

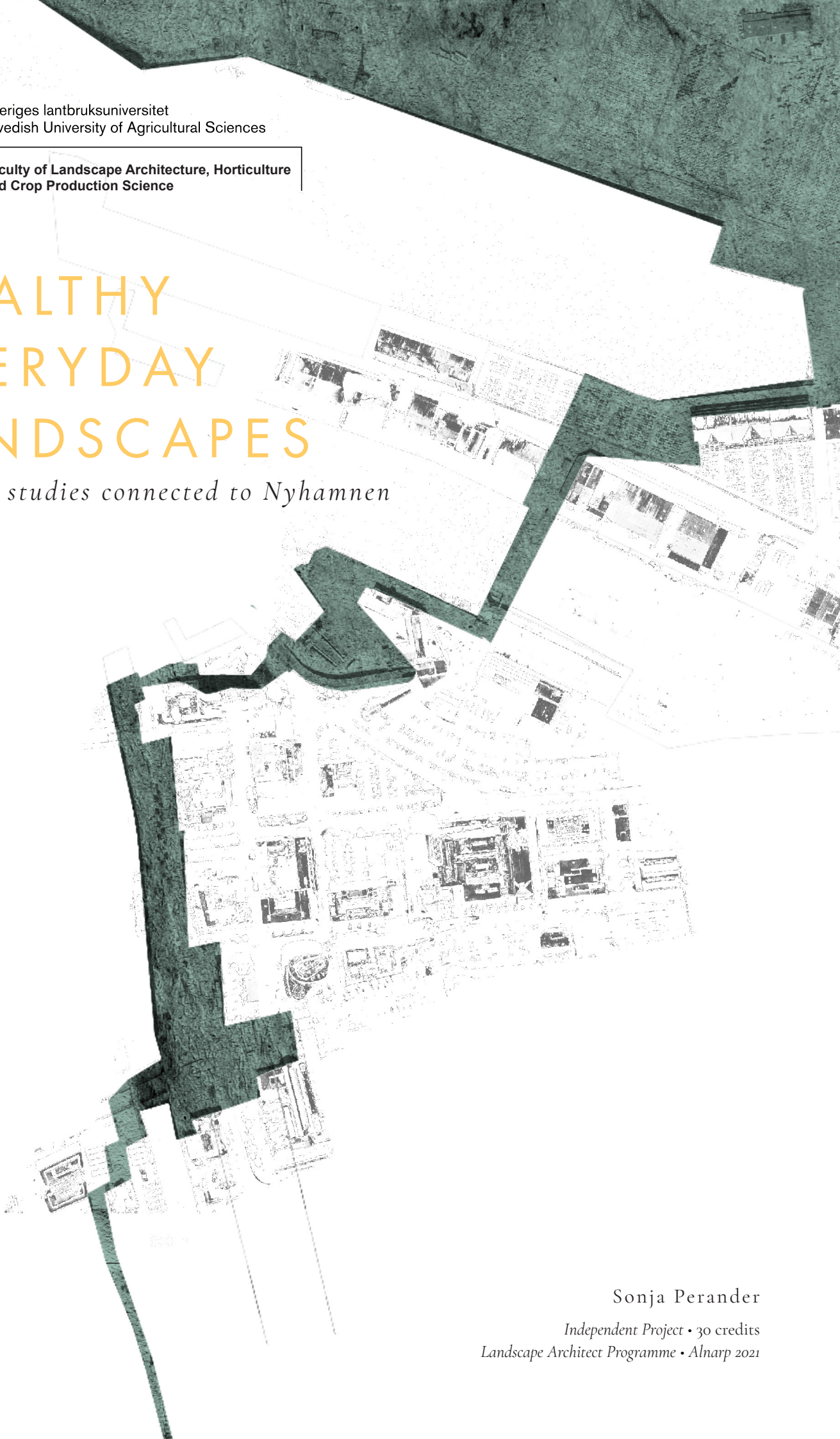


Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Faculty of Landscape Architecture, Horticulture
and Crop Production Science

HEALTHY EVERYDAY LANDSCAPES

- design studies connected to Nyhamnen



Sonja Perander

*Independent Project • 30 credits
Landscape Architect Programme • Alnarp 2021*

Healthy everyday landscapes - design studies connected to Nyhamnen

*Hälsosamma vardagslandskap
- gestaltungsstudier kopplade till Nyhamnen*

Sonja Perander

Supervisor: Anna Bengtsson, SLU, Department of Landscape Architecture, Planning and Management

Co-supervisors: Monika Gora, Gora Art & Landscape
Lisa Diedrich, SLU, Department of Landscape Architecture, Planning and Management

Examiner: Emily Wade, SLU, Department of Landscape Architecture, Planning and Management

Co-examiner: Johan Wirdelöv, SLU, Department of Landscape Architecture, Planning and Management

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SLU, Swedish University of Agricultural Sciences

Faculty of Landscape Architecture, Horticulture and Crop Production Science

Department of Landscape Architecture, Planning and Management

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“Landscape architecture has the potential to be as important to the health and well-being of the landscape and the populations in it as medicine is to humanity. It likewise has the vulnerability to diminish in importance by ignoring the lessons of other disciplines.”

Brown & Corry 2011 p. 329

abstract

The urban landscapes are rapidly transforming in order to meet the demands of population growth as well as dealing with issues of climate change. At the same time the health of urban dwellers is urgently declining due to chronic stress and lifestyle factors. This master thesis in Landscape Architecture explores how the aspect of human wellbeing can be integrated in the urban development process through design studies. The theme of the thesis - *healthy everyday landscapes* - is based on the assumption that in order to deal with issues of health in cities the exposure to healthy environments needs to be increased in the everyday lives of urban dwellers. Nyhamnen that is a new development area centrally located in the harbor of Malmö became the object of this study as it is in an ongoing process of development.

The thesis combines research on health with design thinking as well as explores how contemporary urban planning resonates with the theme of healthy everyday landscapes. The process includes theoretical studies, site studies through an internship at an architectural firm and design studies.

The process revealed that combining research on health with the discipline of design is a complex task. It requires knowledge of both fields as well as skills to translate it to a specific site and context. The process also revealed that connections between sites are essential to promote healthy everyday landscapes and is therefore difficult to apply on an isolated part of the landscape as within the plan area of Nyhamnen. Thus, the outcome of this process is a green strategy that exceeds the boundaries of Nyhamnen and suggests both an adjoining restorative nature area as well as a connective public path to the inner city. The proposal would therefore need to be a part of a larger strategy for the city. At the same time the process shows that designing healthy everyday landscapes requires on-site experiences that need to be a part of the early stages of an urban design process. The thesis therefore suggests that the theme of healthy everyday landscapes is integrated in large-scale strategies for the city as well as detailed design proposals, and they need to be planned and designed in shifting scales and focal points.

The aim of the thesis was to explore how human wellbeing can be integrated in an urban development process. But the outcome of it reveals that healthy everyday landscapes can be combined with other measurements for urban resilience and sustainability, supporting the wellbeing of the urban landscape as a whole.

sammanfattning

Stadens landskap håller på att förändras i en snabb takt för att möta kraven från en växande befolkning och för att hantera utmaningar som orsakas av klimatförändringar. Samtidigt försämras hälsan för stadens invånare i oroväckande takt på grund av kronisk stress och livsstilsfaktorer. I detta masterarbete i Landskapsarkitektur utforskas hur människans välmående kan integreras i den pågående stadsutvecklingsprocessen genom gestaltungsstudier. Temat för arbetet - *hälsosamma vardagslandskap* - baseras på antagandet att exponeringen för hälsosamma miljöer måste öka i stadsinvånarnas vardag för att den nedåtgående trenden för hälsa i städer ska vändas. Nyhamnen som är ett nytt utvecklingsområde centralt beläget vid hamnen i Malmö blev föremålet för denna studie eftersom det är ett landskap i en pågående utvecklingsprocess.

Arbetet kombinerar forskning om hälsa med gestaltungsprinciper och undersöker hur samtida stadsplanering harmoniserar med temat hälsosamma vardagslandskap. Processen består av teoristudier, platsanalyser gjorda under en praktik på ett arkitektkontor samt gestaltungsstudier.

Processen visade att det är en komplex uppgift att kombinera forskning om hälsa med gestaltning. Det kräver kunskap om båda områdena samt skicklighet att översätta kunskapen till en specifik plats och dess sammanhang. Processen avslöjade också att kopplingen mellan platser är central för att främja hälsofrämjande vardagslandskap vilket är svårt att tillämpa på en isolerad del av landskapet såsom planområdet för Nyhamnen. Resultatet av denna process är ett strategiskt förslag som överskrider Nyhamnens gränser och föreslår både ett angränsande rekreativt naturområde samt ett sammankopplande offentligt stråk till innerstaden. Förslaget skulle därför behöva ingå i en mer omfattande strategi för staden. Samtidigt visar processen att gestaltningen av hälsosamma vardagslandskap kräver fältstudier av platsen. Arbetet föreslår därför att temat för hälsosamma vardagslandskap bör vara genomgående från storskaliga strategier för staden till detaljerade gestaltungsförslag, samt att planeringen och gestaltningen bör genomföras i olika skalor och med olika betraktelseperspektiv.

Syftet med arbete var att undersöka hur människans välmående kan integreras i en stadsutvecklingsprocess. Men resultatet visar på att hälsosamma vardagslandskap kan kombineras med andra åtgärder för hållbarhet och resiliens som i sin tur kan bidra till ett välmående stadslandskap i sin helhet.

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01

INTRODUCTION

background

Urban landscapes are under great pressure to adapt to rising urgent demands. The urban population is rapidly growing worldwide and changing climate leads to new challenges in the urban landscape. Therefore, affording new housing as well as dealing with the effects of climate change are issues of high priority in programming new development areas. At the same time, the health of urban dwellers is urgently depriving, largely due to chronic stress and lifestyle factors (WHO 2016). This aspect should be of great concern in urban planning and design, but suggestions on how to deal with these issues of health in cities are sparse. Going back in history, parks were the answer to the increasing health issues caused by the large urbanization in the beginning of the last century (Nolin 1999). However, as the cities are being densified, parks are threatened, both to decrease in size and to become isolated patches in the urban landscape, instead of natural parts of people's everyday lives. Research suggests that in order to address the depriving health of urban dwellers, focus needs to be turned to the landscapes that people are most exposed to (Frumkin et al 2017). Many authors have highlighted the immediate outdoor environment of the building structure as a neglected part of the urban landscape. Jane Jacobs (1958) refers to this network between the blocks as the nervous system of the city that has suffered from neglect because of the block-focused principles used in urban development. Jan Gehl (1971) has engaged his professional career to bring life into these neglected spaces between the buildings. And studies have shown that streetscape greenery is even more associated with health than nearby green areas (Van Dillen et al. 2012). Therefore, this thesis is based on the assumption that the discourse of urban planning needs to involve the aspect of human wellbeing by affording healthy environments connected to the everyday lives of urban dwellers.

Nyhamnen is a central postindustrial harbor area in Malmö. As it is in the early stages of developing into new use for the purpose

of densification it is an interesting object for this study. The development of Nyhamnen is also a global concern as harbor areas worldwide are undergoing a massive transformation, dealing with issues of such complexity that researchers have identified the harbor developments as wicked problems (Dahl & Diedrich 2020). They point to transdisciplinary science as the only way to solve these problems (Dahl & Diedrich 2020), which is what this thesis is about to explore by integrating research on health in a design process.

My interest for the theme of healthy everyday landscapes awoke through a master course I took just before the global pandemic of 2020. It is a mere coincidence that this term has gained another dimension and focus along the process of the thesis as everyone worldwide during the past pandemic year has become subdued to their immediate local environments - captivated in their everyday landscapes. As the pandemic passes and things go back to normal, everyday landscapes will resize again and the impact it has in people's lives now will probably change. But not for everyone. Children, elderly and people suffering from health issues or social deprivation will still be subdued to their immediate local environments the way the rest of us are now experiencing. As the pandemic circumstances still prevail it offers a unique opportunity to see the urban landscape from the perspective of these groups that are most in need of supportive environments. It enables us to reconsider what the urban landscape could be and what the public space should afford.

purpose

The purpose of this thesis is to explore an urban design process where human wellbeing is the center of focus. Based on the assumption that the exposure to healthy environments for urban dwellers needs to be increased in their everyday lives I wanted to find out what the theme of healthy everyday landscapes implies and how it can be integrated in the exploitation of a central harbor area. The study applies the theme to the specific context of Nyhamnen and explores how evidence-based models for salutogenic design can be used for this purpose. Design studies connected to the area explore how research and design can be combined to create healthy everyday landscapes in connection to Nyhamnen.

DESIGN THINKING

(Kees Dorst 2011)

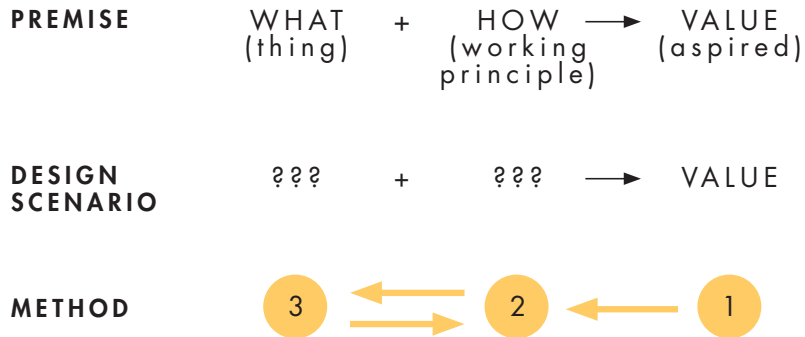


Figure 1. Design thinking according to Kees Dorst (2011). Knowing what to do and how to do it leads to the aspired value. In a design scenario it is more likely that you start out only knowing what you want to achieve. The method then suggests going backwards by first figuring out how to carry through the process and then decide what is needed. The process will continue moving back and forth between these questions until a design solution is reached (Dorst 2011).

PROCESS OF THE THESIS

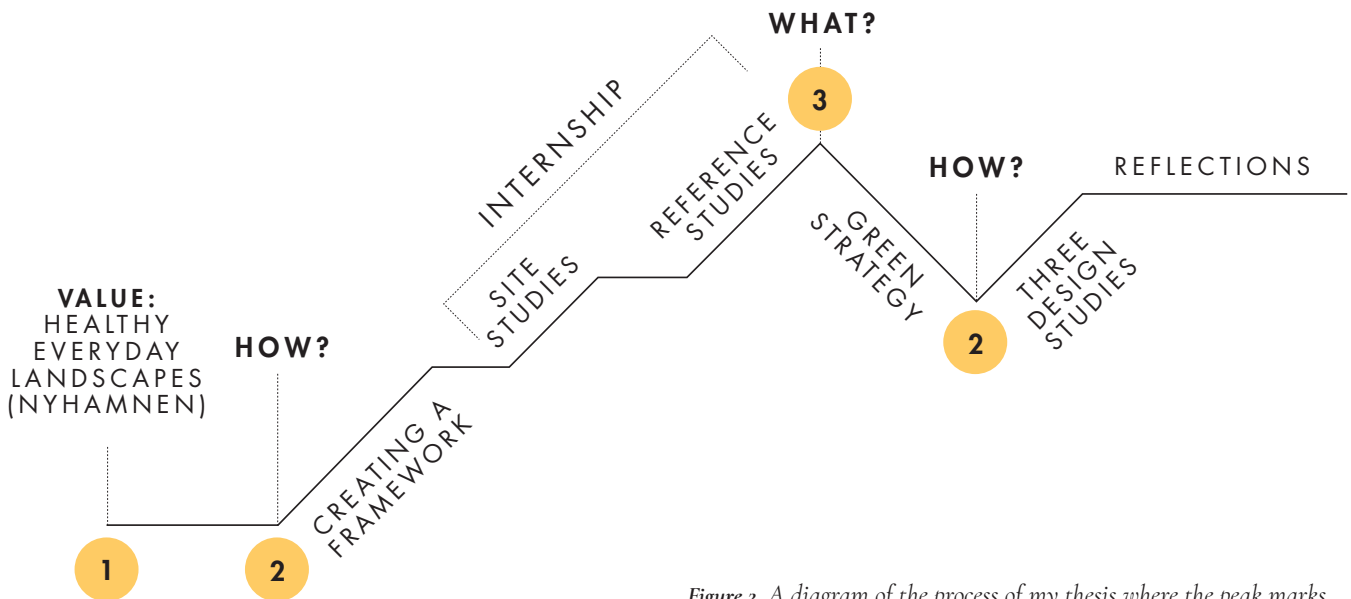


Figure 2. A diagram of the process of my thesis where the peak marks a turning point where I had to reevaluate the scope and the character of the proposal.

method

The process of the thesis is based on a method called design thinking as presented by Kees Dorst (2011) (*figure 1*). As a starting point I only knew what value I wanted to achieve - healthy everyday landscapes in connection to Nyhamnen - so the process was about finding out both what to do and how to do. To find out how to do this, a framework for the process was created based on design theory and research on health (*figure 2*). Three key aspects for everyday landscapes were found to guide the studies as well as two evidence-based models for salutogenic design to apply in the studies. Through an internship at White Architects in Malmö, site studies of Nyhamnen as well as connected reference studies were conducted based on the framework. The internship also included desktop studies of the past, present and future of Nyhamnen and engendered knowledge about urban planning processes in general. The knowledge gained from the studies and the internship was used together with the framework to decide what to do. Based on that, the proposal was created, resulting in a large-scale green strategy. To find out how to further realize the proposal on a smaller scale, three design studies were conducted exploring different aspects of the framework and the findings from the site- and reference studies. The process was exploratory and therefore reflections as well as descriptions of the process are integrated in the studies. The thesis ends with a reflection on how the proposal corresponds to the intention of designing urban landscapes for human wellbeing and how the methods and approaches used have aided translating the concept of healthy everyday landscapes to a specific site.

delimitations

As the process of the design studies are exploratory, I will not account for all the trials and errors along the way. I will focus on the insights that have been important for the process and approaches that have helped me find solutions. The proposal will be strategic and conceptual, without going into detailed design or technical solutions. The thesis will not focus on a specific group of people as the proposal is connected to a variety of public spaces aimed to be used by a variety of people.



My everyday landscape



My pre-pandemic everyday landscape



Everyday landscapes of others



02

FRAMEWORK

As ‘healthy everyday landscapes’ is the theme for the thesis a framework for the process based on the theme is presented in this chapter. It is a theoretical study that grounds the theme of healthy everyday landscapes in design theory as well as in research on health. In the first part the term everyday landscapes is defined and after that evidence-based models for salutogenic design that are of use in the process are compiled. I found that the term everyday landscapes is closely related to design theory and that it can be summarized through three key aspects - connectivity, perceptuality and site affinity. I also found two evidence-based models that were useful in the context of Nyhamnen – the 8 perceived sensory dimensions and the triangle of supportive environments. These three key aspects together with the two evidence-based models became the spine in the work guiding both how to conduct the studies and what type of proposal to create.

everyday landscapes

Understanding the term everyday landscapes may not seem that hard to do in the first place. As the term implies it is the different landscapes people encounter in their everyday lives. Anyone could easily draw a line on a map showing where they wake up every morning, which routes they pass taking the kids to school or going to work, which grocery store they go to on their way home and where they go for evening activities. For someone else with completely different daily activities the line would simply be drawn differently. In both cases, each landscape that is intersected by the drawn line would define their everyday landscapes. They are in other words shaped by individually composed movement patterns in the everyday lives of each and every one. They consist of the landscapes experienced with all senses from the moment of waking up until the moment of going to sleep. They are unique and yet they are not fixed but constantly changing through life. Our everyday routes tend to expand as we grow up, alter as we move, change schools or jobs and they tend to contract as we get old. But still everyday landscapes are rather comprehensible from a subjective point of view.

Figure 3. The map illustrates that everyday landscapes are individually composed moving patterns that change over time and piled together almost every part of the urban landscape becomes someones everyday landscape - they are in other words impossible to grasp geographically.

