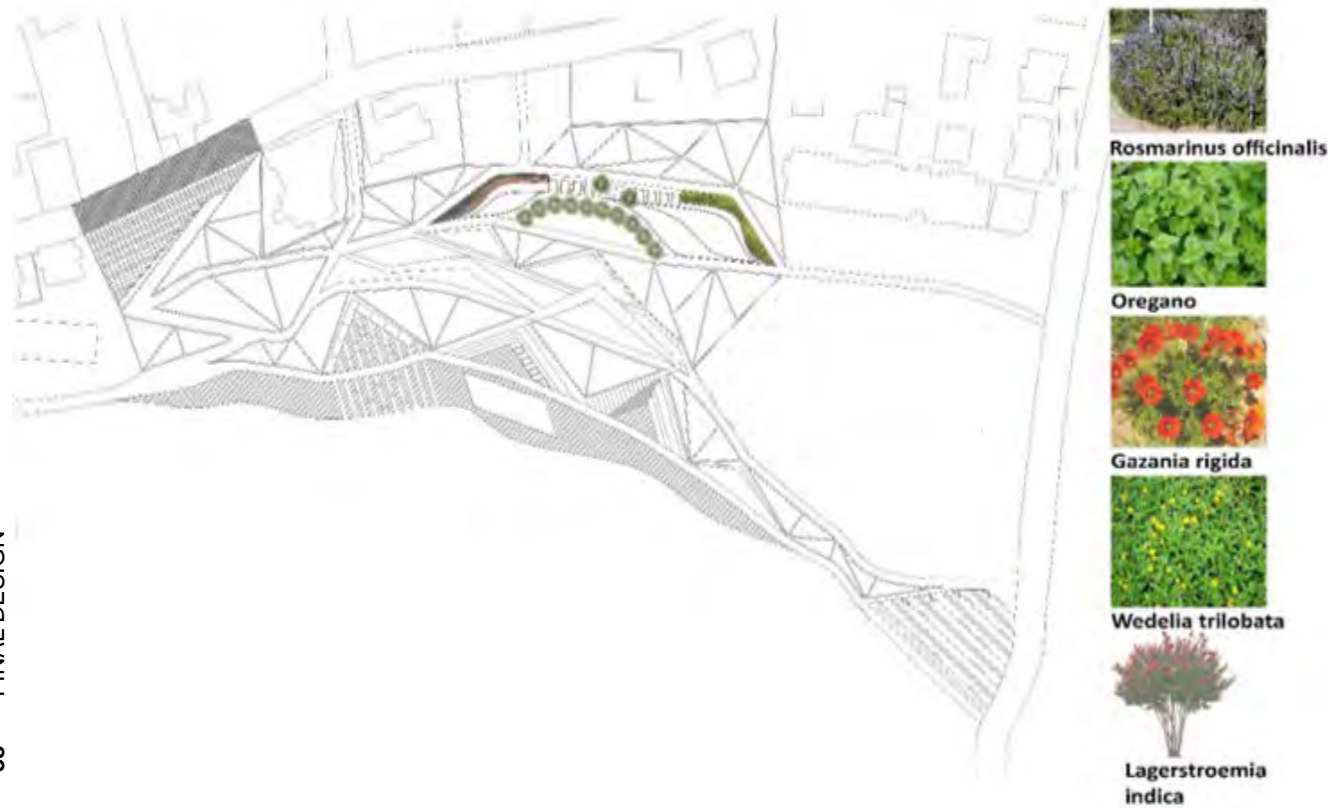- Seating Area Facing Archeology in front of the Jetty

Site 2:

- Erosion Control Vegetation
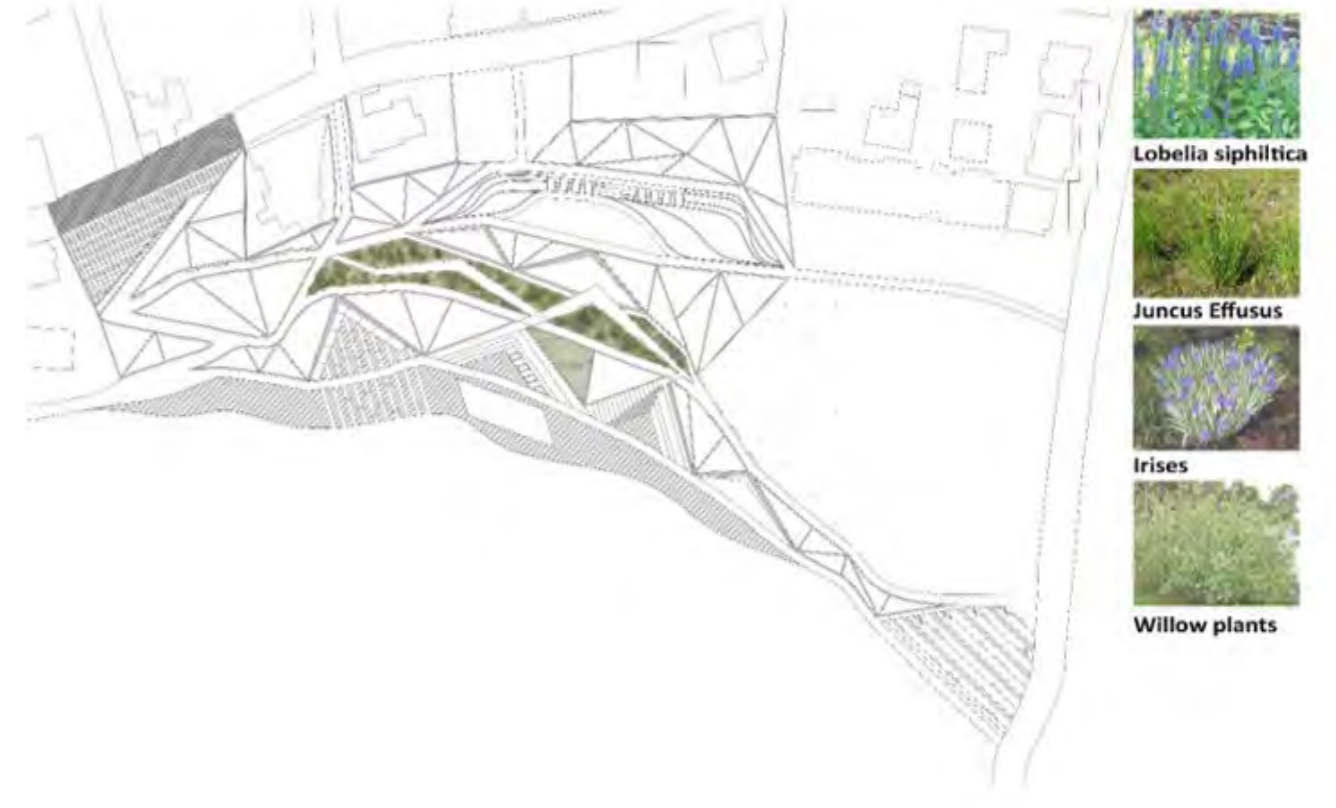- Water Filtration Vegetation
- Outdoor Sports Area
- Rain Garden
- Gathering Areas
- Walls Providing Enclosure
- Parking

