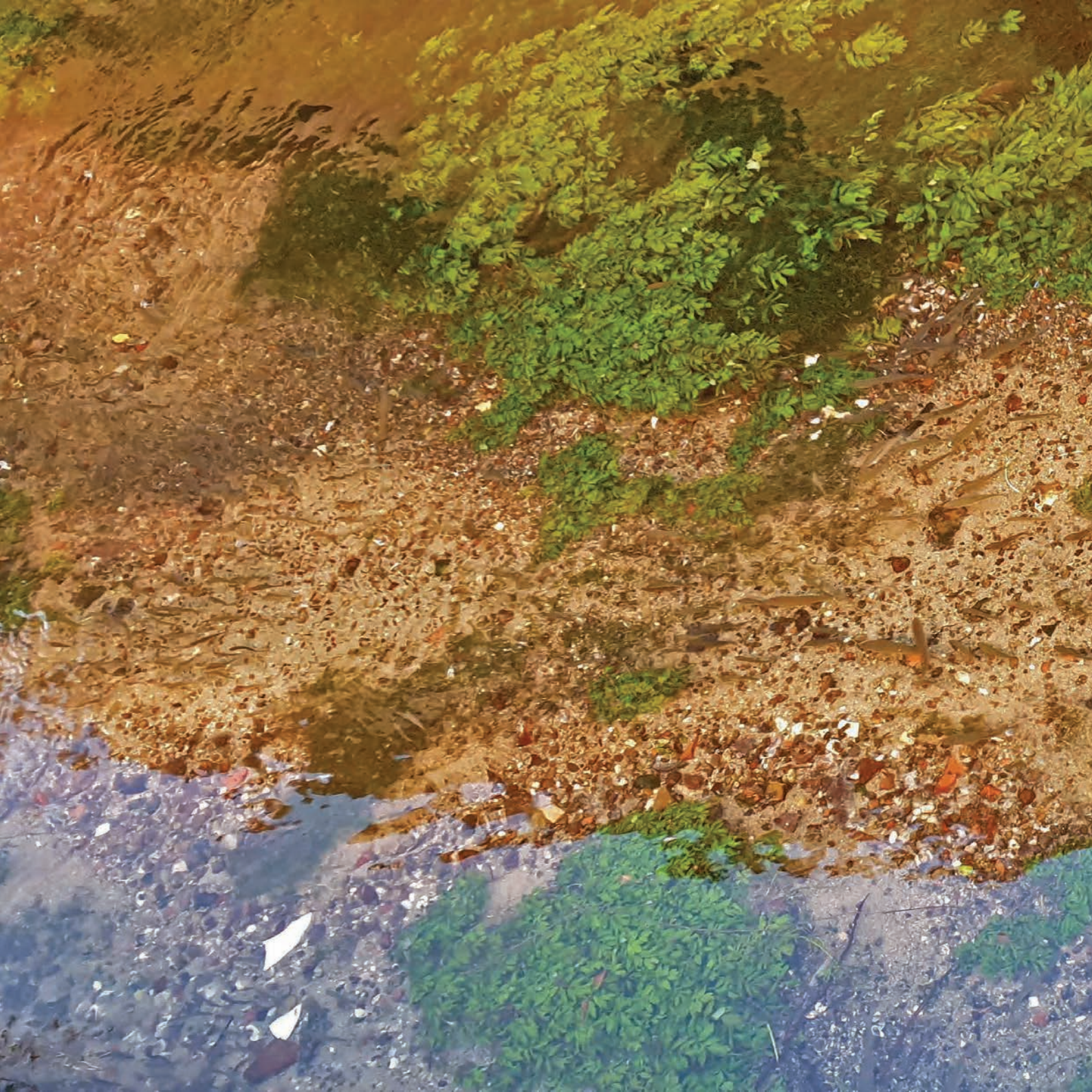
THE VILLAGE OF SPRINGS

Enhancing landscape values of Tushemisht, Albania.
Towards a sustainable recreational and urban development.

Bledar Zaho
Landscape Architecture Msc 2020



THE VILLAGE OF SPRINGS

ENHANCING LANDSCAPE VALUES OF TUSHEMISHT, ALBANIA. TOWARDS A SUSTAINABLE RECREATIONAL AND URBAN DEVELOPMENT.

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Graduation Studio: Circular Water Stories

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TABLE OF CONTENTS

Preface
Abstract
01. Introduction
Context
Communism period
After 1990
Timeline
Water sources and their origin
Problem statement
Research question
02. Research framework
03. Site analysis
Landscape typologies
Walking experiment
Senses
Housing typologies
Colours and textures
Waterways typologies
04. Conclusion map
05. Design
New vision plan
New boarders
Waterways and routings
Road relocation
Zoning, rules and housing typologies
Spatial elements
Promenade
Fruit park
Pier and pocket park
New harbour of Tushemisht
06. Reflections
References

Preface

From early on, I have been fascinated by authentic and unique aesthetic of the village of Tushemisht. Located near the UNESCO listed ancient lake of Ohrid and only few minutes away from the main city of Pogradec in Albania, the village is characterized by numerous streams of spring water that circulate around and under the houses, disappearing into the gardens or even inside the houses. The channels, like veins, are channelled through the village and play a crucial role for its locals who use it to drink, navigate, and fish farming. This characteristic beauty of the village has been engraved in my memory.
Similar to other locations in Albania, Tushemisht faced the violent waves of transiting from a communist nation to a democratic republic, including a civil war in 1997 that left the country paralysed and hopeless. During the transition period, Albanians were struggling with an identity crisis, and in the process of reinventing themselves as citizens of a European democratic community, it looked almost that the country was trying to destroy every traces of communism and replace it with uncontrolled building and expansion that often do not take in account the history of the location. The ripples of destruction were felt everywhere, even in those unique spaces like Tushemisht. Social and economic aspects are improving with the years, although some would say the transition is still ongoing! Compared to its neighbouring countries Greece and Italy that enjoy a worldwide reputation as touristic hotspots, Albania remains relatively in the shadow despite its Mediterranean climate, crystal blue seas, lakes and natural springs, mountains and rich history.
I visited the village again, that time as a professional architect, and was overcome by the feeling that its character was at risk of fading and its full potential was unrealised. The push and pull between private and public interests are still visible. Hence, it is crucial for the new generation of (landscape) architects to establish a balance between preserving the history and genius loci of the country and embracing the new and modern design.
In this research, I have attempted to explore manners to retain and accentuate the unique character of the village. Understanding the informal culture in Albania, I aimed to offer a set of guidelines that accommodate the wishes and needs of the villagers while maintaining the aesthetic of the village. The new design proposed in this thesis focuses on realising the full potential of the village and attracting more modern-day tourism, which in return will increase the social and economical well-being of the region.

Abstract

Located southeast of Albania, the village of Tushemisht is characterised by numerous water springs and freshwater canals emanating from these springs and dispersing through the village creating a network of water lines, and small water basins. Small houses clustered around these water lines, in some cases incorporating water into their courtyards and even their indoor environments, create a harmonious and balanced environment. Like many other areas of Albania, Tushemisht has undergone a rapid urban development which has affected the quality and values of the urban and natural landscape. As such, new buildings such as vacation homes oriented only towards the impressive lake view are replacing old, small and diverse houses that are already well integrated into the existing typical landscape. Land that was once used for agriculture purposes is being transformed into construction land where more multi-story residential buildings are build that have nothing in common with the landscape and the typical architectural tradition of the village. The old tradition of fishing, fish farming and land cultivation have been replaced by tourism-based economy. In general, people's relation to water, and nature is being lost and alienated though time. Embedded in a culture of high informality and uncontrolled developments, the characteristic water element of the village is in constant danger. Hence, it is crucial that these qualities are preserved and improved in the future by laying the groundwork for sustainable development.

This research aims to create a new design strategy to guide sustainable development of the village of Tushemisht by enhancing its landscape qualities. The design strategy consists of a new vision plan which proposes a set of guiding principles for new buildings, water ways, routings, new boarders and road relocation. Furthermore, the design strategy will provide guiding rules based on existing housing typologies as well as introduce spatial elements to improve promote social and economic development within the village.

01. Introduction

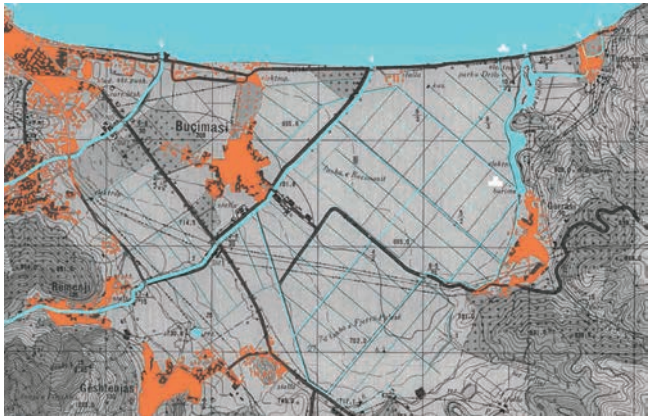
The village of Tushemisht was built approximately 200 years ago, making it a relatively new village even if it is located on the shores of one of world's ancient and deepest lakes, which presumably dates from the Early Pleistocene or Pliocene (Albrecht et al. 2010). It has been suggested that the existence of the lake in the region for such a long time has prompted the creation of an ecosystem with an exceptional endemic biodiversity (Albrecht et al. 2010). It stands as a unique lake because of its origin of 4 million years, hydrology and biodiversity (Cullaj, 2005). It has a very high transparency (15-25 meters) and there are a number of endemic fishes such as the Salmon Letnica and Salmothymus Ohridano (known in Albanian as Koran and Belushka). Moreover, 70% of the tubular worms, 80% of the shrimps and 90% of molluscs are endemic to this lake (Cullaj, 2005). Drilon springs which feeds in this lake passes throughout Tushemisht which sits at an elevation of 841m.

There are numerous water sources surrounding Tushemisht, a factor which makes this village truly one if its kind. Because of the soft hills a colourful diversity of not only landscape but also vegetation is created. These rolling hills of vegetation stand in contrast with the barren calcareous slopes of the mountains (Ministry of Tourism and Agriculture of Albania, 2018).The original structure and layout of the village has been maintained even though cheaper and sometimes improper materials are used. Rural architecture of the villages is simplistic but nevertheless, if their characteristics and materials are preserved, they contribute to the overall ambiance of the landscape (Extension to the existing

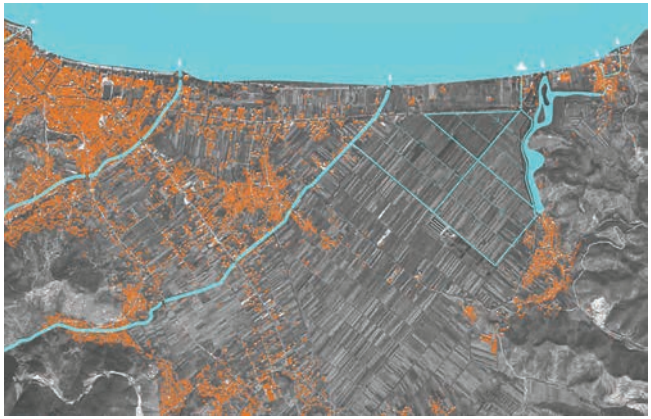
Mixed World Heritage Property “Natural and Cultural Heritage of the Ohrid Region, 2018). However, the turbulent systemic changes in Albania, which transitioned from a dictatorial communist state under a total isolation for fifty years to a completely free market and democratic state, have left their mark in the landscape and typology of the village (Jusufi, 2017).

Communism Period

After World War II, Albania entered in a five-decade rule from the Albanian Communist Party (PPSH). During this period the urban growth was kind of stable and slow and under strict control by the state which dictated all the needs and future plans in order to fit the party's ideology (Dino, 2016). Albania became a deeply isolated country, cutting diplomatic ties with every other nation in the world. This isolation extended also in the cultural, architectural and geopolitical trends (Mayer & Knox, 2009), lunching a plan to create completely new cities, thus cutting ties with the ottoman past (Dino, 2016). Existing regulatory plans were redrawn, following the new ideology. This ideology rested under three main pillars: abolishment of any private property, social housing, and a mono-centric city model (Aliaj, 2003). While on one had new cities were being built as centres where the new ideology was to be reflected and enforced, an even bigger emphasis was put on rural areas and suburban industrial districts where the urban growth was closely monitored and control over demographic distribution was strict. This has been called an anti-urbanisation strategy (Parto, 2017). What this meant was that the population was supposed to be concentrated one-third in urban areas and two-thirds in rural ones. It seemed that for the first time since the Italian occupation of the 30's there was a well-defined strategy as to how cities and rural areas would grow. Through this strategy, the status of a "town" was granted to areas which were organised around industrial labour, and they were to have between 2000-5000 inhabitants, making here an exception for bigger cities like Tirana or Durrës (Prato, 2017). The rest were defined as rural areas making Albania one of the most rural societies at that time



Pogradec valley 1979 (buildings and waterways)


Pogradec valley 2019 (buildings and waterways)

in Europe. A reason for this might have been the need to have people working in the new heavy industries and farmlands being developed at that time. This division of small towns where administrative power was exercised and big rural areas where the population worked in farmland (where 70,4% were collective farms and 29,6% were state farms) drastically changed Albanian society. In this unified and monochromatic landscape there is one city which escaped the strict ideology under which the other cities were developed. Pogradec where Tushemisht is located follows a different route of development. Because of the lush nature and biodiversity, during the communist period Pogradec became a summer escape for government officials who built there their villas. Consequently, the area became heavily monitored one and the drastic urban development which had engulfed the rest of Albania did not touch Tushemisht (Mayer & Knox, 2009). There was a strong consciousness and respect shown when dealing with this area making it one of the most beautiful and unique spaces in Albania. During the communist regime fishing in these waters was reserved only for the state and all private fishing was prohibited. A cooperative of 40 fishermen called the Pogradec Fishery Enterprise designated the harvest rates, maintaining them at a stable level. Nonetheless, with the fall of the communist regime, all the state regulations became ineffective and the overfishing has led to a "impending extinction" of the endemic fish Salmon Letnica (Schmidt & Theesfled, 2012).

After 1990

In 1991, the communist regime collapsed, and Albania entered in a long process of democratisation of the country. With the regime also the stronghold on the urban development was cut loose. Suddenly, there was rapid, uncontrolled urban expansion and demographic growth and internal migration (Prato, 2017). Abitz (2006) argues that the "lack of respect for public property" which followed in the 90's can be attributed to the harsh, restrictive policies which isolated Albania resulting in a population who misinterprets the meaning of the free market. In terms of urban planning these are not the best years for Albania (Abitz, 2006). The collapse of state industries and closure of factories and state farms left a huge chunk of the population unemployed, where suddenly the majority of the once predominantly rural population either decided to move outside of Albania or moved in the bigger cities with the hope of a better life (Jusufi, 2017). Not being able to pay rent or buy apartments, the once cooperative farmland was occupied in order to build houses (Prato, 2017). Houses and small businesses were built without permits and moreover in absence of a proper public planning, Even though, Prato (2017) takes into consideration the areas around Tirana, a similar fate was reserved for Pogradec and Tushemisht as well. After 1991there was a belief that everything that was built and constructed during communism needed to be destroyed to make place for something new, for something that is created out of pure (meaning unregulated) freedom. What was

once the idyllic Tushemisht, where the summer villas of the nomenclature were located and with pristine canals run through the village was transformed. These spaces were not respected as they represented something of the repressive past. Moreover, the need for housing and small businesses surpassed any aesthetic need. Thus, likewise in the rest of Albania, informal situations became present in the village of Tushemisht. The lack of urban planning meant that people built their houses in places which they thought were most advantageous. This meant that in this uncontrolled fast development, people were building houses as close to the lake as possible, polluting the visual space and creating and unequal development where the front lake side became overpopulated and the rest of the village remained undeveloped. Not only was the lake shore damaged but the once fertile fruit fields were left barren. The informally developed constructions happened until 2006, meaning that for more than 15 years the space was developed with no awareness of synergy. In this need to destroy everything from the communist past, knowledge on how to organise space and urban planning was lost. The state was not any more powerful enough to control this rapid development. There was no masterplan due to the fact that during the communist regime development was centralised and strictly organised to serve to the state and the public good and suddenly urban planners had to face a population which was solely focused to fulfil their personal, private interests. Only in 2016 there was a substantial program by the government which outlines the development of the region until 2031.

Thus Tushemisht becomes a tale of the change of systems and the impacts that has not only in politics, but architecture and development. A par excellence example of an area which reflects all the political changes it has undergone through the years. Nonetheless, I believe that the quality of waters, the canals, the fields and the lake are elements that persist and that can coexist in a balanced manner. I believe that this can be achieved even with the hectic development of the 90's and early 00's.

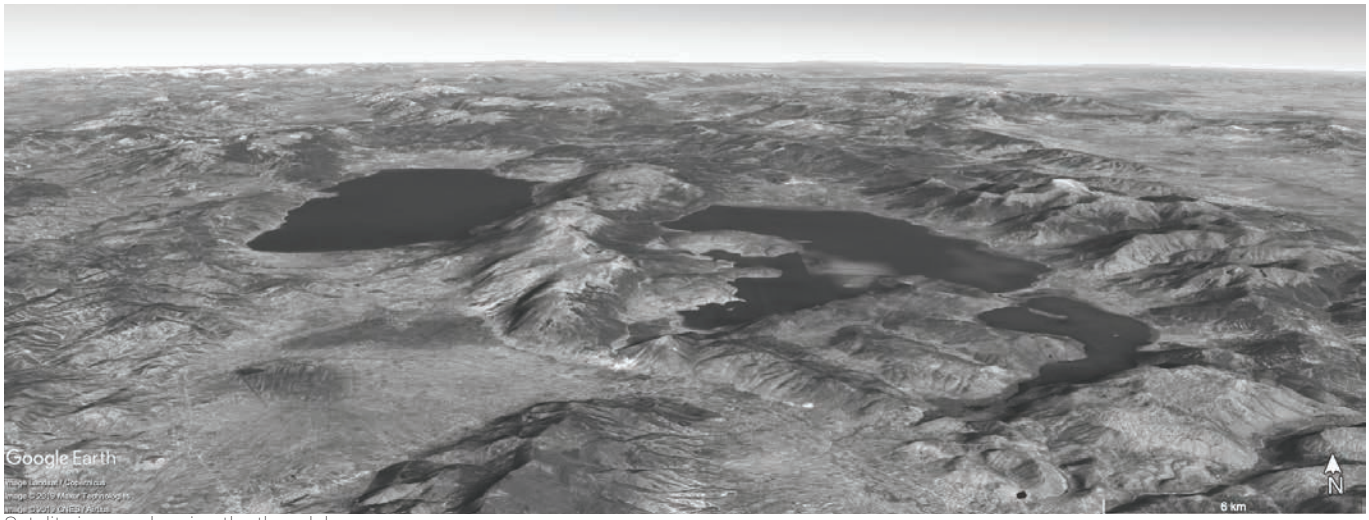
Water resources and their origin

Water which springs from the two Prespa Lakes which are connected to one-another by a narrow channel moves amidst the subterranean karst cavities and enters Lake Ohrid. In terms of water volume, Ohrid is the largest lake in the region and one of the largest and oldest in Europe. The Black Drink River which is the only river springing out of Lake Ohrid enters Albania through Macedonia to then meet the White Drink which springs in Kosovo to then together form the Drin River. Drin River then passes through Albania to merge with Buna river to finish its journey in Lake Skandar and consequently in the Adriatic Sea.

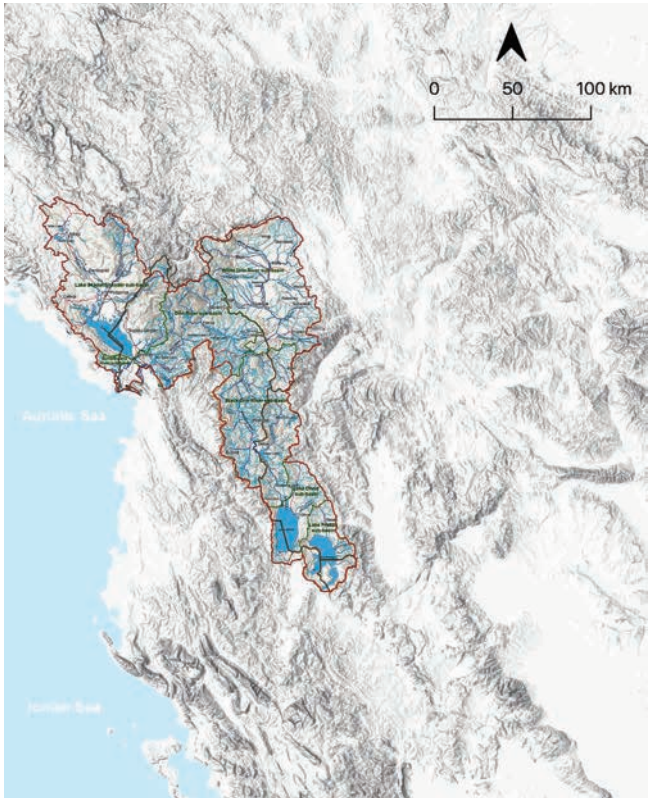
On the left a section showing the underground channels and on the map below shows the PRESPA-OHRID Transboundary Reserve. Tushemisht springs originate from Prespa Lake, whose waters flow through underground channels towards Lake Ohrid.

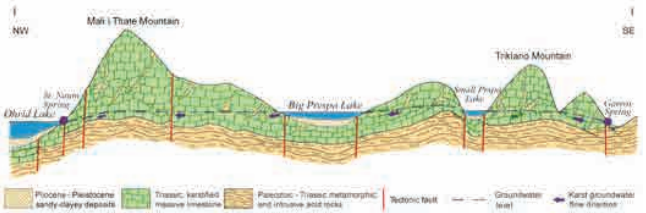
Most of the water resources are occupied by the karst springs of Tushemisht and Gurras which have an average flow of 2.5-3.5 m^3/s, where 53% of the water volume flows from Lake Prespa, while the rest from the filtration of rainwater in the karst relief of the Dry Mountain (Mali i Thate). Numerous water sources with small inflows emerge at the foot of ultrabasic rocks, in areas of tectonic faults. An important place is also occupied by groundwater resources, which are exploited through wells by many families. (Mentor Sulollari, 2017).

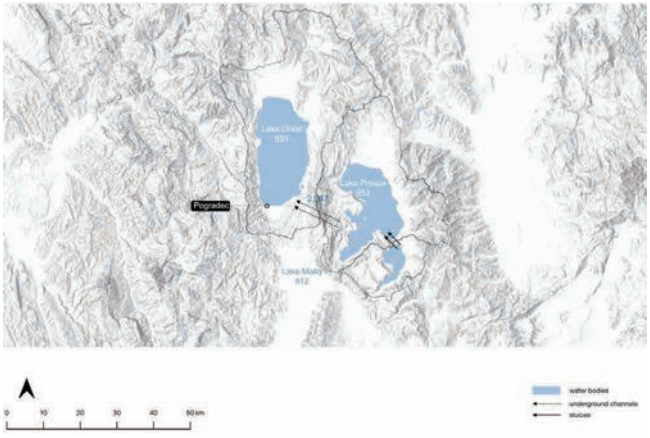
Water supply network. The city of Pogradec and the administrative unit of Buçimas have drinking water 24 hours a day and are supplied from the source of Tushemisht with a flow of 200 l/s and the source of Gurras with a flow of 30 l/s.

