

together



together

Waterfront Integration Project in Trelleborg, Sweden

Master Thesis of Sustainable Urban Design

By Ina Tumpele

A handwritten signature in black ink, appearing to read 'Ina Tumpele', with a long horizontal flourish extending to the right.



Lund University
School of Architecture

Examinor: Peter Siöström
Supervisor: Louise Lövenstjerne

2016

STRUCTURE

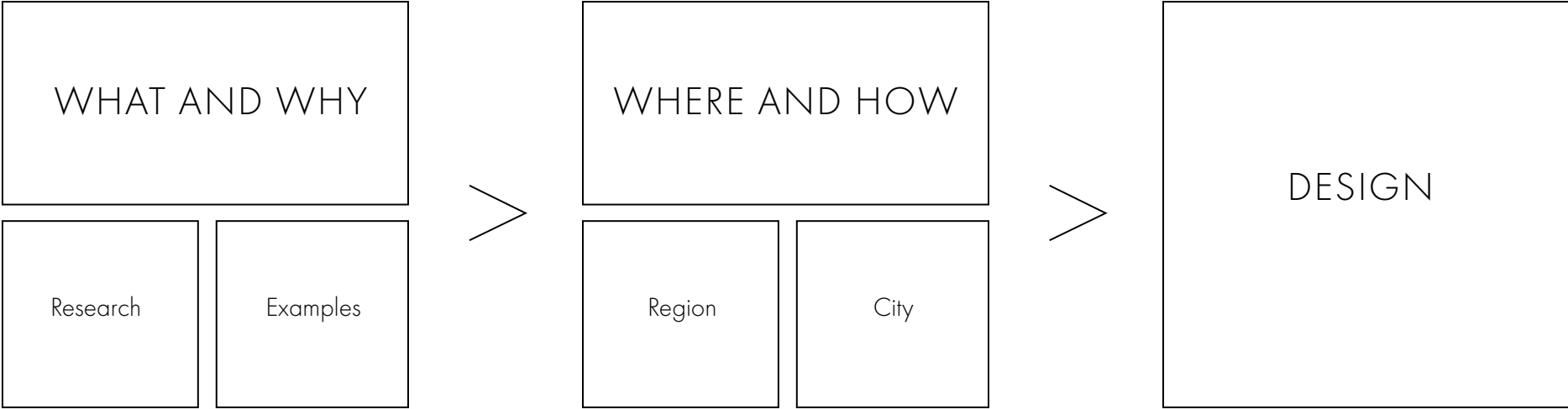


TABLE OF CONTENTS

1	Introduction	8
2	What is the Problem?	10
3	Why is it Important?	17
4	By the Water	18
5	Case Studies	25
6	Regional Context	40
7	City Context	55
8	Design	108
9	Sources	136



“

**If there is magic on this planet,
it is contained in water.**

L.Eiseley

1. INTRODUCTION

In the last year Sweden and especially Skåne in Sweden has experienced rapid growth in immigration rates. Combined with already existing levels of immigration, many headlines has screamed out bold words, - "crisis, collapse, racism" and generally questioned the unclear future for Sweden. Immigration has caused increase in population and therefore the need for cities to develop in larger extents. Borders between countries are fading out, but instead becoming more evident within. The new age cities should thrive from the increasing diversity rather than closing down and breaking apart.

Segregation is of course political, social, economic question. But it appears not only on the paper, but most importantly out in the streets, neighborhoods, schools, - in the public realm where all dissimilarities are put on a plate for everyone to see. Segregation is a spatial issue that is present in the physical world around us.

The great task of this research project is to re-establish links between the waterfront and the wider urban fabric that would strive for integration, (eds Smith & Ferrari 2012) rather than blindly focusing only on economically convenient development and market driven changes.

The greater issue behind this thesis work is to create urban waterfront regeneration project that would contribute to social integration of exacerbated issue of immigration and accordingly segregation in Sweden.

In the reasearch and analysis phase I have trieded to answer questions as:

- How to reclaim former industrial waterfronts to contribute to social inclusion and integration?

- Can urban form and design shape not only the physical form of a city but also the social?*
- How should waterfronts change after the industrial age to actually comply with the needs of human beings? (Well-being, health...)*
- What is the materiality of segregation and how to prevent it in new regeneration projects?*
- How to create spaces of common ground, where 'otherness' can become familiar?*
- How to design culturally and socially attractive waterfronts?*

Throughout history this is not a unique situation. But we cannot make the same mistakes rapped in a new package. This challenge must not become another miljon scenario. It is time to act differently.

There is no question if cities in Skåne has to grow, the question is how. How to coexist not dragging lines between us and the others but rather dragging all of us together?



Infrastructure and industry barrier by the sea, Trelleborg



Refugees on the way

2. WHAT

- 2.1 Immigration
- 2.2 Segregation
- 2.3 Expressions of Segregation
- 2.4 For Future Reference

Immigration

Throughout history Sweden has experienced several periods of immigration, whether for labour, relationship or giving shelter for refugees. Last year has reached the limits and has seriously affected the current situation in the country. The headlines have stated that Sweden is a country that is coming apart. As Fraser Nelson mentions in The Telegraph that "accepting immigration at such a level, while being unable to integrate it, is the recipe not just for a political crisis but a national identity crisis." (Nelson 2015)

Refuges from Syria and Iraq have left their homes to seek for shelter in calm regions. When reaching Germany or Denmark, they keep heading north. Where they really want to go is Sweden, where policies for refugees are more beneficial. Sweden has the most convenient asylum policies and most generous welfare programs in the entire European Union. Sweden takes in more refugees than any other European country, and immigrants now are about 16 per cent of the population. (Wente 2015)

But unfortunately refugee crisis in Sweden will not disappear without consequences. Already now there is apparently high segregation within natives and the 'others' in the country. Coming years Sweden will face more aggravate challenges regarding social inclusion and integration.



Immigration flows in Europe

Segregation

Definition explains that segregation is a system that keeps different groups separate from each other, either through physical dividers or using social pressures and laws. (Definition Vocabulary.com)

Segregation has a various forms it can be evidenced. And it can be categorized in Racial segregation - separation of humans into racial groups in daily life, Religious segregation - the separation of people according to their religion, Geographical or spatial segregation - rates of two or more populations which are not homogenous throughout a defined space, Residential or housing segregation - the physical separation of two or more groups into different neighbourhoods, Gender segregation - the physical, legal, and cultural separation of people according to their biological sex, Age segregation - separation of people based on their age and may be observed in many aspects of some societies, Occupational segregation- the distribution of people based upon demographic characteristics, most often gender, both across and within occupations and jobs, Income segregation is the separation of various peoples by class based on income, segregation between rich and poor. (Segregation 2016)

Even though these categories or types are explained and organized this particular way, I believe all of them are interrelated. As for instance, occupational segregation can share the symptoms of income segregation or gender segregation, housing segregation – of spatial or geographical. For this reason I can draw three wider causes for segregation in the urban contexts that are: economically segregated (Occupational, Income), personally segregated (Racial, religious, gender, age)

and environment segregated (Geographical, spatial, residential). And even these larger branches of segregation can still be linked to one another.

Segregation is primarily described as a social problem, and it can also be defined as a spatial problem, therefore - public space problem (Legeby 2013), where it can be revealed and distinguished. In other words, public space are the platforms where all the complications are visible and coexistent. Accordingly, urban design in this issue plays a big role. Segregated districts within cities vary in terms of economic, social and cultural conditions—meaning that public space becomes as the most important site where people can take part in societal processes. For many people being co-present means ‘being in the city’, but it is argued that sharing the public open space with other people is crucial for actually ‘being in the society’. (Legeby 2013)

For socially healthy urban development all these three wider categories as economic, personal and environment segregation, are equally important while being apparent in larger or smaller extent in the different cases in question. Subsequently requiring special attention now when designing new neighbourhoods for new type of society.

Expressions of Segregation

The increasingly divided cities in Europe is a consequence of globalization and structural changes in the current economy, which have undermined the high-paying middle of the economy, divided in economic classes, and sorted them into more and less desired districts. Overall, socioeconomic segregation in Europe is mostly driven by the advantaged. More affluent and privileged groups are usually the ones to be more segregated compared to the less advantaged groups. As an example the rich, the prosperous class have effectively recolonized the centres of larger cities, pushing the underprivileged even farther out to the periphery. (Florida 2015)

The widening gap between rich and poor is leading to segregation in more and more European cities. Socio-economic inequality is causing people in different income classes, simple the rich and the poor to live at increasing distance from each other, and this can be disastrous for the social stability and competitive power of cities. Residents who are able tend to leave predominantly low-income neighbourhoods. This accelerates the process of segregation, making cities more susceptible to social unrest and less attractive as areas for locating a business. (Communication BK 2015) Socioeconomic segregation is also shaped and overlaid by race and ethnic difference, in many cases these factors are not even separable. (Florida 2015) Economic and the ethnic segregation is closely related. (Legeby 2013)

Every developed country contains a 'third world' within as in the form of unemployment, inadequate housing etc. (Cumberland&Musgrave2007)The failure of ethnic integration is linked to housing segregation. Residential



Demonstration against racism in Sweden

segregation leads to unequal opportunities and unequal access to labour markets that eventually prevents the process of integration in society. In this context imaginary (or real) boundaries that limit access, that separate, isolate and keep people apart can be explained as segregation and possibly solved by the physical form. If people are limited to using only parts of the city or if people are restricted to sharing not only residential areas but also restricted to sharing urban public space, then our everyday life practices also become segregated. (Legeby 2013)

Some places that are 'segregated from the city' in the eyes or judgment of municipality, may be thriving within itself (coexistence of diverse cultures, activities, businesses, age groups), but the area may not seem inclusive for the locals. This clearly shows that not 'the area is segregated', but 'other areas segregated themselves from it'. "Studies of others must also be studies of ourselves in our relationships with those others" (Davies 2008, p. 13).

As segregation is a phenomenon existing within a physical environment, it is necessary to investigate the roles played by buildings, landscaping, infrastructure, economic development and the many people, objects and uses which inhabit spaces, to fully understand the materiality of spaces we plan and design. To draw possibilities for social inclusion and sustainability into physical structures, it is important to understand how segregation manifests itself in a given physical environment. Lessening the threat of difference or 'otherness'; attempt to breach segregation must develop strategies for familiarization of the unfamiliar.

Consumption is a potentially productive element in the creation of social relationships. Economic factors clearly



Example of spatial segregation and function concentration, Trelleborg

influence access to services, products and accommodation, the role of money must not overshadow the importance of other materials and objects in terms of socio-cultural influence. Just because one does not have access to housing in a particular area, does not mean that they do not have access or interest in being there. (Sherfey 2011)

For Future Reference

Inequality and segregation are the key urban issues of our time, and the vexing challenge for cities is how to overcome them or at least cope with them. (Florida 2015) There are no ready formula that will assure the integration within public space, but there are guidelines that are needed to be considered and included in the future plans of cities where different class people are meeting in the same area, but not necessarily with the same destinations or purposes being there. (Sherfey 2011)

The most important rule regarding that is to provide security needs and interest needs that would include variety and diversity between choices. For instance, there is nothing dreadful of having a modern square surrounded by cafes, and higher class restaurants, as far as there can be an option provided also for not so wealthy residents and visitors, for instance, picnic places in the lawn, benches by the edges of the square, etc. (Sherfey 2011)

In many examples 'Finished-ness' of urban renewals can describe the design intention which consequently results in lack or no ways to adapt for inhabitants in the environment, no space left for appropriation by community. This sterile environment usually are an influencing factor for segregation, to avoid this scenario, design should focus on the process. This openness gives space for opportunities to emerge. (Cumberlidge&Musgrave2007)



Refugee crisis in 2015



3. WHY

“Integration is the extent to which people interact with others who are different to themselves”

A lack of social integration is reducing our ability to solve key economic and social challenges as long-term employment, recruitment and career progression, community health and wellbeing, which leads to high costs of health and social care amongst the isolated, including cost of cardiovascular diseases, depression, suicide, etc.

Positive outcomes of integration

When diverse groups of people are integrated it is a generally positive experience for all involved and has clear positive result by the aspect of trust. People tend to have more positive experiences with people who are unlike them. We are also more likely to enter relationships by who we have the opportunity to meet, rather than by a choice to search people we identify as similar to us. When diverse groups are integrated, it is associated with higher levels of trust meaning that the positive interactions with people from different backgrounds are positively related to how much people trust others afterwards. Negative interactions can of course also happen, however the effects of these negative interactions are notably reduced if we have more positive connections. When negative perceptions of one group are challenged through positive interactions, our common perceptions and prejudices towards other groups are also questioned. (Social Integration Commission n.d.)



Photo taken in Trelleborg beach

4. BY THE WATER

- 4.1 Water
- 4.2 Coast
- 4.3 Potential
- 4.4 Relevance

Water

There is a great quality regarding water which bonds to the root of human nature. It has the ties to our primitive past – where the most important elements were water, fire, trees and the sky above. From these matters, water and fire gives the most direct alertness. Fire is primarily associated as negative and dangerous whereas water has a positive and life-giving associations. When we look back in the history, the record of civilization involves developments along water bodies. (Breen & Rigby 1996) Because of water all life forms thrive around it and even within the beings. As example being the human body that contains 60% water. (Perlman 2015)

People always seek the water's edge. And this deep connection to water is not limited or affected because of differences in nations, continents, age groups or races. Water is attraction for all cultures, all classes, and all beings. Therefore even in nowadays segregated world such a simple element as water, could act as a strong tie between the differences in society. Water could become the catalyst for healthy urban life to evolve.

Regarding waterfront regenerations it is important to remember this natural power of water. And instead of projects being designed 'by' the waterfront they should actually be created 'on' the waterfront - in the sense that they themselves embrace the specific water presence. They should reflect and celebrate the character of their location, where in many cases the globalization and international architecture is a threat to obliterate it. (Breen & Rigby 1996)



Outer edge of the harbour in Trelleborg

Coast

Sweden is located in Northern Europe, bordering the Baltic Sea, Gulf of Bothnia, Kattegat, and Skagerrak and positioned between Finland and Norway. Country has a strategic location along Danish Straits linking Baltic and North Seas. The total length of coastline is 3,218 km. And there are 34 coastal cities. Total area of Sweden is 450,295 sq km, from which 39,960 sq km is water. (The Central Intelligence Agency 2016)

Most of Sweden was covered by a layer of ice during the last Ice Age. When that ice melted by around 6,000 BC it left in its wake a deeply-indented coastline with many islands, and numerous lakes, rivers and streams spread across the whole country. Central Sweden is characterized by lower mountains in the west that give way to highly forested hills, a lot of rivers and an estimated 101,000 lakes. (World Atlas 2015)

These facts clearly state that Sweden among other countries is shaped by the water. It has been and still is a very important asset to the culture, economy and environment. Water and water bodies are major part of Swedish landscape that should be emphasized also in future.



Coastline of Sweden

Potential

The world and places within it we know today has gone through different processes that has left remarkable marks. There has been three waves of globalization that influenced how people lived. Second wave of globalization caused creation of massive and extensive infrastructures. Including large industrial sites, harbours, factories and other bases for large production, consumption and delivery. After this phase came the third wave of globalization that brought significant technological changes. Also referred to as post-industrial era, it was the cause of the many abandoned, neglected industrial areas. Simply for the reasons that the modern ports do not need direct proximity to markets and the large space for activity.

As a result these enormous disused former industrial harbours transformed to noticeably smaller areas of operation by the help of dislocation of cargo business that gradually moved away from the town-side harbour. This progress has given completely new possibilities to rediscover the waterfronts and use them for other purposes that complement the needs of people rather than the products.

Waterfronts are therefore centrally located in the cities which creates a foundation for vivid urban life potential, but on the other side these areas are cut-off the city through infrastructural barriers. Along with other risks of increased unemployment and pressures on land use from different involved parties, attracting increasingly footloose investment and risk of dominance of speculative property development and superficial redevelopment - wealthy households, ignoring social inclusion. (eds Smith & Ferrari 2012)

The new technological age and global culture today desires more open space for physical activities. Economically

dominated projects would probably suggest more leisure, more commercial opportunities for inhabitants and also visitors. And for example environmentally dominated plans would focus on cleaning the water. Unfortunately most of the good-intended proposals ends up in market driven waterfront developments. (Breen & Rigby 1996)

Rather than following function, form has increasingly been following finance. After the industrial times the conception of urban places has shifted from the spaces of production to spaces of consumption.

Harbours are highly visible areas that definitely influences the identity. (eds Smith & Ferrari 2012) Some argue that these post-industrial spaces should be historically celebrated rather than forgotten. (Cumberlidge & Musgrave 2007) Which of course is relevant. New image of the waterfront can be different in character, it can have two faces - nostalgic or technological. But it unfortunately in most cases means as the commercialization of memories.

Redeveloped land can be changed into high-quality leisure areas, as the main focus being to attract business. From economic view it is a successful model, but it leaves a question how does it occur from urban perspective and also social? (eds Smith & Ferrari 2012)

Waterfronts are the gateways to cities. (eds Smith & Ferrari 2012) These are the areas that can connect not only locally, but also internationally. Harbour represents an interesting interface between local life and the big world. Meeting place between tradition and 'the new', nature and 'the manmade'. (eds Smith & Ferrari 2012) And among these extremes can a new spectre of diversity appear, that would gradually introduce people to the unknown and unfamiliar.

Segregation can also arrive from sudden changes that we are exposed to and made vulnerable to which leads to unpleasant experiences. "Places represent others, and our feelings towards them are based on their 'interactional past' and 'interactional potential'" (Kusenbach, 2003, p. 474).

In the design of new undeveloped areas, it has to be carefully considered that people will not be intimidated of much foreign-ness or in this situation to much Swedish-ness. Immediate apparent physical differences creates situations that are too much to process for people and that eventually relates to physical segregation. It is not a matter of acceptance, embracing of difference, but becoming acclimatised to it. (Sherfey 2011) Different meanings and cultures can coexist (Cumberlidge&Musgrave2007) if foundation is correctly placed. Open public space is the key to not only to social but also spatial and economic segregation. Sharing urban public space suggests bringing these many social differences together and make them apparent, present, and visible. (Legeby 2013)



City and the Harbour in Trelleborg

To successfully design waterfront it is necessary to switch the usual focus on architecture to urban life and space, to program activities in the first place, spread them strategically, plan for different seasons and consider dimensions - combine land and water in a synchronized spatial experience and orientation. (eds Smith & Ferrari 2012) When opening-up these previously closed and restricted areas, designers have to find ways how to give life to the new 'piece' of city so it creates attracting and welcoming environments for everyone, also visitors. I believe that the starting point for designing vibrant and diverse urban life is by creating a foundation or platform where numerous activities can co-exist. (eds Smith & Ferrari 2012) There are a lot of examples all over the world of focused design waterfront regenerations as commercial, cultural-educational-environmental, historic, recreation, residential, working-transportation. I believe it is possible to design a project including all these various functions - interblending them together and create socially integrated neighbourhoods. (Breen & Rigby 1996) Public space can also act as a tool contributing to participation and integration and redefining the borderline between the water and city. Examples can be citizen participation in regular cultural events, temporary art installations, celebrations, etc. (eds Smith & Ferrari 2012)

There are exact same cases all around North Sea, Europe and the rest of the world of a great potential to reclaim waterfronts in a sustainable manner. Other countries has gone through the same processes of industrialization and technological evolution, and there are of course countless project examples for redesigning the coastline cities, to give the land back for people. But over time, we have come closer to actually experience the climate change and shifts in the social interactions, and now there are many more layers and challenges that needs to be addressed immediately.



Edge of the harbour in Trelleborg



Google earth plan view of references

5. CASE STUDIES

5.1 Oslo, Norway
Aker Brygge
Positive and Negative

5.2 Malmö, Sweden
Västra Hamnen
Positive and Negative

5.3 Århus, Denmark
Nordhavnen
Positive and Negative

5.4 Comparison and Context

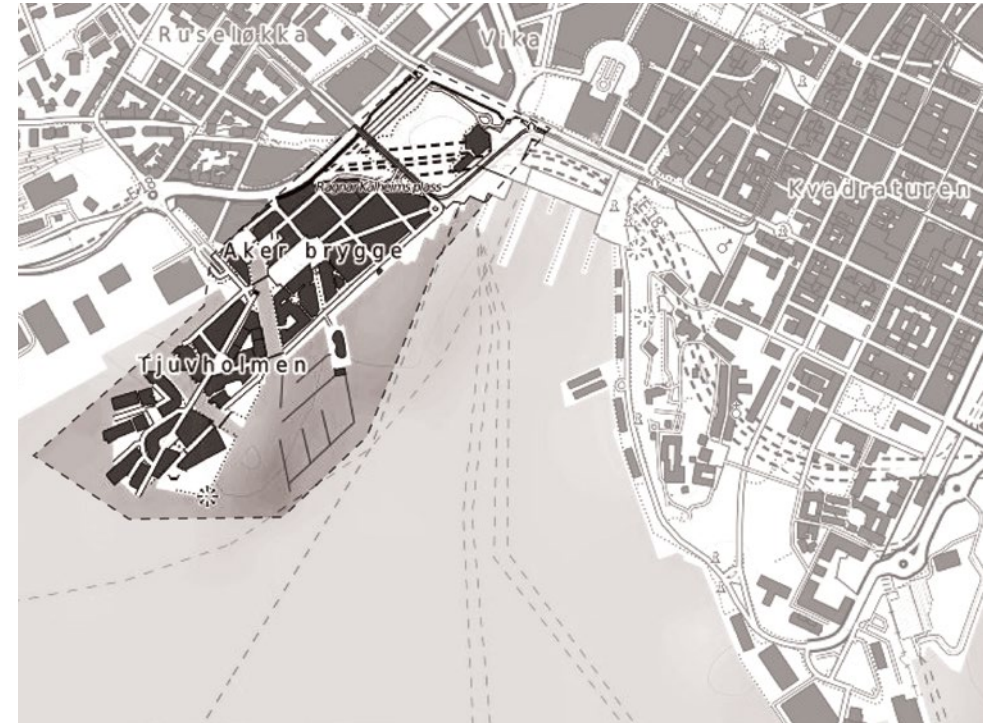
Oslo Aker Brygge

Aker Brygge is west of Pipervika, an arm of the Oslo Fjord, on the former ship yard of Akers Mekaniske Verksted, which was shut down in 1982.

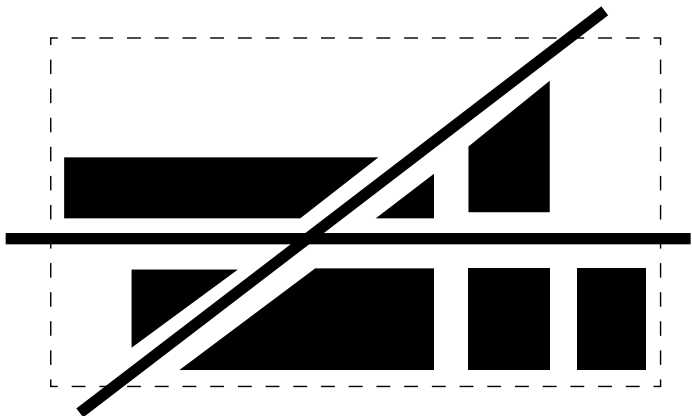
The construction of the waterfront project was carried out in four phases. A few old industrial buildings were demolished, while several of the major workshop halls were rebuilt as shopping areas. The first step of the construction was finished in 1986. The fourth and final construction, the Storebrand insurance building facing Munkedamsveien, was completed in 1998. The area consists of a shopping center with shops and restaurants, a cinema, office space, and apartments. Additionally, there is a small boat harbour, and a terminal for the ferries to Nesodden.