Site 1:

The Stabilizing Cliff

Overlooking Platform
Gathering Areas
Edible plants
Wire Grid Stbilization

Site 2:

The Filtration Park

Erosion Control Vegetation
Water Filtration Vegetation
Outdoor Sports Area
Rain Garden
Gathering Areas
Walls Providing Enclosure
Parking

Site 3:

The Permeated Edge

Main Walkway
Seating Area Facing the Pebble Beach
Seating Area Facing the Archeological Site on the Top of the Cliff
Seating Area Facing Archelogy in front of the Jetty

Site 3:
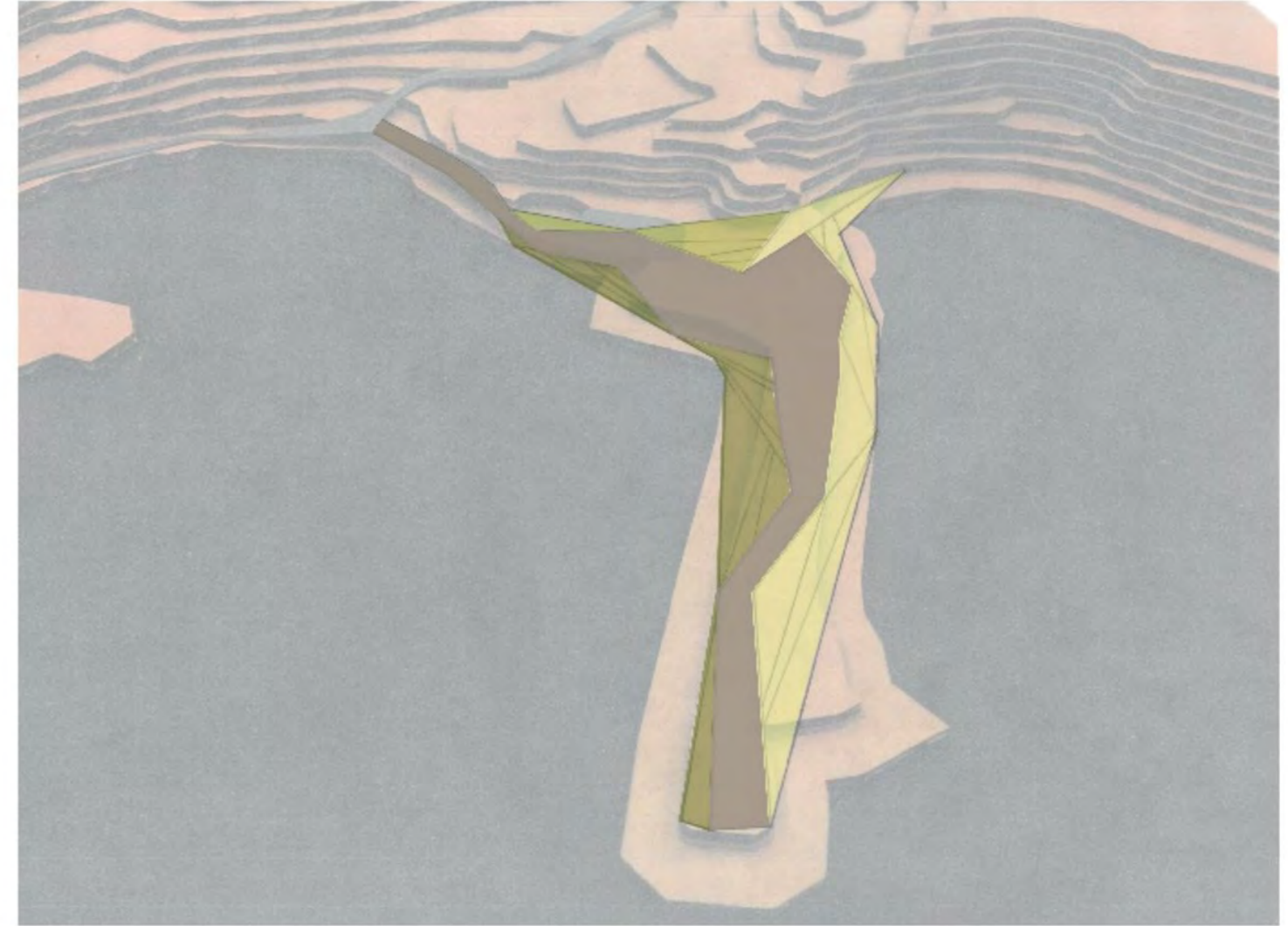
