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UNDERGRADUATE CAPSTONE PROJECT IN LANDSCAPE ARCHITECTURE

SUBMITTAL FORM

BEINI W BEINO

by

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Rural Tourism for Sustainable Development in Beino, Akkar

Tina El Chaer Landscape Architecture Final Year Project 2016

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1.1 Overview

My hometown Beino is located in the uppermost northern extents of Lebanon; 124 km from the city of Beirut and 40 km from the city of Tripoli in the province of Akkar. It sits at the foothills of the northern Lebanese mountain chain then slides down to a valley between two mountains.

The higher mountain being the natural reserve of the Deputy Prime Minister Issam Fares at an altitude of 700 meters and the lower mountain at an altitude of 650 meters that holds the Orthodox Monastery of the area and the grave yards of the village. The neighborhoods and the houses stand at an altitude of 550 to 650 meters.

The location of the village, with two mountains guarding it from the east and west, has helped shelter the village from strong winds, winter storms, heat waves and so on. Figure 002. Longitudinal Section 1:2600



1.1

Figure 003. General Base Map 1:65000

Two streams pass through the village to later meet and continue their flow in the valley's river, "Nahr El Ostwein", "نهر الاسطوان". The location of Beino along with these conditions, gives it a moderate climate in both winter and summer.

Beino occupies an area of about 9 square kilometers where only 20 percent of it is built as residential space. The remaining 80 percent is divided between forested areas and agriculture. The village overlooks a series of hill tops outlined by the agricultural fields and the agricultural terraces.

Beino is a perfect-picture example of how man and nature can intervene in a manner that allows each to grow and prosper, giving each their needs, with enough personal space for both to live in co-existence.

1 THE VILLAGE

1.1 Overview



1.1

Overview

Figure 005. Zoning Map 1:65000

Beino's first settlements are found next to the streams in the southern part of the village and expanded outwards through time. Nowadays Beino holds around 600 to 700 residents distributed between various neighborhoods still in the southern outskirts.

Future expansion is expected to be on the northern hill tops due to the construction of The University of Balamand - Issam Fares Faculty of Technology that gave hope to the villagers to stay and invest in their own village.



Beino was established in the Phoenician Era where its name refers to «the goddess of beauty». The village then increased in population during the Roman Period and evolved to become the center of wheat storage in Akkar because of the abundance of wheat plantation. Beino continued to prosper in time until it had its first upheaval in architecture in the 1600s, dominated by the Lebanese Central Hall Villa also known as "*ic_ue*". It also grew in wheat production where agriculture constituted the main economic income.

The village reached its golden age in the early 20th century where the population reached almost 5000 residents that were exposed to various professions such as carpentry "نجارة", silverware "نجارة", and tailoring "خياطة". The economy was still based on agriculture and a 1.5 kilometer market developed through the village. It was considered as an international commercial and industrial market in the area that was based on wheat and wool production, vegetable and fruit trading, and artefacts manufacturing. In addition to the market, there were different activities along the stream from coffee places, picinic places and restaurants.

The village continued to progress until the start of the 1975 civil war that changed all circumstances and let the people live in fear. Beino then witnessed a high immigration rate. The streets and houses were drastically abandoned and the market started shutting down gradually. The streams were drying because of upstream drilling of wells consequently agriculture practices decreased and the remaining villagers depended on their migrated family members for income.

Beino remained this way until the establishment of Fares Foundation in the early 2000s that gave hope to the people by constructing a medical center, and giving out donations. The Foundation also at that time launched the natural reserve and the lake in order to distinguish Beino as a touristic attraction. Since then the village rejuvenated until it reached around 700 residents today. Another reason to keep the people in their hometown and take care of their homegardens as main sources for food is The University of Balamand - Issam Fares Faculty of Technology that was established few years ago. Unfortunately, they still depend on



1 THE VILLAGE

1.2

Timeline



The landscape in Beino mainly includes two forested areas, the natural reserve and the monastery hill. The two hills hold the living spaces in between and slide down into terraces for olive tree plantations. Further down the hill sides, the landforms change into an easier and much flatter slope making it suitable for agriculture and additional olive groves.

Along the eastern stream there is minimal human intervention hence the landscape remains intact and preserves its natural form and diversity. The vegetation around the stream is the only remaining riparian vegetation in the village due to close construction on the western stream.



olive & almond terraces



agricultural fields



natural vegetation

1 THE VILLAGE 1.3

Landscape Character







2 THE COMMUNITY

2.1 Neighborhoods



2 THE COMMUNITY

2.1 Neighborhoods



Figure 009. Neighborhood Noise 1:12000

There are three main neighborhoods in the village. "Haret El Slik", "autor of the oldest and the largest residence. It is considered as the village center because it intersects with the old market, holds almost all the recent activities in Beino, and lies between the two streams. It has around 60 households with 200 residents; mostly the elderly and the youth.

