

AMERICAN UNIVERSITY OF BEIRUT

CONTINUITY AND CHANGE:
REVISITING RURAL HERITAGE

by
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An Undergraduate (Architecture Design Thesis)
submitted in partial fulfillment of the requirements
for the degree of (Bachelor of Architecture)
to the Department of Architecture and Design
of the Maroun Semaan Faculty of Engineering and Architecture
at the American University of Beirut

Beirut, Lebanon
May 2021

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Date of project presentation: May 12, 2021

Acknowledgments

First, I would like to express my sincere gratitude to my advisor Professor Robert Saliba for the continuous support and encouragement throughout the year.

I would like to thank Cybelle Bou Saab, Elie Baaklini, Issam Sawaya 'Shweir Archives and Heritage', and Syrine Abi Kheir for their constant help and support, and for sharing with me their great knowledge on Dhour Choueir and inspiring me to choose to work on our hometown.

I would also like to thank my family for always being there and helping me throughout this whole year.

Abstract

Title: Continuity and Change: Revisiting Rural Heritage

The rural context in Lebanon holds a very unique environmental and ecological heritage that has been neglected and forgotten after landowners migrated after the Lebanese civil war in 1975, which was the case of Dhour Choueir. Its evolution from a residential village, to a summer resort with a regional reach, and now back to a village with relatively stagnant touristic activity, is reflected in my site, the now abandoned Hotel and Café Shwar. So, in order to continue reflecting this evolution in architectural and social practices, my aim is to introduce a new layer to its evolution. Which is “Ecological Design as a Regeneration Strategy for Rural Landscapes and Abandoned Heritage sites”. This will happen through explorations from the solid mass that is vernacular architecture, to a semi permeable structure where landscape adapts to the given form of the architecture, and finally to an open, completely permeable structure where architecture adapts to the natural agricultural needs of plants.

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Continuity and Change: Revisiting Rural Heritage

*Ecological Design as a Regeneration Strategy for Rural
Landscapes and Abandoned Heritage sites*

*The Case of **Hotel and Café Shwar** in Dhour Choueir*



Introduction

The centralization of services in the city has created a dense zone around Beirut and the coastal area. However, more people are considering moving outside of the over-crowded metropolitan cities and closer to the rural villages as they provide a less dense alternative with almost all services being located not far away. The rural context holds a very unique environmental and **ecological heritage** which brings in a different dynamic to the context. In addition to that, these rural villages hold a great number of **abandoned spaces**. They have been neglected and forgotten after their owners migrated after the Lebanese civil war in 1975, leaving them with a heritage which is slowly declining. With this degradation in the rural heritage, many villages have lost the impact they once had on the Lebanese map. They are slowly being **forgotten**, such as the case of **Dhour Choueir**, a village located in Mount Lebanon, which I will be working on.

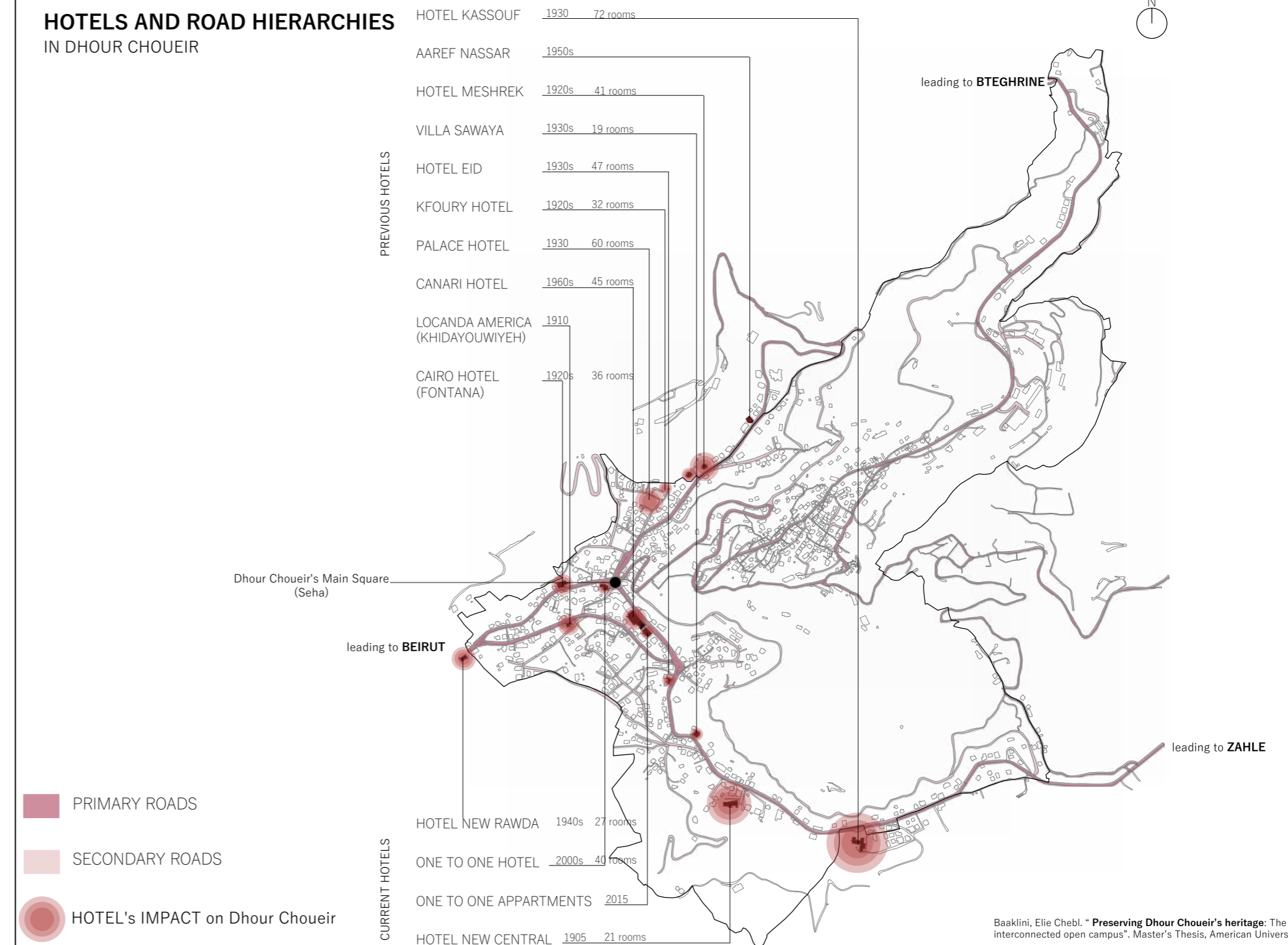
The **evolution** of this village, from a residential village, to a summer resort with a regional reach, and now back to a village with a relatively stagnant touristic and economic activity, is reflected in the architectural and social practices of my case study, ***Hotel and Café Shwar*** in Dhour Choueir (Zeghrine 12). Many historic buildings and landscapes from before the civil war are left unmaintained and are now falling apart. So, in order to continue reflecting the significant evolution in architectural and social practices of my case study, my aim is to introduce a **new layer** that reflects the architectural and socio-cultural practices of today, which is **Ecological sustainable design**.

Therefore, to revive Dhour Choueir as a local and regional summer resort, I will use **Ecological Design as a Regeneration Strategy for Rural Landscapes and Abandoned Heritage sites**.

Dhour Choueir is a mountain village situated at 1,200 meters above sea level with a population of about 3,000 people in winters and about 5,000 people in summers. What makes it a popular summer resort is its cool weather, its unique geographical location where it sits perched halfway over Beirut and the Mediterranean and looking up the Sannine Mountains, and its proximity to many cities and services.

Dhour Choueir started as a residential village in the early 1900s, that evolved into a **major summer resort** in the 1920s, holding a double identity; an internal summer resort for the inhabitants of the coastal area of Lebanon, and a regional summer resort for people from all over the Arab world. At the time, there were **14 hotels** distributed along the three main arteries going out of the village's main square, one leading to Beirut, one leading to Bteghrine, and the third leading to Zahle. Each hotel had a different impact, which depended on its size, number of rooms, age, and whether it was located within a landscape. Some of the most important hotels were Hotel Kassouf, Hotel Central, Palace Hotel, and Hotel Mechrek adjacent to café Shwar. Most of these hotels are now abandoned, demolished, or repurposed. Nowadays, few visitors come to spend time and money as they used to, which is very unfortunate. This is mainly because most of the hotels, restaurants, and leisure/commercial activities started declining and closing off their services after the civil war started in 1975. However, we notice that the hotels that are still functioning until today are located on the axis leading to Zahle, and all other hotels are currently unoccupied. So, to create an equilibrium in tourist activity to revive the strip leading to Bteghrine, I chose to take Hotel Mechrek and Café Shwar and make it an attraction point which will revive the axis it is located on.

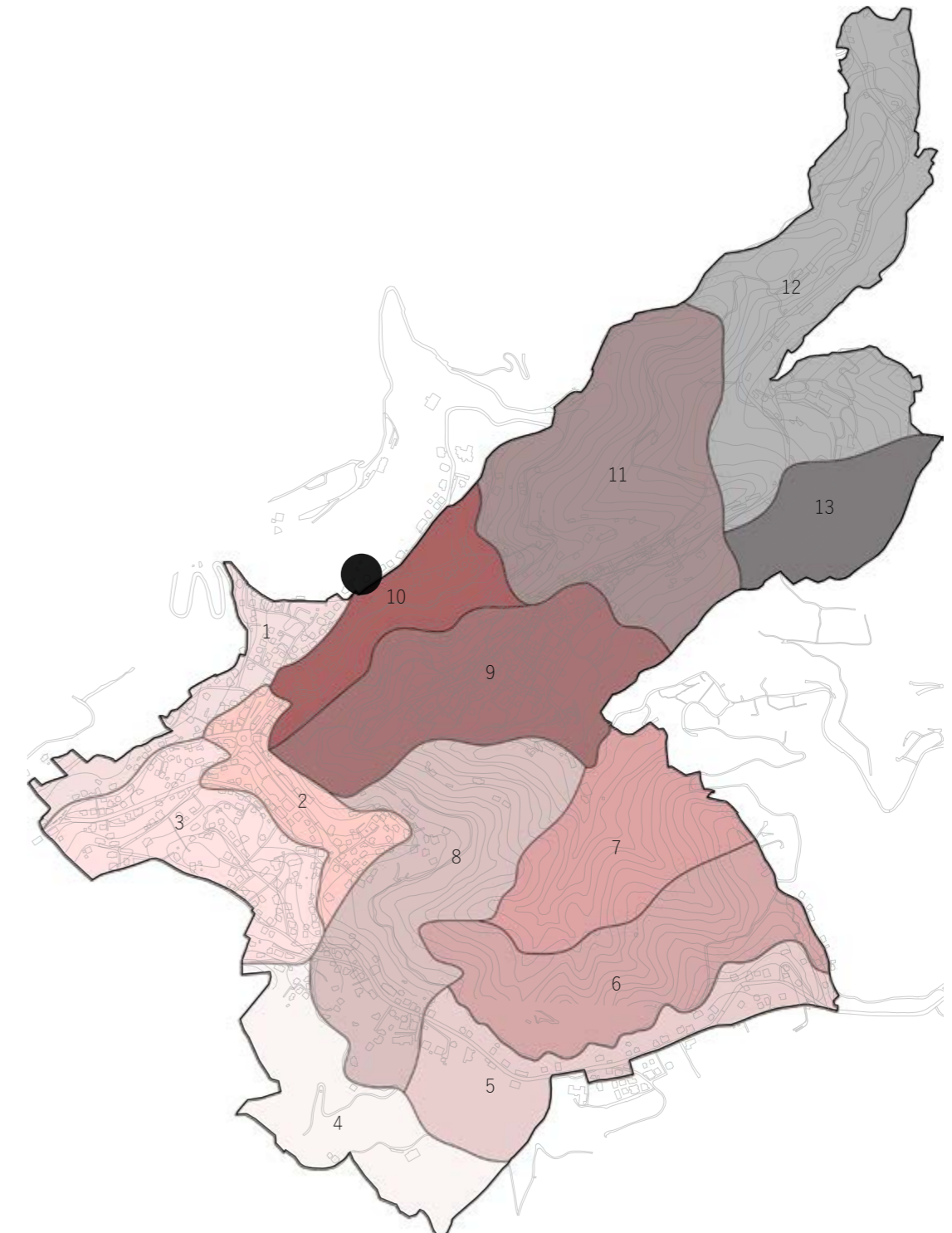
HOTELS AND ROAD HIERARCHIES IN DHOUR CHOUEIR



According to a study done by a Landscape Architecture Student for her FYP in 2015, Syrine Abi Kheir studied Dhour Choueir through different geographical and landscape typologies. She was able to divide Dhour Choueir into 13 different **character zones** that are unique from one another. For example, zone 2 is the Centre Ville that is the service/commercial area, zone 3 is the highest hill of the village with a low resident density. My site is located at the intersection of **zone 1**, the clear sea view that is windy and humid, and **zone 10** which is the seasonal summer area known to be the most active when its residents come up to spend their summers.

