DESIGN FOR GREEN STRUCTURES IN DENSIFYING HOSPITAL AREAS

A design proposal for Skåne University Hospital Malmö

Emilia Pudeck

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Supervisor: Victoria Sjöstedt, Department of Landscape architecture, planning and management, SLU - Swedish University of Agricultural Sciences
Assistant supervisor: Monika Gora, GORA art&landscape AB
Examiner: Lina Berglund-Snodgrass, Department of Landscape architecture, planning and management, SLU - Swedish University of Agricultural Sciences
Assistant examiner: Maria Kylin, Department of Landscape architecture, planning and management, SLU - Swedish University of Agricultural Sciences

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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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ABBREVIATIONS

PSD - Perceived sensory dimension

SUS Malmö - Skåne Universitetssjukhus Malmö (Skåne University Hospital Malmö)

SUS Lund - Skåne Universitetssjukhus Lund (Skåne University Hospital Lund)

ABSTRACT

Skåne University Hospital Malmö has been going through a process of densification for over 120 years. The original planning of the institution from 1896 was characterised by a castle-like building located in a park environment. Due to the growing city of Malmö the hospital has been forced to adjust and expand. Densification of the hospital area has led to an extensive loss of green space, left are fragments of the former park. The main objective of this research is to make a design proposal for SUS Malmö. The aim is to explore how design can be used as a tool to create resilient green structures in densifying hospital areas. The following questions guide the research: *How to design resilient green structures in densifying hospital areas? What are the key challenges?*

The overarching method is Landscape Biography. This is a method that is based on the notion that landscapes are layered with stories, and shaped by various ongoing processes. It is a method that is interdisciplinary, it includes history, geography and architecture and it is promoted to include methods from other fields as well. The research is non-linear, it includes literature reviews, site analysis, cartographic investigations, historical research, visits to reference landscapes and design. The literature review gives context to driving forces of densification and theory on alternative strategies in urban planning, including evidence-based design for healthcare environments. Site analysis provides practical knowledge and insights to design challenges within the area. Examination of maps exposes the continuous transformation of SUS Malmö and shed light on green structures that have survived the process. Learnings of former use and values within the landscape are found in historical narratives. Visits to reference landscapes provide inspiration for design and shed light on factors important for the survival of green space. Main findings from the study are explored through design of a specific area within SUS Malmö. The design process is used as a method to investigate the retrieved theoretical and practical knowledge. The result is a design proposal where new insights of the challenges within the landscape become apparent. Many factors affect the resilience of green structures, political, social, historical and aesthetical are some of them. To design for resilience, the various flows within the landscape need to be acknowledged and carefully considered in the process.

Keywords: *densifying, resilience, narrative, socio-nature, flow, entanglement, evidence-based design, perceived sensory dimension, SUS Malmö*

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PREFACE

The theme for this project was not clear from the beginning. It was something that took form over weeks, perhaps months even, and is a result of several courses of events. I began my search for a subject for my master project in the winter of 2021, during a time when I took the course *People and Environment*. The course taught environmental psychology and brought up theories on the impact of outdoor environments on health and well-being. The learning that nature has positive effects on recovery and health was one of the initial incentives for this project. A close member of my family underwent a surgery at that time that demanded a week's stay in Karolinska university hospital, Stockholm. In the aftermath of the surgery he shared how he felt about his surroundings. He lived in a ward on the twelfth floor. From the bed he could look out the window, but all he saw was a concrete facade and a small glimpse of the sky. He described the view as unstimulating, the location was dark and the view was consistent, never changing. I had just read about Roger Ulrich's research on how recovery after surgery was affected by the view from the window of hospital rooms. His research had shown that patients with a view over a natural green scenery had shorter hospital stays than patients with rooms overlooking a brick wall.

