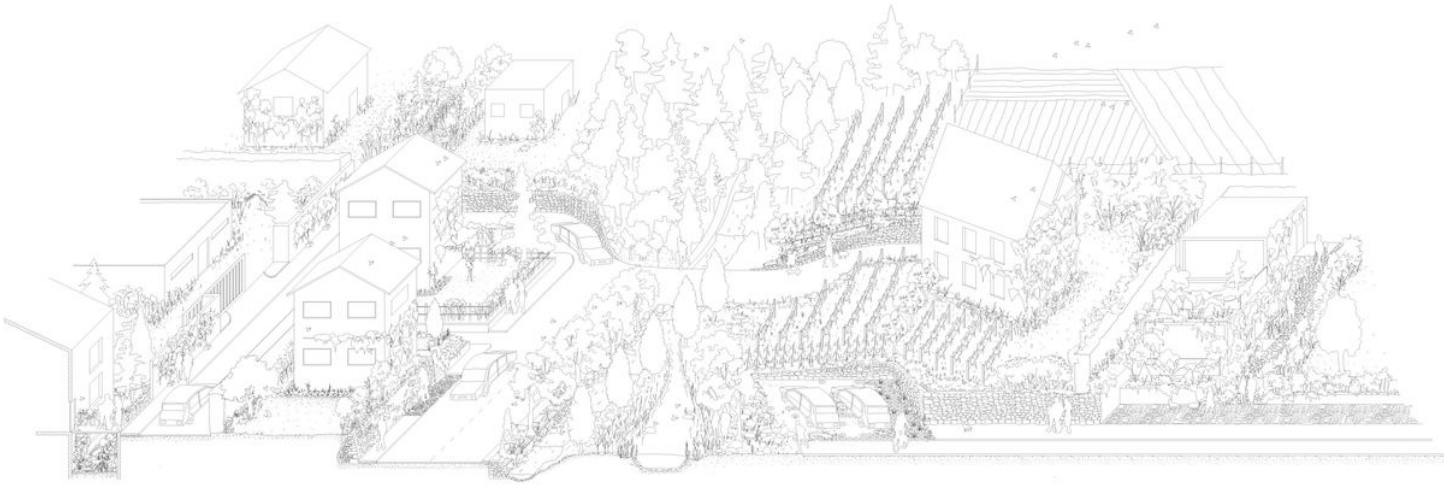
ETH Zurich Department of Architecture
ARCHITECTURE OF TERRITORY
Chair of Architecture
and Territorial Planning
Professor Milica Topalović

Nothing but Flowers
Fall 2021

Zürichsee

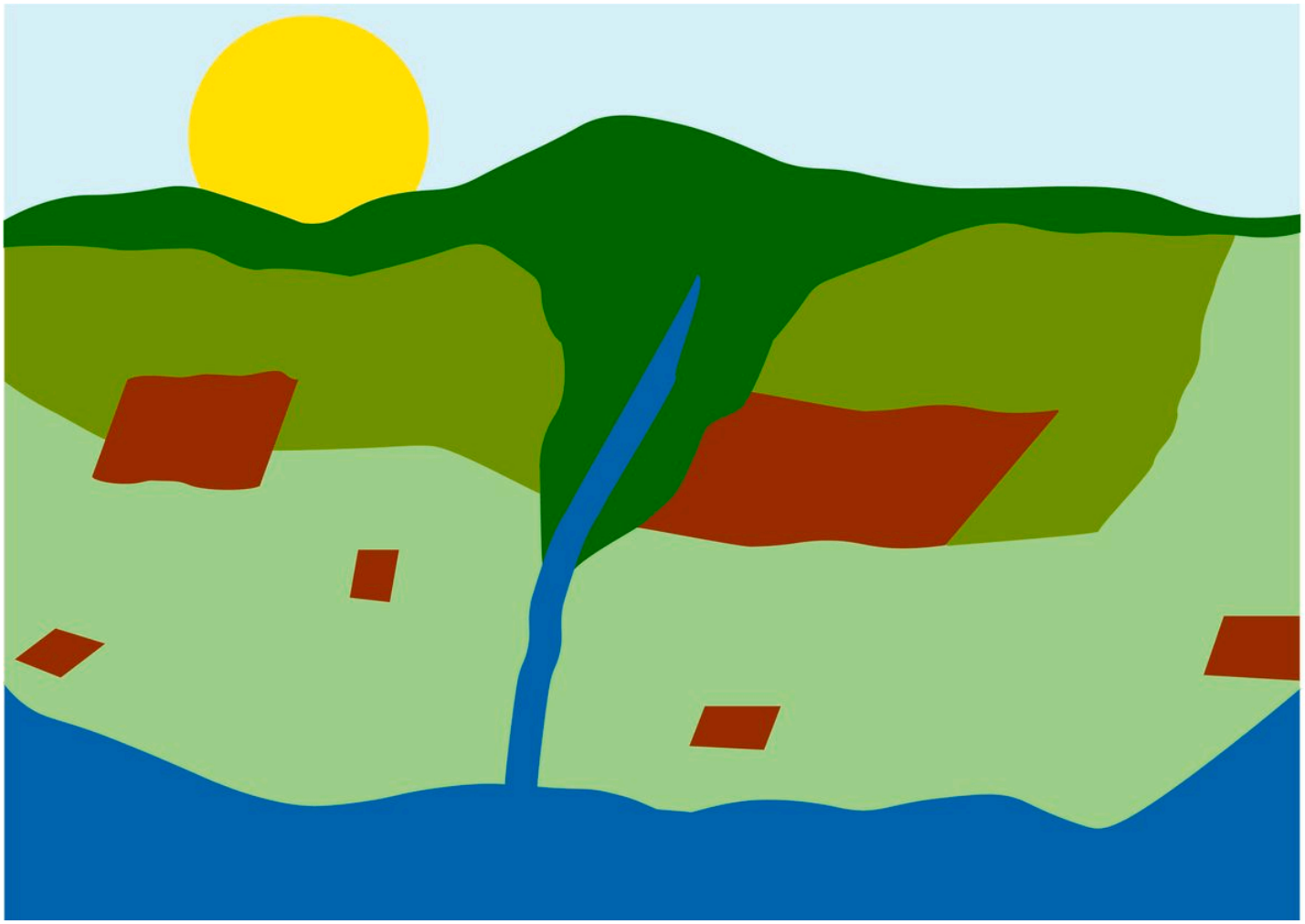
More Than Human—
Architectures of Cohabitation

Claire Debons and Xue Jingfan



At a first glance, the built fabric as well as the nature surrounding Lake Zurich seems solidified. In reality, it is a highly green region with a lower building density than the city centre of Zurich. What are these green areas? Taking a careful look at the unbuilt fabric along the lake shore, one can define three types of nature: the *Tobel* forest, the vineyard, and the private garden. Fragmented between built fabric, it is their edges where human and nature meet and cohabitation between multiple species takes places. By revaluing these moments, we have the ability to build for “more than human.”

Three Natures of the Goldcoast



As Zurich expanded people settled by the shore of Lake Zurich. A rapid population growth led to a highly urbanised lake shore. Although a peri urban activity has developed here, nature also remains present. Where is nature in this landscape? How is this nature produced?



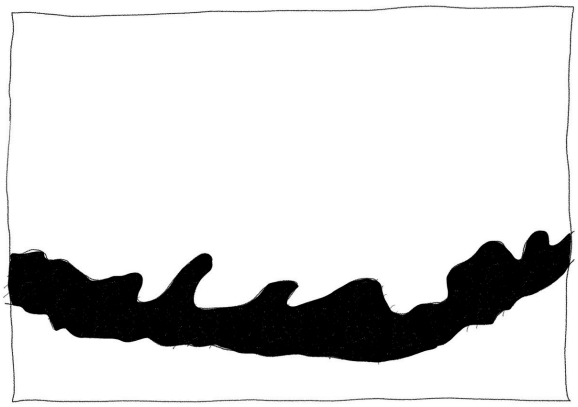
https://vimeo.com/manage/videos/656074188

Strolling past the idyllic landscape of the vineyards, watching the elderly point out their gardens from their balconies, greeting the small children walking by; the whole activity surrounding the biotope of the vineyard is intriguing. This visit of the vineyard in Meilen gave us a first glimpse of the peri-urban nature around Lake Zurich.

Our site consists of Lake Zurich and its surroundings. By looking at both sides of the shore, the “Goldküste” (gold coast) and the “Pfnüselküste” (sniffle coast), it seems like the built fabric stretches out from the city like two arms embracing the lake.



Aerial View of Küsnacht and Meilen

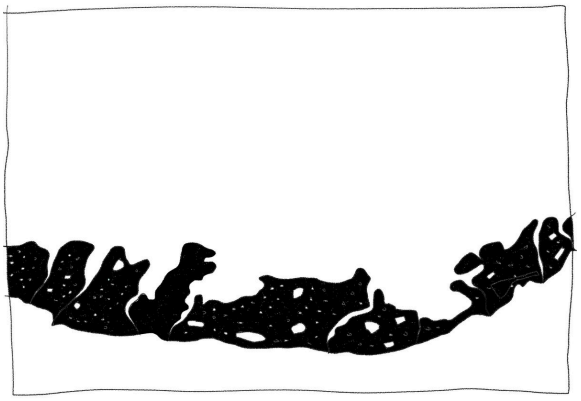


Built Fabric as Separation of Nature

This initial observation declares the built fabric as a horizontal division of the landscape. The peri-urban settlement area divides the landscape like a single, non-permeable mass, which separates the lake from the forest and the agricultural area above.



Map of Three Natures



Built Fabric Penetrated by Nature

However, although the built fabric seems to be highly solidified, it is still a relatively green territory with a lower building density than in the city. What are those green areas? What can be defined as nature in this region? We define nature in this region through three categories: The Tobel forest, the agricultural field, and the private garden. Further observation of these three natures led us to rethink our initial hypothesis of the territory.



The Tobel, small stream flowing down the mountain, cuts through the built fabric till it gets into the lake. While the forest surrounding the Tobel at its upper part is categorised as protective nature, as it protects the steep slope from sliding. Whereas the agricultural fields, the productive nature, remain mainly outside the built fabric but also have patches inside it. The other dominating nature is the private gardens. The gardens are created by human as a kind of private nature. It is an important element of people's daily life within the built fabric. Therefore, we realised that the nature penetrates a lot into this continuous built fabric along the shore of Lake Zurich.