GEOGRAPHICAL AND LANDSCAPE CHARACTER ZONING OF DHOOR CHOUEIR

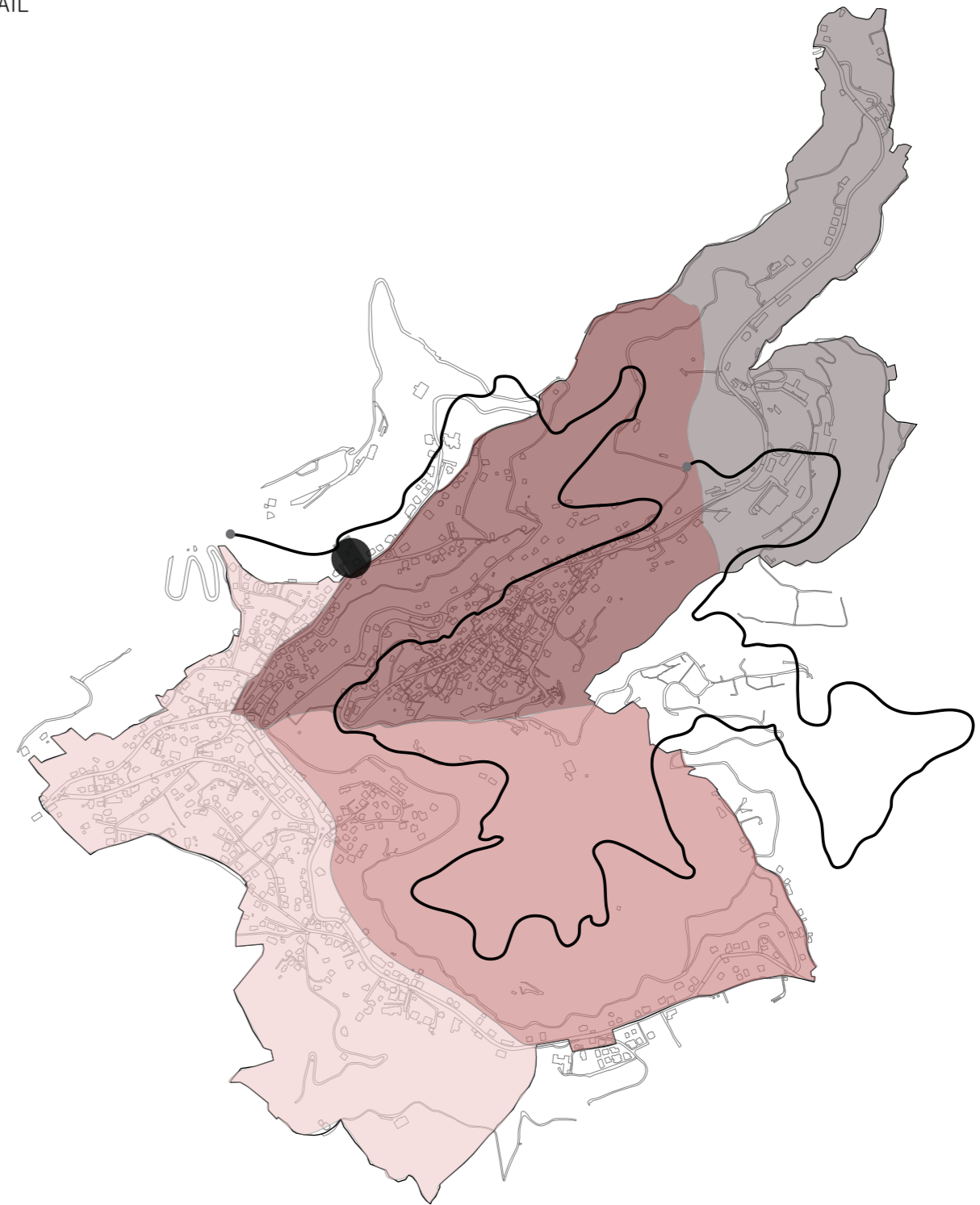
- 1 CLEAR SEA VIEW
WINDY AND HUMID AREA
- 2 CENTRE VILLE
SERVICE/COMMERCIAL AREA
- 3 HIGHEST HILL IN DHOOR CHOUEIR
LOW DENSITY OF RESIDENCE
- 4 STEAP SLOPED AREA
NO BUILT FABRIC UNTIL TODAY
- 5 MAIN ROAD WITH VILLAS ON THE SIDES
PINE FOREST
- 6 LARGE NATURAL FOREST
WIDE ECOLOGICAL BIODIVERSITY
- 7 RICH AGRICULTURAL AREA
HEAVY NATURAL VEGETAION
- 8 WOODLAND AREA
VIEW TOWARDS SANNINE MOUNTAINS
- 9 OLD TOWN OF CHOUEIR
HISTORICAL AND CULTURAL SIGNIFICANCE
- 10 SEASONAL SUMMER AREA
SEA VIEW WITH HIGH HUMIDITY
- 11 POLITICAL-SOCIAL-EDUCATIONAL
SIGNIFICANCE
- 12 ENCLOSED HUMID FOREST
RECENT DEVELOPMENT
- 13 ROCKY AREA
HARD VEGETATION



Then, Syrine combined the zones with similar characteristics into a more general zoning to get 4 areas, that were **connected** through a **natural trail**. This trail had many stations and it passed through the natural forests, the old cultural souk of Choueir, and it passed through the natural landscape within my site.

COMMON LANDSCAPE ZONES MAP AND THEIR CONNECTION THROUGH A NATURE TRAIL

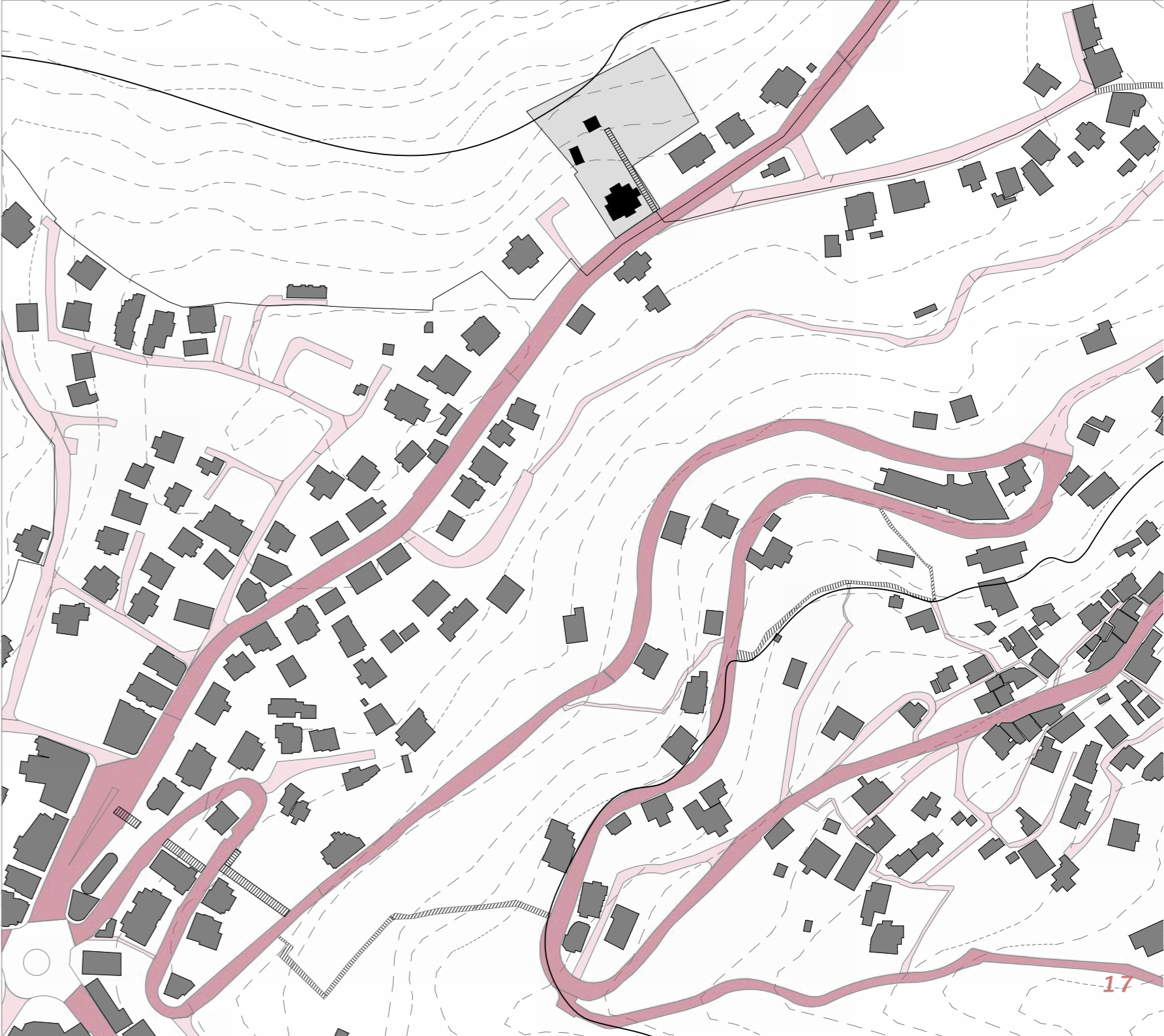
- NATURE TRAIL LINKING THE 4 ZONES
- ACTIVE ZONE
- CULTURAL ZONE
- ECOLOGICAL ZONE
- PANORAMIC ZONE



Zooming in to the area around my site, we can see the different accessibility methods to my site. We can see the **primary roads**, **secondary roads**, the **staircases** leading up from Choueir that link to the large staircase in my site, and it is also accessible through the **Natural trail** previously mentioned

SITE ACCESSIBILITY

- PRIMARY ROADS
- SECONDARY ROADS
- STAIRCASES

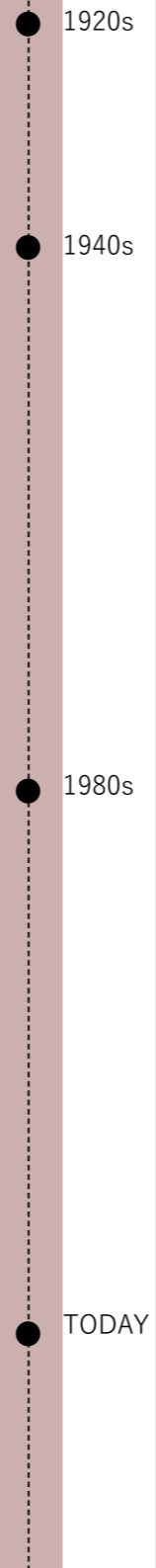
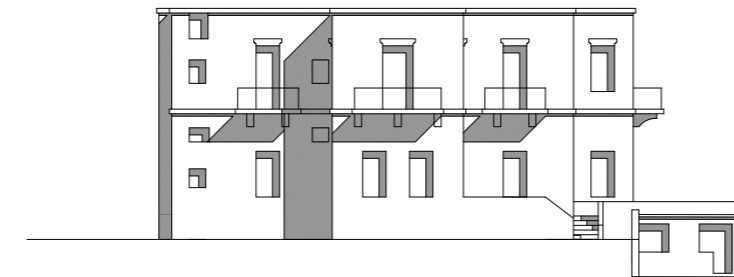
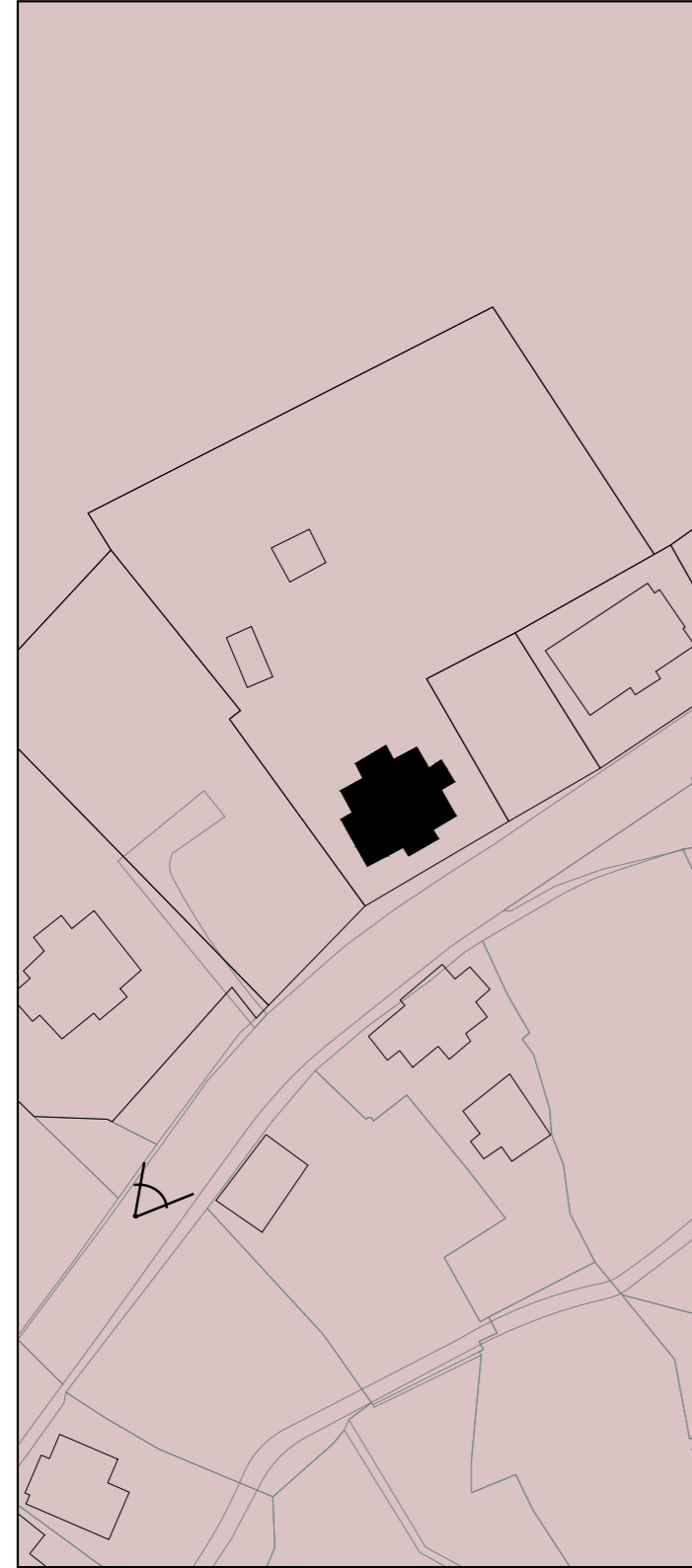




Site's *History and Evolution*

Moving into the site, Hotel and Café Shwar was a very important summer destination which hosted people from all over the Arab region. The name “Shwar” was after the Arabic word “شير” which means cliff, also after which the village is named after. Here is the building in its different phases, and consecutive images from the **1940s**, **1980s**, and **today**. which I will be explaining in more detail.

HISTORY of HOTEL SHWAR
1940s - 1980s- NOW



1940s



1980s



TODAY

Site's Evolution

Phase 1: Family House

Phase 2: Hotel and Café Shwar

Phase 3: Abandoned

After surveying and drawing the building and the site in their current conditions, I developed their evolution.

