

# KUMBELHAVEN

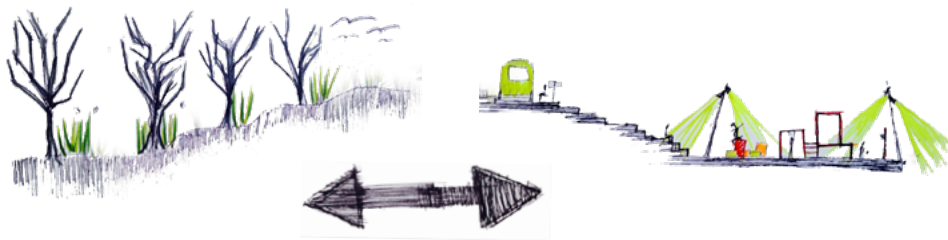


MASTER THESIS

MSC04 URB // SPRING 2016// AALBORG UNIVERSITY

BY ZOHEL NOORESTANI

ZOHEL  
NOORESTANI



The new **COMMUNITY PARK**, that supports **SPONTANEOUS ACTIVITIES, UNORGANIZED SPORTS** in a **NATURAL SURROUNDING** that affords a **SENSORIAL EXPERIENCE** in the hart of **FARUM'S CITY-CENTER**

# KUMBELHAVEN

AALBORG UNIVERSITY  
ARCHITECTURE & DESIGN

DEPARTMENT OF URBAN DESIGN

PROJECT SEMESTER - MSc04

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**IN TOTAL** 114 p.

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Zohel Noorestani

# ABSTRACT

This project aims to develop a new community park in Farum city-center, that activates the city-center as an urban catalyst and supports the city's distinctive features, and trademark. The new community park will act as a positive "driver" for the city-center that supports a more visible urban life. There is a special effort to create an attractive environment for young people in Farum, that focuses on better opportunities for health and recreation. The vision is to create a space that stimulates both mind, body and the soul.

Mind = A sensorial space

Body = An active space

Soul = A community space

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# PREFACE

THEORY

METHOD

INTRODUCTION

MUNICIPALITY VISION

The focus of the project is that the developments should build on the strong elements in Farum's identity: Sport and physical education, and the great qualities of nature in and around the city. There should be a special effort to create an attractive framework for young people in Farum, but also make sure to provide for a wide target-group, to ensure a strong social community in the area.

The booklet is divided into six chapters; Introduction, analysis, presentation, design strategy, evaluation and appendix. Together they create the story of the genesis of the design proposal.

The Harvard method is used for the references. The references for illustrations, literature and appendix occur throughout the booklet. The sources are referenced in the literature and illustration lists, which can be found after the evaluation chapter.





*Illu. 01 Concrete wall*

# METHOD

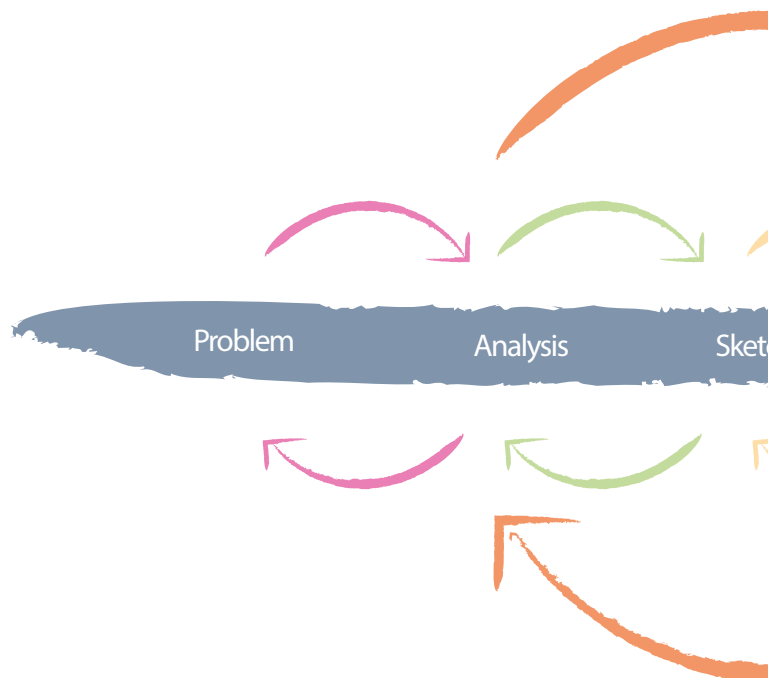
**THE INTEGRATED DESIGN PROCESS (IDP)** is the overall design method used to organize the project. The use of IDP structure forms an understanding of the advances in the field of cross-disciplinary work; architecture and engineering. IDP's five phases; Problem, Analysis, Sketching, Synopsis and Presentation, should not be perceived as linear process but a iterative process where it is necessary to make loops between the different phases. [Knudstrup, 2010]

**SCALE** is used in architecture and urban design constantly, both according to drawings and models, but also in a relation to humans and users of the city. Scale is a gradient from small to large and reverse. The human scale is a well-known term in architecture and urban design. The Danish architect, urban planner and author Jan Gehl is one of the founding fathers of the term "the human scale". One of his pointers is that the human scale is the most important scale, both in planning and architecture. From his point of view, everything is happening in the human scale; the interaction with other people, the perception of the environment and the everyday life [Faber, K. 2010] "...!(Jan Gehl) mean, that if you do not put effort in to all scales, the master plan scale, the building scale and the human scale, then you should not think of the master

*plan scale and the building scale, but only focusing on the huma scale"* [Faber, K. 2010].

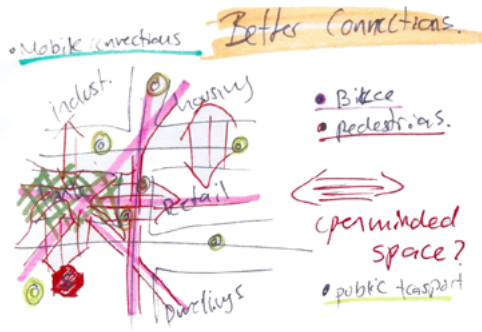
Jan Gehl charges modernism and the modernistic architects for not using the human scale in the process of planning. The modernistic architects created large city plans and the plans were always shown from above. In the modernistic plans there was a lack of details and refined objects in that scale [Realdania Debat, 2014]. To take both scales in consideration, it will help to create a greater understanding of the site. This method will be used in the analysis of the site where the mappings will be made from above and below and also in the design process where the design interventions are thought through in both scales.

**MODELING, SKETCHING AND 3D DESIGN** is going to be another method introduced in this project. By using this method of visually createeing the ideas, will help to understand the scale, the formation, the texture and colouring and even the specific atmosphere that is intended. Sketch will be the first phase where i will move over to modeling and 3D to give the idea the real mesurements and scale to understand the realistic outcome of the design.

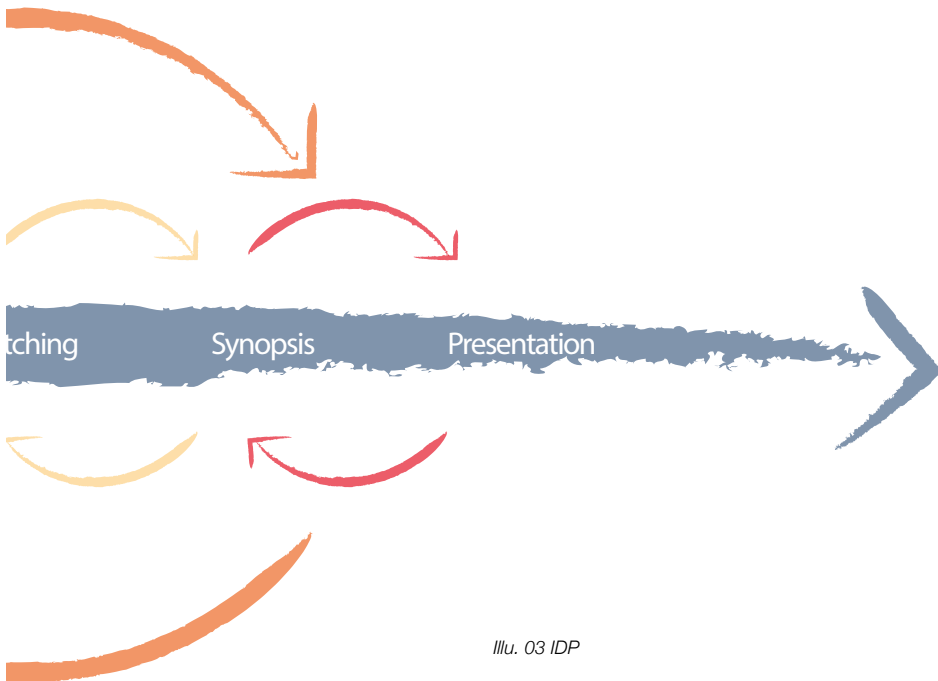




# Designing from Above



Illu. 02 Designing from above



Illu. 03 IDP

# TEORIE

Jan Gehl is in no doubt what the essentials are. Modernism and the car mobile dominions was taking over the architectural thinking in the postwar period, where urban space was set aside, and paved the way for the "effective city and human." in this period there was created prestigious buildings which didn't relate to the communities they were placed in.

Gehl Architects has drawn up a checklist of 12 criteria for good urban quality on three main themes: Safety, comfort and enjoyment. The list includes the most basic things, such as the comfortable seating, green spots in the urban space and urban furniture which invites both stay and activity. The urban space must be clearly defined. Good lighting is a must, and there must of course be something to look at. It is crucial to have enabled ground floors with cafes and shops of all kinds. [Realdania Debat, 2014]. His theory is used in the project as a guidance in designing a comfortable and attractive urban space.

**BETTINA LAMM** is a landscape architect and associate professor at the Landscape Architecture and Planning Division in Copenhagen University. Bettina's research addresses the interaction between the built environment and the lived life, and has been a counselor on architectural projects focusing on play and activity in modern society's public space.

Bettina Lamm is working through practice and theory by converting the city's residual areas through temporary installations and architectural projects. This is done in

## **ATMOSPHERE BY GERNOT BÖHME.**

- *"The term atmosphere is used to apprehend perceived qualities of space. As the example of stage design elucidates, atmospheres are produced through deliberate arrangements; their character, however can be defined only by the perceiving subject. Accordingly, the aesthetics of atmospheres mediates between the aesthetics of production and that of reception"*

We refer to the atmosphere of a city, a restaurant or a landscape. The term is usually used in a spatial sense, where it can be describe with a rich and colorful vocabulary like: sublime, tense or uplifting atmosphere. Atmosphere is in one way to describe the "sense" of a place. Gernot Böhme, a German philosopher, describes atmosphere as an aesthetic concept. He argues that atmosphere, like aesthetics, can only be defined by the perceiving subject. Atmosphere is a highly sensorial term which concerns a spatial sense of ambience and depends on the aesthetics of the object or the reception of the perceiving subject. (Böhme, 1993) Böhme teori vil be used to design an atmosphere for the percived subject by using easthetical elements that can create an senorial space for the opsver.

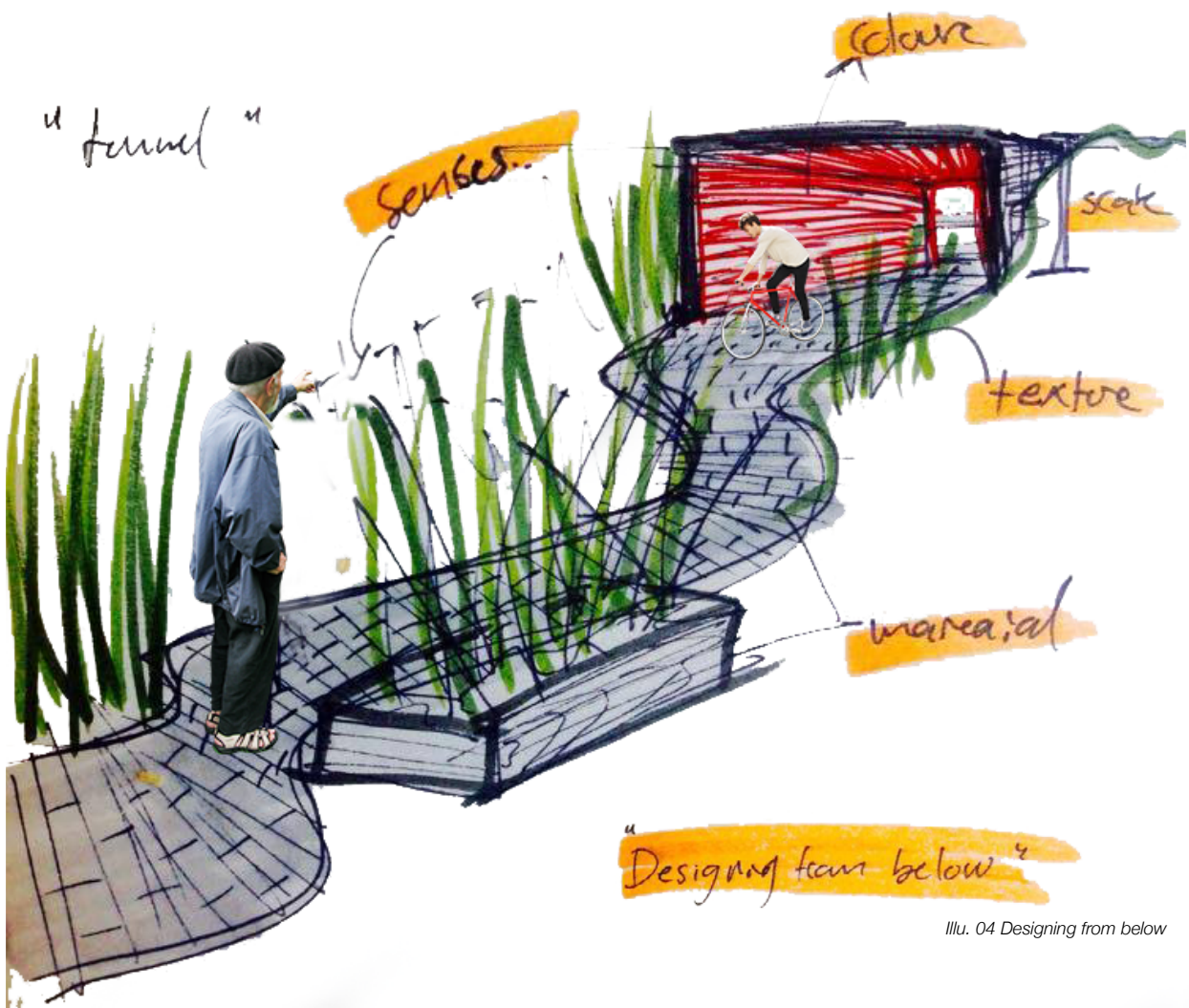
## **JAN GHIEL "THE HUMAN SCALE"**

Jan Ghel is a pioneer in the understanding of good urban spaces. . He has in about 50 years engaged in the development of safe, healthy and sustainable cities in the human scale. [Realdania Debat, 2014]

When it comes to bad urban space and lack of urban life,

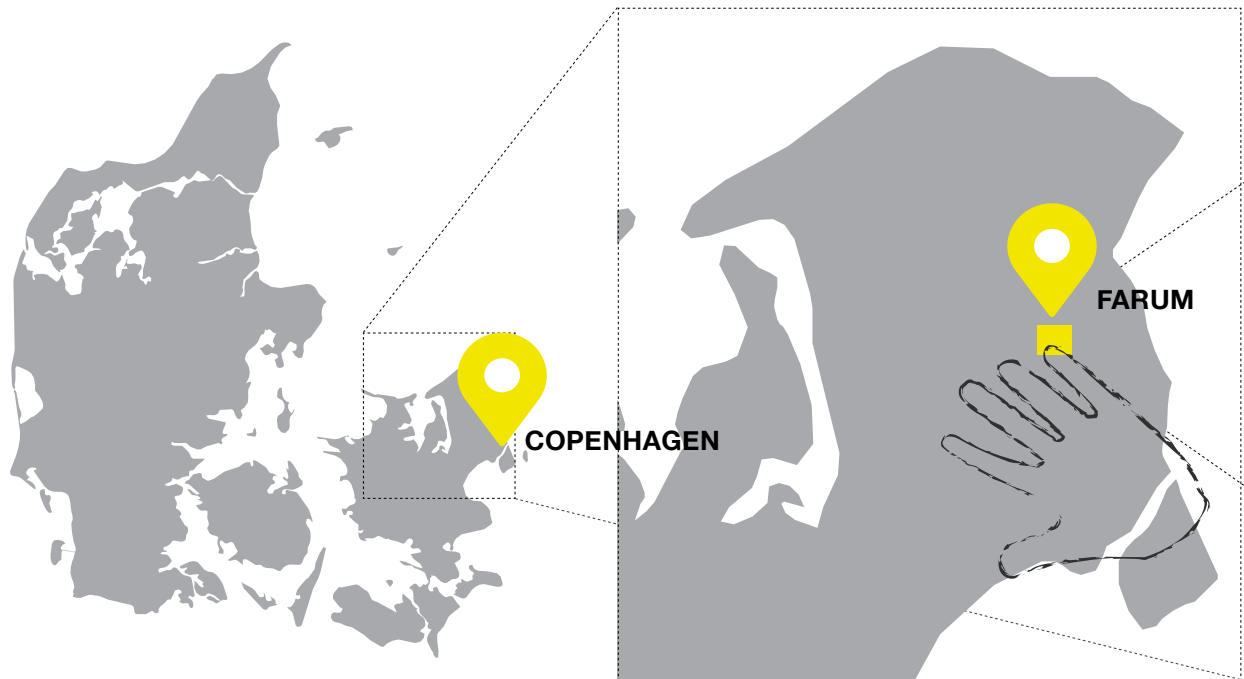
partnership with several local committees in Copenhagen and the Current research is rooted in the EU project Seeds, which examines the opportunities and challenges for temporary use of residual areas and un-programmed spaces.[www.dac.dk, 2016] Her projects will be used as inspiration and case studiefor the project.

*It is essential to think of life between the houses very early in the process, and not think that its possible just to sprinkle it over afterwards. First life, then space, then buildings. It is too late afterwards. - Jan Gehl*



Illu. 04 Designing from below

# INTRODUCTION



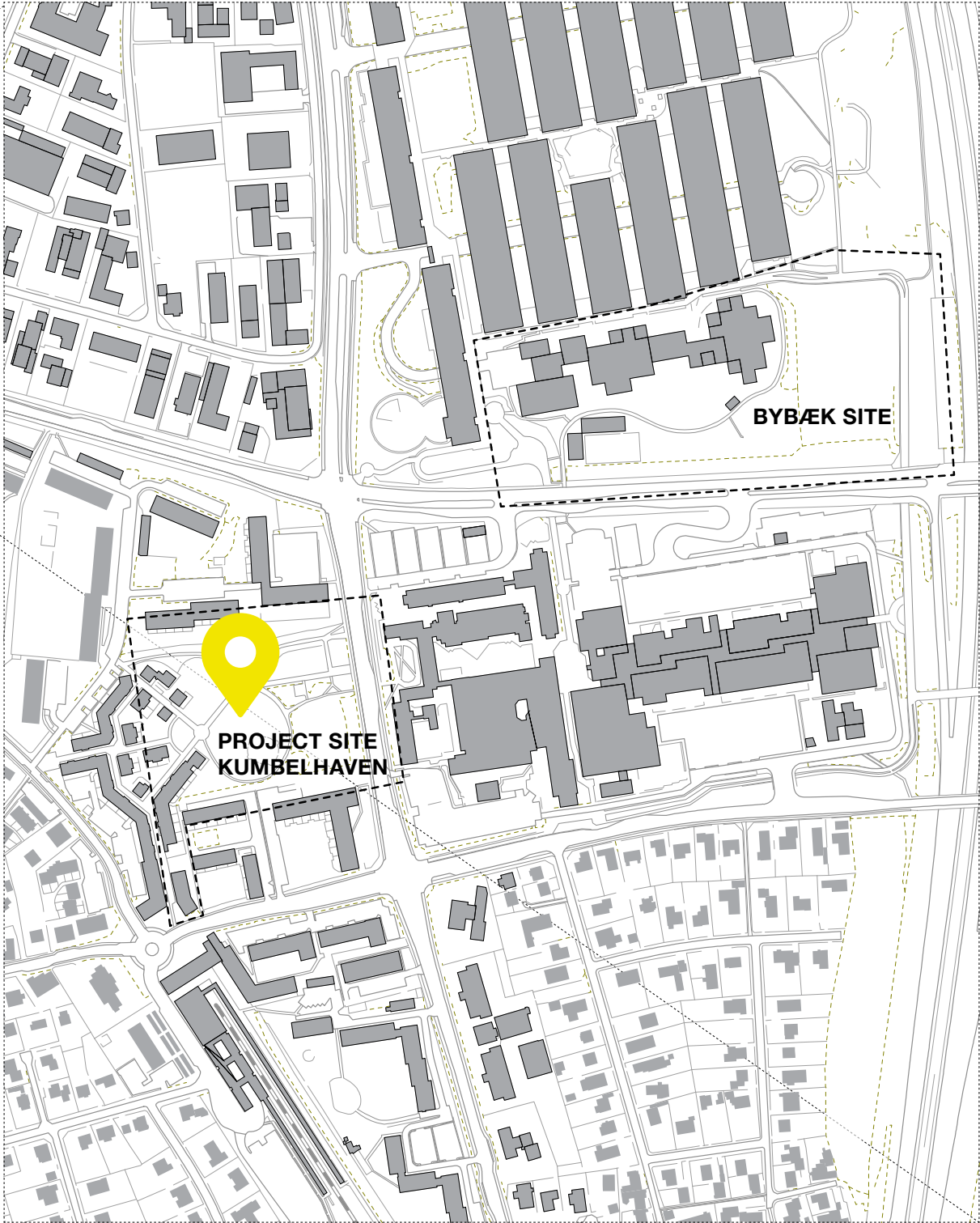
## FARUM IN DEVELOPMENT

The project will help to create a visible debate on how best to prepare the suburban areas for future challenges and come up with suggestions on how a suburban area may develop on the basis of environmental, economic and a strong social sustainability.

This project is based on a project competition from 2011 in Farum municipality. [Furesø kommune, 2011] Farum in development "Farum i udvikling" is the project competition, focusing on the urban renewal of the city-center. The architectural competition is meant to kick-start an ambitious development over the next 20 years towards Farum become more eventful, sustainable and a safer city-center that is attractive for residents, visitors and investors, and continues to attract new residents. The competition site was "The Bybæk site" a closed-down school area in the city-center, where the main focus was

to expand the retail area from the local shopping mall (Farum Bytorv). When closing the school, an after-school program for many kids in Farum where also closed down. The after-school program was for youngsters that afforded programs like art project, martial arts courses and street games. The youth club is now moved to another location in 'Farum Midtpunkt, but could use a more permanent site where outdoor activities and programs can be afforded for them.

The base of this competition will be used as an inspiration, where another site is chosen for the project. The chosen site is "Kumbelhaven" where a new urban area will be proposed as the outcome of my Master Thesis research.



Illu. 05 Site

# MUNICIPALITY VISION

Farum has a strong identity and foundation. There are good residential areas, A train station that is under the finger Principe and connects Farum to the rest of Copenhagen. There are also good connections to get around by car and busses as well. The city has an active trade and business, a strong profiles in sport, physical education and music as well as unique, green surroundings!

When asking the citizens, who lives in Farum to describe the city identity, they mention; The city's strong sports and athletic profile, the music and the unique, green surroundings - which has an importance to them. [Furesø Kommune, 2011]

The brief for the competition project "Farum in development" [Furesø Kommune, 2011] has been read and 6 focus points has been concluded on.



*Illu. 06 Farum municipality*



**REDUCING TRAFFIC BARRIERS AND GENES.**

Traffic and parking is very visible in the city-center. The area is characterized by a high traffic separation, which splits the city-center into “islands” and a function-divided areas. Especially Frederiksborgvej is a barrier that makes it difficult to move across and separates the area in two different districts. (see appendix Kevin Lynch mapping XX)



**VISUAL AND FUNCTIONAL CONNECTIONS**

Establish a more defined center where city life is strengthened. Connections across should be more comfortable and efficient and include the soft traffickers more in the urban space.



**FARUM'S IDENTITY**

Future developments should be based on the strength of Farum's identity: Sports and athletics and the great qualities of nature in and around the city.



**MORE CITY LIFE IN THE URBAN SPACE**

The city-center should attract and accommodate new development-oriented activities that can act as a positive “driver” for the community. The urban spaces should support a more visible urban life.

**BETTER OPPORTUNITIES FOR HEALTH AND RECREATION.** Focus could be on creating better opportunities for health and recreation, where unorganized activities are incorporated in the urban space.



**AN ATTRACTIVE ENVIRONMENT FOR YOUNG PEOPLE.** There should be a special effort to create an attractive environment for young people in Farum. Many families with children and senior citizens are already happy to stay in Farum.



# PRESENTATION

DESIGN CONCEPT  
DESIGN INTERVENTIONS  
PROGRAMMING  
SITEPLAN 1:1000  
SECTION 1:500  
LANDSCAPE  
LIGHTING  
DETAIL  
PARKING  
VEGETATION STRATEGY  
VIZULIZATOINS







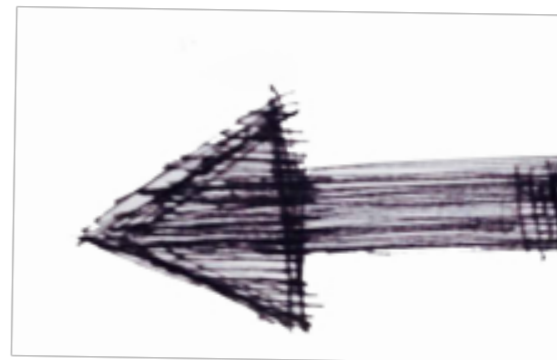
SITE PLAN 1:1000

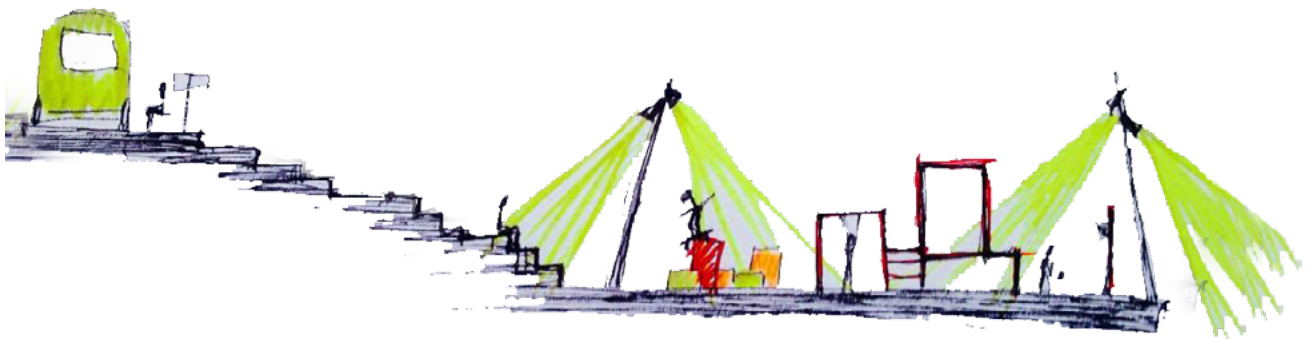
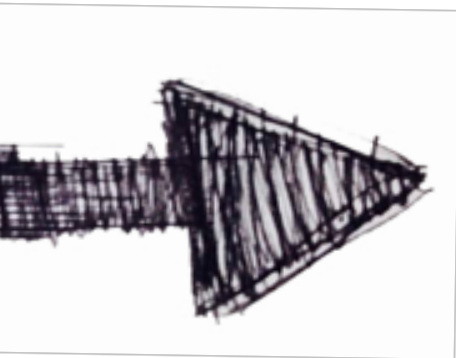
Illu. 07 Site plan 1:1000

# DESIGN CONCEPT

The urban vs the rural is the overall concept of the design. The element of a lush natural environment in contrast to hard paved urban landscape is meant to enhance each other and together create a raw atmosphere with sensory and spatial experiences. The intention is to enhance accessibility and functionality through paved surfaces but still make it seem as untouched by man as possible, where the vegetation is more or less left to grow uncontrolled. The two elements is the foundation for a space that supports a spontaneous atmosphere that affords unorganized activities, movement and play for the mind body and soul.

## URBAN VS RURAL





*Illu. 08 Design concept*

# DESIGN INTERVENTIONS

There are in total 8 illustrations that shows different design interventions that is made on the site. The interventions are explained in the illustration with a following text.

## THE SITE TODAY

is a green park that is mostly use by the local dog walkers and as a shortcut to get to Farum station, a 2 minutes walk from the site.

**THE STEP-LANDSCAPE** eliminates the barriers the terrain is createeing, hence to that it allows a better access and a more fluent flow for the pedestrians in to the park. The steps on the corner to the right of the park , creates a emphi-step landscape overlooking a big area, that can potentially be a multi-court for the youngsters in the city. The only official pathway in the site today is going through the tunnel. This area will be leveled out with the lowest point which. This will help solve the flooded blue-spot which is a critical point that collects the rainwater (See Micro climate page XX)

Another issue on the site, is **BETTER CONNECTIONS TO THE CONTEXT**. By connecting key areas and buildings like the library, the municipality buildings and the apartment buildings around Kumbelhaven with straight lines, the lines automatically creates a center point on the site.

When draping the lines down to Kumbelhaven and intergrade it with the current vegetation and buildings on the site, a **NEW FLOW** is portrayed.

