

# THE FUTURE IS HYBRID!

An exploration of Gullbergsvass

Chalmers University of Technology  
Master's Programme in Architecture and Urban Design  
Architecture and Urban Space Design Studio



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# **INTRODUCTION**



# HYBRIDITY AS PEDAGOGICAL TOOL IN ARCHITECTURAL EDUCATION

Marco Adelfio and Joaquim Tarrasó

## INTRODUCTION

Architecture and Urban Space Design is a **Design studio** starting on Monday 21st September 2020 and ending on Friday 18th of January 2021.

This studio approaches urban space as a result of countless overlapping layers of different character, all of them with implications in terms of social, cultural, environmental and economical parameters. That situation has important consequences on our physical environment, in relation to architecture, public space, infrastructure and landscape. The result is a diversity of conflicts, distortions, needs, concerns, and involves different sensibilities and epistemologies.

Hence, to understand and address such a complexity we need a transversal approach that embraces different scales and complementary disciplines. The aim of the studio is to gain a deep understanding of the different aspects that conform a complex urban space and to acquire tools that can help us to transform it holistically.

In the course, we interpret urban layers defined by the physical environment to experiment with new types of urban structures that are defined as urban hybrids. They represent new spatial prototypes that, without predetermined scales or typologies, will define new qualities and the linkage of the proposals with the adjacent areas. As we understand the city as an entity, as a whole urban structure and not as an aggregation of parts, the scope of intended transitions is studied to improve the physical relationship to the place and working on a human scale.

## HYBRID ARCHITECTURE AS CONCEPTUAL SUBSTRATUM FOR THE COURSE

The concept of hybrid architecture functions as the overarching approach that permeates the Architecture and Urban Space Design course, highlighting its potential as a tool for urban transformation. According to the Cambridge English Dictionary, a hybrid can be defined as something that is a mixture of different things. On the same page, Alhusban and Alhusban (2020) describe hybridity as a "concept used everywhere to describe new shapes created from mixing (combining, joining, blending or merging) of two forms or species we recognize". The same authors state that "a hybrid finds itself in an intermediate position that derives the two well-known forms while it is not a copy of any of them". The concept of hybridization can be interpreted both from the perspective of a process (Alhusban and Alhusban, 2020) but also from the perspective of projects or design (Zanni, 2012). According to Zanni (2012), from a project or design perspective, hybridization is a "composition, even dissonant, of architectural and urban space defined by the intersection of different types of spatial and functional forms or from the transformation of predefined spaces". Zanni (2012), a representative academic from the Polytechnic of Milan in Italy, focuses in particular on three hybrid figures, fold, sponge and pore and correlates them to hybrid projects focusing on the architectural molding of soil, recomposition of fragmented spaces and interstitial/in-between spaces.

Among all those different definitions, this course draws on the interpretation of hybrid architecture given by

Pinto de Freitas (2011). According to her perspective, hybrid architecture is at once an architectural object, landscape and infrastructure. Such a vision of architecture shows commonalities with landscape urbanism. In fact, hybrid spaces can be considered as "multifunctional architectural and landscape entities, designed by applying the landscape urbanism approach and having the spatial connectivity with adjacent areas" (Krasilinikova and Klimov, 2016).

Such a multidimensional concept can also be displayed by means of graphical representations, as shown by Marc Angelil and Anna Klingmann (1999) in their hybrid morphologies diagrams, that build on other diagrams created by Rosalind Krauss concerning the relation between architecture, infrastructure and landscape. The concept of hybrid architecture highlights thus the transversal relationships between three spheres of knowledge, i.e. architecture, landscape and infrastructure, rather than considering them as separate entities.

In practice, several exemplars can be used to illustrate this idea of blurring different disciplinary fields. If we consider, for instance, the Skogskyrkogården in Stockholm by Gunnar Asplund, inaugurated in 1920, we can see the transition of physical spaces and between landscape and architecture. Another example can be provided by the Guggenheim museum project by Frank Lloyd Wright publicly opened in 1959, whose building can be viewed as the result of the design of a flow or a way of moving, like an indoor street. The Maritime Youth House in Copenhagen by Plot, completed in 2004, can be interpreted as a landform building, in the sense that the building is forged like an interpretation of the land and, as a consequence, it has an hybridity condition between a building that is hosting activities and the landscape itself. Other projects regard an upgrading of former infrastructures into other types of public spaces, such as the High Line in New York. Hence, the course focuses on the possibility of defining the projects from different perspectives, incorporating in them infrastructures, landscapes and buildings as results of interconnected types of programs. The blurring of boundaries is perfectly incarnated in the obliquity principle by Claude Parent and Paul Virilio, "who investigated a new kind of architectural and urban order that forced the body to adapt to disequilibrium, encouraging vertigo and promoting fluid, continuous movement" (Parent & Virilio, 1996).

## **HYBRIDITY IN URBAN TRANSFORMATION**

At the urban scale, the concept of hybrid architecture can be related to the idea of urban transformation, as shown by Cedric Price's (2001, cited by Jauslin, 2015) analogy between the city and an egg, explaining the different typologies of cities/egg along history, from the ancient city with clear boundaries depicted as a boiled egg, an egg that becomes fried or poached trespassing the limits of city walls with the industrial revolution, until the contemporary city that, for its hybrid conditions is portrayed as a scrambled egg. Such an evolution can be reflected in the historical development of Gothenburg. While its historical centre is clearly structured around the main axes and nodes, with a clear perimeter, nowadays the city incorporates a diversity of urban fabrics and infrastructures which resembles the scramble egg idea of contemporary city proposed by Price. A characteristic of Gothenburg is a correlation between the morphology of the city and the location of main infrastructural systems to the point that we can find a relation between the different geographical location of the rivers and canals converging in the Göta Älv and the infrastructures - e.g. Sävveån and the E20 highway that connects to Stockholm. Moreover, there is a relationship also between infrastructure and major public buildings, for instance, Östra Sjukhuset or the Sahlgrenska hospital in Mölndal. Hence, we can now see how these river systems have been occupied by these major infrastructures in relation to mobility, but also in relation to public buildings.

As a consequence of this type of development, the city of Gothenburg nowadays is characterized by fragmentation, as a sequence of urban fabrics that are all of them divided by water and mobility infrastructures. This idea can be well expressed through the words of Nijhuis & Jauslin (2015) who state that "from nineteenth century onwards, complete river systems became controlled by man in favour of economic growth". Accordingly, the

same authors highlight that "natural landscapes have been transformed into urban, logistics, industrial and waste landscapes". This has created on the one hand co-existence of functions and, on the other hand, leftover, in-between or residual spaces have emerged. The result is what Rem Koolhaas described in "The Generic City" (1995) as an image of the contemporary city in which "roads, buildings and nature coexist in flexible relationships". This is the kind of urban environment which represents the focus of the AUSD course. It is characterized by a condition of in-betweenness, diffuse edges and different disciplines work together in the resolution of hybrid projects considering the diverse elements as one entity. Therefore, rather than examining cities in terms of morphological units with clear boundaries or by separating systems of functions and land uses, which would be a more traditional urban analysis approach, the course embraces the aforementioned idea of contemporary cities as scrambled eggs. Their inherent hybrid mix of elements and fragmentation are considered as opportunities for architectural experimentation. Dealing with hybridity implies recognizing co-existences and work with in-between and transition spaces as vital elements of urban development.

Therefore, the in-between spaces existing between buildings, infrastructures and landscapes are deemed as drivers for change rather than looking at them as leftover spaces with a dystopian or negative imagery. To understand the values of in-between or residual spaces, resulting from a conflict between landscape and built structures, different concepts are introduced in the course such as: in-between city (Sieverts, 2003), transitional spaces (Harlé, 1993), vacant land (Freire Trigo, 2020), brownfield (Chowdhury et al., 2020), urban voids (Sousa Matos, 2009), interstitial spaces (Sousa Matos, 2009), spaces of indeterminacy (Montemayor Díaz and Kamel, 2015), eco-tones (Montemayor Díaz and Kamel, 2015). All such concepts show that the in-betweenness is a multi-scale concept (rural-urban, urban, architectural) and are mentioned to display the opportunities for architectural creativity that stems from working with these spaces. Following Sousa Matos (2009), "urban voids have almost always been a space of experimentation and recreation, where their resilience transforms them into a space of difference and permanence, establishing the priority and continuity of their reconstruction processes".

## **TRANSDISCIPLINARITY: A NEED FOR PRACTICE AND ACADEMIA**

As a consequence of the hybridity of the subject, this course takes a transdisciplinary approach. This is also a response to the existence of different administrative offices that intervene in the mechanisms for urban transformations in Gothenburg. Among them, the main ones can be identified as Trafikkontoret, Stadsbyggnadkontoret, Park och Natur Förvaltningen, which reflect different fields of action e.g. infrastructure, buildings and landscape. From the perspective of hybridity in an architectural and urban context, a shift is needed from subdivision of specific competences towards a more integrated ability to deal simultaneously with infrastructure, buildings and landscapes. Hence, this course is, among other things, about challenging the current practice of urban development in Gothenburg. Transdisciplinarity becomes therefore an intrinsic value of the course, and such a mix of disciplines is reflected in the hybridity of projects developed through the course, where built topographies intercalate with urban infrastructures and landscapes are intertwined with mixed-use urban development. The fragmentation and diffused edges of urban fabrics, characteristic of contemporary Gothenburg's urban landscape, are in this way "recomposed" (Rossi, 1984 cited by Stan, 2013) through hybrid architectural interventions.

## **WORKING WITH GOTHENBURG AS LOCAL CONTEXT: GULLBERGSVASS AS CASE STUDY**

As mentioned before, a main characteristic of the course is that we work specifically with the context of Gothenburg. Gothenburg, as many other industrial cities, is an example of a fragmented city. Along its river structures, across its urban areas, we find many **different layers in an unbalanced coexistence**. The relationship between landscape, buildings and infrastructure forming a system recurs in different parts of

the city e.g. Göta Älv, Mölndalsån, Kvarnby etc... The course takes advantage of such a context with its diversity of rivers to learn from such an unbalanced situation of the built environment and to propose **new scenarios of urban reconnection** and effective coexistence. The course uses through the years the same systems (landscape+buildings+infrastructure) in different locations and work on different scales to understand the relationship between the components of the systems at different scales and in different locations.

This year the work has focused on the concept of detached and fragmented city, highlighting the coexistence of functional, structural and social aspects that needs to be articulated and integrated. The focus is on the area of **Gullbergsvass**, located on the south bank of the Göta Älv in the central part of **Gothenburg**. The study area was **originally** a great reed bed, secured in the second half of the XIX century to become a strategic harbor and industrial area, connected to the city railway and many of the major Urban Infrastructures.

Within the plan for the **Rivercity**, the area is going to undergo a deep transformation in the next future that we believe must consider its articulation with the adjacent areas. In that sense it becomes relevant to examine border conditions, between natural, urban, industrial, infrastructures, giving special attention to the waterfront and the infrastructural barriers.

## LEARNING SEQUENCE

In this diffusion of edges and fragmentation of parts that we can consider characterizing the contemporary cities, we operate for composing or finding projects that can be aimed at re-establishing connections between fragments of the city. In that sense, if we apply hybridity as a multidisciplinary field of knowledge in terms of learning approach in academia. We follow a methodology that aims to translate the principles of hybrid architecture into specific ways of developing work and acquiring knowledge. To do so, we establish a sequence of periods, moments or steps that develop the concepts of hybridity and hybridization.

The course is divided in **two parts or Study periods** and each period is subdivided in two modules where we perform a series of exercises and workshops. The first part allows us to understand the specific contexts and work with urban cartographies and proposals of urban connectivity from a conceptual perspective. The second part consists of a project in depth where students develop their personal project, based on previous analysis and conclusions from part 1. Each part is divided into two modules.

The first module of part 1 is about creating specialist profiles among students, through a combination of theory, digital tools and a compilation of historic, contemporary and speculative urban projects related with the following infrastructures as main driving forces: Water / Daylight / Ventilation / Mobility / Ecosystems. The second module of part 1 focuses more on the local context of the course, which is the area of Gullbergsvass in Gothenburg for the academic year 2020/2021. The work is about the integration of the diverse infrastructures in one coherent design proposal that takes the form of a superstructure. Here, hybrid architecture becomes a relevant tool in terms of trying to find holistic and synthetic project results, a result in terms of bringing together different layers of information.

The result is an architectural and innovative urban prototype that responds to the local needs for urban growing and urban reconnection, and acts as base for further development and refining in form of individual projects.

Part 2 starts with a module which embraces the development of projects in depth. Each student works individually in the continuous definition and refining of a prototype using the information collected through previous work on superstructures and interstices. The work of students goes through a process of iteration and incremental adjustments.

This idea can be exemplified by a referring to a description of Koolhaas' project of La Villette.

"The program will undergo constant change and adjustment. ... The underlying principle of programmatic indeterminacy as a basis of the formal concept allows any shift, modification, replacement, or substitutions to occur without damaging the initial hypothesis" (Koolhaas, R. cited by Waldheim, 2006).

The second module of part 2 focuses on the work the students perform for their exhibition and publication of course material.

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# GULLBERGSSVASS: A HISTORY OF TRANSFORMATION

During its lifetime it is sufficient to say that Gullbergsvass has been many things. A place for wildlife, military logistics, farmland, human invention, trade, innovation and human living. The land is, on its own, an ever changing hybrid, now awaiting its next transition.

## **1659 : The first master plans of the area**

This is when the initial thought of drying the area arises. The area was to be part of the inner city, hence surrounded by the characteristic moat and defense wall.

## **1687 : Construction of the military outpost**

The military outpost of Skansen Lejonet (Leo Gothicus) was the first building of the site. Serving as an important lookout and defence post at what was then the waterfront.

## **1859 : Drying the land**

On the 17th of May 1859 the most dramatic change in the history of Gullbergsvass occurred, the day the reed slowly became land. A place that had once been a 200 acres natural reed, so full of life it was considered one of Europe's bird-richest wetland, quickly became a claysite. The highly nutritious clay attracted farmers and the land was allowed for some years of harvest to stabilize the ground.

## **1861 : Second planning of a city**

The city of Gothenburg announces a competition for a master plan of the area. The proposals show a very different Gullbergsvass, with grand squares, canals and even royal castles.

## **1862 : Take-off of trains**

The coherent train track between Gothenburg and Stockholm is finished as a result of an increasing trade in Gothenburg harbour, and an interest to distribute the goods by train rather than the detour of the waterway.

## **1866 : Masterplan wins legal force**

His Majesty the King established the proposal combining a canal system from what is today Lilla Bommen and the spaghetti junction of the north east of the area, a park area, a square and housing. However, due to the demand for expanding the train tracks, this plan was never realized, although the space for the canals was long reserved. Instead an era of logistics began.

## **1884 : Start of the industry**

Gullbergsvass is decided to be an industrial site for steam power and goods

## **1888: Hisingsbron is finished**

## **1920 : The industrial takeover, population decline**

The final train tracks were inaugurated and Gullbergsvass had developed into a lively and important site for logistics and infrastructure throughout the decades that followed, housing around 3000 inhabitants and securing a large portion of the trading logistics of the Nordic countries. However, as the logistic site developed further, it did so at the expense of housing and the population started to rapidly decline.

## **1940 : Population halved**

The population had halved to 1500 inhabitants due to a combination of demolished housing and an unfavorable living environment. The decline kept at a rapid pace.

### **1970 : Offices and motorway**

A large portion of the train tracks are demolished and the few residential houses along the canal are replaced by offices. The E45 road was built on the old train tracks.

### **1990 : The population of Gullbergsvass reach zero**

### **2010 : A turning point**

Housing became available in a small area of Gullbergsvass and the population reached 500 people in just one year.

## **GULLBERGSVASS: FUTURE CHALLENGES**

### **URBANIZATION AND POPULATION GROWTH**

The process of urbanization is a global trend seen in most larger cities - Gothenburg included. Cities function as magnets for working and living in the sense that people to a higher extent move from rural areas to urban areas causing a rapidly growing urban population. This poses significant challenges when it comes to urban development and the need for cities to respond has brought about a hot debate on the topic of densification.

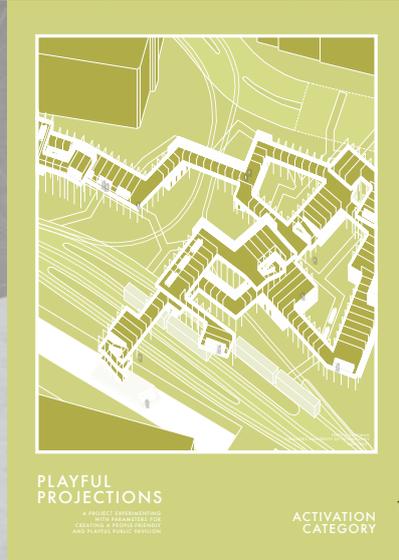
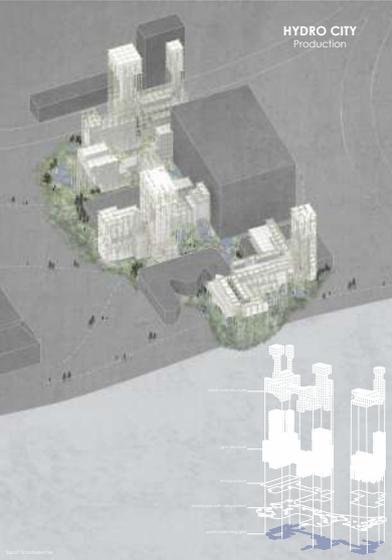
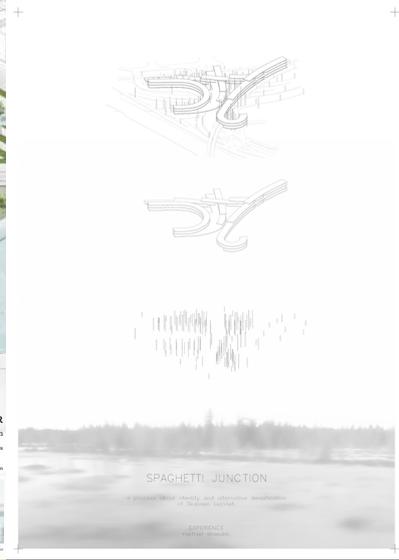
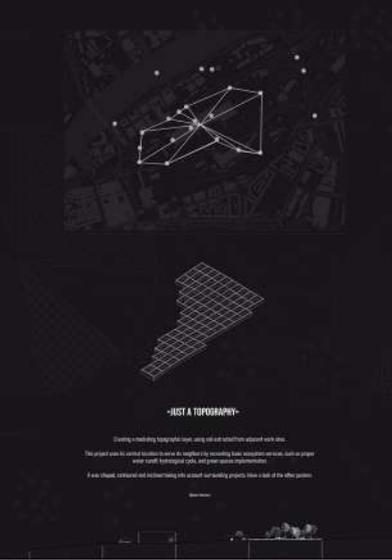
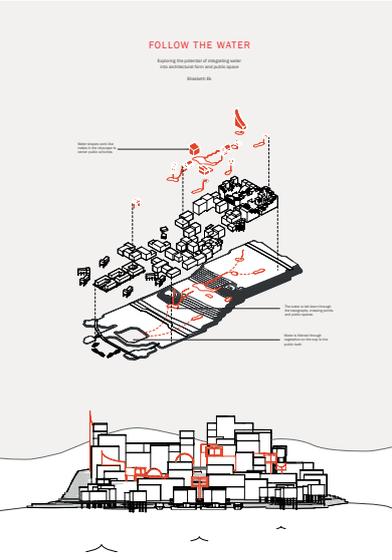
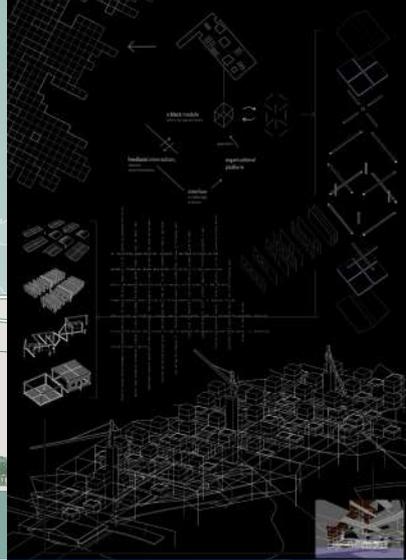
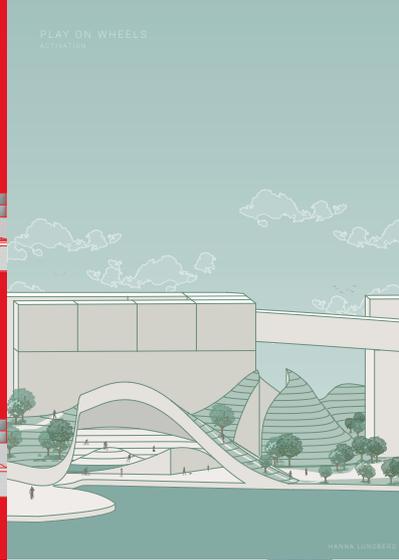
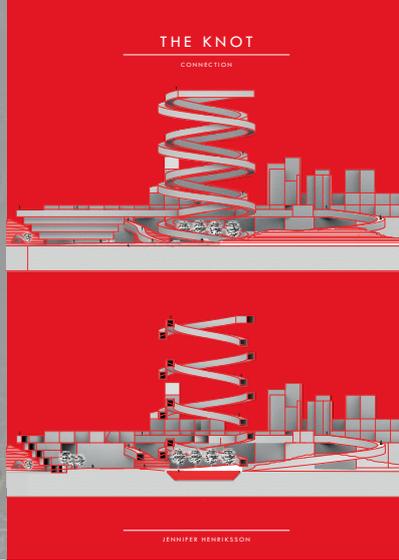
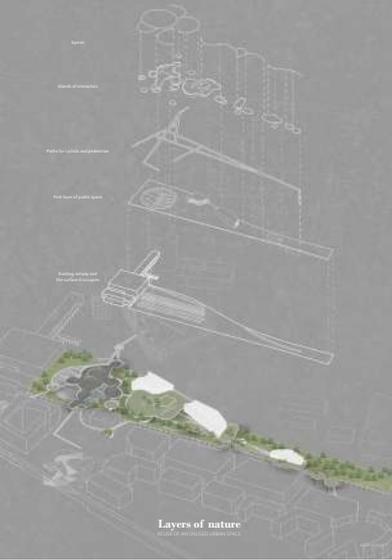
Gothenburg is now in the middle of a densification process with the ambition of creating a strong urban core for the region. The plan from the municipality is to expand the central areas by doubling the size of the city centre and a key strategy is to focus on new developments in underused central locations (Göteborgs Stad, 2012). It is in this context that Gullbergsvass plays an important part in what the future of Gothenburg will look like.

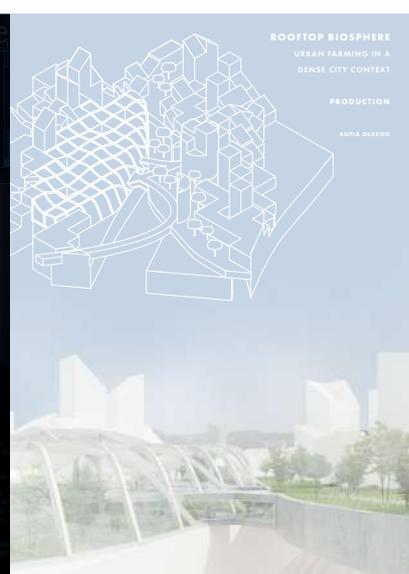
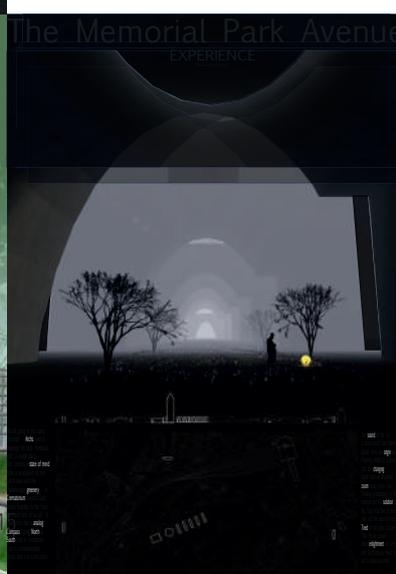
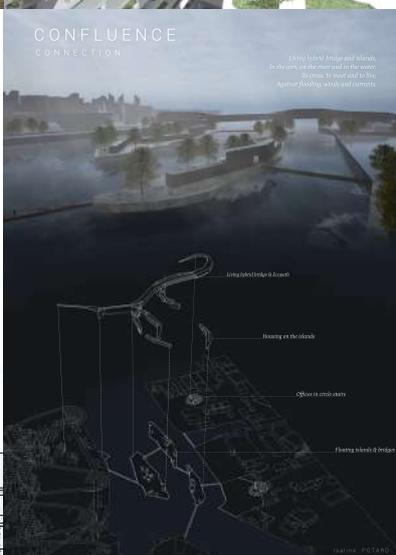
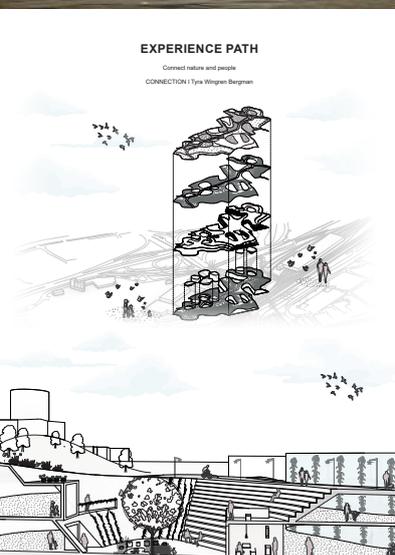
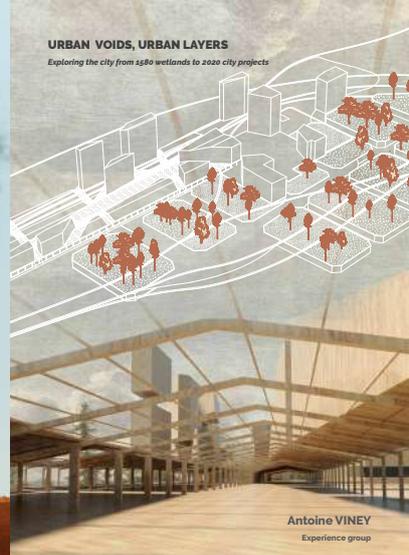
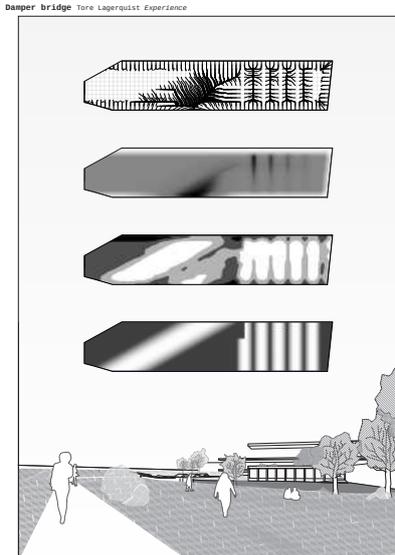
So, as a way of responding to the growing population, Gothenburg is becoming more dense and the decisions made in terms of urban planning influence how we will live and function in the city. When tackling these aspects, an integrated approach is required and there is a need to ask questions such as - what is the future city? Through this exhibition, this is being explored in the context of Gullbergsvass with the use of hybrid architecture. By stitching together architecture, landscape and infrastructure with already existing qualities, it could provide an alternative way of densification where synergies are created through mixtures and overlaps of various programs, spaces and scales.

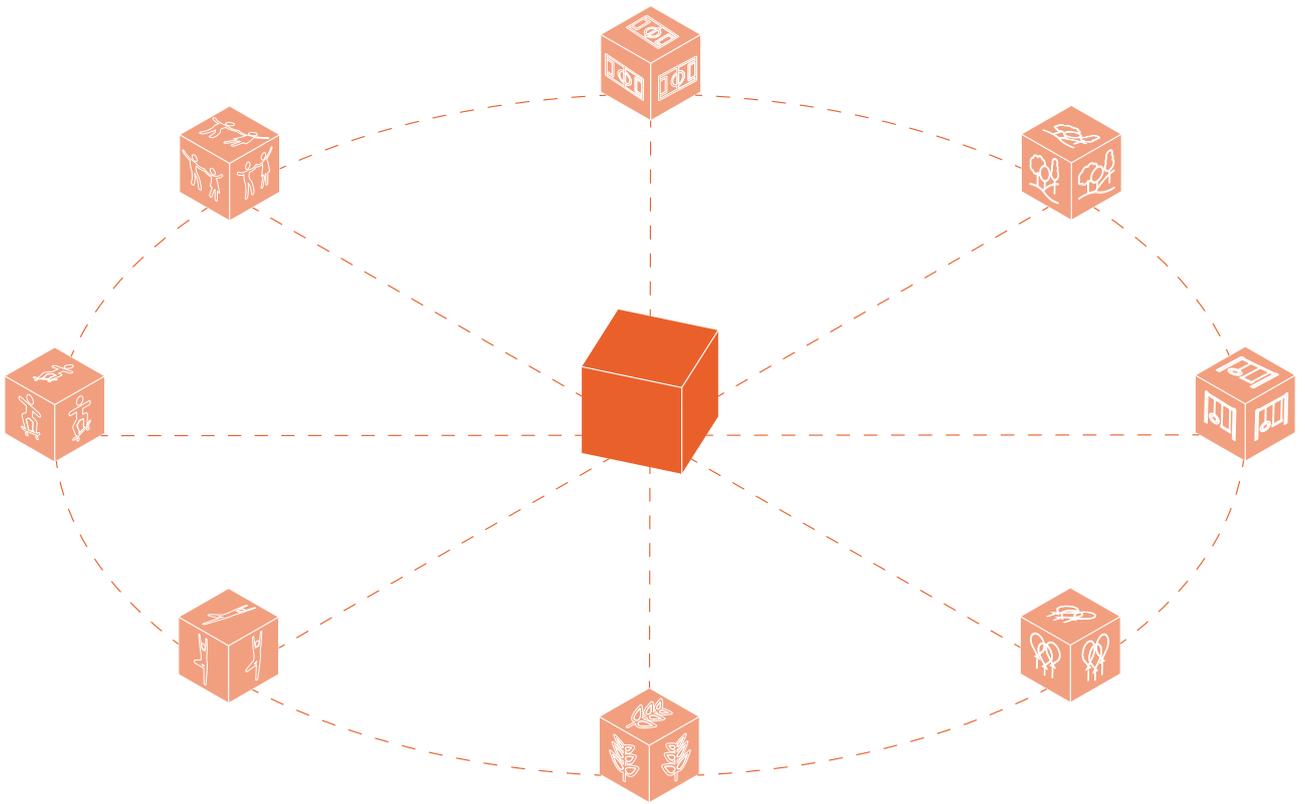
### **CLIMATE CHANGE**

Climate change, a crisis described as one of the biggest challenges of our times (EEA, 2020), is continuously affecting the present but also the future existence of today's urban developments. Gothenburg as the second largest city of Sweden, is facing a period where projected densification processes and increased climate-related risks are simultaneously evolving. Within the focus of climate-related threats, increased flooding and heavy rain events will play a major role in the city's future resilience. On the one hand it is the geographical location in the southwest of Sweden which will cause increased water pressure through precipitation. On the other hand, the closeness to the sea will have a significant impact on Gothenburg's blue structures.

As an anchor point of Göta Älv, Säveån and Möndalsån, Gullbergsvass belongs to these areas, where blue structures and their surroundings are continuously changed by the rising sea level. Water dynamics are affecting Gullbergsvass today, will change the site tomorrow and also in 80 years where the expected sea level rise of 80 centimeters will flood major parts of the area (Climate Change Post, 2020). The upcoming questions of how Gothenburg can adapt to such changes and of how architects and urban planners can tackle these challenges through design have been explored through the scope of hybrid architecture.







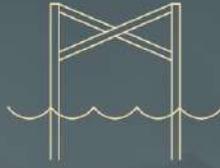


# ACTIVATION

Spaces can be activated to become places of fun, energy and vividity. It can invite curiosity, discovery and exploration. It can be a space ready for events and activity.