Aker Brygge is a melting pot where people meet, mingle and visit. The area is a popular tourist destination and gives a brief historical overview of Norwegian shipbuilding, naval- and oil industry. During a year, Aker Brygge is home to several exciting activities and festivals. (Aker Brygge Oslo n.d.)

The area in total covers 260,000 m² and today, approximately 6,000 people work and 900 people have their homes in Aker Brygge. (Aker Brygge 2015)



Aker Brygge in Oslo



Principle of Aker Brygge urban form

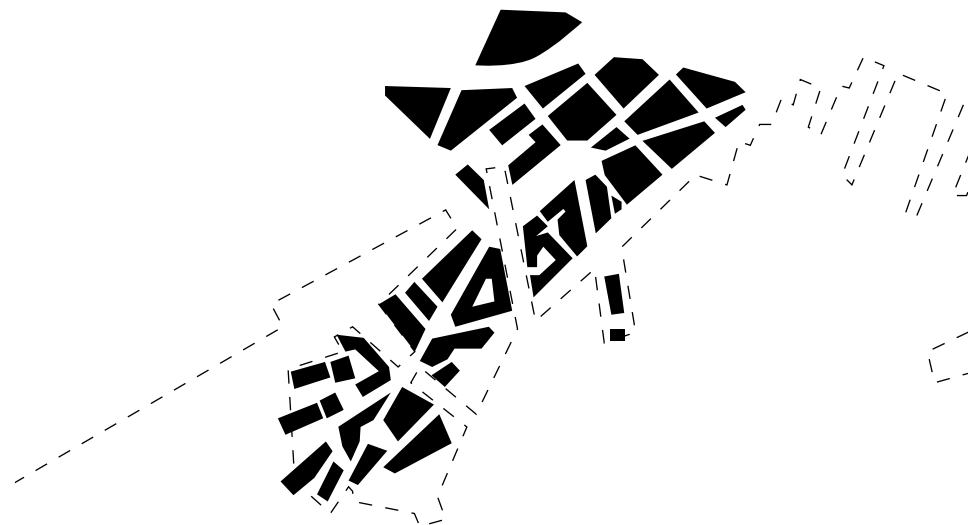


Diagram of Aker Brygge built environment



Aker Brygge waterfront promenade



Aker Brygge has walkable and cycling friendly layout

Positive

Aker Brygge is definitely successful waterfront regeneration project which attracts many people all over year. It has a vibrant urban life and a lot of open public space for gatherings and relaxation by the water. There is also visible connection to fjords and leisure ports that attracts people and creates beautiful scenery. Waterfront promenade promotes walking and cycling and gives priority to people rather than traffic or production.



Winter season in Aker Brygge



Large areas of hard surfaces in Aker Brygge

Negative

Unfortunately, the bad side is that the area is exposed to the rough Nordic weather conditions and therefore the outdoor comfort is dependent of season and weather. Regarding integration levels within this area, it is clearly noticeable the class division, for example, most of the functions are planned for wealthy visitors. I can identify market driven strategies for the project as for example, large shopping mall with high class stores and restaurants. Aker Brygge is a place for consumption. Architecture is affordable only for high-income residents. Regarding environment, there is very little or no greenery and connection to the nature is only visual.

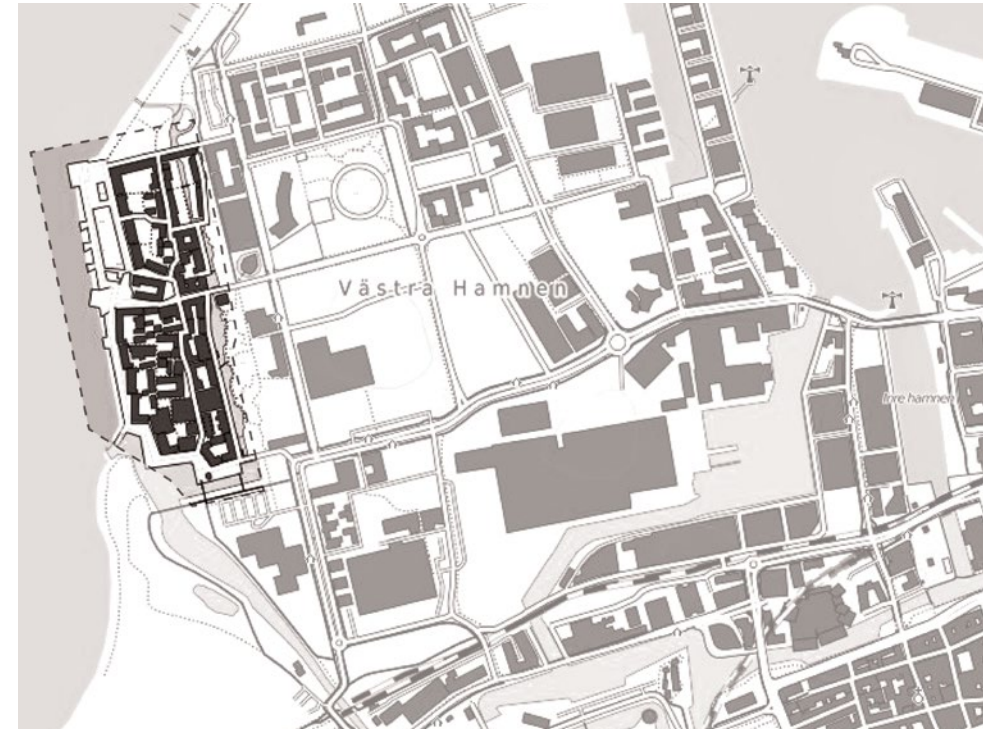
Malmö Västra Hamnen

Västra Hamnen is a neighbourhood of Malmö, which was an industrial area until the 21st century, when also the last factory closed down, leaving a residue of abandoned industrial lands and docklands along the coast north of the city. This old industrial land is now transformed to a new urban area. Västra Hamnen is also known as the City of Tomorrow, and is the first district in Europe that claims to be carbon neutral. The district uses aquifer thermal energy storage system to heat buildings in the winter and cool them in the summer. (Västra hamnen 2016)

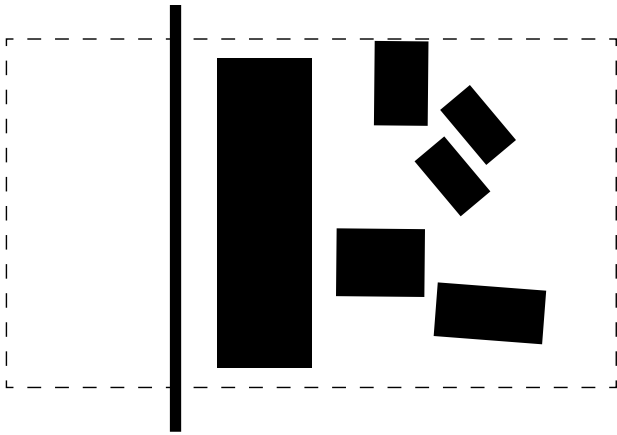
19 different developers engaged 21 architects to build the 450 apartments in the neighbourhood. Diversity has been the primary goal. Bo01's strong environmental profile is evident in many of the district's features. Solar cells and solar thermal collectors are present on many of the buildings, other renewable electricity is provided by the district's own wind turbine Boel situated in Norra Hamnen.

Head architect envisioned a network of street with a broken-up character, with a dual purpose, partly it would break up the urban environment allowing for a more pleasant experience, partly it was to break up the harsh sea winds. (Bo01 2014)

Västra Hamnen demonstrates that an ecological strategy and infrastructure can be integrated into a market-led development process, producing homes to Sweden's high energy standards that meet householders' needs. In Västrahamnen it is planned to have 30 000 people working, living or studying after the exploitation. (Hancock n.d.)



Bo01 area in Västra Hamnen



Principle of Västra Hamnen urban form

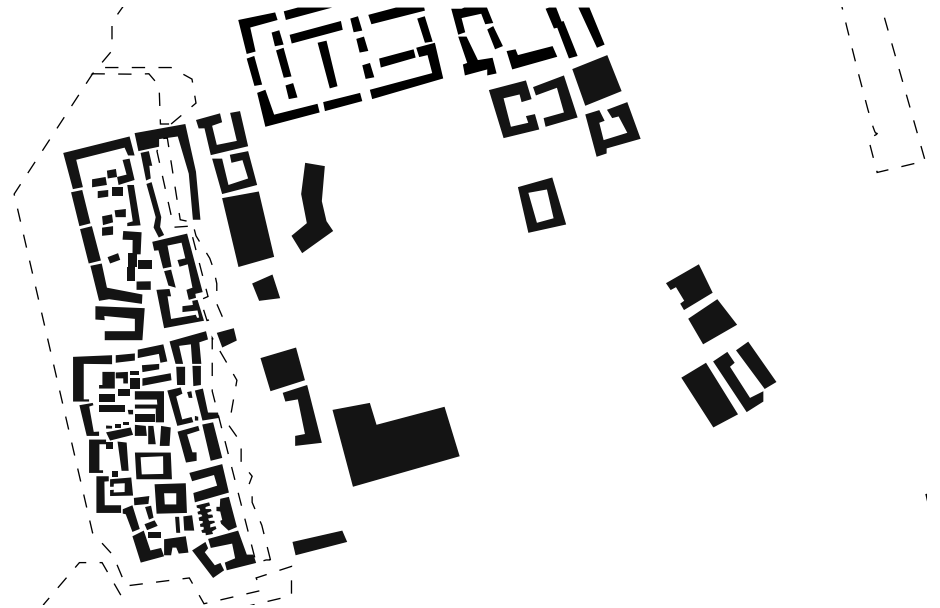


Diagram of Västra Hamnen built environment



View to Västra Hamnen



Waterfront promenade in Västra Hamnen

Positive

Built form is designed to deal with the exposure to strong winds of the sea which is mainly a wall of houses that shelters the inside. Access priority is for pedestrians, with cycles and cars on sufferance that minimizes the dependence of cars and promotes alternative modes of transportation and walkability. Tenure is a mix of rental, shared ownership and freehold, which can allow for various groups of people to live in the neighbourhood. As previously mentioned, project includes environmental strategies that is a strong advantage for the area. Moreover, it is designed as a dense residential neighbourhood with a potential for groundfloor activities for small businesses which is vital to the development plan.

Area also includes benefits as a landmark, coastline promenade, diverse architecture and variations in scale and forms, access and connection to water, places by the sea where new activities can emerge and large groups can meet which all together is a basis for spatial integration. Area is attractive not only for wealthy residents but also residents from other parts of Malmö who can take part of the public life by the sea.



During storm events in Västra Hamnen



Strong winds by the coastal promenade in Västra Hamnen

Negative

Even though the inside is sheltered by the wall of larger buildings, the large coastal promenade which is also the largest public space in the area is exposed to strong winds and becomes even dangerous in weather that is classified as a storm. Public space in uncomfortable weather conditions becomes unused and empty. Not so much greenery designed for promenade, compared to the much greener courtyard zone. Despite the good intentions for diversity within built environment and variety of dwellings there is still noticeable social segregation that are result of high building costs. As well as, the luxury freehold flats enjoy the prime outlooks and privacy facing over the ocean and canal.

Most of the apartments have west- and east-facing glazing. This makes good use of the sea and canal-side views but it loses the passive solar advantages of south-facing glazing. Even in this eco-friendly plan, it seems, energy-saving loses out when it comes to prime real estate.

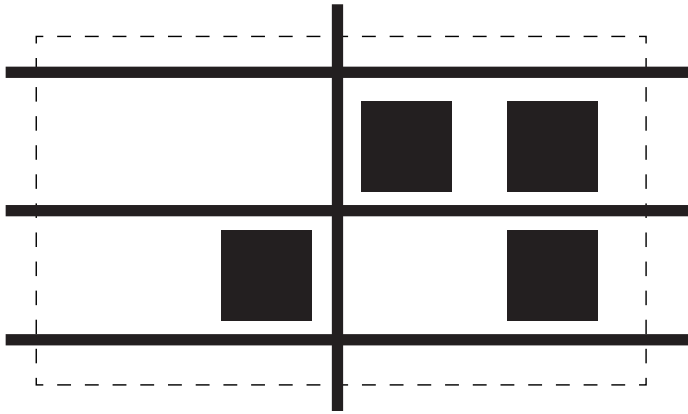
Aarhus Nordhavnen - Aarhus Ø

Aarhus Docklands is a new neighbourhood in Aarhus, Denmark. In the beginning of year 2007, the Aarhus Docklands were just a large construction site but already in the coming years the project will convert the area and the former container port, Nordhavn of the Port of Aarhus, to a whole new residential, educational, commercial and recreational area, consisting of several high rise buildings of modern architectural designs. (Aarhus Docklands 2016) The first sod at the Aarhus Ø was taken in 2008 and today residential and commercial buildings are building up at a high speed, which also offers an attractive city life with beach bar, Denmark's largest urban garden and Havbanen at bay promenade, where you can swim 500 meters in the open sea. Around the area at the Bassin and student housing there are more intense urban city life with sea swimming pool, beach, theatre, cafes, restaurants, maritime bath houses and allotments. City life and housing at Bassin 7 will be completed in 2017.

Harbour district will bind the city together with the waterfront. Aarhus Docklands offers a view of the Aarhus Bay and there is a short distance to the inner city. When waterfront's development will be completed and the light rail established, pedestrians and cyclists will quickly get from the cafes by the river in the centre of Aarhus to the city's new urban waterfront. The new neighbourhood is intended to be one of Europe's largest waterfront regeneration projects including 7,000 residents and 12,000 jobs. (Aarhus Kommune n.d.)



Aarhus Nordhavnen



Principle of Aarhus Nordhavnen urban form

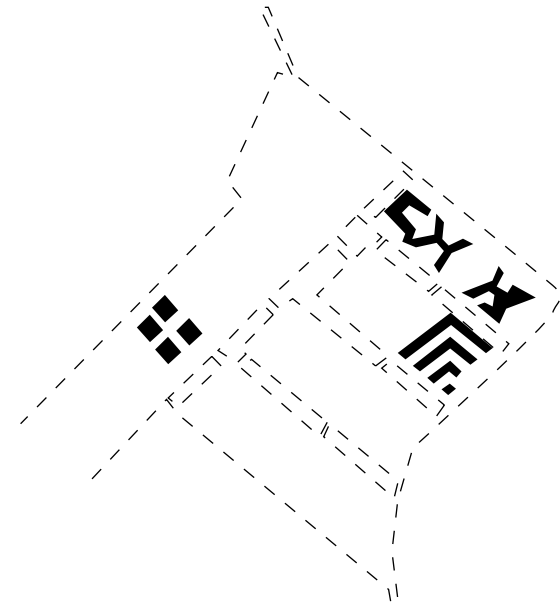


Diagram of Aarhus Nordhavnen built environment



Small boat harbour of Aarhus Nordhavnen



"Iceberg" residential project designed by CEBRA, JDS, SeARCH, Louis Paillard Architects

Positive

There are many beneficial aspects of this project. One and most noticeable is having modern architecture designed by internationally well-known firms, as well as city branding the new waterfront in a way that it has become attractive for many visitors to see, new activities are arising within the unfinished urban form, a lot of experimental activities are opening up temporary, a lot of open space that is also used for art exhibitions. New part of the city has a long promenade by the sea, small boat harbour that indicates an identity of fisherman's neighbourhood. In future there are plans to create light rail connection to the area.



High social segregation in Aarhus Nordhavnen



Coastline promenade in Aarhus Nordhavnen in a rainy day

Negative

Project is highly exposed to strong winds from the sea and the built form does not correspond in any way trying to create the urban microclimates at least partially better, the urban design is actually intensifying the conditions by creation of high-rise buildings and wind corridors. Most of the time the long promenade is not used by anyone, especially in unpleasant weather conditions. New architecture and open space creates sterile feeling that is not welcoming for all. High prices of real estate are the foundation for economically segregated area. Large plots are given to different developers and designers, but does not break up the scale of the large territory in any point. Also

these divided plots are mostly for residential use and large underground parking lots. Large density is considered to be solved by larger volumes and together with long walking distances is a threat for future urban life. Hard surfaces are very dominant and greenery is not appearing in any future plans and the little courtyard vegetation can be perceived as very artificial or fake.

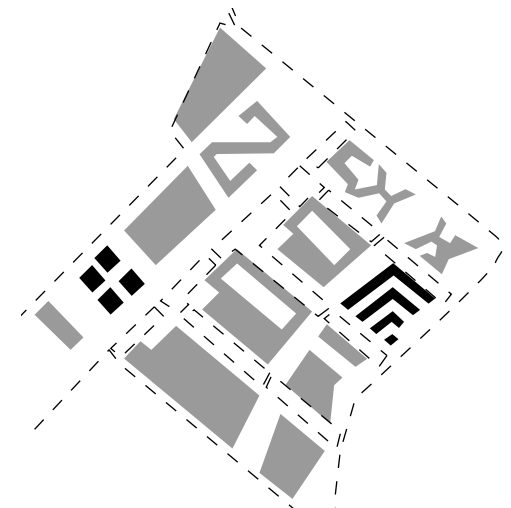
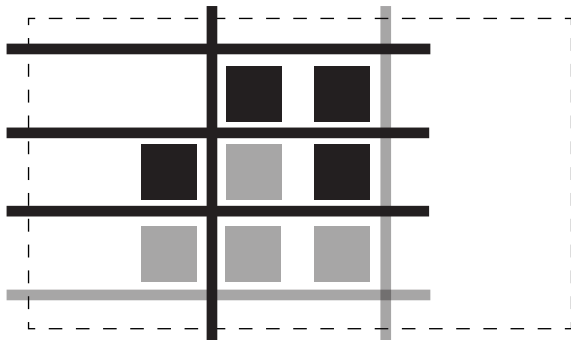
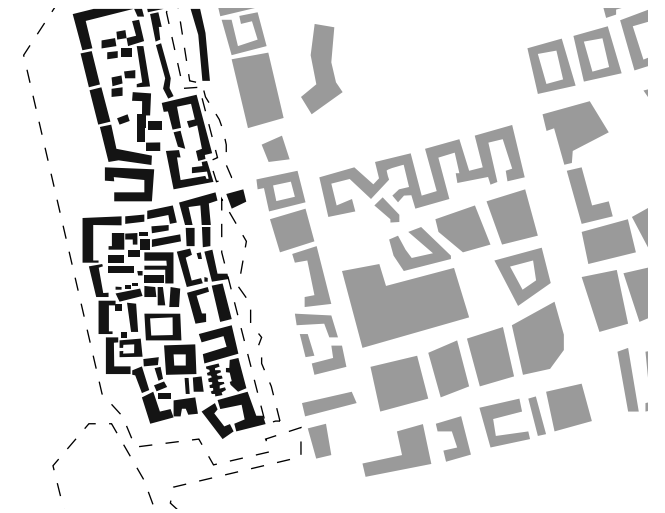
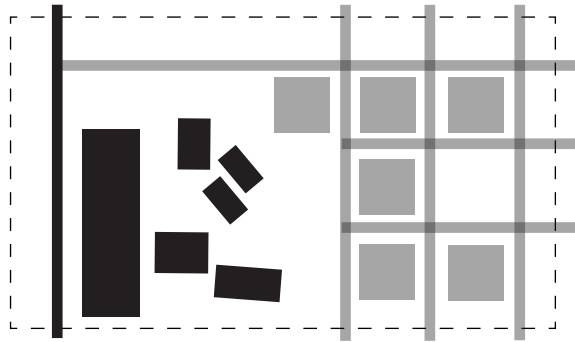
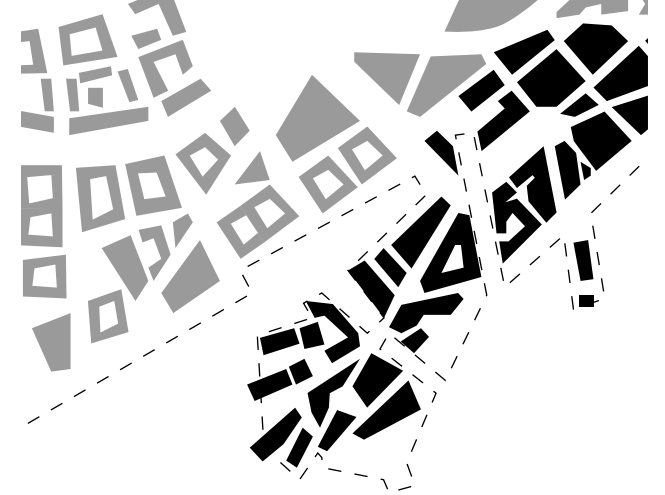
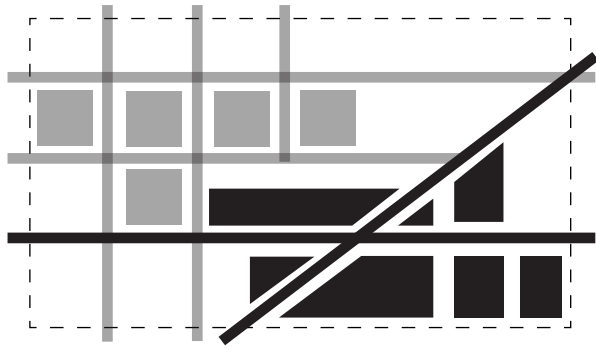
Comparison and Context

All projects are affected by direct, strong winds from the sea which affects the safety and attractiveness to the very similar waterfront promenades. All coastal edges are kept with hard surfaces and barely no vegetation.

The amount of functions within these projects vary a lot, but majority is planned for residential purposes. And all projects in smaller or larger extent contribute to social segregation within its residents, mostly due to the high costs of the newly built real estate and value of architectural design. The build form is different in all these projects, but all has sustainable intentions within their project area.

Unfortunately, when comparing the further development plans of these three harbors, the layout starts to look quite similar to each other. There is not a wide variety of typologies or urban form and therefore has a risk becoming spatially segregated from other parts of the city.







Skåne landscape

6. REGIONAL CONTEXT

- 6.1 Skåne Region
- 6.2 Where?
- 6.3 How?
 - Environmentally
 - Socially

Skåne Region Background

Skåne in southernmost Sweden is one of the most dynamic and expansive areas in Northern Europe. Skåne is strategically located in the fast-growing transnational Öresund region, which incorporates Skåne and Greater Copenhagen. (Facts about Skåne n.d.)

Skåne was part of the kingdom of Denmark up until the 1658 and the region did not form part of Sweden proper until 1720, but had the status of conquered “foreign land” until that year. It was then divided in two counties and has since then been regarded as fully integrated in Sweden.