With this in the back of my mind, I contacted Landscape Architect Monika Gora. I had an idea to perhaps collaborate with a landscape architectural firm for my degree project. I wanted the opportunity to work with a theme grounded in a real-life project. Monika Gora told me about a project which she was working on called *Revisits*. The project involves revisits to former projects which she made 10, 20 and 30 years ago to see how they had developed over time. What was left, what had happened to the ever-changing materials, plants and trees, were they taken care of? What happened after she left these projects, was the vision maintained? One of the projects she showed me was the Oncological Clinic in Lund. A small hospital park with rich vegetation. I was intrigued by the time aspect. An interest in history and narratives within landscapes had grown on me since the course *Landscape theory in architectural and planning practice*, on which one of the themes was cultural heritage and landscape identity. The idea to work with a hospital environment, and with aspects of time and health took form. Monika suggested that I'd look into Malmö hospital, a hospital that had been there for over a hundred years but had transformed from a small hospital in a park to a large university hospital. I began my research.

Figure 1. Facade of hospital building at SUS Malmö.

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INTRODUCTION

BACKGROUND

This project investigates how green space can be implemented in a hospital area that is going through densification. It is a site-specific design proposal located in Skåne University Hospital in Malmö. A hospital that historically was situated in a park-like environment, that today has grown into a network of hospital facilities at the expense of green areas.

Densification is an established design strategy which has been common since the end of the 20th century (Haupt et al. 2020). Even though research has shown that densification has a negative impact on several factors, among them health and wellbeing, these are rarely acknowledged in Swedish planning practice (Haupt et al. 2020).

That our surroundings affect us has been known for centuries, but it is not until recently that there is scientific proof of it. Professor Roger Ulrich's (1984) study *View through a Window May Influence Recovery from Surgery* showed how recovery after surgery was affected by the patient's view through the hospital windows. This generated plenty of studies of how health and wellbeing are affected by physical environments. Scientific research shows that green and natural elements can have a positive impact on health.

Hospital environments can play an important part in the process of recovery and restoration. To examine hospital environments, and to implement health promoting design, is increasingly becoming an important task within landscape architecture and planning practice.

Malmö hospital was built in 1896 and had the character of a castle, located in a generous park. As the city grew the hospital was exposed to more, and more, pressure to expand (Ersgård et al. 1996). This has led to a process of densification which has been going on for over 120 years, and it hasn't stopped. One of the consequences of the densification is a fragmented green space. The large open park that once characterised the hospital has been replaced by small pocket parks (Hedar 2016).

The expansion of the hospital has led to a transformation where very few traces of the old character are left. Cultural historical values have been neglected, but some strong green structures are still present. In this project evidence-based design principles, aspects of historical narratives together with learnings from literature and reference landscapes guide the research and the design.

Figure 2. Location of SUS Malmö on orthophoto of Malmö.

Figure 3. Orthophoto of SUS Malmö today.

Figure 4. Orthophoto of SUS Malmö in 1960.

Figure 5. Gingko trees at SUS Malmö.

AIM AND OBJECTIVE

The main objective for this study is to create a design strategy and design proposal for Skåne University Hospital in Malmö. The aim is to investigate and develop strategies to design resilient health promoting environments for patients, workers and visitors at SUS Malmö. A historical review of hospital environments provide insights on the implications of densification of hospital environments and how they have been valued over time. The aim is to discuss how design can contribute to developing resilient green structures in a densifying hospital area to support healthy environments. Emphasis is on discussing how landscape architects can work to preserve, enhance and develop green structures in hospital areas.

QUESTIONS

- How to design resilient green structures in densifying hospital areas?
    - What are the key challenges?

METHOD

To answer the key question of this study various methods have been used. The study is divided into four parts: Literature review, Site analysis, Reference landscapes and Design proposal. The study has been non-linear, and the presented research reflects the process. Site visits have raised questions that have led to literature studies, and in the literature studies issues regarding design have led to research of reference landscape. In this research the reader gets to follow the circular research process. Literature reviews are interspersed with site analysis, examination of maps and investigation of historical narratives. Learnings from the study and the main question are finally explored through design.