It is when these unique and transforming movement patterns of each and every one are drawn together in an attempt to map and identify them in an urban context that things start to get blurry (*figure 3*). They overlap and join together creating a web of shared landscapes, where someone's workplace might be someone else's local grocery store and someone's schoolyard might be someone else's view from the bedroom window. They move from indoor to outdoor disregarding the boundary between public space and private space as well as the abstract lines of plan areas. Almost every part of the urban landscape is someone's everyday landscape, which makes them almost impossible to grasp and comprehend geographically. So how do they need to be defined in order to make sense in the context of urban planning and design? I concluded that the essence of everyday landscapes is that they reveal how landscapes are perceived. Therefore, I summarized three key aspects of everyday landscapes with the help of design theory.

connectivity

Firstly, everyday landscapes are perceived not as separate entities but in connection to each other. According to Carol Burns and Andrea Kahn (2005) no site can be experienced in isolation. They claim that sites are to be interpreted through three distinct geographic areas: the area of control which is the scope of the design, the area of influence consisting of the surroundings influencing the design and the area of effect that is the surrounding areas influenced by the design (Burns & Kahn 2005). In other words, two opposite spatial ideas need to be incorporated in the concept of site: "a physically specific place and a spatially and temporally expansive surround" (Burns & Kahn 2005, p. xii). It is this connection between a site and its context that everyday landscapes bring into focus. This aspect has led me in my process to study the site and its surrounding landscapes sequentially revealing the connectivity between spaces. It has also guided me to see the context as a part of the whole.

perceptuality

Secondly, everyday landscapes are perceived spatially and through sensory, temporal and phenomenal experiences. This aspect correlates with Doreen Massey's (2005) definition of space that she describes as shifting, temporal and experienced subjectively. She points out that the problem with studying sites from above is that they offer a form of representation which is not to be confused with the complexity of space (Massey 2005). Kahn (1998) encourages a site construction based on programming the city from the ground

up instead of the traditional opposite, claiming that a ground-up approach reveals the subjective presence of the user of space and thereby the irregular spatial experiences of the city that are hidden from above. However, perceptuality is not just about a ground up approach, it also concerns the sensory, temporal and phenomenal experiences. Although vision is our primary sense, sounds, smells and tactile sensations including thermal comfort are also of great importance in our experience of landscapes, as perception of space involves all our senses working together (Grahn & Stigsdotter 2009, Brown 2010). These sensory experiences also relate to the temporal and phenomenal dimensions of the landscape. Phenomenal experiences, episodic contrasts and temporal moments are what Elisabeth Meyer (2005) calls haecceities. They are part of a site's inherent qualities and need to be recognized in order to include these dimensions in the design (Meyer 2005). Consequently, in my process I have persistently been trying to study landscapes through on site experiences from a perceptual level and by using my subjective physical experience as an instrument for registering the sensory, temporal and phenomenal experiences as well as the irregular spatialities of the city.

site affinity

Finally, everyday landscapes are characterized by a relationship that evolves between a user and a daily visited site. According to Kahn (1998) understanding a site implies studying them without appraising their value, in order to reveal their hidden character that can define their urban potential. This is especially important for overlooked urban sites that can be ugly or displeasing, unbuilt or underutilized or simply lack characteristics to differentiate them from their surroundings (Kahn 1998). Genius loci, sense of place, the spirit of the place, place identity and site specificity are only a number of terms describing this aspect of unfolding a site's inherent qualities (Cushing & Miller 2020; Diedrich, Kahn & Lindholm 2015; Burns & Kahn 2005; Meyer 2005; Kahn 1998). Nevertheless, I found the term site affinity more suitable as a key aspect for everyday landscapes since it points more directly at the relation between the site and its users. In practice, it means the same thing but with an emphasis on studying a site and its surroundings on the premises of the user. In this thesis my approach has thus been to create my own relationship to the site. I have done this through continuous site visits throughout the process, trying to acknowledge the site for what it is and registering different uses. This approach has also encouraged me to make proposals with regard to existing structures and the inherent qualities of the landscape.

evidence based models for salutogenic design

In order to find out how everyday landscapes can become healthy I integrated research on health into the framework. Salutogenic design has been used in many different settings, from healthcare to workplaces and nature areas (Bengtsson & Grahn 2014; Skärbäck, Bengtsson & Grahn 2019; Stigsdotter, Sidenius & Grahn, 2020). In salutogenic design, contact with nature is a key component (Stoltz 2020). For the purpose of designing health promoting environments with nature as an element, evidence-based models and tools have been created through research and studies (Stoltz & Grahn 2021, Bengtsson 2015). For the context of Nyhamnen I found two models that I have used throughout the process – *the 8 perceived sensory dimensions* and *the triangle of supportive environments* that are presented below. As I have focused my proposal on public space, the tools have first of all contributed as an instrument to study existing landscapes. Secondly, they have been used to ensure that a variety of environmental qualities are found in the proposal presented in this thesis. Thirdly, they have been used in the design studies, in an exploratory way, to find out how they can be translated into design.

8 perceived sensory dimensions (PSDs)

The model of *8 perceived sensory dimensions* (figure 4) shows eight different environmental characters that research points out as universally important for human wellbeing (Stoltz & Grahn 2021). They are named the natural, cultural, cohesive, diverse, sheltered, open, social and the serene (Stoltz 2020). The model points at the human need for a variety of PSDs in the local environment. It also shows that the PSDs are connected to different intentions with the design (Stoltz 2020, Grahn & Stigsdotter 2009). Studies have shown that there is a coherency in the experience of the different PSDs which makes them gradable in terms of their restorative qualities (Stoltz & Grahn 2021). The PSDs *serene* and *sheltered* for example, are experienced the most restorative while *social* and *cultural* are experienced the least restorative as they offer stimulation instead of attention restoration (Grahn & Stigsdotter 2009). There is also a relationship between the different PSDs. The PSDs that stand close to each other in the model, like *natural* and *serene*, have related qualities, while the PSDs that form opposing pairs, like *sheltered* and *open*, have qualities that stand in contrast to each other (Stoltz & Grahn 2021). In a stimulating environment the contrast created through opposing pairs can be used as an asset although careful consideration is required. In a restorative environment, an

opposing PSD might on the other hand become conflicting unless it is carefully balanced in order to support the primary design intention (Stoltz & Grahn, 2021). A recently made study suggests that the PSDs should be used to distinguish dominant PSDs from supportive PSDs as well as identifying lacking and conflicting PSDs (Stigsdotter, Sidenius & Grahn, 2020) (*figure 5*). In the evaluative studies of this thesis I have identified the existing dominant and supportive PSDs found in the landscape, while in the proposal part I have identified areas that lack PSDs and made proposals on which PSDs to develop in the design. In order to understand the different characters of the 8 PSDs and to translate them into an urban context I have used the descriptions of each character presented by Jonathan Stoltz (2020) (*figure 6*).

triangle of supportive environments

The model of *the triangle of supportive environments* (*figure 7*) shows how different types of environments, from stimulating to restorative, are connected to our subjective experience of wellbeing (Bengtsson & Grahn 2014). In a state of low wellbeing the sensitivity to the environment is high and the capability to engage with the environment is low, a state of mind that prefers restorative space (Bengtsson & Grahn 2014). Going up the triangle in terms of wellbeing the sensitivity to the environment decreases, gradually enabling a more active engagement with the environment where stimulating space is preferred (Bengtsson & Grahn 2014). Although the triangle is based on different emotional and physical states of wellbeing the need for different types of environments can also vary on a daily basis and depending on life situation. Thus, *the triangle of supportive environments* reveals the necessity of having access to both stimulating and restorative spaces in our everyday life (Ibid.). The model also connects the restorative and stimulating design intentions to the 8 PSDs (Bengtsson & Grahn, 2014; Stoltz & Grahn, 2021). The PSDs *diverse*, *social*, *cultural* and *open* are connected to stimulating qualities while *sheltered*, *natural*, *serene* and *cohesive* are connected to restorative qualities. In the triangle, the PSDs *social* and *cultural* are placed in the top which implies that they demand an outward directed engagement. The PSDs *serene* and *sheltered* are placed in the bottom allowing an inward directed engagement. The PSDs in the middle of the triangle are connected to emotional and active engagement (Bengtsson & Grahn 2014).

Considering the high amount of stress related diseases in cities this model highlights the need to ensure restorative qualities in public space as a complement to stimulating qualities that today seem to

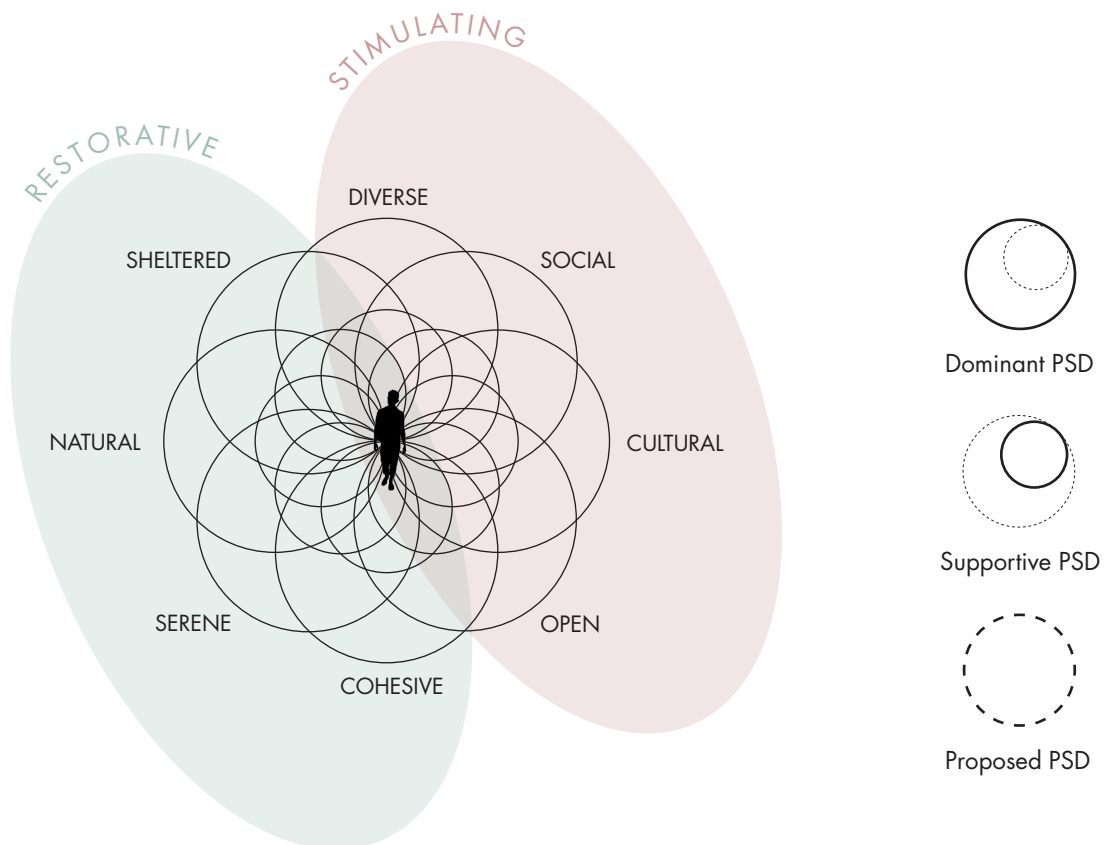


Figure 4. 8 perceived sensory dimensions. Schematic illustration based on Stoltz & Grahn (2021). The PSDs on opposite sides form opposing pairs in terms of character while PSDs that stand close to each other have related qualities. The different PSDs are also connected to different design intentions.

Figure 5. Suggested ways to identify the 8 perceived sensory dimensions. Schematic illustrations based on Stigsdotter, Sigenius & Grahn (2020).

Natural	A natural quality: a sense of fascination with the natural world, its force and power. A sense of wild, untouched nature, and the passage of time. Seemingly self-sown plants and naturally shaped features.
Cultural	A cultural quality: a sense of fascination with human culture, creativity, efforts, and history. The cultivated, crafted and man-made, as opposed to the “self-made” or natural.
Open	An open quality: Overviews, sceneries, prospects, vistas, and stays. Room to roam freely, space for play or physical activities.
Social	A social quality: plenty of people and movement. Social activities and interactions. Food, shops, cafés, restaurants, etc.
Cohesive	A cohesive quality: a sense of spatial cohesion and spaciousness, an experience of entering a “world in itself”, an uninterrupted, cohesive whole.
Diverse	A diverse quality: a sense of variation and abundance. Different species of plants, animals, etc. Variations in spatial configuration and content.
Sheltered	A sheltered quality: a sense of shelter, safety and protection, An enclosed environment, a refuge, a hideaway.
Serene	A serene quality: a sense of serenity, peace, quiet and stillness. Freedom from noise and disturbances. No people.

Figure 6. Descriptions of the 8 perceived sensory dimensions (Stoltz 2020).

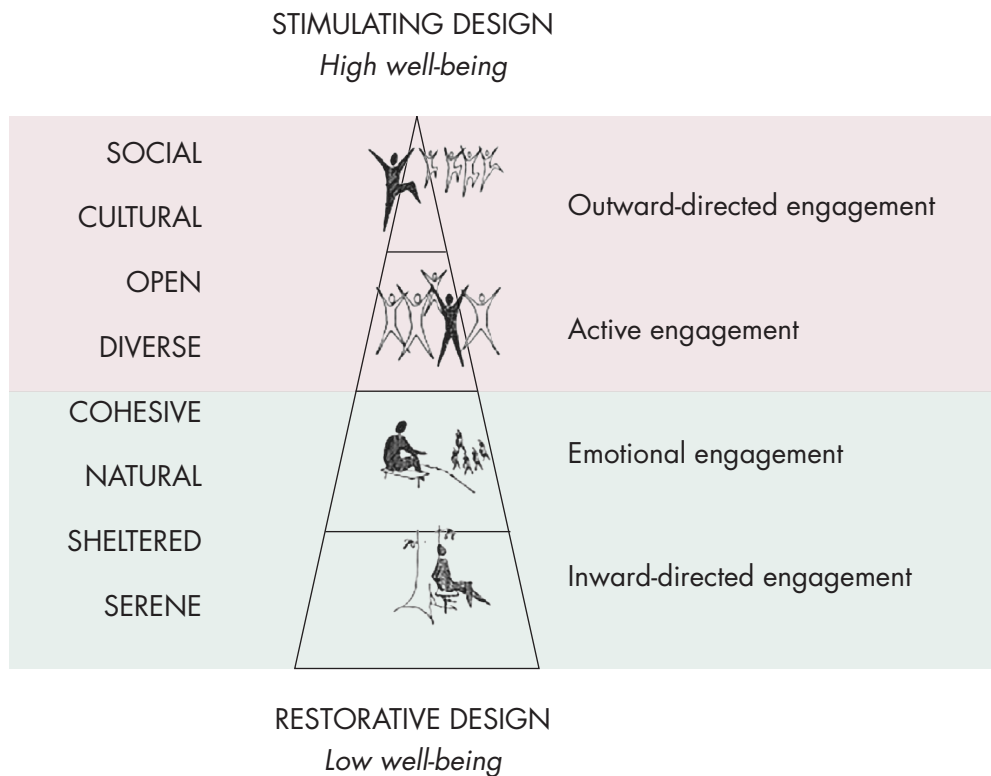


Figure 7. Triangle of supportive environments based on schematic illustrations by Bengtsson & Grahn (2014) and Grahn, Bengtsson & Stoltz (unpublished).

dominate the discourse of appealing design in urban landscapes. In this thesis *the triangle of supportive environments* has guided me to first of all ensure that these qualities are found in the proposal. I have also used the model together with the 8 PSDs to evaluate existing landscapes and to propose different design intentions depending on the context.

reflection

Through creating this framework for healthy everyday landscapes, I found both methods and models to use in the studies. Based on the three key aspects of everyday landscapes, I have throughout the process mainly used an approach that explores the landscape sequentially, through on site experiences and where proposals are made with regard to existing structures and qualities. The three design studies at the end of the thesis also explore each of these aspects in connection to design – the waterfront study exploring site affinity, the inner-city study exploring perceptuality and the green connection study exploring connectivity. The evidence-based models have added a research-based dimension to the study that is otherwise conducted with my subjective experience of the landscapes as an instrument. I have used them for evaluation in the reference and site studies, as a base for design in the proposal and for the purpose of translating them into design in all three design studies.

03

SITE STUDIES

At this point I started an internship for White architects in Malmö where I worked on a project commissioned by Malmö Stad that was to deliver a report on how to make the goals of Nyhamnen operational. Through the internship I conducted most of the site studies presented in this chapter and I also learned about urban development processes. As connectivity is one of the key aspects for everyday landscapes, I will start by presenting context studies of Nyhamnen. In order to integrate the other two key aspects of everyday landscapes in the studies - perceptuality and site affinity - I have conducted most of the context studies on site, using a sequential approach. These studies also include the first attempts of using the evidence-based models. After that I will present studies exploring the past, present and future of Nyhamnen that are relevant in understanding the site through different aspects of time. They are done both on site and through desktop studies. The things I learned about urban development processes are presented in the reflection part of this chapter.

context

Nyhamnen is centrally located at the harbour area on the north side of the central station in Malmö. One of the goals of Nyhamnen is to integrate the area with the center as well as the east and the west of Malmö (Malmö Stad 2019). Therefore, I started out by transecting Nyhamnen by bike exploring the connections to the east and the west. The bike transect goes from Daniaparken, a public space at the shore of Västra hamnen, to Rostorp, a green single-family residential area in Kirseberg. As I studied the landscapes in movement leaving out detailed observations, I focused on registering the perceptual aspect of noise along the route that I documented through a sequential photo collage (*figure 8*). In the second study I transected Nyhamnen by walking, exploring the connection to the center, from Värnhem to the central station. I conducted the study by stopping every five minutes to take notes on both sensory and spatial experiences. I documented the landscapes through panoramic views as well as sketches, and I analyzed them with the help of the evidence-based models (*figure 9*).

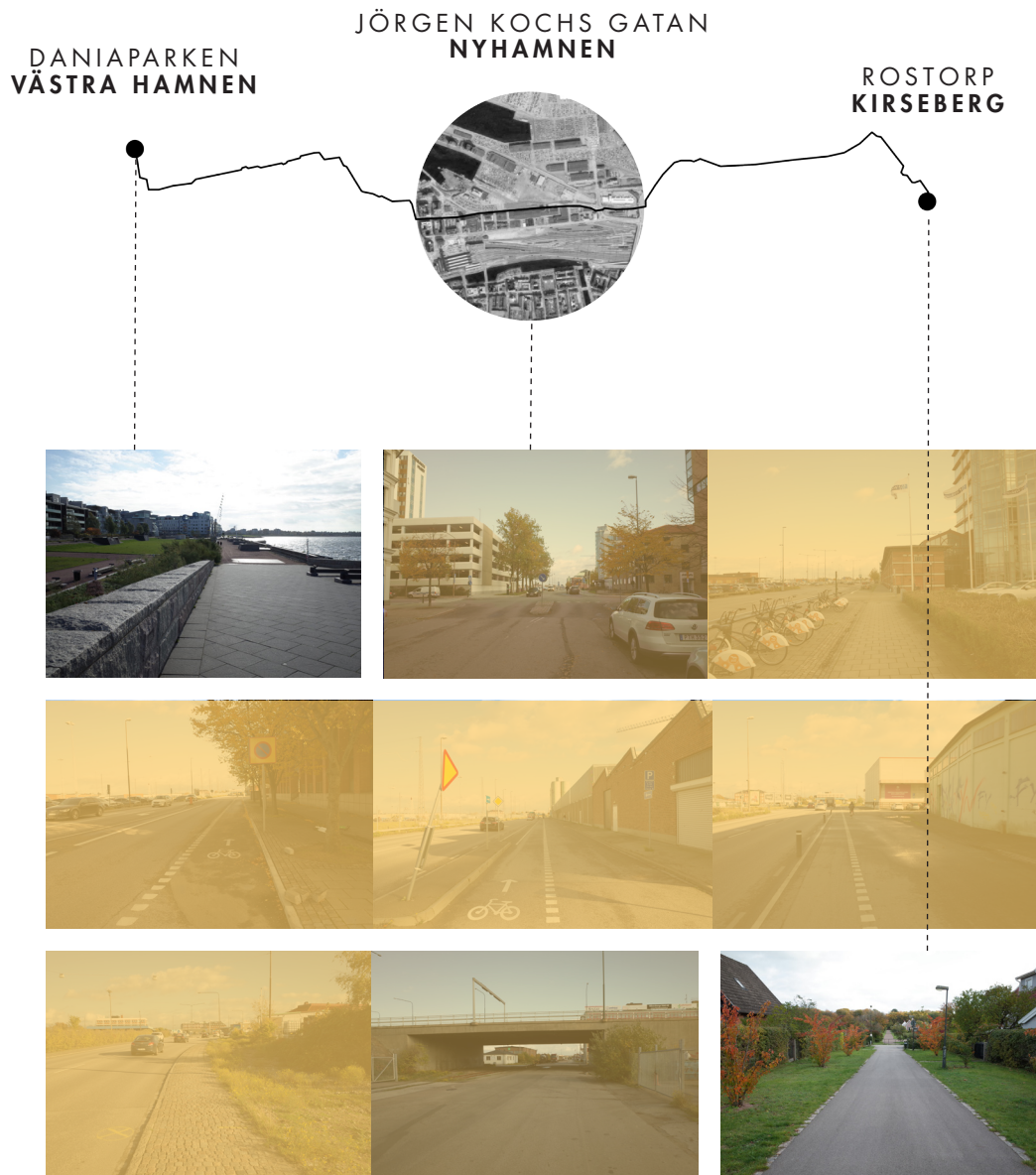


Figure 8. A transect by bike from east to west goes from public space at the shore of Västra hamnen through Nyhamnen to a green single-family residential area in Kirseberg. The study reveals that the passage through Nyhamnen is a highly noisepolluted and trafficked street.