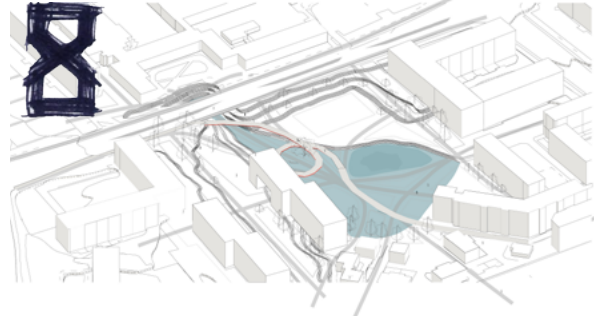
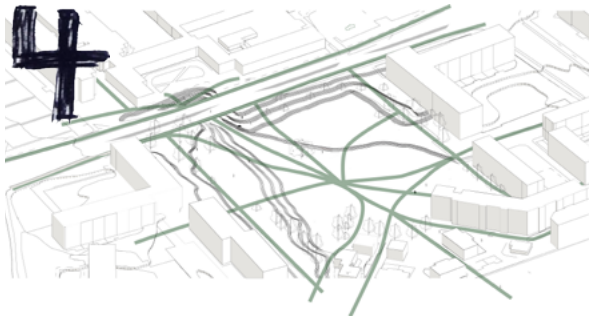
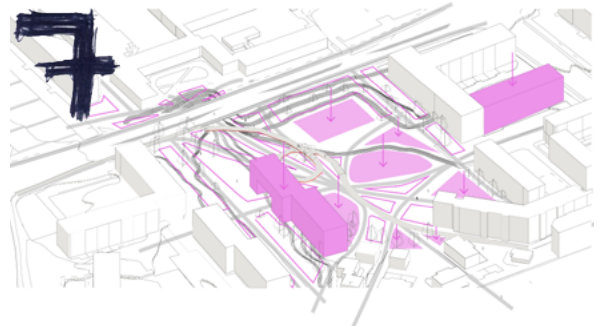
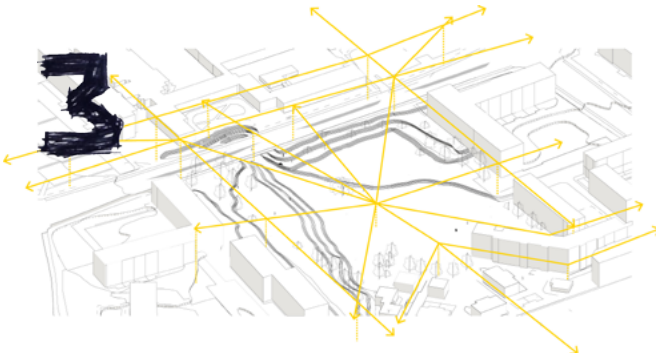
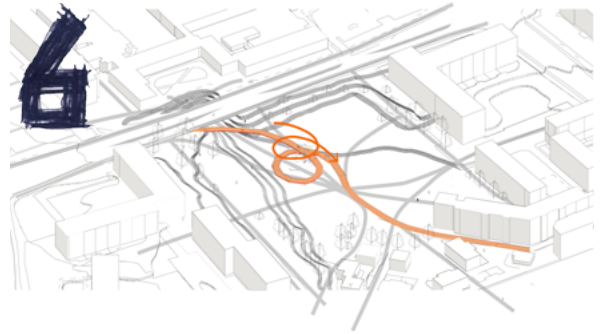
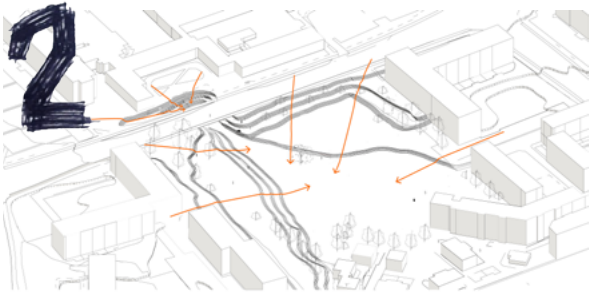
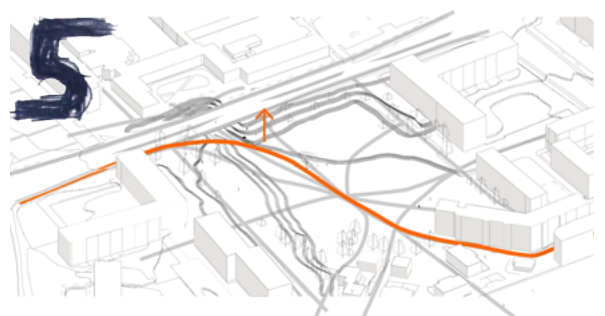
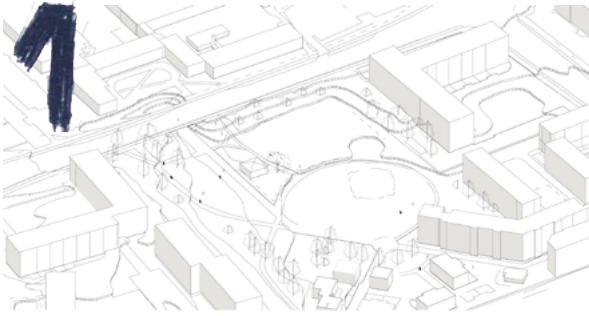
To better the **ACCESSIBILITY FOR CYCLISTS**, the flow line connected to the current bike lane on Frederiksborgvej, is extruded up and functions as a bike bridge down to the site as the official "fast lane".

The bike lane loops around the big Willow-tree on the site and levels down with the terrain. This will enhance the **IDENTITY** on the area with its distinctive form. The form also creates opportunity for other activities to be integrated in the design. The inner loop will be covered with a net-system of ropes that will function as a big hammock or can be used as a climbing element.

In between the flow lines, **ACTIVITY ZONES** are created. Not only outdoors but also two new buildings that can densify and contribute to the community. The densification of the park is due to the space that allows for it, but also to eliminate the function-divided city-center, by incorporating other commercialized programing on the site.

The new building connected to the apartment-block is Farum city-center's new fitness center. Hence to that, a new public gym is created in one of the activity zones, where outdoor yoga or cross-fit courses can be arranged in collaboration with the fitness-center. The other new building will function as a sister building to the library.

As mentioned the terrain today allows the **RAINWATER** to be contained under the tunnel, when extreme rainfall occurs. To manage the stormwater in the best way, the ground level towards the buildings will have a slight slope upwards so the water can't damage the surrounding buildings.



*Illu. 09 Design interventions*

# PROGRAMMING

The programming of the site follows the ideas behind the zoning showed in the design intervention diagram. The urban landscape offers seating arrangements with a lush recreateeional character. On the outer edges of the site, the programming is dominated by recreateeion and seating arrangements, where the vegetation with high grass and bushes dominated the area. These areas are mainly for relaxation and enjoyment of the beautiful natural environment. Going further in the site, there is space for urban gardening in the summertime where the vegetation gradually goes from high grass and bushes, to cut grass accessible for people and dog walkers.

From Frederiksborgevej and down the amphi-steplandscape you find the sport area. Here, young, old and children of Farum city-center can play street soccer or basket in an urban environment. On the amphi steps the vegetation is placed in smaller section with seating arrangements looking over the court.

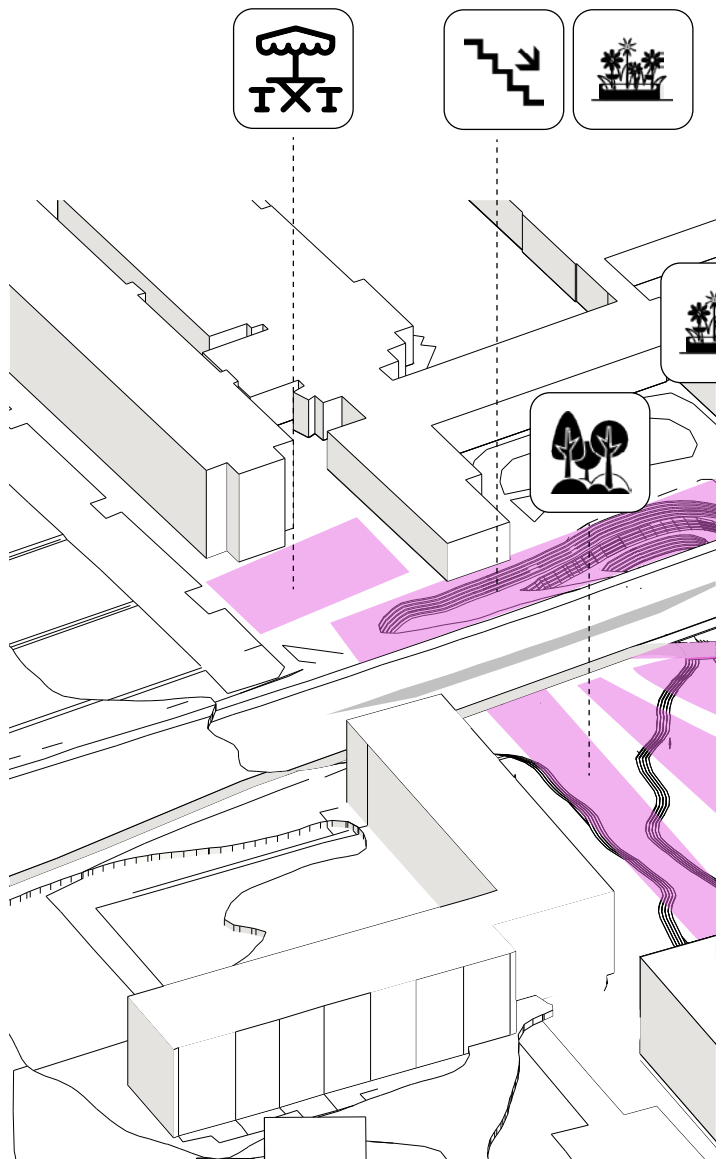
The bike bridge is formed as a loop around the big willow-tree, where the inner loop is covered by a net system of ropes. The net can be used as a hammock for relaxation, overlooking the park or if you're in a playful mood, it can be used as a climbing element around the big tree. There is several bike parkings located around the site. As assume that more cyclists are going to use site now, that the site is more accessible for bikes with a skate park and nonetheless better mobility and flow for cyclists.

as mentioned the site is densified with two new buildings with different programing. A new youth-club and fitness center in site could contribute to a more vibrant city center for the younger generation. The youth club can work as a sister building to the main library building located across Frederiksborgevej. It will be facilitate with different programing like a small coffee shop a library section and after-school programs. Outside the youth club there is space for outdoor serving and seating arrangements for the visitors, who can enjoy a cop of coffee before moving on to the next destination.


The step landscape flattens out and leaves space for a skate zone and outdoor gym. The outdoor gym is a public space where outdoor yoga or cross fit course can be held by the new fitness center.

The flatten area leaves space for temporary installations and events. The multi court can be used for ice skating in the vintner, and the skate-ramp can be covered and space for an outdoor concert can be afforded for the public.




On the opposite side of the new youth club, urban gardens are placed. These small gardens involve the local community and allow the residents of the many nearby apartments to grow their own vegetables, herbs and flowers. A vibrant and divers area occurs as a green pause in the urban context. Bicycle parking is also placed towards Elmely, to accommodate the cyclists coming from Farum station.




CAR AND BIKE PARKING  


OUTDOOR SERVICE 


STEPLANDSCAPE//SEATING  

HIGHGRASS//BUSHES//BIG TREES//  
URBAN FARMING   



OUTDOOR GYM 

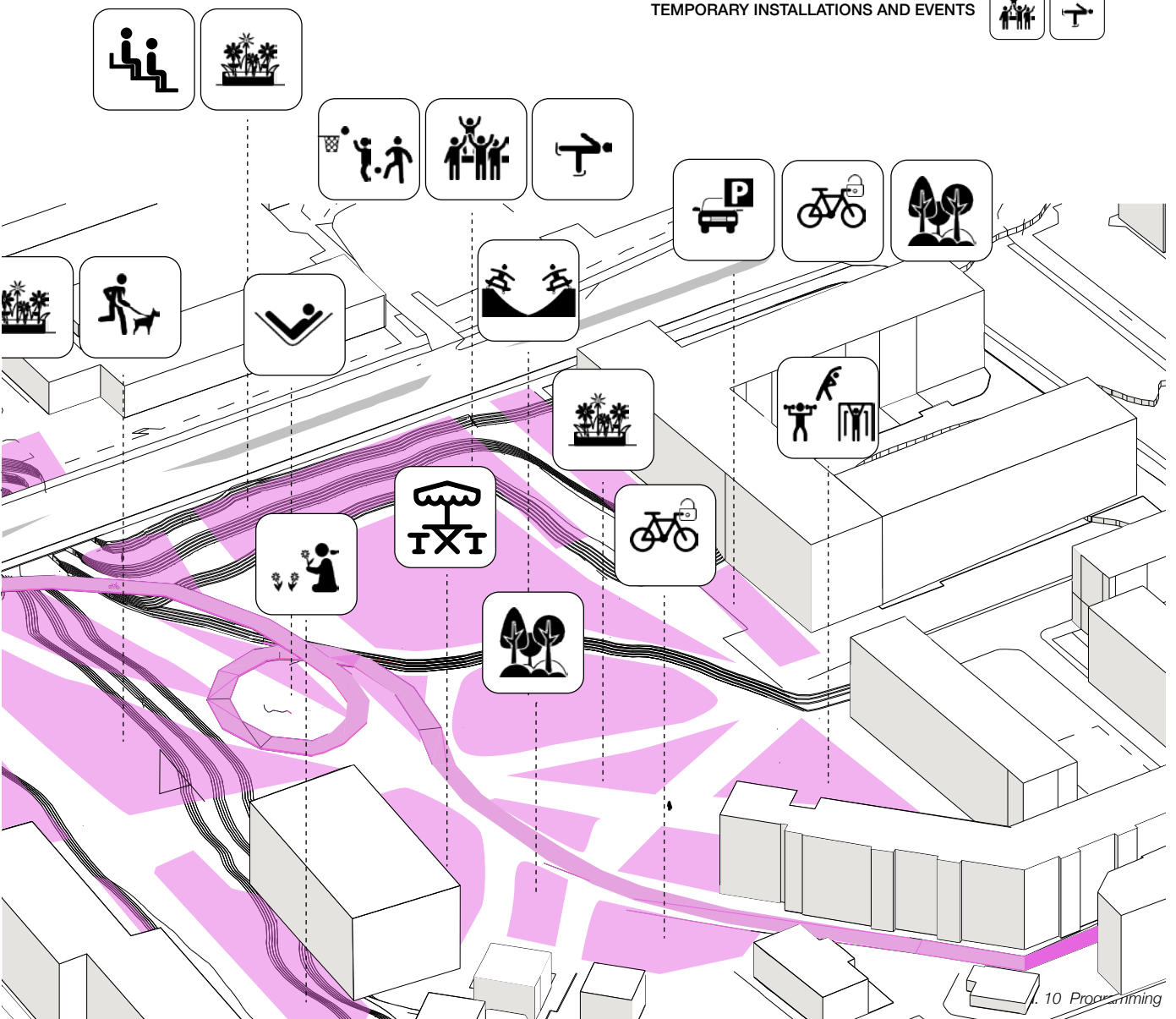
DOGWALKING 

HAMMOCK 

SKATEING 

STREET GAMES 

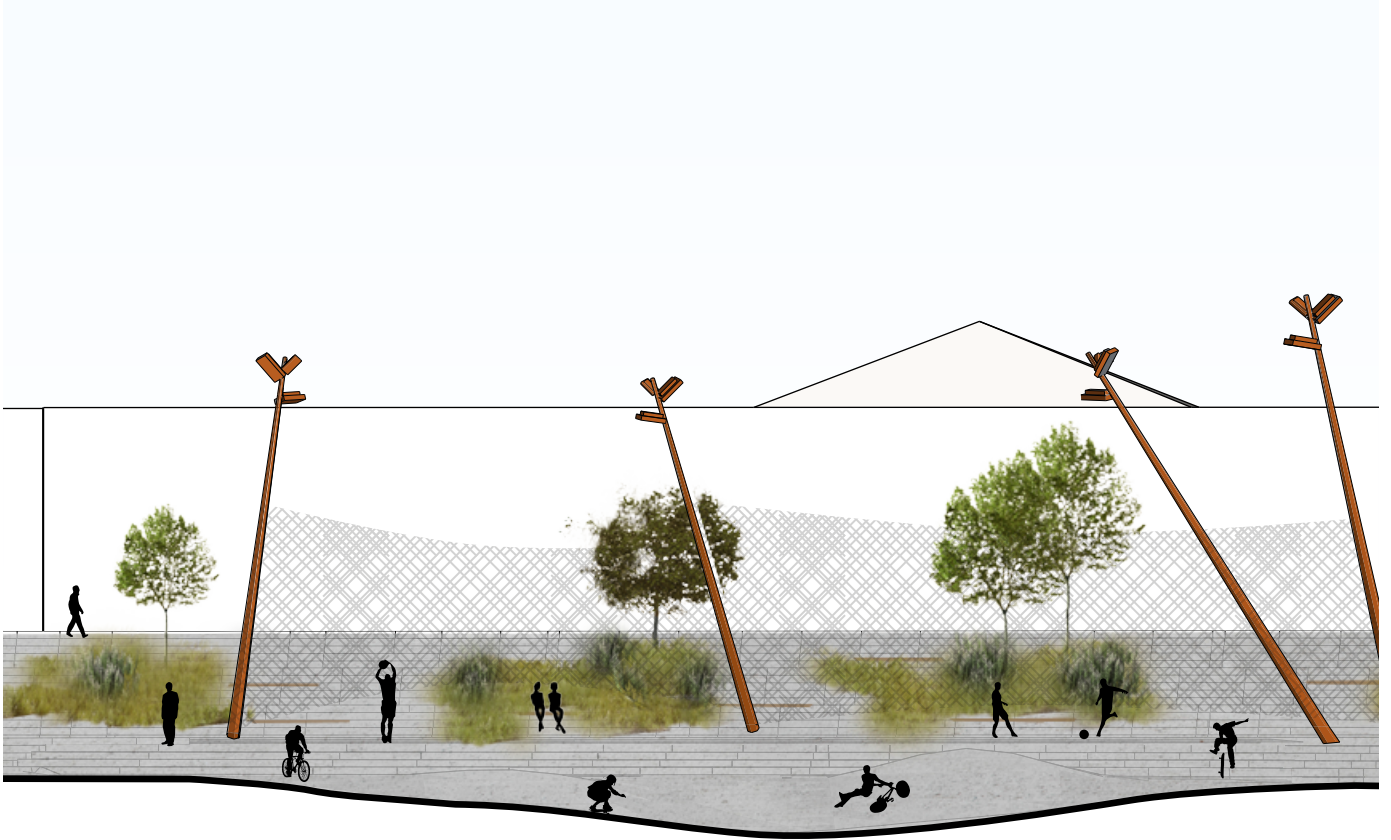
TEMPORARY INSTALLATIONS AND EVENTS  



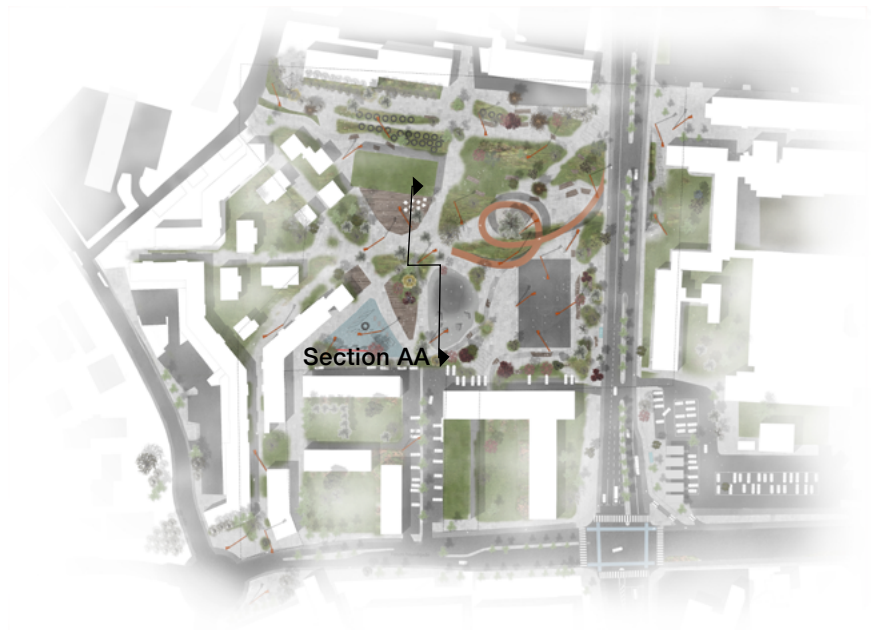
SECTION AA 1:200







*Illu. 11 Section*



# VIEW FROM FREDERIKSBORGVEJ





*Illu. 12 View from Frederiksborgvek*

# VIEW FROM OUTDOOR GYM

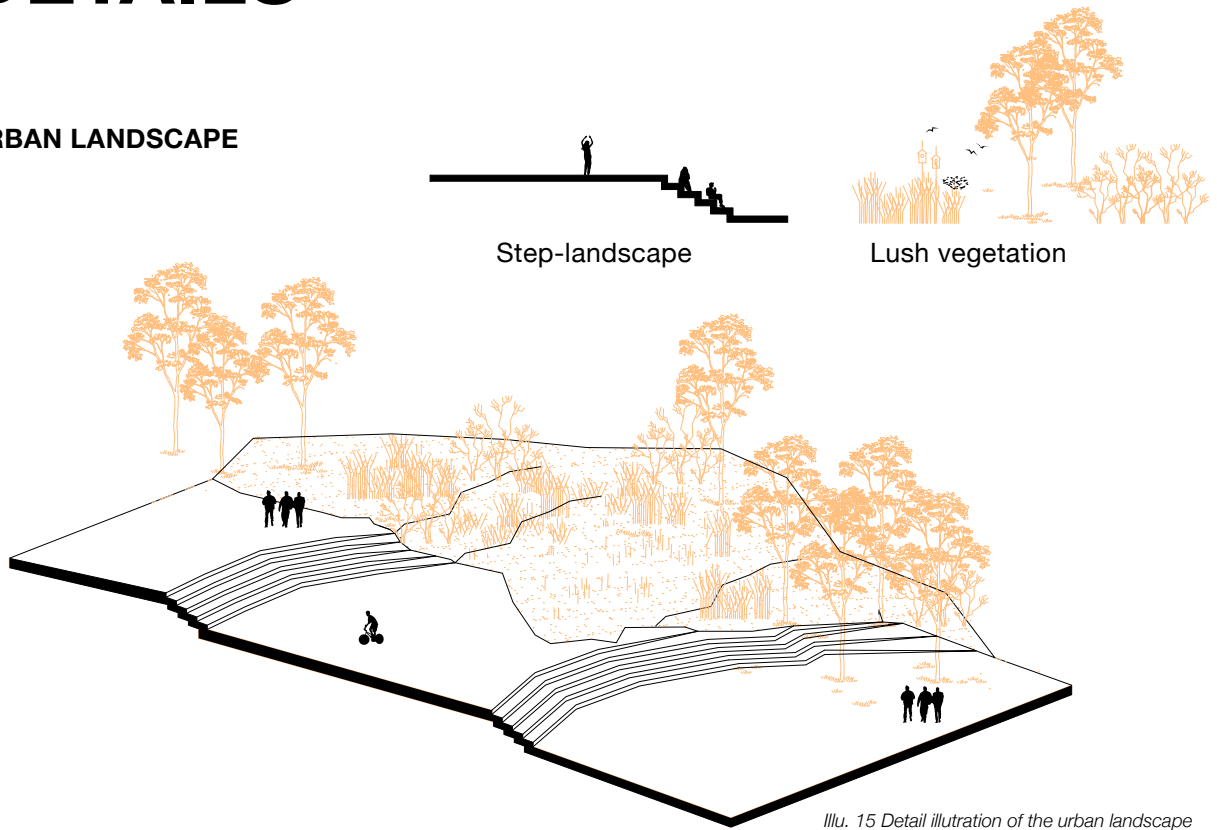




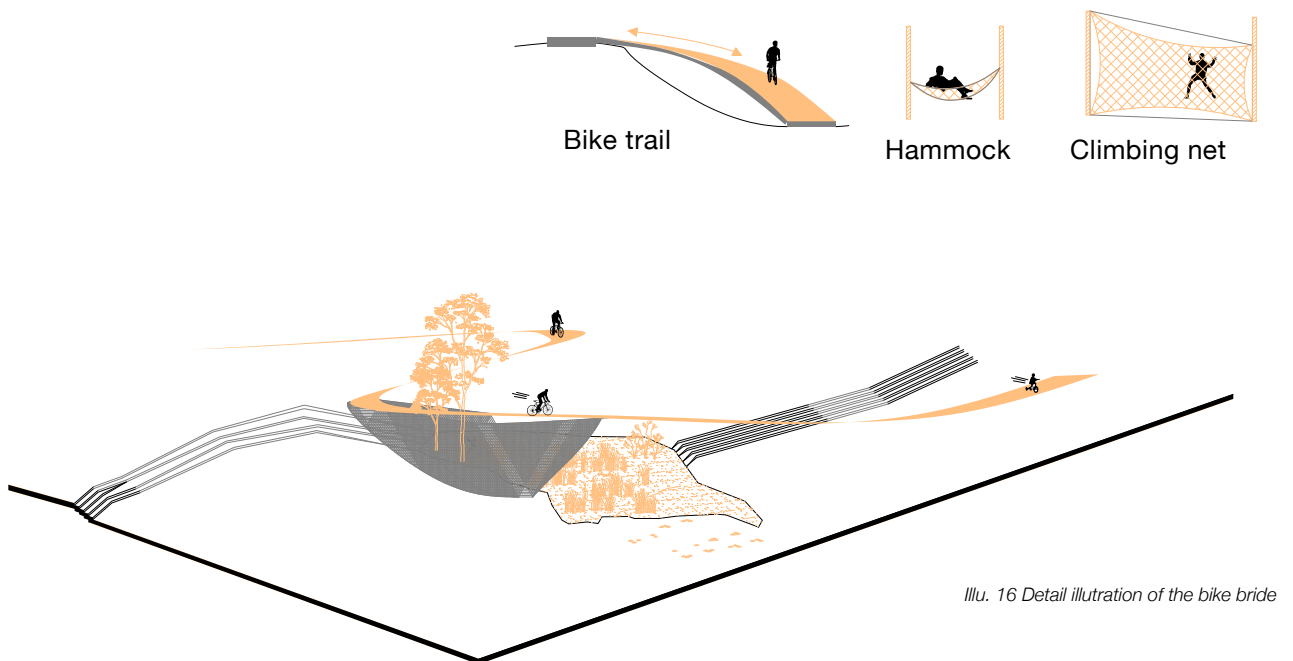
*Illu. 13 View from outdoor gym*

# DETAILS

## URBAN LANDSCAPE



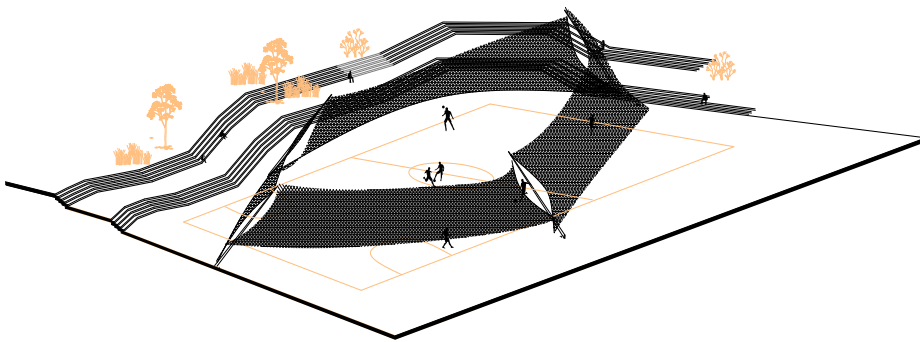
## MOBILITY AND PLAY





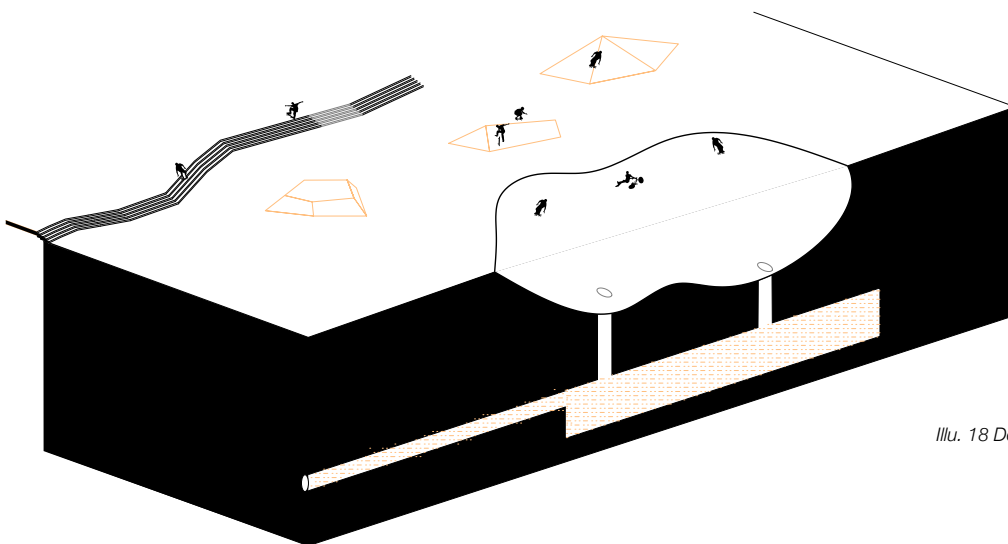
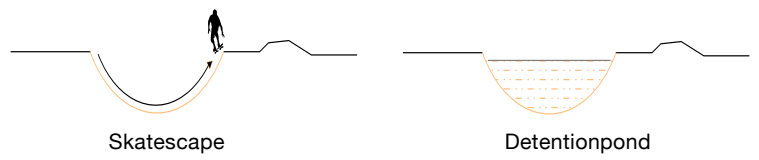
Illu. 14 Zoomed plan 1:500 Urban landscape

## SPORTS AND ACTIVE PLAY



*Illu. 17 Detail illustration of the multi-court*

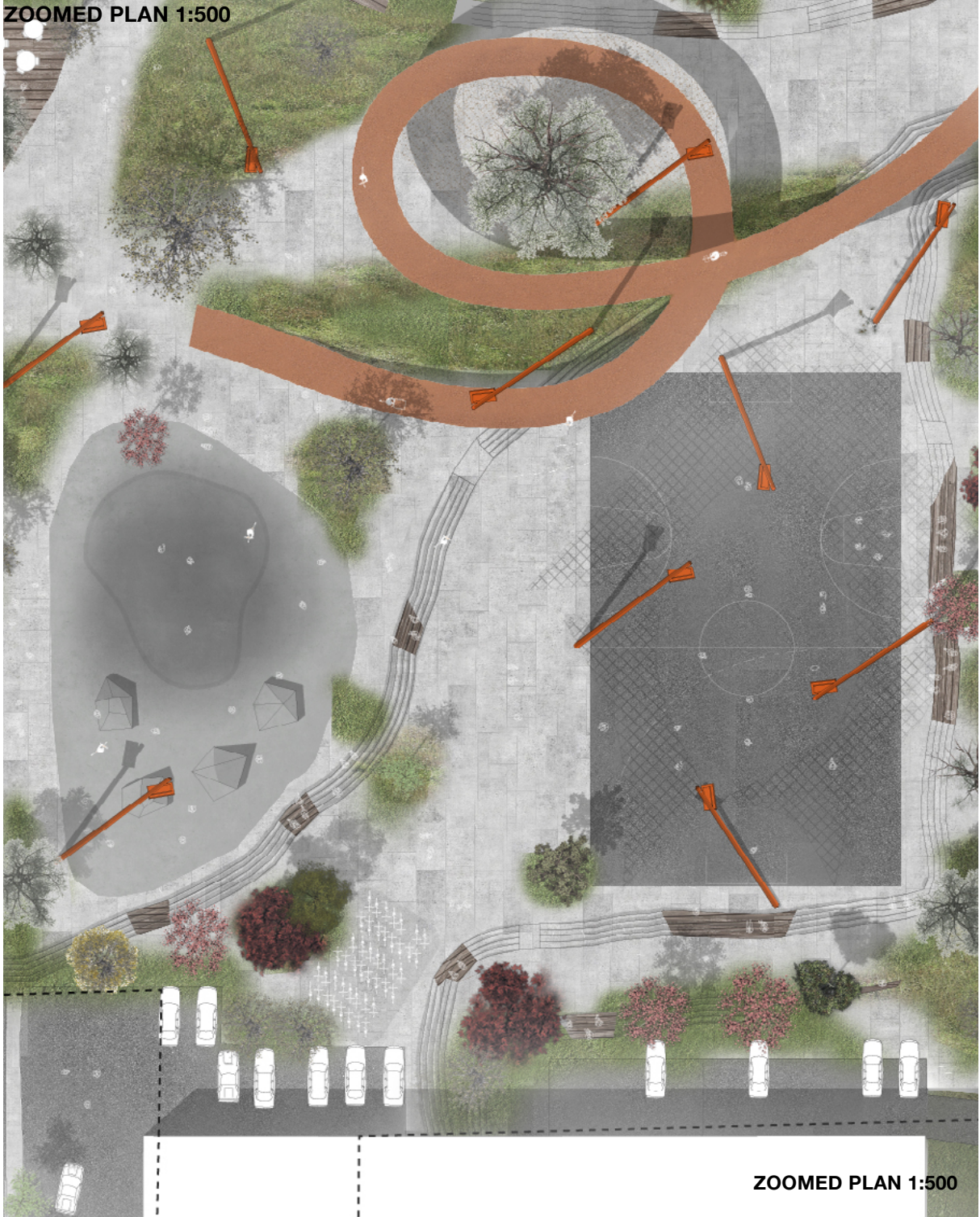
## STREET SPORT AND HYDROLOGY



*Illu. 18 Detail illustration of the skate scape*



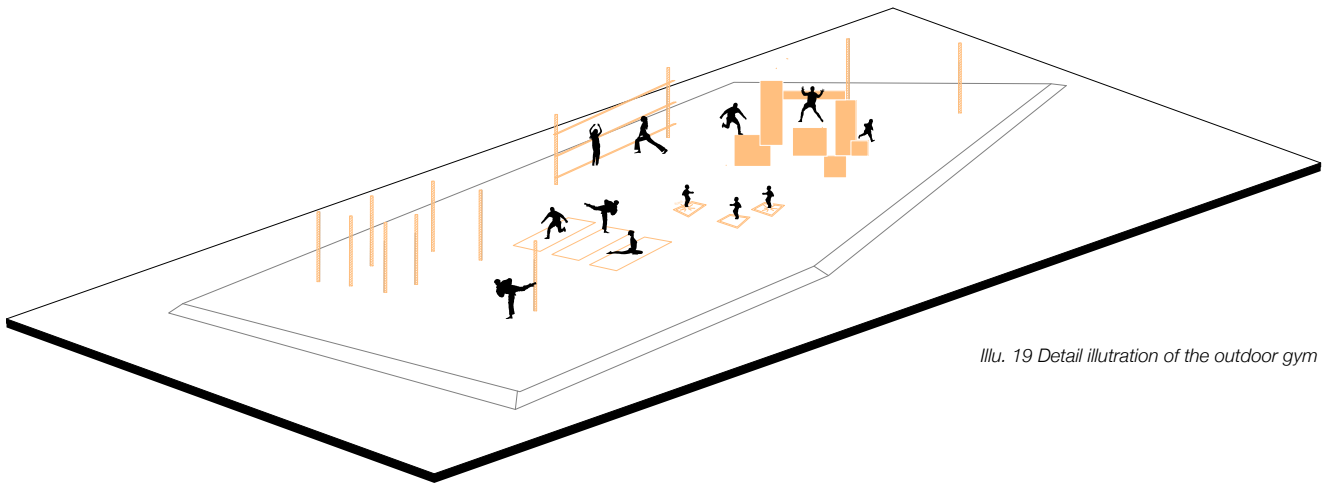
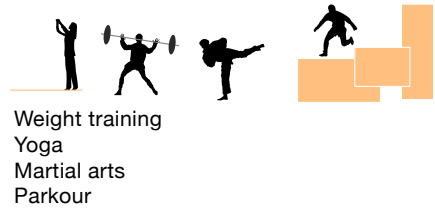
ZOOMED PLAN 1:500



