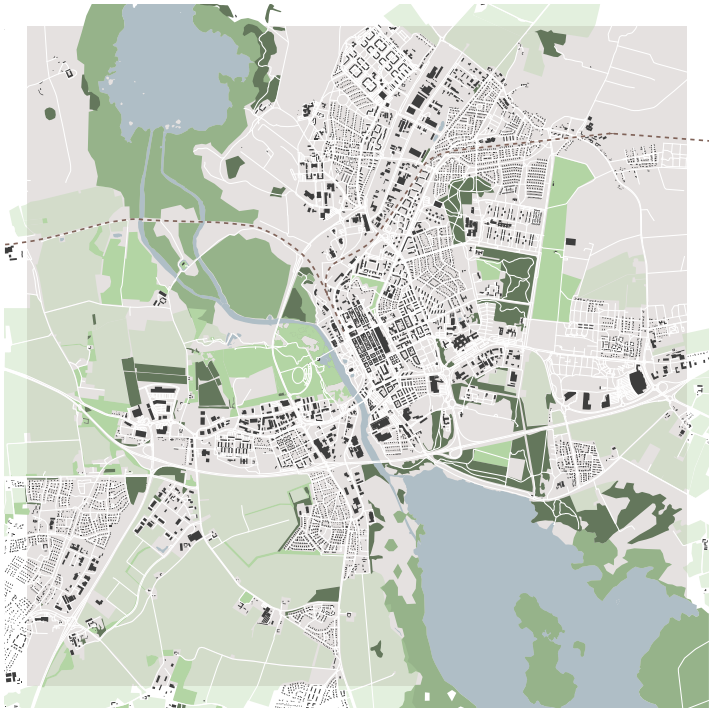
In the Interface Between Nature and City

how integration of nature could contribute to new kinds of meeting places around the city center



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2025

Examiner: Meta Berghauser Pont
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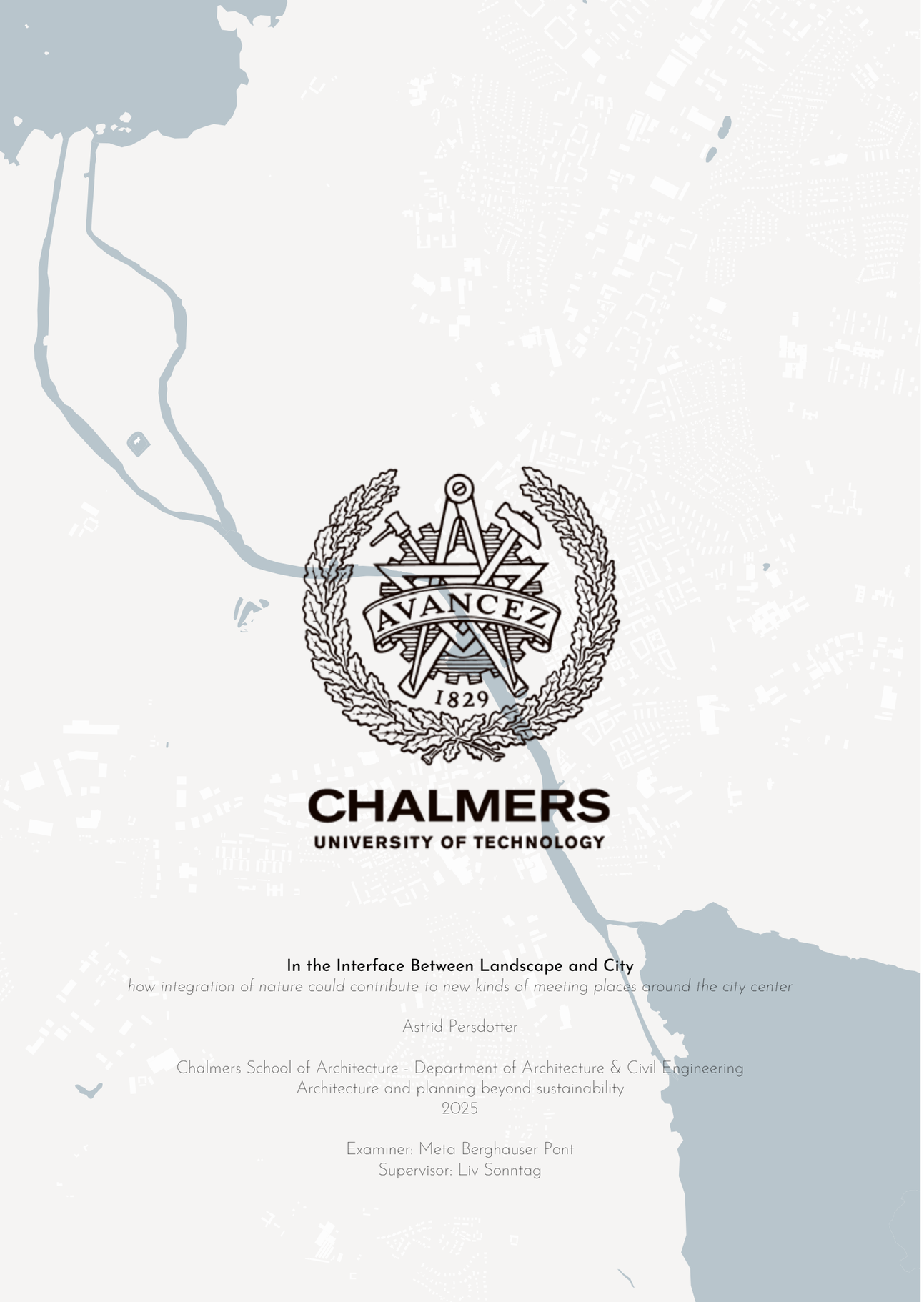

In the Interface Between Landscape and City

how integration of nature could contribute to new kinds of meeting places around the city center

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Abstract

In this master thesis project the aim was to investigate how natural and urban elements could be integrated in the transition zone between the built city center and the natural landscape, to create new kinds of meeting places. This was done by studying both theoretical and practical references. In the theoretical section, the social and ecological benefits of nature in cities, as well as the change of the city center's role, and urban qualities of public spaces were studied. The practical references, which consisted of reference projects and guidelines, supported transforming the theory into practice.

The study focused on Kristianstad, a medium-sized city in southern Sweden. The city is located in the biosphere reserve Vattenriket, which works as a role model for sustainable development for landscapes and nature conservation. Vattenriket, with its aim, focus and ongoing projects, worked as a resource and a guideline for sustainable urban development in this project.

The site in focus is located in the interface between the city center and the landscape of Vattenriket. Water has since the city's founding in 1614 had a big role on the site, and the aim of the design was to once again give space to water, and thereby meeting the challenges of flooding in the city, as well as making space for people and biodiversity. Shortly, a human-nature interaction was strived for, in a space with strong natural and urban qualities. The result was a kind of water park with bathing possibilities in Helge river. Here, humans can interact with each other, with water and with several biotopes.

By doing elaborated desk research, mapping, studying references, doing site visits and observations, interviews, and sketching, an understanding of the site, natural elements in cities, sustainable urban planning, and what inhabitants actually want and wish for, was aimed for.

The thesis was a collaboration with the Biosphere Office at Kristianstad municipality.

Key words: *nature in cities, biosphere reserve, biodiversity, human and nature interaction, meeting places, city centers, health, interface, bluegreen structures, sustainable urban planning*

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Student Background

I am a sustainability-oriented architecture student with a strong interest in public spaces. My experiences include working contextually, collaborating with various stakeholders and target groups, and balancing practice with theory. I am particularly drawn to working in the intersection of urban planning, architecture, and landscape architecture. In my architectural projects, I strive to strengthen the connection between nature and people, implement climate-smart solutions, and enhance the qualities of spaces.

Education

2023-2025 **Architecture and Planning Beyond Sustainability, MSc**
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Content

Fig 1: Vattenriket's visitors' place Näsby fields

INTRODUCTION

This chapter introduces the reader to the master's thesis project, by explaining the background and the purposes of the thesis, presenting the aim and the research questions, and showcasing the structure of the project. The project structure involves the subjects addressed in the thesis, and how they relate to the methodology.

Background

In 2014 Kristianstad received the award "City center of the year" in Sweden (*Kristianstad blev Årets stadskärna 2014*, 2014). Ten years later, the city center is struggling to stay alive (*Erlingson*, 2024). This could be derived from several factors, for instance the construction of two shopping malls in and outside of the city center, the pandemic, the increase of online shopping and recession in Sweden. Times are changing and so is the role of our city centers (Start, n.d.). With knowledge, driven stakeholders and skilled planners, this could be a possibility rather than a decline.

In Kristianstad, the biosphere reserve Vattenriket is a big resource (*Kommunfakta*, 2024). A biosphere reserve is an area appointed by the UN body UNESCO, which is supposed to act as a role model for sustainable development in landscape and nature conservation. Vattenriket, with its strong natural and cultural historical values, has become a big identity for the municipality as well as for the city. There is an opportunity to integrate that even more in the city center, both for the city to be able to act as a role model in sustainable urban development as well, and to give the city center a new role and character. Since water is the reason for Kristianstad's founding in 1614 , and since then has been a part of the city's development, giving space to water would also connect to Kristianstad's history (*Lokalhistoria*, 2024).

In an ongoing global urbanisation, there is a significant focus on bigger cities, urban densification, metropolitan regions, and growth in the urban planning discussion (Björling & Rönnblom, 2023). The medium-sized and smaller cities are sometimes a bit forgotten in this discussion, although they have urban qualities that bigger cities do not always have. They are often more dense, the scale more human, there are more local initiatives and greater cohesion, and you can achieve a bigger impact by smaller changes (Kwiatek-Sołtys & Mainet, 2014).. To ensure best possible urban sustainable development, the urban planning discussion needs to be more inclusive, and more specified on smaller cities as well. So that smaller cities do not believe they have to act as the bigger cities when developing.

Problem - resource - general issue
In summary, there are three reasons for working on this project:

1. *Site-specific problem:* The city center's former strong trading character has decreased in the last ten years. Many commercial spaces are today empty and there are less people and activities in public space.
2. *Site-specific resource:* The city center is located in the middle of Vattenriket, a biosphere reserve pointed out by UNESCO, to act as a model area for sustainable development. The area has strong cultural and natural values, and attracts many visitors.
3. *General issue:* Medium-sized and smaller cities are a bit forgotten in the sustainable urban development discussion, although they have good conditions for being sustainable role models.

Purpose

The essential purpose of the thesis are to answer to the three aspects lifted in the background:

1. Site-specific problem - city center in change:
To give alternative, sustainable, functions to the city center, other than commercial.

2. Site-specific resource - Vattenriket:
To enhance the city center's character as the city in the middle of Vattenriket, by communicating Vattenriket's values in placemaking.

3. General issue - medium-sized and smaller cities:
To let the smaller cities be role models in sustainable urban development.

These purposes are merged together in the aim (see next page), which in turn result in one research questions, divided in three sub-questions in different categories.

Fig 1: Kristianstad. The city center is located in the middle of the biosphere reserve Vattenriket (*Biosfärområde Kristianstad Vattenriket*, 2018)

Aim and Research Questions

The aim of the thesis is to handle the importance of nature in cities, the problems that transforming city centers are facing today, and discuss how Kristianstad, the city in Vattenriket, could act as a role model for sustainable planning.

How can natural and urban forms be integrated at the interface between the natural landscape and the city to create spaces for interaction between humans and nature?

Nature and biodiversity in cities
- How can natural elements in cities provide ecological and social benefits?

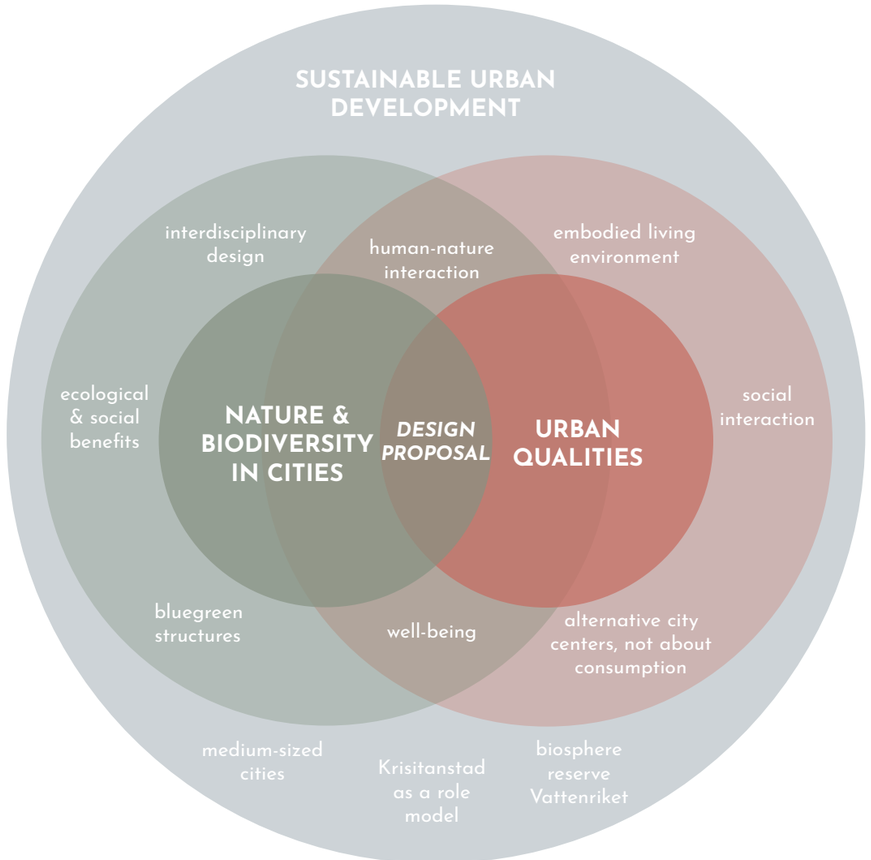
Urban qualities for interaction
- How can cities (especially city centers) in transformation provide (non-commercial) functions and spaces for interaction?

Sustainable urban development
- How can Kristianstad, the city in Vattenriket, act as a role model for sustainable urban development, regarding human-nature interaction in cities?

The first two questions will be answered using a variety of methods to gain insight, and by proposing design strategies and developing a concrete design proposal for one site. The last question will mainly be covered in the discussion part of the thesis.

Project Scope

The diagram shows the scope of the project. The three main themes, their content and their relation is illustrated. The theoretical framework on the next page is a development of the project scope diagram, and explains what specific subjects, theories and references that have been studied and analysed in the theoretical part of the thesis.



Theoretical Framework

How can natural and urban form be integrated in the interface of natural landscape and city, to create places for interaction between humans and nature?

	Subjects to analyse	Main theory	Other references	Methods
THEORY				
Nature and biodiversity in cities **How can natural elements in cities provide ecological and social benefits?**	Benefits of nature in cities	Article: *The green soul of the concrete jungle*		Desk research Mapping Interviews Analysing sites
	Ecological aspect: biodiversity in cities	Research: Biodiversity creates resilience		
	Social aspect: 3-30-300	Theoretical model: 3-30-300		
	Environmental psychology	Theoretical model: *Perceived sensory dimenions*		
Urban qualities for interaction **How can cities (especially city centers) in transformation provide (non-commercial) functions and spaces for interaction?**	City center's role in change	Report: *The future's city center*		Desk research Analysing sites
	How placemaking affects its context	Theory: *Theory of natural movement*		
	Urban qualities	Theory: Jan Gehl's theories on urban space		
CONTEXT & SITE				
Sustainable urban development ***For discussion:*** **How can Kristianstad, the city in Vattenriket, act as a role model for sustainable urban development?**	Kristianstad's visions and urban planning goals		The municipality's identity, goals and comprehensive plan	Desk research Collaboraiton with stakeholders Interviews
	Biopshere reserve Vattenriket's visions and guidelines		Biosphere reseve Vattenriket's knowledge, visions and work	
Site analysis ***Kristianstad, Vattenriket & Båthamnen***	Context: Kristianstad and Vattenriket		The municipality's: website, map service, flooding documents	Desk research Mapping Collaboration with stakeholders SWOT Site visits in Vattenriket and the city
	The plot: history, future, area, conditions		Information about Vattenriket	
	Flooding			

design framework (p. 52)

concept → **design strategies** → **DESIGN**

Methods, Tools, and Sources of Information

Methods

Referencing
Referencing involved analyzing reference projects, approaches, documents, and sites to gain inspiration in various forms. It served as a way to connect research, design, and impact. The Vattenriket Biosphere Reserve was a key reference in this thesis.

Sketching
Sketching was used to explore ideas in plan, section, and perspective. It supported the iterative development of concepts and was performed both by hand and digitally.

Mapping
Mapping facilitated spatial understanding across scales. It involved creating diagrams, identifying places of interest, and tracking historical development. This helped visualize spatial relationships and inform design decisions.

Modelling
Modelling was used to test and communicate design ideas in three dimensions. Both physical sketch models and digital models were employed throughout the design process.

Site Visits
Site visits were conducted in the selected project area, Kristianstad city center, and relevant areas within Vattenriket. They provided first-hand observations and sensory input, supporting site analysis and inspiration. Additional site visits to other locations offered comparative insights.

Collaboration with experts and s takeholders
The project included collaboration with the Biosphere Office at Kristianstad Municipality. This involved meetings, interviews, and feedback, ensuring alignment with Vattenriket's guidelines and incorporating expert knowledge.

Tools

QGIS
Used for geospatial analysis and mapping.

Adobe Illustrator
Employed for diagramming and refining maps and visual representations.

Adobe Photoshop
Used for refining visual material.