Main Walkway

Seating Area Facing the Pebble Beach

Seating Area Facing the Archeological Site on the Top of the Cliff

Seating Area Facing Archelogy in front of the Jetty

Site Layering
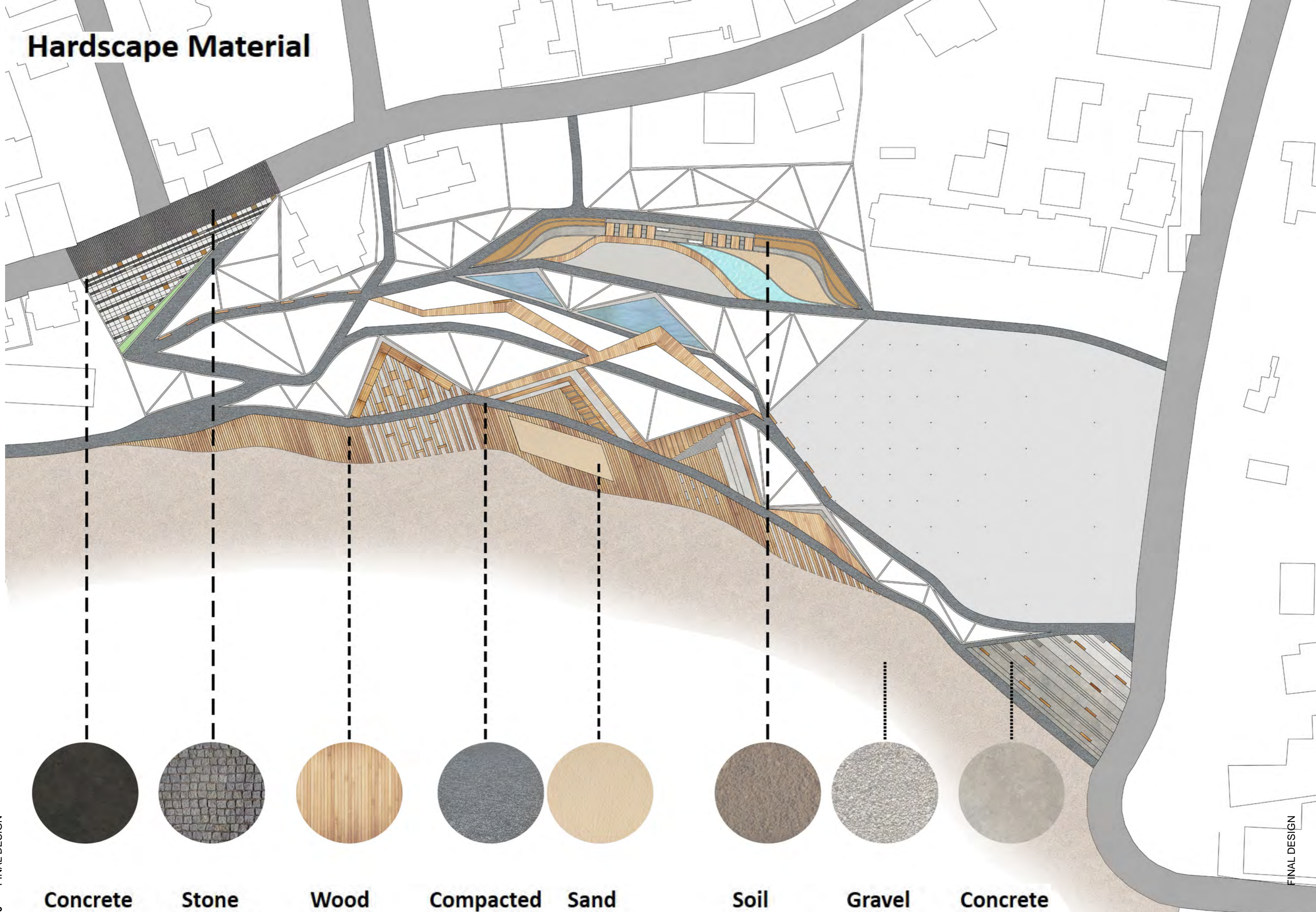
Planting Strategy

Erosion Control Plants

Vinca

Zinnia grandiflora

Lantana camara

Clerodendron inerme

Aptenia cordifolia

Water Filtration Plants

Pennicetum Setaceum

Chlorophytum comosum

Ophiopogon japonicus

Alternanthera dentata

Scented and Colorful Plants for Children