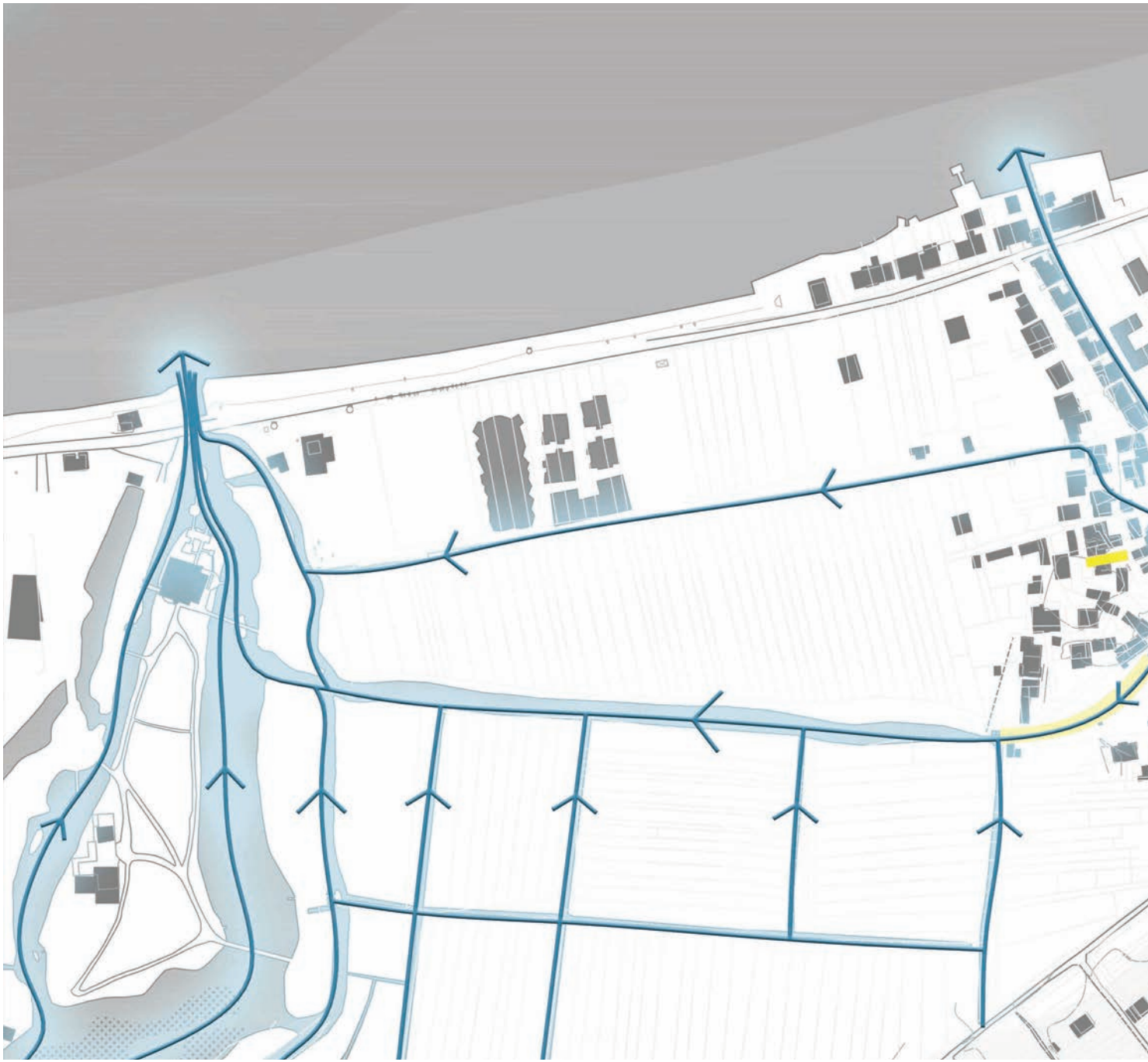


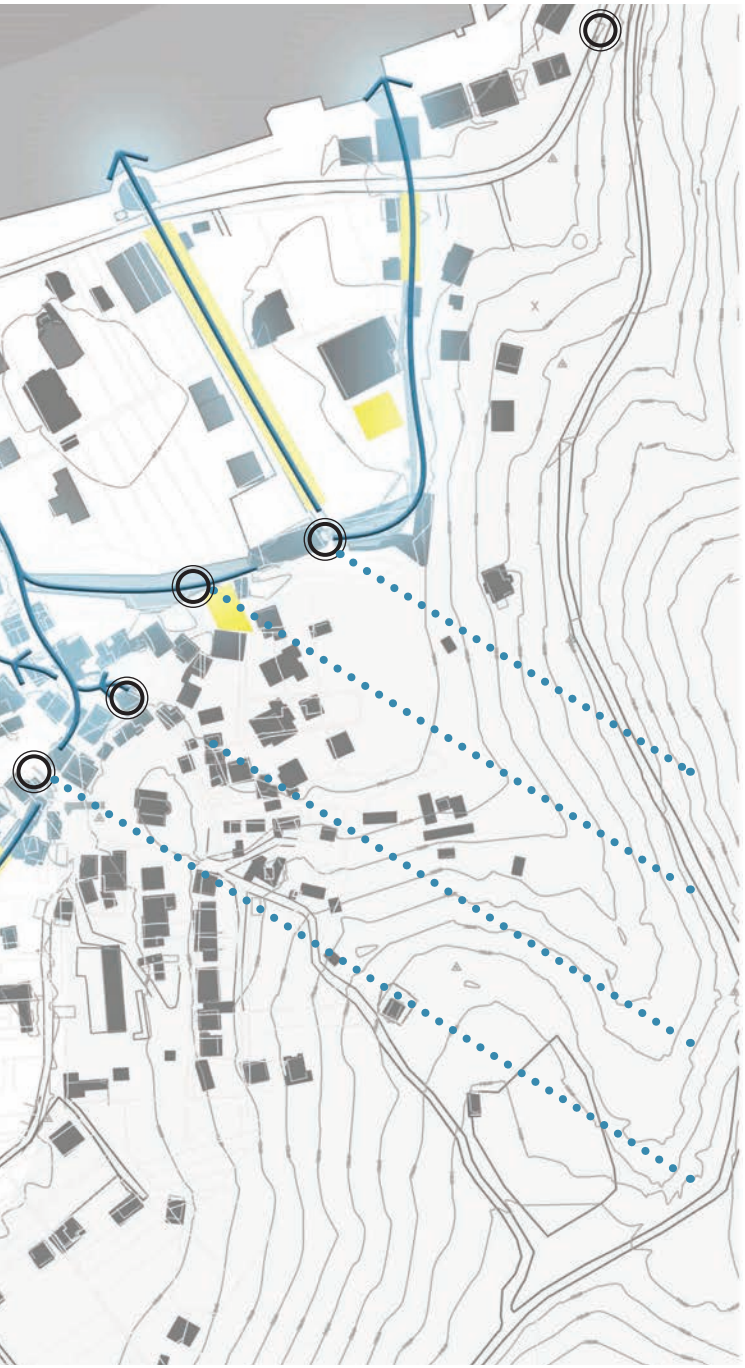
Satelite image showing the three lakes











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LEGEND

springs

water movement

fish hatching

lake

underground channels from Prespa lake

0 10 20 30 40 100 m

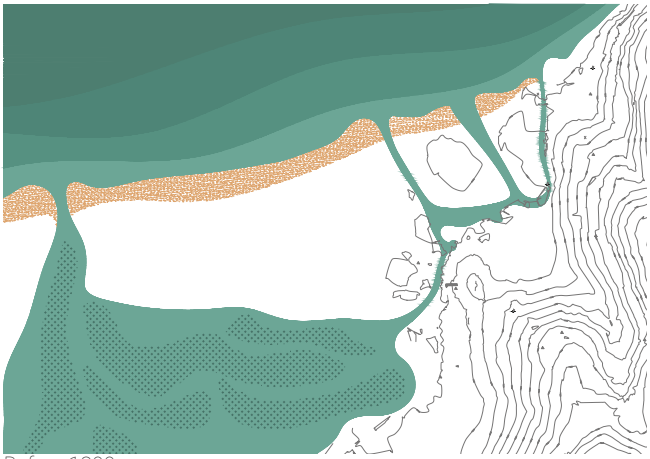
Timeline

This chapter shows important historical events that has affected the current composition of Tushemisht from the 18th century to the present days.
The first map shows the Tushemisht area before 1800, before the first inhabitants moved to the area. Water coming out of the springs flowed into the lake naturally according to the topography, flooding the areas below the lake level turning them into marshes.
In the early 1800s the first building, the church of Saint Pantaleon, was built on the top of one of the low hills near Lake Ohrid. This church was part of a church system around the monastery of Saint Naum which today is located in Macedonia.
In subsequent years, around 1800-1850, began to be built the first houses in the village at the foot of the hill, on one of the sources of sweet water as well as around the church. These houses will later form the current village centre.
In subsequent years the village grew towards the lake as well as along the road that linked the church to the road along the lake. During this period, several groups of houses are built along the canal as well as between the national road and the lake. With the further growth of the village the need for more arable land also increased and resulted in the creation of new agricultural lands in the marsh- land creating a network of drainage channels.
The coming period is represented by the time Albania was under communist rule, from 1969 until the fall of this regime in 1990. This is the period of the cooperative where the lands once owned by various families were returned to state lands. It is characterised by a slow and

steady development. Because the village is located on the border with the neighbouring state of Macedonia, many military families who were on duty at the crossing point, moved to this village in new two-storey building in the south of the village. Drilon Park was also created during this period, where a holiday residence for the head of state Enver Hoxha was also built.

The following years are characterised by rapid and unstructured development, especially in the area along the lake shore.

Historical maps



Before 1800

1850-1969

Around 1800

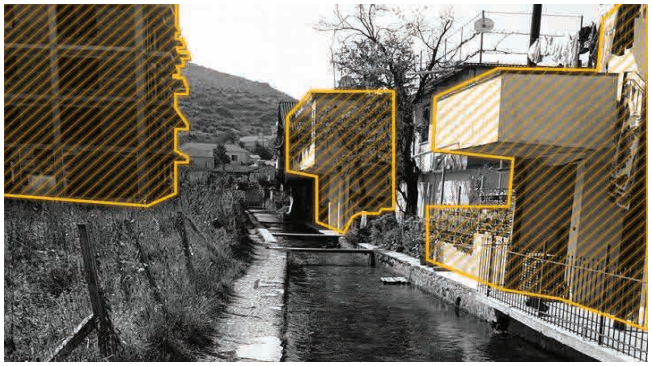
1800-1850

1969-1990

1990-2005

Problem statement

The Tushemisht area as well as the entire shore of Lake Ohrid has many attractive elements for tourism, especially of the landscape, historical, cultural and agro-tourism nature. From 1946 till 1990, Pogradec and especially the village of Tushemisht have been one of the favourite destinations by Communism government officials as well as by party leader Enver Hoxha who built his summer residence just outside the village in what is now known as Drilon National Park. As a result of the leader's security but also because the village was on the border with neighbouring Macedonia, Tushemisht underwent minimal developments during that time. Following the collapse of communism regime with the advent of the new democratic system, Tushemisht s well as other areas of Albania underwent a



rapid and uncontrolled urban development which affected the existing values of the environment but also the quality of life of the inhabitants. The rapid urbanisation of the Tushemisht area has a major impact on the quality of the landscape, endangering cultural values and creating a lack of balance between the formerly harmonious relationship between man and nature.

Formerly agricultural areas now serve as building sites to meet market needs. Taking advantage of the informal culture, developers built multistorey buildings by maximising land use, disrupting the natural continuity of the landscape and thus threatening the environment resulting in the creation of alien constructions. The unique character of Tushemisht, derived among others by its proximity and direct communication with numerous water lines, low-rise and humane buildings, fields planted with fruit trees, is being threatened. Multi-storey flats with elevators and car parks, balconies and massive windows are built in such a way that new residents overlook the lake while ignoring other elements of nature such as agricultural fields, water canals and the surrounding hills.

As a result of uncontrolled growth the boundary between the agricultural fields, the park and the urban area has been lost. The once well-defined area has already merged with one another. Some of the areas, especially those near the shore of the lake have a high density creating a negative visual and environmental impact.

Research question

1. .How to create a sustainable urban and recreational development of Tushemisht village and surroundings while preserving and enhancing its landscape features, mostly related to water elements and its sensorial qualities such as the lake shore, fresh water springs and ditches, agriculture fields and the foot-hills surrounding the village?
2. How could Tushemisht village water streams and water elements be used as one important leading principle for the design?
3. How to make the existing presence of water such as lake, springs, canals and streams more expressive, working with recreational needs and human perception?

- what policy instruments would be necessary to guarantee a sustainable development of the Tushemisht village?
- -what spatial interventions would be necessary to guarantee a sustainable development of Tushemisht village?
- -what is the existing relation between water and the units of housing in the intact parts of Tushemisht and how it could be preserved and enhanced in the possible future developments?

02. Research framework

The research methodology is based on literature study, site visit, interviews, case stuwdies, typology-morphology study and research by design.

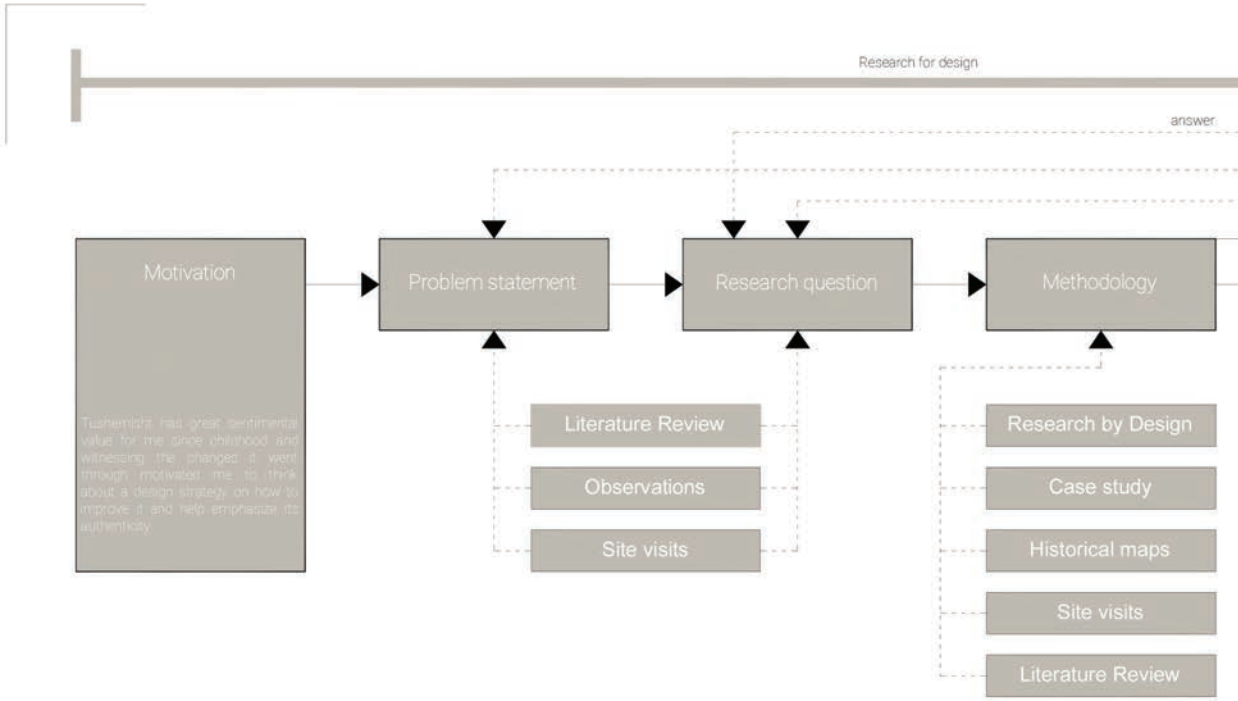
The research is based on the theory of urban landscape as palimpsest and landscape biography according to which a certain landscape at a certain time should be seen as a historical continuum. To better understand the site one should study the activities that have contributed to shaping the landscape. Landscape is valued as a stratified entity where traces left by time can strengthen or contradict each other. Understanding these layers is a starting point for new transformations of the studied landscape. (Nijhuis, 2013)

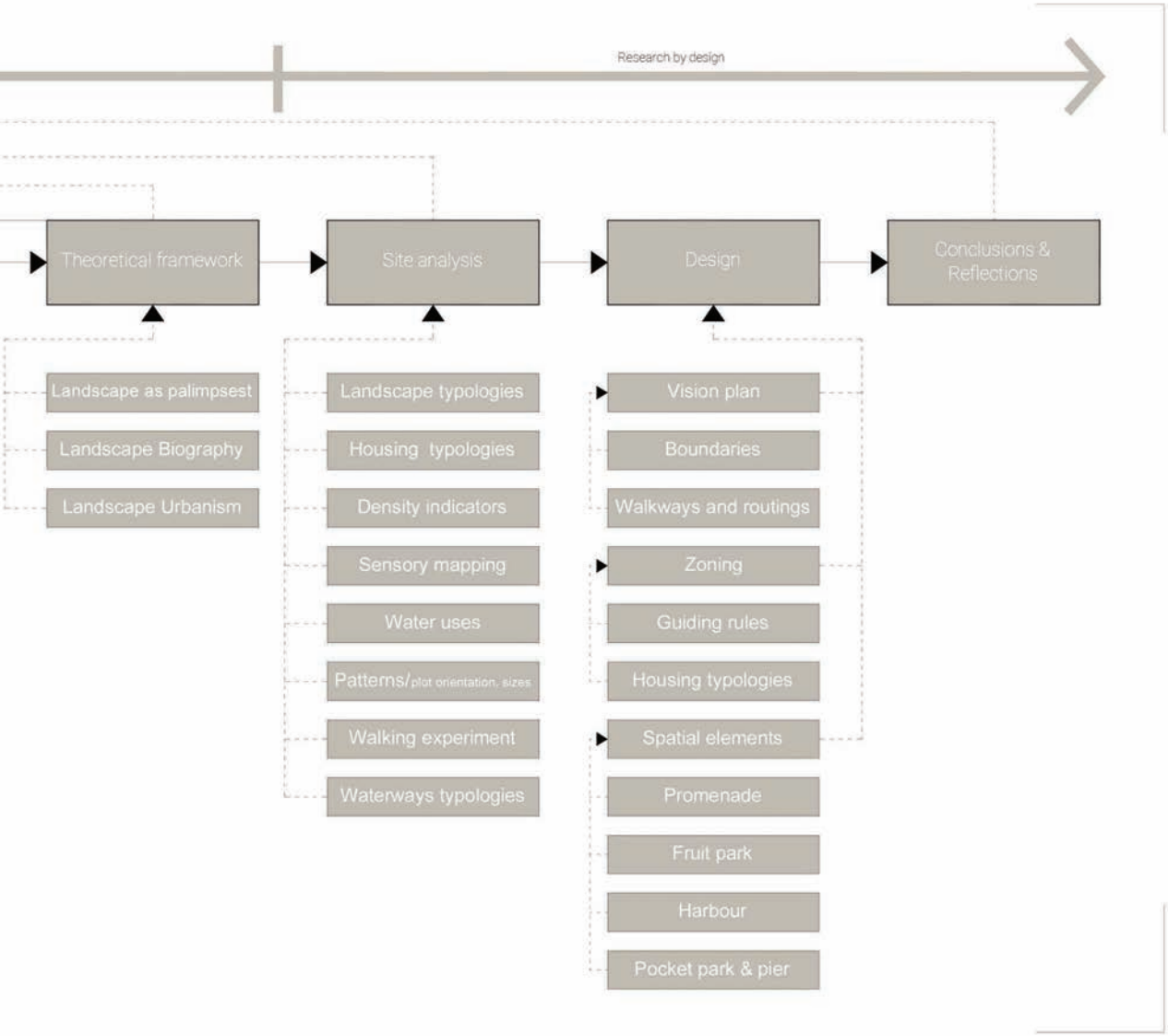
One of the main problems that the village of Tushemisht has today is the construction without character and a design language and this loss of character comes as a result of not considering the 'genius loci' of the site. The loss of meaning of the notion of genius loci results in a series of designs and approaches that do not have a common style language and ultimately lead to a mix of aesthetic arbitrariness. (Gabrielle Bartelse, 2016).
Historical maps have been created to better understand the development of the village over the years.

Creating these maps will be the basis for further study of the typologies of landscape as well as the building typologies. Maps are based mainly on the study of literature but also on the use of interviews with locals and analysing old photographs. Maps show the main periods of history which have resulted in modifications and shaping of today's landscape. The changes are mainly of a social nature, starting with the early settlements and the communist period in Albania, until the last developments of the post-communist period.
Then the different types of landscape that form the essence of the village will be studied by defining their main characteristics.
Important for this research is also the use of the existing site as a main case study to find current and historic relationships between houses and water.

The next phase of the research consists of building typologies, their structure, their relationship to the water lines, infrastructure, housing orientation in the plot of land, type of green etc. These typologies will be used in the design creation phase as basic models for generating design rules.
The different landscape types in combination with the building typology will form the main research pillar and serve as a toolbox for the new proposed buildings.

The typological study will not only help in understanding the current housing typology and their relation to the landscape but will serve as a basis for proposing new building methods by creating pilot projects that will serve as tests for various opportunities.
To regulate and guide new urban development a new urban plan in the form of a design strategy would be needed.
The design should be more in the form of an open and flexible strategy towards the possibilities of the future leaving the freedom to express the individuality of the developers (in this case the inhabitants) but at the same time to ordinate and structure it. The design has the form of an open strategy that aims to lead developments and not in the form of a blueprint where everything is strictly defined by the designer leaving no room for interpretation. (Nijhuis, 2013).
A blue-print design with a certain shape and structure would make the delicate plan to suit the future. Especially in a country like Albania where recent developments have shown that following and implementing strict urban plans has not worked to guide these developments.

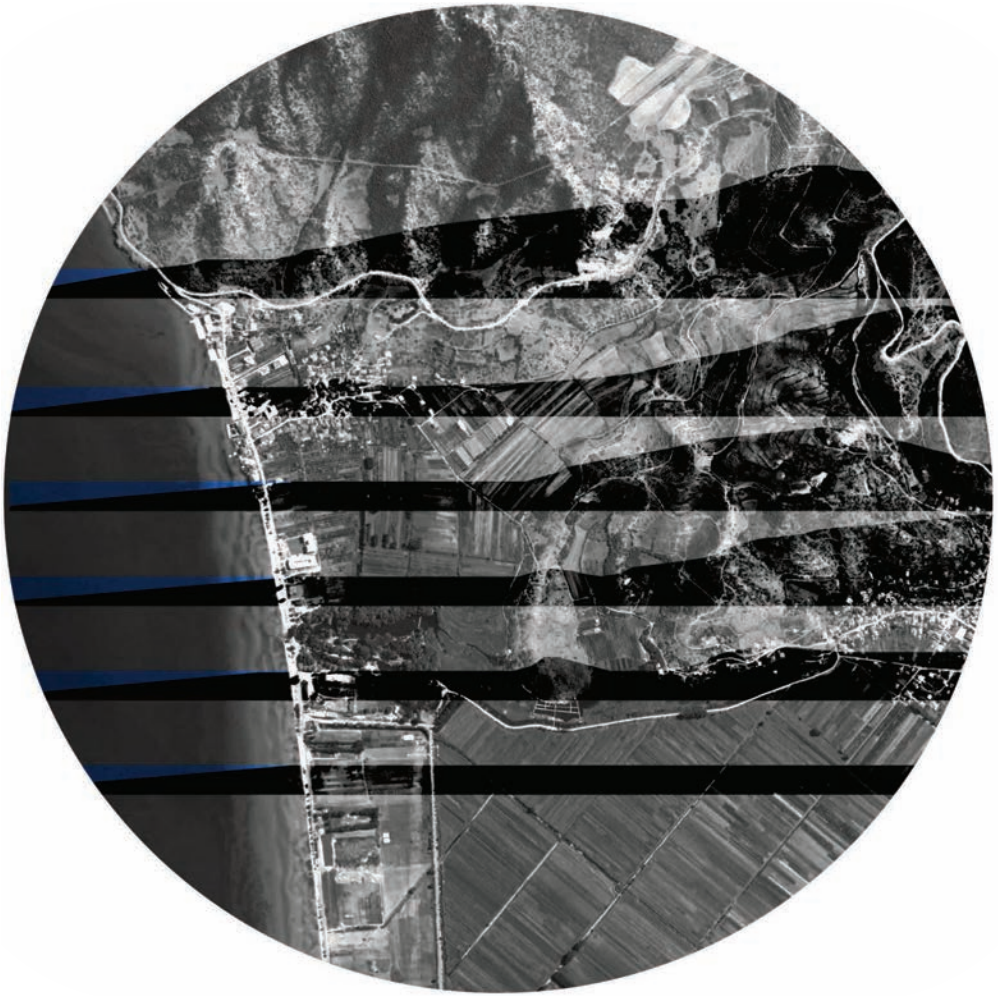

Research for design
answer
Motivation
Tushemishi has great sentimental value for me since childhood and witnessing the changes it went through motivated me to think about a design strategy on how to improve it and help emphasize its authenticity.
Problem statement
Research question
Methodology
Literature Review
Observations
Site visits
Research by Design
Case study
Historical maps
Site visits
Literature Review


Research by design
Theoretical framework
Site analysis
Design
Conclusions & Reflections
Landscape as palimpsest
Landscape Biography
Landscape Urbanism
Landscape typologies
Housing typologies
Density indicators
Sensory mapping
Water uses
Patterns/plot orientation, sizes
Walking experiment
Waterways typologies
Vision plan
Boundaries
Walkways and routings
Zoning
Guiding rules
Housing typologies
Spatial elements
Promenade
Fruit park
Harbour
Pocket park & pier

03. Site analysis

To improve the quality of a small urban structure, such as Tushemisht, in order to design a "good" city requires first of all an understanding of the coherence between different elements of the city, and discovering current relationships between different housing units among each other as well as with the topography, the different elements of the landscape and the existing infrastructure.
To gain a more comprehensive knowledge of the site, this research will be based on two main axes, namely landscape typologies and housing typologies. The analysis of the five landscape typologies will lay the foundations of this research, while the housing typologies will be implemented to assess the interrelationship between houses and water, as a characteristic element of the village of Tushemisht. These relationships will be grouped into six typologies which will then serve to create guidelines for future constructions. Moreover, this research will be supplemented by the study of other indicators such as density, footprint, heights and distances, as well as sensory information such as colors, aromas, textures, etc.

Landscape typologies



Tushemisht area is characterized by rich landscape typologies such as 1) the village with residential and tourism facilities, 2) the agricultural area with its characteristic narrow and long plots, 3) a hilly terrain surrounding the fields and the village and overlooking the entire Pogradec valley as well as 4) the lake Ohrid, and 5) the river. The purpose of landscape typology analysis is to identify new areas with potential for further development. To see if water is already present in these areas and if so in what form and how it can be enhanced, becoming an important part of the new development plan. The further development of the village of Tushemisht can be done in two ways: by expanding the living area across its surroundings or by densifying the existing area of the village without losing its character. The plots bordering both areas carry features of both types of landscape creating hybrid areas that can be easily incorporated into the village expansion plan.

The Tushemisht hills make the rural landscape more diverse and attractive in terms of landscape mosaics and types of crops, the low hills with vegetation creating a very interesting contrast to the limestone slopes of the mountains.

Figure 1-3 Pictures of the village,
Captured by the author

The village

The village is characterized by mainly two-story buildings with stone walls and small window distributed in an irregular manner. Freshwater canals flow through the village, meandering from private to public space, creating the characteristic sound and smell of water. The area along the lake consists mainly of multi-family five to six story flats, mainly designated for tourist use.
The village area has a special value for Albanians because one of a national cult movie, 'The Lady from the Village', was shot here. The vernacular architecture found in this area is typical for the whole area of Albania as well as the Mediterranean - with the only difference being the presence of numerous water channels. Small gardens with low fences create a sense of hospitality and a certain transparency for their private lives, unlike other Albanian villages where privacy is very sacred.

fig.1

fig.2

fig. 3

Figure 1-2 The lake shore,
Captured by the author

The lake

This lake and its coast represent the boundary between the inhabited area (humanity) and the immensity of the lake (nature) in its pure state. The lake shore is mainly sandy except for the eastern area where it joins the rocky hilly area. Tushemisht beach is formed as a result of the continuous retreat of the lake. The lake shore area is the most affected by rapid urbanization.
This type of landscape, which is presented in a linear form, has a length of about 1.6 kilometres and it varies depending on the relationship the lake creates with other types of landscape. The lake is connected to the fifth landscape typology (the river) at the moment of its discharge. The waters in this area are constantly turbulent and not preferred by beachgoers. Moreover, the lake intersects with the third type of landscape typology (agricultural area) in two areas, where it takes the form of a sandy beach very frequented by people in the summer season. The interaction between the lake and the first landscape typology (the village) forms the area where the residential houses and hotels are built. Most of the land here is reclaimed by residents at different times in order to increase their private property. All these houses have exit to the lake and on can observe short private piers where boats are anchored. When the fifth landscape typology (the hills) merges with the shoreline, the lake landscape changes significantly. In this area, the main source of water is located which supplies the entire Pogradec region with drinking water. Currently, the Pogradec - Ohrid national road separates this area from the rest of the village, becoming an obstacle for tourists and locals.

fig. 1

fig. 2

Figure 1-2 Agriculture land planted with fruit trees
Captured by the author

The agricultural area.

This landscape typology is characterized by agricultural land parcels, irrigation canals and catchments. The fields are arranged in straight plots and surrounded by irrigation canals built during the socialist system. Although affected by sporadic construction, this area retains its former agricultural character where the main crops cultivated are cereals, orchards and medicinal plants.
The plots are narrow and long with a direction perpendicular to the lake. Fruit trees also follow this orientation, giving the landscape repetition and order. The agricultural area has almost the same height as the lake, consequently numerous drainage canals are used to lower the water level. The swamp located in the southwestern part is stems from the past, when the whole area was covered by water. The Kulla River that divides the agricultural area into two parts is used for irrigation during droughts. Willows have been planted along the banks of this river to protect the soil from erosion.

fig. 1

fig. 2

Figure 1-2 Drilon park,
Captured by the author

The River

The river, located at the mouth of the Drilon River, has an idyllic character with large aquatic surfaces reflecting the sky and weeping willows. The river has a dense hygrophilous vegetation and a very rich wildlife and incomparable natural beauty and scenery. This is a protected area of Drilon and its karst springs are among the most visited places in Pogradec. This due to the natural landscape created by hygrophilous vegetation, birds, fish and clean waters spring across its area of 7.8 hectares. The river is located near the village of Tushemisht and about 3 km from the town of Pogradec. This landscape is endangered by the numerous constructions of restaurants and hotels built in recent years. The local government should stop issuing construction permits in this area, in order to preserve the natural environment – an action it has failed to reinforce during the past years.