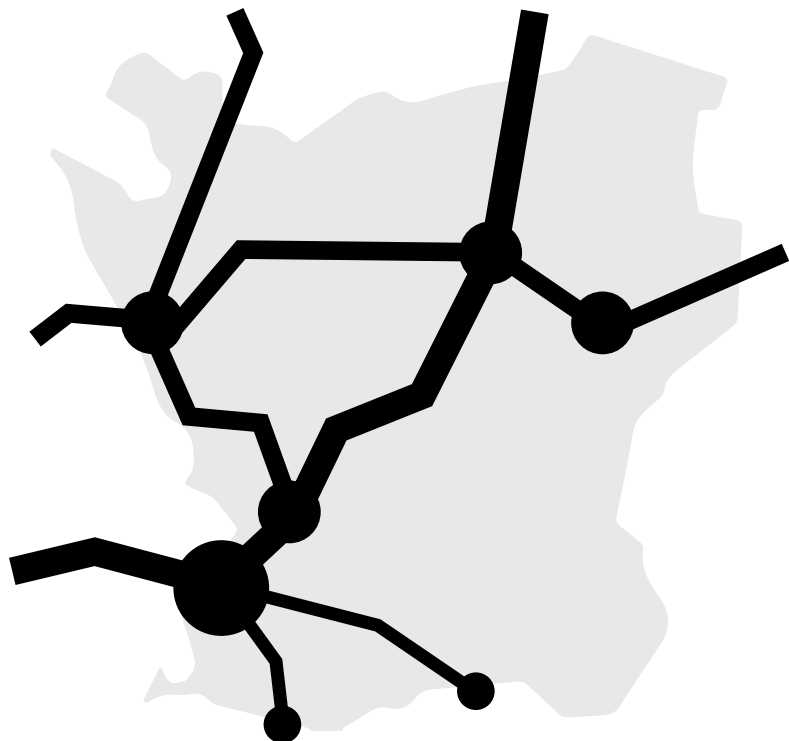
From north to south Skåne is around 130 kilometres and covers less than 3% of Sweden’s total area, however it is a home for 13% of the country’s entire population that has grown from about 110,000 inhabitants in 1570, to population of approximately 1,260,000 in 2015.

About 16% of Skåne’s population is foreign-born. Western Skåne has a high population density, not only by Scandinavian standards but also by average European standards. With 120 inhabitants/km² Skåne is the second most densely populated province of Sweden. The western part, along the coast of the Øresund, is by far the most populated part.

With the exception of the lake-rich and densely forested northern parts, the rolling hills in the north-west and the beech-wood-clad areas extending from the slopes of the horsts, a sizeable portion of Skåne’s terrain consists of plains. Its low profile and open landscape distinguish Skåne from most other geographical regions of Sweden.

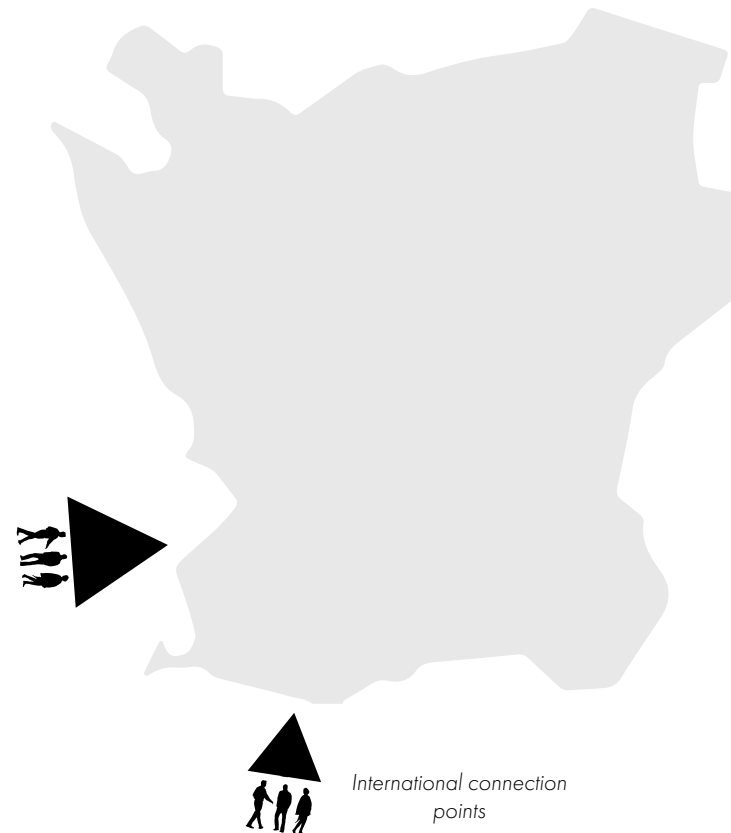
The two major plains, in the south-west and south-east, consist of highly fertile agricultural land—the yield per unit area is higher than in any other region in Sweden.

The Skåne plains are an important resource for the rest of Sweden since 25–95% of the total production of various types of cereals come from the region. The soil is among the most fertile in the world. (Scania 2016)



Main flows and biggest cities in Skåne

Malmö is the biggest city in Skåne, third biggest city in Sweden and also an important hub in the Öresund region that represents strong domestic and also international connections. Most flows derives from the capital of Skåne and continues north to Gothenburg, Oslo and Hässleholm, Stockholm, south to port cities Trelleborg and Ystad.



International connection points

After creation of Öresunds bridge, it has become not only a major link between Denmark and Sweden, but also the rest of Europe. Another international link is Trelleborg in the south that has great importance from economic aspects and has an intense traffic to and from Germany, Poland and other countries that has gained a great influence in connecting Scandinavia with the continent. Therefore south west Skåne are mostly affected by rapid increase in population, high immigration rates and foreign born residents.

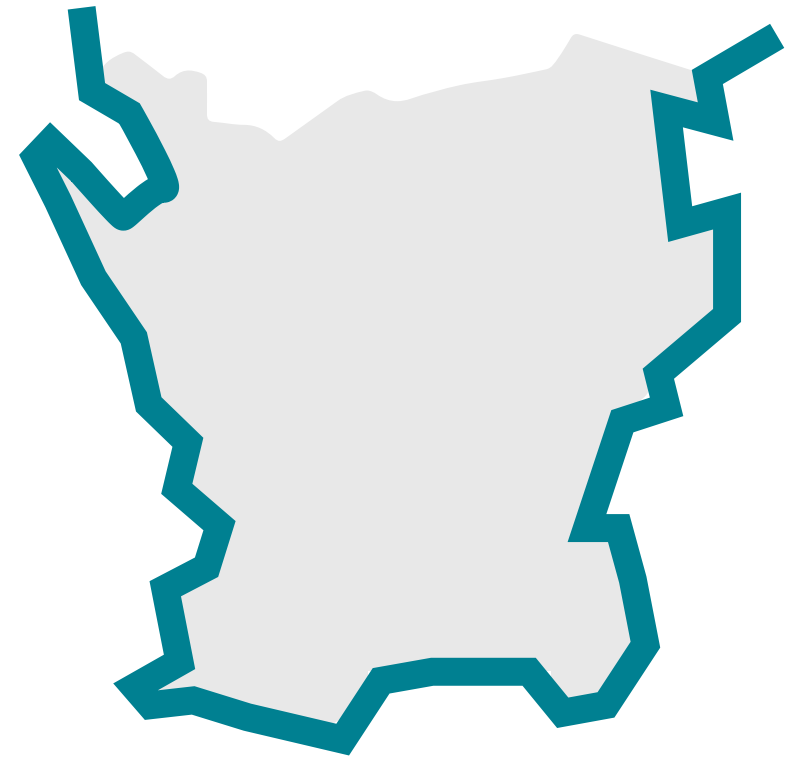
WHERE



Large harbour territories



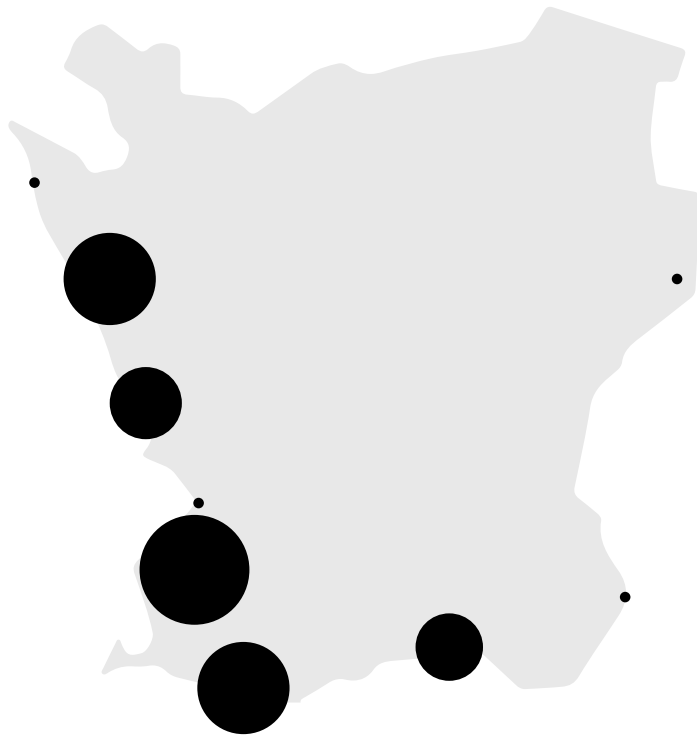
*Area with currently highest population
and prediction of highest growth*



*Skånes coastline as the greatest
value and strength*

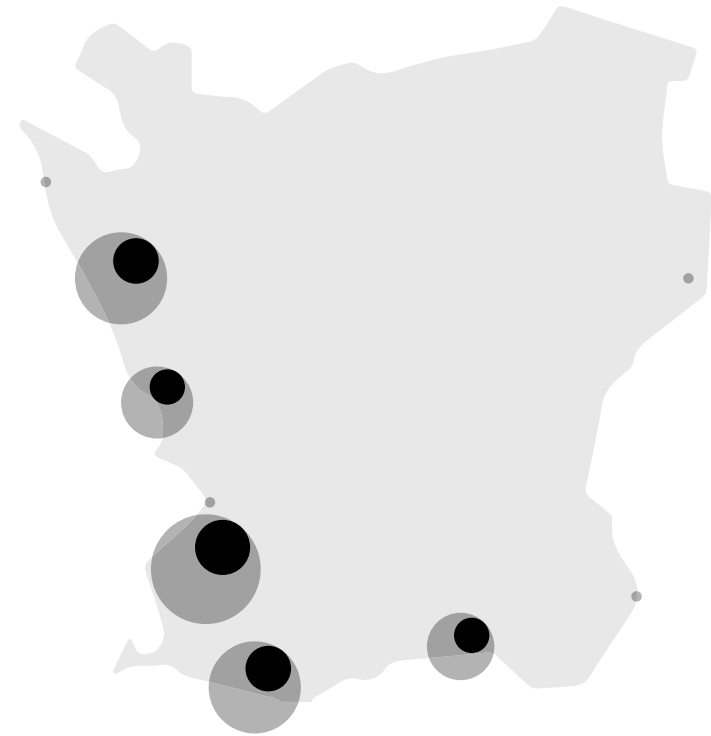
As previously explained due to international connections and increasing immigration, most populated south west Skåne has also predictions for the highest growth compared to rest of the region. This part of Skåne has become the engine for Skåne's labour market, business, innovation, education center and accordingly also living and leisure.

Skåne is defined and enclosed by the coastline that is one of if not the most valuable asset through all ages. Starting even far back in the viking ages, when settlements and villages started to thrive by the coasts of Skåne up until now where coastal cities rely on the international connections or just simply appreciate this great natural value.



*Strategic position of settlements
before and during industrialization*

During the industrial age, coastal cities expanded in large extents covering territories in front of the cities that correspond even to half their size or sometimes even more. A lot of space was needed for excessive and prosperous work of the harbours to which all Skåne and rest of Sweden was counting on.



*Decrease in the size of harbours
due to technological advancements*

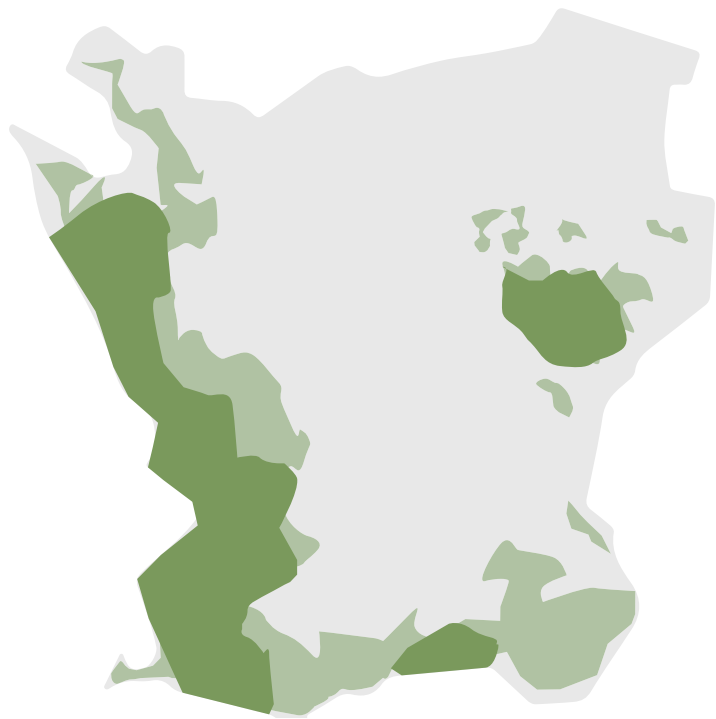
But as technologies developed and harbours needed to become more efficient, they did not require so much space and close proximity to the markets. Therefore a lot of industrial sites are now being developed for the needs of cities and can be used to not only connect back to the valuable coast and the open sea, but most importantly respond the high demand of housing in Skåne.

HOW

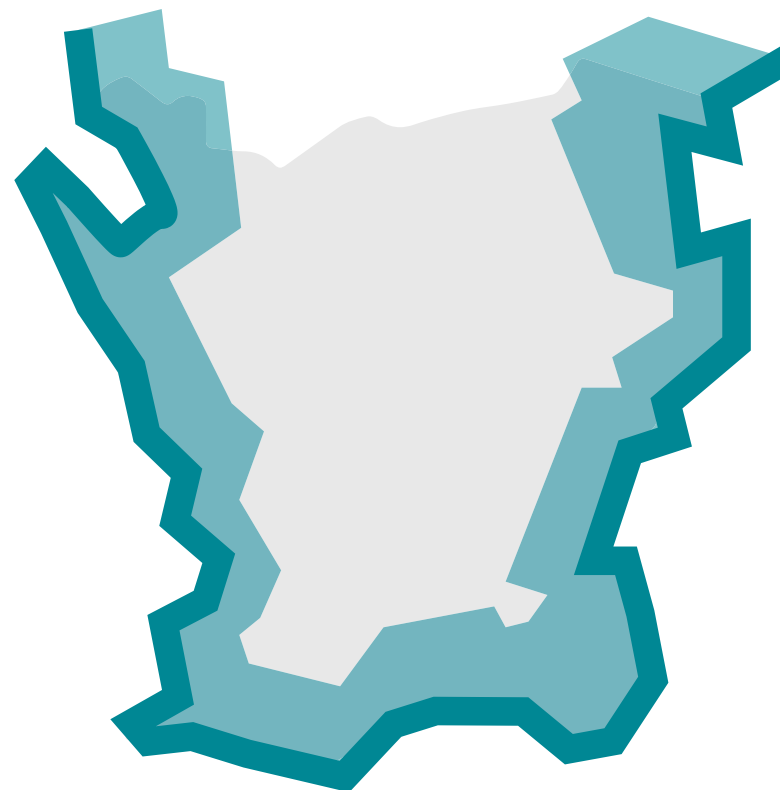


Skåne Region charecteristic landscape

ENVIRONMENTALLY



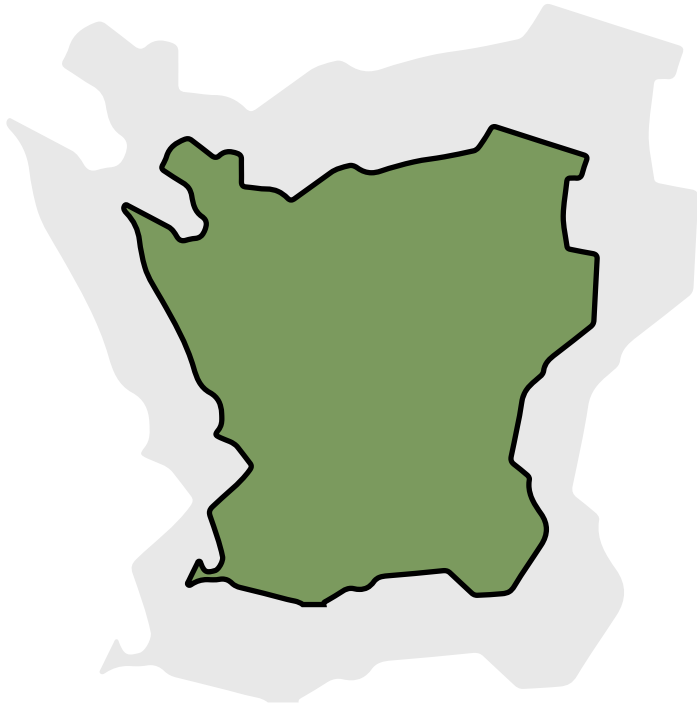
Most valuable agricultural land



Sea level rise

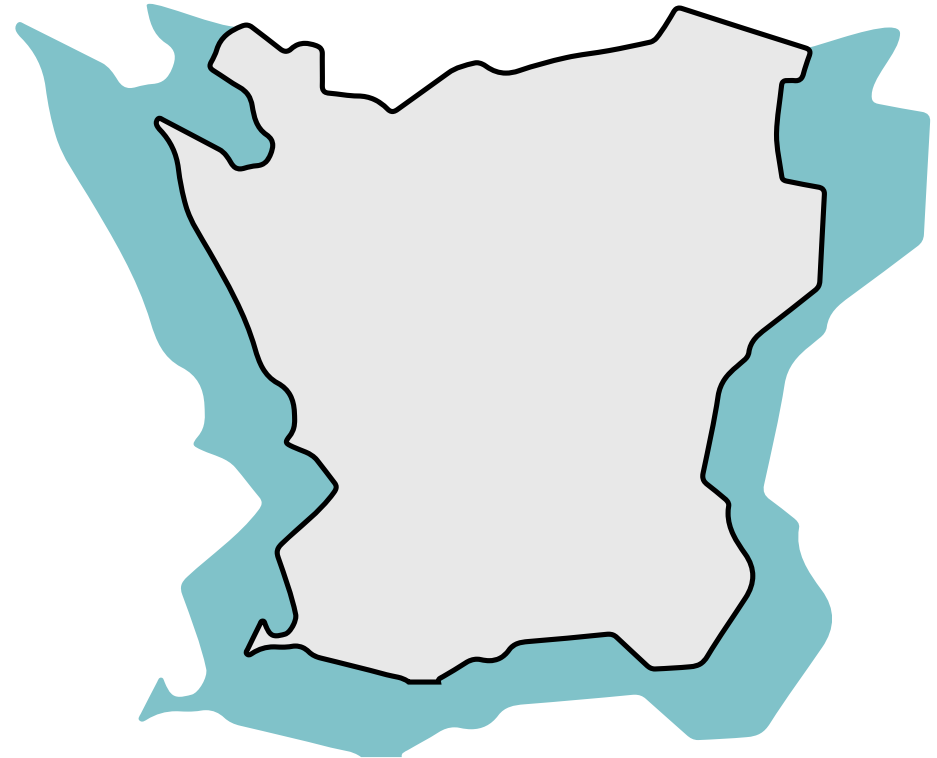
Unfortunately, the most populated area in Skåne has also the most valuable agricultural land with the highest rankings in the world. Consequently, the cities can not sprawl and affect it which creates a paradox of the increasing population and need for building more.

Skåne's coastline is not only the greatest value but also a threat. As the result of global climate change, also Skåne is under a threat of eminent sea level rise and risk losing historical centers of coastal cities. Since the coastline covers all Skåne, this issue is multiplied and can not be ignored.



Protect nature

Solution or answer to this challenging case is simple - we need to protect nature, we can not allow more sprawling developments of cities that comply with the demand of housing while irreversibly destroying the fertile agricultural fields. Cities has to set limits, that cannot be exceeded and violated.



Protect from nature

Not only we have to protect nature of Skåne, but also protect Skåne from nature. Cities by the coast must incorporate new design strategies to create appropriate living conditions taking into consideration the worst scenarious of sea level rise.

SOCIALLY

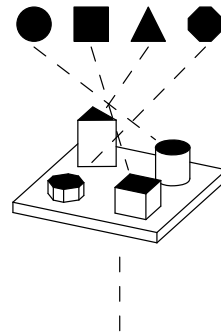
When designing for underused areas in our cities it is important to make sure that the new plans are not contributing even more to segregation but doing the exact opposite - generating social, economic also racial inclusion by the help of physical form of city and neighborhoods. It is crucial to assure that the lines are not drawn even thicker among people, through areas only affordable for wealthier residents or in the contrary allow for isolated low-income peripheral settlements, or just simply through physical barriers and limited access for different groups of people. After the research about segregation and how it manifests in the physical world, I have created a scheme that includes the most crucial aspects of urban planning that in smaller or larger extent can contribute to not only spatial integration but also social, a framework for integration in urban contexts that can act as a checklist or a model for predicting the risk of segregation in the area in question. For example, as if the principles of the integration scheme are not met. Following this integration model will assure that physical environment in the newly developed site is not separated or isolated from other parts of the city, but instead by the creation of this new part merging the city together. This scheme can provide certain outline for vivid and healthy future life in growing cities, where dissimilarities are the ground rule that enriches the environments, while blending within the existing urban fabric and providing common links that everyone can identify with.



Illustration from competition "Imagine Open Skåne 2016"

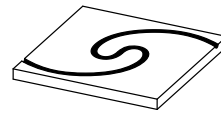
1. The Different

- Dissimilarity
- Distribution

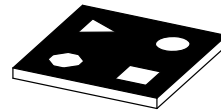


2. The Common

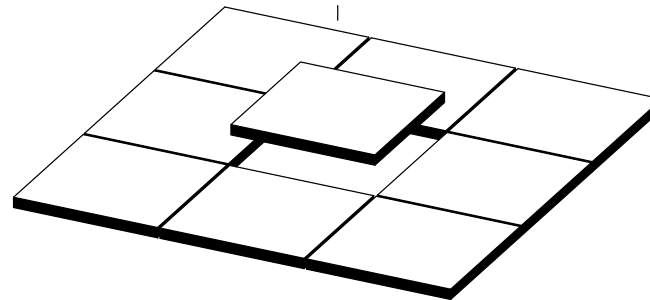
- Common Link



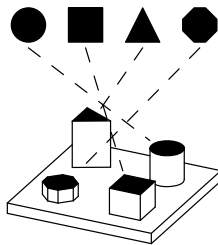
- Common Space



- Common Ground



1. The Different



PRINCIPLES

What to do?