ZOOMED PLAN 1:500

Illu. 21 Zoomed plan 1:500 multi-court and skate scape

## OUTDOOR GYM

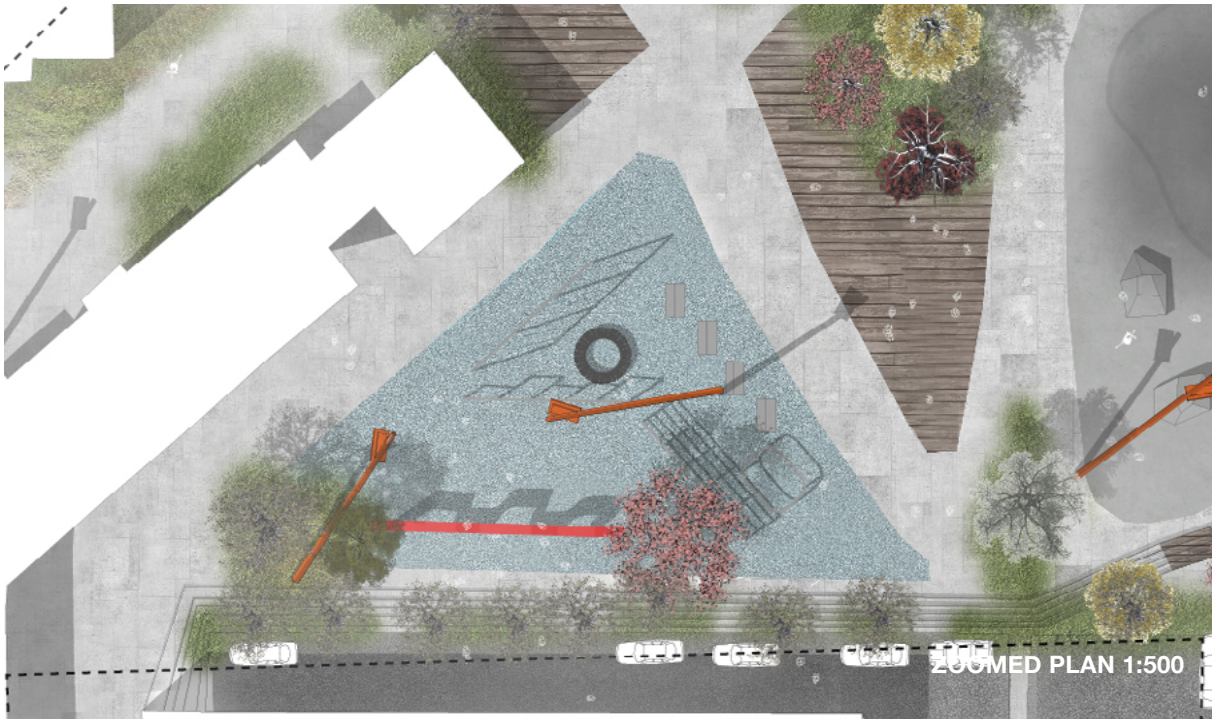


*Illu. 19 Detail illustration of the outdoor gym*

## URBAN GARDNING



*Illu. 20 Detail illustration of urban gardens*



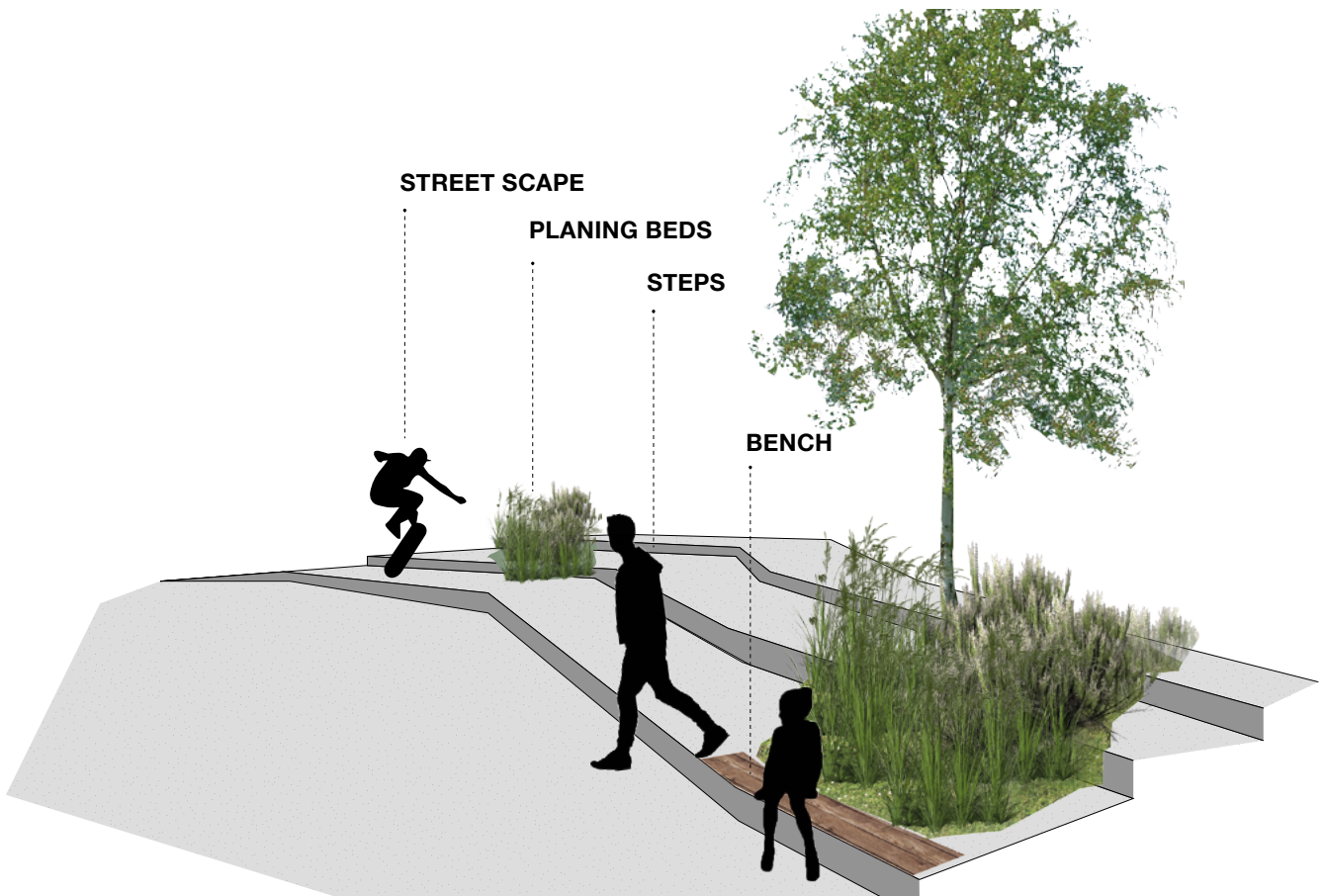
*Illu. 22 Zoomed plan 1:500 outdoor gym*



*Illu. 22 Zoomed plan 1:500 urban gardens*

# STEP LANDSCAPE

Besides creating better flow and accessibility, the step-landscape affords other elements incorporated in the design. The height and width of the steps affords seating by adding a wooden surface on top. The hard concrete edges are perfect for skating. Planted beds are placed to break the space in smaller sections and provide a sense of privacy for people using the seating arrangements. This theory is based upon Jan Gehl's "edge effect", where he talks about how people prefer to sit in a space where their backs are covered, with a view out in the open. [- Jan Gehl, cities for people 2010 p. 137]



*Illu. 23 Step landscape*

# LIGHTING

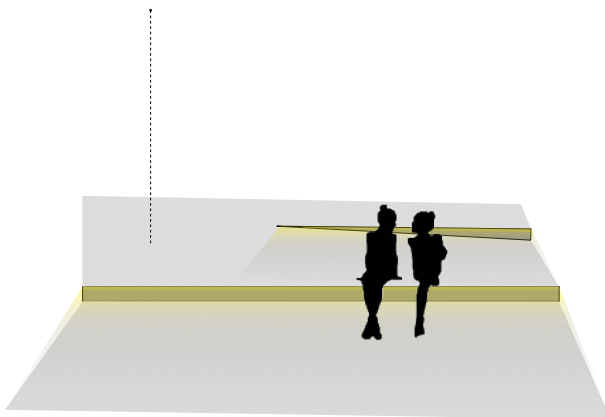
The site is lit up by three different lighting principles that have functional and aesthetic purposes. The spotlights are a functional lighting located on the activity zones and through the pathways. It consists of a 10 m tall lamp post with three to four lamps pointing in different directions to create a spotlight on the ground. The aesthetic lights are implemented to enhance the landscape and create an intimate atmosphere around the landscape at night. The light also functions as wayfinding at night whether it's under the steps to make it more visible and safe to walk on at night or small light spots that either are placed in the pavement along paths that guide people through the area.

## EASTETICAL LIGHTING



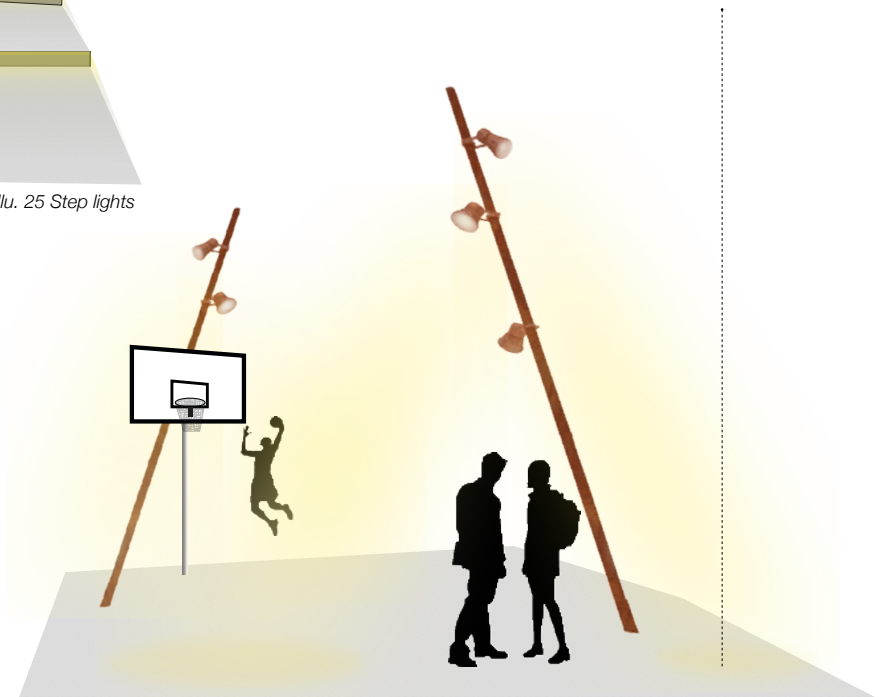
*Illu. 24 Aesthetic lighting*

## LANDSCAPE DETAILING



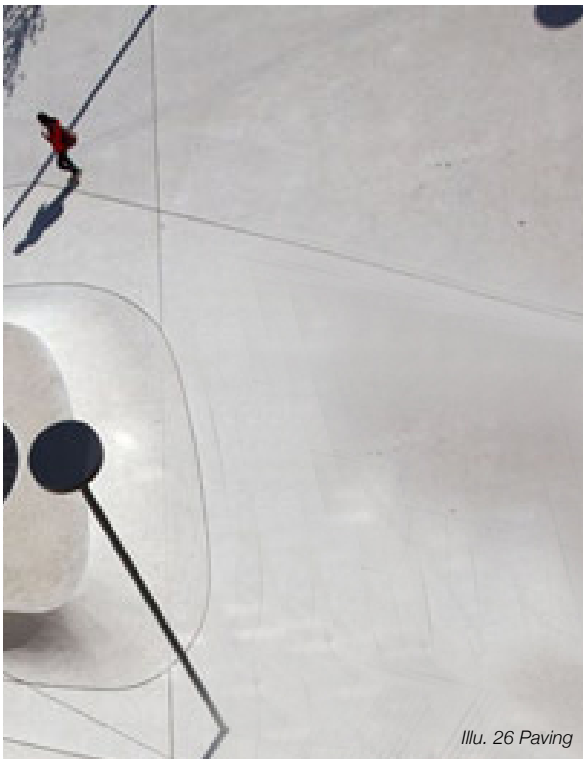
*Illu. 25 Step lights*

## SPOT LIGHTS



*Illu. 26 Spot lights*

# TACTILITY, FORM & MATERIAL



*Illu. 26 Paving*

## PAVING

The chosen paving in the site is white concrete that creates a good contrast together with the vegetation strategy. The hard concrete in contrast to the rural green environment that creates a raw atmosphere which contributes to the sense of place and contributes to a strong identity on the site. Inspiration picture is from the The Landhausplatz square by LAAC Architekten.



*Illu. 27 Steps*

## STEPS

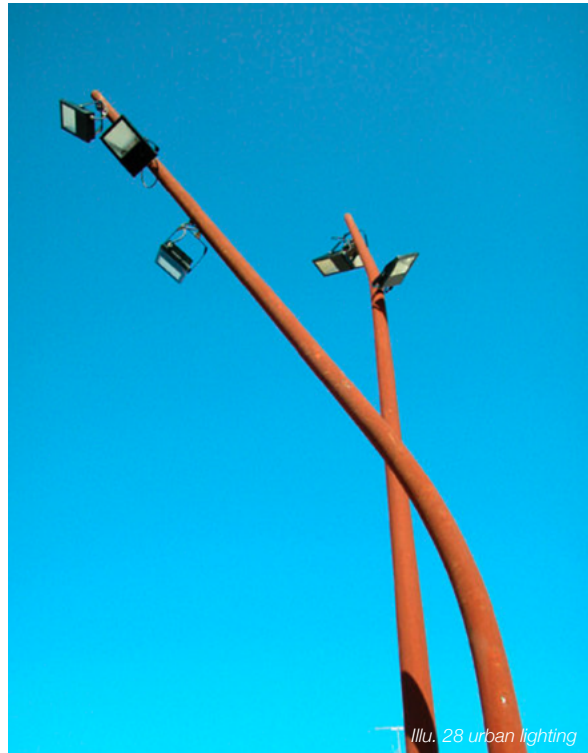
To better accommodate access for pedestrians, cyclists and people in wheelchairs or with carriages it is important to make sure that the accessibility is afforded. Therefore the step landscape is inspired from M Museum, Leuven, Belgium where the ramp is discreetly integrated in the design of the steps. This will optimize and create a fluent flow and functionality.



*Illu. 28 Bench*

### **BENCH**

The step-landscape has incorporated benches that affords seating in the area specially around the amphi-steps with view towards the multi-court. The seats are created by adding a wooden surface on top of a step.



*Illu. 28 urban lighting*

### **URBAN LIGHTING**

Lighting elements on the site are meant to function as a functional element but also contribute as an aesthetic structure. The material Corten steel is chosen because of its distinctive orange color and raw texture in contrast to the green environment and cold hard pavement on the site.

# VEGETATION STRATEGY

For the vegetation of the site, the idea is to create diversity in scale, shape and color. The plants chosen as a starting point are selected due to their specific qualities. The idea is to use the greenery as an instrument which stimulates the senses and help create a sensorial space. Many trees are seen in the site, but mostly in the outer corners. To create variation in scale, density and color, there will be planted smaller trees throughout the site which will help break up the larger surfaces and define smaller spaces within the area. The smaller bushes and high grasses are chosen from their individual characteristics. The redbarked dogwood has significant, red stems that light up during the winter and the maidengrass has beautiful seedheads with an interesting color and texture – you almost cannot resist touching it. The flowers and ground covers are chosen according to their color, smell and how well they attract insects. The proposal should also support the decreasing eco systems through the vegetation strategy that accommodates these lifeforms. Plants that can help absorb rainwater or have other practical qualities are also integrate. This to create a vegetation strategy that not only works as a sensorial stimulation, but also have an incorporated functionality.

JAN FEB MAR APR

## FLORAL

Dandelion  
'*Taraxacum officinale*'



*Festuca gautieri*



## BUSHES

*Deschampsia Cespitosa*  
'Goldtau'



Maidengrass  
'*Miscanthus sinensis*'



Cardinal  
Redtwig Dogwood



## TREES

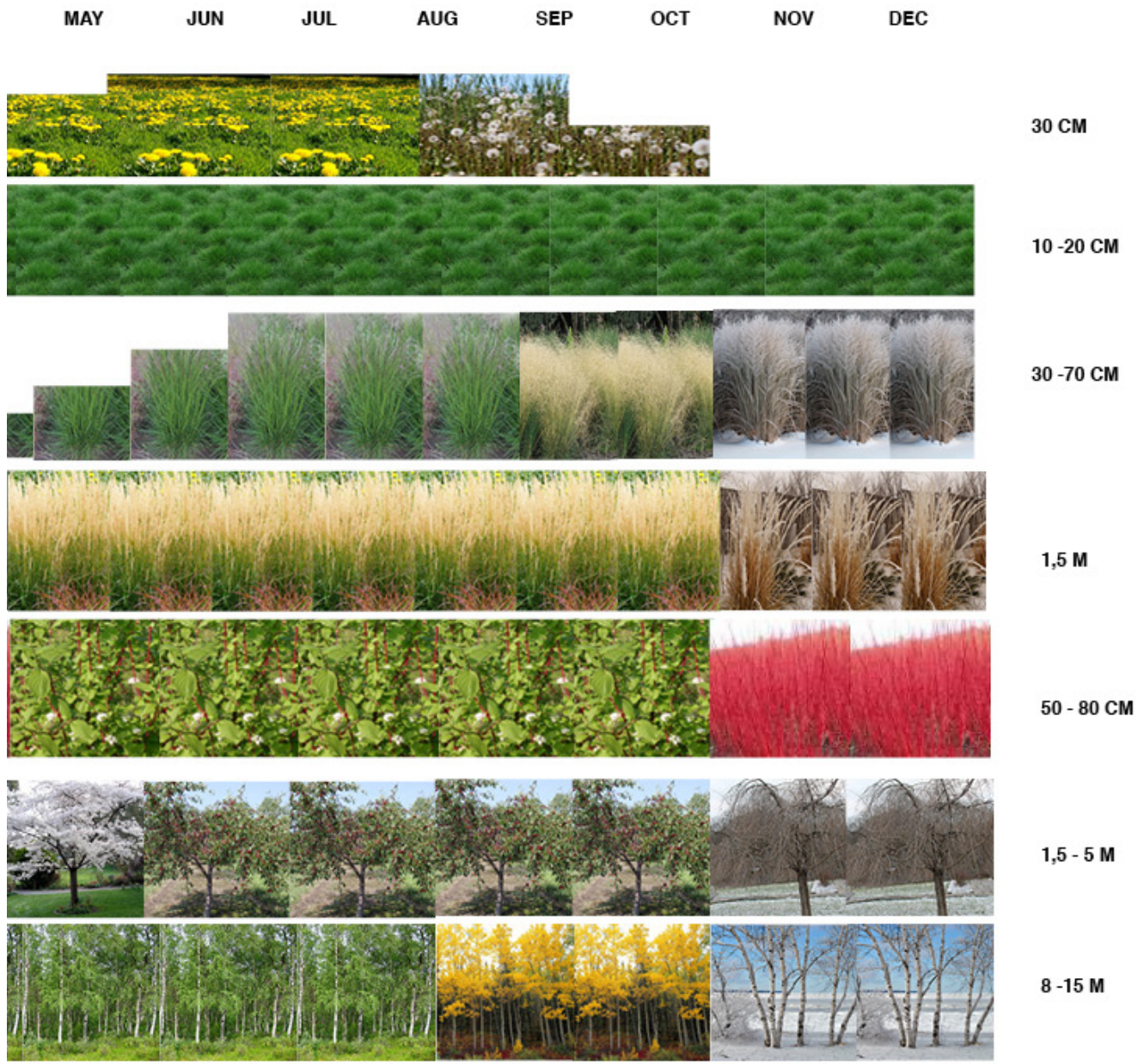
Yoshino Cherry



Silver birch  
'*Betula pendula*'







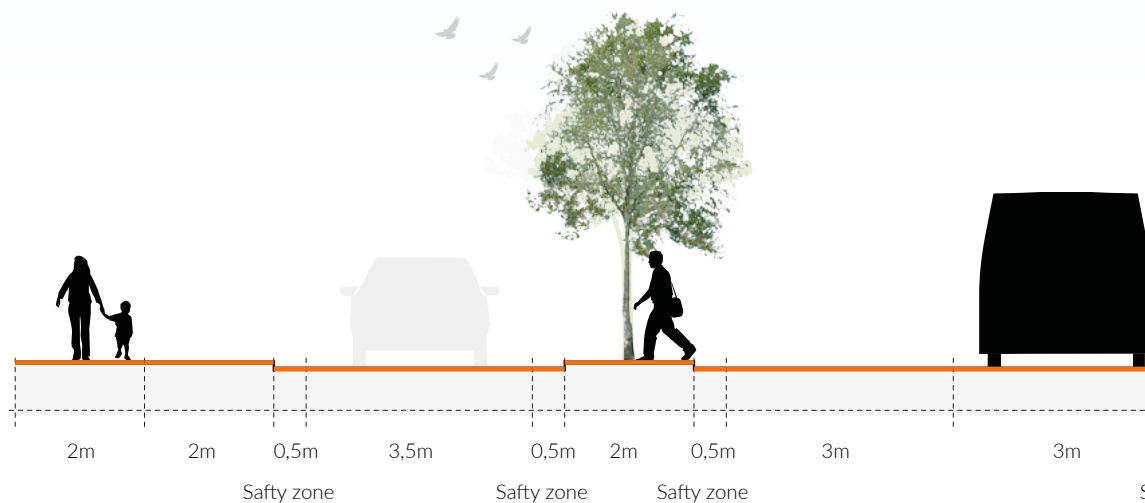
*Illu. 29 Vegetation strategy*

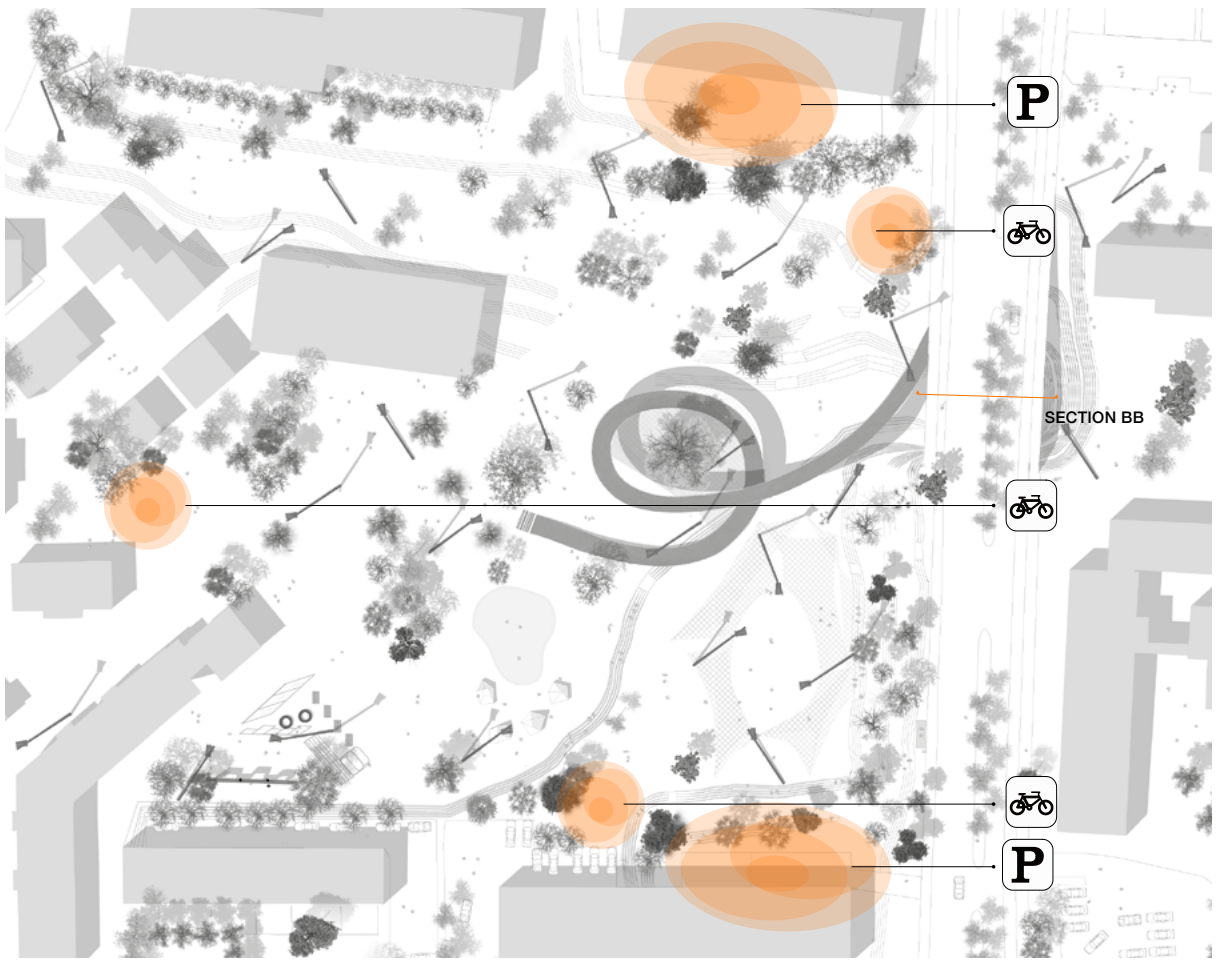
# TRAFFIC AND PARKING

## FREDESIKSBOGVEJ

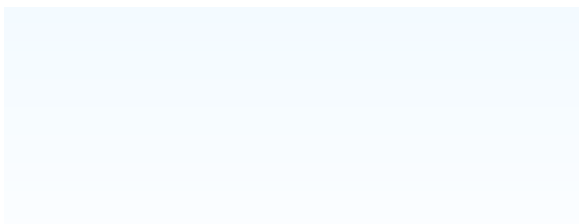
The mobility is mainly dominated by hard traffic, specially cyclists are neglected in the planing and does not necessarily related to urban spaces or public facilities and therefore do not contribute to generate a visible urban life. Besides the highway there are three big roads and barriers created by Paltholmvej, Frederiksborgvej and Farum Hovedgade. Frederiksborgvej is the main connection through north-south and is the traffic link between Kumbelhaven, Farum station, the industrial district and Farum town square (The library and local shopping mall, Farum Bytorv) Frederiskborgvej stands today as a classic artery only crossed by traffic light. A new proposal for the road with a profile transformation that incorporates a mid-section area for crossing, with planted beds and small scale trees to allow visibility across the road. This will help establish a more fluent flow for the light traffic and break the berrier that it creates today.

## Section BB 1:100





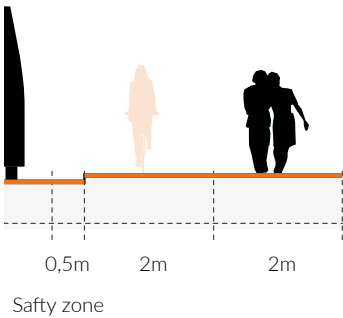
Illu. 30 Parking



Illu. 31 Section Frederiksborgvej

### PARKING

Parking is very visible in Farum city-center. (See Mobilitie registrations p. xx) Today Frederiksborgvej affords 6 parking spots which will be removed to create space for the proposed crossing area instead. The plan illustrate the new parking facilities on the site. The site will afford 12 parking spots, 6 new spots on each side of the project site. Bike parking will also be accommodated on the site with space for 90 bikes. The amount of bike-parking will also relive the lack of bike-parking space in Farum station which is located less the 2 min. walk from the site. [see picture of parking in farum st. appendix p. 109]



# ANALYSIS

## **FARUM CITY-CENTER**

STRUCTURE ANALYSIS  
DEMOGRAFIC  
CITY NODES  
INFRASTRUCTURE  
PUBLIC TRASPORT  
TYPOLOGY  
PROGRAMMING  
ACTIVITY // DAY / NIGHT

## **KUMBELHAVEN**

PROBLEM & POTENTIAL  
GREEN AND GREY LAYERS  
MOBILITY  
MICRO CLIMATE  
USER GROUP  
TERRAIN

## **SUB CONCLUSION**





Illu. 32 Wall

# FARUM CITY-CENTER

Farum is a typical suburban and structured in a typically suburban way. The city is structured in the principle of "function division" where different types of housing, commercial and shopping opportunities are placed apart from each other. At the same time the public housing are often located in very large units. The functionally divided areas separated by major roads, where the areas comes to lie as isolated "islands" in between. [Farum i udvikling, p. 9] Farum city-center is also a social congested area with residents of different ethnicity. Therefore, the goal is to create a place where people from different social classes, age and cultural background can meet and interact with each other to create a strong diverse community and improve quality of life in the area.





Illu. 33 Farum city-center

# STRUCTURE ANALYSIS

There are made different mappings to understand the structure in Farum city-center. The highlighted area illustrates the main citycenter in Farum. The analysis' are described and explained with text followed by an illustration.