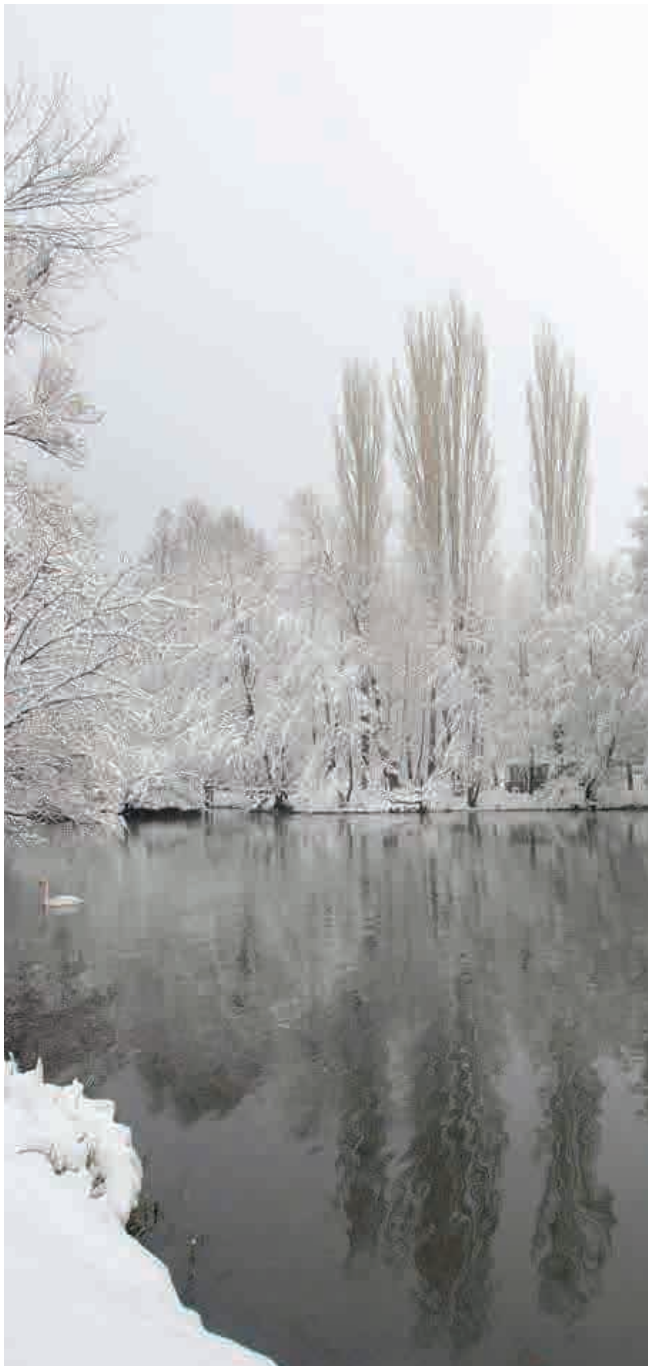


Figure 1-2 Pictures of the surrounding hills,
Captured by the author

The hills.

The hilly area that surrounds the village creates the impression of an enclosed space and has an impressive view over Lake Ohrid. The hills around the plain represent numerous traces of terraces and were developed during the dictatorship period to add agricultural land. The hills were deforested and terraced by planting more apples and vineyards. After 1990 as a result of the collapse of agricultural cooperatives, the trees and vineyards planted there were damaged and the land was left barren, being affected by slope processes, mainly landslides and erosion.
The hills are mostly uninhabited and bare of greenery. The dominant colour is red to yellow as a result of the formation of the soil and the type of limestone. They present a good opportunity for residential and holiday homes as they have a direct connection with the village. Hence, this is an excellent opportunity to build a new road that connects the area with the city, while offering future residents wonderful views over the lake.

fig. 1

fig. 2

conclusions:
From the analysis of the five landscape typologies we conclude that the possible areas for urban expansion are the agricultural area which is already affected by informal constructions, the hilly area respectively at the base of the hill where it connects with the village, as well as the peripheral area of the village. The river area where Drilon park is located together with the lake shore area as they have high landscape values will not be included in the expansion areas of the village.

Walking experiment

The walking experiment can be used as a method to get to know the village better as well as a design element to define the new routing system. Walking is one of the simplest, revealing and common ways used by designers to explore a certain territory (Schultz, Henrik & Etteger, Rudi. 2016). Through this experiment, landscape typologies unfold along the walk starting with the lake typology and ending on the hilly landscape of Tushemisht. The agricultural fields, the river area as well as the interior of the village are revealed during this walk. All these are presented in the form of ordered sequences.


LAKE OHRID
1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Sequence No. 01. The route starts with a transition moment from the seemingly boundless space characterised by the strong horizontal presence of the lake towards the interior of the agricultural fields.
Sequence No. 02. The route continues partly through the Drilon park to the Kulla River, where the landscape consists of picturesque notes and the visitor completely departs from the noises and aromas of the lake shore to immerse themselves within the agricultural area of the village.
Sequence No. 03. Walking along the river, a group of trees (salix alba) placed in line on both sides of the path creating the effect of a green tunnel. Contact with the sky is lost and only visual lateral contact with the landscape remains.
Sequence No. 04. Along the passage side opening moments anchor the visitor to the location by creating stronger visual connection with the surrounding landscape.
Sequence No. 05. Different moments side opening towards the rural landscape, view of the cultivated lands with hills in the background.
Sequence No. 06. An area planted with trees (alnus glutinosa) creates a wall formed by the trunks of trees planted very close.
Sequence No. 07. Approaching the village area, the hard edges of the Kulla River mark the transition from the natural to the urban area. The tops of the village houses appear in the distance surrounded by hillside.
Sequence No. 08. We are now approaching the entrance of the village, the first house appears very close to the path, water flows in the backyard passing from the public to the private space, traces of the old fish farming elements not in use anymore.
Sequence No. 09. We have already entered the village, passing through the gardens of the houses on both sides of the cobbled alley.
Sequence No. 10. Noise of gurgling water through the narrow canals along the cobbled alleys.
Sequence No. 11. The oldest part of the village, low characteristic stone houses, where you can almost touch the roof. Walking towards the top of the hill.
Sequence No. 12. At this moment the lake appears in the background of the roofs of the village houses.
Sequence No. 13. View of the whole Pogradec valley, the lake, the village of Tushemisht, the agricultural fields, as well as the park of Drilon.
Sequence No. 14. Near the cemetery is the moment where you completely detach from the village and head to the hilly landscape.
Sequence No. 15. Walking through the hills and the bare landscape where the only influence of mankind on nature is the frequent slopes and the base of a possible road.
Sequence No. 16. Immerse in the typical hilly landscape of the outskirts of the village of Tushemisht.


sequence No. 01


sequence No. 02


sequence No. 05


sequence No. 06


sequence No. 09


sequence No. 10


sequence No.13


sequence No. 14


sequence No. 03


sequence No.04


sequence No. 07


sequence No. 08


sequence No. 11

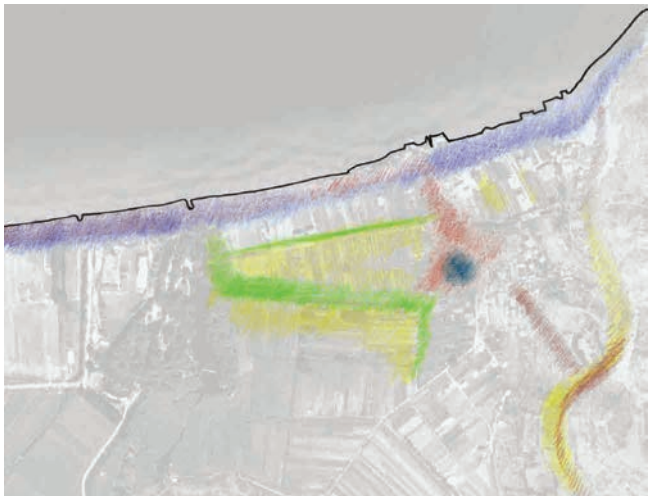

sequence No. 12


sequence No. 15


sequence No. 16

Mapping the site through the five senses

Touch and Taste
This map shows the different main types of surface encountered while walking through the village. From soft natural surfaces to hard ones like asphalt or stone alleys. The sense of taste is also an important part of sensory mapping for this village where fruit trees occupy a large area.

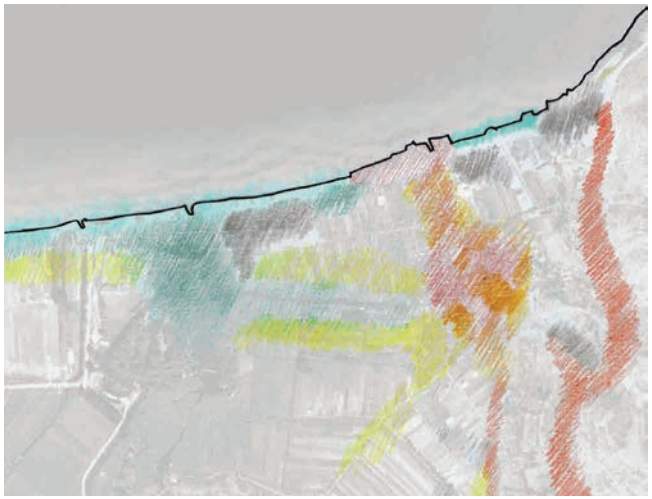


hard surface (stone pavement)
natural soil (grass)
asphalt
compacted soil
fruits (apples, plums, cherries, balcberries)
natural spring water

Sound.
The soundscape of the village consists of the sounds of the lake waves and the sound of water flowing through the canals of the village. In the agricultural part and as close as possible to the river bank, the sounds of birds are heard, breaking the tranquility of this area. People's voices are the next layer of sound.

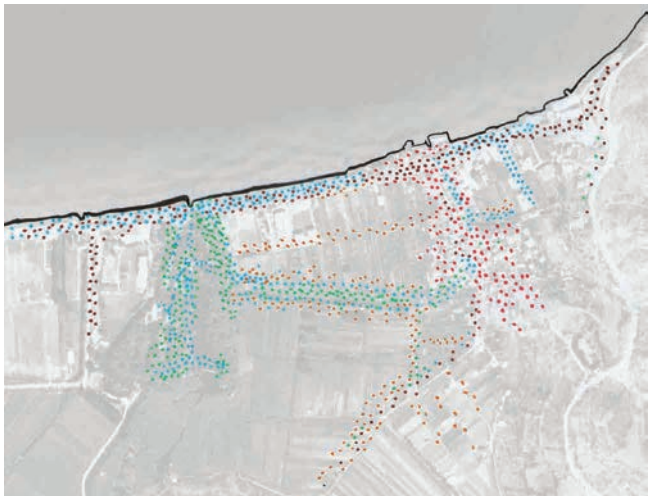
lake waves
water gurgling
birds
vehicle noise
new buildings
gathering of people

Sight.
Dominant colors are divided into two groups, human and natural. In the first group are the colors of the lake, the greenery and the yellow soil of the hill, in contrast to the built part.



stone
green
water lake
red brick
new buildings
rock
agriculture fields

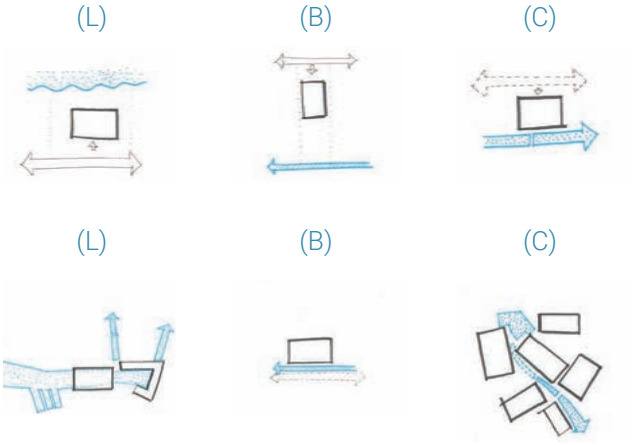
Smell.
The aromas in the village of Tushemisht vary greatly according to the season or even the hours of the day. However, what remains in the memory of a visitor of the village are the aromas of fruit trees as well as the characteristic aroma of water, especially in the green areas. The road area along the lake is quite polluted especially in the beach period in the two months of July and August.

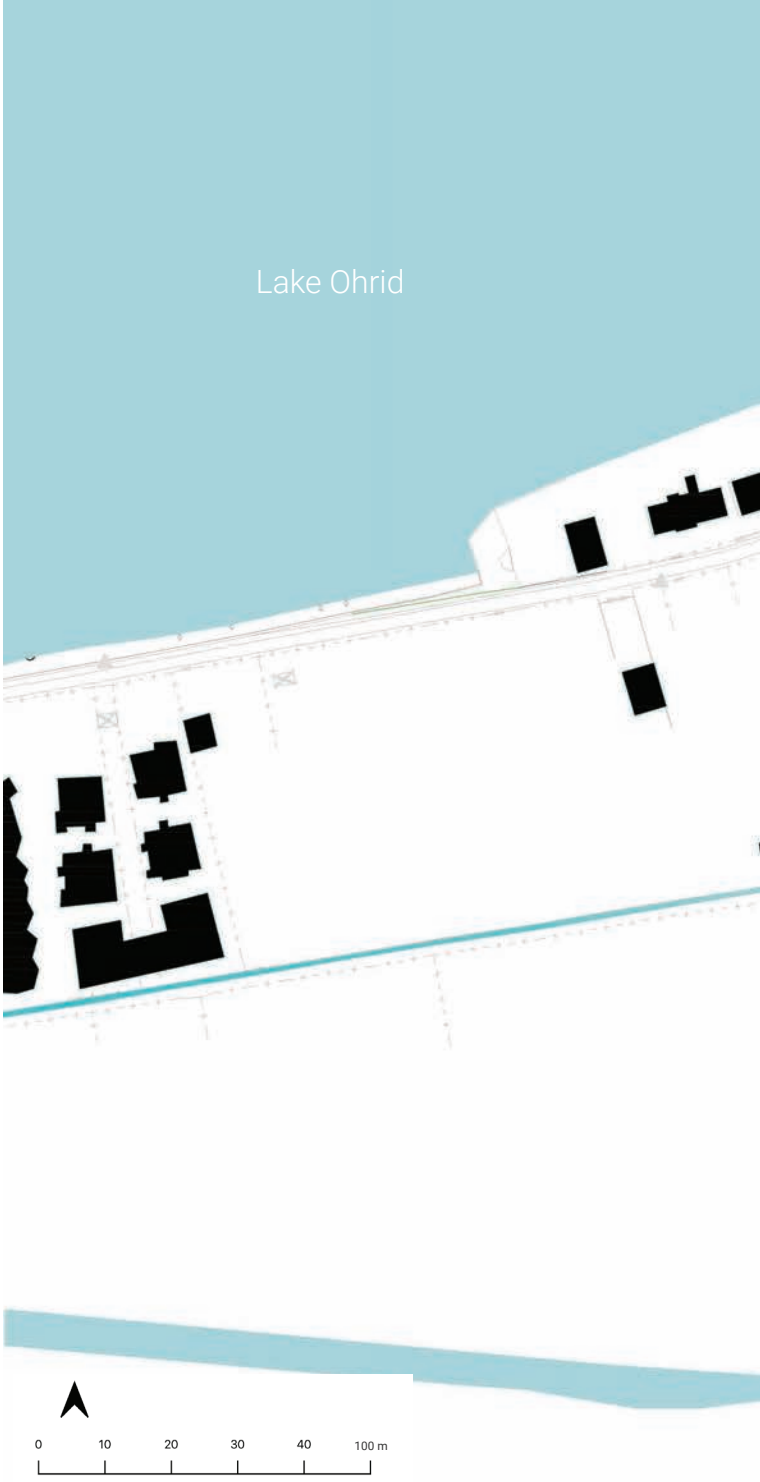


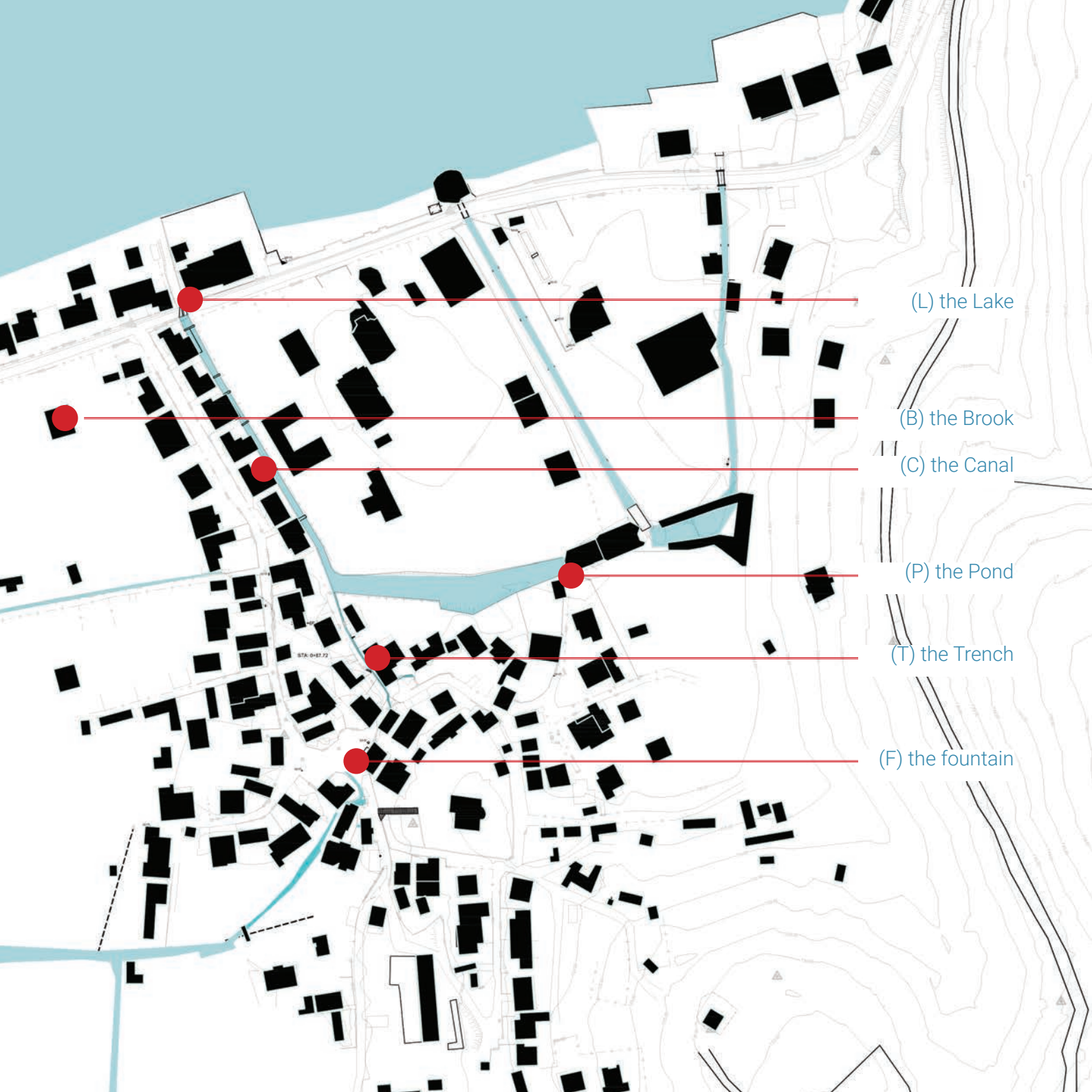
petrol
water
fruit trees (different accoring to seasons)
grass
chimney (winter)

Housing Typologies

Based on the analysis of the existing situation, six different typologies can be distinguished, namely 1) the lake, 2) the brook, 3) the canal, 4) the pond, 5) the trench, and 6) the fountain. They differ from one another by some general characteristics such as among others the relation to water (wide channel with large amount of water flow, or narrow stream of water passing by the streets), accessibility (motorway, pedestrian road), location related to the village (inside the village with small plots of land, or outside in the rural area with large plots). Besides their specific relation to water as one of the key elements in their distinction, these typologies also vary in other aspects such as the density, percentage of land use, type of vegetation, function (tourism, housing or trade).






(L) the Lake
(B) the Brook
(C) the Canal
(P) the Pond
(T) the Trench
(F) the fountain

(L) the Lake

This housing typology is characterised by a strong and direct connection to the lake, with great accessibility to both motorway and pedestrian sidewalks. Buildings differ from each other as a result of many renovation at different times. The front of the dwellings being in direct contact with the motorway is mainly dedicated to commercial services. The buildings comprised in this typology have direct exposure to the lake. During the winter, the high lake waves collide with the facades of the houses. The function of the buildings is mainly residential, although a hotel and small commercial units at the front of the street can be distinguished. The front entrances of the houses are dedicated to commercial services (e.g. shops) in contrast to the more private rear gardens. The backside of the building is characterized by high vegetation. Finally, the only point of contact between the lake typology and the water channels is in the discharge point.

fig. 00

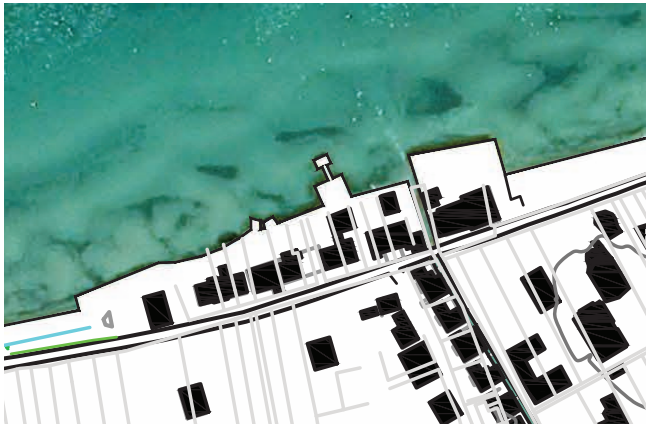
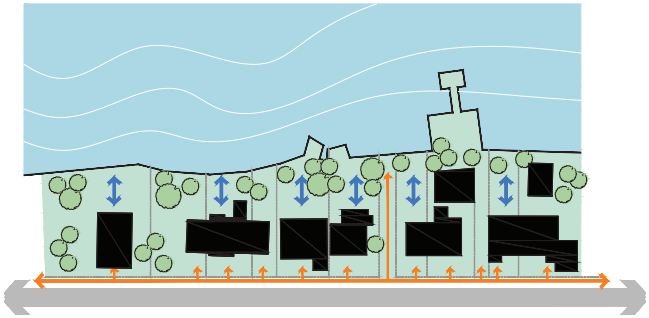


fig. 00

Data and information about the typology			
Number of floors			
Building use	Housing	Hotel	Market
Water use	Fishing	Recreation	
Accessibility	Pedestrian	Automobile	Boat
Permeability			
Vegetation			
OSR (Open Space Ratio)			
FSI (Floor Space Index)			
BCR (Building Coverage Ratio)			



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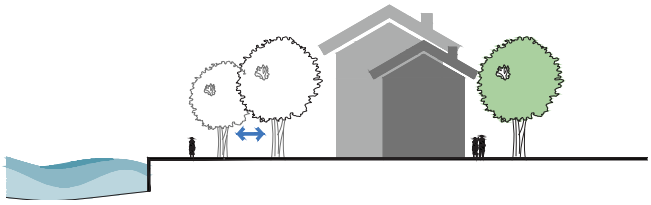

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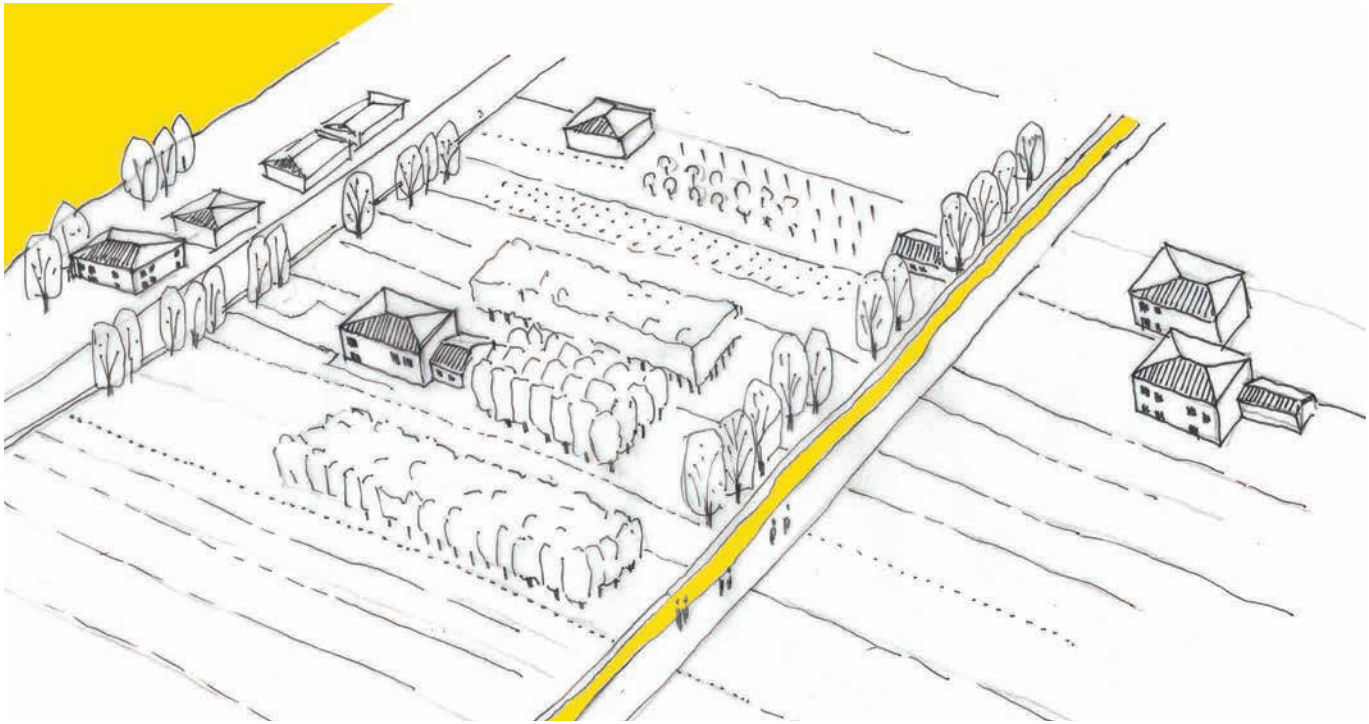
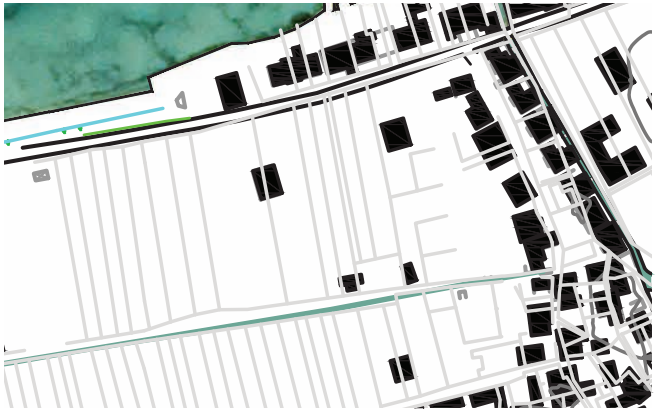
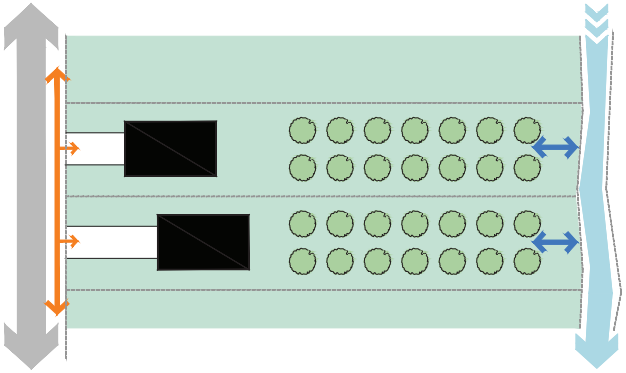


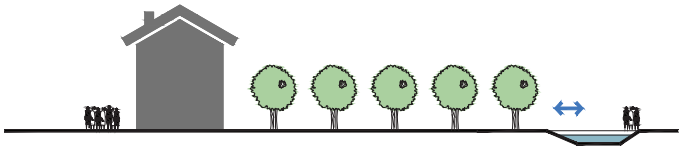
(B) the Brook

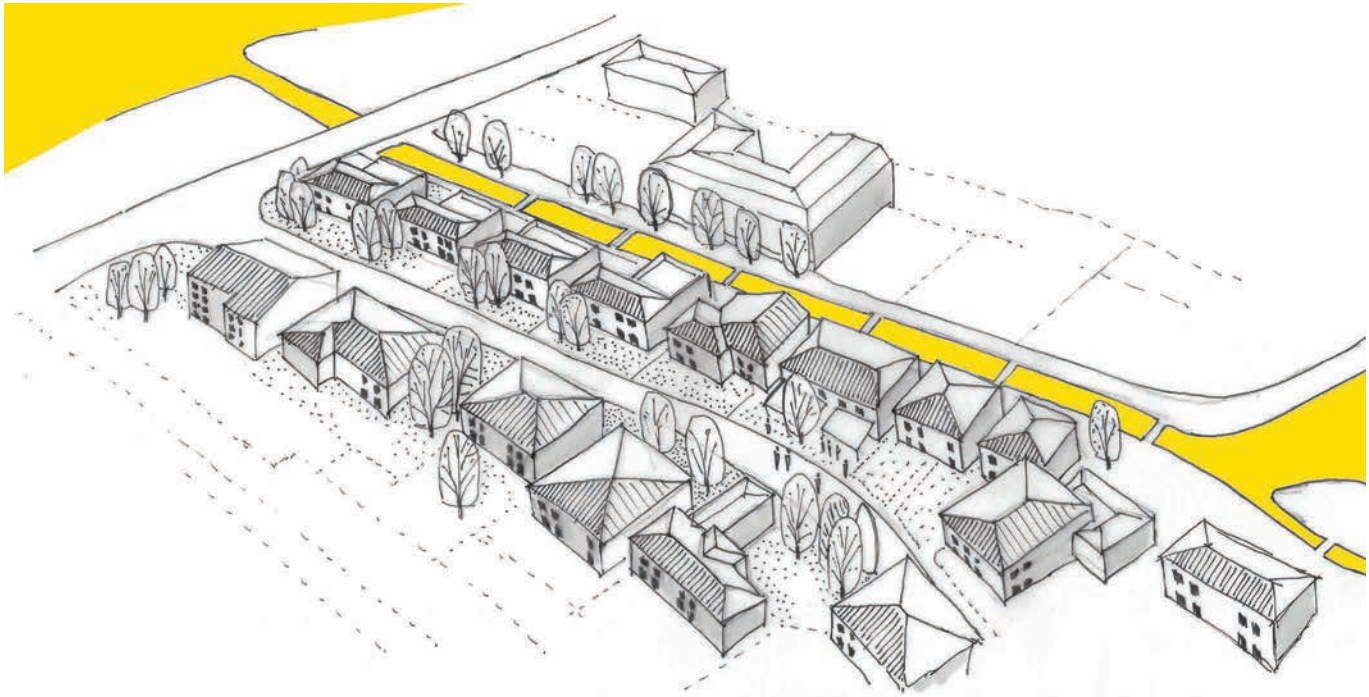
The brook typology comprises houses built in the outskirt area of the village that are characterised by relatively large areas of plot, unpaved surfaces, direct contact with the motorway, and waterways with natural edges. This typology consists mainly of post-1990s constructions. These lands once used to be orchards and a good part of these fruit trees are still preserved in the backyards of new homes.