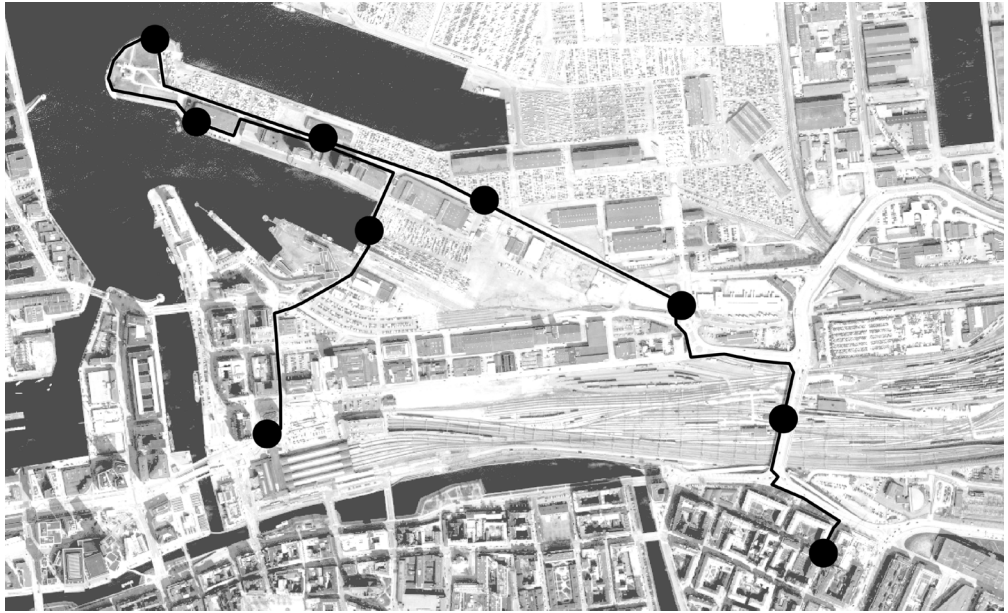
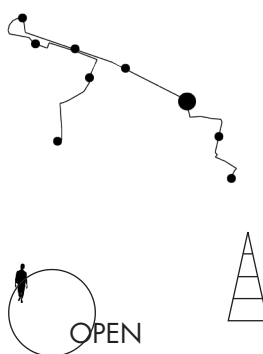
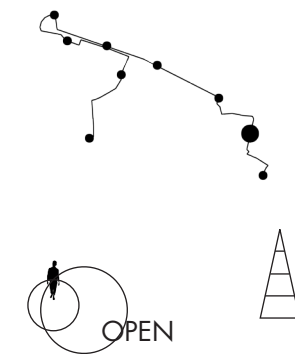
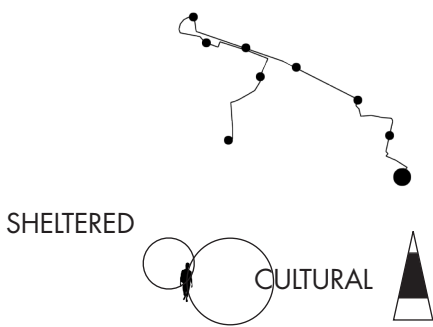
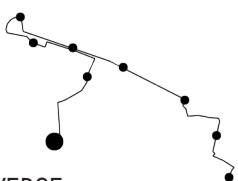
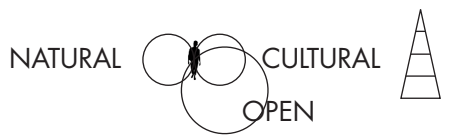
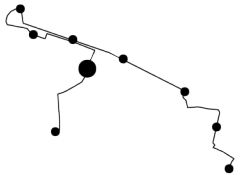
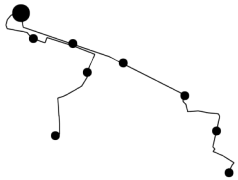
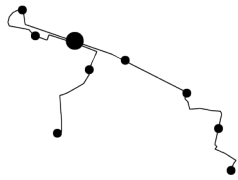
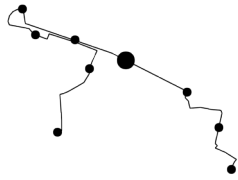


Figure 9. Walk transect studying Nyhamnen and its connection to center from Värnhem to the central station of Malmö. The study shows that open is the dominant PSD in Nyhamnen and that the area in large lacks supportive environments today. The connection to the central station has a diverse and social quality while the connection to Värnhem has a sheltered quality.





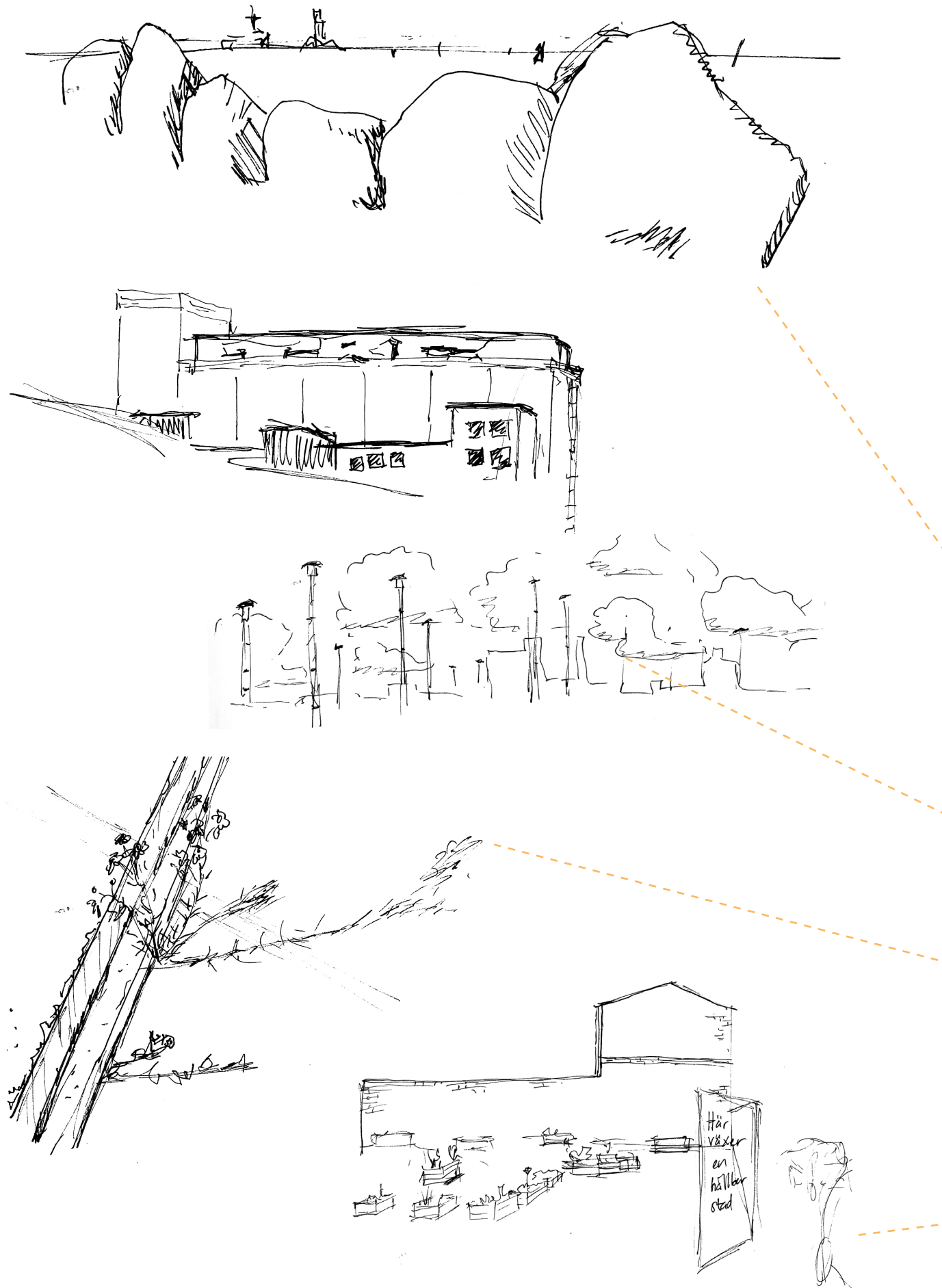
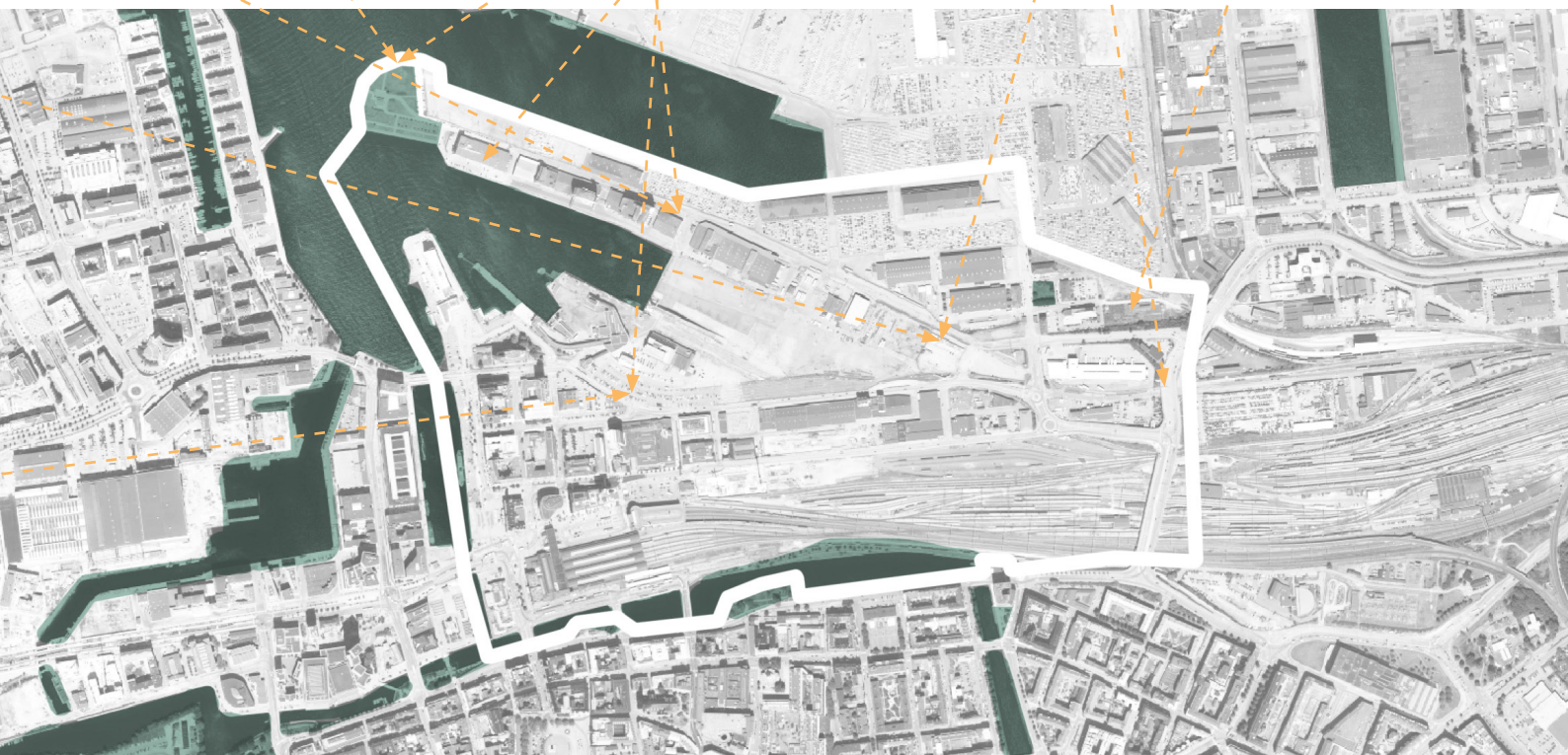


Figure 10. Sketches from walk transect placed on a map.

The bike transect revealed that the east-west connection is affected by traffic and noise that escalates in Nyhamnen. The walk transect revealed that the most prominent PSD of Nyhamnen is *open*, in terms of providing prospects rather than space to roam freely. This study also revealed that the area, with the exception of Hamnparken, generally lacks both stimulating and restorative qualities. In terms of my perceptual experiences of the site that I gained through the site visits this is what I found: I found myself feeling small most of the time in a landscape where everything felt stretched out horizontally. I also found that standing in the tunnel under Frihamnsviadukten I could see the silhouette of both Västra Hamnen and Kirseberg in opposite directions just by turning my head. I found that Jörgen Kocks gatan was difficult to cross because of traffic and that it was highly noise polluted. I also found that the traffic noise faded at the foot of Nyhamnspiren and was replaced by the clicking sound of flagpoles. I only occasionally met people on my site visits and always at a distance. At lunchtime I noticed a scattered movement of pedestrians, bikes and cars heading towards Nyhamnspiren from different directions. Following them I found a calm place in Hamnparken viewing the city of Malmö from a distance and hearing only the sound of soft waves breaking the shore. Famished and cold I found food at a canteen at Nyhamnspiren with the view of the water obstructed by parked cars. In October I found an ocean of yellow wildflowers growing out from the abandoned rail tracks and sketching them I felt the sun warming my back. In January I found myself in a snowstorm walking diagonally to defy the wind. I found large parking spaces, both filled and emptied. I also found occasional trees. When I came across some wild nature in a deserted part of the area, there was a sign urging me to beware of thieves.





VÄSTRA HAMNEN

New development area

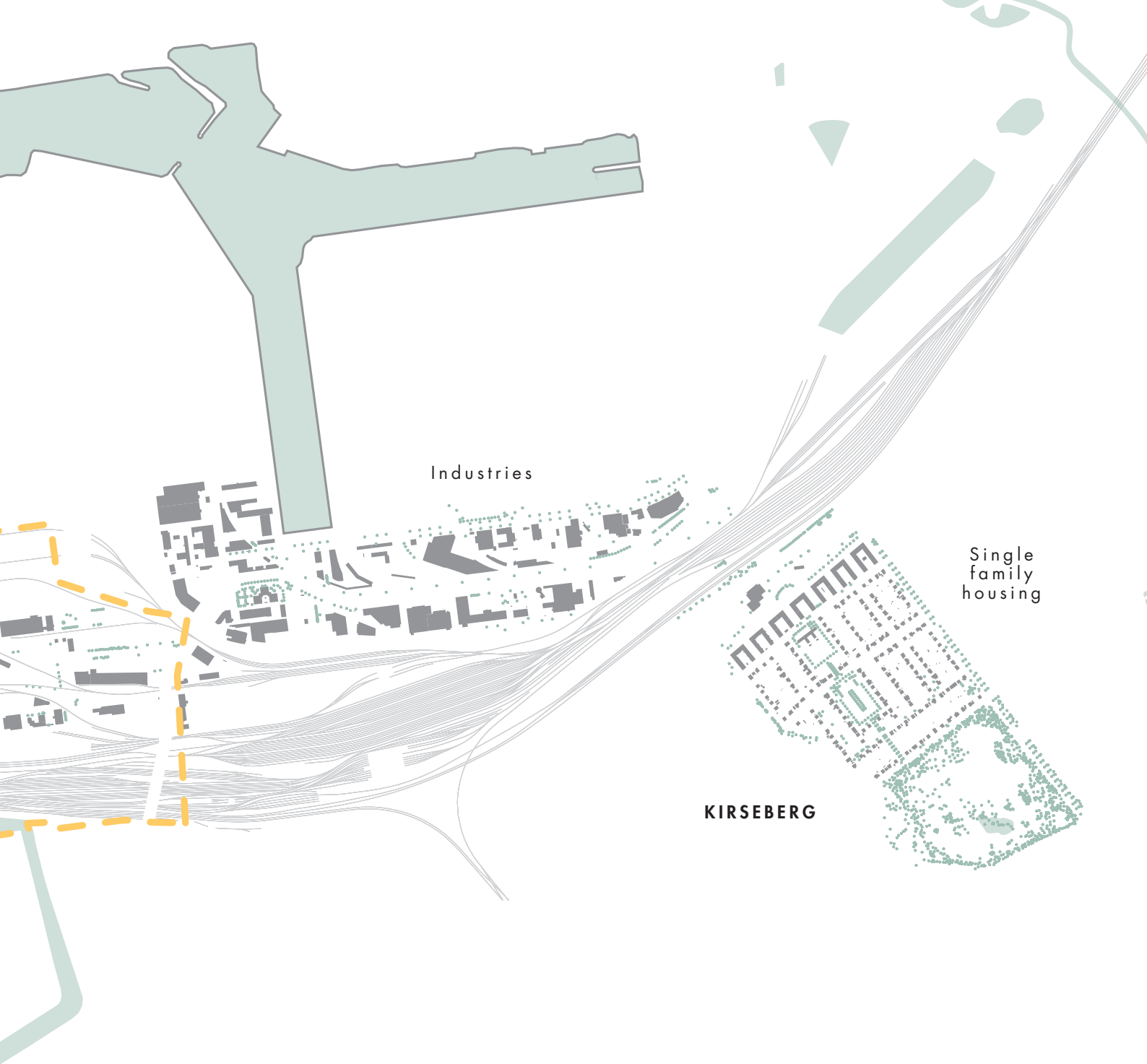
Old town

Post-war housing

Shopping street

TRIANGELN

Figure 11. A study on the context of Nyhamnen reveals a variety of urban typologies and built structures in connection to the area. The map also shows how Nyhamnen despite its central location is disconnected from the center because of the railway.



I completed the site studies with a contextual map of Nyhamnen showing the urban green and built structures connected to the site (*figure 11*). The map explores the connection to the east and the west of Malmö as well as to the center since these connections are relevant for the development plan of Nyhamnen (Malmö Stad 2019). The map reveals how they are characterized by a diversity of urban structures from different eras and with different scales and uses, including the old town of Malmö, new development areas in the west harbor, a shopping street and post-war housing at Triangeln, scattered industries along the railway as well as single family housing in Kirseberg. The map also highlights that in spite of the central location of Nyhamnen the area is detached from the center because of the railway.



Figure 12. The coastal change of Malmö shows that Nyhamnen is entirely built on landfill and has a unique position both in connection to the sea and surrounded by an urban landscape.

past / present/ future

Nyhamnen is an old harbor area that initially was used for shipping goods and large-scale food handling (Malmö Stad 2019). The maps of the coastal change (*figure 12*) show that the site is entirely built on landfill, a process that has been ongoing from the middle of the 19th century until the beginning of the 21st. The artificially built landscape creates rather extreme circumstances for a new development of the area. And the structure of the old harbor industry creates a unique form and position in the landscape for both Nyhamnen and Mellersta hamnen. They are located in contact with the sea but at the same time surrounded by the city, making them a part of both the coastal and the inner city landscape.

Nyhamnen today is a large-scale postindustrial landscape, consisting of remnants of old harbor structures and buildings, large warehouses, some offices as well as vast parking spaces (*figure 13*). It is intersected by a wide trafficked road that serves as a route for cars and transports from outside of Malmö to Västra hamnen. Nyhamnen is located adjacent to the central station of Malmö making it a relevant part of central Malmö, but it lacks the urban qualities of the inner city.

According to the overview plan (Malmö Stad 2019) Nyhamnen is to become a dense and green mixed-use neighborhood with high urban qualities (*figure 14*). It is supposed to afford good living and working environments, attractions for visitors as well as business opportunities. It is also supposed to provide a connection between the east and the west of Malmö as well as the center and the sea. More landfills will be built, expanding the center out on the water in order to build housing and working spaces with closeness to the water and to create more intimate waterscapes along the docks (Malmö Stad 2019). The existing traffic through the area will be moved from Jorgen Kocksgatan to a new road that will be built intersecting the whole area. The structural plan of Nyhamnen also includes urban parks and park lanes, but they are intersected by the planned road through the area and they share space with both schools, bike lanes and sports facilities.