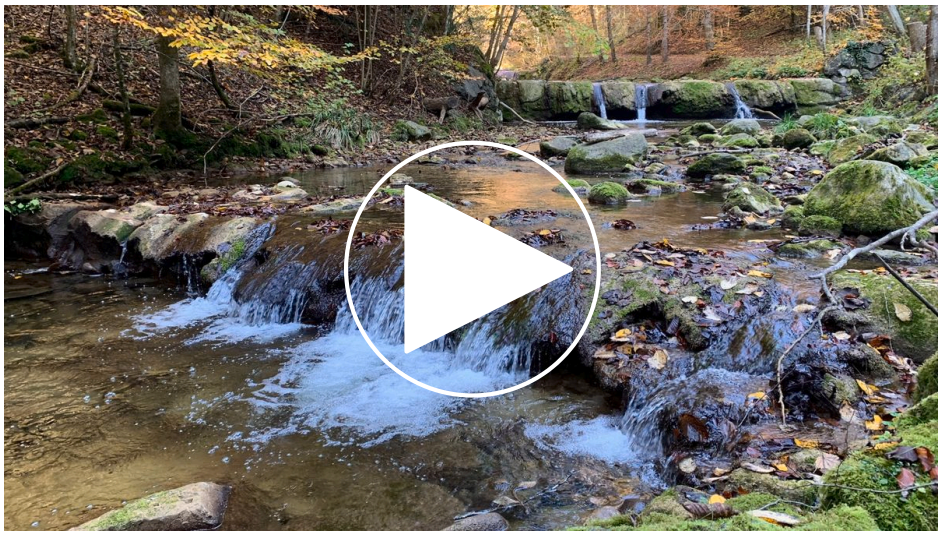
The Three Natures through Time

By looking at the history of Lake Zurich, we understand how the three types of nature have evolved over time. Three main questions occur: How are they produced? Why are they still there? How do they influence one another? There is a transition in time in which each nature became respectively predominant. In our narrative we would like to figure out how the dominance of each nature shifts through an anthropogenic history: from protective, to productive, to private.

Protective Nature: Eroding the Landscape



In this urbanised landscape, the tobel appears as a lost element of nature tracing it’s way through the urban fabric. The landscape around the Lake Zurich has been greatly formed by the erosion process of the tobels. While the tobel is also an important part of the anthropogenic scene, a place around which humans have settled over time.

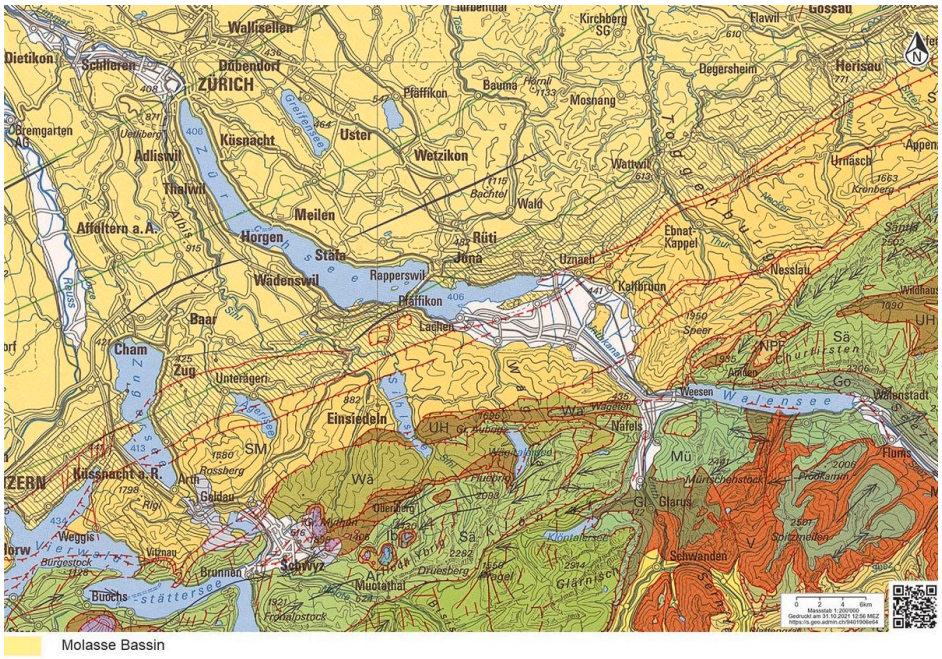


https://vimeo.com/660661004



Protective Nature: Lake Zurich, Forests, Tobel, and Tobel Forests

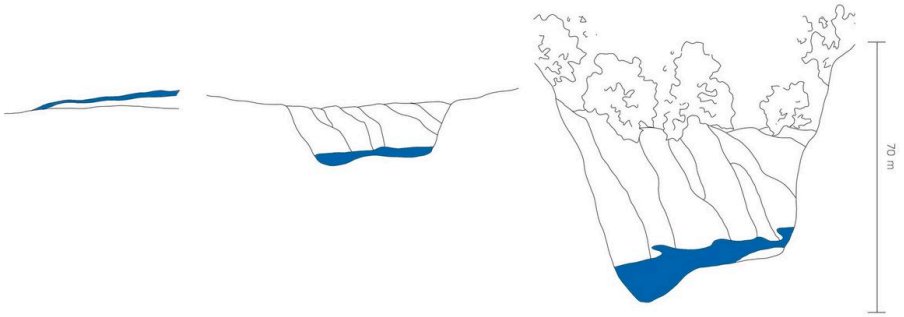
In this urbanised landscape, the tobel appears as a lost element of nature tracing it's way through the urban fabric. It starts out surrounded by forest at the top of the Pfannenstil mountain and gradually losses its protective forest. At times it is hidden and other times it is a narrow strip of water surrounded by a few trees. It is an important part of the anthropogenic scene, a place around which humans have settled over time.



Techtonic Plan: Soft Molasse earth composition. Source: Swisstopo, 2021

The molasse that characterises the soil of Lake Zurich and its surrounding is a soft sandy earth. The molasse ground allowed the land to be formed through water erosion.

18,000 years ago, the glaciers of the last ice age started to melt in this area. The lake was formed and the melting water could find its ways from the mountain top to the lake.



Erosion Process of the Tobel

The ground was gradually eroded by the flowing water, forming a deep valley with small streams, which is called “Tobel” today.



The Landscape in Küsnacht from Zurich Lake, 1857.
Source: Küsnacht Ansichten zwischen 1700 und 1900

The landscape around Zurich Lake is therefore moulded by the glacier and its retreat. It also provides conditions for the development of settlements. Alluvial surfaces were created where the tobels flow into the lake, providing flat surfaces for construction. Furthermore, the flowing water from the top could be used as productive energy.

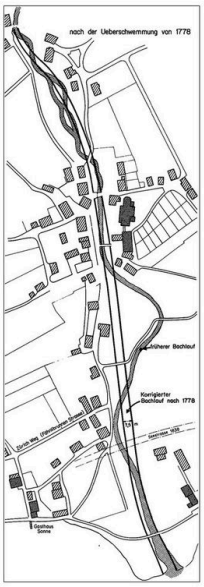


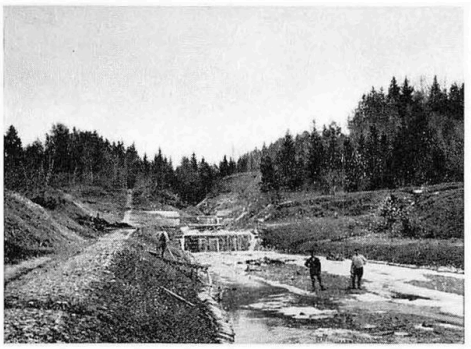
Johannes Hegi, Küsnacht after the Flooding in 1778. Source: Zentralbibliothek Zürich, 1778



Küsnacht after the Flooding in 1878.
Source: Zentralbibliothek Zürich, 1878

However, the nature is not easy to tame. In 1778 and 1878, two extremely ravaging floods destroyed the settlements that had been built around the tobels. Therefore, the settlers started to make interventions.

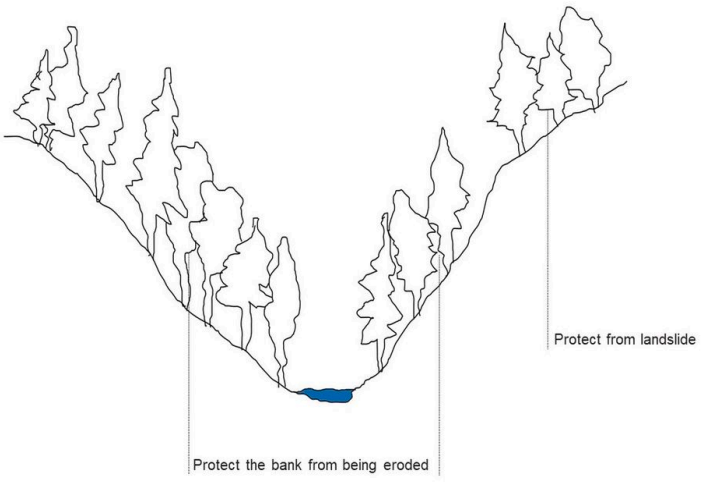




Correction of the Dorfbach after the flooding in 1778. Source: Küsnacht Jahresblätter, 1974 (left)
Building of Obstruction and Embankment after the flooding in 1887 to slow down the water flow and create protection in case of flood. Source: Küsnacht Jahresblätter, 1974 (right)

After 1778, people started the correction of the tobels. The water could no longer finds its own way down, but were instead adjusted and canalized to follow a certain path.

After 1878, more engineering interventions were applied. People created steps to slow down the flow of the water, while building dikes to protect the neighbourhoods from being flooded.



Tobel Forest as Protective Forest

The forest around the tobels still exists in some parts as they play an important protective role. The trees could hold the soil, prevent the landslide as well as protect the bank from being eroded. Therefore, these protective forests are also protected during the urbanisation process. It also acts as important wildlife corridors nowadays.

Productive Nature: the Wine Industry

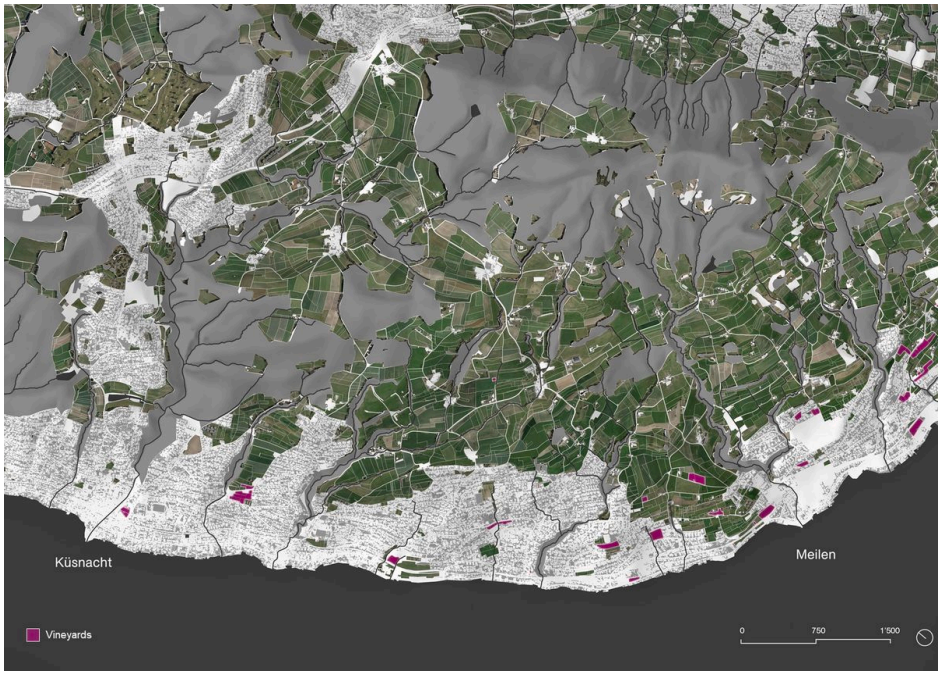


The vineyards are like patchwork in the urban fabric around the Lake Zurich nowadays. They no longer have such a dominant productive role but acts as an important symbol in the surrounding landscape of Lake Zurich, reminiscent people of the local vine culture.