Google Maps
Utilized for general site orientation and spatial context.

Kristianstad municipality's map service
Provided detailed local maps and spatial data for analysis and mapping.

Rhino
Used for 3D modelling, both for testing ideas and for presenting the finale design.

Sources of information

Online platforms and media
Local Facebook groups and articles from regional newspapers were reviewed to gain insights into the perceptions and ideas of Kristianstad residents.

Desk research
Academic literature, reports, and background documents were studied to inform the theoretical framework and provide contextual understanding.

Fig 2: Boardwalk in Årummet, part of Linnérundan

THEORY

Nature and Biodiversity in Cities
Urban Qualities

This chapter integrates knowledge from scientific literature, policy reports, interviews with planners from Kristianstad, and analyses of Kristianstad relating to the theory presented. To highlight the site analyses, these excerpts are presented in coloured text boxes.

Nature and Biodiversity in Cities

The benefits of nature in cities

The article The Green Soul of the Concrete Jungle, handles the issue of nature, or lack of nature, in cities (McDonald et al., 2018). The paradox, that "Cities are quintessentially human, yet often shockingly inhumane" (McDonald et al., 2018), is presented first. What the authors mean is that cities are an expression of our deep need for social interaction, but the spatial environment is often not the ones we evolved as a species to handle.

The importance of nature and recreation, both for the climate and for our health, is argued for with a lot of research through the article. For the climate, natural infrastructure that generate ecosystem services in cities are highlighted. For physical health, two activity domains connected to urban form are stated: transport and leisure activities. Regarding mental health, three consequences of spending time in nature, and nature integrated in cities, are presented: increased social cohesion, stress reductions, and improvement in mental health.

It is stated that only 13 % of urban dwellers are living in neighbourhoods with more than 20 % forest cover, which, according to research, is enough to experience its mental health benefits. The authors argue that "nature can make cities more humane in the fundamental sense of according with the needs of human well-being and happiness." (McDonald et al., 2018). Biophilic urban design and biophilic cities, and a nature-immersive view of cities, are presented as solutions to strive for.

Nature-based solutions

According to Naturvårdsverket, nature-based solutions are "measures based on nature's ability to address societal challenges." (*Naturbaserade lösningar*, n.d.) Issues such as emission reductions, climate adaptations and human health are suggested for where nature-based solutions can contribute to a more sustainable society. The solutions are characterised by handling societal challenges by strengthening ecosystems, biodiversity and human well-being, while also being cost-efficient and multifunctional. In other words, nature-based solutions are a way of developing ecosystem services. By developing ecosystem services, a wide variety of challenges, for instance regarding climate change, can be faced.

Naturvårdsverket lists some examples of nature-based solutions:

- In the city: stormwater parks that take care of stormwater and flooding.
- Within agriculture: restoring wetlands to solve the problem with shortage of water.
- In the forest: mixed forest, to strengthen the forest's ability to generate ecosystem services.
- Along the coast: installing fences made of woven wood to counteract erosion and protect the built areas nearby.

Ecosystem services in Kristianstad

Kristianstad municipality has carried out a mapping of ecosystem services in the municipality (Kristianstad Kommun, 2017). In this report, the relevant ecosystem services in the municipality are listed. They are divided into four categories:

- supporting ecosystem services
- regulating ecosystem services
- providing ecosystem services
- cultural ecosystem services.

In the report, ecosystem service analyses have been made in different areas of the municipality, by investigating the ecosystems' ability to deliver services. The areas' ecosystems are evaluated in the following criterias:

- natural values, diversity, continuity, ground- and water use
- impact on the ecosystems
- the four categories of ecosystem services
- multifunctionality

The result is presented simply: either the area produces a surplus, a balance or a shortage of ecosystem services.

In this project, the most relevant areas to look at are wetlands and the city:

- The wetland: high natural values, diversity, continuity, and connectivity. Affected by the climate and by ground usage upstreams Helge river. Its ecosystem services are supporting, regulating and cultural. The ecosystems are multifunctional. The area has a surplus of ecosystem services.
- The city: some natural values. Affected by climate, noice, pollution, due to intense ground and water usage, dense built environment, infrastructure and hardened surfaces. Cultural ecosystem services. The ecosystems have a few functions. The area has a shortage of ecosystem services.

Fig 3: Ecosystem services relevant in the city (*Ekosystemtjänster – Biosfärområde Kristianstads Vattenrike*, n.d.)

Social aspect

Some of the positive social consequences due to nature in cities have already been mentioned. In Region Skåne's report 3-30-300 *i Skåne*, nine possible consequences from how greenery in cities contribute to health are presented (3-30-300 *i Skåne*, n.d.). These are based on a report from The scientific council for sustainable development (2019), are are:

- increased relaxation and less stress - studies have shown that urban greenery decreases stress by decreasing the secretion of cortisol. There is also scientific evidence that spending time in natural areas leads to less brain activity associated with frustration and incitement.
- strengthens the immune system - this directly connects to the consequence of less stress. When chronic stress is decreased, so is the risk of high concentrations of specific inflammatory markers.
- increased social capital - urban greenery can encourage social interaction and the sense of community.
- increased physical activity - internationally, it is reported that the more urban greenery there is, the more physical activity as well.
- better exposure of sunlight and better sleep - directly connects to increased physical activity. The more physical activity, the more exposure of sunlight, which leads to better sleep.
- less exposure of noise - urban greenery reduces the noise related irritation.
- less exposure of air pollution - urban green structures work as natural ventilation.
- less exposure of urban heat island - by having trees and greenery, urban areas are cooled down during heat waves. In extreme climates, this can save lives.
- increased environmental behaviour - by being in natural environments, a more environmentally friendly behaviour is induced, especially during childhood.

The 3-30-300 rule

In the report, the 3-30-300 rule is presented (3-30-300 *i Skåne*, n.d.). The rule is developed by Cecil Konijnendijk, a professor in Urban Forestry and docent in Nature Based Solutions Institut, and works as a guideline for greenery in cities. It is presented in the article *Evidence-based guidelines for greener, healthier, more resilient neighbourhoods: Introducing the 3-30-300 rule* (Konijnendijk, 2023).

The rule, which rather works as a guideline with threshold numbers, implies:

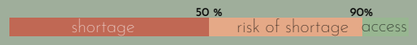
- at least 3 trees in view from every home, school and place of work,
- no less than 30 % canopy in the neighbourhood
- a maximum of 300 metres between housing and a bigger green area (according to WHO, this are should be no less than 0,5 hectare).

The model presents a level of access to green structures that, according to today's research, is estimated to promote sustainable urban development and healthy living environments. In the report 3-30-300 *i Skåne*, analyses of green areas in cities in Skåne have been made.

The 3-30-300 rule in Kristianstad

3 trees visible from each housing

Looking at the first step in the rule, 3 trees visible from each housing, an evaluation matrix is proposed (3-30-300 *i Skåne*, n.d.):



In the Kristianstad urban area, **31 % of housing has a view of at least three trees**, meaning there is a **shortage** in this category.

Canopy

Canopy in percent can be analysed in different area settings and scales, for example in 50 metre squares, 300 metres around buildings or in neighbourhoods. In this project it is most relevant to look at the demographic statistical areas around the city center. **The city center has a canopy of 14 %**, meaning there is a **shortage** in this category as well.

300 m to nearest green area

In the last category, 300 metres to the nearest bigger green area, **all inhabitants in Kristianstad urban area achieve the guideline.**

Fig 4: Canopy in Kristianstad city center (QGIS, data from Boverket, 2025)

Fig 5: Canopy in percent in Kristianstad city center (QGIS, data from Boverket, 2025)

Ecological aspect

Looking into the ecological reasons for having nature in cities, UN Environment Programme mentions the following: plants reduce smog and ground level ozone, biomass binds CO2, vegetation reduces flooding, water and plants reduce and regulate city temperature, foliage reduces noise, and that nature in cities strengthens surrounding ecosystems (*Environment*, 2017).

Of big importance for most ecosystem services is biodiversity (*Vad är biologisk mångfald?*, n.d.). Biodiversity works as a supporting ecosystem service, and can be seen as our base resource. Simplified, it is all life on Earth, with all its variations of species, habitats and ecosystems. Naturvårdsverket speaks of four categories of biodiversity:

- diversity of ecosystems - ecosystems include all species within a certain natural area, and the ways in how they affect each other.
- diversity of species - includes a big variation of different species, both animals and plants, in smaller or bigger areas.
- genetic diversity *within* species - many species have several variants of genes, which makes them more resistant to changes in its environment.
- biological cultural heritage - consists of the ecosystem, species and genetic diversity that has developed by how humans have used the landscape.

During the ongoing climate change, the ecosystems, its processes, functions and services are changing (*Biologisk mångfald ger motståndskraft*, 2019). Because of the already heavily loaded urban ecosystems, and the big amount of hardened surfaces in urban areas, these areas are the most affected ones. Ecological resilience is an ecosystem's ability to keep or recreate processes and services, and this is achieved by giving more space and growth to biodiversity. That means, when giving nature and biodiversity more space in urban areas, the urban area and its ecosystem services will gain ecological resilience, and the effects of climate change will not be as palpable.

From a planning point of view, a way of increasing biodiversity and ecosystem services in urban areas is to work with green infrastructure (*Biologisk mångfald ger motståndskraft*, 2019). That means keeping and adding green areas and also connecting these with green structures, which is extra challenging in cities, with its ongoing densification, and many barriers. Measures to do this depend on the area in question, both its spatial conditions, and the needs of the species in the area. To include biodiversity in water in this, the correct term to use is rather bluegreen structures (*Från grå till blågrön infrastruktur*, n.d.)

Biodiversity in Kristianstad

Close to Kristianstad city center, the nature reserve Årummet, which is part of the biosphere reserve Vattenriket, is located (*Årummet*, n.d.). The area has high natural values, and a wide variety of species are found there, both on land and in Helge River. Primarily, many types of birds, fish and vegetation are in the area.

According to Biosphere Office's ecologist Dan Gerell, there are some natural values in Tivoliparken, the park area between Helge River and the city center. He talks about a kind of "base level" for biodiversity in the park, where some general species live, but rarely any rare species, as in Årummet.

The city center has less biodiversity, due to its poor green and blue structures (see map on p. 32).

Perceived sensory dimensions

Based on research and evidence collected between 1984 and 2018, the landscape architect and professor Patrik Grahn, and the doctor in physical geography Jonathan Stoltz, suggest the model of perceived sensory dimensions in their article *Perceived sensory dimensions: An evidence-based approach to greenspace aesthetics* (Stoltz & Grahn, 2021). The model consists of eight key qualities that are particularly important to support people's needs, which all can be achieved by greenspace design. The aim of the research has been to collect proof by evidence, and not only by aesthetics, on why greenspace is important for human health and well-being, for practitioners, such as planners and landscape architects, to use as guidelines in their work. Evidence-based design can be described as "the process of basing decisions about the built environment on credible research to achieve the best possible outcomes" (apuccinelli, 2011), and is closely related to other evidence-based practices, like evidence-based medicine.

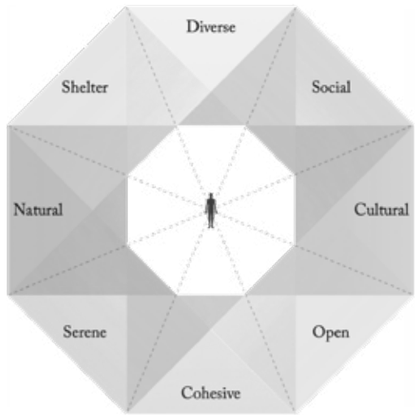


Fig 6: Perceived sensory dimensions and their relationship. Perpendicular PSD's are opposing qualities, while the adjacent go well together. (Stoltz & Grahn, 2021)

The eight qualities and the correlation is shown in fig 7. The qualities are placed on four axes, with opposing qualities. (Stoltz & Grahn, 2021). Every quality is connected to the adjacent qualities, while it opposes the quality that is positioned perpendicular to it.

The qualities are described shortly below:

1. Natural - events and features that exist in nature as a result of natural forces.
2. Cultural - in its broadest sense, all purposeful human activity.
3. Cohesive - the capacity of an environment to support the experience of a unified whole.
4. Diverse - the sense of variation and diversity in an environment, both in structural elements and in species.
5. Sheltered - a sense of shelter or protection, where one can relax, alone or with others in smaller settings.
6. Open - exposed, unobstructed environments with open space for different kinds of activities.
7. Serene - a calm and safe environment, not disturbed by noise or other stressful distractions.
8. Social - about the presence of people, where people can meet and interact with each other. The most urban of the qualities.

The authors propose that working with adjacent qualities adds value in an environment. Since it is difficult, and even conflicting, to work with all qualities within a certain spatial area, it is proposed to work simultaneously with three, maybe four, adjacent qualities.

Urban Qualities

City center's role in change

In the report *Framtidens stadskärna 2050*, developed by Wingårdhs and Svenska Handelsfastigheter, the city center's historical, current and future possible character and role are discussed by experts and researchers from different fields. (*Framtidens stadskärna 2050*, n.d.) The character of the general city center as a trading place has changed over the years, as well as it has decreased, especially since the 1980s, when the external trade started to develop (Bergström, n.d.). Malls and large trading areas were built outside of the cities, where they could be reached by car. According to the report, in 2019, the city center only accounted for 11 % of the retail trade, while other physical trade accounted for 73 %, and online shopping for 16 % (*Framtidens stadskärna 2050*,, n.d.). The report also highlights that we are more prone to spend money on culture, experiences and recreation, and that this is what attracts us to the city centers.

Further on in the report, researchers and experts are expressing thoughts and ideas about the future city center and what it could be if revived. Aspects brought up are: creating experiences, creating and preserving identities and culture, smarter and more efficient use of premises, and attractive architecture and urban planning. According to a report from Westfield, more than half of all trading areas will be transformed to experiences för the customer, rather than actual merchandise, in the coming decades.

In summary, their predictions are:

- people will still work, live in and visit the city center, but more fragmented and with new purposes.
- regions and municipalities must plan to favour the transformation of our city centers.
- the 15 minute city, the super local living environment, is a potential urban structure.
- sustainable mobility.
- creating natural meeting places in city centers, attractive city centers where people want to gather for other reasons than trade.
- The future city center is a place for social interaction, identity creation, and to handle climate changes.

City center in Kristianstad
The city was founded by the Danish King Christian IV in 1614, as a city for defence, trading and craftsmanship (Kommunfakta, 2024). Since then, the trading character of the city has been strong. In 2014 the city center received the award City center of the year in Sweden. In recent years, the city center's trading character has weakened, while external shopping areas have developed. In 2011 Kristianstad municipality, retailers and property owners created Handelsstaden Kristianstad (today Kristianstad City), as a collaboration for strengthening the city center as a commercial center and meeting place (Om oss | Kristianstad City, 2017). Today, they still work actively with attracting visitors to the city, and experiences, events and networking are a lot in focus.

Theory of natural movement

In the article *Natural movement: or, configuration and attraction in urban pedestrian movement*, Hillier et al. present a way of understanding the pedestrian movement in urban areas (B Hillier, A Penn, J Hanson, T Grajewski, J Xu, 1992).

The correlation between the three aspects attractors, configuration and movement in urban areas is highlighted and explained logically:

- Attractors - specific places and spaces that attract people. The presence of attractors influences the presence of people and thereby movement. Attractors can not influence the fixed configuration.
- Configuration - the configuration of the urban grid, with streets, squares, pathways etcetera. Configuration affects movement, and the location of attractors.
- Movement - peoples' movement. Movement can affect where attractors are located, but can not affect the fixed configuration.

The authors argue that the configuration is the primary generator of pedestrian movement patterns, where attractors rather work as multipliers. Meaning, a well-planned urban grid is the base for pedestrian movement, and that adding attractions to it will increase the presence of people and thereby movement. In areas where there are many attractors, the multiplier effect of the attractors can exceed the effects of configuration.

Although, since the argument is that movement primarily is generated by the configuration, and since it is so basic, the authors call it the *natural movement*. "Natural movement in a grid is the proportion of urban pedestrian movement determined by the grid configuration itself" (B Hillier, A Penn, J Hanson, T Grajewski, J Xu, 1992).

Natural movement is both a global and a cultural phenomenon. Meaning that its logic, that configuration is linked to movement, is global, but its shapes are very local, reflecting the culture of where it takes place. Urban grids are varying around the world, and thereby affecting the local movement. The issue of "overlocalised design", where modern design has a tendency to interrupt natural movement, is brought up.

So, spaces with well-planned configurations, and several attractions, encourage movement and attract people.

Movement in Kristianstad
The diagram below shows the configuration of Kristianstad city center. A, B and C are three different attractors in the city (train station, Naturum and main square), and the configuration allows different types of movement between these. Between A and B, the configuration is only offering one way to go (the bridge), while between A and C, several routes are offered. Though, pedestrians are most likely to choose the marked street, since it is a pedestrian street, with several attractors (shops, cafés and restaurants) on it.

Gehl's theories on public space

In the book *The City Reader*, there is a chapter from Jan Gehl's book *Life Between Buildings* (LeGates & Stout, 2011). From this we derive three extracts from Gehl's book.

Three types of outdoor activities

The first extract is from the chapter *Three types of outdoor activities*, where Gehl here lists three categories and their correlation to the quality of their physical environment:

1. Necessary activities - more or less compulsory activities, often related to walking.
2. Optional activities - those pursuits that are participated in if there is a wish to do so and if time and place make it possible. Are significantly related to exterior conditions and weather.
3. Social activities - depend on the presence of others in public spaces. They occur spontaneously, and are indirectly supported whenever necessary and optional activities are given better conditions in public space.