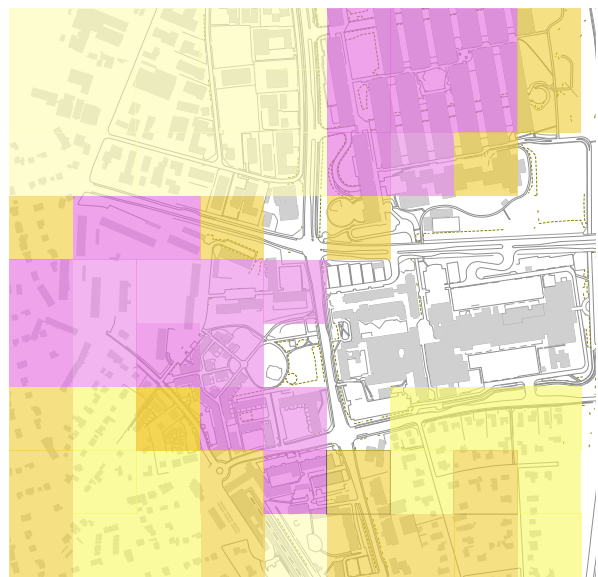
## DEMOGRAPHIC

About 40.176 people lives in Furesø municipality. [Furesøe.dk, 2016] The municipality expects an increasing proportion of elderly as well as a decrease in the number of young people in the group of economically active age of 26-64. The municipality is today characterized by a high employment activity and quality education. In 2010 there is registered about 16,000 home, low-rise housing apartment buildings, student housing and nursing homes. Most of the municipality's citizens live in single-family houses or low-rise residential. Roughly draw the single-family houses, low-rise residential buildings and blocks of flats counts each, one-third of the total housing. The 38% of the homes, which are single family houses, are all build in large areas from the 1960s and 1970s. [Furesø Kommune, 2011]

The largest age group in Farum municipality is 41-50 year olds just surpassed by the age-group between 1-10 years olds. The focus group in this project is the third largest age group in the municipality who is between the age of 11-20 [see appendix p. 110 to see the age interval]. This age group lacks and misses a place they can be apart of in the public place. Another age-group that also is essential to the project, is the elderly 70 + whom live in nursing home close to the site.

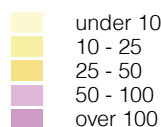
## THE CITY CENTER MOBILITY NODS

The diagram illustrates Farum city-center and its key node. The city center is facilitated with a variety amount of programming, used in a daily basis. A community park that could provide activity as well as a place for relaxation and cafes, is seen as a great opportunity to enhance the city center. The park will be an extension of the city center, only 2 min. walk to the library and less than 5 min. to the shopping mall.



Population 100m grid

Illu. 35 Demographic







Illu. 34, 10 min. walk

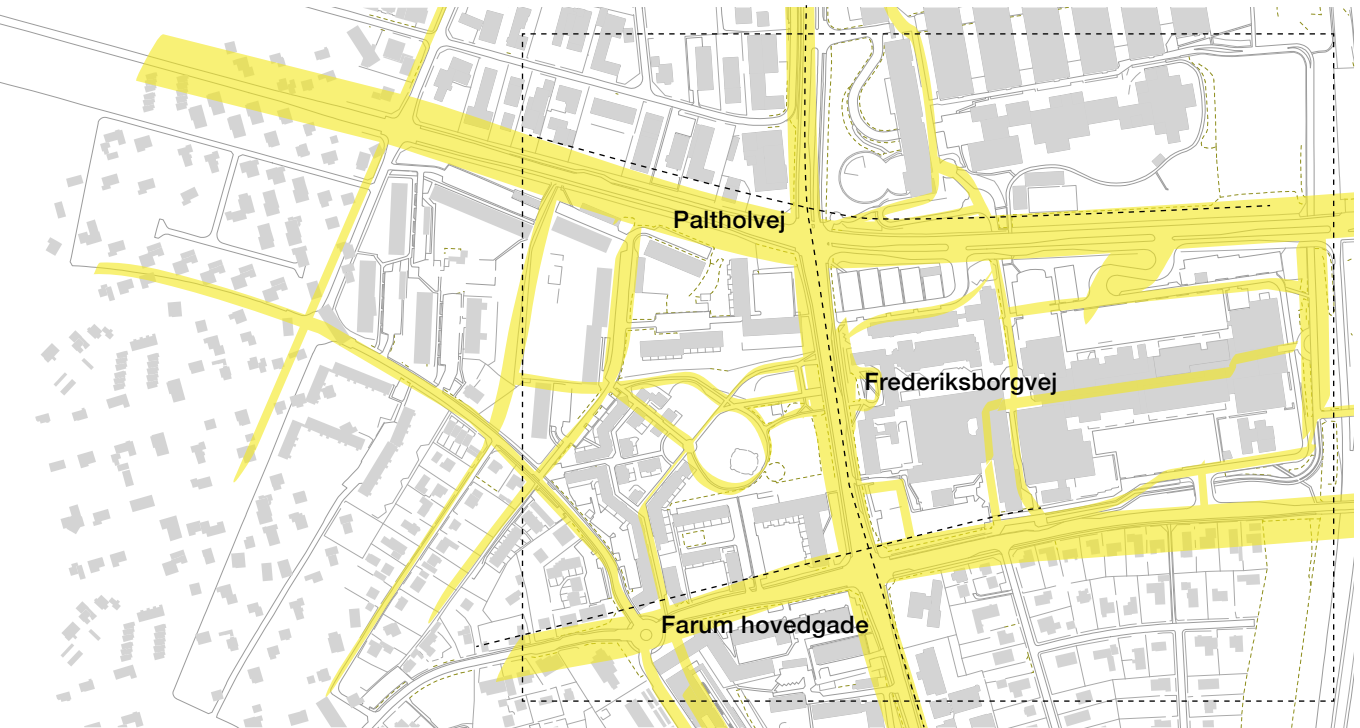
## **INFRASTRUCTURE**

Mobility connection in Farum is good for the dominant hard traffic, whereas the relations with the soft traffic could be better. Heavy traffic congestion on the road creates a barrier to get easily over the road from the park towards Farum' Bytor - the city's local shoppingcenter, and the library. The transition must be improved if the park should feel like one with the city-center.

## **PUBLIC TRANSPORT**

There are good transport facilities in Farum center. Both locally with busses but also to the other towns near Farum, like Væreløse and Birkerød. With bus stops connected to the site and a train station 2 min. from the park, the site has big potentials to attract people from other nearby cities. Therefore Farum's new community park has potential to become one of Farum's landmarks with such good public transport location.

Illu. 36 Main roads



Illu.37 Public trasport

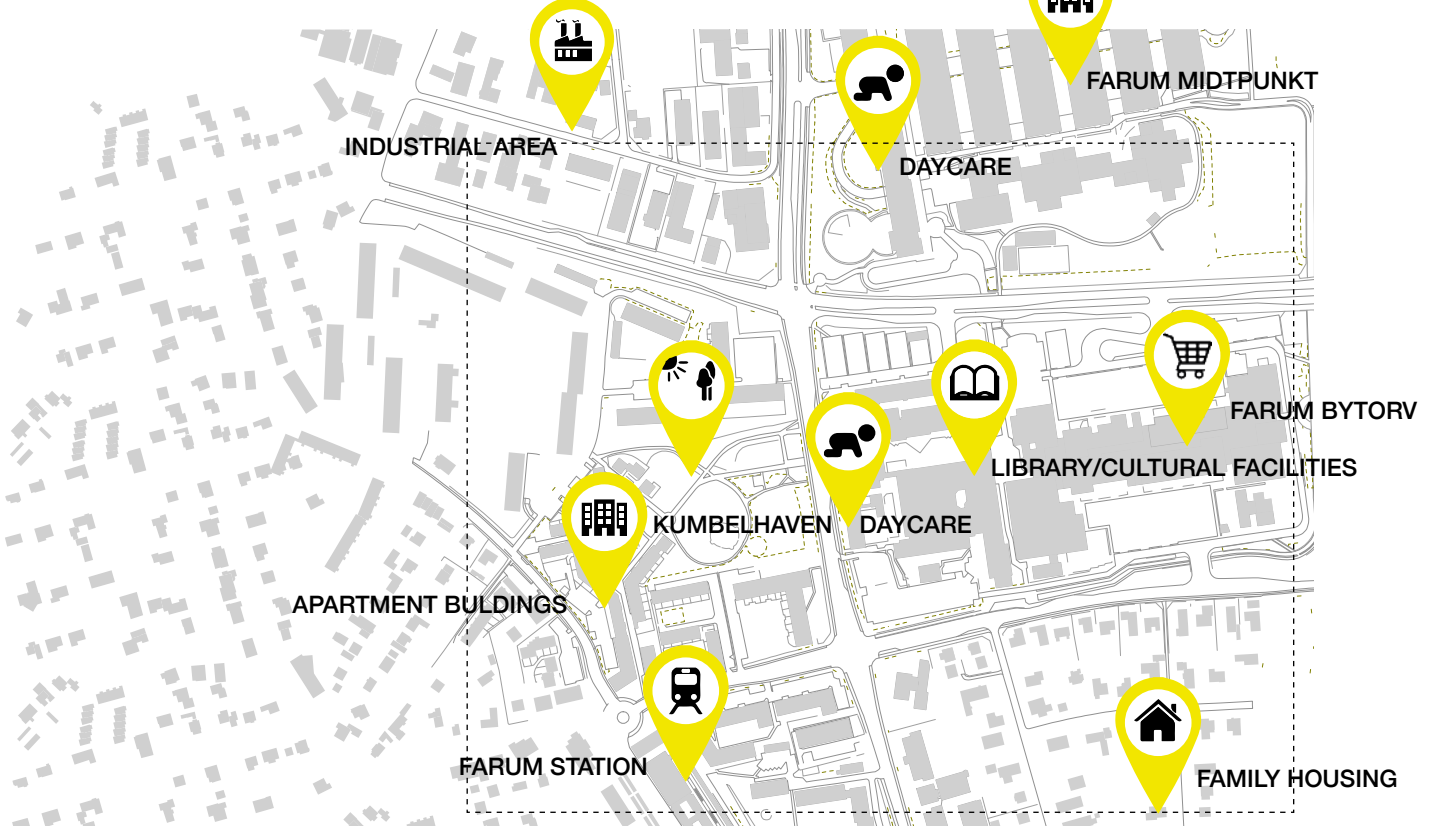
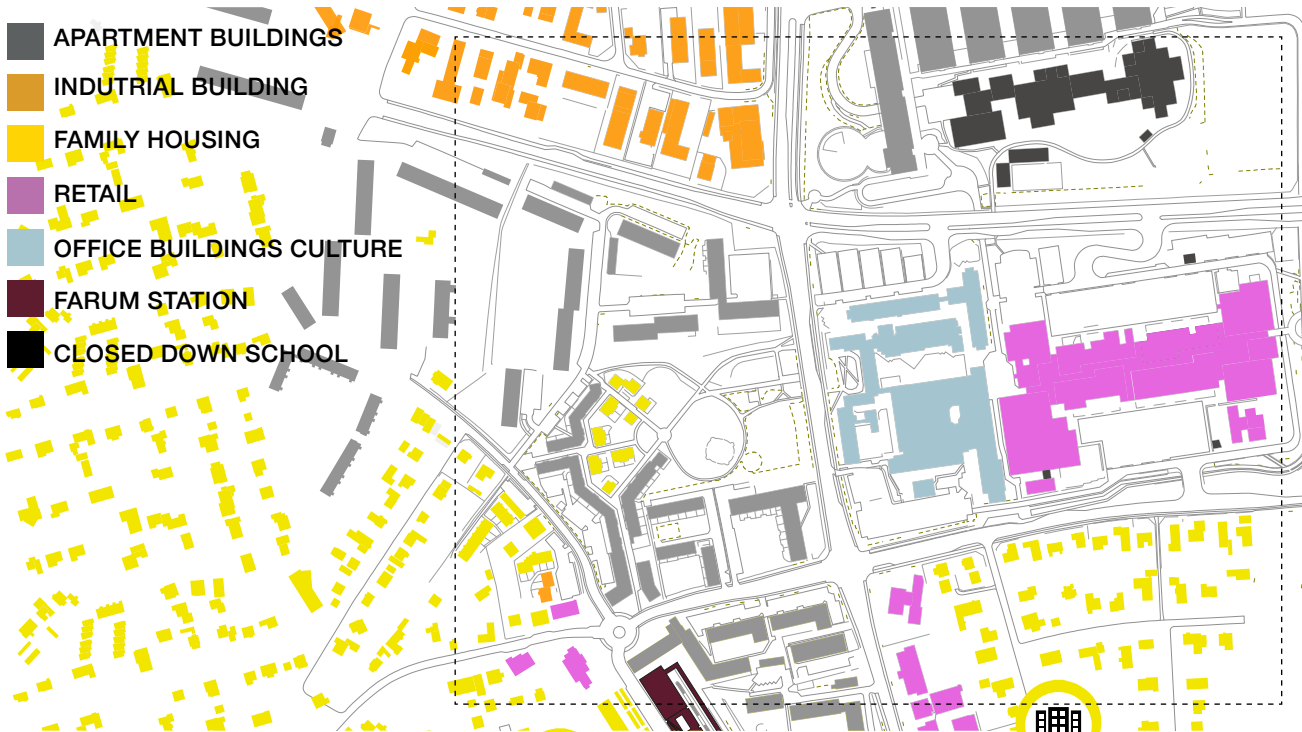
## **TPOLOGY**

The typology in the city-center is mainly apartment buildings and family housings from the late 70's. [Furesø kommune, 2011] It is mostly families with kids who lives here. There are also elderly housing that is close to the site and Farum st. This is also something to considerate when programming the new community park.

## **PROGRAMING**

This diagram shows the programming in the city center. The core center is the library and the shopping mall. A community park that works as a public domaine, could extend the center and activate the area with programming for the resident's enjoyment. A park that connects the other facilities and coexist with them.

Illu. 38 Typology



Illu. 39 Programming

### **AKTIVITY DAY**

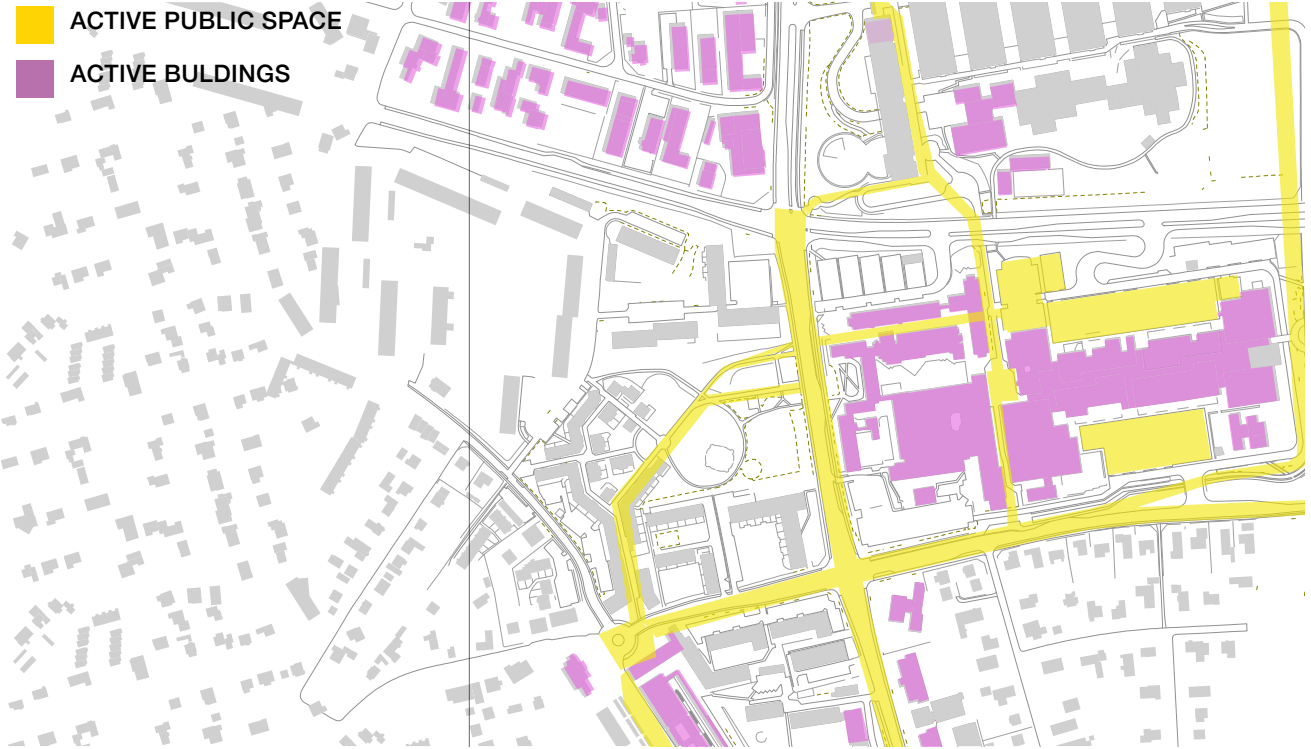
It is illustrated in the two diagrams how the activity level is divided in the city center, day and night. It is shown how the activity level by day vs the activity level by night. The diagram by day also shows how the projectsite is only used as transit area, where the pedestrian paths are in active, but not the park in general. [Furesø kommune, 2011]

### **AKTIVITY NIGHT**

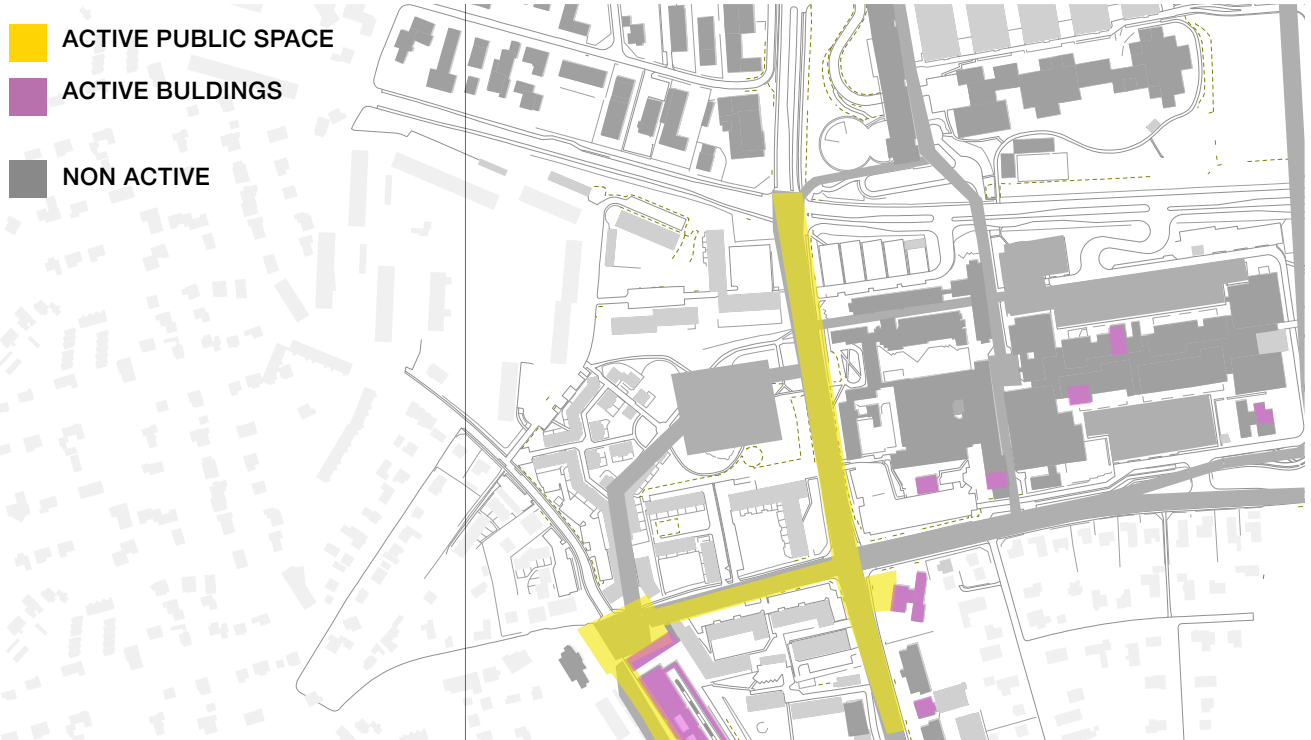
There is a lack of indoor and outdoor activity, in the project site. There is space for densifiing the site with a building that could function as a community center or youthcenter connected to the library on the other side of the road. The building can be active by day, and by night the program can still be active in the outdoors. Outdore facilities like street sport, climbing walls and outdore gym facilities can be an extension of the programming that is connected to the building. [Furesø kommune, 2011]

Illu. 40 Activity day

- ACTIVE PUBLIC SPACE
- ACTIVE BUILDINGS



- ACTIVE PUBLIC SPACE
- ACTIVE BUILDINGS
- NON ACTIVE



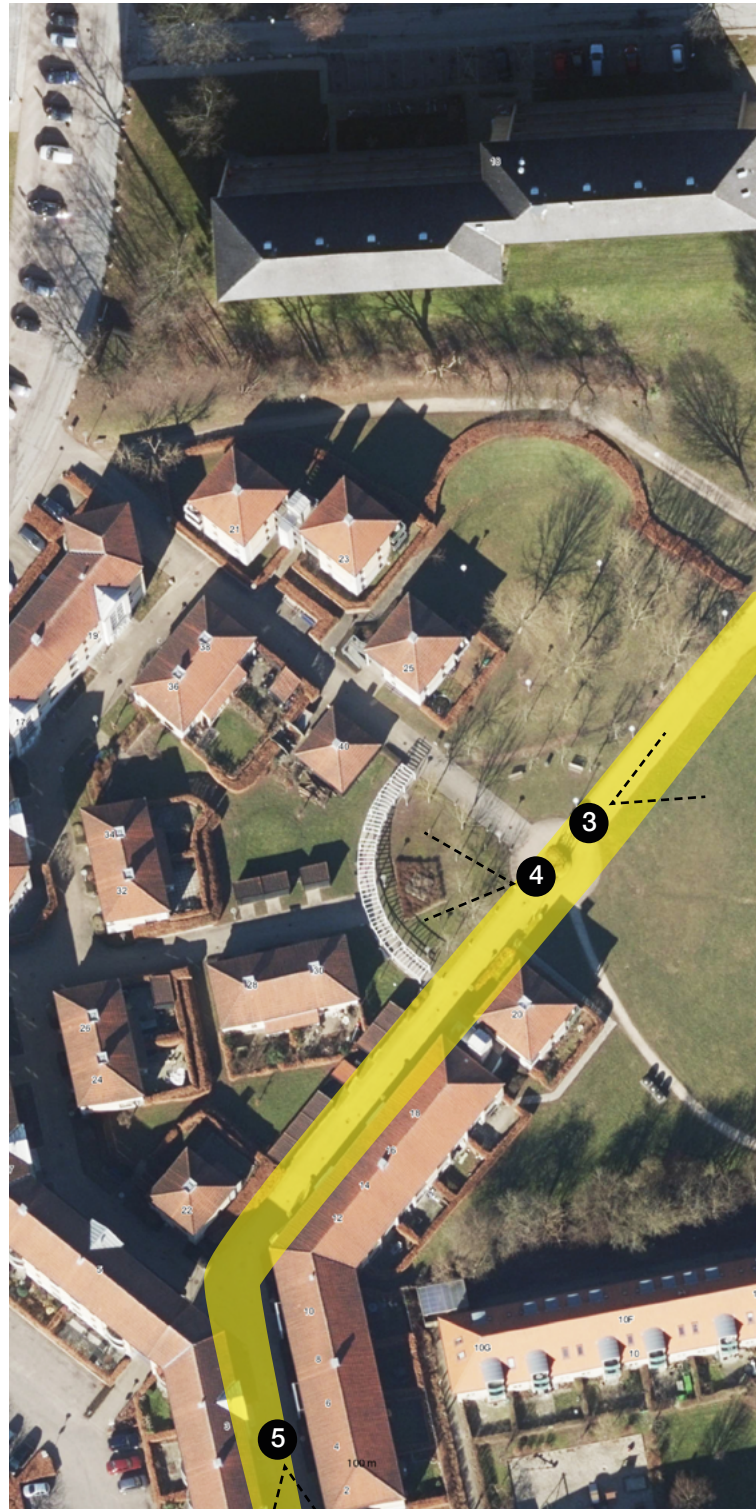
Illu. 41 Activity night

# KUMBELHAVEN

Kumbelhaven is a park, located in Farum center and form a connection between the station square, Town Hall Square and the shopping mall Farum Bytorv.

Kumbelhaven has its origins in an exhibition in Farum cultural center in 1992, where among the exhibits was also one created by Piet Hein and the connection here were several initiatives. One of these was an exhibition in 1995 dedicated to Piet Hein entitled "Piet Hein - the universal man." During the planning emerged the idea of Kumbelhaven and opened simultaneously with the exhibition. In the garden Piet Hein created a maze using cobblestones and grass, and in the middle you finde his three-dimensional superellipse "super egg" in bronze. The park is later in 2000 gotten further three bronze sculptures, one of them a metal cast bust of Piet Hein himself. The is used at a transit area, whith no outhr programming then an old playground for children a public toilet which is closed off due to vandalism. The site has big potential to be a green oasis in [Furesoe.dk, 2016]

City Park is a cornerstone in the overall development of urban space in Farum city-center. The location of the park can serve as a central connection point in the citycenter.







Illu. 42 Kumbelhaven

# PROBLEM AND POTENTIALS



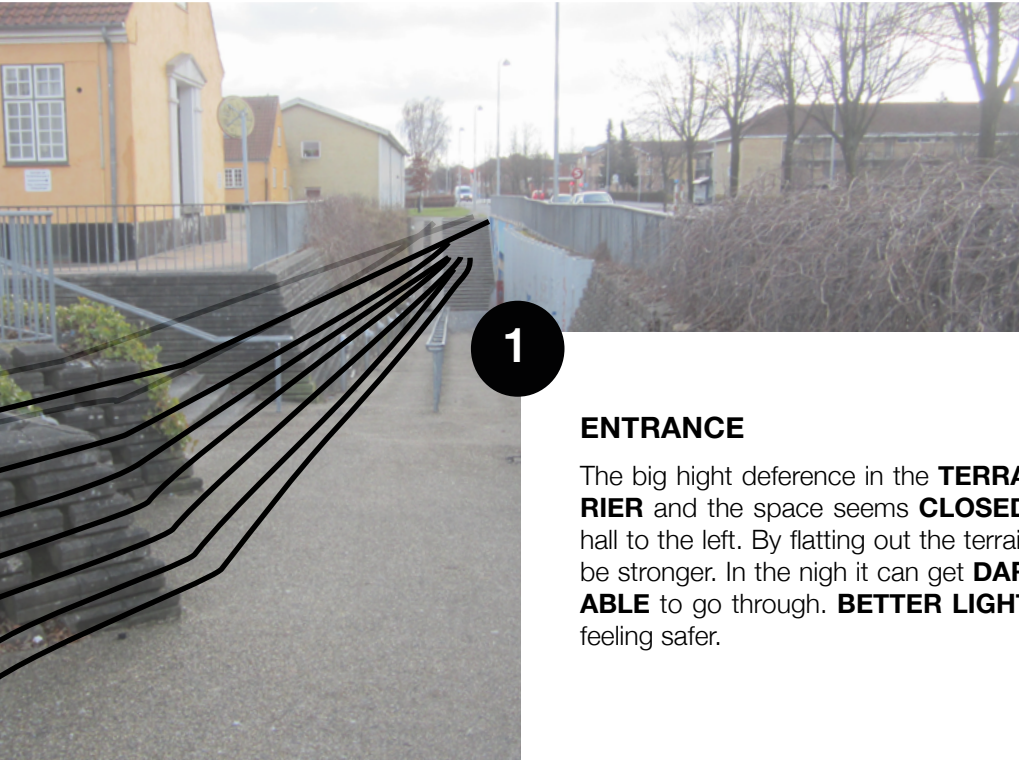
2

## TUNNEL

As mentioned it can get **DARK AT NIGHT** and the space is **ENCLOSED** which feels **UNSAFE**.



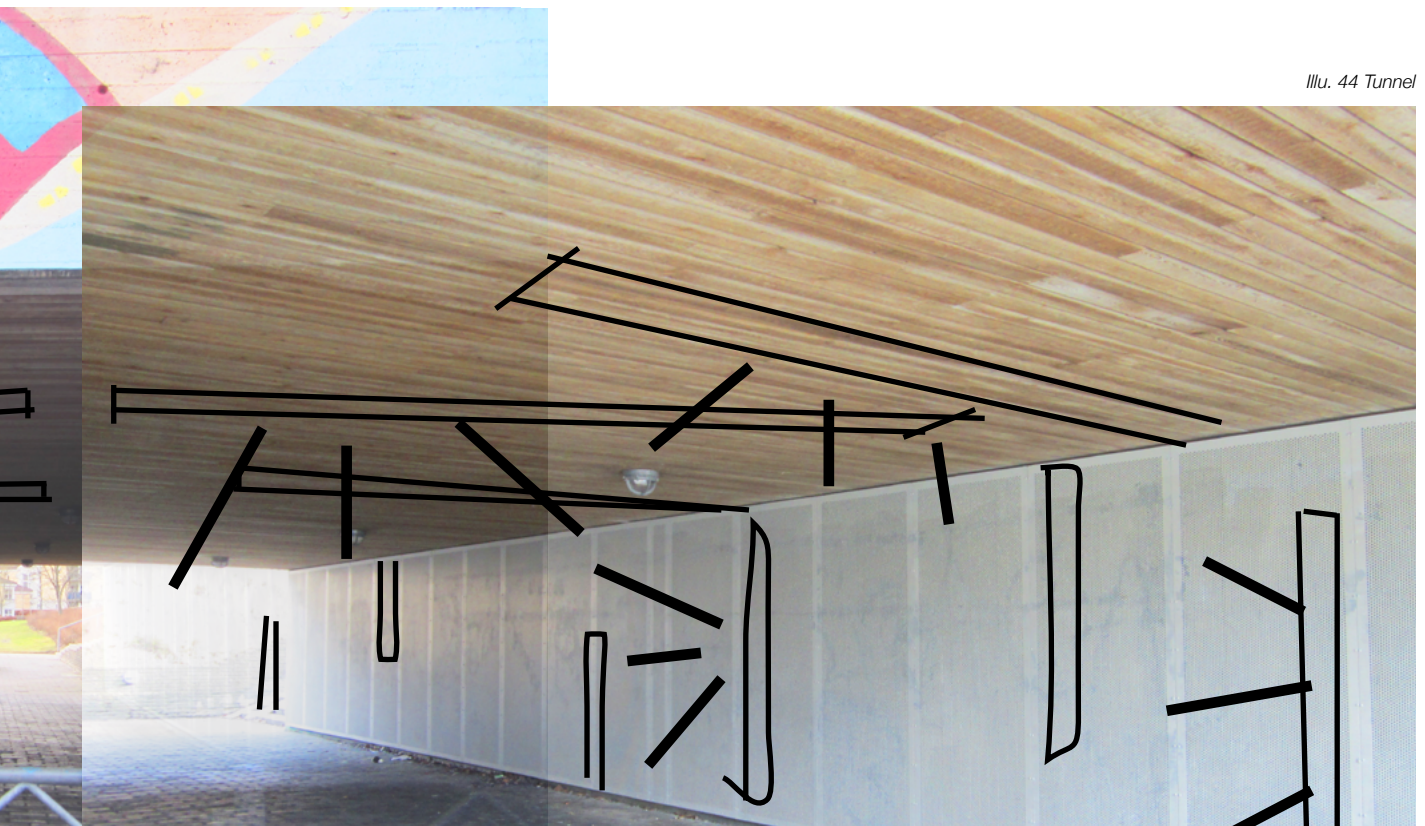
Illu. 43 Entrance



### ENTRANCE

The big height difference in the **TERRAIN** creates a big **BARRIER** and the space seems **CLOSED UP** towards the town hall to the left. By flattening out the terrain the connection would be stronger. In the night it can get **DARK** and **UNCOMFORTABLE** to go through. **BETTER LIGHTNING** would also help feeling safer.

Illu. 44 Tunnel





3

### KUMBELHAVEN

The only activity is an worn out playground for kids. The site is **UN-PROGRAMED** and mainly used for **TRANSIT** or **DOG-WALKING**. The lighting arrangements is also bad which can feel **DARK AND UNSAFE AT NIGHT**. The terrain is **CURVY** and creates **BARRIERS** to the surrounding areas. There is a lack of official paved paths and steps connecting to the surrounding buildnigs. Its an **OPEN FIELD** with few benches for stay.