The second largest neighborhood is "El Biyatra", "بيباطرة" that is located upstream and is closest to the lake and the reserve. It has almost 40 households with 100 residents and considered as the recent living space for young adults such as the professers for the Faculty of Technology.

"Haret Abboud", "مارة عبود" with 20 households and 50 residents is characterized as the urban sprawl in the village for current families.

Noise in the village is propagated depending on each denisty but the area around the stream remains buffered because of the natural reserve and the natural vegetation that surrounds the stream.



People

Immigration formed the most important factor in the advancement of Beino both economically and socially. The huge income earned by expatriates enabled them to own land in the village, and increase interest in the education of their children. The immigrants then grew up to become doctors, lawyers, engineers and business men.

The locals, on the other hand, resumed with their traditions from cultivating olive trees. This plantation and cultivation became a great financial support for the people of Beino, where they started investing in olive oil mills and presses.

Today, production still exists but has decreased in comparison to the old days, due to the lack of care and investment in the olive tree plantations that surround the village or infestations that had raided the fields without ever being cured.

People live on what they produce in their own gardens from fruits and vegetables to later produce home products such as pomegranate molasses, jams, dairy products, etc. They also work on simple hands-on jobs like sewing or cobbling.





people from Beino

2 THE COMMUNITY

2.2

People



olive picking

herb grinding

bread baking

2.3

Activities

Beino villagers spend their time doing different activities depending on their age group. After school, children spend their afternoons studying and playing at home as there are no appropriate outdoor spaces in the village for children to gather and play together.

Young locals spend their free time hanging around the neighborhoods, on the streets and around the unused village square, which is mostly used as a parking. The reason these young locals have remained in Beino is the presence of the University of Balamand nearby, which they attend.

Older villagers spend their extra time taking care of household chores and making preserves. For example, they look after their home gardens and farm animals, and make products such as pomagranate molasses, olive oil, jams, etc.

The only remaining church goers, on sundays and during the week, are the eldest villagers who are still rooted in their religious beliefs.







village square





Historically, Beino's market emerged from the meeting point of the two streams that run through the village. It was a 1.5 kilometer space that was considered as an international commercial and industrial market in the area that was based on wheat and wool production, vegetable and fruit trading, and artefacts manufacturing.

Market

Before the 1975 civil war, the market was a dynamic and successful space of exchange that generated an important income for the village. However, after the civil war, most shops had closed down, leaving only a handful still running. Therefore, the village's economy started depending on foreign income instead of the market and with less communication between the villagers, their relationships started breaking down bit by bit creating a disconnection between families. Nowadays, as the village is rehabilitating, there has been a shy attempt at reopening the market, with only a few shops up and running.



meeting point souk streams

2 THE COMMUNITY

2.4

Market

Figure 011. Market Timeline 1:3000 🍐



3.1

Until the 1960s, because of the abundance of springs, the two streams that run through Beino were considered as the main water source for the village. The water was used for agriculture and for generating the wheat mills, hence contributing to the economy. There were also some interventions along the river that generated income.

History

During the 1975 civil war, different villages upstream dug wells due to the fear of lack of water, what made the streams dry up, as previously mentioned. As the streams dried up and faded away, so did the vibe and pulse of the village and its residents.

The construction of the lake in the 2000s brought back some hope & income by attracting tourists; the villagers then got back to some simple daily activities like opening minimarkets and bakeries.

The two streams remain till now seasonal; dried up in summer and flooded in winter; which makes it hard for the people to use the water on daily basis or for agriculture. Instead, the people use water provided by the municiplaity to manage their house gardens. Some water traces still do exist like little ponds and springs running in the main stream bed.



stream remnants





Timeline



Late 1980s	Today
Dry river Water wells upstream Immigration wave Activities shutdown Agriculture minimized	Fares Foundation Lake & Reserve Tourism
	Late 1980s Dry river Water wells upstream Immigration wave Activities shutdown Agriculture minimized

Figure 012. Stream Timeline

3 THE STREAM

3.2 Experience

Figure 013. Stream Landscape Typlogies 1: 10000



THE STREAM

Experience

The walk along the stream is a diverse experience. It starts at a man-made space, the lake, where one can workout or just walk around it while observing the reserve from down low. Further down the stream, the experience changes into a natural atmosphere where one can enjoy the planted terraces on the left side of the stream while walking inside the stream bed.