Different kinds of relationships

In the chapter *Life between buildings* Jan Gehl emphasises the need for contact among humans. He talks about the different intensities in contact, and that we have different needs. See figure.

Gehl also highlights the need for stimuli by seeing and experiencing other people.

> "Life between buildings offers an opportunity to be with others in a relaxed and undemanding way. One can take occasional walks, perhaps make a detour along a main street on the way home or pause at an inviting bench near a front door to be among people for a short while. One can take a long bus ride every day, as many retired people have been found to do in large cities. Or one can do daily shopping, even though it would be more practical to do it once a week. Even looking out of the window now and then, if one is fortunate enough to have something to look at, can be rewarding. Being among others, seeing and hearing others, receiving impulses from others, imply positive experiences, alternatives to being alone. One is not necessarily with a specific person, but one is, nevertheless, with others."

Quality of outdoor space

In the last chapter, *Outdoor activities and the quality of outdoor space*, two extremes of cities are presented: the city with multistory buildings, underground parking facilities, extensive automobile traffic, and long distance between buildings and functions, and the city with reasonably low, closely spaced buildings, accommodation for foot traffic, and good areas for outdoor stays along the streets and in direct relation to residences, public buildings, places of work, and so forth. The last one is what Gehl calls a living city. He argues that, within certain limits (regional, climatic, societal), it is possible to influence the following in a city:

- *how many* people use the public space.
- *how long* the individual activities last.
- *which activity* types can develop.

Gehl states that an establishment of a suitable physical framework for social and recreational activities can help with this.

In Gehl's book *Cities for people* (Jan Gehl, 2010), Gehl presents 12 urban quality criteria. These are meant to work as guidelines when designing urban spaces. See figure X.

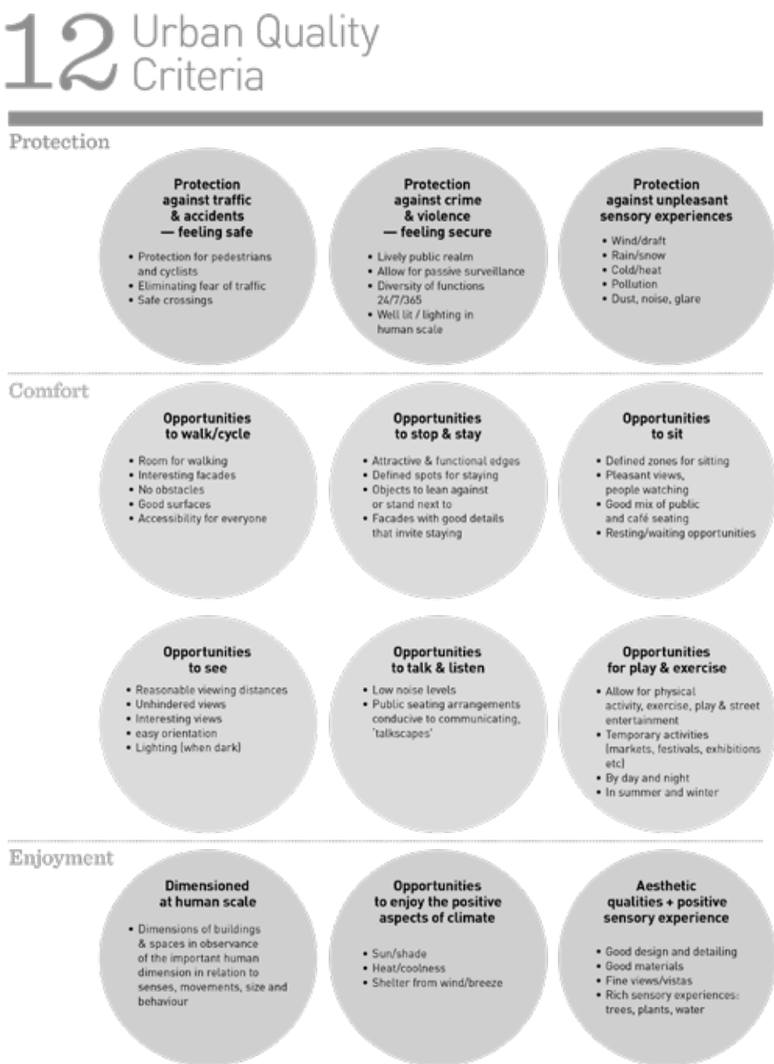


Fig 7: Urban Quality Criterias, presented by Gehl. Can be used as guidelines when designing urban public spaces. (Gehl People n.d.)

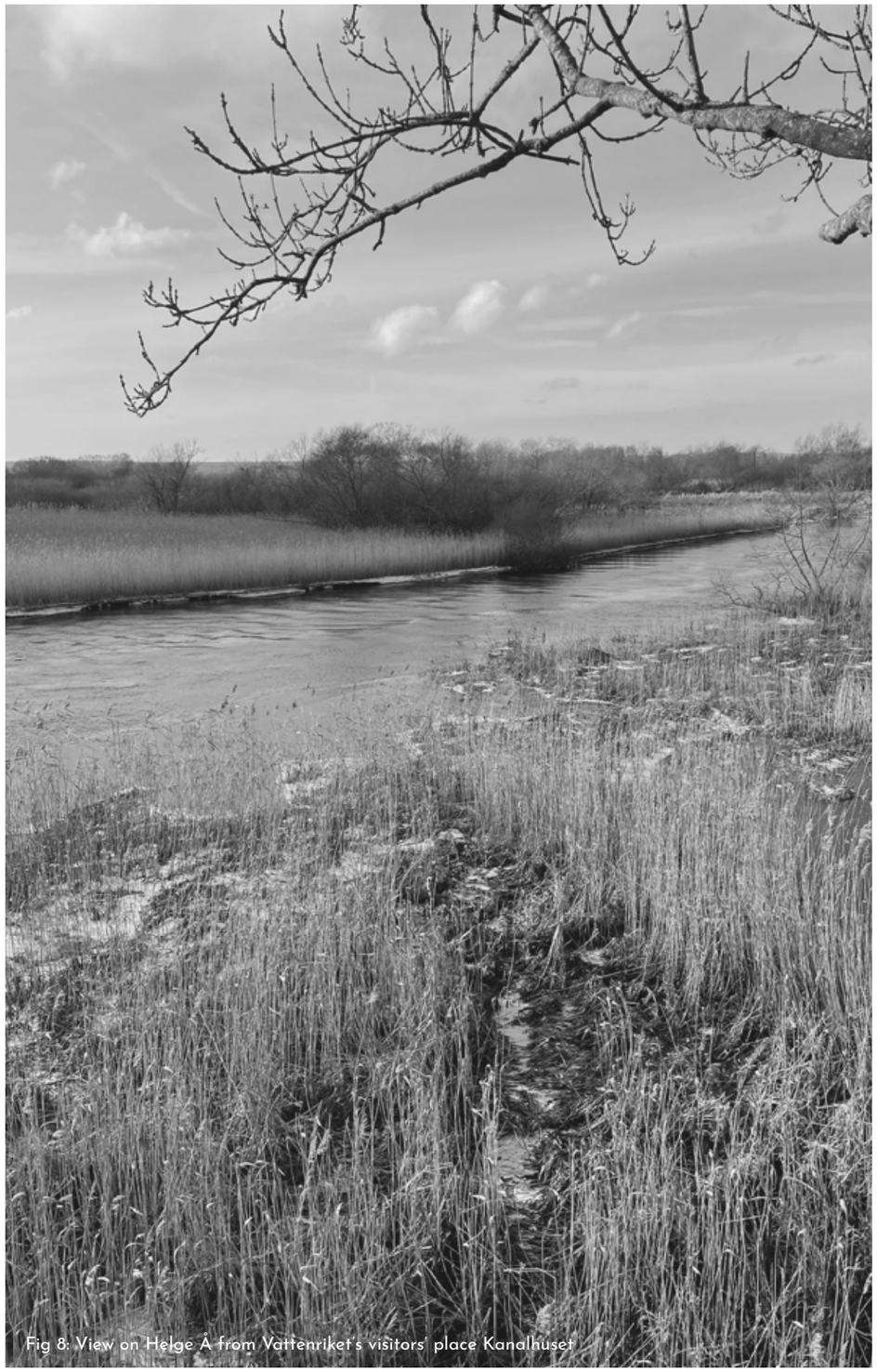


Fig 8: View on Helge Å from Vattenriket's visitors' place Kanalhuset

CONTEXT

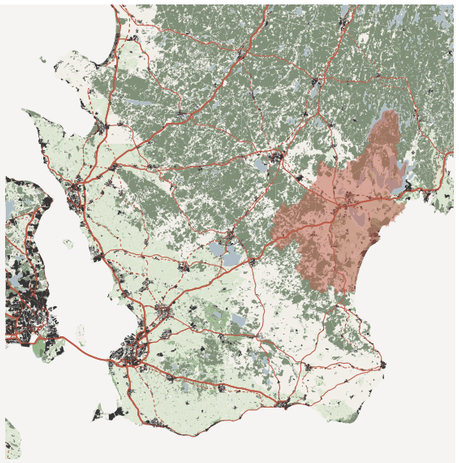
Kristianstad
Vattenriket
Nature and City Today

The context, in various scales, is presented in this chapter. The reader is introduced to Kristianstad, to the biosphere reserve Vattenriekt, and to how the city center and natural landscape relate today. The aim is that the reader will get an understanding of the geographic, spatial and cultural conditions of the site's context.

Kristianstad

Kristianstad is a municipality and urban area in southern Sweden (*Kommunfakta*, 2024). It is located in the northeastern part of the county Skåne. The municipality is the biggest in Skåne to its area, with its 1 346 square kilometers. The municipality's 86 000 inhabitants are spread out in approximately 20 localities. The urban area is slightly smaller; the area is 2155 hectar and the population is 42 000.

Founded by the Danish king Christian IV in 1614, the city was initially a residence city, focused on military defense, craftsmanship and trading. Placing the city in wetlands was a strategic choice, making it difficult for enemies to enter. Today, the municipality emphasises the unique position in the middle of wetlands and surrounded by a rich nature as a big natural and recreational resource.

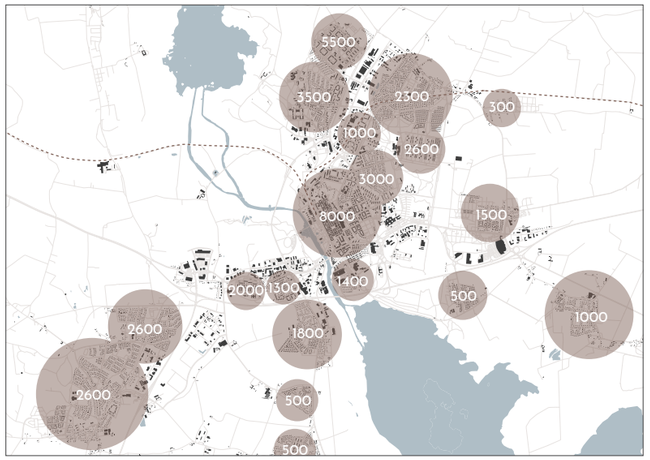


Kristianstad municipality

- The municipal area
- Bigger car road
- Railway

Kristianstad urban area

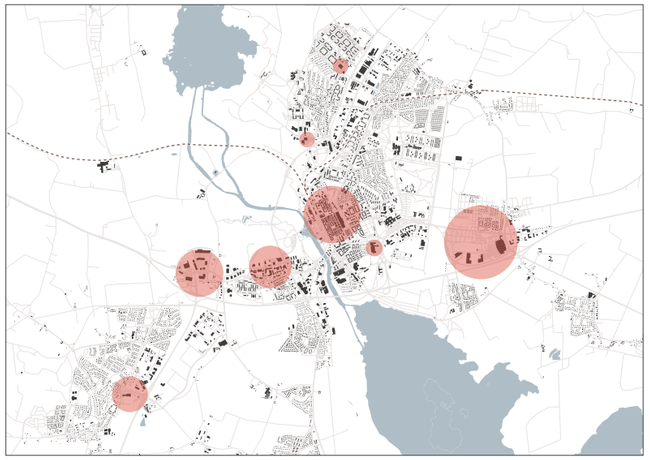
- Agricultural land
- Meadow/grass
- Wetland
- Forrest



Urban area

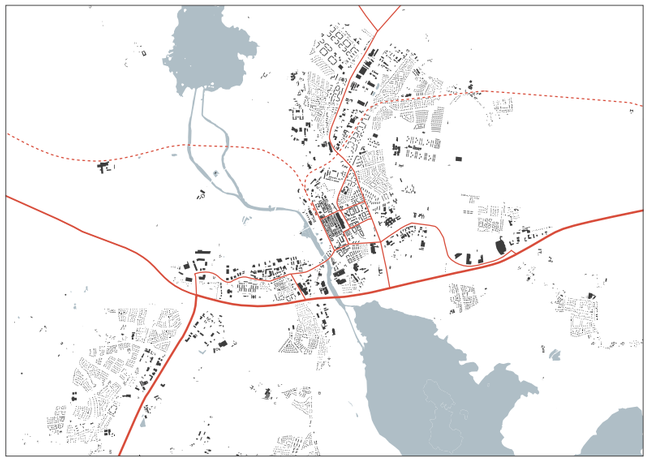
Inhabitants

The diagram shows where people in the urban area live.



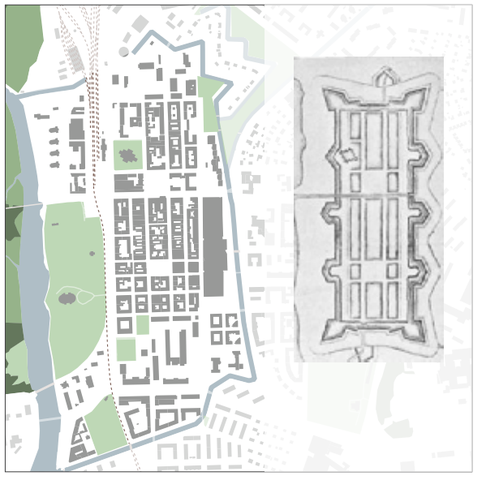
Consumption

Historically, the city center has been the place for trade. During the 2000's external trading areas has developed, internet shopping has increased, and the city center's role as shopping center has diminished.



Connections to and from the city

- Bigger car roads
- Railway



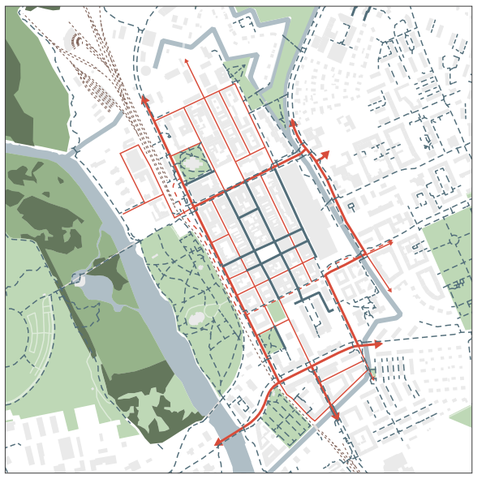
City center

The old city center

The canal is framing the old city center, which was built by the ideals of the Renaissance, with grid plan, embankments and bastions (*Kommunfakta*, 2024). The right map is the oldest city plan of Kristianstad, from 1614. Although the city has changed and expanded, some parts, like the church, the main squares, the street network and parts of the moat are preserved.

Axiality

Remaining from the first city plan are the significant straight axes in the city center. Today, the axes stretch even further, connecting the city center to its surroundings.



Streets

- Pedestrian streets
- Pedestrian pathways
- Car roads
- Bus road

(See Theory of Natural Movement, p. 19, for further understanding of the street network)

Identity, vision and goals

Identity

At Kristianstad's website, under municipal facts, the municipality lifts three characteristics (*Kommunfakta*, 2024). It describes itself as the city in the middle of the water, referring to its location in the middle of the biosphere reserve Vattenriket. The municipality also lifts the character of a Danish trade city, since it was the Danish king Christian IV who founded Kristianstad in 1614, as a fortress and trading city. Here the old city center is highlighted and the award City center of the year 2014, is mentioned. The third characteristic pointed out is close - simple - comfortable, and here the belonging to the region Greater Copenhagen is shared. In less than two hours you can transfer from Kristianstad to Copenhagen.

Vision

The municipality's vision for 2030 is called We lift together, and is aiming for strengthening the municipality's identity, self-esteem and creating a belief in the future (*Visioner Och Framtidsidéer | Kristianstads Kommun*, n.d.). The vision is based on three areas: growth, thought and well-being. To reach the vision the municipality has created strategic plans for the following subareas: sustainability, labour market, education, safety and attractivity.

Three urban planning goals

In Kristianstad's comprehensive plan, there is information, goals and strategies to be found regarding the municipality, its localities and the urban area (*ÄÖP/FÖP*, n.d.). The comprehensive plan is based on three urban planning goals, and it is argued that these are directly connected to the SDG's as well as the municipal goals in the strategic plan. The three urban planning goals are:

1. city for everyone - about long term social sustainability, where everyone is included, healthy and safe.
2. attractive city - about long term economic sustainability, where a dense, mixed and multifunctional city is emphasised. It aims to attract bort inhabitants, workers and visitors.
3. greenblue city - about long term ecological sustainability, with healthy ecosystems and a width of greenery and water environments. Aims for a city that is part of the biosphere reserve Vattenriket

The goals are broken down into 15 strategies,. The strategies that are of extra importance to this project are:

2. Participation
3. Recreation
9. Embodied living environment
10. Climate impact and climate adaptation
12. Ecosystem services
13. City and landscape
15. Safeguard national interests.