Rosmarinus officinalis

Oregano

Gazania rigida

Wedelia trilobata

Lagerstroemia indica

Rain Garden Plants Collecting Water

Lobelia siphiltica

Juncus Effusus

Irises

Willow plants

Hardscape Material

FINAL DESIGN

Concrete
Tiling

Stone
Pavement

Wood

Compacted
Gravel

Sand

Soil

Gravel

Concrete

The Waterfront Filtration Park

1- **The Entrance from the Residential Area**

2- **The Entrance from the Touristic Area**

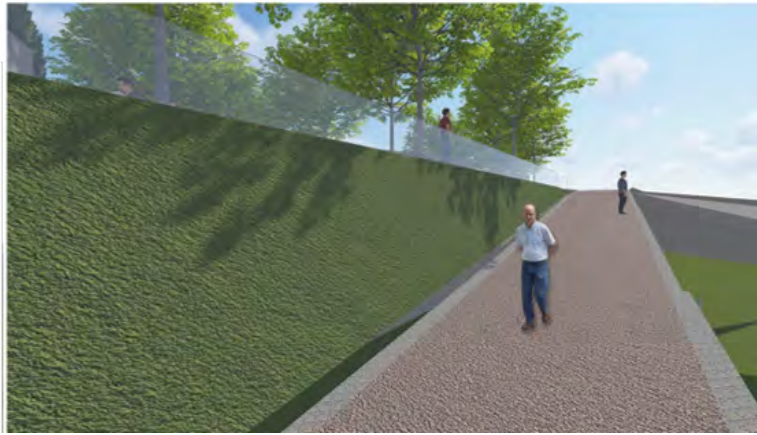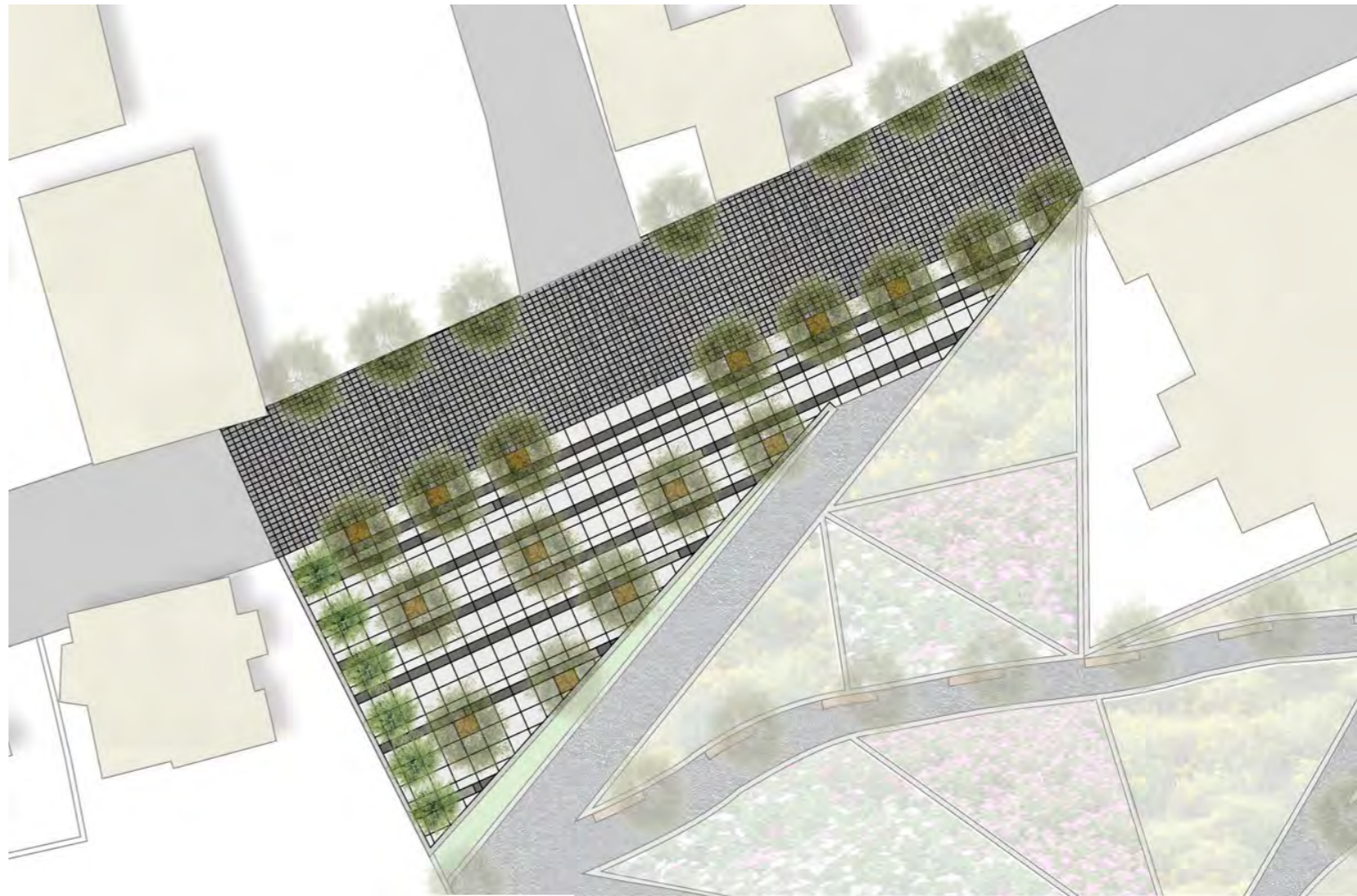3- **The Shoreline**

