



*PORTFOLIO 2013 - 2021*

*LI QIAN*



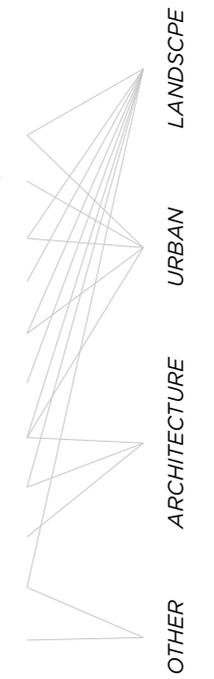
*Since I started learning design in year 2010, I have always had the desire to improve human-being's living environment. Now I choose landscape design as a powerful tool to achieve my goal, thus I have great passion on it. I always intervene social issues by spatial design and try to insist the real problem fields hidden behind the client's demands.*

*Via the working experience as a junior landscape architect at Delva landscape architecture (NL) and the education at TUD (NL) and TJU(CN), I have the ability to design on multiple scales. I am able to give strategies from urban design perspective, and also able to make a space in a short time as well. Landscape Narrative is always important to my design moves. Waterscape, ecological considerations, social impact assumptions, sustainability, urban heritage and parameterization are all topics that I have been involved in. The variety experience has also bring completeness to my design thinking.*

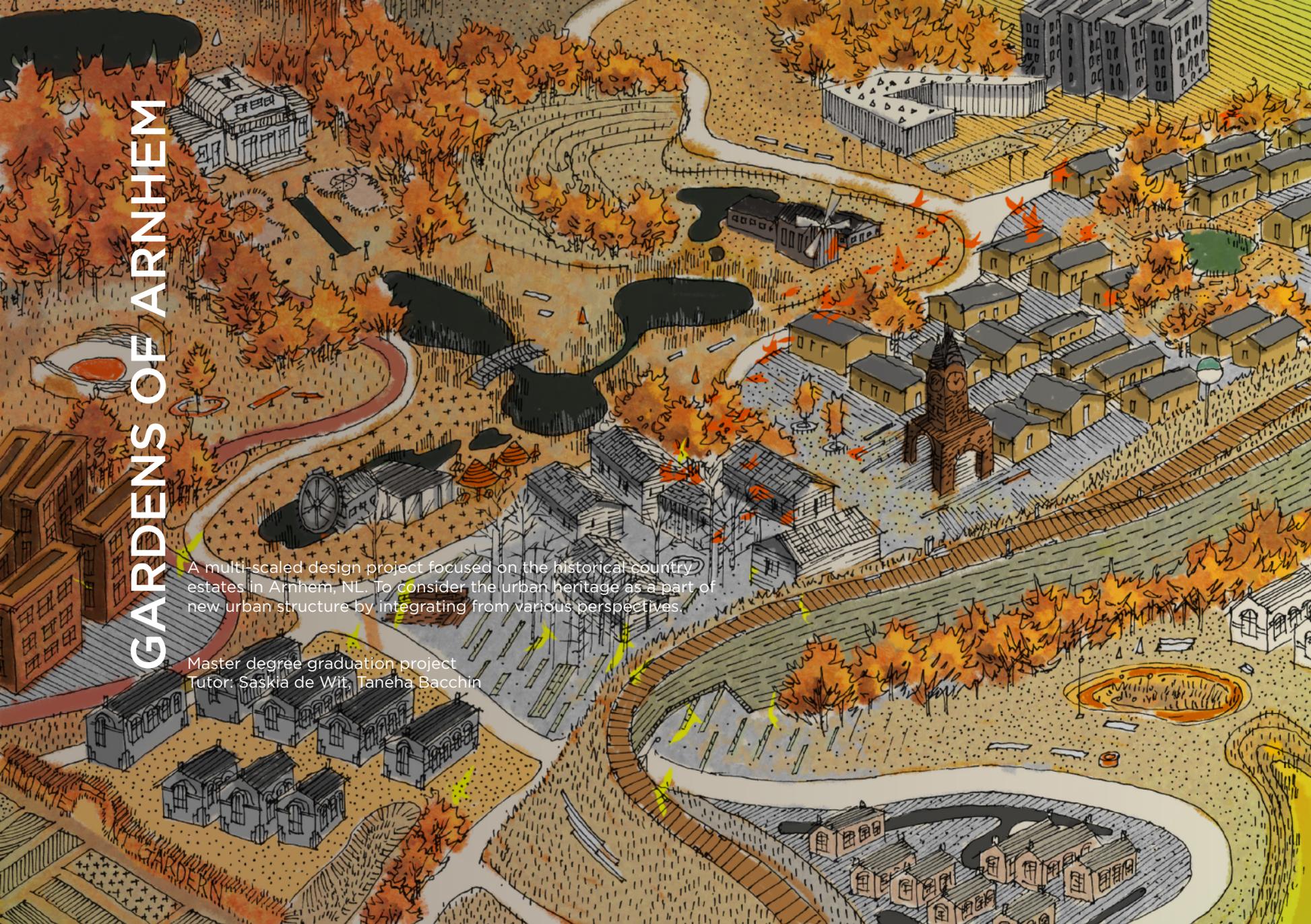
*I wish I could bring high quality design to the living environment of my country. To integrate the rich historical culture with the landscape urbanism theory is the field that I would like to practice on. I believe it is possible to improve the society by urban and landscape design - since the 'space' is usually the foundation of modern cities.*

*This portfolio shows my idea. In each work, I used landscape design approaches to influence an urban social issue. When we are talking about how the future looks like, we are largely talking about the future urban designing and landscape designing.*

GARDENS OF ARNHEM  
NORWEGIAN PARADOX  
ROTTERDAM NODES  
OTHELLO  
PARC ORANGE  
MAZE  
GROWING NATURE  
BIRD LAND  
CUBES  
XINGENG  
MISCELLANEOUS



# GARDENS OF ARNHEM

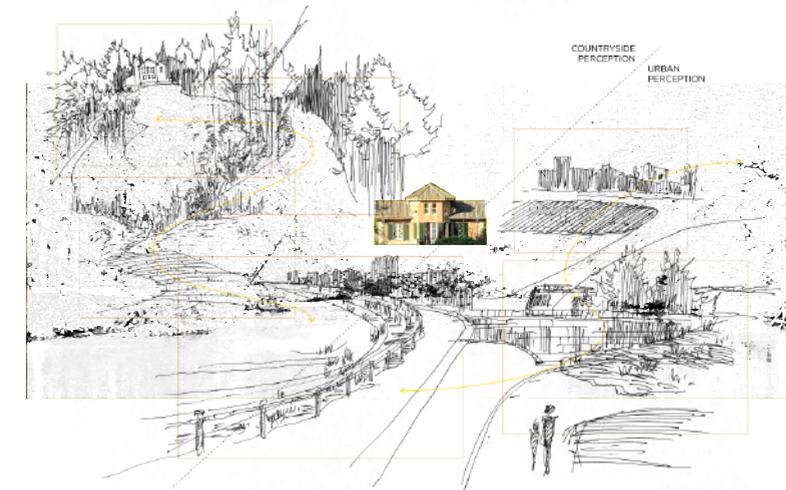


A multi-scaled design project focused on the historical country estates in Arnhem, NL. To consider the urban heritage as a part of new urban structure by integrating from various perspectives.

Master degree graduation project  
Tutor: Saskia de Wit, Taneha Bacchin

Arnhem is an ancient city located in Gelderland province of the Netherlands. It has the Veluwe mountain terrain at the north and the IJssel-Rijn river plain at the south. The mountain terrain in Veluwe we can see today is a typical moraine landform formed by crustal movement and wind erosion started from the ice age. Arnhem is located in the large sand plain which was created at the front of the ice by sediment from the melt water. The sand soil formed by moraine movement and the river clay soil formed by the river movement together determined the historical land use in Arnhem area. Such geological features are even visible in today from existing ditch patterns on the maps. (figure) The area with more wet soil on the map was always the agriculture land in history. It is also where the most historical country estates in Arnhem is located.

The historical country estates can be divided into different construction periods and were belong to different owners with different functional emphasis (figure). The estates in Arnhem city (Sonsbeek, Zypendaal, Warnsborn, Presikhaaf, Angerenstein, Klarenbeek and Bronbeek) were mostly built after year 1800, and used to be the properties owned by the new elite class at that time, built for escaping the noise of the city and

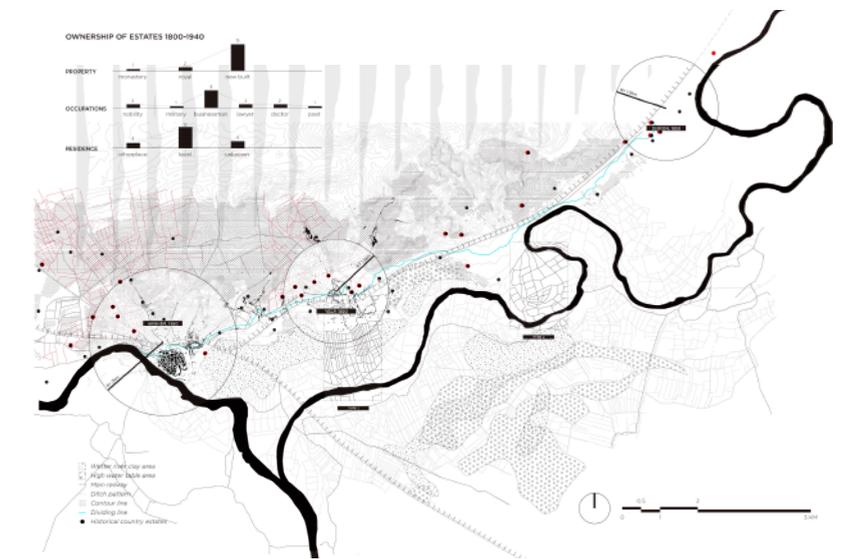


'Feel like the boundary'

## THE HISTORICAL COUNTRY ESTATES IN GELDERLANDS

getting closer to the Veluwe area for the nature and Arcadian life experience. Therefore, most of them are located at the north part of the city, in between the Veluwe and the old city area.

The initial assignment present the recreational demands from the estates owners. The government and the organization who is maintaining these estates required a more collaborative-used estate scenario, from which they could benefit more financial income, to support the increasing maintenance costs. In fact, the historical country estate is already an important city attraction that can create tourism value and income. In the past, Arnhem has always used these estates as the cultural name cards of the city. If we pay attention to the current situation of these historical country estates, we may find that most of them are in a quite good maintenance state. However, the identity of historical country estate is weakened from the city nowadays. This is a result of multiple reasons - the problem cannot be simply attributed to either the estate or the city. From my study, I found both of the following urban issues have impact on this problem: the fragmentation and disconnection.



History and geography features of Gelderland estates

## FRAGMENTATION

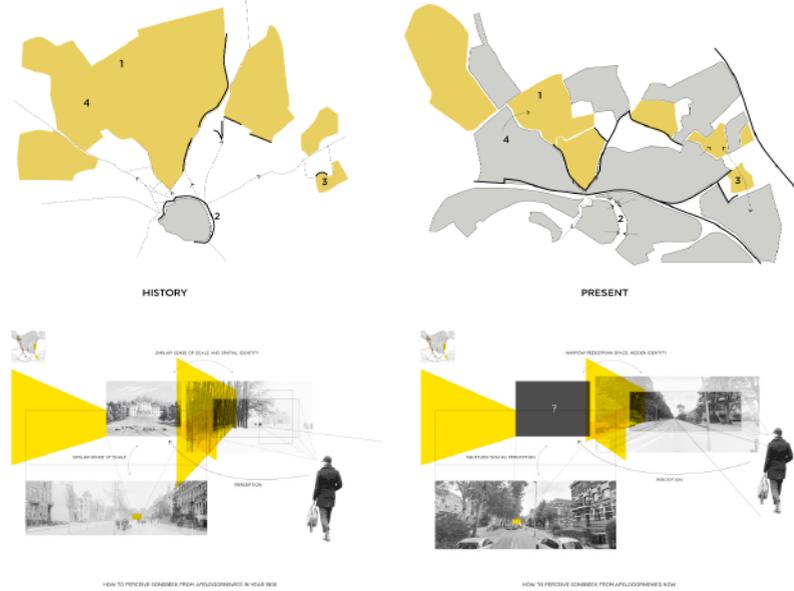


With the expansion and development of Arnhem, the former agricultural land and the country side were annexed by the city. It means that the historical country estates also became a part of the city and no longer located in the 'country' anymore. They are now surrounded by the residential areas and the infrastructure networks, showing a complete difference from the past. The most obvious phenomenon caused by this change is that the position of the historical country estates in the city has become ambiguous and uncertain. This uncertainty is also weakening the identity of the estates and the related urban culture.

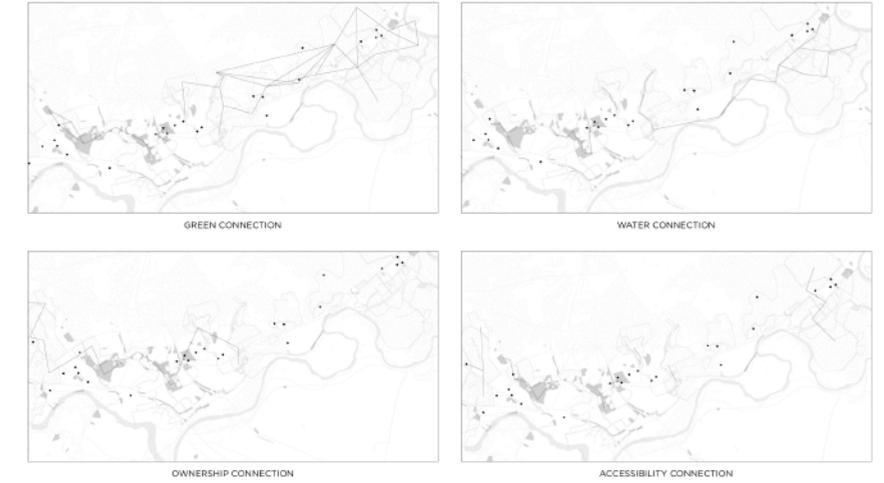
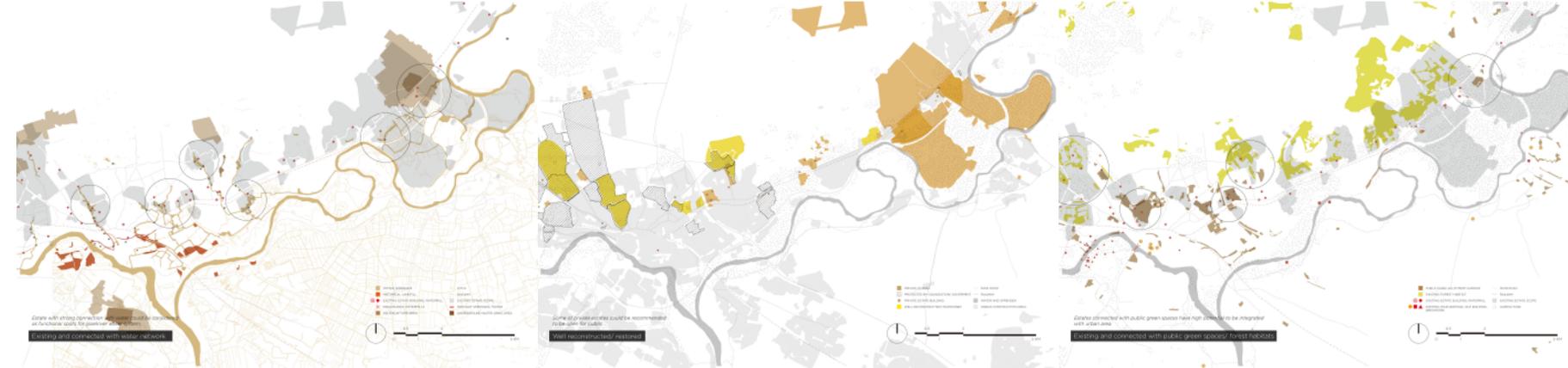
The relationship between the city and the historical country estate used to be more clear than it is now. It is because the estates used to be located in the countryside and far away from the city. When people are going there, they leave the urban area and reach these Arcadian landscapes by crossing the countryside landscape. However, although the estates still keep a different landscape from urban area, they are no longer located in the place that has the same landscape quality as they have. Ironically, although they are no longer rural landscapes, they are also incompatible with urban landscapes. Even if they are now located in the urban area, some of them still looks like they are located at the city boundary because of the fragmentation caused by the infrastructure networks.

The fragmentation also cut the connection between the estates themselves. This barrier not only exists in space, but also affects people's cognition. People in the city could no longer perceive a strong historical country estate culture anymore. As the most important recreational destinations in the city, the historical country estates have discretely formed some clusters in the city. But they did not work as a whole.

The transition of urban structure



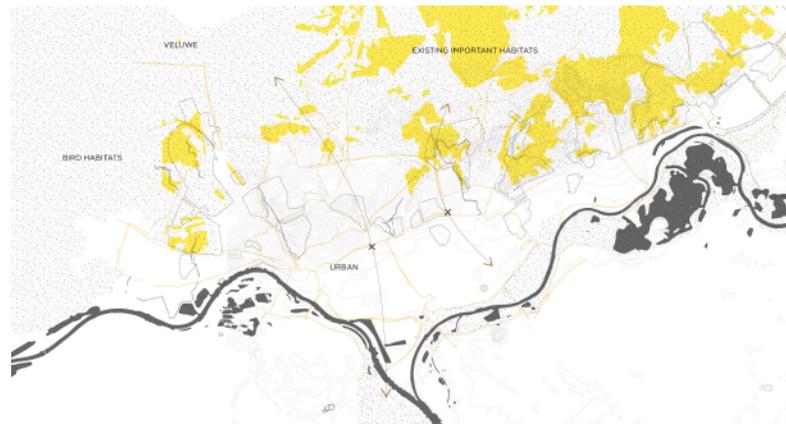
The fragmented recreational clusters



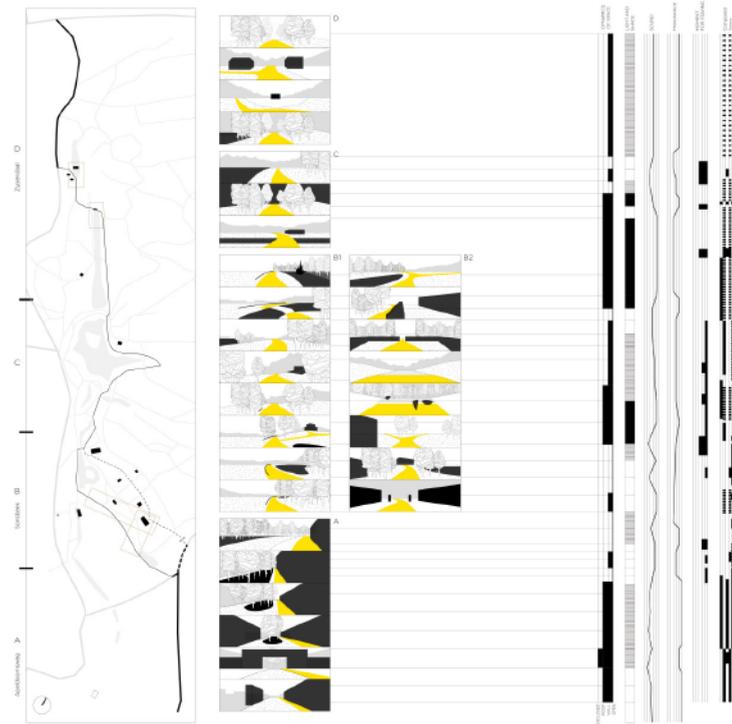
## DISCONNECTION

There are disconnection problems in Arnhem city as well. The disconnection both happens on infrastructural and ecological networks. From the infrastructure perspective, there is no strong and attractive connection between the Arnhem city to the north Veluwe zone. In history, Sonbeek, Zypendaal and Warnsborn used to be connected. Together they presented the Arcadian landscape at the north end of the city. But now they are separated. The great nature zone at the north in history, which was the combination of Sonsebeek, Zypendaal, Warnsborn and the whole Veluwe zone, was now divided by dwellings and infrastructure lines.

The disconnection also happens on the ecological network. The habitats in Veluwe zoom continues to the south, end in Zypendaal, Sonbeek and Klarenbeek area. There are only few green spaces in Arnhem city could be seen as habitats. Therefore, the habitats are divided by the Arnhem city between Veluwe and the river plain. Although there are quite a lot of greens in the city area, most of them are only simple lawns which do not have enough ecological and recreational values. However, some of the estates are located on the current habitat structure. With a better design strategy, they have great potential to be considered as a part of the eco-structure in the future. The green can be derived from them and penetrate into the urban space by adding coherence green space. The historical country estates are more or less related the above urban issues.