Data and information about the typology			
Number of floors	2 floors		
Building use	Housing	-	-
Water use	Buffer	-	Irrigation
Accessibility	Pedestrian	Automobile	-
Permeability			
Vegetation			
OSR (Open Space Ratio)			
FSI (Floor Space Index)			
BCR (Building Coverage Ratio)			
Footprint	m²		



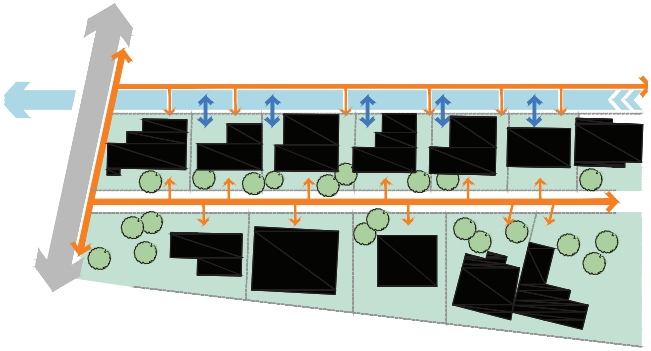


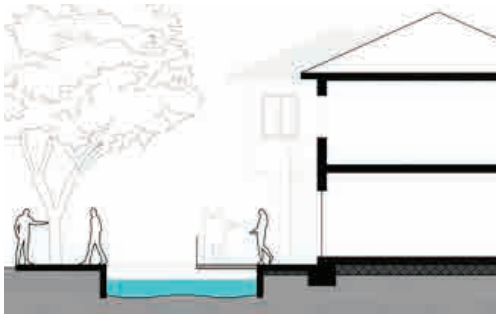


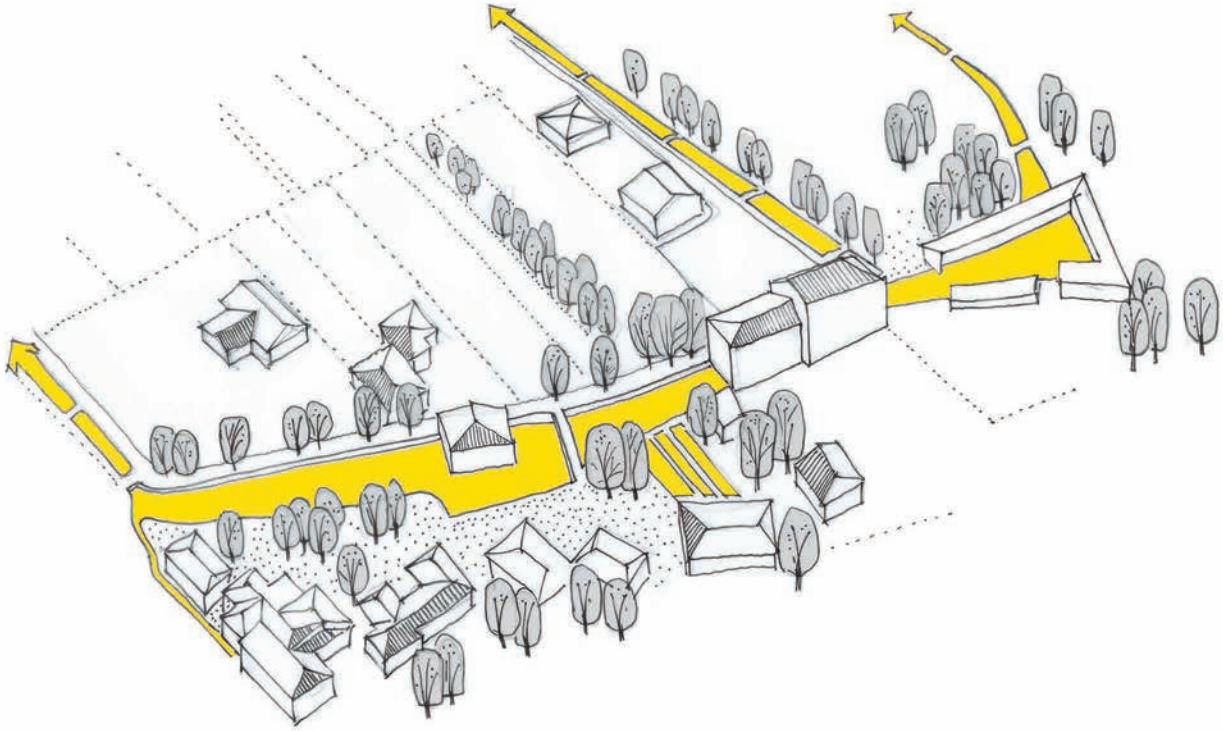
(C) the Canal

The canal typology consists of grouped single family houses built near the water canal, with additions made at different times. Occasionally, wood panels cover the canal to gain additional surface area. The houses have a direct connection to the water and are accessible from both the front and back side. The front yards have been preserved in their former condition while the back yards have shrunk and almost disappeared. In this case, the inhabitants use water for domestic needs. The water channel is mostly straight and with strong concrete edges. In general, the canal bed is sandy and covered with aquatic vegetation. Another distinguishing feature of this typology is the use of the water line as an element separating the private area from the public one.

Data and information about the typology			
Number of floors	2 floors		
Building use	Housing	-	-
Water use	Buffer	Recreation	Domestic use
Accessibility	Pedestrian	-	-
Permeability			
Vegetation			
OSR (Open Space Ratio)			
FSI (Floor Space Index)			
BCR (Building Coverage Ratio)			
Footprint	m²		

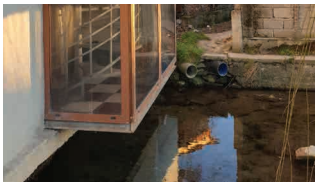




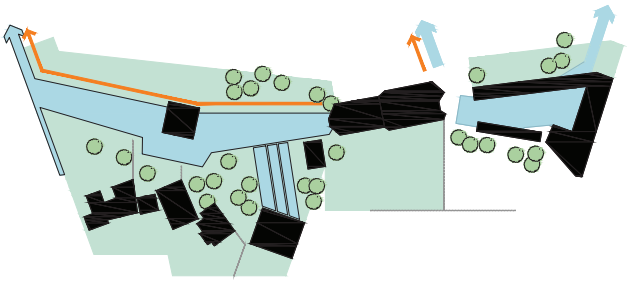


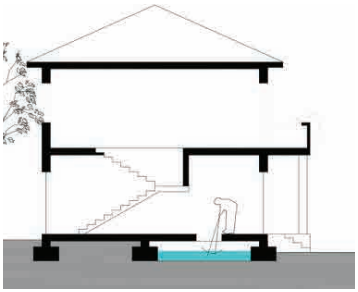
(P) the Pond

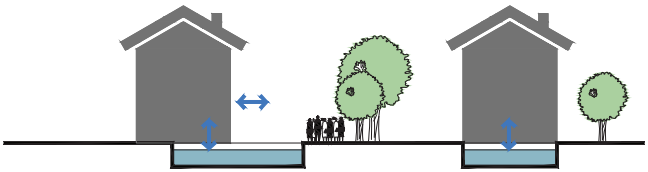
This typology of houses is unique in terms of building on water sources with very strong connection to the water according to the inhabitants' s stories. Picture 00 shows an old house during the restoration where rocks and water springs are clearly visible on the floor. The surrounding ponds are dedicated to the growth of characteristic fish of Lake Ohrid. Very strong visual communication with the water and a good part of these buildings are used for hotels and restaurants.

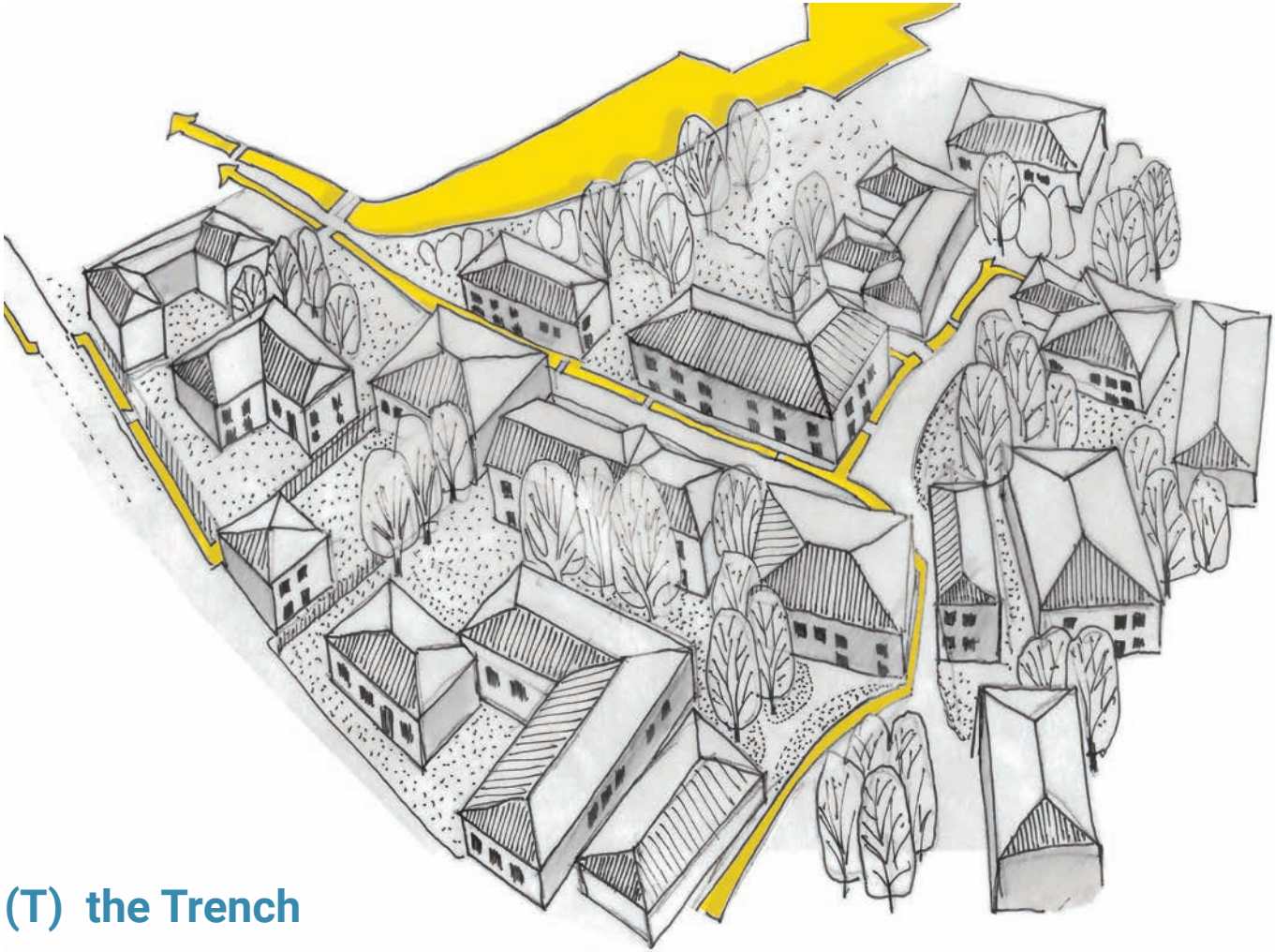


Data and information about the typology			
Number of floors	2-3 floors		
Building use	Housing	Hotel	-
Water use	Fish Hatchery	Recreation	Domestic use
Accessibility	Pedestrian	-	-
Permeability			
Vegetation			
OSR (Open Space Ratio)			
FSI (Floor Space Index)			
BCR (Building Coverage Ratio)			
Footprint	m²		





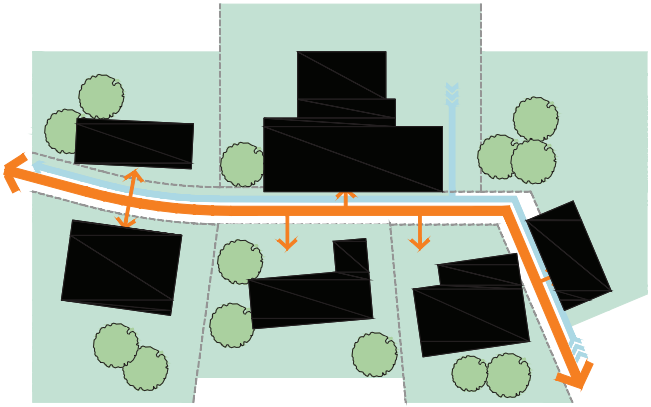


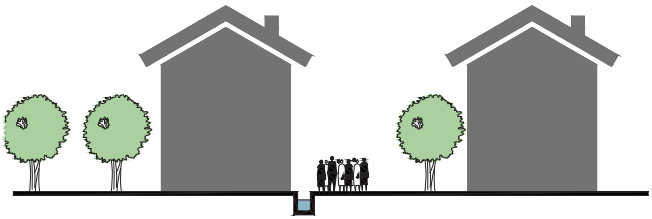


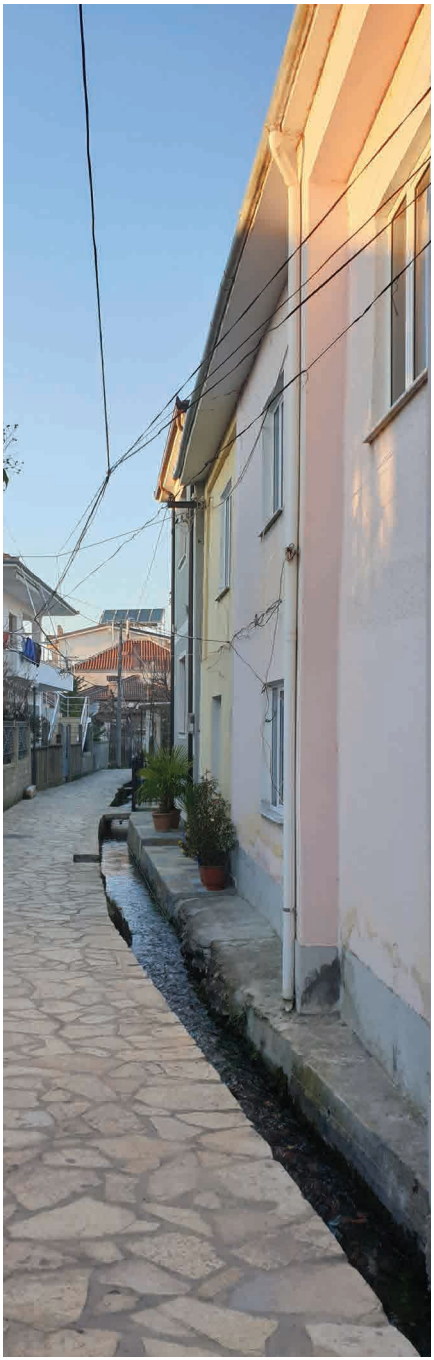
(T) the Trench

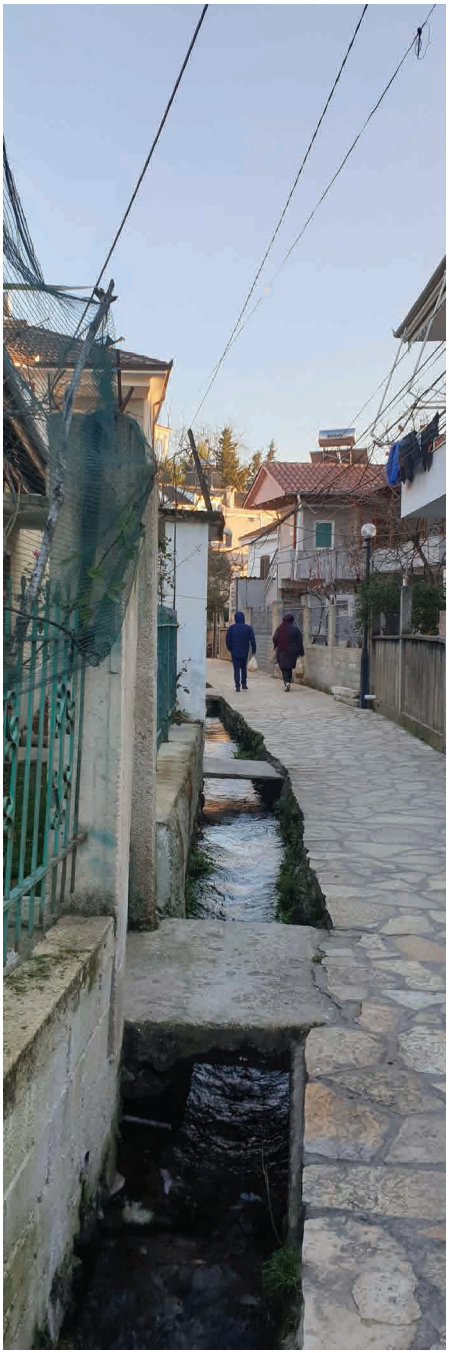
In this typology the presence of water is minimal but found everywhere and plays an important role in the visual separation of spaces by meandering from a public space to a private courtyard. The dimensions of this water line range from 30 centimetres (covered with iron gratings) to 80 or 100 centimetres in most cases. If it is less than 30 centimetres, then the water disappears under the pavement to reappear in another space in another form. The water in these canals moves relatively quickly and no fish is observed. The water quality is relatively good as it is close to the source point and therefore water was once used for domestic use.

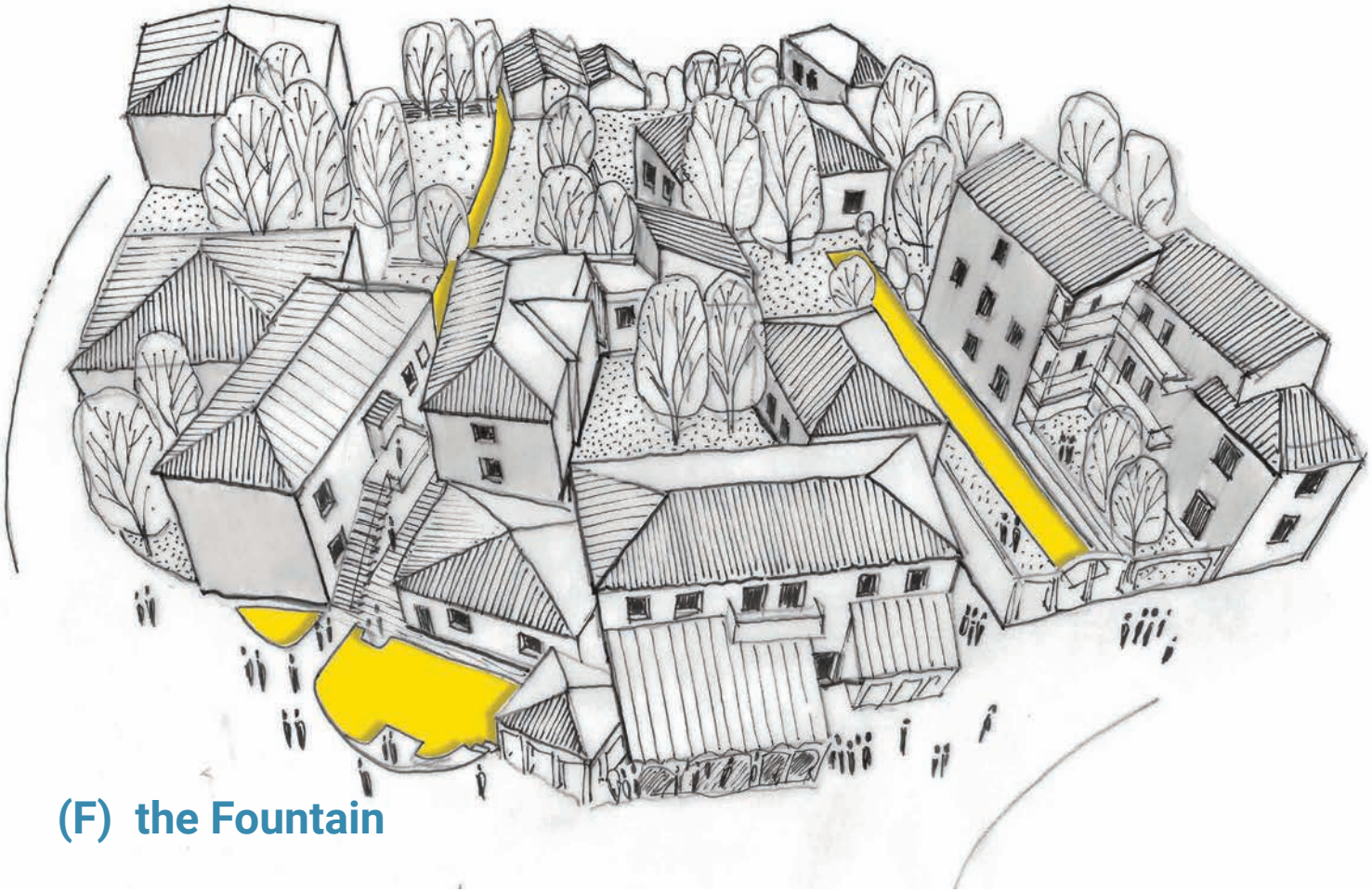
Data and information about the typology			
Number of floors	2-3 floors		
Building use	Housing	-	-
Water use	Border	Recreation	Domestic use
Accessibility	Pedestrian	-	-
Permeability			
Vegetation			
OSR (Open Space Ratio)			
FSI (Floor Space Index)			
BCR (Building Coverage Ratio)			
Footprint	m²		







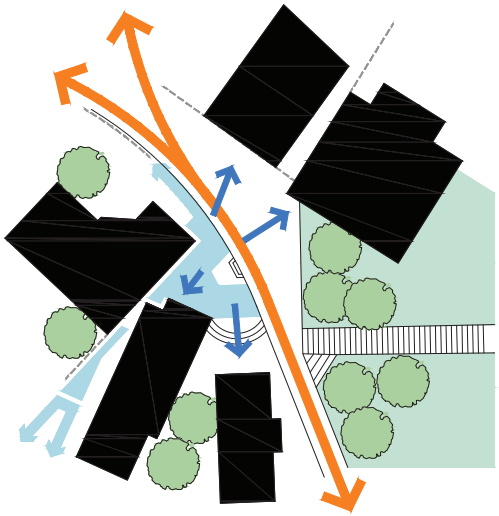


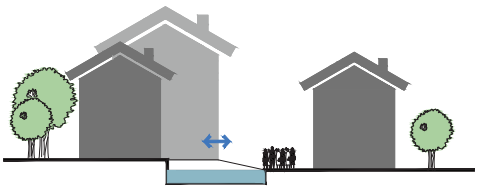


(F) the Fountain

The Fountain is one of the highlights of the water source and is also part of the village centre. The water is of very high quality and therefore serves as drinking water for the inhabitants or visitors of the village. The bottom of the basin is rocky and sandy and therefore no aquatic vegetation is found. This aquatic surface has the premise of having high visual value. The water has a central character and then flows in different directions of the village supplying its many canals.

Data and information about the typology			
Number of floors	2-3 floors		
Building use	Housing	Hotel	-
Water use	Drinking	Recreation	Domestic use
Accessibility	Pedestrian	-	-
Permeability			
Vegetation			
OSR (Open Space Ratio)			
FSI (Floor Space Index)			
BCR (Building Coverage Ratio)	0.65		
Footprint	3162 m²		





Colours and Textures

The old characteristic buildings of Tushemisht do not stand out for their special architecture, however they are in harmony between them and the materials used. The old houses are built of dry stone and the additions at a later time are made of red brick wall. The alleys are also paved with the same stone of the surrounding area but most have been built in recent years under a restoration project of the municipality of Pogradec. New constructions of recent years have brought to the village different architectural styles that do not fit the character of the village.