LANDSCAPE BIOGRAPHY

The overarching method is the landscape biography approach which is a method that highlights the time-depth of landscape by studying its history and its inherent narratives (Kolen et al. 2016). It is an approach that is based on the idea that landscapes are layered with stories. The aim of the approach is to merge the field of planning and landscape design with historical landscape research to understand the ongoing processes that shape the landscape (Kolen & Renes 2014). In the book *Landscape Biographies*, the archaeologist Jan Kolen and the geographer Hans Renes describe how historical knowledge of the landscape is of importance in transformation projects. They argue that research on historical processes, narratives, and memories will give insight to how historical landscapes can be developed from vulnerable to resilient. In the book *Research in Landscape Architecture: Methods and Methodology*, authors Jan Kolen, Hans Renes and Koos Bosma present five operational principles that are used in the landscape biography approach (2016). These operational principles have inspired a framework for this research and inspired ways to study the hospital area, SUS Malmö. A presentation of the five principles and how they are implemented in the study are as follows:

1. Historicising approach - The aim with the landscape biography approach is to get a better understanding of the current landscape situation. This is achieved through construction of knowledge (constructivist research) in which the various ways landscape is experienced is emphasized (Kolen et al. 2016). The history of SUS Malmö and the social processes that have shaped the institution will be analysed to identify contestation in the present-day landscape. This is done through literature on the history of the site, examination of planning documents and cartographic research.

2. Continuum of transformations - This principle highlights the construction of history through processes of remembering and forgetting. Looking at the landscape as being in a continuous transformation process, where some traces of the past have been used and reused, can give insights on the layered landscape of both past and present (Kolen et al. 2016). This is achieved through examination of cartographic material, photos, landmarks, and site visits where elements that have been kept intact are searched for. This will create a better understanding of the processes of remembering and forgetting, which will give insights on how the past has been processed and the layers of landscape up till this day. Resilient structures within the focus area will be brought forward.

3. Interdisciplinary approach - The landscape biography approach is not a method on its own but aims to mix different methods that are geographical, architectural, social, historical, and archeological (Kolen et al. 2016). Apart from landscape biography being the overarching method, design principles within evidence-based design are used in the site analysis of SUS Malmö and in the design process. Visits to reference landscapes and conversations with a landscape architect will provide knowledge of architectural issues. Sketching, examination of maps and historical reviews will be included in the research to provide knowledge of the development of the physical landscape.

4. Dwelling perspective - The fourth principle highlights the “authored” landscape, which imply that the landscape is shaped by life stories in a certain area (Kolen et al. 2016). To understand the ideas and identities expressed in the landscape observations of the focus area are carried out. This will provide information on human-landscape relationships of today. To get insight on historical narratives of SUS Malmö, research on life stories and the history of the hospital is reviewed. This will provide insight of the landscape´s inherent narratives, of past and present.

5. Design principle - The fifth and final operational principle refers to the importance of applying historical knowledge in the design of landscape. Kolen et al. (2016) puts it like this: “The interaction of interest groups with the past in the landscape is an integral part of the spatial conditions of communities and, hence, of spatial transformations” (Kolen et al. 2016:145). By looking into the past and present landscape current design issues will surface which will provide knowledge of the needs of the future. Apart from design principles within evidence-based design and learnings from visits to reference landscapes, principles of entanglements are provided. Theory and guidelines developed by landscape

architect Martin Prominski (2018) inspires to design with aspects of time in mind.

LITERATURE REVIEW

A literature review is carried out to give some background to matters related to the objectives of this thesis. Some of the literature has been found through courses taken during the master's programme at SLU Alnarp, in subjects I have found interesting. Other literature related to the theme of this project has been recommended by supervisors and classmates. The literature review is divided into three subchapters. In the first chapter, the nature/city relations and densification as a planning strategy is reviewed to give insight on the implications of densification. Densification as strategy is discussed in relation to theory on the dualistic view of nature/city to explore driving forces behind it. In the second chapter, Supportive environments, history and principles, environmental psychology is studied to provide knowledge on how nature can support health and wellbeing. A historical review of hospital design is initially presented to provide context to the field. Principles within evidence based design are studied to provide guidelines for designing restorative environments. This will give insights to tendencies that have shaped SUS Malmö and how evidance based design can be used in the design propsal. The third chapter, Design through entanglements, provides knowledge on how to design with a time perspective. This gives insight to how design can become resilient over time, by considering past, present and future.