1 2 3 4 5 6 7 8 9 10 11 12



reflection

Through the internship I learned that an urban development process is linear going from large to small scale where everything gets more and more fixed the further into the process you go. The plan area of Nyhamnen has an approved overview plan that includes general goals for the development as well as a structure plan for the whole area. Smörkajen, which is located at the western part of the area, has on the other hand an approved detailed area plan. As the overview plan is visionary, it does offer flexibility in the development process of the site, although the general course and the vision for the site is difficult to change. The planned structure of the detailed area plan on the other hand needs to be considered as a determined part of the future structure.

I learned that a development process first of all needs to include different aspects of time. This implies understanding the past of the site, the present structure and use as well as the future plans for it. These aspects were thus included in the site studies presented. But what the site will be while transforming is also an important part of the time aspect. As a construction process inevitably affects the everyday landscapes of many people, the meanwhile use of a site while it is transforming is a highly relevant aspect to include in the studies of healthy everyday landscapes. This will be studied more thoroughly in one of the design studies in the last part of the thesis. Further, I learned that in the development process the site needs to be understood through different scales - from a local scale, a city scale and a regional scale to an international scale - but also from a street level integrating on site experiences. The aspect of perceptuality connects the studies of healthy everyday landscapes to street level and a local scale while the aspect of connectivity connects the studies to a city scale. This is why the studies in this thesis are done through moving between these scales, challenging the linear process of urban planning. The third aspect that I learned about through the internship is that in terms of sustainability the existing structure has a key relevance for the process of development, as every built addition implies an environmental cost in terms of consumed resources and climate impact. Regarding the existing structure as a resource in an urban development process goes in line with the aspect of site affinity that requires design decisions to be made on the premises of the existing structures and uses. This has guided me in my process to base proposals on the existing structure of the city but with consideration of the future plans for Nyhamnen, and not the other way around.

Figure 13. Nyhamnen today is a large scaled post industrial landscape with remnants of the harbour industry, vast parking spaces and large warehouses.

“Ett centrum som möter havet”

*“Här ska många kunna
bo och leva bra”*








*“En egen identitet skapad
av många”*

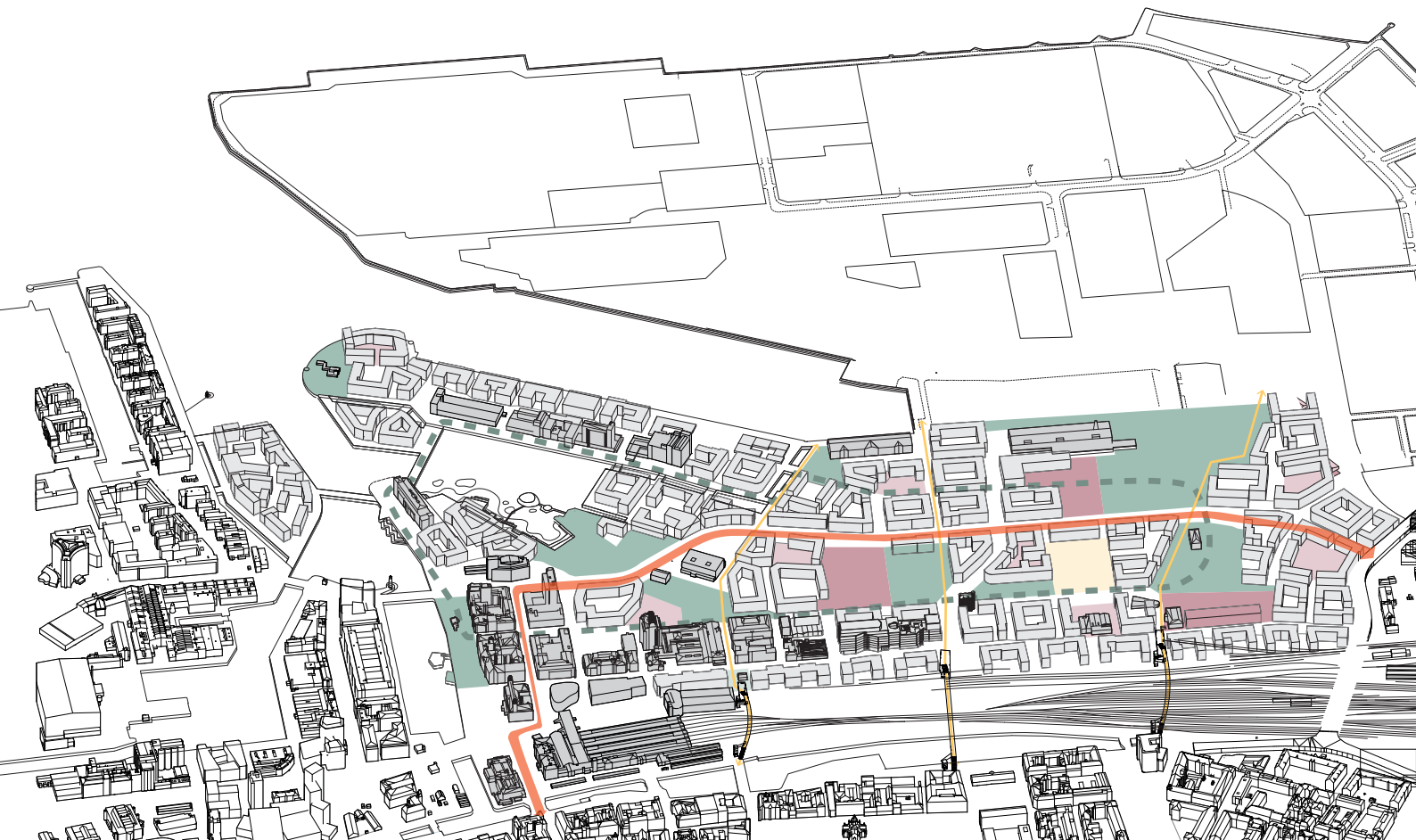
*“Här ska näringsliv och
verksamheter trivas och
ge arbete till många”*

*“En del av Malmö,
för hela Malmö”*

*“Här står
människan
i fokus”*

*“Hållbar
stadsutveckling
som utmanar”*

-  Green area
-  Elementary school
-  Pre-school
-  Sports
-  Public transfer route
-  Bluegreen loop
-  Pedestrian path



04

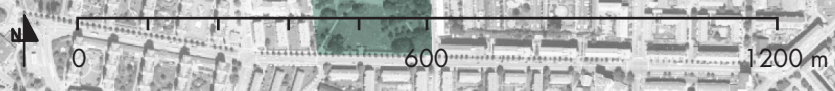
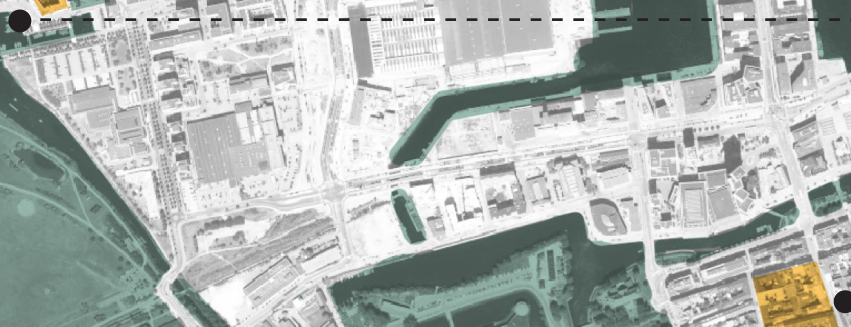
REFERENCE STUDIES

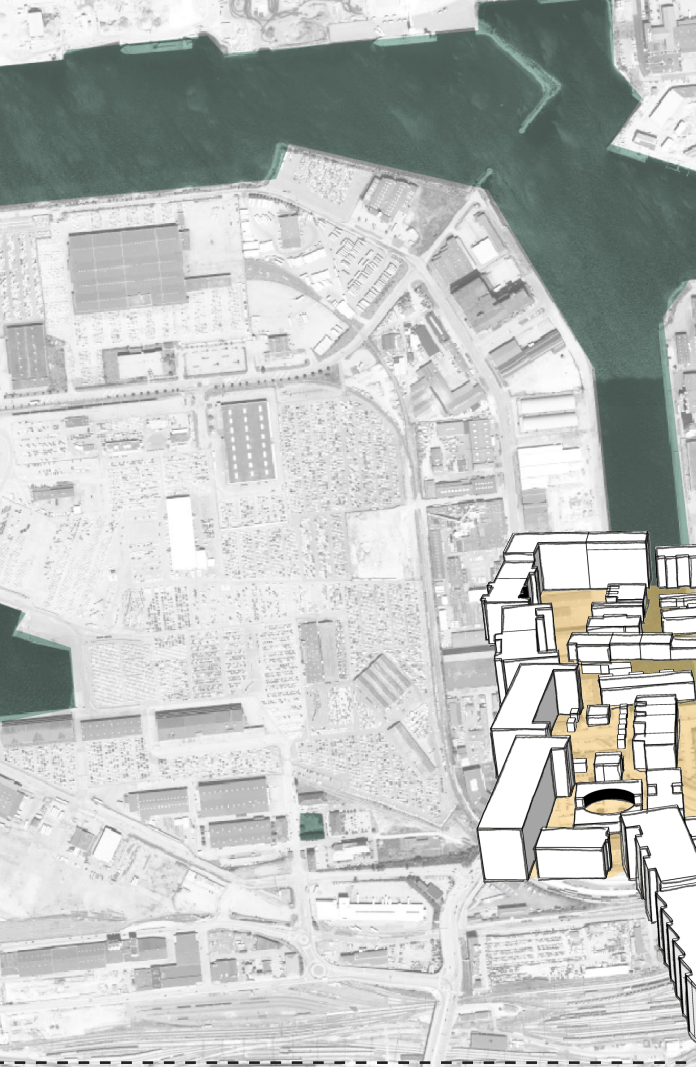
As Nyhamnen is to become a densely built mixed-use green neighborhood, this chapter presents two reference studies of existing dense structures in Malmö that I did as a part of the internship. I chose to study Boo1 and Gamla staden since both places are densely built central structures that are considered to represent an appealing urban design. Boo1 is located at the shore while Gamla staden is located in the inner city. Gamla staden has been built and developed over a long period of time, revealing different architectural approaches starting from medieval times. Boo1 on the other hand represents a modern architectural approach with emphasis on sustainability and urban greenery. In relation to the goals of Nyhamnen, Gamla Staden represents a mixed-use neighborhood while Boo1 represents a green residential area with public appeal. The scope of the studies is based on structures with similarities in function and form. The reference studies are conducted through site visits analyzing the areas and their contexts through photographic sequences and sketches. The qualities of the areas are analyzed with the help of the evidence-based models together with subjective sensory and spatial experiences. The studies are presented through visualizations that summarize the important findings. The studies contributed to the process by revealing other aspects of design that need to be combined with the evidence-based models. They also revealed that the dense structures themselves do not afford all the different PSDs and the whole triangle of supportive environments that are needed in our everyday lives. That is why the surrounding environments with other characters were included in the studies.

Boo1

Boo1 is a residential area located by the shore of Västra hamnen, surrounded by the sea shore and a canal (figure 15). The built structure creates a world of its own, sheltered from the sea climate and the surrounding public spaces (figure 16). Narrow views from within the area show glimpses of the sea and the surroundings, connecting the area with its geographical context (figure 22). Turning Torso serves as a landmark, aiding the orientation along the winding paths of the area and creating a contrast in scale to the small-scale buildings

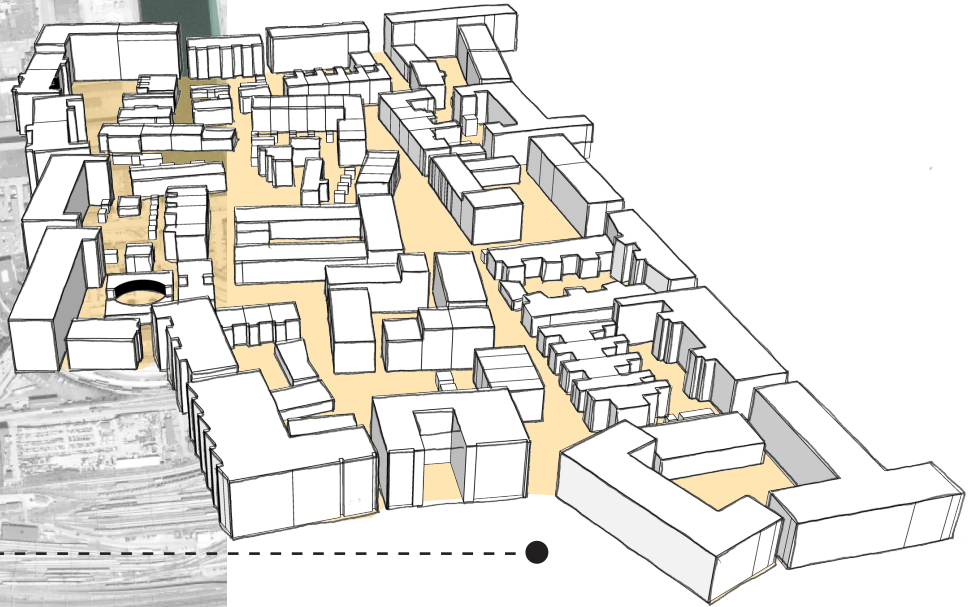
Figure 14. Nyhamnen is to become a dense, green, mixed-use neighbourhood with high urban qualities. Illustration based on the overview plan of Nyhamnen. Quotes extracted from the overview plan (Malmö Stad 2019).





BO01

Bo01 is a green and dense residential area with a seafront location and it represents a modern approach in architecture built in 2001. The edges of the area has taller buildings providing shelter while the structure inside is smallscaled.



GAMLA STADEN

Gamla staden is a densely built mixed use neighbourhood at the heart of Malmö that has been built over a longer period of time and represents different architectural approaches starting from medieval times. The structure is varied in scale and separates private spaces from public.

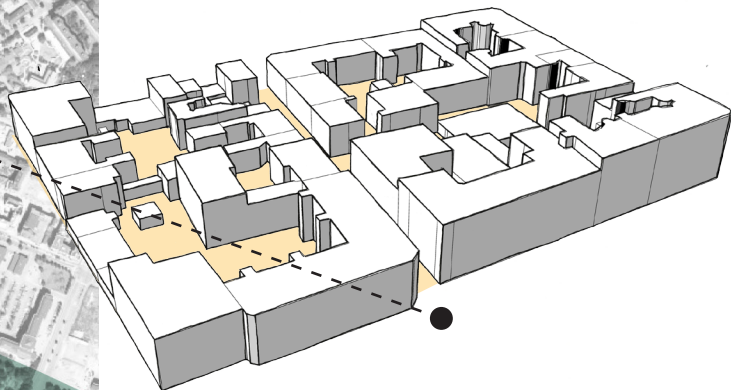


Figure 15. As a dense, green, mixed use neighbourhood is the goal for the development of Nyhamnen reference studies were made in two existing structures in Malmö that have these qualities.

of Booi (figure 19). Booi has a strong sense of place, it is cohesive in time and scale and yet structurally and spatially diverse. The area consists mainly of residents with some small spaces for limited social interaction. The area is characterized by the absence of noise and pedestrian friendly spaces as it only affords a limited amount of traffic and a few residential parking spaces connected to the houses. The broken silhouette of the buildings captures the movement of daylight creating shifting shadows along the day. Together with the green elements that change over seasons and over time the area contains both the temporal and phenomenal aspects of design. The public spaces are located outside the area while a semi-public path intersects it (figure 16). The rest of the area has a semi-private character and the design of the buildings allows views both to private yards and inside the residents.

Gamla staden

Gamla staden is a mixed-use neighborhood located in the inner city of Malmö (figure 15). The studied structure is in the middle of the area that is surrounded by a canal. Gamla staden is an old structure from medieval times where new buildings and functions have been developed over a long time. Contrary to Booi the area is in other words strongly characterized by depth in time (figure 24). The winding paths in the area moves from narrow streetscapes to small openings (figure 27). The area provides shelter from wind as well as sunlight while adjacent squares of different scale create a contrast to the narrow streetscapes. The structure is spatially diverse and is characterized by material detailing (figure 25 & 26). The traffic is sparse and apart from the people in movement the area is rather quiet. The area consists of residences as well as offices and hotels. The street level affords shops, cafés and restaurants. Vegetation within the area is sparse consisting of smaller planting beds and some vegetated facades. The seasonal change is thus mainly noticeable through ornamentation from Christmas lights to summer flower beds. The sparse vegetation within the area is compensated for with large adjoining green areas as Kungs- and Slottsparken and Gamla kyrkogården. The streetscapes have a public to semipublic character while the residential yards are private and protected from views and public life.

analysis

The analysis of the areas revealed that the PSDs found within the dense structure itself - *diverse, social, cultural* - mainly provided the ones of stimulating character (figure 16 & 22). So, in order to find

all of the 8 PSDs in the local environment I had to include the surroundings (figure 17 & 23). In Boor both Daniaparken and the coastal promenade afford stimulating qualities while Ribban is the only place where restorative qualities are found. In Gamla staden it is the adjoining squares and the public spaces at the canal that afford different types of stimulating qualities while Kungsparken is the area that provides restorative qualities. The study also revealed other aspects of design that are important for sensory and spatial experiences. *Visual depth* revealing layers of spaces that connects the location to its surroundings is one of the aspects found in both Boor and Gamla staden. The winding alleys and the small openings provided within the sheltered structure as well as the irregularities of the built structure found in both areas creates a sense of *spatial variation*. The built structures that are characterized by a *material detailing* through patterns in the ground cover as well as details and colors in the facades of the buildings contribute to a sense of care for the place. And finally, one of the most evident features in both of the areas is the *lack of traffic disturbances and noise*. I found it difficult to translate these four aspects to the 8 PSDs as they give more detailed information about different sensory experiences (visual, spatial, sound) in terms of design. Visual depth and spatial variation cover more than one of the PSDs at the same time while lack of noise and a sense of care through material detailing are general aspects of design and not connected to specific PSDs. Noise for example is equally disturbing for social and serene spaces. As I found that these four aspects are compatible with both restorative and stimulating design intentions, which also complicates placing them in the triangle of supportive environments, I concluded that they are aspects of design that need to be combined with the evidence based models.

reflection

These reference studies gave me four design components, i.e. *visual depth*, *spatial variation*, *material detailing* and *reduced traffic*, to work with in addition to the evidence-based models and the three key aspects of everyday landscapes. As the evidence-based models were to ensure a variety of environmental qualities in the proposal, I concluded that the design components found in these reference studies could be used as binding elements to create coherency. As the adjoining green areas were crucial for finding restorative qualities in the reference studies, which implies that they need more space, I concluded that a proposal for Nyhamnen would have to include a restorative green space in an appropriate size.

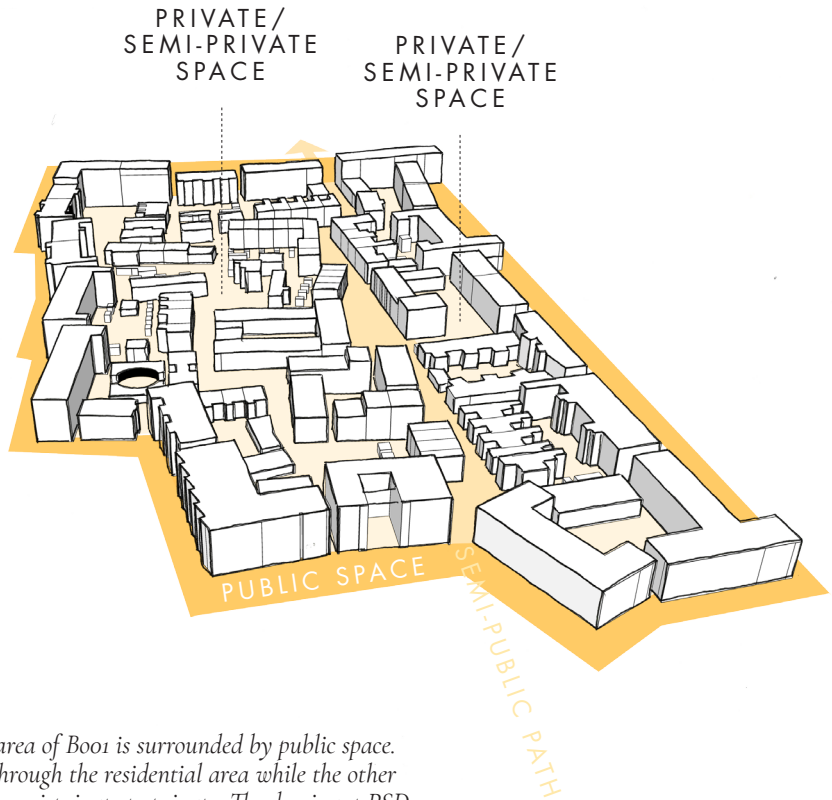
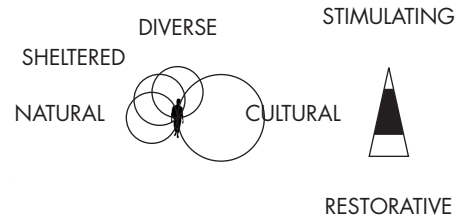


Figure 16. The residential area of Boo1 is surrounded by public space. A semi-public path goes through the residential area while the other spaces inside the area are semi-private to private. The dominant PSD found in the area is cultural while diverse, sheltered and natural are supportive PSDs. The area is characterized by a comfortable design.