Vattenriket

A biosphere reserve

Big parts of Kristianstad municipality is part of the biosphere reserve Vattenriket (*'Biosfärområde Kristianstads Vattenrike'*, 2017). A biosphere reserve is an area with high cultural historical and biological values, appointed by the UN body UNESCO. In Sweden, there are seven biosphere reserves, and their purpose is to act as model areas for sustainable development, by keeping, developing and supporting the values mentioned.

In 2005, Vattenriket became a biosphere reserve, making it the first in Sweden. It is the municipal Biosfärenheten that works actively with the area, by strengthening both ecological and social values. Efforts and projects are focusing both on preserving nature and biodiversity, as well as making nature accessible for humans by creating visitors' places and walking paths.

"Vattenriket should be a good place for both nature and people. In various projects, the Biosphere Office helps animals and plants to survive, while giving people the opportunity to enjoy nature's benefits without destroying them." (*'Biosfärområde Kristianstads Vattenrike'*, 2017)

Ecological aspect

As one can understand from the name, it is the water and the wetlands that characterise the area, where the Helge river is the main water that runs through the whole area, and out into the ocean. Due to the conditions given by the water in Vattenriket, a variety of habitats is possible. Vattenriket consists of almost all Swedish nature types, like different kinds of water streams, lakes, wetlands, coastal meadows, deciduous forests and dry, sandy farmland. This makes the area unique, and very rich in species. Although Vattenriket covers less than two per thousand of Sweden's surface, it contains 20 percent of the country's red-listed species.

Social aspect

To make it accessible for humans, 21 visitors' places are places around the varying landscape, for example birdwatching towers, outdoor museums, boardwalks or information (*'Upplev Vattenriket'*, 2017). Naturum is the visitors' center, positioned in the reeds in river Helge Å, but still very close to the city center. It is reached by a wooden bridge, connecting the city center with the landscape. At Naturum, an exhibition about Vattenriket and its history is found. There are activities going on, and staff to interact with. There is also a restaurant with a view over Vattenriket.

Focus areas

There are five focus areas that the biosphere reserve Vatttenriket are working with (*'Fokusområden'*, 2021):

- Healthy ecosystems and biodiversity
- Water balance from source to sea
- Attitude change and learning
- Sustainable business in agriculture and the hospitality industry
- Health, life quality and social development.

Fig 9: View of the city meeting the landscape. To the left is Vattenrikets visitors' center Naturum, located in the middle of the wetlands of Helge river. (*Biosfärområde Kristianstad Vattenrike*, 2013)

The city in Vattenriket

Relevant to this project is how Vattenriket works with sustainable urban development. Since the city is placed in the middle of Vattenriket, and since UNESCO's mission about being a model area for sustainable development includes urban development, this becomes something that Biosfärenheten works actively with (*'Hälsa, livskvalitet och samhällsutveckling'*, 2021). Mentioned on their website is their work with a new sustainable district, the ongoing work with protecting the city against flooding (see p. 44), changes in the comprehensive plan, and making the city center more living by bringing more of Vattenriket into the city.

Map of Vattenriket, showing waters and wetland. Helge river is the one running from north to south, through the two big lakes. The red circle highlights Kristianstad city center.

Vattenriket and the city

Water has since its founding in 1614 been a big part of Kristianstad's history, although the view on it has changed ('Vattenrikets framväxt', 2017). As mentioned earlier in the report, the city is placed where it is today because of the water, since the wetlands surrounding the city created a strong defence. In the coming centuries, the water in and around the city then went from clean drinking water to contaminated, and the area became considered water-sick. This was due to the sewage and industrial pollutants that were released into Helge river in the 19th century, and later on due to the landfill that was placed next to the river in the 1960's.

Although the sewage and the industrial pollution decreased from the mid of the 20th century and the water quality improved, the area had still not recovered. In 1988, a man called Sven-Erik Magnusson first presented the concept Kristianstads Vattenrike ('25 år i Vattenrikets tjänst', 2013). He had noticed the strong natural and cultural values that could be found in the landscape, and now wished to make people see what he saw ."He wanted to try to change the attitudes from water-sick to water-rich" ('Vattenrikets framväxt', 2017), and a big project began...

In 1991 the outdoor museum Kanalhuset opened, and thereby became the first visitors' place. In 2005 the area became a biosphere reserve, and in 2010 Naturum opened.

from...

water-rich

Helge river's water and wetland attracted people, for fishing, hunting and farming. In 1614 Christian IV founded the city in the inaccessible wetland. In 1749, Carl von Linné visited Kristianstad during his Skåne trip, and described the beautiful landscape and nature.

to...

water-sick

Due to pollutants from sewage and industry, and in the 1960's, the landfill, the water became more and more dirty. From having drinkable water, the area became water-sick.

to...

vattenriket!

Sven-Erik Magnusson found interest and saw potential in Helge river and the wetlands in the late 1980's, and a work towards a biosphere reserve began. In 2005, Vattenriket became a biosphere reserve.

Kristianstad is placed in the wetlands 1614.

High water

During the 19th century, the Nosaby lake was pumped out into the Hammar lake, to create more agricultural land. Today, there are embankments along the Hammar lake, to prevent the city from

Water-sick.

Vattenriket is under development. On this map, one can see the landfill beside the river, car roads taking place in the landscape and exploitation taking place on agricultural land.

Vattenriket becomes Sweden's first biopshere reserve.

Naturum, is opened, and is thereby clearly connecting the city center to the landscape.

All maps are from Kristianstad municipality's map service (*Kristianstadskartan*, n.d.)

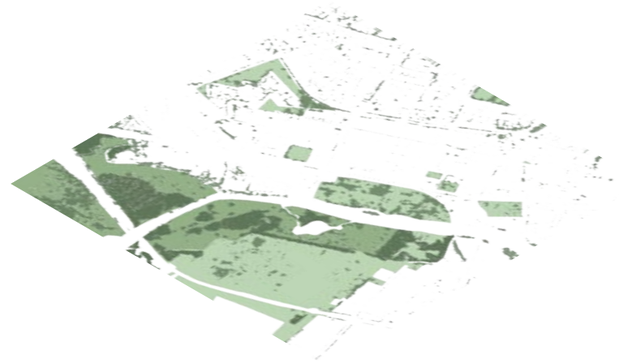
City Center and Nature

As mentioned earlier in the report, the city center in Kristianstad has a shortage of canopy (p. 15), as well as of biodiversity (p. 12). As seen on the map below, there is some green space in the city center, but most of it is concentrated in the park Tivoliparken.

Two borders are in focus in this project. One is the canal in Kristianstad, which is framing the old city center, and thereby framing the urban area of interest. The other border is the one between the city and the biosphere reserve. This border is not as clear as the other, and it could be argued where it goes or if it really is a clear border. These spaces between the city and the biosphere reserve could be seen as transition spaces, or interface spaces, as they are called in this project. Here they are divided in four different parts that have been identified. These interface spaces are affected by barriers around them, which affect the transition between city and landscape.

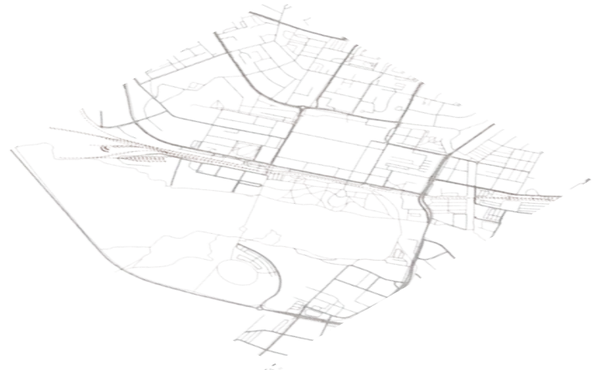
The clearest barrier in the city center, both socially and ecologically, is the car, bus and railway road between the city center and the interface areas. By having fences and a lot of greenery, the park area is shielded from the busy road. It becomes a sheltered green space, but less connected to the built structures in the city.

A relevant question in this project is what we define as city and what we define as landscape. Is the the city center only the built structures, or could it stretch out further towards the landscape?



Green structures

Blue structures



Street network

Built structure

Public meeting places and green structures

In this view, public meeting places in the city center have been pointed out. Green and blue structures are also shown. The city center today offers a range of culture, nature, sports and leisure activities. The site of the project is pointed out in this view as well. The site has clear connections to both city center, several public meeting places, and green structures.

Categories

- Public & functional
- Sport & culture
- Social-ecological

Central station

Church and parish house

Stora torg
old square, where the municipal hall is

City museum

Östra and Västra Storgatan
Main pedestrian streets

Galleria boulevard
shopping mall

Kulturkvarteret
concert and event halls, library and bistro

Lilla torg
old central square

In 2029: University

Arena and sports field →

Kanalhuset
Vattenriket's oldest visitors' place

Naturum
Vattenriket's visitors' center

Barbacka
youth cultural center

Hälsoträdgården
community garden and cultivation space

Playground

Theatre

Tivoliparken
city park

Fig 10: Vattenriket's visitors' place Håslöv's meadows

SITE

Båthamnen
The History of the Site
The Future of the Site
Flooding
SWOT Analysis

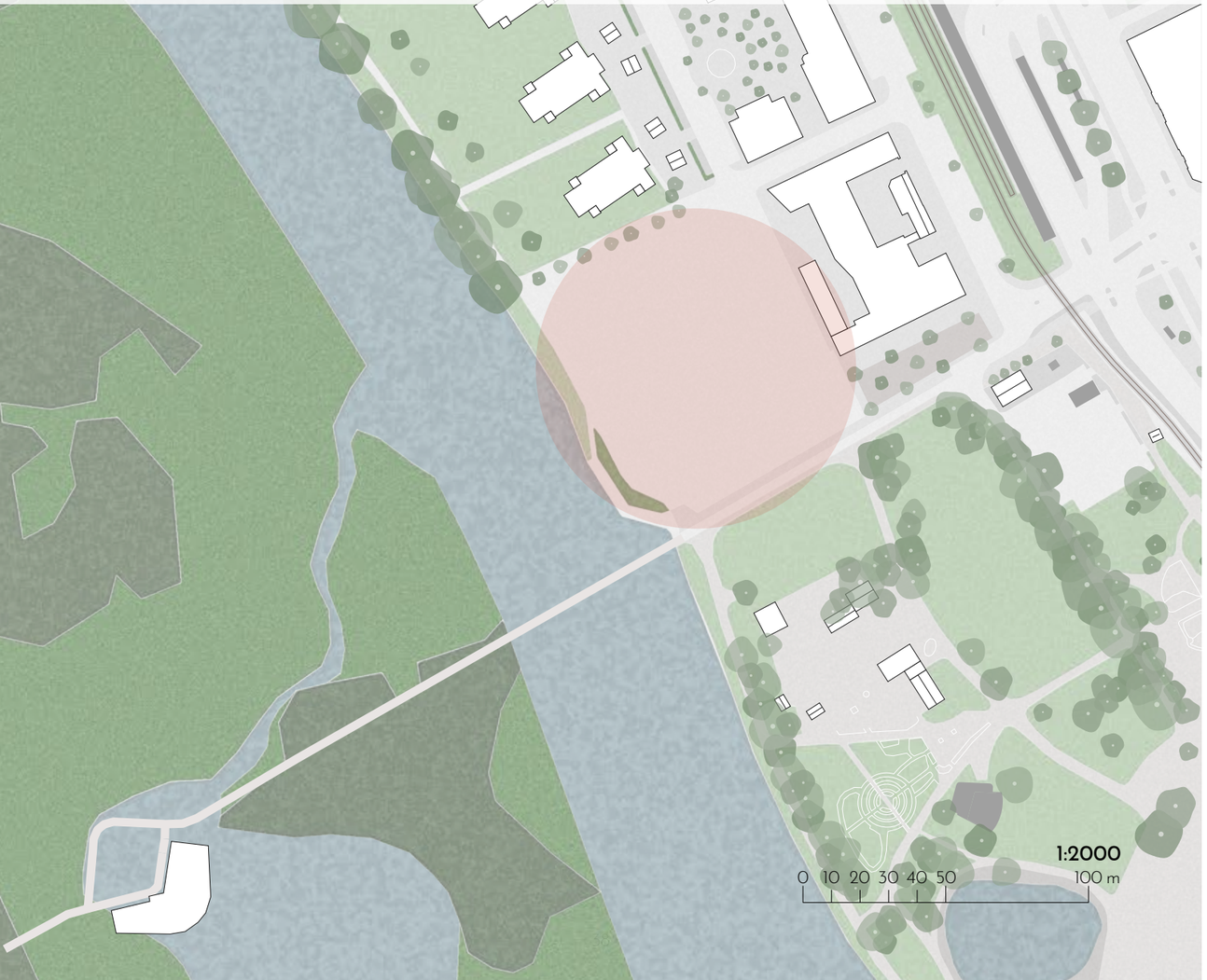
In this chapter, the specific project site is presented. This is done by showcasing analyses of the site today, its history and the municipal plans and people's wishes for its future. Flooding issues are also addressed, since it is of big relevance to the site.

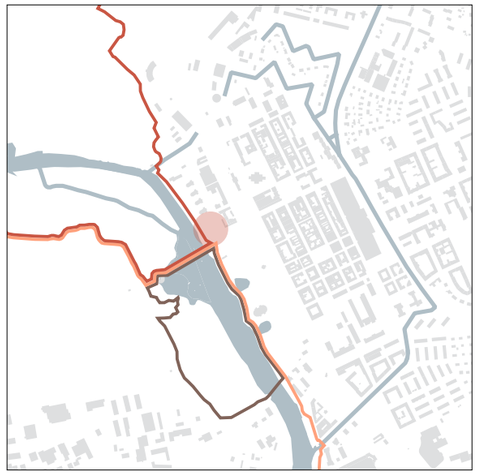
Båthamnen

The site for the project is a plot called Båthamnen, which is located in the interface between the city center and the biosphere reserve Vattenriket. It is directly connected to the central station, as well as to the pedestrian and bicycle bridge leading to Naturum and out into the landscape. Just south of the plot the park Tivoliparken is located. Up until 2022 the municipal bathhouse Tivolibadet was there (*'Tivolibadet'*, 2024). At the moment, the old bathhouse is being demolished, and there are only preliminary plans for what the plot should be transformed to (*Så kan badhustomten se ut – efter rivningen*, 2024). This is due to the ongoing wall operation in Kristianstad, which will have to take place along the plot.

The Barbacka area

It is located in the Barbacka area, which is the slightly isolated area between the train station and the Helge river. The area is just outside of the old residential city, which was torn down in the 1850's (*Båthamnen*, 2024). It was colonised from the 1860's. For around 100 years, between 1881 and 1991, the area was dominated by a mill industry. Today the old mill is transformed into offices. There is also housing, cultural facilities for youths and electrical facilities in the area. Along the river, there is a walking path leading to Vattenriket's first visitors' place, Kanalhuset, an outdoor museum. Here is also a wooden dock, a possibility to rent kayaks, and a starting point for a boardwalk out in Vattenriket (*'Kanalhuset'*, 2017).

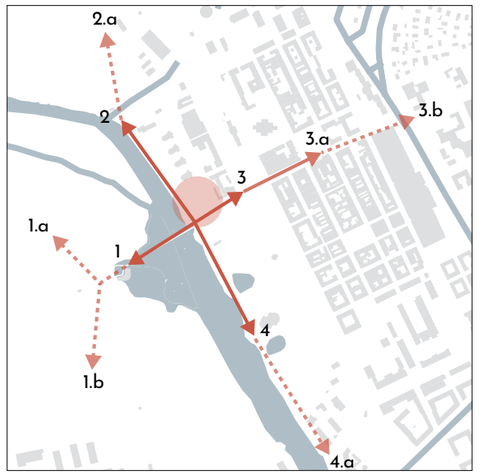




Recreational walking paths

- Linnérundan
- Skåneleden
- Tivolirundan

The exisiting walking paths are all passing the plot, increasing its potential of being meeting place.



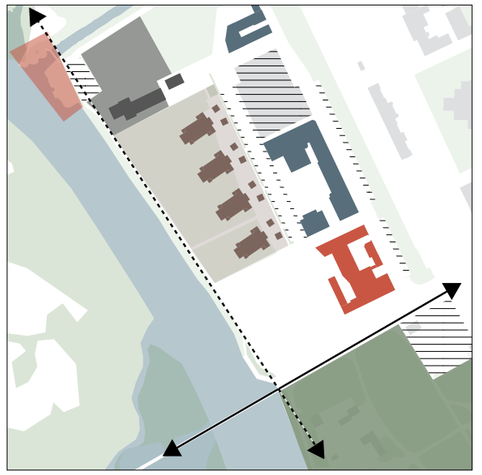
Connections

1 Naturum (Vattenriket's visitors' center)
1.a Vattenriket, Linnérundan
1.b Housing areas

2 Kanalhuset (Vattenriket's visitors' place)
2a Vattenriket, Linnérundan

3 Central station
3.a City center
3.b Housing areas

4 Tivoliparken
4.a River walk, housing areas



Functions around the plot

- Nature & culture
- Offices
- Housing
- Parking
- Inactive
- Park
- High movement of people (to and from city)
- High movement (river walk)

The History of the Site

Information and pictures are from Kristianstad Municipality and Kristianstadsbladet (*Kristianstads Kommun*, 2025 & *Kristianstadsbladet*, 2024)
All maps are from Kristianstad municipality's map service (*Kristianstadskartan*, n.d.)