Nature/city relations

The first chapter of the literature review focus on implications of densification understood through theory on the nature/culture dichotomy. Implications of densification is studied in the article *A systematic review of motives for densification in Swedish planning practice* written by Per André Haupt et. al. (2020). In the article swedish planning practice is criticised for motivating densification on false pretenses. Driving forces of densification are then reviewed through theory addressing the nature/culture dualism. In the book *City of Flows: Modernity, Nature, and the City* author Maria Kaika, D.Phil. in Geography and an MA in Architecture, challenges the nature/culture dualism (2005). Kaika (2005) argues that the separation of city and nature is problematic since the historical geographical processes generate objects, landscapes, and cities that are hybrids. Geographer Erik Swyngedouw (1996) is in his article *The city as a hybrid: On nature, society and cyborg urbanization* calling this process socio-nature. Socio-nature is a term that describes the various processes that all landscapes, urban and rural, are made of. They consist of flows that are both natural and human. The concept of socio-nature is presented to provide an alternative view of the city and inspire new ways to address development issues.

Supportive environments, history and principles

In the book *Therapeutic landscapes: an evidence-based approach to designing healing gardens and restorative outdoor spaces* architect, and landscape architect, Clare Cooper Marcus and Naomi A. Sachs (2014) introduce the history of hospital outdoor space. Marcus and Sachs (2014) present an overview of the development of hospital environments since ancient times up till this day. Their review gives background to how religion, scientific progress and ideas have shaped hospitals through the centuries. In the book *Hospitals: A Design Manual* various perspectives on hospital architecture and healthcare development are brought up by architectural historian and urban planner Noor Mens and urban and architectural historian Cor Wagenaar (2018). Their research provides insights on how trends and philosophies through history have shaped both the architecture and the view of the patient. The historical review from these main sources will help to put the history of SUS Malmö in a larger context and provide an understanding of its development. The historical review of hospital architecture will give background to the development of evidence-based design and principles that will be applied in the design of SUS Malmö.

The eight perceived sensory dimensions is a model developed to be used by landscape architects and urban planners to aid evidence-based designs that support health and wellbeing. In the article *Perceived sensory dimensions: An evidence-based approach to greenspace aesthetics* (2021) the geographer and cognitive scientist Jonathan Stoltz and Patrik Grahn, professor in landscape architecture, have defined eight important perceived qualities in urban green space that are experienced in a similar way regardless of social, cultural and individual differences. The model is based on studies on perceived sensory dimension carried out since the 1980s. Stoltz and Grahn (2021) argue that an evidence-based design approach will better support sustainable solutions than designs based on primarily artistic practice. The eight characteristics are used to analyse SUS Malmö and work as guidelines in the design process. The eight perceived sensory dimensions include *Natural, Cultural, Cohesive, Diverse, Sheltered, Open, Serene,* and *Social* quality. These principles are further explained in the literature review.

Designing with entanglements

Landscape architect Martin Prominski (2018) writes about the concept of entanglement in the chapter 'Designing landscapes of entanglement' in the book *Routledge Research Companion to Landscape Architecture.* His concept of entanglements supports ways of designing with time, humans, and non-

humans to achieve resilient solutions where nature, culture and aspects of time are intertwined. This chapter will create a deeper understanding of how design can become resilient, by considering landscapes as entangled with a variety of flows.

SITE ANALYSIS

The site of SUS Malmö is analysed with various tools to provide historical knowledge and knowledge on current conditions for green space. The site analysis is divided into three subchapters, the first one is called *SUS Malmö - Intuitive walk*, the second is *History, Maps and Narratives* and the third one *Revisit SUS Malmö*.