The rocky hills on the right side in addition to the richness of the vegetation, give the feeling of enclosure and seclusion. Continuing the walk, one can get to observe historical elements along the stream such as ruins of old mills, swales carved inside the mountain that were used to divert water for irrigation, and an ancient wall that is used as bridge connecting the village center, "Haret El Slik", "out of "Haret Abboud", "suce" At the end of the experience, one gets to olive groves or open fields that were previously used for the wheat plantation.



Sections

The stream is around 550 meters long and drops 80 meters to occupy a slope of about 14 percent. It flows in the northwest direction to meet the other stream passing through the village.

The stream width varies in and depth from to another. one part The canalized parts range between 4 to 6 meters in width, 3 to 6 meters in depth and change between rock or concrete material. On the other hand, the natural parts range between 4 to 8 meters in width and 4 to 6 meters in depth.

The lake is 128 long and 16 meters deep. The water is let occaisonally into the stream when the lake overflows. The lake also contains a variety of fish.



Figure 014. Longitudinal Plan & Section 1:1500



3.3 Sections



river flow NW



3.3 Sections



3 THE STREAM Sections

3.3

Figure 017. Section C-C 1:350





road connecting lake to village center



road connecting north neighborhood to village center bridge over the stream



3 THE STREAM

3.4 Connectivity





indirect vehicular connection



direct pedestrian connection

4 EXECUTIVE SUMMARY

Issues

4.1

There are several issues concering the changes in Beino. The main ones are summarized as the following:

1 Immigration

Ever since the 1975 civil war, an immigration wave appeared in the region where villagers left their hometowns to pursue a better future either in the city or in foreign countries. This lead to a huge decrease in Beino's population: 5000 residents pre-war to 600 residents postwar. Since most of the facilities shut down during the war, people had no more future in the village itself and instead of staying there to bring it back, people decided to leave.

2 Less Income Generation

As a consequence of this immigration, Beino lacks the consumer profile for the villagers to sell their products to. The people of Beino depended on their home-made products from reserves to artefacts in order to receive income and survive. The market shutdown affected this aspect since the villagers started depending on the income of their migrated family memebers. The shutdown also affected the people's mood and connection towards the village.

3 Weak relationships

Under the circumstances of the abadonment of the market, relationships between the people decreased. Lack of trading and marketing between the villagers lead to a kind of disconnection in the village. People had less common interests and less mutual relationships to maintain. Thus creating a kind of individual living. Families taking care of their own homes and own homegardens disregarding other families. Project Statement

The aim of this project is to revitalize Beino as well as the livelihood of the people by changing the village into a touristic attraction.

Integrating tourism with this project will draw people into the village; thus opening doors for economic uplift and regeneration by marketing the local products already present but hidden in the village.

In order to attract the people, different paths will be designed, each with a different experience. Hiking and biking trails, walks through nature and even through the village will be organized.

The different events passing through the reserve, the stream or through the market will open opportunities for the tourists to discover Beino and the part of its remaining history, as well as enhancing the sense of belonging of the villagers.





I HIMA

The Arabic term "Hima" signifies the land in which grazing and tree-cutting is prohibited. Dating back to the pre-Islamic era and practiced by Arab tribes, it is a traditional system of preservation and management of particular lands. The concept of "Hima" changed according to areas; while some prohibited grazing, others were only designated to protect trees and water catchments. (Rhea Henri Salwan, 2005) Nowadays, the term "Hima" is also recognized as an "embodiment of community-based conservation" (Makhzoumi, 2012). It involves efficient management and sustainable practices by the community; ensuring nature preservation. The concept of "Hima" acts as an alternative approach to state- owned landscapes. The revival of this concept reestablishes the dialogue between the people, their rural heritage and their right to ownership.

For example, the community of Ebel-Es-Sagi, a village in Southern Lebanon, has raised the issue of the woodland protection to international organizations, such as ESCWA and UNIFEL, along with landscape architect; Jala Makhzoumi. The pine woodland is described as the most important landmark of Ebel-Es-Sagi, composed of a diversity of tree species, such as Pinus brutia, Pinus halenpsis, Pinus pinea, an oak species and gum. Historically, the woodland belonged to the community; however, the Ministry of Agriculture presently manages it. As a landscape architecture project, it was essential to preserve the pine woodland as a wildlife habitat in and to improve the local community's economy by integrating activities; encouraging local awareness of environmental issues (Rhea Henri Salwan, 2005).

Figure 022. Schematic Concept for Hima Ebel es Saqi (Jala Makhzoumi, 2012)



This holistic approach includes an Ecological Park master plan, aiming to develop the local inhabitants' economy and to enhance their appreciation to their land.