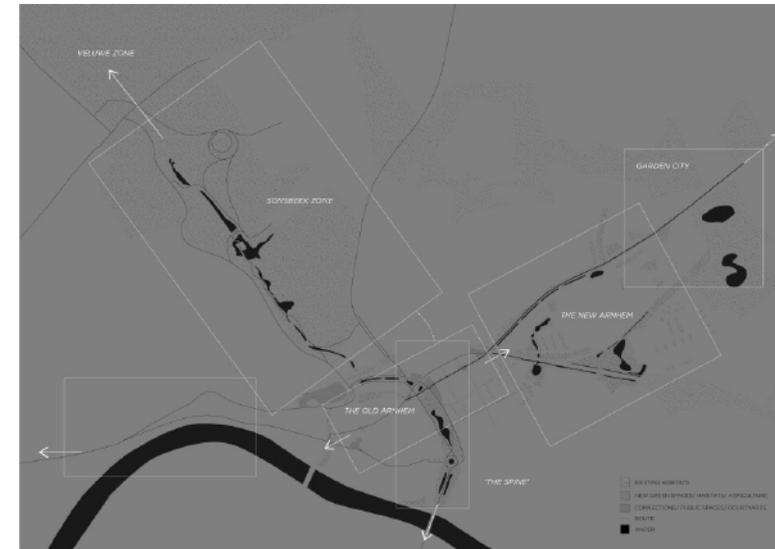


The Harplin's score on Sonsbeek



The perception of the identity of a space, comes directly from people's experience from this space. Therefore, the experience study is a powerful tool to analysis the space issue. I refer to Harplin's experience score to visualize the route from the center of Arnhem into Sonsbeek and finally to the northern section of Zypendaal. From the estates, the experience in the estates are well-managed. It is mostly complete and full of the impression of the Arcadian landscape. From the outside urban area, the historical experience and elements are no longer there. There are certain disconnection in between the estate and urban area.

New green structure of Arnhem



## A MULTI-LAYER SYSTEM

There are three horizontal lines in the structure, which is the green line at the north, the urban context line in the middle and the river line at the south. Between the horizontal lines, there are also three vertical lines goes across them, which are the sprengen lines. In these vertical sprengen lines and the surrounding historical country estates, agriculture lands, urban greens, surface water, road nets, public spaces, together connect the horizontal lines from ecological, water and recreational perspectives. Thus, the urban clusters from all the directions, the urban habitats and water systems, are all included and connected in this structure. In order to connection, I proposed a series of design strategies to apply on different urban areas.

First, from ecology perspective, (figure) the habitat which continues from Veluwe to Sonsbeek oak forest now has been connected to the city due to the increased urban green spaces. The restored surface water in Molenbeek area and the re-greened abandoned land near infrastructure will together form a new large habitat node in the new developed urban area.

From the recreational perspective, the new structure brings a more clear urban context experience structure. The recreational structure could be divided into three themes. Each theme does not only have one single route, but are consist by multiple roads, spaces, routes and spots.

From the water perspective, the current water system (figure) is overly dependent on the Angerenstein sprengen.

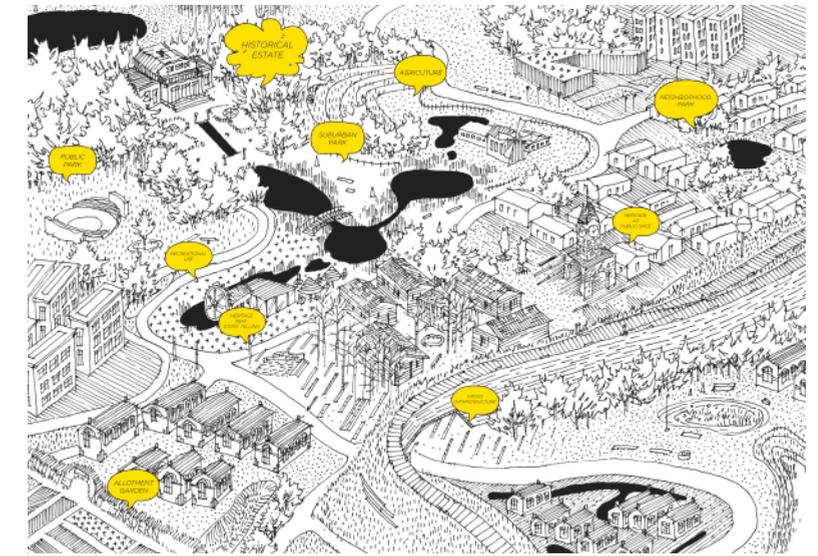
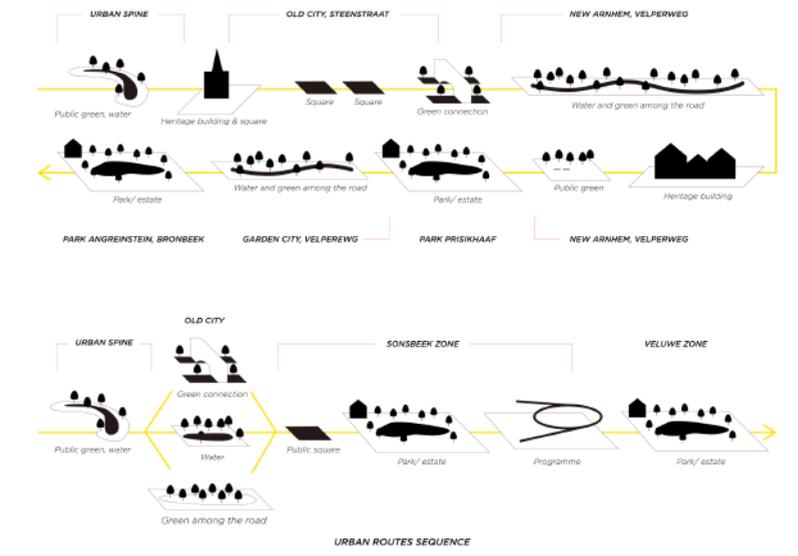
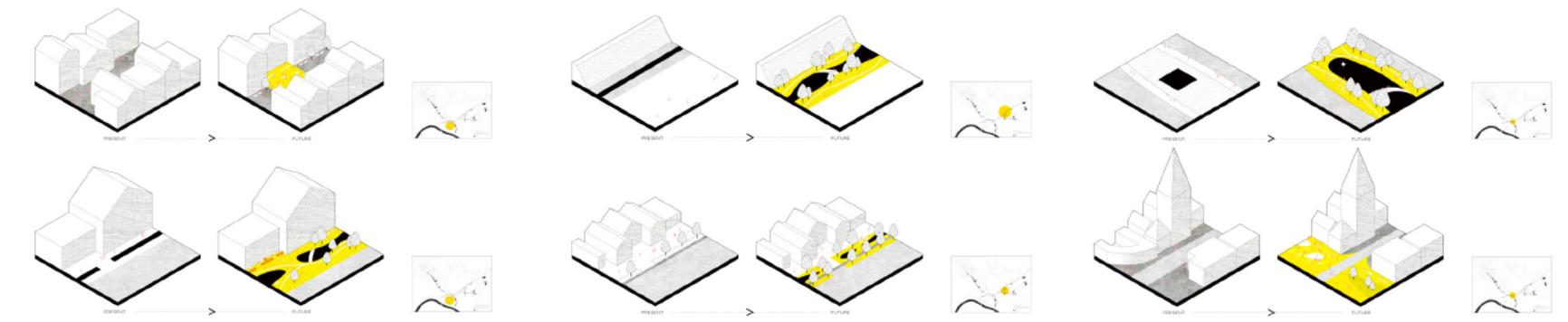


Connection on urban habitats and water



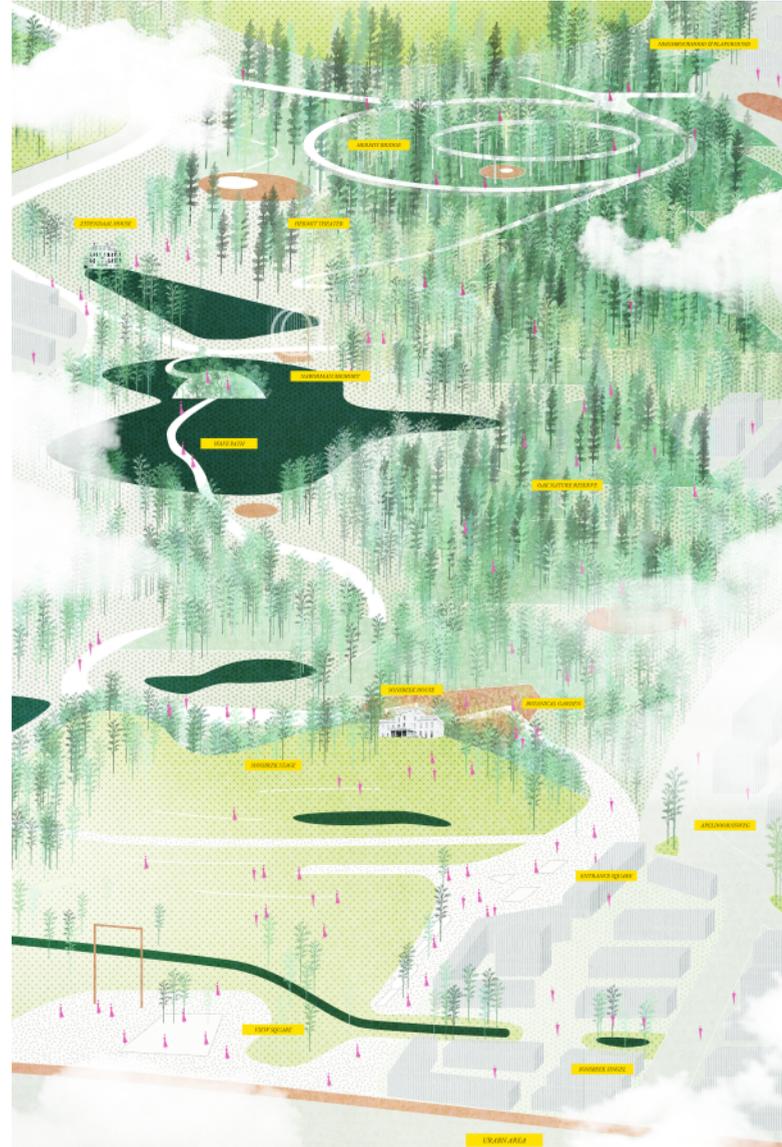
**NEW PUBLIC SPACES AND PROGRAM CONNECTIONS**

*New recreational experience routes: more public realm, more programs, more active spaces*



## SONSBEEK TRILOGY

I named the new landscape in Sonsbeek locatatie as 'the Sonsbeek trilogy'. It is because the design most happens on the three joint parts between Sonsbeek, Zypendaal and the urban area. I choose to maintain keep the existing situation and do no actions in the other areas in order to maintain the style of the estate to the greatest extent. The three joint parts are the south Sonsbeek agriculture land (and the entrance), the Grand pond between Sonsbeek and Zypendaal and the Hermit forest at Zpydendaal north. Although these three locations are all belong to sonsbeek park, they have completely different spatial characteristics and historical memories. Therefore, my design principle is to dig out more of their stories and to enhance the feature instead of creating too much new strong stories.



### The Sonsbeek State

The first act of the trilogy is Sonsbeek State, which locates at the south of Sonsbeek and is now the main way to enter the estate from the city. This is the first place people will see when they go to Sonsbeek. As the first act of the drama, I want it to be can be open, direct and attractive. I transform the Sonsbeekweg, which used to be a narrow motorway, into a pedestrian-only space to provide a larger public space for this area. It now has formed a hard-paving area including the small view square at the south corner and the new entrance near Alpeldoornsweg. I keep the original landscape terrain and vegetation here in order to keep the iconic classical view of the Sonsbeek from the history. A view frame has been add at the south corner to guide visitor's view. The direction of pavement is also been designed to give people some hints to walk and to watch into a proposed direction. Therefore, people can still see the same beautiful Arcadian landscape as it was in the history. To make a more open space here, I removed the fence at the boundary. However, I still want keep the wooden lines in the view, so I create several wooden strips with the same material inlaid on the slop following the terrain. The wooden strips can be used as low seats and also platforms for people's activities here such as picnicing. The entrance of Sonsbeek is also integrated here to recover the history experience on Alpeldoornsweg, so people can easier enter the estate from this historical avenue. The old gate is transformed into a secondary entrance by removing the gate construction. The same plan of the constructure is been designed to be showed on the new entrance pavement to shout out to the history. The cycle path goes across this area, crossing the beautiful meadow slop and bypassing the sprengen. The singel at south are now connected to the Sonsbeek to create a more coherence perception of Sonsbeek sprengen. When people arrived this area by following 'the spine' are, they could see the historical Arcadian landscape, the open publica space and big meadow slope, the coherence water way direct to the north and the new entrance square near them. They could either choose to get into the landscape directly from the open meadow and go into the estate from the new entrance square, or going to the north following the path across this area. No matter which choice they make, they would always be able to enjoy the great scenery here. (figure)

NEW ENTRANCE

VIEW FRAME



SONSBEEK SOUTH VIEW SQUARE

### The Wave Path

NABERMAN MEMORY

WAVE PATH

The second act is the Wave Path, which locates at Grand pond area between Sonsbeek and Zypendaal. The idea is to create a more 'into landscape' route here for the connection. The Wave path is a floating bridge which allows people walk and cycle. The original route going to the north does not cross this area. The water landscape in Grand pond is gorgeous, but it was hidden by the dense plant hedge at the edge. Therefore, people can never see it when they cycling passby. This is why I come up with the idea to invite people to go into this water landscape. The surface of the floating bridge is lower than the water surface. It has a reflective mirror stainless steel edge. The direction of the bridge is also carefully designed. (figure) When people are looking at the pond from the view point at the shore, they would see a vaguely bridge line floating in the water instead of a big and obvious element destroying the scenery. In the sunny weather, the stainless steel edge will reflect the sunlight creating a sparkling wave effect when the bridge is floating. At the end of this route, there used to located the Naberman watermill in the history, which is one of the oldest industry construction in Arnhem but has now dissapeared. I want to use a flexible design language to evoke the memory here. I designed an art installation constructed by thin transparency poles but filled in the right place to form an outline of the watermill shape. People can see this white watermill illustration from the view point at the other side of the pond same as in the history, but won't find a strong and solid construction when they get closer. People who comes from South Sonseek can cross the Wave path and then enter the Zypendaal area. (figure)



GRAND POND AND WAVE PATH

### The Hermit Bridge

The third act is the Hermit Bridge. There is an old oak forest named Hermit forest, located at Zypendaal north. Although it's hard to find the relevant historical stories about this forest now, the name of the forest is still intriguing. In this forest, there is huge height difference and also the source of Sonsbeek sprengen. However, the experience for visitors is a bit too monotonous here. From the Harpin's experience score analysis, there is almost no change of rhythms in this area. The connection between this area with the city is also hard. Therefore, I create a bridge across the forest. I keep the original small paths in the forest so people can walk around at the ground level and enjoy the songs of birds in the new-designed forest theater. In the middle of the forest, I create a small empty space with a mirror on the ground. When people are walking through the high oak tree forest, they might arrive here suprisely. When they look to the ground, they will notice the tree tops and a small piece of sky reflected by the mirror, which would increase a bit more mysterious sense for this forest. A same mirror is been added at the end of the blind walking route in forest theater area. When people go through the shaded forest with their eyes closed, they will arrive at this open space. When they suddenly open their eyes, they will see the flower meadow and the mirror reflecting the sky in the middle of the flowers. This is an expression of the glacier of ice age in Veluwe. When people enter the bridge, they can perceive more about the terrain. In some part of the bridge people can touch the top of the trees, but in some part they go back to the ground floor. A view point platform is designed at the edge of Hermit forest, from where people can see the wide open agriculture land and the wood cabin with hundred year history. At the east, the bridge connects to the residential area nearby. The residents can thus enter the Zypendaal forest direct from the entrance near the community playground instead of detour to the south to enter. The north end of the bridge leads to the route which is direct to the north. The north Zypendaal area thus has a better connection with the Veluwe zone and the nearby neighbourhoods.

HERMIT BRIDGE

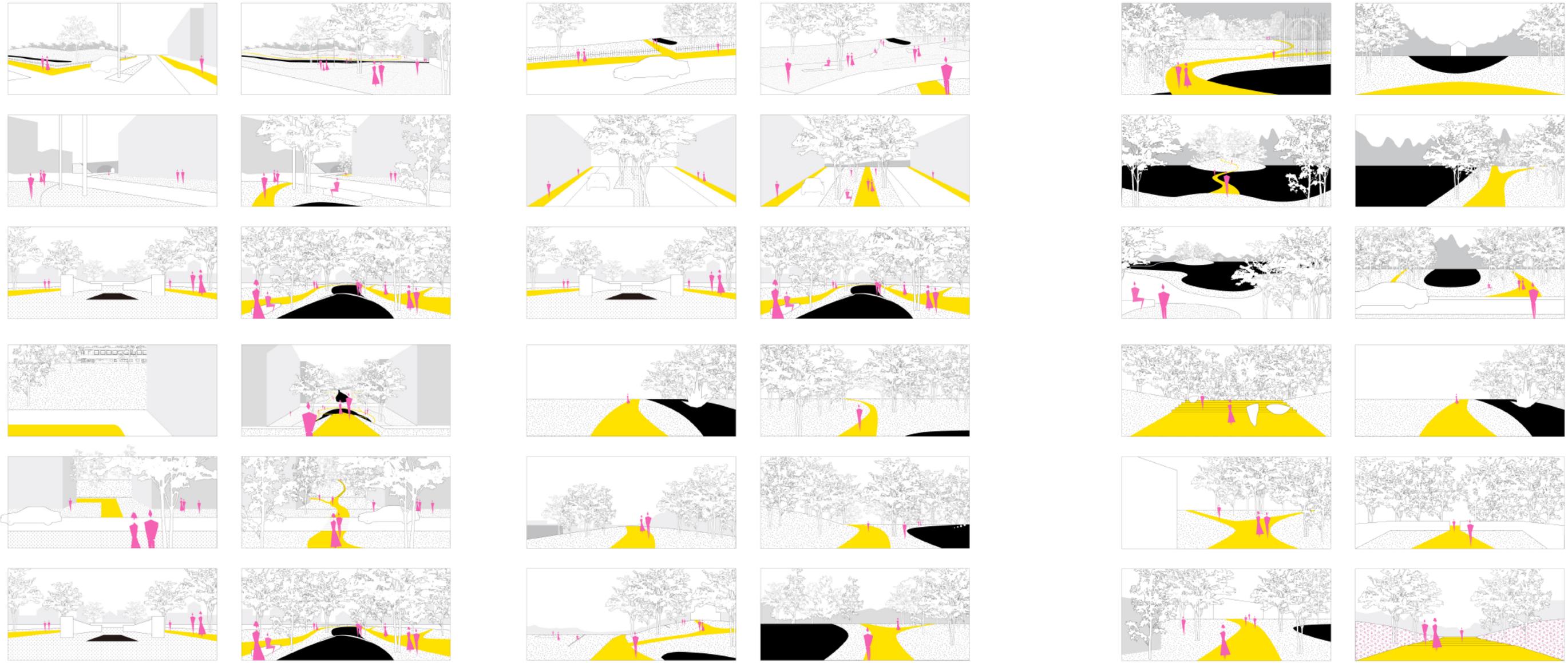


## DETAILS



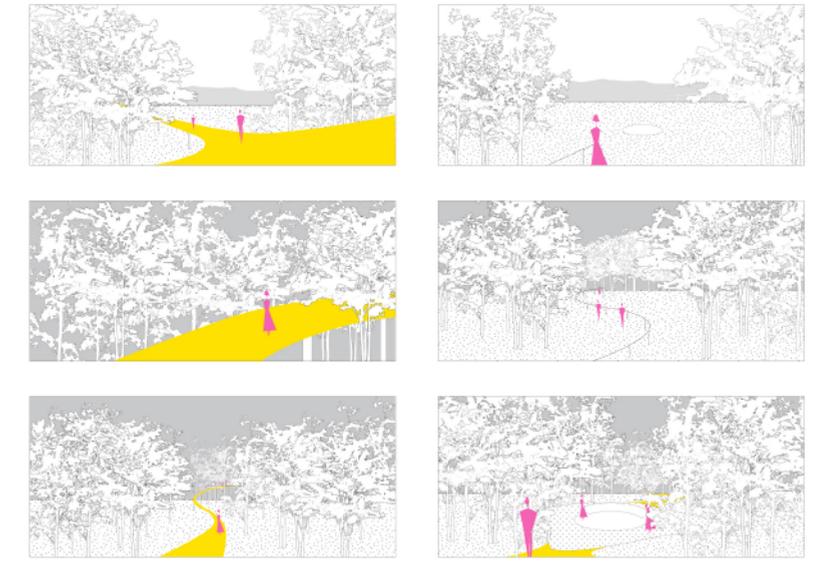
I mainly used three materials above design: wood, mirror metal and white color material (such as white concrete). They all comes from my first impression of the Sonsbeek park – the wood material refers from the forest and wooden fence, the mirror metal material refers from the reflective water surface and steel installations, the white color material refers from the white villa and the white statues in the park. I want to use the existing material from the park to create harmony instead of adding brand new elements to the landscape and make it strange.