DRY STONE WALL

MIX WALL (DRY STONE & RED BRICK)

STONE AND WOODEN WALL

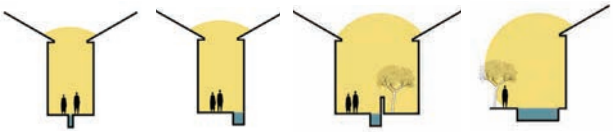
LIMESTONE PAVING

RED BRICK WALL

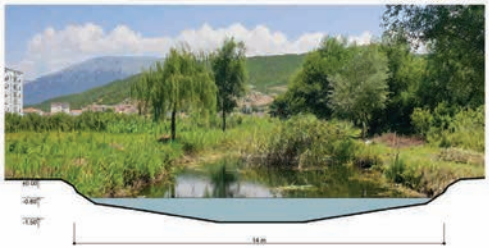
PLASTERED WALL (PAINTED)

Waterway typologies

Waterways can be categorized into two types, natural and urban. The first type, mainly in the agricultural area of Tushemisht, consists of water channels in different dimensions and with soft edges with vegetation. The depth of these channels varies from 40 centimeters to 1 meter and a half. In the second type are the canals in the urban area inside the village. These canals range from narrow streams 30 centimeters wide to canals four meters wide. In some cases when the space is very narrow these channels are covered with iron nets. The edges of the canals are built with concrete walls but the base is natural and in most of them you can see aquatic plants which wave from the movement of water. These canals are an important part of the village identity.



WATER ELEMENTS IN THE URBAN AREA OF THE VILLAGE



04. First step into the spatial principles

Based on the analysis made on the village of Tushemisht, in relation to the problems and questions raised by the research question, in improving the quality of the village, the design proposal should focus and be based on the following points:

- General Urban Structure

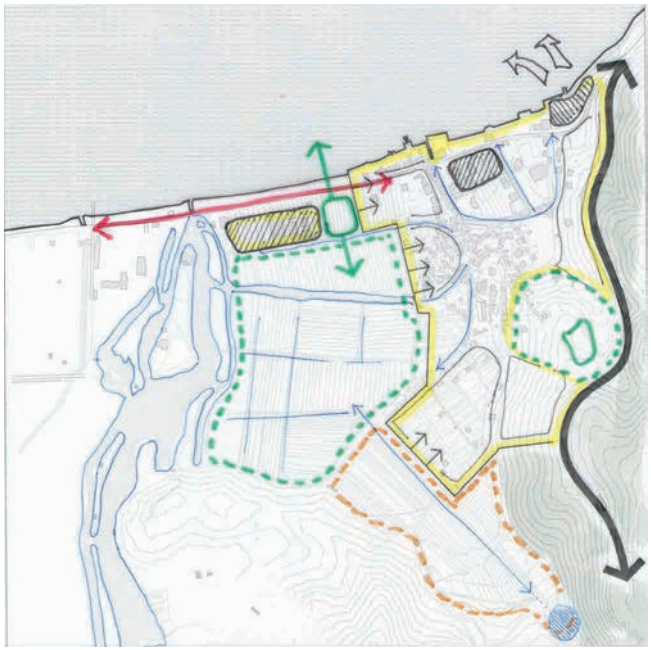
A general structure for the development of the village will be defined in the form of a master plan. In this plan, referring to the landscape typologies found in the Tushemisht area, the possible areas for development and expansion will be identified as well as the areas in which the prevention of further densification will be recommended.
Strengthening of water-housing connection.
The former strong connection of dwellings with water in the form of canals, streams, springs or ponds will be further strengthened, making its presence more visible. This will be achieved through the creation of new water channels as well as their improvement in existing cases.

- Preserving and enhancing pattern orientation.

Another characteristic feature of the village such as the fruit trees in the former agricultural plots with a typical longitudinal orientation towards the lake will not only be preserved but will be incorporated in the new plan as an important part of it.

- New Bypass.

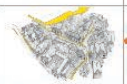
An important part of this plan will be the relocation of the



existing road that connects the city of Pogradec with the city of Ohrid in the neighbouring country. This relocation will not only serve as a constraining element of the village in the southern part but will also free up space for the creation of a promenade along the lake including various social activities.

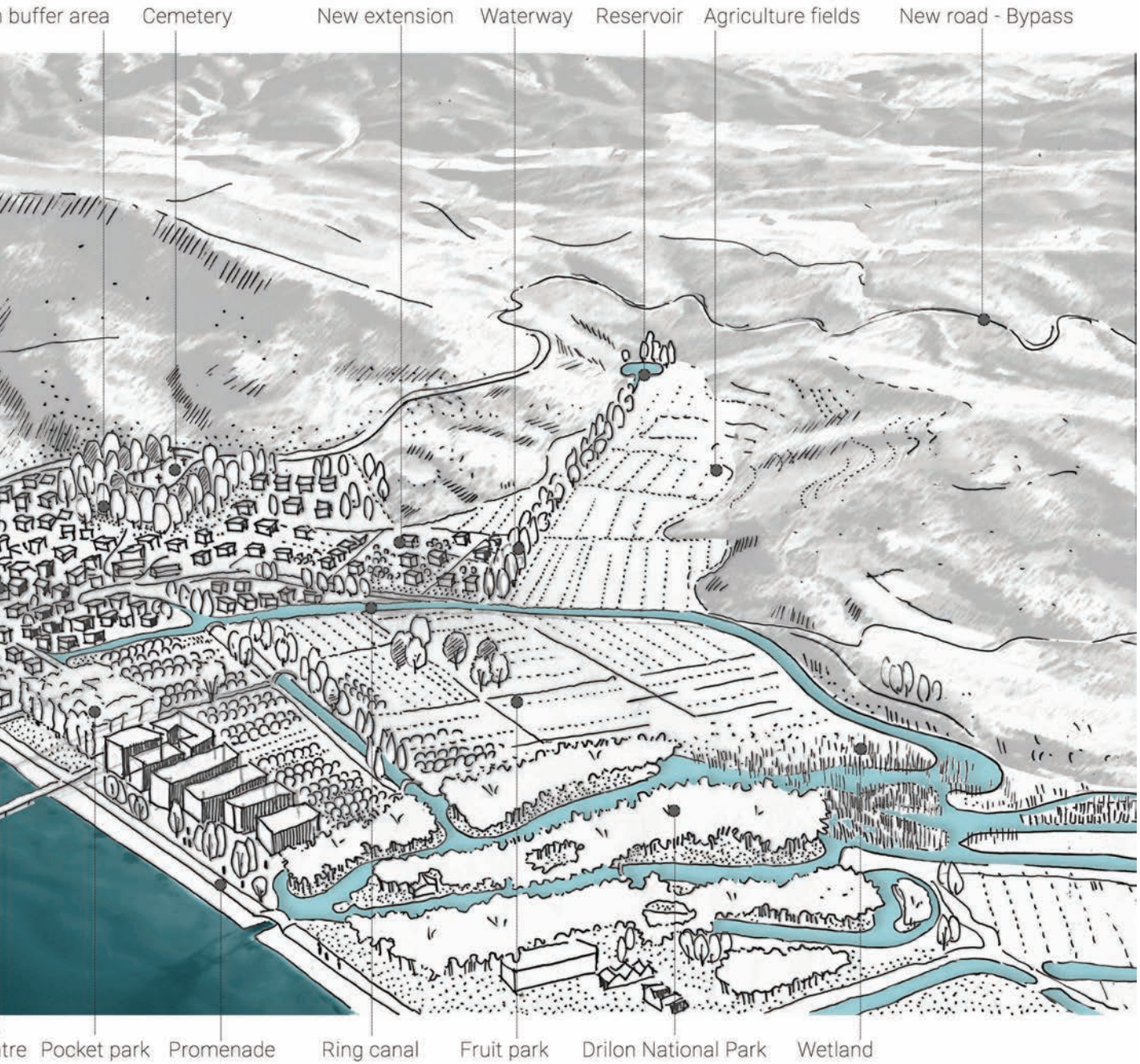
- The pier as a recreation facility.

The lake is the main element that represents the village of Tushemisht and is also the main engine for the development of tourism, however, the emphasis is placed only on its use as a beach during the summer months. To create a more complete relationship between people and the lake as well as to further develop tourism this relationship should be complemented by the construction of a pier which can become part of new routes as well.
The characteristic houses of Tushemisht, with their human scale, materials, colours, heights, shape, etc. should be taken as a basis in the creation of a design language for the new development and expansion.
From the land ownership map, two typical types of plots are noticed. Plots and houses built before the communist period, oriented around the hill and the church, irregular shapes which have affected the constructions themselves as well as the village alwleys.
Plot and houses built on lands returned to the inhabitants (land return law number 7501) after the fall that of communism which are mainly in former agricultural lands and as a result have a rectangular, longitudinal shape and oriented in a direction perpendicular to the lake.
These two different types of plots are an important element in shaping the landscape over the years and will serve as the basis for the new master plan.

EXISTING (TRADITIONAL)							ADAPTATION (NEW DEVELOPMENT)				
LANDSCAPE TYPOLOGY	HOUSING TYPOLOGY	TYPES	IN CONTEXT	WATER USE	BUILDING USE	PUBLIC/PRIVATE	WATERWAYS	TYPES	USES	SPATIAL ELEMENTS	ZONING
THE VILLAGE	LAKE			RECREATION	HOUSING	PRIVATE				PROMENADE	A
LAKE AREA	BROOK			IRRIGATION	HOTELS & COMERCIAL	PUBLIC				PIER & POCKET PARK	B
AGRICULTURE	CANAL			COOLING	SMALL SHOPS	SEMI-PRIVATE				FRUIT PARK	C
RIVER	POND			DOMESTIC						HARBOUR	D
HILLY AREA	TRENCH			BUFFER							
	FOUNTAIN			FISH FARMING							
				FISHING							

05. Design

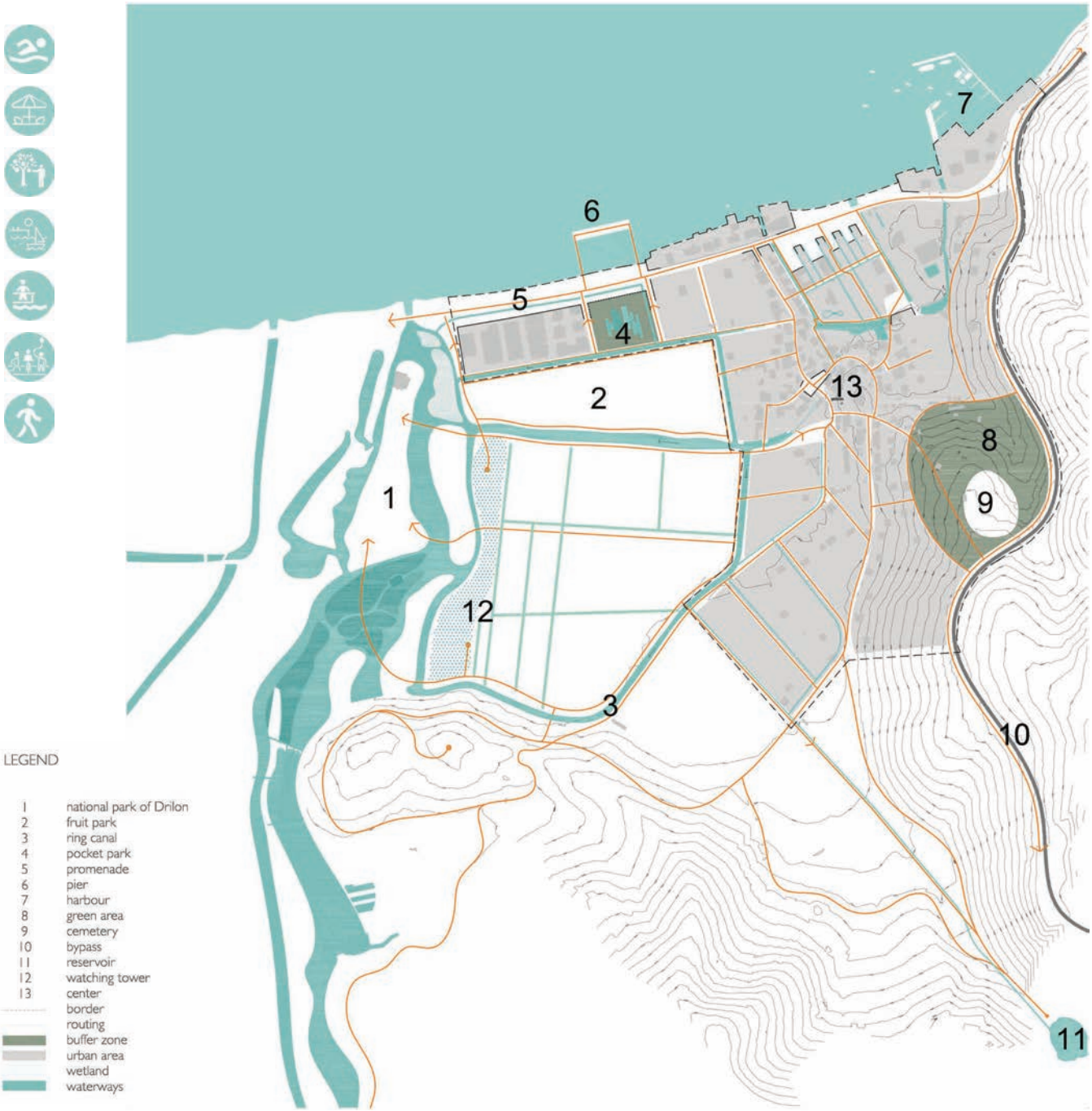
This is a bird's-eye perspective of the village in 2050. The longtime laps is chosen to accommodate long term developments.


buffer area
Cemetery
New extension
Waterway
Reservoir
Agriculture fields
New road - Bypass
tre
Pocket park
Promenade
Ring canal
Fruit park
Drilon National Park
Wetland

New Vision Plan for Tushmisht

In order to create a controlled development of the village of Tushemisht while preserving not only the characteristics of the landscape but also the typical features of the village itself, some measures need to be taken.
First, the village must be limited by certain defining elements which will also create the limitations of the new development plan.

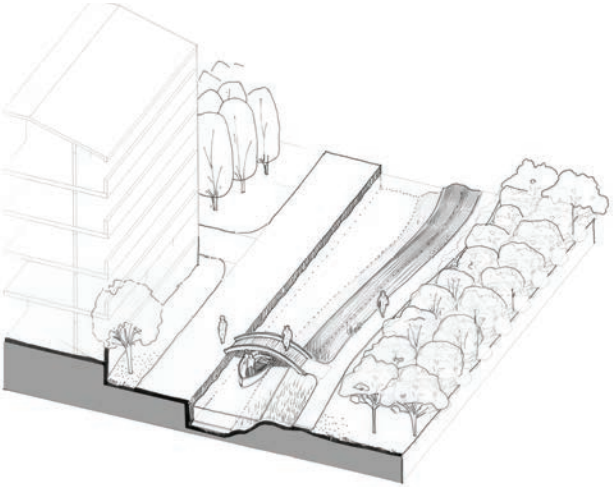
The current road that connects Albania with Macedonia passes along the lake shore and physically separates it from the village of Tushemisht, Drilon park as well as other elements of the landscape. According to the LOR Management Plan (2016) the main roads with heavy traffic and railway lines should be diverted away from the coastal zone where possible.
These roads are not only a major obstacle to the development of tourism but also for the locals themselves. Moving this road to the back of the village will not only free up traffic and reduce noise and air pollution but will also create opportunities for new public spaces that are missing or are already small in size. This new area that will be created by the relocation of the road will be a new public space in the form of a promenade where various social activities will take place.
This road will also serve as a border element of the plan in the southern part of the village, limiting the village in this direction.



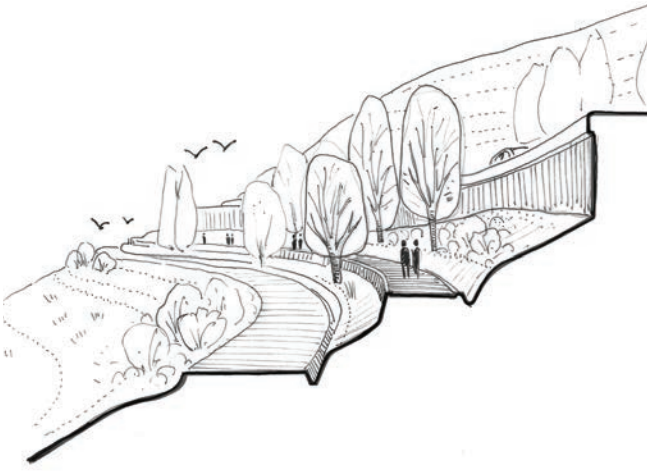
LEGEND

1	national park of Drilon
2	fruit park
3	ring canal
4	pocket park
5	promenade
6	pier
7	harbour
8	green area
9	cemetery
10	bypass
11	reservoir
12	watching tower
13	center
	border
	routing
	buffer zone
	urban area
	wetland
	waterways

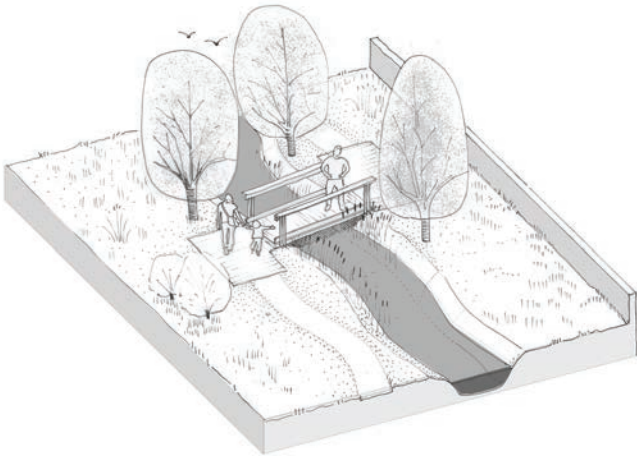
New borders



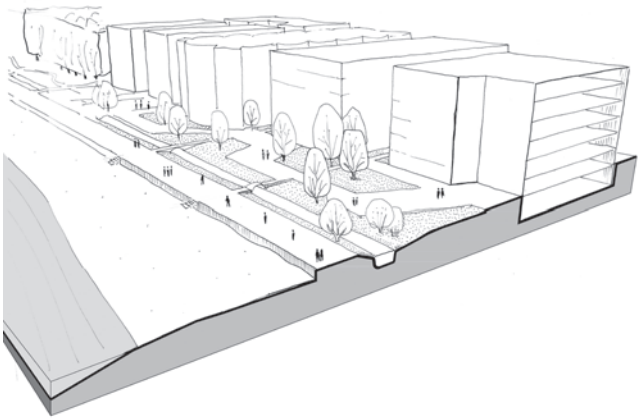
Section 1-1 showing the transition from urban (village) to the fruit park. From urban system to the man-made landscape. From one side the hard edge of the new proposed water ring, and the other side the soft, natural edge.



Section 3-3 showing the transition from urban (village) to the hilly area. From the urban system to natural landscape. This border consists of a line formed by the new road as well as a bicycle and pedestrian track.



Section 2-2 showing the transition from urban (village) to the agriculture area. From urban system to the man-made landscape. This boarder of 10 meters width consists of a reactivated water line connecting the water reservoir with the new ring channel.



Section 4-4 showing the transition from the uban area (the village) to the lake are. From urban system to natural landscape.

This map shows the borders of the village and their spatial development. To the left of the map are shown 4 characteristic types of these spatial boundaries. Transition from the urban area to the fruit park area as in figure 1, the transition from the village to the agricultural area as in figure 2, or from the village to the natural area of the Tushemisht hills as well as the transition from the urban area to the natural lake area. Having a well-defined physical shape makes these borders more protected against the uncontrolled expansion of the village.

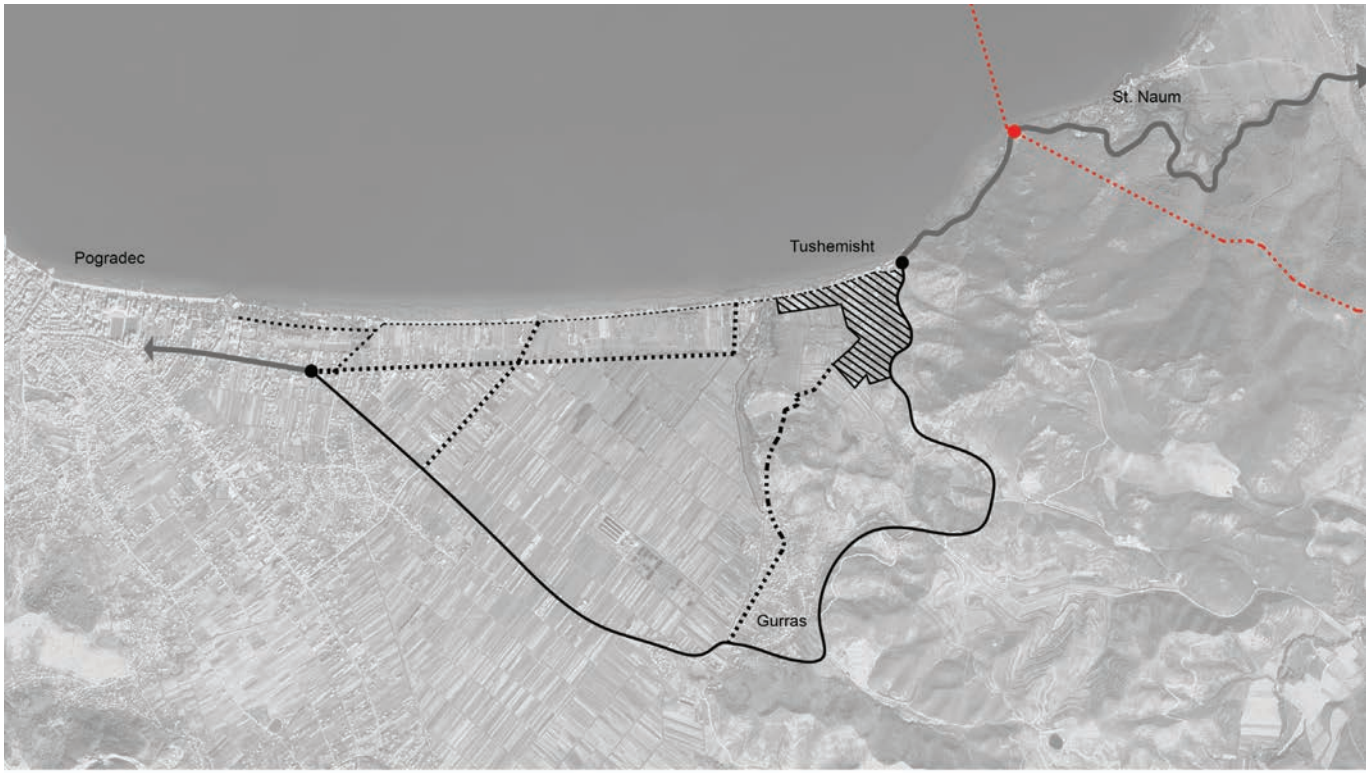
Waterways and routings

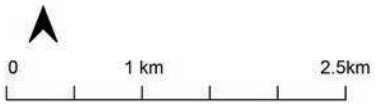
Water is closely related to the identity of the village of Tushemisht and as such occupies a dominant place in the design proposal.
The following maps show the proposed structure of waterways as well as the new routing network. Water in its linear form present in this village serves as a strong steering element and expresses movement, therefore it is combined with the paths system to create a special experience.
Recreational walking has always been well connected with the water spaces in the history of the architectural landscape and the different forms that water takes in this village, such as canals of different widths, ditches, rills, trenches, etc., create a special atmosphere by inviting and encouraging walking. At the same time, monotony and repetition are avoided as a result of a diverse relationship between walking and water.
The duo of routings and waterways serves as the basic structure and also frames and divides the sub-zones of the new plan.
The strong separating character of water is mitigated by the presence of numerous crossings on the water which also have a recreational function playing with the proximity of people to the water.

New proposed structure

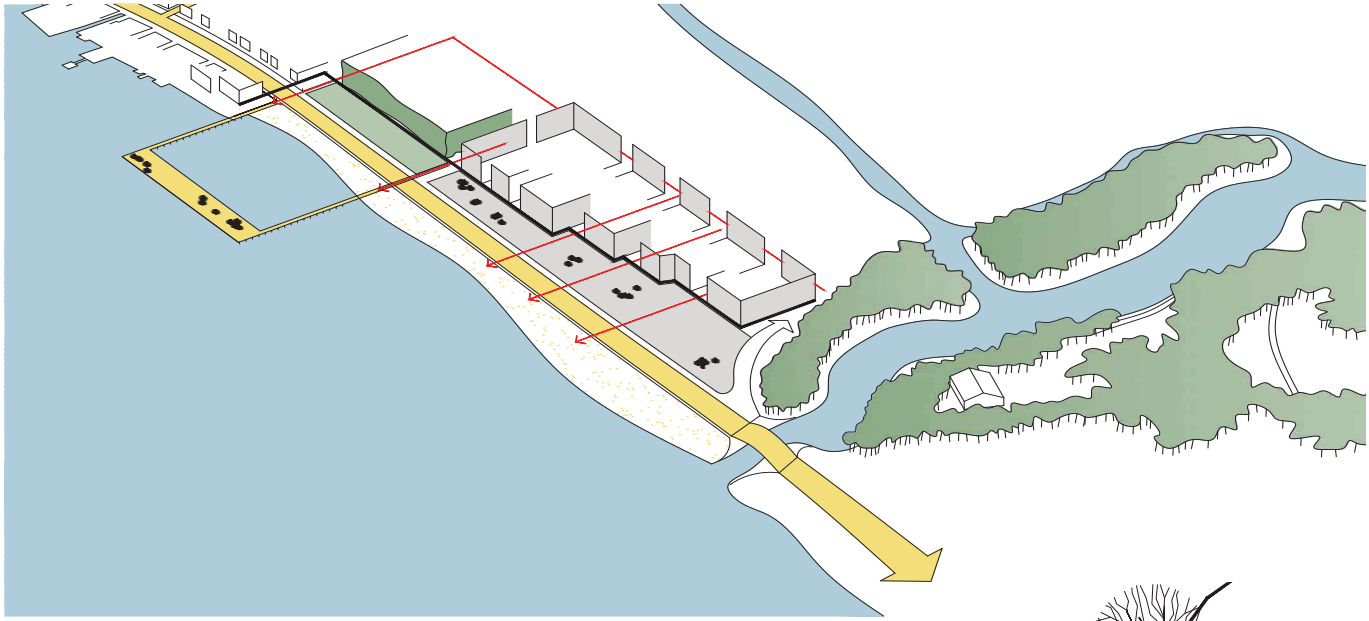
Existing structure

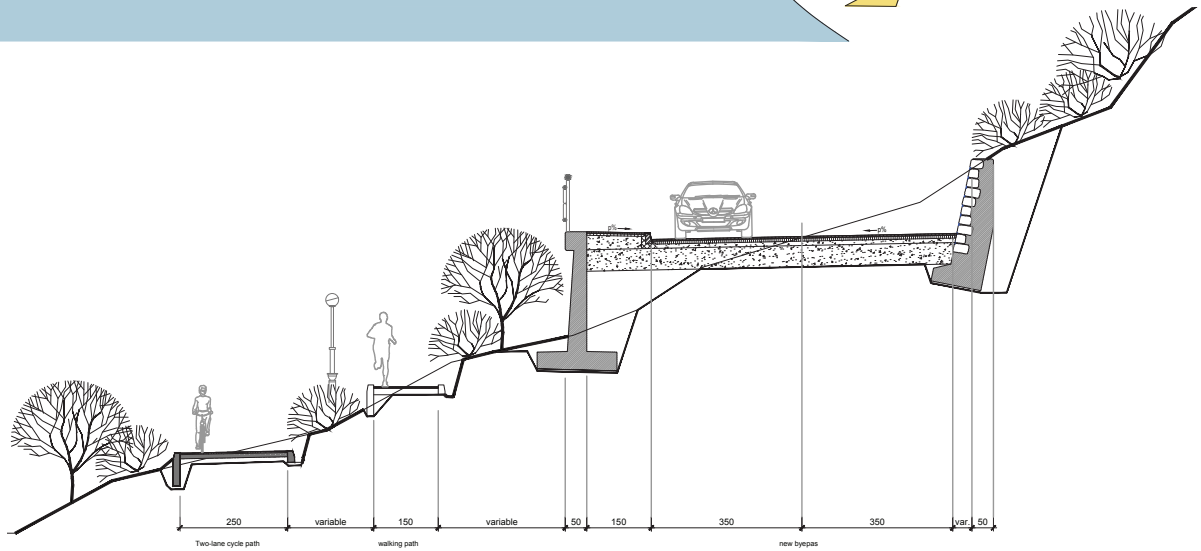
Road relocation





Border crossing
New nodes
Current road
Bye pass
Low traffic
Promenade
Border crossing

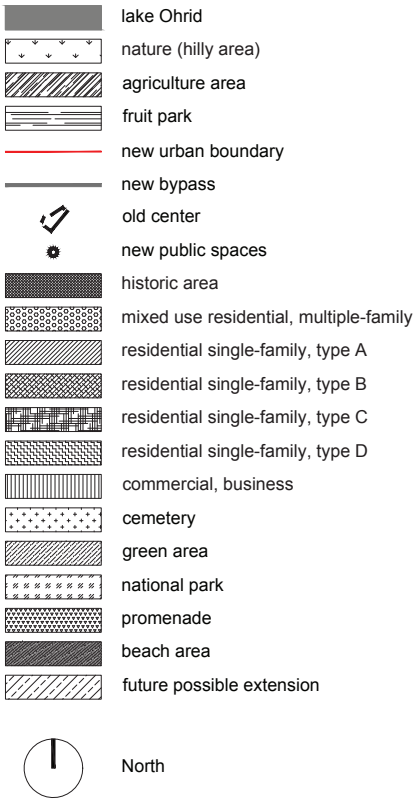




The relocation of the road that connects Pogradec with the Albanian border with Macedonia, creates new public spaces which serve the villagers but also the visitors. A 5 km long promenade will be built instead of the road which will continue to the city center of Pogradec. The spaces between the street and the new residential buildings will serve as recreation facilities with small squares at the service of the residents of these buildings as the ground floors of these buildings have mainly service functions.