Hima Ebel el Saki holds three significant zones identified as important landscape character zones. The zones (figure 1) are characterized respectively by a pine woodland, a rocky outcrop and the Hasbani riparian ecosystem (Jala Makhzoumi, 2012).

While promoting sustainable management, the Ecological Park master plan includes an "Ebel Market" and a multi-use activity area; promoting Ebel El Saki's traditional and rural heritage, while also enhancing the engagement of the local community to the Hima (figure 05). Therefore, the "Hima" approach considers ecological appreciation, promotes economic opportunities, and re-connects the local inhabitants to their cultural heritage. Figure 023. Ecological Landscape Character Zones (Jala Makhzoumi, 2012)


II RURAL TOURISM

Rural. touristic attractions exist as multidimensional programs which highlight the cultural, ecological and/or historical heritage of small-scale settlements; primarily populations maintaining low densities of less than 10,000 residents. Towns or villages associated with rural tourism generally characterize cultures inclined towards traditionalism; being strongly correlated with conventional heritage. (Kiper & Zdemir, 2012) While rural tourism plays an important role in the preservation of ecological and/or historical heritage, cultural values are essential in the expression of rural tourism. The relationship between natural settings and cultural values is prevalent in rural areas; being revealed through slow-growing, organic processes.

This natural-cultural relationship may be evoked through different methods within the scope of rural tourism, such as eco-tourism, recreational tourism and farm tourism; each portraying different aspects of the rural landscape and people. Programs and activities, which may exist as touristic attractions in rural settings, include farmers' markets, festivals, farm accommodation, catering, education, campsites, walking trails and cultural displays. (Kiper & Zdemir, 2012)

Rural Tourism as Community-led Initiatives Since rural peoples distinguish superior knowledge of their customs and exhibit close ties to their land, tourism in such areas should ultimately exist as community-led initiatives. Locals being highly involved in the establishment and management of their town's touristic sites is necessary with regard to the impact of such programs on community development. (Kiper & Zdemir, 2012)

Rural Tourism as Economically Beneficial

Locally-led, touristic sites of rural settlements endorse community development not only by further relating people to the cultural, ecological and historical values of their landscape, but also by presenting economic benefits. Rural tourism, especially in the context of areas which have experienced the decay of agrarian practices and resulting marginalization of the landscape, provides job opportunities for locals in the management of the sites, and also produces revenue through site entry fees and the promotion of local businesses. Development of touristic attractions in rural areas should be based upon capabilities of the locals to make use of their potentials for the betterment of their community. Once rural tourism adopts the methodology of integrating socio-cultural, bio-environmental, legal-political and economic aspects; sustainable community development may be accomplished. (Kiper & Zdemir, 2012)

Figure 024. System of Definitions in Rural Tourism Taken from (Kiper & Zdemir, 2012)



6.1 Concept Proposals

Figure 025. Concept Diagram | 1:4500 🗼

SOCIAL NETWORKING

This concept targets different age groups by creating activities along the river and expanding this network to the larger context.

Each activity location will be based on the user group and their corressponding interest. The concept can transform the village into a touristic attraction, contributing to its future economy.



6.1 Concept Proposals

CREATING A PLACE

This concept aims at celebrating the story of Beino by highlighting historical and cultural elements located along the river. Each area will be transformed into a place that people can access from multiple entries to admire and learn about the village.

The different will nodes also multiple functions have based on the seasonality of the river and the proximity the residential to areas.



6.1 Concept Proposals

7

6

5

3-4

2



1

start/end of walking & biking trail reserve entrance ticket booth

2-3-4

trail along historical elements water remnants

5

accessible outdoor picinic place access into village water spring

6

access to village historical wall

7

start/end of walking & biking trail reserve entrance ticket booth historical bridge

6.1 Concept Proposals

Figure 027. Concept Diagram III 1:12000 📣

ECOLOGICAL EXPANSION

This concept aims to expand the borders of the nature reserve already present in the village, to include the riparian habitats surrounding the stream, and opening up the whole area to the public but keeping it as a buffer from the village. Access to the newly joined areas will be provided via pedestrian paths linked to the village's neighboring residential areas.

This approach will also enhance the touristic experience which was previously limited to the area around the lake. Expanding the touristic path to integrate with the village; passing inside the old market; will also help rejuvenate the activities.



6.1 Concept Proposals



Concept Design

6.2

Under the tourism umbrella, the visitor will arrive to the entrance parking to then have the choice to either rent a bike or take a shuttle that would take him around the village, he will also have to choose which tour to take, the reserve, the stream or the town or even have a package.