The research begins with an intuitive walk that aims to give a better understanding of the site. Through walking, sketching and by taking photos interesting elements, challenges and inspiration will surface. Sketching is used as a tool to comprehend the site and to pinpoint what I find interesting to further explore in the design process.

In line with the landscape biography approach, the history of SUS Malmö is examined in the subchapter *History, Maps and Narratives.* The history of SUS Malmö is presented together with cartographic material which illustrates the continuous transformation of the site. The analysis provides information on the values within the site, what has been kept, removed, or transformed. Apart from examining cartographic material, photos and literature are reviewed to highlight narratives entangled in the landscape. Municipal plans are also examined to give some insight on future plans.

The third subchapter aims to evaluate characteristics of the focus area according to the eight perceived sensory dimensions, history, and usage. The eight perceived sensory dimensions are used as a guideline to analyse whether the site is restorative. Traces of history are searched for to learn what elements have been kept and if there are traces of historical narratives left in the landscape. Through observations of the site information of current use is provided.

REFERENCE LANDSCAPE

Two reference landscapes are visited and analysed through sketching, photography and personal notes. The first site is Bispebjerg hospital in Copenhagen. Bispebjerg hospital with its over 100-year-old history has met similar challenges as SUS Malmö, which have been addressed in a different way. An intuitive walk at Bispebjerg hospital gives inspiration for design that support green structures and protects cultural heritage. The second reference landscape is the oncological clinic at SUS Lund, designed by landscape architect and artist Monika Gora. The oncological clinic garden is located on a small patch that is 5400 m2, but despite its small size the garden is rich with vegetation which creates a world of its own (GORA n.d.). The Oncological clinic is chosen as the second reference landscape since it inspires green solutions in densely built hospital areas. Conversations with Monika Gora give a deeper knowledge on the design and planning process behind the oncological clinic.