Vineyard Meilen

https://vimeo.com/manage/videos/656076073



Productive Nature: Agricultural Fields

The agricultural fields form a compact mass linking the built fabric and the forests. And the vineyard is the only agriculture presently left as patchworks inside the built fabric. It acts as a symbolic agriculture that finds its place at the shore of Lake Zurich.



Historical map of Küsnacht, 1677

As the first settlers appeared by the Lake shore around the 14th century, the land started to change. People used the rich earth for cultivation purposes. Agriculture became predominant in the vast fields of the lake shore. Among them, vineyards were planted as a dominant commercial activity since 17th century. As the inclined lake shores were not suitable for other plantations, yet created adequate conditions for the vineyards.

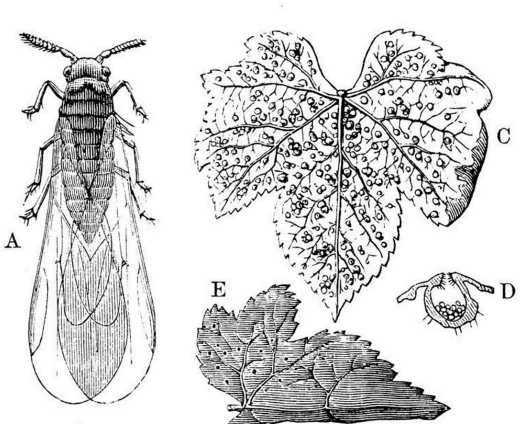


Küsnacht 1905. Source: Archiv Hochbau und Planung Gemeinde Küsnacht, 1905

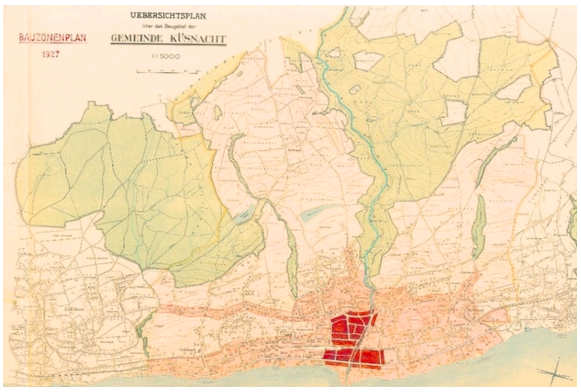


Küsnacht 1945. Source: Archiv Hochbau und Planung. Gemeinde Küsnacht, 1945

Nonetheless the peak of Zürich's wine industry didn't appear until around 1880, when Zürich was the second biggest wine producer in Switzerland ranking after the canton of Vaud.



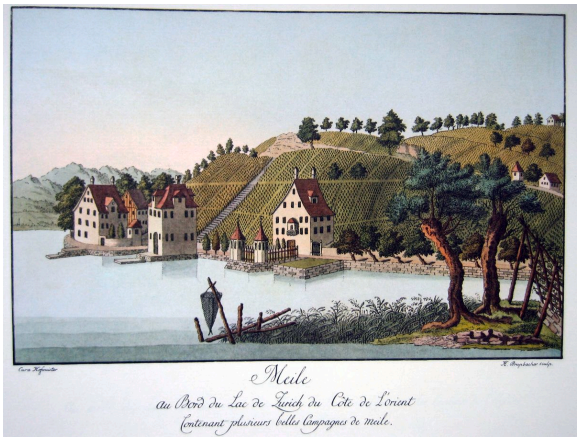
Phylloxera from America



Küsnacht first Zoning Plan

The decline of the agricultural activity of Zürich Lake Shore was due to many factors. First and foremost, the arrival of the pest phylloxera from the USA completely ravaged the wine industry. As industrialisation appeared, people travelled at a significantly further distance, which eventually brought this sickness to the vineyards in Europe.

The second major impact on Zürich Lake Shore was the change of the zoning plans first released in the 1900's. Building on agricultural land was then allowed. Thus, after the Second World War, when urbanization started to grow rapidly, it was possible for the city of Zürich to expand due to its new zoning laws.



Meilen's Terraced Vineyards
Source: Heinrich Brupbacher, 1794



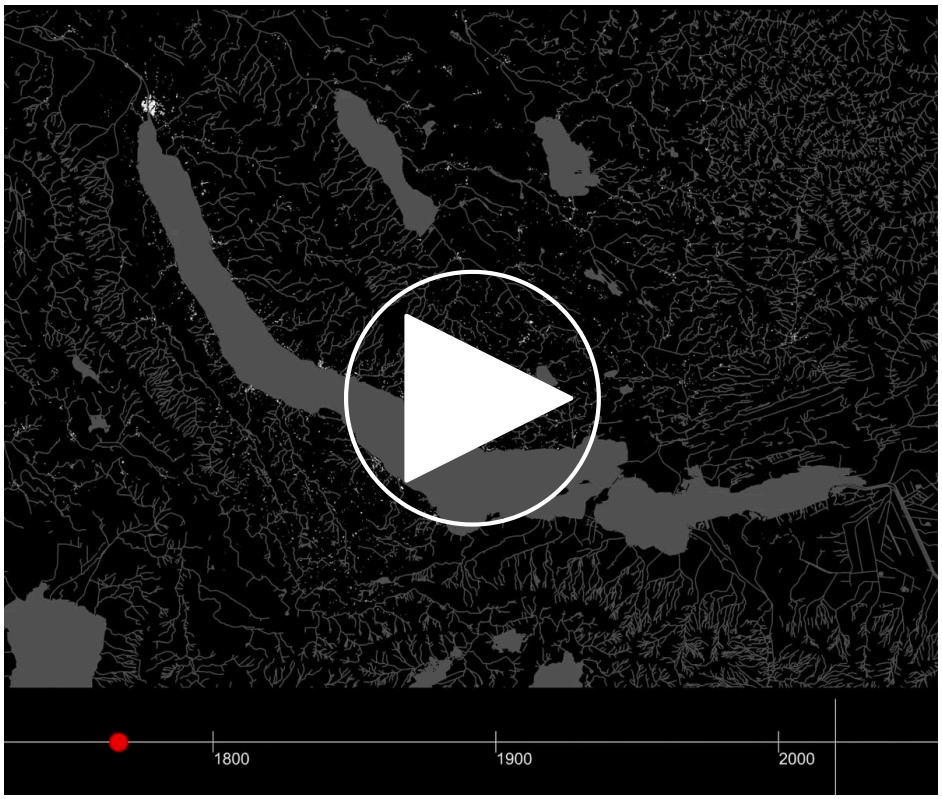
Meilen's Symbolic Vineyards.
Source: Meilen, 2011

Nowadays, the vineyards are a patchwork lost in the urban fabric. Small pieces are protected as reminiscence of a past culture and a kind of heritage. The vineyard no longer has such a dominant productive role but acts as an important symbol in the surrounding ladscape of Lake Zurich. The importance of the vines for the local inhabitants still appears in their private gardens, where some people grow grapes as decorations.

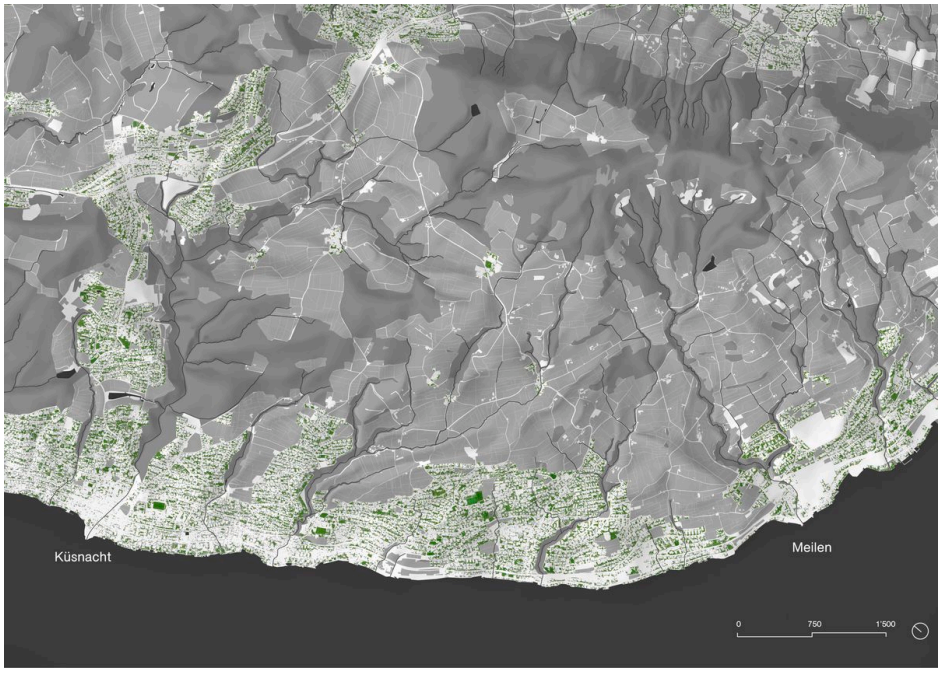
Private Nature: Urbanisation Builds Gardens



The heavy urbanisation of the shore of Lake Zurich over the past century shaped its contemporary landscape. As there was a strong desire to live closer to nature, private gardens have constituted a major part of the green space in the settlement area along the lake.



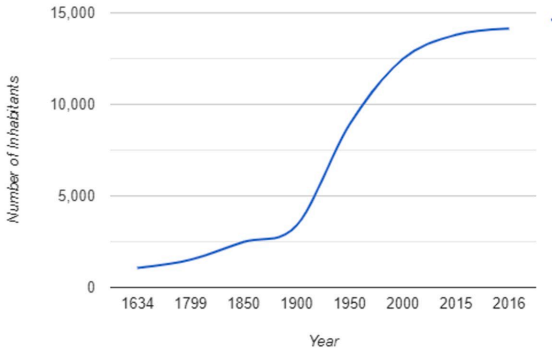
Urbanisation at the shore of Lake Zurich.
https://vimeo.com/manage/videos/656122203



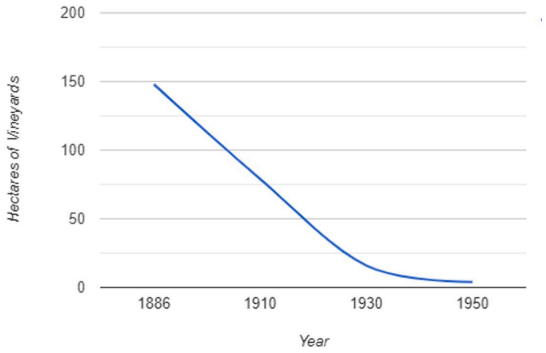
Private Nature: Private Gardens in the Built Fabric

As vineyards lost their place and urbanisation invaded, the population of Zürich's shore grew drastically.