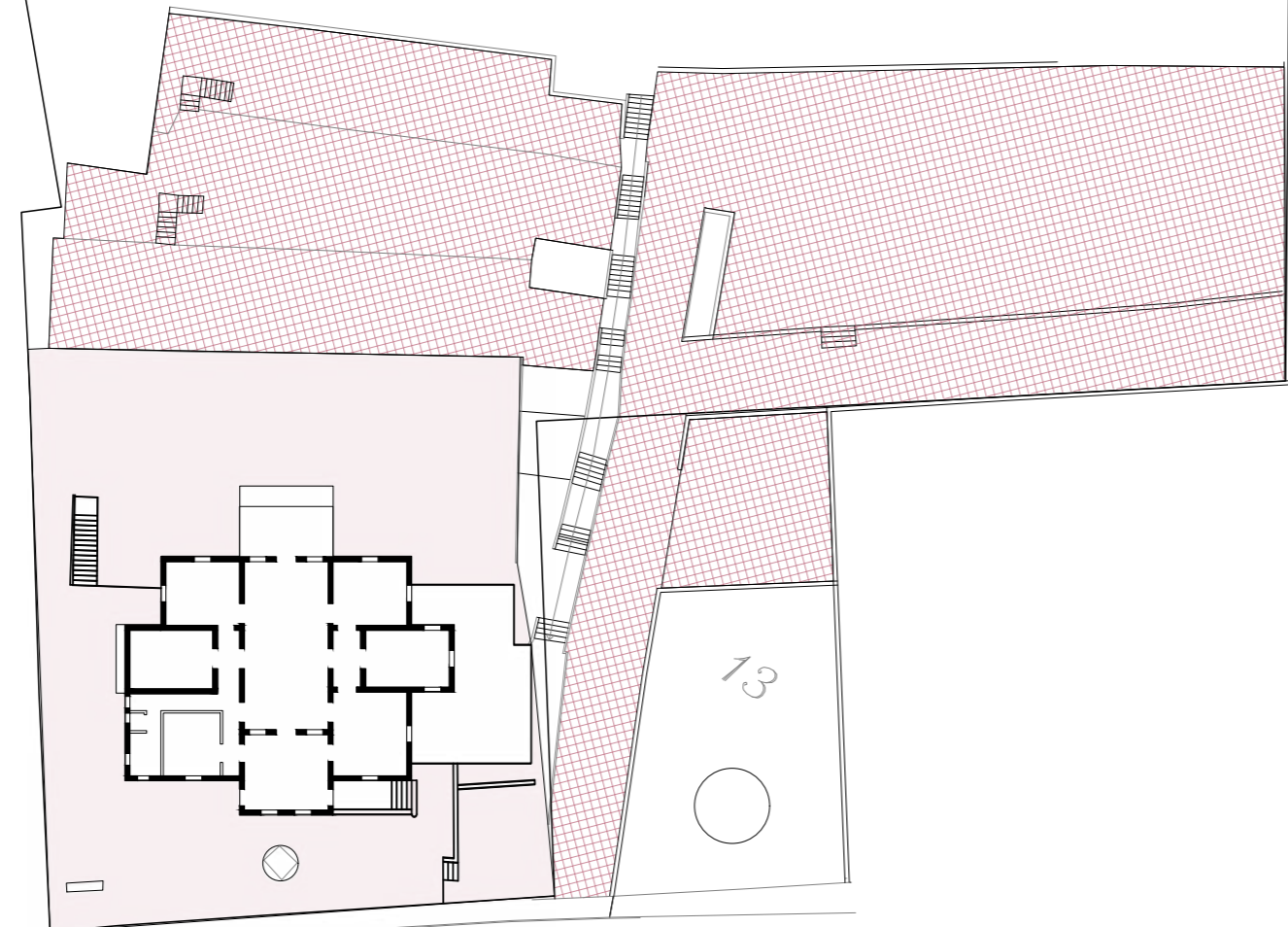
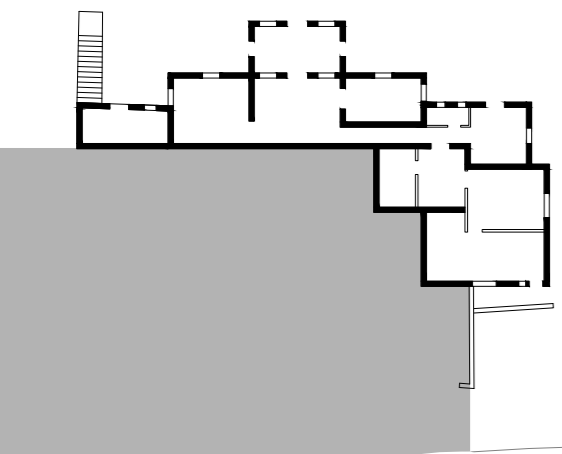
This site in its **first phase**, from the late 1920s to the early 1940s, started as a **family house** built from stone, owned by Najib Mechrek and consisted of a basement, a ground floor, and a large landscape, part of which was terraced and used as agricultural land.

In its **second phase**, 1940s till the 1970s, the house was transformed into a **Hotel and Café Shwar** (مطعم ومقهى الشوار) and sold to George Younes Abou Jaoude. In this phase, a new floor was added, in addition to a pitched roof, and one of the rooms on the ground floor was transformed into a staircase. New concrete partitions were added, to create a kitchen and bathroom space within the building. As for the landscape, the space around the building was used as the hotel's garden, agricultural terraces were located below, and on the right of the staircases was the restaurant and café seating area, with the kitchen space located next to it. There were 2 adjacent staircases that lead you through the site, one narrow staircase that gives access to the agricultural terraces and the kitchen, so it was a service staircase, and the other wide staircase which leads straight to the restaurant's seating area.

In its **third phase**, during the civil war, the building was destroyed, the pitched roof collapsed, and the whole site is still, until today in an **abandoned unoccupied** state. In this period, it was sold to the Tabbarah family from Beirut.

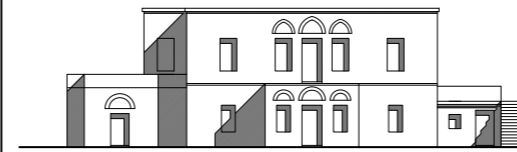
1920s-1940s OWNED BY THE MECHREK FAMILY
FAMILY RESIDENCE OF NAJIB MECHREK

 AGRICULTURAL TERRACES
 HOUSE'S GARDEN

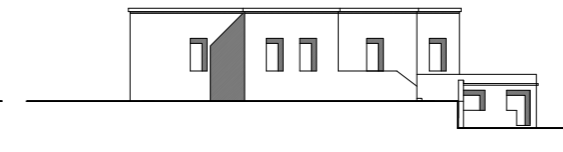


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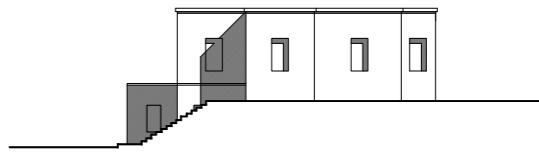
LEVEL 1



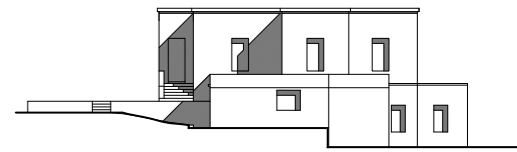
NORTH WEST ELEVATION



SOUTH EAST ELEVATION







SOUTH WEST ELEVATION

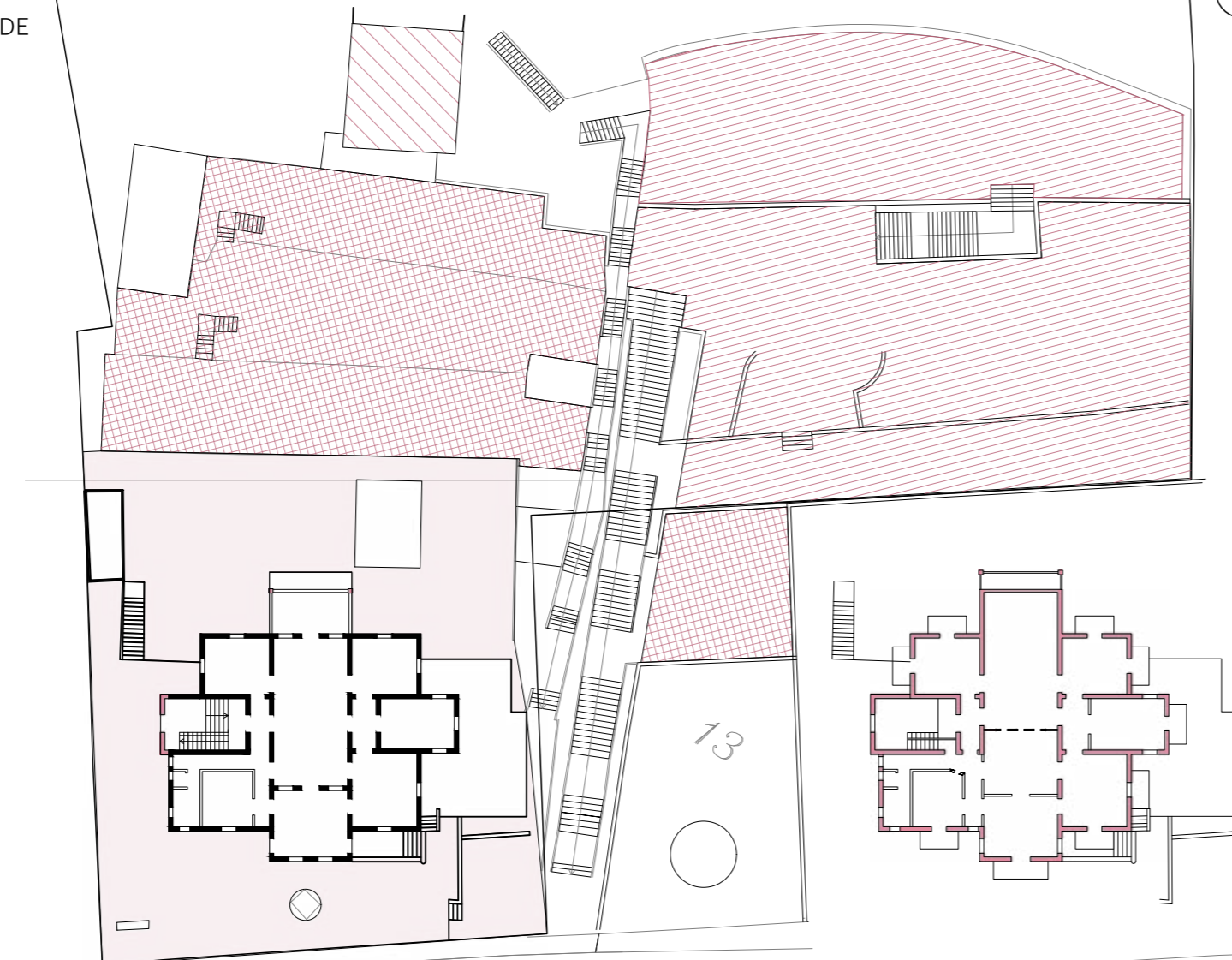
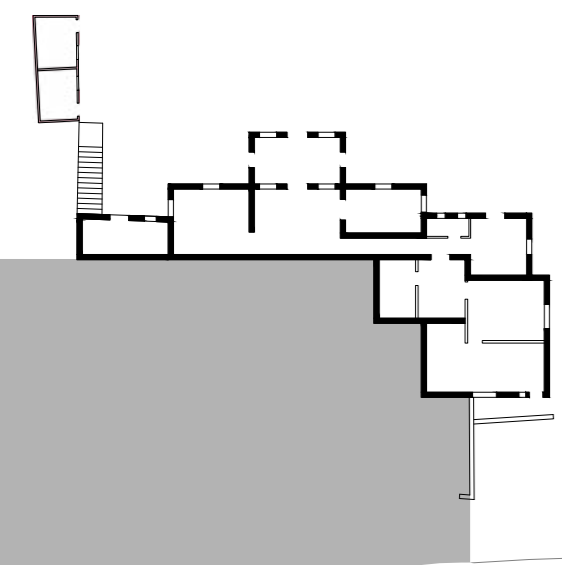