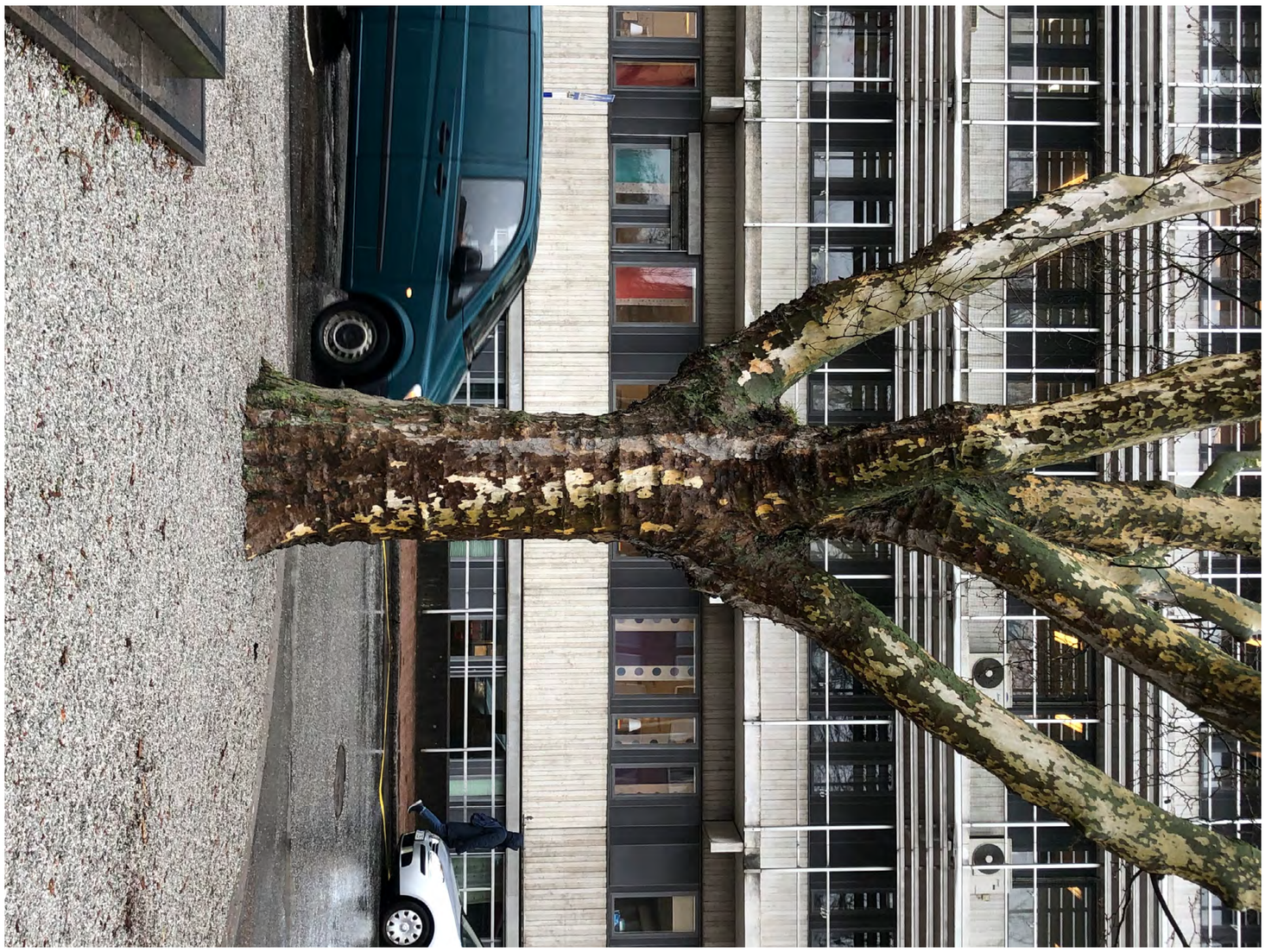
The two reference landscapes have different character, location, and scale. They are chosen because of their differences, Bispebjerg is chosen because it's a hospital where careful measures for protecting green space have been taken. Bispebjerg gives inspiration for a holistic approach to hospital design. The oncological clinic inspires targeted measures in a small area. This reference landscape is chosen since it inspires design in hospital environments that have undergone intense densification.

DESIGN PROPOSAL

The last chapter of this thesis presents a design strategy and design proposal for Malmö hospital area. Findings from the site analysis, reference landsacapes, read through the lense of theory from the literature review, guide the design. Important narratives and historical findings provide a time-depth to the proposal and strengthen the identity of the site. The concept of the eight perceived sensory dimensions works as a general framework for the design proposal so a health promoting design can be achieved. The chapter is divided into two subchapters: *Design strategy* and *Design proposal*. In the first subchapter the main findings of the research are summarised and important elements for further development are presented. An overarching concept and strategy for the whole area of SUS Malmö, based on the main findings, is introduced. In the second subchapter the design proposal is introduced from concept to detail. The design proposal focus on a specific site within the hospital area, the choice of site is based on findings from the site analysis. The design proposal includes site plans, sections, visualisations and illustrations of development over time: past, present and future.

Design is a method used to deepen knowledge of the site and explore questions asked in the study. The design proposal works as a foundation for discussion of issues within the landscape.

SITE ANALYSIS



SUS Malmö - intuitive walk

THOUGHTS FROM THE SITE VISIT
2022.04.06

I visited the hospital area in Malmö one rainy morning in early April when the trees and bushes were still without leaves. The purpose was to get familiar with the area and get a sense of the place. I had no specific agenda but to see as much as possible of the outdoor environment. I started in the Northwest corner and decided that I would try to walk in a spiral inward, peeling layers to eventually get to the core of the site. I documented my walk by taking photos and through sketching, with much focus on green areas and green elements and their relation to the built structures.