Dissimilarity

Assure wide range of elements within the design area.

Diverse Structure

Include various built forms and selection of various volumes, choose numerous typologies and rich materiality.

Range of Value

Plan for differences in the range of costs among different building projects, allow for differences in quality and architectural design.

Multiple Functions

Program multiple attractions, services, types of usage, destination and points of interest that are appropriate for different age, class, gender or interest groups.

Possibilities for Flexibility

Plan for resilient, adaptive areas and flexible design that can be changed or improved over time and/or manipulated by the users.

Distribution

Create a mix of all selected elements and strategically distribute within the design area.

Gradual Transformation

Design gradual change of physical form as the scale and layout between different building projects, blocks, districts.

Continuous Network

Assure continuity of the city grid, the system of connected shared space and networks of mobility.

Easy Access

Provide safe and easy physical access for all people and all groups of people within and outside the design site.

Shorter Distances

Plan and calculate short duration between elements or points of interest that originates from measurements and distances adequate for different modes of transportation.

REASONS

Why do it?

- To provide interest for all different people in the same area.

- To exclude physically and visually monotone, repetitive and identical forms that can meet only few requirements.

- To assure economic, financial integration of different classes in the society.

- To integrate all different interest and age groups within the same area.

- To avoid sterile and uninviting environments that do not allow for personal expressions.

- To avoid concentration and centralization of similar elements and exclusion or isolation of groups within limits of their interest areas.

- To avoid immediate physical changes that creates separation between various districts or usages.

- To prevent inaccessible and isolated islands within the same city.

- To exclude boundaries, borders, barriers and obstacles that limit access of any sort.

- To prevent too long duration between everyday destinations that would minimize the choices of transportation modes and therefore possibilities of interaction.

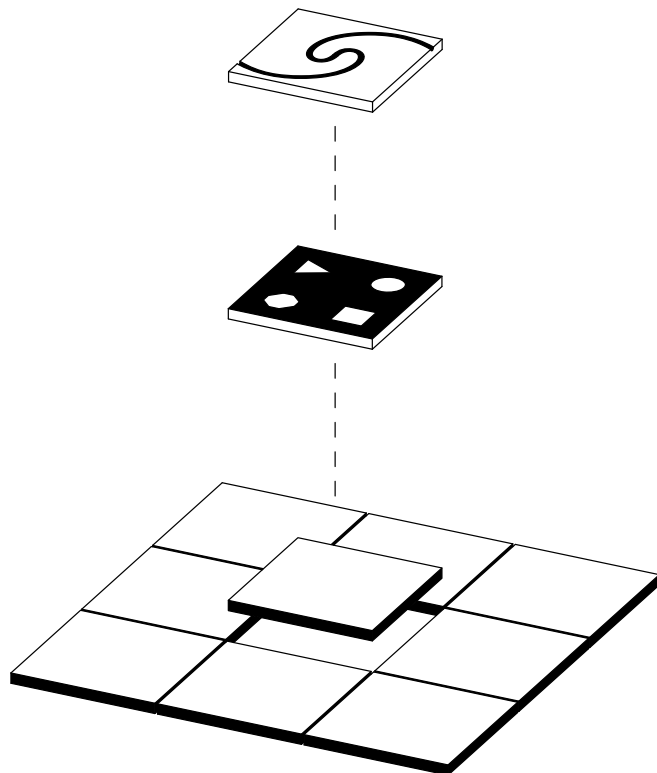
PRINCIPLES

What to do?

REASONS

Why do it?

2. The Common



Common Link

Include connecting links (natural and/or artificial) for all to recognize, be familiar with and attracted to.

Common Space

Assure quality open - public - shared space within and outside built environment that is visible and accessible for all.

Common Ground

Create physical, visual and mental relations to existing context, urban fabric, neighborhoods, surroundings and rest of the city's identity.

- To avoid environments or neighborhoods that people do not care about or do not feel attached to that eventually can lead to degradation of the areas.

- To create a foundation where all groups of people can meet, interact and be a part of "the otherness" while feeling equal possession to the area.

- To eliminate developments that by meaning or culture drastically differ from surroundings and can feel impertinent or alien.



The city front of Trelleborg

7. CITY CONTEXT

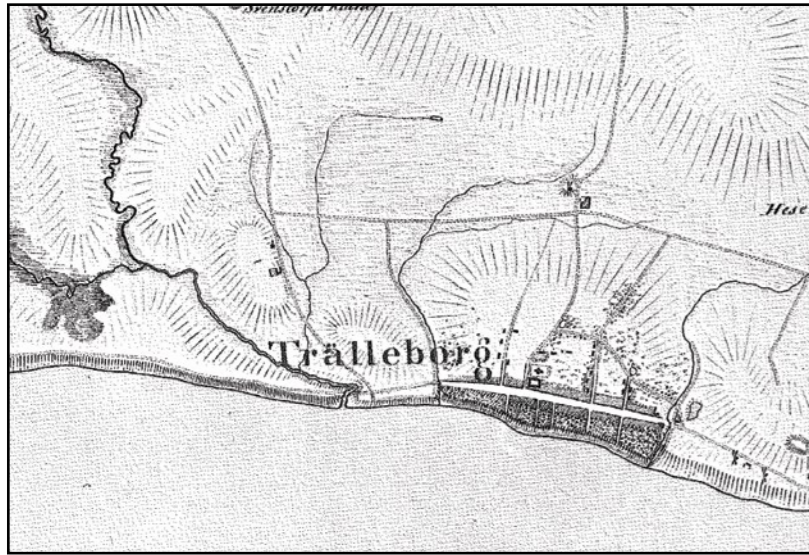
7.1 City of Trelleborg

- Nature
- Industry
- Life
- City
- Future Growth

7.2 Where?

7.3 How?

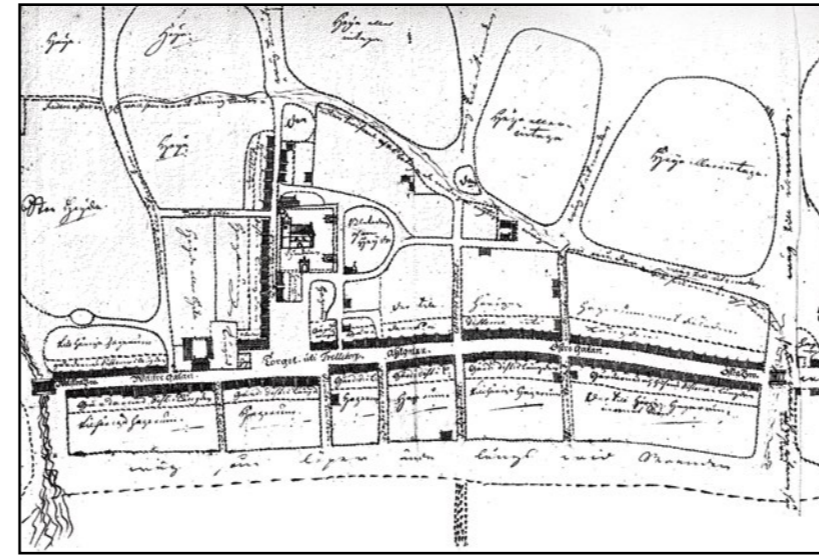
- Environmentally
- Socially



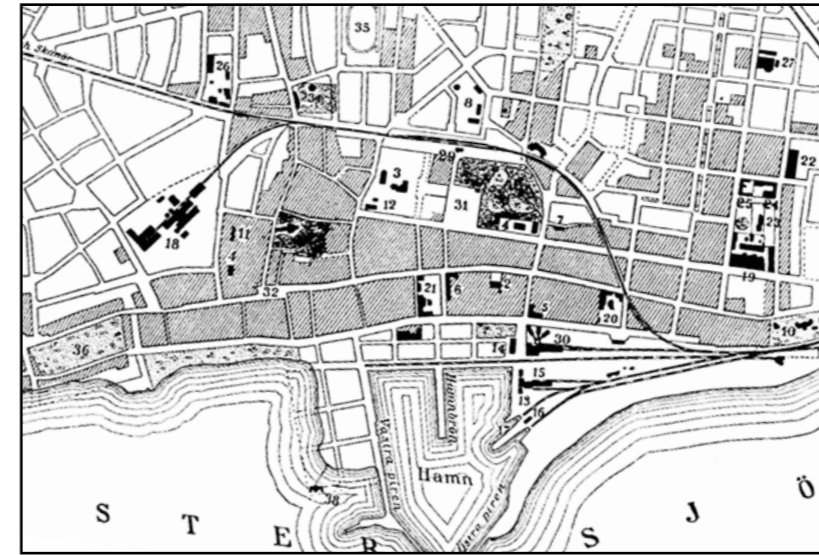
1600



1650



1700



1930



1980



2016





TRAIN STATION



MUSEUM



RAILWAY UNDERPASS



EAST BEACH



KULLAGRUNDSGATAN



CENTRAL INDUSTRY



FIRE STATION



STADSPARKEN



THE CITY LIBRARY



VISUAL AXIS



ST. NICOLAI CHURCH



TRELLEBORGEN



THE LAKES



RESIDENTIAL STREET



HARBOUR FRONT



PUBLIC SPACE



VIEWPOINT



LOCAL HIGHWAY

Trelleborg

The city's oldest history is shrouded in mystery. For more than thousand years ago the Vikings traveled to the ring castle in Trelleborg. In 1257, Trelleborg (Threlæburgh) is mentioned in writing for the first time. Three years later, in 1260, Trelleborg and Malmö was given as a bridal gift to the Swedish king.

In medieval times, Trelleborg played an important role in the extensive herring trade in the Baltic Sea. In the shadow of the herring fishery trade started to flourish. Many kinds of craftsmen settled in the village. From far away came the citizens and farmers to do business in Trelleborg. Trelleborg's success was not seen kindly by the neighbors in Malmö. They complained repeatedly to the king in Copenhagen. In April 1619, King Christian after the complaint withdrew the Trelleborg city status. Although people in Trelleborg were living under difficult conditions, they never stopped to fight to regain its town rights. Over the centuries Trelleborg fought in an unequal struggle against sovereignty. In 1867 the city got so long-desired city rights again. After 248 years of humiliation, Trelleborg became again a city. Happiness was immense, the small town was ready to take a leap into the future. Developments did not take long to wait. The railways were being built in all Skåne, four iron lines also emanated from Trelleborg.

The most famous attraction in Trelleborg is the great Viking castle right in the center of the town. To everyone's surprise the remains of the old fortifications were first discovered only in the late 1980s. The structure is called Trelleborg-type, of which there are now five in total. This surprising finding finally gave an explanation of the city's name. (Visit Sweden n.d.)

Trelleborg is often called the City of Palm trees.

In 1984 the first palm trees were planted in Trelleborg that came from Alicante in Spain. But palms used to the Mediterranean climate surely raised concerns that they couldn't thrive in Trelleborg, but it soon became apparent that the pleasant climate of southern Sweden and unique identity of the southernmost city - Trelleborg were suited for the palm trees perfectly!

Area

13.66 km²

Population

28,290

Density

2,071 /km²

(Trelleborg 2015)

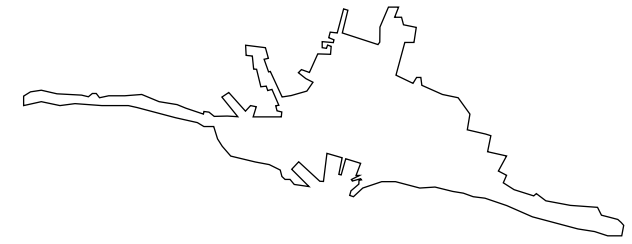


Nature

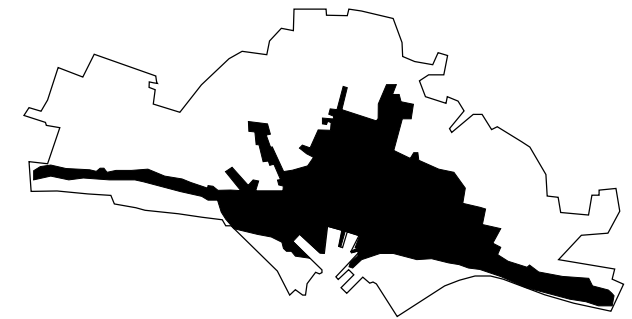
Back in 1940 Trelleborg was a small town closely surrounded by agricultural fields, small, but important port and build environment close by the sea coast. Over time this situation changed greatly. Port activities increased and therefore also the need for more space resulted in industrial territory that covers almost all coastal side of the city. Landfill was realized in large extents and the city did not face the water anymore, but the industry.

Also other global trends as urban sprawl affected Trelleborg and its surrounding landscape was "eaten by" the low density developments all around the original city core. Eventually city now is lacking access and also emotional connection to its earlier treasures that was enjoyed by all – the sea and the remarkable Skånes landscape. There is a risk of continuous sprawl of the city due to the growing need of housing in the region and therefore also in Trelleborg.

Not only the nature is endangered, but also the existing historical built environment, that stands below the marks of predicted sea level rise. Nature and its forces have always played very important role in Trelleborg, whether it has been food production or connection by the water to the other parts of central Europe, it has been and still is the greatest strength of the city that has to be respected also in future.

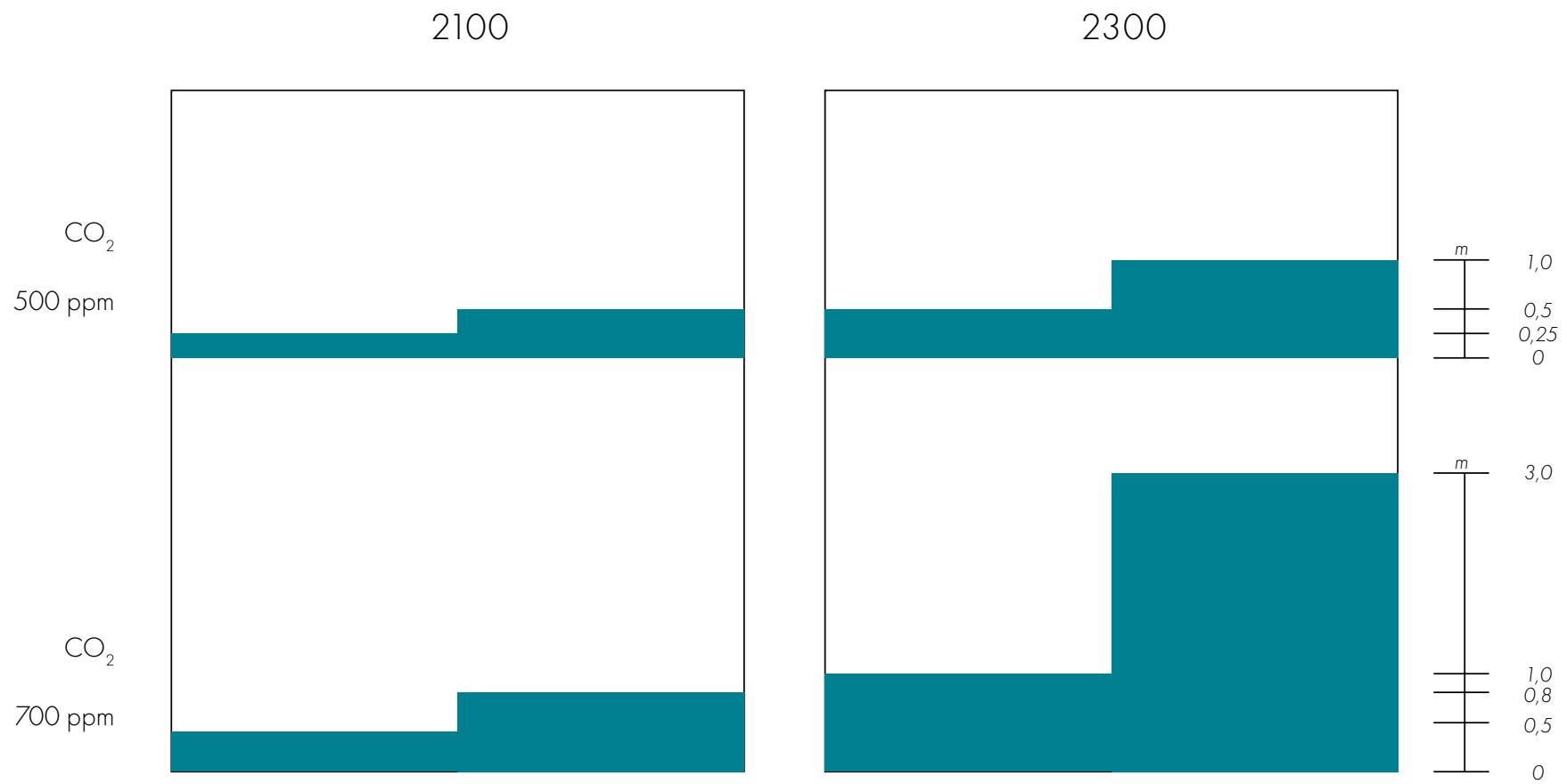


Trelleborg city and landscape in 1940



Development and sprawl of Trelleborg in 2014





Prediction of sea level rise



Worst scenario prediction of sea level rise (3 m)

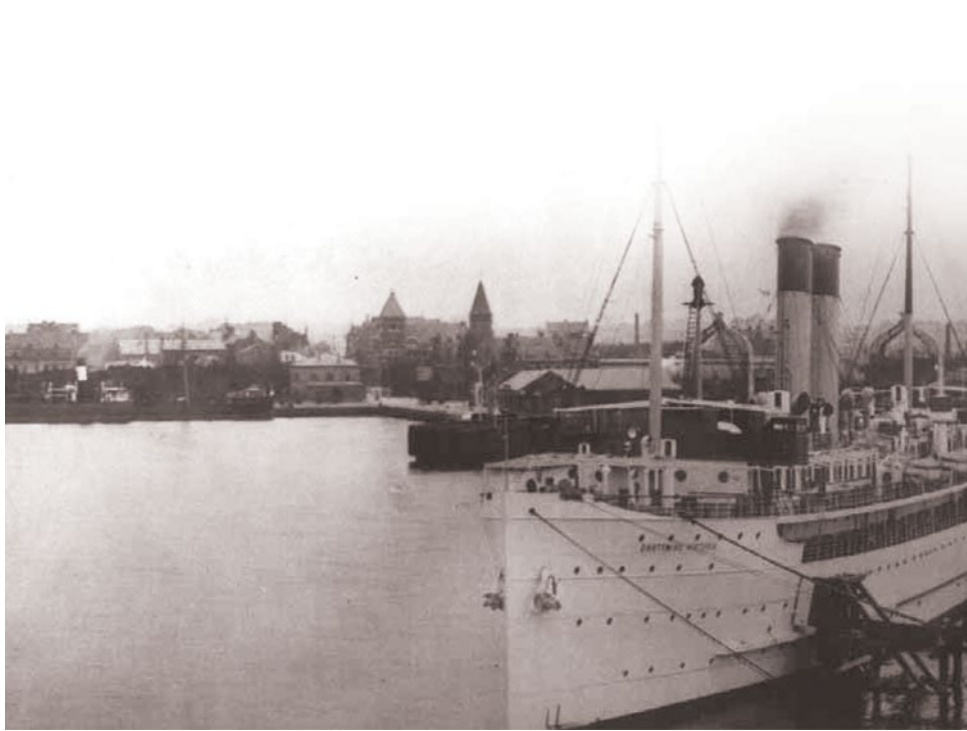
Industry

Johan Kock was an important person in Trelleborg that in the beginning of the century took initiative in a broad range of industries. Multinational Trelleborg AB, Akzo Nobel Inks and DUX has its roots in the far-sighted industrial man's business. Johan Kock also started glassworks and brewery in Trelleborg, while he ran the family company's lumberyard and grain trading. Today Kocks company is probably the oldest going concern in Trelleborg, spanning back to more than 175 years old history. (Wall 2013)

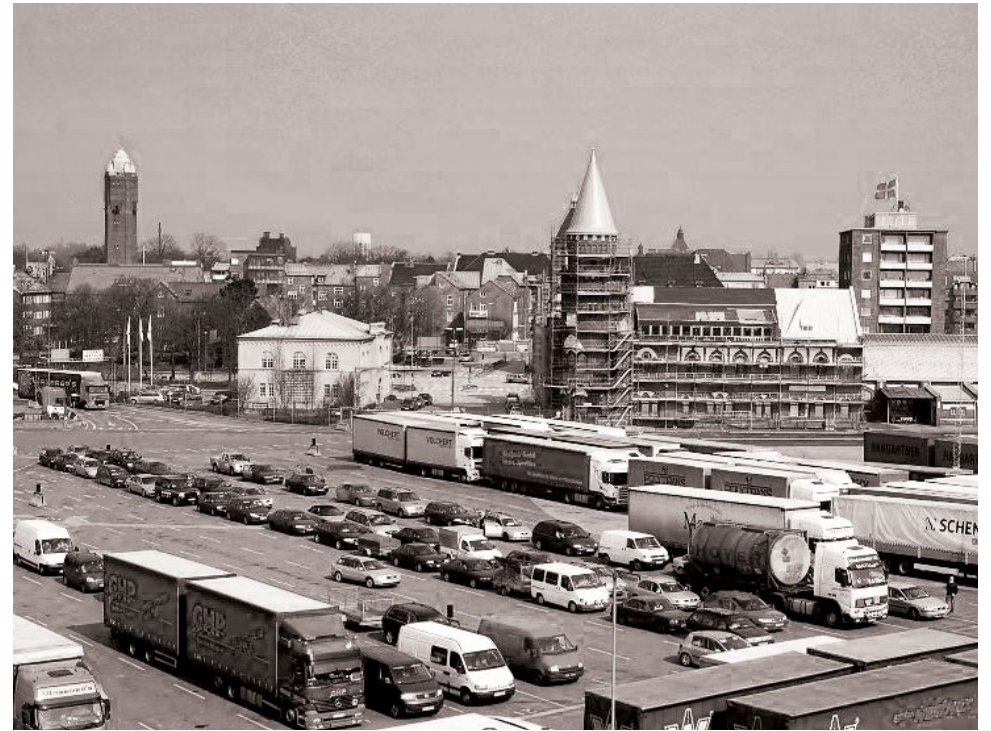
Port of Trelleborg dates back to the 1500s, but it is only in the mid-1800s as construction of a port facility comes on the scene. In 1861 the Port Construction Company in Trelleborg was founded and in 1865 the first port facility was ready. During the last twenty years Trelleborg AB has become Sweden's second largest port and Scandinavia's largest Ro-Ro port. The geographical location on the doorstep of Europe, has made Trelleborg major hub in the harbour traffic over southern Baltic Sea. Around the clock, 365 days a year, the ships plowing the water between three ports in Germany and one in Poland with 99% accuracy. Over the Baltic Sea is a floating bridge connecting the countries and people, now as then. Whether one travels in a hollowed oak trunk, on a Viking cogs or on one of the world's largest rail ferries.