4- **The Kids Playground**

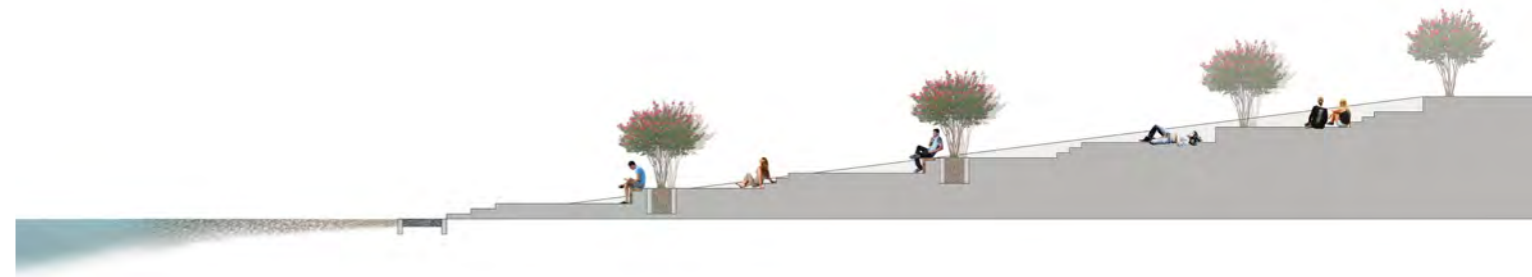5- **The Rain Garden**
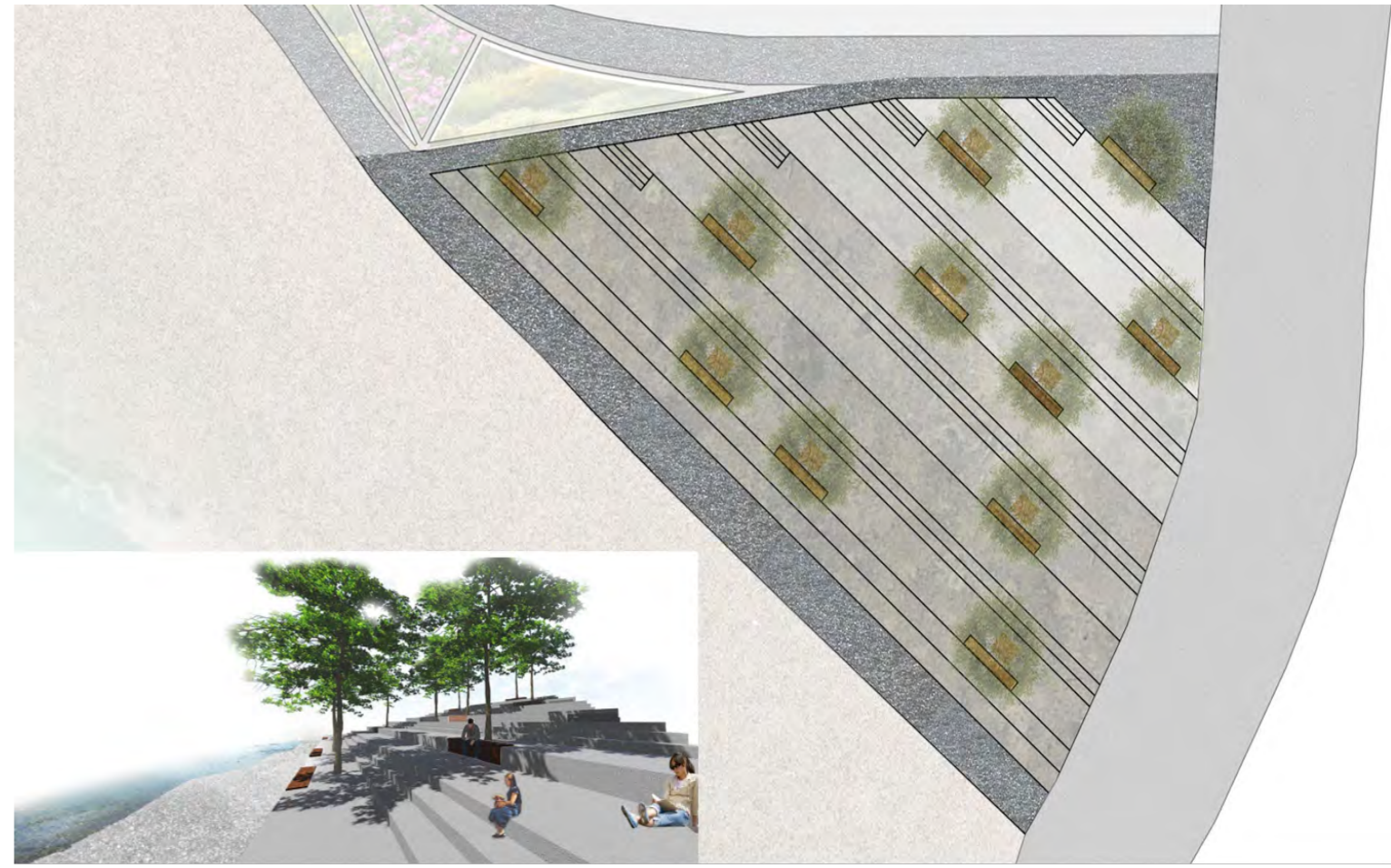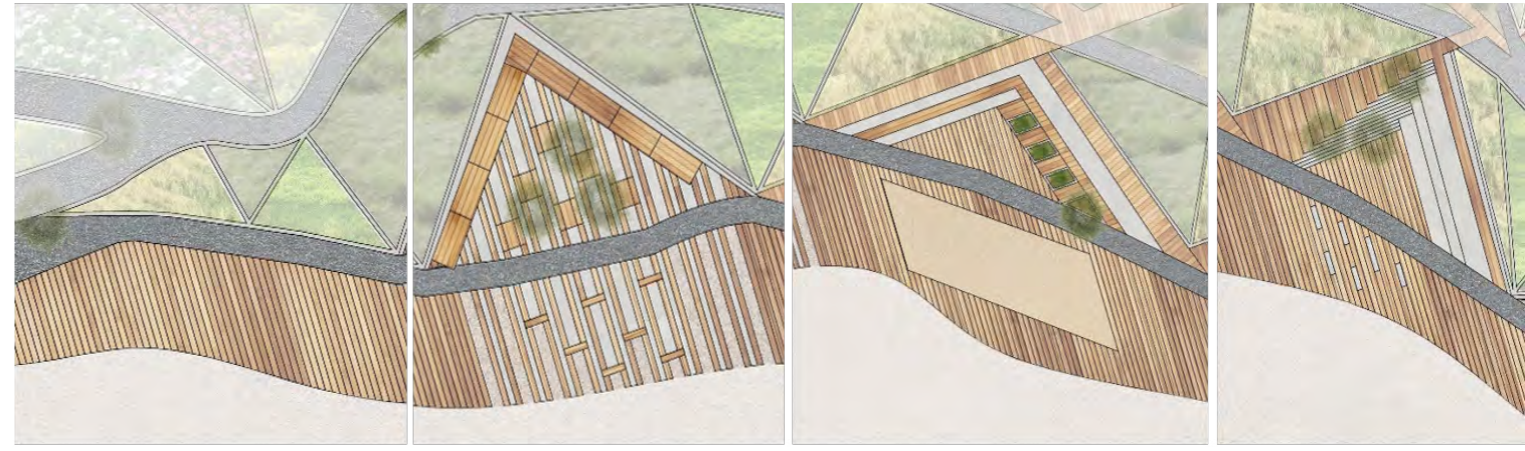
6- **The Parking Area**