The following projects in this category are:

- Drömmarnas Kaj Community Center
- Experience Path
- Follow the Water
- Play On Wheels
- Playful Projections
- Providing Opportunities



# DRÖMMARNAS KAJ

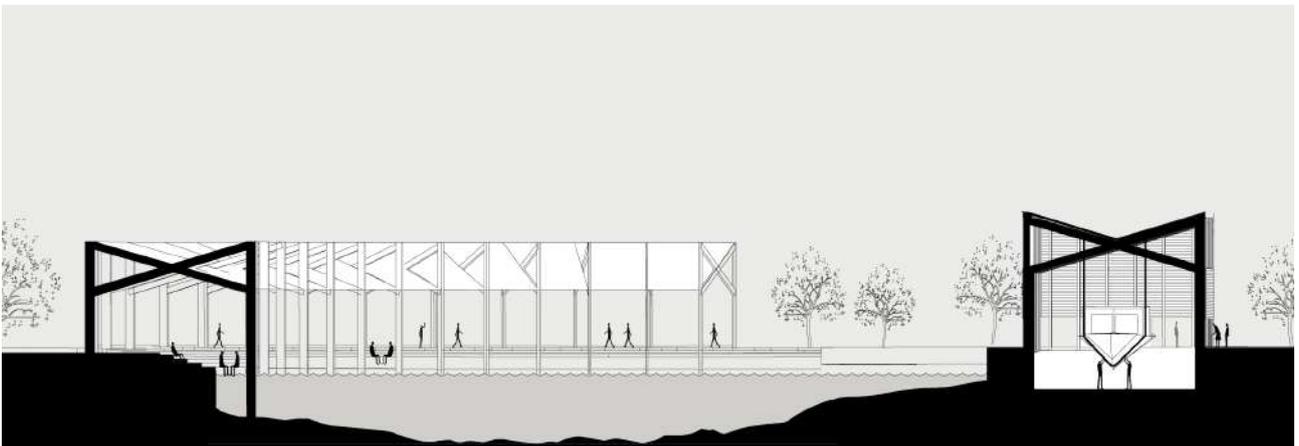
COMMUNITY CENTER - COOPERATION AND SHARING IS IN OUR NATURE

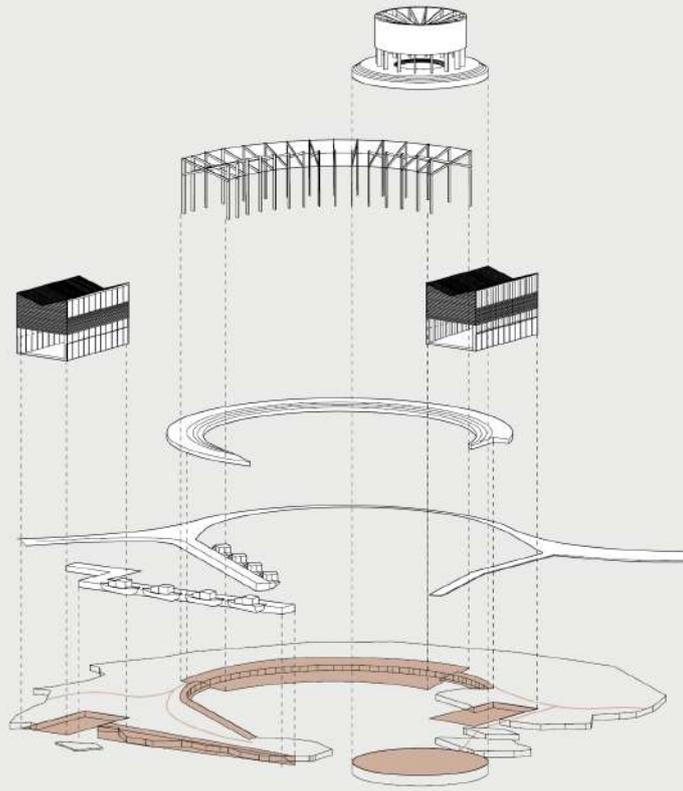


## DRÖMMARNAS KAJ COMMUNITY CENTER

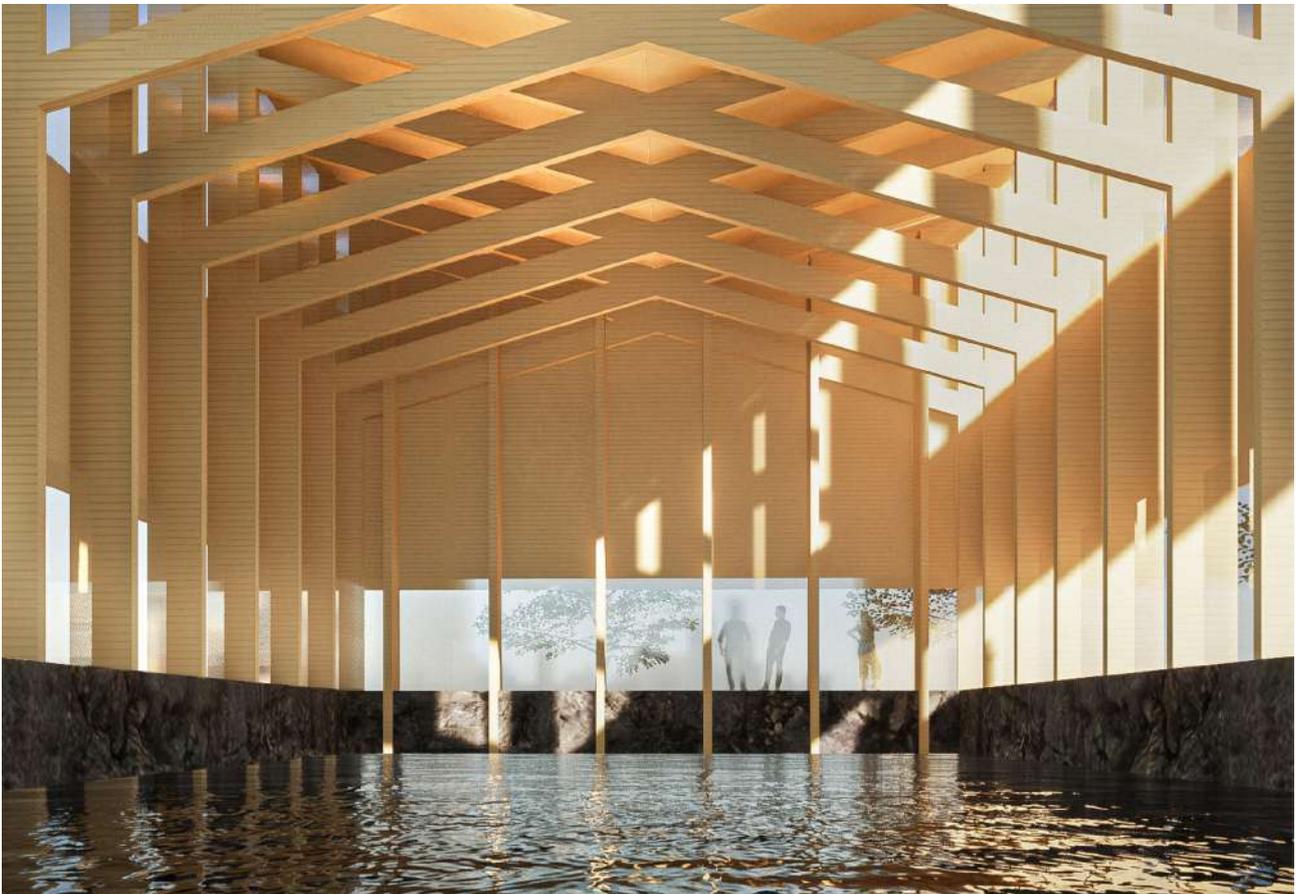
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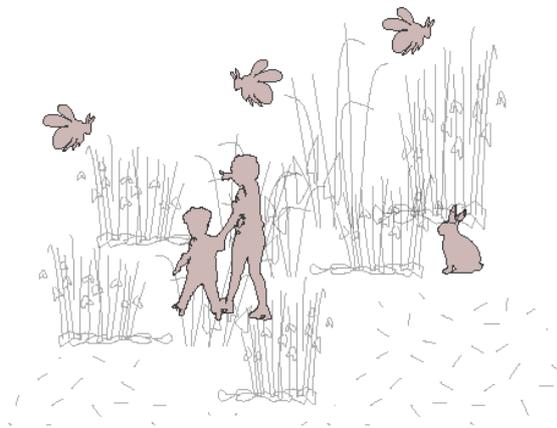
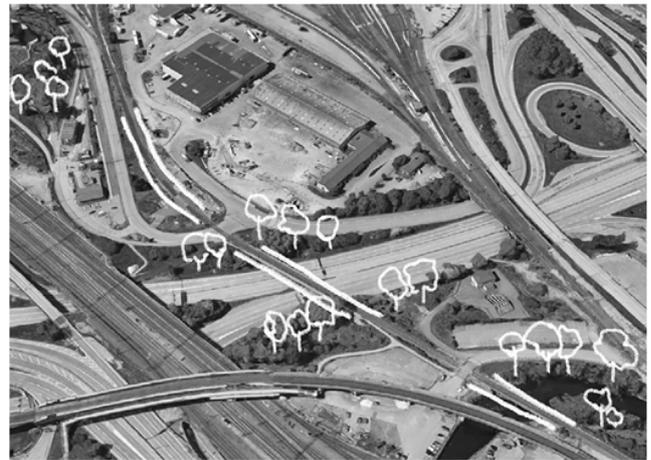
Walking along the quay at Drömmarnas Kaj you'll find an interesting boat community, built up by a group of people living on their boats all year around. They share the quay, the boats and tools - but also knowledge and their different skills within all kinds of crafts, repairing boats and maintenance. Inspired by the community, this project is developed based on qualities and the atmosphere of the quay. The idea is to create a community center for the people of the boat community, but also make it a public space for you and me to visit and get inspired by the activity and explore this hidden part of Gothenburg.





ALL PROJECT COMPONENTS

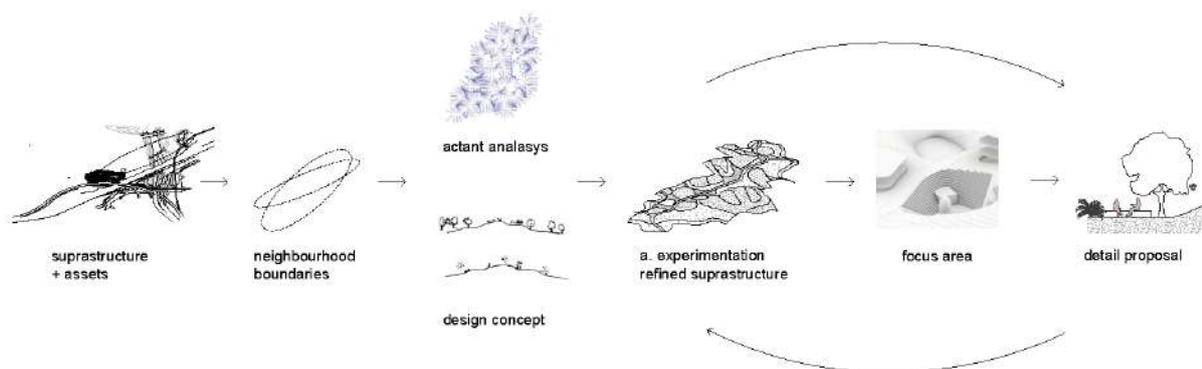




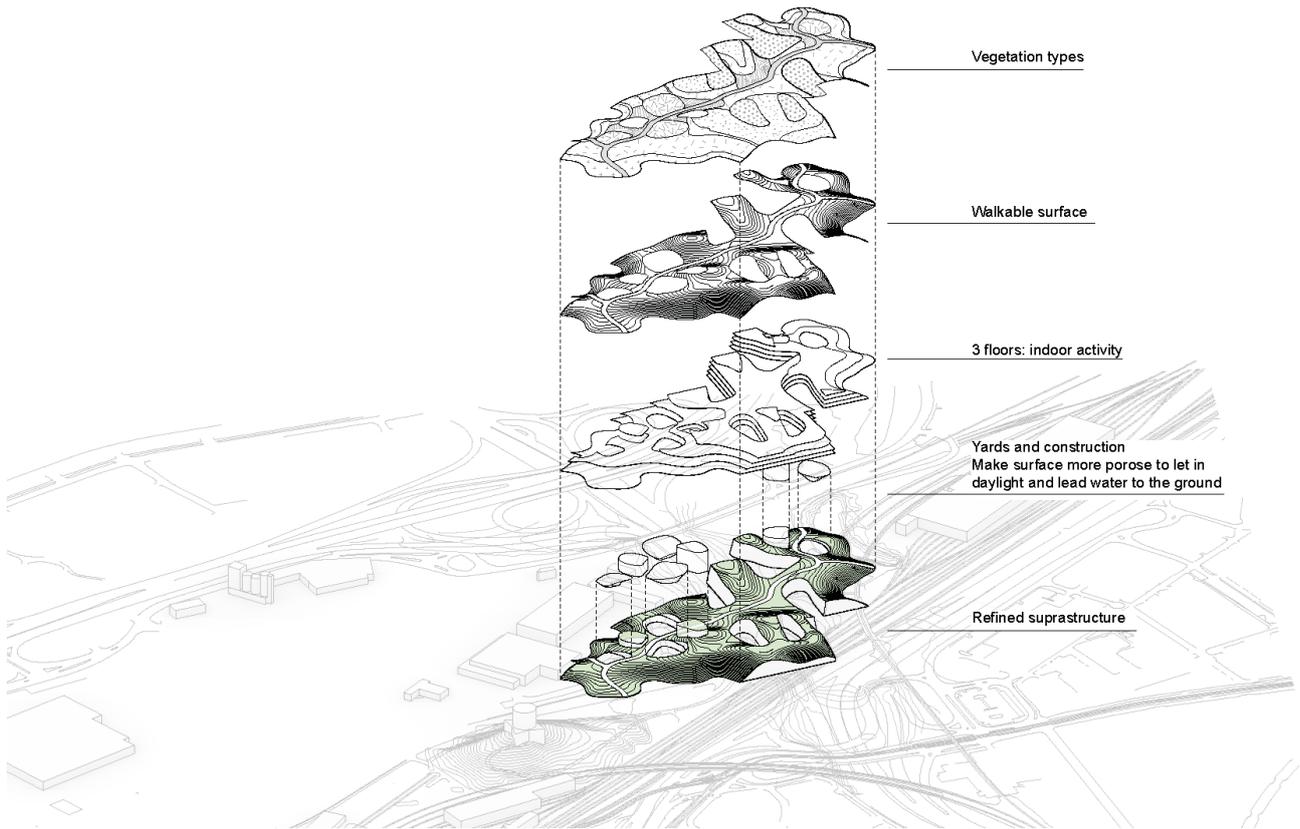
# EXPERIENCE PATH

Tyra Wingren Bergman

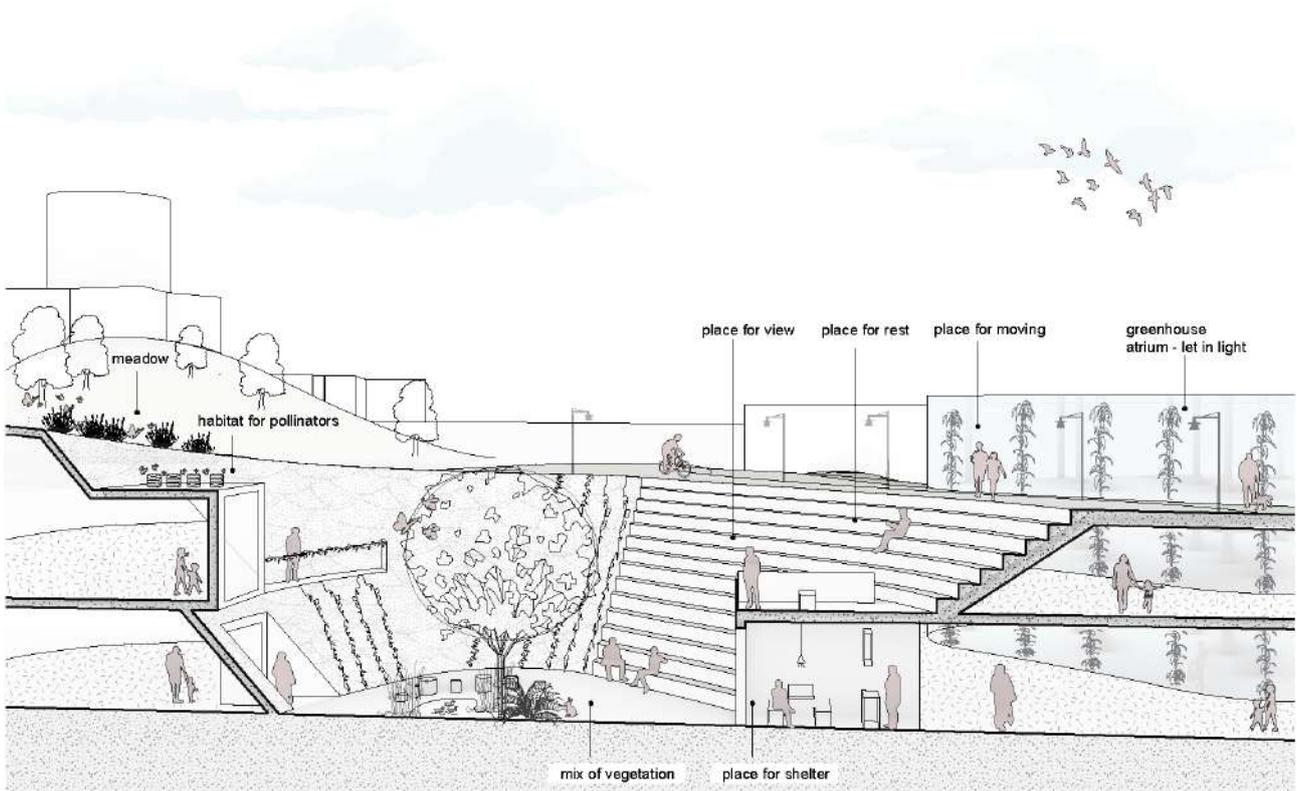
**Experience path** is about the transformation of an unused space with a new structure that sustain both human and nature. This project takes place in the edge condition of the area of Gullbergsvass, an area you just pass by and where large traffic junctions dominate. The traffic infrastructure takes up much space, generate a constant noise and creates in-between spaces that are difficult to use, especially for actants that are not moving by car. What if this in-between space could be transformed into something new? Could it be a place for connections, meetings, and a place where vegetation can thrive?



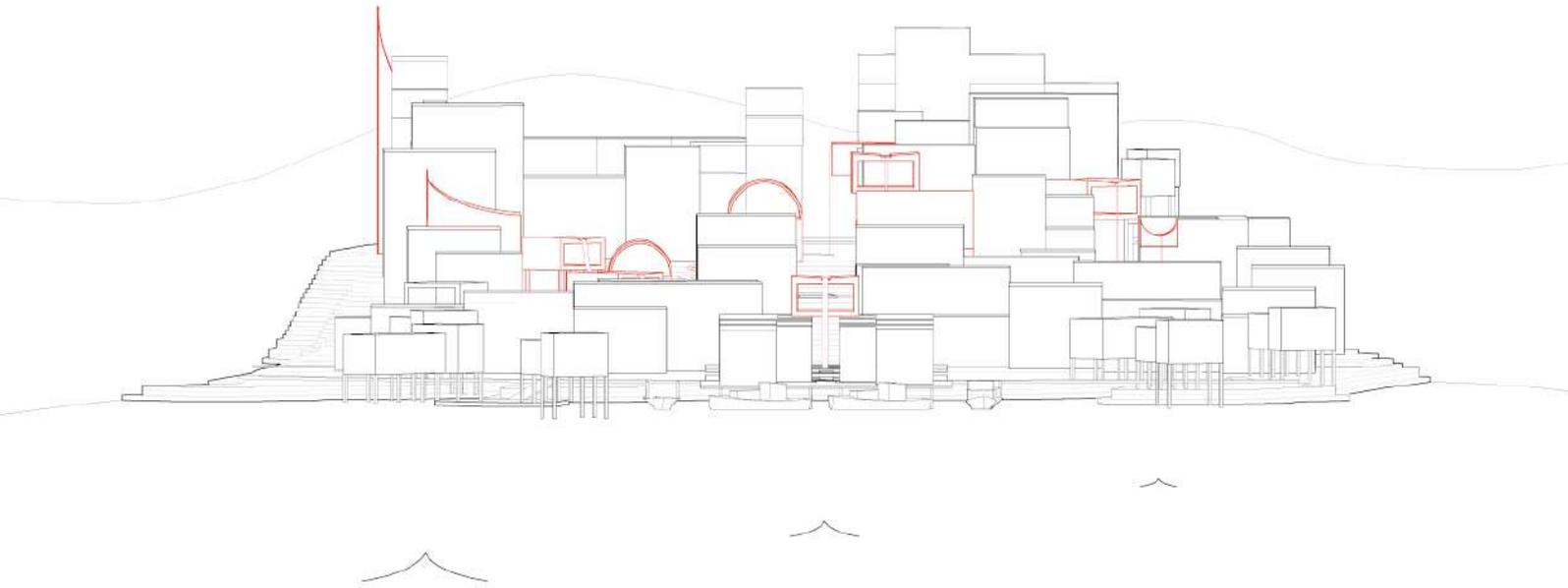
Workflow. Identifying assets and concept. Design iterations and actant performance analysis to test and adapt the design.



The hybrid structure generates a topography that aims to create new connections and provide habitat for both nature and people.



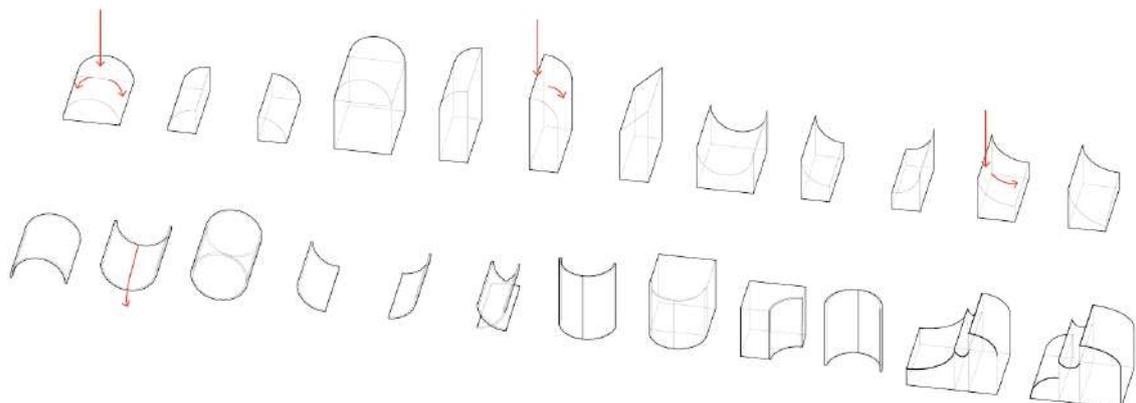
Relation surface - yard - interior. An environment that aims to benefit both people and nature. Vegetation is one major design element.

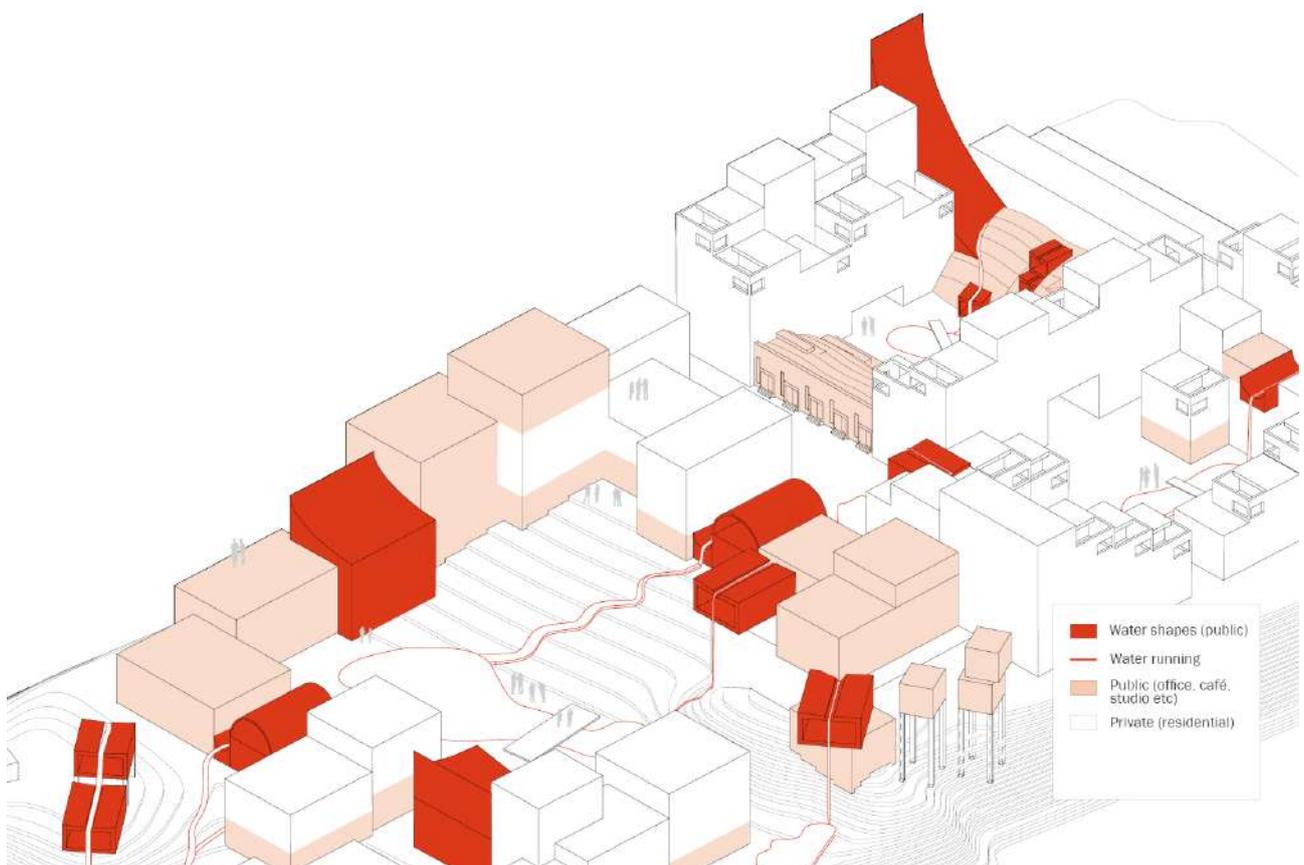
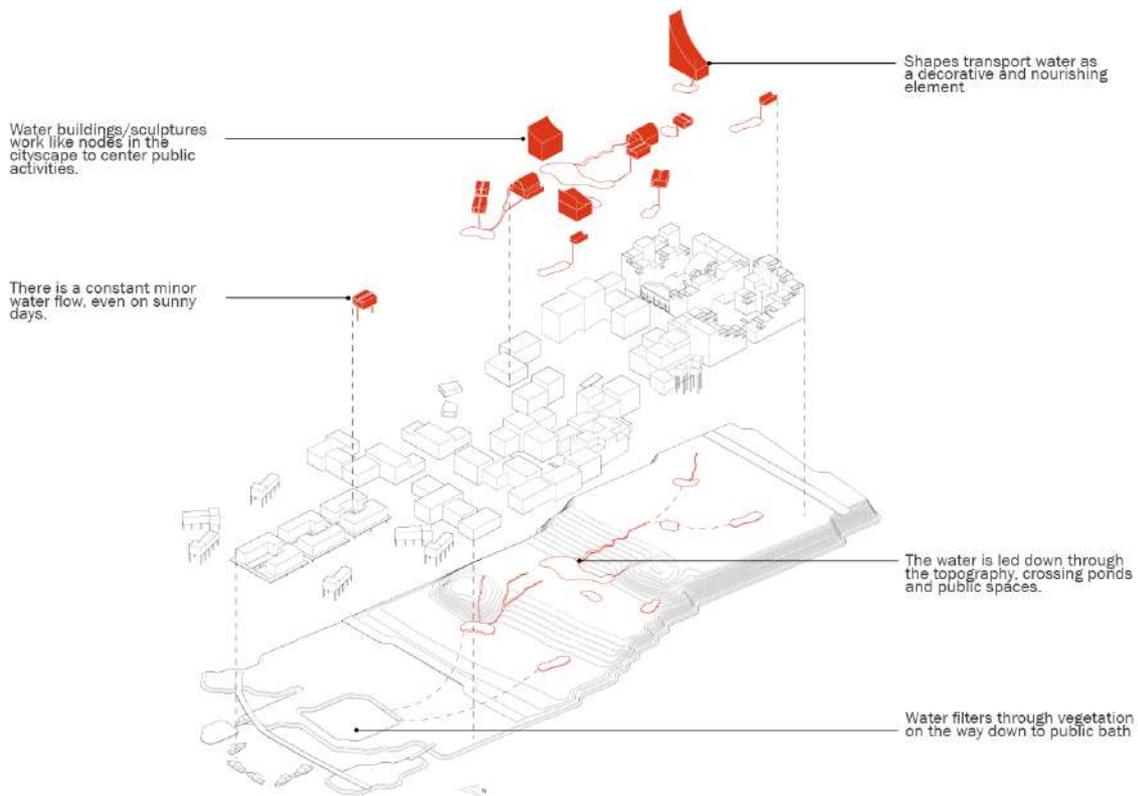


## FOLLOW THE WATER

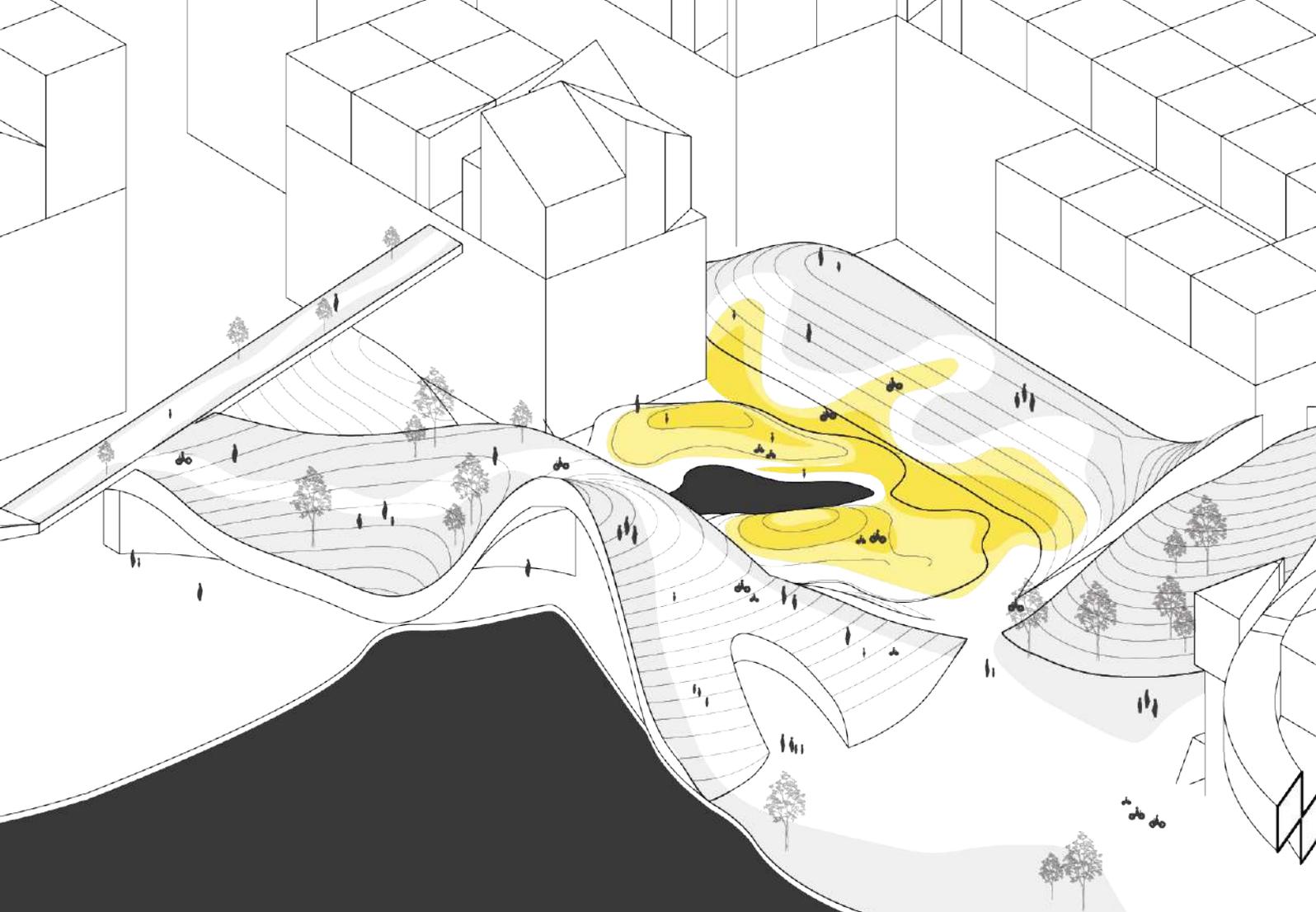
Elisabeth Ek

**Follow the water** explores the potential of integrating water into architectural form and public space. Gothenburg has a strong character of water, with much rain and closeness to sea. How could water translate into an architectural asset? Drömmarnas Kaj has a unique hidden character but is also exposed to wind from the sea. This project studies how to make a cityscape that shelters people. A dynamic between vast and short sight-lines, between bigger volumes and more sculpture-like ones. Throughout the site water is emphasized, with blue structures and an inclination of landscape that brings a visual contact with the river.





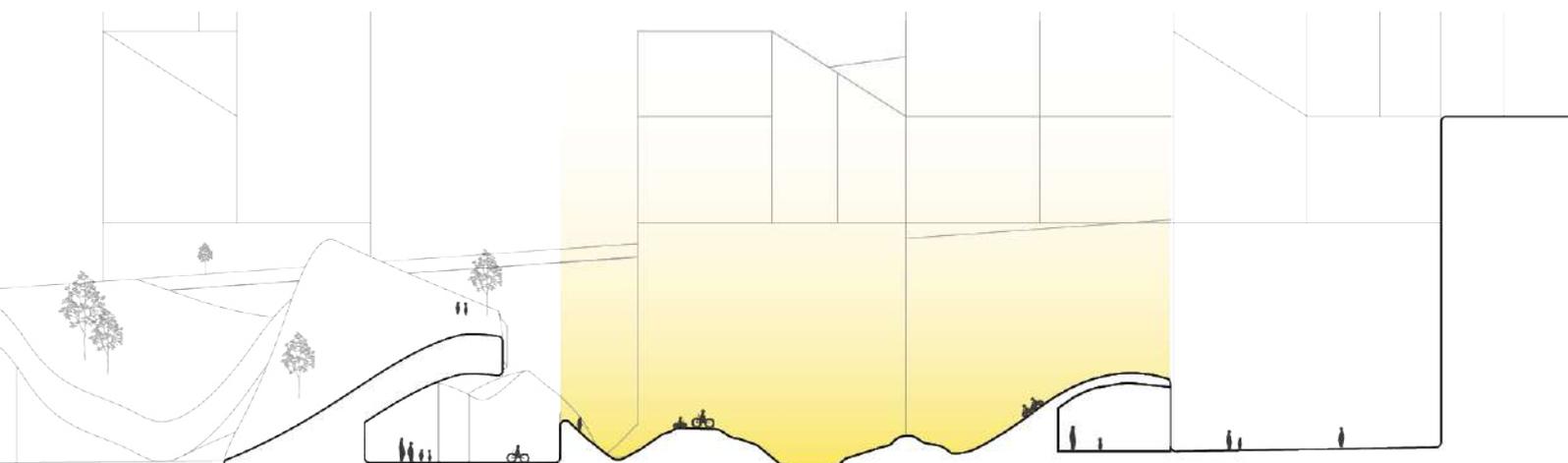
The level of how public the building is, varies within the volumes. The walkable rooftops are sometimes private but more often for public spaces.