The harbour of Trelleborg is constantly developing and aiming for sustainable goals, company works systematically and is committed to improvement targets to reduce the negative environmental impact of its own operations. One of the most important goals is to achieve 100% recycling of grey and black water from the ferries. Another, not least crucial, is that the city and the port are closely linked, which

means that the interaction with the city and its inhabitants is another key in ports efforts to develop a sustainable business and adapt the port business for the future. Which would mean using the land efficiently for ports needs, while allowing for sustainable growth of the city in its former territories.



City and the harbour in the previous century



City and the harbour today





Life

Trelleborg carries a history of importance during Viking times and also industrial age that the city is proud of and identifies with. Viking traditions are still carried out today having events by Trelleborgen - the reconstructed Viking fortification from the time of Harald Bluetooth. Together with other historical sites, several museums and galleries, Trelleborg definitely expresses the cultural values are in great respect. Especially Smygehuk, Sweden's and Scandinavia's southernmost headland, where the summertime in particular sees the region come alive with art exhibitions, organized events and traditional Scanian cuisine. Different events and traditions are celebrated all year around and cities environment is very welcoming for families. Many preschools and kindergartens are spread around the city and the various neighbourhoods.

Unfortunately, city has a problem to ensure a proper living conditions for the younger generations who tends to leave the small town for a new life in the dynamic neighbour -Malmö.



Fortifications 'Trelleborgen' during viking age



Celebration of viking traditions today





Picture from homepage of Trelleborgs Kommun

City

Trelleborg is rich with historical buildings, architectural values and characteristic neighbourhoods. Brand buildings are the medieval churches, the steam-mill with a magazine in the harbour, the railway station with the station hall, post and telegraph building, the old water tower, the rubber factory's steam plant and oldest factory buildings by Henry Dunker street, art hall, bathhouse and the chapel at the North Cemetery.

Within the urban fabric there are wide range of typologies, materiality and identities. Varying between small scale private house areas, city blocks, industrial buildings and territories, commercial large scale estates, multi-storey apartment buildings, row-houses and farms. Quiet and small country side atmosphere contrasts with the loud and dynamic port scenes.

Unfortunately, some of these great qualities of the city are isolated and very separate from each other. There are missing connections to these various stories of the city, that can be considered in the future and provide wide range of experiences within the city and provide environments for all people, with different interests and backgrounds. Therefore, not only it is the values that are most important to preserve and protect, but also to develop.



Historic boulevard towards the Station



Main street towards the Station today

ONE PURPOSE

MONOTONE

BORDERS

REPETITION

ISLAND

CAPACITY

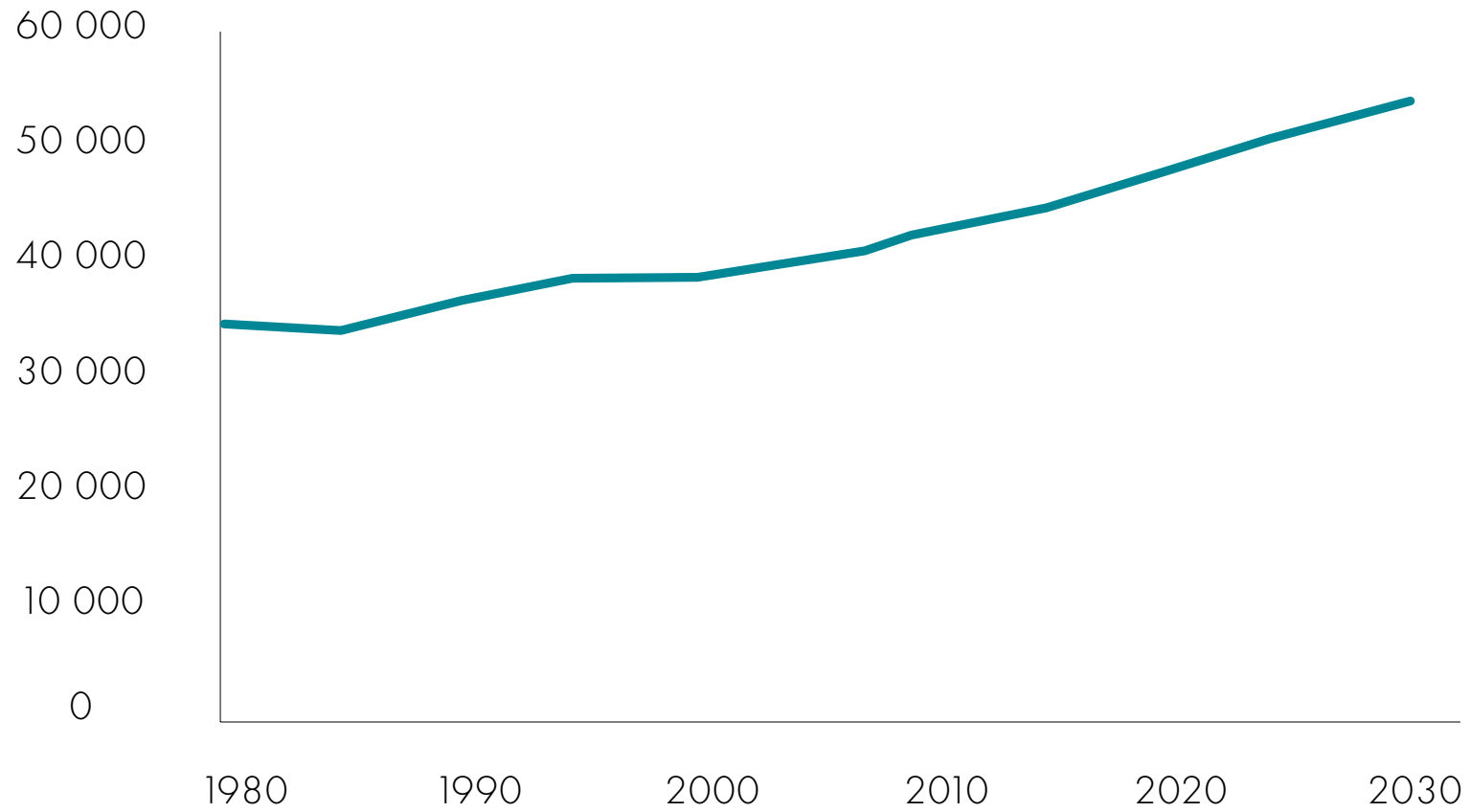
MIX

SCALE

Typologies and signs of segregation in Trelleborg



Future Growth



According to different processes in the society from which one of the most evident is immigration in the region, the population in the province of Trelleborg will grow for about 10 000 inhabitants. Increase in the numbers of residents means that it is needed to built more housing. But the question is - where to built?

WHERE

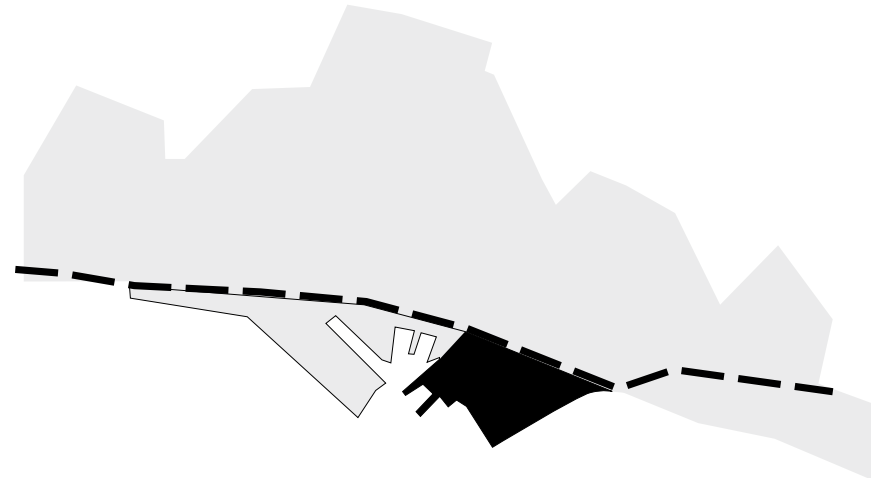


Large harbour territories, Trelleborg



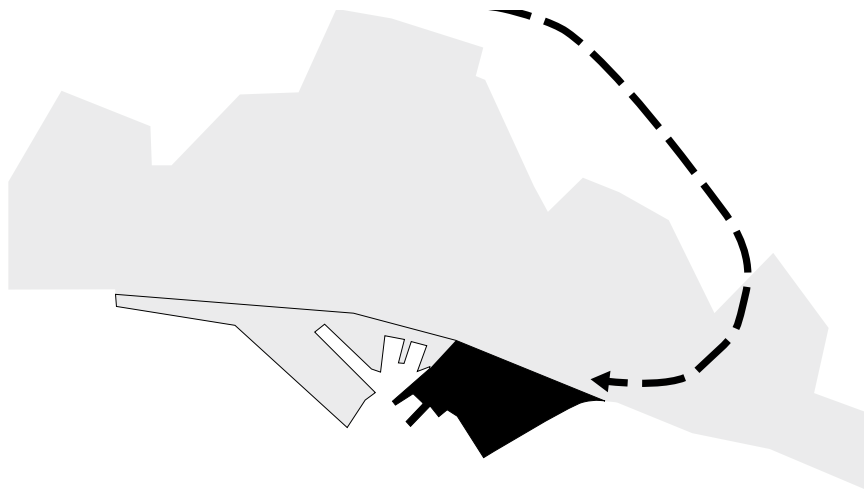
Large harbour area

Currently the harbour area covers a large part of the city, that is inaccessible and isolated. Territory is fenced and people experience the coast only visually in a distance.



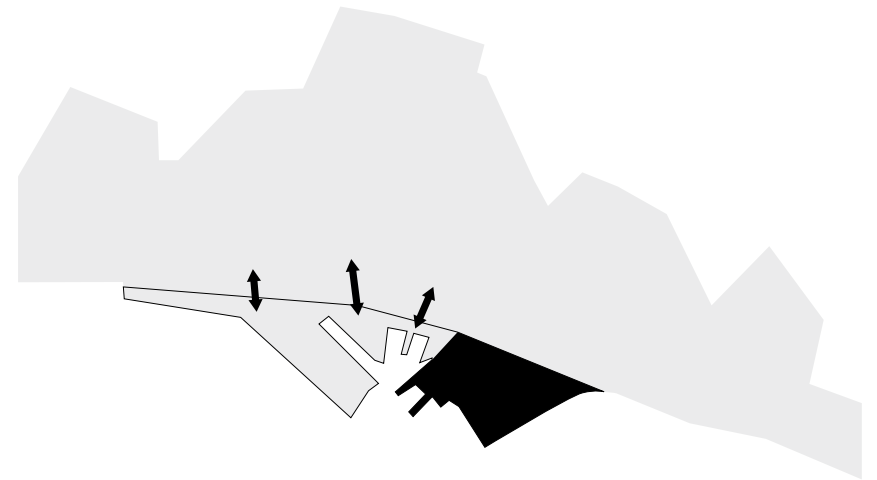
Future reorganization of the harbour and existing highway

Due to more efficient workflow, harbour and logistics center are planning to re-organize their layout in the city. Eventhough the area needed for port is planned to be much smaller, there is still a major barrier of the existing highway between the city and the harbour area.



Planned ringroad by the railway infrastructure

By implementing a continuous ringroad next to already existing train infrastructure, it is beneficial both for the port and the logistics center to have appropriate and direct entrance.



Possibility for integration

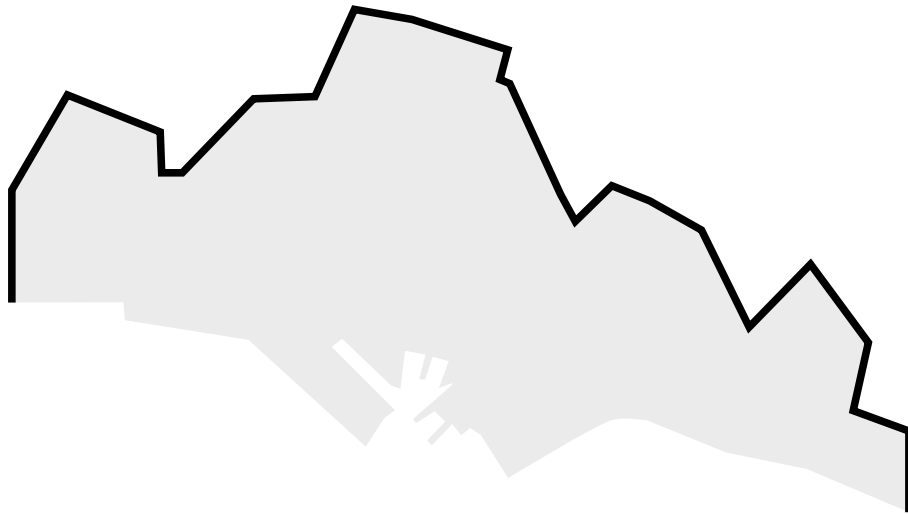
Moreover, this situation creates a foundation for the new piece of city to develop and over time become integrated within its self and the surroundings.

HOW



Skåne Region charecteristic landscape

ENVIRONMENTALLY



Limiting the possible future growth outwards

Especially when allowing for new infrastructure outside the current city limits, it is important to set boundaries for the built environment. Within the existing built-up land, there is already appropriate amount of usable space and potential for higher density that can be developed over the next years. Therefore implementation of the ringroad should not become a reason for urban sprawl.



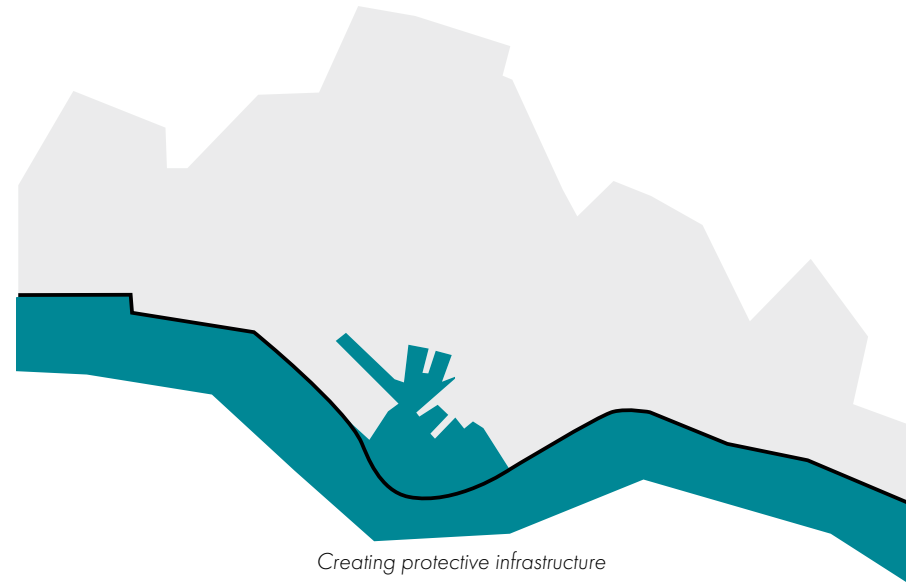
Establishing connections to the landscape

New links from the existing valuable landscape has to be established throughout the city until the waterfront. These green corridors must provide easy access and prioritized pedestrian routes that creates healthy environment in the built areas and brings awareness to the surroundings and unique position in the landscape of Skåne.



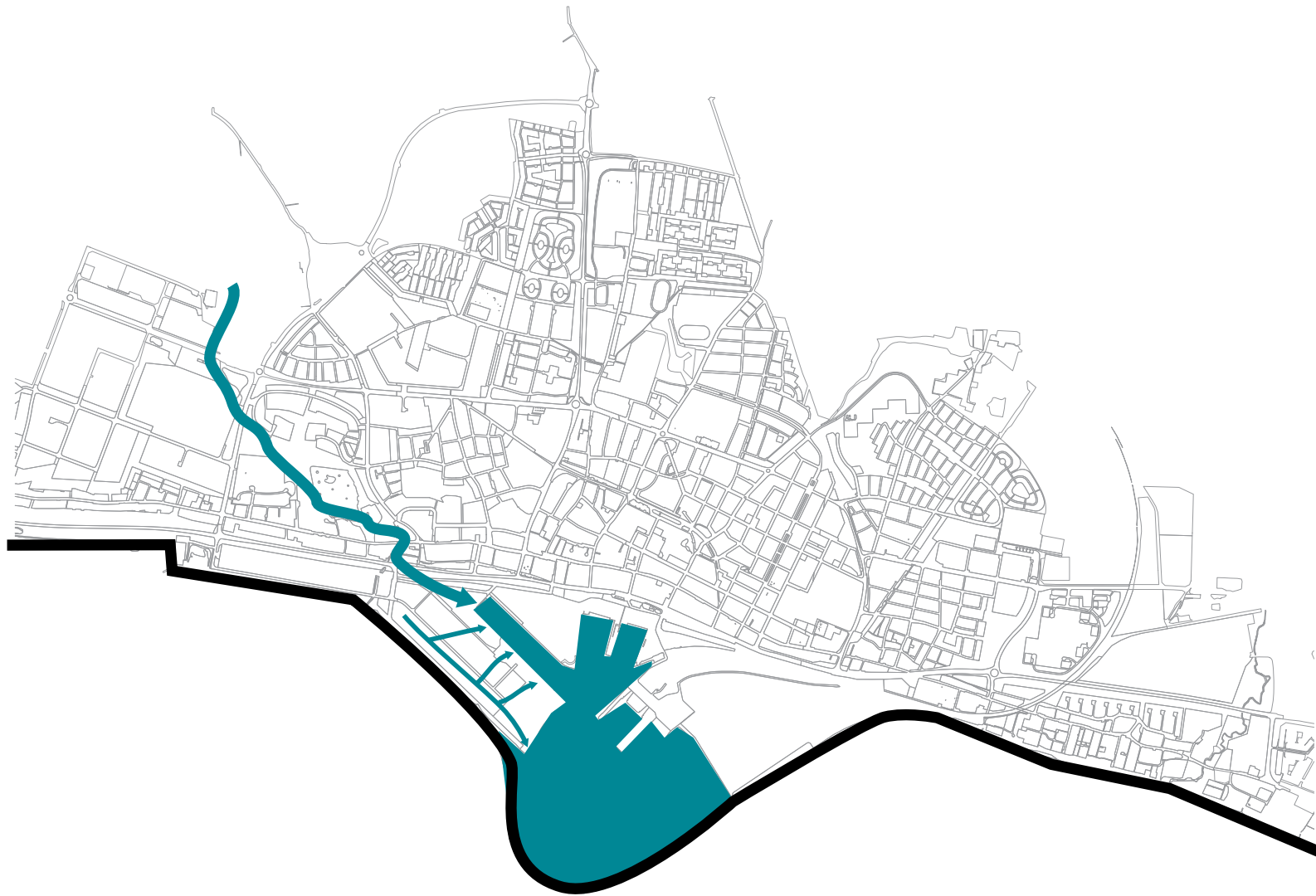
Prediction of the sea level rise

Trelleborg is greatly affected by the global environmental changes, which includes sea level rise due to the consequences of global warming. There are different scenarios that are predicted of how extensively the situation can change, but the city must be ready for an increase in the sea level for about 3 meters.



Creating protective infrastructure

Therefore it is crucial to provide proper protection for even the worst scenarios and build protective infrastructure now before the transformation of the frontal side of the city has begun. By strengthening, raising and extending the existing harbour gates and breakwater system a protection for the central and historical core of Trelleborg would be achieved. This berm could be the new Trelleborg, the new protective built structure that unfortunately protects not from people anymore but from nature which is far more powerful.



Due to the consequence of proposed protective infrastructure blocking the natural exit of a river, it has to be redirected and collected within the harbours' water body. Additional canals can be designed within the former industrial territory that can be a part of on-site grey and black water recycling system, that is not only functioning to clean the waste water from ferries, but also act as a park and wind breaking buffer zone for the new development.

River redirection and creation of grey and black water recycling system

SOCIALLY

Diverse Structure

Include various built forms and selection of various volumes, choose numerous typologies and rich materiality.

Range of Value

Plan for differences in the range of costs among different building projects, allow for differences in quality and architectural design.

Multiple Functions

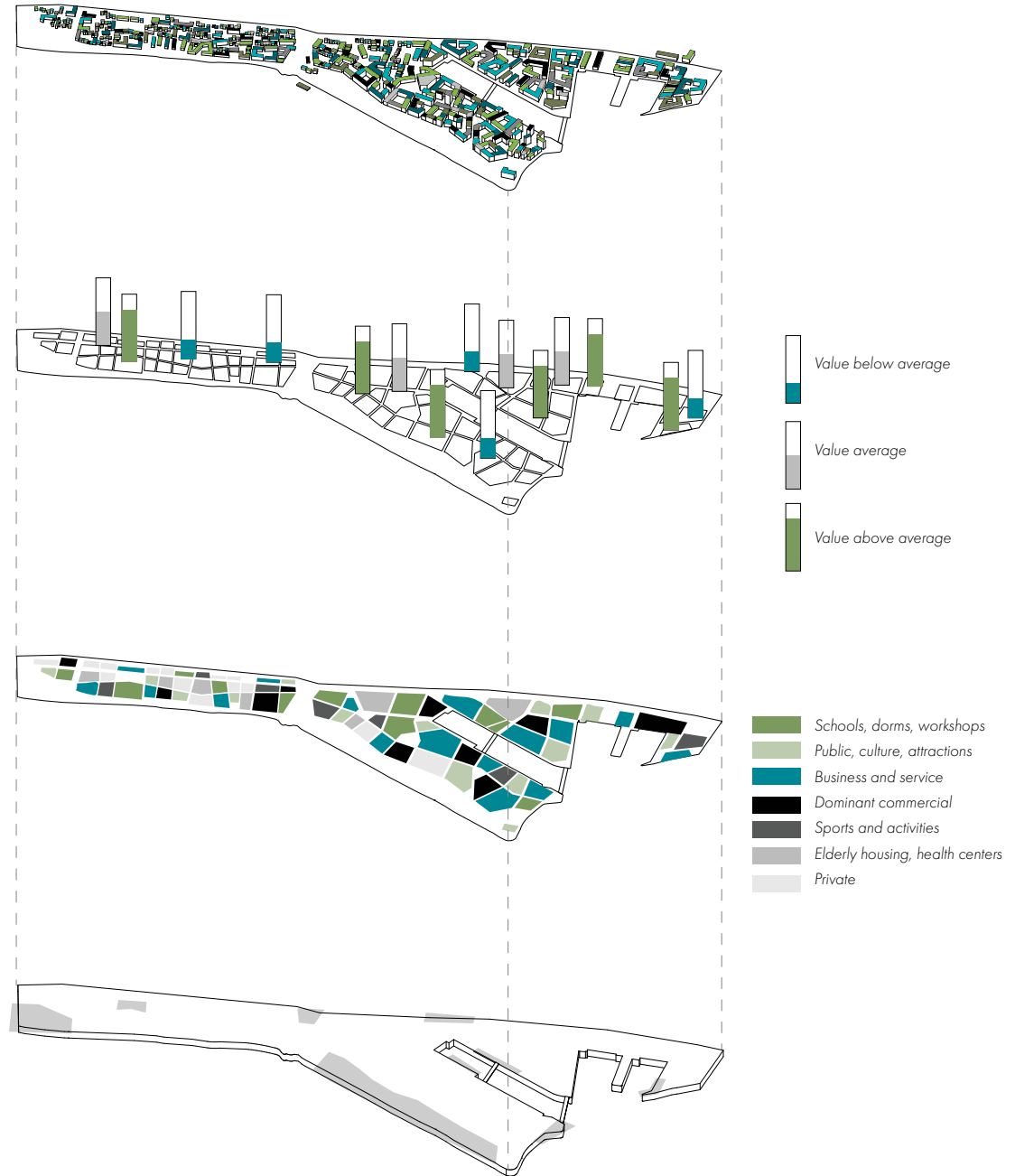
Program multiple attractions, services, types of usage, destination and points of interest that are appropriate for different age, class, gender or interest groups.