1854

Until the 1870's, the south part of the plot consisted of a canal that ran through the city. In the map, the place is called "Boat harbour".

1905

The canal was closed at latest in 1878, and in connection with that a new, bigger dock was created. In 1865 the railway opened, which is also visible on the map.

1933

Parts of the dock had closed, and the railway and industry had spread out in the area.

1955

In 1953, the boat harbour was closed and a bathhouse was built. Tivolibadet opened in 1957.

Looking into the history of the site, a few summarising observations about the essence of the site can be made. The site has always been:

- a public area
- connected to water in different ways (canal, dock, bathhouse)
- just outside of the city center
- sensitive to flooding.

1999

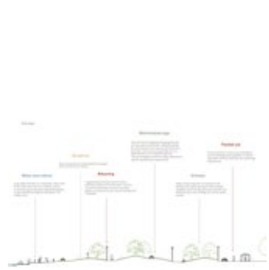
Tivolibadet was extended in 1994, with more swimming facilities and a relaxation department.

2006

Tivolibadet was extended once again, this time with more fitness facilities

2024

Tivolibadet closed in 2022 and demolition begun in 2024.



Preliminary plans: a public green space, that contrasts from the arranged nature in Tivoliparken (see next page).

History of bathhouses in Kristianstad

1832 — The first cold bathhouse opened. It was located in the city center, in the crossing of Nya Boulevarden and Östra Vallgatan. It was used for about 20 years, but was demolished first in 1993.

1855-60 — Oldest cold water bathhouse in the river Helge Å existed in Tivoliparken, but was demolished at latest in 1865. There was another cold bathhouse in the river in the northern part of the park. There might have been two there, one for the military and one for the less wealthy, but they might also have been in the same building. They were all built on poles in the water.

1864 — Outside of the park's south part, there was another cold bathhouse. This building was demolished in 1958.

1868 — A military bathhouse was built along the river. It was earlier in the park's north part, but was now in the south. In 1953 it was demolished.

1862 — A warm bath house, made of wood, was built in the northeast part of Tivoliparken.

1893 — A new warm bathhouse, bigger and made of brick, is built on the same spot. The bottom floor was the more luxurious one, while the upper floor was more simple. In 1921 it was renovated. In 1958 it was demolished.

A five meter high diving tower was built in Tivoliparken. It was only there for approximately ten years.

1940's

1957 — Tivolibadet opened. It was extended in 1994 and again in 2006, and then demolished in 2024.

2022 — The current bathhouse, Badriket, opened. It has swimming pools, trampolines, an aquapark and a relaxation department.

The Future of the Site

Comprehensive plan - Barbacka area
In the comprehensive plan some values, conditions and proposals of the Barbacka area are lifted (*ÄÖP/FÖP*, n.d.).

Values highlighted are:
- Cultural historical values of the of Kvarnen (the old mill industry) and Fiskaren (today youth center Barbacka), because of their architectural expressions and identity for the city.
- National interest Cultural environment care: taking building height, block structure and material in consideration.
- National interest Outdoor life: increased accessibility in the area.

Conditions mentioned are:
- The nearness to recreational walking paths, landscape, the river Vattenriket's visitors' places and Tivoliparken creates strong recreational values and ecosystem services.
- The area is not protected against flooding.
- The area is today only reached by the crossing in the east south. If the train station is expanding, the car parking would disappear.

Proposals: Densification
- Densification and completion of urban structures, by housing, work and service facilities.
- Protecting embankments against flooding from Helge river, with a buffer zone, need to be built.
- The meeting between the city and Vattenriket should be emphasised.
- The train station might extend into the area.
- More connections to the city center should be established, such as a pedestrian and bicycle bridge over the railway.

Preliminary plan
Due to a complicated site, where flooding risks are high and where embankments are not yet built, there are no permanent plans about what the plot should be transformed into (*Så kan badhustomten se ut – efter rivningen*, 2024). The preliminary plan, made by a municipal project group, is to create a public green space, consisting of rolling and organic greenery and a boardwalk to connect with the water. There is also a flexible space for more urban activities, like flea markets and food trucks.

People's choice
In April 2023, the Social democrats in Kristianstad invited inhabitants to a civil dialogue about the old bathhouse plot (*DEBATT*, 2023). They collected people's wishes and opinions on what should be there. Some key takeaways are:
- They all wanted the place to remain public, and not a place for either densification or cars.
- Water was a strong theme among the wishes. Some wished for a bathing place and some for a marina outside of the future embankments.
- A majority wanted the plot to be a continuation of the park, that could stretch all the way to Kanalhuset.
- There was also a wish for cafés close to the water.
- The nearness to Barbacka and to childrens' culture was emphasised as well.
- A green square with food, play, activities and outdoor gym was another proposal.
- Light and safety.

Flooding

Kristianstad is located in an area sensitive to flooding (*Skydd mot översvämningar*, 2025). The city is the lowest located city in Sweden, and Sweden's lowest point (-2,32 m below sea level) can be found here. As mentioned in the part about "Vattenriket and the city", the location of the city is because of the water, since it was a good protection against enemies. Although the ongoing climate change makes flooding a present threat, where forecasts predict that the water in the Baltic Sea can rise 3,5 m in extreme conditions in the year 2150, flooding has alway been part of Kristianstad history, more or less. What makes it complicated now is that the city has expanded, and that land that once was for water now is built on.

Embankments in Kristianstad

The first embankments were built in 1860, when water was pumped out of the Nosaby lake. The land was for agriculture, but was colonised in the 20th century. Facilities such as housing, hospital, the municipal treatment plant and part of the highway are there today.

Since a big flooding in 2002, there is ongoing work with building new and maintaining existing embankments in the city. Combined with pumps and stormwater ditches, these are supposed to protect the city. Since the threatening extreme scenarios will not appear until at the earliest year 2100, the work is a long-term work (*Plan för utbyggnad av vallskydd*, 2024). It is possible to finish it completely in 20 years, although the plan has to be evaluated continuously, and adjusted according to conditions and forecasts.

Barbacka and city

When working with flooding in Kristianstad, it is the water level in Helge river that is in focus. This is measured at a measuring point at Barbacka, which it has been since the early 1900's. The reference system is called RH 2000, and the zero level is fixed to a certain level against the ground. Today, the yearly average water level is around +0,5 meters, but varies over the year. The highest difference in level was in 2015, with +1,63 in January and -0,33 in October. The highest level of water was back in 1928, with +2,32 meters.

In the comprehensive plan, it is written that the embankments along Barbacka and Tivoliparken peacemeal need to be stretched and raised to 4, 5 meters above sea level, bit-by-bit, starting with Barbacka area (*ÄÖP/FÖP*, n.d.). In the Plan for extension of protective embankments, it is stated that this means a raise of 1,5-2 meters from today's ground height (*Plan för utbyggnad av vallskydd*, 2024). Tivoliparken can work as a flooding surface, but only to a certain extent, before the flooding threatens to damage greenery and constructions there, so the park will have to be raised 0,5 meters.

Design and construction

In the plan document for embankments, Kristianstad's approach of wall construction and design are presented. This is how they work with a so called filter wall:

1. The ground has to be strengthened, for example by sheet piling, or concrete or cement pillars, depending on space and the ground's conditions.
2. The core of the wall is made of bentonite or boulder clay.
3. On the side of the core, filters are positioned.
4. This is covered by gravel or soil.

The design and spatiality of the wall can and should differ depending on its context. Different types are presented in the plan document. For each wall, a 10 meter protection zone is needed. The safety zone is for future reinforcement and maintenance, but can also be used for other purposes, such as walking and bicycle paths.

Fig 11: Flooding and walls in Kristianstad. Data from Kristianstad municipality's map service (*Kristianstadskartan*, n.d.)

- Area in risk of flooding if embankments did not protect the city, and if sea level is 2+ m
- Existing embankments
- Planned embankments

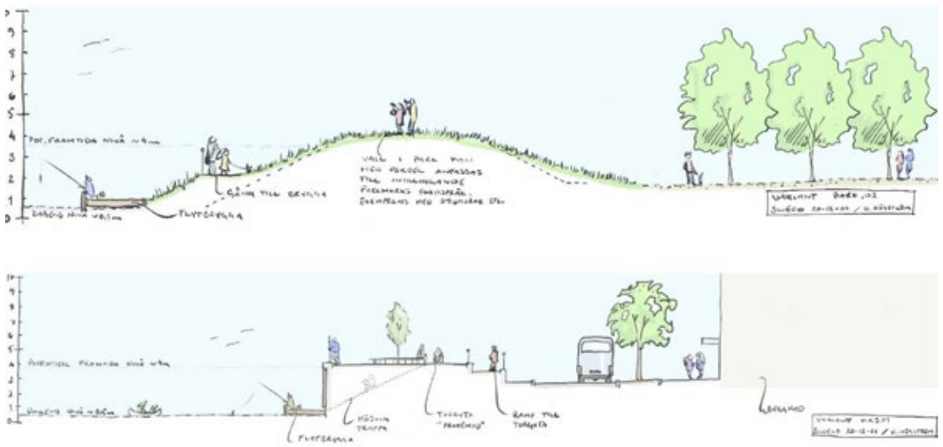


Fig 12: Sketches of how embankments could be designed in different kinds of context (Kristianstad Kommun, 2024)

SWOT Analysis - in collaboration with Biosphere Office

- Big area with possiibilites of being multifunctional
- Right now: very adjustable and shapeable
- Node with connections in four directions
    - city, central station, municipal building
    - Naturum, Årummet, western part of urban area
    - Kanalhuset, Linnérundan, Vattenriket
    - Tivoliparken, southern part of city
- View to Helge river and Vattenriket
- Central location in the interface between city and landscape
- The water-rich history of the site
- Several hiking paths along the site
- Location within Vattenriket
- The closeness to the Biopshere Unit office

STRENGTHS

- Divided from the city center by a big road, which acts a barrier
- Barbacka area a bit undefined
- Political site - not obvious which interests the site will serve
- Uncertainty about conditions and prioritisations in 10-15 years
- Difficult ground to build on
- The wall work creates both uncertainty and difficulties for the design and expense of the site
- Stripped surface without natural elements

WEAKNESSES

OPPORTUNITIES

A possibility to...

- Have more contact with water
- Keep and revive the bath history in the city center and on the site
- Design the area in line with SDG's, Agenda 2030 and biopshere reserve's goals
    - be a "good example" on how an urban social-ecological meeting place could look like
- Strengthen the transition between built city and landscape
    - be an extension of both city and Vattenrike
- Increase green spaces and biodiversity in city, for climate reasons as well as spreading awarness among people
- Continue to be a public space and a meeting place, due to location
- Design the area in collaboration with inhabitants
- Be a collaboration between different units within the municipality

THREATS

A risk of...

- Private explotation that doesn't take interest in public or natural values
- A barrier being built, which could block the view and the connection to the water and the landscape
- Flooding
    - wall design that affects the site and its connections to the water, if not designed well
- Operating and maintenance costs that increase more than expected, and in turn affect the design of the site
- Damage of constructions
- Political site - political and profit interest can affect the use and design of the area
    - conflict of interests

Fig 13: View towards the plot from the Naturum bridge.

Fig 14: Plot to the right. Walking and bicycle path leading towards Naturum brigde.

Fig 15: Plot to the left. Walking and bicycle path leading to the city.

Fig 16: Vattenriket's visitors' place Forsakar.

DESIGN: THE CONCEPT

Concept
Design Strategies
Design Framework

This chapter addresses the transition from theory and site analysis, to a design proposal. A concept and design strategies are presented. A design framework, that showcases the work towards a design further, is also explained.

Concept

Strengthen the city's character as the city in Vattenriket, and give alternative functions in the city center other than commercial

City scale

Local scale

Create a transition between the built city and the natural landscape, which will communicate Vattenriket's values and act as a social-ecological meeting place

Design Strategies

Integrate urban with natural elements

Making it a transition zone between the built city and the natural landscape, both the urban and the natural need to be present. This is done by giving space to nature and biodiversity, as well as making space for people to be there, for example by adding seating or making bridges to the water. PSD's and Gehl's Urban quality criteria will work as guidelines.

Theory: PSD's and Urban quality criterias

Create differents types of contact areas with water

To emphasise the character of Kristianstad as the city in Vattenriket, getting close contact with the water is one of the goals. This can be done by making seating along the water, bridges that go over the water, and spaces for bathing in the river. It can also be done by giving more space to water, and being creative with water elements.

Theory: Social aspects of nature in cities
References: Kristianstad municipality's urban planning goals

With design narrate Vattenriket and its values

By giving space to water, nature and biodiversity, communicating Vattenriket and its values is aimed for. Making it a place for views and bathing in the river, the goal is to make people feel part of Vattenriket, even in the city center. The built structures will be in line with Vattenriket's other built structures.

Theory: Ecological and social aspects of nature in cities
References: Vattenriket

Create spatiality by working in levels

The embankments that will be built in this area will be around 2 metres high. It could be seen as a barrier, but it could also be seen as a space-making element. If the embankments inspire further work of levels, the levels could create several different spatialities.

References: Wall documents, Kristianstad municipality

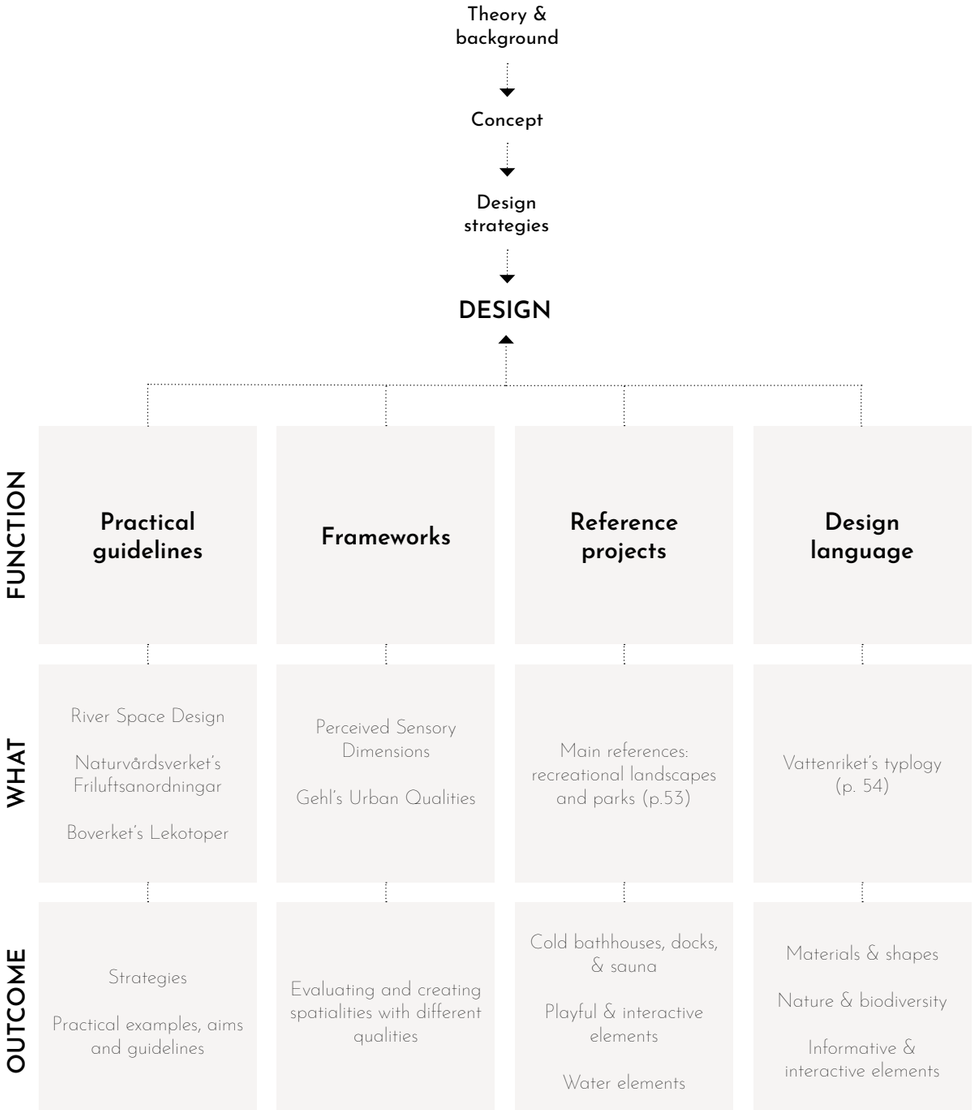
Let the water level change the place

Flooding is often a big threat, but the aim in this design is to make it part of it. By making the edge to the river into a longer transition zone, the water level can rise and drop, and by this affect the experience of the place. It also showcases nature-based solutions to flooding.

Theory: Benefits of nature in cities, nature-based solutions

Design Framework

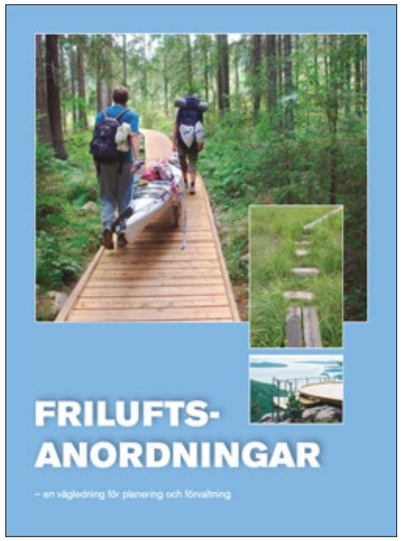
As shown in the theoretical framework (p 8), the theory and background (context and site) are the base for the concept and the design strategies. To develop the design further, a separate design framework was made. It aims for letting the design strategies take physical shape.