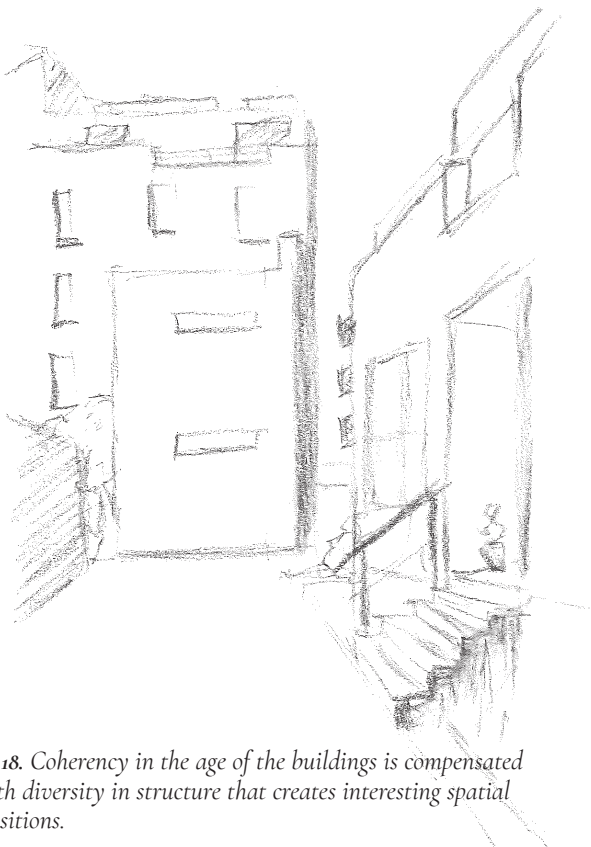


Figure 18. Coherency in the age of the buildings is compensated for with diversity in structure that creates interesting spatial compositions.

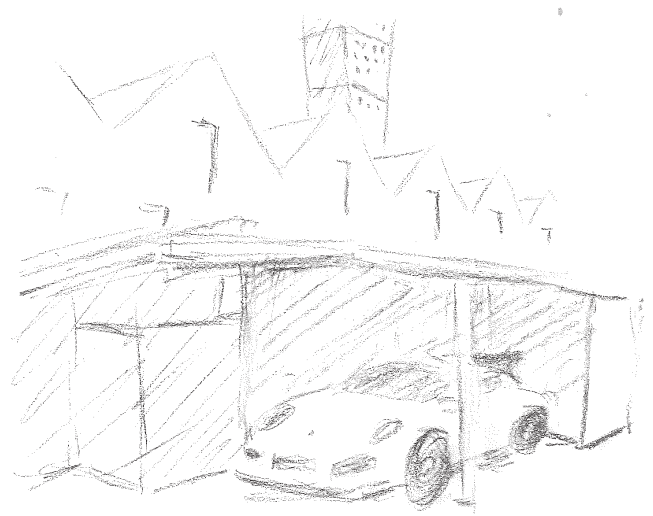


Figure 19. Small scaled housing in contrast to large scaled landmark. Turning torso provides orientation along the winding alleys in the area.

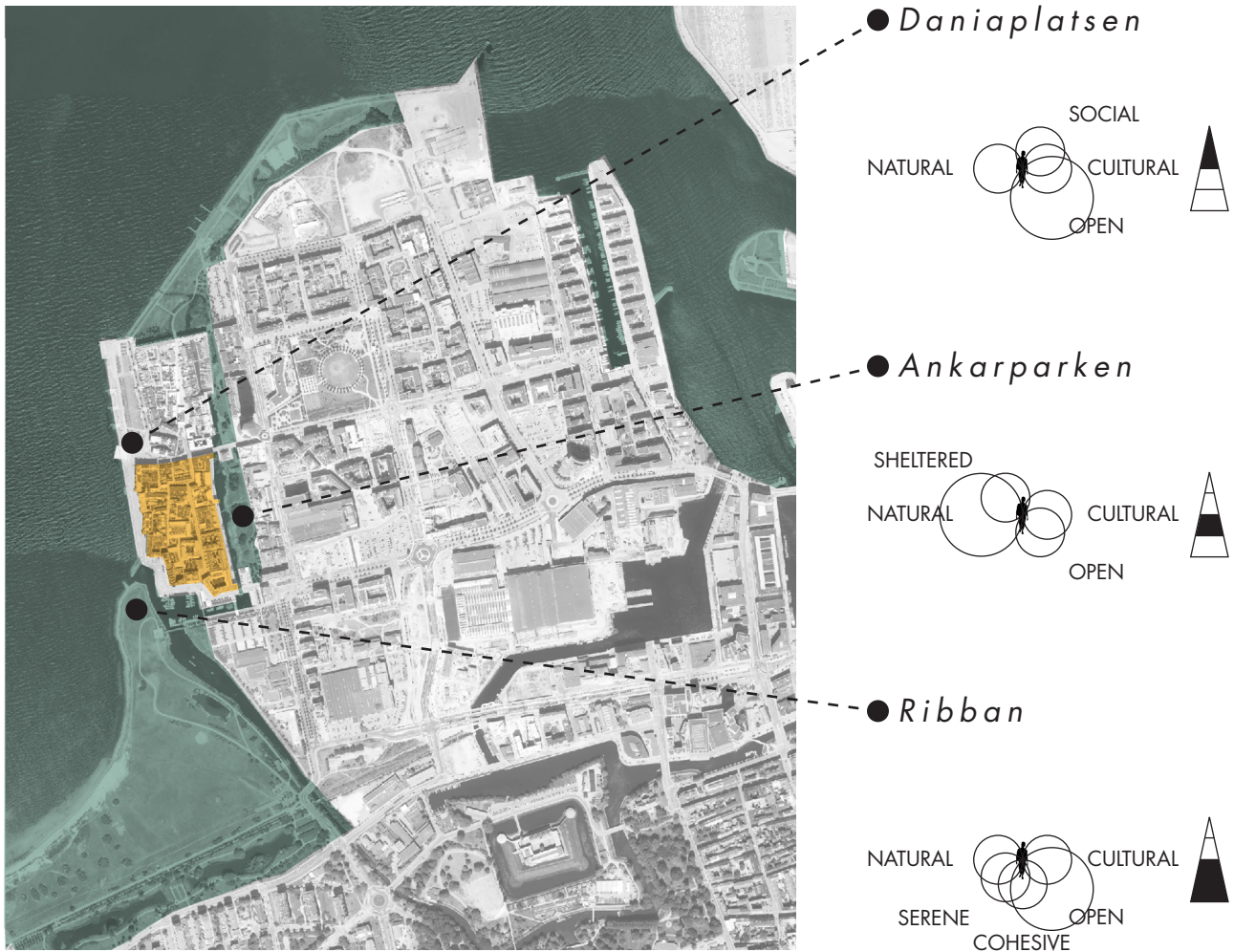


Figure 17. Including Daniaplatsen, Ankarparken and Ribban in the studies resulted in that all 8 PSDs were found in the area in varying degrees. Restorative space was found in Ribban, that is a large green area with seafront location adjoining Booi.

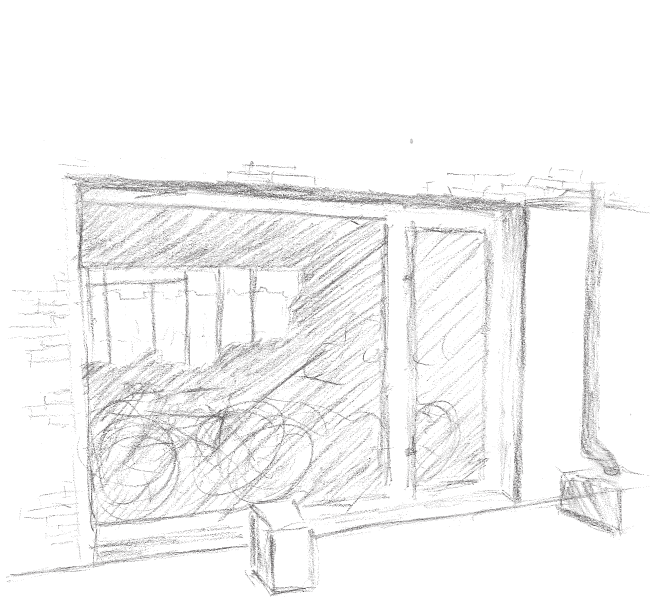


Figure 20. Connection to the surroundings through a glassed bikeparking that shows the silhouette of Ribbersborg in the far south.



Figure 21. The narrow pathways in and out of the residential area creates shelter both from public life and coastal winds but also provides visual depth.

GAMLA STADEN

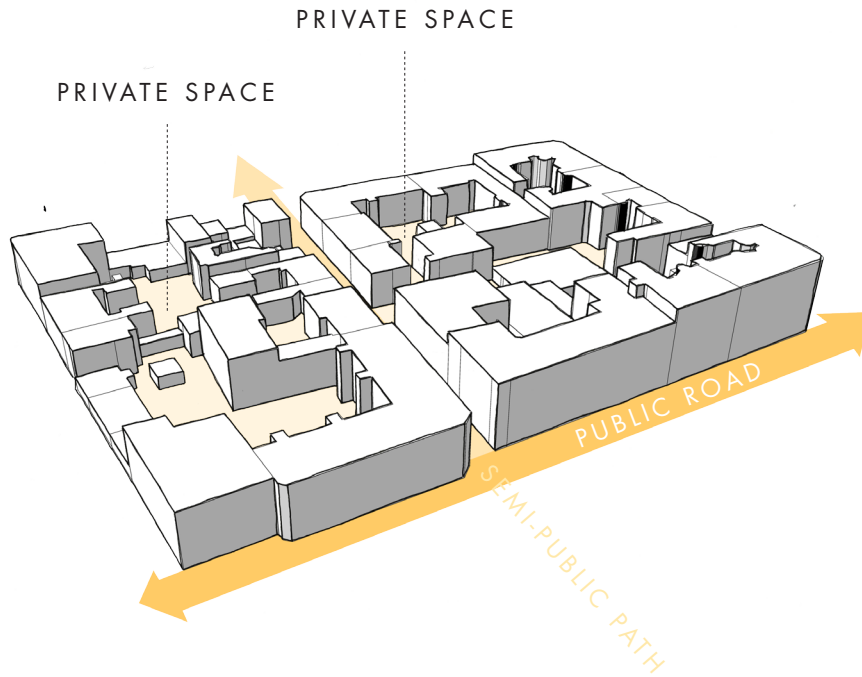
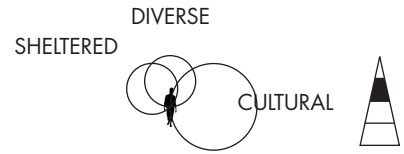


Figure 22. The residential block in Gamla staden is adjoined by a public road and intersected by a semipublic path, similar to Boo1. The residential spaces on the other hand are all private and protected from sight. The dominant PSDs in Gamla staden is cultural with diverse and sheltered as supportive PSDs. The area has a more stimulating design supporting active engagement.



Figure 24. The built structure of Gamla staden reveals layers of time connecting the area to its history, while the visual depth connects it with the surroundings.



Figure 25. The irregular structure of the buildings creates spatial variation.



Figure 23. By including Lilla torg, Kungs- & Slottsparken and the public space at the canal all the PSDs were found in the area. Restorative space on was only found in Kungsparken that is a large city park adjoining the area.

● Kungs- & Slottsparken ● Norra Vallgatan ● Lilla torg

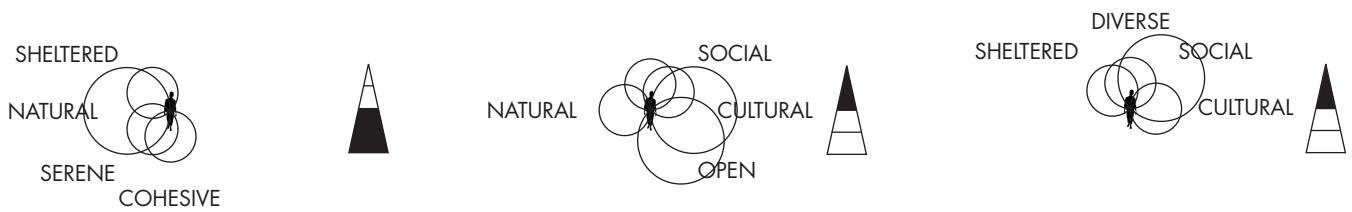


Figure 26. The material detailing and the winding paths are accustomed to human scale and a pedestrian pace.

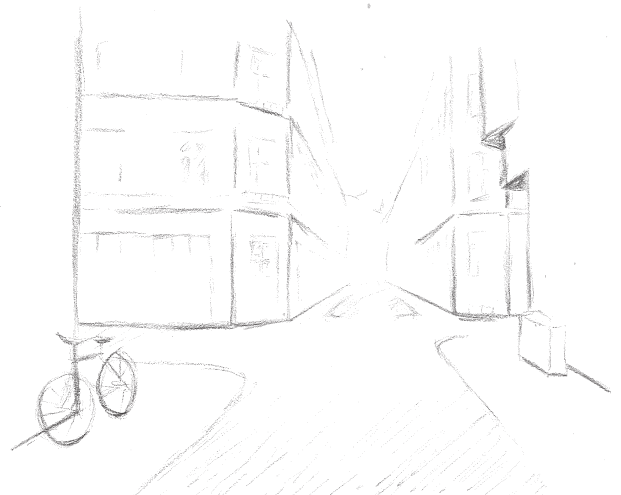


Figure 27. The spatial compositions varies from sheltered spaces to small openings.

05

CONCEPT

In order to make a conceptual model for healthy everyday landscapes that could guide the proposal for Nyhamnen, I summarized the findings of the site studies and the reference studies with the framework as a base. As nature is the key aspect of salutogenic design I concluded that natural elements should be the binding element of the proposal (*figure 28*). As restorative space is an urgent need for the health of urban dwellers, affording this in an appropriate size should be of primary interest. But as the local environment needs to afford a variety of PSDs the concept of healthy everyday landscapes needs to include a variety of environmental qualities. The restorative space should be located in connection to the spaces with other environmental qualities, as connectivity is one of the key aspects of everyday landscapes, but also in connection to spaces where many people move in their daily lives.

As the reference studies show, the restorative qualities require more space than the planned green spaces of Nyhamnen can afford. Moreover, a trafficked road will intersect the green spaces that are part of the structural plan of Nyhamnen. This road is also a part of the approved detailed area plan of Smörkajen and therefore fixed in the future plans of Nyhamnen. Taking into account the negative health effects of noise, the road should be considered in relation to its noise distribution. The site studies showed that the noise from Jörgen Kocksgatan faded at the foot of Nyhamnspiren. It is therefore conceivable that the new road will probably have a negative health impact on the whole area (*figure 29*). Although some noise can be reduced with the planned built structure, the green spaces will be affected to such an extent that they will not serve as proper restorative spaces. Therefore, the question arose, where can the restorative space be found if not in Nyhamnen?

In a final discussion during the internship, Mellersta hamnen, that had been a blind spot for me in my studies, came up. Although I had noticed the area and reflected on its relationship to Nyhamnen I had not thought of Mellersta hamnen as a possible part of my

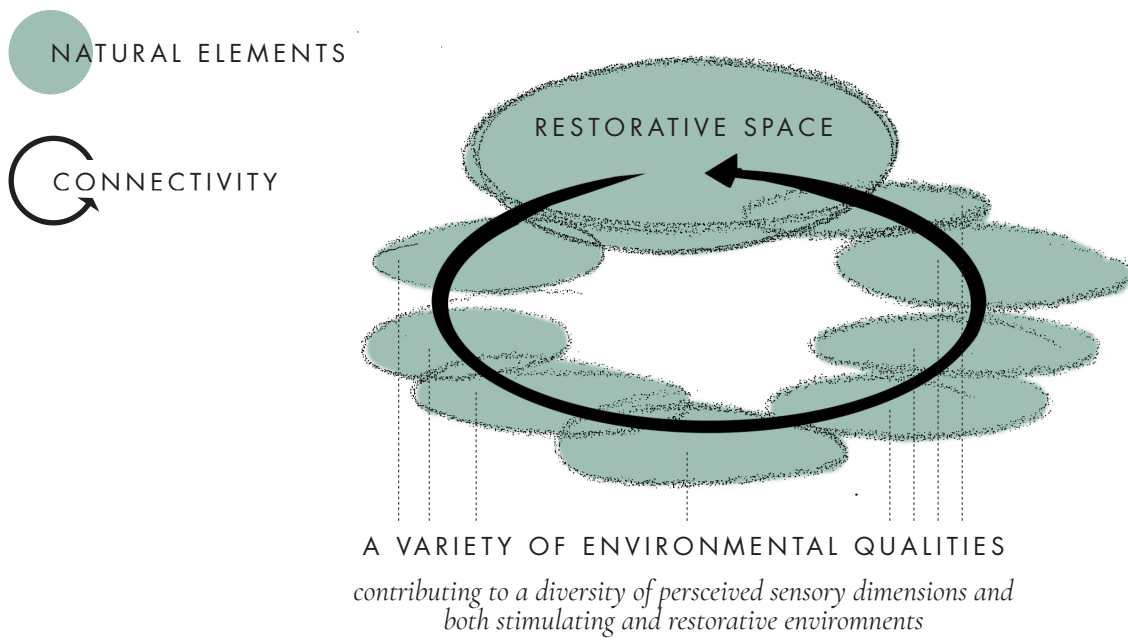


Figure 28. Conceptual model for healthy everyday landscapes.



Figure 29. The planned green spaces within Nyhammen will be affected by the noise generated from the planned road that intersects the area.



Figure 30. The size of Mellersta hamnen compared with Kungs- and Slottsparken in Malmö and Central Park in New York.