Dissimilarity

Assure wide range of elements within the design area.

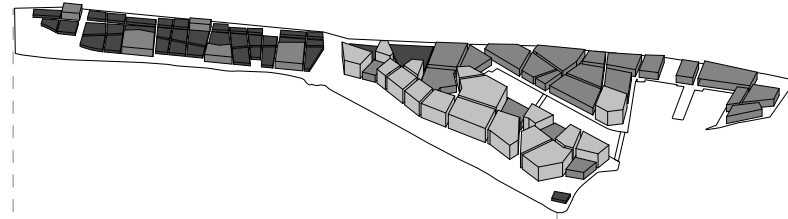
Possibilities for Flexibility

Plan for resilient, adaptive areas and flexible design that can be changed or improved over time and/or manipulated by the users.



Gradual Transformation

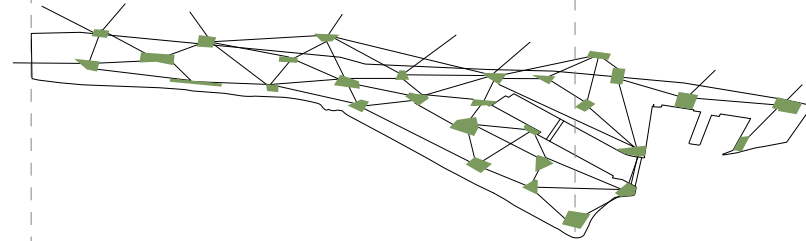
Design gradual change of physical form as the scale and layout between different building projects, blocks, districts.



- Higher development (1-10 floors)
- Medium height (3-6 floors)
- Lower development (1-3 floors)

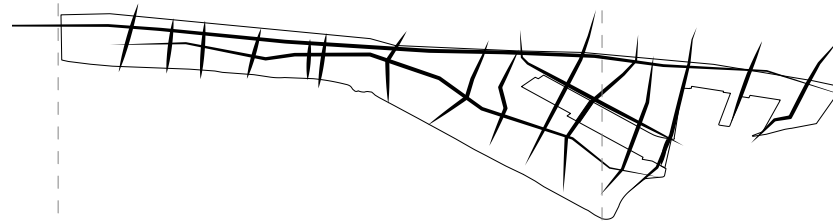
Continuous Network

Assure continuity of the city grid, the system of connected shared space and networks of mobility.



Easy Access

Provide safe and easy physical access for all people and all groups of people within and outside the design site.

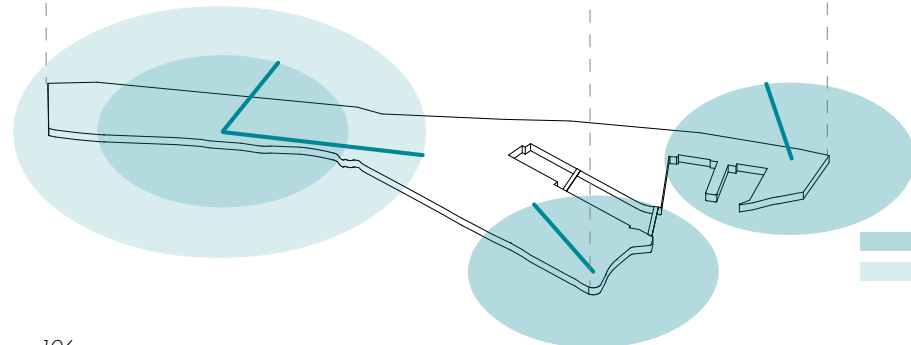


Distribution

Create a mix of all selected elements and strategically distribute within the design area.

Shorter Distances

Plan and calculate short duration between elements or points of interest that originates from measurements and distances adequate for different modes of transportation.



- Radius of 400 m
- Radius of 600 m

Common Link

Include connecting links (natural and/or artificial) for all to recognize, be familiar with and attracted to.

Common Space

Assure quality open - public - shared space within and outside built environment that is visible and accessible for all.

Common Ground

Create physical, visual and mental relations to existing context, urban fabric, neighborhoods, surroundings and rest of the city's identity.





Masterplan

8. DESIGN

- 8.1 Masterplan
- 8.2 Nature Within
- 8.3 City Edge



Masterplan of the former industrial site

Masterplan

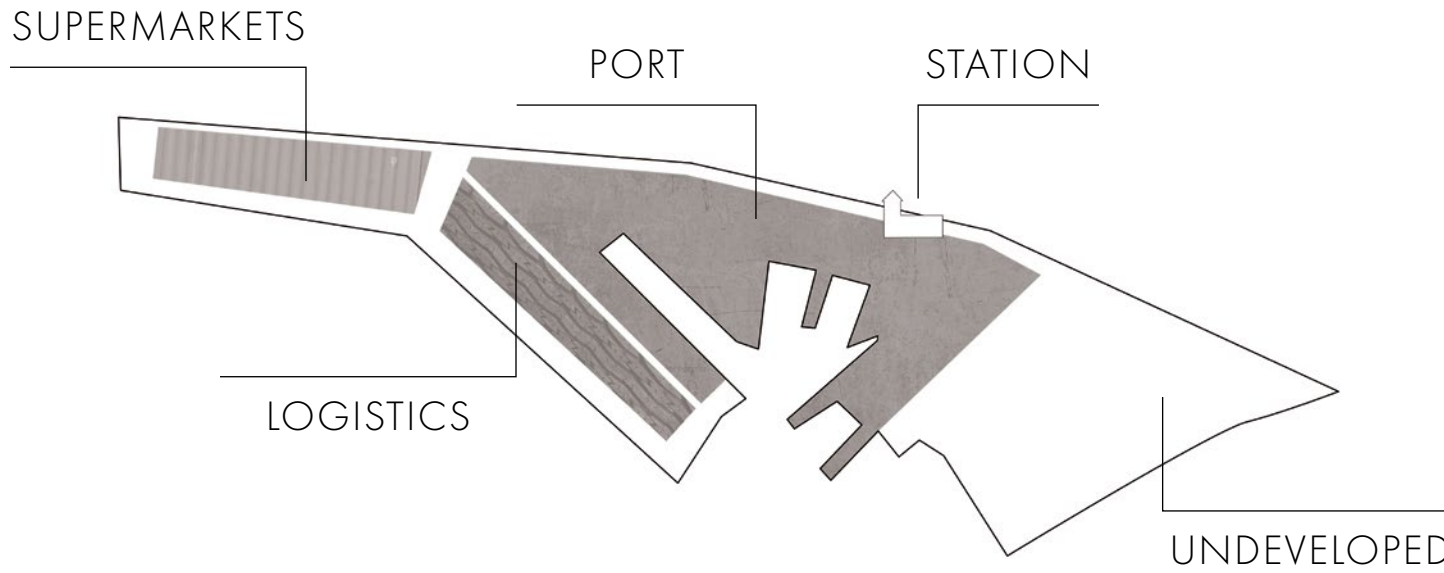
Most important intention of the masterplan was to create continuous green corridors reaching from the surrounding agricultural landscape through the city's historic districts and characteristic places to the new waterfront. These new links provide not only easy pedestrian movement through the city from north to south but also adds fast connections east to west for cycling to nearby villages and other seaside towns. A coastal infrastructural protection for sea level rise that is covering most of the city's front edge is acting as one of these green corridors - a major pedestrian and cycling promenade by the coast.

Existing recreation area by the river in the west part of the city is emphasized in the new waterfront development and continued until the furthest point of the artificial pier that all together forms the largest green public space in the city. This recreation axis brakes down the mental barrier between the city and the other side of the former highway.

The new development is designed in the way to respect the surrounding neighborhoods and scale of the built environment and creating integrated new part of the city. Ranging from smaller scale in the west, medium volumes around four and five floors high in the city core by the station and reaching up to 10 floor high buildings in the south pier by the seaside forest.

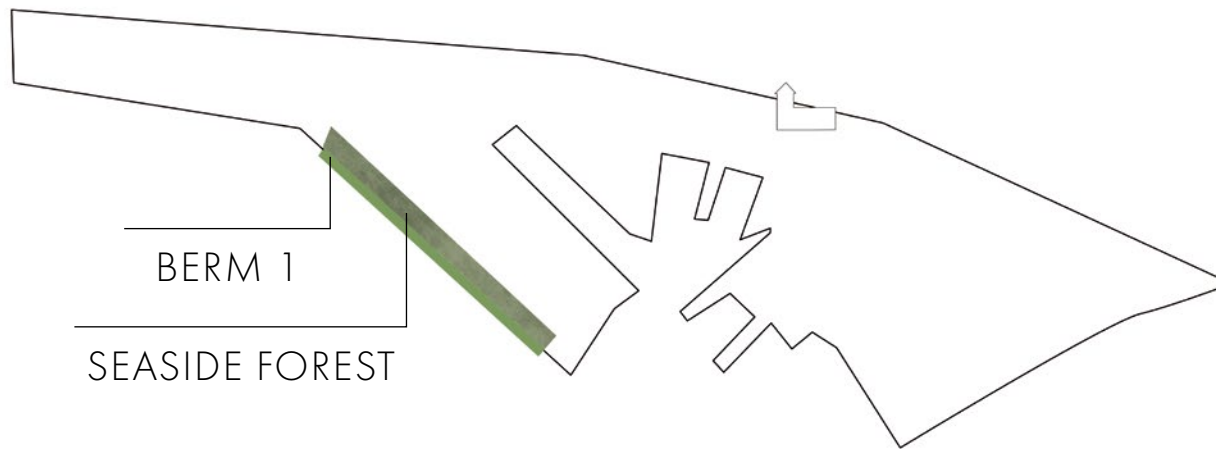
The 90 hectare large new development of Trelleborg can meet the housing demand in all Trelleborg province for the next 15 years.

01



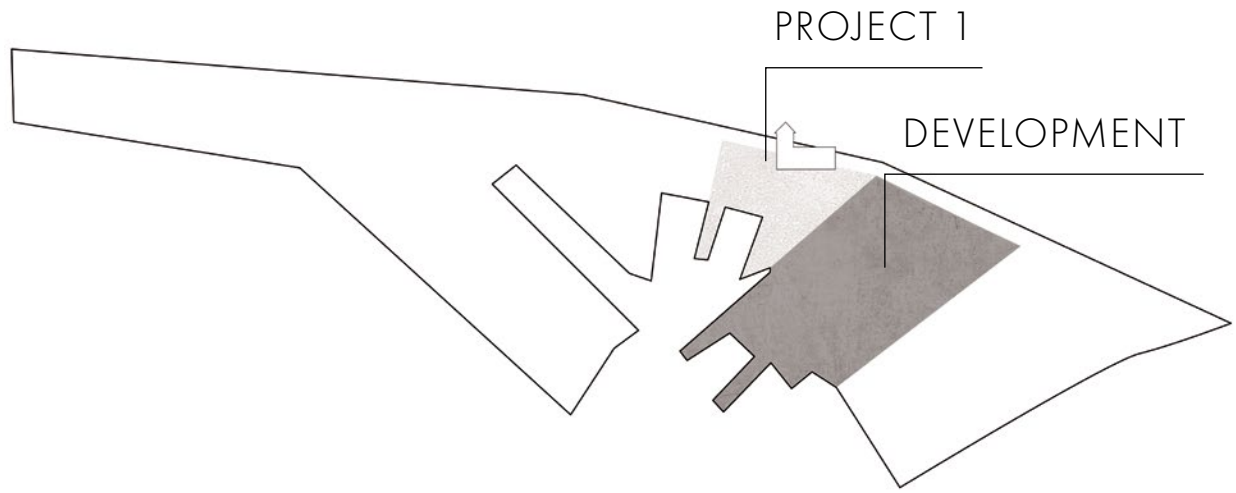
Current situation and start of the ringroad

02



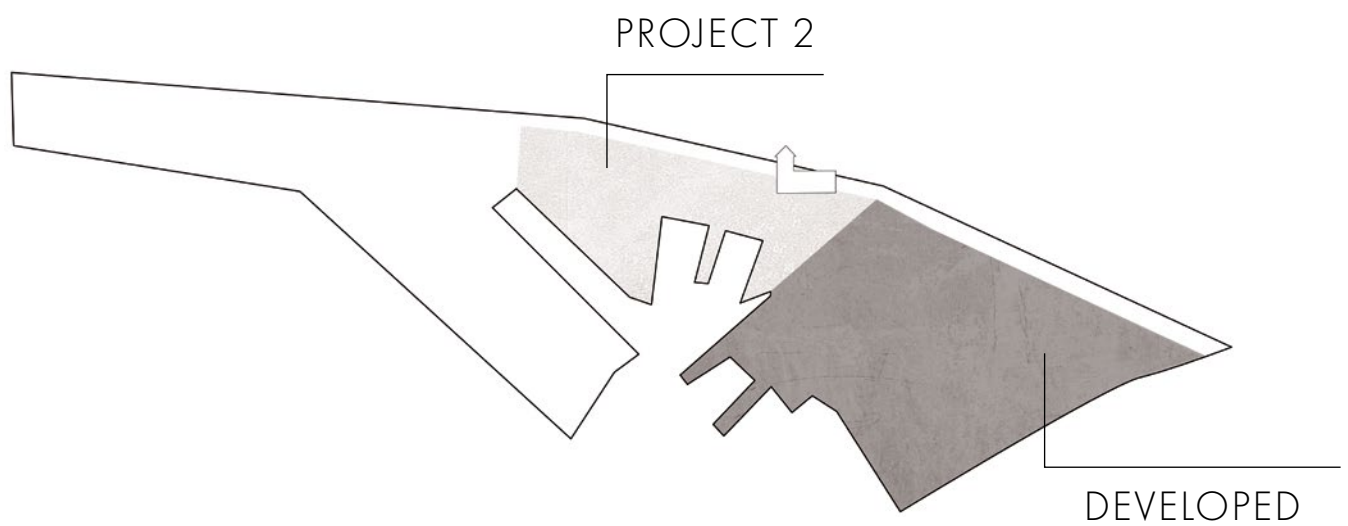
Creation of first stage protective berm and purifying park

03



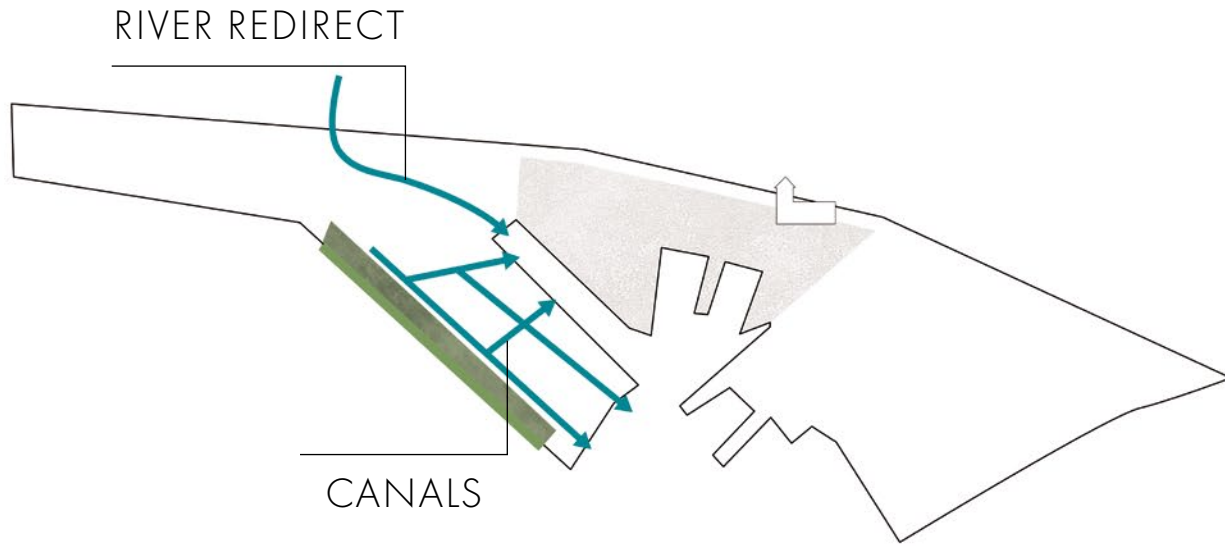
Start building by the station and port develop area to the east

04



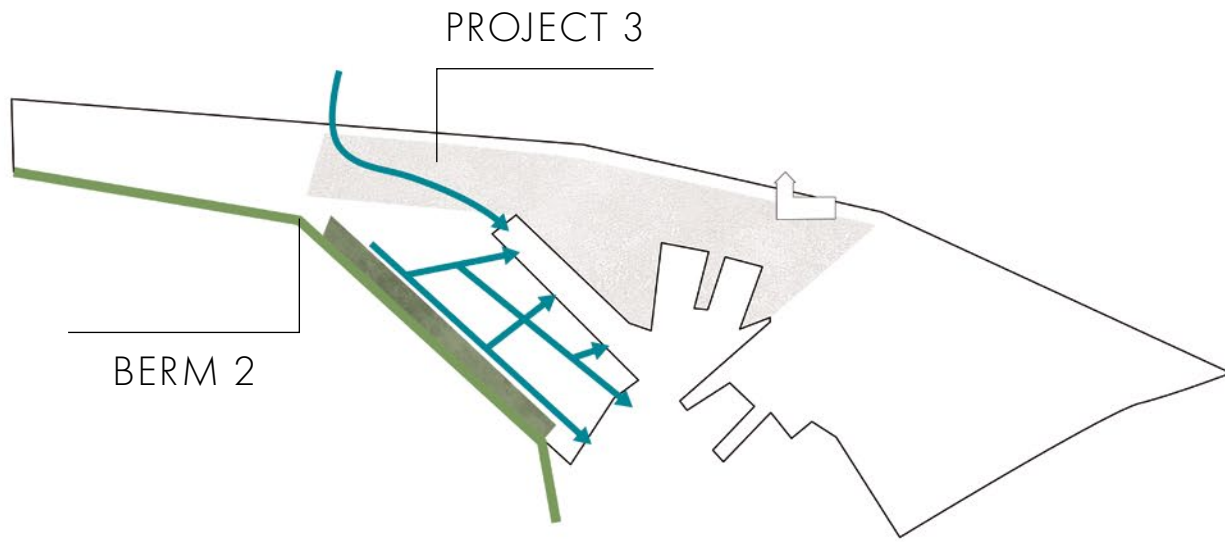
Building by the futher by the station while port is functioning in the new position

05



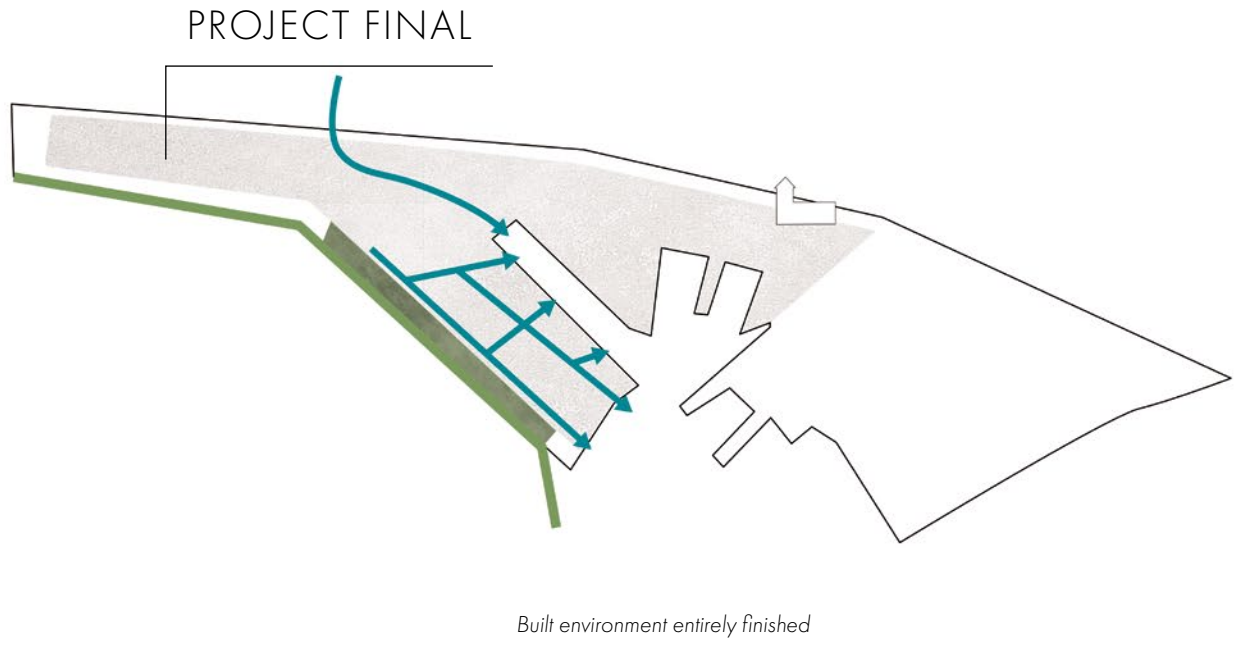
River is redirected and additional canals for the park are created

06

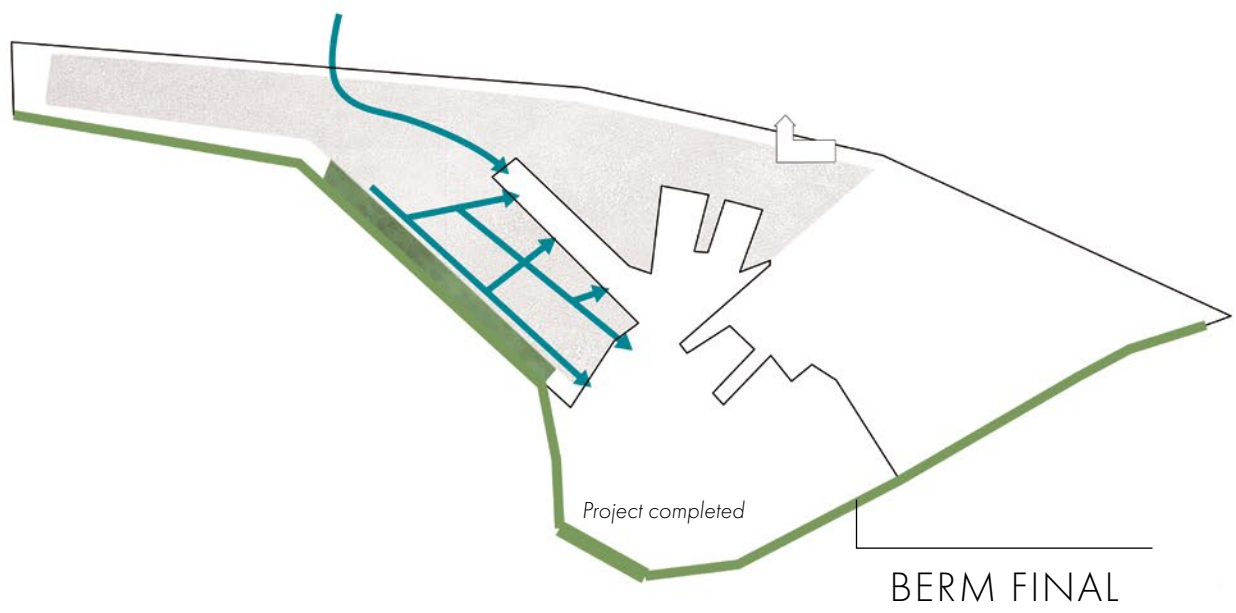


Project continues to develop west along the river

07



08





COUNTRY SIDE

THE LAKES

LOCAL MARKET

PROMENADE

GALLERIES

THE BEACH

PLAZA

PALM AVENUE

RIVER SIDE

MARITIME UNI

LEISURE PORT

HISTORIC CENTER

CULTURE HOUSE

THE BULEVOURD

STATION

THE HARBOUR BATH

FOCUS 1

SEASIDE FOREST

SILO HUB

"WELCOME"

DRAMA

FOCUS 2

CITY EYE



Plan of Focus Area 1 (Nature Within)

Nature Within

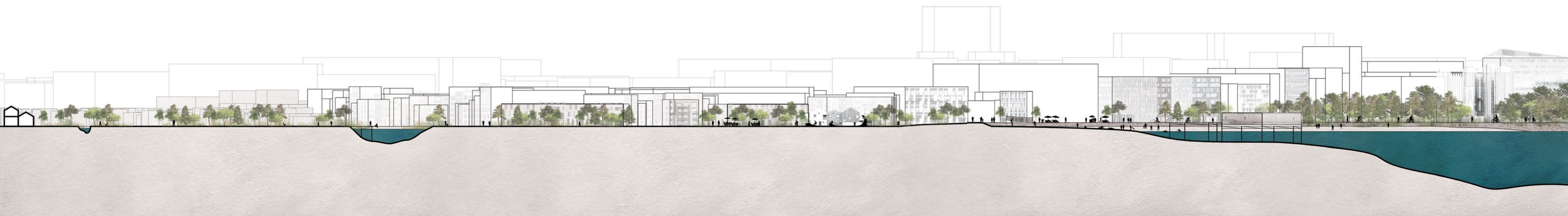
The first focus area that is a part of the green axis of Trelleborg includes several environmental and some important social solutions.