NORTH EAST ELEVATION

1940s-1970s OWNED BY GEORGE YOUNES ABOU JAOUDE

HOTEL AND CAFE SHWAR: مطعم ومقهى الشوار

-  RESTAURANT'S KITCHEN
-  AGRICULTURAL TERRACES
-  HOUSE'S GARDEN
-  RESTAURANT AND CAFE SEATING AREA

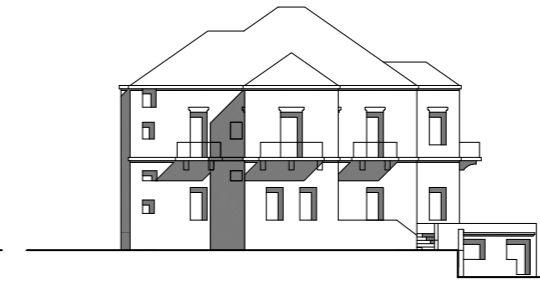


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LEVEL 1



NORTH WEST ELEVATION



SOUTH EAST ELEVATION



SOUTH WEST ELEVATION



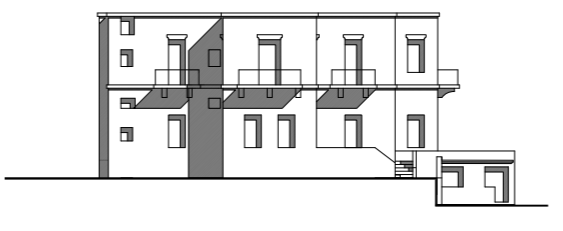
NORTH EAST ELEVATION

1980s-now OWNED BY THE TABBARAH FAMILY
ABANDONED AND PARTLY DESTROYED AFTER THE CIVIL WAR

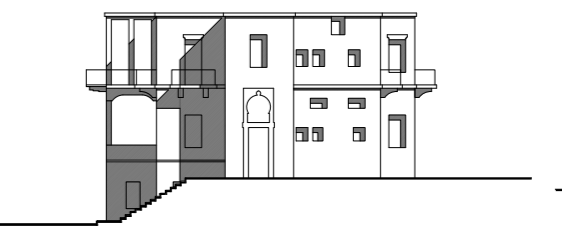
- XERISCAPED LAND- NOT MAINTAINED
- AGRICULTURAL TERRACES



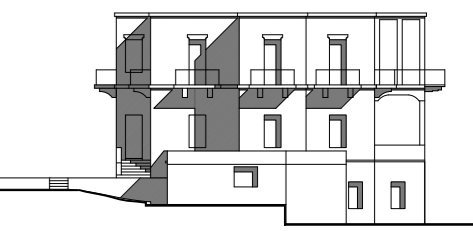
NORTH WEST ELEVATION



SOUTH EAST ELEVATION



SOUTH WEST ELEVATION



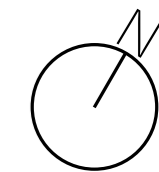
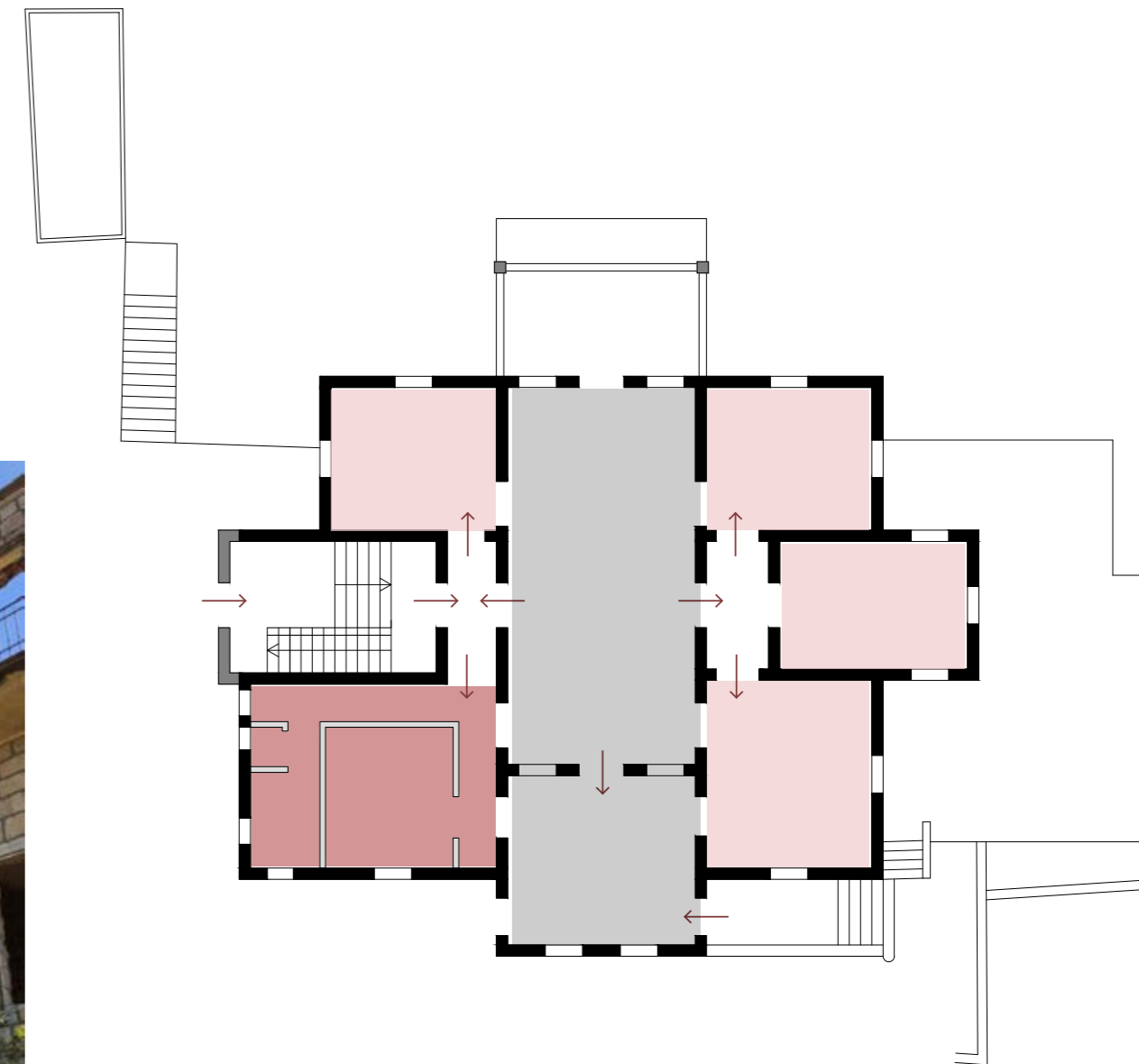
NORTH EAST ELEVATION

The building's plan typology is a **central hall**, where one enters into a central space that distributes into the rest of the rooms. This plan is copied on all the levels, however with variations in building material throughout the years.

Whereas on the façade, we find more variations in elements that date to its different phases. In the basement the triple arch opens up to the garden space and contains some iron work inside the arches. On the ground floor, the **triple arch** opens up to a balcony, which was added to the building at a later stage, with cast-concrete balustrades. In the 1930s and the 1940s, the innovation in **building technology** was through the import of industrial material from the west, which was directly reflected in the building's architecture in its second phase. On the top floor, the geometry of the triple arch is transformed to a rectangular concrete veranda with iron balustrades, which emphasizes the **dynamism** and **evolution** in building and **architectural elements**.

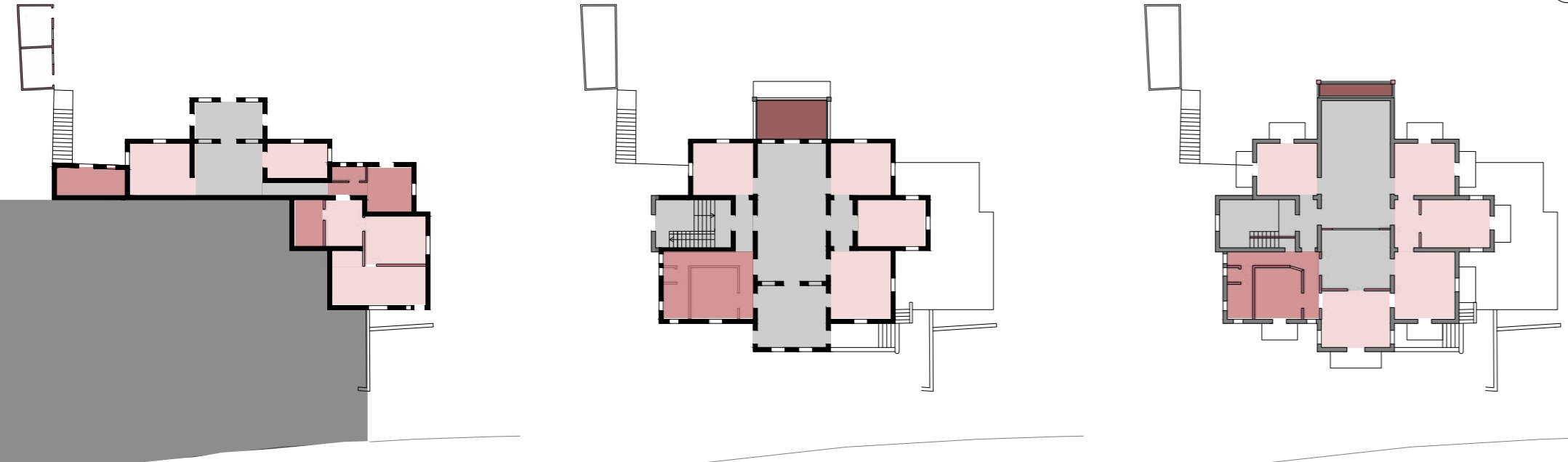
PLAN ANALYSIS

CENTRAL HALL PLAN



HOTEL PLAN ANALYSIS

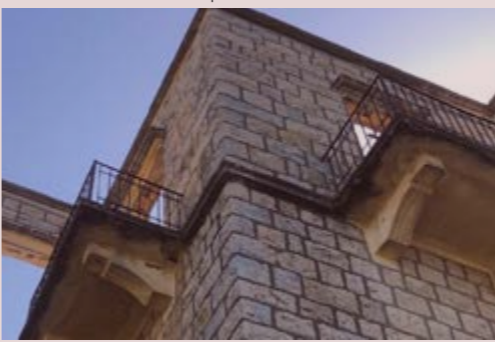
1940s- 1975



- PUBLIC VERANDAS
- SERVICES
- PRIVATE SPACES
- PUBLIC SPACES

FACADE ELEMENTS

Protruding slab indicating the building phases



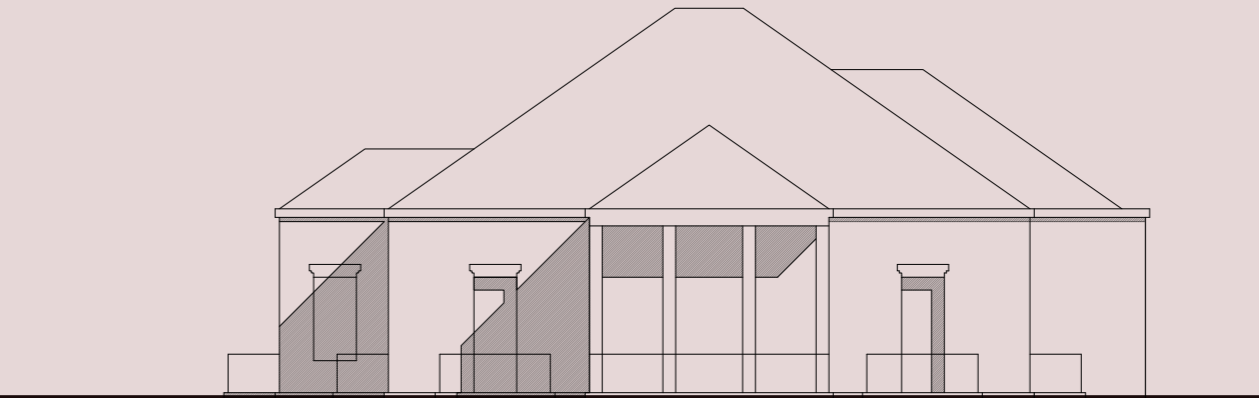
Concrete Rectangular Central Platform Veranda added on the last floor



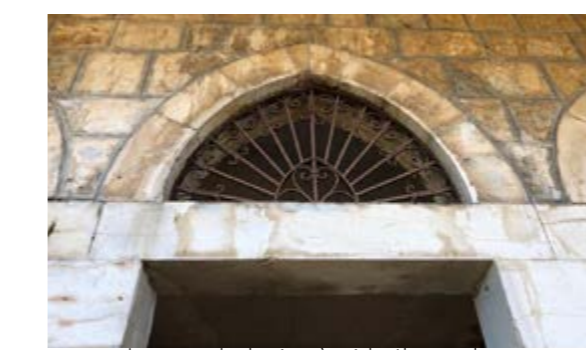
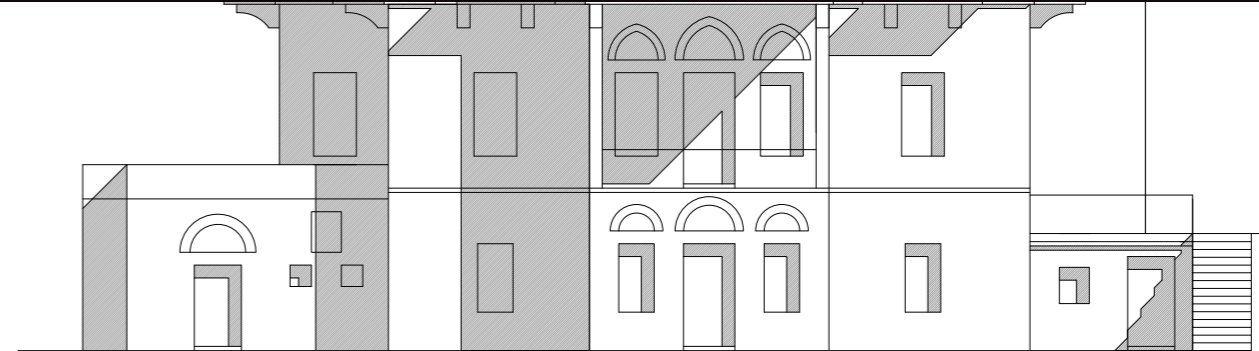
Concrete Rectangular Central Platform Veranda added on the facade



1940s



1920s



Iron work design inside the arches



Ground Floor: Triple Arch with aggregate form as a balcony bay



Iron Balustrades



Level -1: Triple Arch with aggregate form as an entrance bay

Cast-Concrete Balustrades

As for the **land use**, the images on the right show the current conditions of the different program locations present from the 1940s to 1975.

The light metal structures in images 1 and 2 used to house the restaurant under them, and image 3 is a view of the agricultural terraces and the building from the bottom of the site.

SITE LAND USE 1940s - 1975



CURRENT STATE



Therefore, in the three phases of the site, there was a **change** in *ownership, identity, building material, program, land use, landform, and building technology*. The continuity and change of this site relates to the identity of Dhour Choueir as a summer resort open to people from different backgrounds throughout time. So the **evolution** of Dhour Choueir for the past 60 years reflected clearly in terms of its architecture, and in terms of its social and cultural setting.

First, Dhour Choueir was a village that evolved into a major summer resort with a double identity; an **internal summer resort** for the inhabitants of the coastal area of Lebanon, and a **regional summer resort** for people from all over the Arab world. The building became a clear *illustration of this socio-cultural change* in its evolution from a family house, to a hotel, to an abandoned site.

Moreover, with respect to its architecture, this building is a clear indication of how building technology has evolved from the 1920s, to the 1950s, and later on to the 1970s. Therefore, the building has an *open hybrid architecture*, it is an architecture that is constantly reflecting its times. After historicizing the site and its components, analyzing the hybridization of the site in its evolution, the next stage is to follow up on its openness by responding to the changes in architectural thinking and in the social setting.

Therefore, with this concept of *continuity and change*, my aim is to introduce the new layer that reflects the architectural and socio-cultural practices of today, which is **Ecological sustainable design**. So what is ecological design in architecture? What is ecological design in landscape? What are the different design strategies applied in both? How can they be brought together in a program that reflects the socio-economic and socio-cultural conditions of the context?

CONTINUITY AND CHANGE

PHASE 1: **FAMILY HOUSE** of Najeeb Mechrek
 PHASE 2: **HOTEL AND CAFE SHWAR** owned by George Younes Abou Jaoude
 PHASE 3: **ABANDONED STATE** with new owners from the Tabbarah family

Change of **OWNERSHIP - IDENTITY - BUILDING MATERIAL - PROGRAM - LANDUSE - BUILDING TECHNOLOGY -**

CONTINUITY AND CHANGE of this site relates to the **IDENTITY** of Dhour Choueir as a **SUMMER RESORT** open to people from different backgrounds throughout time.