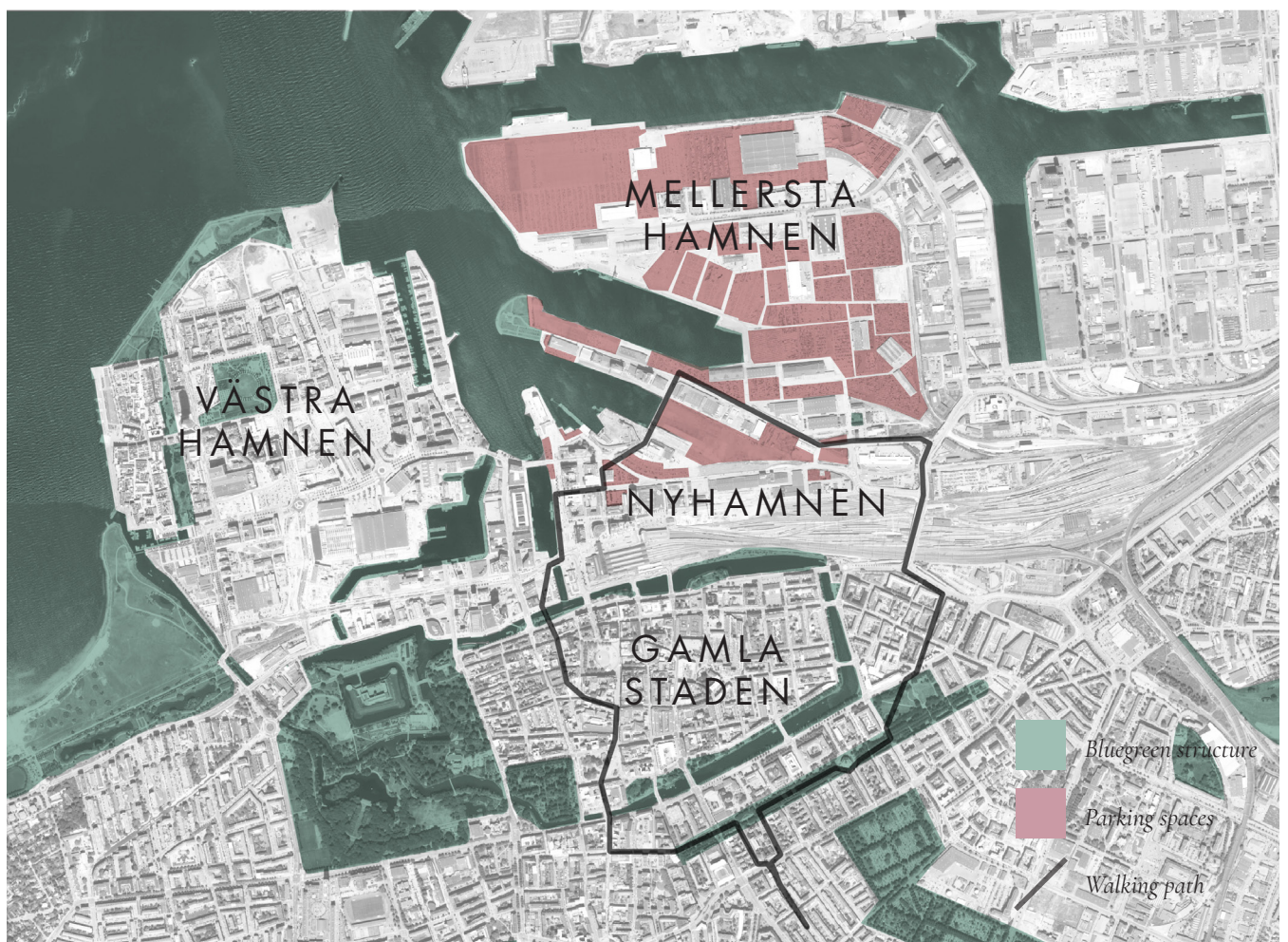


Figure 31. Zooming out to the context of Nyhamnen reveals the potential of the unsighted Mellersta hamnen that could afford the restorative qualities Nyhamnen cannot provide. A walk to Mellersta hamnen and back revealed how the area could be connected to the center.

proposal. Maybe because it is a fenced area, difficult to access or because I unconsciously had dismissed it as it is a vast landscape providing space for cars to be shipped. Or as Kahn (1998) would have put it, I had simply been obstructed from seeing the area's urban potential, most likely because of the fact that Mellersta Hamnen is outside the plan area of Nyhamnen. Connectivity being one of the key aspects of everyday landscapes allowed me to see the context as a part of the whole and therefore encouraged me at this stage to exceed the limits of Nyhamnen when defining the scope of the proposal. As I zoomed out mapping the surrounding bluegreen structures as well as the existing land use of both Nyhamnen and Mellersta hamnen, it appeared logical based on all previous studies to propose Mellersta hamnen being turned into a nature area (*figure 31*). I had some doubts about the size of the area as it exceeds the size of Nyhamnen. However, compared to Kungs- and Slottsparken in Malmö, which were included in the reference studies, it is only slightly bigger (*figure 30*). During the site studies, I came across some articles referring to Manhattan in New York for the plans of Nyhamnen. For that reason, I also compared the size of Mellersta hamnen to the size of Central Park. Central Park is an essential component in the urban structure of Manhattan and as *figure 30* shows it is about three times the size of Mellersta hamnen. With these comparisons in mind, Mellersta hamnen appeared to have an appropriate size for a nature area that should afford restorative qualities.

I took a walk to Mellersta hamnen and back to have a look at the area. As it is fenced off from public I watched the area from a distance standing on Frihamnsviadukten and imaging it being a nature area felt intuitively right. As I walked there and back I also noticed how I chose my path based on streetscapes I found appealing. As I came back from my walk, I drew the walk route on the map which laid out the structural base for the proposal (*figure 31*).

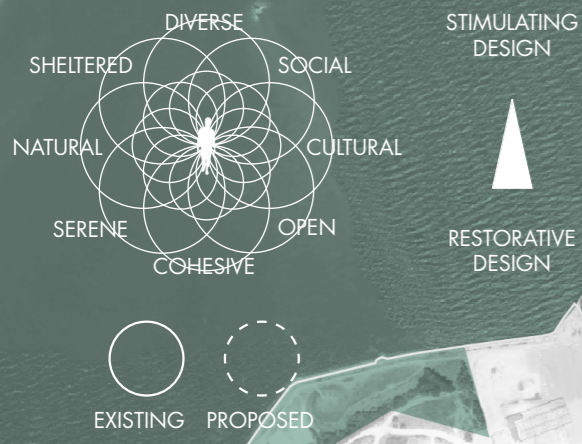
06

GREEN STRATEGY

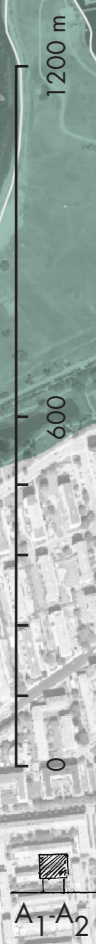
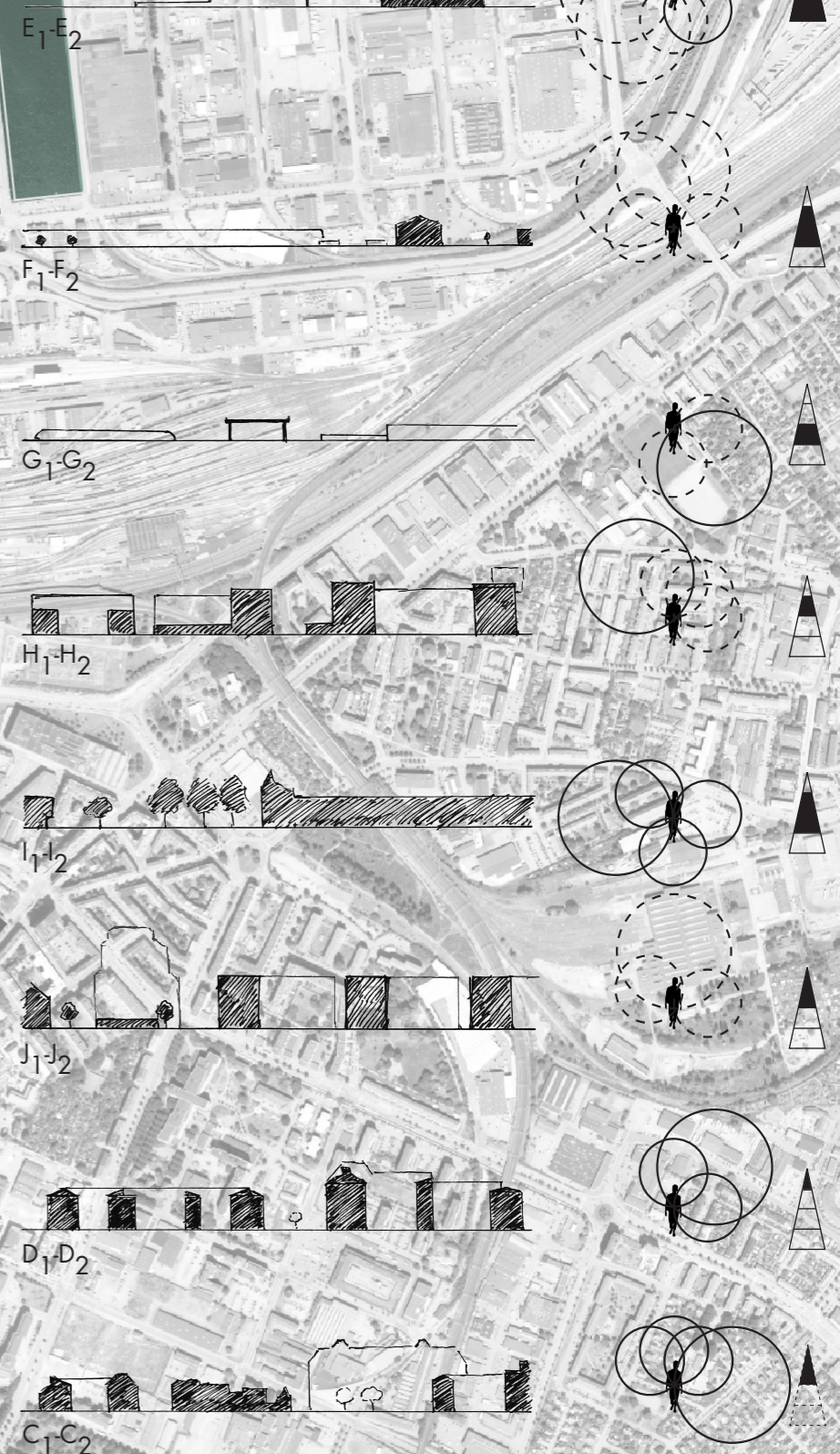
Making a green strategy based on the concept of healthy everyday landscapes in connection to Nyhamnen marks a turning point in my process. As I started the thesis I thought that the outcome of it would be studies made within the plan area of Nyhamnen. But in order to connect the proposal to the theme of healthy everyday landscapes I found that a larger strategy was needed. As this is an exploratory process I took the liberty to exceed the boundaries of Nyhamnen and include the surroundings in the proposal. The outcome is a green strategy that is coherent with the conceptual model of healthy everyday landscapes, but that at the same time affords qualities to Nyhamnen that are in line with the goals for the area.

In the green strategy Mellersta hamnen is turned into a large nature area offering restorative qualities both to Nyhamnen and to the city as a whole. To enable the nature area to become part of people's everyday lives it is connected to the city center as well as to the existing bluegreen structure in the city with a pedestrianized green public path. The path stretches alongside spaces in the city that already have existing environmental values of different kinds. Through Nyhamnen it stretches alongside the waterfront on the west side and alongside green spaces that are planned on the east side. The connective public path goes through a variety of urban structures and the proposal aims to strengthen this variety with the help of the evidence-based models. Thus, the proposal should include all of the 8 PSDs as well as make sure that all parts of the Triangle of supporting environments are represented.

Figure 32. Proposal for healthy everyday landscapes in connection to Nyhamnen: a large nature area and a connective public path.



- A. Nature area
- B. Connective public path
 - B1. Water front study
 - B2. Inner city study
 - B3. Green connection study



A. nature area

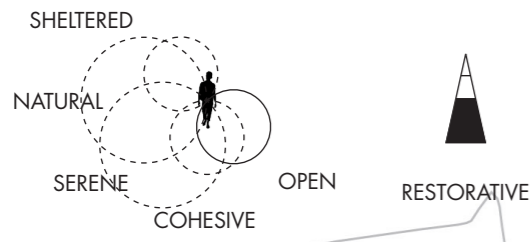
According to the green strategy, Mellersta hamnen is to become a large nature area affording restorative qualities both to Nyhamnen and the city as a whole. As restorative space is what urban dwellers most urgently need in terms of health, and as restorative space is difficult to offer within the densely built structure of the inner city, it is important for the proposal to ensure that this is what the nature area in Mellersta hamnen will provide.

According to *the triangle of supportive environments*, the PSDs *serene*, *sheltered*, *natural* and *cohesive* afford restorative qualities and should therefore guide the design of the nature area. *The serene* and *the natural* should be the dominant PSDs. Considering the size of the area as well as its seafront location, I have added the PSD *open*. The PSD *open* is added both to create a contrast to the dense structure of the inner city and to create a spatial variation within the area. The PSD *open* should be defined in this context as mainly providing views and prospects rather than space for activity which could compromise the restorative design intentions. Furthermore, in this context the opposing PSDs *open* and *sheltered* should be carefully balanced through soft transitions in order to maintain the restorative design intention. Thus, the evidence-based model should be used in this context as schematic guidelines for the overall design.

Looking at the nature area in relation to the city as a whole it is important that it adds something unique to the urban landscape that gives it public appeal. The unique location of the area, connected to the sea and at the same time surrounded by the city, is emphasized in order to distinguish the area from both Kungs- and Slottsparken and Ribban. In addition, *natural* in the sense of wild, is chosen as one of the dominant PSDs for the area, as it isn't a dominant feature in the other two green areas. The proposed PSDs *natural* (in the sense of wild) and *open* (in the sense of providing prospects) are also chosen based on the character of the nature that can be established in the area, considering the exposure to the coastal climate.

As mentioned before, Mellersta hamnen is entirely built on landfill, which together with the rising sea level creates rather extreme preconditions for making it into a nature area. But there are examples of places with similar conditions where this has been done before, such as Klagshamns udde in Malmö, Amager Strandpark in Copenhagen and Freshkills Park in New York (*figure 33*).

Figure 33. References for a large nature area providing restorative qualities for Nyhamnen as well as a greenspace with unique character for the city as a whole.



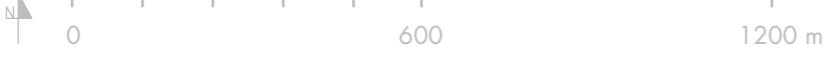
Reference 1: Klagshamns udde, Malmö. An artificially built peninsula that has developed into a nature reserve with unique flora and fauna. It is located 15 km south of the center of Malmö. Image above © Naturskyddsföreningen, image below © Malmö Stad.



Reference 2: Amager strandpark, Copenhagen. An artificially built island that has been turned into a 5 km long beach park offering a more stimulating environment for leisure activities. Image above © Ulrika K. Stigsdotter, image below © Hazlov & Kjersgaard.



Reference 3: Freshkills Park, New York. Built on a former landfill on Staten Island the area has become a place for wildlife, recreation, science, education, and art. The area is almost three times the size of Central Park. Images © Freshkills Park.

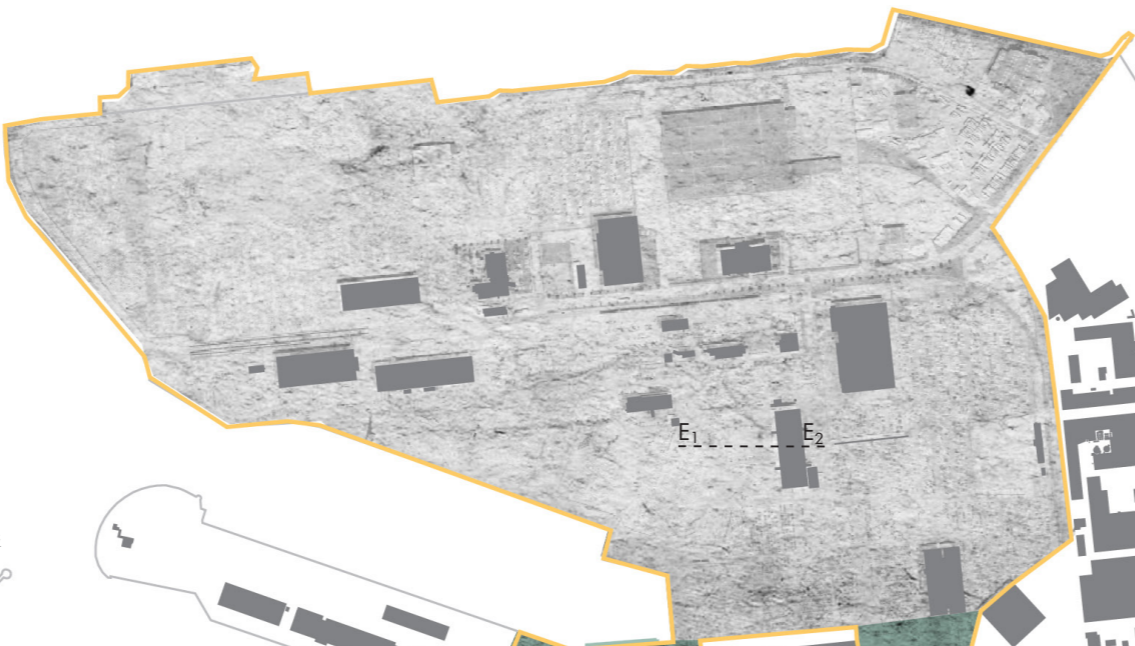


B. connective public path

The connective public path intersecting Nyhamnen, which connects the nature area with the inner city, highlights existing environmental qualities found in the center of Malmö. The path connects the nature area with existing bluegreen structures and urban spaces where different PSDs are identified. The proposed PSDs are used to strengthen different urban characters along the path that goes through a variety of urban structures. In addition, the idea is to ensure that the path and the nature area together ensures that all PSDs are included in the proposal and that the different parts of *the triangle of supportive environments* are represented. The suggested PSDs and *the triangle of supportive environments* are then to be used as a schematic guideline for the detailed design (*figure 34*). Based on which existing PSDs and which existing parts of the triangle of supportive environments that were identified along the path I made proposals for the parts entirely lacking PSDs. The PSDs for these parts were chosen based on the context and how the spaces with different characters should connect to each other. To create coherency along the path the design components from the reference studies - *visual depth*, *spatial variation*, *material detailing* and *reduced traffic* - should be used as binding elements.

I wanted to take this green strategy further and in order to find out how it can be carried through on a smaller scale, I decided to do three design studies connected to the path. The three studies all focus on existing ruptures within the proposed connective public path, where design interventions are needed. The three design studies focus on spaces which are deficient in terms of PSDs and in relation to *the triangle of supportive environments*. Each of the design studies explores different aspects of healthy everyday landscapes and they present different scales.

Figure 34. A green and pedestrianized public path providing a variety of environmental qualities as well as a connection both to the nature area and to Nyhamnen.



E1-E2

B

G1-G2

B1-B2

C1-C2

D1-D2

A1-A2

B1-B2

C1-C2

D1-D2

J1-J2

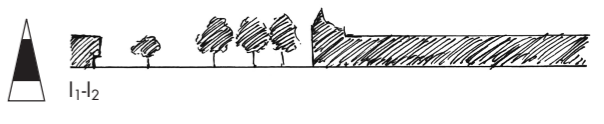
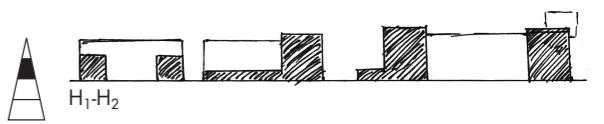
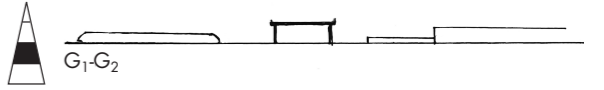
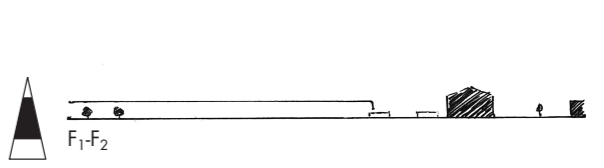
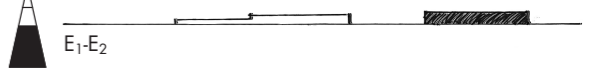
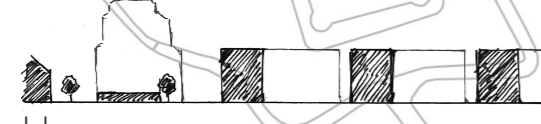
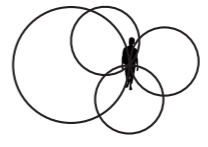
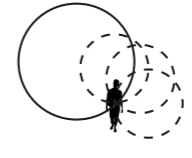
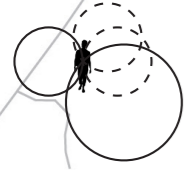
E1-E2

F1-F2

G1-G2

H1-H2

I1-I2



07

THREE DESIGN STUDIES

The aim of the three studies is to show ways to carry through the green strategy presented in the chapter before. The design studies are exploratory and should be interpreted as inspirational studies rather than detailed design solutions. The aim is to find out how the key aspects of everyday landscapes together with the evidence-based models can be used in a smaller scale and translated into a specific context. The first study explores how existing qualities in the landscape can be taken care of. It connects to site affinity, one of the key aspects of everyday landscapes, and concerns the meanwhile use of a landscape in transformation. It is located at the waterfront of Nyhamnen. The second study explores how to combine the evidence-based models with other aspects of design. This study connects to the key aspect of perceptuality and is located in the inner city of Malmö. The third study explores how to create a green connection to the proposed nature area by using existing green structures in the city. In addition, it studies how the PSDs can be translated into green components in different urban structures. The third study connects to the key aspect of connectivity.

Figure 35. Three design studies exploring different aspects of healthy everyday landscapes on different scales with the purpose of sealing the connective public path.