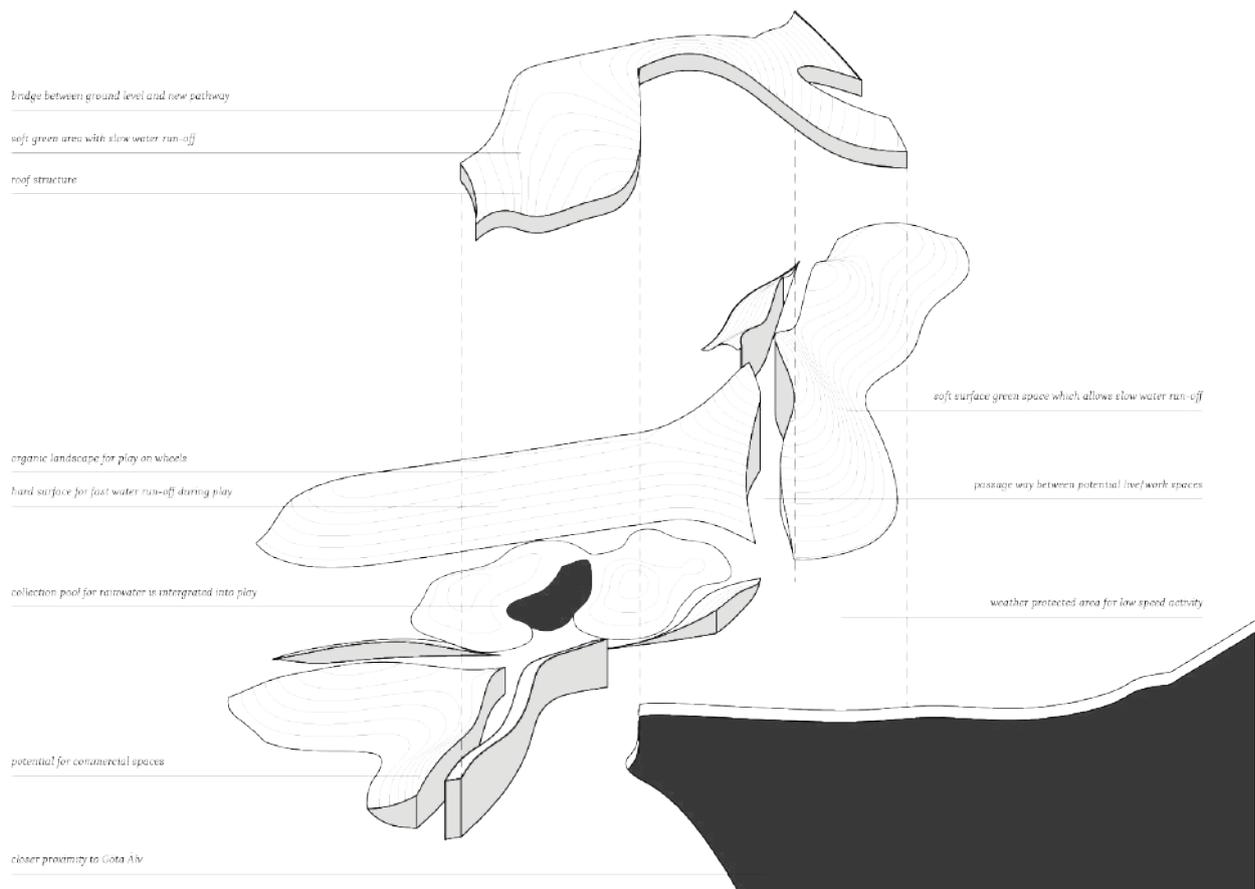
## PLAY ON WHEELS

Hanna Lundberg

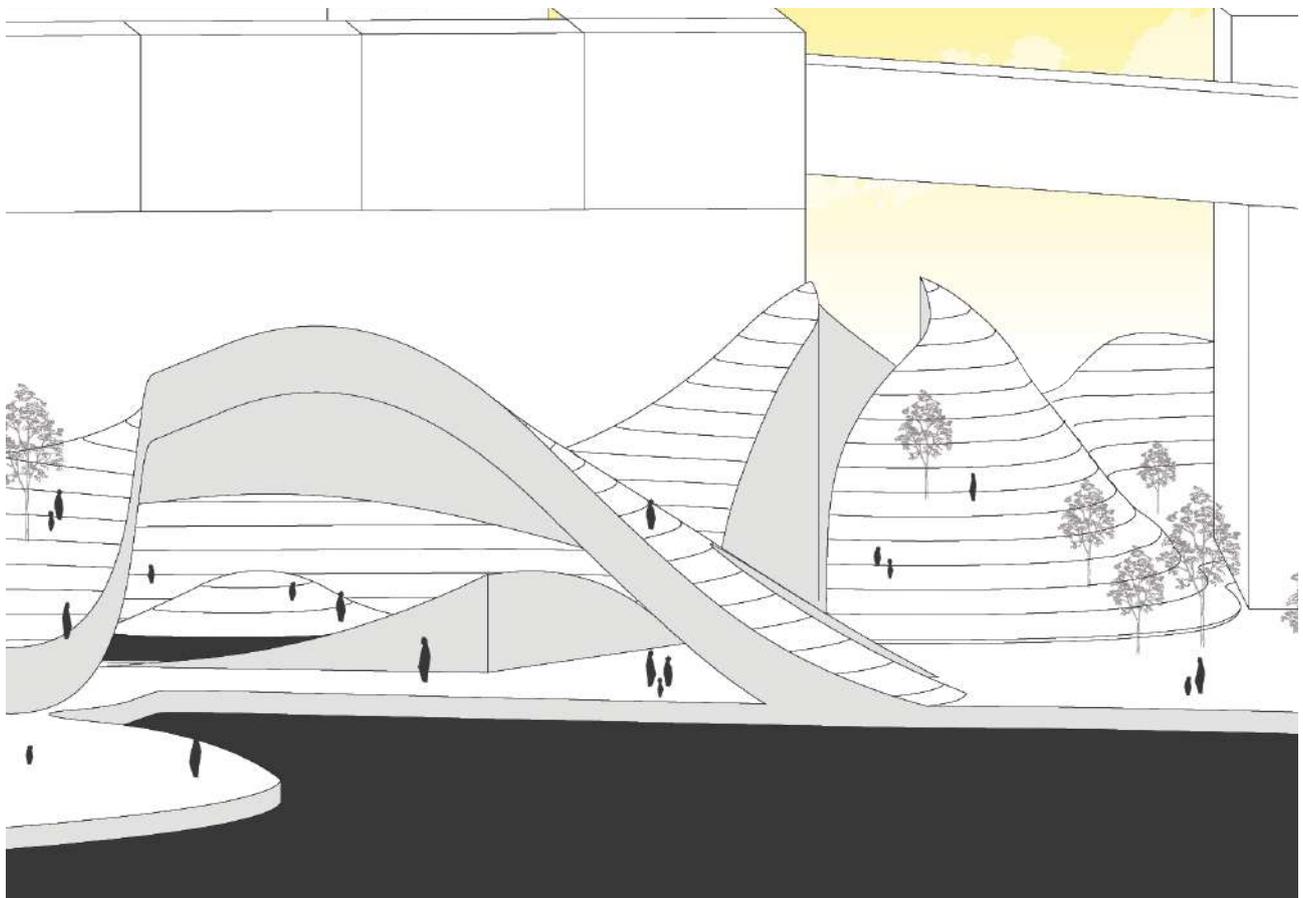
**Play on wheels** explores the idea of fun and action in a city context. How can we integrate playful mobility into a larger infrastructure system? By allowing the growth of an organic landscape for mobility connections, the visitor is invited into play across the hills, while the spaces underneath can be used for communications and commercial spaces. The landscape also plays an active part in water management, letting rain and flood water become a part of the scenery and play, as dynamic as the weather that controls it.



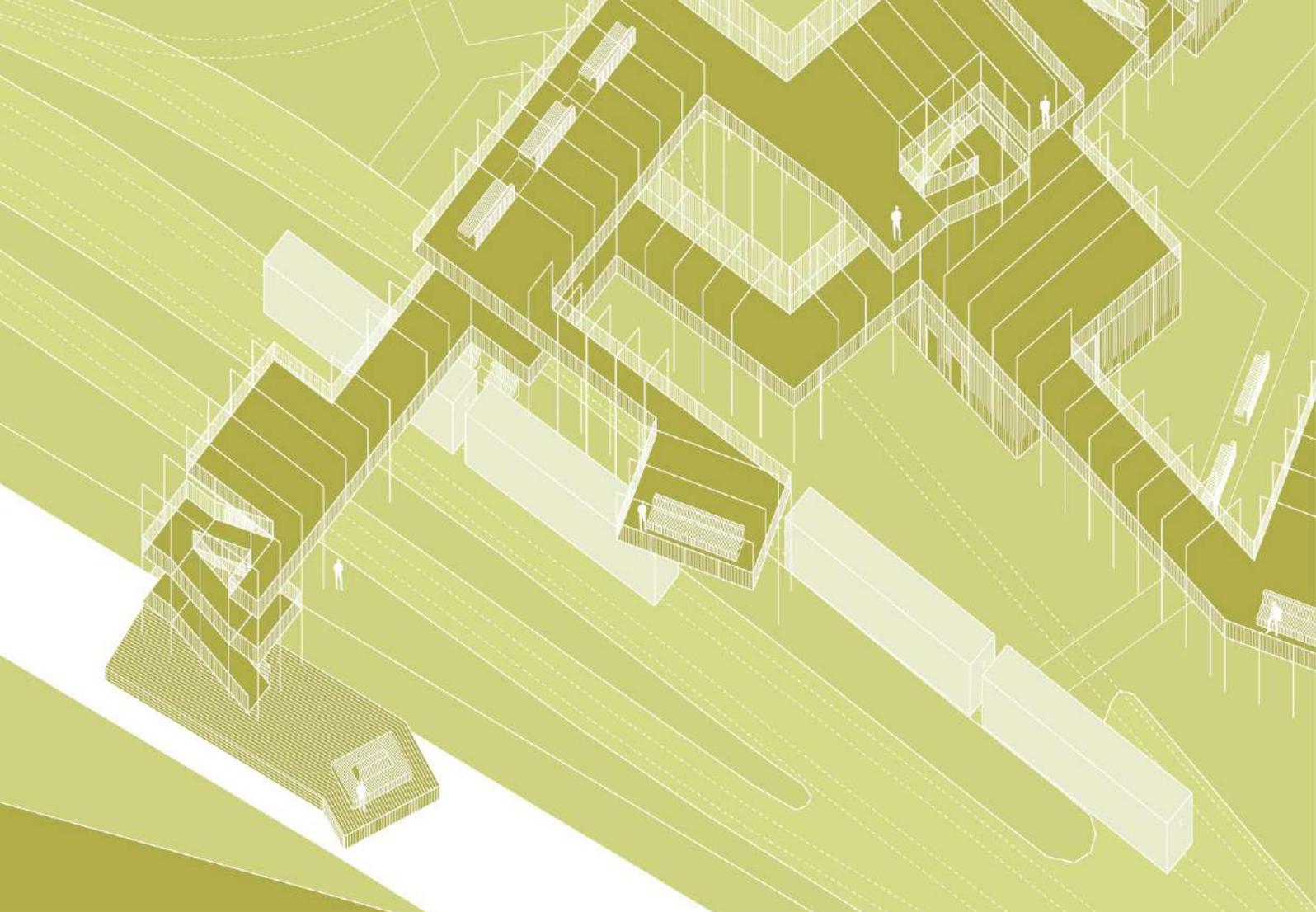
The topography provides the dramatic experience of going up, down, and in sharp turns, adding a fun risk-taking aspect to play.



Components of the organic landscape for play on wheels.



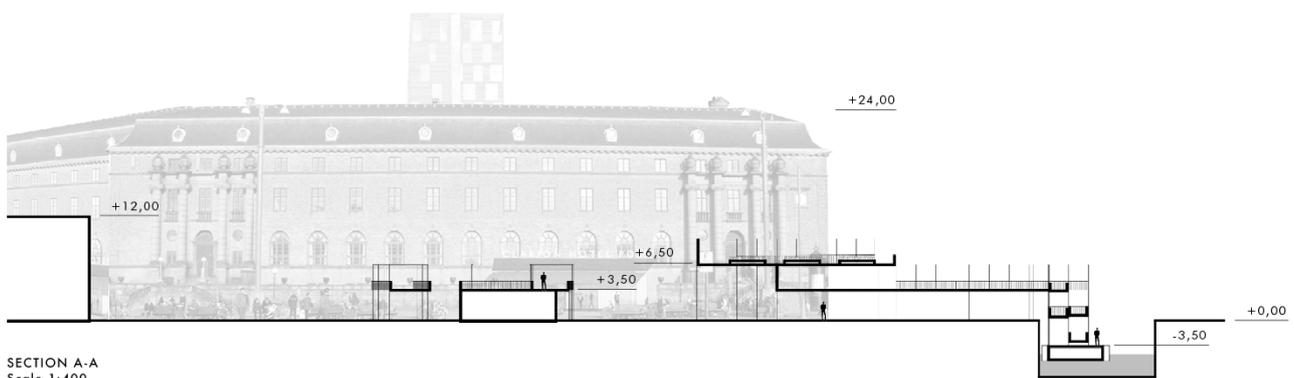
Thanks to the roof/bridge structure, the water front can be enjoyed with weather protection.



# PLAYFUL PROJECTIONS

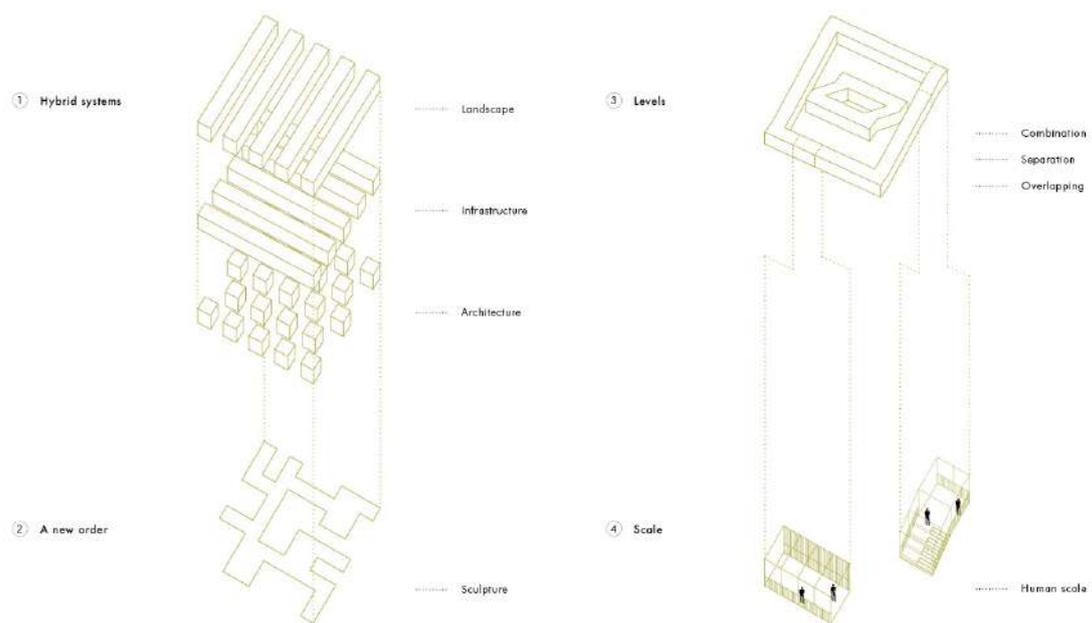
Teresia Forsman

This project takes place in the setting of Drottningtorget, the large open square in front of the central station of Gothenburg. The aim is to transform the area into a new public square that offers different choices and opportunities, that combines aesthetics with playfulness. A public space that can be used in many different ways, that creates many places in one and that becomes an interesting structure both horizontally and vertically. The main focus is to divide and define the large open area of today, and to create sequences and flows that are adapted to the human scale.



SECTION A-A  
Scale 1:400

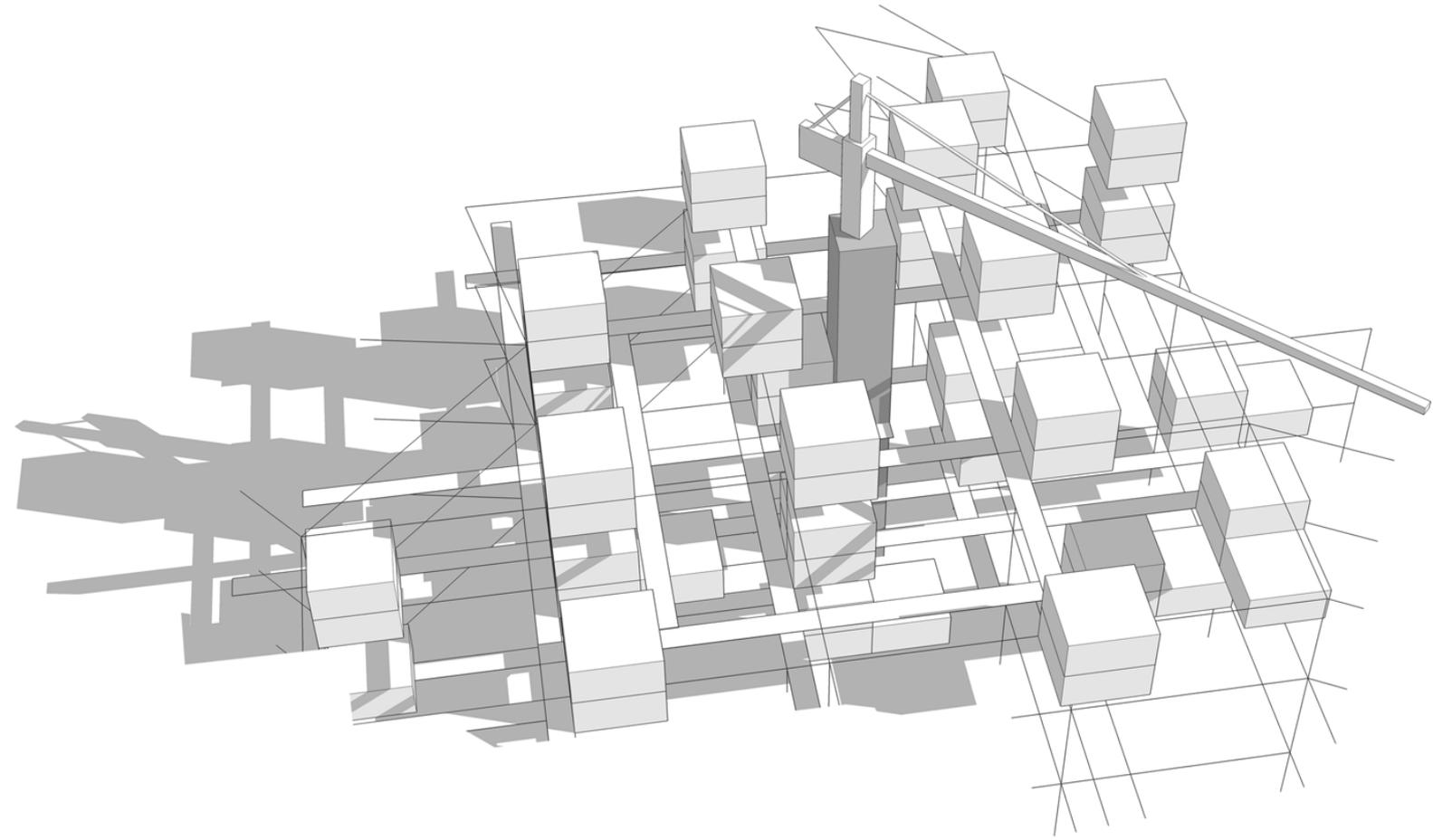
The topography provides the dramatic experience of going up, down, and in sharp turns, adding a fun risk-taking aspect to play.



The four concepts that worked as a frame for the design process.



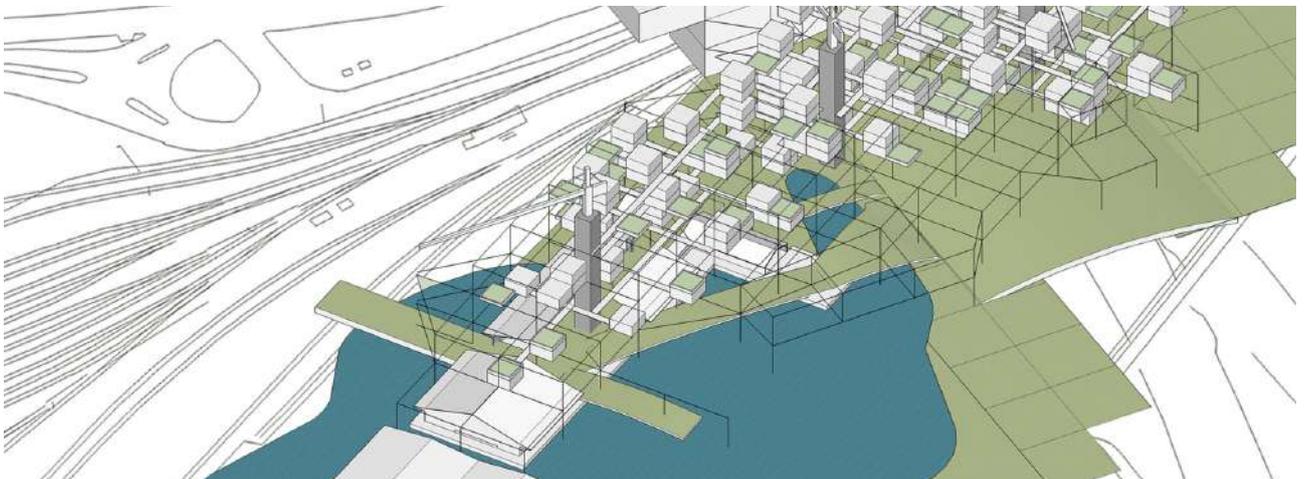
In the south-east parts of the are the structure is lower and the spaces more narrow and calm.



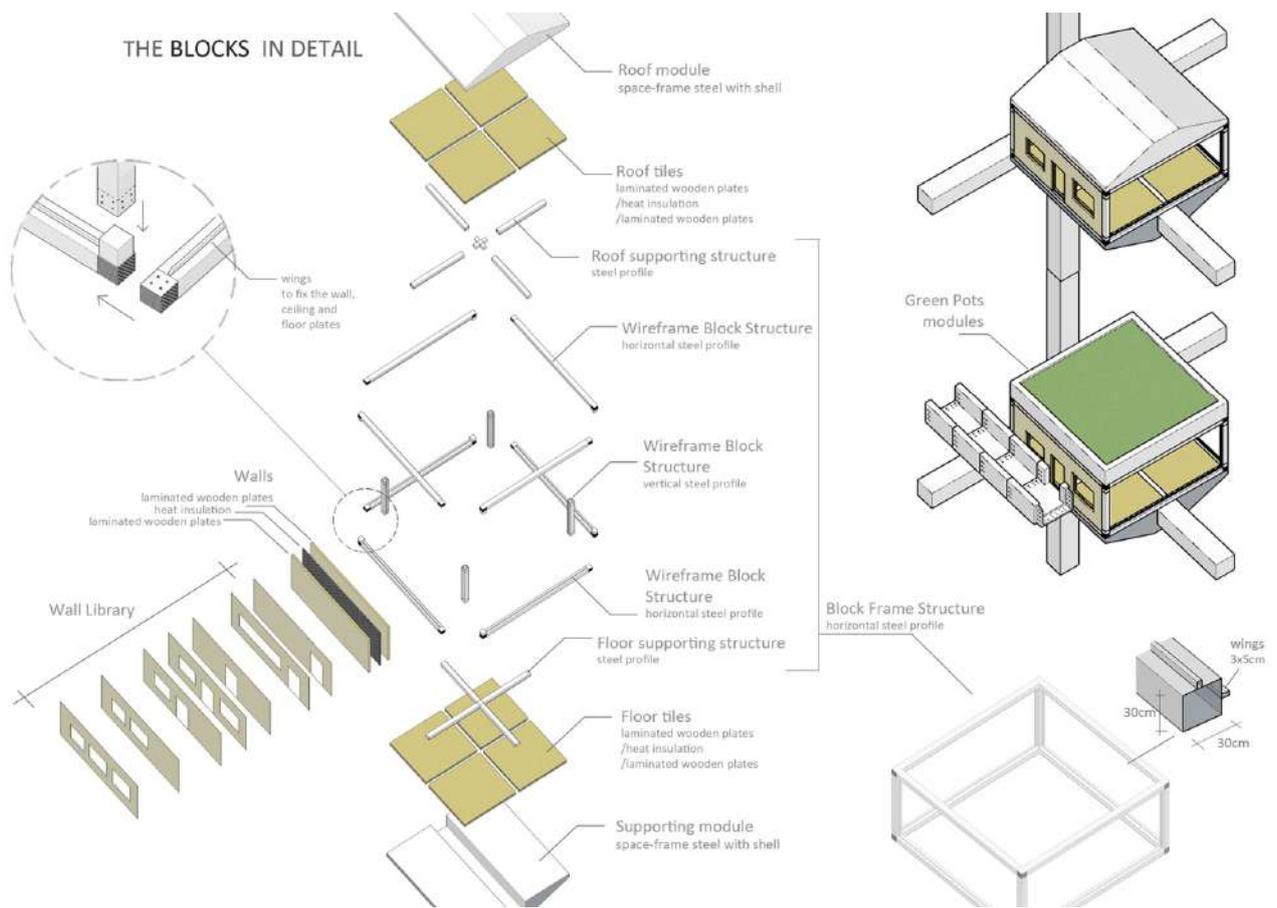
## PROVIDING OPPURTUNITIES

Irfan Meric

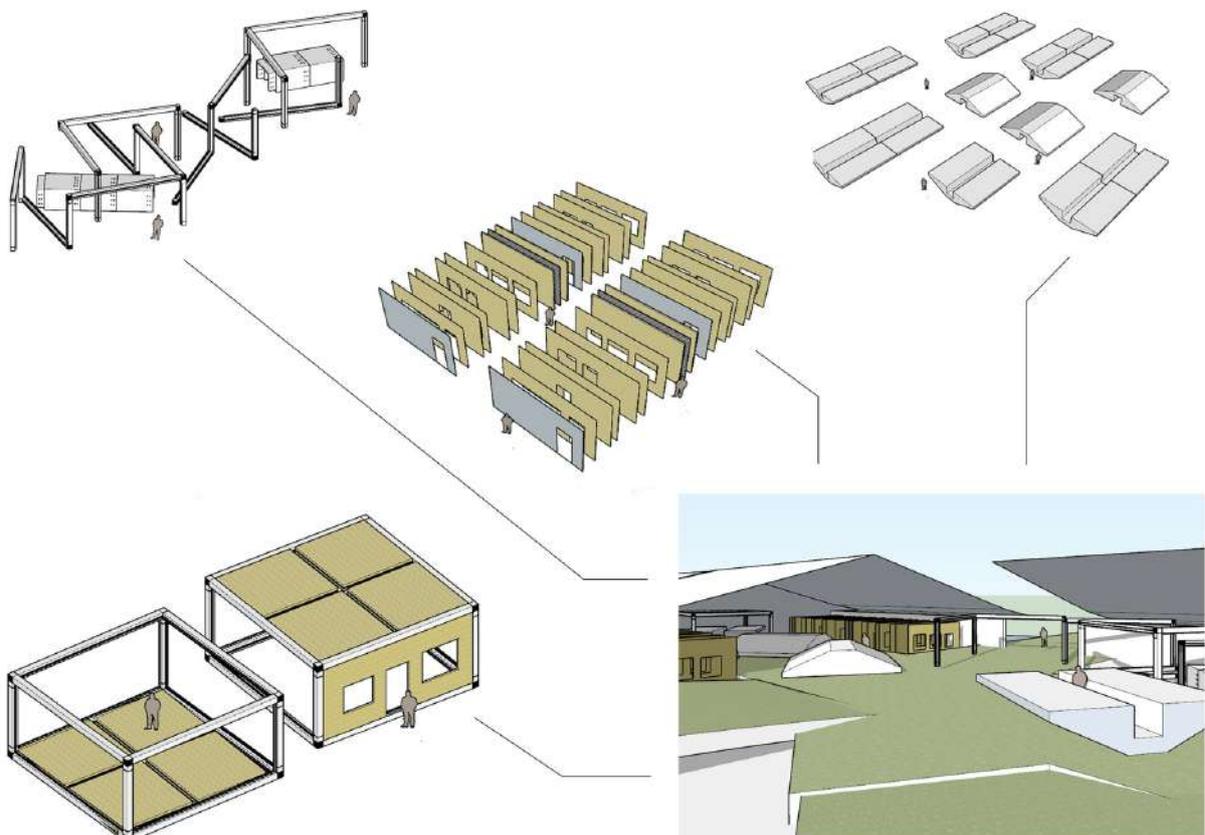
How much of change our built environments are able to provide for? The static forms of buildings setting the physical limitations for movement and functional form adaptations. **Providing oppurtunities** project gives a skeleton to attach blocks when needed and detach them when it's not needed. For instance, with individual house energy solutions being prefered and urban farming becoming a house need with climate crisis; it is always possible for the skeleton to grow within to provide for the change and challenges that will come in time. The project is giving space for future development.



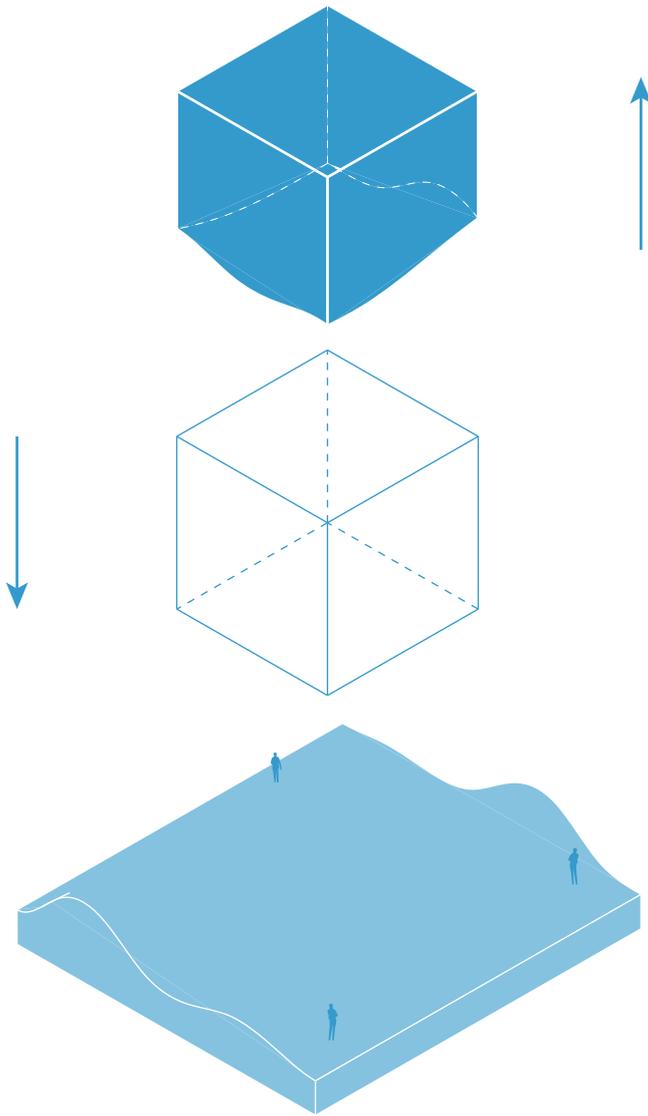
A vision of how the project could evolve and look like in time



Blocks are formed following the attachment-detachment principles



The green structure that the skeleton is built, is giving space for blocks to be placed; providing for marketplaces, exhibition spaces etc





# ADAPTATION

There is a range of ways in which a city will need to adapt, be it through forces of nature and the ever present climate change. Or the complex coexistence between human and nature. Or perhaps to provide the very opportunity for change and adaptation.

The following projects in this category are:

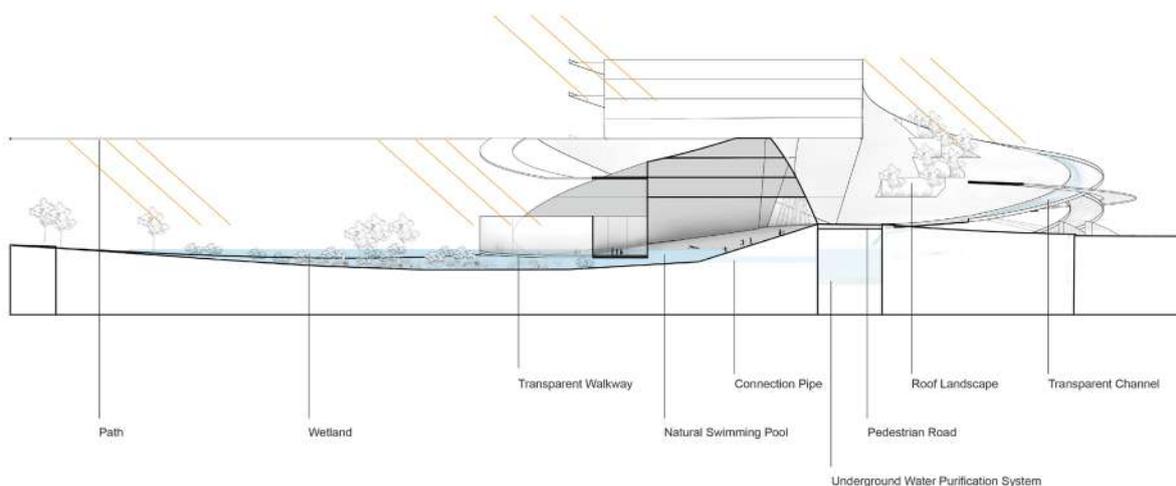
- Adapt to Water
- Green Hills of Gullbergsvass
- Gullbergsvalley
- Living With Water
- Upperhood
- Urban Wilderness
- Wind Corridor



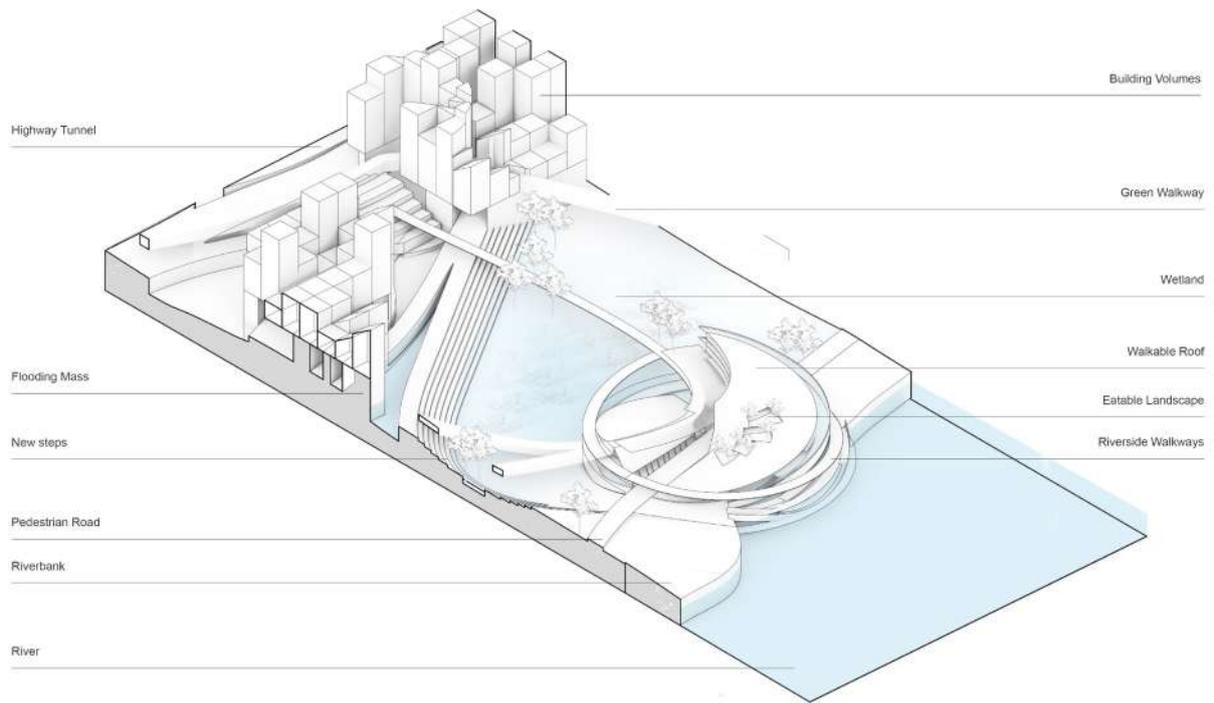
# ADAPT TO WATER

Peilin Yin

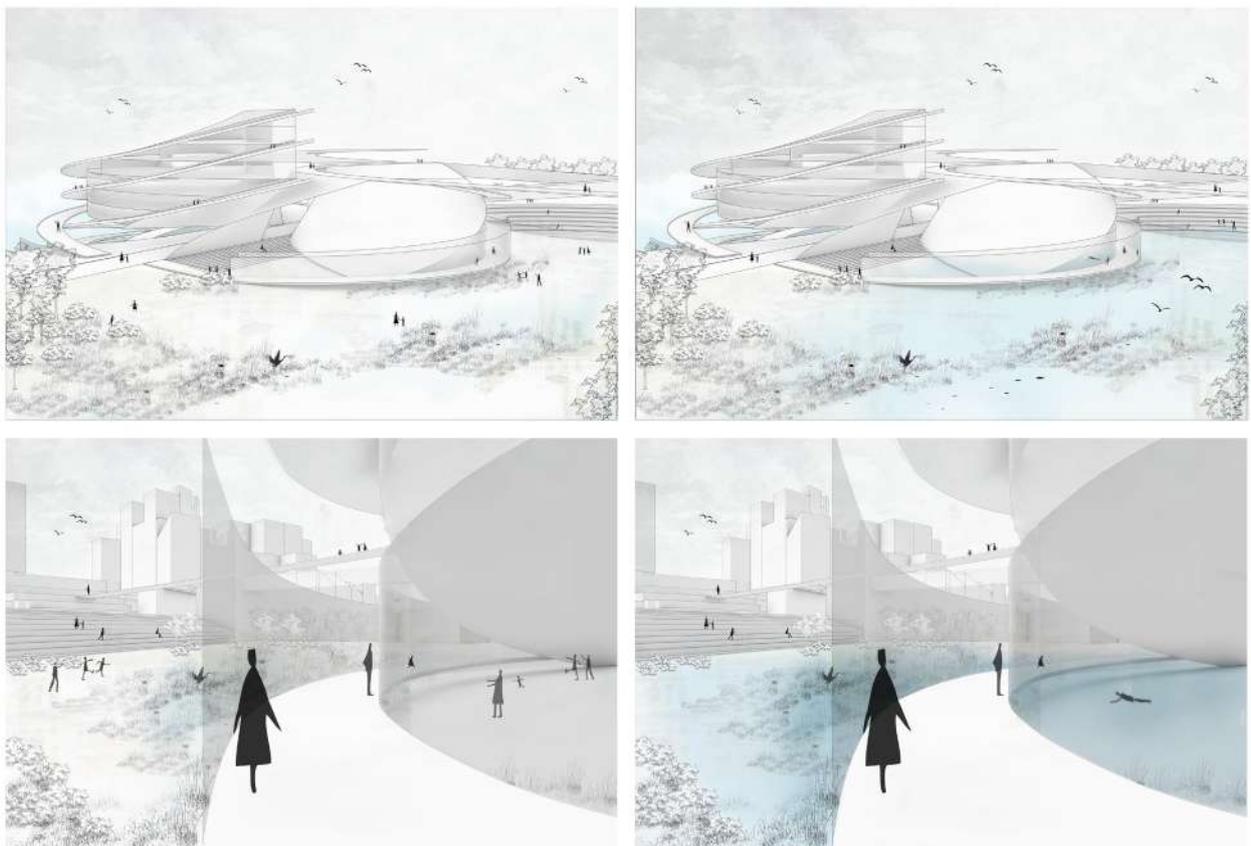
Under natural conditions, water is not controllable. How to effectively control water through the combination of building, landscape and public spaces is an eternal topic between human and nature. It rains a lot in Gothenburg, however, it shouldn't be a barrier to getting close to nature for human. Taking advantage of the water's properties to create some interesting indoor and outdoor spaces to make rainy days more attractive was the main concept of the project. At the same time, rainwater is an important resource, and its collection, purification and reuse can help promote sustainable local development.