**DETAILS**

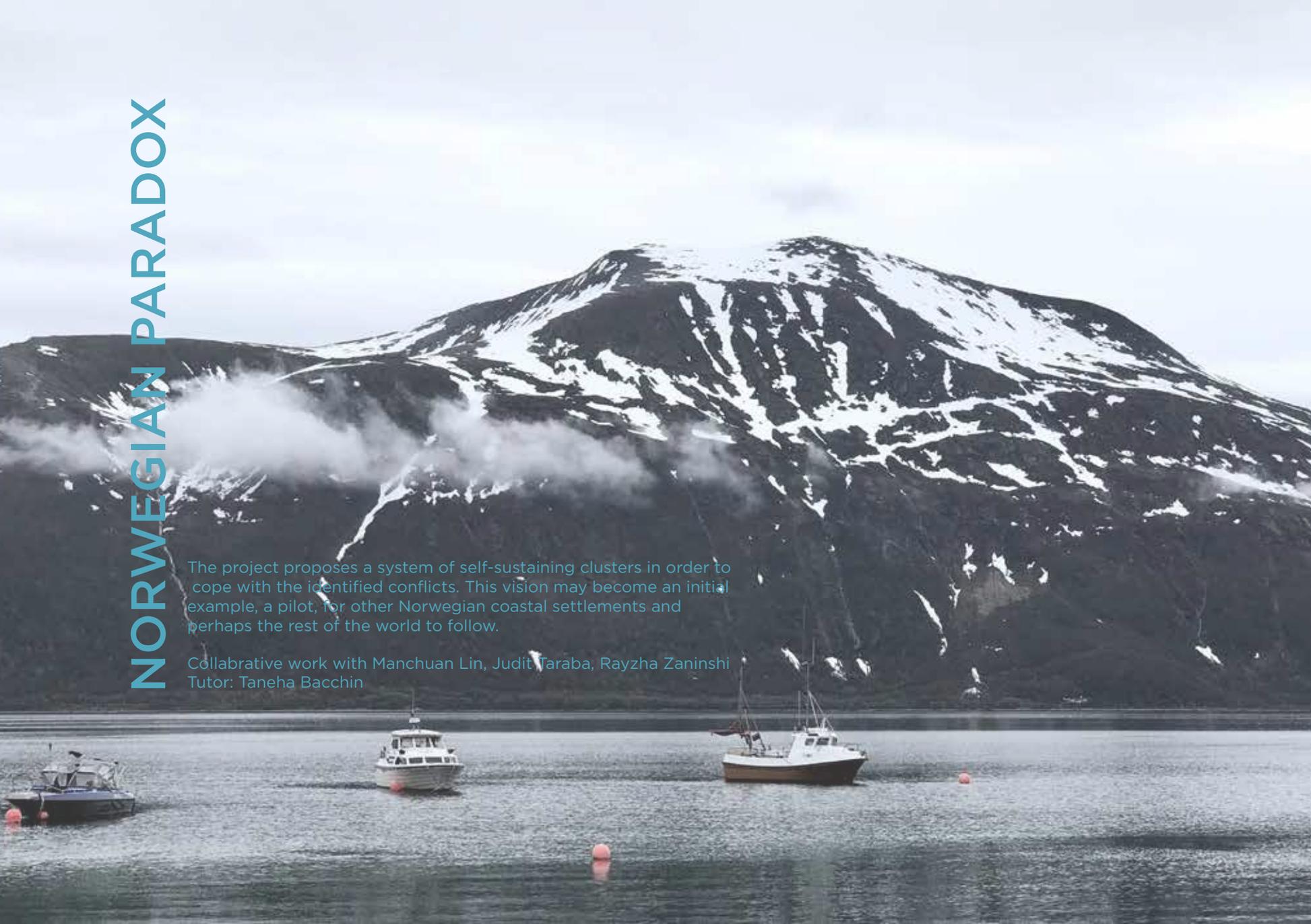
I hope the Sonsbeek trilogy can not only create a better estate experience for the visitors, but also can create a better cycling route links to the north, to build a closer relationship between Arnhem city and the Veluwe zone. Because of the time, I only complete the precise design in Sonsbeek zone. However, it does not means there is no need to design for the other areas in the newly designed green structure. Instead, there are probably a lot more joint areas in the city need to be percisely analyzed and carefully designed. For me, the deisgn proposal for Sonsbeek zone is a projection of my urban plan thinking. It gives a detailed example to explain how the connections in the green structure can be implement to the real space.



# NORWEGIAN PARADOX

The project proposes a system of self-sustaining clusters in order to cope with the identified conflicts. This vision may become an initial example, a pilot, for other Norwegian coastal settlements and perhaps the rest of the world to follow.

Collabrative work with Manchuan Lin, Judit Taraba, Rayzha Zaninshi  
Tutor: Taneha Bacchin



Senario for Tromso future infrastructure

## THE SNOW LOTUS IN THE NORTH

## MENIFESTO

On the sea in the bay of Hammerfest, there are white and light cable car towers. A cluster of aquaculture fields and modern infrastructures locates at the cable tower ground area. Most structures are either small scales or hiding under sea level. Clean sky, snow mountain, dark blue sea surface... The beautiful nature scenery of Hammerfest is still the same, but it reveals new vitality.

*It was the best of times, it was the worst of times.*

The climate is changing to extremes. Sea level is rising, temperature is increasing... Human-beings have to be careful to protect their living environment. But the people here never give up their homes and never give up their confidence in survival. New innovative industrial structure and more advanced production technologies have emerged. Hammerfest still maintain a partially global business model, but more focus on the local business. New sustainable industrial incomes gradually replace the petroleum industry, supporting the construction costs of local high-tech, high automation infrastructures and communities. The carbon cycle loop consisting of Biomass factory, Algae aquaculture and Carbon capture factory is the core of new industry structure. It provides not only the energy and income, but also basic material for the whole system. Comparing to the busy sea surface due to oil exploitation, more laborer and infrastructure are gathering at the coastal area and inland in Hammerfest nowadays. Aquaculture is one of the most important innovative and sustainable industry. It combines with the future transportation infrastructure, which is the cable car towers, to create the desired habitat for aquatic products. The main cultivation material is algae. The algae can not only provide fertilizer for local agriculture and process the waste, but also produce energy from biomass factory. This is a place of work and produce, but still keeps the original beauty of nature. According to the sustainable principle of maintaining small communities and mitigating urbanization, these clusters do not have many living facilities for dwelling. Most production is automated, including the feeding of salmon fry, transporting between tanks, arranging, harvesting and processing.

The clear sea breeze blows through the seemingly calm aquaculture fields. There is not too much noise here, only the automatic machinery that works regularly and the cable car slowly passes through the air. Sea birds quietly parking on the cable tower and combing their feathers. Most of the time, farmers are able to take a book and sit near their aquaculture fields in good afternoon of the sun, feeling the smell of the ocean, waiting for the next shipment to be loaded onto the cable cars. Hammerfest is like a snow lotus, strongly and beautifully surviving in the climate changing.

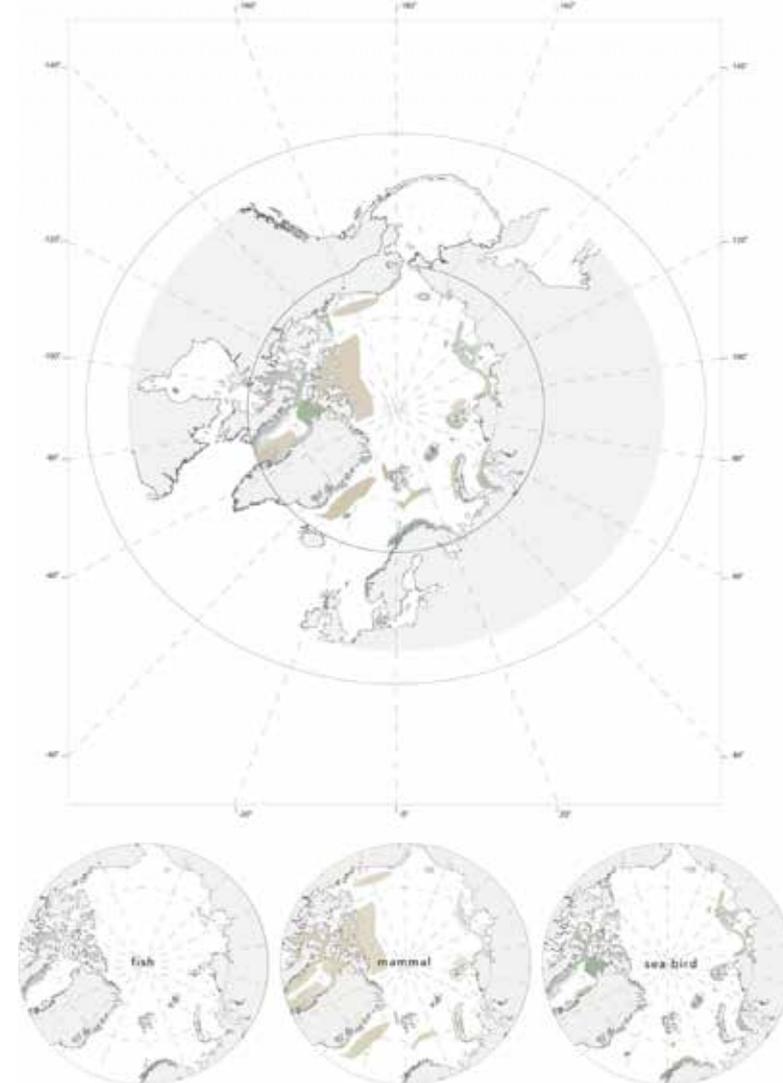
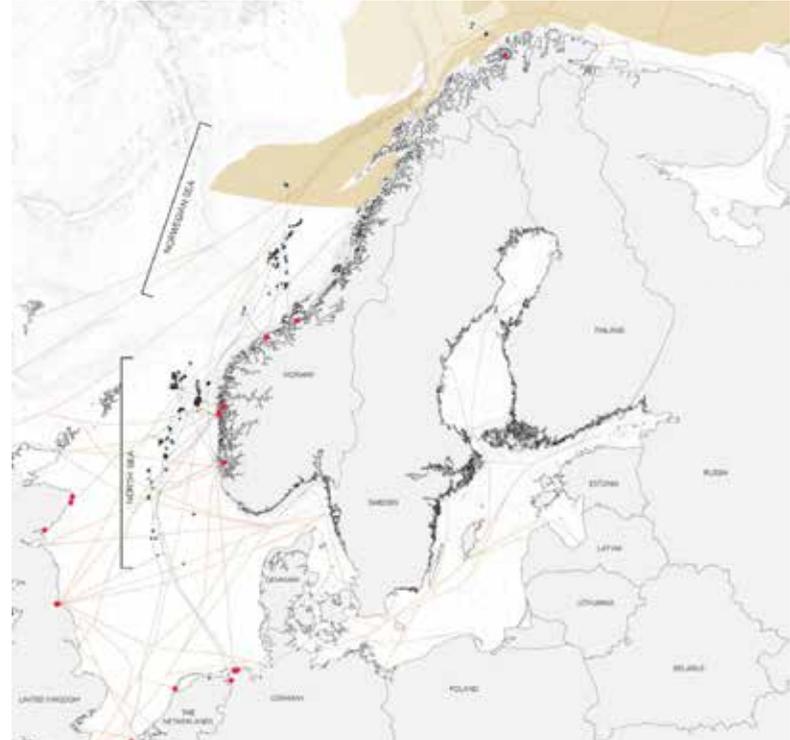
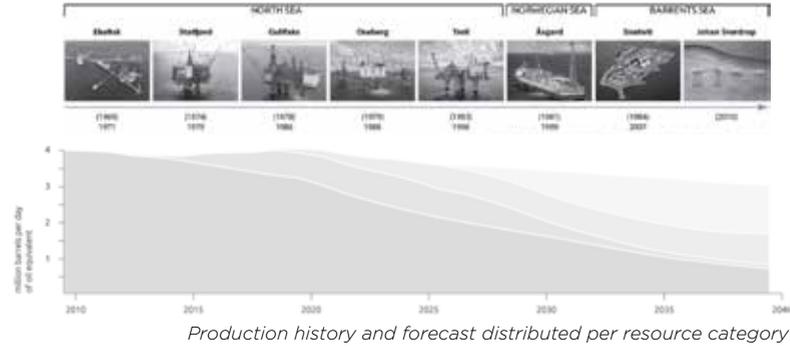
## OIL DELLIMA

The first oil fields opened for production in the North Sea region of Norway from the 1970s, then the discoveries continued northwards along the Norwegian Shelf. The latest oil and gas fields opened in the Barents Sea (Norwegianpetroleum.no, 2019). The search for oil has not stopped and there are areas north of Hammerfest, where the probability of oil reservoirs are 100%. In the future, these areas will be opened for production (Gautier et al., 2009).

The North Sea and the Norwegian Sea region is well connected with pipelines to other parts of Western Europe. Where these are not present the oil and the gas is shipped with tanker boats.



Oil wells and shipping routes



Vulnerability towards oil, resource: J. Taraba

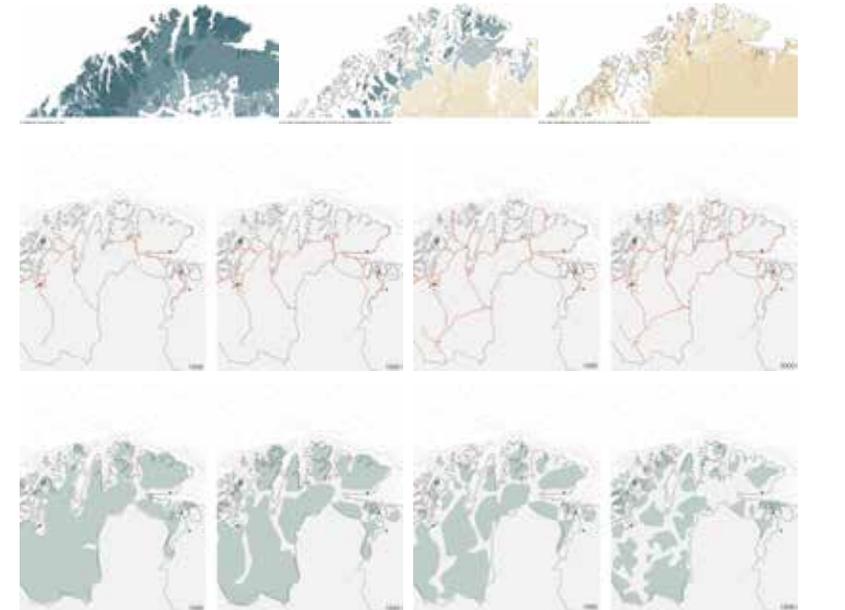
## SIDE EFFECTS: ENVIRONMENT ISSUES

The right map shows the vulnerability of marine animals towards oil-spills in the Arctic region. Here cleaning up oil spills is more difficult because of the often harsh environment.

These oil-spills pose a high risk for the environment along the coastline of northern Norway, where species are more vulnerable. In the northern regions, biodiversity is lower and less resilient, with areas of high productivity and hence animal aggregation. Consequently, this ecosystem is more vulnerable to oil pollution.

Also, due to climate change, Norway's future temperature will rise sharply, regardless

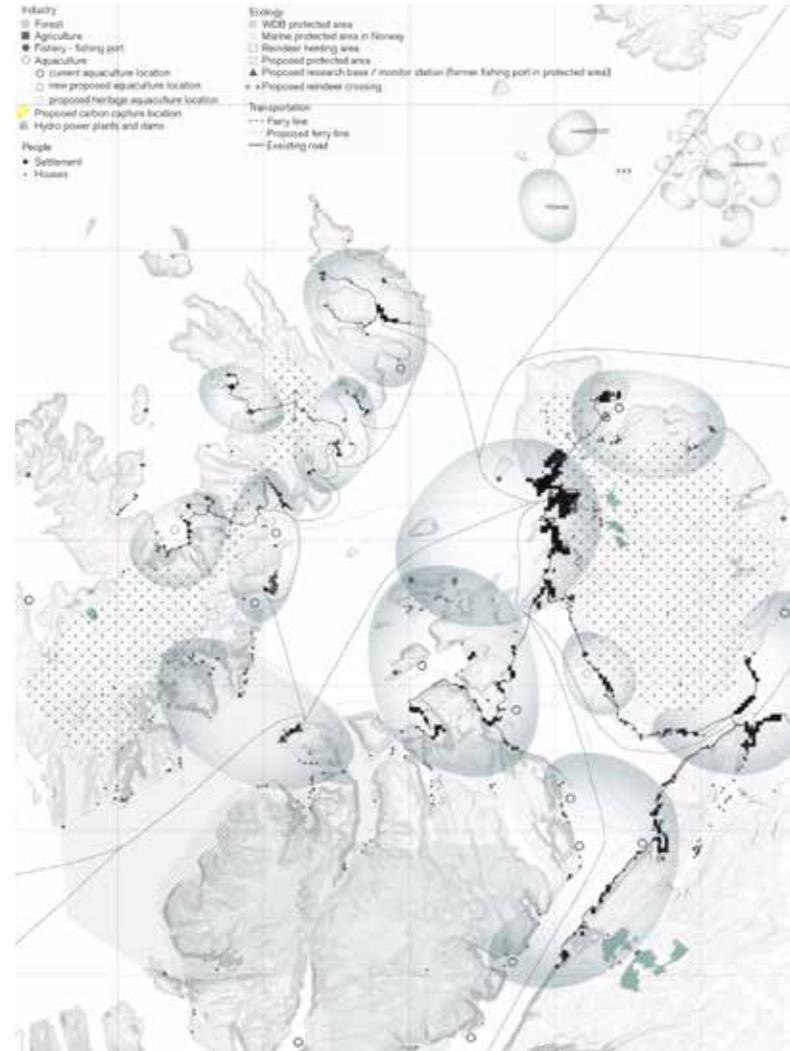
of which Representative Concentration Pathway (RCP) model is observed. The different RCP models represent different greenhouse gas concentration trajectories for the future. In the worst scenario, this temperature increase will be more than 6 degree Celsius, while in modest emission trajectory the increase of temperature is around 2 degree Celsius by 2070.



Climate change effect and habitat fragmentation



# VISION MAPPING



Vision mapping on Municipality scale

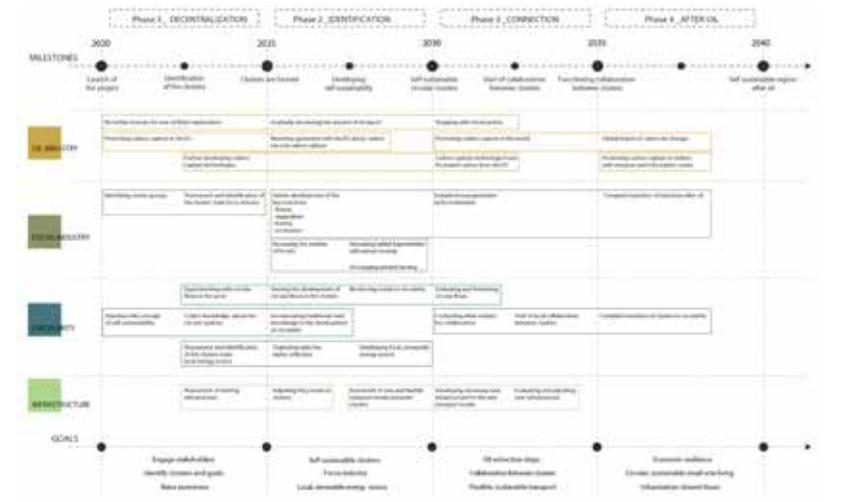
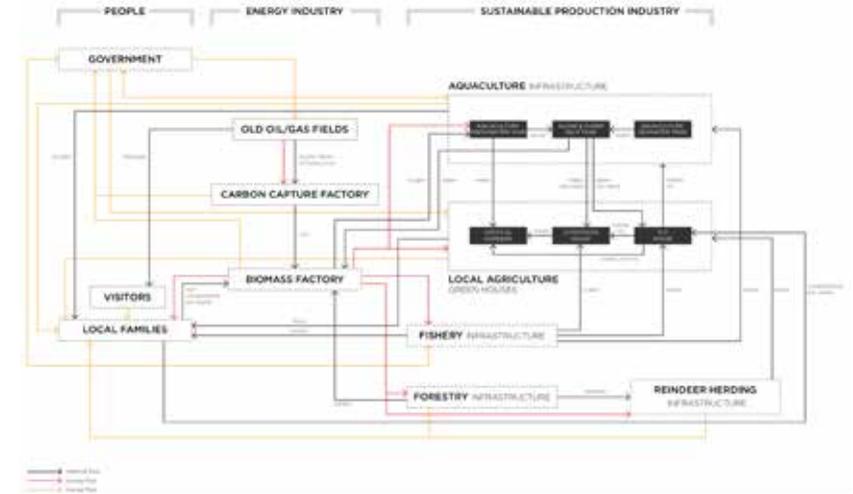


Vision mapping on Territory scale



Cluster mapping on Municipality scale, resource: Manchuan Lin

System map: how the clusters integrate different industries



Project phasing, resource: Reyzha Zaninshi

# SCHIDAM NODE



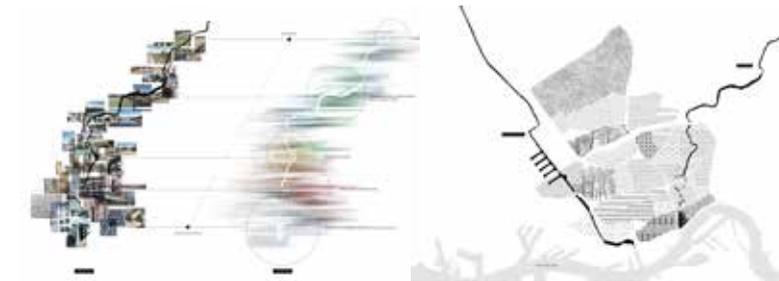
Urban design for Rotterdam 2020. The new green structure forms a new urban context including the lake city, the garden city, the new Schidam and green corridor. The individual work focused on the New Schidam concept and builds a new urban nodes.