As urbanisation started, and infrastructure was built by the Lake shore, people could work in the city and live by the Lake. There was a strong desire to live in a place closer to nature. People lived in houses surrounded by gardens.

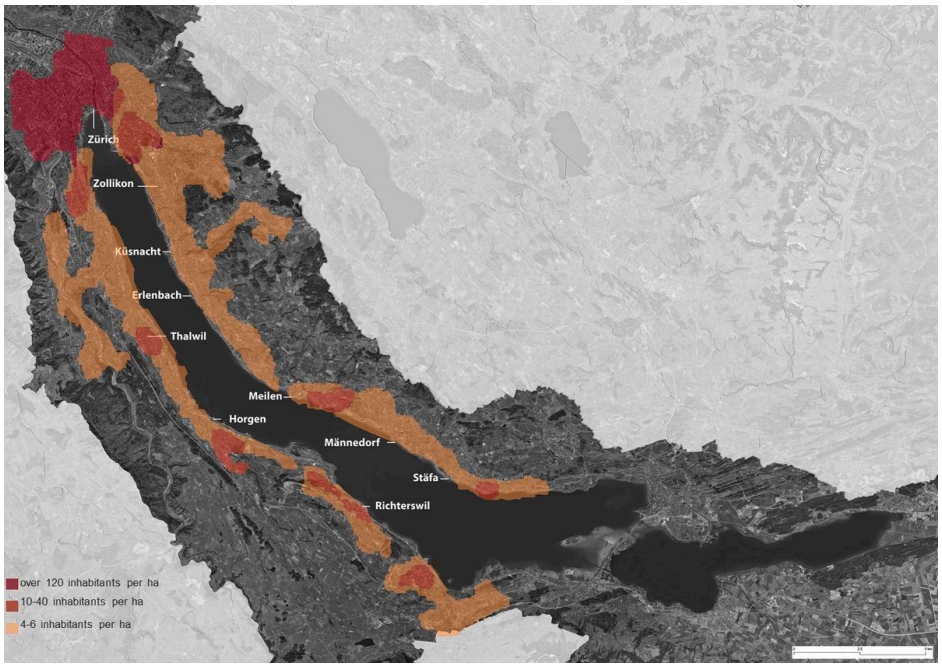


Küsnacht Population Evolution 1634-2016



Küsnacht Vineyard Surface Evolution 1886-1950

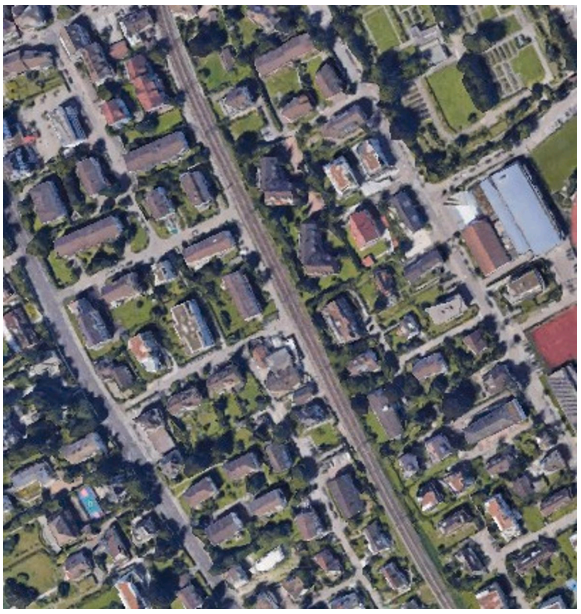
From 1950 to 2000 an exponential curve describes the evolution of the living density by Zurich's Lake shore. Around the same time, a rapid decline of the amount of vineyards occurs.



Living Density in City Zurich and at the Shore of Lake Zurich



Seefeld, Zürich City. Source: Google Earth



Meilen, Zurich Lake Shore. Source: Google Earth

Nevertheless, the living density at the shore of Lake Zurich is still a lot lower than that of city Zurich. The lake shore is less densely built, and the peri-urban ideal of a garden is very prominent in the region. The private gardens that people have constitute a predominant nature in the composition of the landscape. A lot of very tall and old trees can be found within the settlements.











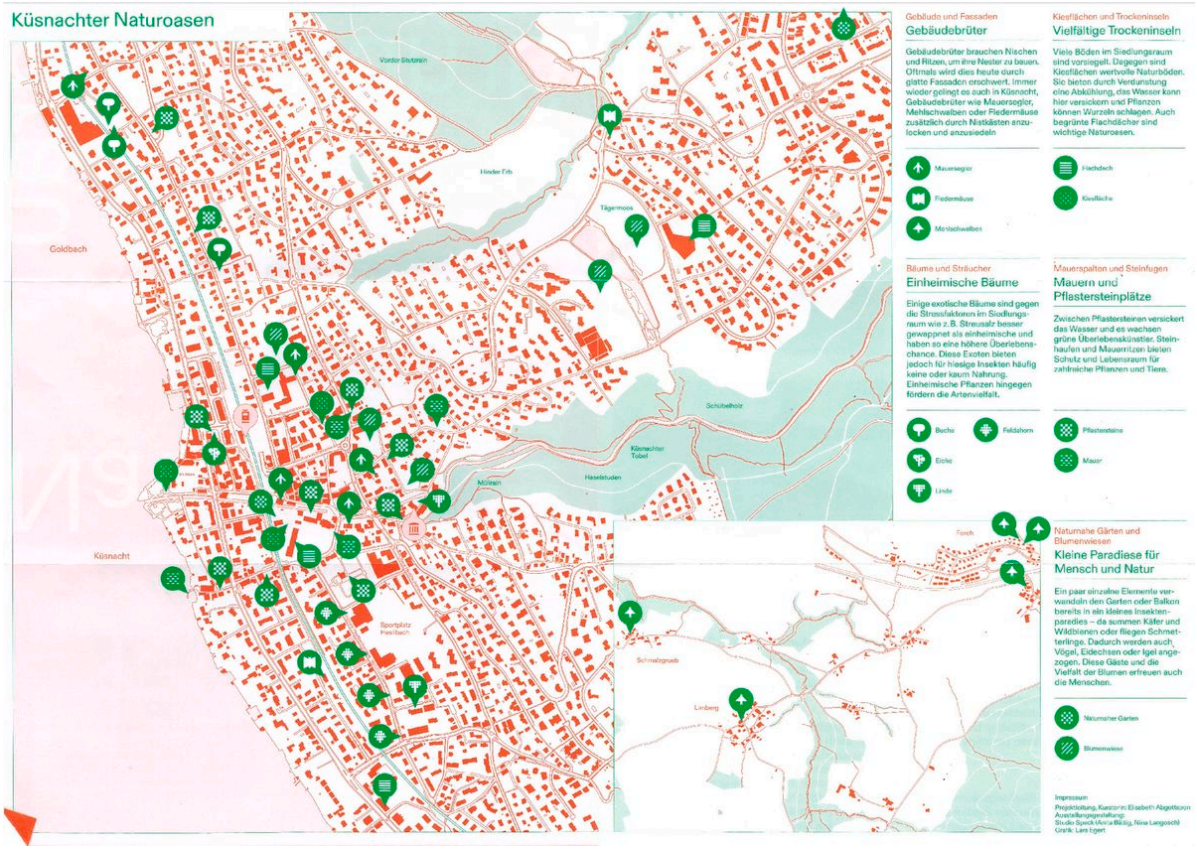








The private gardens have a lot of potentials. They are often situated around and in front of houses. The garden space could be created for leisure, as a visual barrier, or even as a social space.



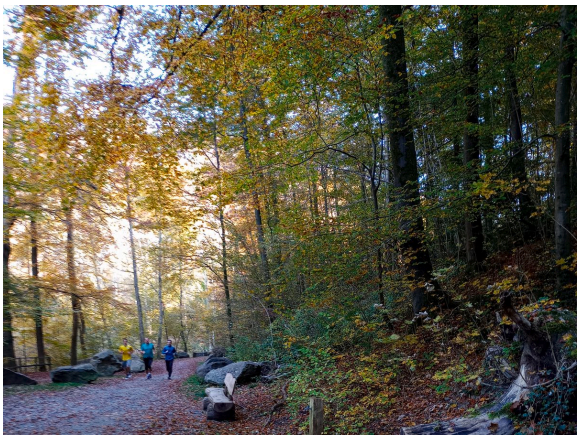
Küsnacht Nature Oasis. Source: Ortsmuseum Küsnacht, 2019.

What's more, as they are much more freely planted than the agricultural field and the forest nearby, these gardens have a high potential of biodiversity regarding the number of species. As we can see in the exhibition *Grün Stadt Grau – Natur im Siedlungsraum [https://www.ortsmuseum-kuesnacht.ch/index.php/2019-1]* hold by Ortsmuseum Küsnacht in 2019, many of these private gardens can be seen as nature oasis in the urbanized context.

Boundaries and Edges:
Nature in the Anthropocene



The relationship between human and nature is subtle. Where is the boundary between human and nature? As time goes on, the human intervention on nature becomes more and more significant. Human is setting boundaries to nature, while nature has a tendency of trying to grow out of these boundaries.



People Running, Küsnacht Tobel Forest



Mulching Vineyard Grass, Meilen



Erlenbach Gardeners

From these observations, a few conclusions can be drawn. Nature here is inseparable from the human settlements. The three predominating “Natures” along the shore of Lake Zurich are all highly influenced by human. As time goes on, the human intervention on nature becomes more and more significant.

There is a certain awareness about the quality of nature, and several local initiatives around the theme of nature have been taking place in the region of the Gold Coast. The afore mentioned exhibition from the Ortsmuseum Küsnacht *Grün Stadt Grau* [https://www.ortsmuseum-kuesnacht.ch/index.php/2019-1] is one of them, focusing on nature in the settlement area. Now there is a new exhibition *Ausser Man Tut Es* [https://www.ortsmuseum-kuesnacht.ch/index.php/aktuell/ausstellungen/aktuelle-ausstellung/622-aktuelle-ausstellung], which brings people’s attention to the sustainable projects in Küsnacht.