HISTORISIZING the site and its components
 BUILDING and LANDSCAPE

Analysing the **HYBRIDIZATION** of the site resulted from the **EVOLUTION**

Preserving the past but accounting for the **continuity** and **change** by adding an **ECOLOGICAL** layer

Research Problematic:

Now, what is **CONTINUITY** and what is **CHANGE**? How can I introduce **Ecological Design as a Regeneration Strategy for Rural Landscapes and Abandoned Heritage sites** as a new layer in the evolution and adaptation process of this **dynamic** site?

WHAT IS AN ECOLODGE?

It is located in a **natural** or **rural area** within a short distance of a natural area and is not significantly affected by urban development, noise, traffic, smog or pollution.

It uses systems that **protect the environment** from pollution and degradation.

It uses **energy-saving** systems and possibly **renewable energy** technologies.

It employs or has access to nature interpretation guides that have received training in biology or have an excellent **local knowledge of the natural habitat**.

It provides books, posters, maps, photographs, orientation presentations or other means of **informing guests and visitors** about the biology of the region.

It helps educate guests, staff, and visitors about the importance and value of a **healthy ecosystem** and describes how **best to enjoy the area without affecting it**.

It contributes to the **local economy** and it helps demonstrate that **ecotourism** is a more **sustainable** way to earn income in the long term than destroying or modifying habitats for short term gains.

Ec lodge Case Studies

Case Study 1:

Finca Tierra Organic Permaculture Farm and Eco-Lodge in Costa Rica

Case Study 2:

Feynan Ec lodge in the Dana Biosphere Reserve, Jordan

Case Study 3:

LifeHaus Ec lodge in Baskinta, Lebanon

Case Study 1:

Finca Tierra Organic Permaculture Farm and Eco-Lodge

The organic farm is based in Puerto Viejo de Talamanca, a coastal town in the Province of Limón of Costa Rica. Finca Tierra Organic Permaculture Farm & Eco-Lodge. It incorporates permaculture principles to promote sustainable lifestyle.

Material

Even the buildings in the farm are built with natural eco-friendly materials. The shared infrastructure consists of a beautiful bamboo and leaf thatch kitchen, a dining area with a mud oven, class area, and lounge space.

Food Production

The food forest and organic gardens supply most of the produce and products used in our plant-based, tropical **farm-to-table** meals. The main goal of Finca Tierra is to provide hands-on experience and workshops to educate people about sustainable agriculture, agroforestry, alternative construction and energy resources, ethno-botanical medicine and wildlife conservation.

Energy

The farm is completely powered by solar energy and harvests both rainwater and natural spring water. The ecolodge is solar powered, 100% off the grid, and harvest both rainwater and natural spring water, with gravity-fed water supply.

Water Management

We have biological flush toilets where the black waters go to a biodigester, and the waste is processed to be sent back into the food forest system, making it a perfect closed loop nutrient cycle.



Case Study 2:

Feynan Eco-Lodge in Dana Biosphere Reserve, Jordan

Designed by Architect Ammar Khammash, Feynan Eco-lodge sits on the lower entrance of the Dana Biosphere Reserve in Wadi Araba. The lodge was built in the wadi where a previous campsite for The Natural Resource Authority once existed in the 1960's. The project was intended to use the exact footprint of the old campsite, so as not to extend the already-interrupted area of intervention.

Material and Thermal Comfort

Most of the heat escapes through the roofs. To overcome heat loss, roofs were made from two layers of Ferro-cement sandwiching straw bales in-between to ensure low thermal bridging. The very thin inflated organic domes do not follow any particular geometry; they were done spontaneously from 3-4cm of plastered chicken wire. The protruded and bulging domes face the sun from one side, and shade the other side, another climate control strategy used in the project.

Stone chips were used as sun-breakers in the southern and western elevations; a technique widely used in Asir in Yemen and some parts in Saudi Arabia. In the summer, the stones shade the walls from the vertical sun; as the sun moves, the elevation changes dynamically over the day. During the winter season, the sun is lower and the shade is shallower, thus heat is retained in the walls warming the building's interior.

Food Production

Fruits and vegetables are bought from local producers. Waste and other food surpluses are transformed into fertilizers, making sure nothing ends up as landfill.

Energy

Solar panels are the main source of energy, especially for the kitchen and the laundry room. Consumption — limited to 16 to 18 kwh — is the equivalent to that of a typical two-bedroom apartment in the capital city of Amman. The need for heating is very limited in this region. However, when extra warmth is required, olive residue is burned in the fireplaces of the lodge, avoiding the annual destruction of four tons of trees.

Water Management

Given Jordan's poor access to water resources, Feynan Ecolodge's water is supplied by a nearby spring, and its consumption is limited for staff and guests.



Case Study 3:

LifeHaus Ecolodge in Baskinta, Lebanon

Thermal Comfort

Earthtubes ventilation system, is integrated to ensure natural ventilation with minimum heat loss. The design also integrates the greenhouse effect and the 'trombe wall' system.

Material

By using natural local low embodied energy material, the LifeHaus calls for old ancestral construction techniques. Rammed clay for the ground replaces extremely high-embodied energy ceramics, hard stone and wooden floors. The use of upcycled and local materials reduces transports, and new building materials production.

Food Production

Organic agriculture and aquaponics: The concept is designed to replace pesticides and chemical manure with a balanced micro-ecosystem that heals and nourishes itself naturally. The system introduces birds, insects, fish, and botanical and mineral pest repellents.

Greenhouse agriculture: Every individual LIFEHAUS is designed to include a greenhouse to produce tropical foods, even during the coldest weather. The greenhouse expands the specter of plantation for a larger variety of edible, healing and air purifying plants.

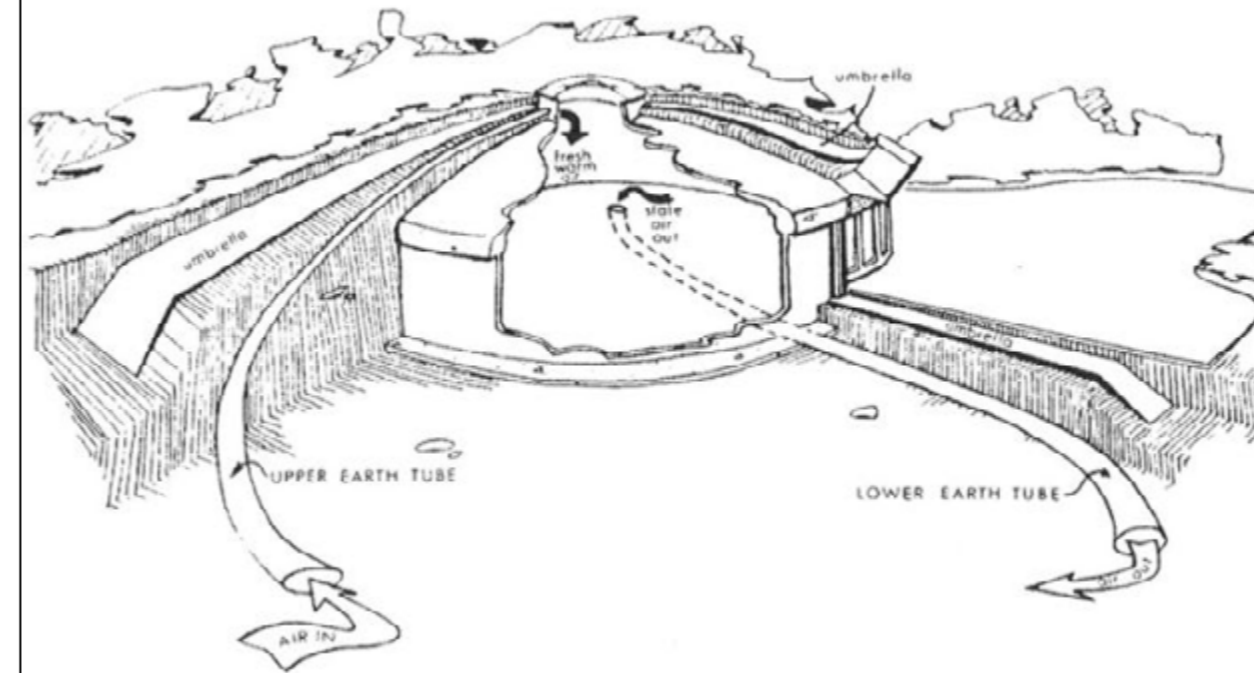
Hydroponics: This system allows a vertical condensed plantation, which reduces the horizontal plantation area, and evades all diseases that arise from unhealthy soil and pests.

Energy

The LifeHaus generates it's own electricity through renewable and sustainable sources: Sun, water, wind and humans energy, in line with passive technologies. (Replacing the microwave oven, electric cook-top, oven and grill with solar powered cooking equipment. Gas or wood-fuel technologies should only be used as backup. The use of a hand-pump, or a solar or wind powered pump instead of an electric water pump to move rainwater to the upper water tank.)

Water Management

Rain water collected from the roof, then stored in a tank, then it is filtered water to be used in showers and sinks. Grey water which is rich in nutrients and minerals is used for the irrigation of interior botanical cells. The excess of water used in the botanical cells will feed the toilet flush, to become black water. Black water is then treated in the the septic tank, to separate the solids and liquids. After filtration, it is used in irrigation.



	FOOD PRODUCTION	THERMAL COMFORT	MATERIAL	ENERGY	WATER MANAGEMENT
FINCA TIERRA ECOLODGE Province of Limon, Costa Rica	Organic gardens supply most of the produce and products Farm-to-table meals Sustainable agriculture and agroforestry		Bamboo and leaf thatch kitchen A dining area with a mud oven	Solar energy Gravity-fed water supply	Closed loop nutrient cycle Harvest both rainwater and natural spring water
FEYNAN ECOLODGE Dana Biosphere Reserve, Jordan	Fruits and vegetables bought from local producers Food surpluses are transformed into fertilizers	Bulging domes face the sun from one side, and shade the other side Stone chips were used as sun-breakers Low thermal bridging	Roofs were made of two layers of Ferrocement sandwiching straw bales in-between	Solar panels When extra warmth is required, olive residue is burned in the fireplaces Energy consumption of the whole lodge is equivalent to that of a 2 bedroom apartment in Amman	Water is supplied by a nearby spring
LIFEHAUS Baskinta, Lebanon	Organic agriculture and aquaponics Greenhouse agriculture Hydroponics	Earthtubes ventilation system Greenhouse effect Trombe wall system	Rammed clay for the ground Use of upcycled and local materials	Solar powered cooking equipment The use of a hand-pump, or a solar or wind powered water pump	Rain water collected then filtered to be used in showers and sinks Extra water after botanical cells will feed the toilet flush, to become black water Goes to septic tank to be treated and filtered to be used in irrigation





To conclude the case studies, each dealt with sustainability and ecological strategies in a similar way yet varied with the **change in climate and context**. So the pink would be how each of them *programmed the landscape*, the brown would be the *architectural ecological strategies* used, and the grey would be how *architecture and landscape ecological strategies came together* such as the use of straw bales for the roof in Jordan or bamboo for the kitchen in Costa Rica, as well as harvesting rainwater to be used in plumbing services and irrigation, through filtration.

After that, I went to study the different natural characteristics present in my site. We can identify 4 different Ecological Landscape Associations (ELAs),

"ELAs are spatially articulated units identified by associating landform, land use and/or cover, which then serve as the building blocks for context specific design interventions."

Jala Makhzoumi

The 4 identified Ecological Landscape Associations(ELAs): 1940s - 1975

-  NATURAL LANDSCAPE
-  AGRICULTURAL LANDSCAPE
-  HOTEL'S GARDEN
-  LEISURE/COMMERCIAL LANDSCAPE



This leads to dividing this site into different **landscape character zones**, similarly to the zones Dhour Choueir was divided into, so we have the **Natural Landscape Zone**, then the **Cultural Cultivated Zone** in the middle which contains the agricultural terraces and the previous restaurant seating area, then we have the **Cultural Architectural Zone** that contains the building and the garden area around it.