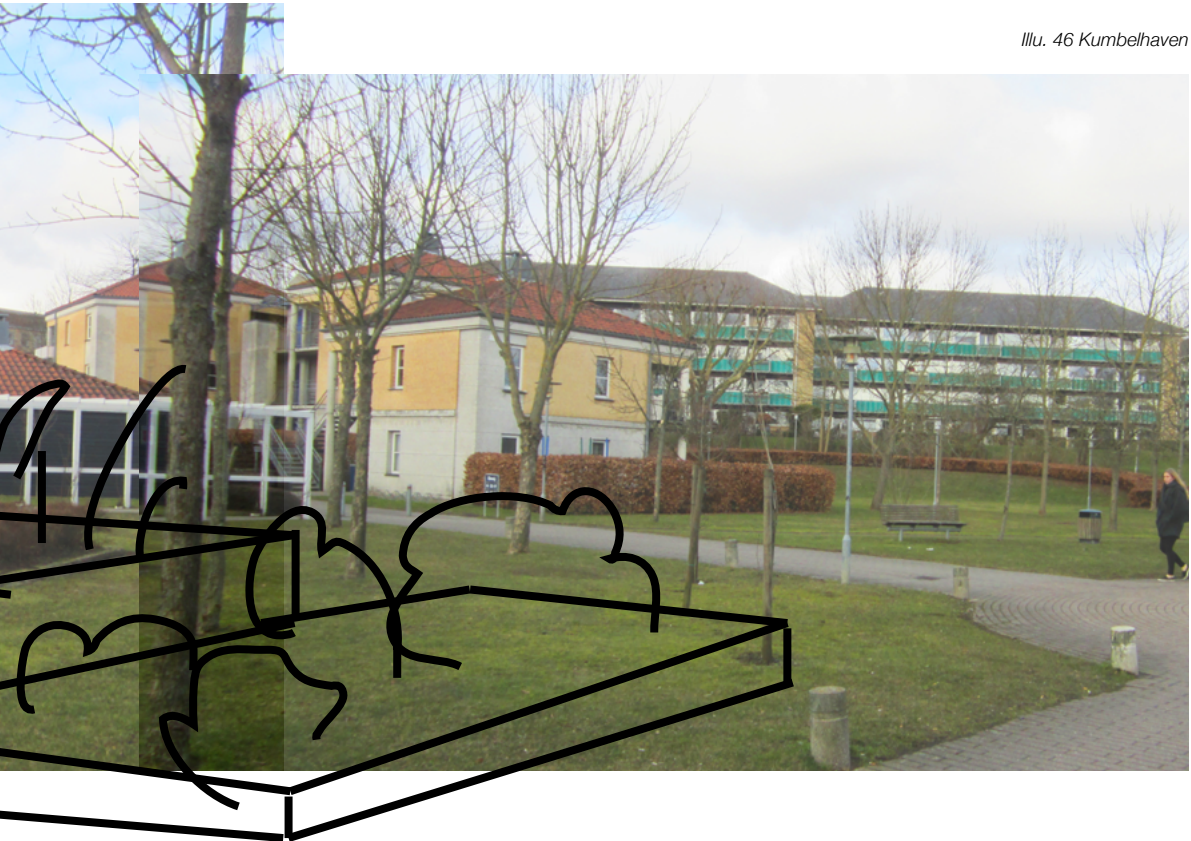
4



Illu. 45 Kumbelhaven



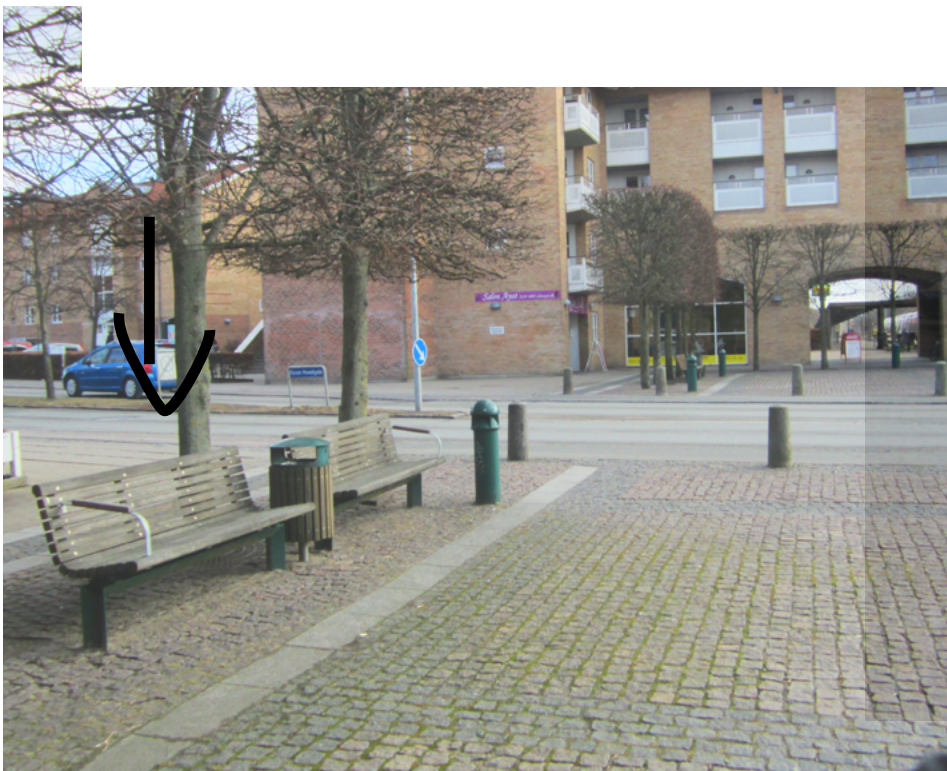
Illu. 46 Kumbelhaven

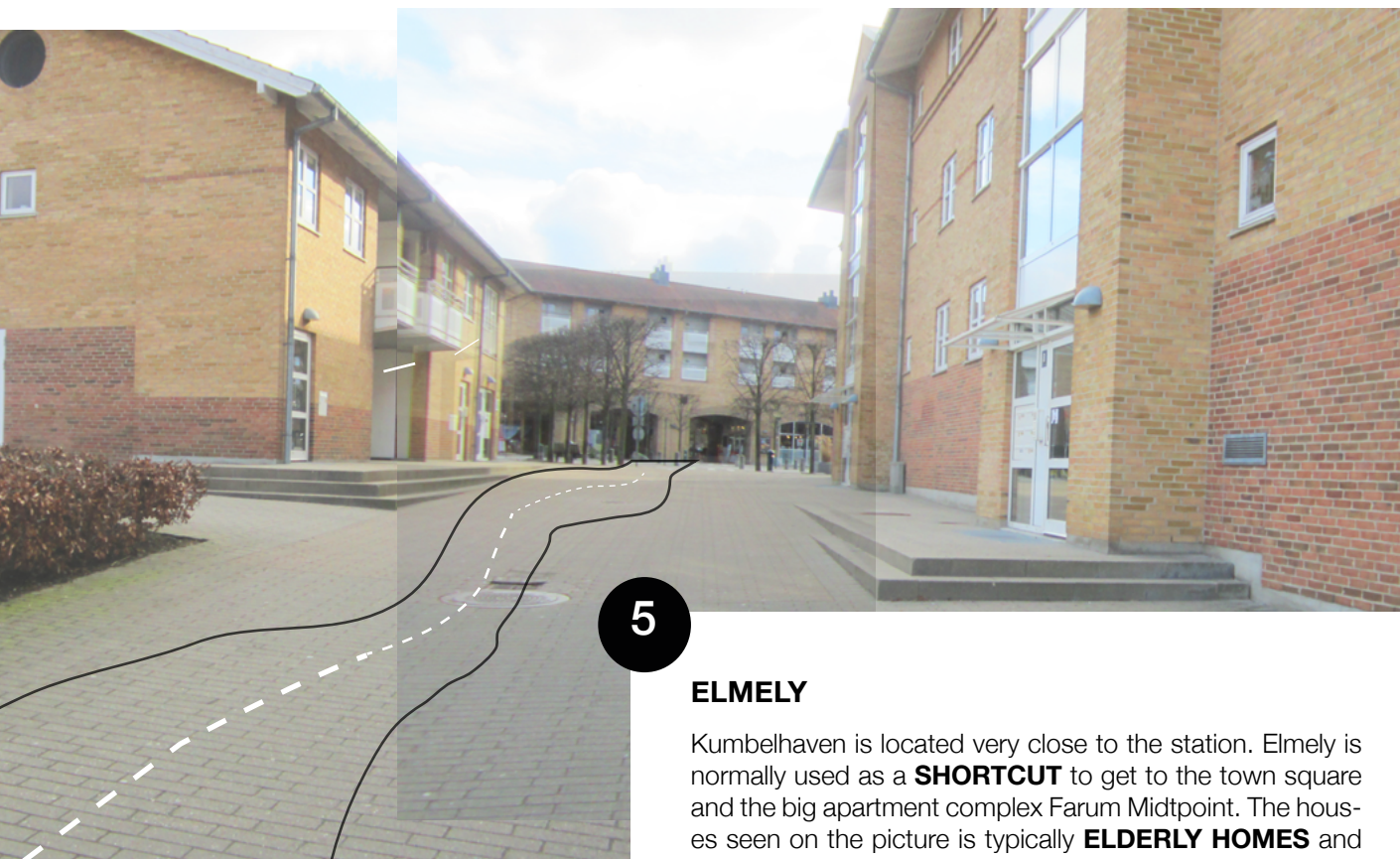


6

## FARUM STATION

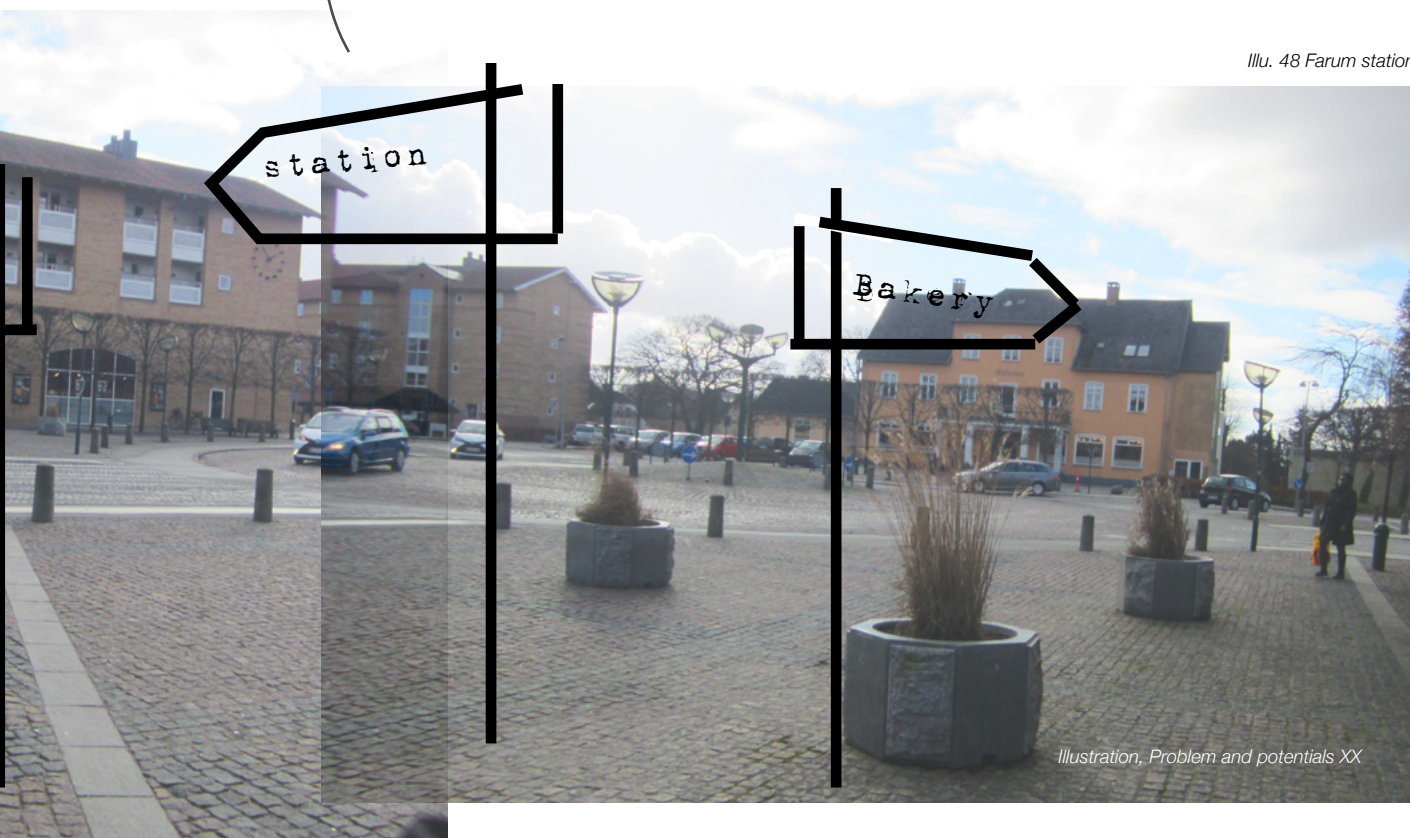
Going though Elmely, you will com across **THE TRAIN STATION**. The roundabout creates a mobility node on the site. The area is mainly a **TRANSIT AREA** with some **SEATING** arrangements. Other then a 7-Eleven which is connected to the station, you can find a **BAKERY AND PIZZERIA**.





### ELMELY

Kumbelhaven is located very close to the station. Elmely is normally used as a **SHORTCUT** to get to the town square and the big apartment complex Farum Midtpoint. The houses seen on the picture is typically **ELDERLY HOMES** and some student houses



Illustration, Problem and potentials XX

# GREEN AND GRAY LAYER

Kumbelhaven is mainly structured in two layers. the green layer and the paved layer.

## GREEN AREA

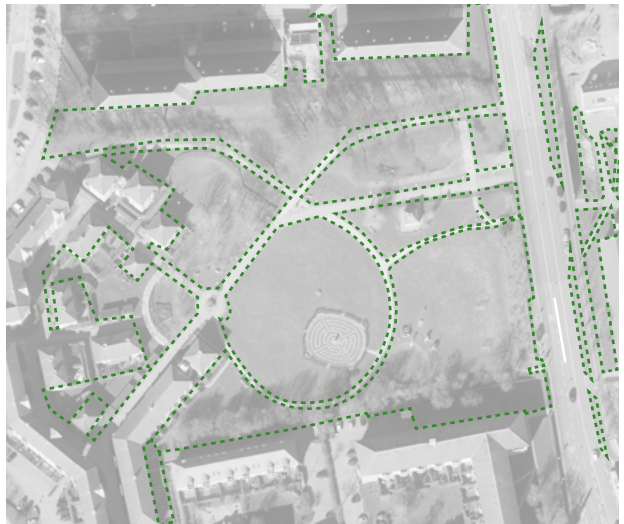
The first image shows where the trees are located on the site. The intention is to preserve all the trees if possible. the vegetation encircles the site in the corner areas, where the only tree in the middle of the site is a big Willow tree. when createeing a specific atmosphere, the vegetation and trees has a lot to say. Therefore there is a need to consider whether to plant more smaller trees, bushes or other plant species, and integrate it with seating arrangements and lighting elements that can cre



The site is more likely a green cultivated field with newly cut grass, trimmed bushes. The green area will be preserve as much as possible which is one of the elements that people like about the site. Its likely that some of the green areas will be coated with concrete, but the vegetation will be intensified with different grass species bushes and other local plants to make sure that the green element is not put aside but strengthened. ate a specific atmosphere on the site.

## PAVED AREA

Kumbelhaven is a open green field with a strict formed pathway. The only place that is coated in the site, is the pathways illustrated in gray. To make sure that there is comfortable pathways for pedestrians and bikes, the existing pathways must be optimizes for better comfortable mobility. space for activity and play is also going to be coated in either rubber-asphalt, concrete tiles or wooden surface. The coating material will be considered after use and durability.



Illu. 49 Green and paved layer



# MOBILITY

extrovert the mobility in the area is dominated by cars, while the project site is car free. As mentioned the site has a main coated path going through the tunnel and connected to Farum st 2 min. away. The other paths are either unofficial paths or non coated dirt paths which are meant for pedestrians on foot, people in bikes, or people in wheelchair or with carriages are not taking in consideration.

## PATHWAYS

The pathways are narrow and in a controlled form that limits you to go a specific way. Its evident that there is a need for better flow and connection on the area, due to several manmade paths made by bike wheels and footsteps, thies are illustrated with dashed lines in the illustraten.

## BIKE PATHS AND PARKING

The bicycle is an essential means of transport and seen in every garage, workplace, educational institution or public space. Virtually seen everywhere and as a part of our everyday lives. Today it signals environmental awareness and health when sitting on the bike and by integrating the bike in the design there is put focus on the bicycle as both environmentally friendly means of transport, but also a health-promoting activity. Therefore it is important to involve the bike into the design as a essential transportation ability and also incorporate the active and playful element in the design to make sure the bikes are just as dominant as the pedestrians and cars on the area.

## CAR ROADS AND PARKING

The roads create barriers for people to cross over. The road Frederiksborgvej creates a physical and mental barrier in the area and divides the city center in two districts- the town square with the library and the local shopping mall on the one side and Kumbelhaven and Farum station the the other. If the traffic on the road was softened and a better flow between the two areas was create, the citycenter would be connected as one. The illustraten shows the carroads and parking spaces aswell.

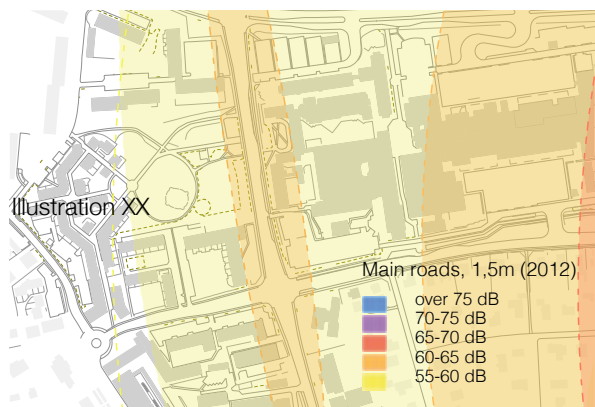


Illu. 50 Mobility layer

# MICRO CLIMATE

The sun, wind sound and rainfall is in direct influence on the way a city develops and the comfort the urban space. How the city is designed in relation to the climate conditions, outlines the potential for urban life to exist. There are made different analysis of the climate to understand the effects of them on the project site. The sun, wind, rainfall and sound conditions are looked upon to see if there are some critical issues to be aware of. The question is how to make sure to create good micro-climate in every area on the site, to integrate sun, wind, sound and rainwater in the design for better and comfortable stay? The hydrology illustrations shows that there is some critical points on the site that need to be solved. The wind and sound-conditions does not have any problematic areas on the site that could affect the comfort on the site. The sun-conditions show where there are most sun on the site, which could determine where the different programming should be placed. There are also big potential for outdoor stay on the other side of Frederiksborgvej towards the parking-lot on the upper-left corner in the illustration.

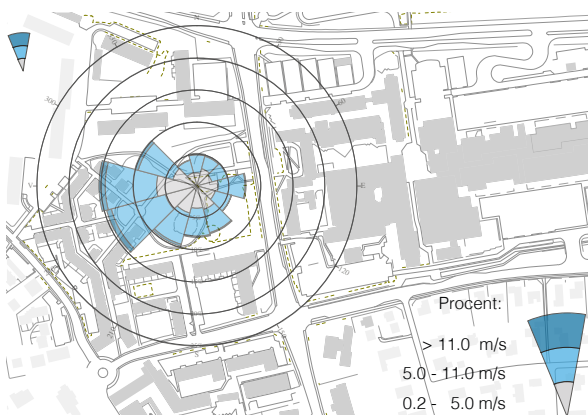
Illu. 51 Sound



## SOUND

A normal conversation sound level is 60db where the limit for soundlevel for open space is 85db, which isent the case on the project site. [Anon, 2016]

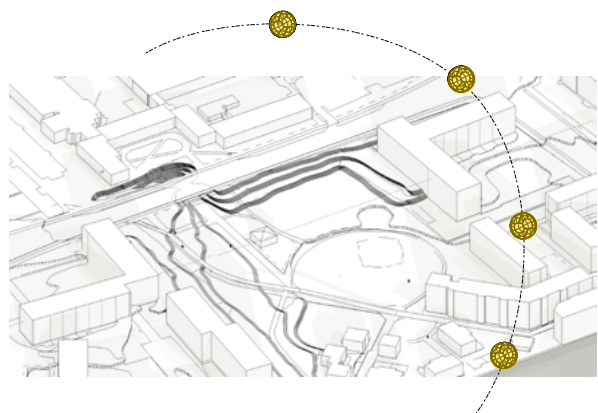
Illu. 52 Wind



## WIND

The wind rose illustrates the annual wind speed and direction. The dominant wind that come throughout the year comes from the west, southwest direction.

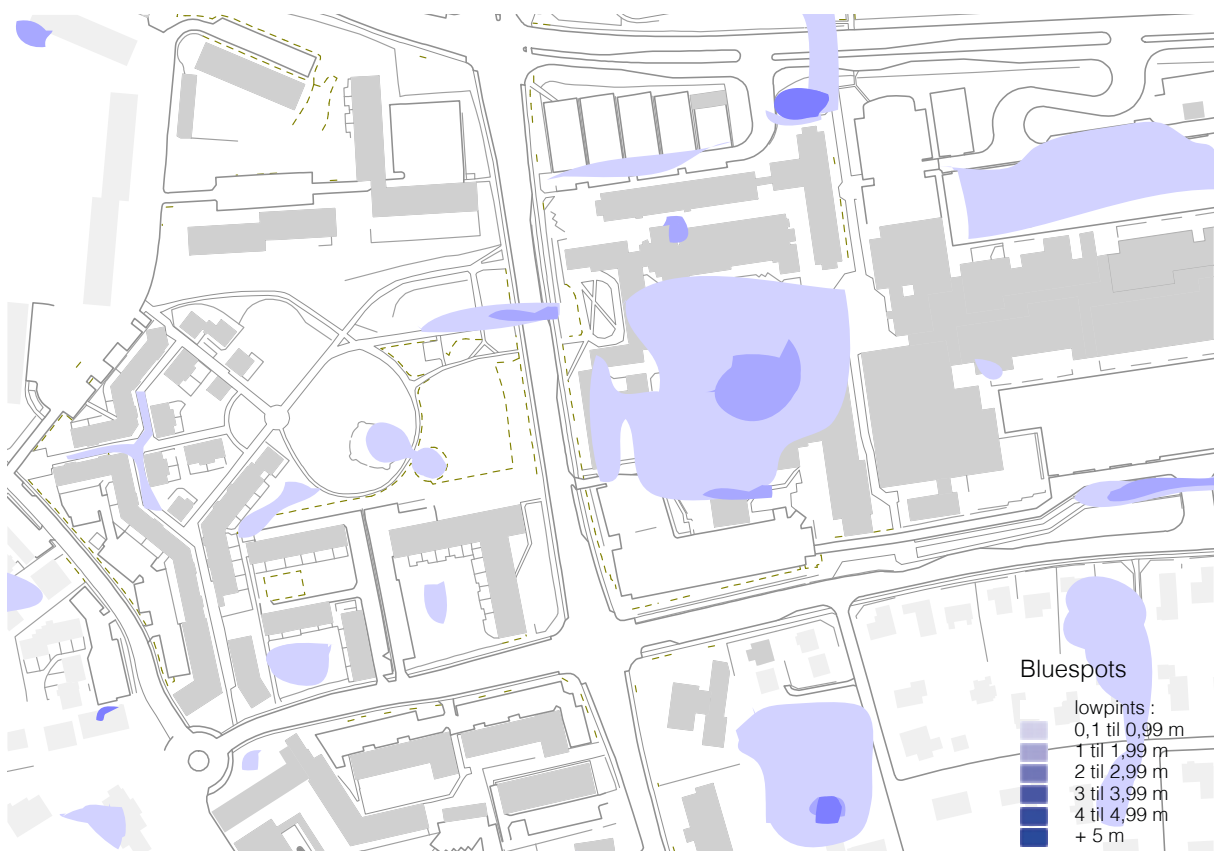
Illu. 53 Sun



## SUN

When designing a public space, it is essential to understand the sun's position on the site, and how the shadows will be cast from the surrounding buildings. this illustration shows the sun conditions in july.

Illu. 50 Blue-spots



## HYDROLOGY

Maximum extreme rainfall scenario that shows the spread and depth of the water in the low points without drainage in the landscape. Water management solutions is only taken into consideration inside the project site.

# USER GROUP

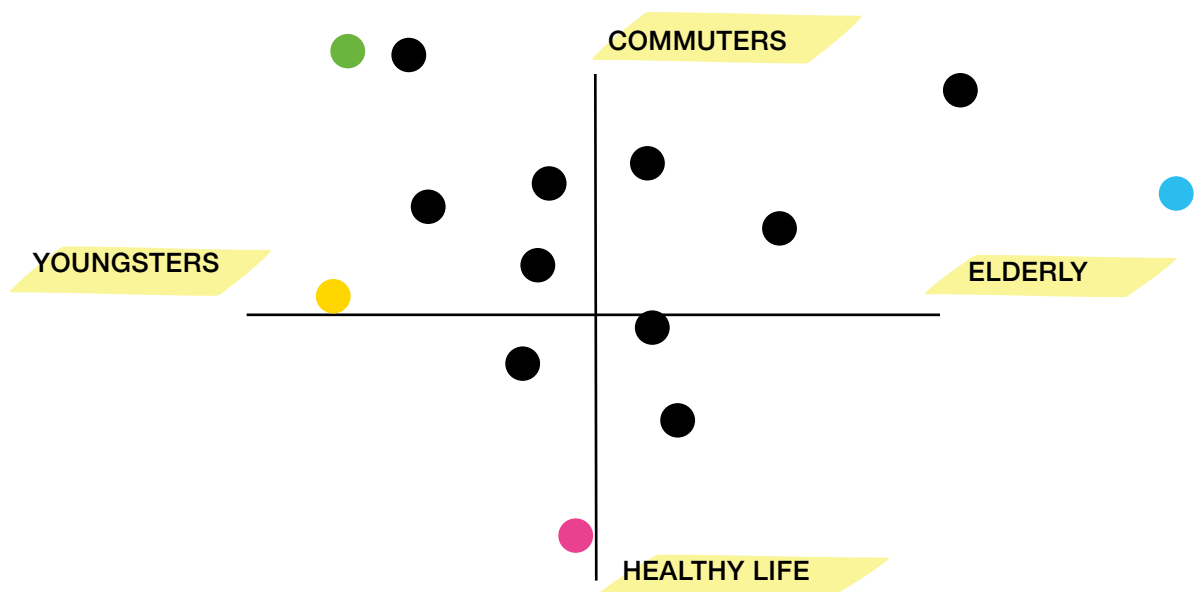
By understanding the users needs and relate to their personal experience, we can illiminate the “gap” between what the designer intentions are for the urban space with how the users actually use the space. Therefore to avoid this gap, it is important to understand the user’s needs according to what the urban space can afford tem.

Personas are a tool that is used to understand the need of specific individuals, for whom the site is supposed to be designed for. This will remind the designers to develop solutions for people with different needs and desires. With the knowledge of the users personal experiences, it is possible to relate to their genuine needs in their everyday life to plan the re-design of Kumbelhaven and the surrounding area. The personas becomes the starting point of the development of programming and interventions on the site in the design process.

As a method to understand the user groups need, there has been made observations and small interview with people passing by on the site. Small questions where asked and a organic conversation was started hens to their use of the site. On that note several personas are being described in these ethnographic portraits. (The full

interview can be found in Apendix p. 111)

The diagram explains how people are categorized. It was observed that there where 4 main groups of people on the area. The commuters are the people who where passing by to get to another destination, which was the majority of the people on the site. There where several groups of teens and youngsters that either where siting in benches or where hanging around the site area. Dog walkers or people running in the area where also observed on the area, which are categorized as the healthy lifestyle. Last there is a majority of elderly living in apartment buildings on the site, either going to get there daily groceries or talking a walk.





Illu. 53 commuters

### THE COMMUTERS

People going from A to B

#### NEEDS

Seating area, easy access, visibility, safety.



Illu. 52 Elderly

### THE ELDERLY

The elderly whom live closeby

#### NEEDS

Gardning, outdoor gym, seating, walkable area, safety.



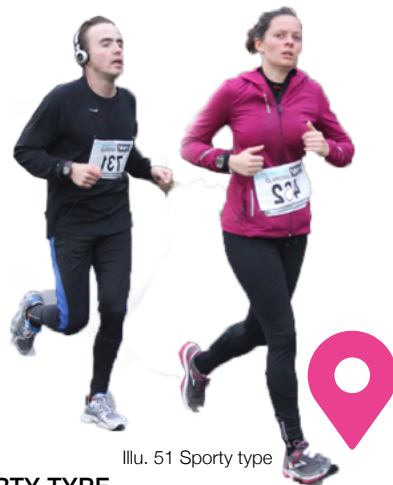
Illu. 54 Youngsters

### THE YOUNGSTERS

Teens whom lack after school activities in the area.

#### NEEDS

Unorganized sports, hangout spots, seating areas.



Illu. 51 Sporty type

### THE SPORTY TYPE

The fit and healthy lifestyle

#### NEEDS

Outdoor gym, ballgames, running space, walkable area, restarea.

# THE TERRAIN

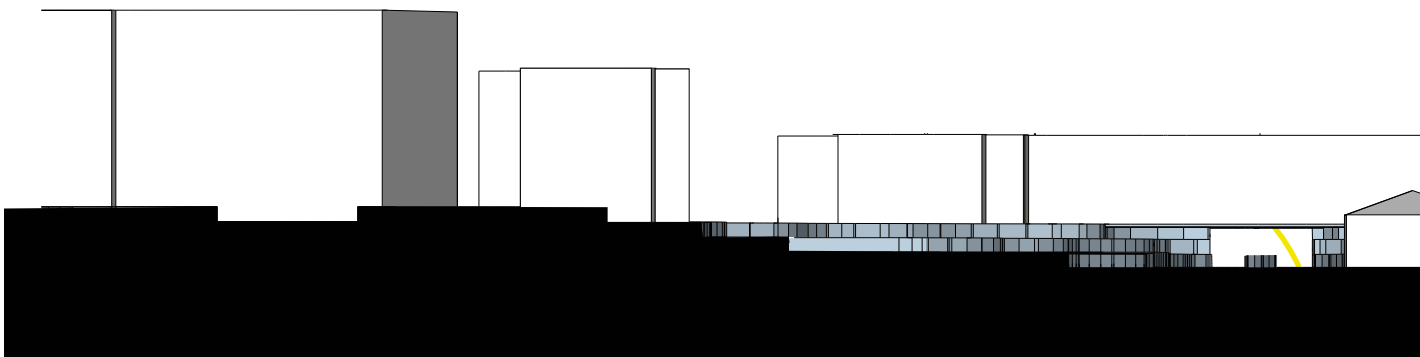
- "Furesø Municipality has the intentions that the specific characteristics of the landscape in the municipality will be preserved and highlighted"

The landscape in Farum is very characteristic with lush curvy terrain. But the terrain has its problems and potentials. The potential is that the site is lowered down and pulled away from the trafficked roads which creates a green oasis in the city center. The yellow marked area on the plan highlights the problematic area. In the micro climate analysis, the bluest analysis shows a problematic area that needs to be solved, when rainfall occurs. By removing the soil from the area, we make sure that there is created a downstream where there is no opportunity for the water to be retained, but rather it flow downstream to a runoff or a potentially detention-pond. By removing the soil from that area, we also create more space under the tunnel by going from approximately 2,8m to 3,8 meters high to the ceiling.