Practical guidelines

River.Space.Design
Planning Strategies, Methods and Projects for Urban Rivers
(Martin Prominski et al., 2023)

The book addresses the issue of urban rivers in a comprehensive and systematical way. Strategies, methods and reference projects are presented, and both spacemaking and cosntructions are in focus. The scale ranges from small to large, and in varying contexts.



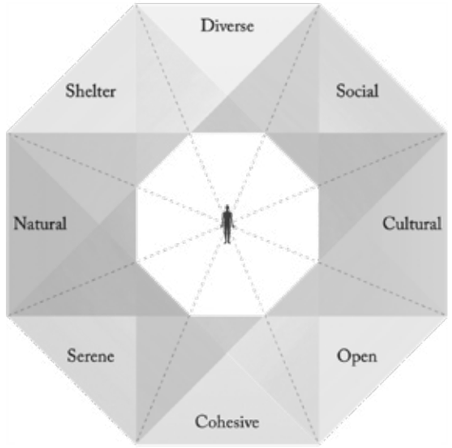
Friluftsanordningar (Recreational facilities)
A guideline for planning and management
(Schibbye, 2007)

Naturvårdsverket offers this guideline for constructning and maintaining recreational facilities. It gives guidelines on how to think about qualities and values of recreational spaces, as well as clear instructions on constructions, measurements and details.

Lekotoper
A guideline for nature-like green landscapes
(Mimmi Beckman et al., 2022)

Developed by Urbio and Örebro municipality this guideline offers an introduction to "lekotoper", which are natural playgrounds for children. Several examples, depending on nature type, are given.

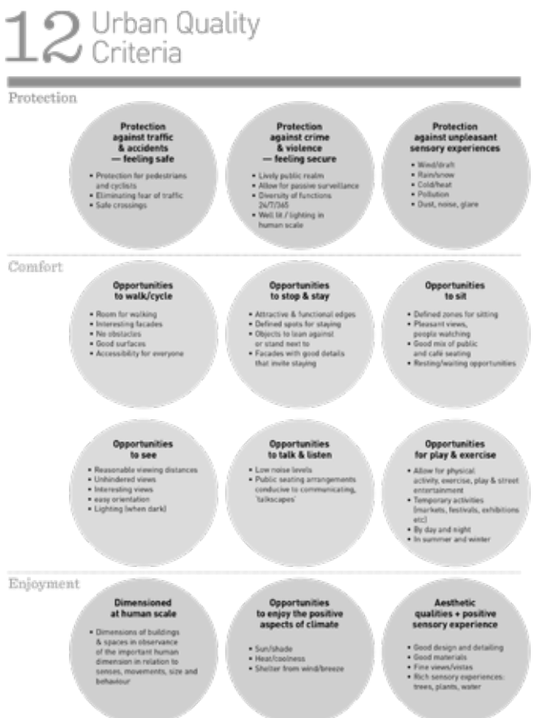
Frameworks



Perceived Sensory Dimensions
An evidence-based approach to greenspace aesthetics (see p. 17)

A model consisitng of eight perceived sensory dimensions, or simplified, eight key qualities in greenspaces. These qualities that are particularly important to support people's needs, and they can all be achieved by greenspace design.

This model is used for developing and evaluating different greenspaces in the design project.



Urban Quality Criteria
(see p. 21)

Developed by Jan Gehl, these criterias summarise Gehl's research on public spaces and human needs. The criteras offer a simple way of working with urban qualities.

These criterias are used for developing and evaluating the design project's urban character.

Main reference projects

Naturum Vattenriket, Kristianstad

The design of Vattenriket's visitors' center Naturum is a big inspiration, from shape to details. This project also has to connect well to Naturum, due to its location.

Kalvebod Brygge, Copenhagen

A waterfront area with space for several water-related activities, such as bathing, kayaking and sauna. The bridges also invite walking or running, as an alternative extended route to walking along the existing dock. The shape is a rolling play of soft curves and levels, as waves in the water.

Vestre Fjordpark, Ålborg

Vestre Fjordpark in Ålborg, Denmark, is a recreational learning and experience landscape, located along the water. Its interactive and playful elements, and its combination of natural and urban design are inspirations for this project.

Kastrup Havsbad, Copenhagen

The simple and elegant design of this bathing spot in Kastrup, Denmark, is a reference to the bathhouse in this project. The wooden construction, the smooth shape and the work with levels are inspiring.

Sjödalsparken Huddinge

This park contains several water elements, which differ in creative ways. The water used to go underground in a culvert, but now is pumped up to go through the park and be visible to people. By making several water designs, different types of park rooms are created. Nature-based solutions, such as day water management, and wetland, are also shown in this park.

Vattenriket's typology

Inspiration is taken from the rich nature and the design langugage of the many visitors' places in Vattenriket. The design of this project aims to go well in line with the design elements of Vattenriket.

Varying use and expression of wood...

...in detail

Wooden sticks used for fencing. Lingenäset.

Wooden joint on foot-bridge. The wood has aged and moss is growing on it. Ekenabben.

Terraced seating. Straight and uneven boards are used. Naturum.

...in building

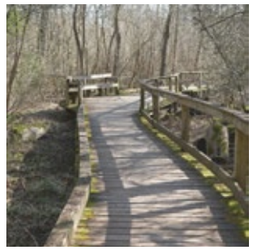
Shielding structure, a bit more cottage-like. Ekenabben.

Birdwatching tower, classical and simple strucure. Hercules.

Building with several structures and expressions. Urban and modern. Naturum.

Footbridges

Linnérundan.



Ekenabben.

Årummet.

Crooked, bent shapes, varying in width

Lingenäset.

Linnérundan, Kanalhuset.

Naturum.

Nature takes place

The footbridge is shaped around the tree. Lingenäset.

Seating and pathways are arranged around water and reads. Naturum.

The birdwatching spot is hidden in the reeds, so that nature surrounds you. Årummet.

Integrated information

Information signs, often in this sail-like shape, welcomes you to visitors' places. Håslöv's Meadows.

Informatiove signs are often intergrated in the design, for the curious to read and for others to pass. Naturum.

Information sign at a footbridge. This speaks of sounds you can hear. Årummet.

Interactive elements

"Crank up the sound". If you crank the wheel, an audio guide will start. Kanalhuset.

"Take a picture". Encourages bypassers to participate in research by taking a photo. Linnérundan.

"Jump like a frog". These walks for children, with challenges, are to be found at several visitors' places. Ekenabben.

Integrated seating

Naturum Bridge.

Årummet.

Bench and table. Ekenabben.

Fig 17: Vattenriket's visitors' place Ekenabben

DESIGN: THE PROPOSAL

Design
Step-by-step
Plan
Diagrams
Siteplan
Bathing
Facade
Section
Visualisations
Space Evaluating Tools
Addition to the City Center

The final design is proposed. The aim is to showcase the main findings from the research and visualise them in a design example.

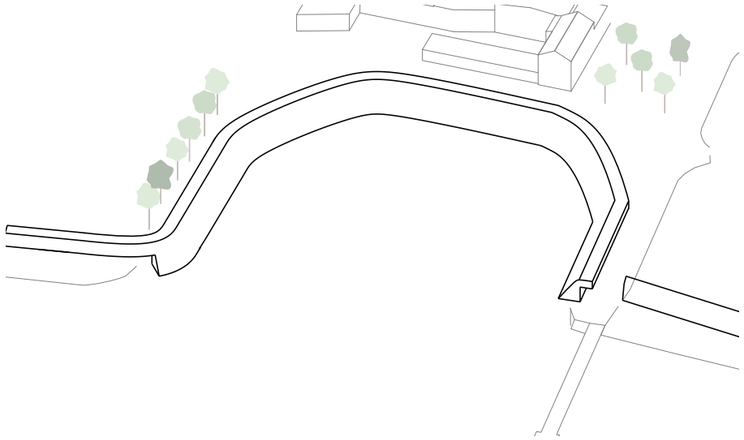
Design

The design proposed is a natural water park with spaces for natural and human life. A social-ecologcal meeting place! By pulling the embankments in towards the city, the plot Båthamnen once again gives space to water, but in a new way. Here, fluctuating water levels, and even flooding, enhance the space rather than threaten it. The terraced landscape creates possibilities for different biotopes, giving a glimpse of the rich nature of Vattenriket. Adding boardwalks, ramps, seating, sauna and bathing possibilities, the area invites people to take part of the landscape. The contact areas with water are several, from playing in a pond to taking a swim in the river.

Due to its strategic location, and to its mix of urban and natural components and qualities, the park becomes an entrance both to the city and to Vattenriket. On both the city side and the river side, entrance situations welcome visitors and introduce them to Vattenriket or to Kristianstad city center.

The hope is that the park will strengthen Kristianstad's character as "The city in Vattenriket", and be a more urban way of experiencing Vattenriket. Water is what created Kristianstad 400 years ago, and giving space to water is a way of telling the history of the city. It is also a way of preserving the site's traditional character - a public place where water, and also flooding, has always been a strong theme.

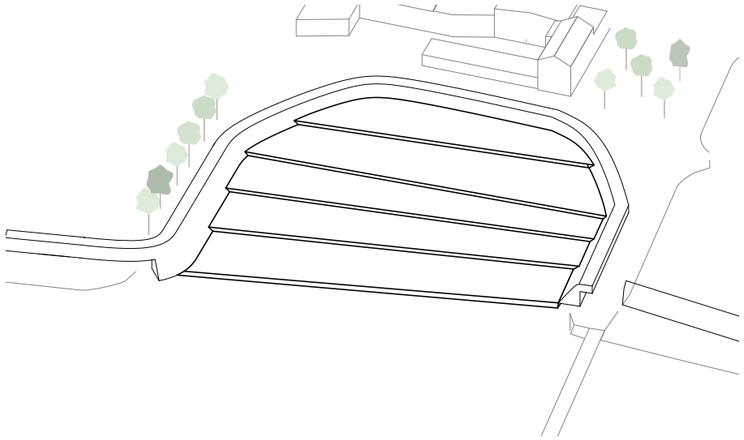
By adding experiences and functions to and around the city center, the aim is to increase movement and people there as well.



Step-by-step

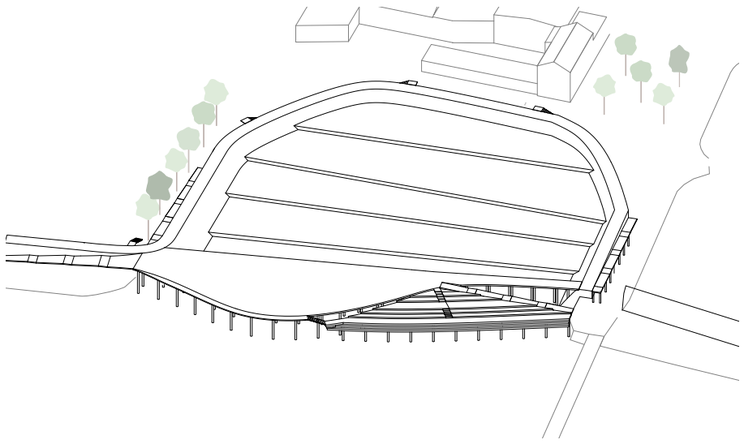
1. Embankments

Instead of adding two meter high embankments along the river, they are pulled in towards the city, allowing water to take place.



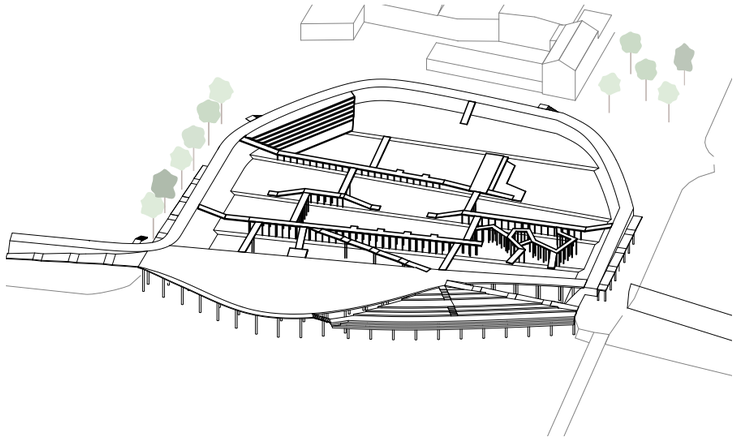
2. A terraced terrain

The highest terrace is on ground level, and then they lower one meter step by step. This creates different biodiverse biotopes on each terrace, and depending on the current water level, different spatialities.



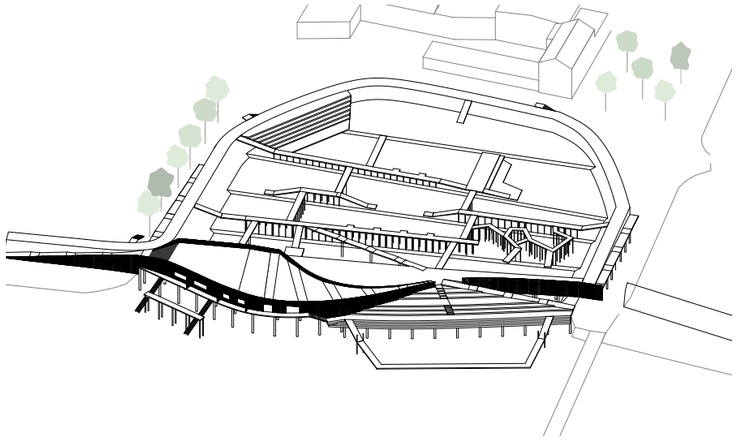
3. Ways to pass

By adding stairs and ramps, people can continue their river walk, or ascend the embankments. The ramps are made accessible.



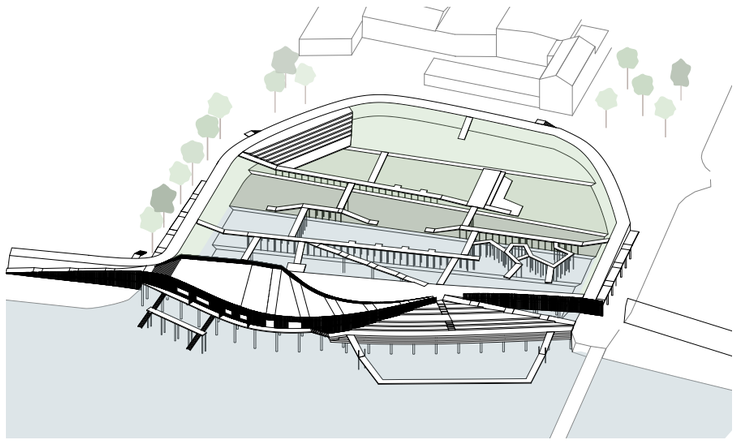
4. Ways to enter the park

By adding boardwalks, which are characteristic for Vattenriket's visitors places, accessibility to the park for people to pass or stay in is created.



5. Bathing possibilities and kiosk

By adding floating docks and a building with sauna and kiosk, a bathing spot by the river is created. Views, both from the sauna and from the accessible rooftop are offered.



6. A water park!

Details, spatial elements and play elements are added, turning it into a place for people of all ages to visit.

Plan

Entrances

1. From bridge. Welcomes you to the city by information signs, or to the park though the ramp.
2. From the city. Welcomes you to Vattenriket by information signs, by or to the park though the ramp.
3. Back entrance. Bike parking.

Terrain (see p. 72-73)

4. Meadow
5. 6. Wet meadow
7. Wet meadow & reeds
8. Reeds

Lekotoper (nature play)

9. Meadow labyrinth
10. Play pond
12. Jump on rocks
13. Boardwalk and net in the reeds
14. Small docks

Other spatialities

15. View
16. Bathing
17. Bathing for cold bath guests
18. Cayak parking
19. Seating stairs
20. Outdoor seating
21. Kiosk (under roof)
22. Cold bathouse (under roof)
23. Floating platform/jetty

Details

24. Possibility to close portway when risk for flooding occurs
25. Water map of Vattenriket, that also acts as water play and storm water management, leading water to the play pond

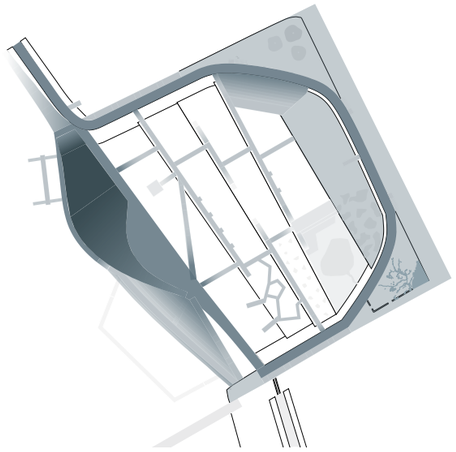
--> Ramp or staircase

--> Accessible ramp

1:500

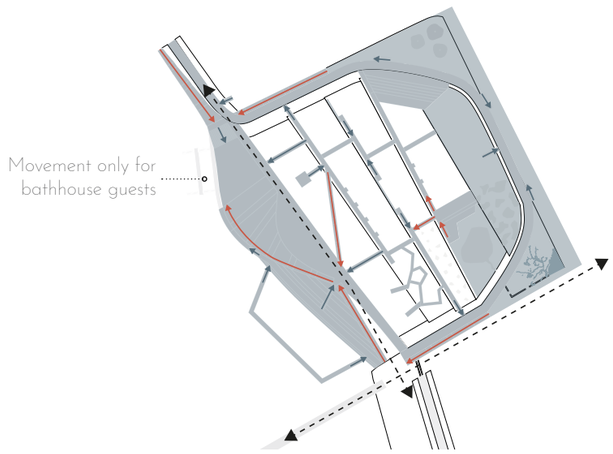
0 10 15 20 30 m

Diagrams



Heights

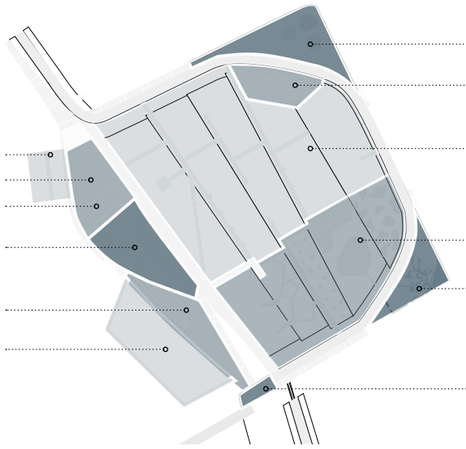
- +5 m above ground level
- +2 m above ground level
- Ground level
- Below ground level



Public movement

- Accessible ramp
- Ramp/staircase
- Free movement
- Preserved sightlines

Peoples' movement has been an important factor for the design of the area. Being able to simply move around, through, and past the area was aimed for. By working with long accessible ramps, most people can move in the area.