The reserve trail mainly consists of a hike in a pine and oak forest to reach areas with beautiful viewpoints for the village. And also bird and animal watching at the top of the hill.

The stream trail is a combination of historical elements from old mills and dams that were used to divert water for the agricultural fields. It also contains remnants of the several springs that existed long time ago.

In the town trail the visitor will experience the busy part of the village from the oil presses to the village squares and market also observing the cultural part of the village because it is the oldest settlement.



6.2

Concept Design



6.2

Concept Design



6.3

Design Development



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6.2 Concept Design

Figure 030. Design Development Sketches





6.3 Design Development

Figure 030. Design Development Sketches



6.3 Design Development

Figure 031. Rendered Plan 1:1000





The focus of the design is based in the village center where the streets will change into one way pedestrian friendly roads connecting the different village squares, church squares and market. The design consists of collecting rain water from rooftops and streets in visible channels all connected through underwater pipes to be collected in a retention pond next to the meeting point of the two streams to be later used for agriculture. Now the visible channels on the streets represent the streams that once served as Beino's main water source and that is to highlight the element that was of great importance to the people. The water channel will become wider in the squares for people to interact with and gets smaller again in the market. These channels appear and disappear representing the seasonality of the streams running across Beino now.

Another element of my design is vegetation since its one of the driving elements that will attract the visitors to Beino (reserve, agriculture) so the streets will also be planted along the opposite side of the channel where the water and vegetation meet in the squares, the gathering point, and meander along the market to represent the movement and circulation of people.

6.3 Design Development

Figure 033. Concept Diagram



0. ...

6.3 Design Development



The choice of trees is based on what is used by the villagers to produce their local products from olive oil, molasses, herbs and many more. Each part of the design is planted with a certain type so it can be highlighted as a landmark.

For example, there is first the Zaytoune Square that extends into the Almond and Pomegranate Market that later connects to the Orange Square.

The other part of the design is kept quieter because it is considered as residential hence it is treated differently and calmly. A parking is also provided for the locals but that is also considered as an extension for the church square. Supporting the concept of rain water collection, a rain garden will be formed to collect all water running from the hardscape of the parking to seep into the ground and feed the water table.

Banyoles Old Town Refurbishment







6.3 Design Development

TREE PLANTING LEGEND

	Botanical Name	Common Name	Height/Width
Ĵ	Citrus aurantium	Orange Tree	5m/3m
O	Punica granatum	Pomegranate Tree	5m/5m
A ANA	Prunus dulcis	Almond Tree	5m/5m
	Olea europaea	Olive Tree	5m/5m
C.J	Melia azedarach	China Berry Tree	8m/8m
and a second and a second and a second	Quercus suber	Cork Oak	15m/10m
\bigcirc	Cupressus sempervirens	Mediterranean Cypress	15m/10m
	Fraxinus angustifolia	Narrow-leafed Ash	15m/10m
	Populus alba	White Poplar Tree	15m/10m

HARDSCAPE LEGEND

Label	Name	Description	Reference Image
TA	Basalt Tiling - Type A	carved and smoothed	
ТВ	Basalt Tiling - Type B	antiqued	
LBS	Loose Basalt Stones	big remnants of pavement	
WB	Wooden Bench	oak wooden beam cladding	-

SHRUB PLANTING LEGEND Botanical Name Common Name

	Botanical Name	Common Name	Height/Width
Ð	Rosmarinus officinalis	Rosemary	0.5m/0.5m
B	Origanum syriacum	Wild Marjoram	0.5m/0.5m

GROUNDCOVER PLANTING LEGEND

	Botanical Name	Common Name	Height/Width
\bigcirc	Juniperus horizontalis	Creeping Juniper	0.5m/1.5m

6.3 Design Development

Figure 036. Lighting Plan 1:1000







Lighting on stairs

Design Development



Lighting around benches





Suggested lighting along market

Design Development





Figure 037. Elevation BB 1:100



Schematic Design

6.2



Figure 038. Section DD 1:100

Schematic Design



Zaytoune Square باحة الزيتون

6.3 Design Development



Figure 039. Section AA 1:100

6.3 Design Development



Orange Square ساحة الليبون



بوق اللوز والرمان

6.3



Almond and Pomegranate Market ہوقہ اللوز والرمان



Orange Square باحة الليبون

6.3



Zaytoune Square باحة الزيتون

6.3



6.4

Design Details

Figure 042. Channel Detail 1:20



6.4 Design Details

Figure 043. Bench Detail 1:20



6.4

Design Details

Figure 044. Stair Detail 1:10



6.4 Design Details



Design Details

6.4

Figure 046. Tiling Detail - type B 1:100