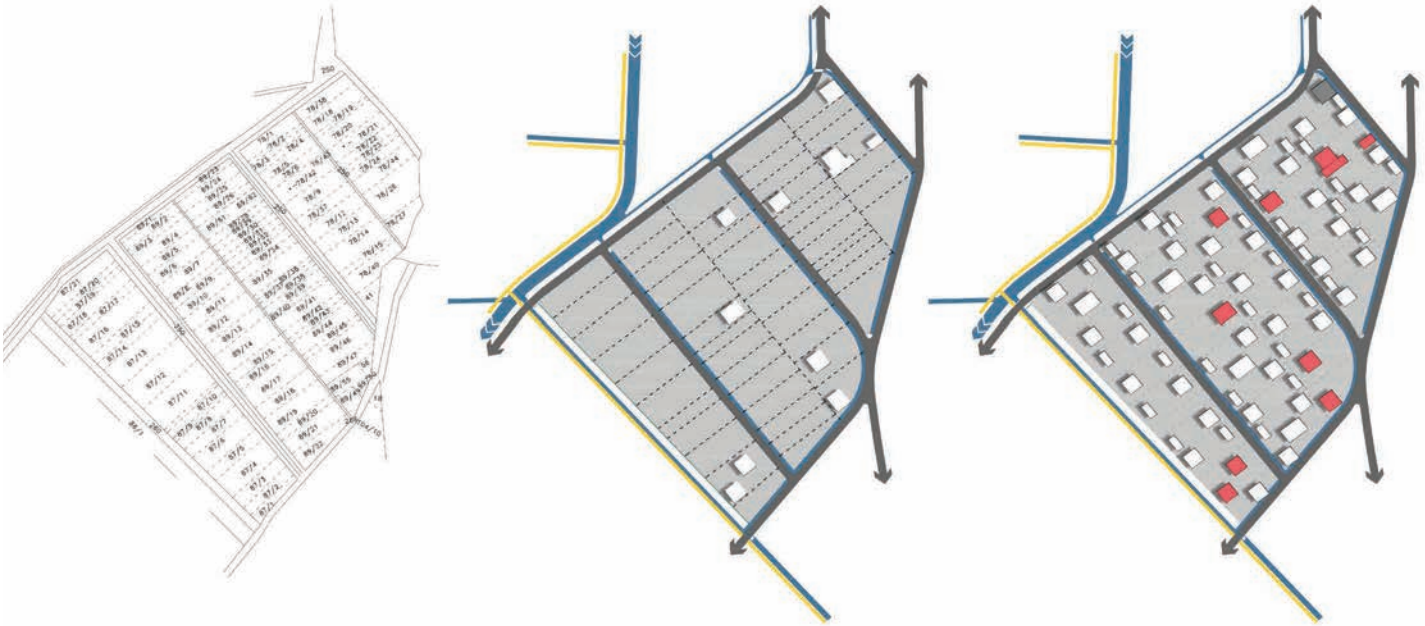
Zoning, rules and housing typologies

This map presents the typologies of dwellings based on three determining factors such as the presence of waterways, the topography of the terrain that is closely related to the first factor, as well as the pattern of the land that has to do with the origin of the land (former agriculture land or inside the village where the lands are more irregular). The commercial area is positioned in the northeast of the village closely connected with facilities such as the port or the new bypass. The centre area has been preserved unchanged as a historical part of the village.



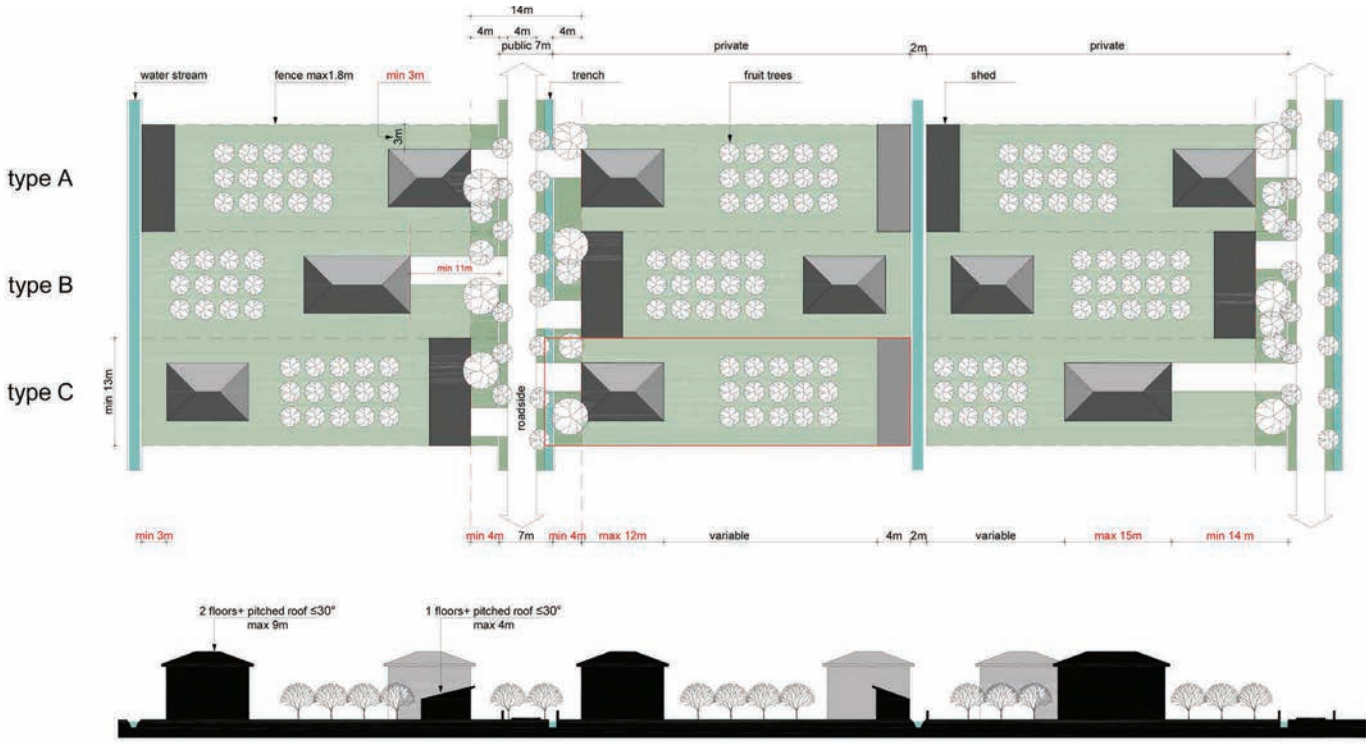
Type A

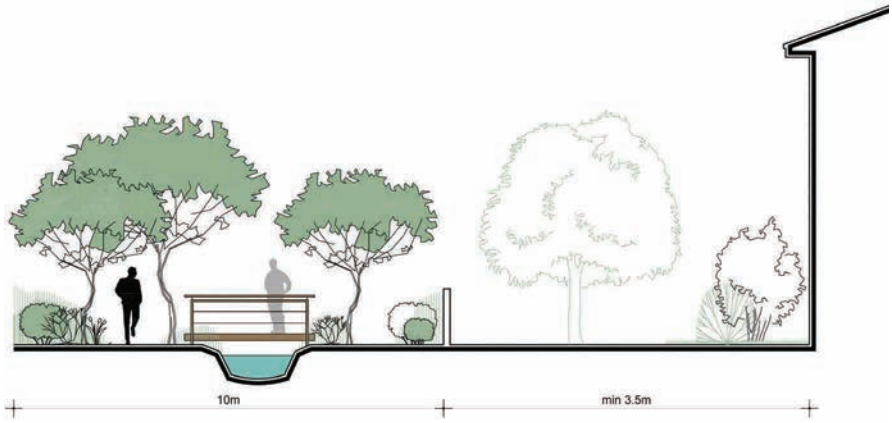
Residential single-family

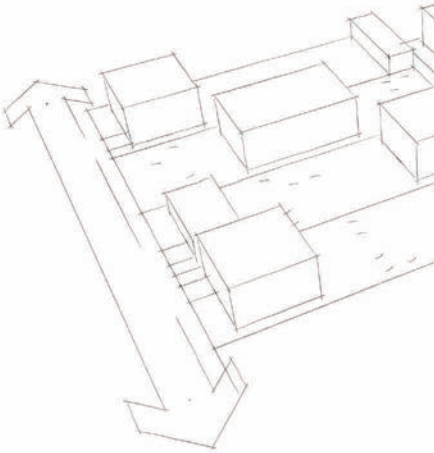


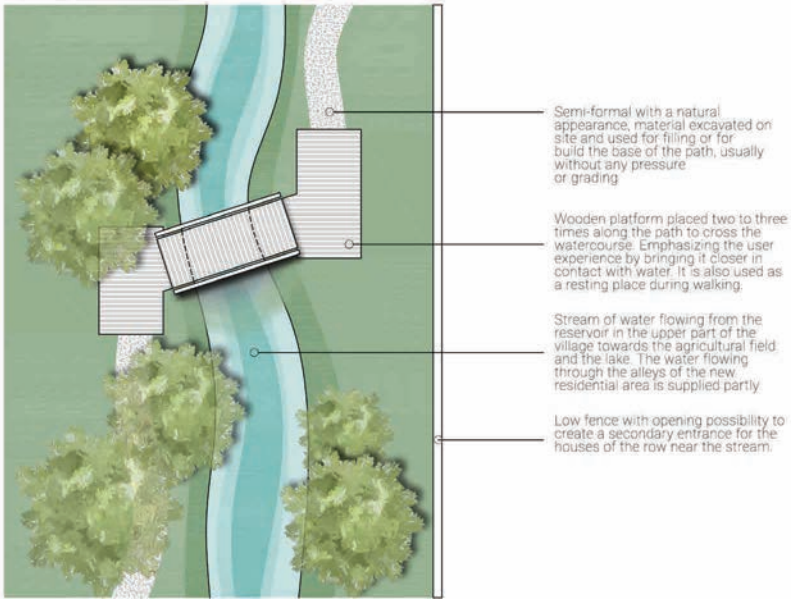
This area represents informal constructions on former agricultural land. The design strategy sets rules based on the three basic types identified in this area. These rules have to do with the positioning of the houses on the plot, the distance between them as well as the minimum distance from the road. The height of the house is also determined based on the existing informal constructions.
The minimum width of the plot will also be set at not less than 13 meters in such a way as to control the density and the minimum distances.

The type of trees will be recommended to be fruit trees but to be more flexible and to meet the different requirements of investors in the future some mitigating rules will be created such as 30% of the trees must be fruit and the rest can be free on request.
The maps on the right show the existing occupation as well as a worst scenario of maximum density according to these rules.







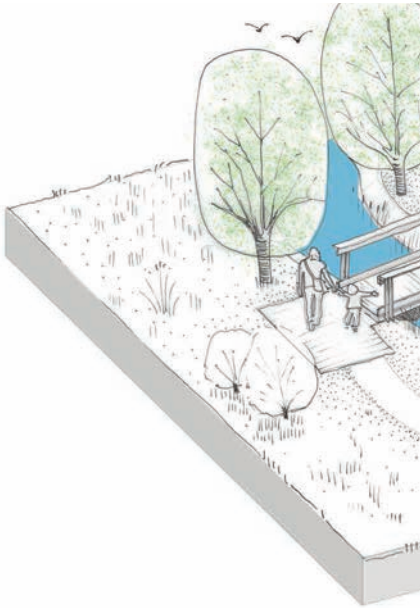


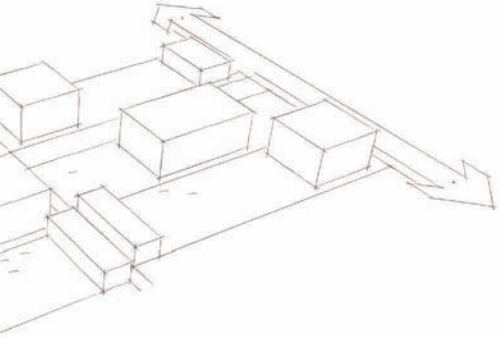
Semi-formal with a natural appearance, material excavated on site and used for filling or for build the base of the path, usually without any pressure or grading.

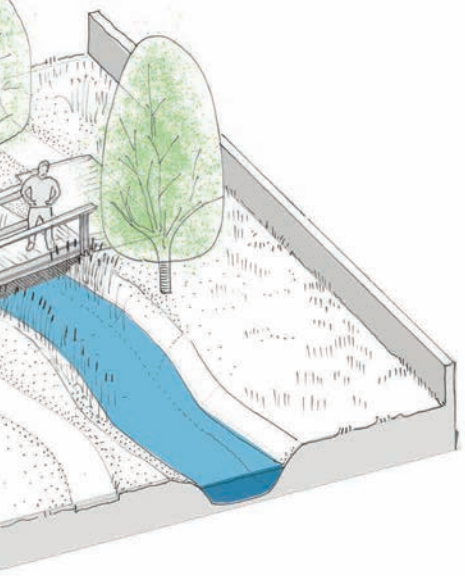
Wooden platform placed two to three times along the path to cross the watercourse. Emphasizing the user experience by bringing it closer in contact with water. It is also used as a resting place during walking.

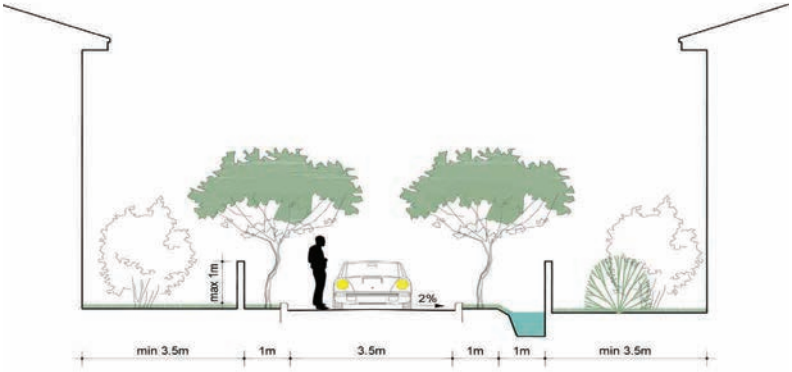
Stream of water flowing from the reservoir in the upper part of the village towards the agricultural field and the lake. The water flowing through the alleys of the new residential area is supplied partly.

Low fence with opening possibility to create a secondary entrance for the houses of the row near the stream.





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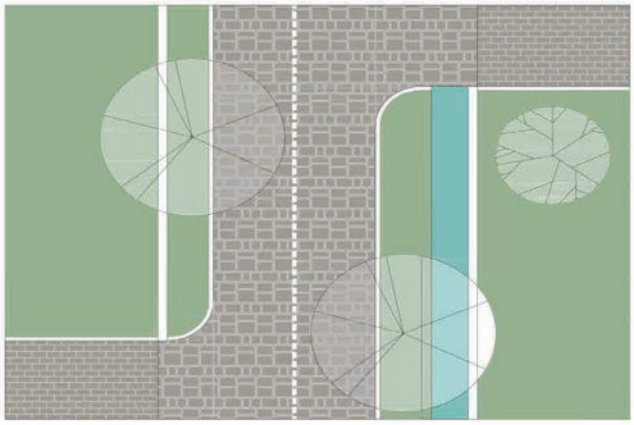
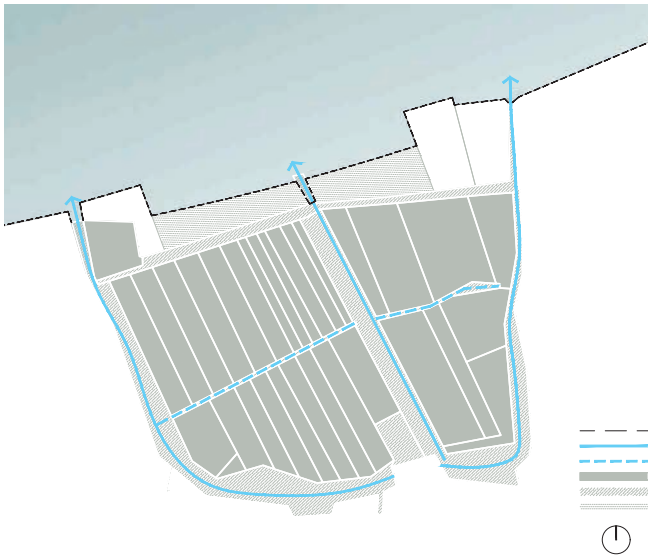


Type C

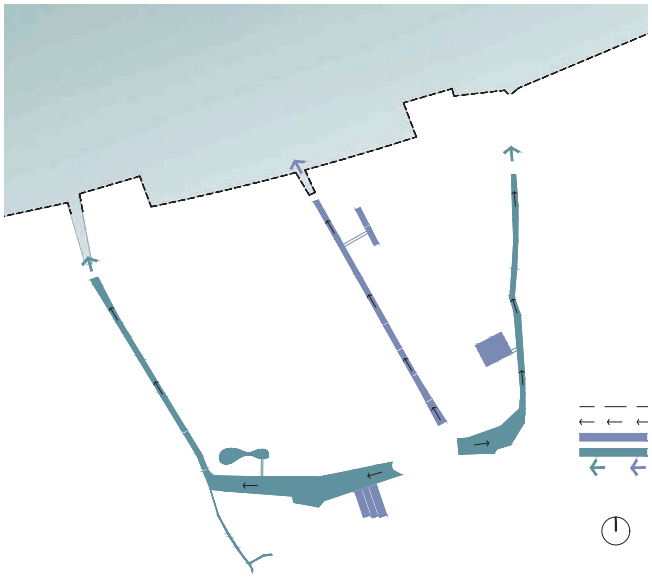
View from Google Earth showing recent construction on agriculture land. In the part near the lake, the buildings are 3 to 5 floors high and with commercial functions.

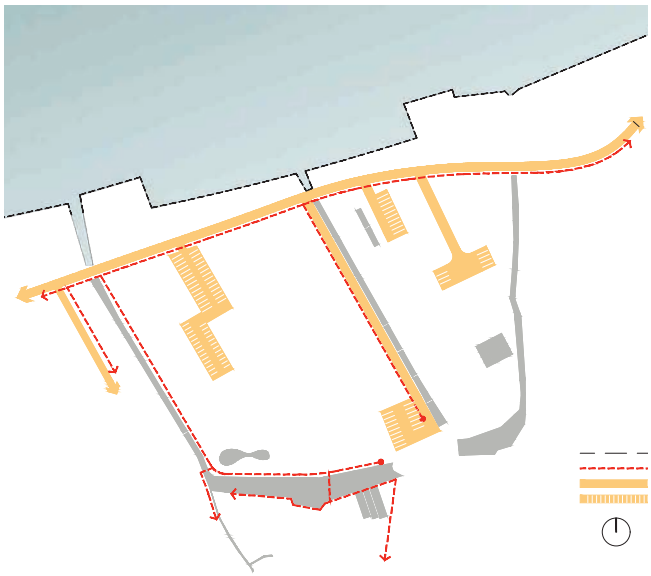
This old photo shows the linear orientation of the plots as well as the irrigation canals.

The map above shows the existing buildings in this area and the one below shows the water and its use for recreation, fish-farming and the direction of its movement.

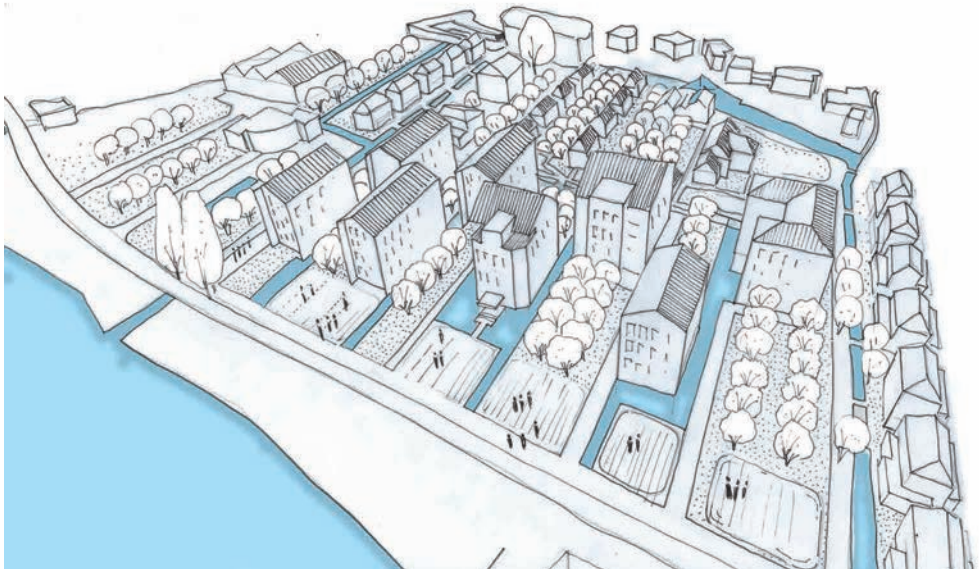


The map above shows the plots and the type of ownership, private or public. While the map below shows accessibility, vehicles and pedestrians.