Nonetheless, the decrease of biodiversity is a global issue at present and in the future. Switzerland is not exempt. According to the report *Zustand der Biodiversität in der Schweiz 2014*: “Over one third of the plants, animals, and fungi species are listed as threatened in Switzerland. While all the efforts till now are not enough to prevent the amount of domestic species and genetic diversities from dropping.”

Have we been controlling the nature to much only for our own benifits?



Gravel Ground Cover



Fence



Square Cut Hedges



Concrete Wall

The images above illustrate the moments in which nature is being controlled by man. The space left for nature to grow and develop on their own is very little. These are also the moments which we are used to in our living environment.



Flowering Growing Through Concrete Wall



Vine surrounding Lamppost



Tree Replacing Fence



Vines Crossing Built Boundaries

However, we also noticed the moments when nature could react, as is shown in the above photos. These are the moments when spaces are left, even if they are not left for nature intentionally.

According to Anna Tsing in her article *On Anthropogenic Landscapes*: “Luckily for us, indeed, the minute humans allow a little room for manoeuvre for other species, those other species are likely to begin colonizing human ruins.”

Those are the moments we would like to revaluate, as precious chances to enhance biodiversity in our living environment.



Natural border conditions, Küsnacht



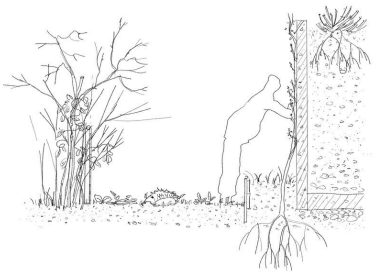
Walls covered by plants, Küsnacht



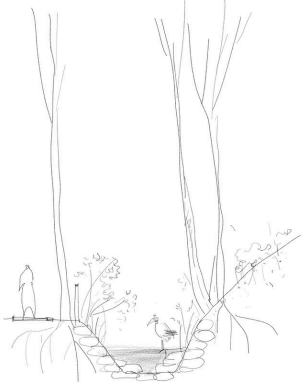
Tobel bordered by trees, Küsnacht



Natural border conditions



Walls covered by plants



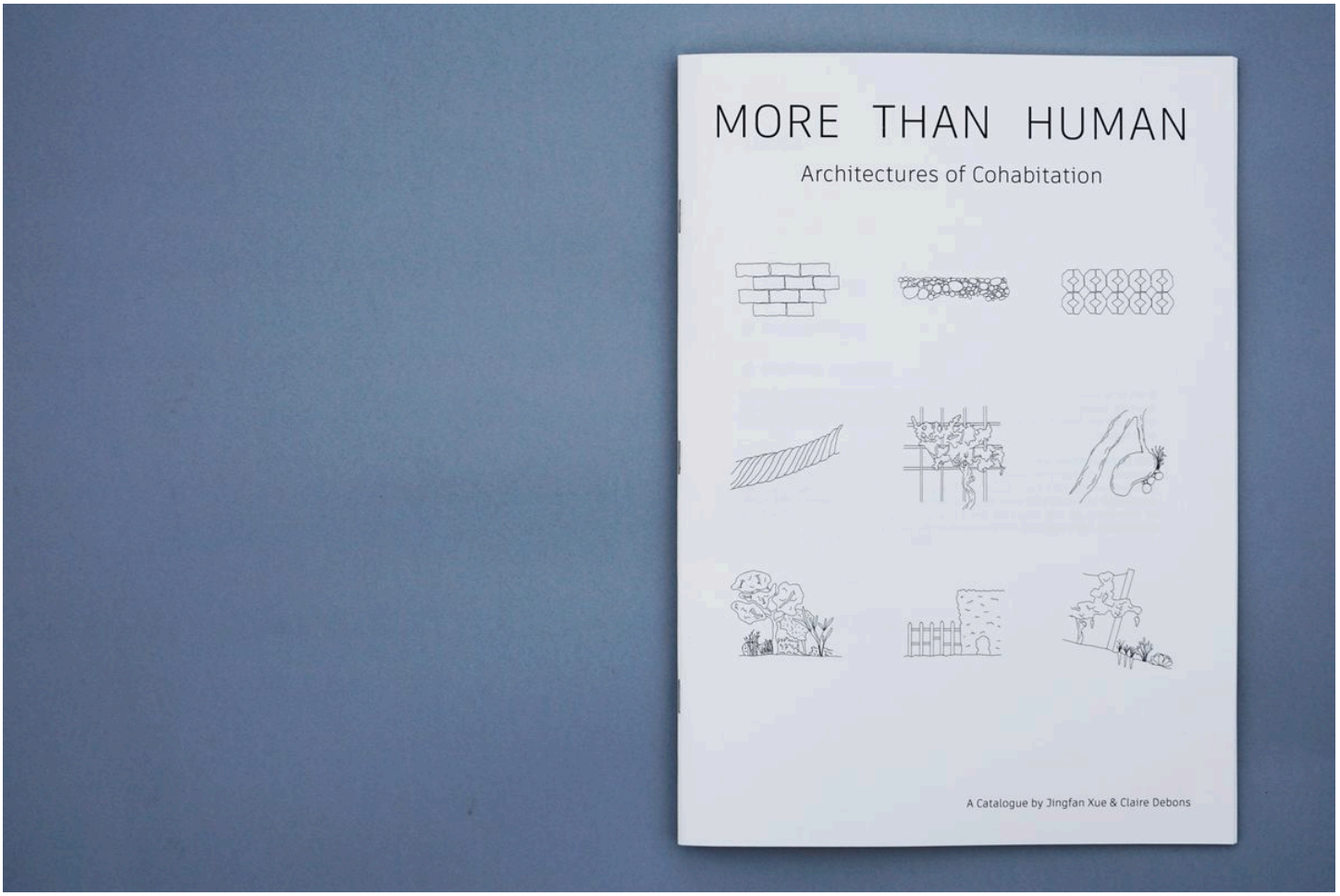
Tobel bordered by trees

We discover and understand these moments as in-between moments: it is not only about man’s control over nature but also about the way how nature reacts. The in-between moments where there is a cohabitation of multispecies.

It is not a space where humans control nature for humans.

It is a space where humans control nature for multispecies.

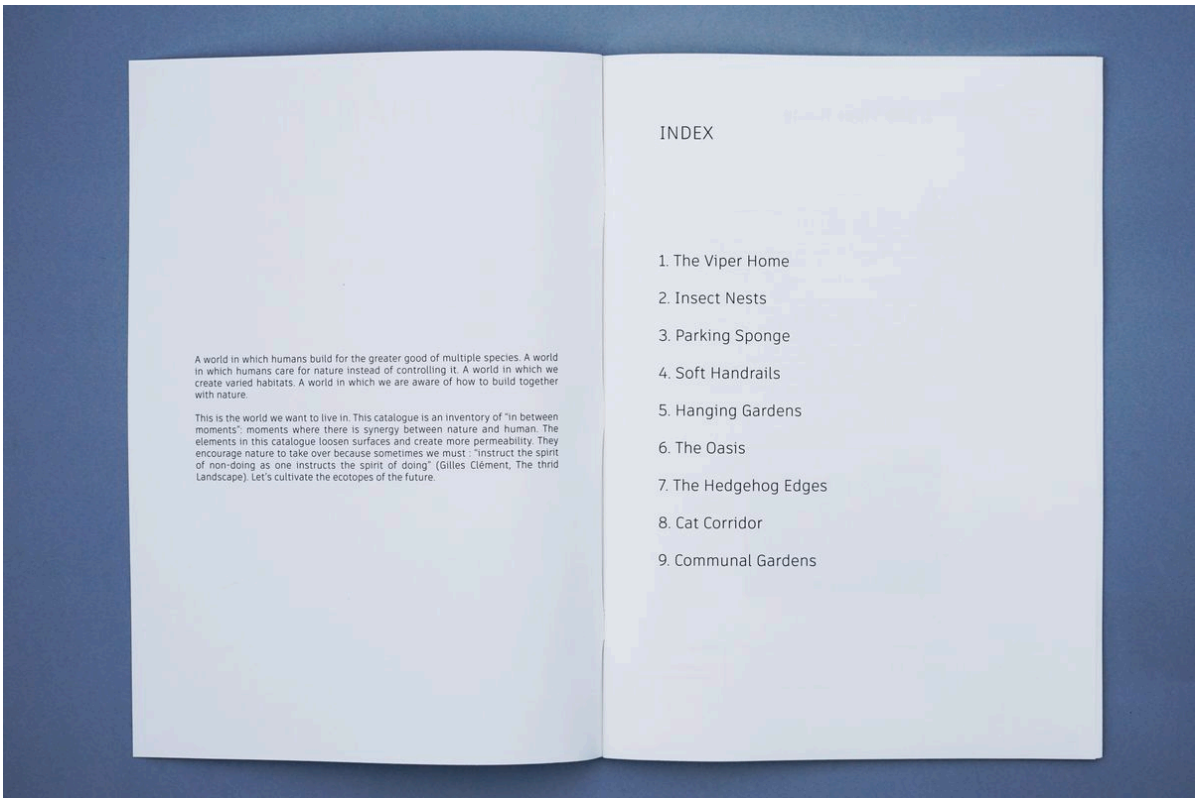
More Than Human:
Architectures of Cohabitation



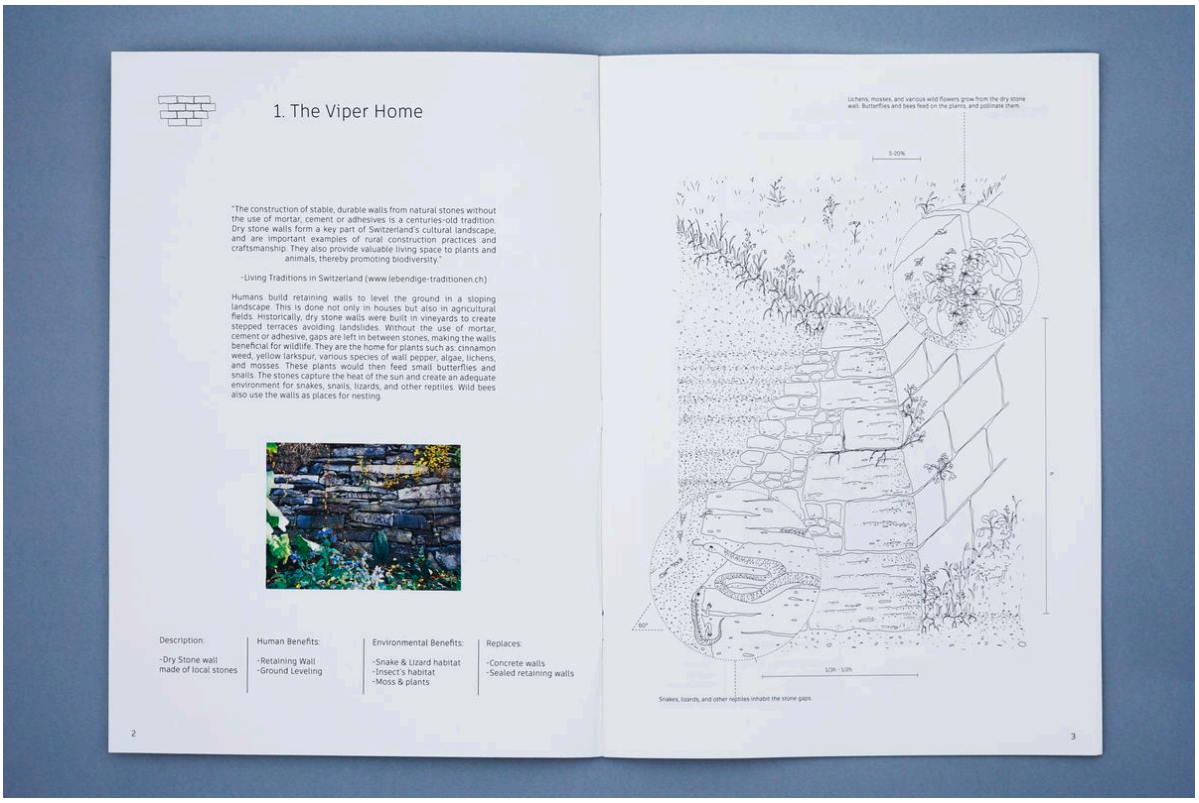
A catalogue of moments where multispecies cohabit.