B1. WATERFRONT STUDY
- taking care of existing qualities

B3. GREEN CONNECTION STUDY
- translating PSDs to green components in different urban structures

B2. INNER CITY STUDY
- combining evidence based models with other aspects of design

B1 - Waterfront study

The first study is located at the waterfront within the plan area of Nyhamnen, exploring how to take care of existing qualities in the landscape, which in this case is the water. This part of Nyhamnen will be affected both by the detailed area plan of Smörkajen and the overview plan of Nyhamnen. Therefore, the focus of the study has been to find a way to create accessibility to the water that is adjusted to both the existing structure and the future plans of the site. It consists of a pathfinding study illustrated through maps and a study on how to create a meanwhile use along the waterfront while the landscape is transforming.

The existing path that goes along the waterfront from the center to the foot of Nyhamnspiren (*figure 36*) will be intersected by a public transfer route that is a part of the approved detailed area plan of Smörkajen (*figure 37*). And in the future the waterscape will partly be built over with new landfills (*figure 38*). So, in this pre-study I focused on the area around Hamnbassängen and how to create a temporary or permanent path along the water to the future nature area, which also is in line with the proposed PSDs for the site (*figure 39*).

Here the sea providing basins with large water surfaces offers a natural quality. It creates a contrast to the industrial buildings and structures along the waterfront, but as the area according to the proposal should have a more stimulating design, I figured that a contrast between the opposing PSDs *cultural* and *natural* could be used as an asset here. In order to understand how the proposal works together with the existing site and on a perceptual level, the proposed paths around Hamnbassängen are coloured in the photographs (*figure 40-42*). Through the simple sections I tried to illustrate ways to afford a closer contact with the water. The sections also illustrate a designed structure that could afford both *the social* and *the cultural* PSDs proposed for the site and at the same time preserve the open quality (*figure 40-42*).

This study shows the complexity of working with a site that is under a transformation process. As this study is connected to the key aspect of *site affinity* I focused on finding a way to create a structure for meanwhile or permanent use that goes hand in hand with both the existing structure and the future plans for the site. This study also showed that the waterfront as a quality has not really been taken care of in the future plans of Nyhamnen since a wide road is planned to be built right next to the basin and in the later stages of the development the basin will be landfilled in favor of housing.



Figure 36. Pathway along the waterfront of Nyhamnen based on movement in the area today.

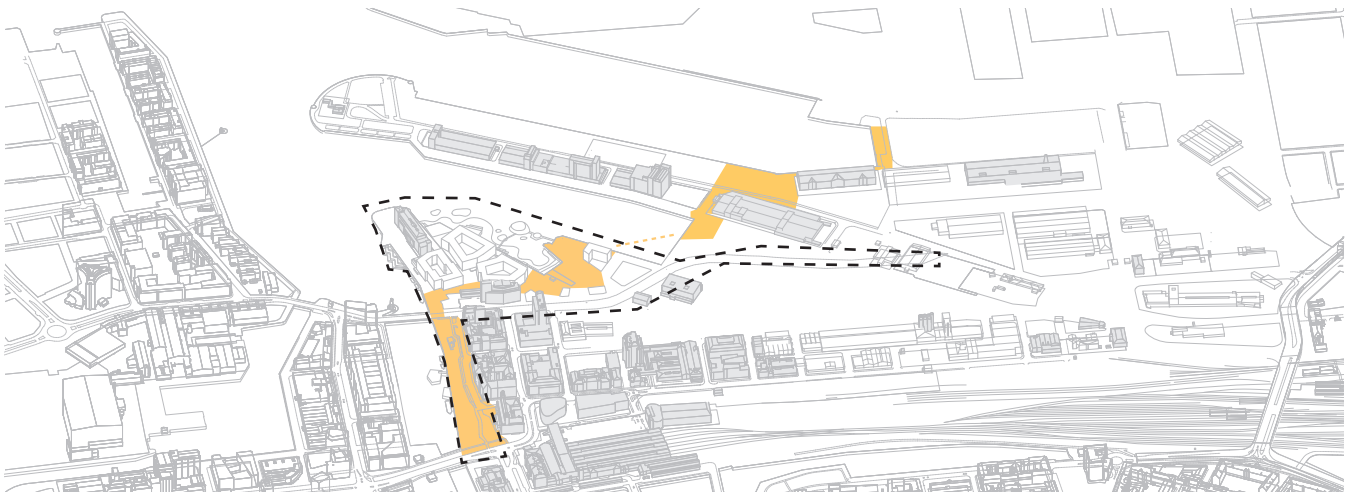


Figure 37. Pathway adapted to the detailed area plan of Smörkajen where a new road intersects the existing pathway.

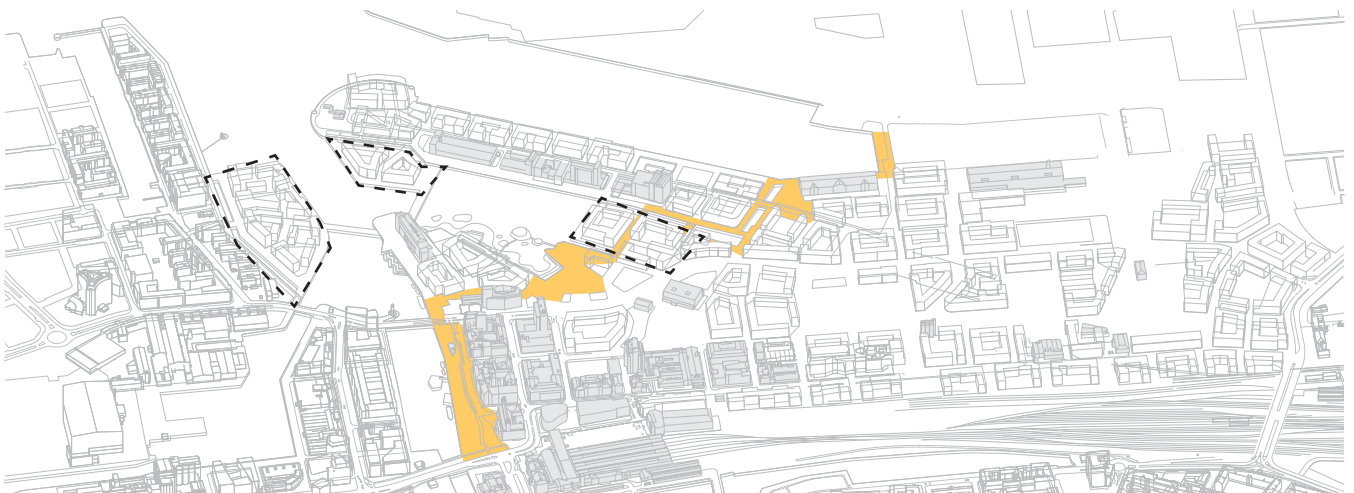


Figure 38. Path adapted to the overview plan where the waterfront is built over with new landfills and buildings.

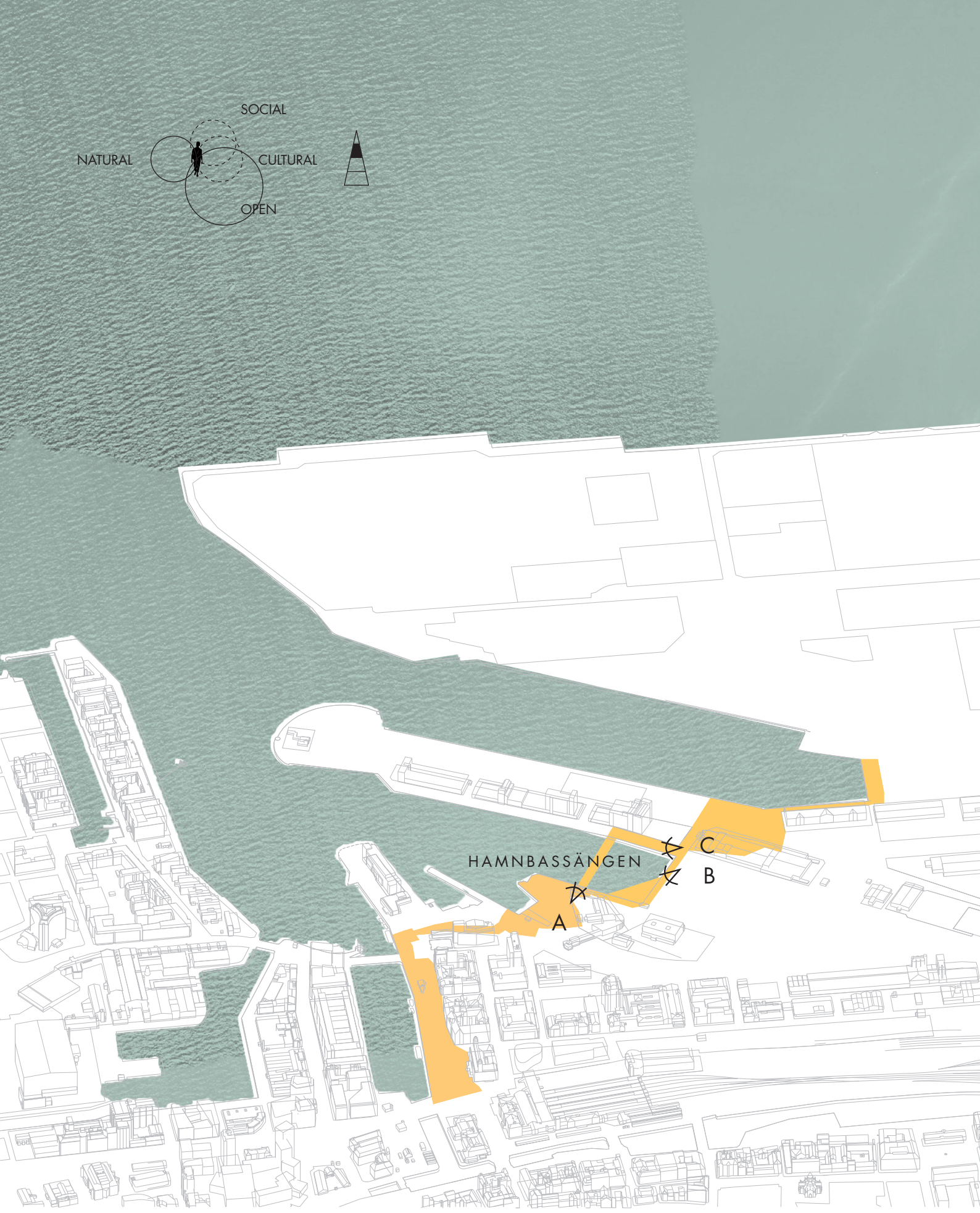


Figure 39. A study on how to create accessibility to the water and provide an appealing path along Hamnbassängen, that works well with both the existing structure and the future plans for Nyhamnen.

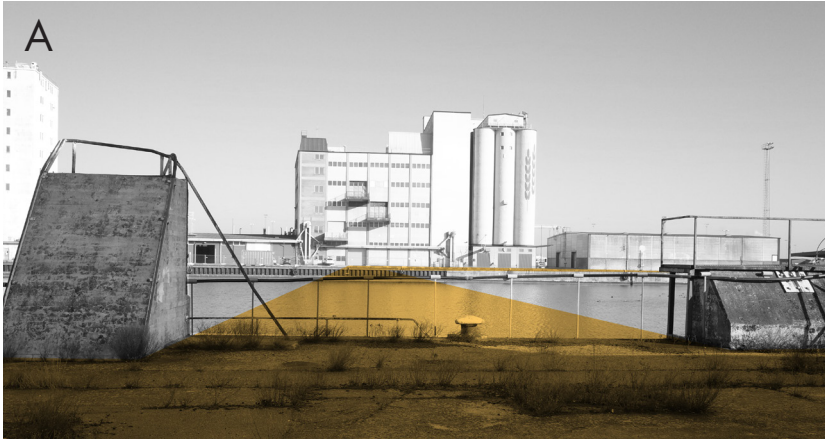


Figure 40. A temporary wooden bridge providing a shortcut across the basin as well as closeness to the water. The yellow area where the bridge would be placed also marks the location of a planned path between new buildings built on landfill (figure 40).

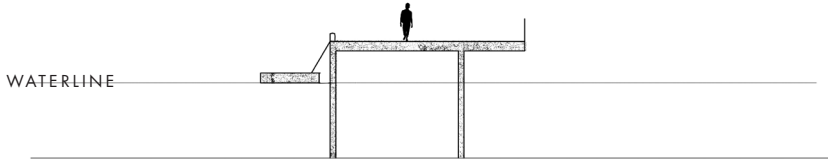


Figure 41. A wooden dock at the foot of the basin providing water access as well as a pathway along the water that doesn't intersect with the road for public transfer that is planned to go through Nyhammen.

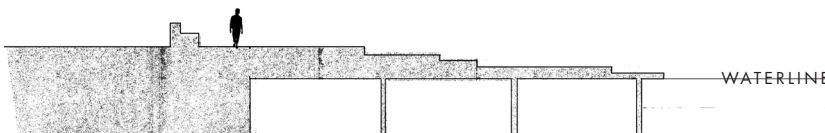
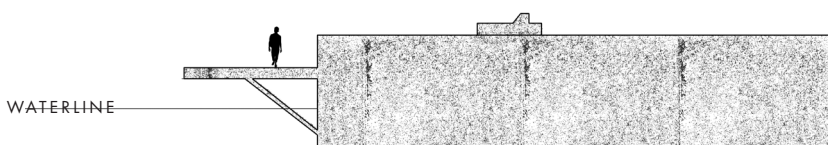


Figure 42. Furniture along the south side of Nyhamnspiren for enjoying a warm spot on sunny days sheltered from coastal winds. A lowered walkway provides a pleasant connection along the water from the wooden bridge in figure 42.



B2 - Inner city study

The second study is located in the inner city of Malmö along a passage between two well-used urban spaces, a central shopping street, Södra Förstadsgatan, and a green pedestrian alley, Kungsgatan. As this study focuses on the key aspect *perceptuality* I have explored how the design components found in the reference studies could be used in combination with the evidence-based tools. The study also explores how to create a transition between the two spaces with different characters.

The first sketches (*figure 43*) illustrates a sequence that goes from the shopping street (Södra Förstadsgatan) through the passage (Storgatan) to the green alley (Kungsgatan). I identified the existing PSDs in the three spaces and based on them I decided which PSDs that should be added in the passage and what part of *the triangle of supportive environments* it should represent (*figure 44*). I figured that the passage should provide a contrast to the cohesive character of Kungsgatan and as the site already is diverse in terms of the built structure I chose *diverse* as the dominant PSD in the proposal. I added the PSD *cultural* as it is a character that connects the two other areas. In terms of the PSD *sheltered* I figured that a gradual transition to the sheltered character of Kungsgatan would be a nice feature. So I decided to add some spatial components creating shelter but also to leave openings to create *spatial variation* going from sheltered to open along the passage (*figure 46*). In line with *the triangle of supportive environments* the design intention gradually changes from stimulating at the shopping street to restorative in the alley.

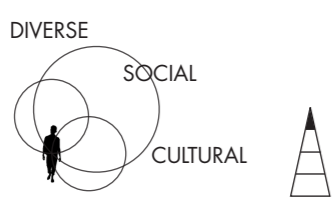
The proposal also illustrates how to combine the suggested PSDs for the site with other aspects of design – i.e. *visual depth*, *spatial variation*, *material detailing* and *reduced traffic*. In the proposal, natural elements are used to achieve the suggested PSDs (*figure 44*). Through *material detailing* in the ground cover forming patterns for orientation, a hierarchy of primary use has been created. The street has thus been turned into primarily a pedestrian and bike path, affording existing uses of the space and eliminating traffic and noise from the site (*figure 45*). Natural elements such as trees and plantings are placed to achieve *spatial variation* in harmony with the structure of the buildings and without compromising the *visual depth* (*figure 46*).

This study also reveals that the added green structure creates permeable surfaces in existing hardscapes, which implies that the design contributes to additional aspects of urban resilience besides human health and wellbeing.

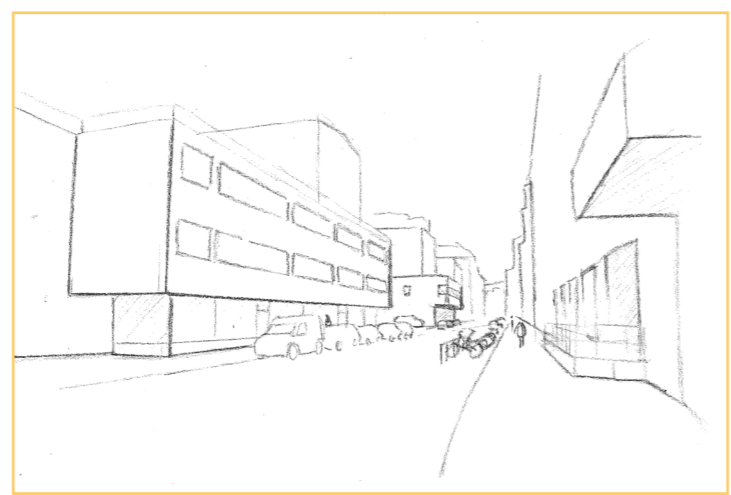
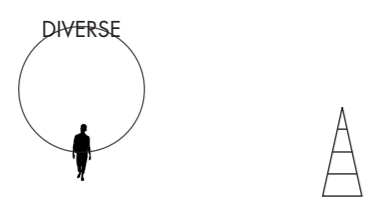
Figure 43. The East side of Storgatan forms a passage between a central shopping street and a green alley with different characters. The proposal suggests PSDs in combination with other design aspects that merges these two spaces of different character.



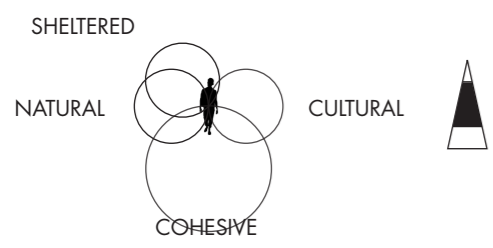
➤ SÖDRA FÖRSTADSGATAN



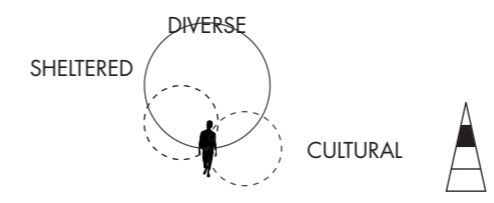
➤ STORGATAN



➤ KUNGSGATAN



PROPOSAL FOR STORGATAN



NATURAL ELEMENTS



Figure 44. Natural elements are used to give the space both a sheltered and cultural character with diverse as a dominant PSD.

MATERIAL DETAILING & REDUCED TRAFFIC



Figure 45. Material detailing in the ground cover can be used to pedestrianize the streets giving bikers and pedestrians priority to use the street. Adding softscape contributes to permeable surfaces along the street.

SPATIAL VARIATION & VISUAL DEPTH

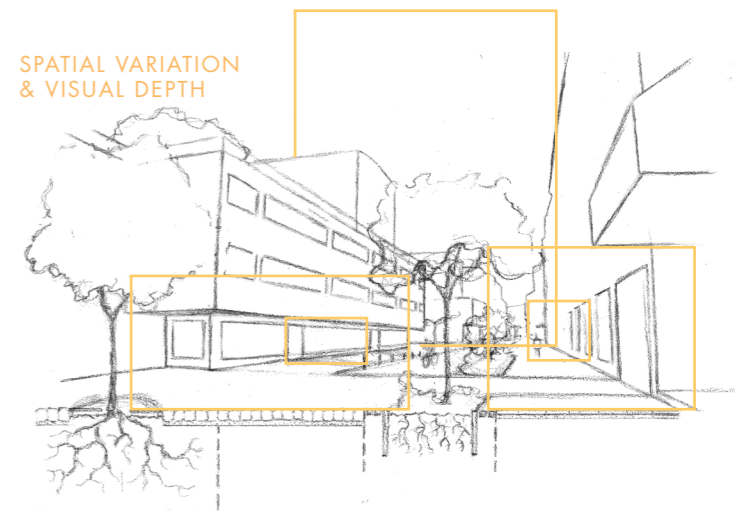


Figure 46. Interesting spatial compositions can be created by adding vegetation and removing parked cars making the structure of the buildings stand out.

B3 - Green connection study




The final study exploring *connectivity* is located along the part of the connective public path that aims to connect the nature area with the existing bluegreen structure in the city (figure 47). It goes through a variety of urban structures so in this study I have explored how the PSDs can be translated to green components in the different built structures. The aim is also to find out how to connect a number of spaces with different combinations of PSDs to each other. The green connection study is illustrated through a sequence of sections from Kungsgatan to the proposed nature area in Mellersta hamnen, revealing design suggestions on different spatial structures. Added natural elements are illustrated in a green color.