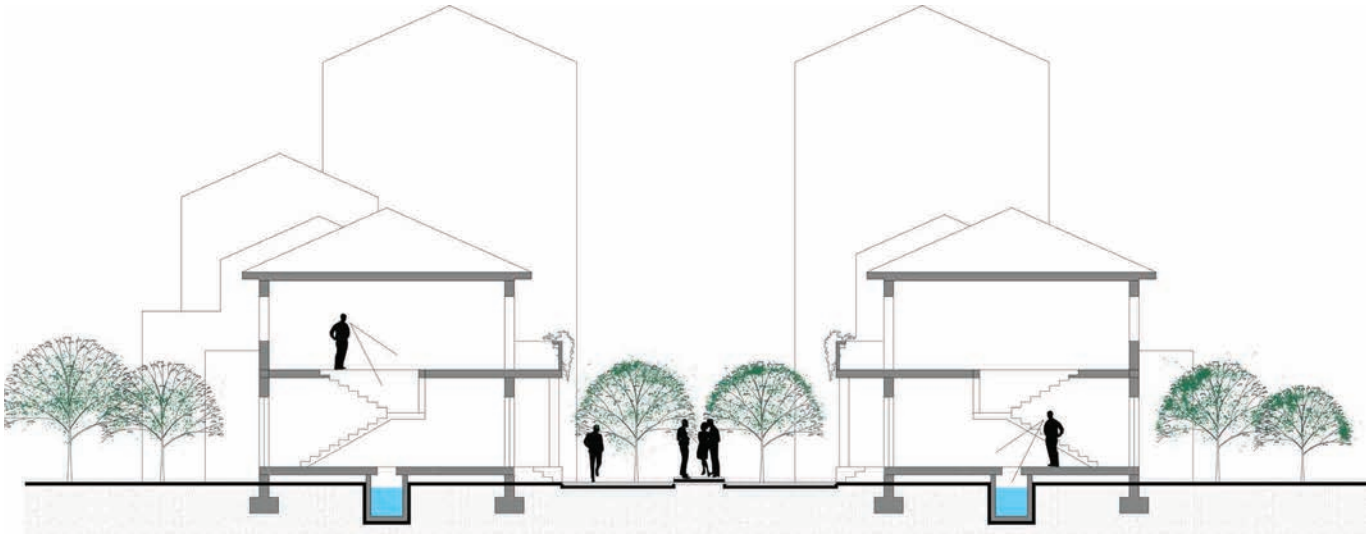


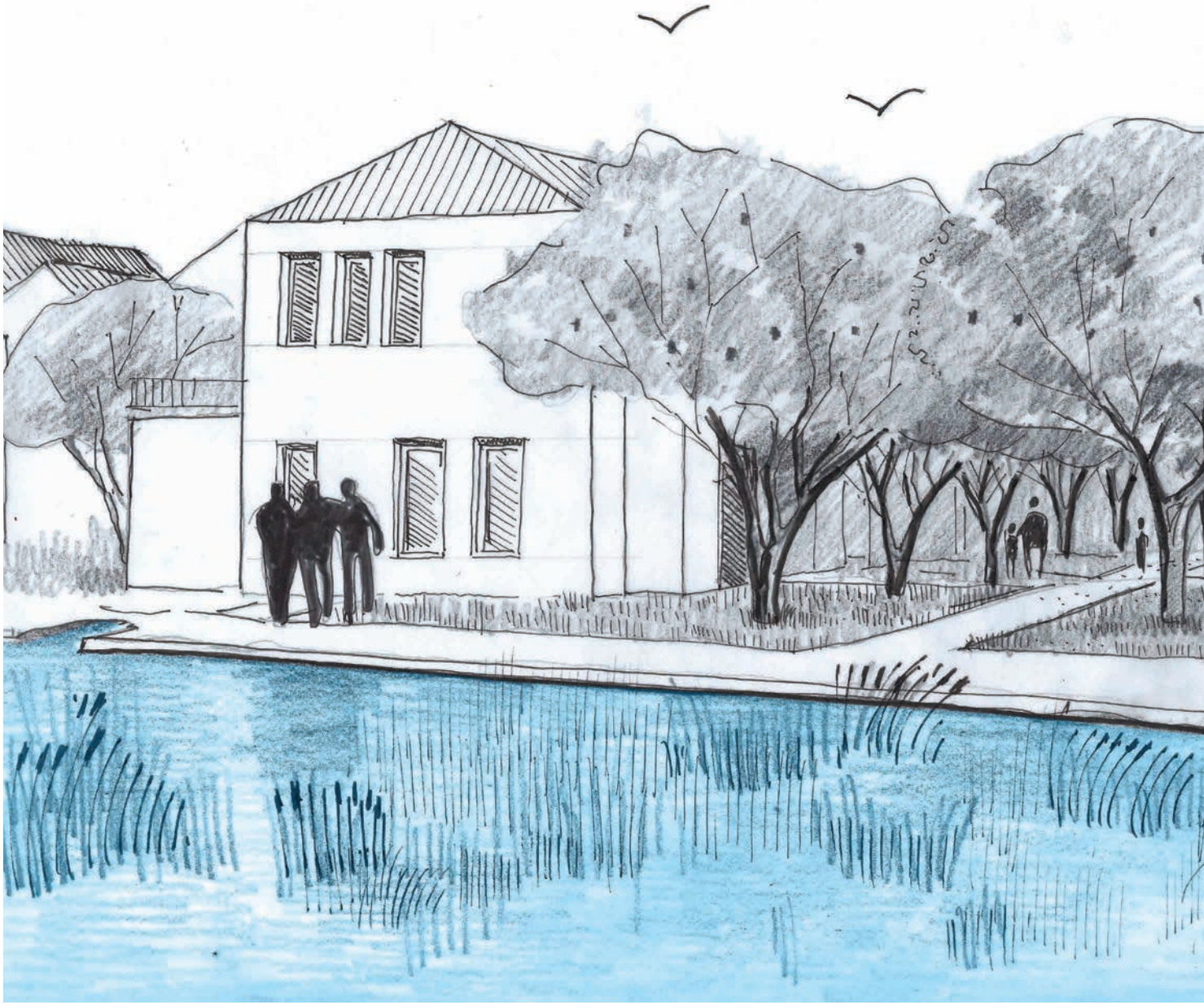
Bird's eye view, showing the area close to the village, the connection to the water canals and the fruit trees



Bird's eyeview, by the lake showing hotels and commercial buildings. Water canals and rows of fruit trees evoke the old character of the place

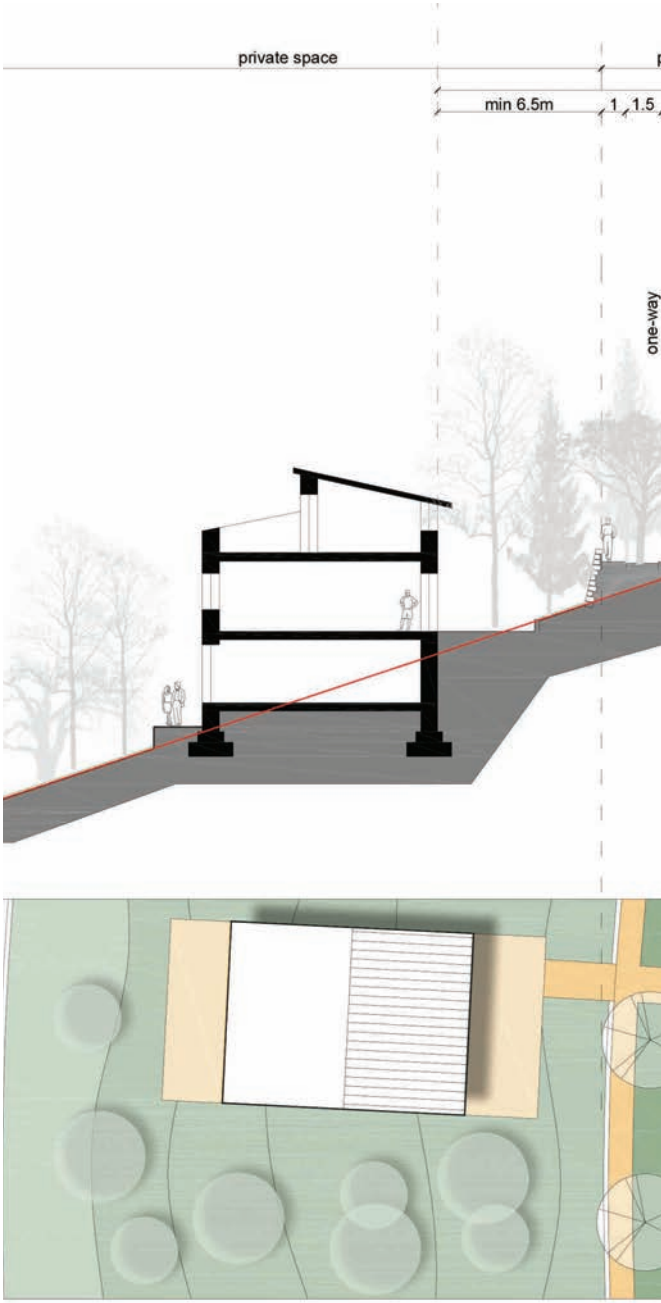
In order to preserve the former character of this area with its linear parcel orientation towards the lake, irrigation canals as well as fruit trees, in the new design is taken into account not only the existing buildings but also landscape elements such as fruit trees and water canals. The front of the lake is dedicated to relatively high-rise buildings including services and hotels, and the back is located closer to the old village area, with more human-scale two-storey houses hidden between rows of fruit trees. Water canals are expanded further by creating a water network between the buildings as well as being included inside the houses based on one of the existing typologies of houses.

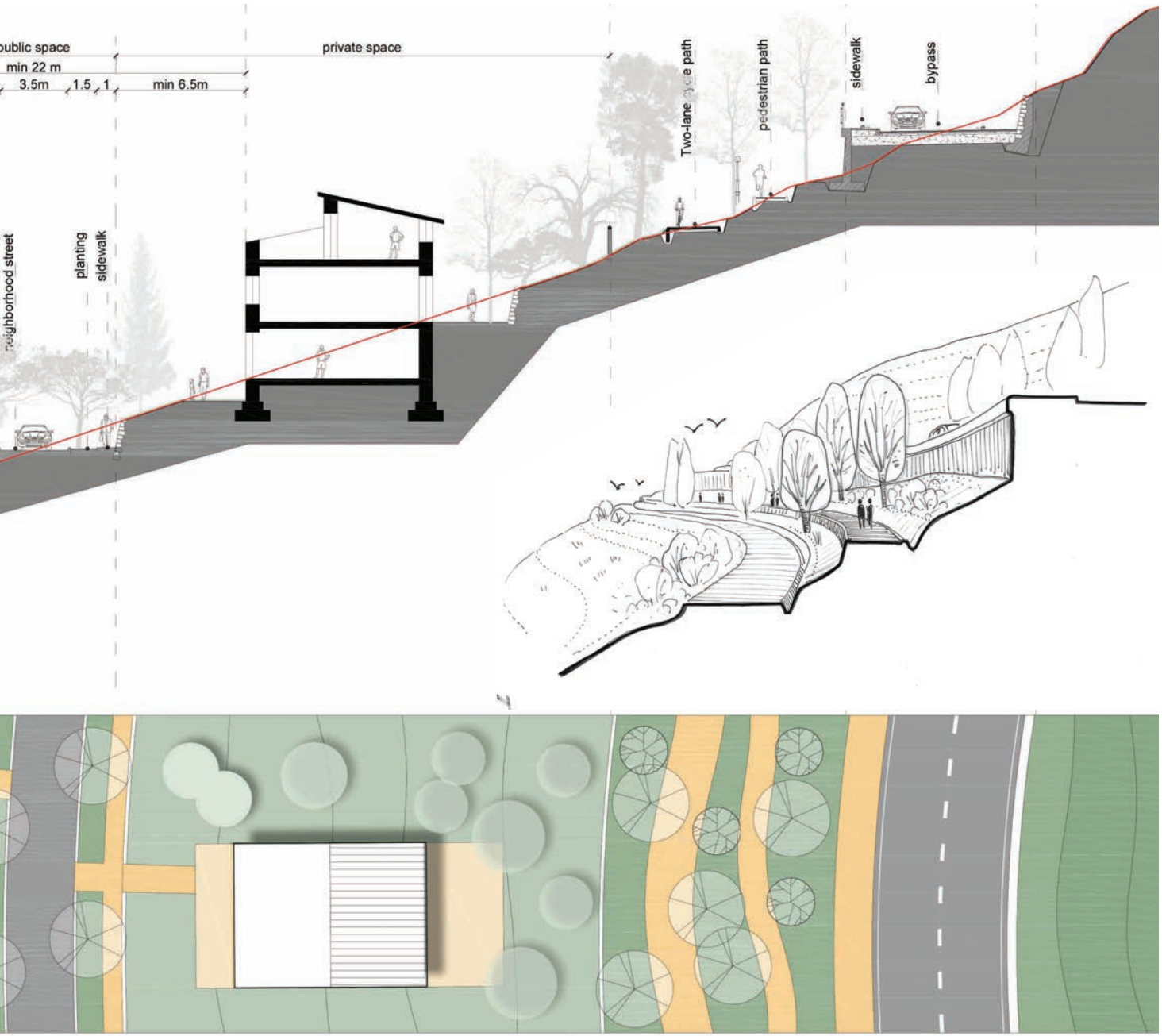




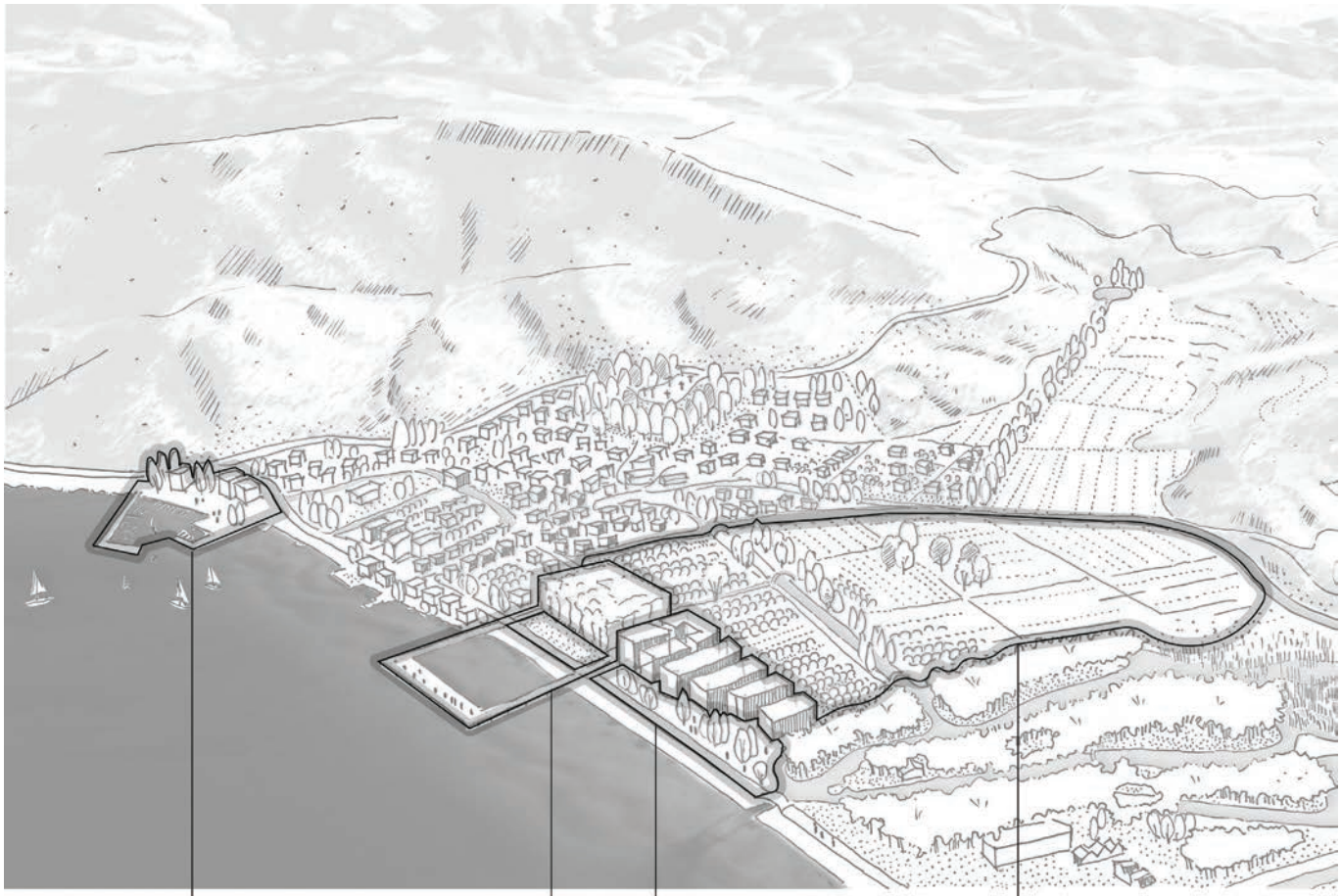
Type D

The houses built in this area are developed on the sloping terrain in the hills around Tushemisht. This area is characterized by two to three storey houses and as a result of the slope, the houses have views over the lake and over the entire Pogradec plain. This area is above the level of water resources and the inclusion of water in private and public spaces is impossible. Limits and allowed distances are presented in the section as in the figure. The new road that connects Pogradec with the border point with the neighboring state together with the cycle track and pedestrrian path is located in the eastern extreme of this area and serves as a limiting element of the village.



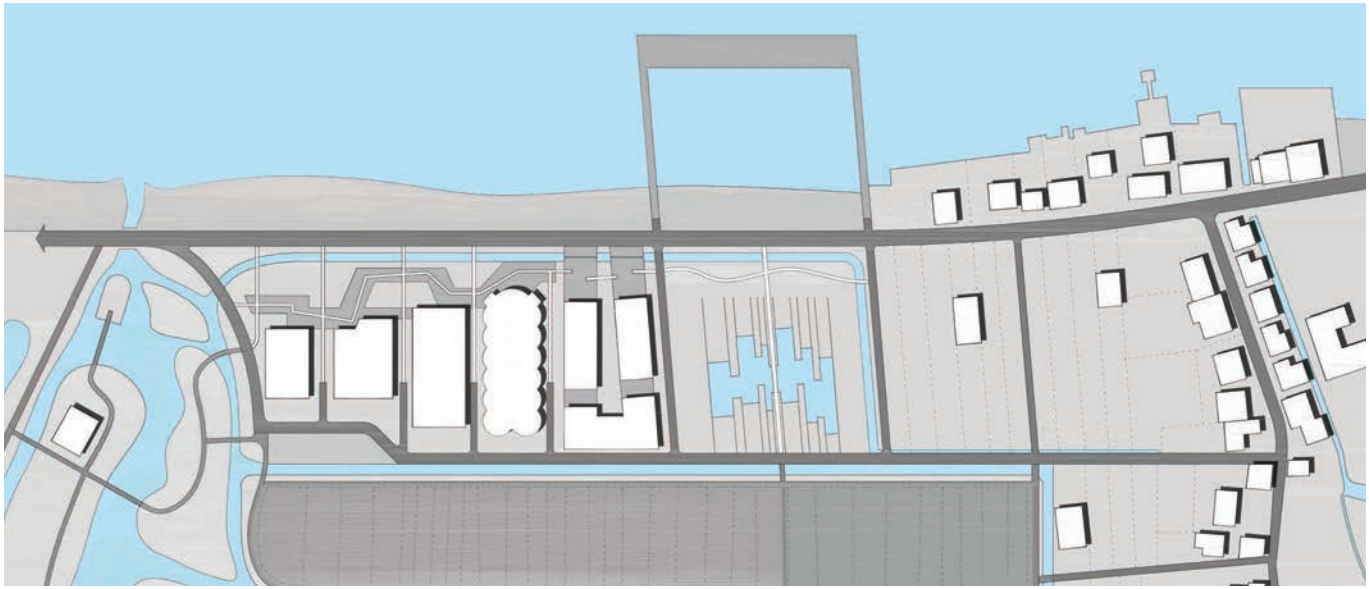

ublic space
min 22 m
3.5m
1.5
1
min 6.5m
private space
Two-lane cycle path
pedestrian path
sidewalk
bypass
planting
sidewalk
eighborhood street

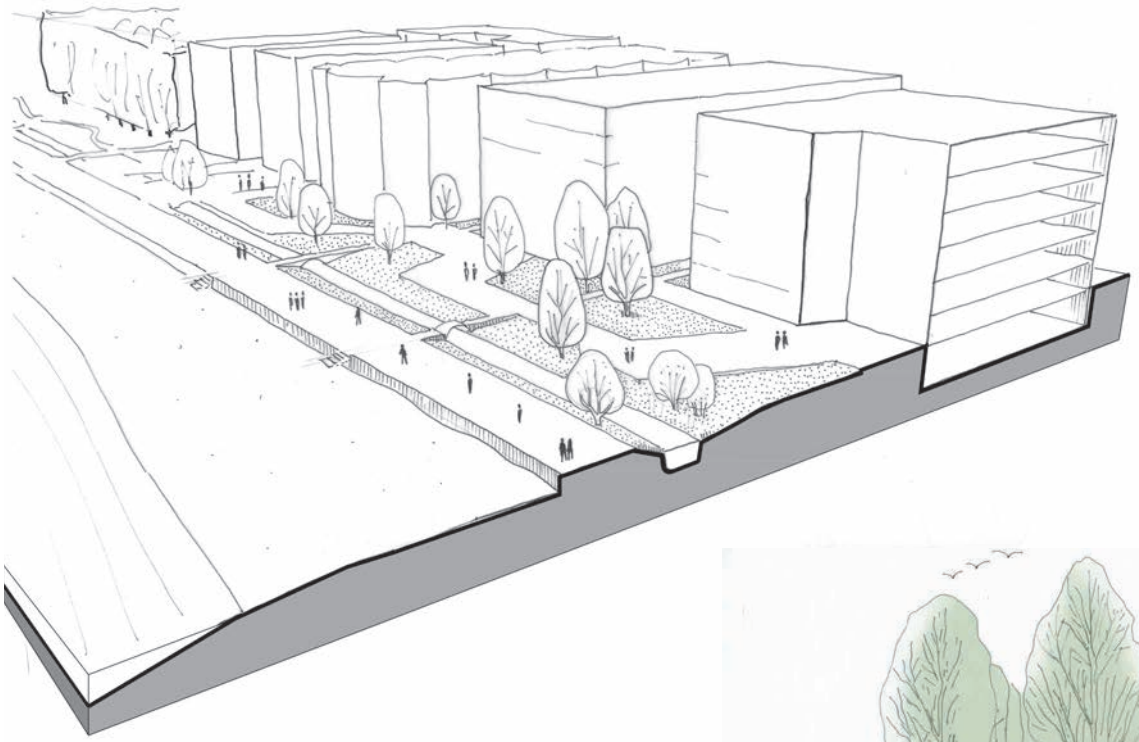
Network of Spatial Elements

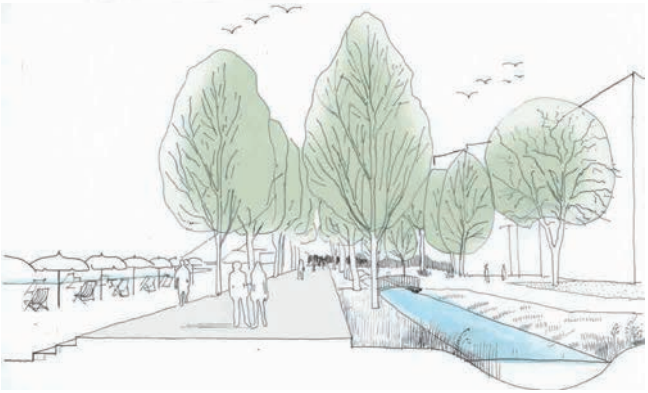

Harbour
Pier & Pocket Park
Promenade
Fruit Park

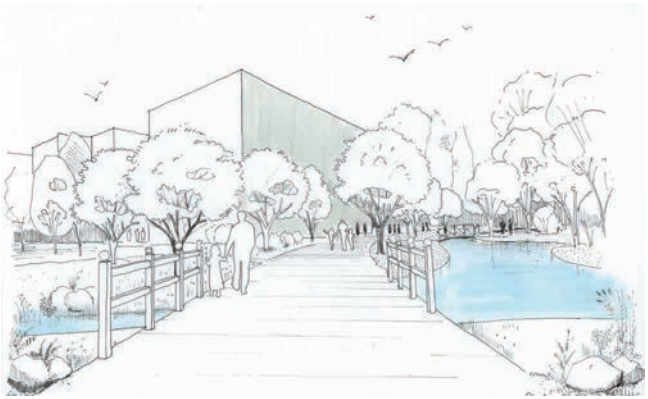
Promenade

The new promenade will be built in the space that will be created by the relocation of the road that connect the village of Tushemisht with the city of Pogradec. Vehicle traffic will be limited to residents only and there will also be set schedules. The promenade together with the beach, the pier and the pocket park will create new public spaces which will include many activities for residents and visitors.It will not only serve as the physical boundary of the village but will create many new public spaces at the service of residents. The promenade with a length of about 6 kilometers will start in the city of Pogradec and will end in the village of Tushemisht. In the area of the village of Tushemisht, in the space between the promenade and the group of buildings at the entrance of the village, a green space will be created to create recreational facilities for visitors and residents. A water canal will be built along the promenade which will make the division between the park and the promenade. Small wooden bridges will connect the beach with the rest of the buildings as well as the fruit park.