The biggest of them being the new protective berm by the coast that is both the destination and the path along the water and seaside forest. The park has the primary function to naturally clean and recycle all the grey and possibly also black water from the ferries, while also act as a wind breaking wall for the new part of the city and not least as a recreation park. Other benefits are the presence of water in the clean water canals in the newly designed streets and soft edge in the previously hard and unwelcoming harbour-scape.

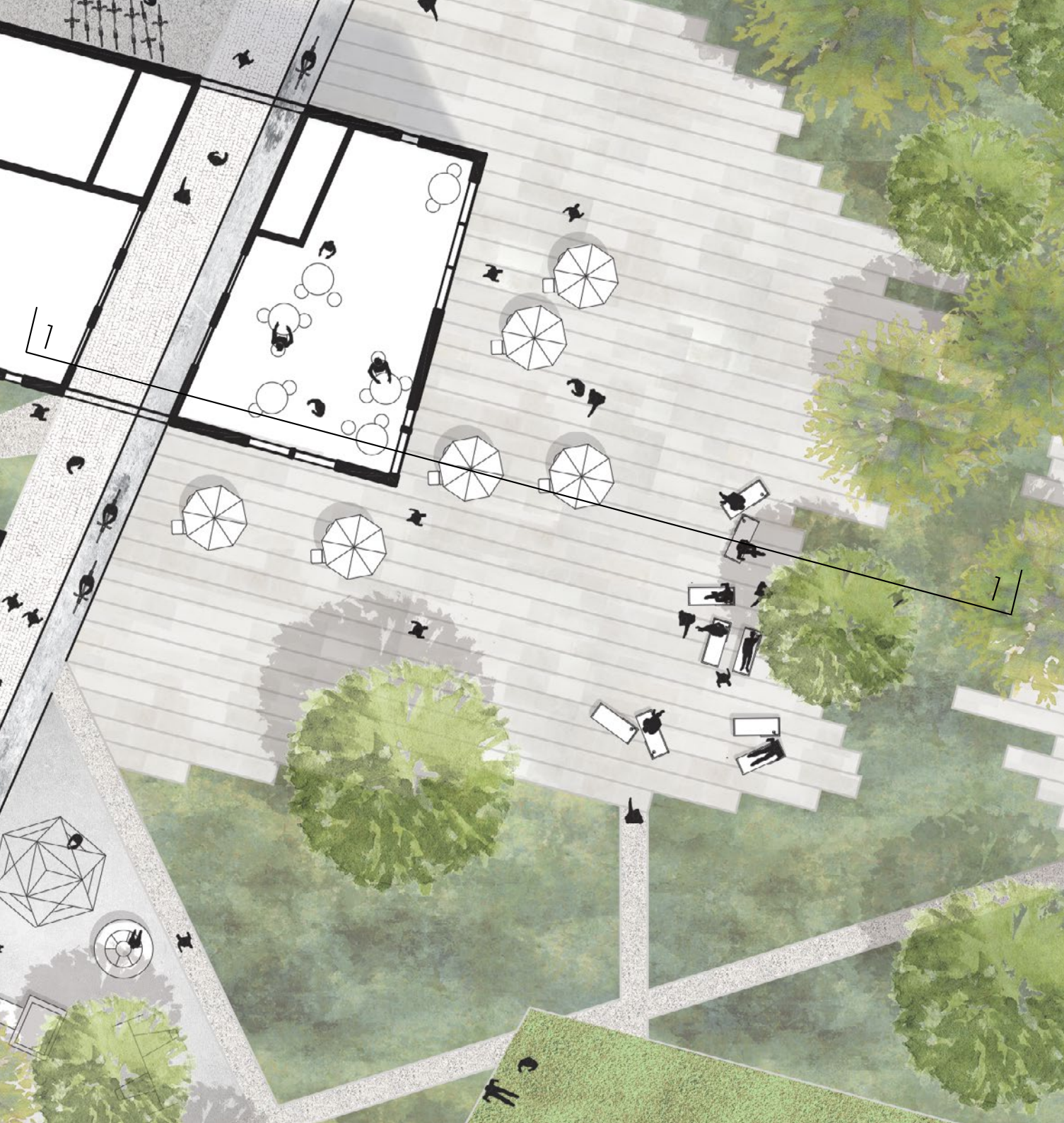
Due to the creation of the berm and need to collect the river water, several ponds and the redirected river winds through the built environment making more attractive outdoor spaces for the city's residents.

Moreover, the plan presents high quality beach and sauna house in the sea, large central meeting space that is defined by the greenery and clear built-up lines and local street that carries long history of being a palm avenue. This large green axis is also one of the city's south to north links to the agricultural fields and country side.

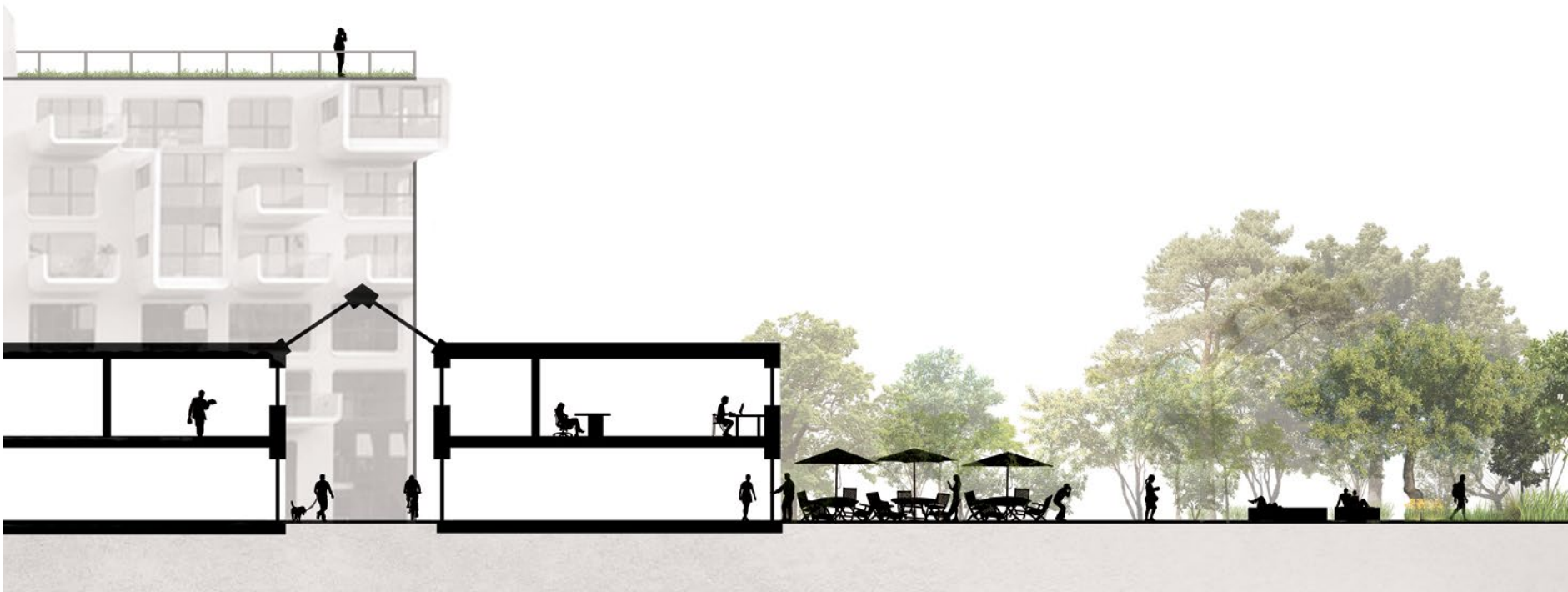
The new built volumes are meeting small scale historical street housing and integrates them back in the city by continuous pathways and attracting elements as the river ponds and meeting plazas.



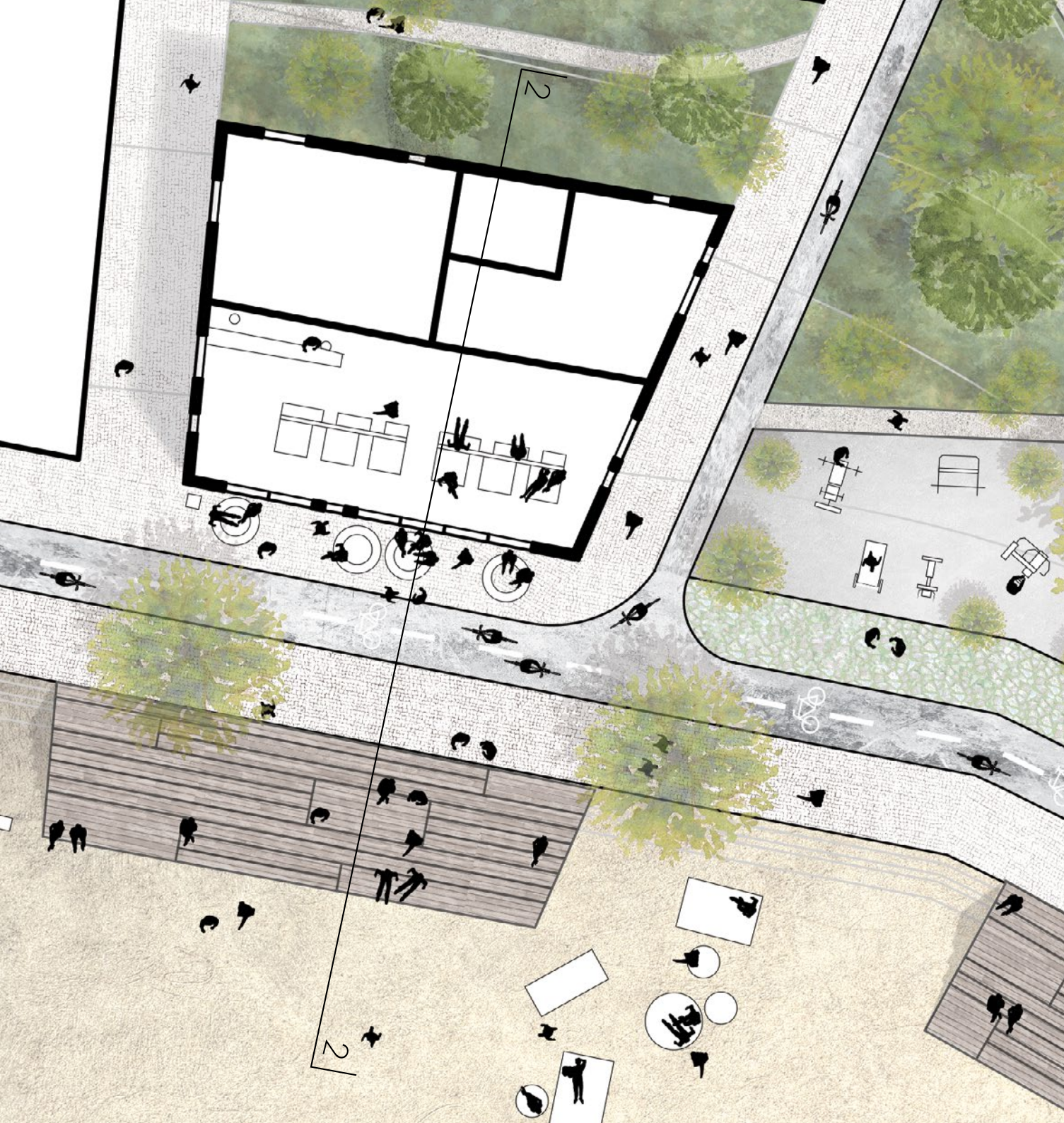
Cross-section A-A, focus area 1 (Nature Within)



Zoom in plan 1 (Nature Within)



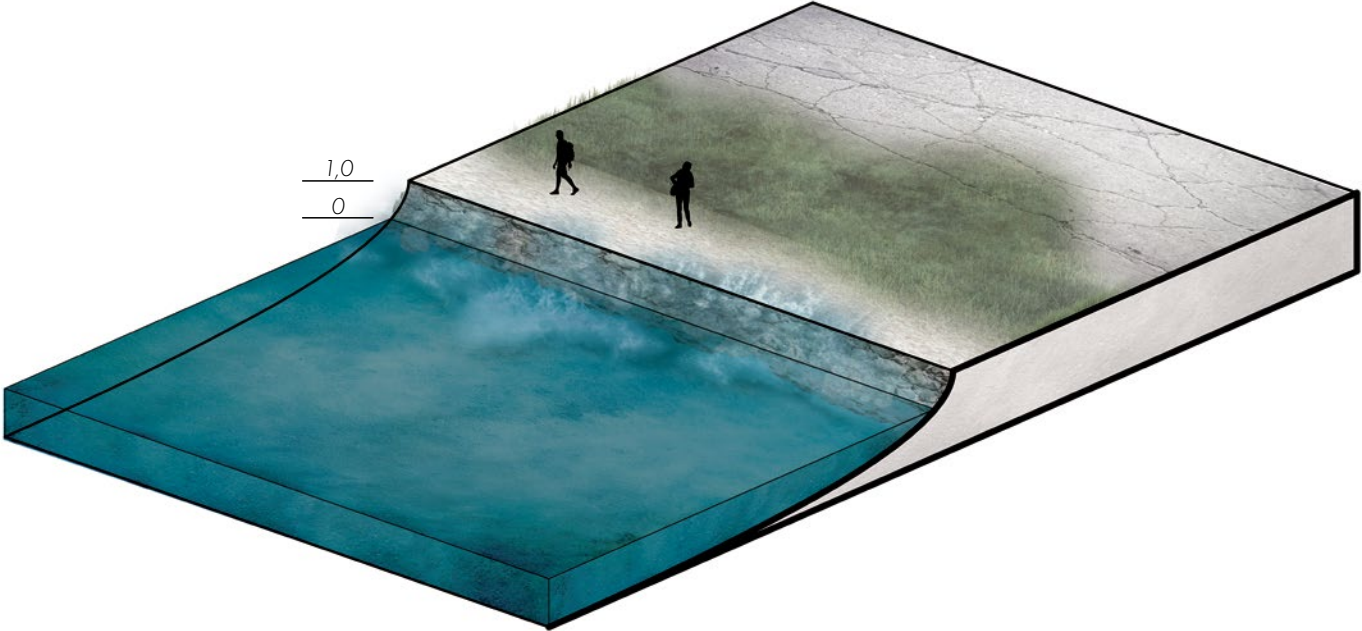
Section 1-1



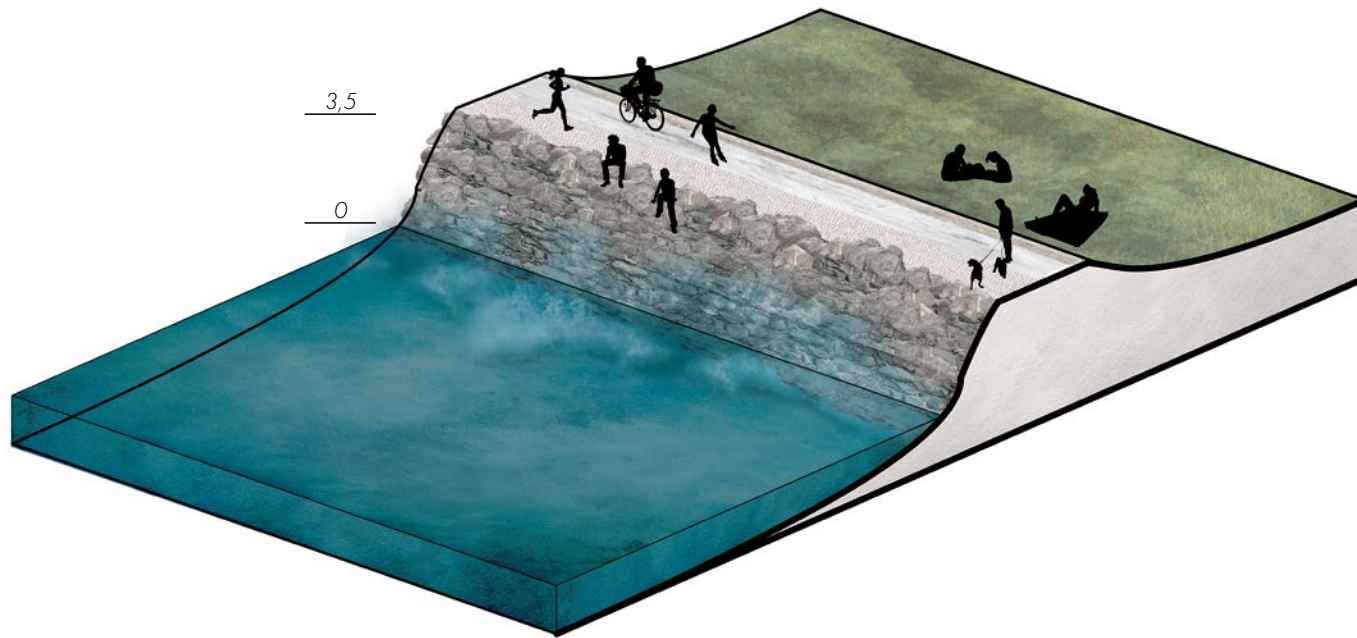
Zoom in plan 2 (Nature Within)