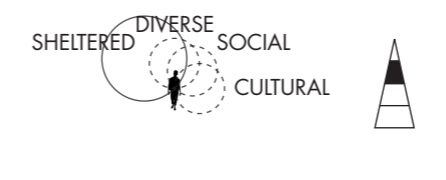
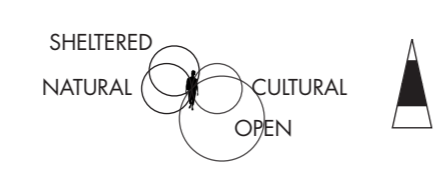
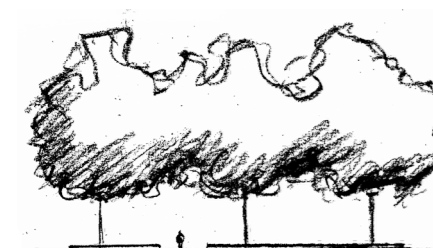
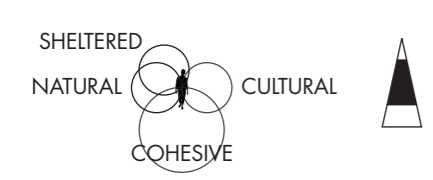
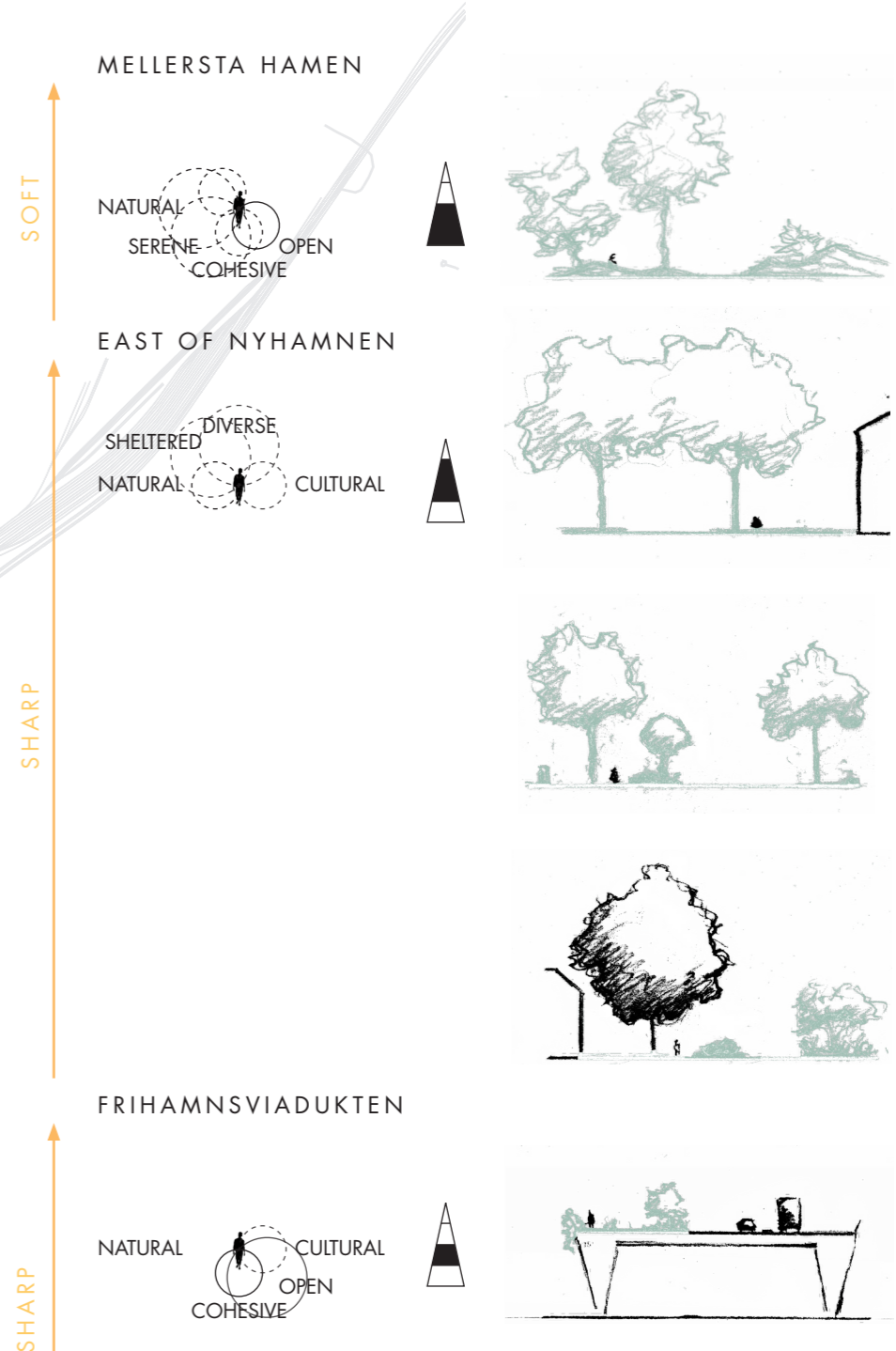
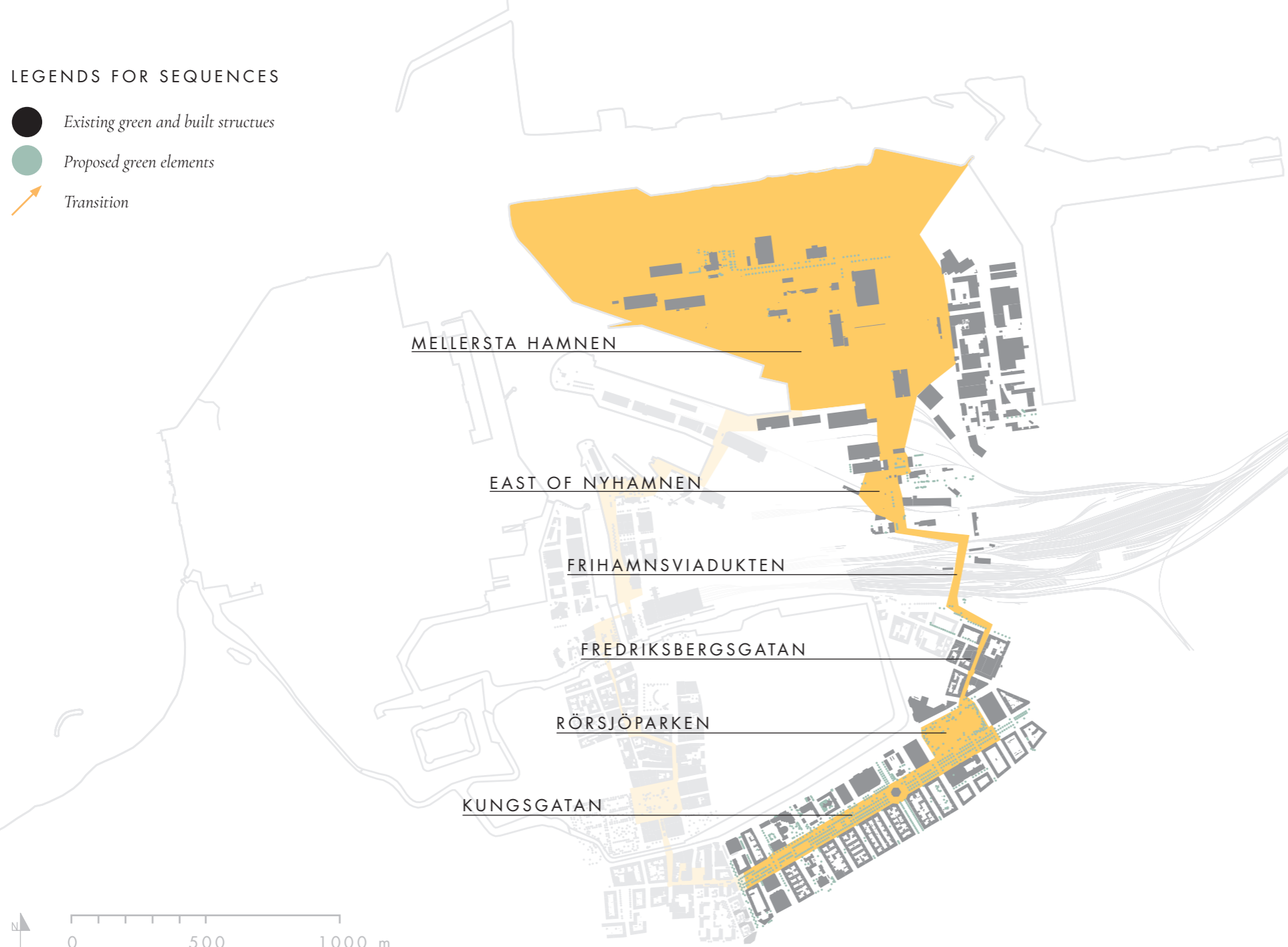
Based on the character of the different existing built structures I started out deciding which PSDs to propose and what the design intentions should be for each space. Kungsgatan and Rörsjöparken are included in the study mainly to guide the design of the other spaces. In order to transform the path into a green connection I placed natural elements in the form of trees, shrubs and plantings in each section so that they would emphasize the PSDs intended for the space. Different illustration techniques, the spatial compositions in the sections, the number of frames for each space and the scale figures are used to illustrate the different PSDs. The green connection study goes from Kungsgatan that is *cohesive* and *sheltered*, along Frihamnsviadukten that is *open* and *cohesive* and finally reaches the nature area that should be dominated by the PSDs *serene* and *natural*. The proposed PSDs of both Fredriksbergsgatan and East of Nyhamnen aims to create contrast and variation in relation to the different inner-city structures, while the proposed PSDs for East of Nyhamnen are also chosen for the purpose of creating a soft transition to the nature area. As the study was to explore the aspect of *connectivity*, the transitions between different characters also needed to be taken into consideration in the design process. That is why I ended up adding proposals for the transitions along the sequential line. The proposals simply mark if the transition should be soft or sharp depending on the character of the connective spaces and if the aim is to create a contrast or a soft gradient between spaces.

The part of the path that intersects east of Nyhamnen goes along planned green spaces of the area according to the overview plan. Here the suggested natural elements are placed on spaces that could be used for establishing greenery beforehand, without conflicting the existing use. In this way the greenery can reach a mature form by the time the area is built.

Figure 47. A study on how to translate different PSDs into spatial structures using green components along existing built structures in the city. The studied path connects the proposed nature area with existing green structure in the city.

LEGENDS FOR SEQUENCES

-  Existing green and built structures
-  Proposed green elements
-  Transition



08

REFLECTIONS

the process

How have the methods and approaches used helped me to translate the concept of healthy everyday landscapes into a real landscape? As I started out knowing only what I wanted to achieve, the process has been exploratory. In other words, I have throughout the process been sensitive to the things I have learned and the insights I have gained along the way, and allowed these to affect the course of my process. This open mindset has helped me find ways to integrate the human wellbeing perspective into a complex urban landscape that is constantly changing.

The theme of healthy everyday landscapes was used to create an initial frame for the project. The three key aspects of everyday landscapes forced me to use on site experiences right from the beginning of the process, revealing perceptual aspects of the site itself and its surroundings that could not have been observed from above. I only zoomed out looking at the landscape from above when it was necessary to study the aspect of connectivity in a broader context. Most of the decisions made in the process are in other words done on site, based on the site. The evidence-based models added another dimension to this process, where I had to ground my decisions on research as well. The models helped me see the need of a variation of environmental qualities in our everyday lives and thus gave me instruments to analyze the landscapes and make design decisions. Using research also increased the validity of the proposal as the evidence-based models added a dimension to the process that is not only based on subjective and intuitive design thinking. It has nevertheless been challenging to use evidence-based models in an urban context. In the beginning, I especially struggled to understand the meanings of the PSDs *natural* and *cultural* in an urban landscape where everything, both the green and the grey structure is part of the constructed landscape and not always a quality. I came to the conclusion to define the PSD *natural* as a feeling of wildness as well as of mature vegetation and large

water surfaces, while I defined the PSD *cultural* as design that has a spatial or aesthetical appeal for humans.

Although the framework presented in the thesis was an initial guide for my process, it turned out that findings of the different studies also affected the course of the process and the outcome of it. This was the case especially during the site- and reference studies I made in the internship. The exploratory character of this thesis allowed me to let these findings interfere with the process, which contributed to the outcome since it helped me think it through on a deeper level.

the outcome

So how does the outcome of this thesis correspond to the intention of designing urban landscapes for human wellbeing? For the urban dwellers of Malmö, the proposal would provide a central restorative nature area in connection to the sea. Considering the high amount of stress-related diseases today, there is an urgent need of access to restorative nature in cities. As the restorative nature area is connected to the inner city, it is accessible to more than local users. The connective public path is another attempt to increase the exposure to healthy environments in the everyday lives of urban dwellers. As it goes through well used inner city spaces, many people are likely to encounter it in their everyday lives. However, as the proposal is connected to Nyhamnen it does not affect the everyday landscapes of all urban dwellers. For that to happen, the conceptual model of healthy everyday landscapes would need to be translated to all new development areas in the city and also to the existing urban areas.

The conceptual model for healthy everyday landscapes could thus be extracted from this thesis and translated into other urban development processes. The conceptual model summarizes key aspects and how to connect them. In addition, the methods used in this thesis could be extracted and refined. One example is to study the site and design solutions from shifting scales and focal points. Another example is the site visits, where a subjective experience of space is integrated with analytical thinking based on theory and research. As the process of this thesis does not go all the way to detailed design proposals, there are many interesting additions in the method that could be used in further design studies. All of the aspects connected to *perceptuality* – vision, sound, thermal comfort as well as spatial, temporal and phenomenal experiences – could be more thoroughly explored in a more detailed scale. In

terms of *connectivity* the connection between the indoor and the outdoor could be further explored in the context of detailed area plans. Here, the evidence-based model of *4 zones of contact with the outdoors* (Bengtsson 2015), could be useful. Further, all new development areas do not necessarily have an adjoining area that could be transformed into a large restorative nature area. It would be valuable to further explore how to create restorative spaces within such development areas. In the case of Nyhamnen, it is a hypothesis that Mellersta hamnen could be transformed into a nature area. However, there are more intentions connected to the proposal than affording restorative space. The new development of Nyhamnen implies a large environmental impact and the nature area could be seen as a compensational measure for this environmental impact. In other words, the proposal suggests that the urban development processes should include compensational measures of equal size for the environment. The connective public path on the other hand suggests that new development processes need to go hand in hand with taking care of existing urban landscapes. This is an aspect of equity. Healthy everyday landscapes is not something that should be created only to those who can afford housing in these new harbor areas, but equally to all urban dwellers regardless of where they can afford to live. For this reason, the design studies made along the connective public path are focusing on the ruptures in the existing city that would need to be taken care of. However, it would be interesting to also work with the other urban spaces of the connective public path, and explore how the existing urban structures can be adjusted to future needs without compromising their existing qualities.

The green structure that is the outcome of the conceptual model of healthy everyday landscapes applied in Nyhamnen already exists in other parts of the city, as the final map reveals (*figure 48*). Kungs- and Slottsparken together with the canals that encircle Gamla staden is one example and at Boor this structure can also be distinguished in the form of the canals, the sea and Ribban encircling the area. This shows that this type of blue-green structure has been created both in history and in modern times. So is it necessary to use the conceptual model and the methods used in this thesis in order to achieve the same thing? Through studying the development plans of Nyhamnen as well as learning about contemporary urban planning I have concluded that it is. The overview plan of Nyhamnen does not present a structure that is coherent with the conceptual model in this thesis. Maybe because this approach has not been a part of the process, or maybe because there are too many other interests involved for the plans of Nyhamnen. This thesis shows

that even though similar structures have been created before, in other contexts, it is still necessary to actively bring this approach into the contemporary urban development process. If we are still not convinced of the importance of green structures such as the one proposed in this thesis, we can have a look on similar existing structures such as the ones connecting to Gamla Staden and Boor and consider their essential contribution to the city today, as has been done in this thesis. Contemporary urban planning is characterized by a linear approach going from large scale to small scale where the landscape is gradually chopped up in smaller and smaller entities. This thesis suggests switching between scales and focal points throughout the process, so that design intentions are coherent from large scale city planning to detailed design proposals.

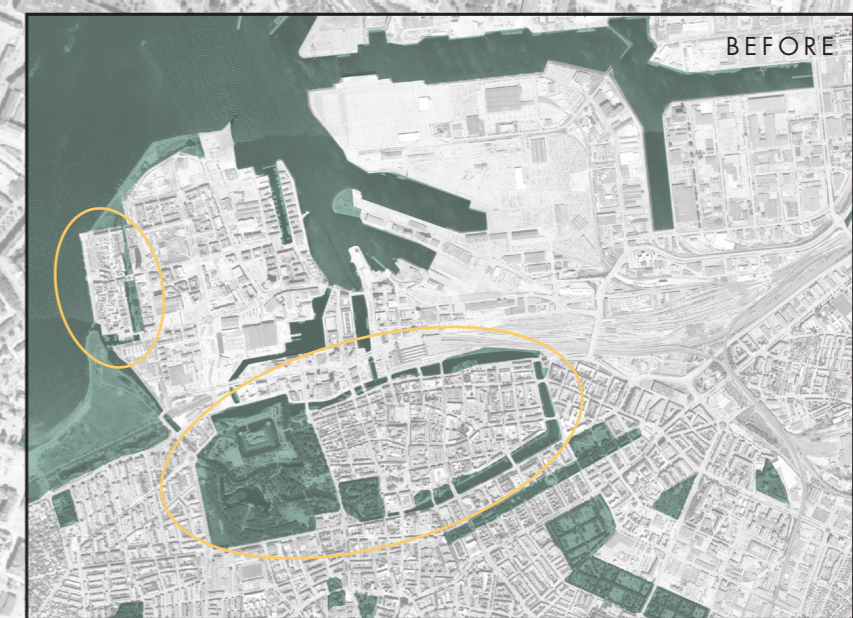
This thesis has explored an urban design process with human wellbeing in focus. However, the outcome that is an added green structure in the urban landscape can be combined with other measures of urban resilience and sustainability (*figure 48*). How to combine water management, heat regulation, wildlife habitats and biodiversity with the aspect of health for urban dwellers would be an interesting next step to explore through a design process. The aim would then be to promote health for the urban landscape as a whole, including the environment itself as well as the flora and fauna in it. Bruno Latour (2018) points out that the landscapes today are undergoing immense changes that are not only the cause of human impact, but also the cause of the earth responding to this impact. He asks: “[...] *how are we to act if the territory itself begins to participate in history, to fight back, in short, to concern itself with us – how do we occupy a land if it is this land itself that is occupying us?*” (Latour 2018, p. 41). This is a challenge highly relevant for the exposed harbor areas worldwide that are going through a transformation imposed by humans. As terrestrial forces in response to climate change are starting to interfere with these transformation processes, a holistic approach for creating healthy urban landscapes becomes a primary concern.

conclusion

This process has shown that the key issue of healthy everyday landscapes is to increase the exposure of healthy environments in people's everyday lives and to afford local restorative environments. It has also shown that designing healthy everyday landscapes is a complex process that requires design thinking and research on health to work in concert. Further, the concept of healthy everyday landscape needs to be integrated in different phases of urban planning and design and applied on different scales, from large scale strategies of the city to detailed design proposals. In terms of new development processes, which is what this thesis has explored, healthy everyday landscapes implies a green strategy that exceeds the boundaries of the plan area. It needs to connect the plan area to the surrounding urban landscape and it needs to provide a diversity of environmental qualities that afford all the different needs of urban dwellers.



AFTER



BEFORE

Figure 48. The proposal focusing on human wellbeing also contributes to the wellbeing of the urban landscape as a whole, adding green structure that can serve other purposes as well. The image also reveals that the concept of the thesis is not a new intervention, but already exists in the city of Malmö.

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Visual material

All visual material (photos, sketches, images) are made by the author unless mentioned otherwise.

Aerial photos of Malmö from Lantmäteriet.
<https://www.lantmateriet.se/>

Base maps for Nyhamnen provided by White Architects in Malmö.

Diagrams on evidence based models are based on:

Grahn, P., Bengtsson, A. & Stoltz, J. (unpublished). *Evidence-based Design Approaches Originating from Research & Development in Alnarp Rehabilitation Garden.*

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