To make sure not to waste the removed soil, we balance it out by using the soil to even out the terrain on the slope. This will make room for buildings or create a space that can be used for events or created to a new hangout area with recreation and setting arrangements. [Furesøe.dk, 2013]

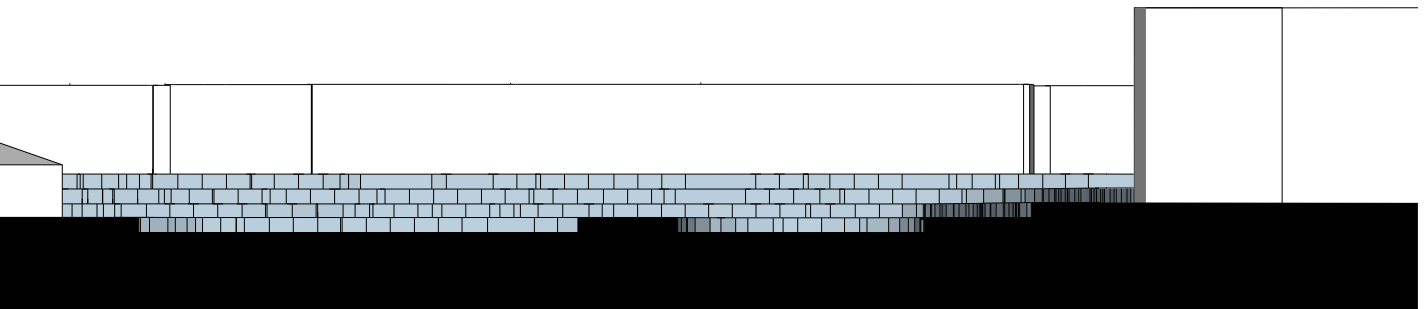
The map is an illustration of the landscape with a shading effect.

[Edited map from [www.miljoegis.mim.dk/cbkort?](http://www.miljoegis.mim.dk/cbkort?)]





Illu. 55 Terrain



Illu. 56 Section today

# SUB CONCLUSION

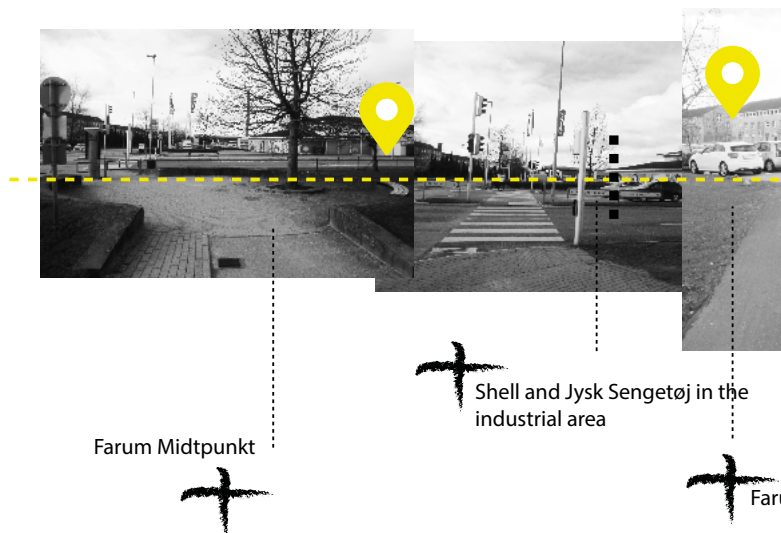
The Function divided city-center has a number of negative consequences in terms of lack of experience and visibility in the city and urban life. The social fragmentation of programming are sharply separated, which creates insecurity and unsafe areas for pedestrians in the evening and night hours and creates large transport distances.

From the municipality vision and different registration and analysis that this chapter unfolds, there are several problematic areas in the project site. The municipality vision portrays 6 main focus areas, which the analysis justifies. The demographic analysis insures that one of the big age groups in Farum is 10-20 years old. The programming analysis and the key nodes diagram shows how there are outdoor facilities for kids in the area, but there is missing a space where the young generation can make their own. A place that could generate more urban life, and with programmed activities, a better visible and functional connection and aesthetic measurements on the site, Kumbelhaven could help create a more coherent city-center. Especially a city-center that focuses on the light traffic with comfortable connections and pathways through the area.

From the Kevin Lynch mapping (See appendix p. 112-113) it is clear that there are many barriers and edges that closes up the project site towards the city-center. Barriers like the terrain and urban landscape and the enclosing vegetation, which needs to be solved and barriers create by fences needs to be removed to open up the site visually and physically.

Farum is characterized by a strong separation of functions - including that the car dominates most of the public space. At the same time the function division and traffic separation is very difficult and expensive to change. A development of a suburban area as Farum requires a drastically change. Either a "re-planning" of the city center - or the city-center can be supplemented with new layers that can soften the separation. The road Frederiksborgvej is dividing the area in two. Kumbelhave-neighborhood on the one side, and the city square together with the library and the local shopping mall (Farum Bytorv) on the other. By densifying and incorporating programming in the project site with a community center that could relate to the library, it could be that layer that is needed to soften the function divided city center. With different programming like coffee shops with outdoor service or even a fitness that also could be take to the outdoors, with yoga in the park, or cross fit courses for the community to be apart of in the outdoors that promotes health and activates and creates a more vibrant public space.

Another issue is water management and a sustainable city-center which also is a focal point for this project. Shown in the micro climate analysis, there are some bluespots on the site. This can be solved by adjusting the terrain and createing a downstream that can retain the stormwater in a potentially detentionpond integrated aesthetically in the design proposal.





## THEMES OF IMPORTANCE

### Kumbelhaven internal

- User Involvement (Utility Gardens, a new youthclub)
- Activate the City Park with more unorganized and spontaniuse sport and play
- Createeing outdoor areas that can attract people to stay
- Create an identity for the area through the design and atmosphere
- Use Farum values; sports, healthy lifestyle and lush greenery as a design criteria
- Rainwater management

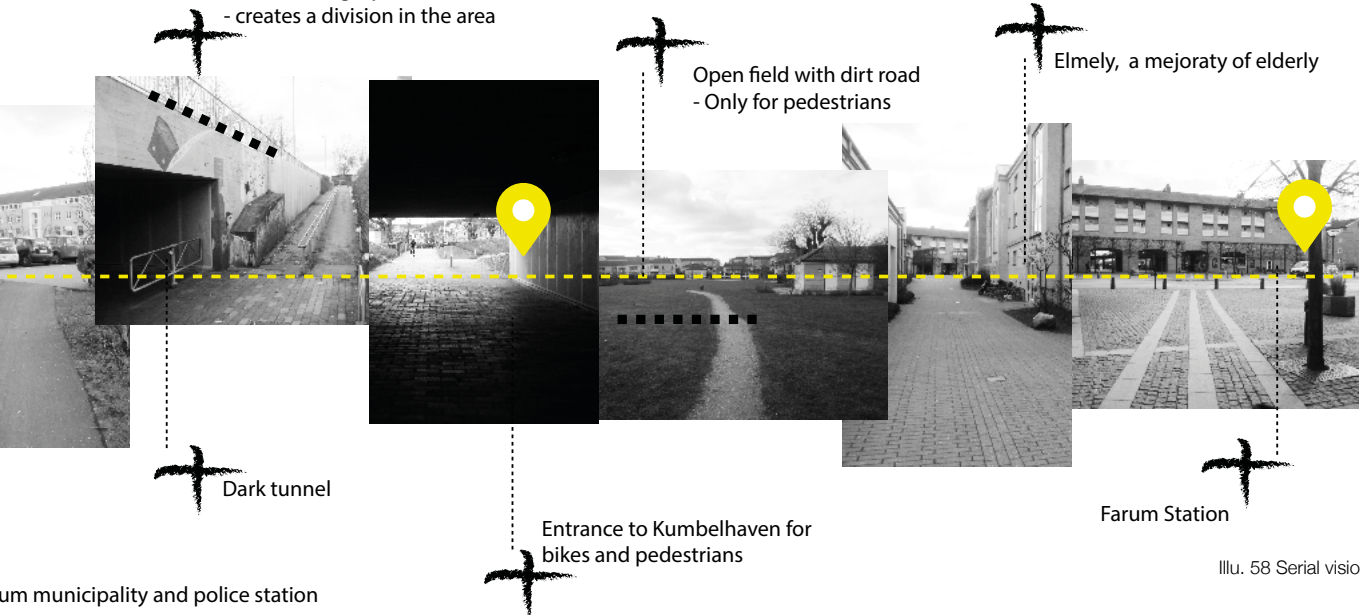
### Kumbelhaven external

- Better visual connection to in the
- Better physical connection in the area
- Better the mobility for soft trafficants
- Break down barriers and separation of functions
- Create a more coherent city-center



Illu. 57 Serial vision

Frederiksborgvej, trafficated road  
- creates a division in the area



Open field with dirt road  
- Only for pedestrians

Elmely, a mejoraty of elderly

Dark tunnel

Entrance to Kumbelhaven for  
bikes and pedestrians

Farum Station

um municipality and police station

Illu. 58 Serial vision

# VISION

The focus of the project is to build on the strong elements in Farum's identity: Sport and physical education, and the great qualities of nature that affords a sensorial atmosphere in the citycenter.

There should be a special effort to create an attractive framework for young people in Farum that encourages spontaneous activities, but also make sure to provide for a wide target-group, to ensure a strong social community in the area.

A space that stimulates both mind, body and soul.

# DESIGN PARAMETERS

## **A GREATER CONSISTENCE ACROSS**

**FARUM CITY-CENTER.** In order to develop and re-new Farum that is more eventful, sustainable and a safer city-center, we should create better coherence in across the area's major roads, this will decrease the dominance of cars in the area and break the barriers and separation of functions in-between.

## **REDUCING TRAFFIC BARRIERS AND GENES.**

There is a desire to make the connections across more attractive and safe, therefor include the light traffics in to the dominant roads as explained before.

## **IMPROVEMENTS IN THE VISUAL CONTEXTS.**

The urban spaces should be developed to better support a more visible and active life.

## **PROGRAMMING**

Better possibilities and meeting place for stay and movement. Farum city center lacks space where city life can unfold. The urban spaces appears diffuse with limited opportunities for stay and outdoor sport/activity. There should be put different layers of programmings to upport an active city life.

## **VEGETAION**

The green qualities in Kumbelhaven must be addressed and prioritized where ecology and sustainable is integrat-ed in the desgin. A community park that affords a senso-rial and spatial atmosphere that works as an green oasis in the city-center.

## **A SPONTANIOUS AND UNORGANIZED SPACE FOR PLAY AND MOVEMENT**

Despite that Farum has many excellent sports facilities, there is a lack of unstructured and unorganized area the young people to be active in. A public space where youngster can be active and engage in the community where there is a diversity in age, social groups and even culture exchanges.

External activities as a skatepark, small gardens and rec-reateeion areas for a broad group could createe diversity. A new urban community park that could serve as a focal point for the city center.

**SECURITY AND SAFETY** issues are a problem. Better lighting on the site, can create better clarity and increased security for example by working with lighting and vegetation on the site.

**WATER MANAGEMENT SOLUTIONS IN THE DESIGN.** The water can form part and be an integrated element in the design solution. The idea is to solve the critical areas where there are bluespots and make sure that the design it self is able to manage stormwater that consist of trenches, detentionponds or green facades that can absorb water, retain it and re-use it.

# RESEARCH

PUBLIC SPACE  
MOBILITES DESIGN  
CASE STUDIES  
INSPIRATION DIAGRAM





Illu. 59 Wooded facade

# PUBLIC SPACE

In the last 100 years development in use of public space has changed significantly. This occurred parallel to the increased focus on health and exercise in our daily lives. [Lamm, Kural and Wagner, 2014]

Public space has primarily being used for daily transit as “movement zones” for the daily life, where we now see a transformation as “stay zones”. The city space creates the fundamental social and recreateeional life for the everyday user. We have developed from a pre-industrial society to a new leisure-consumer society. The public space has now another layer or layers added to it. It is a transit site but also “a hangout space with activities that we would do in our free-time to socialize with friend or interact with our neighbors.

An example of this is the installation created by the artist group Perfume in 2004. They established a golf facility in Halmtorvet in Copenhagen. The idea was to add “another layer” to the Public space, that could bring more life and activity to the site in addition to being used as transit. The sculptural installation was the catalyst for new forms of activity and movement patterns in urban spaces. [Lamm, Kural and Wagner, 2014]

These various installations we see nowadays is not only in the traditional city parks and squares, but also seen in larger landscape space, in the forest, on the street corner, on the construction site and even on the sidewalks among the cars bikes and pedestrians. The aesthetical, active, functional and social elements of urban space is merged together in the installations whose purpose is to put the body in motion. The experience of the installations creates social performative scenes where the experience has a dual-meaning. On the one side it is a space for movement of the body, actively engaging in the installations, and on the other hand, it is an eventful scenario for the pedestrians, who is watching on the sideline. So it offers activity and movement but also performs as sculptural, in which the body forms the framework for the overall architectural expression in the urban landscape. [Lamm, Kural and Wagner, 2014]

It is also studied how various activities attracts different user groups, divided in genders, social classes and age groups. The Center For Sport And Architecture (CIA) and KADK focused on doing that and made studies in the new developed park in Haraldsgade in Copenhagen. The idea is to create the ideal conditions promoting diversity and encouraging interaction between different groups, the architects worked with seven concepts. 1. Visibility 2. accessibility 3. safety 4. shelter 5. spectators or an audience 6. Identity 7. aesthetics. [Lamm, Kural and Wagner, 2014] (See case studie p. 88 )

To optimize the projectsite and make sure Kumbelhaven is a space that affordes the fundamental social, recreateeional and even affordes a healthier life for the everyday users, it needs more and different layers put in. All the layers in the urban space should merged together where its main purpose is to put the body in motion!





Illu. 60 Halmtorvet in Copenhagen

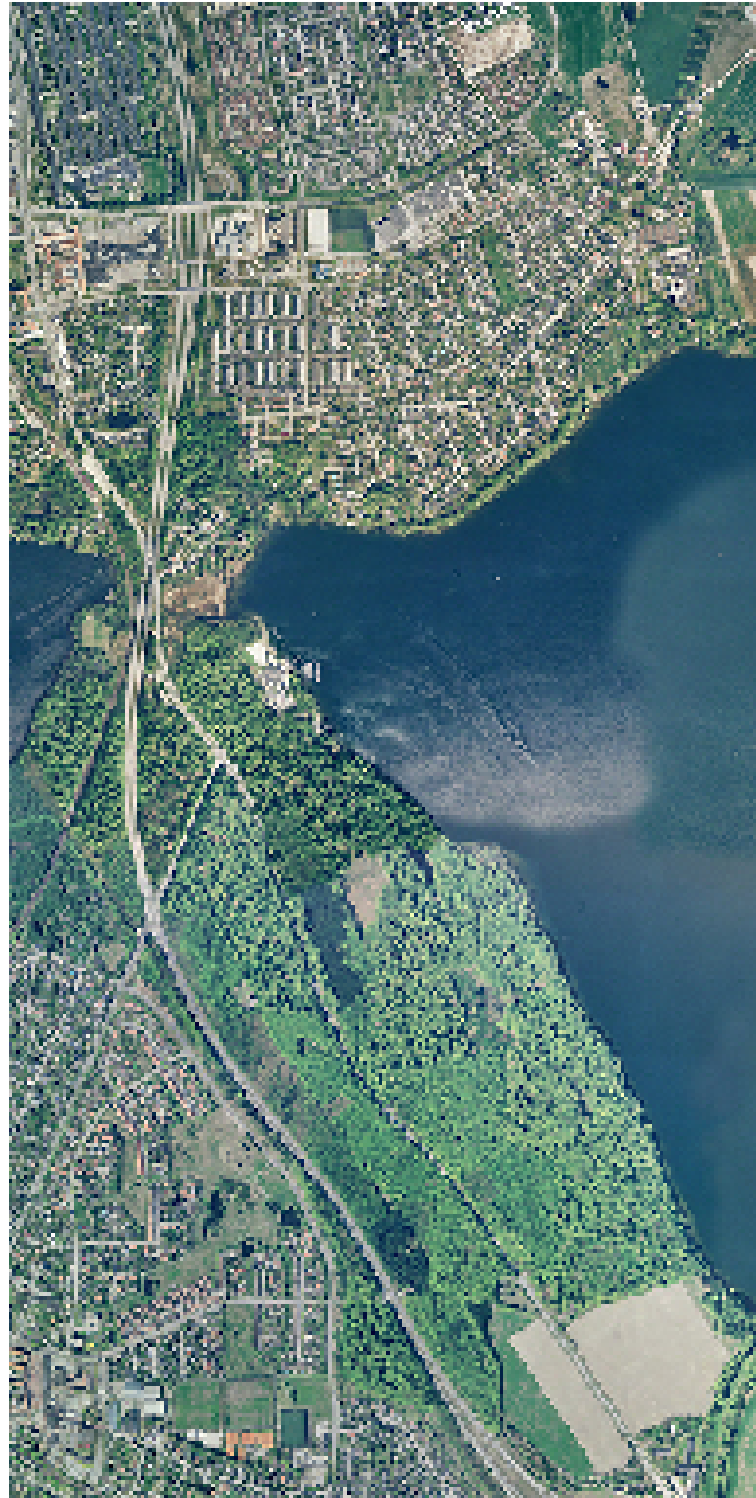
# HYDROLOGY

Climate change will be a challenge to cope with increased rainfall. The winters is going to get wetter and summer more dry. This means that water sensitive cities and management of water on recreateeional areas is becoming increasingly topical issues. (Furesoe kommune, 2011]

The traditional way of handing the increase rainwater in the cities, is to channel it into drains in order to send it out of the city. The rainwater often pollutes local water systems, as it may be contaminated by high amounts of heavy metals and harmful substances from car pollution. The polluted water is washed into drains and ends up in streams. Another problem that accrues in rainwater management is overwhelmed drains during storms, and where polluted water sewers are connected with surface drains, a combined sewer system that effects portable water supplies and the aquatic ecosystems in streams and lakes in the city.

The city center offers green areas, which can play an important role in the development of social interaction, but it can also play an important role in createeing solutions for handling the increased rainfall. Site-specific to Kumbelhaven is the curved landscape which can cause severe flooding downstream.

The water can form part in integrated solutions that consist of trenches, detention-ponds or green facades that can absorb the water or retain it, so it does not overload the sewer system or infiltrate with portable water in the city-center that can effect the aquatic ecosystem in Furesøen, a lush lake in Farum with wild life that can be effected by polluted stormwater.







Illu. 61 Furesøen

# MOBILITIES DESIGN

The sentence that describes the term "mobilities" that one might reflect on and understand it in another way is; "we live, while we move". We are just as much apart of the movement, then going through and getting to a point we are aiming for. The process of going from point A to point B, says as much to ones character, then the point it self. Whether the point is going to work, to school, a party or the local art-installation, the way we get there and the experiences that is made "going through" is just as essential to once character then the "aiming point" itself, in other words, explained by Kevin Lynch; *Moving elements in the city, and in particular the people and their activities, are as important as the stationary physical parts. We are not simply observers of this spectacle, but are ourselves part of it, on the stage with the other participants. Most often, our perception of the city is not sustained, but rather partial, fragmentary, mixed with other concerns.* [Lynch, 1960]

In this project mobilities design is important to consider in the process. The area is effected by different mobile interactions and the project site is considered at a transit site. From above [Jensen, 2013] It seam that the road, Frederiksborgvej, was developed long before any of the cultural activities and programs was developed, because the main road clearly does not take the other developments in account. The visual flow from standing on the road is good, where you have visual contact to most of the important programs in the area (Q8, The culturehouse/library, the iconic sign to the train station in the corner and along the road you se the site area Kumbelhaven folding down the terrain, with clean cut gras and big lush trees surrounding the park. The problem is that the road performs as a physical barrier and divides the area in two parts. It makes it difficult for the soft traffic (the pedestrians and bikers) to get across. The way to get to Kumbelhaven from farummidpunkt or the city square is

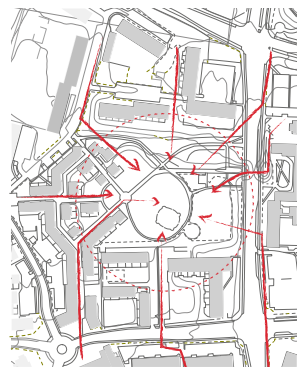
through a dark tunnel, which isn't the fastest or most efficient way to get across or around the area. The project site, Kumbelhaven, can also be described in the therms of sociofugal and sociopetal. Sociopetal is a place that 'draw' people and activities in, where sociofugal 'distributes' people away in different destinations [Jensen, 2013] The site today is a transit-site that works as a "shortcut" connected to the train station, therefor it performs as sociofugal. But can we make it both? Can the site be designed as a distributor as well as drawing people in to the site.

The illustrations below shows the idea behind the term sociofugal and sociopetal, which means that either a space works as a distribute, or it draws peopel in the space. Kumbelhaven functions as a distributor. The idea is to make it more efficient with a better flow and connections for both pedestrians and bikers in the area. The goal is to make Kumbelhaven a place to stay, where people are "drawen" to the site and not just distributet elsewhere.

**SOCIOFUGAL**



**SOCIOPETAL**



Illu. 63 Sociofugal and sociopetal space



Illu. 62 park in downtown Seoul Korea

# CASE STUDIES

The case studies are chosen specific to create an architectural phenomenological analysis of the projects. This means that there is done a "personal experience" of the cases where its described as it has been experienced. The design, tactile, and especially physical context is an important factor that can only be understood by studying each installation in its specific context and needs. The installations are through observation of what they consist of, what environments they are part of and what natural and social movement patterns they are catalyst for. The four projects are selected on the basis of their differences in their aesthetics, function, programming and the identity they impose in their context.

## CYKELSLANGEN BY DISSING+WEITLING

The bikebridge also know as "Cykjelslangen" is a fast and convenient shortcut for city cyclists. Hovering at first floor level, the Bike-bridge cord gracefully in and out of surrounding buildings and connects Dybbølsbridg with Bryggebridge with it is slender expression. It gives the passengers another view of the city and create a fluent and comfortable path of about 4m width. The orange bike bridge managed to tie the incoherent area together

with its simple aesthetic look, high functionality and nonetheless adds a playful and strong expression in the urban space. The bike bridge has achieved international attention and helped to put Copenhagen on the map as one of the world's best bike cities. [Dac.dk, 2015]

## SEB BANK BY SLA

The urban landscape is made by white concrete slaps and rises about 7 meters above the ground integrated with lush greenery. Its spatial qualities creates a sensuous place which encourages movement and stay while ensuring accessibility and rainwater acclimatization. At the same time it provides SEB Bank with a strong and unique Nordic identity with the use of material and the vegetation strategy. [SLA.dk, 2011] The use of the rå white concert pavemt and vegetation let to its own wilde nature,- together the two expressions intensify each other and creates a harmonic atmosphere and spatality in between the two highrise buildings.



Illu. 64 SEB bank by SLA



Illu. 65 Cykelslangen by BY DISSING+WEITLING

### THE RED SQUARE BY BIG

The Red Square in Nørrebro creates unorganized activities with its distinctive design and color. The square in Nørrebrogade and Nørrebrohallen is painted in crisp red, orange and purple shades and focuses on relaxation, urban life, flea market and musical events. It is part of Superkilden which includes three different squares, where The Red Square is one of the three. The project has won many awards where design and function goes hand in hand. The design also reflect on the areas different ethnicity which is symbolized with the exotic vegetation or different urban furnitures imported from countries like Marco and Egypt. The unorganized element is seen in the use of coloring that creates smaller space within the space. The space is used for ball-games, as a skatepark or as space for outdoor-concerts.

### HARALD-NEIGHBORHOOD BY CIA AND KADK

In Harald neighborhood on outer Nørrebro, we find a highly urbanized area with homes, businesses and institutions. The ethnicity in the neighborhood is mixed and far from organized sports clubs and modern fitness centers. The theory behind the project is to activate the areas remanning space and encourage physical activity and get a count in the obesity epidemic that pose a major health threat in exposed areas. [kilde] The project aims to promote spontaneous physical activity in public spaces. The development is installed in three different areas in Harald-neighborhood in Copenhagen. Each area is tailored to a specific audience, so everyone in the area could make use of the features in their everyday active life. [playble s. 69] The design of the elements has diffrent structural forms that affords people to use as pleased. You can hang on it climb on it or use it as outdore gym. The instalations only limites to ones imagenation, which encourages different use then entended.



Illu. 67 Harald-neighborhood



Illu. 66 The red square in Nørrebro



Illu. 68 Harald-neighborhood

# CONCLUSION

The analysis chapter leads to an understanding of the problem and the potentials in the project site. Furthermore the research chapter has given a inside of different focal points, which can generate ideas in the design process.

When designing an urban space, it is important to understand the needs and affordances. Because of the lack of connectivity and bad mobility connections on the site, mobility design became crucial as a design parameter. The area as mentioned is un-programmed and only used as a distributor and a transit area. By putting other layers of programming that affords the needs of the users, the site can be transformed to Farum city-centers new community park, that activates the city-center as an urban catalyst and supports the city's distinctive features, and trademark.

The design proposal support and provide unorganized sports and activity for teens and youngsters in the city that does not necessarily have expenses to participate in organized sports or after-school activities. It encourage spontaneous physical activity and mix-use in the public spaces. With different layers of programming that attracts the young target-group, can make them more visible in the city-life.

The different case studies that has been visited, has given a better understanding of their function, spatiality, atmosphere and sense of place that is created by eastetical elements in use of vegetation, color and tactility. These elements is used in the proposal, which has strengthened the identity of the site and created a raw atmosphere, with a rural vegetation strategy for minimum maintenance.

The vision for the project was to expand and activate the chosen site as an urban catalyst that supports the city's distinctive features, and trademark. The proposal should invite active use but also work as a social generator for the city center.

A proposal that activates Farum city-center and creates an common area where the city can socialize in divers activities with different social groups, age, culture and programming is created in the design proposal for the new city park. The vision was to create a space that stimulated both mind, body and the soul.

Mind = A sensoral space  
Body = An active space  
Soul = A community space

These three elements are portrayed in the aesthetics of the design, the programming and space for temporary use that can create social interactions and diversity in the public space.

The user group was focused on the young people of Farum and their need. The design aims to support spontaneous activity in the site, which is made by putting different layers in the design. The design of the step-landcape is made to have different purpose and functions, to afford the need of the users. Its has functional use, recreateeional that encourages stay but also supports movement and play for skaters. The vegetation strategy has easthetical functional and ecological abilities on the site. Plants that support different lifeforms and contributes to a healthy ecosystem is essential to sustain a eco-friendly city-center. Even though the green area is decreased due to the urban paved programmings, the vegetation is enhanced in planting more species that will contribute to the ecology an create a sensorial space in the site. The contrast of hard, urban, concrete-paved surface and the lush green vegetation clashed together, will inherence each-other which provides a raw atmosphere in the park. This contributes to the ecology, aesthetics and is economy-friendly, where there is no need for maintenance for the vegetation.

Because of the neglected soft traffic in the site, it was important to better the access for pedestrians and cyclist in the area. The connections to the surrounding areas are made clear with paved concrete that makes it comfortable for bikes and pedestrians to move around in wide pathways, that shows a clear flow in the site.

Different mobility modes are represented in the use of material. For stay and recreateeion, the green vegetation and wooden surface - benches is provide for. For fast and active use, colored asphalted zoned affords good comfortable movement on foot and on a bike. For "slow" movement the white concrete creates a clear pathway in the area which connects to the surrounding areas. The use of same material in the context area allows a more visible an coherent city-center.

The step-landscape together with placing a mid-section in Frederiskborgvej, eliminates the barriers that is created towards



Kumbelhaven and out to the surrounding area, which also contributes to a more visible and coherent city-center .

By densifying the area with two new public buildings, using programming that supports Farum identity and trademarks will help to dissolve the function-division city-center as well. A new fitness-center, a culture center that can locate a youth-club and work as a co-building to the library across the street, can provide mix-use and culture exchange in the divers ethnical democratic city.

## REFLECTION

The registration of personas could have been done more intensively, by making a counting of different groups of people and then categorize them. The user group registration where only observed and not counted out and not everyone was interview either. The timespans of observations is also important. The registration could take place in different time on the day to make sure as many different groups where registrated. The registrations and interview where made in to different days and different timespans. One at noon where most elderly where registrated, and the other at 18:00 where the commuters and youngsters where seen at the site and interviewed. An observation in the morning where people often go to school or work could give a broader imagery of the user group that could have been missed.

Another aspect of the project that has steered the curse of design proposal, is the case studies and inspiration diagram. It has been a starting point for the design process, which had generated further ideas for several design proposals on the site. If chosen other case studies and different inspirations for the project, the design proposal would have looked differently in the end of the process. Reference projects and case studies are extremely important in the design process. Reflecting on it now, it is clear how even small elements have inspired the design in a big sense. Functional, aesthetically, textual and even the use of color have been some of the elements that is re-used in the design process.

The technical perspective in the project has also shifted. From hydrology to also including mobilizes design. When starting the project, there was not made registrations of the site in forehand. The theme of the project changed its curse the more I understood the site specifics. I realized

that mobilities design had more to say in the area. How the area and its surrounding context needed to be more connected, and how barriers on the site where created. The biggest problematic on the site is the lack of connection that Kumbelhaven has to the overall city center, and to make that Kumbelhaven opens up and is the connective part from the city hall to the station mobilizes design and the visual connections in the site was crucial to solve the design question.

Some important aspects in the project has been neglected caused by lack of time. In further process there are some design interventions that should be looked further into.

The step landscape is one of the most important design elements that can be optimized to seek its full potential. The function of the steeps are to better access the site for pedestrians but also be used as seating element as a other layer. the hight of the steps are 20cm which is comfortable to step up and down from, but for seating the high is not the most comfortable. For better comfort there should be an variety in hight in the steps.

The bike loop was intended to go through the site and connect it to the station, with its distinct orange asphalt. But as the different coating materials represents different mobility and use, the orange asphalted road represents fast and high speed which isn't convenient through Elmely, (Located between two apart buildings where the majority is elderly). The visual connection is made by using the concrete tiles, same urban furniture that is chosen for the site and the same vegetation strategy to create a visible connection to the context areas. This path will be wide and work as the main transit through the area, as it is today.