Group and Individual Work  
Tutor: Frits Van Loon

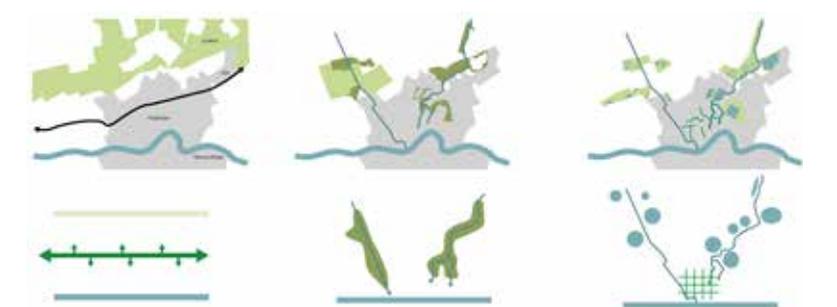
## PROBLEM FIELD

The three horizontal lines. The river Nieuw Maas, de polderlandscape and the A20 are 3 horizontal lines in Rotterdam. Whereas the polder line and the river form borders to the city, the A20 divides the north part of the city in 2 sides. The two blue arms. The two big rivers in Rotterdam, de Schie and the Rotte cut into the city. The Rotte bring a green character into the city, whether as the Schie bring almost no nature into the city centre.

Small landscapes in Rotterdam. the peat landscape around Rotterdam is still visible as small lakes and parks. Inside the city centre the singelsystem brings another type of characteristic small landscapes in Rotterdam.



ROTTERDAM ANALYSIS



CONCEPT PANNING

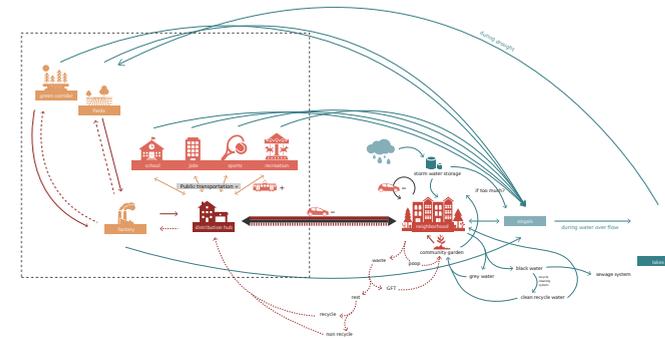
ROTTERDAM 2020

MAIN PLAN ROTTERDAM 2020

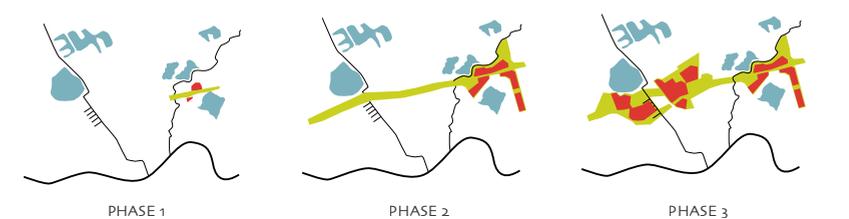
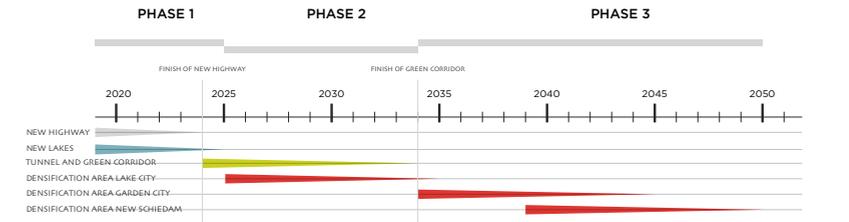


MAIN PLAN ROTTERDAM 2020

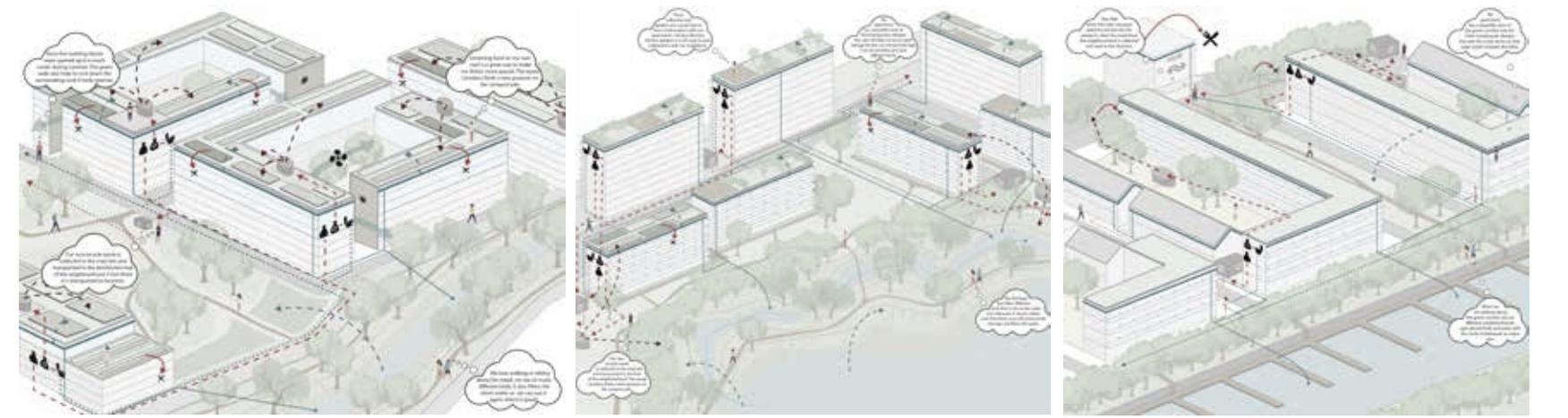
The distribution hub plays a connection role between different neighborhoods and spaces to combine food flow and waste flow with people's daily mobility flow. The aim is to minimize the transportation environmental cost for a sustainable urban living. Crops and vegetable are produce in the field and some part of the green corridor. After harvest, the corps will be transported to factories to process then transfer to distribution hub for people to pick up.



PROCESS



SENARIO



## SCHIDAM 2020

The design of my area starts from the group idea: Rotterdam Green Necklace, which is putting a part of A20 highway underground in order to create more opportunities for Rotterdam, and connecting important urban nodes by the necklace as well.

As one of the 'pearl' on the necklace, the site around Schie and necklace used to be an industrial area. We think it could be desifed based on our analysis and senario. Thus me and Sandy are going to create new urban structure for the coming new neighborhood. The current site was badly divided by the Schie, A20 highway and the railway. The disconnection exists not only between north and south, but also west and east.

Therefore, we picked two areas which have the strongest disconnection issue to do the zoomed-in design.

The challenge of my site is the space and communities was fragmented. Although the tunneled A20 would create more pulic space on the ground, the railway and Schiedam station is still causing a 'dead area' around it which is not friendly for the nearby neighborhoods.

Secondly, the new densification needs more social resource to support it. Thus we have to consider a new food/water/waste flow.

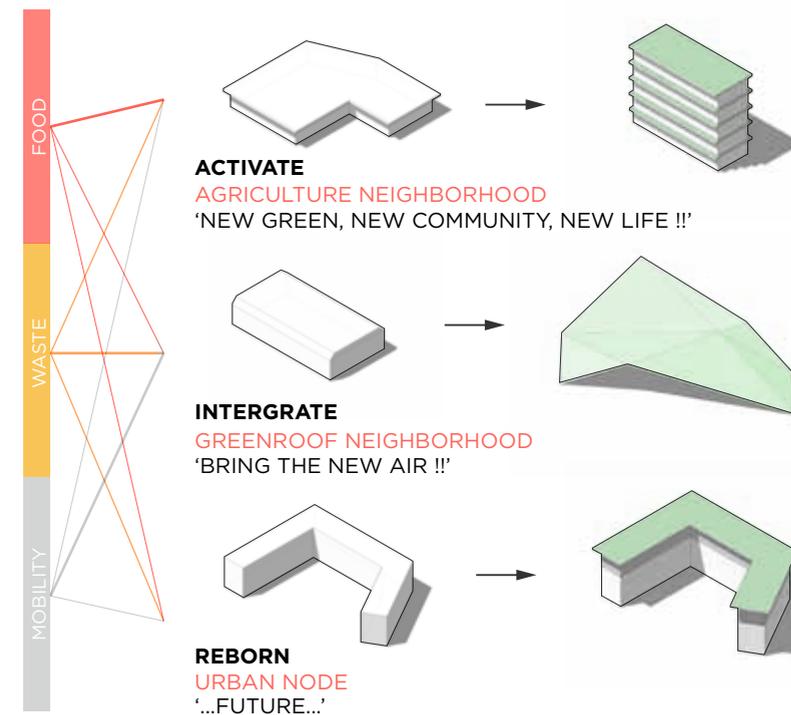
Also, based on our group concept, which is build distribution hubs in communities to enhance public transportation and decrease the cars inside neighborhood, the new mobility flow is also needed.

## ACTIVTE, INTEGRATE, REBORN

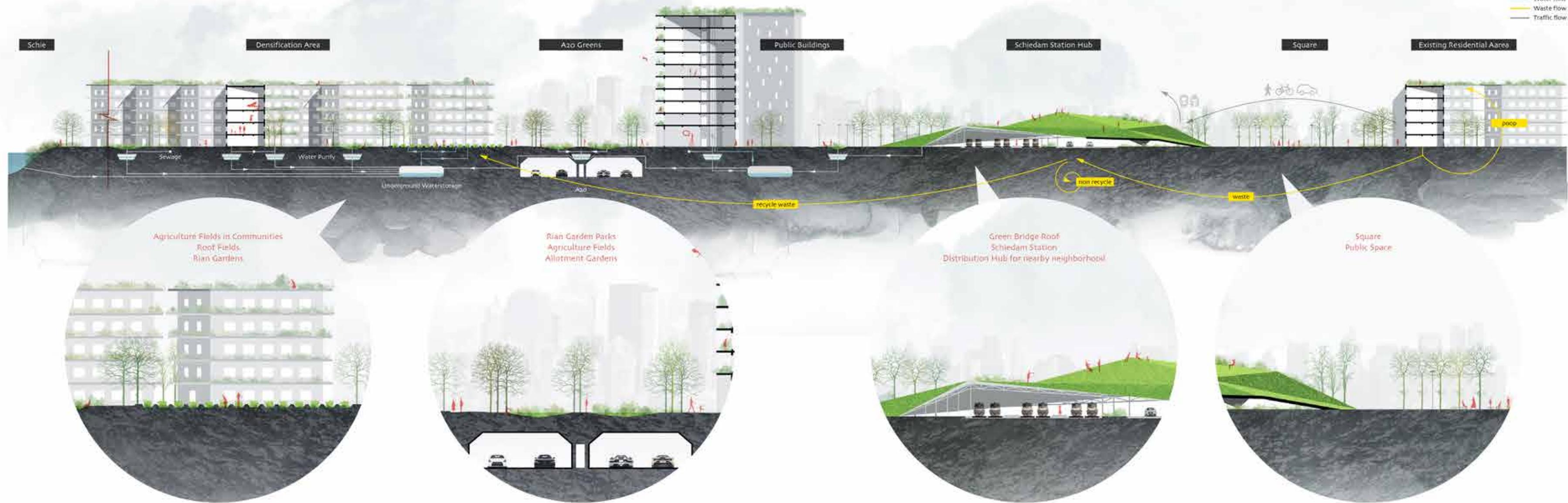
I am thus combining the station and the distribution hub together providing multiple functions for the neighborhoods. Also, build a green roof landscape terrain goes cover the old station, combining wit the green spaces on theh top of A20 and the surrounding public spaces as well, to create a new green structure provides strong connection between neighborhoods.

Activating, integrating and rebuilding methodes are used to build different communities. The old residential areas are renewed by different strategies in order to making a more sustainable, green and social friendly city.

RELATE TO FLOW



SECTION FLOW MAP



SECTION DETAILS

AGRICULTURE NEIGHBORHOOD

RAIN GARDEN PARK

GREENROOF NEIGHBORHOOD

ROOF GARDEN

TOILET

KITCHEN

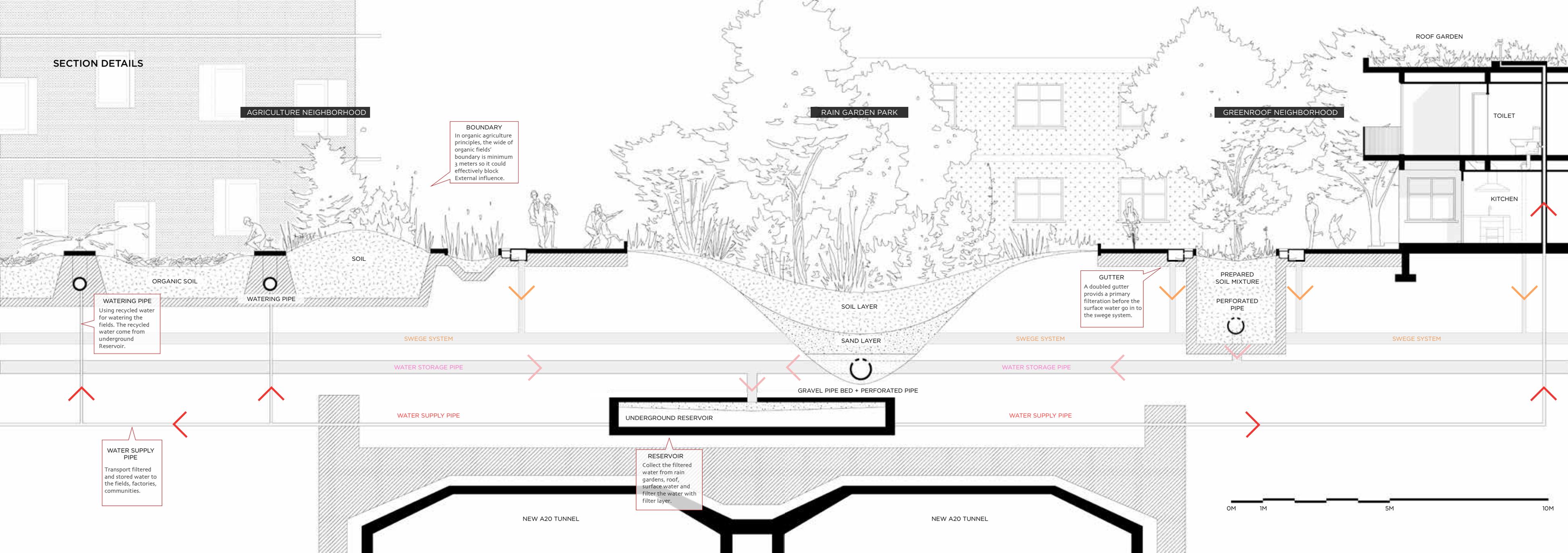
**BOUNDARY**  
In organic agriculture principles, the wide of organic fields' boundary is minimum 3 meters so it could effectively block External influence.

**GUTTER**  
A doubled gutter provides a primary filtration before the surface water go in to the swege system.

**RESERVOIR**  
Collect the filtered water from rain gardens, roof, surface water and filter the water with filter layer.

**WATERING PIPE**  
Using recycled water for watering the fields. The recycled water come from underground Reservoir.

**WATER SUPPLY PIPE**  
Transport filtered and stored water to the fields, factories, communities.



0M 1M 5M 10M

NEW A20 TUNNEL

NEW A20 TUNNEL

SOIL

ORGANIC SOIL

WATERING PIPE

SWEGE SYSTEM

WATER STORAGE PIPE

WATER SUPPLY PIPE

SOIL LAYER

SAND LAYER

GRAVEL PIPE BED + PERFORATED PIPE

UNDERGROUND RESERVOIR

SWEGE SYSTEM

WATER STORAGE PIPE

WATER SUPPLY PIPE

PREPARED SOIL MIXTURE

PERFORATED PIPE

SWEGE SYSTEM

# OTHELLO

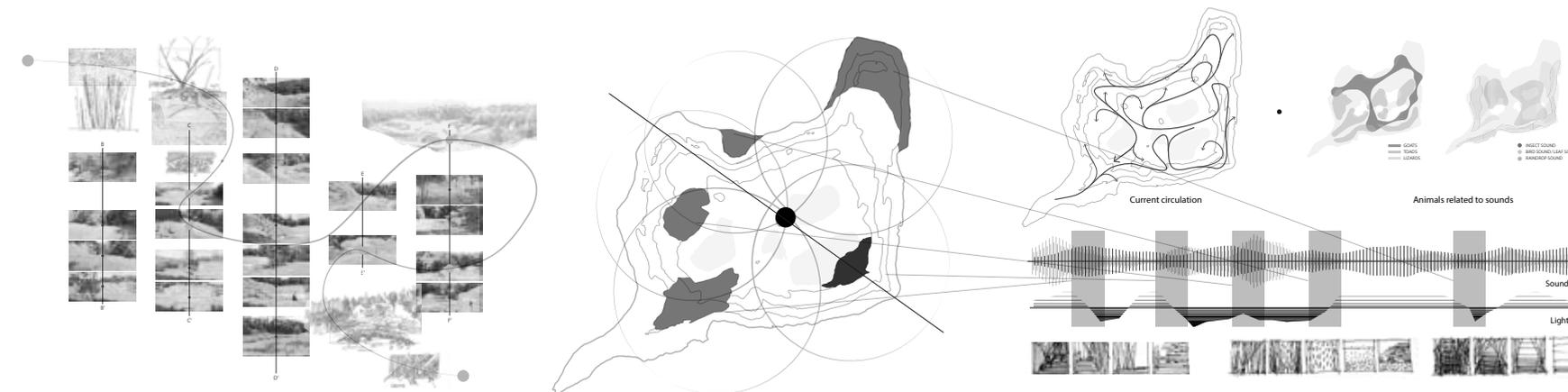
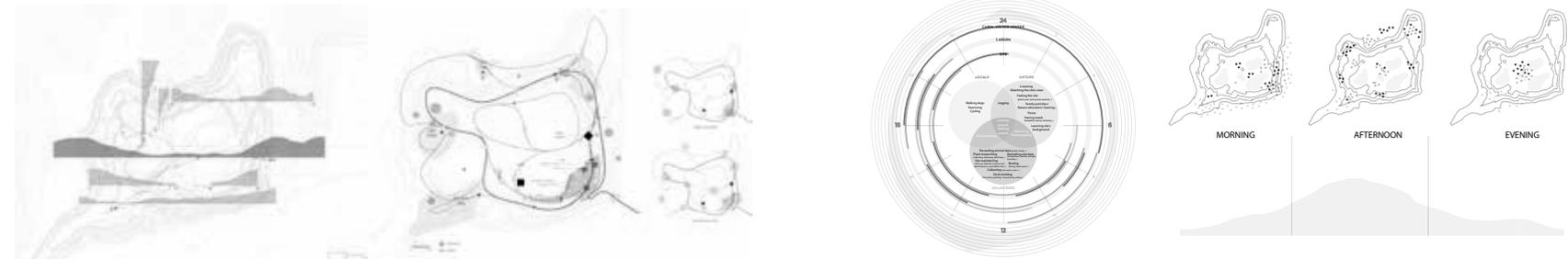
Landscape design for a natural reserve gravel pit. The design aim is to guide visitors' circulation and to enhance their experience by making minimum reacting in the site.

Individual work,  
Tutor: Saskia de Wit



## ANALYSIS

The site located at Maastricht. It used to be a gravel pit for reclamational using. Now it is a natural reserve area. The assignment is to improve the landscape and build a visitor center and a cabin for the site manager's (landscape students and locals) daily using. The site has an impressive terrain because of the pits. But it is not friendly enough for people visiting. For new visitors, interesting spots are hardly to find. Also, functional facilities like shelters and seats are lacking in the site so people could not stay long.