The section shows how the water is gathered from the channel and through an underground purification system into this natural swimming pool



Axonometric drawing of the final design



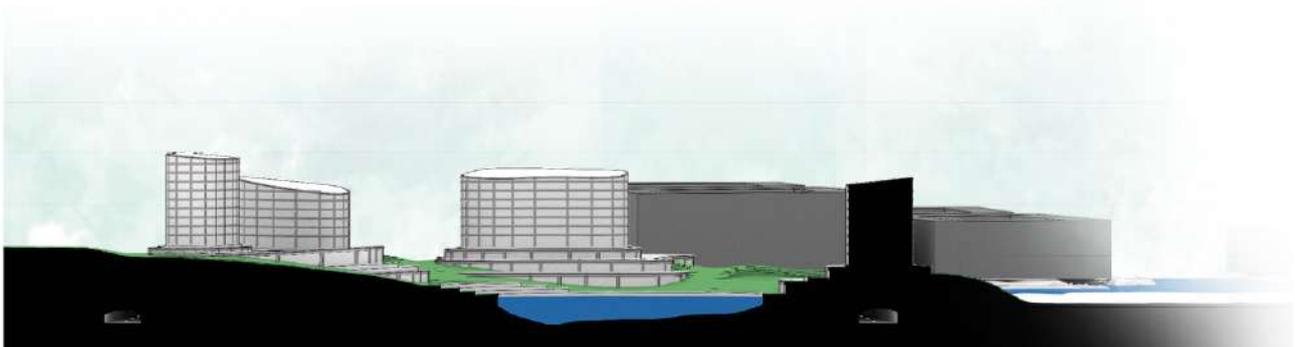
The transparent glass walkway allows visitors' to observe both wetland and swimming pool scenes



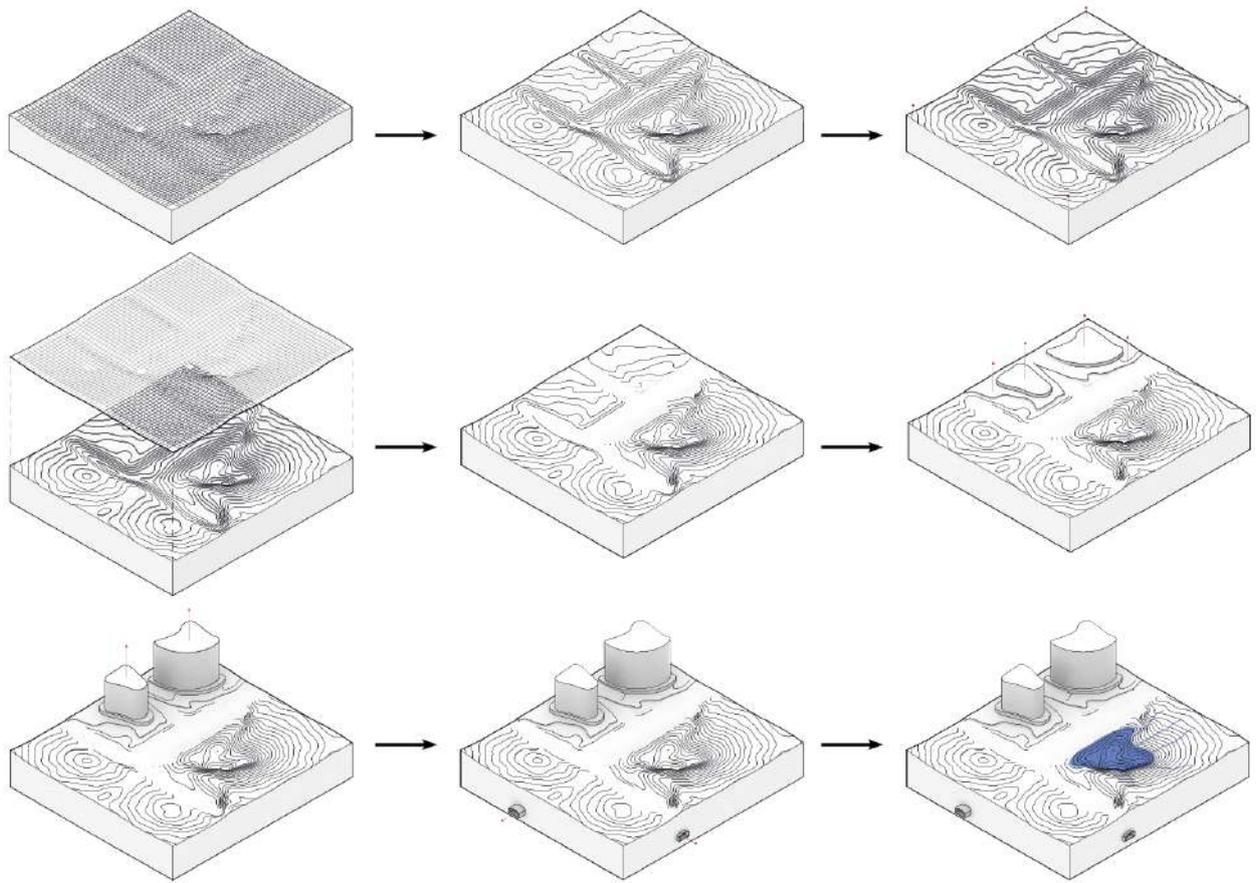
## GREEN HILLS OF GULLBERGSSVASS

Jimmy Örtendahl

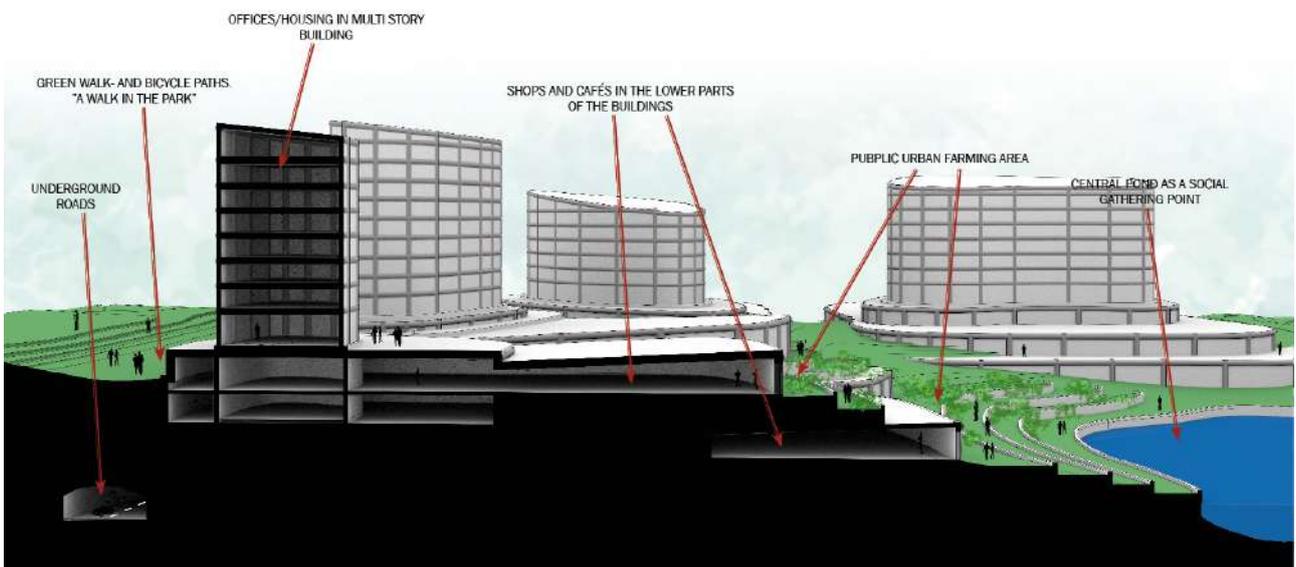
This project is located at the western border of Gullbergsvass where the bridge from Hisingen lands in Gothenburg inner city. The aim of the project was to explore the park environment as a natural component in the urban fabric and how to deal with the challenges of living in an urban park. The biggest focus has been on creating a pleasant landscape and controlling the flow of rainwater so that it's filtered through the greenery. Since the landscape is elevated and cars are led underneath, the problem of urban noises disappear and you are left with the sounds of nature.



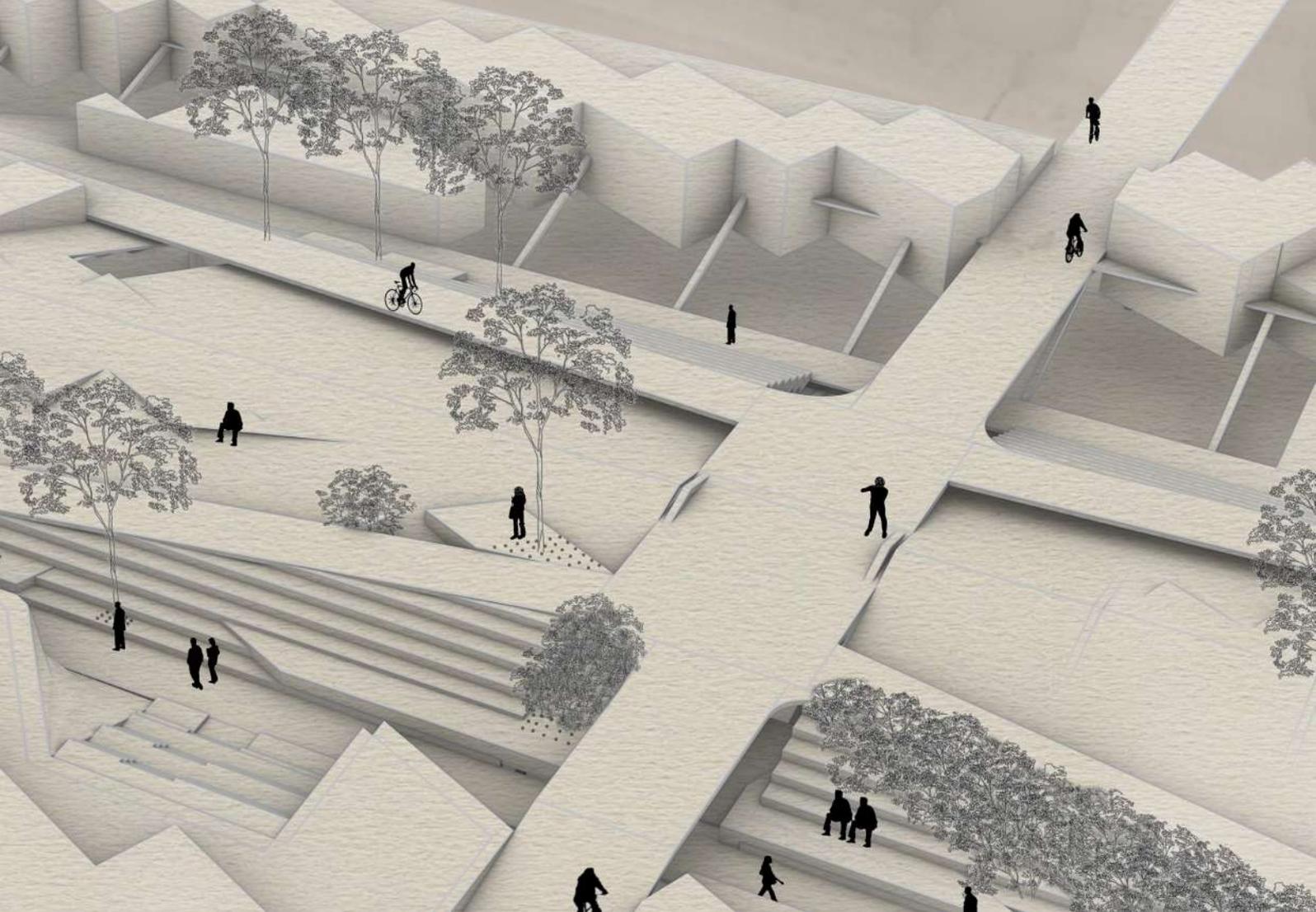
The topography provides the dramatic experience of going up, down, and in sharp turns, adding a fun risk-taking aspect to play



Evolution of the geometry for the landscape



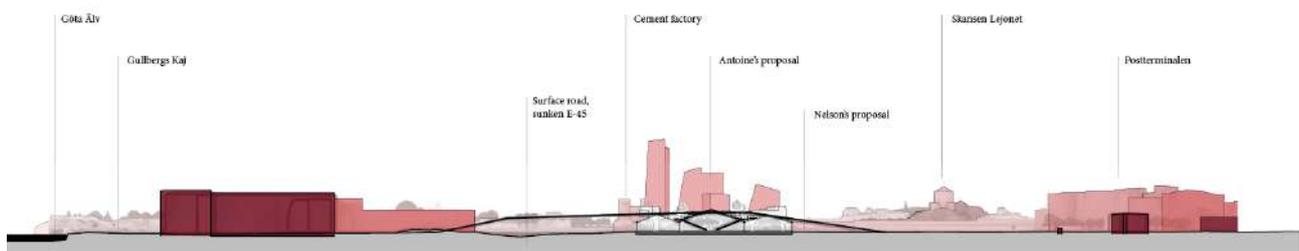
Descriptive section of the project



# GULLBERGSSVALLEY

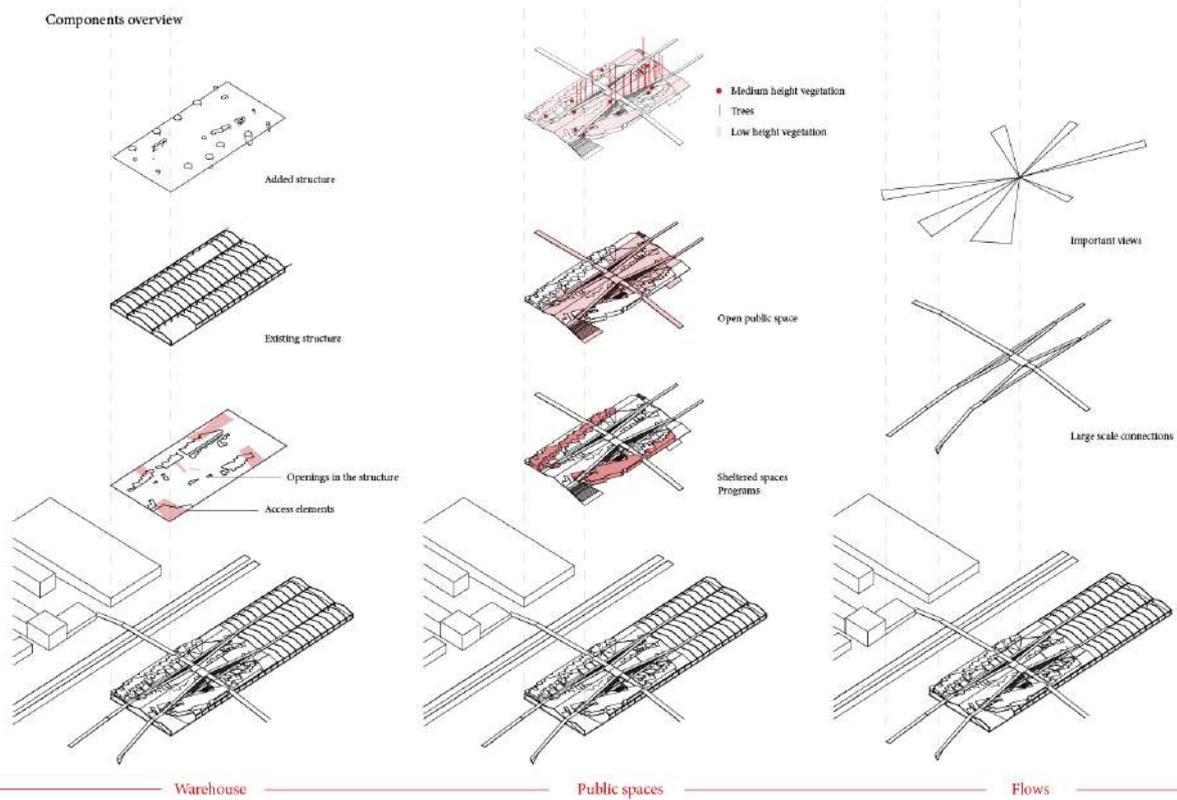
Erik Van Eyck

At the heart of Gullbergssvass, an enormous industrial warehouse reminds visitors, with its empty void, of the many goods that were once moved through it. This project aims to keep this old structure as a stronghold of urban identity and socio-cultural potential by transforming its roof into a new urban space. Long distance connections across the site for cyclists and pedestrians are integrated into a landscape formed by noise cartography massing, creating a collection of spaces with varied conditions related to the actants – wind, rain and views.



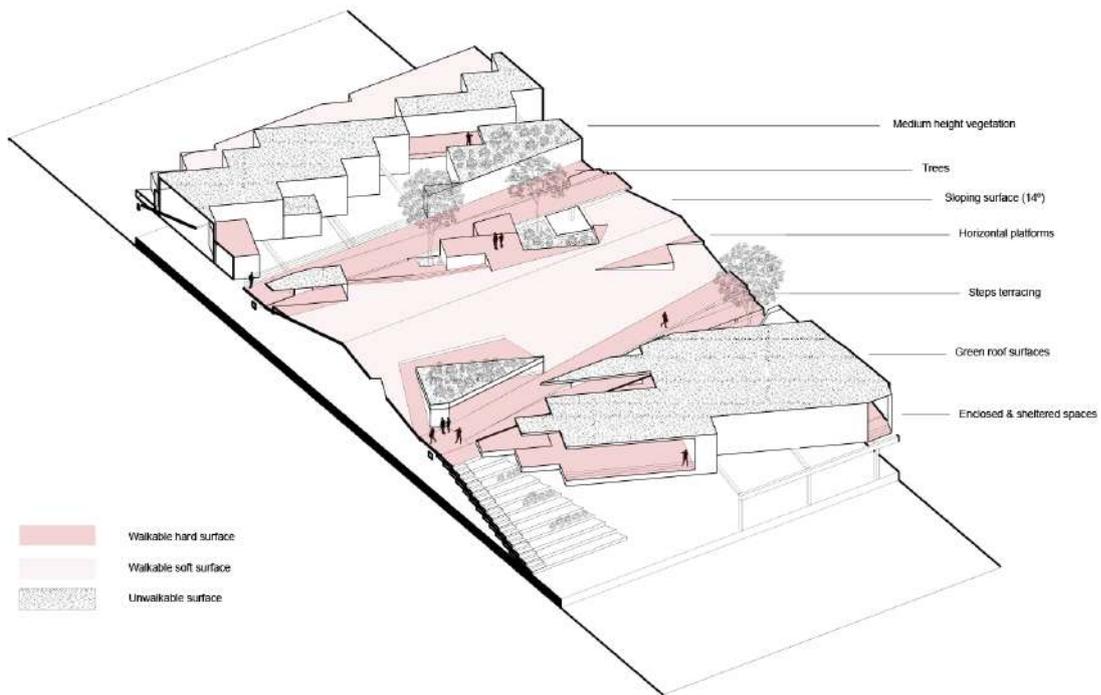
Section from postterminalen to Göta Älv

Components overview



3

Overview of the landscape's components



5

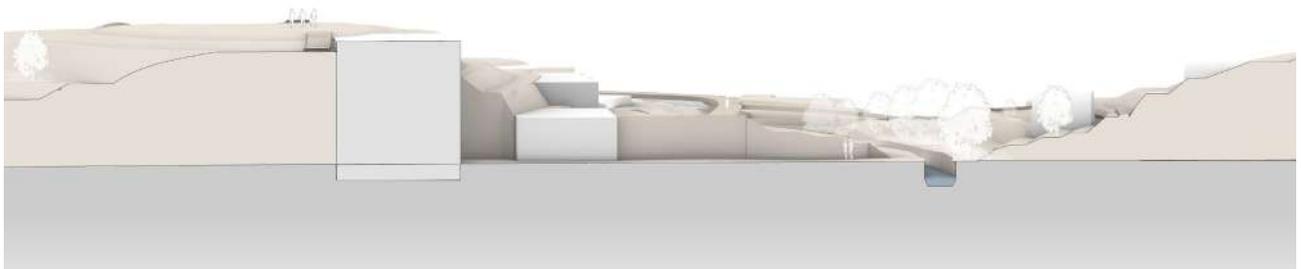
Section of the landscape with its different elements – green spaces, sheltered spaces, slopes, terraces



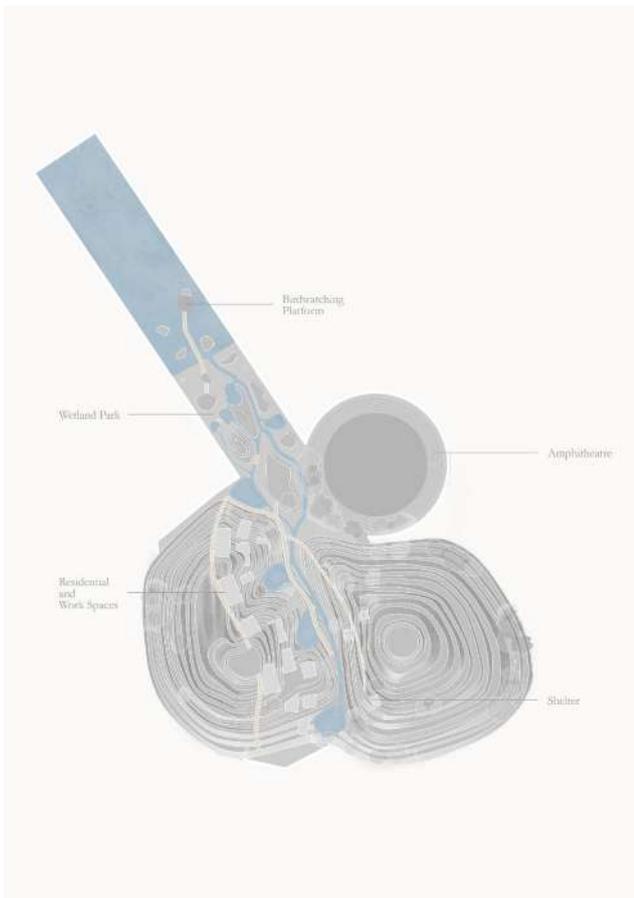
## LIVING WITH WATER

Anna Krassuski

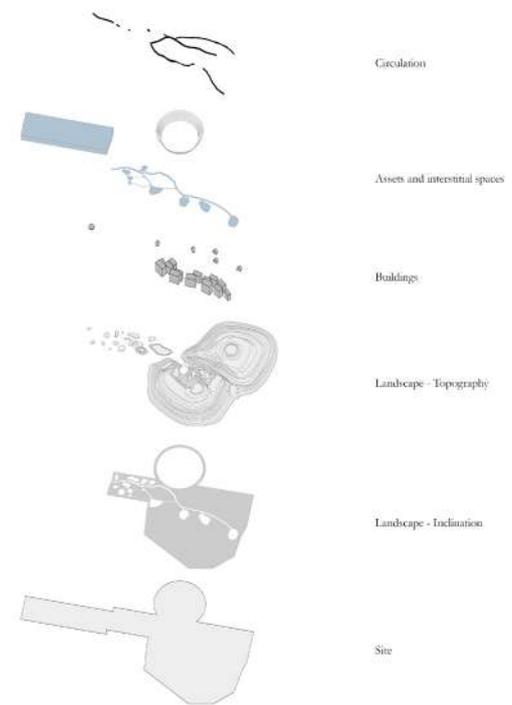
The project aims to explore flood tolerant urban spaces for Gullbergsvass. It approaches the eastern site of Droemmarnas Kaj where the accessibility and visibility to water and the hidden atmosphere have emerged as the primary characteristic assets. By emphasizing these assets and strengthening the site specific actant behavior, a hybrid programmatic system could be generated. A system where living and working environments are hybridized with their natural surroundings. To develop a long-term landscape-building-synergy, asset related risks such as flooding and biodiversity loss have been tackled through design. Inspired by the formation of a river delta system, the design proposal tolerates, delays and distributes changing water dynamics.



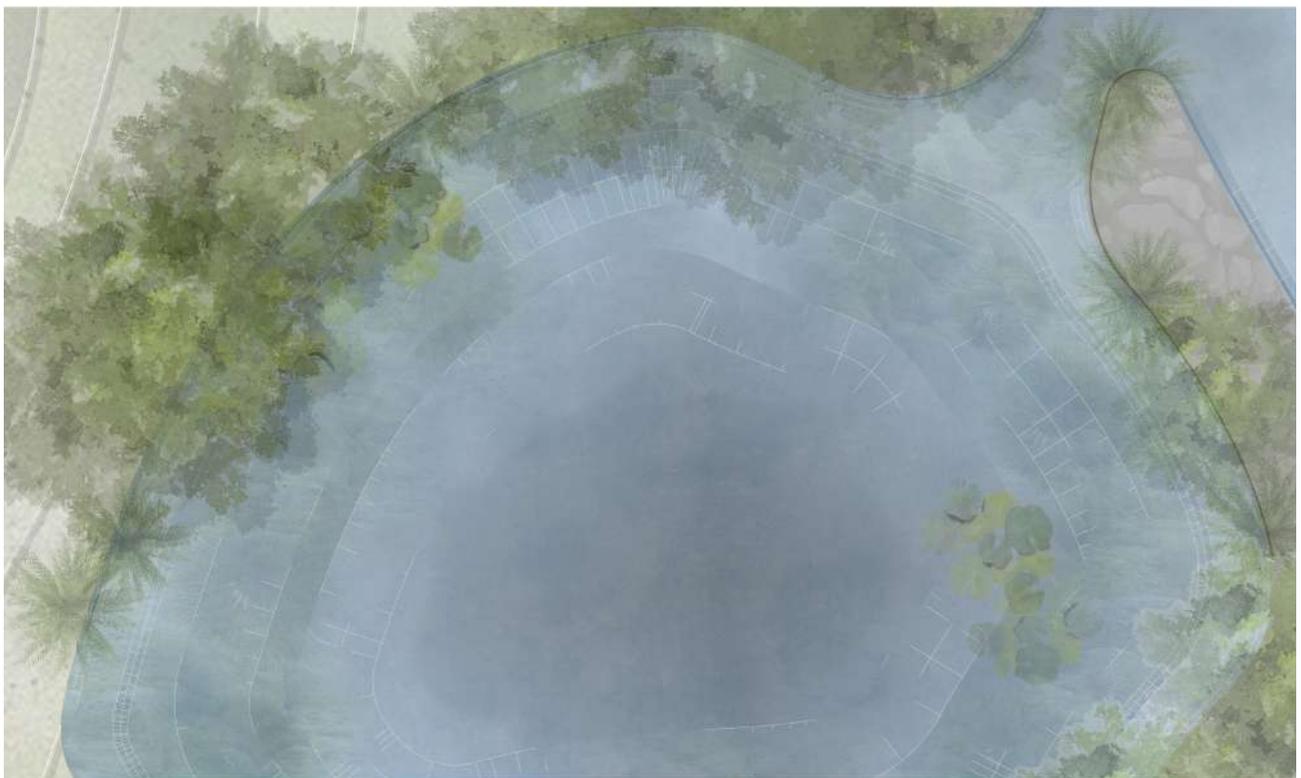
The asset of Droemmarnas Kaj enhances in a variety of hidden, semi-hidden and exposed urban spaces.



The organic landscape links residential and work spaces with recreational spaces and adapts to precipitation pressure and the rising sea level



The anatomy of all parts.



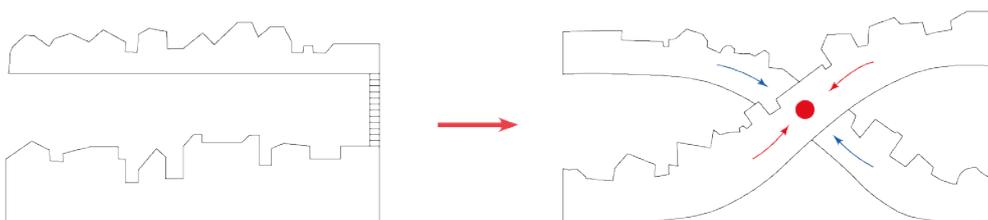
Precipitation is collected in retention ponds and directed towards Goeta Älv. Riparian Vegetation and permeable paving serve as additional water capture.



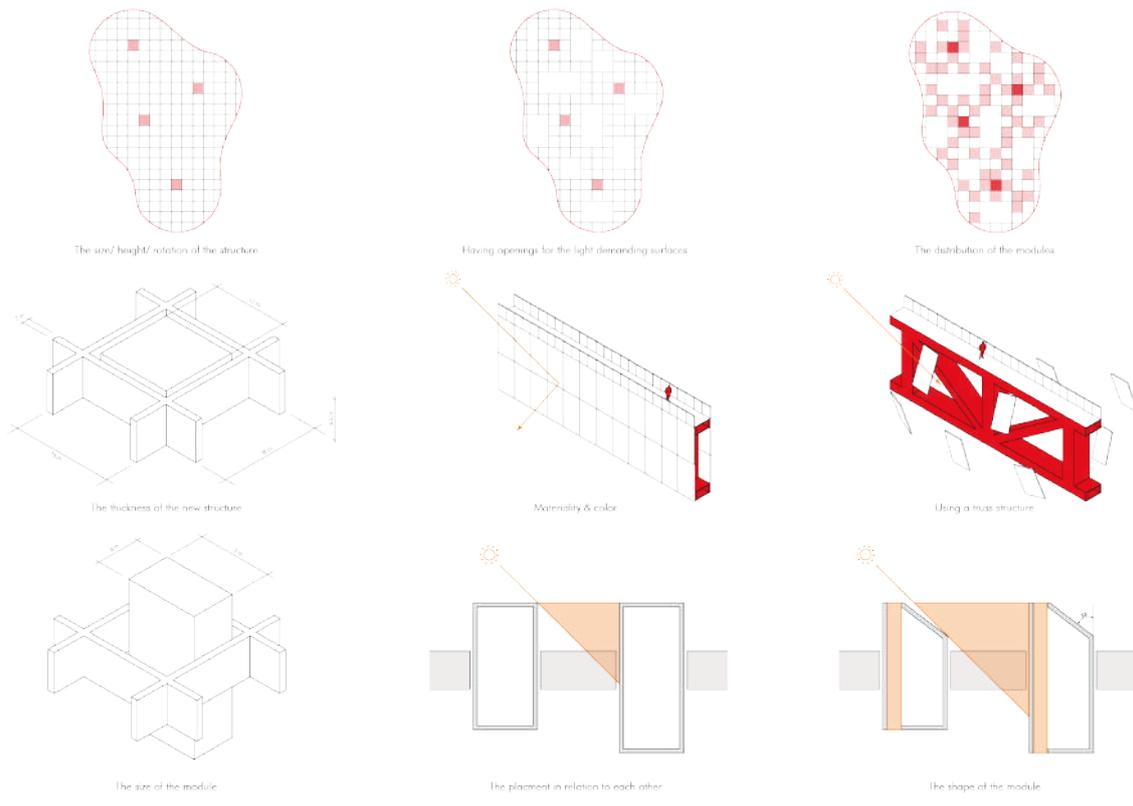
# UPPERHOOD

Safoat Nawlo

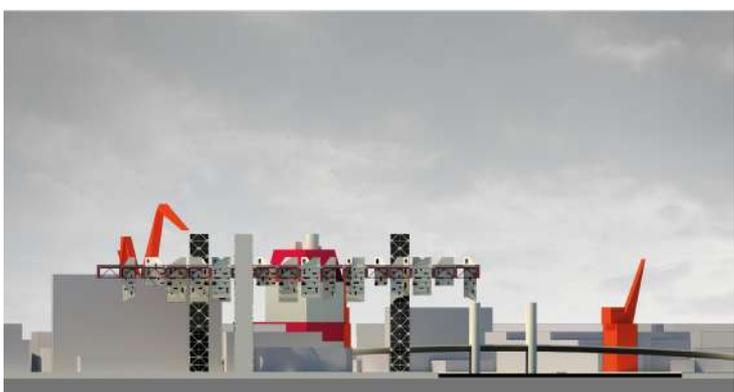
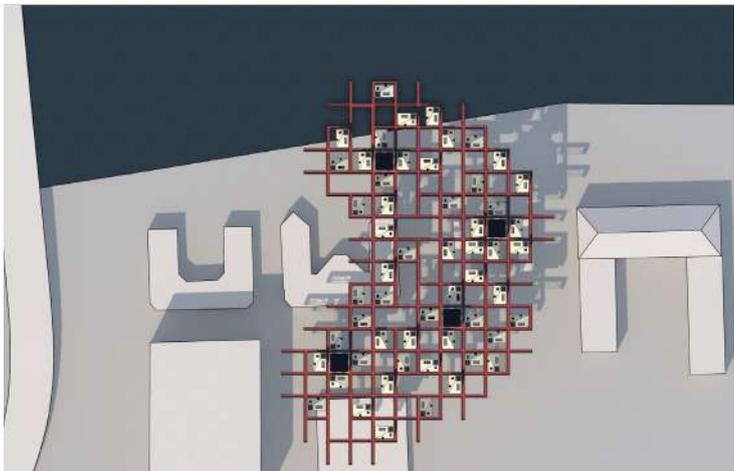
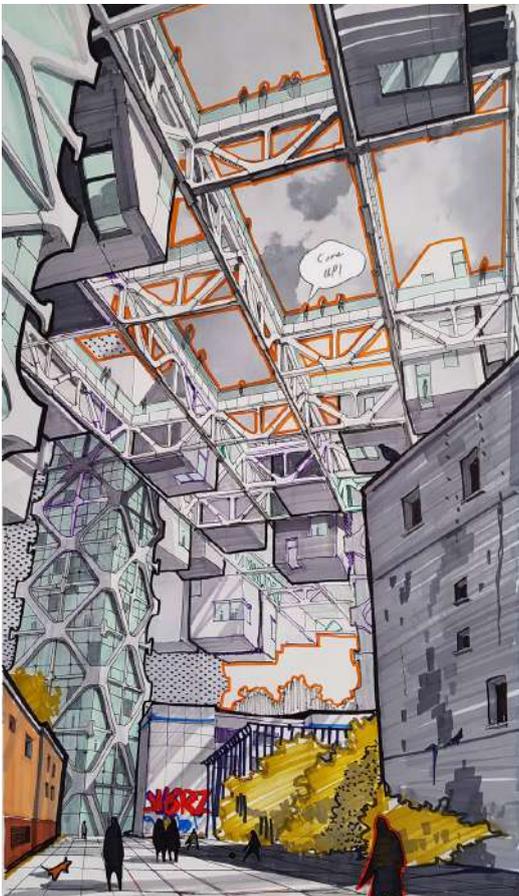
It all starts with a dream, with a dream of another life in an urban environment where everything works a little differently from what we used to, but as we may have dreamed. I don't know what it is, a city that will be built in 2030 or a transit air station acting as a refuge between nearby planets in 2300. This project is about creating a new architectural facility over an area located on the one side in the center in a very historical rich area, on the other side it questions the way we build. It is completely, morally and physically a modern reflection of what exists, while self-sufficiently different. Its name is the UPPERHOOD.