Zones

Siteplan

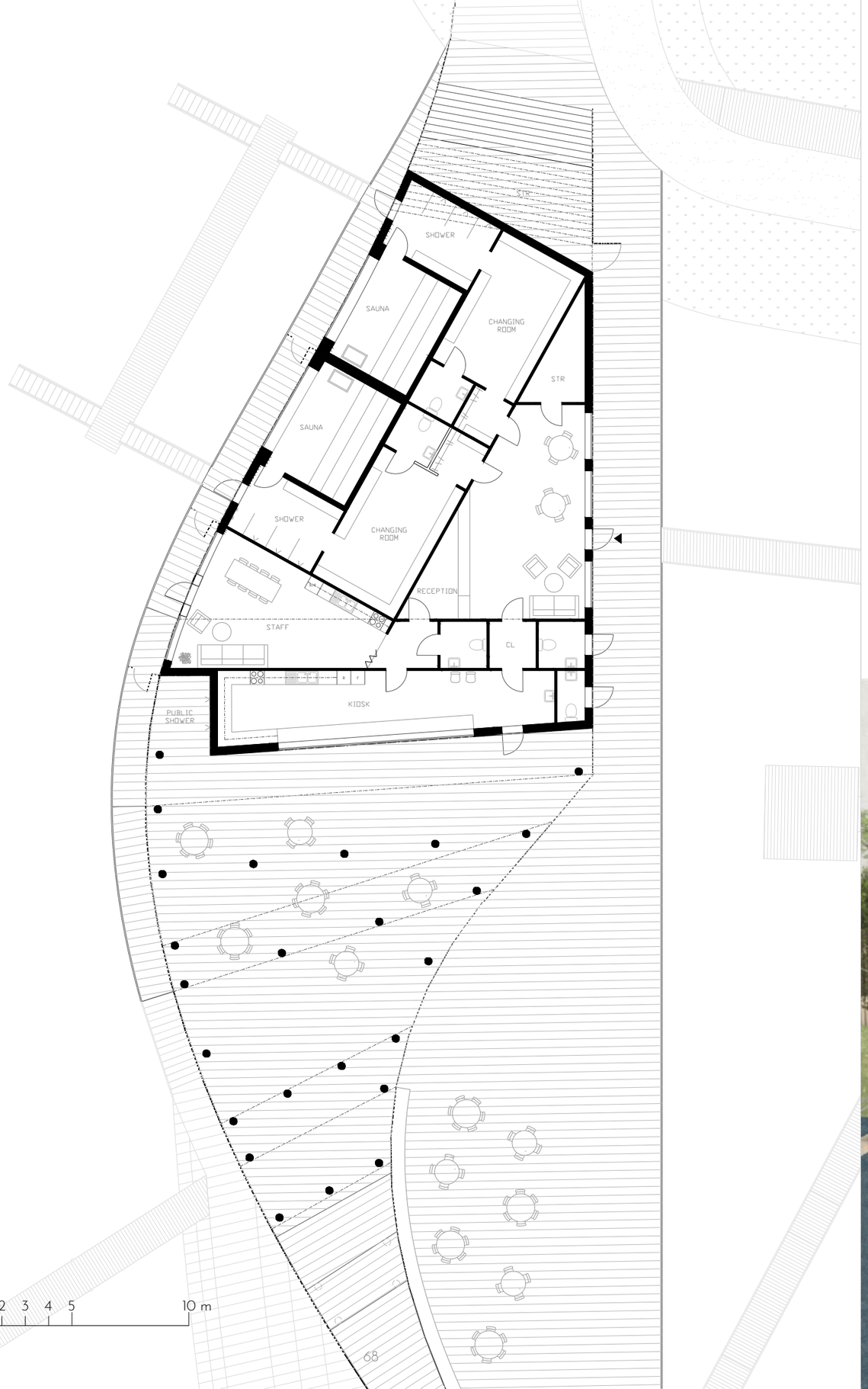
The shapes

The structure facing the river and the natural landscape has **a more organic and flowing shape**, communicating both with the shape of Naturum and with the river and landscape.

The boardwalks, which are closer to the city, are **more strictly organised and work more with straight lines and angles**. They refer to the street network of Kristianstad.

1:2000

0 10 20 30 40 50 100 m



Bathing

The project brings back the bathing facilities to Helge River, and a unique urban-natural bathing experience is offered. Two bathing spots and a kiosk are made.

There is the south one, which is public, outdoor and free. The swimming area is defined by a floating jetty. Outdoor shower possibilities are offered adjacent to the kiosk. There are kayak landing spots along the jetties as well.

The other bathing spot is the cold bathhouse, which becomes a luxurious way to experience Vattenriket. Here you can visit the sauna and enjoy a view of Helge river and the wetland, before taking a dip in the river.

In the same building as the cold bathhouse, there is a kiosk. Some snacks and beverages are offered in the reception of the cold bathhouse, but the main seating is outdoors. In winter time, there are heaters under the ramp, so that you still can enjoy the view, the fresh air and sounds of nature. And for visitors who would rather enjoy their coffee inside anyways - Naturum's restaurant or the city center is just a stone's throw away!

The roof of the building is made into a viewpoint by making it accessible through a long ramp. The space under the ramp becomes a sheltered outdoor room. Parts of it act as a serving area, while the part with low roof could act as urban shelters, or as storage.

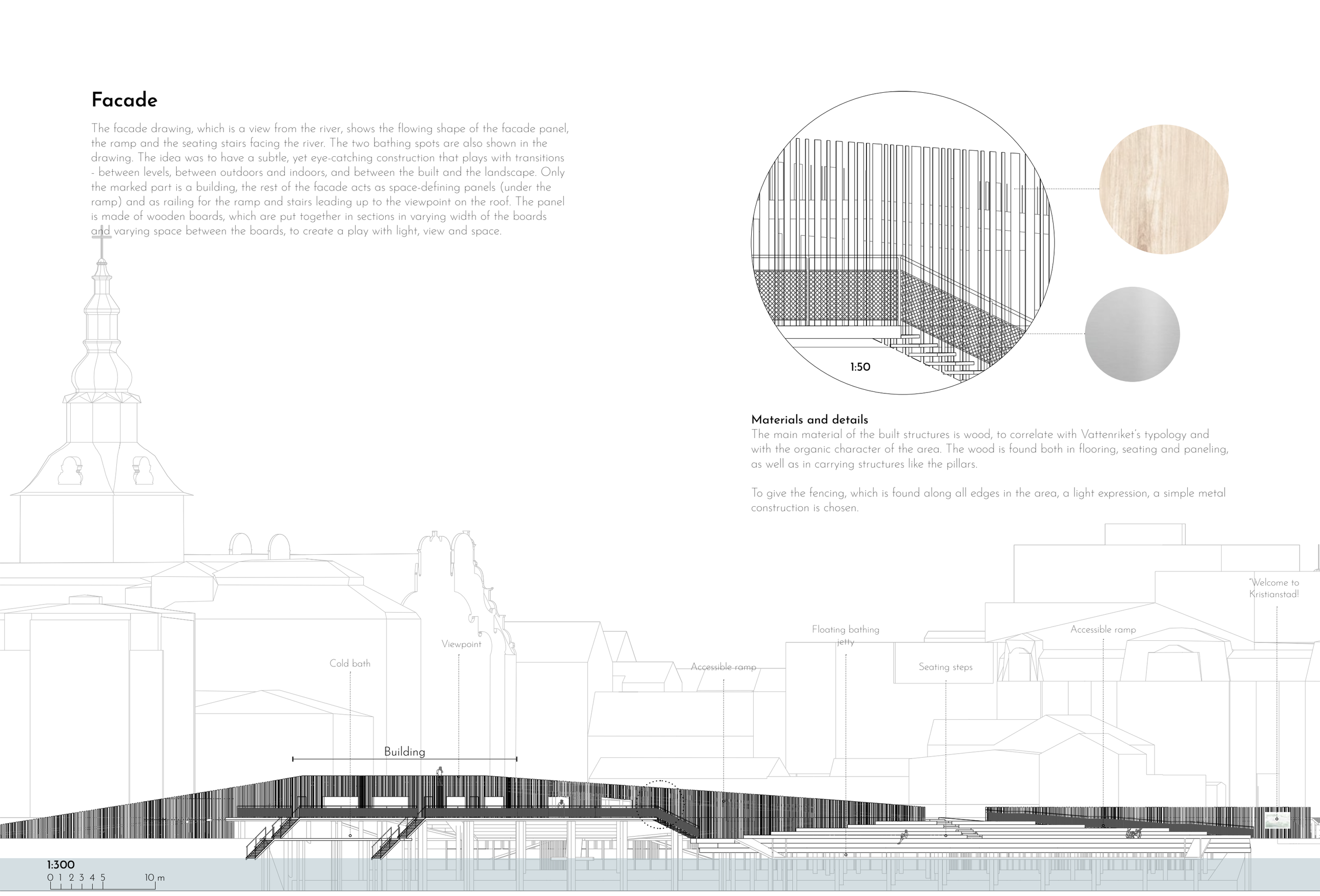
Facade

The facade drawing, which is a view from the river, shows the flowing shape of the facade panel, the ramp and the seating stairs facing the river. The two bathing spots are also shown in the drawing. The idea was to have a subtle, yet eye-catching construction that plays with transitions - between levels, between outdoors and indoors, and between the built and the landscape. Only the marked part is a building, the rest of the facade acts as space-defining panels (under the ramp) and as railing for the ramp and stairs leading up to the viewpoint on the roof. The panel is made of wooden boards, which are put together in sections in varying width of the boards and varying space between the boards, to create a play with light, view and space.

Materials and details

The main material of the built structures is wood, to correlate with Vattenriket's typology and with the organic character of the area. The wood is found both in flooring, seating and paneling, as well as in carrying structures like the pillars.

To give the fencing, which is found along all edges in the area, a light expression, a simple metal construction is chosen.



Section

The section drawing illustrates the idea about the terraced terrain and the different biotopes, the elevation levels and the water levels.

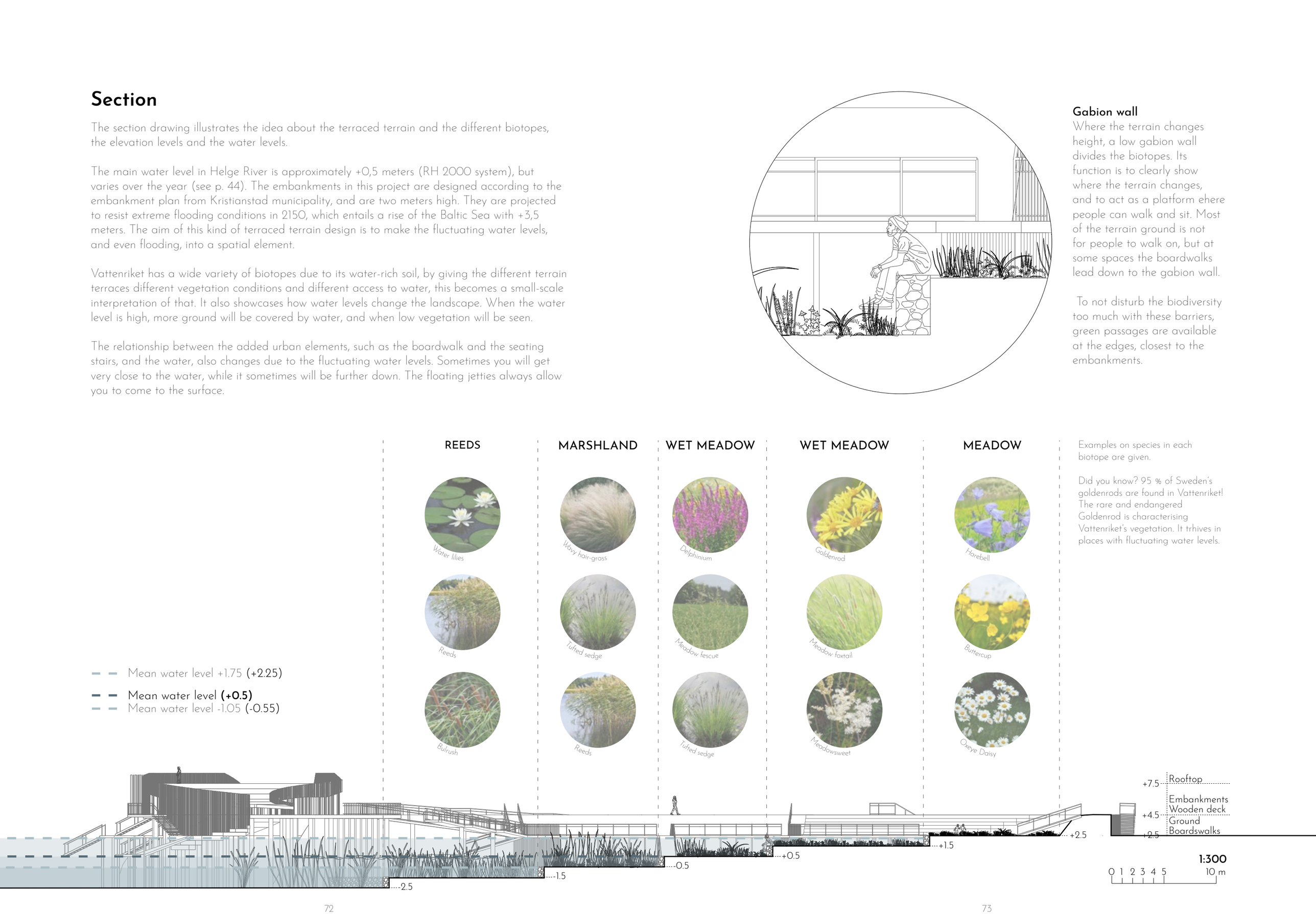
The main water level in Helge River is approximately +0,5 meters (RH 2000 system), but varies over the year (see p. 44). The embankments in this project are designed according to the embankment plan from Kristianstad municipality, and are two meters high. They are projected to resist extreme flooding conditions in 2150, which entails a rise of the Baltic Sea with +3,5 meters. The aim of this kind of terraced terrain design is to make the fluctuating water levels, and even flooding, into a spatial element.

Vattenriket has a wide variety of biotopes due to its water-rich soil, by giving the different terrain terraces different vegetation conditions and different access to water, this becomes a small-scale interpretation of that. It also showcases how water levels change the landscape. When the water level is high, more ground will be covered by water, and when low vegetation will be seen.

The relationship between the added urban elements, such as the boardwalk and the seating stairs, and the water, also changes due to the fluctuating water levels. Sometimes you will get very close to the water, while it sometimes will be further down. The floating jetties always allow you to come to the surface.

Gabion wall
Where the terrain changes height, a low gabion wall divides the biotopes. Its function is to clearly show where the terrain changes, and to act as a platform ehere people can walk and sit. Most of the terrain ground is not for people to walk on, but at some spaces the boardwalks lead down to the gabion wall.

To not disturb the biodiversity too much with these barriers, green passages are available at the edges, closest to the embankments.



Examples on species in each biotope are given.

Did you know? 95 % of Sweden's goldenrods are found in Vattenriket! The rare and endangered Goldenrod is characterising Vattenriket's vegetation. It trhives in places with fluctuating water levels.