A world in which humans build for the greater good of multiple species. A world in which humans care for nature instead of controlling it. A world in which we create varied habitats. A world in which we are aware of how to build together with nature.

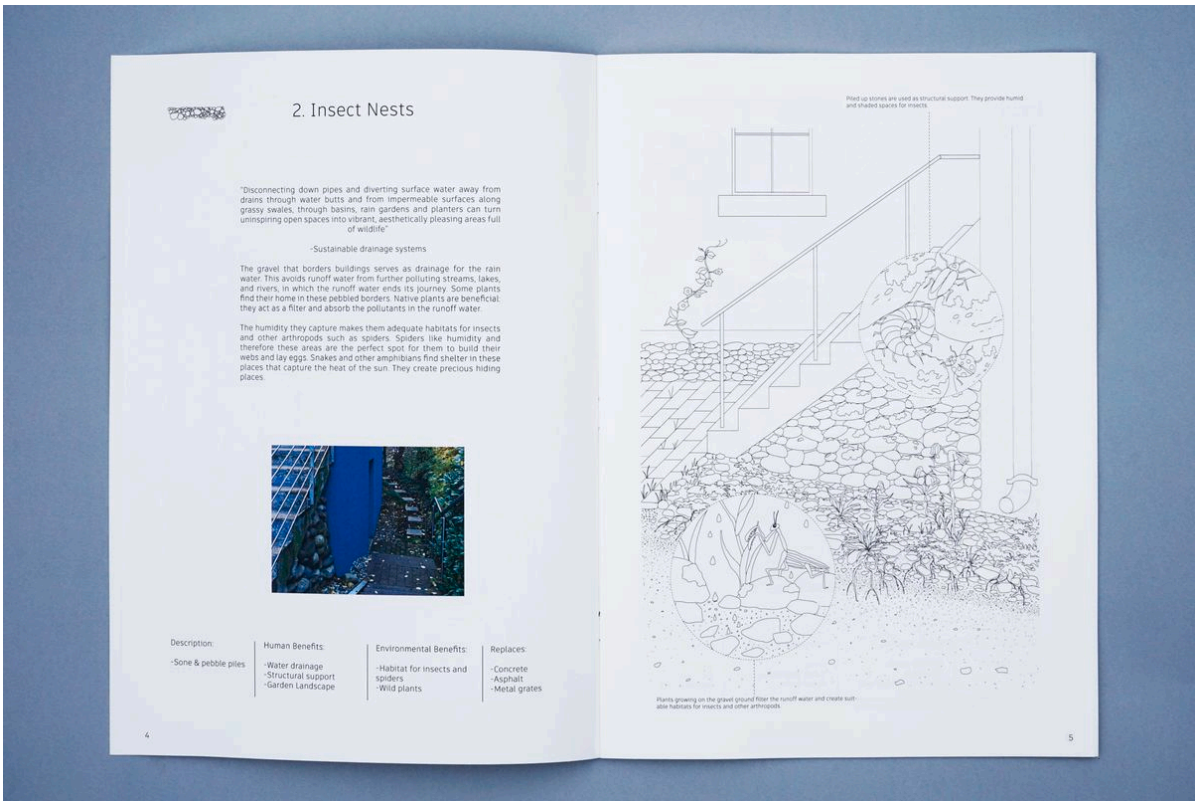
This is the world we want to live in. This catalogue is an inventory of “in between moments”: moments where there is synergy between nature and human. The elements in this catalogue loosen surfaces and create more permeability. They encourage nature to take over because sometimes we must : “instruct the spirit of non-doing as one instructs the spirit of doing” (Gilles Clément, The thrid Landscape). Let’s cultivate the ecotopes of the future.