Current circulation and spatial perception

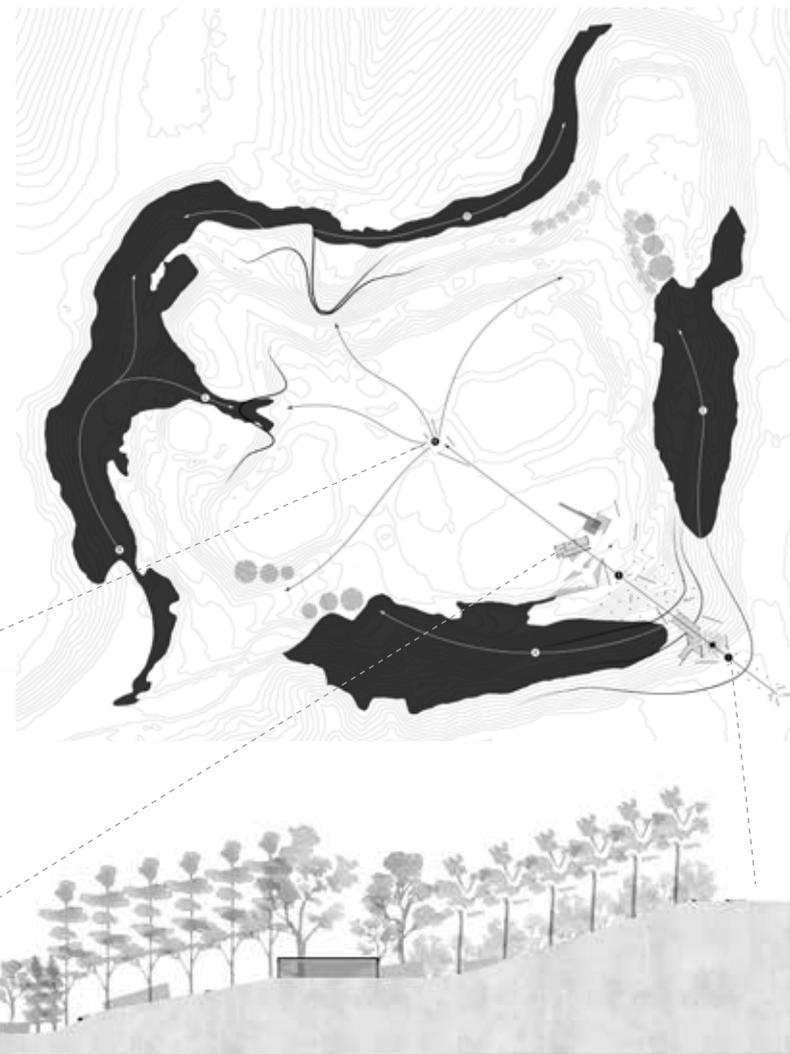
Sound and climate

## CONCEPT

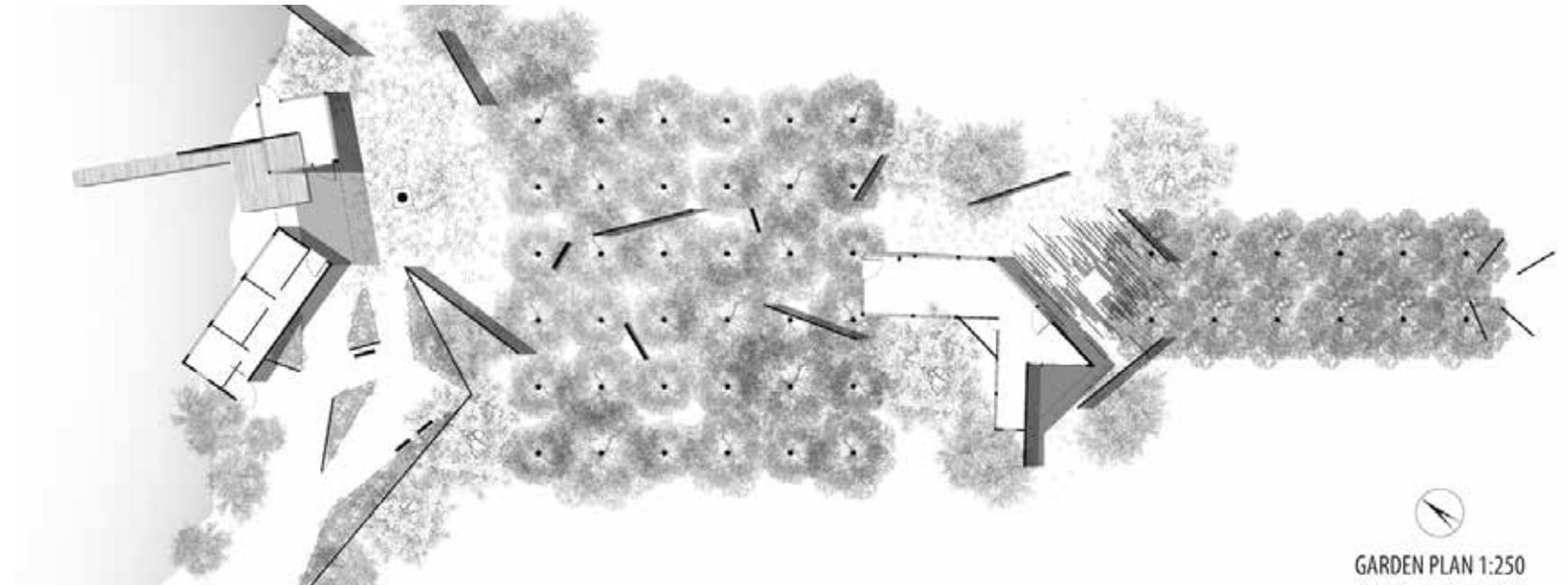
The concept is to enhance people's visiting experience in two ways:

- The construction ensembles provides a well designed route for visitors and the basic functional facilities.
- The renewed landscape in whole areas enhanced the existing shadow experience for visiting.

Thus there are two routes: the light route following the constructure, and the dark route walking freely in the forests.

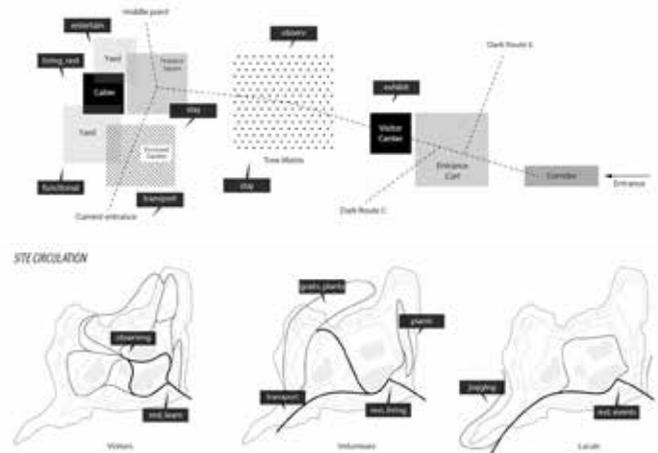


Plan and section



GARDEN PLAN 1:250

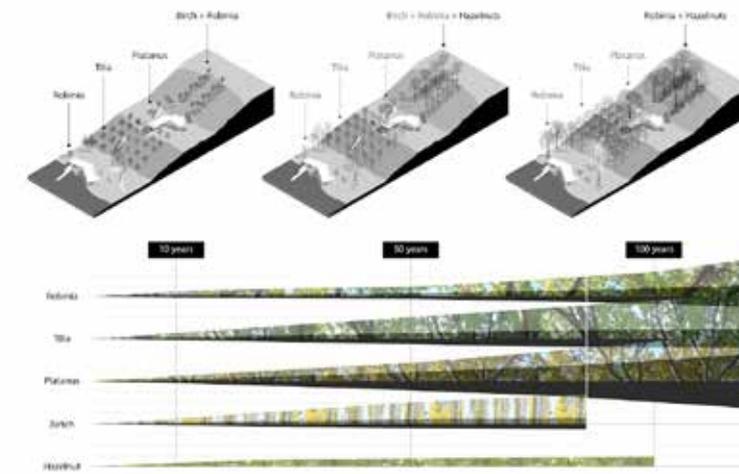
Zoomed in plan



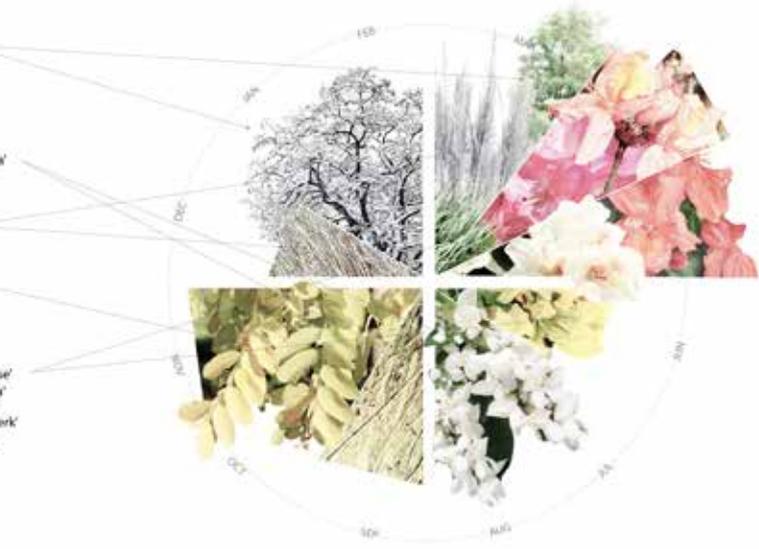
PERCEPTION



DETAILS



- Robinia Pseudoacacia
- Salix sepulcralis 'Chrysocoma'
- Phragmites australis
- Robinia Pseudoacacia
- Rhododendron (AK) 'Berryrose'
- Rhododendron (Y) 'Anuschka'
- Rhododendron 'Goldbukett'
- Rhododendron (AK) 'Feuerwerk'
- Rhododendron (AK) 'Chetco'

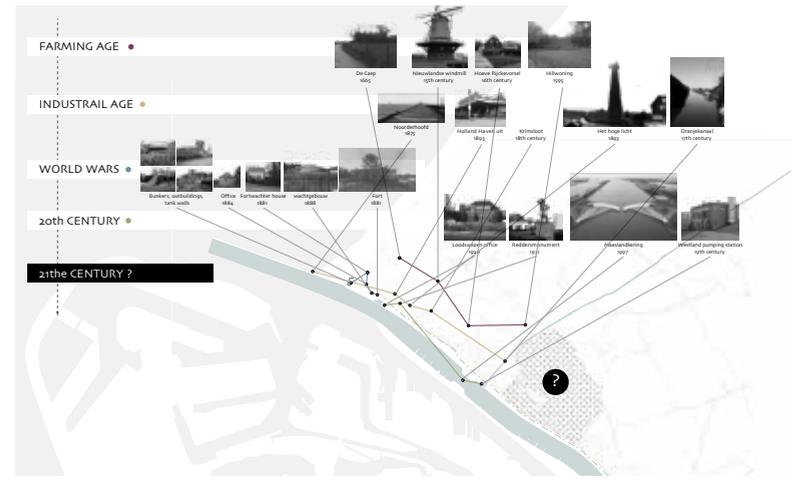




Landscape design for tidal park in Orange Polder, Maasdijk. The tidal park could also be used as water storage area in order to better face the future climate change issues while acting as suburban areas.

Collaborative work with Linyu Qu, Yuyu Peng and Individual work  
Tutor: Nico Tillie

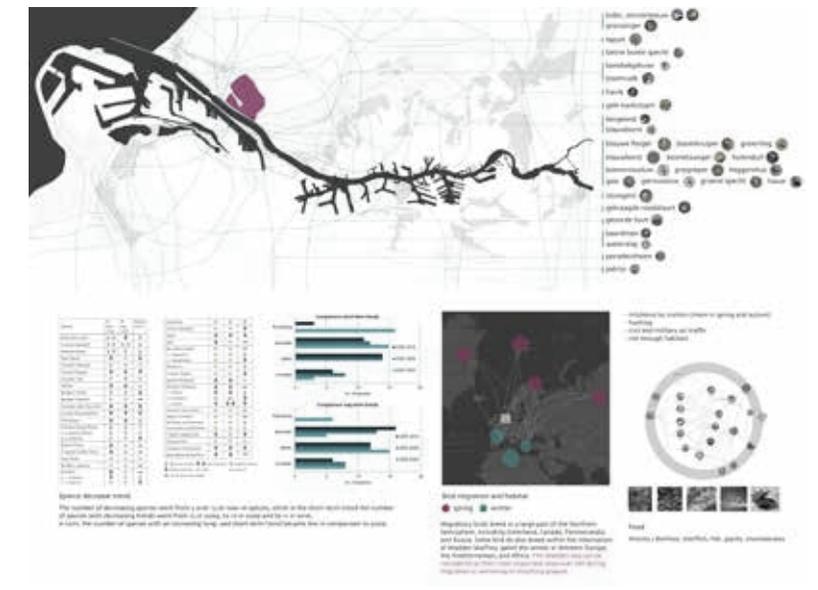
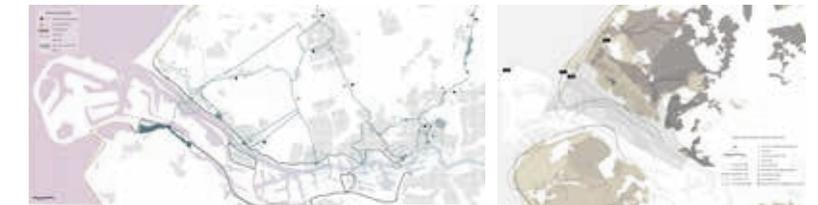
# PARC ORANGE



Green, blue, history analysis

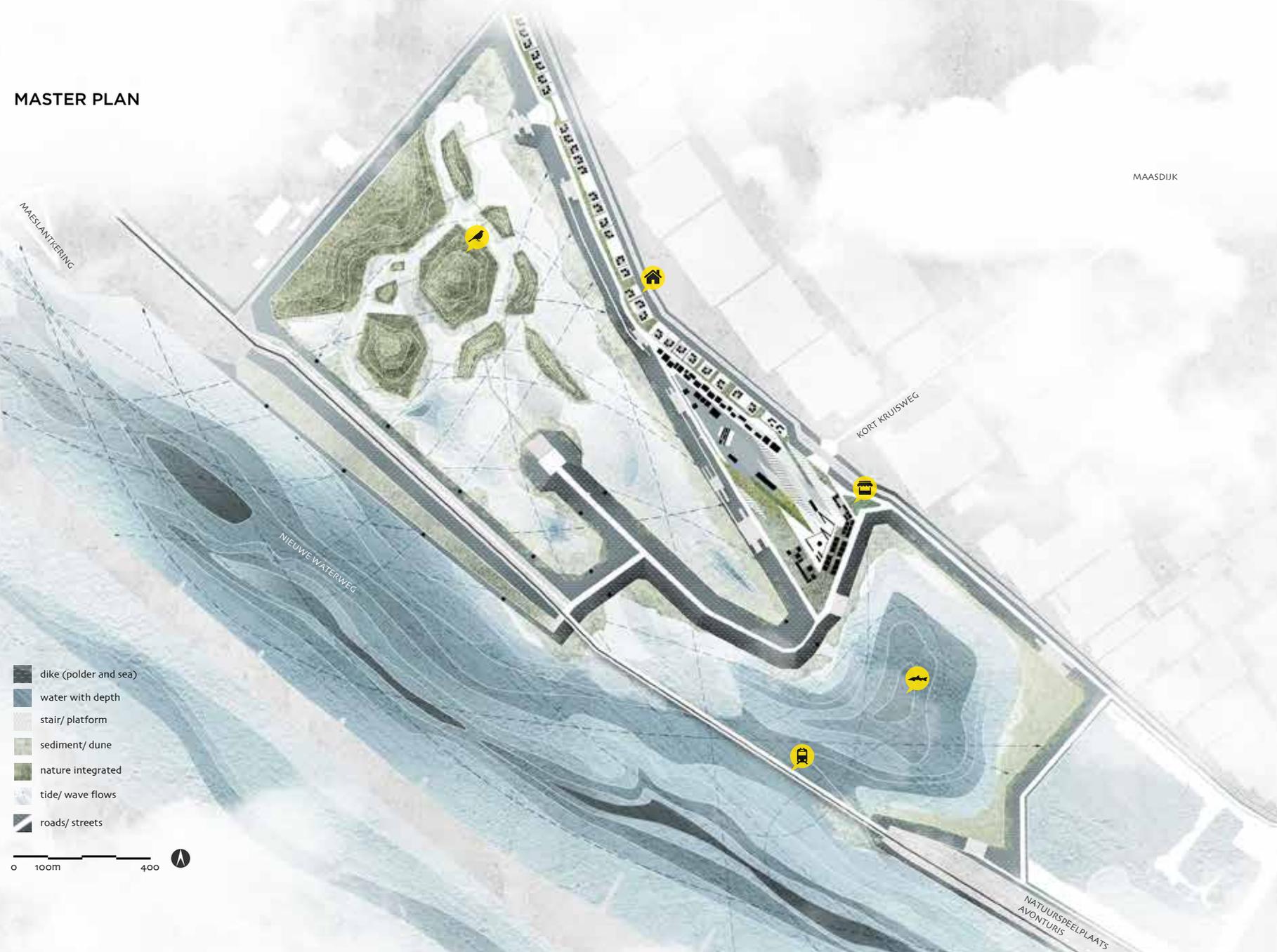
## BACKGROUND

Based on the analysis, the orange polder has three potential: ecology, culture and economy. With the economy calculation, we found it is feasible to use half of the Orange polder area as water storage area. Also, the rail way goes across the site, connecting the Hoek of Holland and Rotterdam. It is possible to create a new rail way scenery spot at the site's location. Among the new Maas river there isn't enough green spaces. It would bring a great ecology change by creating a tidal park here.



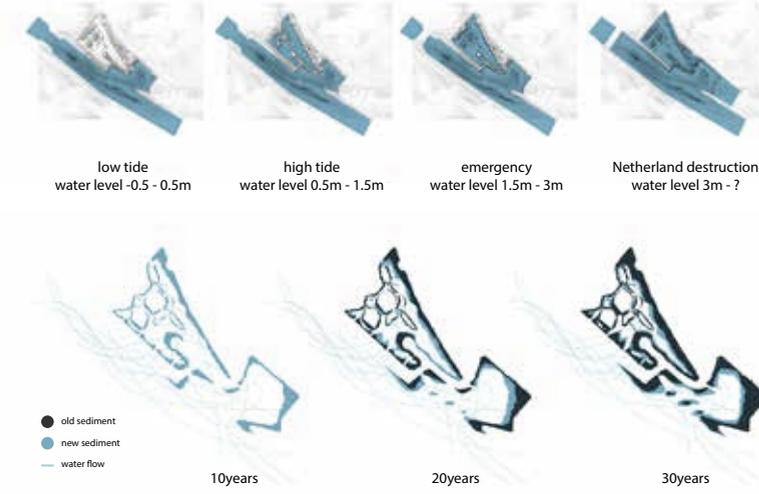
Ecology situation

# MASTER PLAN

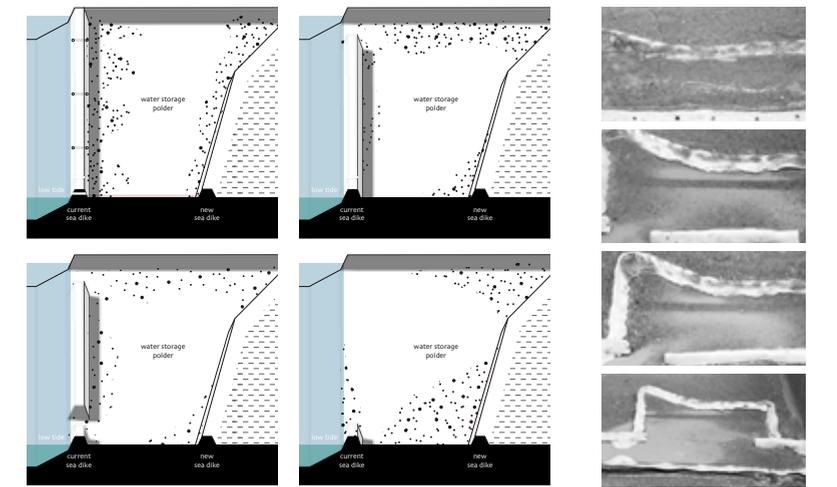
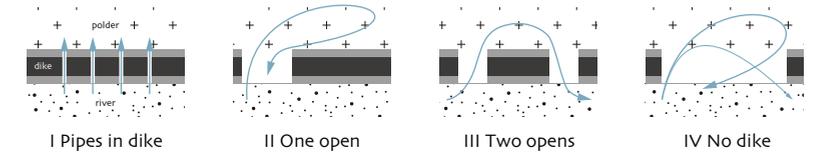


# OPENING THE DIKE

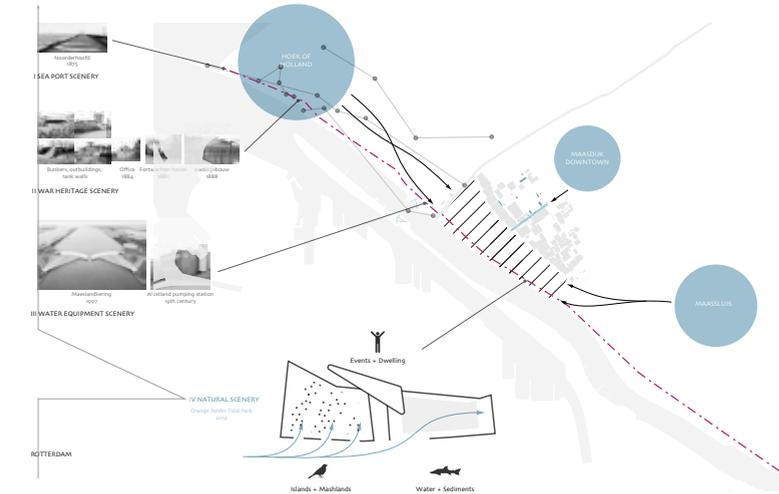
The Orange Polder could provide more possibilities for the local community more than only becoming a water storage area. The Orange Polder is able to connect with Maasdiik downtown through Kort Kruisweg, which is a road full of flower stores and markets. For those tourist trains that pass through the site, the tidal park would offer a new scenery that is different from the war heritage, water equipment and sea port on the railway circulation. By using different openings for water, different sediment could create multiple habitats for birds and fish. Also, adding functional areas would allow the tidal park to serve as a public space to attract visitors and support activities and events. In the future, the orange polder tidal park will become a 'backyard' of Maasdiik. It is also an excellent suburban natural park which is worth to visit for Hoek of Holland and Maassluis.