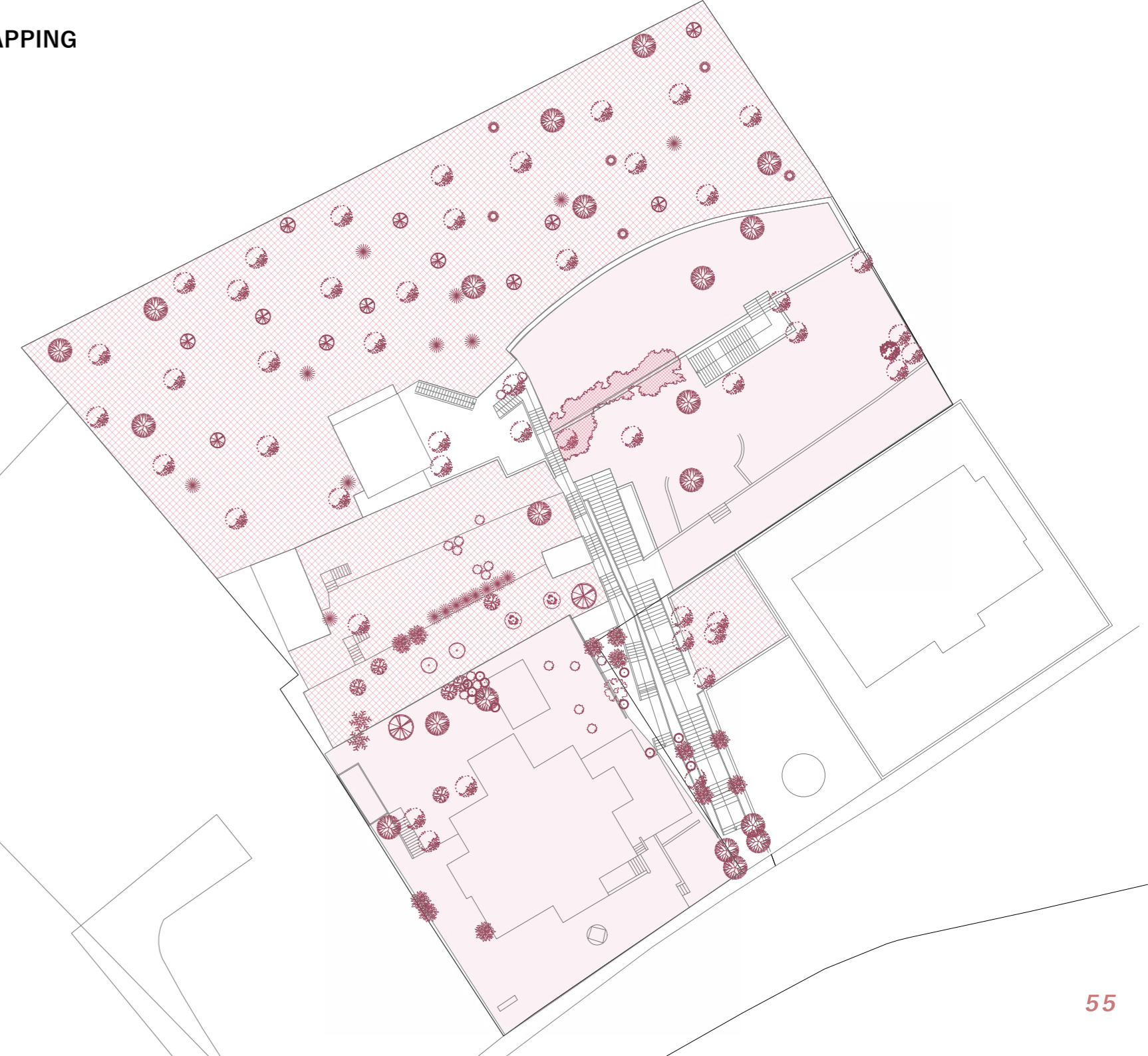
LANDSCAPE CHARACTER ZONES OF MY SITE



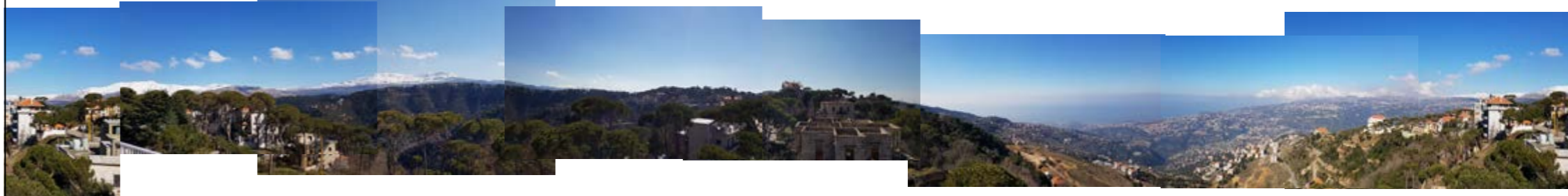
LANDSCAPE TYPOLOGY MAPPING

Here is a detailed **landscape typology mapping** for the site, which shows the location of each type of plant. The scientific name for each is on top and the common name is in bold below it. So, the site has oak and pine trees, in addition to a number of fruit trees that are famous to grow in the Lebanese mountains such as **olive, black mulberry, fig, cherry, and apple trees**, which helps understand what type of flora the site is familiar with.

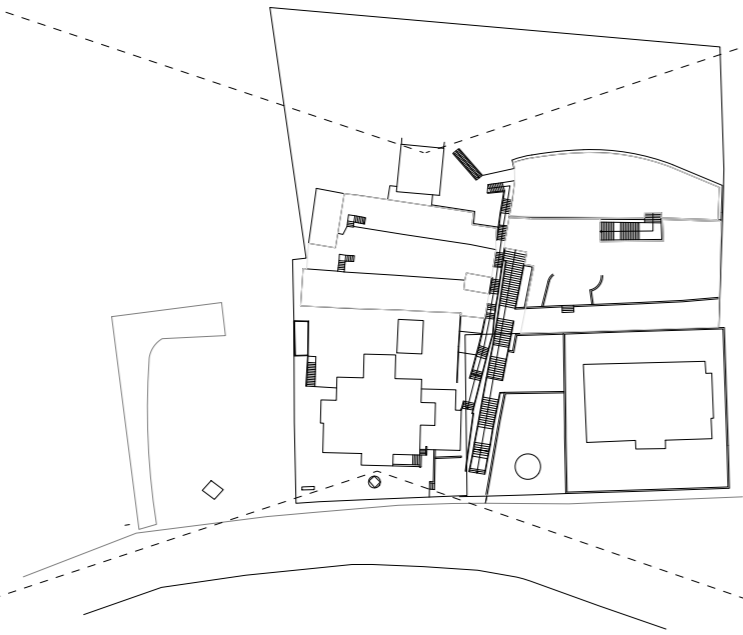
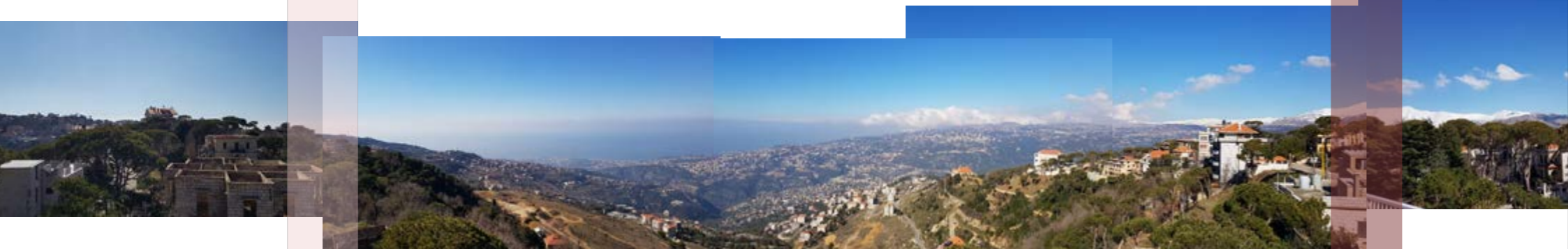
-  ATHYRIUM FILIX-FEMINA
LADYFERN
-  CUPRESSUS SEMPERIVENS
MEDITERRANEAN CYPRESS
-  ROSA AGRESTIS SAVI
FIELD BRIAR
-  QUERCUS SUBER
OAK
-  NERIUM OLEANDER
OLEANDER
-  OLEA EUROPAEA
OLIVE
-  PINUS PINEA
UMBRELLA PINE
-  RUBUS PHOENICOLASIUS
WINE RASPBERRY
-  MALUS DOMESTICA BORKH
APPLE
-  PRUNUS Cerasus
MORELLO CHERRY
-  JUNIPERUS COMMUNIS
JUNIPER
-  ARBURUS ANDRACHNE
GREEK-STRAWBERRY
-  MORUS NIGRA
BLACK MULBERRY
-  HEDERA HELIX
IVY
-  FICUS CARICA
FIG
-  PRUNUS DULCIS
ALMOND



360° Views Around the Site



VIEWS FROM THE SITE

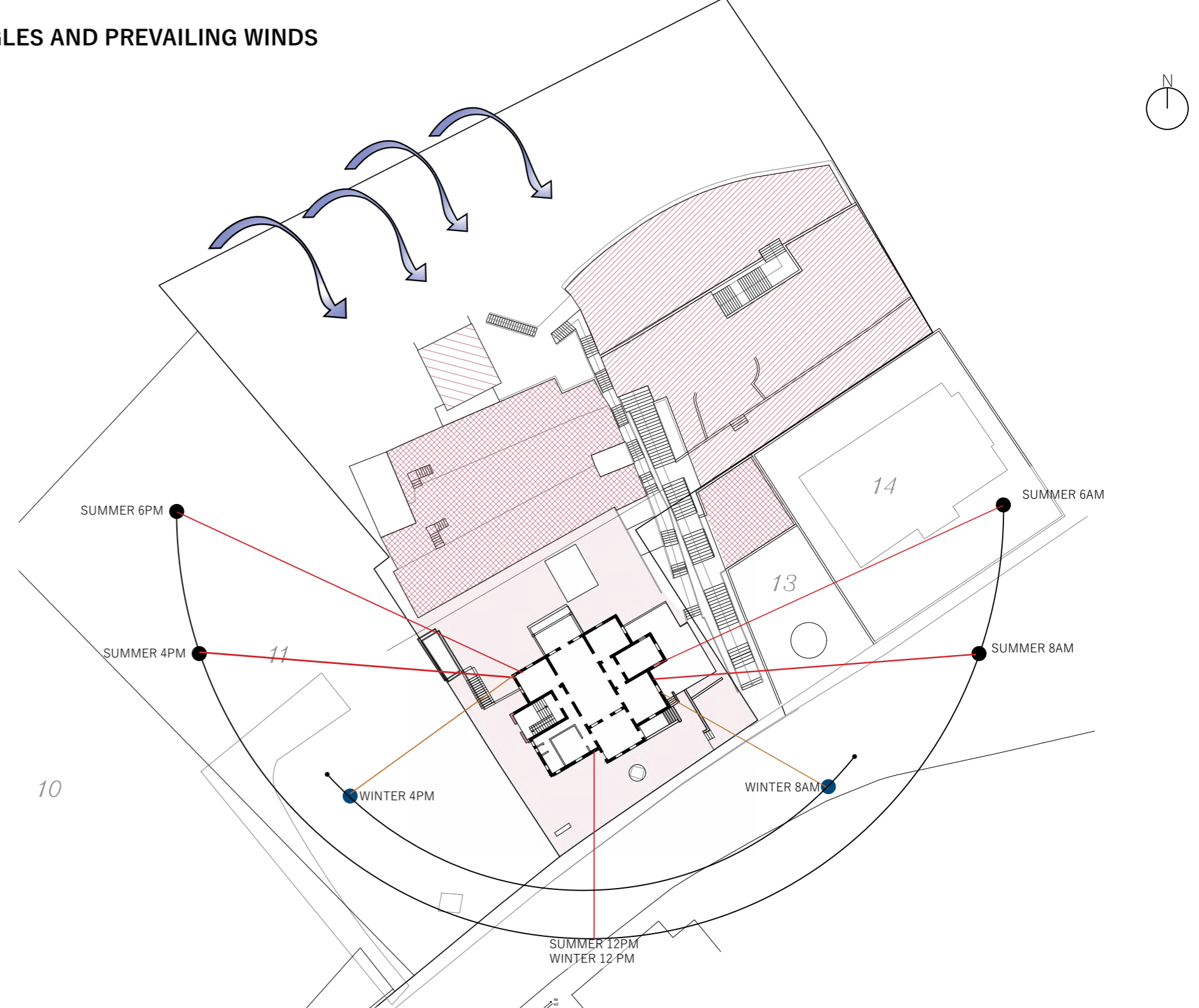


STRATEGIC VIEW POINTS



Here we see the prevailing winds and summer and winter solar angles on the site.

SOLAR ANGLES AND PREVAILING WINDS



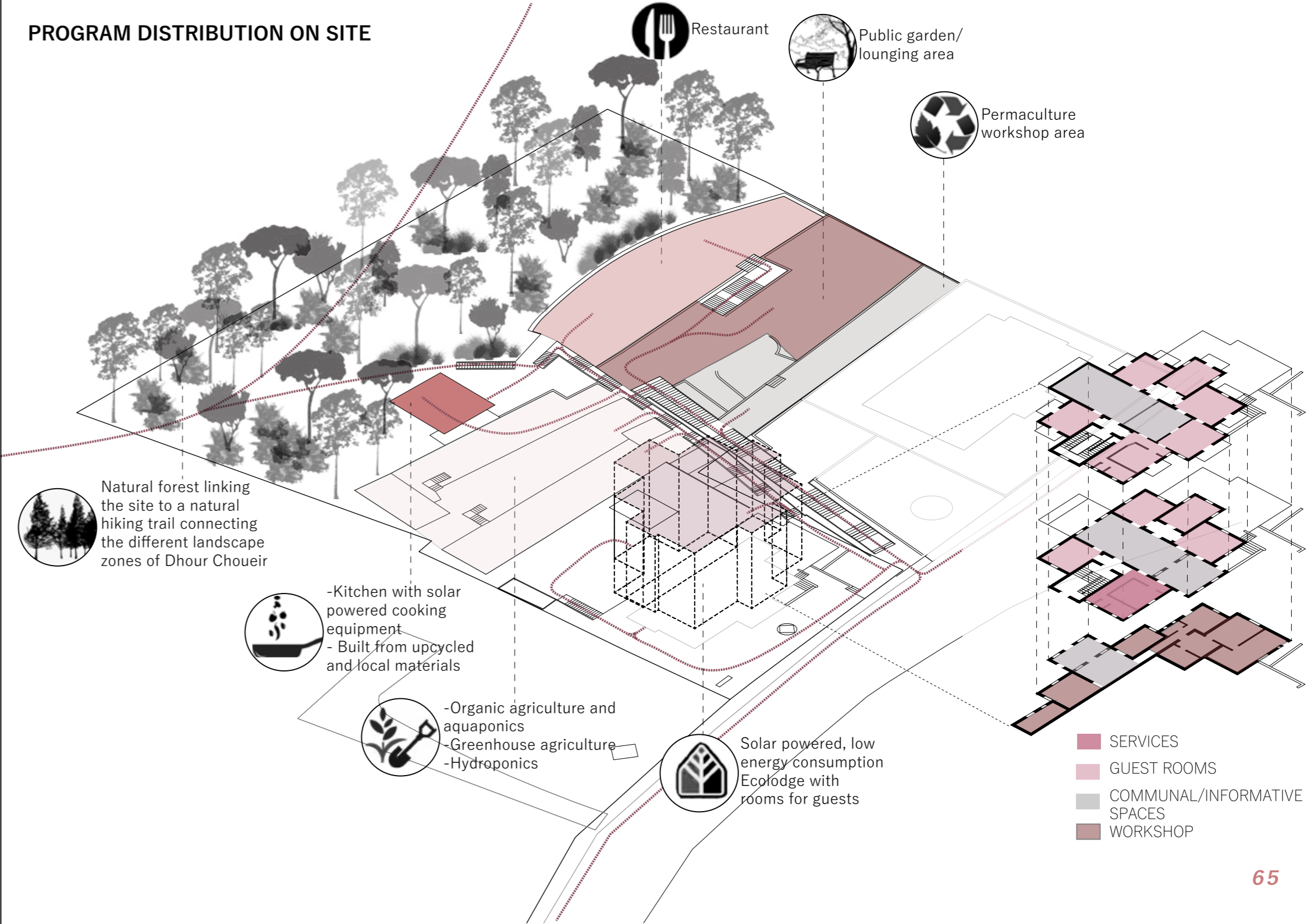
However, different from the case studies above, my site contains its various **layers of history** that I cannot neglect. Acknowledging the site's historical layers and **conserving what is already present** rather than interrupting a new ecology, is in itself the beginning of **ecological design**. So the previous layers of history, will be joined with the added layer of sustainability through adopting ecological architectural and landscape design strategies to create this Ecolodge.