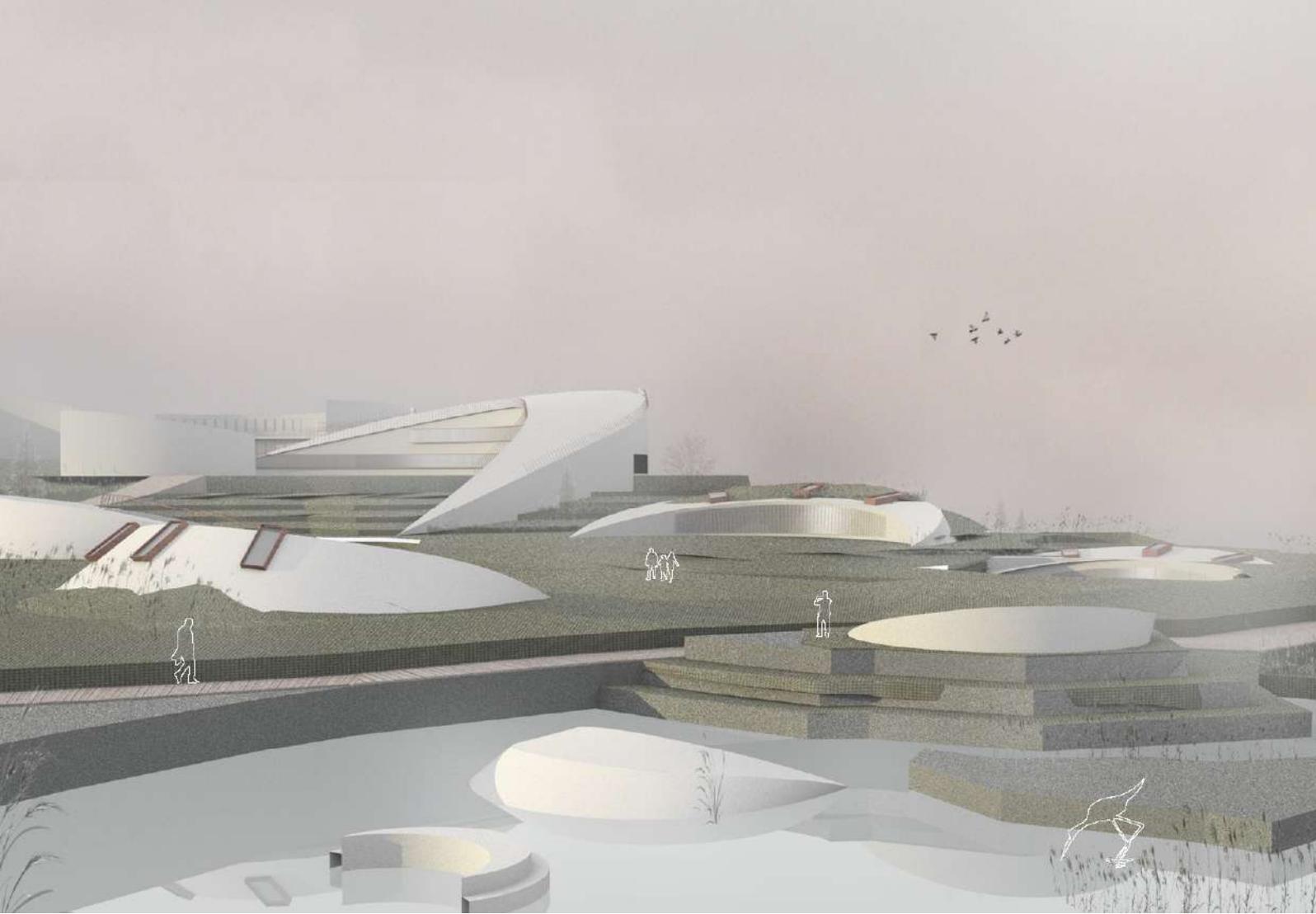
The first thoughts have been to create a city that occupies the sky, in a way that it helps and provides the existing structure with new qualities.



All the strategies and methods that have been used to create the best light conditions for the Upperhood and its Neighborhood.



In the south-east parts of the are the structure is lower and the spaces more narrow and calm.



# URBAN WILDERNESS

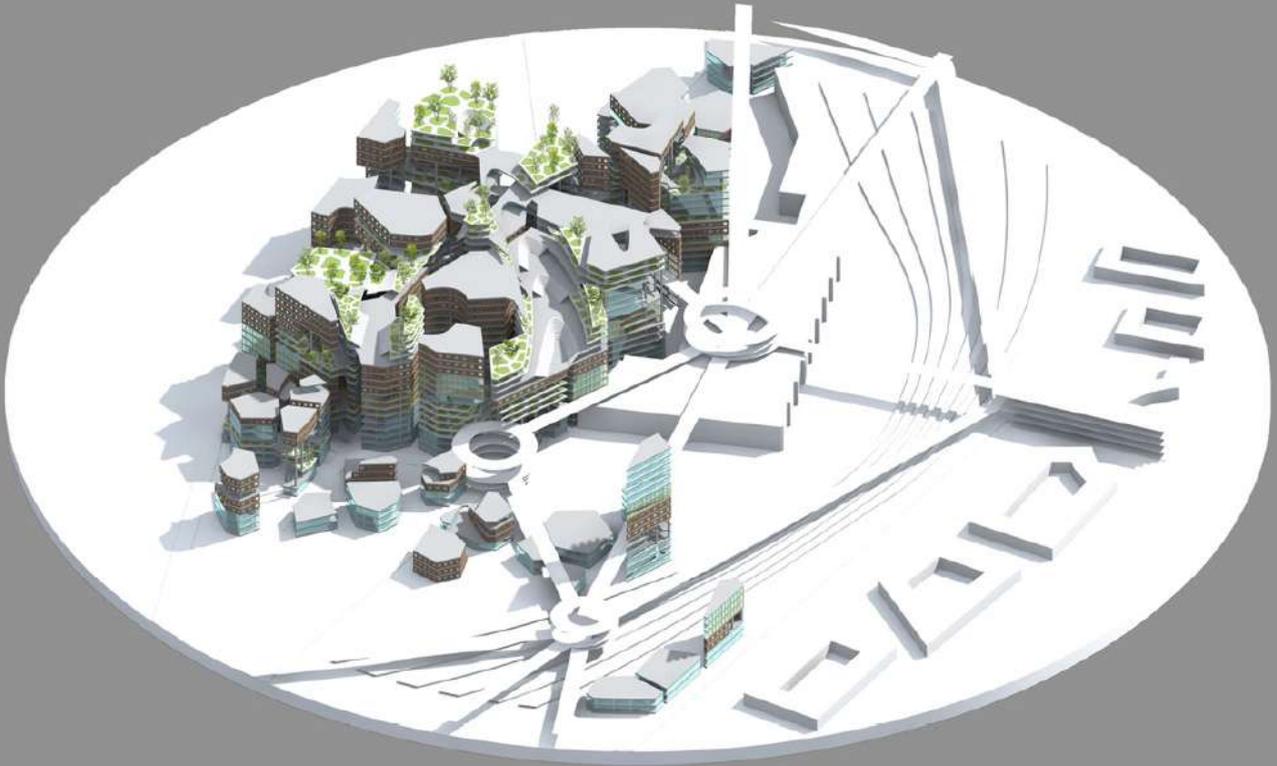
Stina Nilsson

**Urban Wilderness** is about prioritizing the space and function of nature and animals equal to human activity. The project is located at Drömmarnas Kaj, which historically was a wetland; producing reed and acting as a habitat for seabirds. Proposed is an architectural form integrated in the landscape, relating to weather and carefully separating/integrating the flows of people and wilderness. The project is a contribution to the discussion on how we can claim waterfronts to create attractive urban environments, without erasing natural green or wild structures, and at the same time dealing with the struggle of artificiality.



The architectural system displays a gradient of landscape integration between the different sizes, creating various approaches to interstitial space.

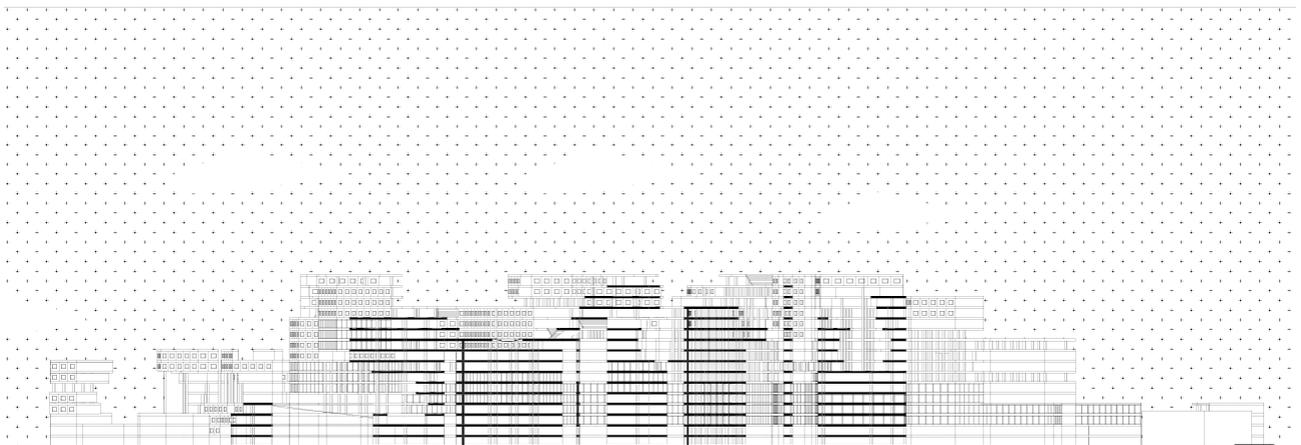




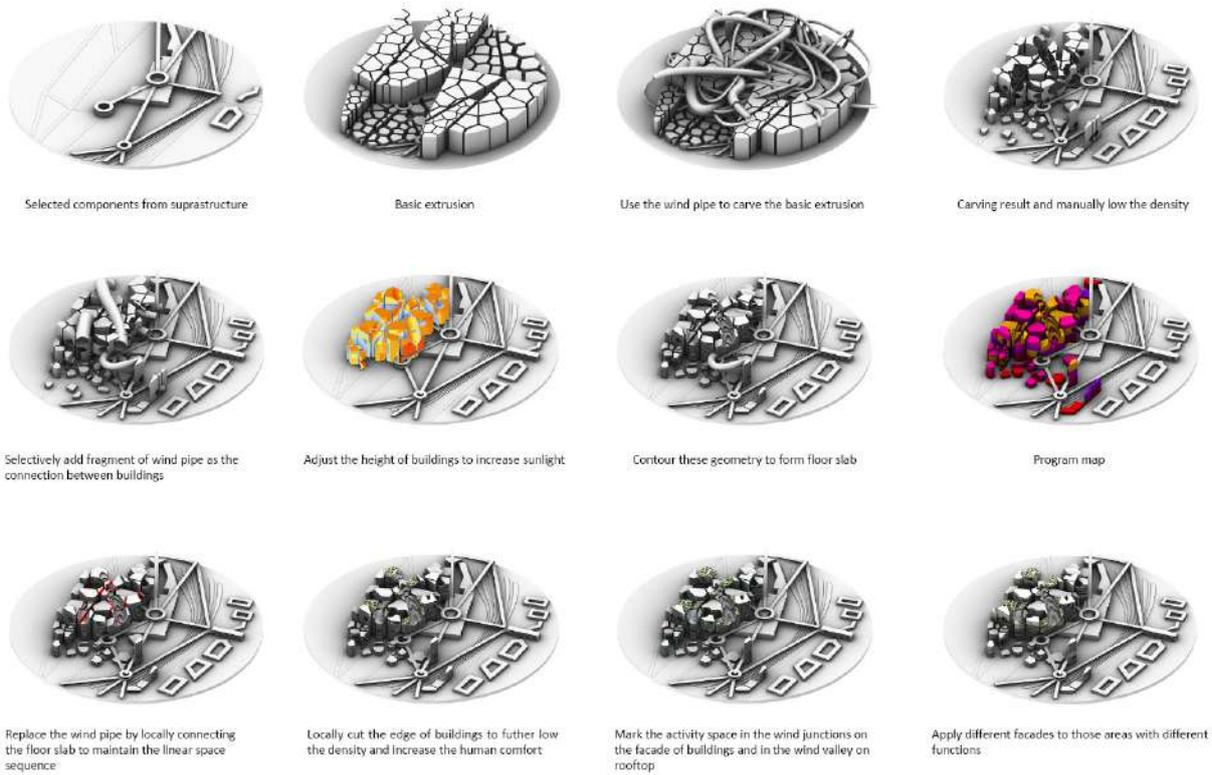
# WIND CORRIDOR

Chaofan Zhang

This project is an research project that explores the wind guided public space generating process. The basic method is to carve out the public and view corridor by the logic of how wind travelling through the site. And then develop the connectivity between buildings and adjust height of these buildings to improve the actant performance.



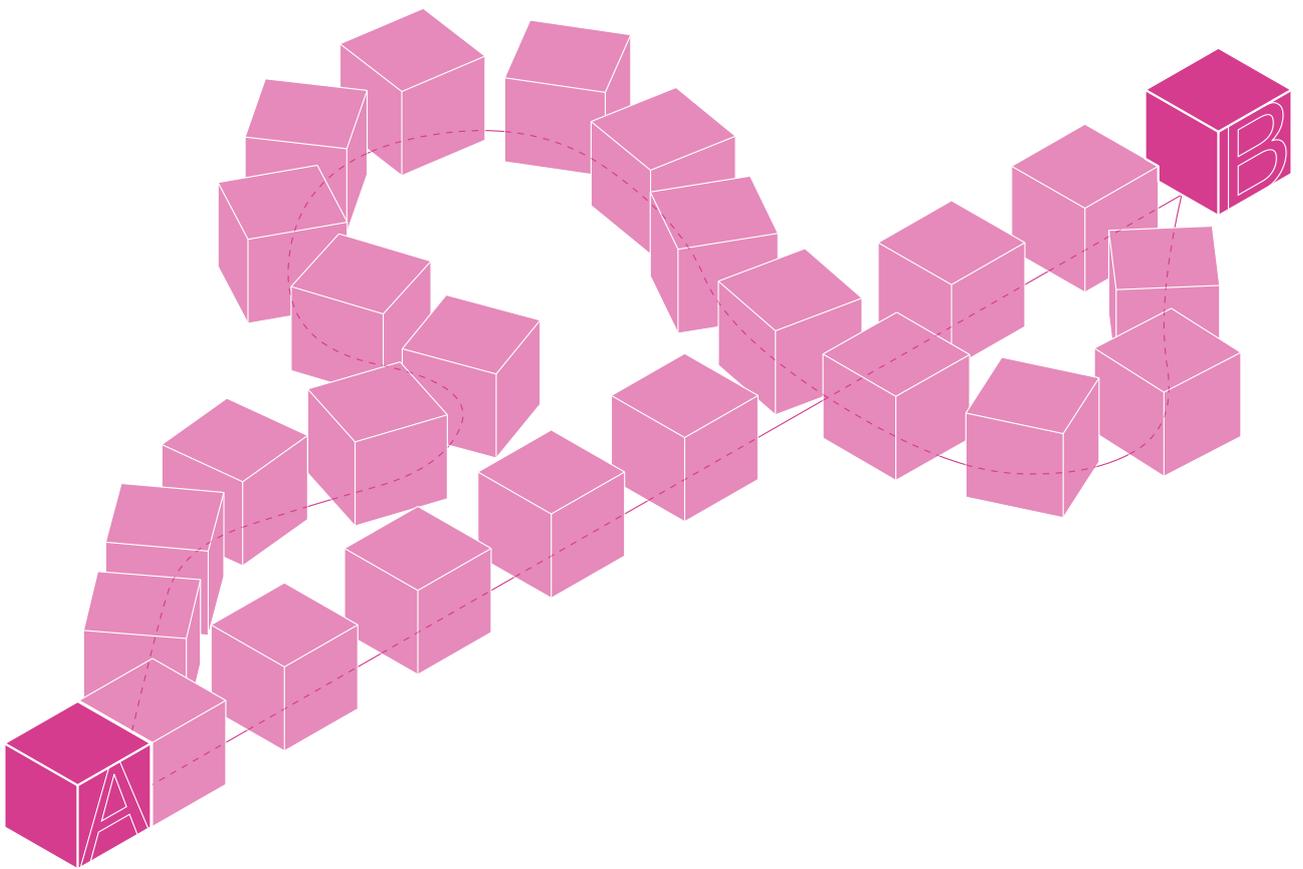
Section, showing the connection between buildings and continuity of the public corridor carved out by wind



The generating process diagram which shows the carving logic of wind and how the public and view corridors are formed



Perspective from the wind valley on the rooftop, this linear public space is the formed by wind carving. Floor slabs are locally connected to maintain the continuity of activity space





# CONNECTION

Regardless if it is infrastructure, architecture, landscapes, history or the uses of our urban spaces the goal is the same, to connect and bring places together.

The following projects in this category are:

Confluence

Link

The Knot

Transforming the transition

Water on Water



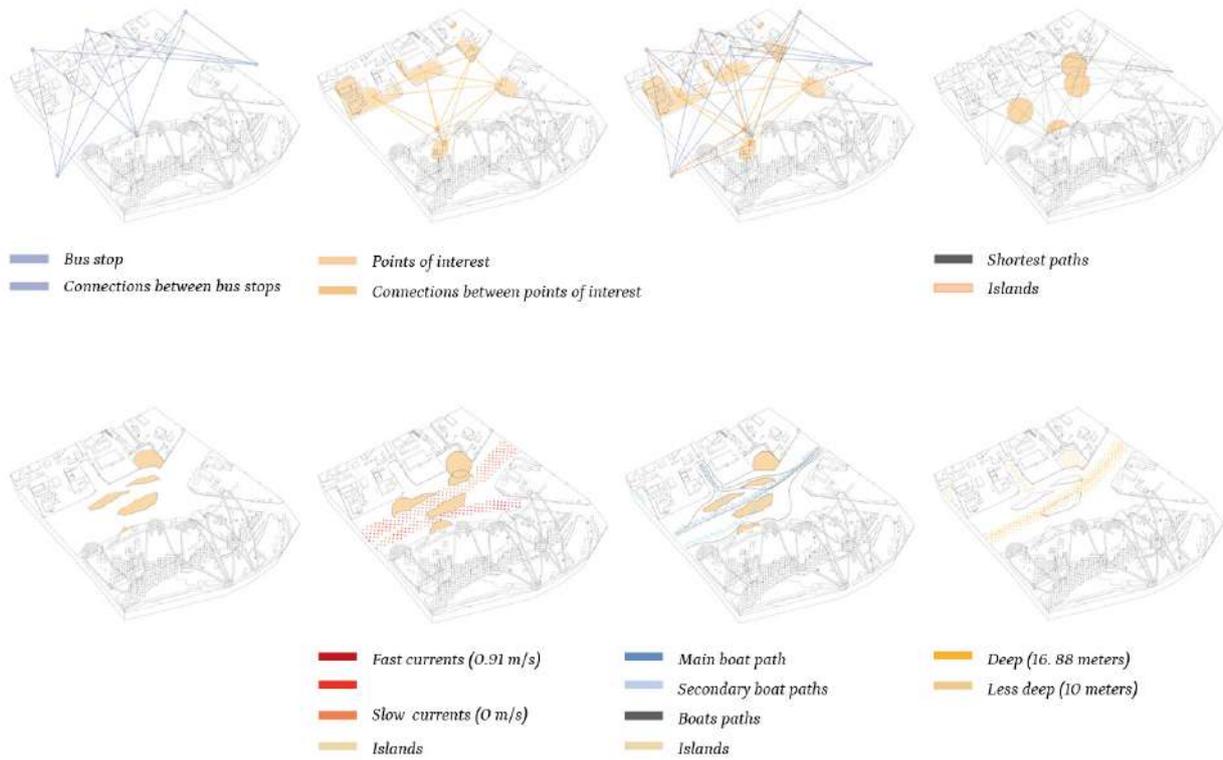
# CONFLUENCE

Isaline Potard

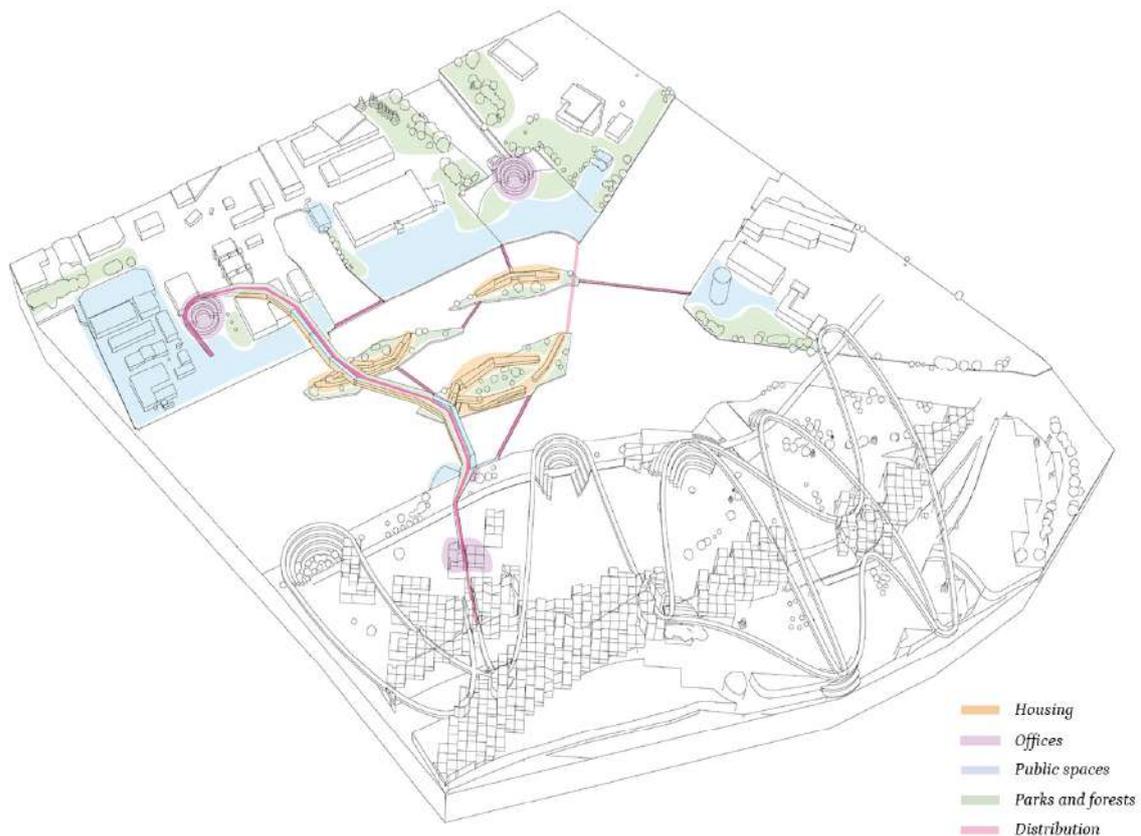
Located in Flodmyrning, Confluence is a project of a hybrid bridge which reaches Göta Älv creating islands. The Ecopath, a public pedestrian and bicycle pathway, is coming from Drömmarnas Kaj and it connects Gullbergsvass with Ringön, making both coasts more attractive. The project creates an environment where people can meet each other (public spaces), live (housing) and be closer to nature (river and green areas). With this project, I propose a hybrid bridge which can protect the islands and the coasts from the strongest winds of Göta Älv and can be a solution to live with the flooding.



The Ecopath is coming from Drömmarnas Kaj to Ringön, it is a place to meet people, go for a walk or a ride, go to an exhibition or a restaurant. There are green areas to increase the biodiversity and to create playground areas for children.



The islands are created regarding the accessibility and the assets of the area linked together. New layers about currents, boats mobility and depth of the river complete the process



The program is defined by the creation of housing in unexpected places in Göta Älv (islands & bridge). Offices and public spaces are located in the Ringön coast because it is protected from the flooding, on the contrary of Gullbergsvass which is a wetland



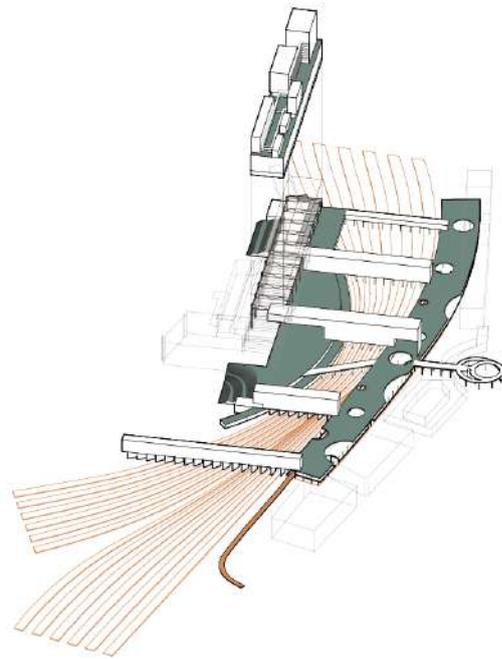
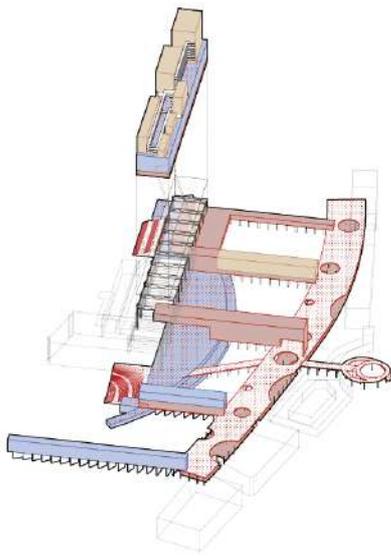
# LINK

Xiaohui Shi

The project starts by zooming out from Postterminalen to the scale of Gullbergsvass district and Gothenburg city. The original isolated and abandoned reality but graphically centralized location lead to the primary intention of connecting Postterminalen and Odinsplatsen, to further get connected to the city system. The mass is shaped by local context as well as analysis of mobility, visibility and daylight. The hybrid structure transforms the fringe to center and creates promising and energetic space for entertainment, living and working. It enriches the urban topography and interface by closely interacting with the built environment.



Section & Facade - Function and Interface



Hybrid Programmatic System

- Public
- Office
- Housing
- Public Access

Hybrid Architectural System

- Landscape
- Infrastructure
- Architecture

Hybrid Mass



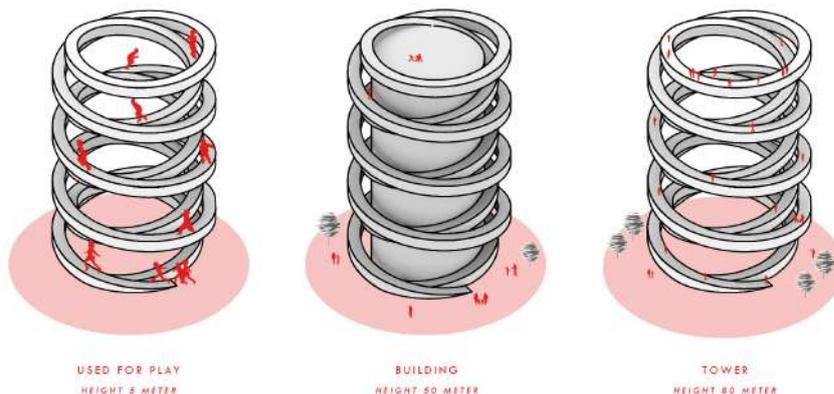
Perspective - The Southern Plaza



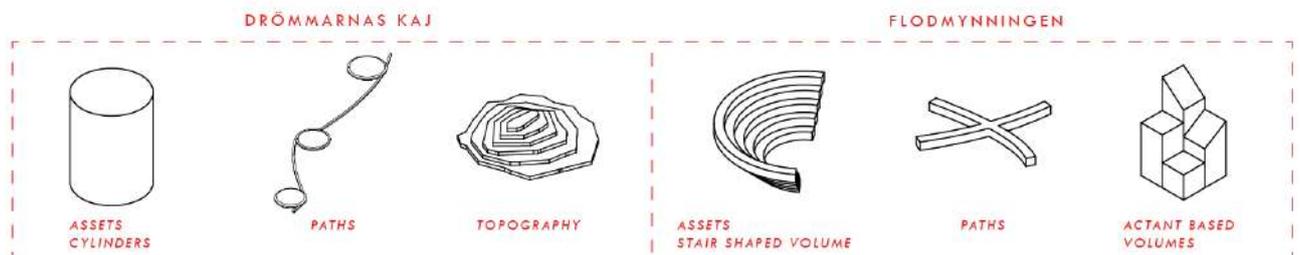
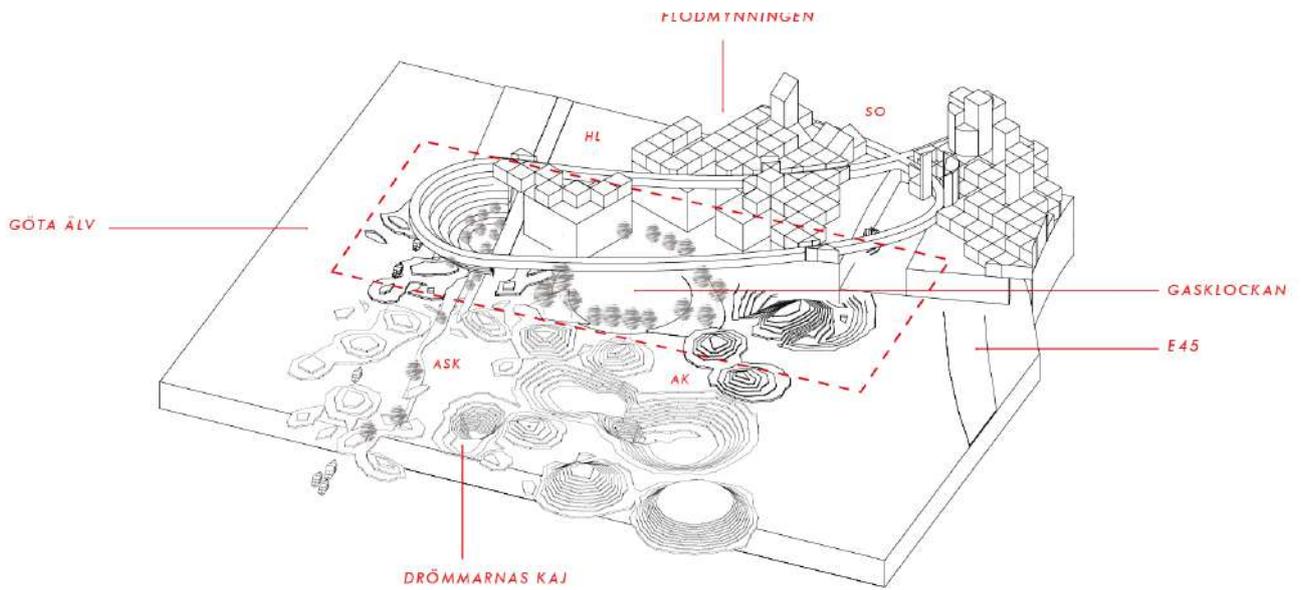
# THE KNOT

Jennifer Henriksson

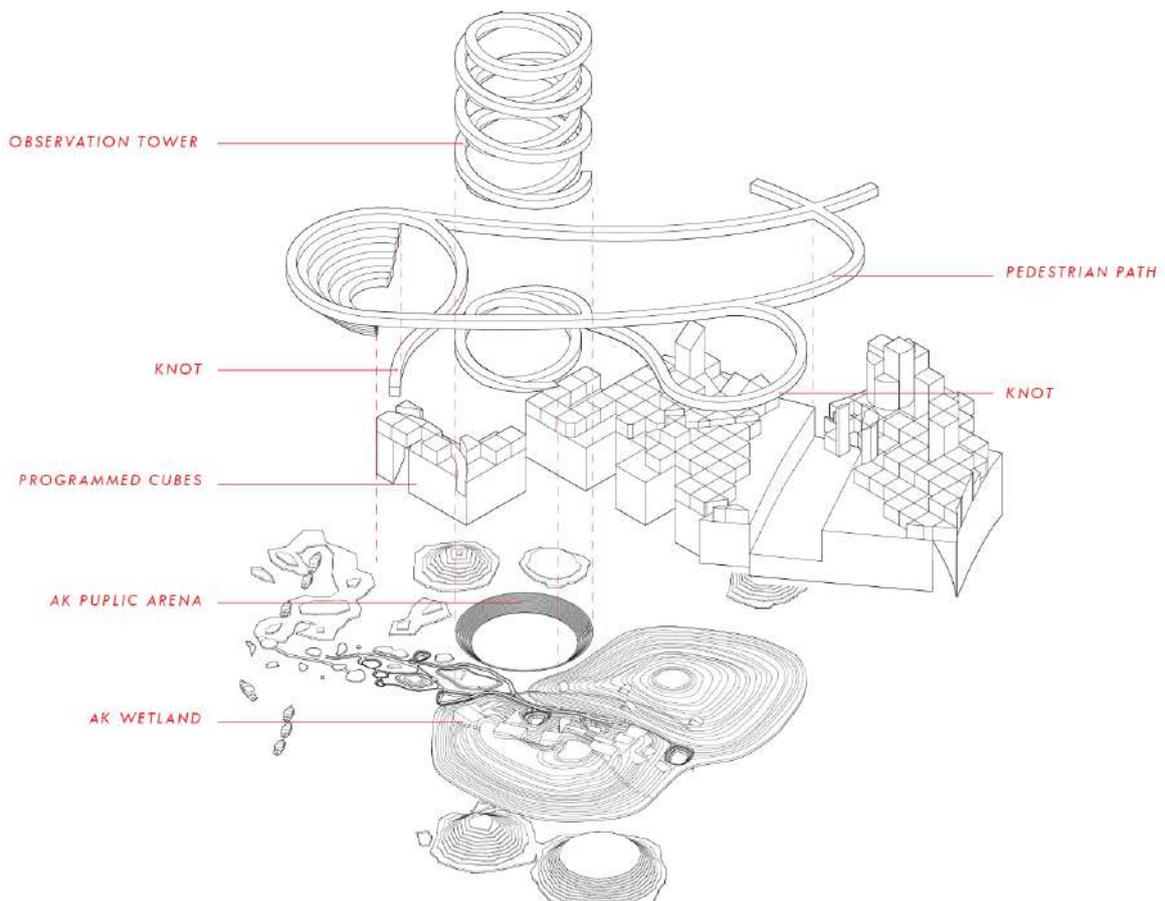
The project site is located in Gullbergsvass. The area today is flat and defined by in- frastructure and inter- sections. The Knot, is focusing on the void of Gasklockan, which I identified as both an asset and an inter- stance, as well as the actant mobility and the aspect of visibility. The gas bell was an 80 meter high cylinder construction and ser- ved as a landmark and used for orientation and localization until it was demolished in 2017. These aspects brought me to the concept of Interact and Attract, focusing on connecting the site to adjacent areas and adding an attraction to the site. By crea- ting continuous movement, a knot connecting volumes and movements, and an ob- servation tower which allows you to experience an unobstructed view over the city of Gothenburg and the quay. The new structure is referencing back to Gasklockan and re- es- tablish a lost landmark to the site while playing with aspects of seeing and being seen.