Tidal and sedimentation change

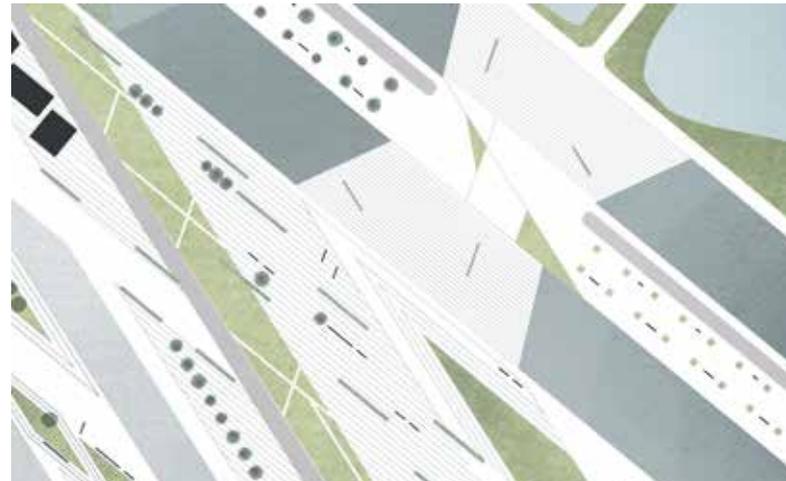


Sediment research for different dike opening options

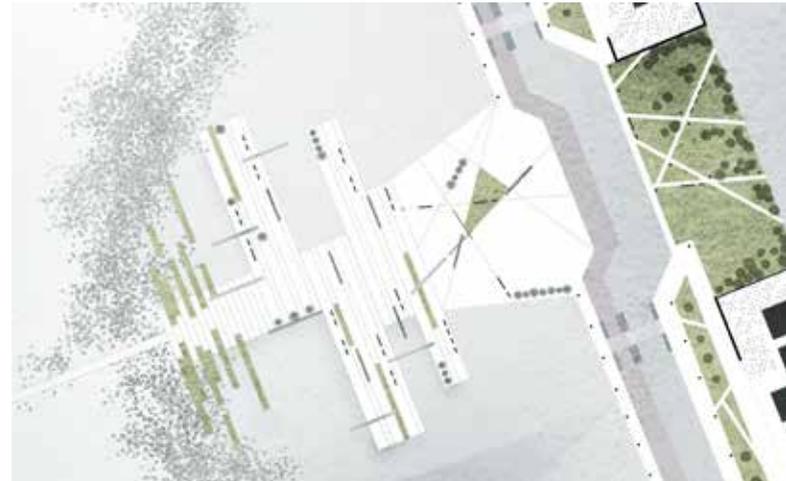


New spot on the railway line

REGIONAL SCALE

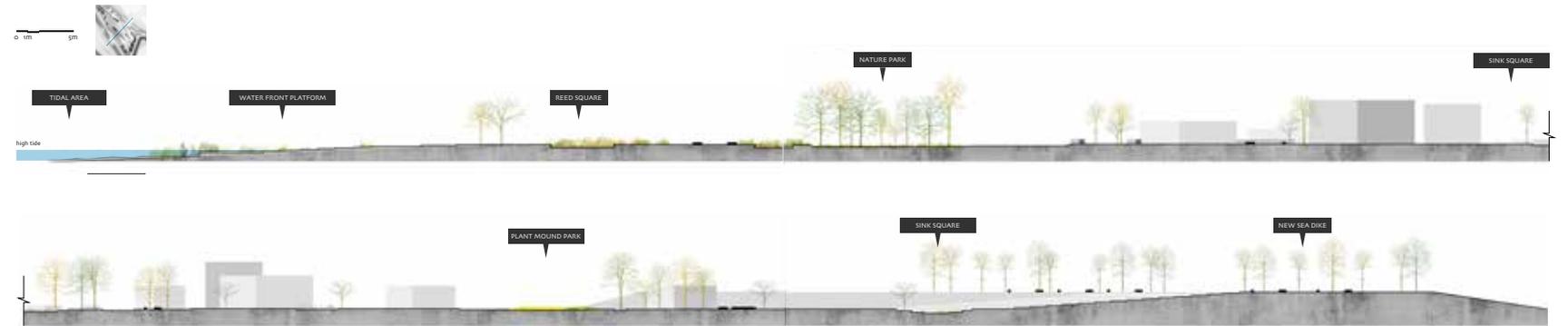


Plan of central part

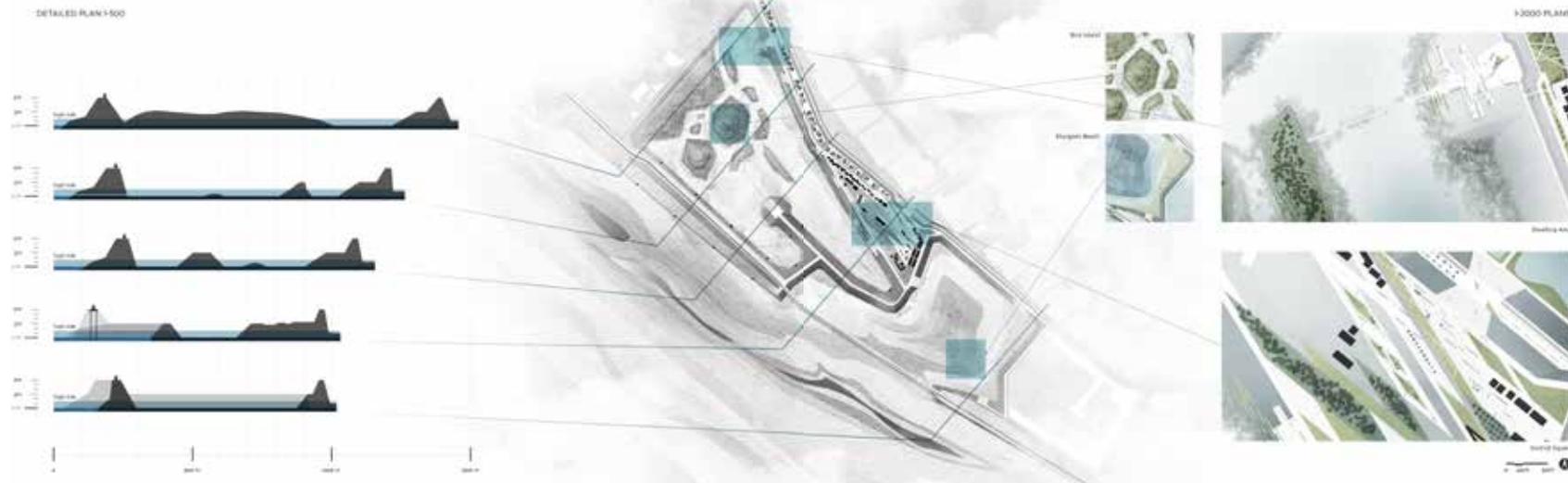


Plan of dwelling area

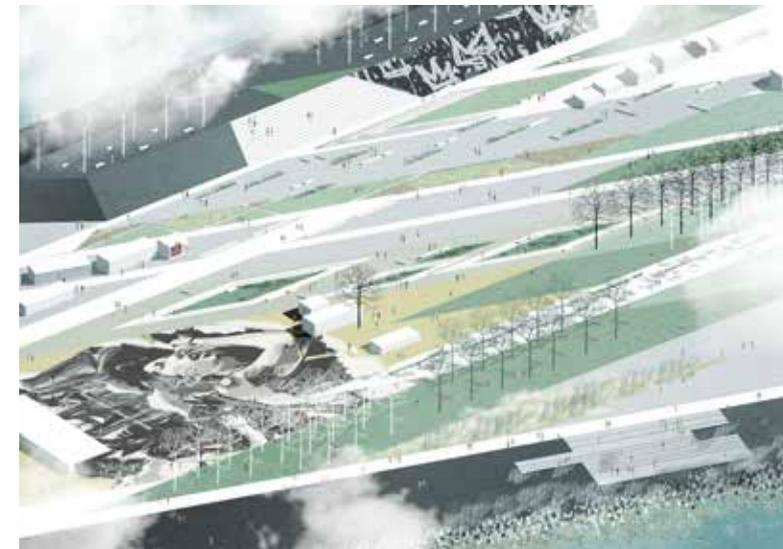
ZOOMED-IN DETAILS



Section



General section



Perspective

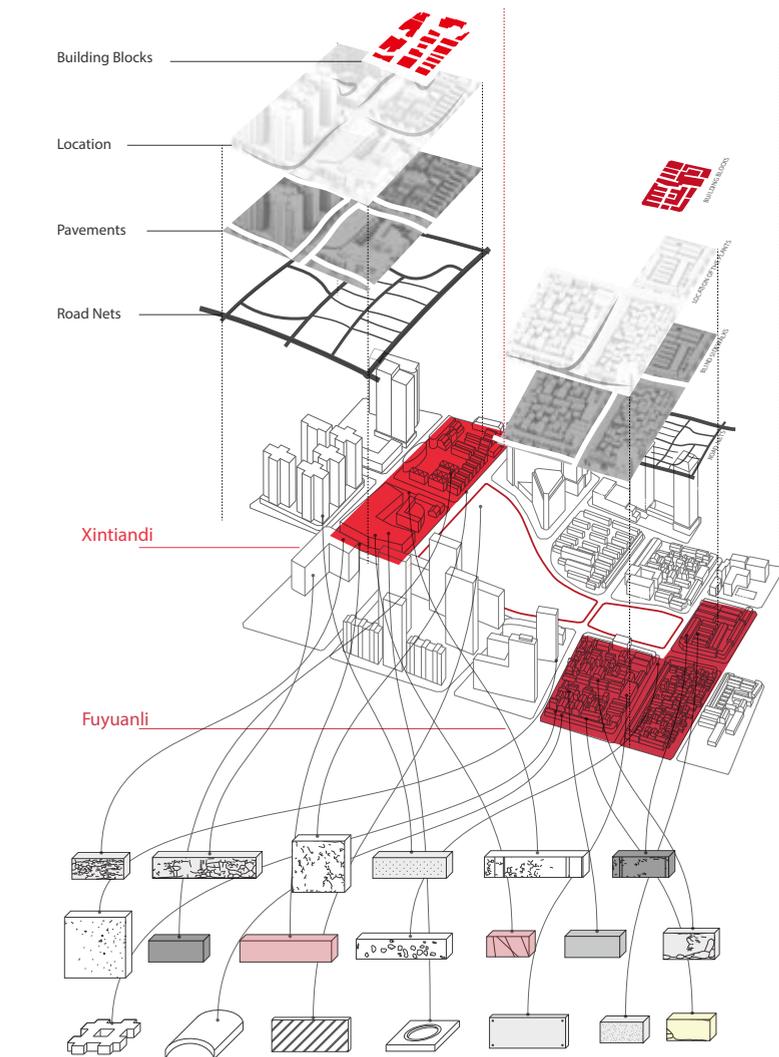


Emergency situation

# MAZE

Parametric modular square landscape design. Establishing the relationship between different social groups by improving space quality. Texture design based on behavior studying.

Partner: Jiawen Chen  
Tutor: Tiger Yifeng Lin



Site analysis and texture collecting

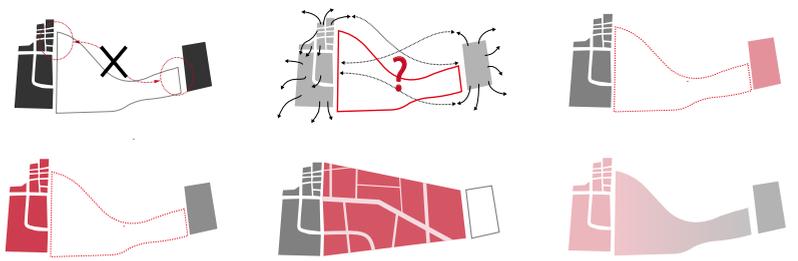
## BACKGROUND



The site connect two toatally diffenret areas in Shanghai. On the west of the site is Xintiandi, one of the most prosperous areas in Shanghai, full of luxury stores and resturants. All though the buildings here combined with the old Shanghai style, the most visitors here are still above middle class because of the consumption level. On the east of the site is an old residential area called Fuyuanli. Fuyuanli is a classical type of local slums. Most people living here are old people without pension and insurance. Low income makes them selling old furnitures and fake antiques for living.

Instead of offering connection, the site is more like an isolation zone between Xintaindi and Fuyuanli. So the design option is to connect them. What we really do is more like connecting people across two different social classes than just simply make a transforming area between two spaces.

Based on the site analysis we found the scale of building and road nets, construction textures and functions are the biggest differnet between them. Therefore, we made our strategy which is connect them from material, scale and function.



Proposal

## CONCEPT

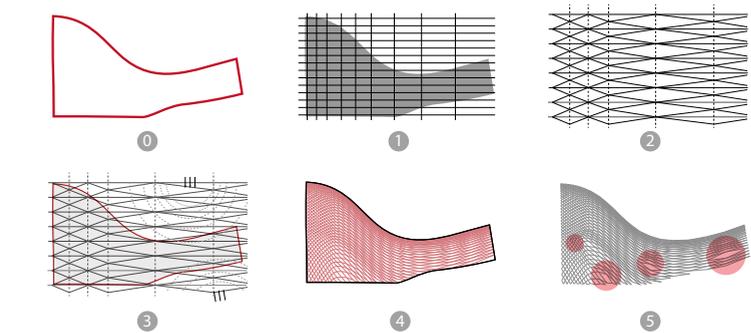
Based on the analysis, we used parametric tools helping us to form and fill the square by modular way.

- Use Step1 to form the site and confirm the filter conditions.

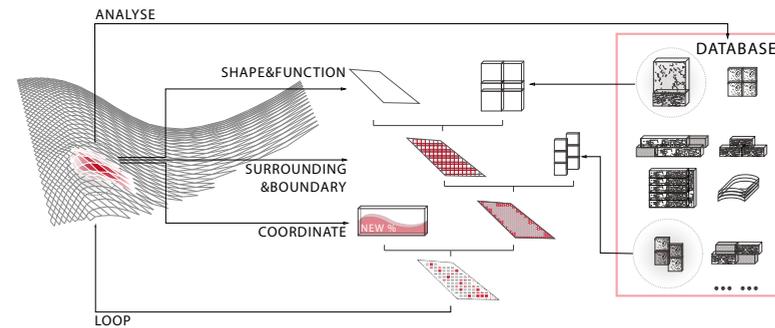
- Use Step 2 to filter the bricks (texture) and fill them into the site.

In Step 1, we divided, formed and disturbed the site with the road net, surrounding building scale from surrounding and function points. Finally we gained the primary site mesh.

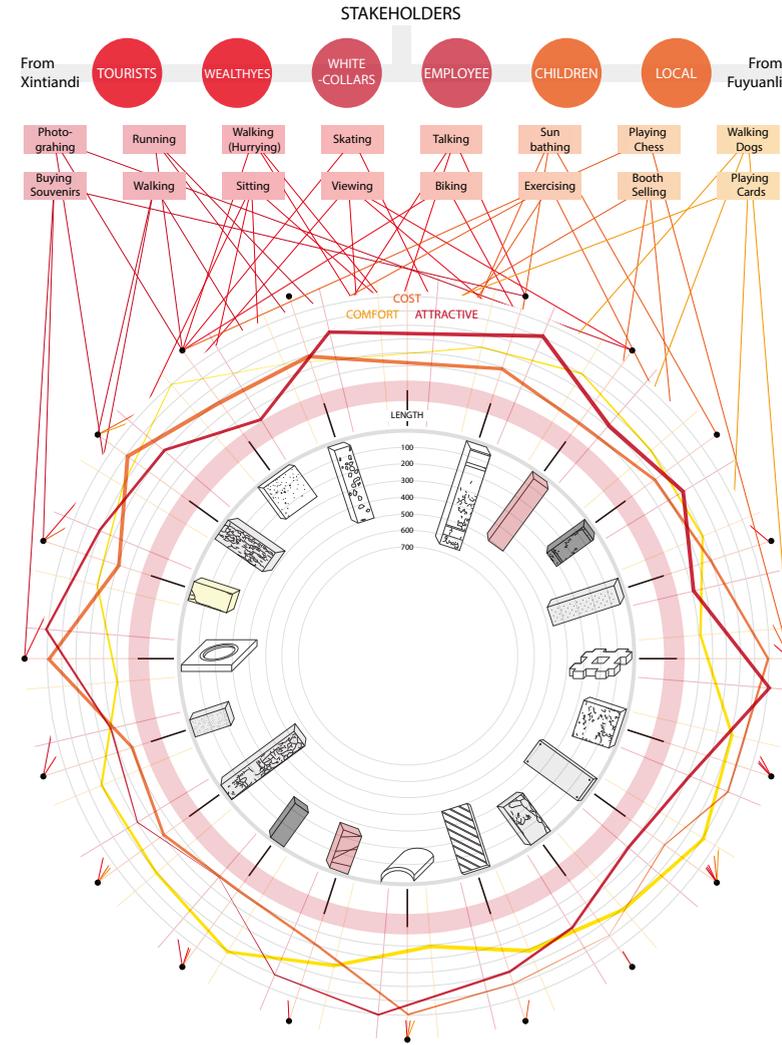
In Step 2, fill the site with the bricks as units depends on the color, function tendency and the shap with Grasshopper.



Step 1: twisting



Step 2: fulfilling

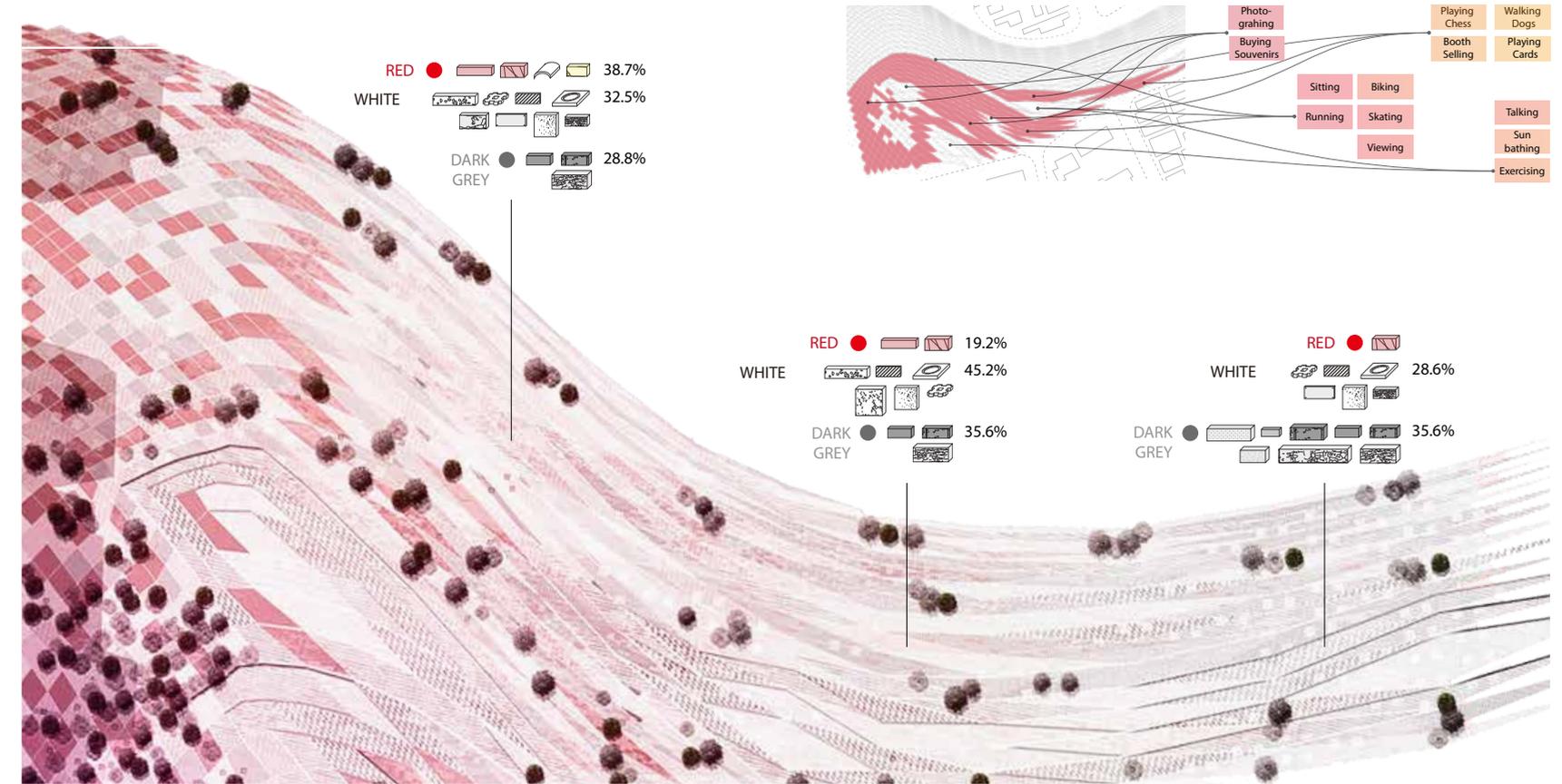


Texture analysis

## MODULAR PLAN

The algorithm from 2 steps made the unit bricks meet the following 3 conditions:

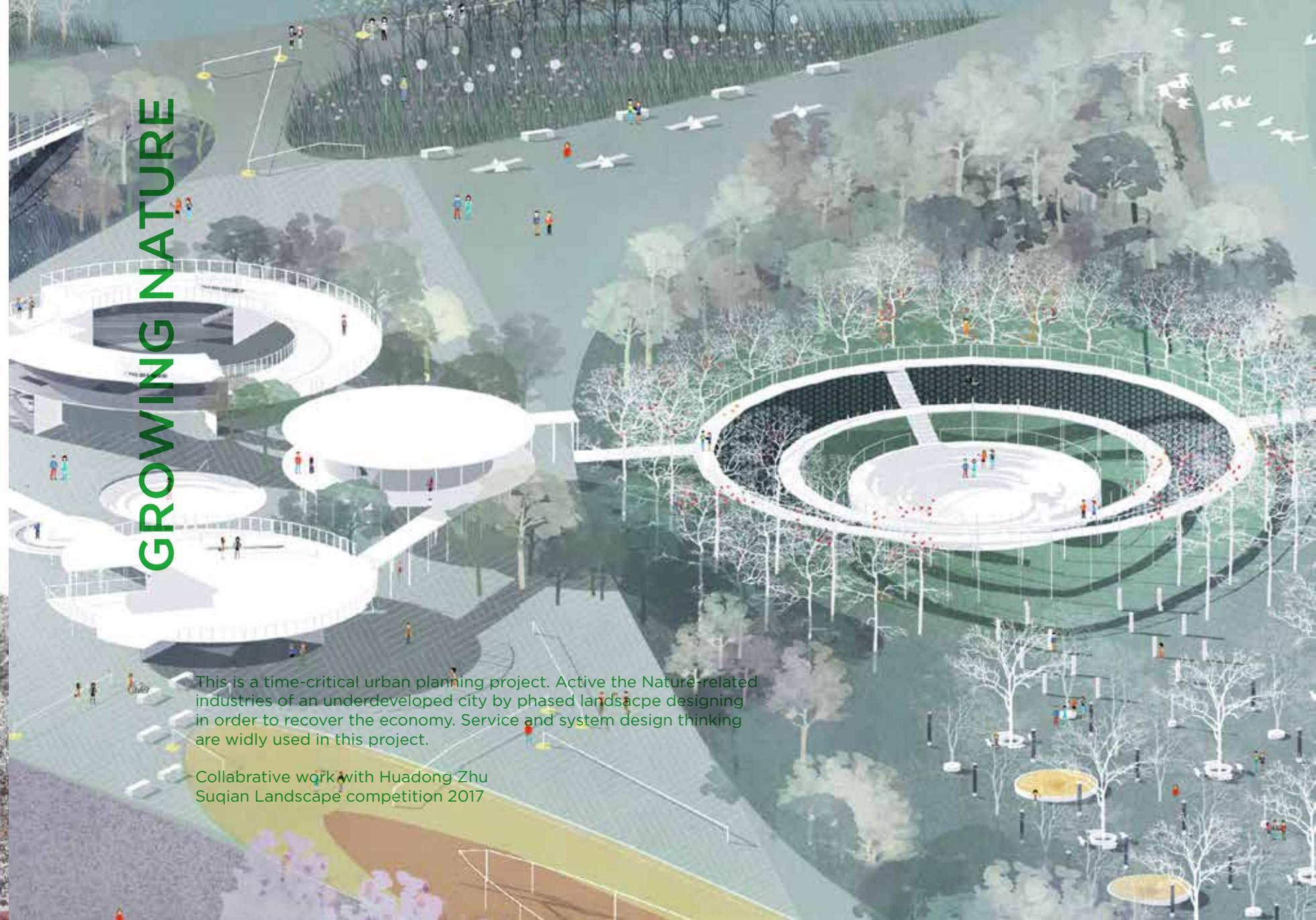
1. Color transition from Xintiandi to Fuyuanli
2. The texture changing from Xintiandi to Fuyuanli
3. The combination of the units satisfied the need of functions in different locations of the site.



MODULAR COMINATION



PERSPECTIVE



GROWING NATURE

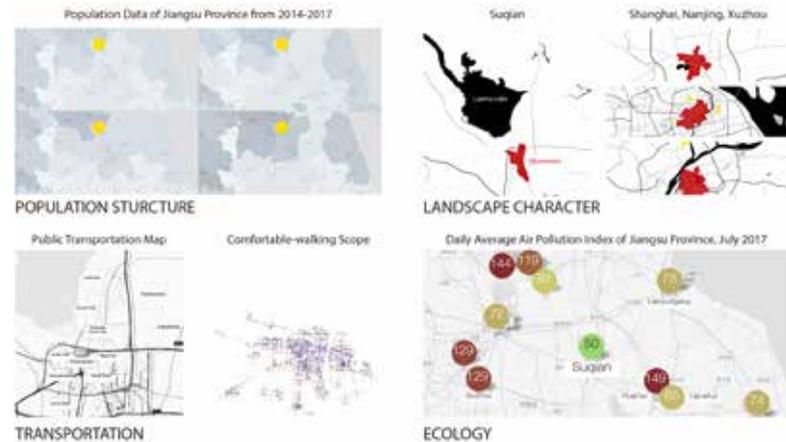
This is a time-critical urban planning project. Active the Nature-related industries of an underdeveloped city by phased landscape designing in order to recover the economy. Service and system design thinking are widely used in this project.

Collabrative work with Huadong Zhu Suqian Landscape competition 2017

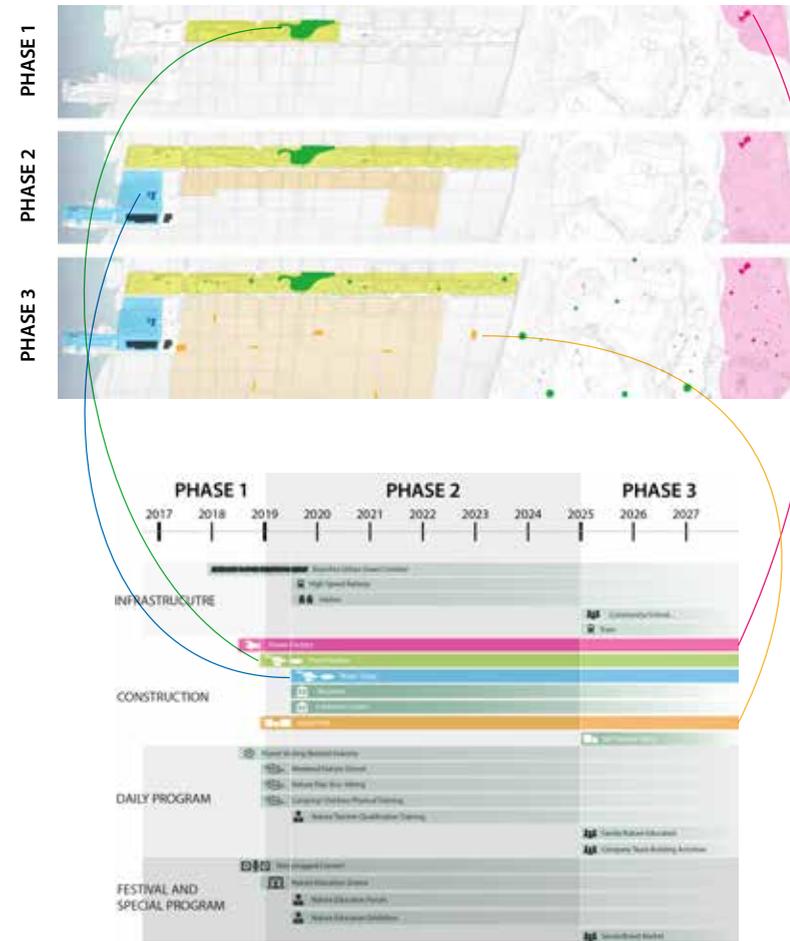
## BACKGROUND AND CONCEPT



The site located in Suqian, Jiangsu Province, China. Suqian is a third-tier city in China. Youth population lossing, lacking of main industry and lack of transportations caused the low economy situation of the city. Therefore, the government hope to active the City Green Corridor and the Flower Fields in Santaishan Park by involving architects' works. Based on that, we came up with the idea to creat significant landsapces for the city in order to active industry which is suitable for Suqian City. The idea came from the case of La Villete Park by Bernard Tschumi. With these backgrounds we started the analysis of Suqian. With suprise, we found Suqian has great natural resource. Based on the landscape character, population struction, transportation and industry background of Suqian, we found Natrual Lifestyle industry has great potential in the city. Besides, the high way and pier will be available in the next few year. The Suqian City also has great history in water transportation culture and unqiue soil culture.



Divided the planning process into 3 phase. Build 4 main constructions: Tree Paradise, Flower Factory, Water Stage and Street Hub to active Natural Education activities and Sustainable Communities.

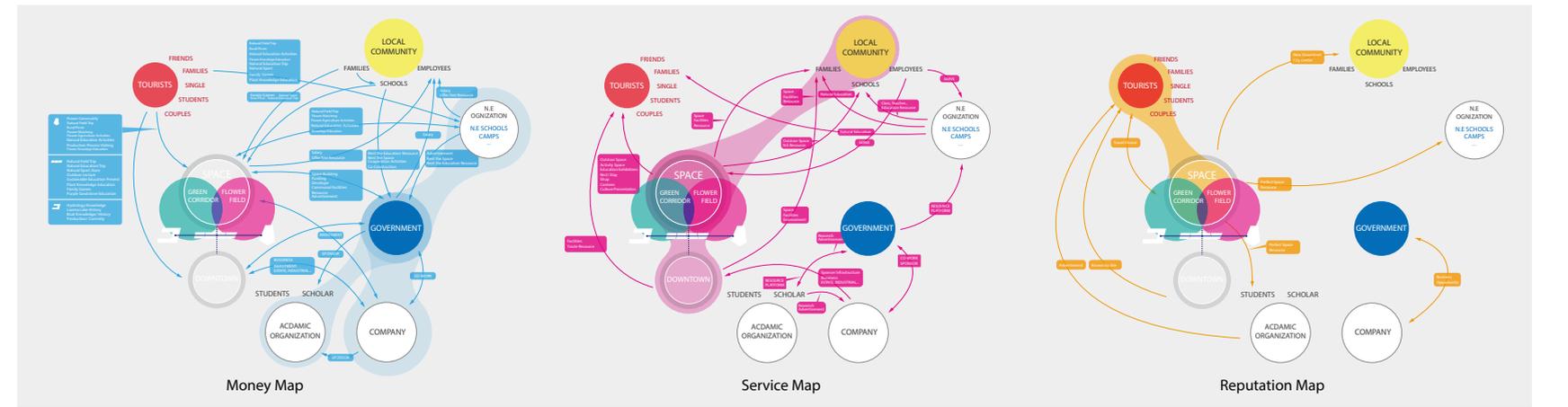
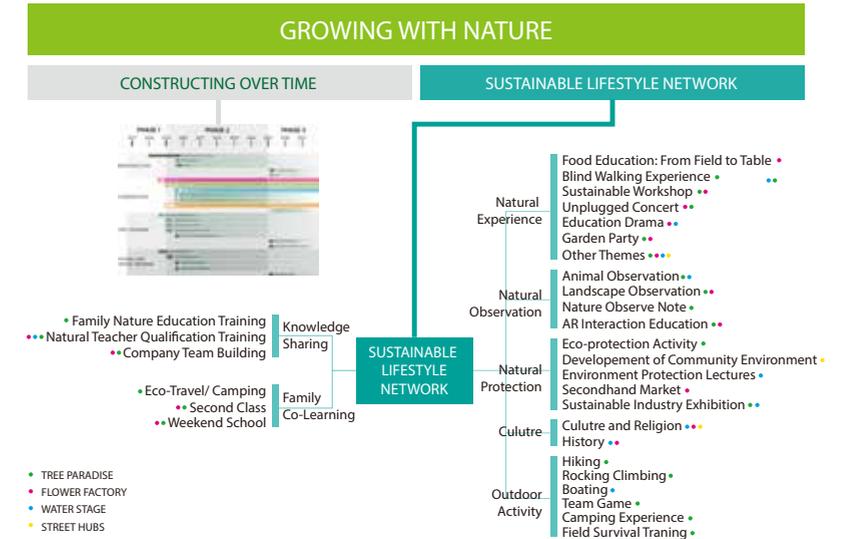


## PROCESS

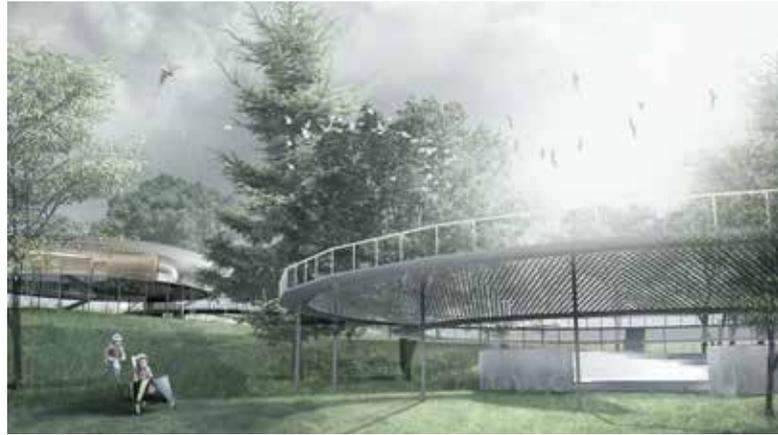
The main concept is Growing with Natrue. It is combined with 2 parts: the time-developing city constructions and the Sustainable Life-style Network.

In PHASE 1, before high-speed rail opening (2019), the site will mainly attract local families and visitors as suburb parks. The Flower Factory is going to active the flower fields. The Tree Paradise is going to provide the site for natural education activities. These two constructions wil attract primary tourists. In PHASE 2, the pier and Water Stage will be completed in 2019. It will provide exhibition halls, museums, large square which can hold national nature education forums and exhibitions. In the PHASE 3, the community and ancillary facilities will be completed. The site will become a city park from a suburb park and will provide more daily service for the community and schools. The Street Hubs will enhance the connection between the site with the local downtown.

The Sustainable Lifestyle Network is combined with Natural education classroom, Knowledge sharing platform and Sustainable service network. 4 main constructions will create a network for Family learning, Knowledge sharing and Community building.



PHASE 1



Theater in Tree Paradise



View from Flower Factory

PHASE 2

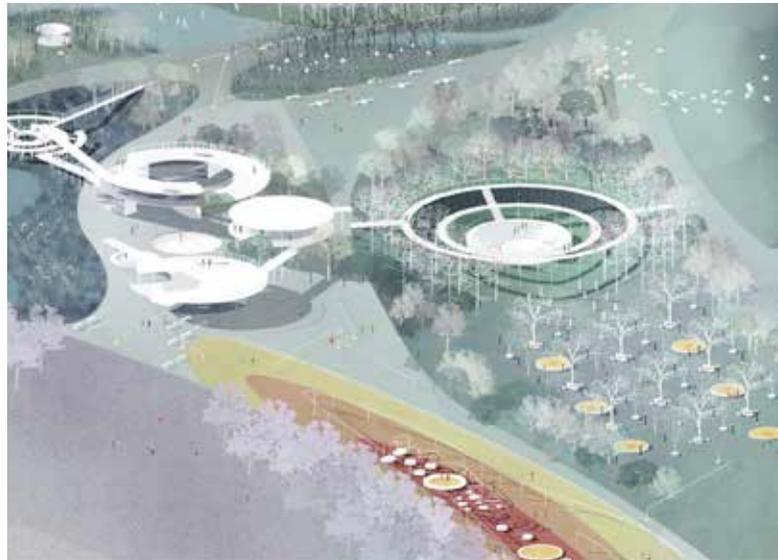


Water Stage holding concert

PHASE 3



Street Hubs in community



Tree Paradise perspective



Flower Factory perspective



Water Stage perspective



Street Hubs perspective

# BIRD LAND

Protect and create the urban birds' habitats through roof landscape design. Using sustainable design methods and interdisciplinary cooperation with life science students to ensure the professionalism of the work.

Collaborative work with Sicheng Zhou, Huadong Zhu  
Tutor: Pius Leuba, Xiaocun Zhu

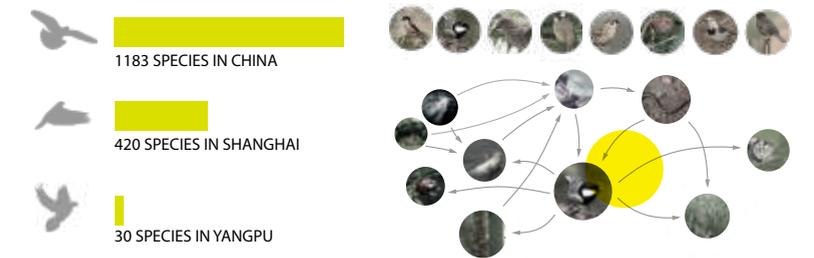


## BACKGROUND

Urban birds are one of the most easiest observed urban animals in the city. In the city's ecological chain they located in the middle position which means they have strongest and most complicated relationship connecting to the other biologicals. In Shanghai Yangpu area, where Tongji university located, the bird species and numbers are decreasing from decade. The decrease of birds not only represent one specie, but also represent that the city ecological system is becoming weaker and weaker. Cooperating with life science students, we found there are 4 reasons caused the decreas of birds: lack of habitats, lack of food, city pollution and human hunting. Therefore, we came up with the idea to attract and protect urban birds by providing habitats with urban buildings' roofs in order to recover the urban ecologic system.



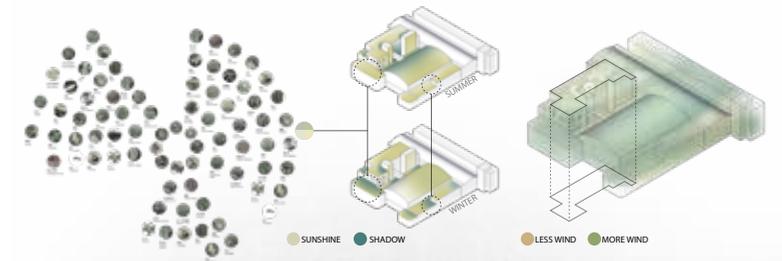
SPECIES LOCATION



POTENTIAL HABITATS

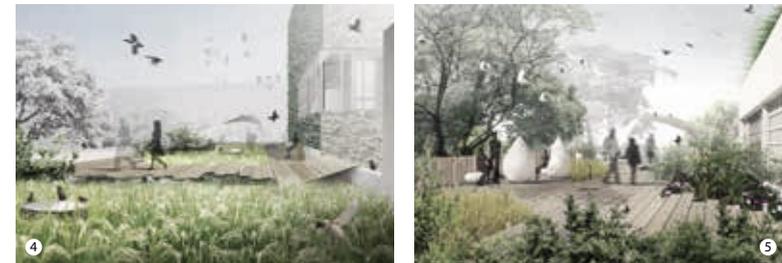
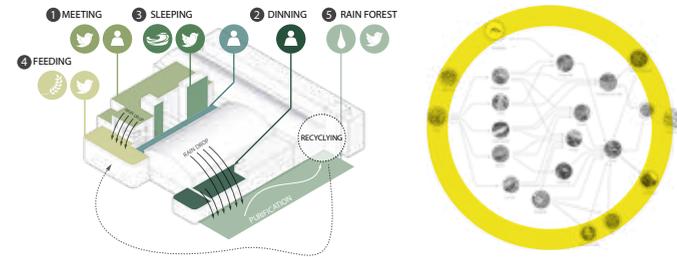
## DESIGN AND DETAILS

The site located on the roof of building of D&I College, Tongji University. The roof was divided into several areas because of the building structure. Therefore, we designed different functions for them.



PLAN

The rain forest and water recycling system can recycle rain water and purify them into clean water. The feeding area in the second roof is a small organic farm. With the participation of birds, the crops produced by feeding area is much healthier because there is no need for chemical fertilizer.



RENDERINGS



# CUBES

Using Grasshopper algorithms to form the skyscraper's shape and skin in order to protect local residential areas from been covered by shadows. Minimize the impact of building on environment by using parametric tools.

Collabrative work with Huadong Zhu  
Tutor: Chi Song

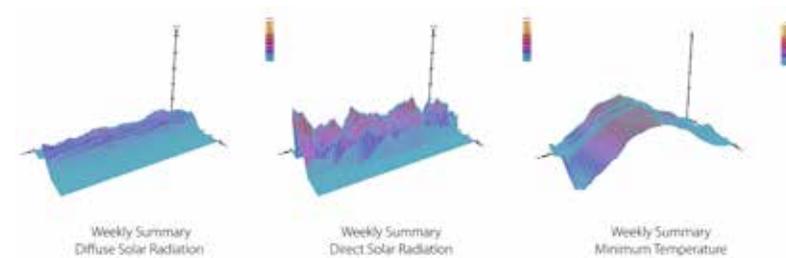
## BACKGROUND



During the period of replacement of city development, sunlight is one of the biggest society issue. Having enough sunlight in the house not only represent the living quality but also shows the social status people has. In this case the government had to build a skyscraper among the old Shanghai local communities. Since we could not cancle the project, the only thing we could do is to decrease the shadow created by the skyscraper. For the local people, sunlight means healthy, good mood, living quility and future.