I began to follow the outskirts of the area, with Pildammsvägen parallel to my path. It was a continuous strip of green through the walk from north to south. I had to walk on the cut grass most of the time since there were few paths along the stretch. Small niches were formed between the buildings, sometimes quite sparse with vegetation and in other cases rich with a variety of trees and bushes. Some parts looked well managed and newly established, while some parts looked forgotten. I wondered whether there had been an overarching theme for the green area and the outdoor space, if so, I could not see it. The different niches between buildings had varying expressions and characteristics. I also noticed that the pedestrian paths had different ground material. The small patches of green and the various ground material and overall characteristics left me with the sense of the area being scattered. It felt like each niche had been designed separately, the same goes for each street, each building, and each entrance in the whole hospital area. It was hard to find any coherency. My impression was that each space had been established at different times. I wondered if there were any traces of the former use of land? Were the green areas merely leftovers or were they planned that way?

The sound of cars from Pildammsvägen was ever present, but the sound became less dominant as my focus shifted to the exploration of the grounds. I saw some pergolas that looked quite cozy. I wondered how often they were used and by whom. I didn't dare to go inside to take a better look since they seemed to belong to the employees of the hospital, but I wasn't sure. So far, I had not seen a single person on the green stretch. It might be because of the unwelcoming weather, but there were also very few connections between the parallel main street and the stretch. For the area to be used, better connections between Jan Waldenströms gata and Pildammsvägen were necessary. It occurred to me that maybe the point was to have it secluded, and for the main user to be employees of the hospital?

When I reached the southwest corner, a fence stopped me from continuing on the green path and I had to step out on the sidewalk by the cars. It felt a bit annoying to be interrupted.