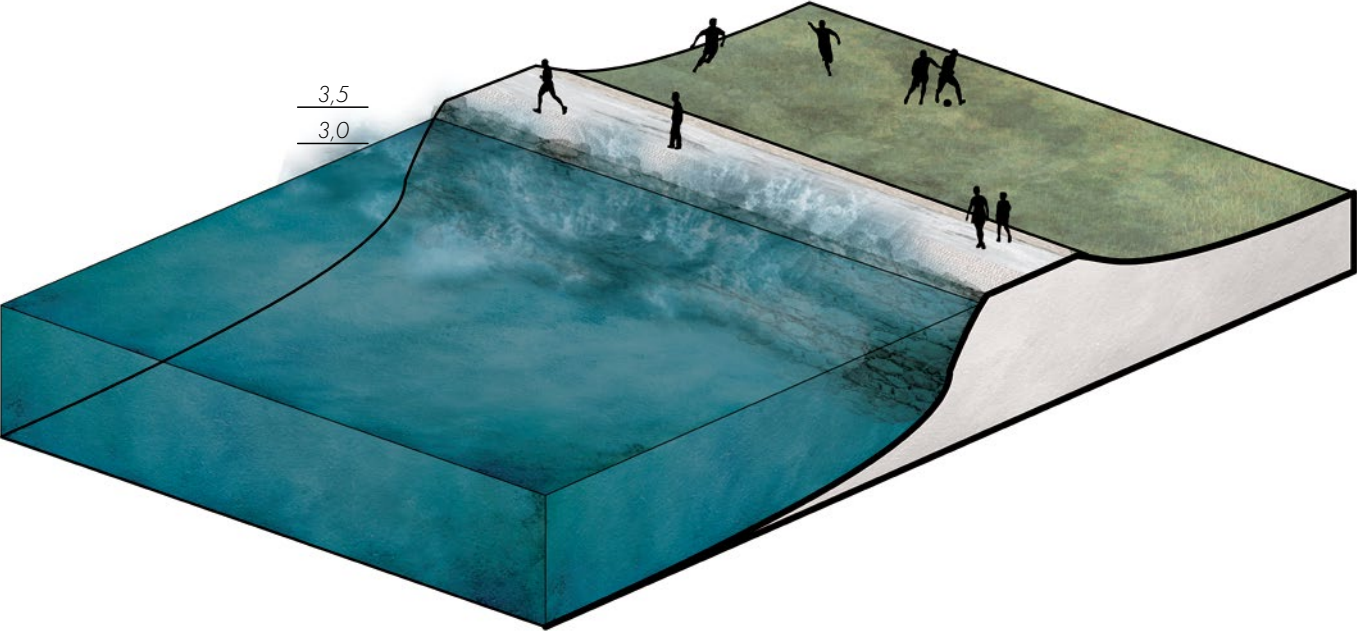
Section 2-2



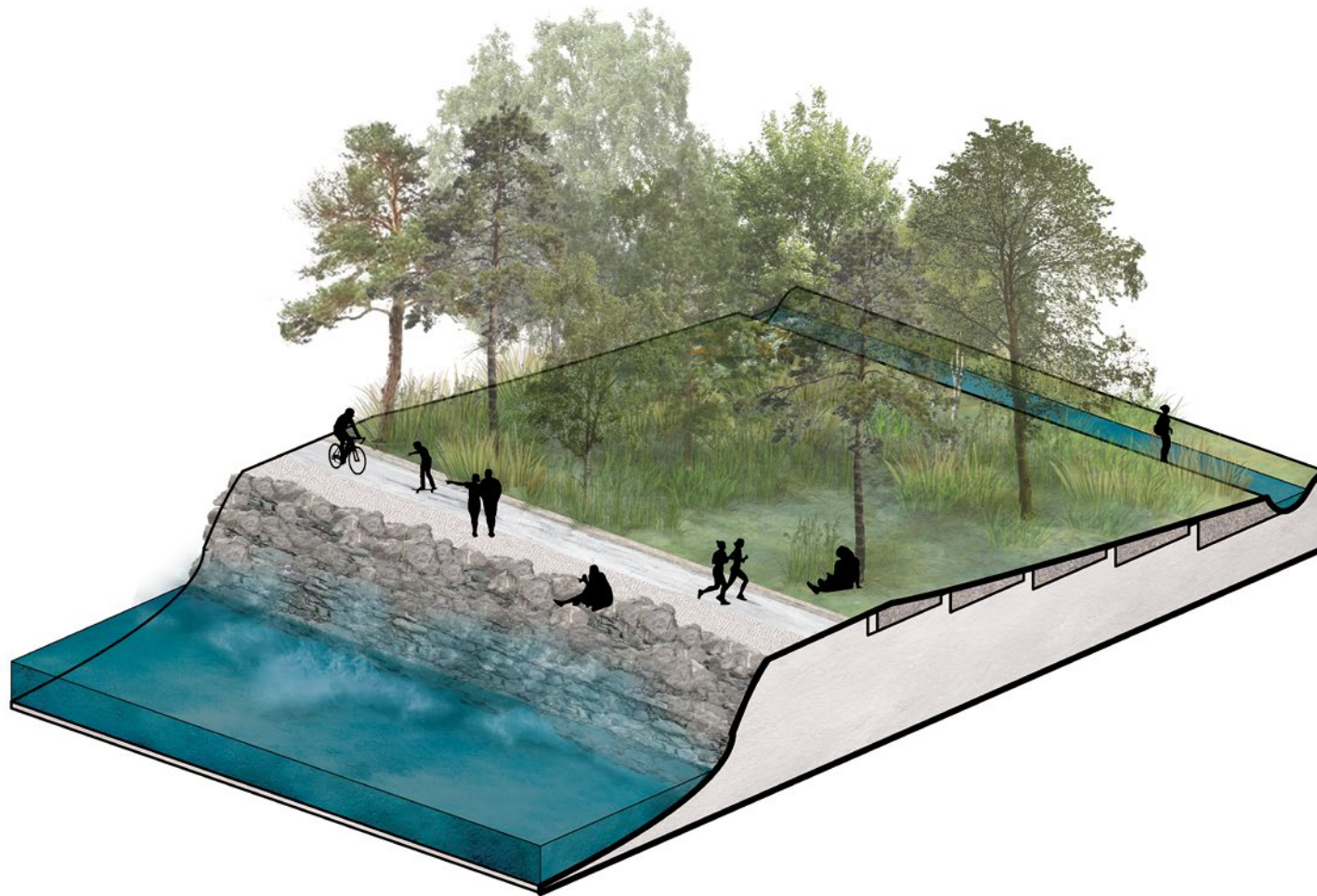
Existing edge of the outer harbour pier



Creation of the sea level rise protection infrastructure



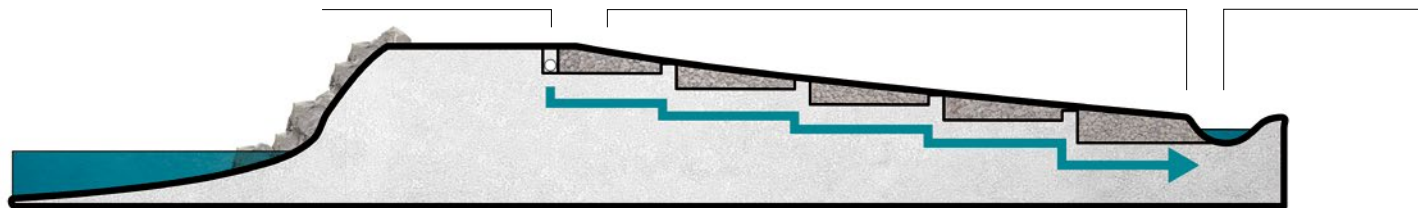
Future situation according to the worst scenario prediction



DELIVERY

STAGES

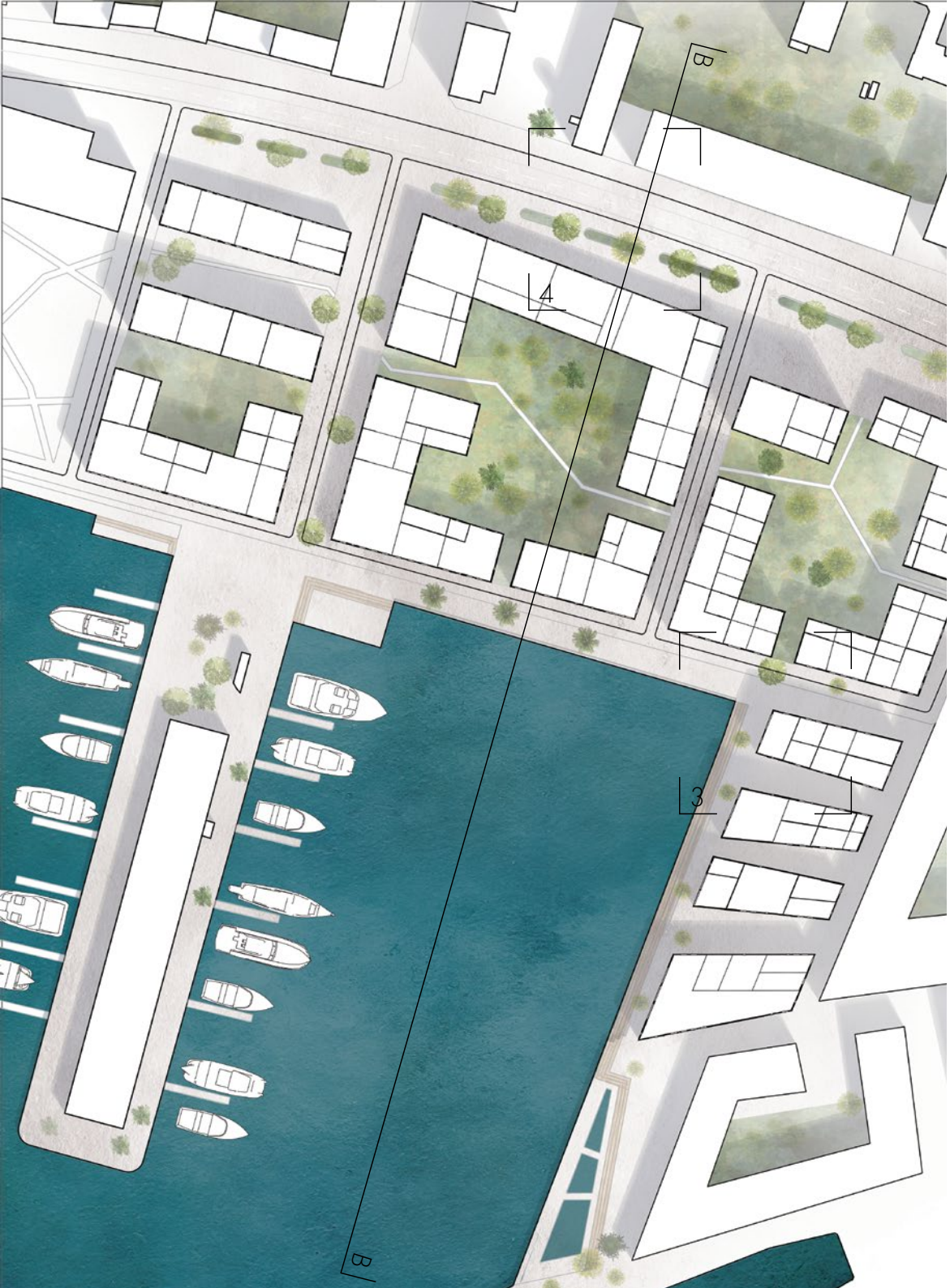
FINAL



Scheme of grey water cleaning system from the ferries



Visualization of the Focus Area 1 (Nature Within)



Plan of Focus Area 2 (City Edge)

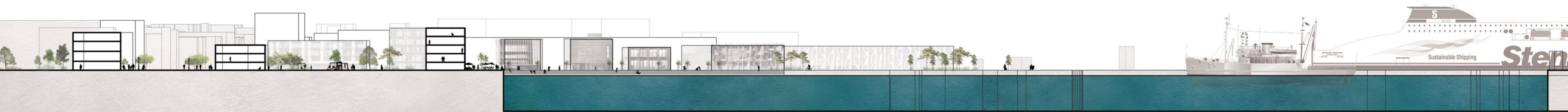
City Edge

The second focus point in the overall master plan is the station area or the extension of the city core. This area differs from the chosen materiality that is more expressing the character of a harbour by using hard surfaces and clear edges within the built environment. Greenery therefore is mostly in the semi-private courtyards and major streets.

All streets are designed continuously to the existing street grid and also visual axis from the city to the sea. This part of the new development is an addition to the existing pedestrian routes through the city center and all major attractions as the water tower, Stadsparken, the church and other historical buildings. These routes now lead down to the waterfront where a vivid urban life emerges. The highway is transformed to a local street with only two lanes both ways, bus and cycling lanes giving more space for pedestrians and commercial activities. The street is redesigned to remind about the historical boulevard that once was an important passage to the railway station (previously a Telegraph).

The former industrial port is changed to a leisure boat harbour that enriches the places around it and marks a new chapter of the 150 years long history of the harbour. Along the water edge there are different ways how people meet and experience it, including steps down the water level, edge that functions as a long seating and protection for pedestrian and cycling movement of greater intensity, as well as open-air public pools by the north edge of the pier and straight edge towards the small boat harbour.

A new large city plaza, a meeting place for any kind of public events is creating in front of an existing historical port building that is iconic for the city.



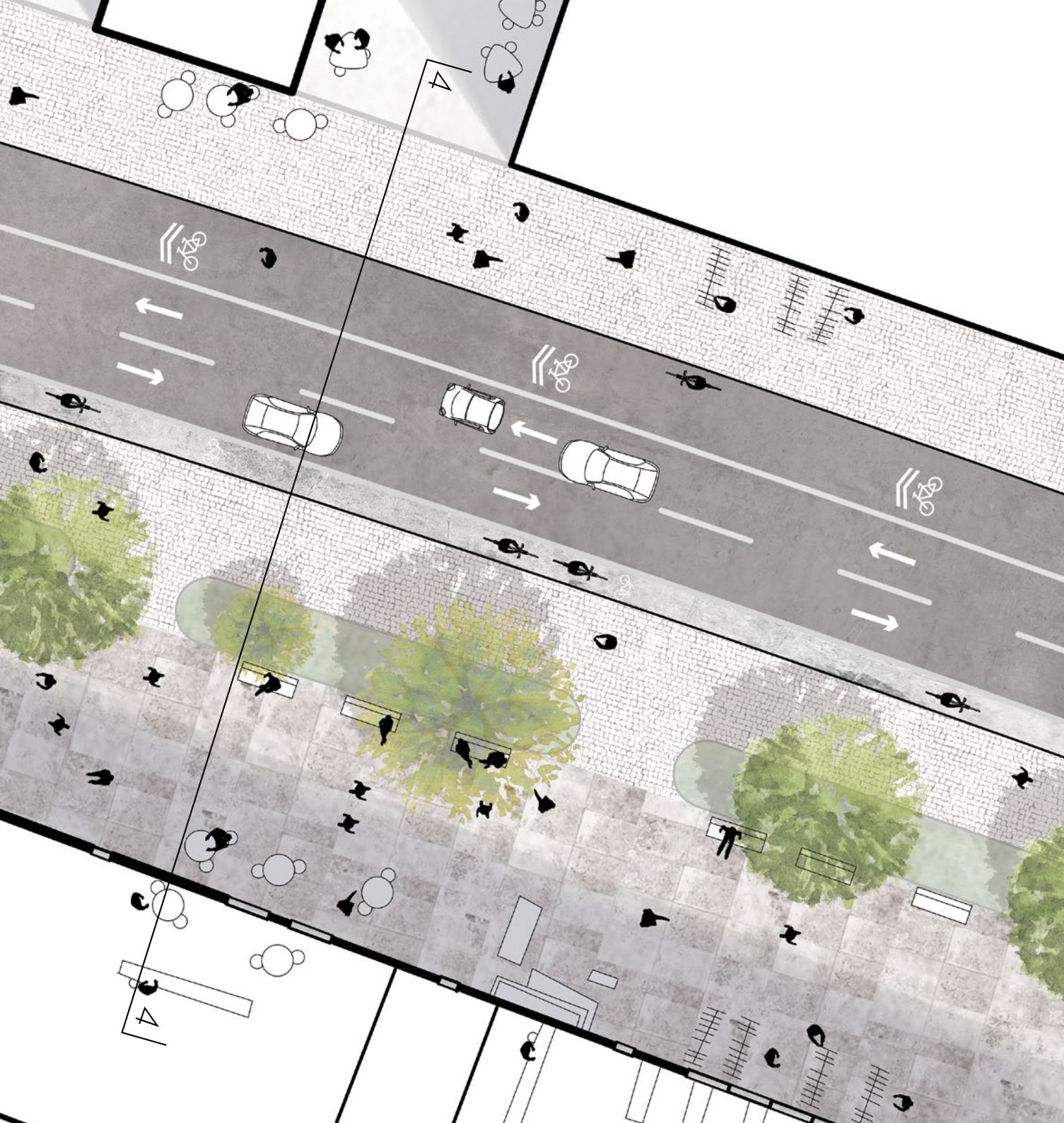
Cross-section B-B, focus area 2 (City Edge)



Zoom in plan 3 (City Edge)



Section 3-3



Zoom in plan 4 (City Edge)



Section 4-4



Visualization of Focus Area 2 (City Edge)

9. SOURCES

Books:

Harry Smith and Maria Soledad Garcia Ferrari (ed.), 2012, *Waterfront Regeneration: Experiences in City-building*, New York, United States of America

Ann Breen and Dick Rigby, 1996, *The New Waterfront: A worldwide Urban Success Story*, London, England

Ann Legeby, 2013, *Patterns of Co-presence: Spatial Configuration and Social Segregation*, PhD Dissertation, KTH Architecture and Built Environment, Stockholm, Sweden

Clare Cumberlidge and Lucy Musgrave, 2007, *Design and Landscape for people: New Approaches to Renewal*, New York, United States of America

Paul Sherfey, 2011, *Managing Otherness: Segregation, sociality, and the planning of a sustainable Helsingborg* Master of Applied Cultural Analysis, Lund University, Lund, Sweden

Davies, C.A. (2008). *Reflexive ethnography*. New York: Routledge.

Kusenbach, M. (2003). "Street phenomenology: the go along as ethnographic research tool." In *Ethnography*, 4(3), 455-485.

Web:

Fraser Nelson, 2015, *The Telegraph News*. Available from: <http://www.telegraph.co.uk/news/worldnews/>

europe/sweden/11992479/How-Sweden-the-most-open-country-in-the-world-was-overwhelmed-by-migrants.html>. [February 2016].

Margaret Wentz, 2015, *Sweden's Ugly Immigration Problem*, *The Globe and Mail*. Available from: <http://www.theglobeandmail.com/opinion/swedens-ugly-immigration-problem/article26338254/>>. [February 2016].

Segregation, (wiki article), 8 February 2016. Available from: <https://en.wikipedia.org/wiki/Segregation>>. [February 2016].

Richard Florida, 2015, *Economic Segregation and Inequality in Europe's Cities*, *City Lab*. Available from: <http://www.citylab.com/work/2015/11/economic-segregation-and-inequality-in-europes-cities/415920/>>. [February 2016].

Communication BK, 2015, *Increasing Segregation in European Cities due to Income Inequality*, TU Delft. Available from: <http://www.tudelft.nl/en/current/latest-news/article/detail/groeiende-segregatie-in-europese-steden-door-inkomensongelijkheid-2/>>. [February 2016].

Social Integration Commission, n.d., *Kingdom United? Thirteen Steps to Tackle Social Segregation*. Available from: http://socialintegrationcommission.org.uk/images/sic_kingdomunited.pdf>. [February 2016].

Howard Perlman, 2015, *U.S. Department of the Interior, U.S. Geological Survey*. Available from: <http://water.usgs.gov/edu/propertyou.html>>. [February 2016].

The Central Intelligence Agency, 2016. Available from: <https://www.cia.gov/library/publications/the-world->

factbook/geos/sw.html>. [February 2016].

World Atlas, 2015. Available from: <<http://www.worldatlas.com/webimage/countrys/europe/sweden/seland.htm>>. [February 2016].

Västra hamnen, (wiki article), 17 February 2016. Available from: <https://en.wikipedia.org/wiki/V%C3%A4stra_hammen>. [February 2016].

Bo01, (wiki article), 22 December 2014. Available from: <<https://en.wikipedia.org/wiki/Bo01>>. [February 2016].

Chris Hancock, n.d., Article - Towards a Sustainable City. Available from:<http://malmo.se/download/18.4a2cec6a10d0ba37c0b800012617/article_towards_sustainable_city.pdf>. [February 2016].

Aker Brygge Oslo, n.d. Available from: <<http://www.akerbrygge.no/english/>>. [February 2016].

Aker Brygge, (wiki article), 19 September 2015. Available from: <https://en.wikipedia.org/wiki/Aker_Brygge>. [February 2016].

Aarhus Docklands, (wiki article), 13 February 2016. Available from: <https://en.wikipedia.org/wiki/Aarhus_Docklands>. [February 2016].

Aarhus Kommune, n.d., Aarhus Ø – den nye bydel på havnefronten. Available from: <<http://www.debynaerehavnearealer.dk/da/Overblik.aspx>>. [February 2016].

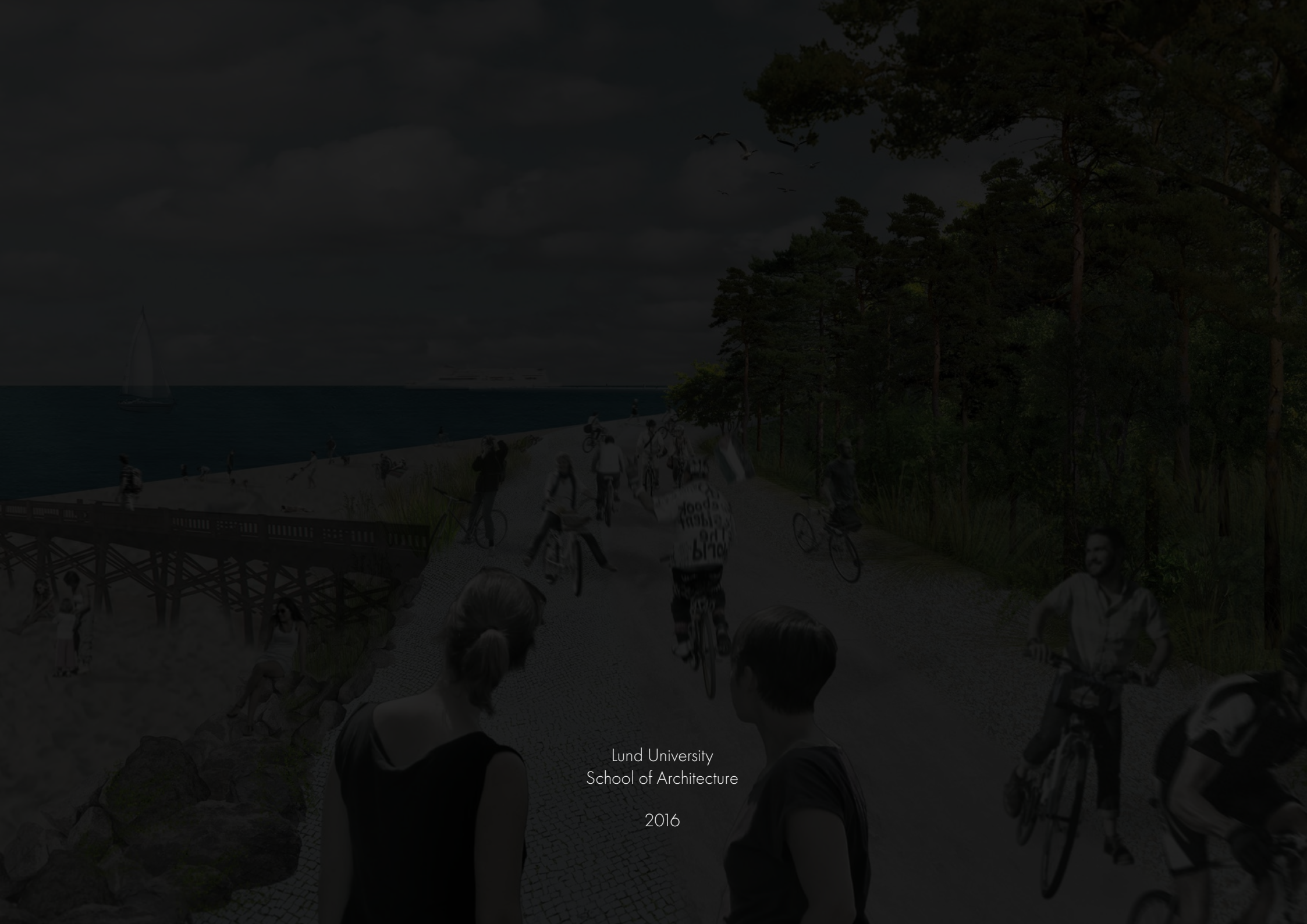
Ingrid Wall, 2013, Trelleborgs Kommun. Available from: <<http://www.trelleborg.se/sv/kommun-politik/kommunfakta/trelleborgs-historia/>>

Trelleborg, (wiki article), 31 December 2015. Available from: <<https://en.wikipedia.org/wiki/Trelleborg>>. [March 2016].

Visit Sweden, n.d. Available from: <<https://visitsweden.com/verige-dk/Regioner-og-Byer/Sydsverige/Skane/Byer-Skane/Trelleborg/>>. [March 2016].

Facts about Skåne, n.d. Available from: <<http://www.skane.com/en/facts-about-skane>>. [April 2016].

Scania, (wiki article), 9 April 2016. Available from: <<https://en.wikipedia.org/wiki/Scania>>. [April 2016].



Lund University
School of Architecture

2016