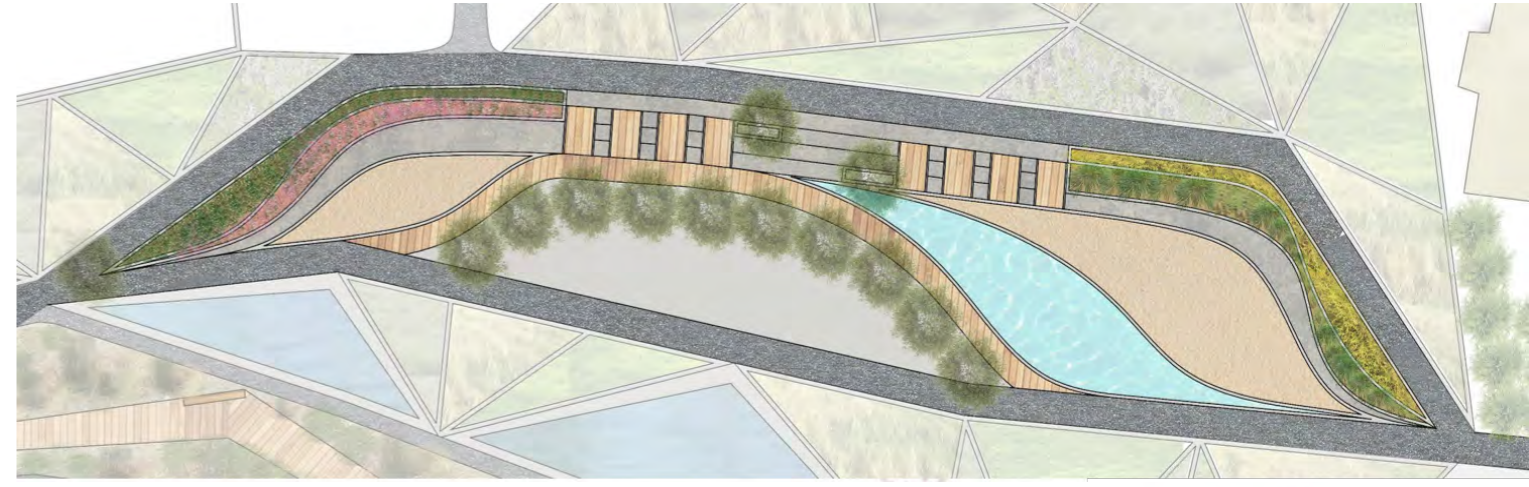Rain Garden
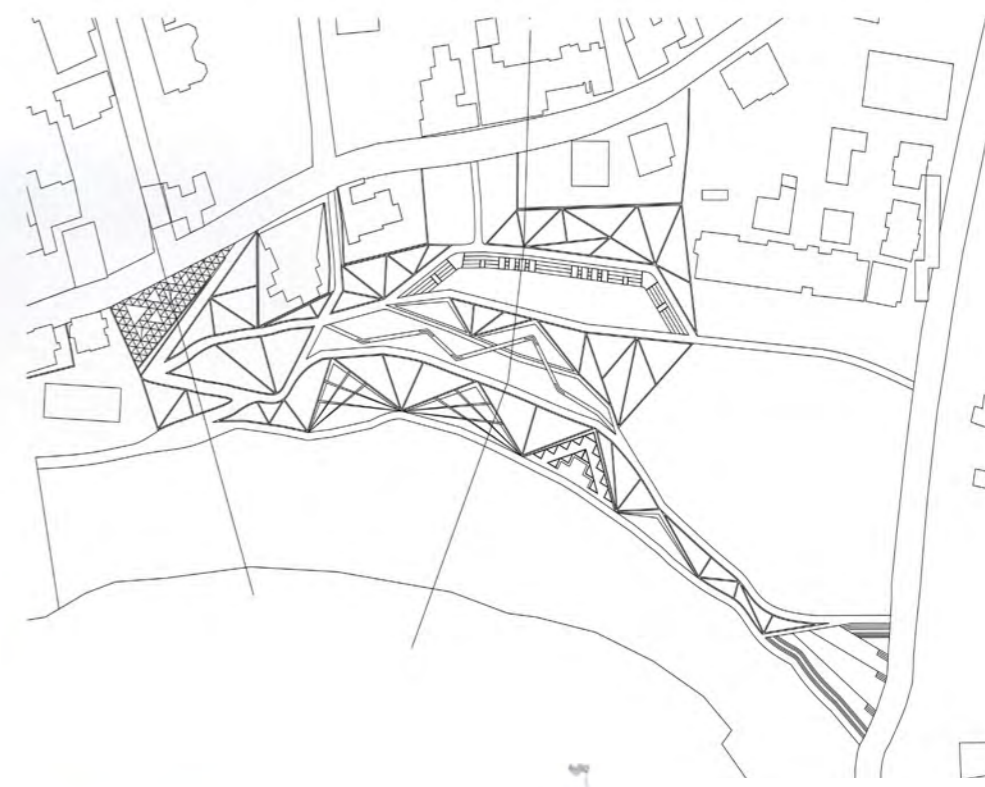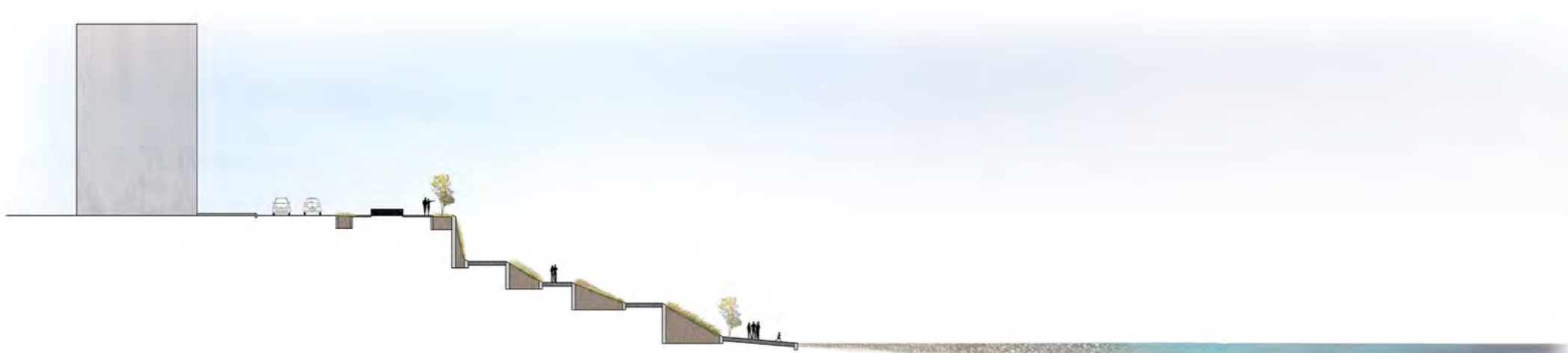
Kids Playground