# REFERENCES

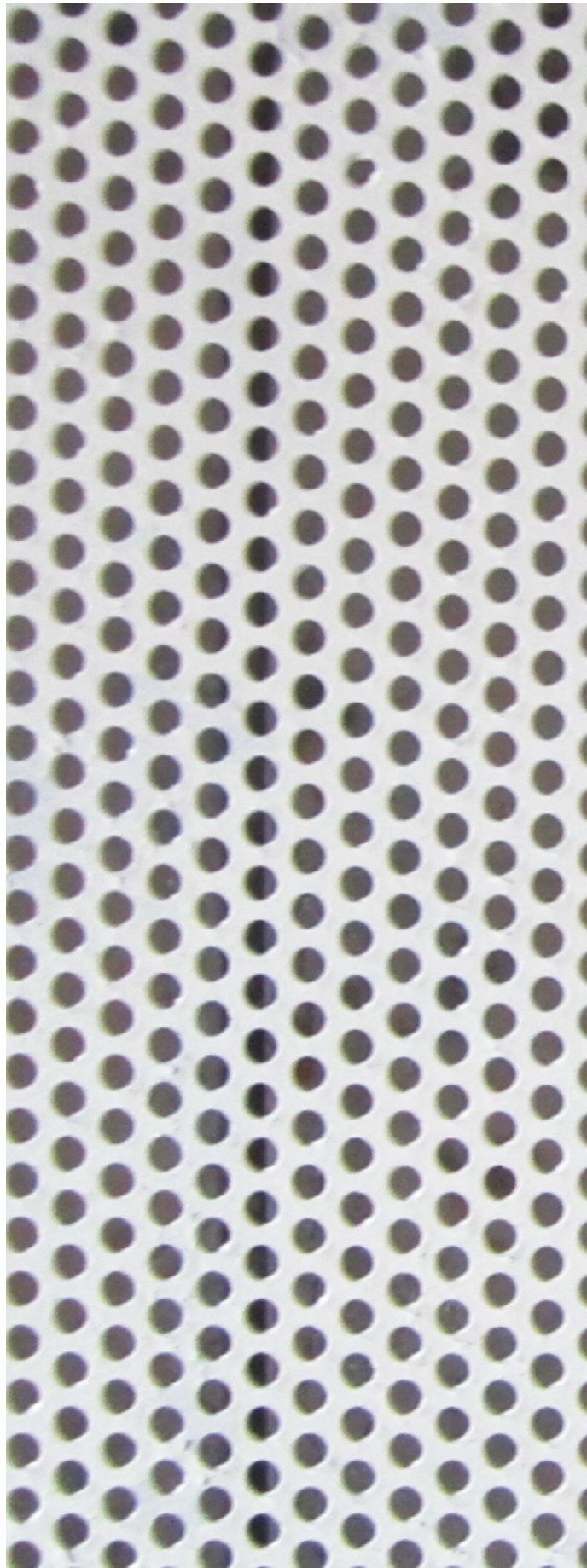
- [Knudstrup, 2005]  
Knudstrup M. A. (2005) the integrated Design process (iDP)- a more holistic approach to sustainable architecture
- [Faber, k. 2010]  
Politiken. [Online] Available at: <http://politiken.dk/kultur/ECE977681/arkitekt-derforer-det-gaaet-galt-i-oerestaden/> [Accessed 28 Apr. 2016].
- [Realdania Debat, 2014]  
Tilbage til den menneskelige skala. [online] Available at: <https://www.realdaniadebat.dk/erhvervsforum/Pages/Tilbage-til-den-menneskelige-skala.aspx> [Accessed 04 Apr. 2016].
- (Böhme, 1993)  
[Böhme, Atmosphere as an aesthetic concept, 2010 p. 112-115]
- [www.dac.dk, 2016]  
Your Bibliography: [www.dac.dk](http://www.dac.dk). (2016). Byg det op. [online] Available at: [http://www.dac.dk/media/48814/BDO\\_PUBLIKATION.pdf](http://www.dac.dk/media/48814/BDO_PUBLIKATION.pdf) [Accessed 23 May 2016].
- [Furesø Kommune, 2011]  
[online] Available at: <http://www.furesoe.dk/~media/WWW/Kommunen/Byudvikling/FuresoeOgRealdania/KonkurrenceprogramFarumIudvikling.ashx?la=da>
- [Gehl, 2010]  
Gehl, J. (2010). Cities for people. Washington, DC: Island Press.
- [Anon, 2016]  
[online] Available at: <http://www.gcaudio.com/resources/howtos/loudness.htm> [Accessed 23 May 2016].
- [Miljøegis.mim.dk, 2016]  
Miljøegis. [online] Available at: <http://miljoegis.mim.dk/cbkort> [Accessed 23 May 2016].
- Furesoe.dk, 2016]  
Kommunens befolkning - Furesø Kommune. [online] Available at: <http://www.furesoe.dk/Kommunen/Fakta/KommunensBefolkning> [Accessed 23 May 2016].
- Furesoe.dk. (2013).  
Available at: [http://www.furesoe.dk/~media/WWW/Kommunen/Klima%20natur%20og%20miljoe/natur/Groen%20plan/Grøn\\_Plan\\_ENDELIG\\_2013\\_02\\_22\\_med\\_forside%20pdf.ashx?la=da](http://www.furesoe.dk/~media/WWW/Kommunen/Klima%20natur%20og%20miljoe/natur/Groen%20plan/Grøn_Plan_ENDELIG_2013_02_22_med_forside%20pdf.ashx?la=da) [Accessed 23 May 2016].]
- [Lamm, Kural and Wagner, 2014]  
Lamm, B., Kural, R. and Wagner, A. (2014). Playable. København: Rhodos.
- [Lynch, 1960]  
[Lynch, 1960, The Image of The City]
- [Jensen, 2013]  
Jensen, O. B. (2013) Staging Mobilites, London: Routledge
- [Dac.dk, 2015]  
Cykelslangen - Dansk Arkitektur Center. [online] Available at: <http://www.dac.dk/da/dac-life/copenhagen-x-galleri/cases/cykelslangen/> [Accessed 23 May 2016]
- [Sla.dk, 2011]  
Sla.dk. (2016). Sla :: City Dune - SEB Bank. [online] Available at: <http://www.sla.dk/en/projects/city-dune/> [Accessed 23 May 2016].

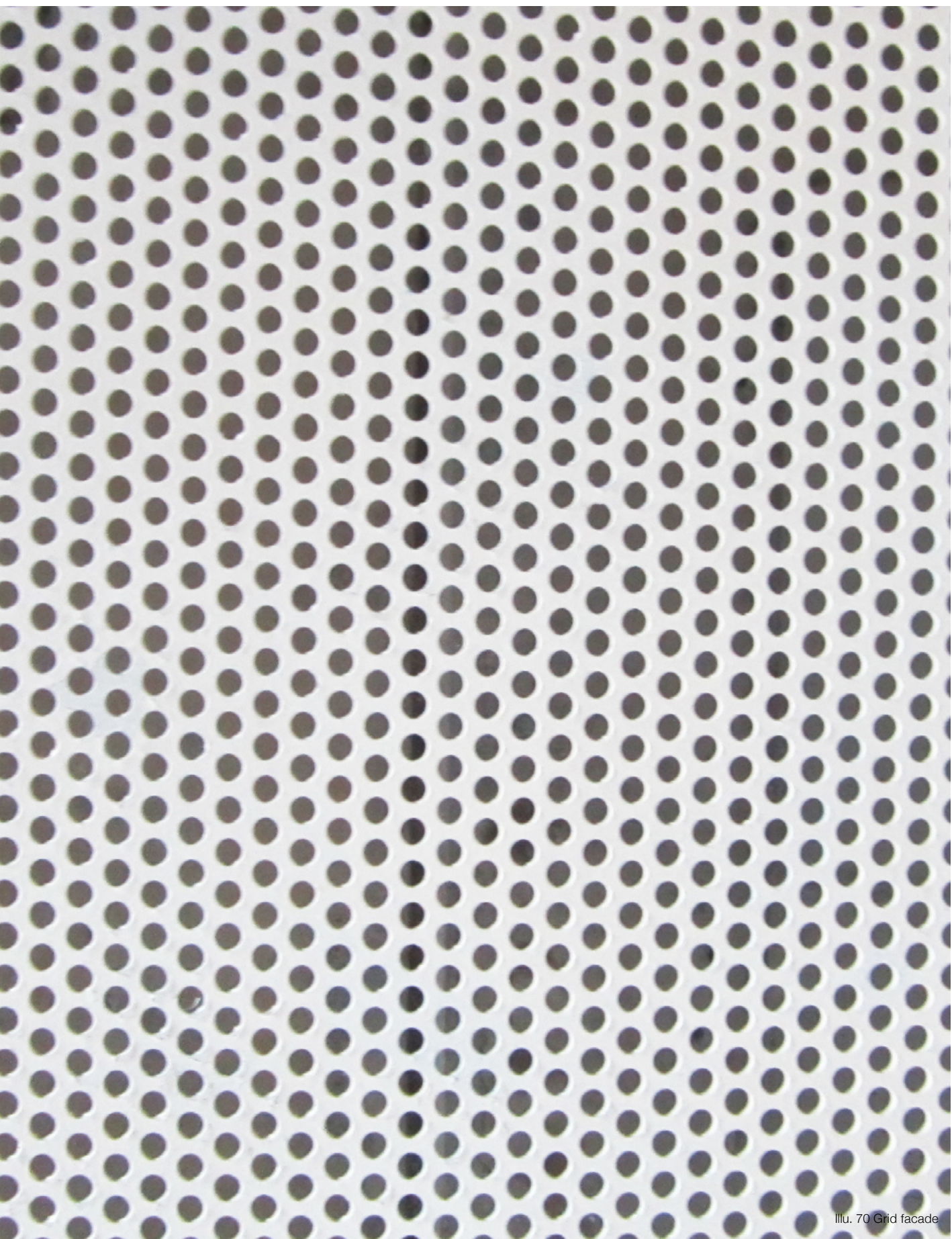
# ILLUSTRATION LIST

Illu. 01 Concret wall	Own picture	<a href="http://www.gis34.dk/map.aspx?caseid=190100">gis34.dk/map.aspx?caseid=190100</a>	Own picture
Illu. 02 Designing from above	Own picture	Illu. 43 Entrance	Own picture
Illu. 03 IDP	Own picture	Illu. 44 Tunnel	Own picture
Illu. 04 Designing from below	Own picture	Illu. 45 Kumbelhaven	Own picture
Illu. 05 Project site	Own picture	illu. 46 Kumbelhavn	Own picture
Illu. 06 Farum municipality -	Own picture	Illu. 47 Elmely	Own picture
Available at: <a href="http://sn.dk/galleri/532957">http://sn.dk/galleri/532957</a>		Illu. 48 Farum station	Own picture
Illu. 07 Site plan 1:1000	Own picture	Illu. 49 Green and paved layer	Own picture
Illu. 08 Design concept	Own picture	Illu. 50 Mobility layer	Own picture
Illu. 09 Design interventions	Own picture	Illu. 51 Sound: Available at: <a href="http://www.furesoe.dk/Kommunen/Byudvikling/FarumiUd-">http://www.furesoe.dk/Kommunen/Byudvikling/FarumiUd-</a>	Own picture
Illu. 10 Programming	Own picture	<a href="http://www.furesoe.dk/Kommunen/Byudvikling/FarumiUd-vikling/-/media/5FEF042353654946BDFD-11F56DF72873.ashx">vikling/-/media/5FEF042353654946BDFD-11F56DF72873.ashx</a>	Own picture
Illu. 11 Section 1:200	Own picture	Illu. 52 Wind: Danish meteorological institute,	Own picture
Illu. 12 View from Frederiksborgvek	Own picture	Technical report 99-13, Copenhagen 1999:	Own picture
Illu. 13 View from outdoor gym	Own picture	Illu. 50 Blue-spots: Available at: <a href="http://miljoegis.rund.dk">Miljoegis.rund.dk</a>	Own clip art picture
Illu. 14 Zoomed plan 1:500 Urban landscape	Own picture	Illu. 51 Sporty type	Own clip art picture
Illu. 15 Detail illustration of the urban landscape	Own picture	Illu. 52 Elderly	Own clip art picture
Illu. 16 Detail illustration of the bike bride	Own picture	Illu. 53 Commuters	Own clip art picture
Illu. 17 Detail illustration of the multi-court	Own picture	Illu. 54 Youngsters	Own picture
Illu. 18 Detail illustration of the skate scape	Own picture	Illu. 55 Terrain	Own picture
Illu. 19 Detail illustration of the skate scape	Own picture	Illu. 56 Section today	Own picture
Illu. 20 Detail illustration of urban gardens	Own picture	Illu. 57 Serial vision	Own picture
Illu. 21 Zoomed plan 1:500 multi-court and skate scape	Own picture	Illu. 58 Serial vision	Own picture
Illu. 22 Zoomed plan 1:500 outdoor gym	Own picture	Illu. 59 Wooded facad	
Illu. 22 Zoomed plan 1:500 urban gardens	Own picture	Illu. 60 Halmtorvet, Copenhagen: Available at: <a href="http://pellebrage.com/Monument">http://pellebrage.com/Monument</a>	
Illu. 23 Step landscape	Own picture	Illu. 61 Furesøen: <a href="http://naturstyrelsen.dk/naturoplevelser/naturguider/furesoeren/">http://naturstyrelsen.dk/naturoplevelser/naturguider/furesoeren/</a>	
Illu. 24 Eastetical lighting	Own picture	Illu. 62 Park in downtown Seoul Korea - Available at: <a href="http://20x200.com/products/hosang-park-howon">http://20x200.com/products/hosang-park-howon</a>	Own picture
Illu. 25 Step lights	Own picture	Illu. 63 Sociofugal and sociopetal space	Own picture
Illu. 26 Paving - Available at: <a href="http://www.dezeen.com/2011/06/02/landhausplatz-by-laac-architekten-and-stiefel-kramer-architecture/">http://www.dezeen.com/2011/06/02/landhausplatz-by-laac-architekten-and-stiefel-kramer-architecture/</a>	Own picture	Illu. 64 SEB bank by SLA	
Illu. 27 Steps - Available at: <a href="https://www.flickr.com/photos/101156208@N02/9700172741/">https://www.flickr.com/photos/101156208@N02/9700172741/</a>	Own picture	Illu. 65 Cykelslangen by by DISSING+WEITLING - Available at: <a href="http://qualitysharing.tumblr.com/post/129487417039/the-bicycle-snake-by-dissing-weitling-copenhagen">http://qualitysharing.tumblr.com/post/129487417039/the-bicycle-snake-by-dissing-weitling-copenhagen</a>	
Illu. 28 Bench - Available at: <a href="http://www.houzz.com/photos/27607003/concrete-and-wood-bench-modern-accent-and-storage-benches-denver">http://www.houzz.com/photos/27607003/concrete-and-wood-bench-modern-accent-and-storage-benches-denver</a>	Own picture	Illu. 66 The red square in Nørrebro: Available at: <a href="http://hmarochos.kiev.ua/2015/05/21/mistse-yake-ob-yednuye-park-u-multikulturnomu-rayoni-kopengagena/">http://hmarochos.kiev.ua/2015/05/21/mistse-yake-ob-yednuye-park-u-multikulturnomu-rayoni-kopengagena/</a>	
Illu. 28 Urban lighting - Available at: <a href="http://www.archiexpo.com/architecture-design-manufacturer/galvanized-steel-lamp-post-24345.html">http://www.archiexpo.com/architecture-design-manufacturer/galvanized-steel-lamp-post-24345.html</a>	Own picture	Illu. 67 - 68 Harald-neighborhood - Available at: <a href="http://www.uno.dk/arkitektstøtte/arkitektoniske-projekter/haraldsgade">http://www.uno.dk/arkitektstøtte/arkitektoniske-projekter/haraldsgade</a>	Own picture
Illu. 29 Vegetation strategy	Own picture	Illu. 69 Concept development drawing	
Illu. 30 Parking	Owen picture		
Illu. 31 Section Frederiksborgvej	Owen Picture		
Illu. 32 Wall	Owen Picture		
Illu. 33 Farum city-center - Available at: <a href="http://www.gis34.dk/map.aspx?caseid=190100">http://www.gis34.dk/map.aspx?caseid=190100</a>	Owen Picture		
Illu. 34, 10 min. walk	Owen Picture		
Illu. 35 Demografic	Owen Picture		
Illu. 36 Main roads	Owen Picture		
Illu.37 Public trasport	Owen Picture		
Illu. 38 Typology	Owen Picture		
Illu. 39 Programming	Owen Picture		
Illu. 40 - 41 Activity - Available at: <a href="http://www.furesoe.dk/-/media/WWW/Kommunen/Byudvikling/FuresoeOgRealdania/KonkurrenceprogramFarumUdvikling.ashx?la=da">http://www.furesoe.dk/-/media/WWW/Kommunen/Byudvikling/FuresoeOgRealdania/KonkurrenceprogramFarumUdvikling.ashx?la=da</a>	Owen Picture		
Illu. 42 Kumbelhaven Available at: <a href="http://www.gis34.dk/map.aspx?caseid=190100">http://www.gis34.dk/map.aspx?caseid=190100</a>	Owen Picture		

# APPENDIX

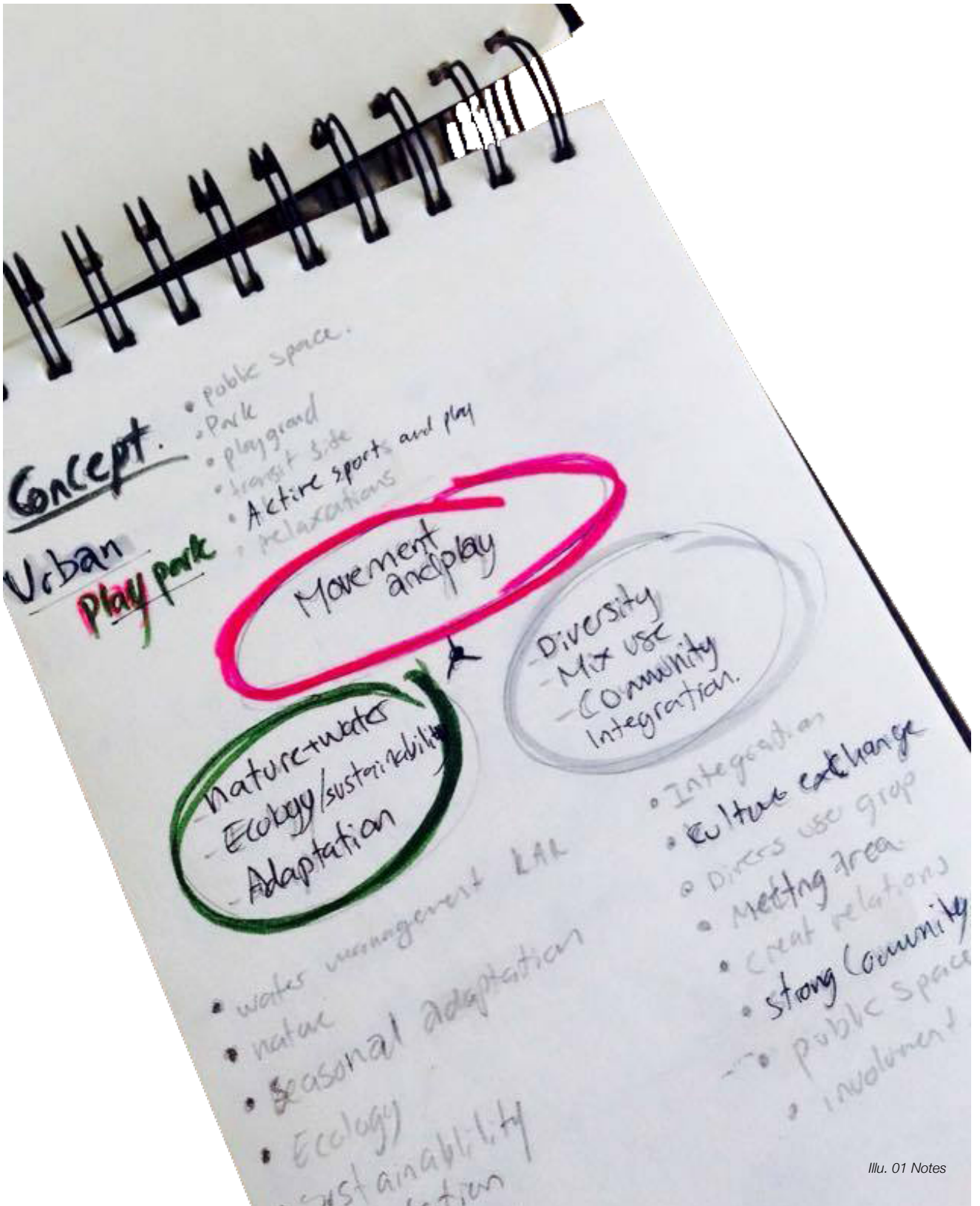
**DESIG PROCESS**  
PROCESS OUTLINE  
DIAGRAM INSPIRATION  
FLOW  
CAPACITY  
**BIKE PARKING**  
AGE INTERVAL  
INTERVIEW  
KEVIN LYNCH



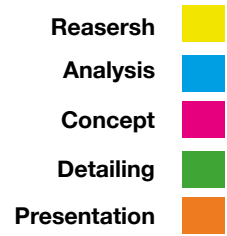
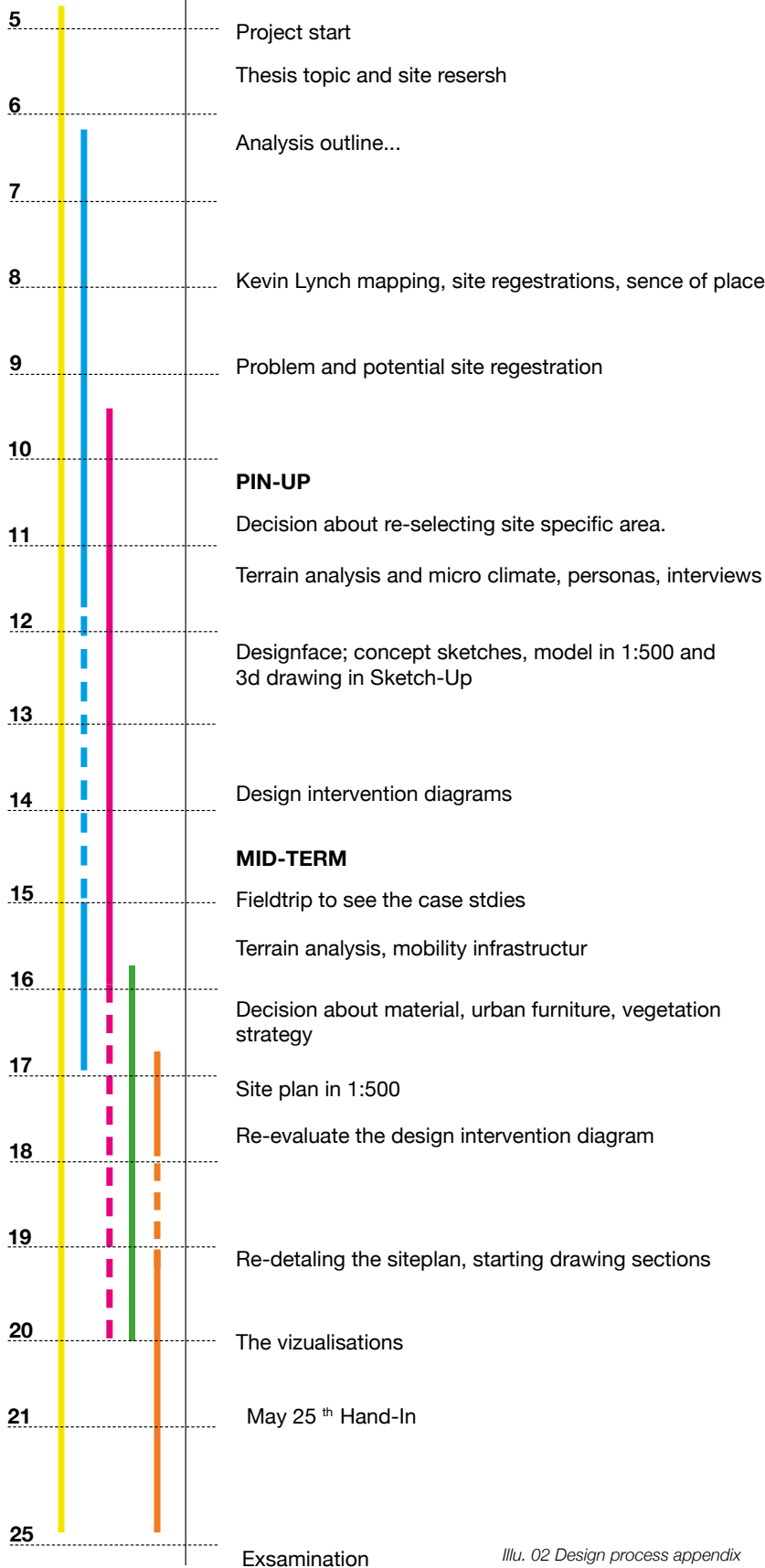


Illu. 70 Grid facade

# Designprocess



WEEKS








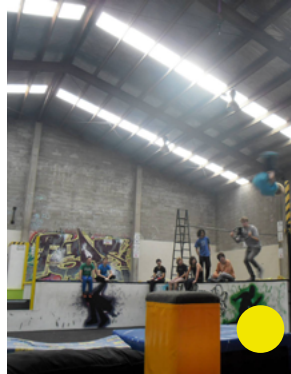


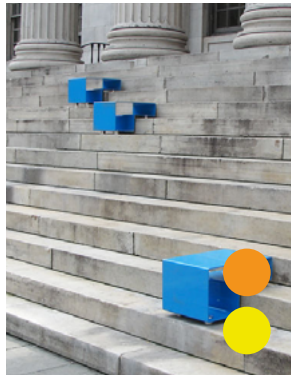



Illu. 02 Design process appendix

# INSPIRATION DIAGRAM

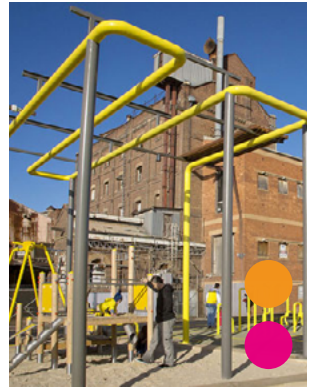
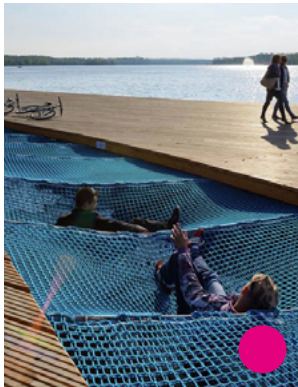
In addition to the selected references, there are also looked at other projects for inspiration. The idea was to find different elements and specially how an element may have multiple functions than its intended use. One of the project's focus points is that the space must be able to invite to the spontaneity and unorganized play and activity, therefore it is important that elements does not foresee a specific function, but afford several in one and meet the users needs, this could even inspire the subject to use the object in a new way. The chart divides the selected projects in categorize, where those with more features and use are marked with different colors. The

more layer imposed or has potential for, the more colors its marked with. This provides a visual understanding of the different programming the project have or even could be developed to have other functions than intended. This has helped in generating ideas for further development and selection of activities and various programming for the design proposal.

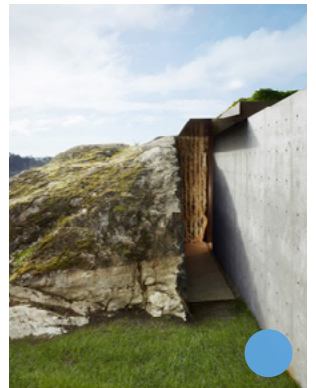
<b>HYDROLOGY</b>	 Orange, Pink	 Red, Green, Yellow	 Orange, Yellow	 Orange
<b>PUBLIC SPACE</b>	 Pink, Yellow	 Blue, Pink, Green, Yellow	 Yellow, Pink	 Yellow
<b>URBAN FURNITURE</b>	 Orange, Red, Yellow	 Green, Yellow	 Orange, Yellow	 Red, Orange, Yellow



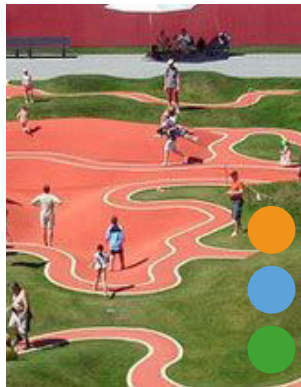
ACTIVITY AND PLAY



URBAN VS RURAL



FLOW



Illu. 03 Inspo diagram appendix

# FLOW

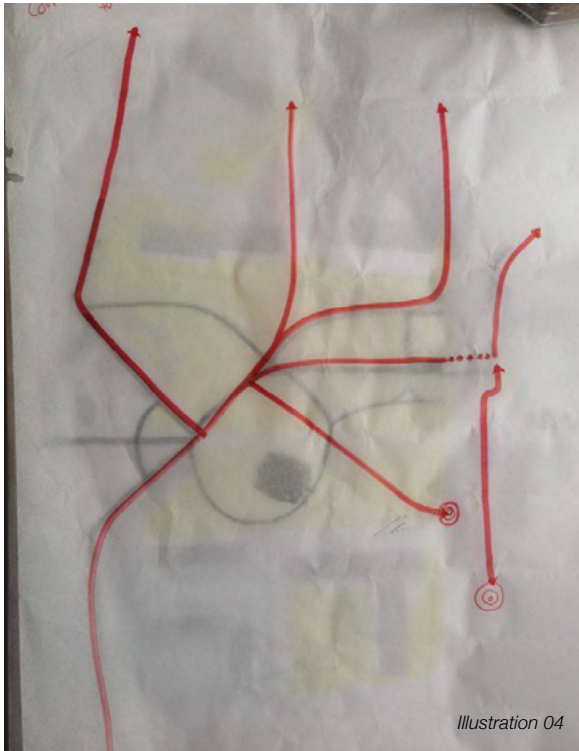


Illustration 04

Sketch face where differen flow and connections iare invetigated.

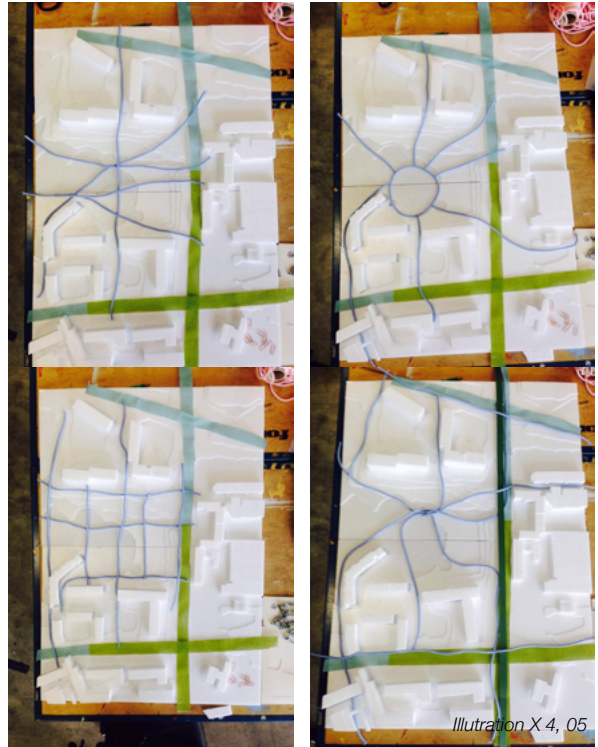


Illustration X 4, 05

Futhermore worked in model to work with scale and spatality



The flow today is portradet where no direct connections with the surrounding key urban spaces public facilitys nor main apartmentsbuildings.



Illustration 06

The new flow is created by connecting key areas to the project site. This makes the most efficient flow and opens up the site towards the context and vice versa.

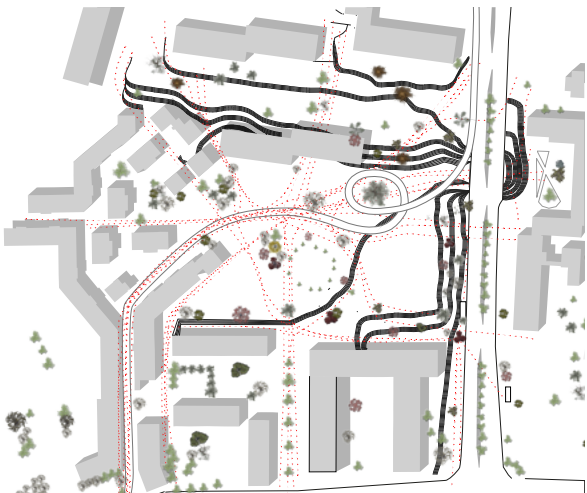
# IDENTITY ZONES



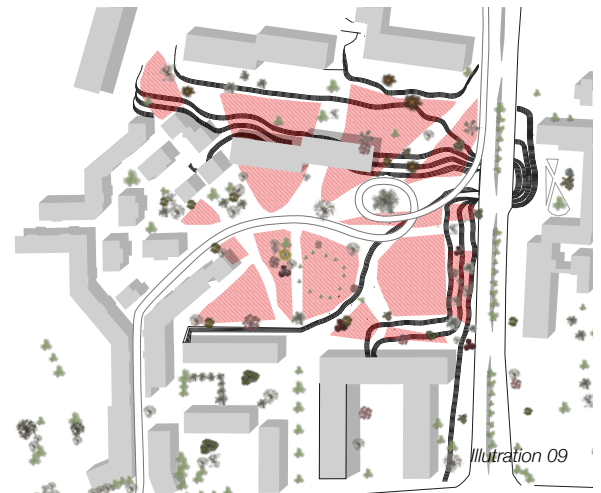
The flow creates the identity zones



The identity zones are investigated with different programming



The flow that is assumed, if key locations where connections to the site



The flow that creates the identity zones.