Program / Scularity - The shape of the structure is flexible, allowing it to change scale and program



Suprastructure components - The site of interest is located in the border area between the two suprastructures, which entails a barrier regarding their volumes and connections.



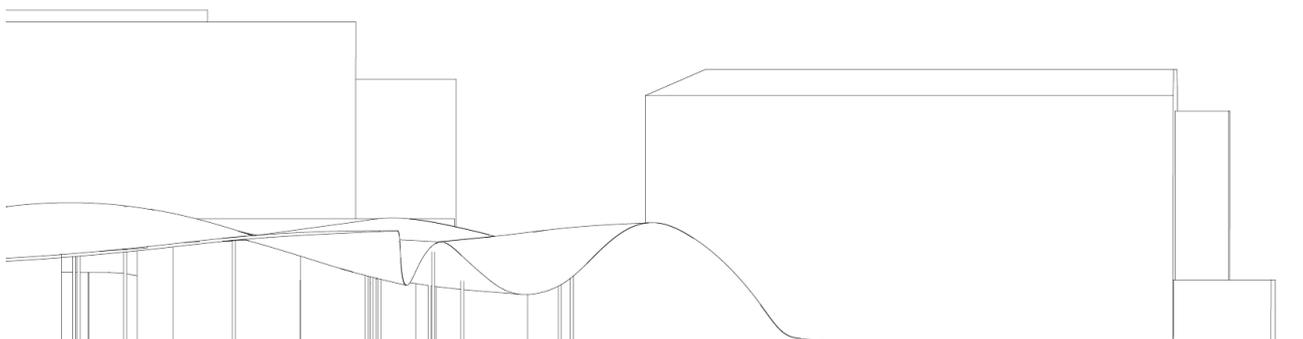
Anatomical Drawing - Illustrating the different parts of the structure

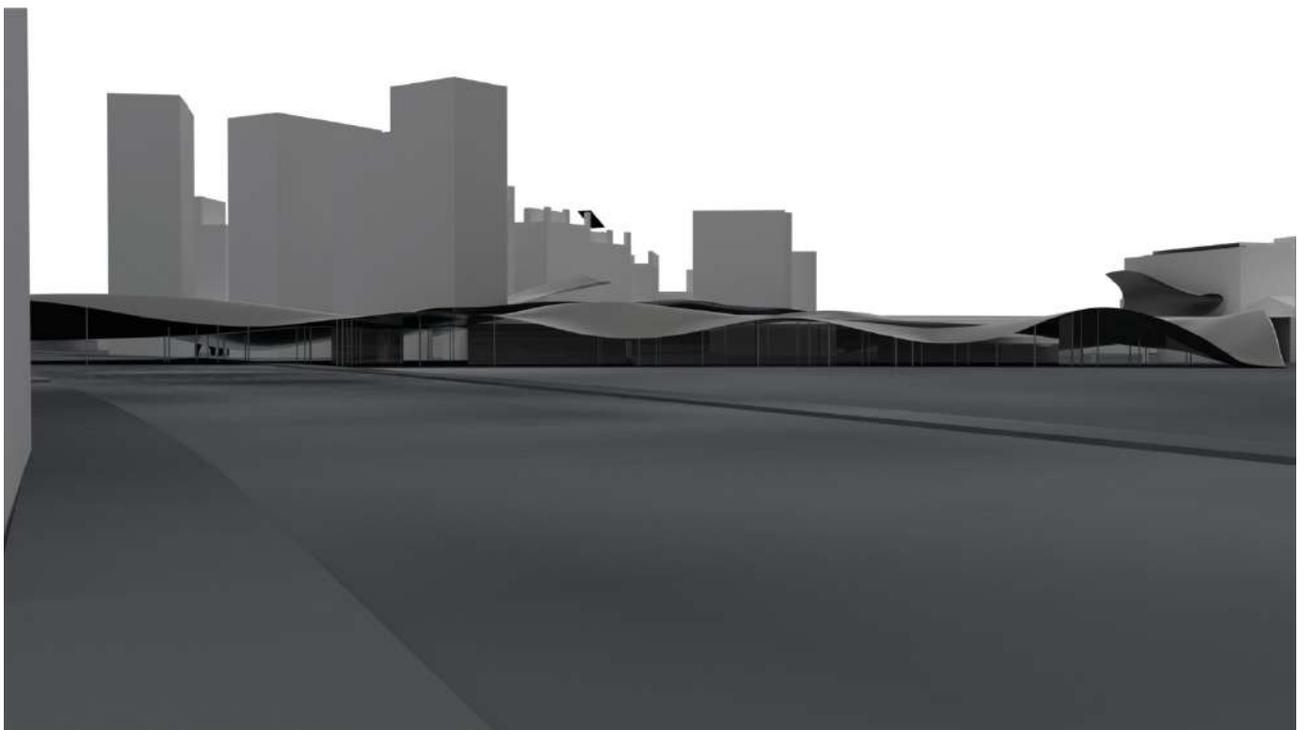
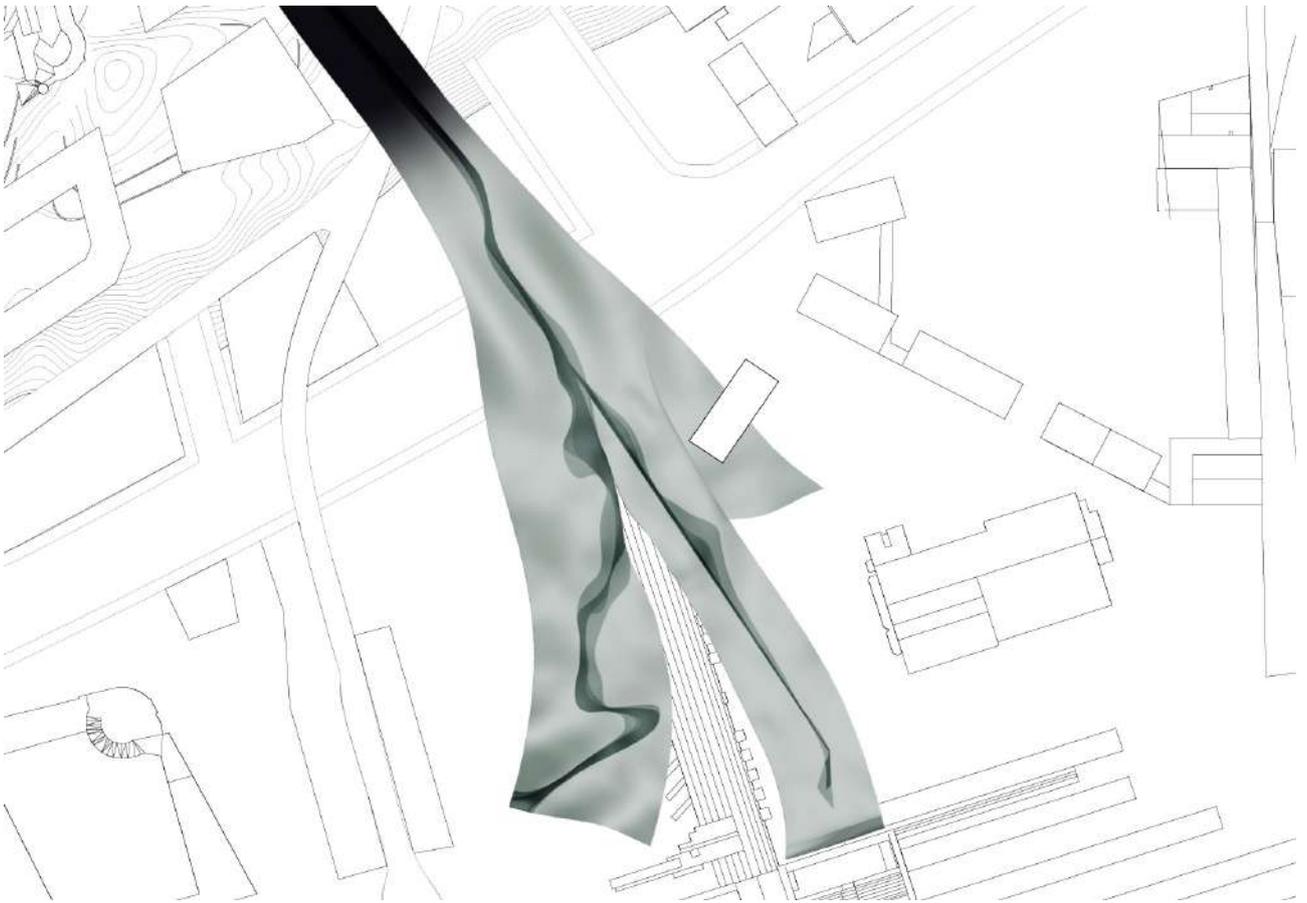


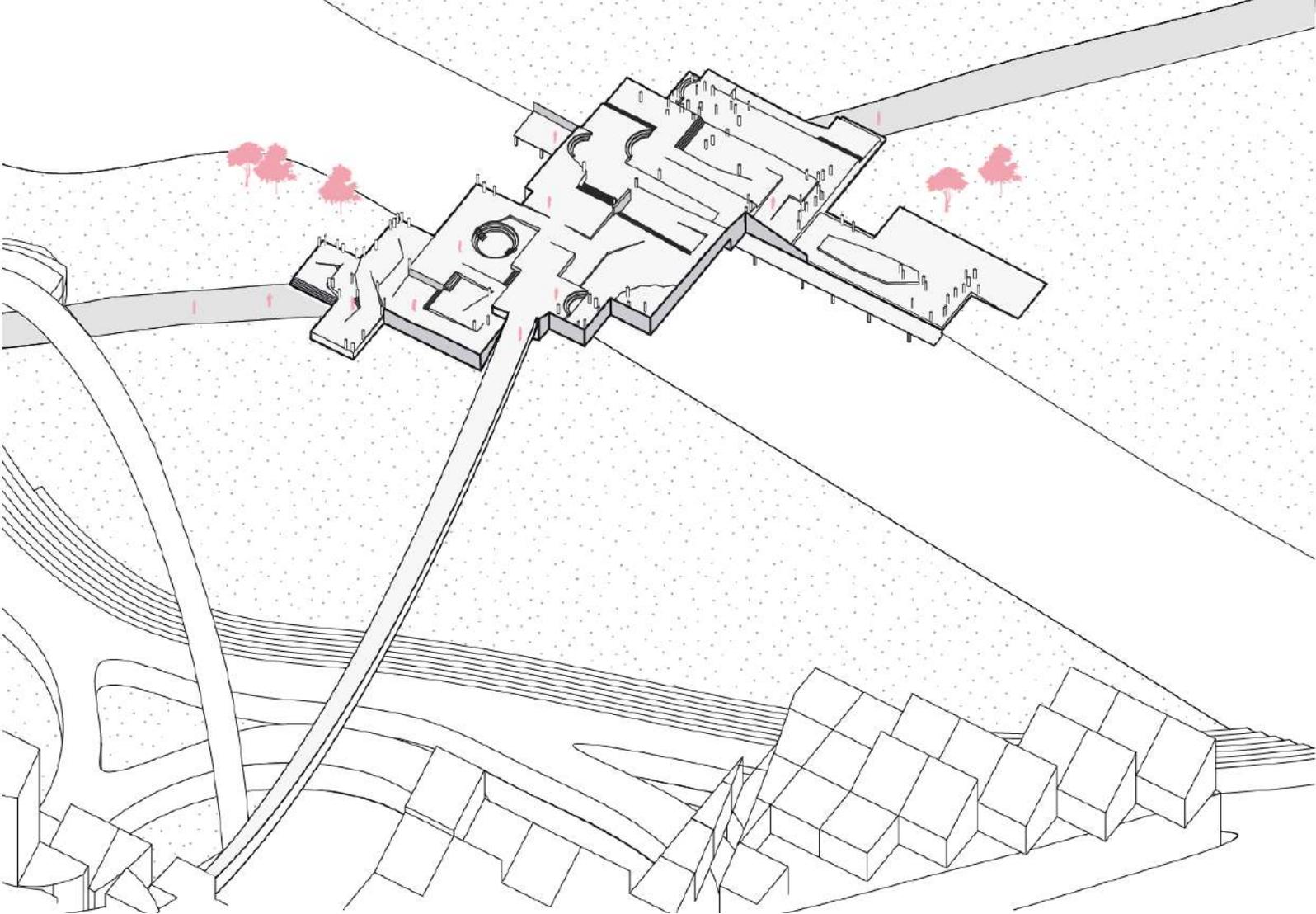
# TRANSFORMING THE TRANSITION

Simon Viklund

This project is keeping Götaälvbron as a pedestrian/cyclist-only bridge, while transforming the landing of the bridge into a landscape over the Västlänken station and bus terminal. The landscape is shaped by two main actants: noise and wind. A forest of columns is generated in the area of low noise levels. These columns carries the weight of the surface - which is generated by imitating a piece of cloth blowing in the strong west winds. The result is making the connection between Hisingen and the city centre an open public space.



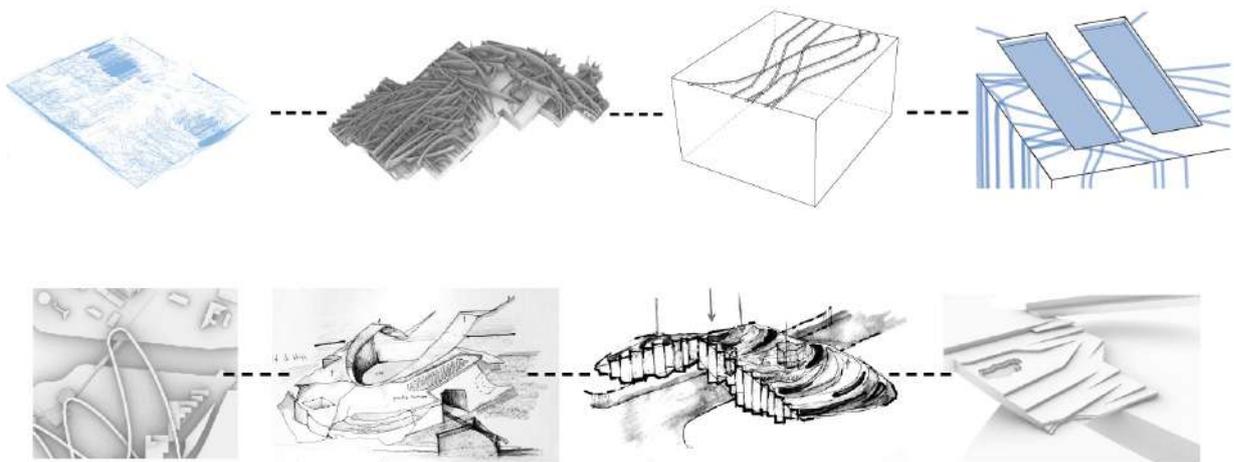




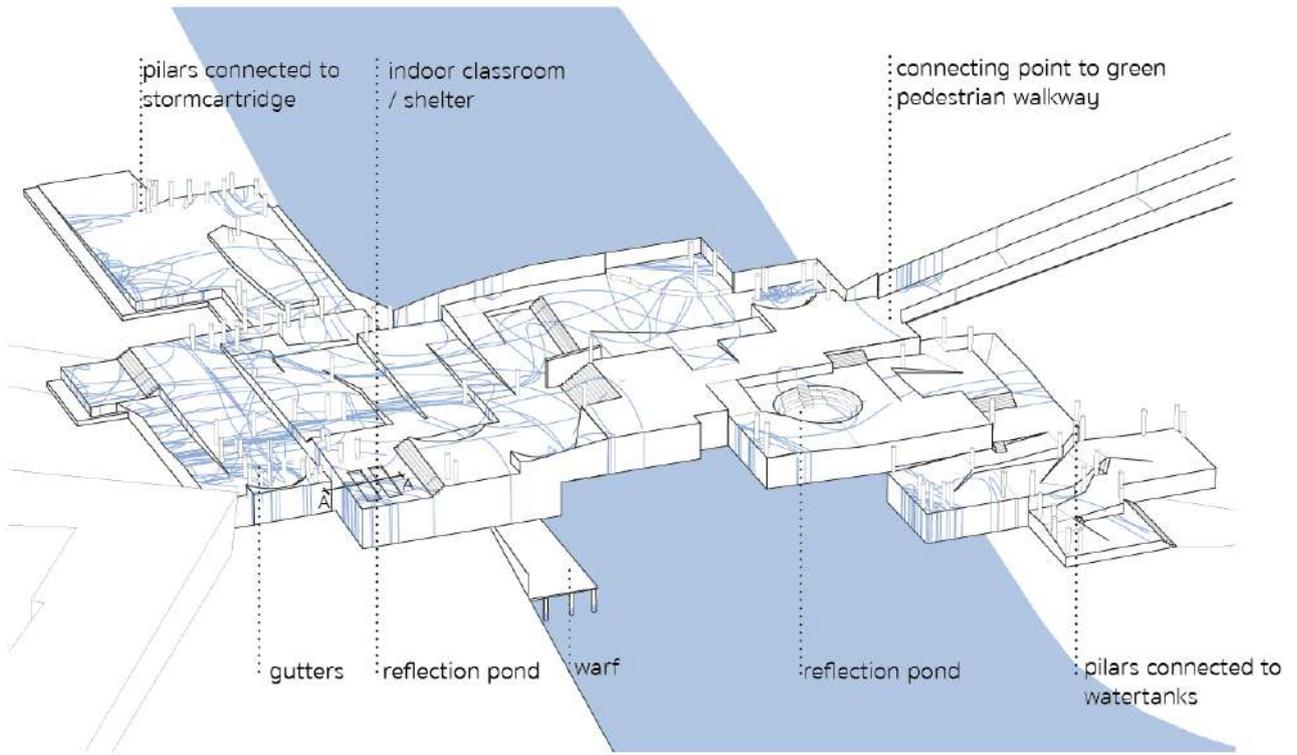
# WATER ON WATER

Linnea Larsson

The hybrid project "water on water" explores the possibilities of creating an artificial landscape, acting as a bridge over Sävån. With the world changing the need to collect fresh water and delay rainwater run off is crucial. That was the departure of my project. I wanted to use these different rainwater collector's as a design element, an indicator of how the building was operating. Connecting Gullbergsvass to Partihallarna this so-called artificial landscape bridge creates a sprawl friendly area with view over Götaälv and Sävån. With smaller pavilion-like spaces generated by the pillars and terraces.



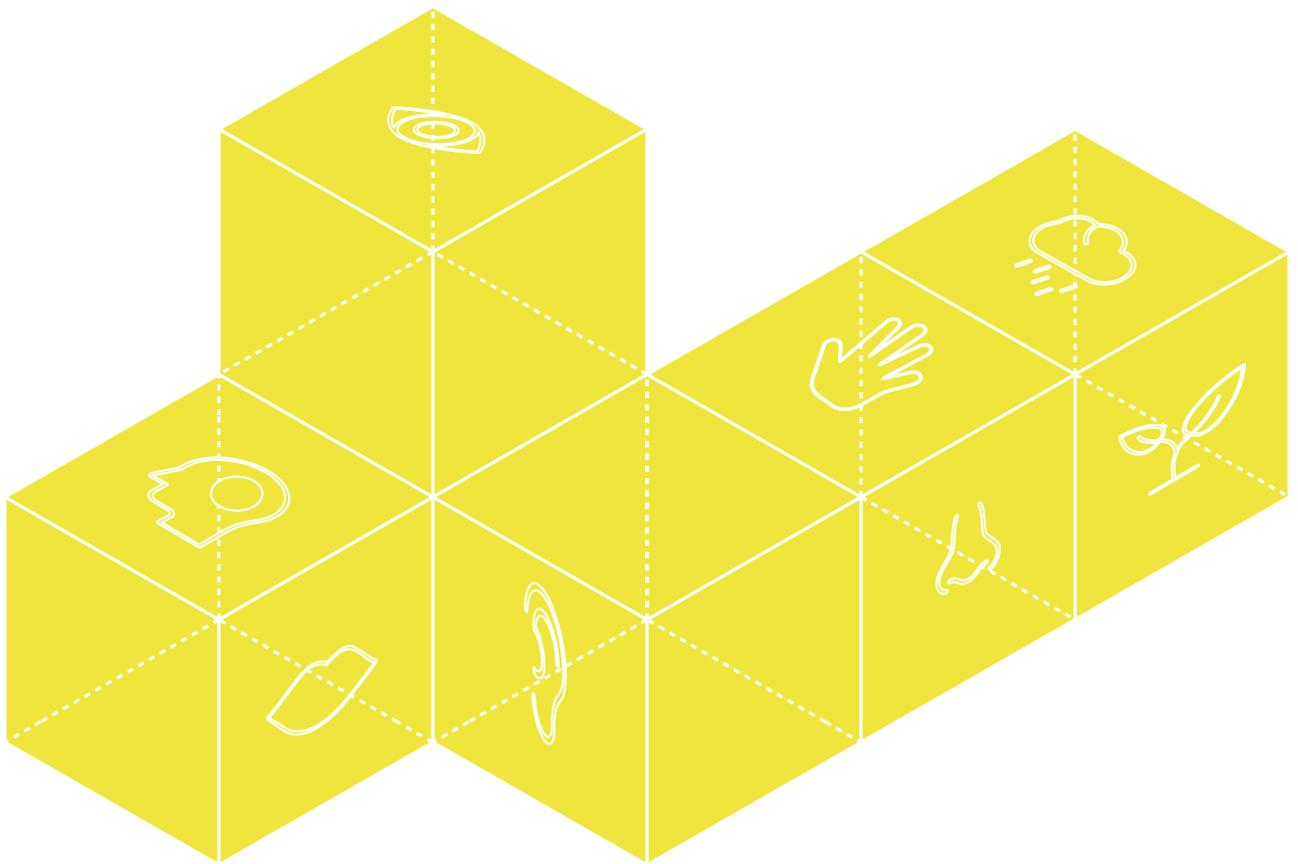
Investigations - making the artificial landscape



Anatomical drawing of projects parts and program



Perspective view from Partihallarna





# EXPERIENCE

The city is full of adventures so why not extend it further? Experiences in the city can be those of space, senses, climate and nature, all in their own way or in great combination.

The following projects in this category are:

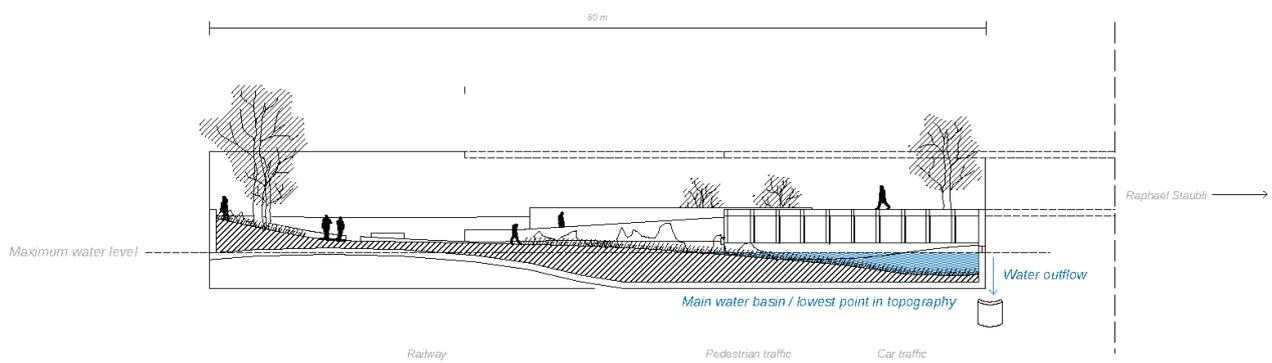
- Damper Bridghe
- Folding Flows
- Layers of Nature
- Memorial Park Avenue
- Postterminal Urban Development Concept
- Spaghetti Junction



# DAMPER BRIDGE

Tore Lagerquist

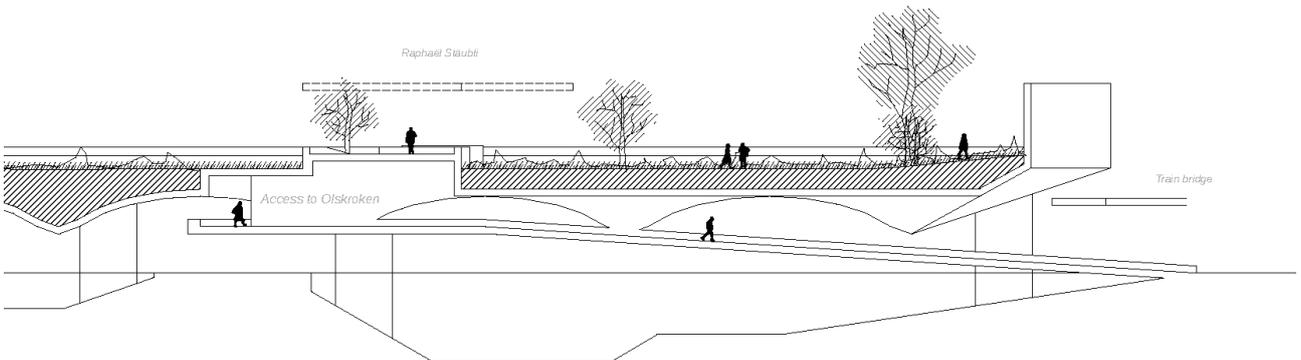
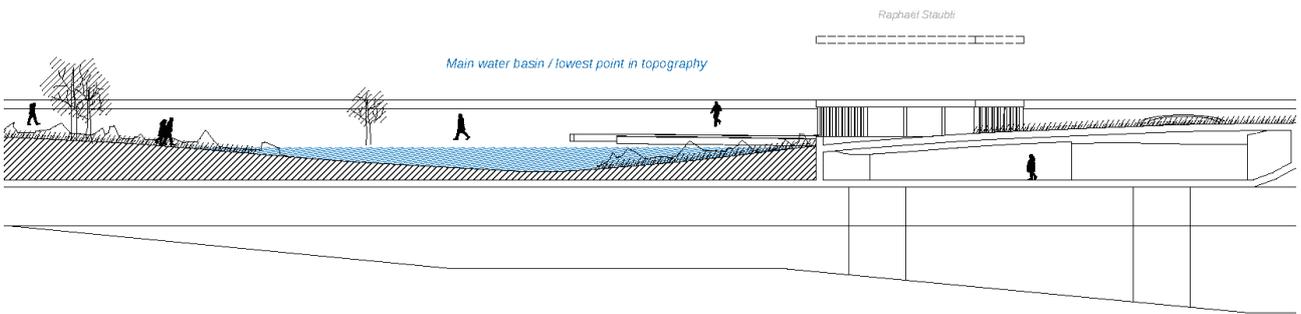
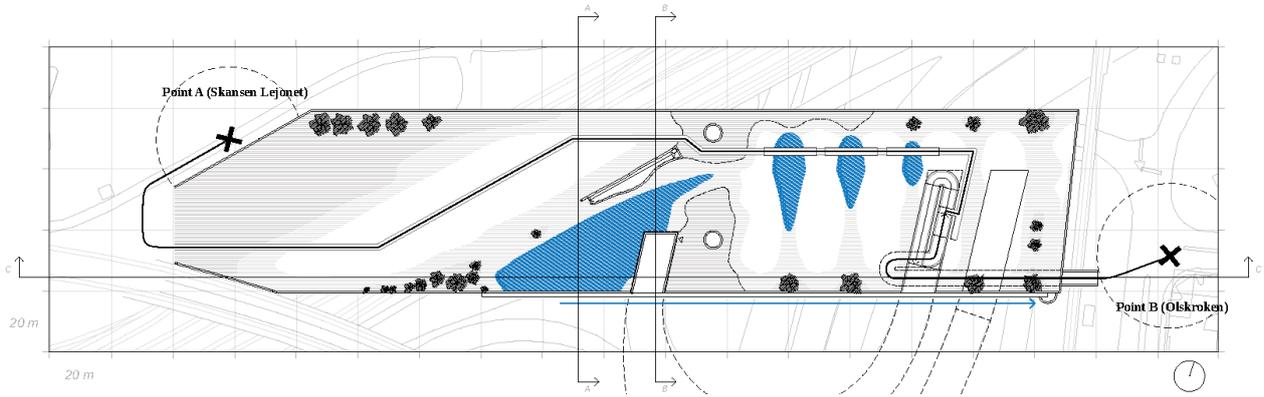
This project is for a new hybrid connection between Skansen Lejonet and Olskroken. The design centers on two actants - noise and rainwater runoff - to arrive at a contextually relevant proposal. The design process is propelled by the analysis and consideration of the behaviour of these actants. The result is a structure that mitigates noise from the transportation infrastructures below and collects rainwater to create a pleasant pedestrian environment while also providing an effective access between two disconnected points of the city.





Depth map

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; background-color: white; margin-right: 5px;"></span> 0 - 1.25 m <i>hard surface / light vegetation</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: lightgray; margin-right: 5px;"></span> 1.25 - 2.5 m <i>heavy vegetation</i></li> </ul> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: darkgray; margin-right: 5px;"></span> 2.5 - 3.75 m <i>heavy vegetation / interior space + light vegetation</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: black; margin-right: 5px;"></span> 3.75 - 5.0 m <i>interior space + light vegetation / trees</i></li> </ul> |
|--|--|





# FOLDING FLOWS

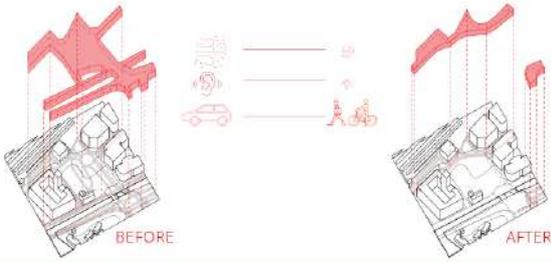
Ellen Wikdahl

This project is located between Åkareplatsen and Trädgårdsföreningen. The preconditions for the project was a site characterized by heavy traffic, large-scale buildings and interstices, and long monotonous walkways with no attraction of staying, only transporting. The aim of this project was to bring human scale and public spaces into the area and at the same time take advantage of the nearby Gothenburg canal and the green structures in Trädgårdsföreningen. A playful triangular grid generates public spaces at different levels and with varied characteristics integrated in the existing pedestrian flows. The nuanced spatiality adds a layer of complexity and legibility to the site.