The Entrance from the Residential Area

The Entrance from the Touristic Area
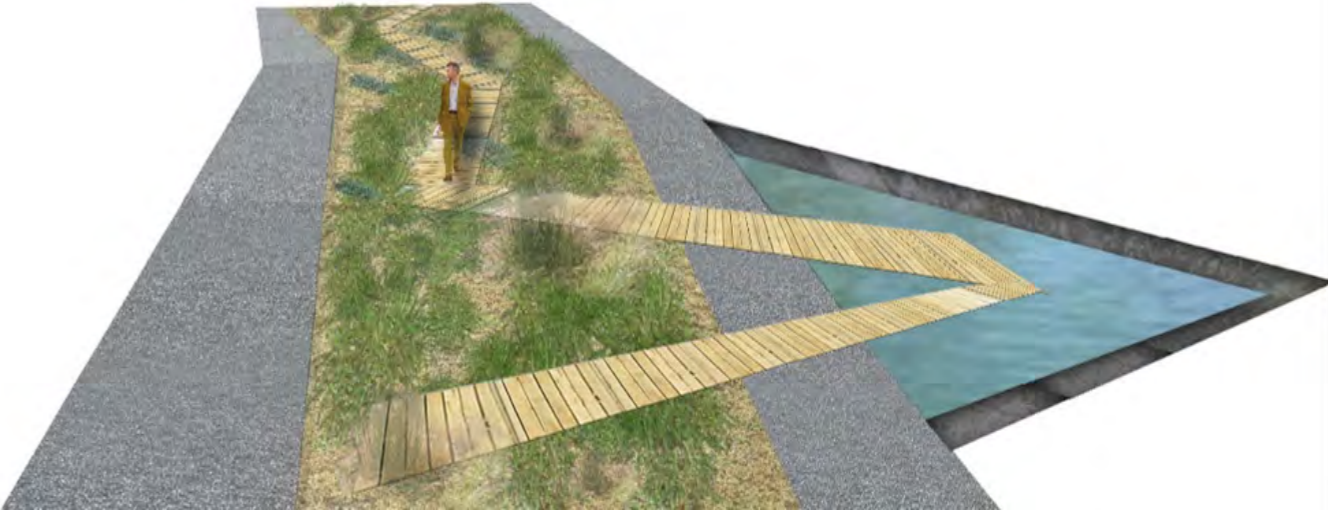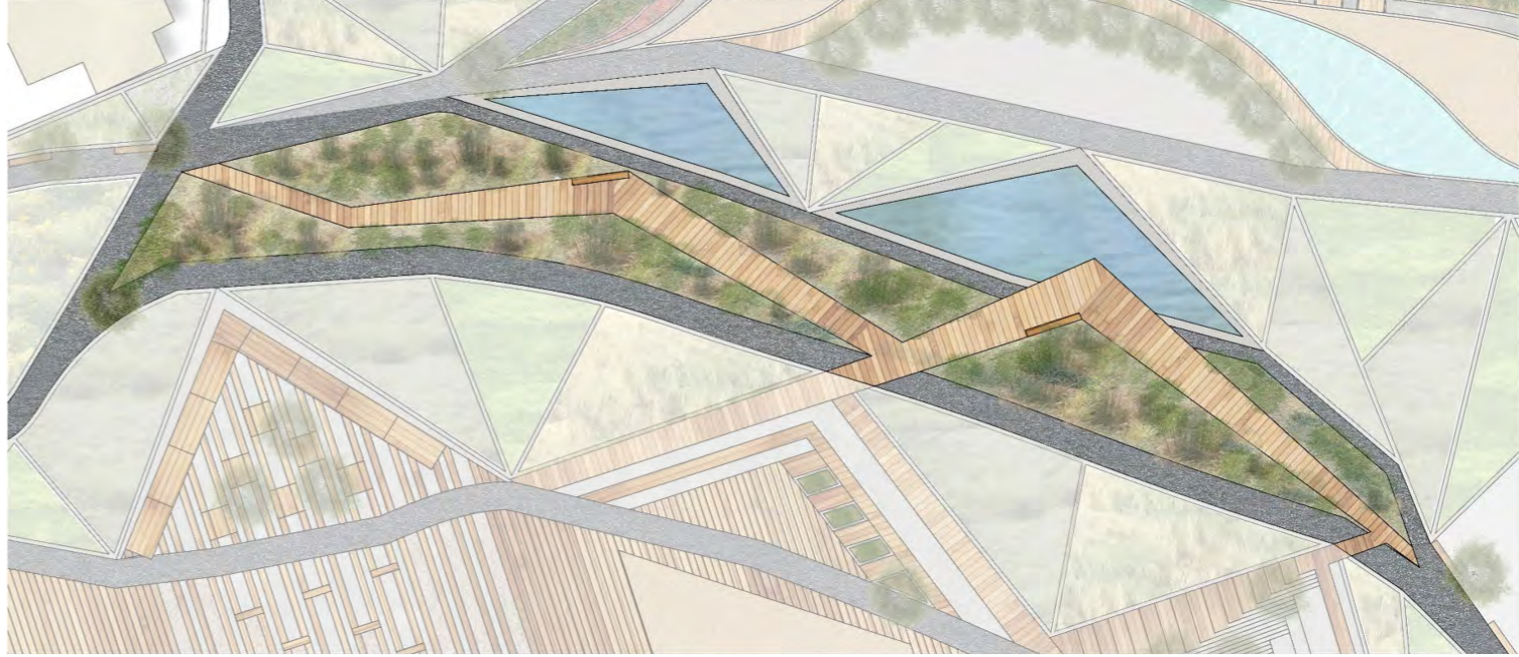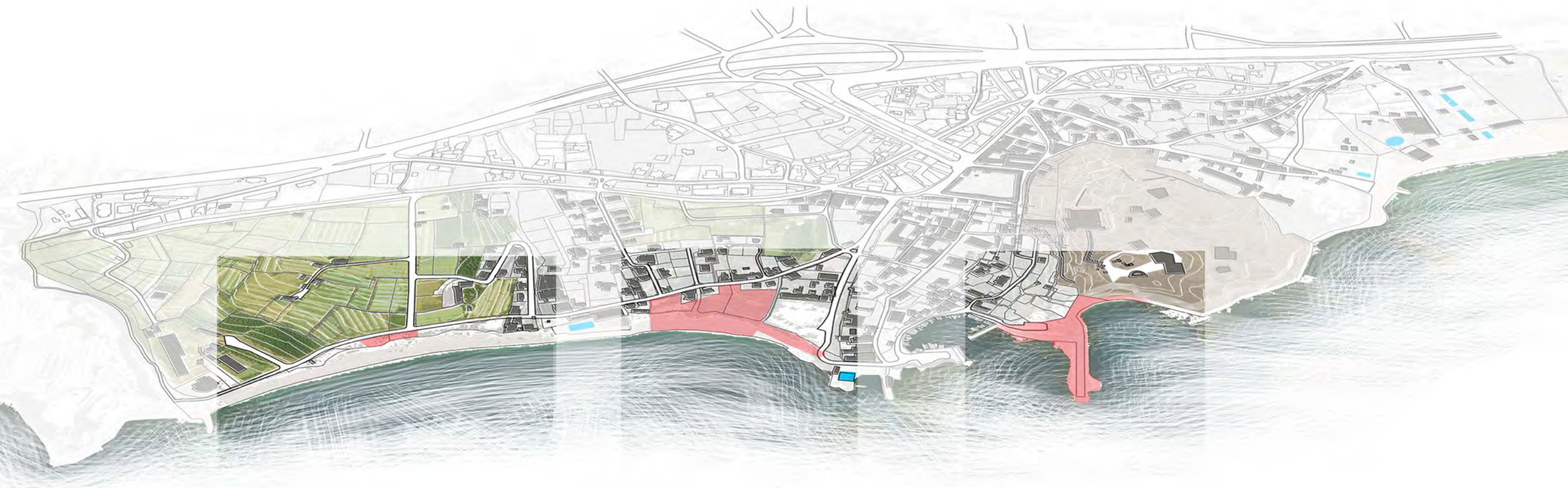
The Shoreline

The Kids Playground

The Rain Garden

Geomorphological Action, Design Reaction!

BIBLIOGRAPHY

Books

Byblos, Land of God

Nouveau livre pour tout savoir sur Byblos

Articles

CITY/SEA SEARCHING FOR A NEW CONNEC-
TION
Regeneration proposal for Naples waterfront like an
harbourscape: comparing three case studies

Green flows: connecting the post - industrial riverfront
of Belgrade with the city

Projects

Etude Urbaine de Byblos

Harborfront of Copenhagen, Denmark

Toronto Central Waterfront

OPORTO River Edge, Portugal

Belgrade Waterfront, Serbia

I wish to express my sincere gratitude to Ms. Beata Dreksler and Ms. Sandra Frem, my advisors for my final year project. In addition to that I would also like to thank Ms. Nayla Al-Akl for providing me with the opportunity to embark on this project and for the guidance, support, and encouragement throughout the process.

I would also like to thank the external sources (individuals and organizations) that rendered their help as I searched for and collected detailed information and material which allowed me to move forward and complete this phase.

Finally, I would also like to thank the Landscape Design and Ecomanagement Department at the American University of Beirut for equipping me with both the knowledge and skills needed to excel at my future professsion.

ACKNOWLEDGEMENTS