Learning from different Ecolodges in different climates, the site will host different programs that help achieve sustainability such as the **solar powered ecolodge** that has rooms for guests and where **informative workshops** and presentations can happen, the terraced land that will have different **agricultural practices**, the kitchen that will be built from **upcycled and local material** and will also function on **passive forms of energy**, the **natural forest** that links to Syrine's natural trail which is a secondary access to the site, a restaurant, a public garden, and a permaculture workshop that overlooks all the different activities happening.

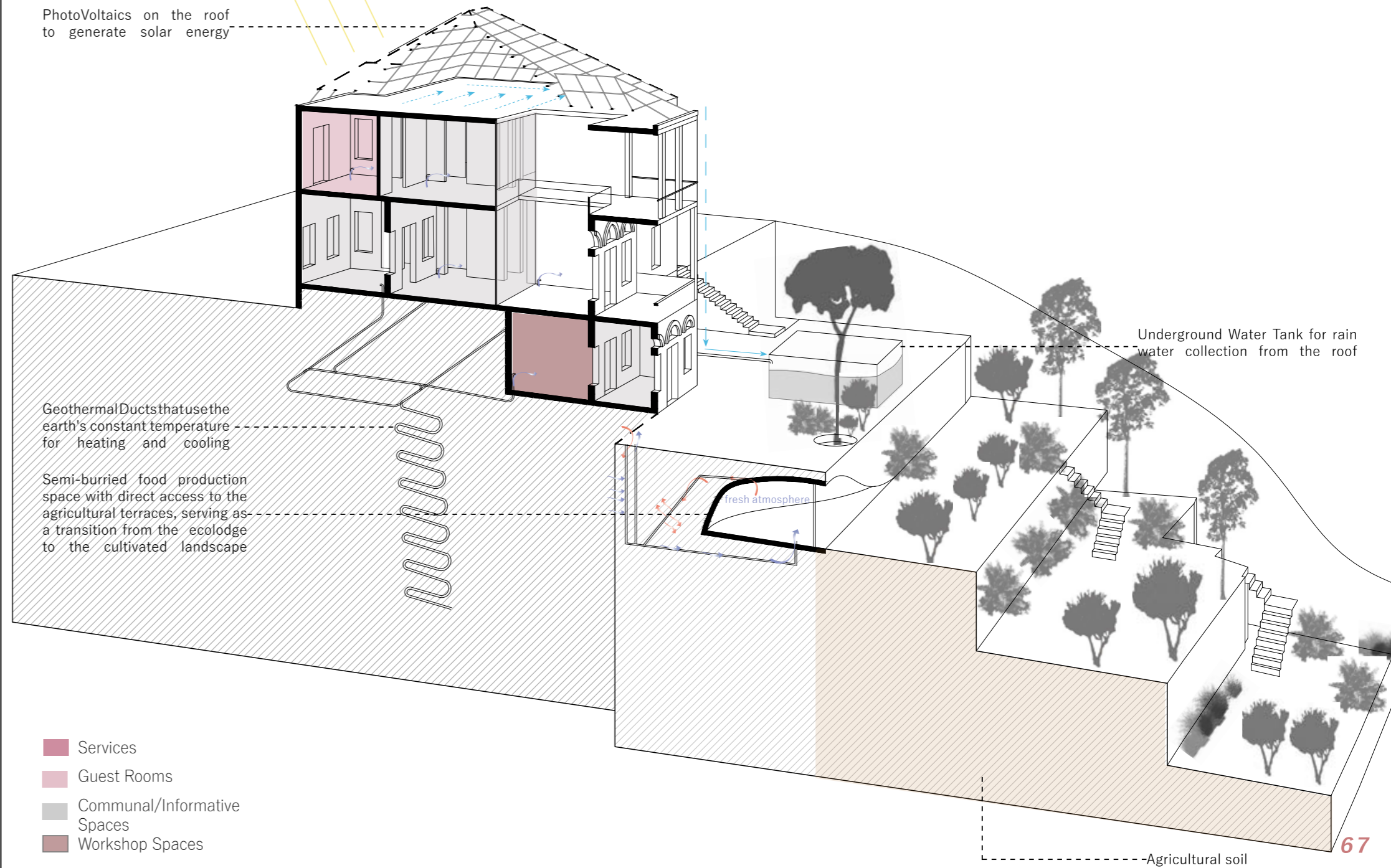
Some zoom in moments showing some of the activities that will take place that will create the self-sustainable Ecolodge that incorporates **permaculture principles** to promote sustainable lifestyle.

PROGRAM DISTRIBUTION ON SITE



Here is a more detailed section of how the **technical sustainability strategies** can be integrated into the structure. **PhotoVoltaics** on the roof to generate solar energy. **Geothermal Ducts** that use the earth's constant temperature for heating and cooling

SITE SECTION DESIGN STRATEGY



Then I went further into **continuity and change** to see how this theme can be explored beyond what already exists on site. To see how continuity with the past, and continuity and change with nature can come together to create an extension to the existing site.

**Continuity and Change
with the Past**

Conceptual Links

Physical Links

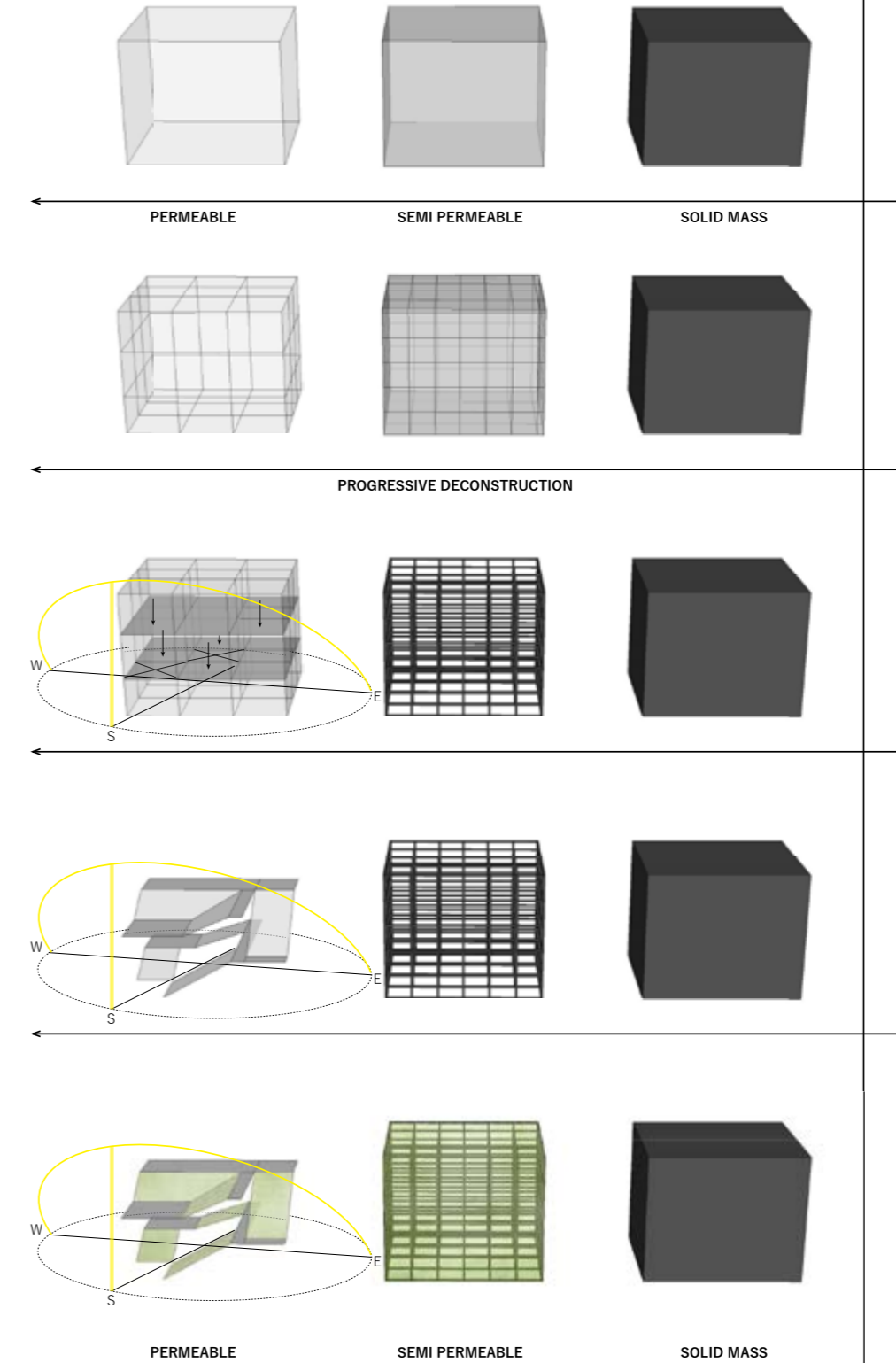
Programmatic Links

Temporal Links

**Continuity and Change
with Nature**

Starting off with an abstraction of the *stone central hall*, to see how it can *progressively evolve* into a relatively more *transparent structure* that adapts to the natural agricultural needs of plants. This deconstruction happens in phases. The first phase is through abstracting yet respecting the formal characteristics of the existing central hall, where plants start to adapt to the form of the architecture. The second deconstruction continues to transform into a structure that will be shaped by the plant's needs, which we will see clearer in this diagram. Therefore, my concept is based on typological explorations from a solid, to a semi permeable structure that respects the original form but slowly starts to lose the *solid envelope*, and finally to an open, completely *permeable landscape*.

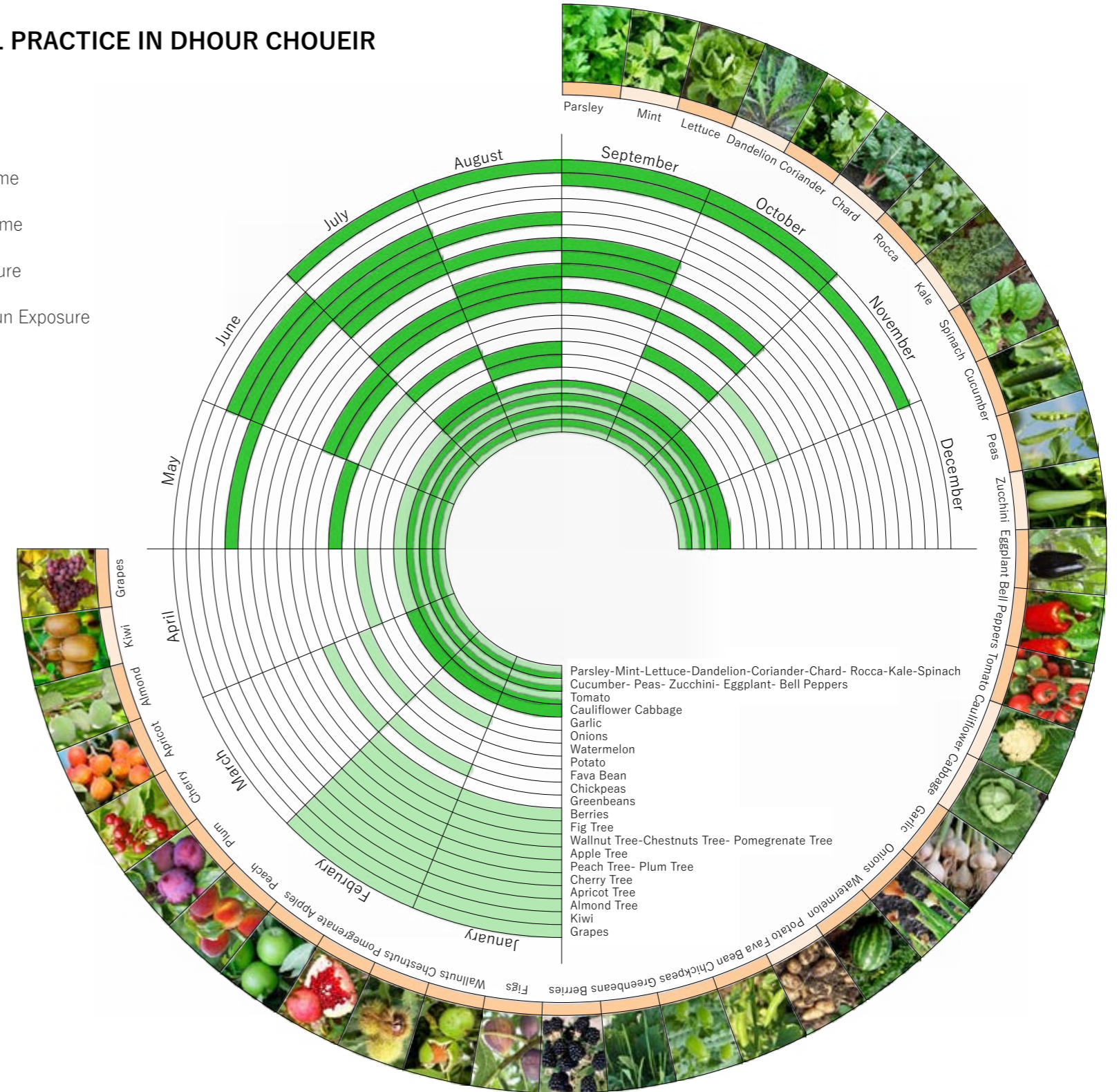
PROGRESSIVE DECONSTRUCTION



Here we see a diagram showing the types of fruits and vegetables that grow in Dhour Choueir, sorted by height, to show which plants grow higher than others. So the parsley is the lowest, to reach the grape vine which is the highest. In addition to the **ideal planting time** of each in light green and the fruit and vegetable **harvesting period** in dark green. So for example if we take the grape vine, you can harvest it from July to October, whereas kiwi is harvested between September and November. In addition to the layer that you can see below the images of the plants that indicates which of them requires the most sun exposure, and which ones prefer the shade.