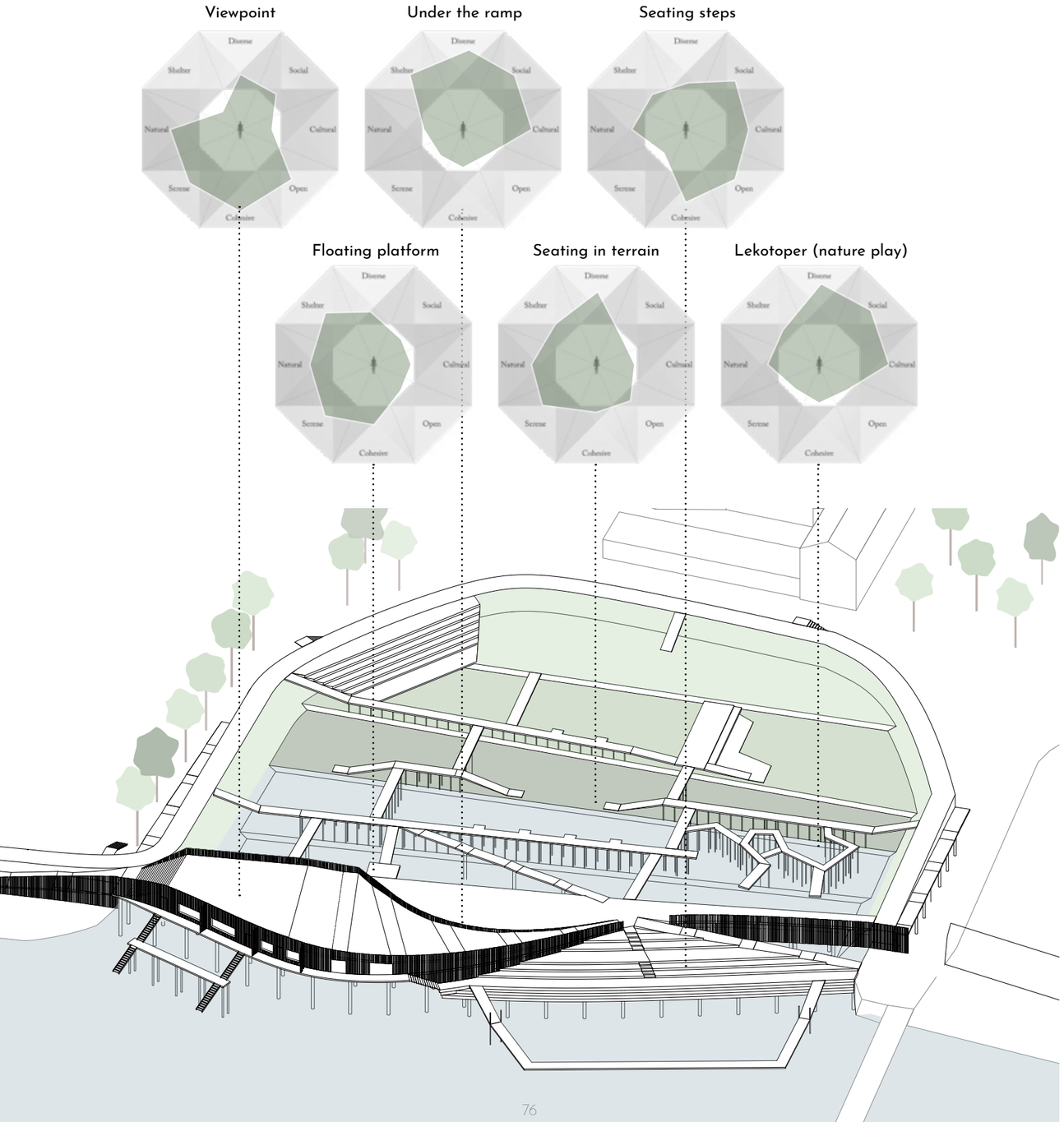
Lekotoper (nature play)
The Lekotop area is shown here. Lekotops are a type of nature-based playground, and each level of the terraced landscape features a different one. Closest to the viewer is the play pond, where the ground is slightly sunken to allow water to collect – both from high river levels and stormwater runoff. On the next terrace, stepping stones invite children to jump and explore. Behind that lies the boardwalk through the reeds, which includes two small platforms extending over the water where children can sit and observe nature.

The ramp
The ramp leading up to the roof serves several spatial functions. It creates the structure's flowing form while also providing an accessible path to the viewpoint. Its curved shape also frames the open outdoor café and the surrounding park. In the image, we see the space created beneath the ramp. Here, there is a kiosk and a more sheltered outdoor seating area. This spot offers protection from wind and rain, while still allowing visitors to enjoy fresh air and the beautiful view over the Helge River.

Space Evaluating Tools

Perceived Sensory Dimensions (p. 17)

The Perceived Sensory Dimension model works as a guide when developing greenspace design. Below, the models show how different rooms have different qualities. By working with this model, different kind of spatialities could be developed.



Urban Quality Criteria (p. 20)

To also get the urban perspective, Gehl's Urban Quality Criteria were used to evaluate the urban character and elements of the area. Below is the author's evaluation of the area. Though both the Perceived Sensory Dimension model and the Urban Quality Criterias, are based on research, they do become a bit subjective when used. But then also, experiencing spaces is a subjective matter.

PROTECTION

Protection against...

traffic & accidents - feeling safe

+ no car traffic.

crime & violence - feeling secure

+ safe in daytime due to people passing and staff working in kiosk and cold bath.
+ lit up in night time.
- less safe at night due to lack of activities.

unpleasant sensory experiences

+ there are places that shelters from wind and rain.
+ the embankments shelter from noise.
+ heaters at kiosk seating during winter.

COMFORT

Opportunities to...

walk, cycle, pass

+ good walking opportunities with several routes to take.
+ good bicycle opportunities around the are.
+ paths are accessible.

stop & stay

+ several spaces and edges that are for staying, both around the embankments and in the area.

sit

+ several zones defined for sitting - on benches, edges, steps or by tables.
+ varying, nice views.

see

+ varying, interesing views.
+ parts of the area are illuminated when dark.
- the building structure is blocking the river view at some parts.

talk & listen

+ low noise levels.
+ seating arranged well for talking.
+ the seating steps closest to the city can be used for lectures/classes.

play & exercise

+ lekotoper (nature play) invites to playing activities.
+ bathing opportunities.
+ movement in the area both summer and winter.

ENJOYMENT

Dimensioned at human scale

+ all spaces are designed for human to be and move in. The structures are not very high and the distances not very long.

Opportunities to enjoy positive aspects of climate

+ seating steps are oriented towards the sun.
+ ramp offers shade.
+ embankments and panels shelter from wind.

Aesthetic qualities + positive sensory experience

+ design correlates with Naturum and Vattenriket in shapes and materials.
+ Nice views of the landscape and of the city.
+ view also of the varying terrain, which offer several sensory experiences.

Addition to the City Center

This diagram illustrates possible movement patterns for example people. The aim is to show how the project is communicating with its surroundings. It is a way of putting the *Theory of Natural Movement* (see p. 19) into practice, where movement is the result of different destinations (attractors) and how an area is planned, meaning its grid with streets, paths, squareas and so (configuration).

Compare this also with the isometric drawing on page 34-35, where all the public meeting places are pointed out.

Two siblings

Older man

Student at the new city campus

Outdoor enthusiast

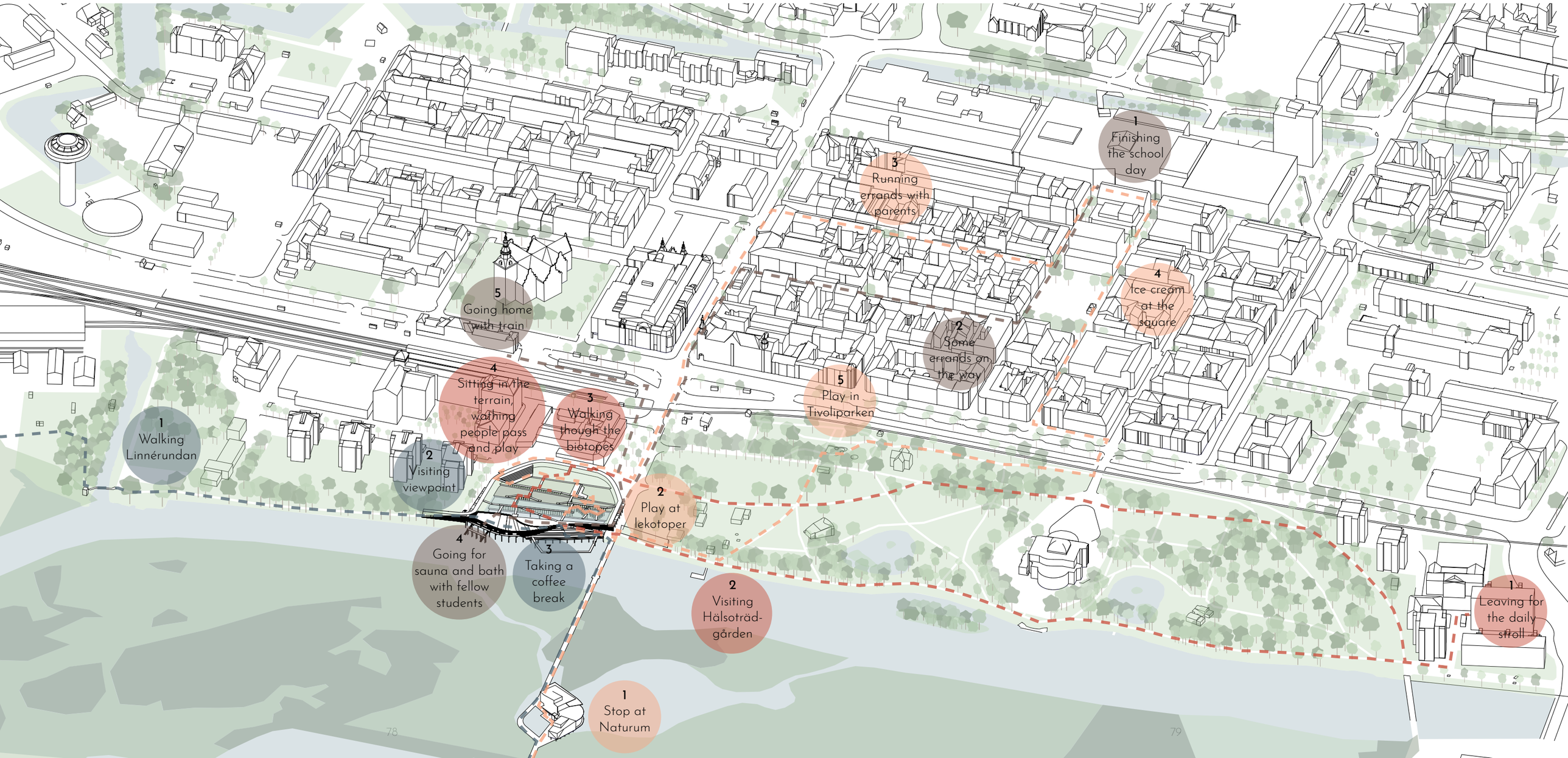


Fig 18: Vattenriket's visitors' place Degeberga Hills

DISCUSSION

The discussion chapter is divided in two parts: a conclusion, where the research questions and purposes are addressed, and a reflection, where the author is more personal about process and findings.

Conclusion

Finding the relevant sub-questions and sub-categories was a bit difficult at first, changing them back and forth for a while. I wanted to capture both the urban and the natural, their relevance to my research, their correlation but also their differences. And that they both belong to sustainable urban development. Since the project, both contextually and conceptually is located in the interface of the natural and urban, simply these two aspects became the two main subcategories, but a bit more specified to my thesis and my purposes. Since sustainable urban development is a very broad theme, that became more of a background category.

Nature and biodiversity in cities

How can natural elements in cities provide ecological and social benefits?

The first sub-question can be answered mainly through theoretical research. There is a lot of research on the ecological and social consequences of nature and biodiversity in urban areas, which support the social-ecological approach in the project. Basing arguments, strategies and design ideas on evidence-based research gave the project more relevance. See concept and design strategies on page 50-51, to see the direct connections from theory to design.

The challenge with this category and question, both in the theory and design section, was to navigate in what aspects to focus on. Nature in cities can take shape in many ways and various scales, and not all could be made in one design project.

Shortly, there are many ecological and social benefits from having nature in cities, and the trick is to find what is relevant for the specific project. In this project, inspiration was from reference projects of similar size, and Vattenriket's way of working with social and ecological aspects. The Biosphere Office supported the process as well.

The result was giving space to water, creating conditions for biodiverse biotopes, adding urban elements so that people can pass or stay, and playing with different contact areas to the river.

Urban qualities for interaction

How can cities (especially city centers) in transformation provide (non-commercial) functions and spaces for interaction?

This question was a bit more complex. There is not a wide selection of evidence-based research on the subject, as there is in the previous question. Presumably that is because the transformation of city centers is an ongoing occurrence, and because there is no clear guideline or "rule" on what city centers are supposed to be. By finding different types of research, like Jan Gehl's theories on urban space and human needs, analyses of city center trends and theories of people's movement, and also combining it with site analyses and studies of reference projects, some kind of answer to the question could be determined. But it was also much a "research by design"-question. The design proposal is an interpretation, based on research and analyses, of what a non-commercial function and space for interaction could be, in Kristianstad. By following the work of Kristianstad City, it can also be perceived that emphasising experiences in the city center, is the way that they are currently working.

Sustainable urban development

How can Kristianstad, the city in Vattenriket, act as a role model for sustainable urban development, regarding human-nature interaction in cities?

This question is addressing all the purposes at once. It is about medium-sized and smaller cities, as pathfinders for sustainable urban planning, but it is also about how Vattenriket as a concept could take more place in the transforming city center of Kristianstad.

Though not addressed or deepened much in the thesis, medium-sized and smaller cities are mentioned in the background and in one of the purposes. Why it is relevant to mention in this thesis, is partly because it is a precondition for the site and the project (working between scale is addressed on the next page), and partly because the thesis is an addition to the discussion about sustainable urban development in smaller cities. The aspiration is that the project embraces the qualities of the smaller cities. In addition to being a medium-sized city, Kristianstad has Vattenriket that could show the way.

Vattenriket as a biosphere reserve is already working a lot with their "good examples" and being a role model in sustainable development in several societal aspects. Letting Vattenriket take more part in and around the city center would, presumably, strengthen the city's unique character as the city in Vattenriket and could also be good examples for sustainable urban development for other cities. This could be done by letting nature take more space, in different ways. It could be about developing greenblue structures, both through and around the city center, developing contact areas to nature, and adding more social-ecological places.

The aim of the design proposal is to be one of Vattenriket's "good examples", and to be a social-ecological, natural-urban meeting place. It is unique to have city and nature so close to each other, and a quality not easily found in the bigger, growing cities.

Main research question

How can natural and urban form be integrated in the interface of natural landscape and city, to create places for interaction between humans and nature?

The answer to the main research question is the design proposal. It is a design based on research, references, site analyses and design tests. In conclusion, it is based on research for design, research on design and research by design.

The approach was to have a combination of urban and natural elements and values, with several different spatialities for different forms of social interaction. The ideas, the concept and the strategies, could be derived from theoretical research, while the actual design rather developed through referencing, sketching and modeling. Models like Perceived Sensory Dimensions and Urban Quality Criteria, helped bridging between theory and practice.

Reflection

The wish to solve everything

Something I, and many other architects and urban designers I believe, struggle with is to narrow down. It is an important part of our mission to balance different requirements, needs and interests. It is easy to end up in a situation where you want to solve everything, especially in urban planning. There are so many approaches and different focuses you can take, and it can be hard to navigate. So, the thesis has been a constant process of narrowing down for me. I believe it is a way of working that I like, but it is also challenging. It requires a lot of reflection and steps back and forth, and letting go of things that you find interesting. But it also benefits the project, hopefully.

Working between scales

Working between scales is challenging, yet very rewarding. To me, it is crucial to work between scales, even though it requires more time and effort, and makes the narrowing down process more difficult. When working locally and on a small scale, as I do on my site, I always want to put my project in the bigger perspective, geographically and conceptually. I usually see my projects as local key projects in a bigger context. How my addition affects its surroundings is just as interesting as the design itself. And the design itself has to be affected by its surroundings, according to me.

You could say that I work in four scales, or contexts, in this project:

1. Kristianstad municipality - Kristianstad's character, history, the municipal goals and visions.
2. Vattenriket - the natural landscape, the visitors' places, the biosphere reserve's goals.
3. The city center - the urban area to which the project will belong and relate.
4. The plot and its closest surroundings - the most local scale, to where the specific design choices relate. Both the site's history and its current surroundings have been relevant.

All of these contexts have affected the final design outcome, and the design outcome could affect these as well.

The interest for smaller cities

It was during my bachelor's thesis that I first really reflected over what cities we as urban designers learn to work in and learn to discuss. In the course I took we worked in Landskrona, a city slightly smaller than Kristianstad, along Skåne's west coast. During the pre-studies, when we visited the municipality and city planning office, I understood the big impacts that smaller changes and implements could have in cities of this size, and I was amazed by it. During the design processes, it was obvious though, that we as students did not really know how to design for cities of that scale. We knew big city urban design, but now had to rethink. Since then I have been aware of that lack in urban design and planning skills for smaller cities, and also aware of the big city focus in the urban planning discussion. Despite the very sustainable qualities that often come with smaller cities! It is these qualities that I would like to enhance, referring to the human scale, the nearness, the local communities and initiatives, and the big impacts that these initiatives or other implements can have.

From theory to design

The biggest challenge in the master The biggest challenge in the master thesis was the step from research to design. Although I always start design projects with site analyses and some research, this was more difficult. From being theoretical, analysing and critical, changing mode to being creative with the findings was challenging. It was not always obvious on how to transform the theory into practice. The mindset had to be changed, from being critically thinking to being creative and open-minded. Keeping a reflecting approach, and trying to work iteratively between theory and design, a proposal developed.

As mentioned earlier, a first step from transforming theory to practice was by defining a concept and design strategies. Though, it has to be mentioned that sketching came before that. Simple sketching, both in words and figuratively, is always my very first step from theory and analyses to design, as a tool to formulate a concept. Having the strategies then helped me shape the ideas further. Since it is convenient for me to work methodically, I structured my design in a design framework, to further know what to base my ideas on. It helped me navigate in guidelines, theory, references and context.

A challenge for me is also to give time and space to design. I think researching and analysing is fun! I could probably have done a whole master thesis with only analyses, but that would not have been as challenging and developing for me. In the end, I wish that I would have given more time to the design work, so that I could have developed it further, and felt more convinced of the choices I made.

Fig 19: Hammarsjön

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