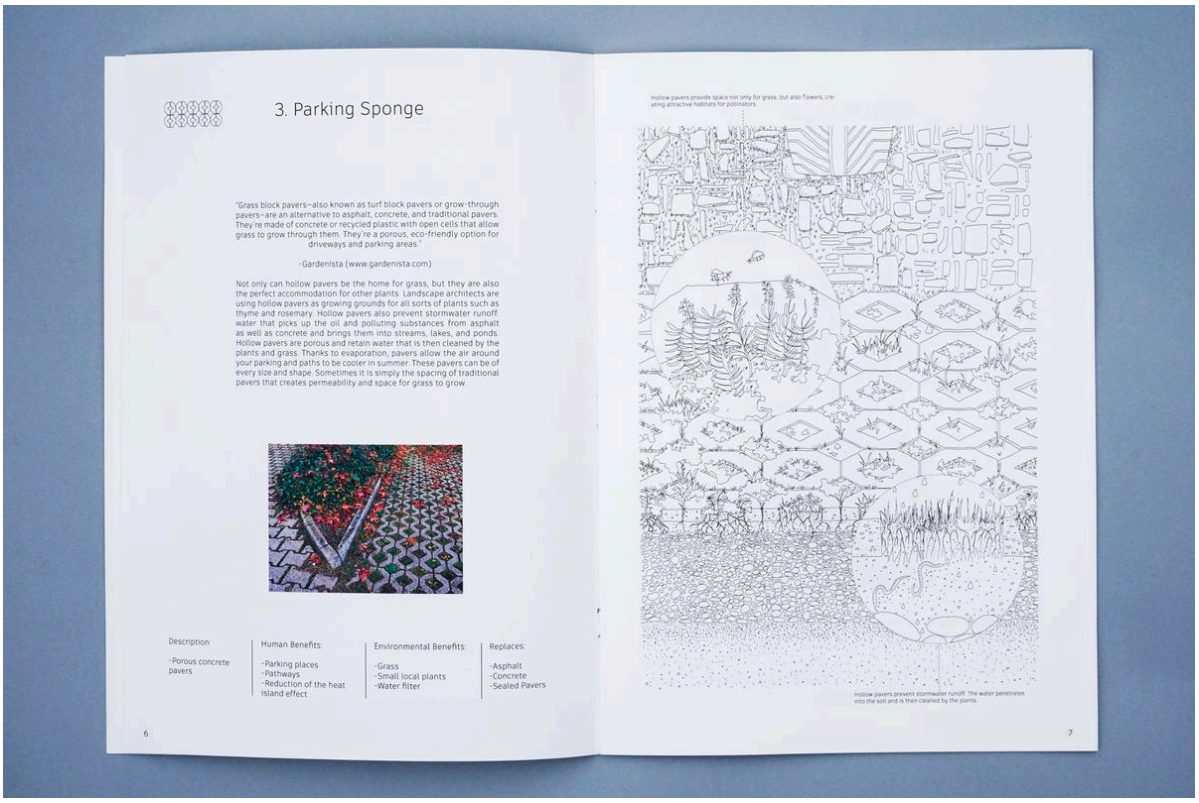
Index



1 The Viper Home



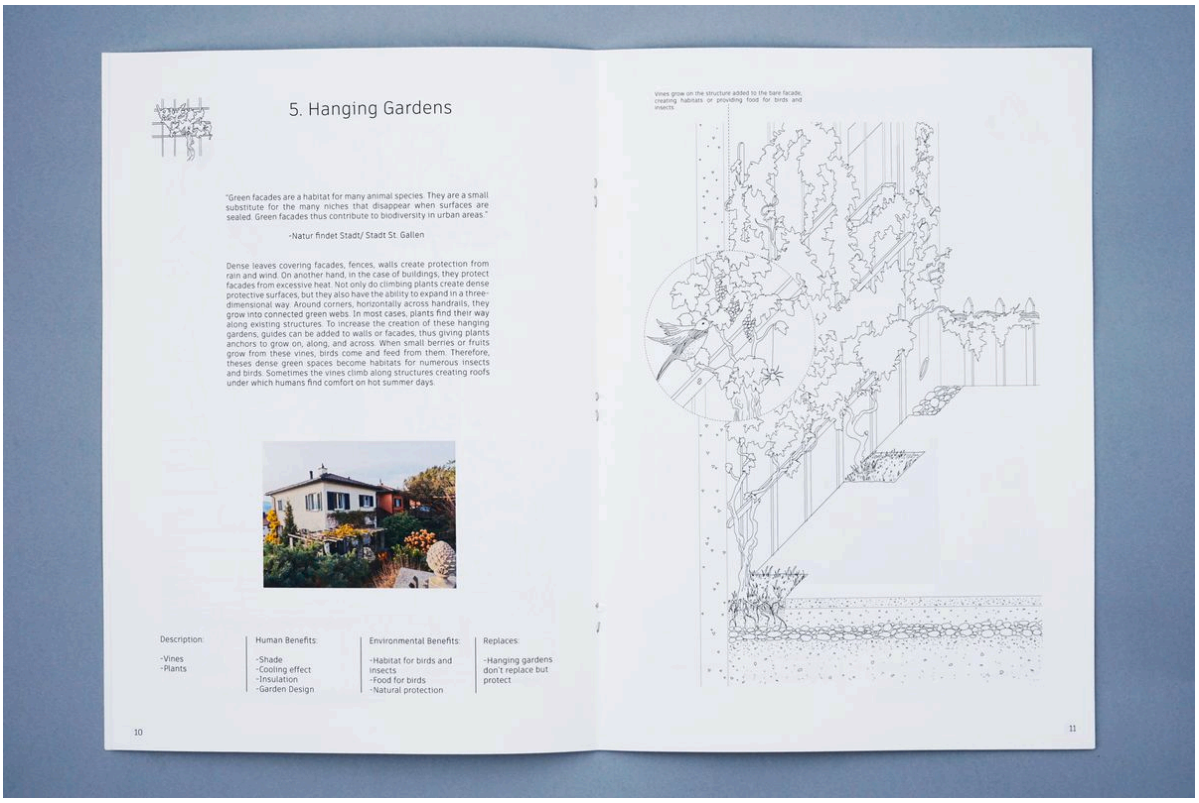
2 Insect Nests



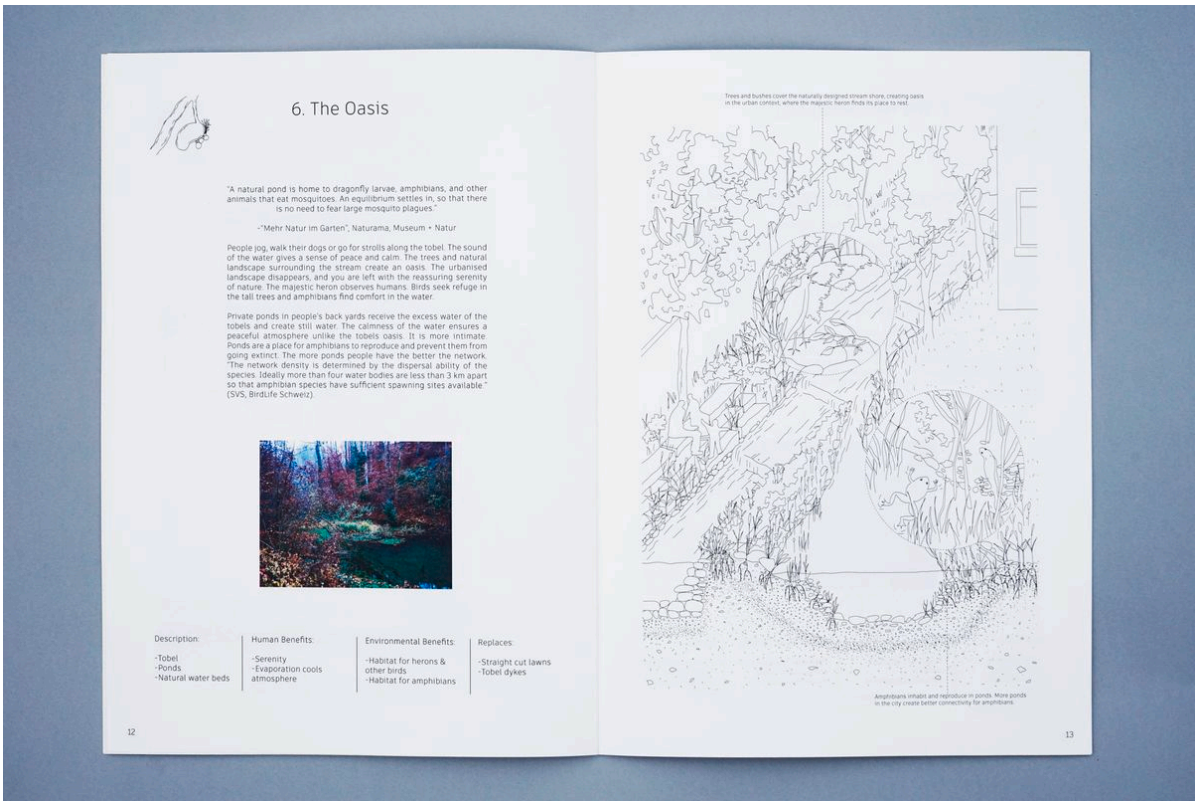
3 Parking Sponge



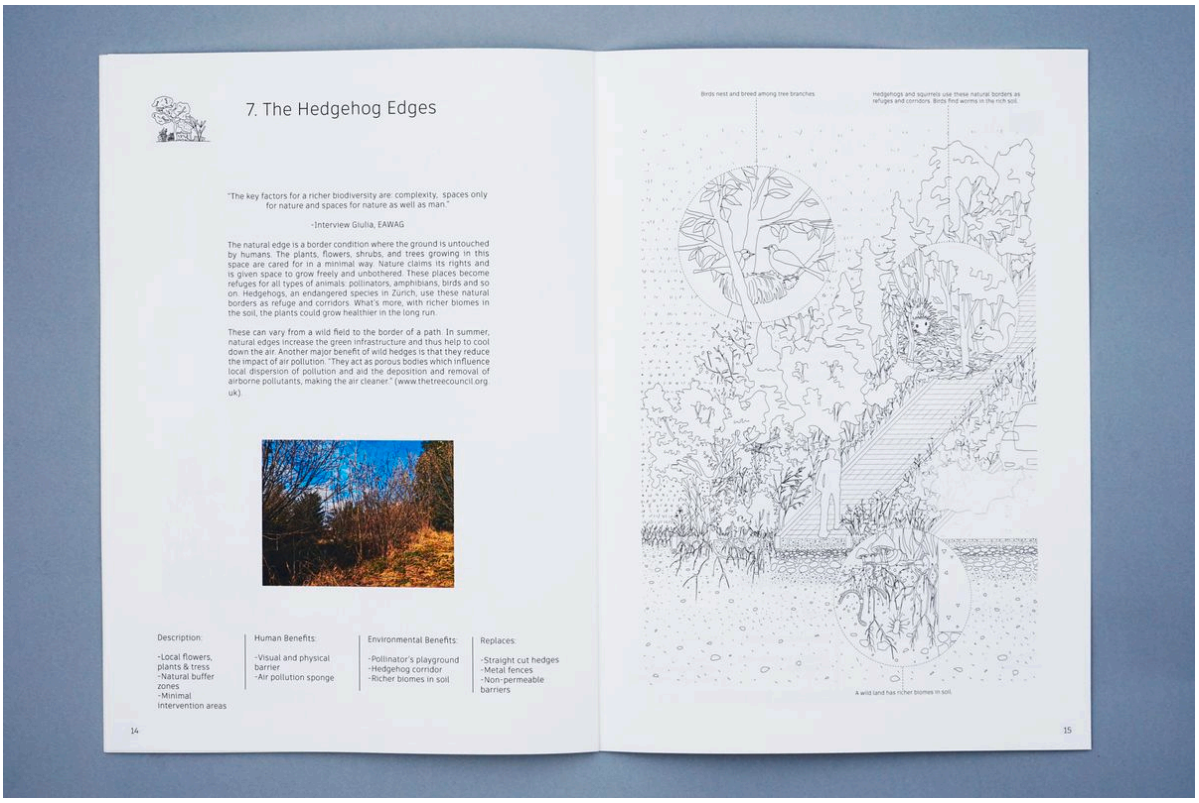
4 Soft Handrails



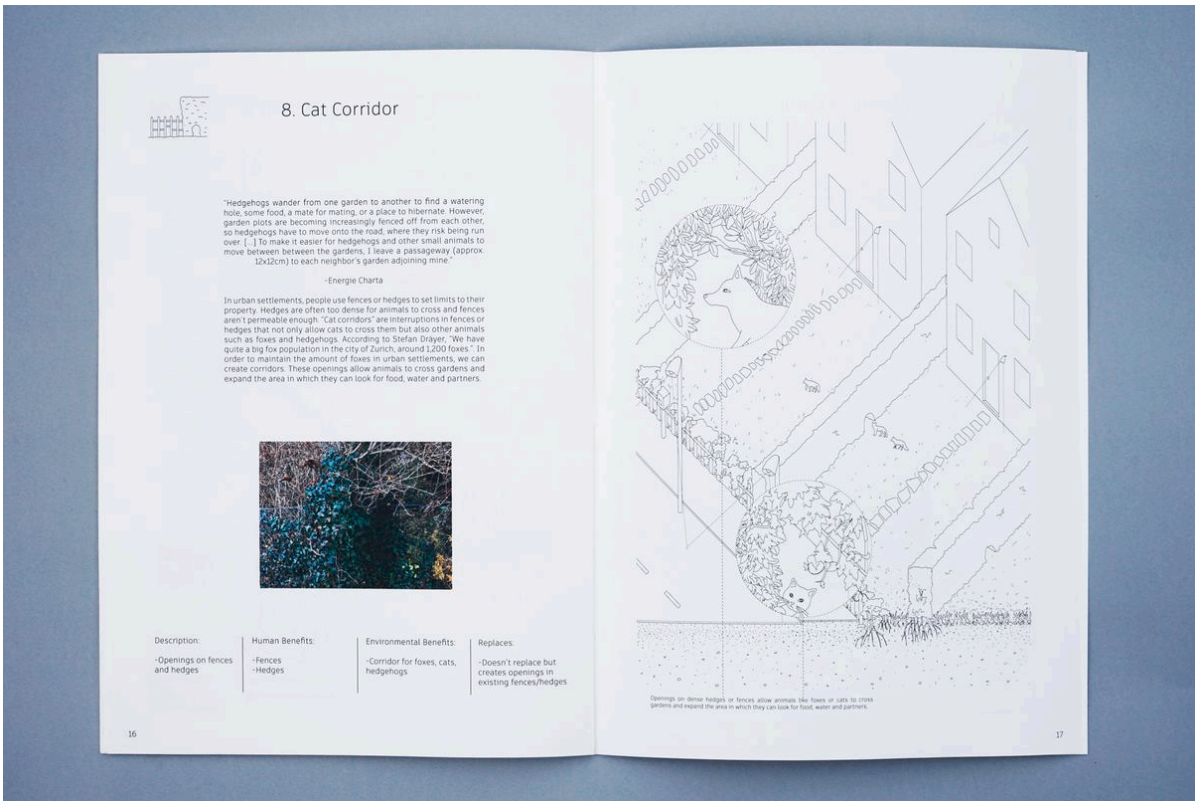
5 Hanging Gardens



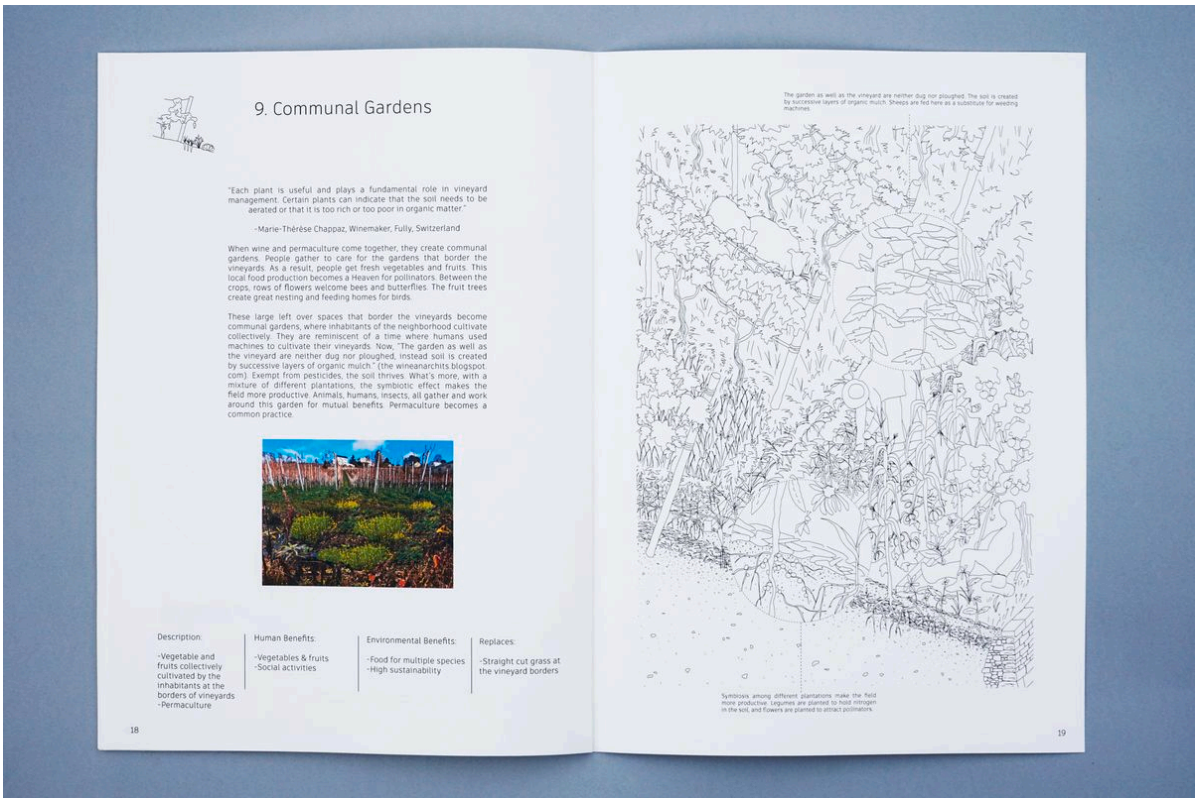
6 The Oasis



7 The Hedgehog Edges



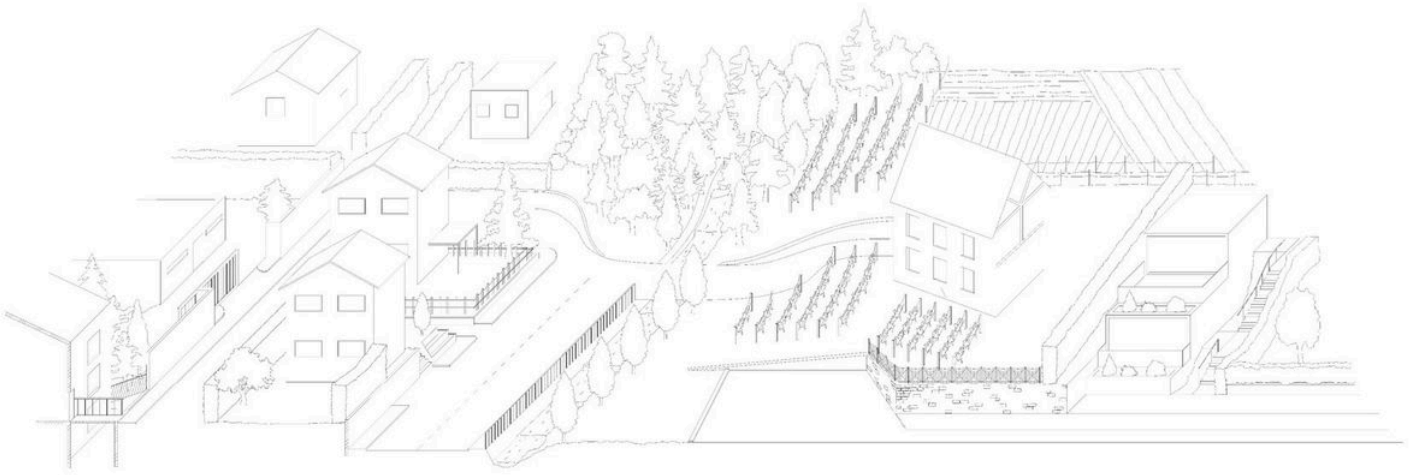
8 Cat Corridor



9 Communal Gardens

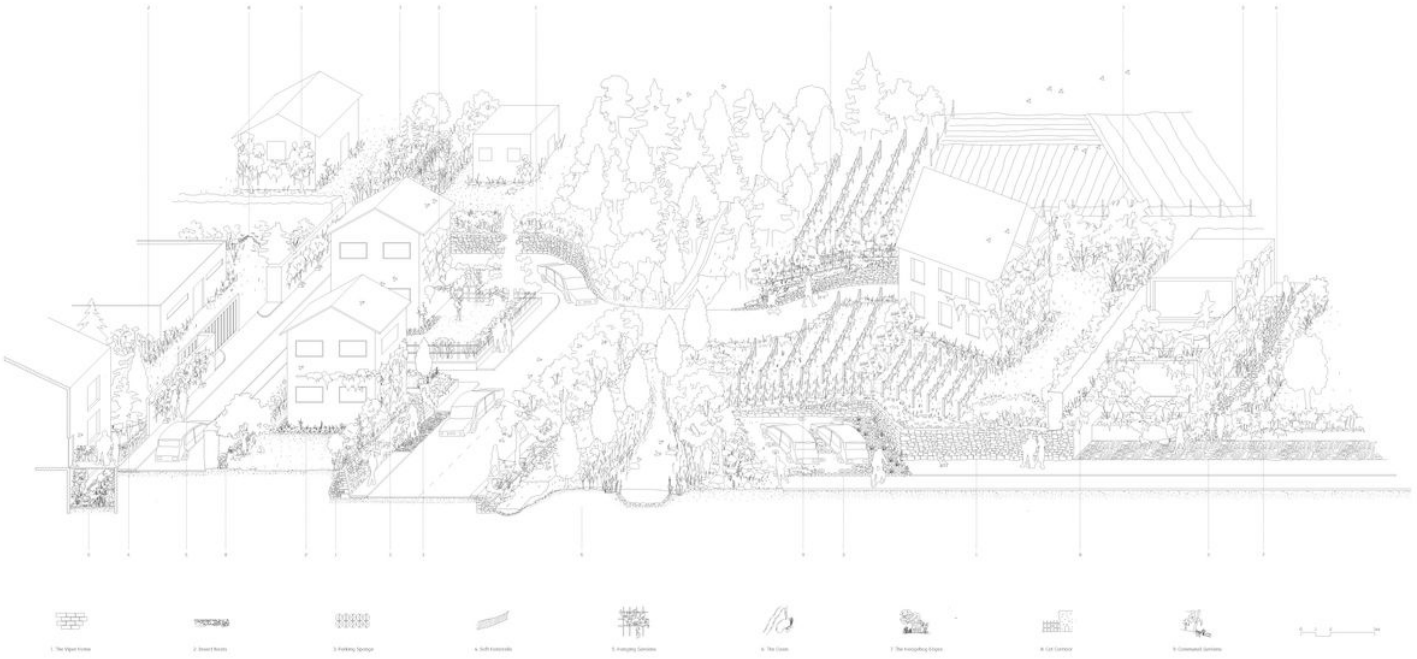


This catalogue is actually endless. It is to provides us with a new insight how we could perceive and treat our living environment. With such an new insight, this catalogue is to be continued by you, and all of us.



Axonometric Collage: Current Situation of Küsnacht

By applying the catalogue to the current situation of the Lake shore, we try to imagine the future landscape when humans built not just for humans, but really try to cohabit with multispecies. We could all try to imagine such a future.



Axonometric Collage: Imaginary Image of Küsnacht.

ACKNOWLEDGEMENTS

We would like to thank everyone for their kind support to our project: Dr. Giulia Donati and Dr. Peter Marcus Bach from Eawag for their input about Blue-Green Infrastructure in urban context, Elisabeth Abgottspon from Ortsmuseum Küsnacht for the kind introduction and providing historical photographies. Special thanks to the residents in Küsnacht and workers in the vineyard in Meilen, without the spontaneous conversations with them, we would not get such a vivid insight into the place. Last but not least, many thanks to Prof. Milica Topalović and the assistants Dorothee Hahn, Jan Westerheide and Muriz Djurdjevic for their constant enthusiasm and encouragement.

SOURCES

- Altwegg, Andreas Manuel, and Andres M. Altwegg. Vom Weinbau am Zürichsee : Struktur und Wandlungen eines Rebgebietes seit 1850. Stäfa: Th. Gut, 1980. Print.