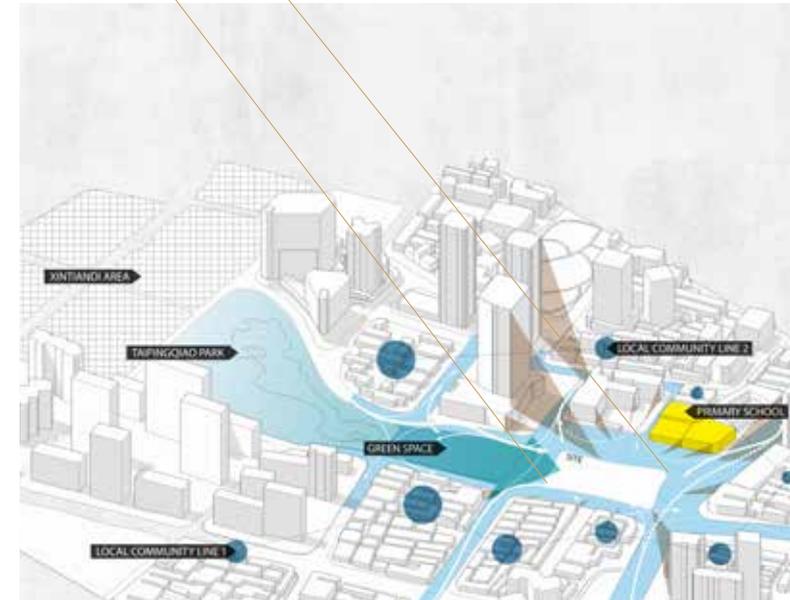
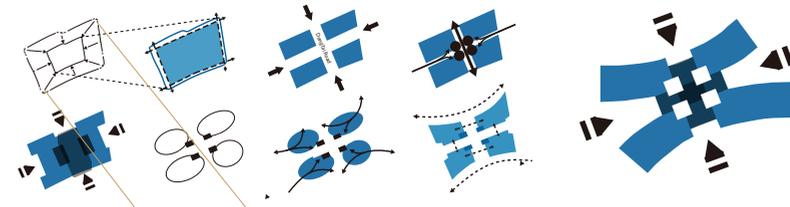
From the site analysis we found most people living in site are olds and childern. Since young people are going out for working, old people and children spend the longest time in these old street blocks. The conclusion represent that the sunlights means almost everything to them. Without enough sunlights the olds will easily get sick. The children will have problem while growing up. It is sad that these important elements could never controlled by these people or their families. As a designer, at least we could do something for them.

There are primary school, parks, residential buildings and hospitals surrounding the site. Based on the analysis, we cleared the demand of each area and the sunlight situation in different time of the site.



Temperature analysis

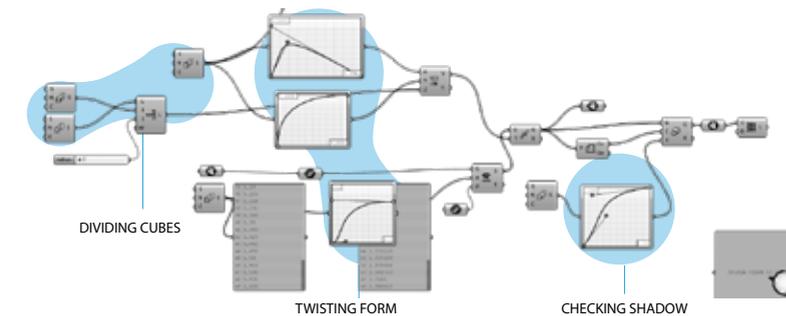
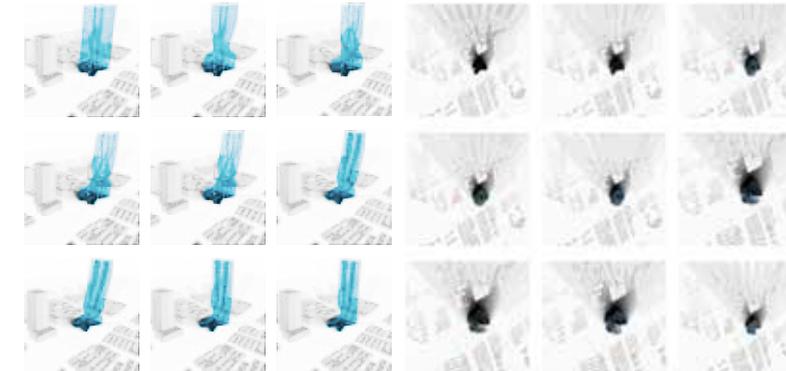
In the first step, we gained the plan of the ground floor of the building based on the circulation and physical environment analysis. The location of the site is a center of the surrounding traffic flows. The plan satisfied the need of traffic flow in order to protect the residential areas from been isolated.



Shadow analysis

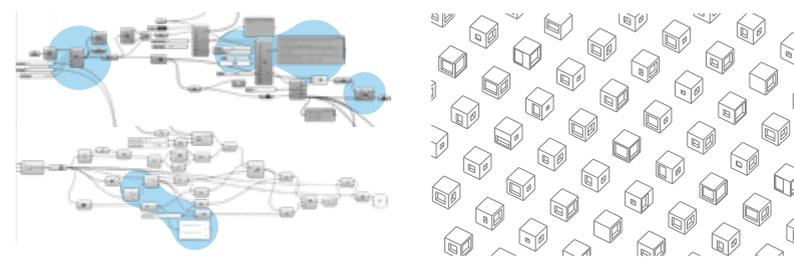
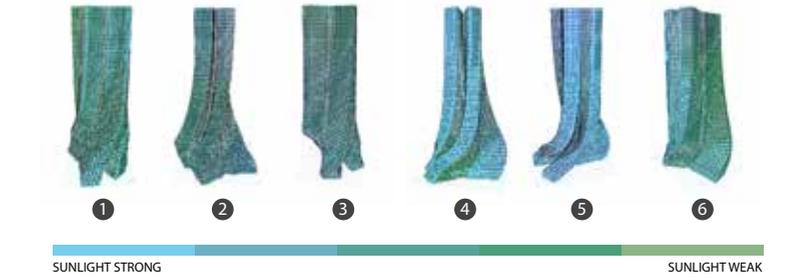
In Step 2, we used Grasshopper alorithems to twist the rudimentary shape of the building. During this process, we tried to make sure that the main shadow of building from a year could avoid from the important parts in community such as primary schools.

With the conclusion of step 2, we started step3. In this stage we used Grasshopper again to create the cubes in order to isolate each room of the building. Then we used Grasshopper to adjust the window shapes of each cube based on the sunlight analysis, making sure that each room has the biggest sunlight and the highest indoor tempreture in winter.



Processing

## PROCESS



Section details

# XINGENG

Agriculture landscape design research for eco-system recovering.  
Substituting chemical fertilizer and increasing production of organic crops by increasing species diversity of the field.

Individual bachelor graduation work  
Tutor: Xiaocun Zhu

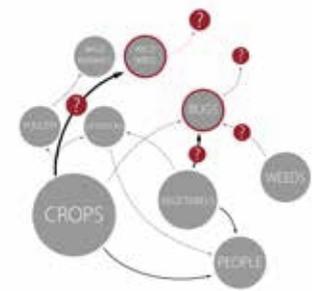
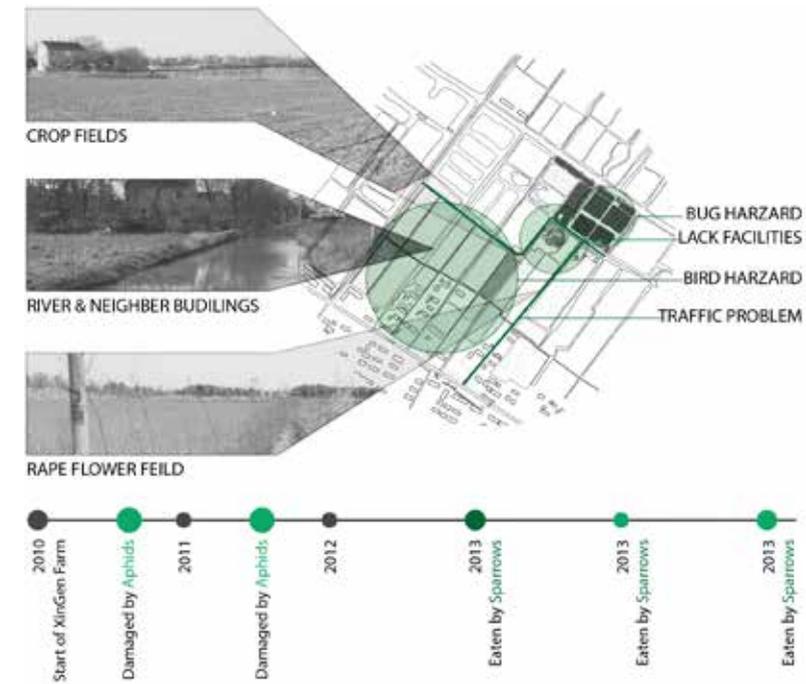


## BACKGROUND

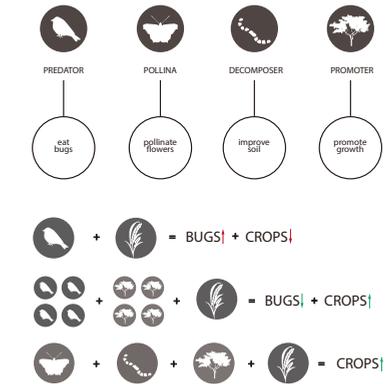
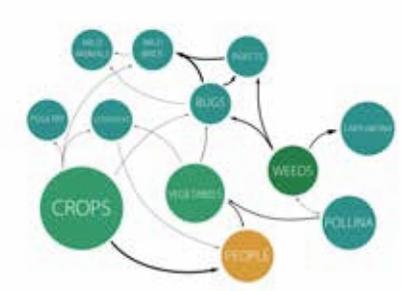
The site located in an organic farm in Chongming Island, Shanghai, China. From the initiate analysed of the eco-system I found the biggest problem is the biohazard. Stop using chemical pesticide brought healthier food but the terrible biohazard as well. The biohazard was caused by the weak bio-diversity of farm. The sparrows had no enough food so they eat a lot crops. The bugs didn't had strong predators so the number was out of control. Increasing bugs also brought truculency result for the crop fields.

Since the farm had already managed by the organic ways, the biohazard can never be solved by using chemical substances. After a large amount of research on organic farming, I found there was a way to solve the biohazard with nature predators. In this case, increasing nature predators could happened by increasing of habitats.

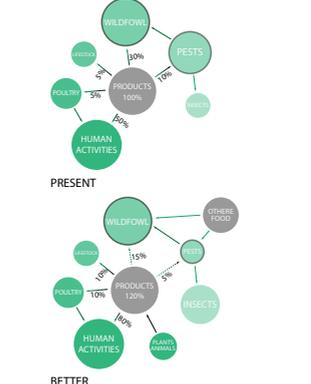
Therefore, the mean strategy is to recover the bio-diversity (by increasing the habitats) of the site. I decided to enhance four following roles in the eco-system: predator, pollina, decomposer and promoter. Predator and promoter can protect crops from the birds and bugs. Pollina and decomposer are good for crop growth. I also found although the farm was running in an organic way, but still really weak on crop diversity. The manages used farmer view to think the organic management, but never looks the field as a natural. No matter how organic the farm was, it was still a pretty weak eco-system comparing with the natural. Therefore, increase the products' species was also important.



Ecological analysis



Roles in system



Improving system

## PRINCIPLES AND PLAN

### 1 DECREASE THE NAKED SOIL

Soil without plants will only can not attract enough living beings.

### 2 SMALL AND STABLE AREA

Small area is better for the ecosystem. Animals like birds have inherent flyability which makes them can not cross the big field. The smaller area can make them easier arrive the different habitats.

### 3 INCREASE CONTACT AREA

Increase the contact area between field and the non-crop habitat is positive to the bio-diversity.

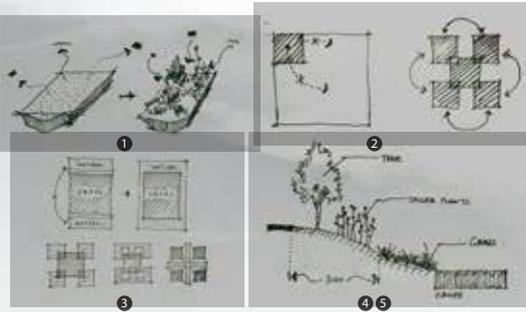
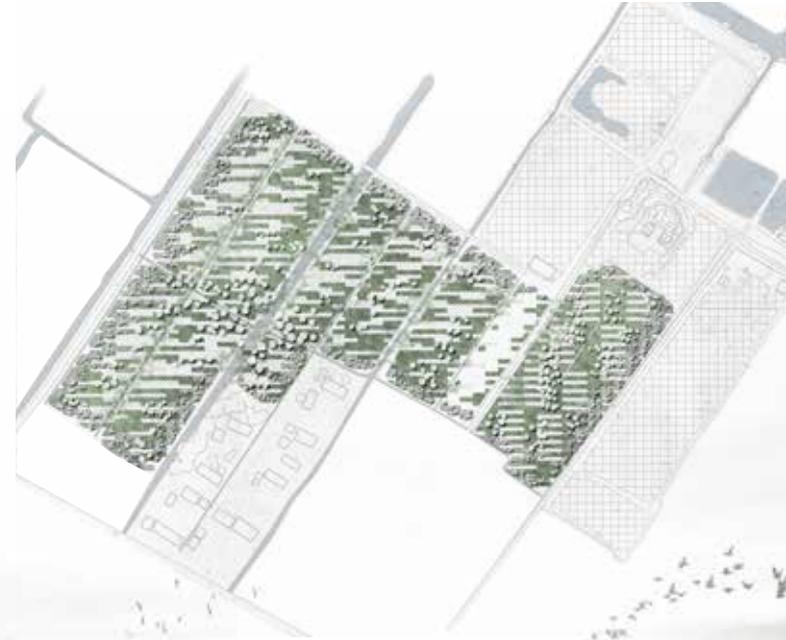
### 4 HAVE AT LEAST 3M BOUNDARY

The boundary will protect the organic field from pollutants and people.

### 5 INCREASE VERTICAL DIVERSITY

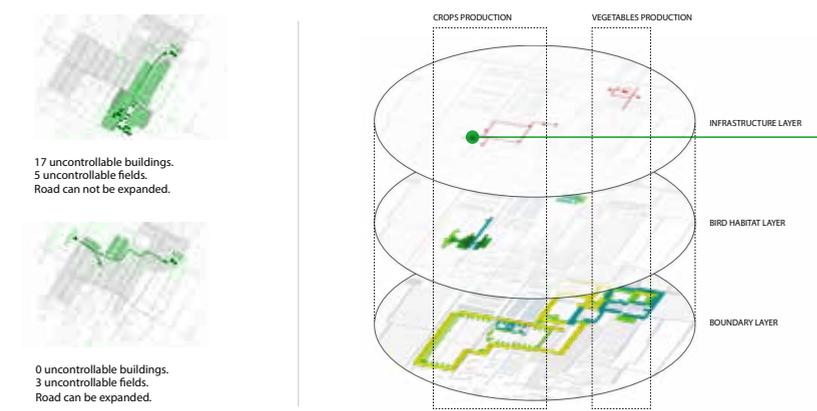
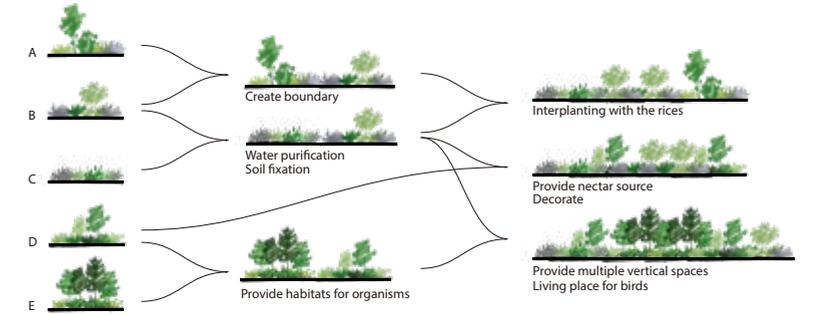
Different plants create different habitats for the different living beings. Aabor and shrub can satisfy the animals' needs.

Therefore I designed this strange plan for the farm. The divided area was based on the organic farming principles. In this case, I designed several planting modules. The whole farm was combined with different combination of the units. The modular planting method could improve the growing efficient of the famers. It is also easy for managing.



## PROCESSING

The whole farm was combined with different combination of the units. The modular planting method could improve the growing efficient of the famers. It is also easy for managing. Diferent units combined into differnt kind of habits and attract multiple species into the farm. What's more, the combination could also create multiple functional areas for people using.



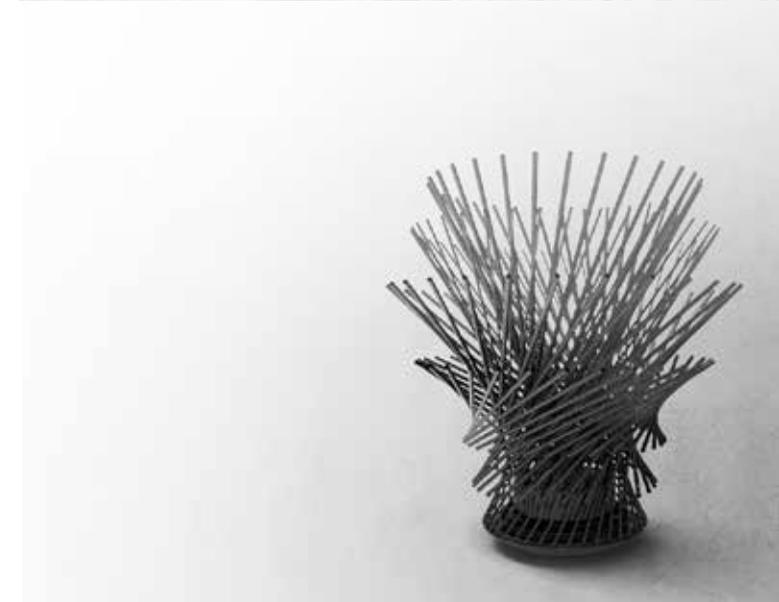
# MISCELLANEOUS

This chapter shows the interdisciplinary works I've been finished in Tongji University including industry design, system and service design, user interface design and interaction design.



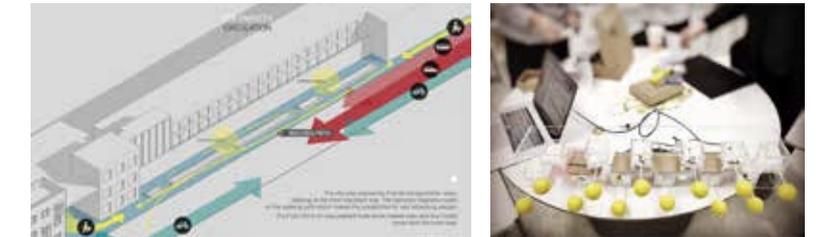
## BAMBOO+

This is an industry design project. In this case the I focus on the material BAMBOO. Bamboo is a fantastic material which is widely used in architecture fields. It is hard, tough, and beautiful. But in this case I payed more attention on the form. How can I re-create the shape of bamboo? How can I use traditional Chinese man-made technique on my lamp? Finally I finished this project with the help of parametric tool Grasshopper Rhino, which is not only able to certify the form but also able to caculate the joints of each bamboo sticks.



## VOICE LAB

The site located in Siping community. We tired to build an interesting interactive art installations on the wall to collect and represent the voice of this old community's history. The installations presents as yellow balls, it could play songs which are able to edited by the passingbys. The songs were created based on the voice in the community. We hope this work could help to active the locals' culture awareness.



## COURSE SELECTING SYSTEM UI DESIGN



This is an interface design project. The Tongji University's course selection system was inefficiency and unfriendly for users. We designed a new interaction system which can make course-selecting became a funny work for students. One of the important terminal for new system is the mobile APP. In this project I designed the UI for the course-selecting App.

Find more information on:  
[http://v.youku.com/v\\_show/id\\_XMTM3NzgOTg0NA==.html?spm=a2hzp.8244740.userfeed.516-5--512-A](http://v.youku.com/v_show/id_XMTM3NzgOTg0NA==.html?spm=a2hzp.8244740.userfeed.516-5--512-A)

## DIGITAL FUNERAL UX DESIGN

Death has always been a sensitive topic for Chinese. It's embedded in Chinese traditional culture that we should respect the deceased and give him or her a decent burial. However, the lack of land space, the wasteful burial objects and even the traditional concept of "respective", have great negative impact on our environment.

There's already a new concept of "tree burial" designed by an Italian company which can solve the problem we mentioned, but this concept goes too far for Chinese in the emotional level. Our main purpose of these task is to design a brand new system based on interactive methods, and to help "tree burial" become more acceptable for Chinese in use of some innovative equipments.



Dongtaihu Art facility design, 2014  
 Collaborative work with Jiawen Chen



2017 UNIQUE Future store competition, 2017,  
 Collaborative work with Yuhong Ma, Fan Chen



Manhattan 42 Street railway comeptetion, 2014. Tutor: Yifeng Lin,  
 Collaborative work with Huadong Zhu, Yang Xue, Jiarui Tan, Junyue Deng



UHU Office, interior design,  
 Collaborative work with Jiawen Chen

MORE WORKS AND ART ILLUSTRATIONS: [www.lqianli.com](http://www.lqianli.com)