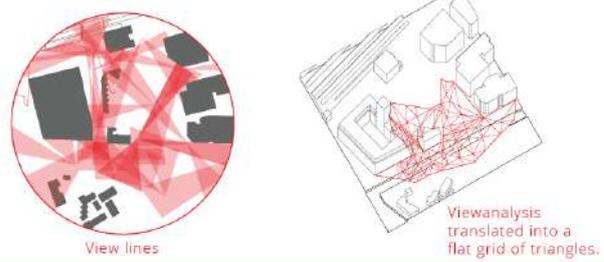


The folded structure gently follows the surroundings and generates varied spatiality through the design

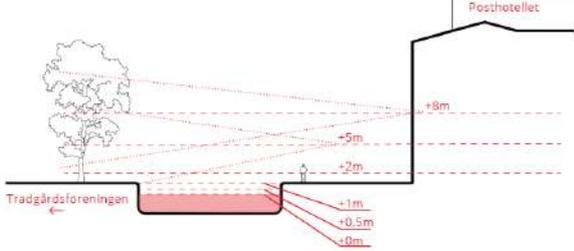
1 - RETHINKING INFRASTRUCTURE



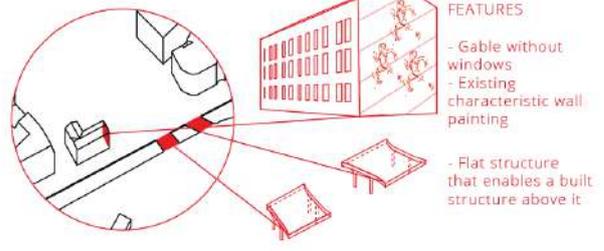
2 - VEIV LINES



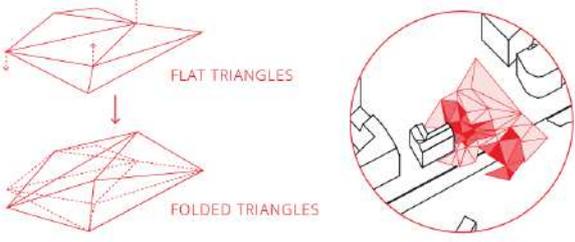
3 - LEVELS



4 - CONNECT TO EXISTING BUILT STRUCTURES



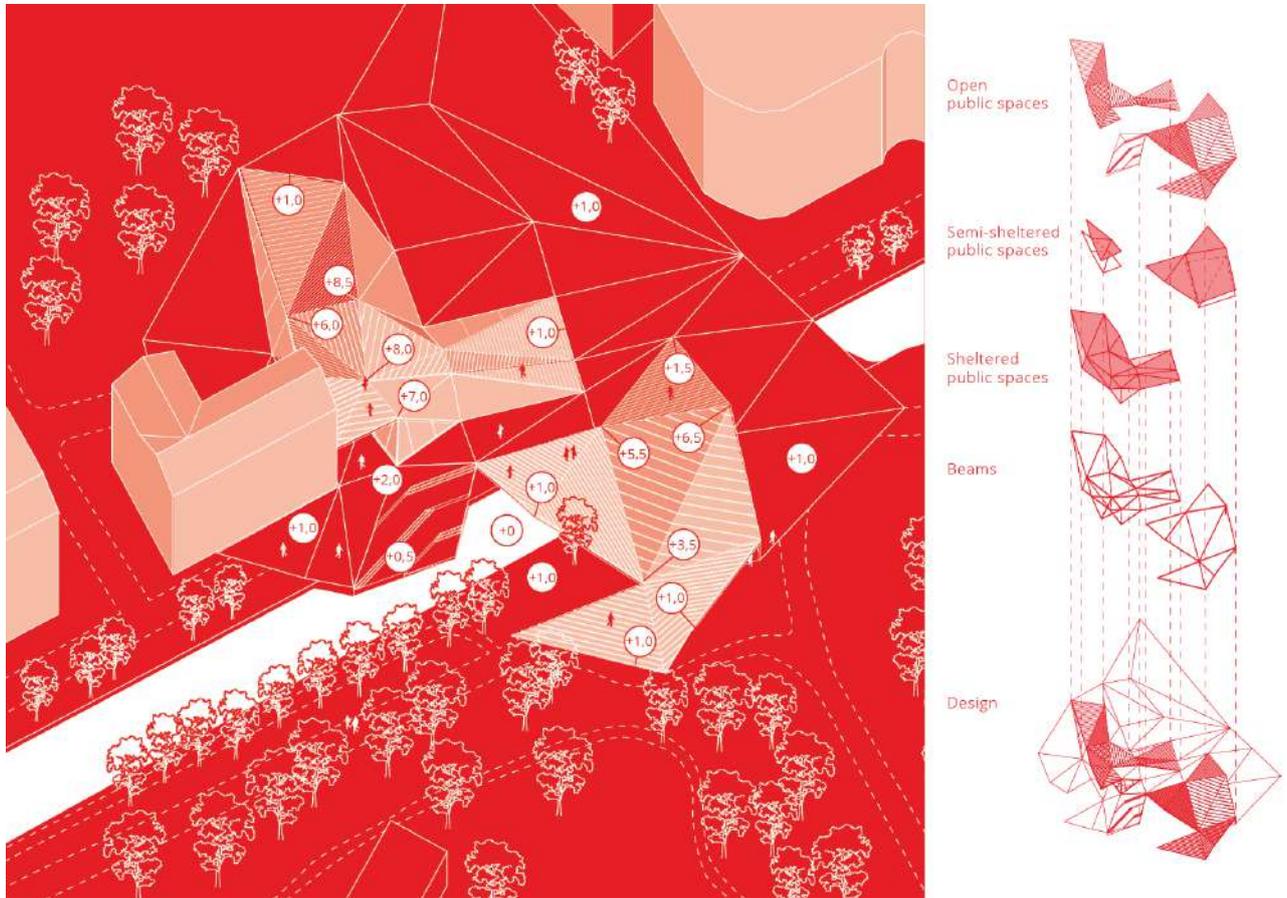
5 - FOLDING



6 - SUN ANALYSIS



Assets and actants in the existing neighborhood acted as guides in the design process of the architectural hybrid



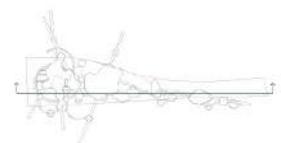
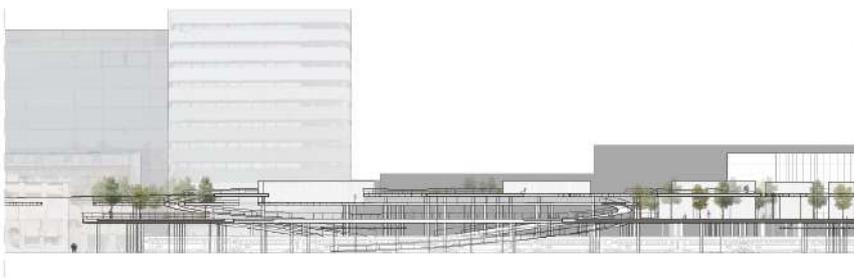
The design has a visible structure of wooden beams in a triangular grid and creates public spaces with different levels of weather shelter



# LAYERS OF NATURE

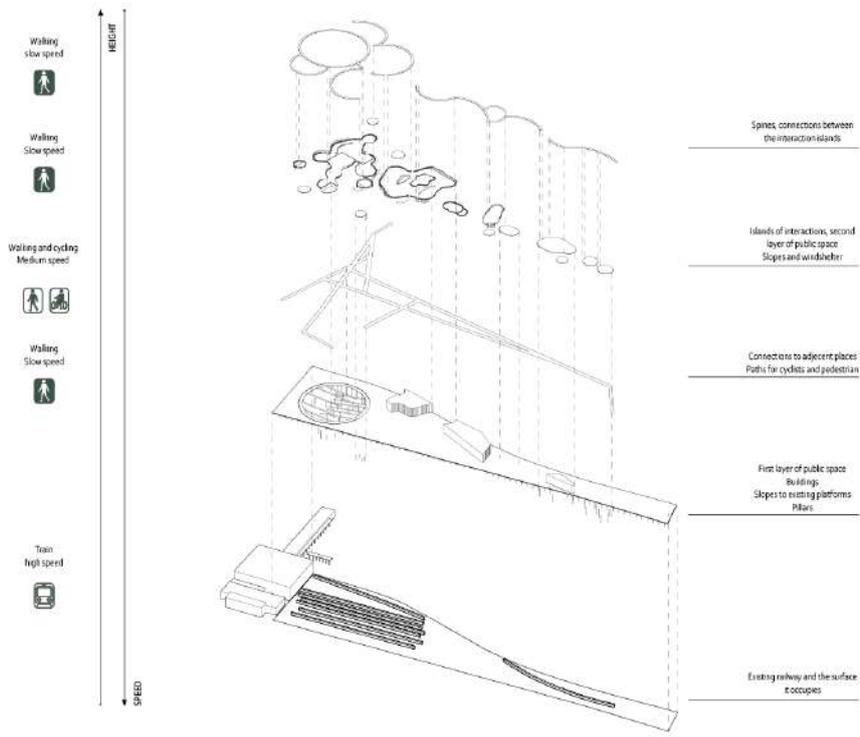
Alida Schultz

This project investigates the experiences of an unused area and how the surface occupied by the railway can be transformed. The use can be enriched by preserving existing elements and adding a layer with activities in combination with the missing nature that once existed. Based on the properties of the site, analyses are made by mapping and layering information to find architectural design strategies. The result of the investigation is a proposal that preserves the current situation and at the same time breaks the barrier by the railway. Instead of being a gap the project creates a vibrant green urban hub.



Section that present relation between the surrounding and the structure and also the vertical and horizontal connection that it creates

AXONOMETRIC

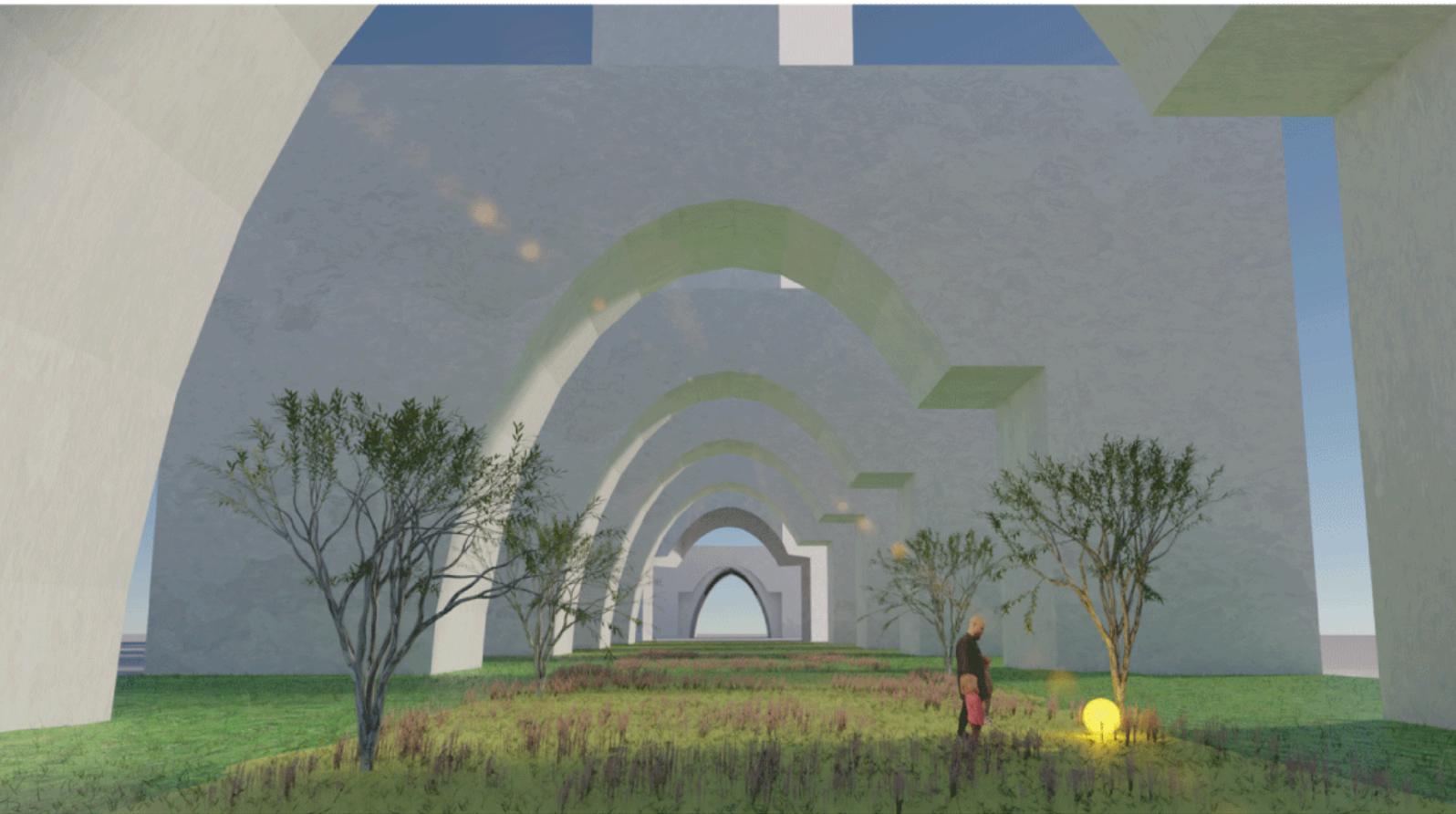


The final project in an exploded axonometric presenting the various components separated in height by the different speed

PERSPECTIVE



Perspective from second elevated level showing the structure and its surrounding



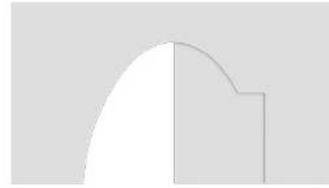
## MEMORIAL PARK AVENUE

Pontus Hedström

A tower as an analog compass visual from a distance faced North and South. A landmark that stretches out towards west. Residential buildings in the shape of archs over a flooding risk strip at the scope of the site. Under the archs there's a memorial park. A public space that creates a state of mind of respect that's beneficial for the residence lowering the aerial noise. The park adds a ecosystem to the harsh area with the implemented greenery. Towards east there's a crematorium cus Gbg lacks that service.



## Shaping archs with noise



Concave shape of facade reduce noise

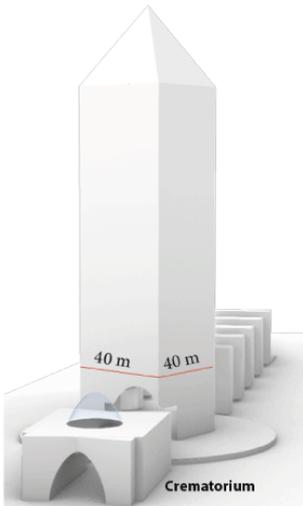


Setback in facade reduce noise



Result combined reduction methods

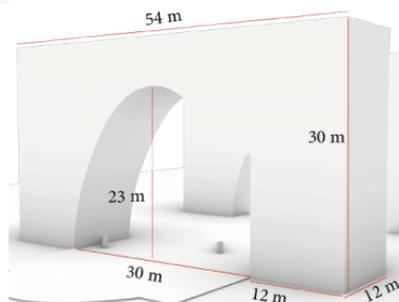
## Habitat

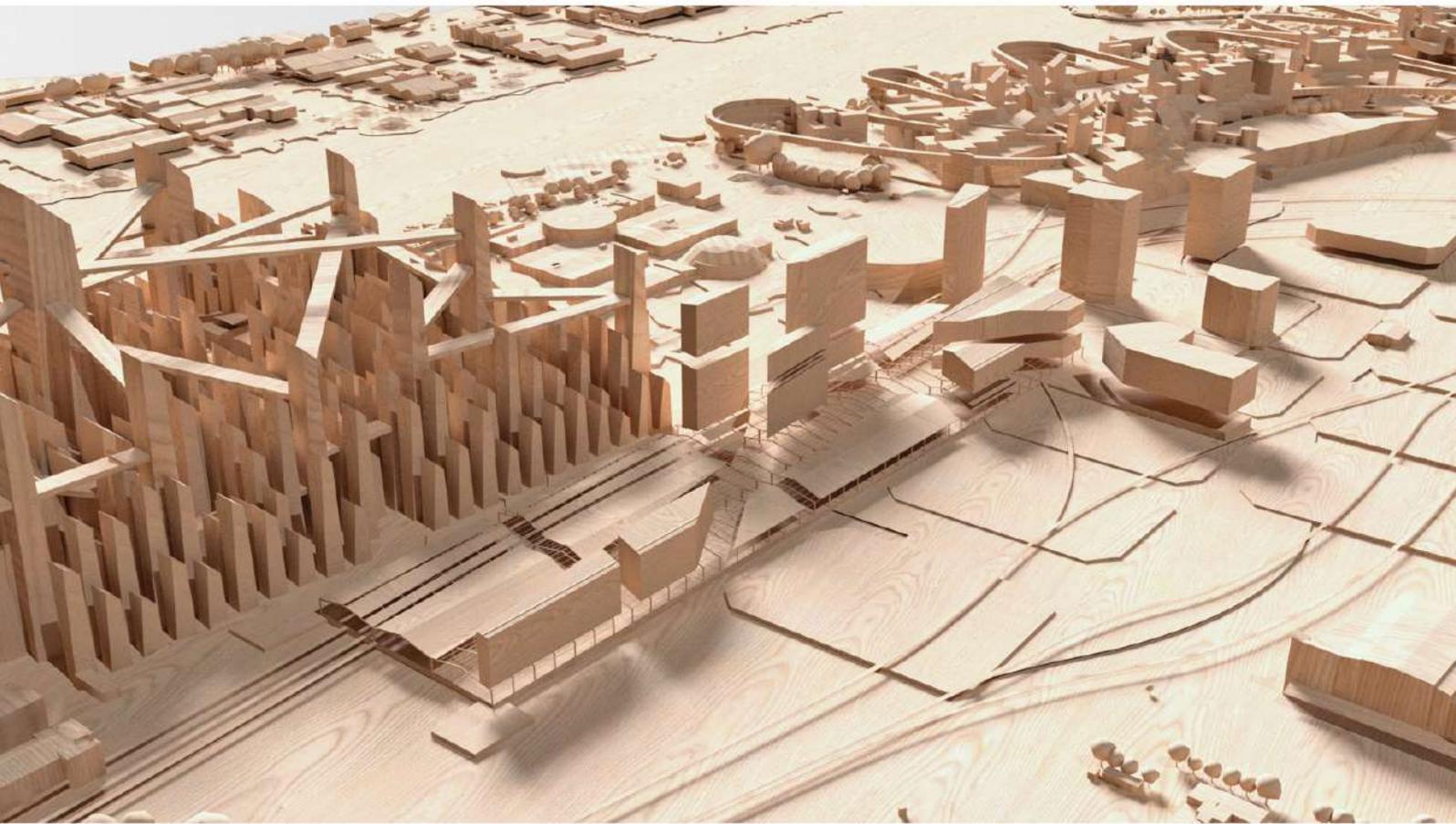


**ARCHS**  
/Residential Buildings  
3-4 room 100 m<sup>2</sup>  
1 room 44 m<sup>2</sup>  
x 5= approx. 300 inhabitants

**TOWER**  
/Offices  
Are faced north and south etc.  
Offices appr. 650 employes/ 20-25 m<sup>2</sup> /person in 8 floors  
Residents approx. 300 in 20 floors  
28 floors total = approx. 100 m high

**Memorial Park**  
To work with the flooding strip in the specific scope and place the structure over it.

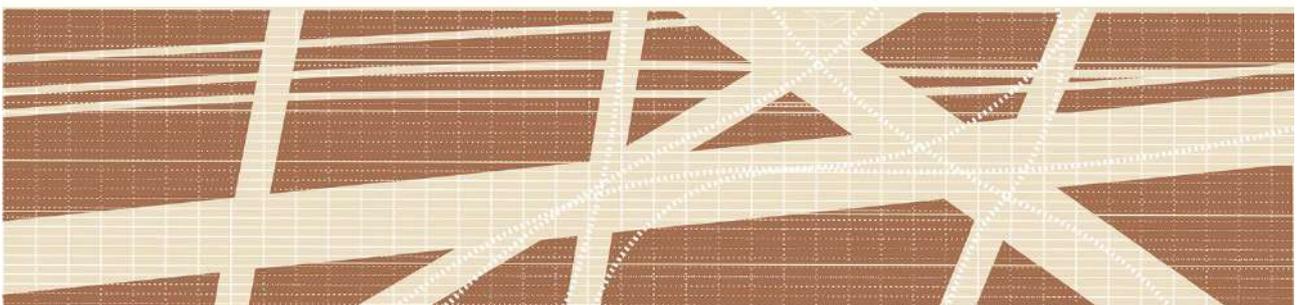


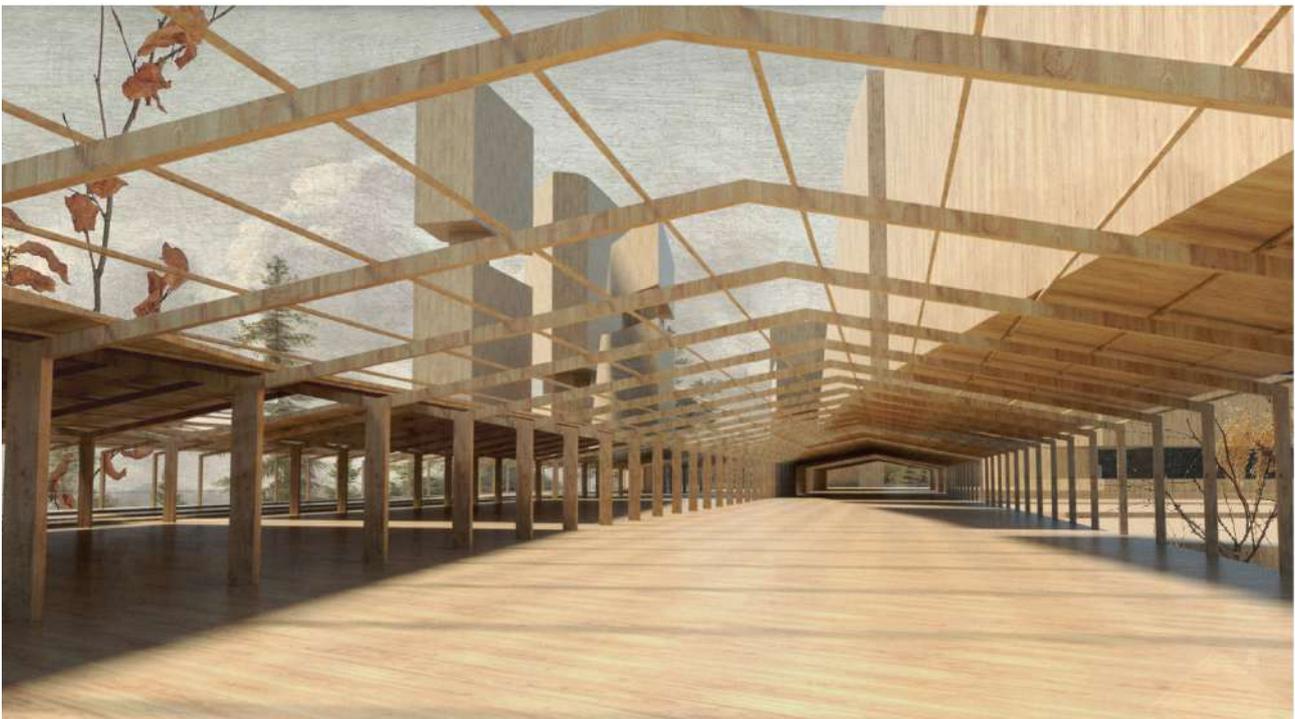
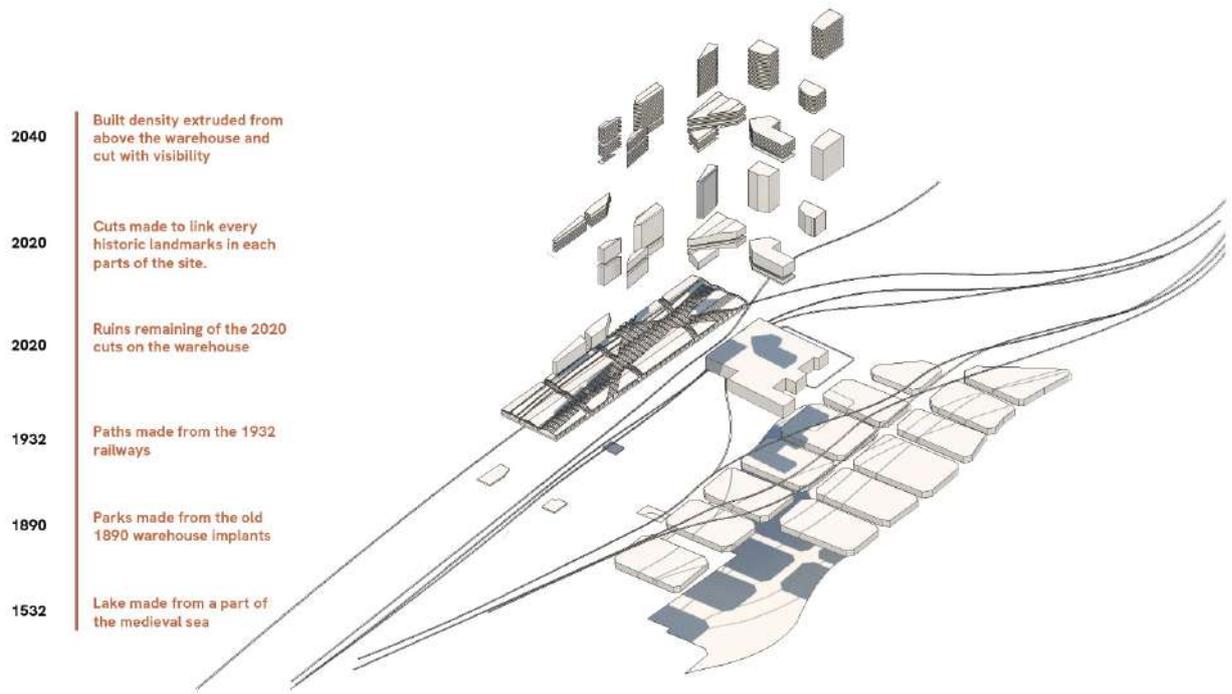


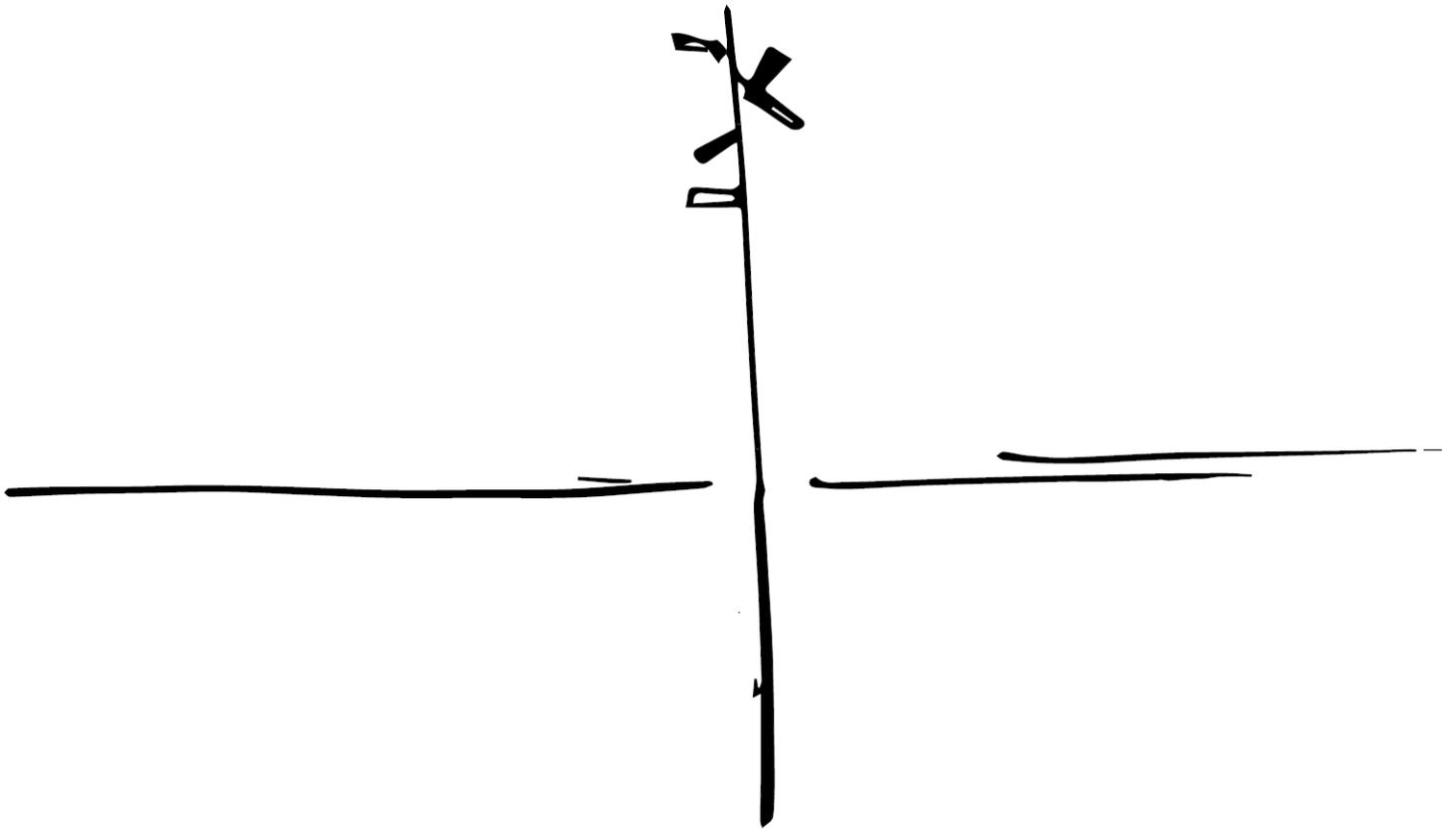
# POSTTERMINAL URBAN DEVELOPMENT CONCEPT

Antoine Viney

For this urban project, I was very interested by the exploration of urban voids and historical layers. I tried to experiment on what could become Gullbergsvass taking into account climate, mobility, history as well as newer aspects regarding ecology. I took inspiration from historic examples, literature books and elements on the edge of architecture. In the end it allowed me to create a project combining my specific heritage coming from Paris with a broader view of urbanism learned with our international teachers. Gullbergsvass neighbourhood is surprising for its vacuity despite clues of it's past. I've tried to challenge the tabula rasa proposed by the municipality by occupying the warehouse in the middle of the site. I was very impressed by its sheer scale as an urban indoor plaza.



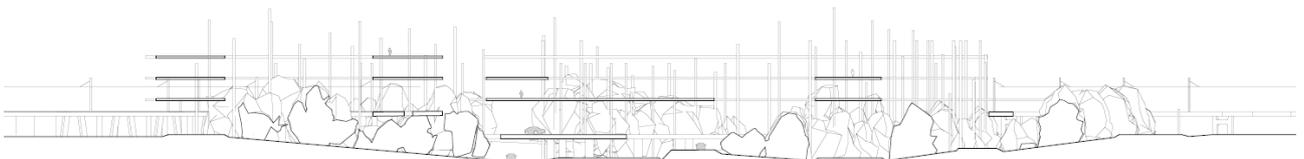




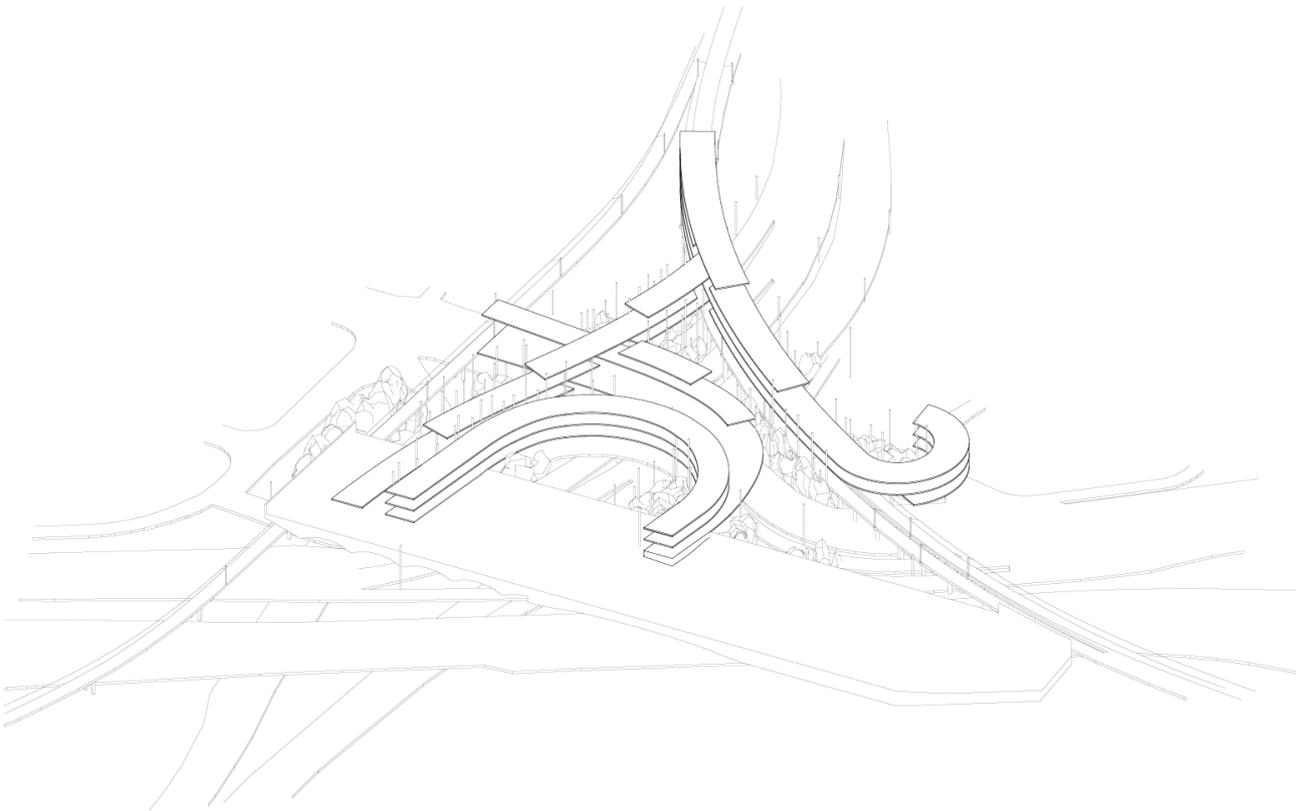
# SPAGHETTI JUNCTION

Raphael Staebli

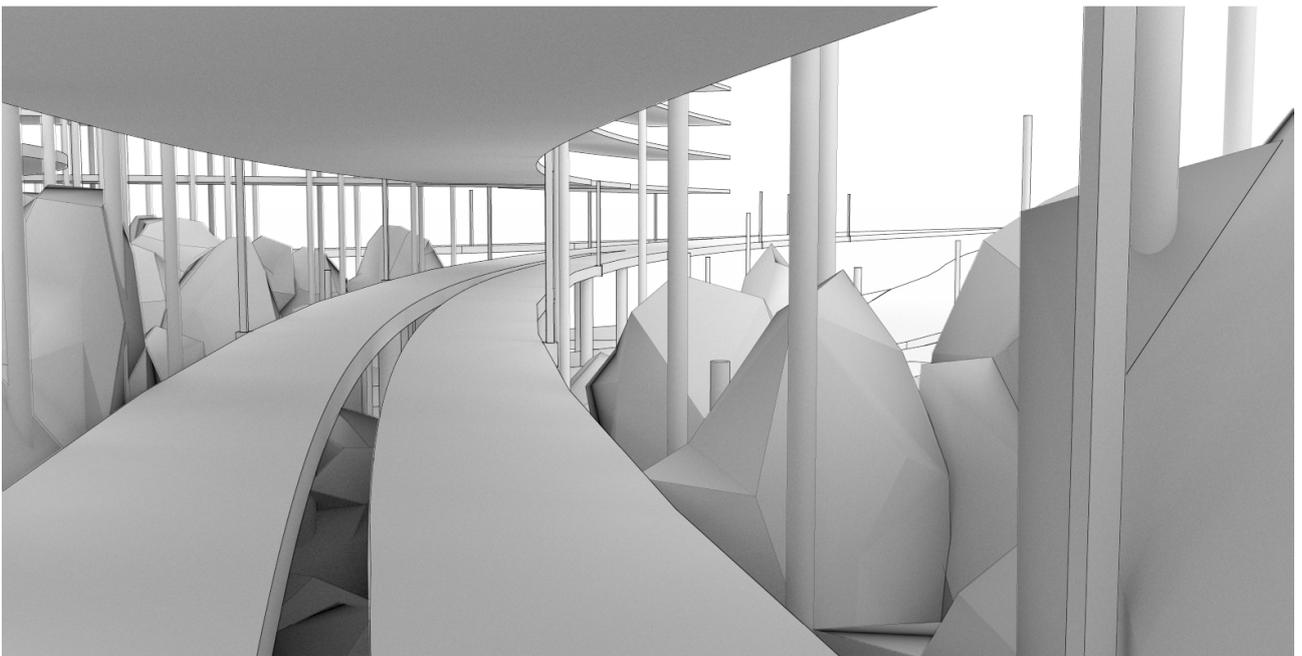
«I live in the orange house» rather than «I live in the 4th window from above, and the 8th from the right». Why do we rarely have our own façade? How important is the notion of identity in architecture? What are its limits? The SPAGHETTI JUNCTION project tries to develop this by fitting into a residual space of the city. It has a magnificent intrinsic characteristic. A forest of verticals, a mixture of horizontal surfaces, an underestimated landscape to compose with.