# BIKE BRIGDE

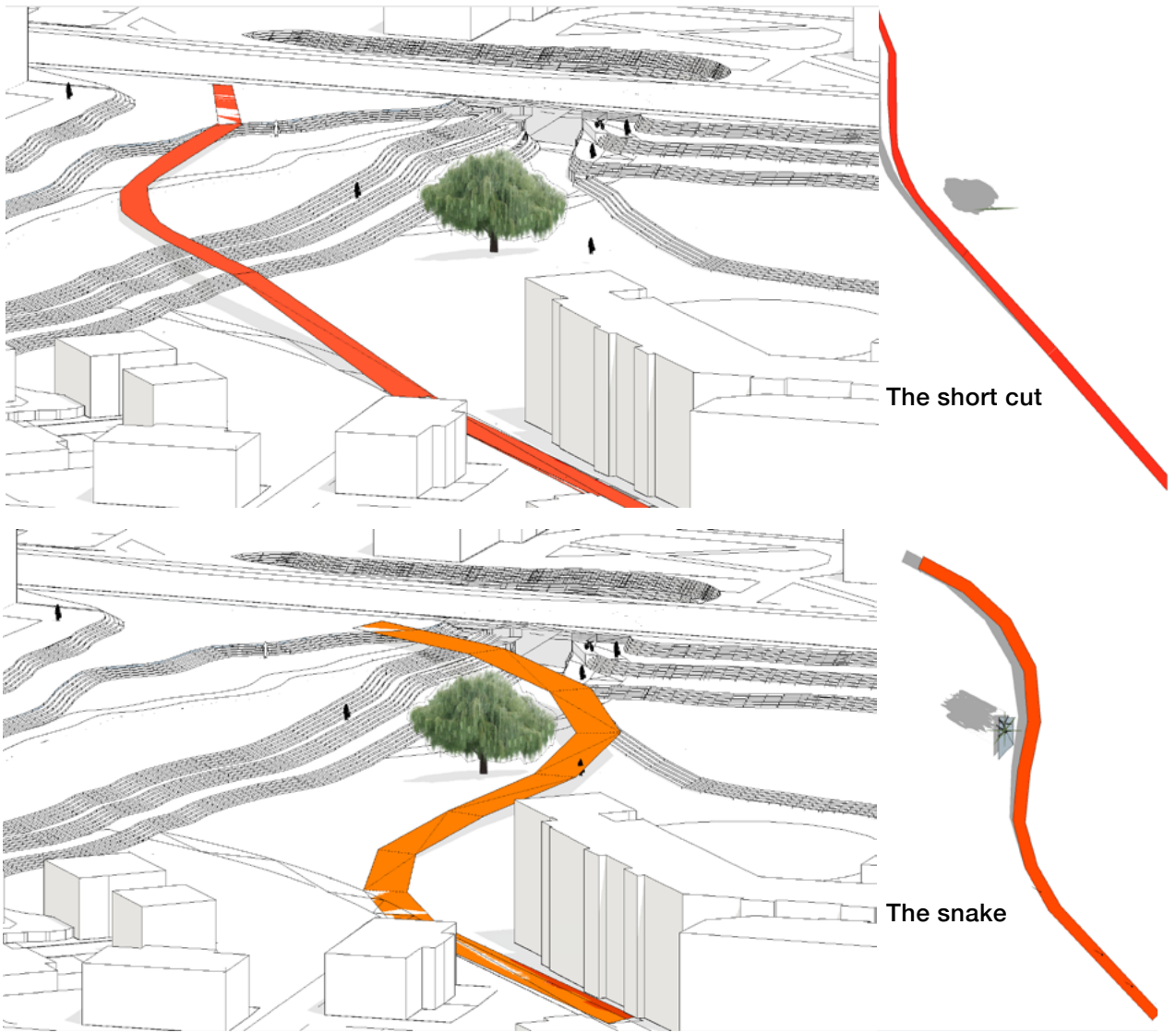
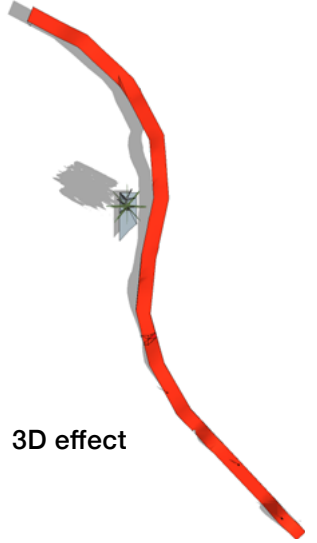
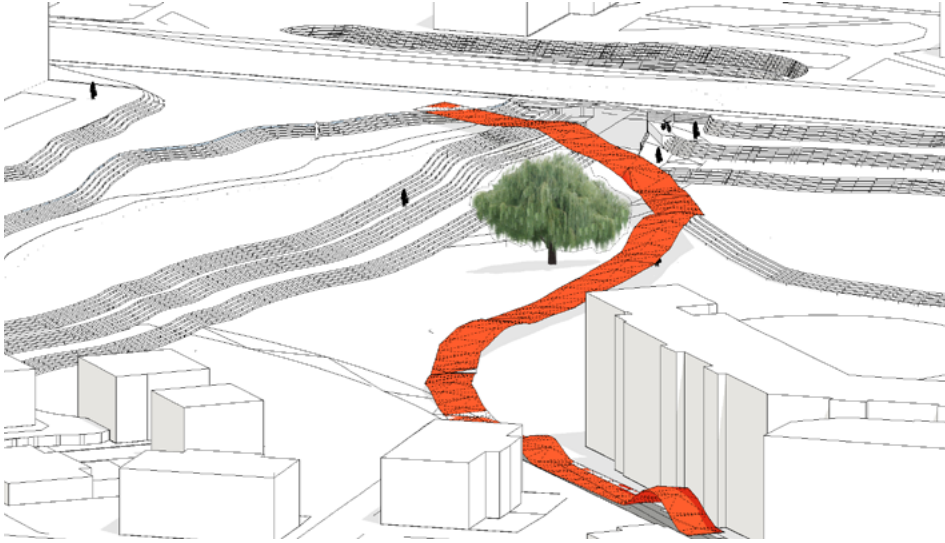
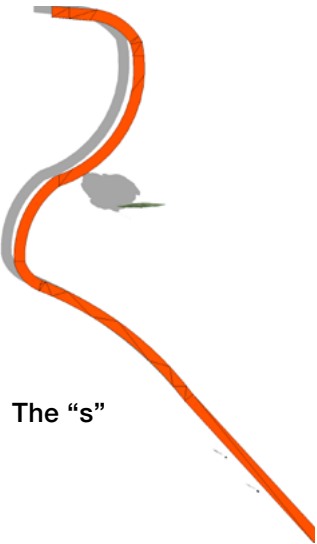
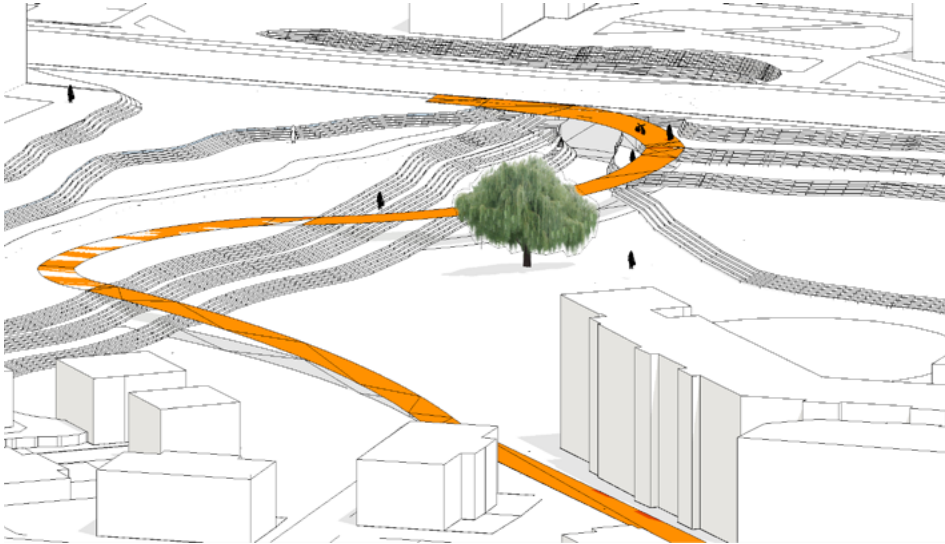


Illustration X 5 10

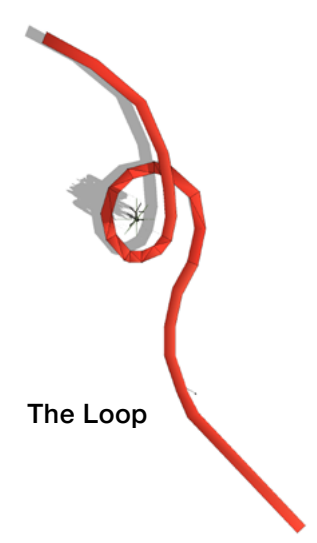
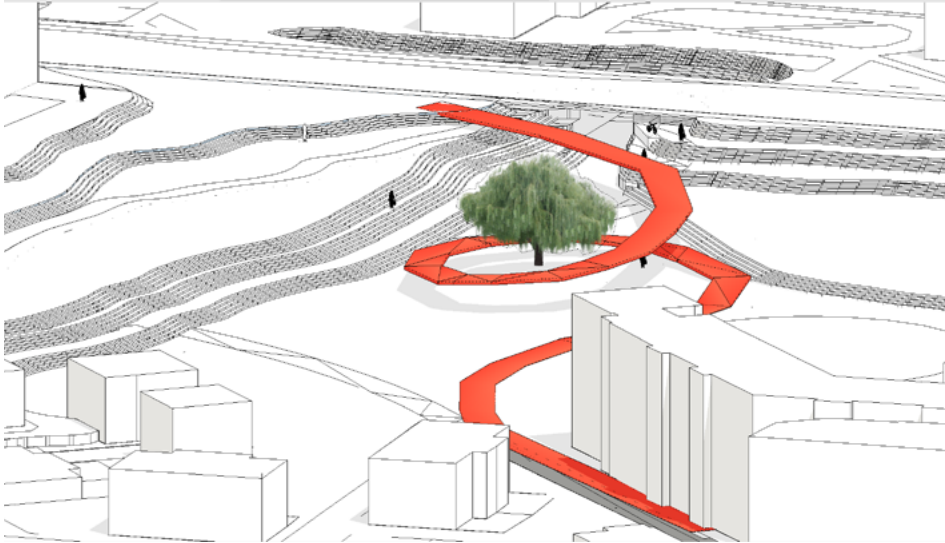
Different proposals for the design of the bike bridge. This is constructed in sketch-up to understand the scale and spatiality of the design.



3D effect



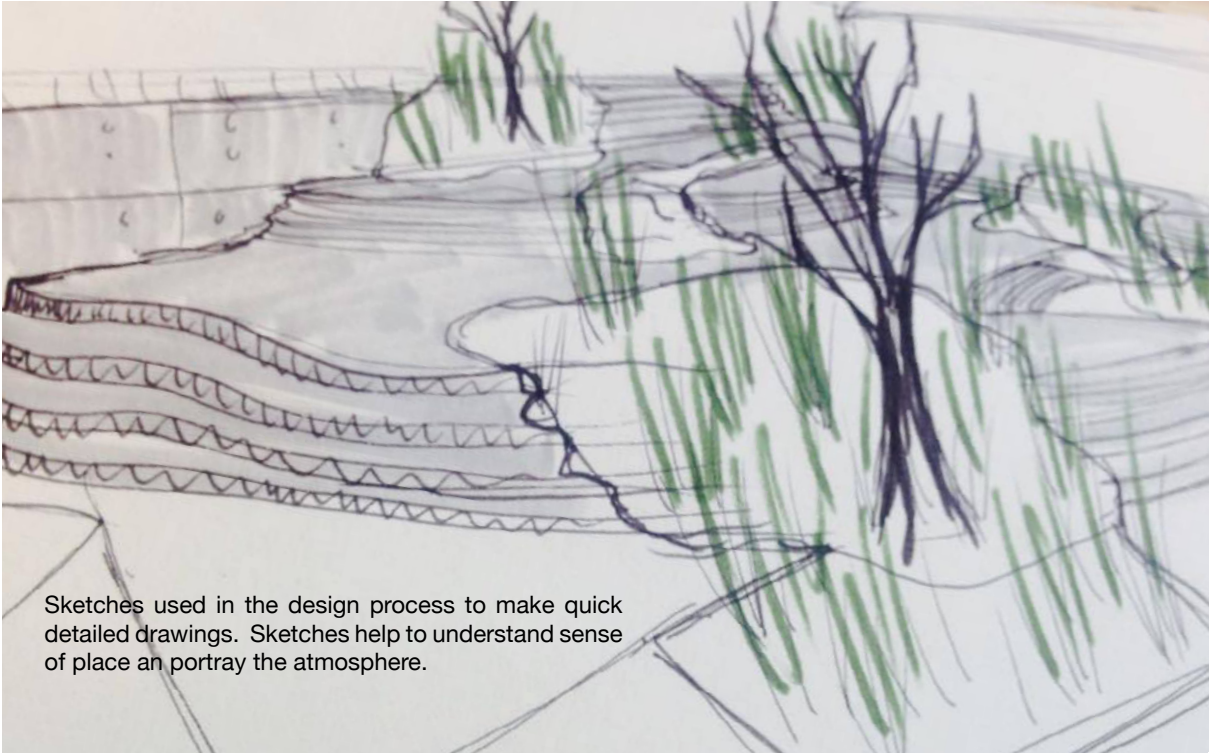
The "s"



The Loop

# SENSE OF PLACE





Sketches used in the design process to make quick detailed drawings. Sketches help to understand sense of place and portray the atmosphere.



Illustration X 5, 11

# CAPACITY

To compare the brutto area and understand scale, the site is compared with other parks and public spaces. The red square in Nørrebro is one of the project to showcase the difference. Kumbelhaven is about 19.000 m2 vs The Red Square which is 9.500 m2.

The same way the programming is scaled by comparing with other projects. An example the skate is scaled in comperresen to the skatepark in fælleparken [Copenhagenskatepark.dk, 2010]





# BIKE PARKING

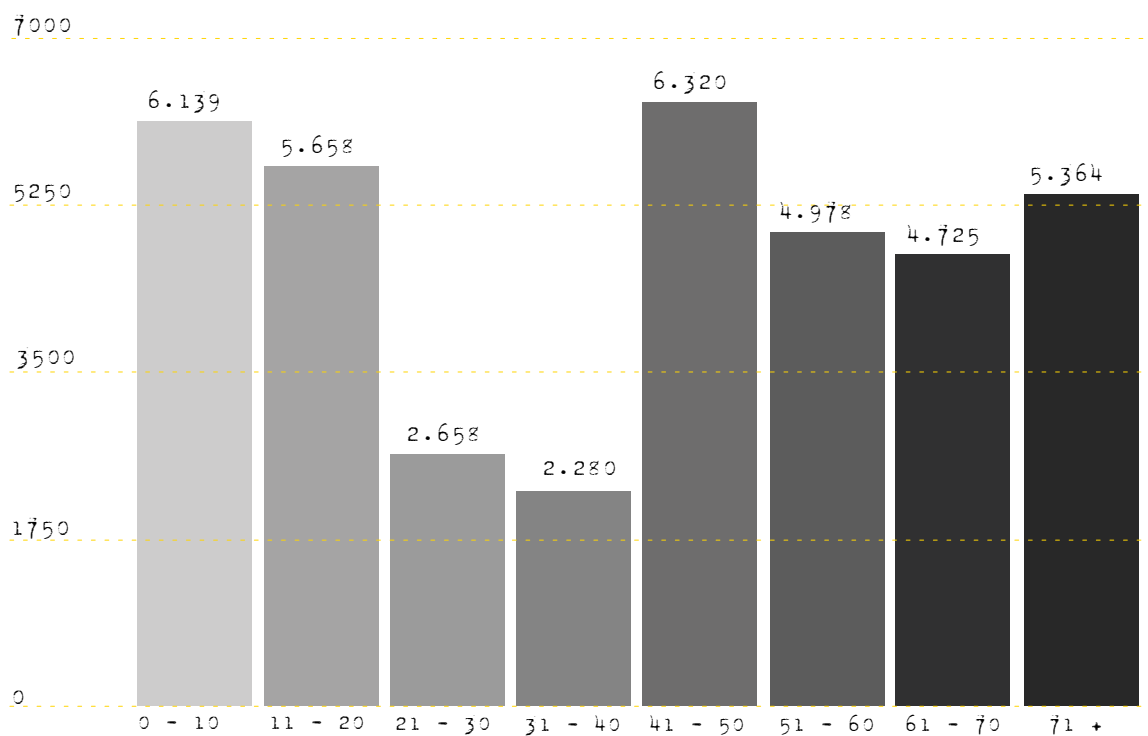
The pictures show a lack of pikeparkig facilities in Farum station. By creting a puclic space that asumerbuly will attract more people in the area, bikeparking should therefore be acomendated for in the projectsite which will have a close connection to Farum station. The pictures shows three drfferent bike parking zones in Farum station, which also affords indoor parking aswell.



# DEMOGRAFIC

## AGE IN FURESØ

The diagram shows the statistics of the different age groups in Furesø municipality [<http://www.statistikbanken.dk>]. The young population between the age group 11-20 is the third largest age group. Farum municipality wants to invest in them by createeing more attractive environments that affords their needs and thereby make them more visible in the public space . (Furesø kommune, 2011)



Illustration, 15

# INTERVIEW

## INTERVIEWS CONCERNING PEOPLES EXPERIENCES WITH KUMBELHAVEN

### **Marina og Rosol 21-25 år**

- Hvad bruger i stedet til ?

*Typisk er det fordi vi skal mod stationen eller hjem fra stationen. Jeg har ikke rigtig brugt det her sted siden jeg var lille, men her er meget hyggeligt om sommeren når der er blade på træerne og kirsebærtræerne blomstre.*

### **Josef 18-20 år:**

*Jeg kommer for engang imellem for bor på rustenborgen (farummidtpunkt) men når jeg skal mod stationen tager jeg altid den her vej. Det er smutvejen - det ved alle, altså dem der er her fra selvfølgelig.*

### **Gruppe unge 15-18 år**

Hænger i tit her?

*...ikke rigtig her, med omkring - du ved når der ikke er meget at lave, sidder vi her og hygger eller tager en smøg plus stationen er tæt på, så kan vi kan altid finde ud af hvad vi vil senere.*

### **Et ældre par 60 +**

*Vi elsker det grønne her, her er så flot om sommeren!*

- Kunne i forstille jer mere liv i området, måske aktiviteter?

*jamen for nogle år siden var der festival i byen og der var boder og forskellige aktiviteter og koncerter, det var vi med til, men det er der ikke så meget af mere fortiden.*

### **Ældre dame 60 +**

*Jeg er ret glad for at bo her. Meget tæt på stationen og farum bytorv så jeg får selv handlet ind, går forbi Kumbelhaven hverdag...men forfærdeligt at trække indkøbet med mig hjem på grusvejen, så den undgår jeg helst, men her specielt dejligt om sommeren.*

### **Hundelufter 40 +**

*Jeg bor her, så bruger området til at lufte hunden engang imellem, det der mange af os hundeejer der gør.*

### **To løbere der strejker ud**

*Vi løber forskellige steder, men når tager den korte rute strækker vi altid ud her - det er bare lidt grønnere at se på. Normalt løber vi lidt længere mod Furesøen.*

### **Mor og datter på 7 år**

*Vi bor her tæt på, solen skinnede så vi tænkte at gå en tur og få os en is ved 7-elleven eller en lille bolle fra bageren...Har ikke rigtig brugt området siden min datter var en lille baby, hun syntes ikke legepladen er så spændene mere.*

### **Hassan arbejder i 7-elleven 17 år**

*Jeg går tit forbi. jeg skal på arbejde så det er min rute, men også når jeg bare skal mod stationen egentlig, så hverdag næsten. så det er det eneste jeg bruger stedet til egentlig ud over jeg en gang imellem mødes med vennerne der også bor her omk. under træet når vi skal vider her fra, alle ved hvor den store træ er.*

### **Liv studerende**

*Kumbelhaven er en grøn grasplane, har aldrig rigtig tænkt over det, for jeg går bare forbi selvom jeg er her næsten hverdag.*

### **En gruppe piger gå forbi 13-16 år**

*Vi skal mod væreløse...bruger ikke rigtig området end at komme til stationen eller når jeg skal mod bytorvet. Vi bruger det som en smutvej.*

*Ville sagtens bruge området, hvis der var mulighed for sidepladser og boldbaner, for vi har missed toget, i det mindste kunne vi sidde her og hygge mens vi ventede på bussen*

### **Hundelufter nr. 2 40 +**

*Jeg kommer her med min hund, for det rart med en stor grøn plads til at løbe lidt rundt i for at røre sig lidt.*

### **Hundelufter nr. 3 25 +**

*Jeg bor i farum midtpunkt, vi plager at tage der ud, men kom her med hunden idag for skulle lige i købe nogle smøger fra 7- eleven.*

### **Jacob. 15-17 år**

*Skal over og hente min cykel fra cykelhandleren. Jeg har ikke rigtig brugt stedet til andet end at komme her med hunden*

### **Lea works in kvickly Farum bytorv**

*Jeg bor her sammen med min forældre. Bruger ikke stedet end at komme på arbejde på Bytorvet eller når jeg skal mod stationen. Jeg vil hellere gå igennem her end ud på vejen (Frederiksborgvej). Men bruger ikke stedet som så.*

# KEVIN LYNCH MAPPING

The kevin lynch mapping is used to understand the site specifics and its surrounding context.

## **PATHS**

The paths on the site is very controlled in a specific pattern and mostly for people on foot. There are some unofficial paths that indicates that the conditions could be better on the site. The only coated path is the connection between the path going through the tunnel towards the station, which is down the corner-node, shown on the illustration.

## **NODES**

The big nodes on the area is the two intersections outside the project site. In the site area, there are small nodes where different paths are connected with each other, which is a coalition between people on foot and on bike. The park area is a car free zone.

## **LANDMARKES**

There are two internal landmarks on the site. The labyrinth is one which is the only installations on the site, beside an old playground for children. The other landmark on the site is the big Willow tree placed somewhat in the middle of the park. the tree is marked as one of the landmarks, when interviewing a local pedestrian on the site.

## **EDGES**

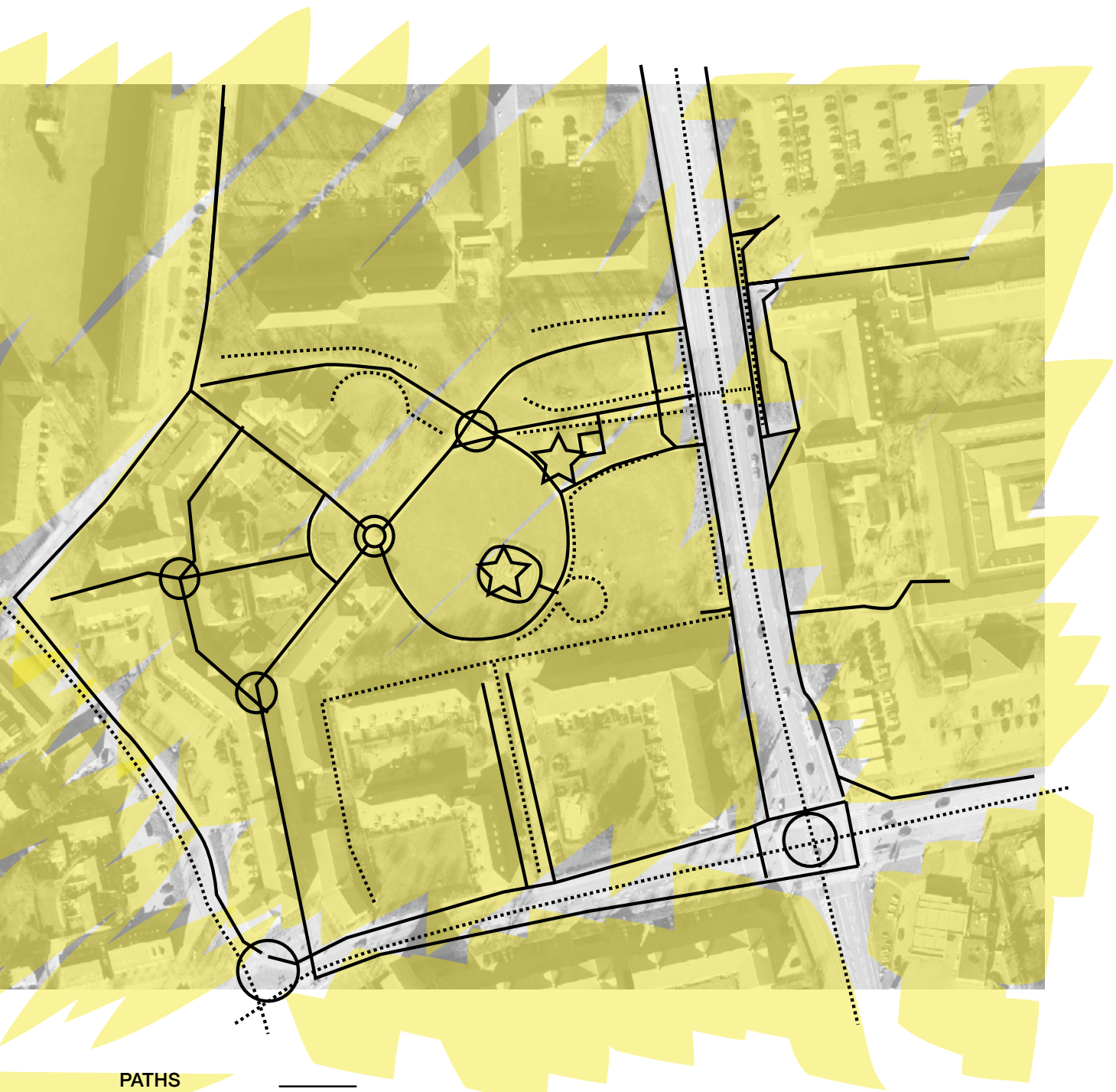
The site is enclosed by edges both externally and internally. Internally there are fences, vegetation and specially changes in the terrain hight creates barriers and makes it difficult for especially bikes to get around the area. The main external edge is Frederiksborgvej, which detaches the area from the city centre and creates a separated dis-

- *“The only thing i use this area for is passing by, when getting to work or home from work. But occasionally when i have to meet up with my friend who live close by, we always meet up under the big tree (The Willow tree in kumbelhaven).. everyone knows where the Big tree is”.*  
se appendix interview [xx]

trict.

## **DISTRICTS**

The districts surrounding the project site, are created by the main roads. The site is dominated by apartment buildings and a green open field which is a district on its own. On the other side of Frederiksborgvej there is the retail and culture district where the municipality, police station, library and the local shopping mall is located. North from the site is a district dominated by a large industrial area which consists of a majority of office buildings, merchants, motor mechanics and auto service. Moreover, there is a large residential area, Farum Midtpunkt, situated north-east of the site. The project site in itself is also divided into sections, where the edges north and south is closing up the site and makes it unable to get in or out of the area in that direction. The road that crosses Frederiksborgvej is, Farumhovegade which lead to the station by car. The area is a district on its own where Farum station is located. On the other side of Farum station, a district of bigger family housing area is located.



**PATHS**  
**EDGES**  
**LANDMARK**  
**NODES**  
**DISTRICTS**



Illustration 16

# DESIGN QUESTION

How can facilitating sport and activity be used as a social generator for the city-center. A proposal that activates Farum city-center that creates a common area where the city can socialize in divers activities with different social-groups, age and cultural background.

How can the design support spontaneous physical activity?

- How to design an public space that works as an urban catalysts for future urban life in the city-center.

- How to connect the project site with the surrounding areas that creates a more coherent city-center?

- How to create a new public domain with attractive urban space, by focusing on the citys distinctive features, and trademark.

- How to create a spaces that invite and encourage activity and supports social sustainability in the area?

- How can urbanlife and green recreateeion co exist and create a spatial and sensoral atmosphere for the public to enjoy.

Can water management form part and be an integrated solution in the design ?

# REFERENCES AND ILLUSTRATION LIST

## Online

[www.statistikbanken.dk, 2016]  
available at: <http://www.statistikbanken.dk/BY1>

## PDF

[Furesø Kommune, 2011]  
[online] Available at: <http://www.furesoe.dk/~media/WWW/Kommunen/Byudvikling/FuresoeOgRealdania/KonkurrenceprogramFarumIudvikling.ashx?la=da>

All illustrations are made by the author, besides the Inspiration diagram Illustration 03

## Illustrations X 22, 03

**Illustration 01** - Abailabe at:

[http://www.byplanlab.dk/sites/default/files2/program\\_nyt.pdf](http://www.byplanlab.dk/sites/default/files2/program_nyt.pdf)

**Illustration 02**- Abailabe at: <http://newyorkcityskateparks.com/pier62chelsea.html>

**Illustration 03** - Abailabe at: [http://www.pkg.dk/da/gallery/people/pkg\\_00396\\_0104.in-fo-leg-i-springvandet/](http://www.pkg.dk/da/gallery/people/pkg_00396_0104.in-fo-leg-i-springvandet/)

**Illustration 04**- Abailabe at: <http://www.dagensbyggeri.dk/artikel/85360-pris-til-arkitekter-bag-stor-cykelparkering>

**Illustration 05**- Abailabe at: <http://www.designboom.com/readers/moov-benedetta-maxia-kitchain-4/>

**Illustration 06**- Abailabe at: <http://mrswestaphg.weebly.com/emilys-project-urban-gardening/category/all>

**Illustration 07**- Abailabe at: [http://inhabitat.com/talking-public-space-and-urban-intervention-with-san-franciscos-rebar-studio/rebar\\_parklet-728/](http://inhabitat.com/talking-public-space-and-urban-intervention-with-san-franciscos-rebar-studio/rebar_parklet-728/)

**Illustration 08**- Abailabe at: <http://obstaclemethod.movementunleashed.com/review-the-manic-room-parkour-gym/>

**Illustration 09**- Abailabe at: <http://lepamphlet.com/category/terrain-sportif/>

**Illustration 10**- Abailabe at: <https://dinneratmidnight.files.wordpress.com/2010/11/netherlands-7.jpg>

**Illustration 11**- Abailabe at:<http://www.pretadecorer.ro/stair-squares-practical-urban-intervention/#jp-carousel-66>

**Illustration 12**- Abailabe at: <http://jiachi.tumblr.com/post/85037371213/copenhagen-denmark>

**Illustration 13**- Abailabe at: <http://www.archdaily.com/775301/paproca-ny-lake-shore-redevelopment-rs-plus>

**Illustration 14**- Abailabe at: Online at [<https://www.pinterest.com/pin/544020829960690081/>]

**Illustration 15**- Abailabe at: <https://www.pinterest.com/pin/317574211205404959/>

**Illustration 16**- Abailabe at: <https://dk.pinterest.com/jorgealdea/amurb/>

**Illustration 17**- Abailabe at: <http://www.treehugger.com/natural-sciences/madrids-green-wall-is-flourishing-as-is-the-caixa-forum.html>

**Illustration 18**- Abailabe at: <http://archleague.org/2009/09/annual-student-program/>

**Illustration 19**- Abailabe at: <https://www.shockblast.net/the-pierre-rock-house-san-juan-islands/>

**Illustration 20**- Abailabe at: <https://dk.pinterest.com/pin/560135272381675629/>

**Illustration 21**- Abailabe at: <https://dk.pinterest.com/pin/488570259549921596/>

**Illustration 22**- Abailabe at: <http://www.deeplinking.net/designing-for-play/>