- Ausser man tut es. Nachhaltigkeitsprojekte in Küsnacht, Ortsmuseum Küsnacht, 2021-2022.https://www.ortsmuseum-kuesnacht.ch/index.php/aktuell/ausstellungen/aktuelle-ausstellung/622-aktuelle-ausstellung
- Clément, Gilles. Manifest der Dritten Landschaft. Berlin: Merve Verlag, 2010. Print.
- Grün Stadt Grau – Natur im Siedlungsraum, Ortsmuseum Küsnacht, 2019-2020.https://www.ortsmuseum-kuesnacht.ch/index.php/2019-1
- Hardmeyer, Barbara. Küsnachter Ansichten zwischen 1700 und 1900 : 50 Jahre Kulturelle Vereinigung Küsnacht. Küsnacht: Ortsgeschichtliche Kommission der Kulturellen Vereinigung Küsnacht, 2005. Print.
- M., Fischer, et al. Zustand der Biodiversität in der Schweiz 2014. Bern: Forum Biodiversität Schweiz et al., 2015.https://portal-cdn.scnat.ch/asset/824fba11-6212-5830-a353-390032c4253a/zustand%20dt%20WEB.pdf?b=c01866f5-a4ab-55c2-a430-6569c15ed3b4&v=1ebf0327-701a-5280-bb81-019381ab44d7_0&s=Wkhr8rYvHlp65ju2MtE8-X0enQKDCWwbth2ZNdsW09dBKzpMwh4LUzk-AHexSati4e3_B9mw7m_a-U5CHLHbgkITKbq8lPcAsbMMxCOlnmSIAFKph1Ubu9WFU1gaEFSxDEmro5G4h6LCfFEcpoVVMf16OVvgNlkIerlFRHgUKp0
- Tsing, Anna Lowenhaupt. “On Anthropogenic Landscapes.” In A Bestiary of the Anthropocene, edited by Nicholas Nova and Disnovation.org. Onomatopee, 2020.https://www.biodesigned.org/anna-tsing/on-anthropogenic-landscapes

This work by Claire Debons and Xue Jingfan was created as part of the design studio Nothing but Flowers at ETH Zurich in Fall 2021. The PDF is intended for educational purposes only. Its commercial distribution is strictly forbidden.

© 2025, Architecture of Territory

Architecture of Territory
Professor Milica Topalović

TEACHING TEAM
Muriz Djurdjevic
Dorothee Hahn
Milica Topalović
Jan Westerheide

Prof. Milica Topalović
ETH Zurich
ONA G41
Neunbrunnenstrasse 50
8093 Zurich
Switzerland
+41 (0)44 633 86 88
www.topalovic.arch.ethz.ch