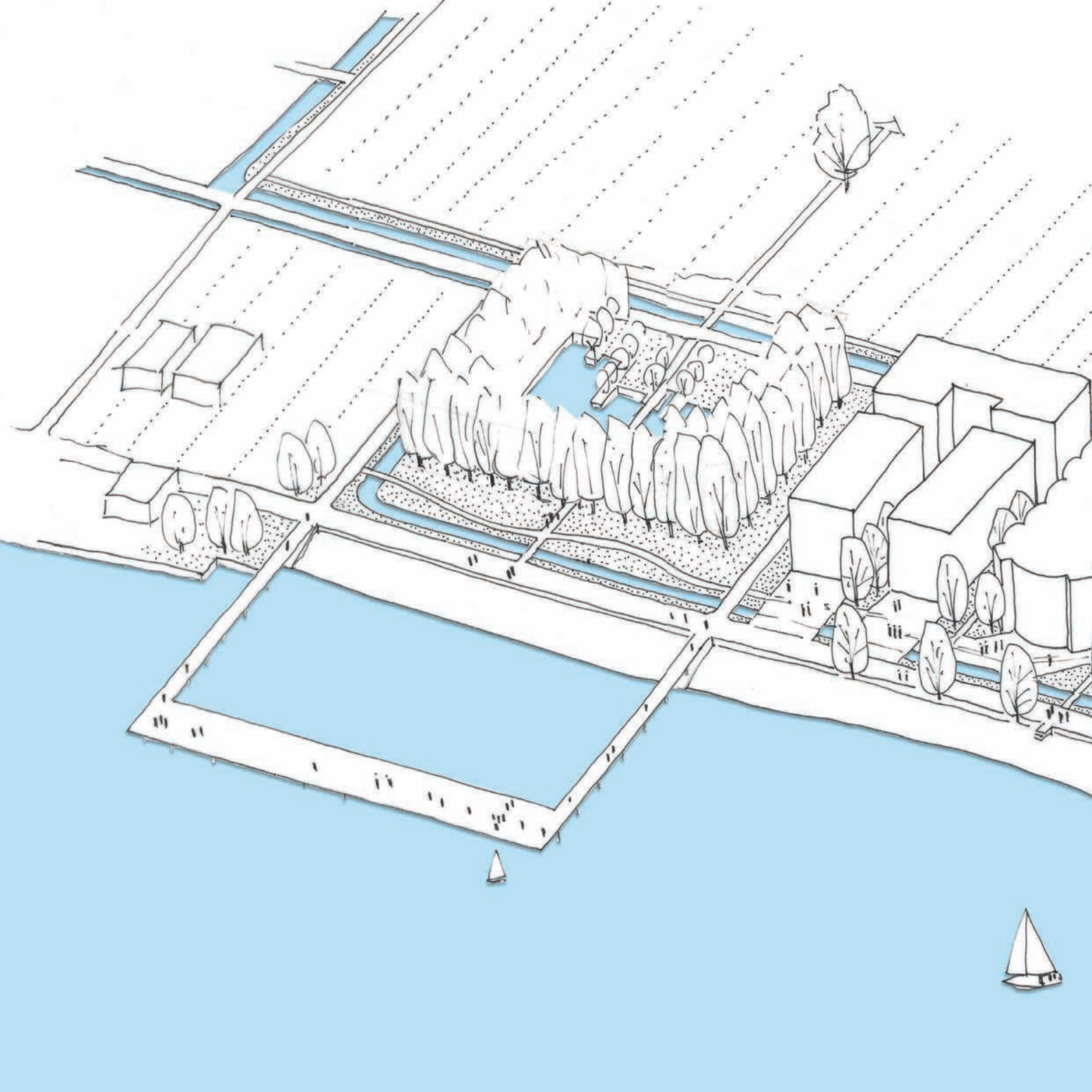


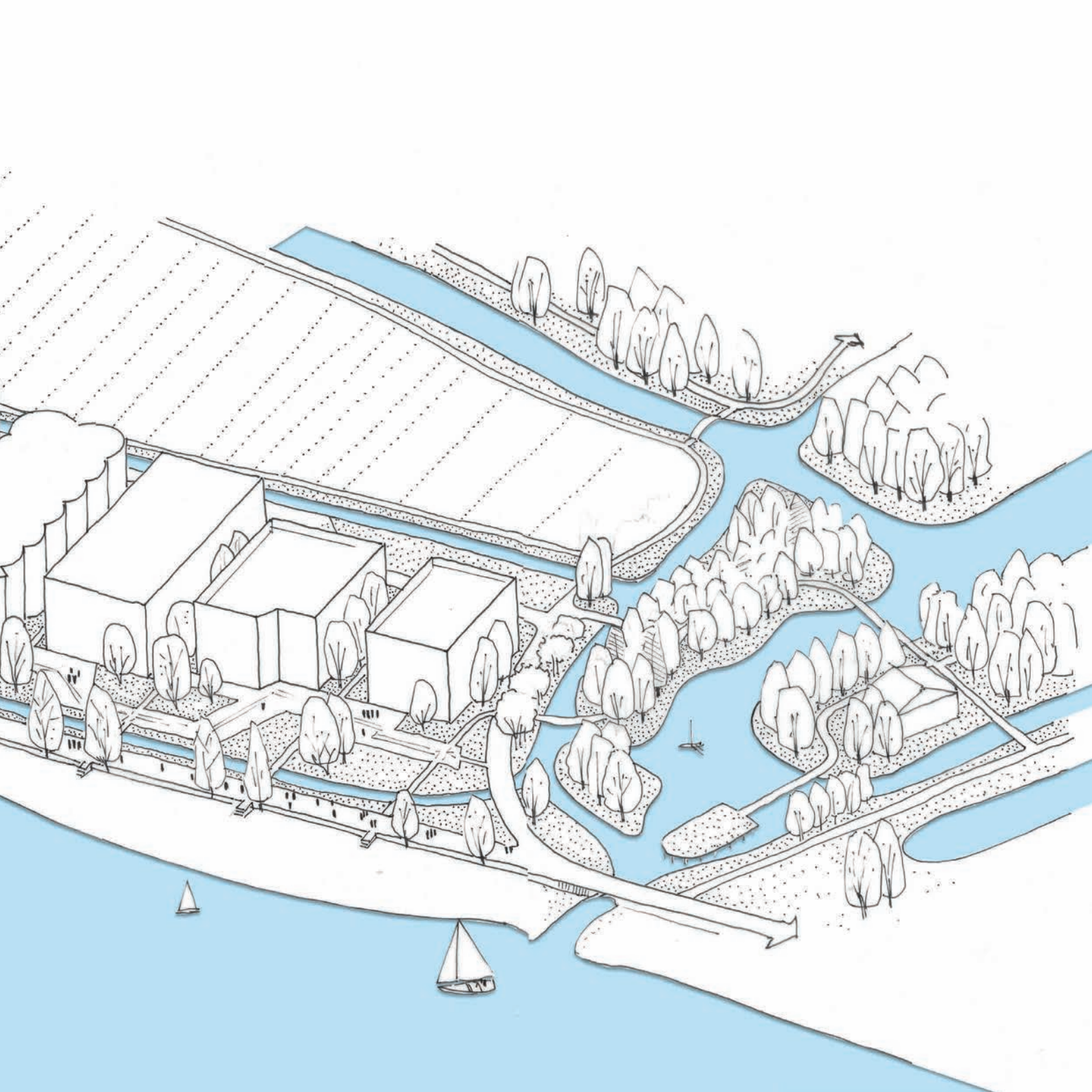






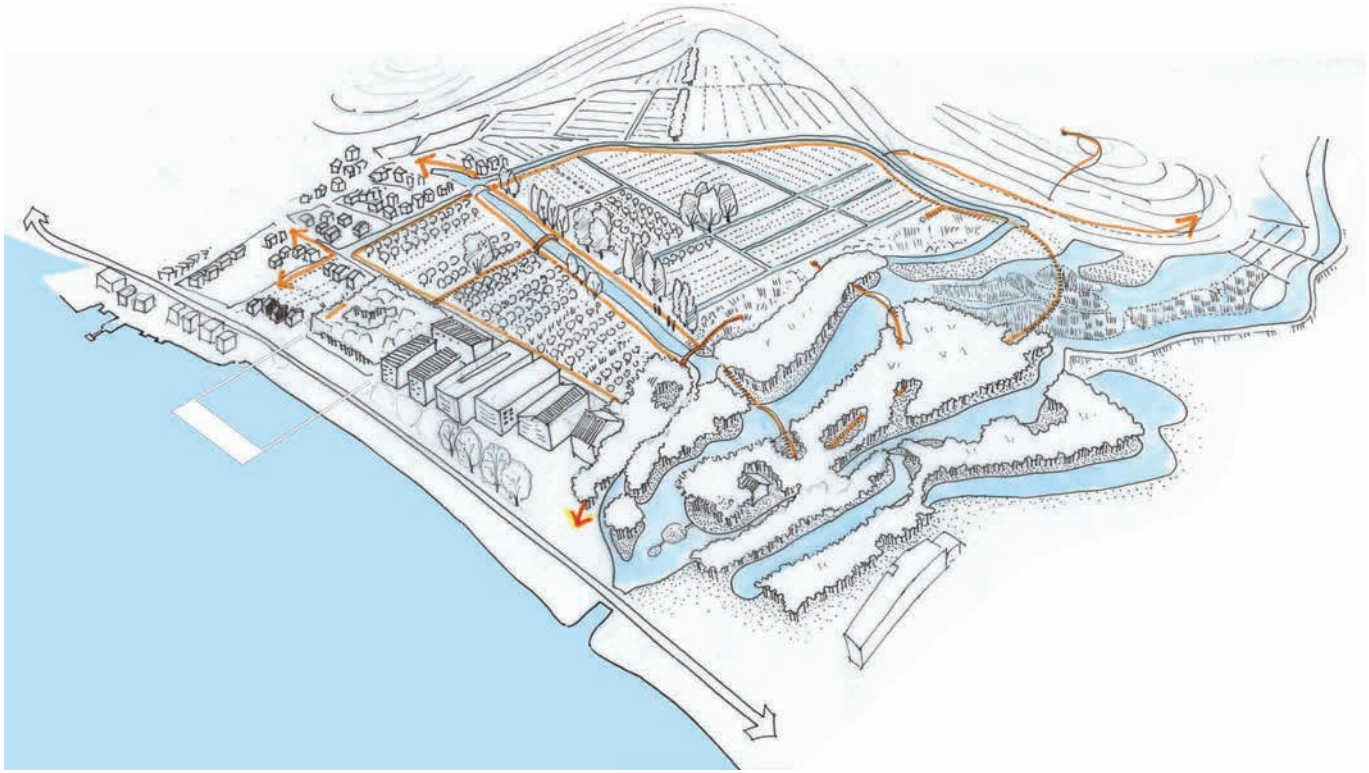
The figure above shows the relationship of the promenade with the beach on one side and the park and residential buildings on the other. The two drawings show two views at eye level of the two key moments of the promenade. Above is the entrance to the village and below is one of the entrances to the orchard where a wooden bridge serves as the entrance to the park.





Fruit park

Tushemisht Fruit Park is included in the characteristic agricultural landscape. The long and narrow plots characteristic for this area, planted mainly with fruit trees and included in an irrigation and drainage system, will be exposed to visitors in the form of a productive park. The picture below shows the connection of the fruit park with Drilon park, with the village of Tushemisht as well as with the promenade along the lake. The Kulla River that originates in the village of Tushemisht and flows into the Drilon Park River will be the basic element of the park around which a rich network of paths will be developed to make the park accessible to visitors.
The map on the right shows the position of the park in relation to the village and other landscape elements.

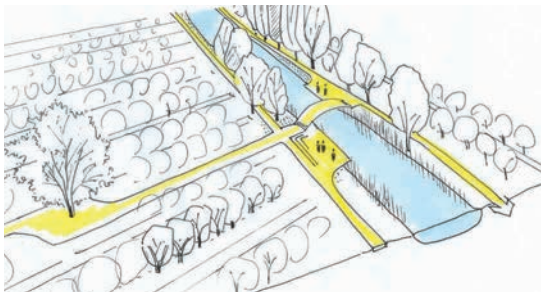


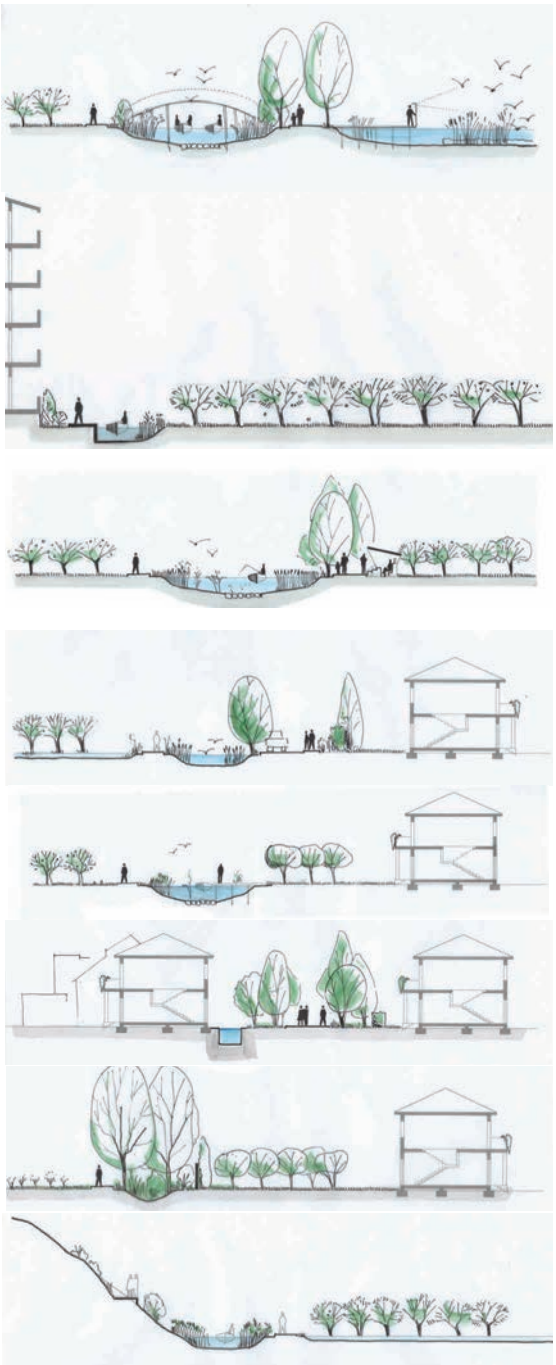

Routing map
Birdwatching
Belvedere
Selling points
Routing
Link to the existing points
Main entry to the park
North

The fruit park will be an important element of the development plan of Tushemisht village. Located in the agricultural area of the village where fruit trees dominate, the fruit park together with its waterways is an important element of the village. Opening it to visitors will make it possible to preserve it. People will have the opportunity not only to walk through the park and experience the beauties by immersing themselves in the typical rural landscape but also to buy fruit directly on site from local traders. Small points of sale will be set up along the plots planted with fruit trees, creating the possibility of buying the product on the spot. Visitors will be able to walk through the plots and collect fruit directly from the trees. This will help locals to sell local products which are currently rotting on the ground as a result of mismanagement and lack of information to tourists about the existence of this local fruit culture.

Special experiences will be created as a result of the diverse relationship of the routing system with water, trees as well as with the terrain. The visitor will dive from the characteristic landscape of the area, being exposed to subtle changes of landscape from the river to the agriculture field to continue further in the hilly relief.

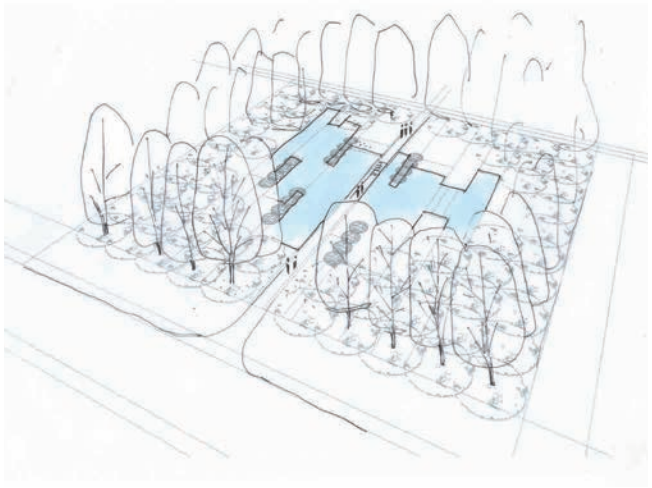
The orchard will be linked to the existing structure of the village to make it as accessible as possible from all sides. Bird watchtowers will be built at special points to observe wildlife. A canal-water ring will be created around the park, which, intertwined with a paths system, will play the role of a physical boundary to prevent the expansion of the village in this direction. The figure on the right shows the different sections along the visitor's journey through the park, the relationship with the water spaces as well as with the surrounding landscape.

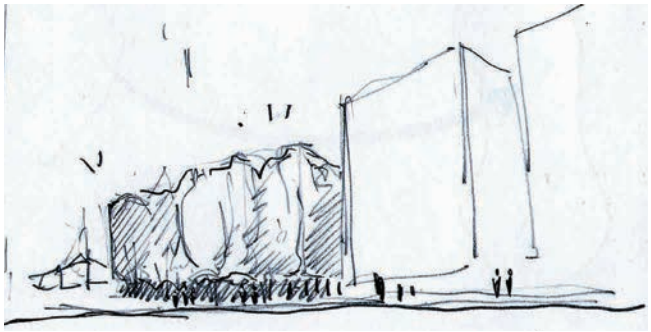




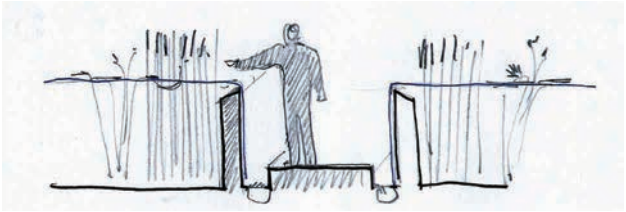
Pier and the pocket park

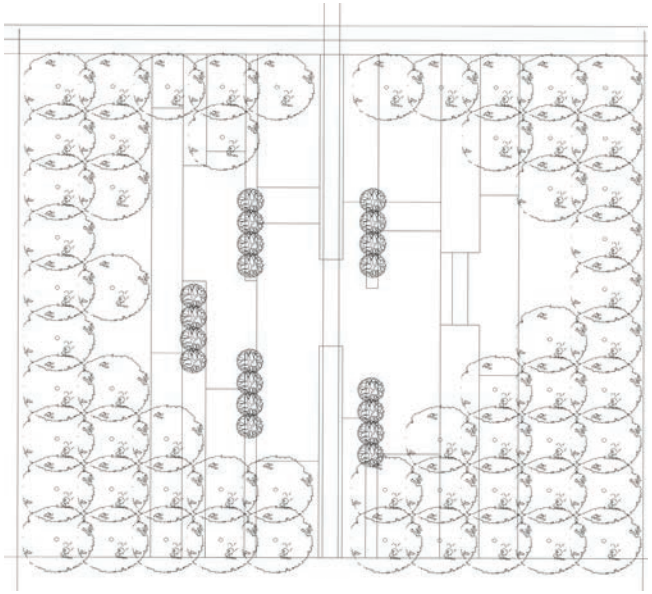
Pier and the pocket par are another important element of the Tushemisht plan. The park will serve as an entrance to the orchard where the visitor after passing through the block of tall trees will be found in a water area with different dimensions that evoke the characteristic plots of the village planted with fruit trees. Water basins will have different depths to create the right conditions for the growth of different aquatic plants. Fruit trees will be preserved in their existing condition and will stand between these water basins as a characteristic symbolic element of the village. The main passage of visitors to the fruit park will pass through the water dividing it into two parts and bringing the visitor as close as possible to the water to observe it up close. The water basins will have sandy spaces between them to bring to mind the sandy beaches of the lake and to create spaces for children to play. Water and fruit trees will be the key elements of this park as a symbol of the village.

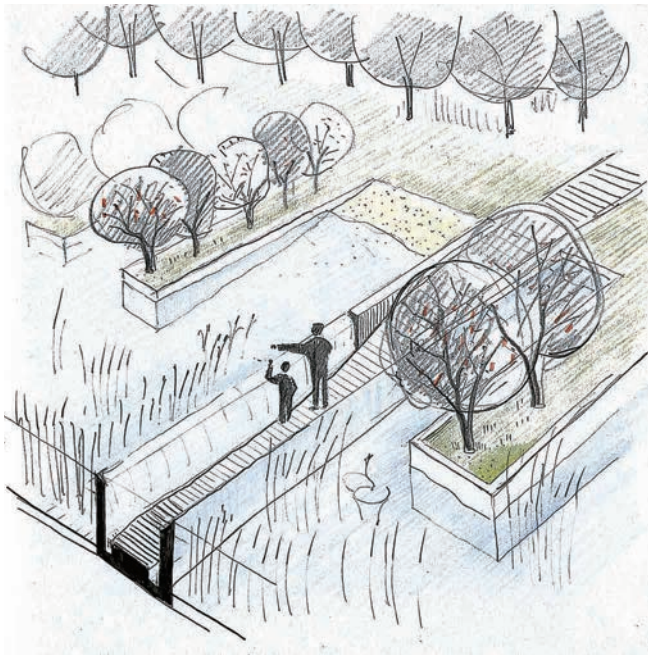




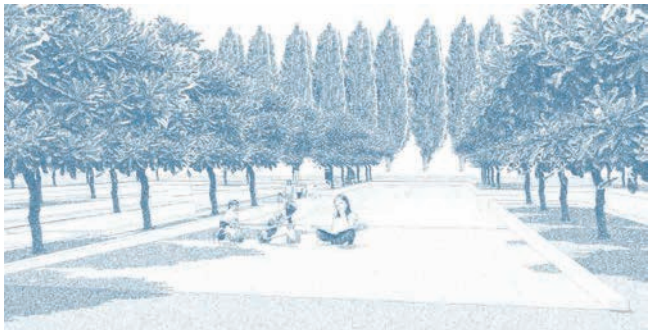
The tall trees (Populus Nigra 'Italica') will play the role of a green wall to make the transition from the area with high buildings to the characteristic area of the village with low houses.

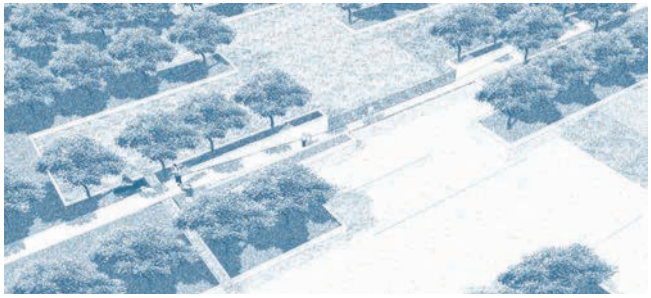




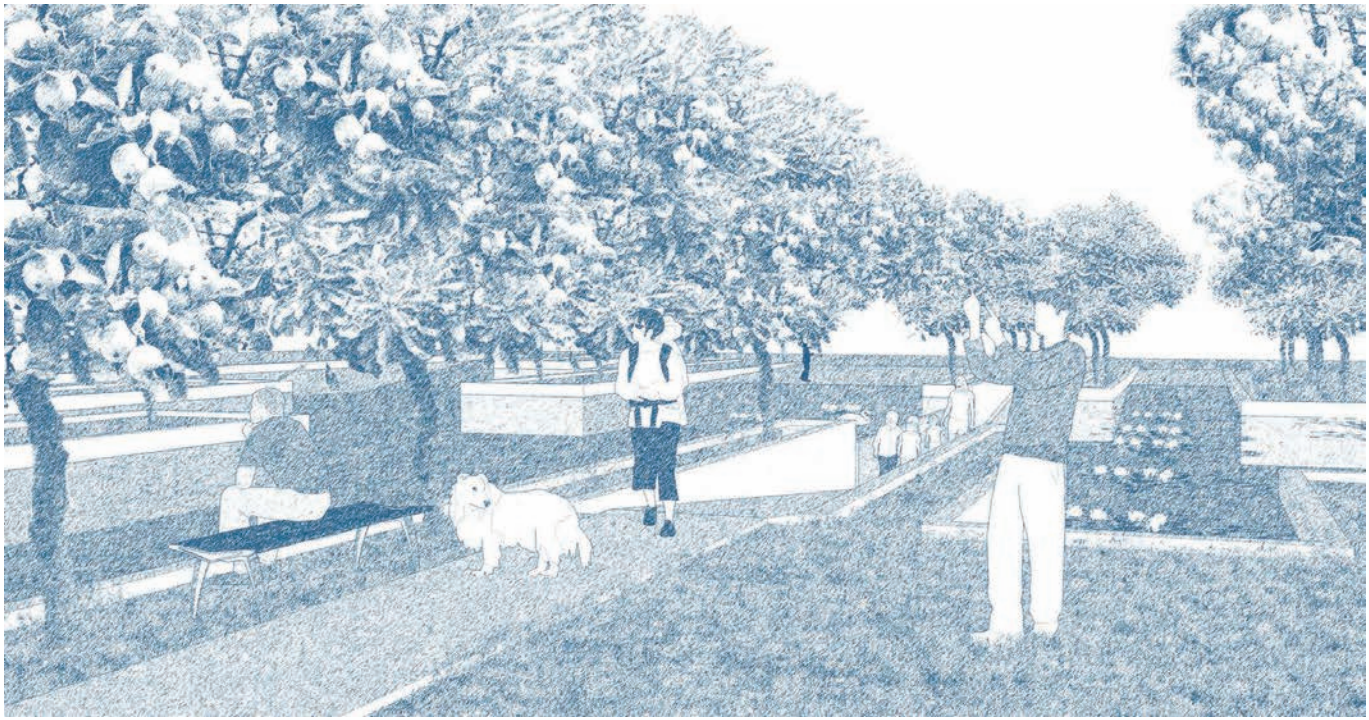


Water passage section showing water flowing to the vertical sides of the water basin





Different views across the park



Eye level perspective at the moment of entering the park.

Eye level perspective that shows the walk through the fruit trees

06.Reflection

- Reflection on the topic of the Flowscapes studio and if applicable to the lab

My encounter with the village of Tushemisht happened at an early age, while on vacations with my family. The characteristics of this village, such as its numerous water sources and fields planted with fruit trees, would be engraved in my memory. Several years later, I returned to this place as a member of a team of architects responsible for the design of a complex of two-store wooden villas near the Drilon National Park. At that time, my professional training was limited to the spatial and functional study of the design object itself. As such, my focus was predominantly on the relationship between buildings with limited attention to the relationship between the building and space and environment. Tushemisht is blessed by canals of spring water channelled throughout the village, passing around, under, and through the various houses, most of which have direct access to natural spring water. Its specific natural characteristic ensures that this village has a boundless potential for tourism. Hence, there is a need to carefully compile a set of guidelines which will ensure that the village can incorporate new buildings and objects while retaining its natural characteristics pertaining to the canals of spring water.
The current project tackles the transformation of the landscape territory and its space, taking care of the spatial quality of the landscape while at the same time preserving and strengthening the individual cultural character of the Tushemisht village. As such, this project is listed under the Flowscapes studio. The proposed urban structure of the village in the new design is not only limited to the five typologies of the landscape which are strongly linked to the character of the place, but it expands further to take into account the typologies of housing by looking at the relationship between housing units and water. This project is part of the 'Laboratory of Circular Water Stories', as such the focus is on water and all the forms it takes in this village: from its source, numerous canals and streams, to the outflow into Lake Ohrid. The new routing system proposed by this project is based on the sensory experience created by moving in space through connecting sequences.

- A description of the societal relevance

Once a communist nation, Albania underwent a traumatic transitional phase. In 1997, the country experienced a short state of mob-ruled semi-anarchy triggered by the swindling of the life savings of many of the citizens by elaborate Ponzi schemes and resulting in 5000 people being killed. The violent signs of transition left their mark

in Albania's landscape, its urban structure and urban landscape. In recent years, the territory of the country has been transformed by a very rapid urbanisation during which many characteristic natural and urban areas have been damaged. The village of Tushemisht and the whole area of the city of Pogradec are a concrete example of these transformations where the main underlying factor of these changes in the environment was of economic nature as well as the need for generating rapid housing. In the midst of these rapid changes, the country clearly lacked an urban plan to guide the landscape transformation by creating space for development and at the same time preserving the characteristic elements of the place. As Professor F. Palmboom points out, space and place, although different, are closely linked in an ongoing relationship. This project aims to provide a set of guidelines to accommodate the economic and social needs which are an irrefutable consequence of any type of transition while offering a manner to safeguard the biography of the place and the characteristic landscape feature of the region. Preservation of the landscape is essential, particularly as we enter an age of rising global consciousness on climate, environmental and ecological issues. Besides bringing new solutions that are generated from the site itself, it is crucial for landscape architects to protect and preserve the genius loci. The project aims to show how one can balance economic and social needs with a healthy and aesthetic landscape.

- A reflection on the strong and weak sides of the chosen (design)methodology.

The design is based on the observations constructed through a case study, a research strategy and an empirical inquiry that investigated the landscape typologies within the real-life context of the village of Tushemisht. One of the strengths of design methodology is the careful investigation of the region by focusing on its landscape characteristics and transition through history. The main design methodology consisted of walking through the village as an aesthetic practice. Walking was an exceptional manner to gain insights on the site which eventually led to the development of guidelines that are specifically tailored for the village and are well equipped to tackle some of its unique challenges. On the other side, the choice for a case study design comes with a well-known set of weaknesses, the most of important of which are related to the lack of scientific rigour, presence of subjective bias in design (presence of the observer's own interpretation and vision), and difficulty to replicate observations. Moreover, some of the strengths of the study can be seen conditionally as weaknesses. For ex-

ample, walking is presented as a strength of the design, however, it also means that this method is time-consuming. Further, while the project proposes a set of guidelines carefully crafted for the village of Tushemisht, this also means that the project provides little basis for the generalisation of results to the wider global landscape.

- A discussion of possible problems that occurred during data collection and how one tried to overcome or compensate these problems.

The data collection process has been one of the most challenging phases of the project. The available maps had many shortcomings which slowed down the research process. To overcome this challenge, I recreated maps based on the information obtained from google map as well as on personal experience visiting the village throughout the years. Moreover, creating historical maps was particularly challenging due to lack of visual information. The historical maps, which were a crucial aspect of this project, were created and drawn from scratch based on a series of interviews with old locals within the village, as well as through reading artistic literature and reviewing old photographs.

- A discussion of possibilities to generalise the results of the research.

As mentioned earlier, one of the weaknesses pertaining to the case study nature of the design is the generalisability of results. The current project offers a tailored design for the village of Tushemisht which cannot be immediately applied to wider landscapes. However, this project consciously proposes a design strategy rather than a blueprint design and as such allows some room for generalisability. A blueprint design would not only be too subtle but would lose its effectiveness very quickly by failing to adapt to future changes. A design strategy is more flexible and provides space for customisation and interpretation from the developers (in this case the residents). In the project, I have defined a set of general rules which aim to offer guidance during building and ensure that some characteristic qualities of the village are preserved and improved through enhancing and emphasising them. Therefore, the design strategy offered here can be generalised to other rural areas that are also governed by a culture where informality plays an important role in landscape transformation. Although this village is specific and special in its kind, the design strategy used here can serve as an example for other rural areas with special landscape features such as those encountered

in Albania.

- A reflection on ethical issues and dilemmas. (lectures at the start to the master track!)

Albania suffers from pervasive problems generated by the low economic income of its residents on one side and high governmental corruption on the other. The stakeholders of this projects, namely the residents and developers, find themselves in constant moral dilemmas that are often dominated by economic rather than social or environmental interests. This is perhaps a familiar dilemma in all those regions that need to accommodate increasing population demands in a restricted area. The (landscape) architect is constantly confronted with challenging situations in which they need to balance the competing interests of different parties. For example, catering solely to the stakeholders (loyalty) would mean in this case maximising space use and profit. However, this goes against the code of ethics for a landscape architect who is responsible for keeping a balance between building and preserving the characteristics of the site. In this project, I proposed design guidelines that allow space for new developments while setting harsh criteria on building density and size. The project offers some solutions to the moral dilemma in form of trade-offs. For example, instead of big scale multi family housing, the residents are offered a landscape that would promote tourism and hence contribute to the local economy. On other specific solution pertains to the inclusion of a fruit park in the design which would facilitate the commercialisation of local produce.
Moreover, this project takes into account the current situation of informal housing in Tushemisht. The design strategy uses a flexible design language that is able to accommodate possible customisation and interpretation from the developers (in this case the residents).

- Difficulties to visit the site, digital mentoring and other issues related to the Corona-crisis.

The design of this project was carried out during the period of the global pandemic COVID-19 and as such was influenced not only by the situation in general but also in particular by the lack of attendance at the faculty and social isolation. Digital mentoring went smoothly, and site visits were conducted before the pandemic spread. The project may have benefited from discussions and information exchange with other students of this master track, which were rendered impossible during the 'intelligent' lockdown.

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