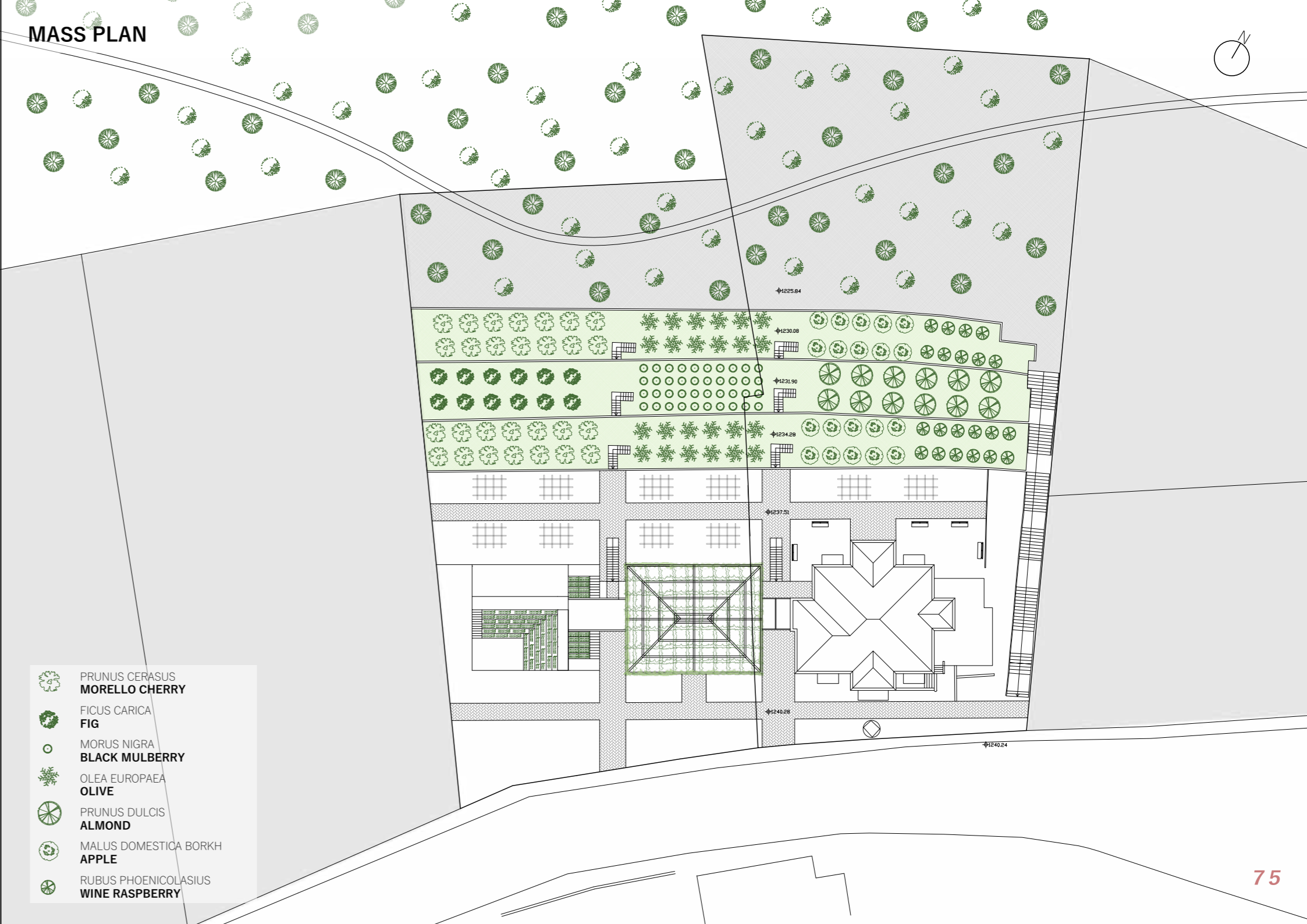
AGRICULTURAL PRACTICE IN DHOOR CHOUeir

- Ideal Harvest Time
- Ideal Planting Time
- High Sun Exposure
- Medium-Low Sun Exposure



The mass plan shows the overall site strategy where the progressive evolution is represented in 3 structures that coexist and are connected through a spine that goes through the 3. The first building is the **existing central hall**, that will be the ecolodge with guest rooms and communal spaces. The intermediate structure would host the **vertical public garden**, in addition to the **main circulation core**. The third structure is a series of **small scale experimental terraces** that would serve as a learning and research space for the seasonal mountain landscape. It would serve as a small scale demonstration of what can be cultivated and when in the agricultural terraces below. The breaks between the 3 structures are projected onto the rest of the site to continue and be the circulation. These circulation strips lead you to a market space located on the level between the architecture and the agricultural terraces, to exhibit and sell the site's agricultural produce. The legend on the left shows what are the types of trees will be planted where, and were chosen from the diagram seen previously.

MASS PLAN



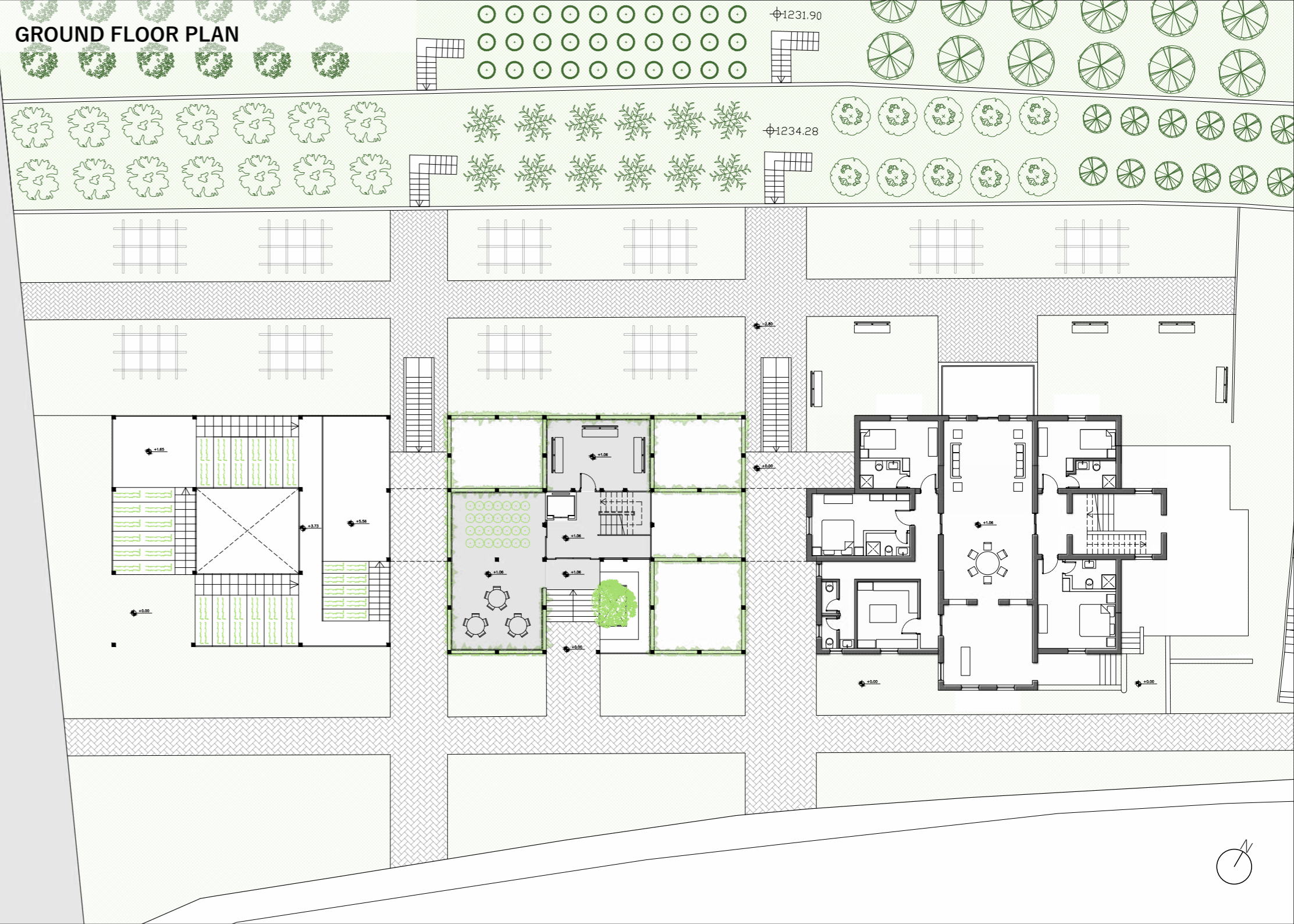
-  PRUNUS Cerasus
MORELLO CHERRY
-  FICUS CARICA
FIG
-  MORUS NIGRA
BLACK MULBERRY
-  OLEA EUROPAEA
OLIVE
-  PRUNUS DULCIS
ALMOND
-  MALUS DOMESTICA BORKH
APPLE
-  RUBUS PHOENICOLASIIUS
WINE RASPBERRY

In this section, the *degradation from solid to transparency* can be seen, in addition to the circulation between the 3 structures. The semi permeability in the intermediate structure is caused by the green vine envelope that adapts to the form of the architecture and grows on the steel structure. In the third structure, transparency is further achieved by losing the envelope completely and to shaping the structure into one continuous surface that meets the ground in the end so people leave the project through a learning experience. Also, water pools collect water below since the platforms in this structure are perforated steel which is permeable to water. It is important to note that the way each plant grows is important. So tomatoes for example grow relatively higher than others, so they cannot be placed in front of shorter plants, as shown.



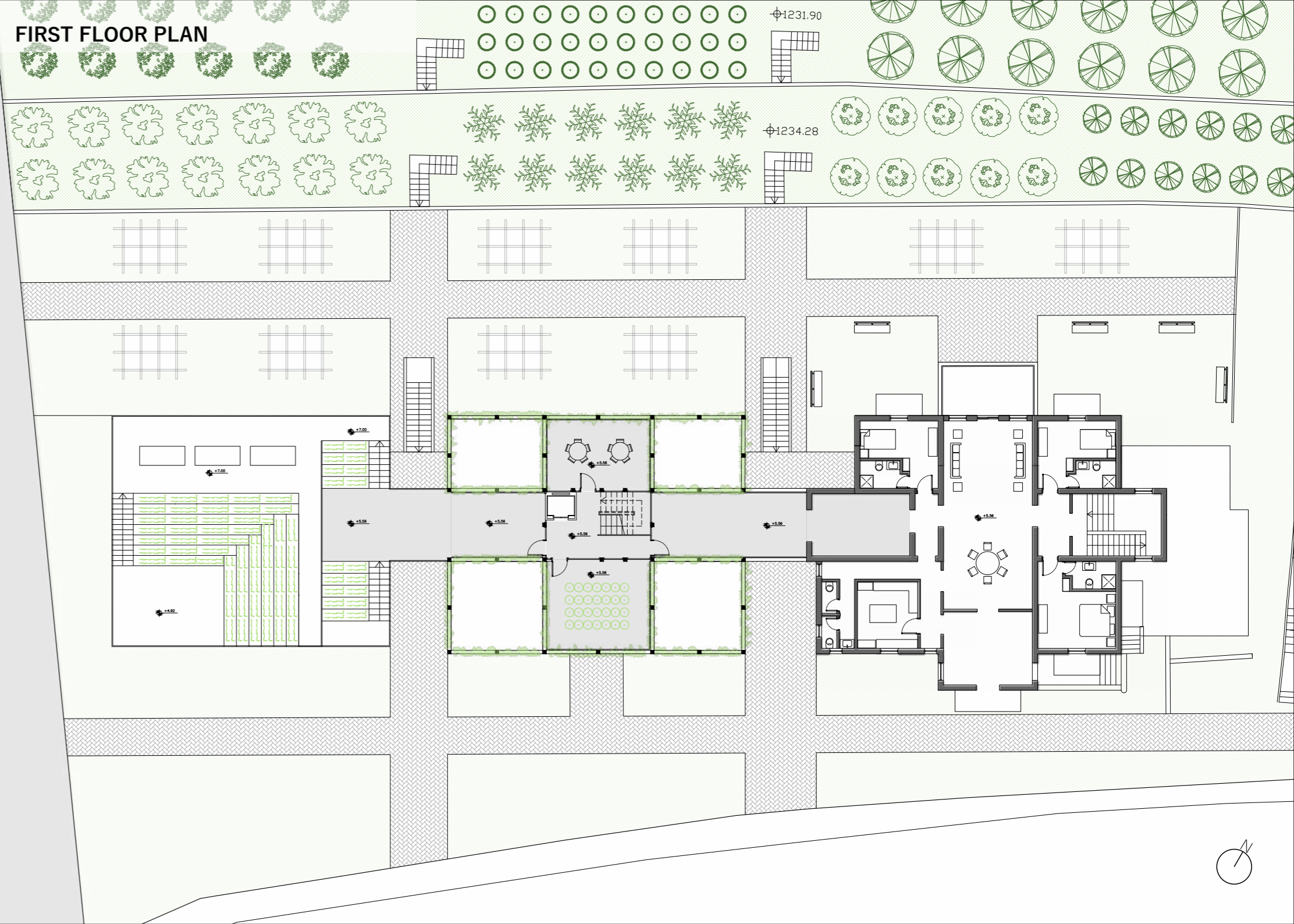
In this **ground floor plan**, we can see the main entrance to the project which is through the intermediate structure and we can see the program distribution clearer, so we have the guest rooms, in addition to communal spaces for workshops or orientations. Then we have the public vertical garden with platforms at different levels with different configurations. The platforms in grey are the accessible ones. And in the third structure we can see the small scale experimental terraces adjacent to the circulation which is placed on the side where it does not interrupt the solar radiation that reaches the plants.

GROUND FLOOR PLAN



In the **first floor plan**, we see the **horizontal connection** between the 3 structures. And also the difference in the envelope treatment of each can be seen. The vertical core takes you up to all the levels of the structure and horizontal circulation between the 3 happens at either the ground floor externally or through the bridge connection at the first floor.

FIRST FLOOR PLAN



Here is a *bird's eye view* to show the project in its context and we can see how the solidity of the material progressively changes between three.



Here is a *view from the agricultural terraces* below looking onto the 3 structures to show that I am bringing forward the evolution that stems from a solid mass that is vernacular architecture to eventually reach the final transparent structure.



Here are some *moments from within the project*. The first one is the entrance through the intermediate structure, to show how the vines grow on the steel structure and create this sort of green barrier that is semipermeable. So it is as if a translucent wall that lets in light and air, yet obstructs clear vision through it

The second moment is from one of the platforms of the public vertical garden where we can also see the green vine.

And finally the third is a view from the connection going from structure 2 to structure 3 and we can see the plants are placed strategically, in addition to its permeability, whether on the level of the structure itself or of its material.





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