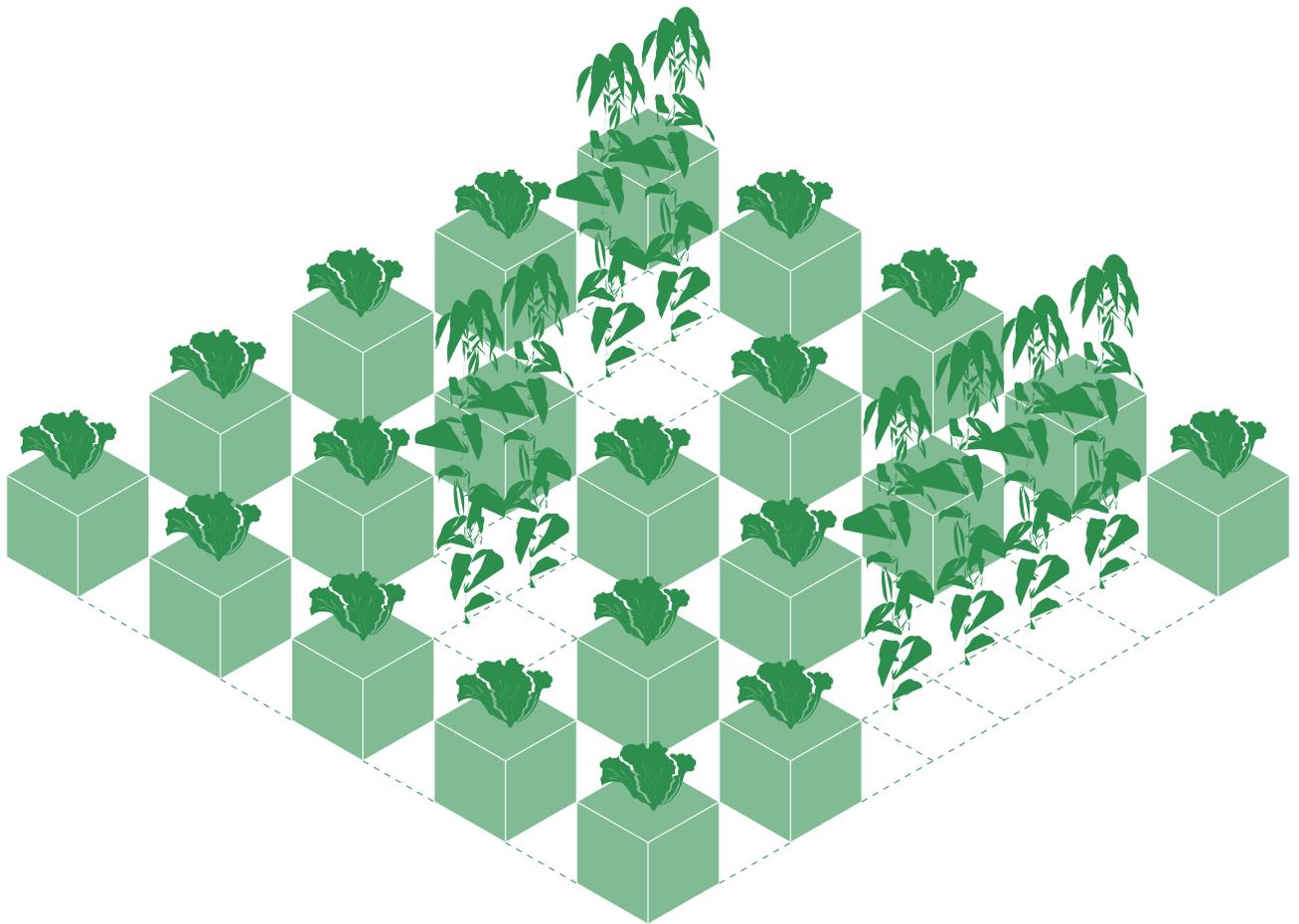
Section. Active circulation on the ground, and passive circulation towards the light. The play of horizontals and verticals



The actual state of the process. The play of horizontals and verticals



Possible future development of the project. How is it possible to keep this human identity? What happens if each one makes its own facade?



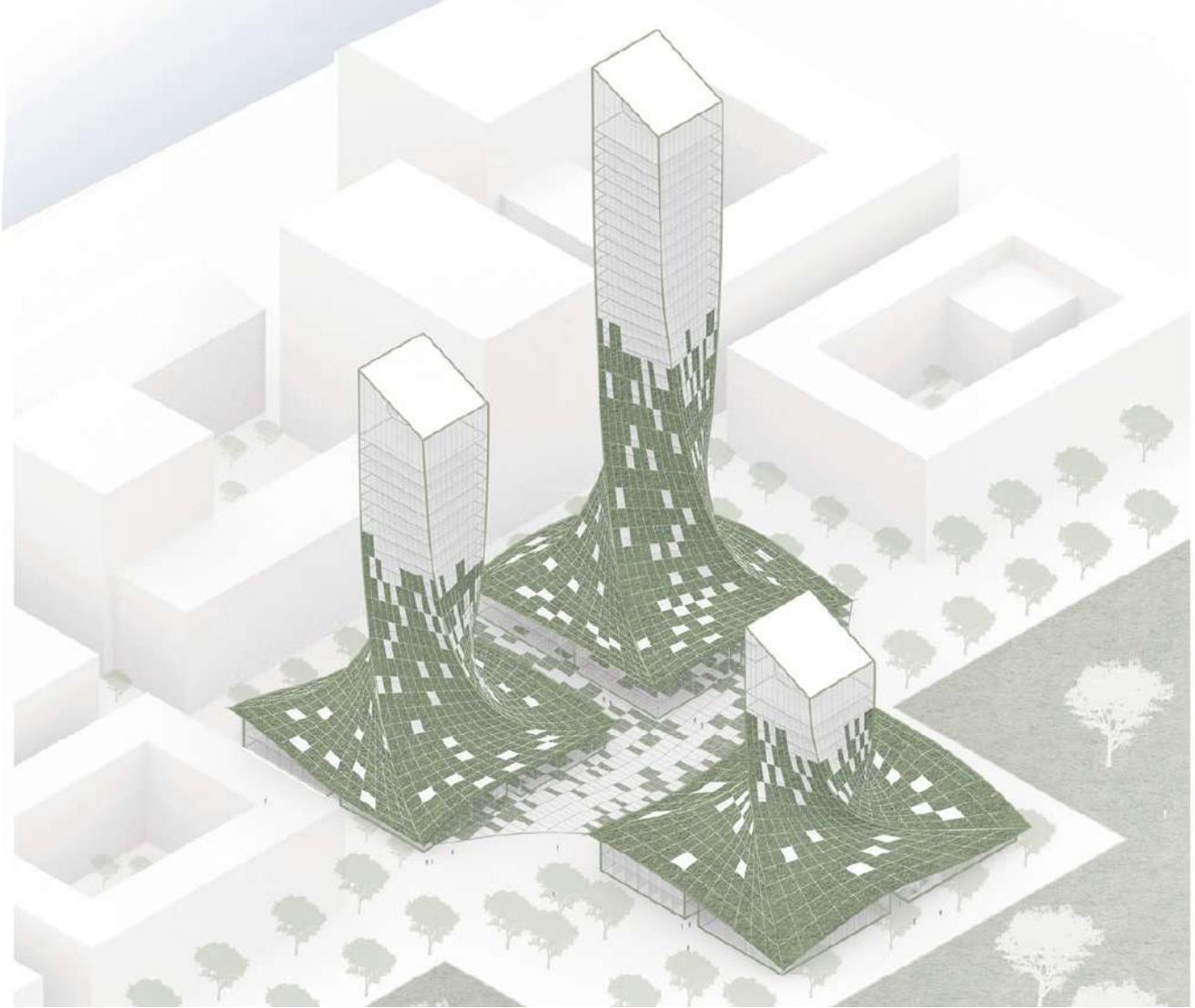


# PRODUCTION

The city has long been a place of production, however now may be the time for some new output. It could be the production of foods as a natural part in the city, feeding a growing population whilst providing places for recreation.

The following projects in this category are:

- Bio Tower Block
- Hydro City
- Rooftop Biosphere
- Urban Nature



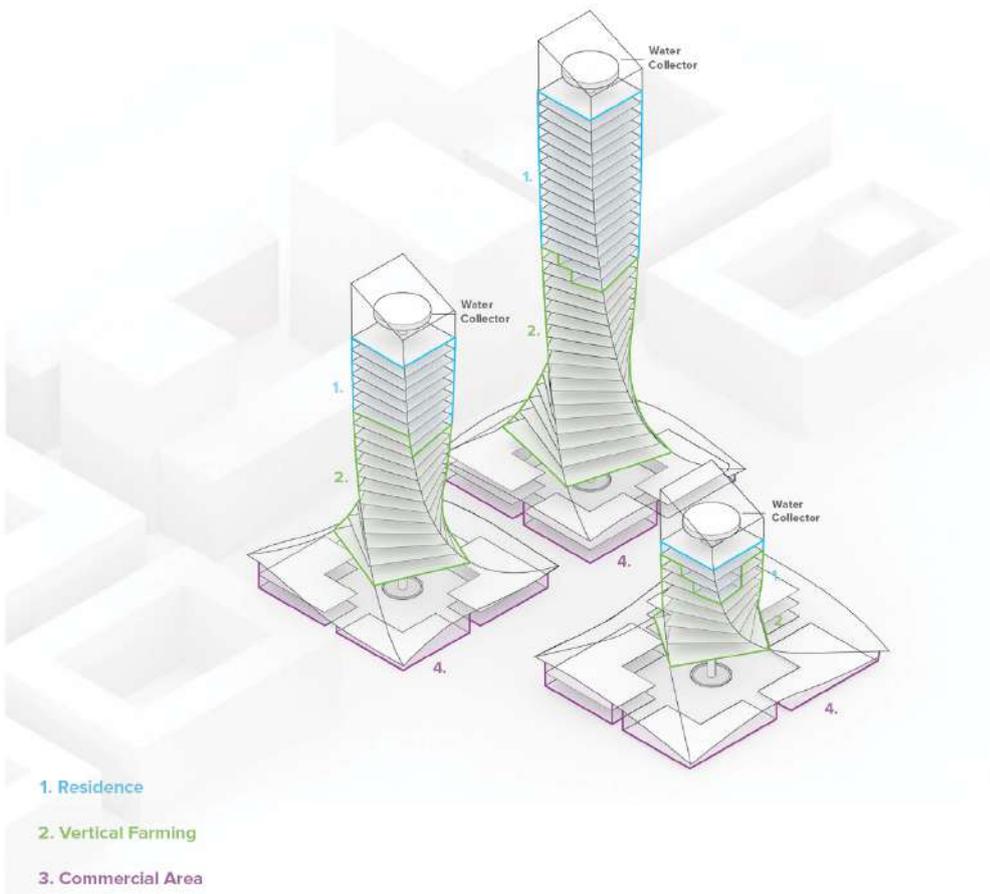
## BIO TOWER BLOCK

Linnéa Forsmark

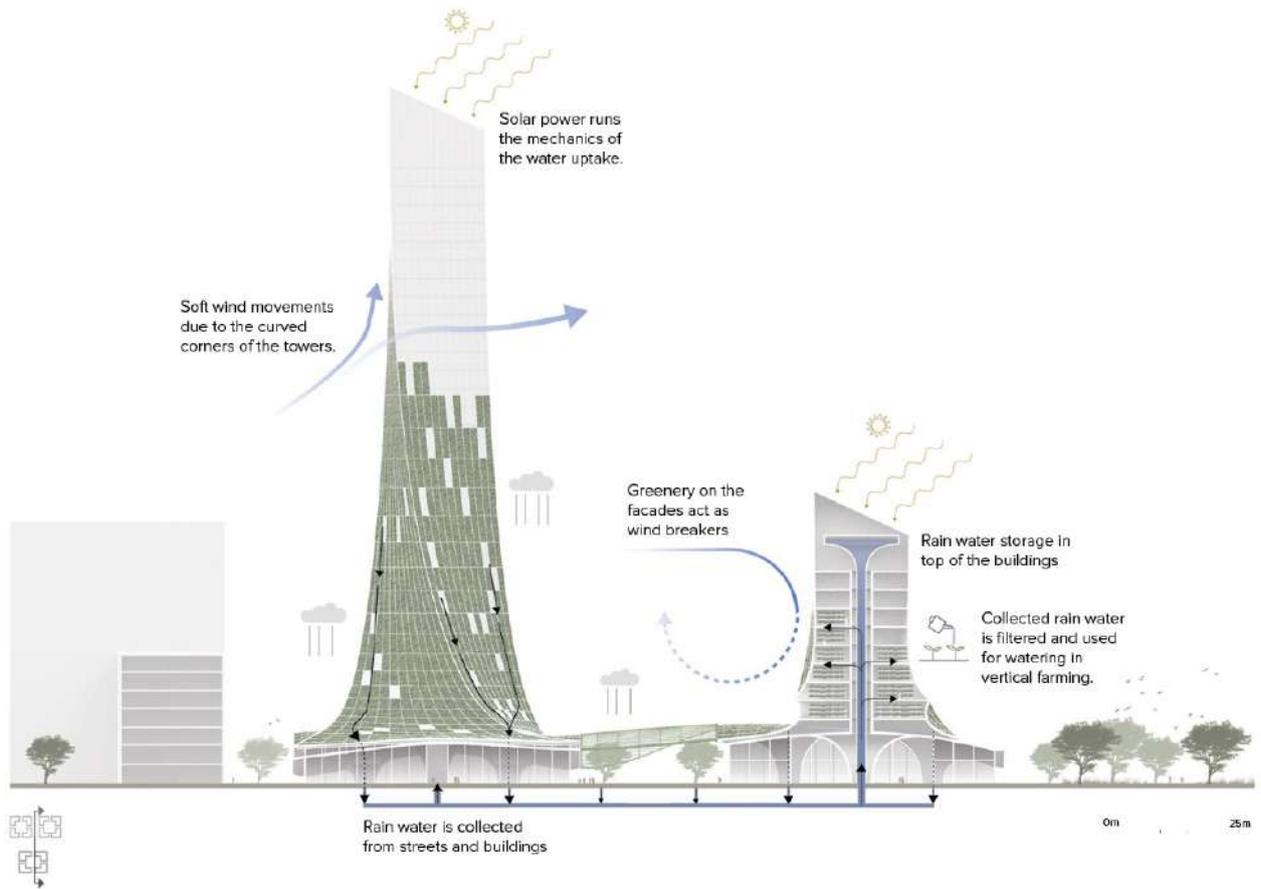
Göteborg faces massive challenges concerning future flooding levels and excess rain. At the same time the production of food must expand in order to keep an ever growing population fed. Tree Tower Block is a suggestion on how the first problem can be a solution to the second. It contains of a system that collects, filters and stores water. The water is then distributed among the the buildings vertical farming sections where it is used for irrigation. And so, excess rain water etc. becomes a significant factor when growing vegetables. Vegetables that then can feed the inhabitants of the very same buildings it has been produced.



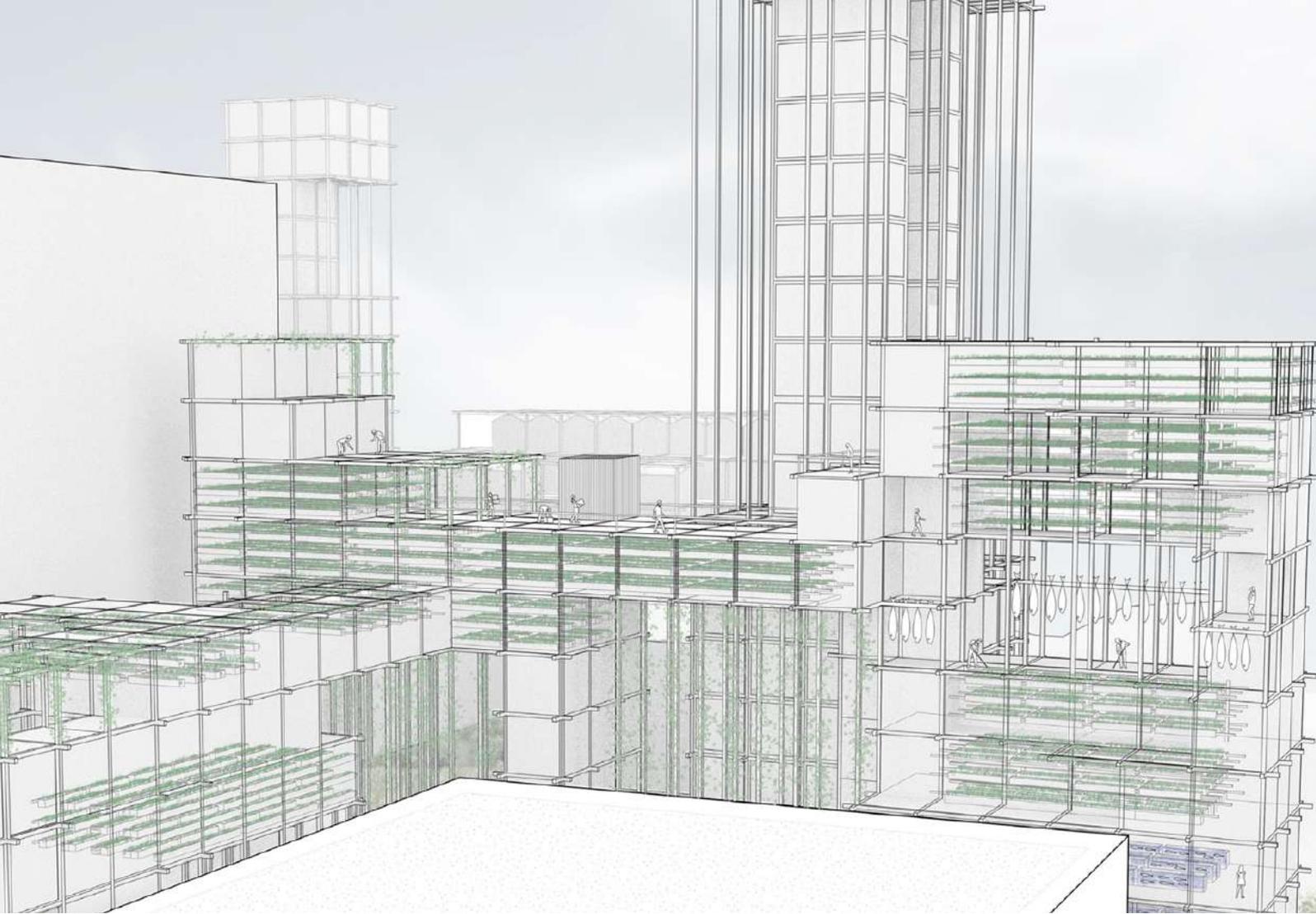
Perspective from main street



Program axonometry



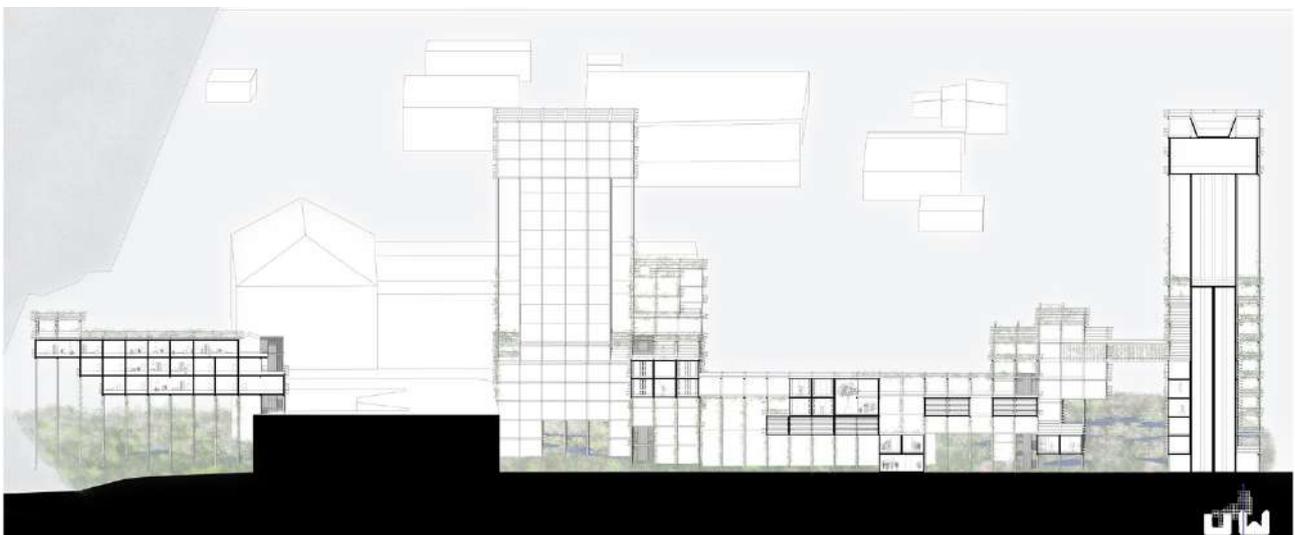
System section



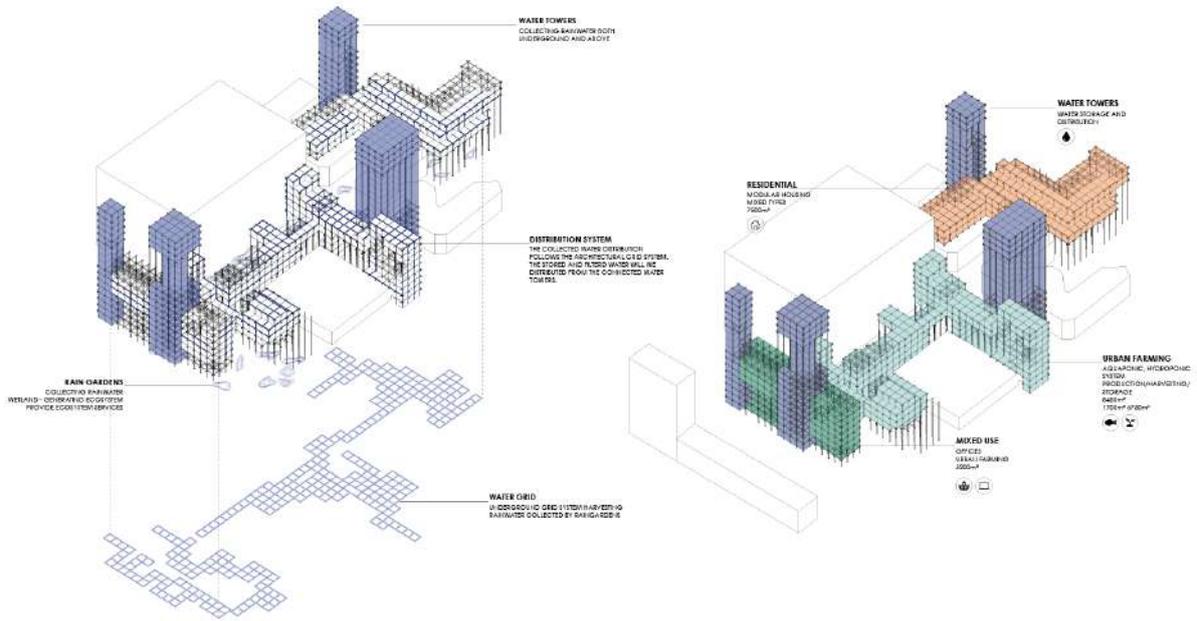
# HYDRO CITY

Sarah Schoberleitner

**Hydro city** is a modular hybrid grid structure with an internal watercollecting system providing water for the whole city. The built volume is shaped by its enviromental conditions. Rising in the scopes empty spaces, it is a cloud like structure that is lifted from the ground making the existing empty spaces remain, reintroducing green infrastructure and thus creating a new atmosphere.



Longitudinal section perspective



Diagrams showing the Hybrid Architectural System (left) and the Hybrid Programmatic System (right)



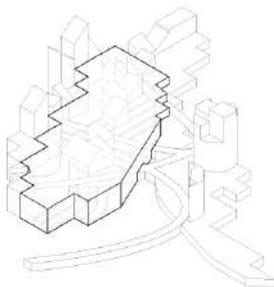
View from underneath



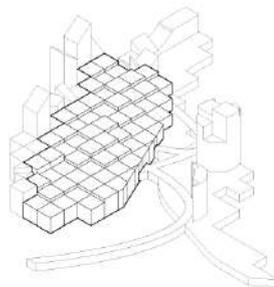
# ROOFTOP BIOSPHERE

Sofia Olsson

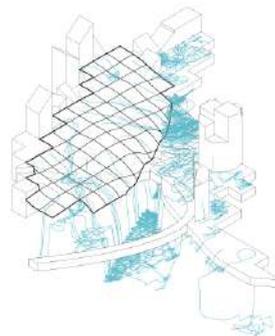
The project 'Rooftop Biosphere' explores possibilities of using rooftops as part of an urban farming system in a dense city context. By introducing green zones to rooftop plateaus, a landscape-like environment is created and elevated pedestrian pathways make it accessible for the public. An outdoor sprawling green area functions as a buffer for the closely situated highway E45 whereas a large-scale greenhouse environment is used for productive landscaping. This so-called biosphere enables a weather protected indoor zone along the elevated paths and it is framed by buildings containing workplaces and residences – creating a vivid environment.



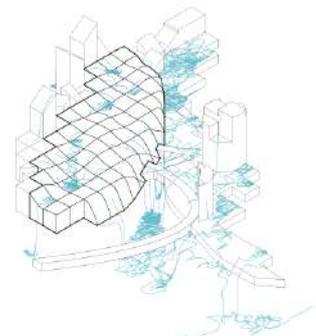
1. Rigid external boundary for biosphere.



2. Extruding volumes in relation to building heights of framing volumes and volumes inside to avoid conflicting geometries.

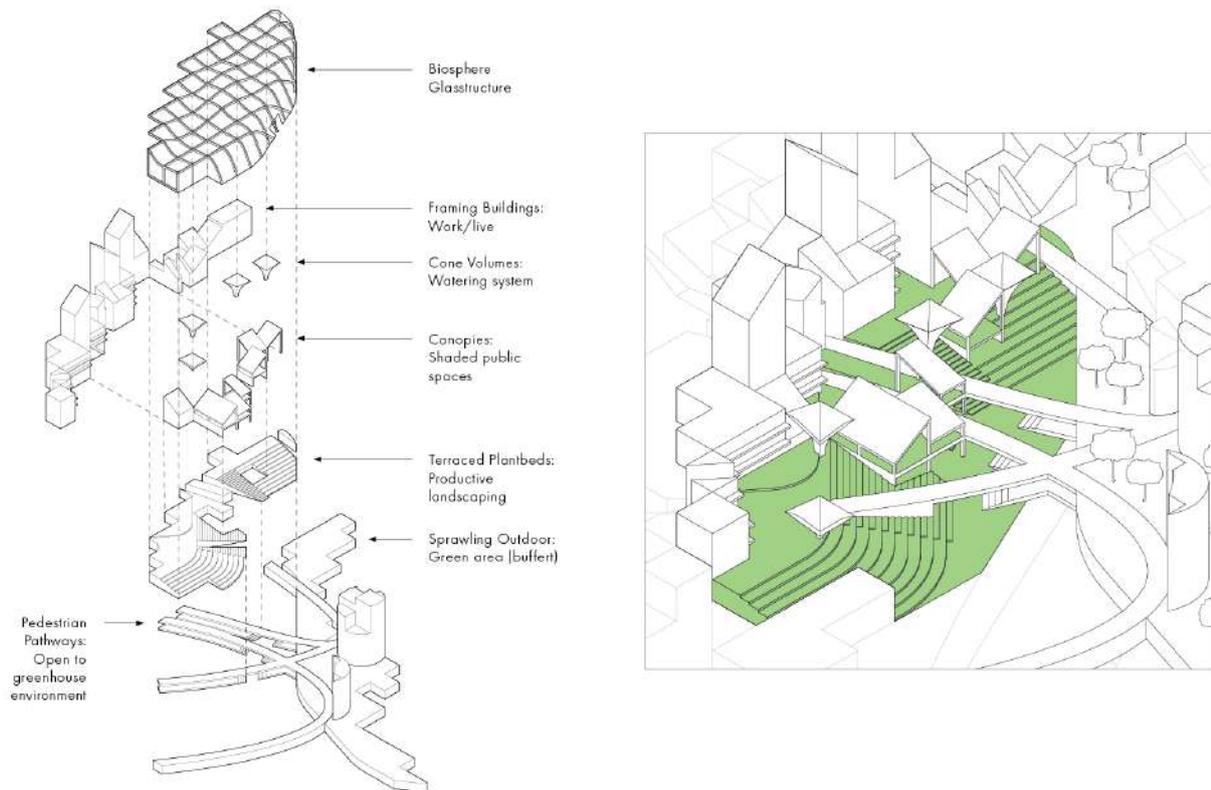


3. Water runoff analysis on draped surface showing that most of the water runs off the structure onto the E45 and the outdoor green area.



4. Surface adjusted to avoid excess runoff onto highway. Rain is gathered in specific points to be used in a watering system for the plantbeds.

Generating the glasstructure for the biosphere



Axonometrics showing the final project components and the inside environment of the biosphere

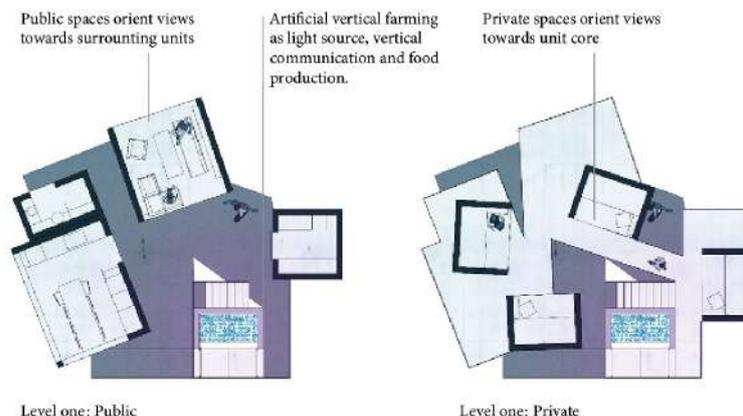




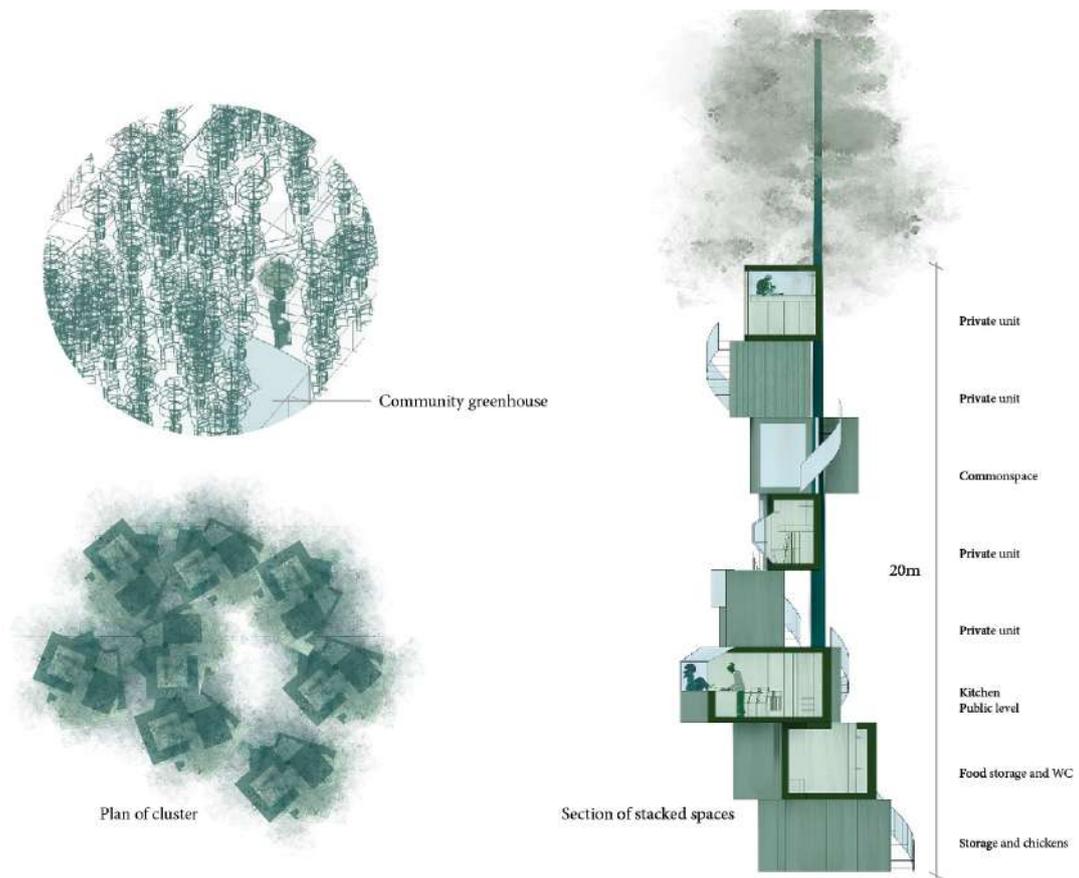
# URBAN NATURE

Andrea Eklund

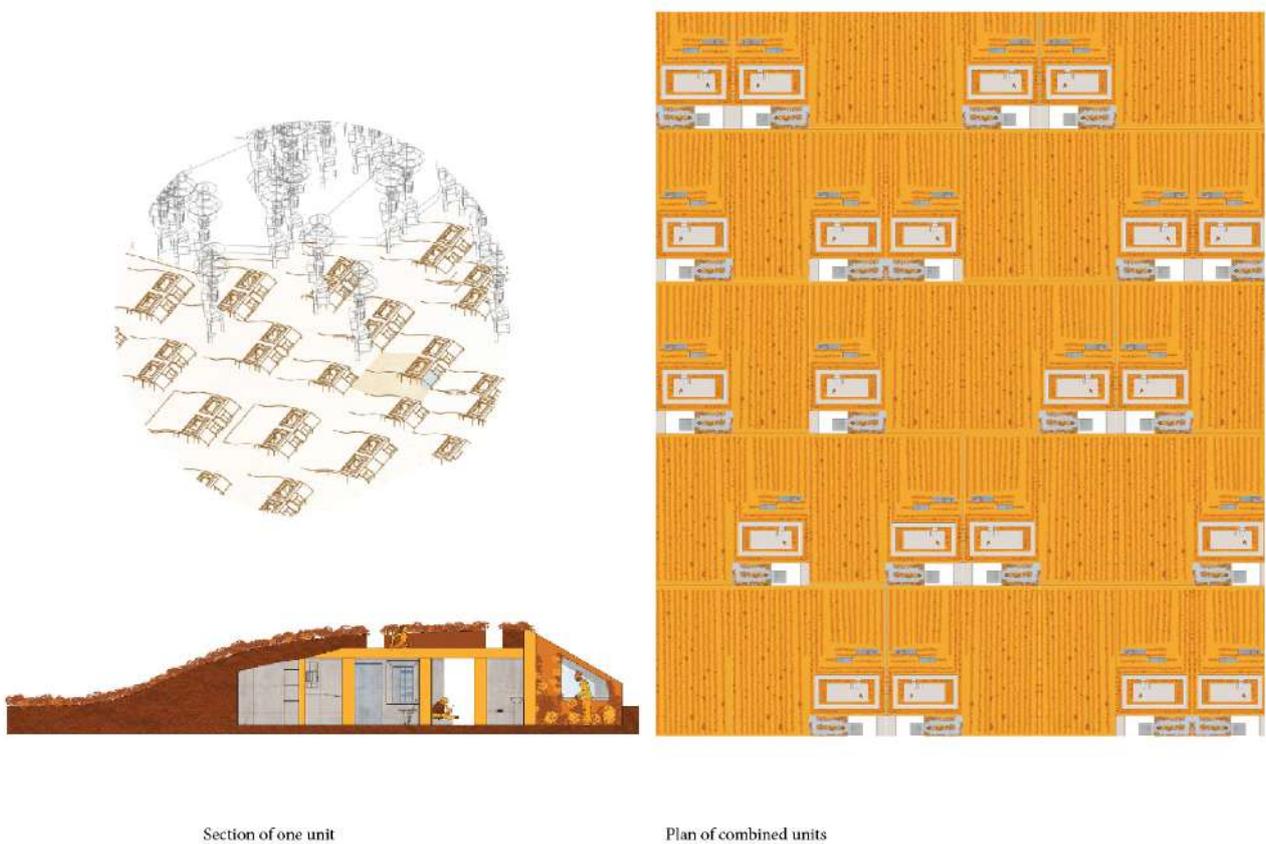
Humanity will not survive unless we change our way of life. Still we keep moving into unsustainable cities and position ourselves further away from nature. So can we live sustainably in a city? Can we create an Urban Nature? This project is an investigation of human necessity which came to revolve largely around food production. It suggests three alternative ways of living completely sustainably by the hybrid of housing, nature, technology and production. The outcome are three highly distinguished environments inspired by three natural elements, the field, forest and mountain. The question remaining is, how are we willing to live?



All units are oriented toward their unit core, the vertical farm, which needs 3 wind-mills to power its energy consumption



The Forest. As in any forest there are clusters and clearings. In clearings, collective greenhouses are placed for food production



The field. Units combine to create a landscape where maximum connection between sun and land is ensured.