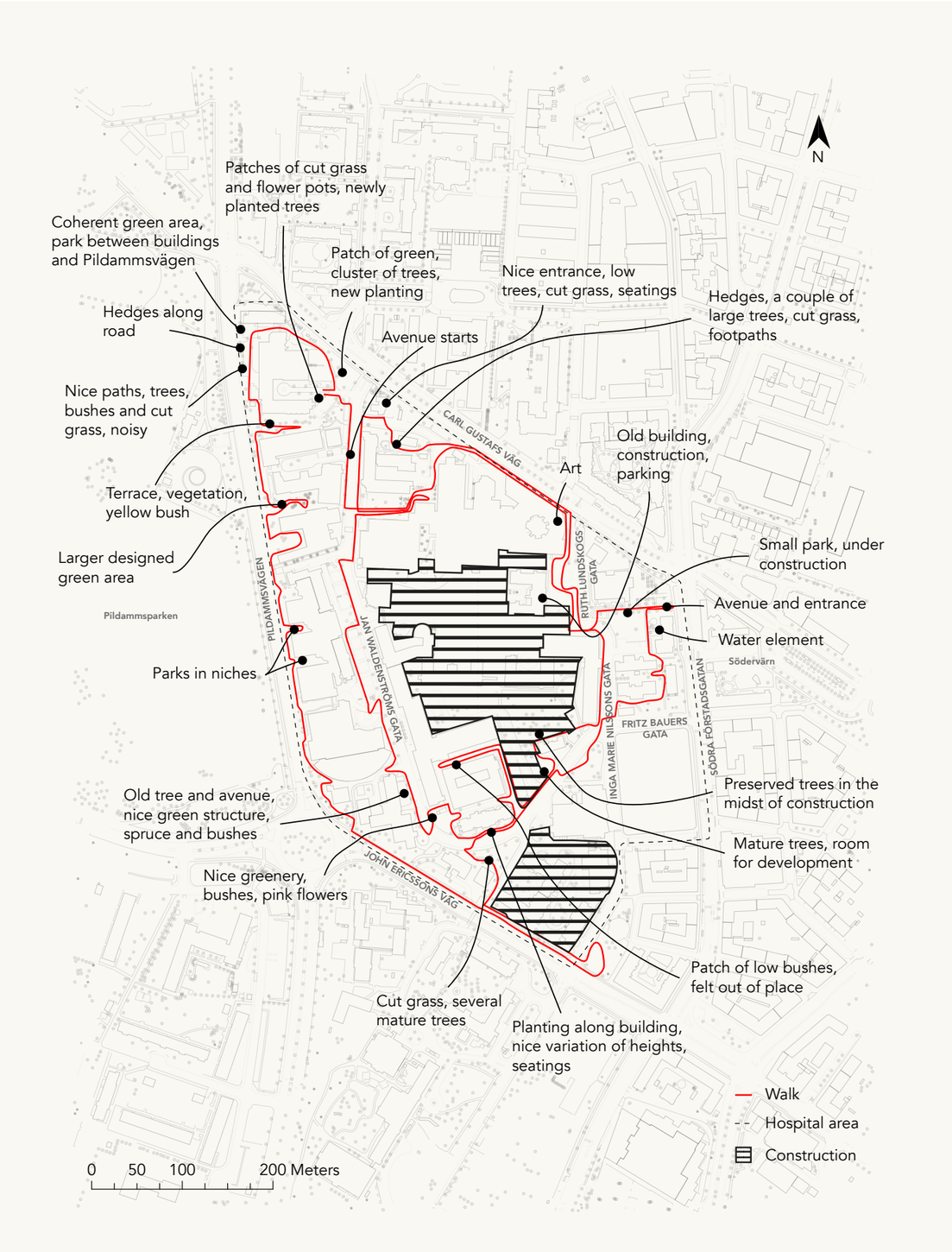


Figure 6. Map of SUS Malmö with route and notes from the intuitive walk.

Figure 7. Sketch of cluster of trees in the south part of the hospital area. One dominant plane tree surrounded by smaller trees. A trampled down path runs through the lawn, the whole area encircled by roads and buildings.

I had to continue on the sidewalk on the border of the hospital area. in a northeastern direction. The stretch between the south part and the middle of the hospital area was quite busy with construction so it was hard to make my way forward. I was often hindered by a fence.

I continued to document the green elements that caught my eye. A patch of muddy soil with a cluster of mature trees (figure 7.). I was happy to see the trees standing together, one was very large. It must have stood there for quite some time. I wondered when it was planted. Unfortunately, the surroundings left me feeling sad. The small grass lawn was trampled down, encircled by roads. I wondered why this was saddening. Perhaps I saw it as a contest between the green and the gray, and the green was losing. The space for it was so narrow and the lawn did not inspire any usage.

North of the block-like parking building a few lower buildings were located. I walked between them, small gardens filling up the space. It looked like they were taken care of, the small scale was inviting.

I made my way to the entrance from Södervärn, the avenue an invitation to the area. A park was in front of the old building by Södervärn. It looked a bit dull, probably due to the rainy weather that had transformed parts of the lawn to mud. I made my way to the west and was met by a construction site, again. The old main hospital building was barely visible behind the containers. The area between the building and the new emergency was busy with work. Hardscapes were dominant even though there was a planting and some trees in the area. I continued towards the emergency building and to Carl Gustafs väg in the north, an uninspiring stretch with minimal vegetation.

Eventually I made my way towards the point where I had started. I saw a small chapel with a small garden surrounding it. The small scale felt secure and inviting, a low building, low trees, and seating. I began to make my way south again, now on Jan waldenströms gata. I saw the old tree row and decided to follow it with some detours. I found a dark pocket park near the entrance of the emergency. Some large trees and cut grass, a hidden bench. It was so dark in the pocket park. I could not imagine it being used at all.

The trees on the avenue, Jan Waldenströms gata, were large and tall and gave a strong impression even if they were squeezed into the sidewalk. There were other elements of green as well. Cut hedges in between the parking for cycles outside of CRC. I noticed that the cut hedges were a reoccurring design element. I had seen them in several pocket parks along Pildammsvägen. The structure did

Figure 8. Sketch of dense greenery on Jan Waldenströms gata. Soft bushes, coniferous trees and the avenue in the background were a nice contrast to the built environment and the broad street.

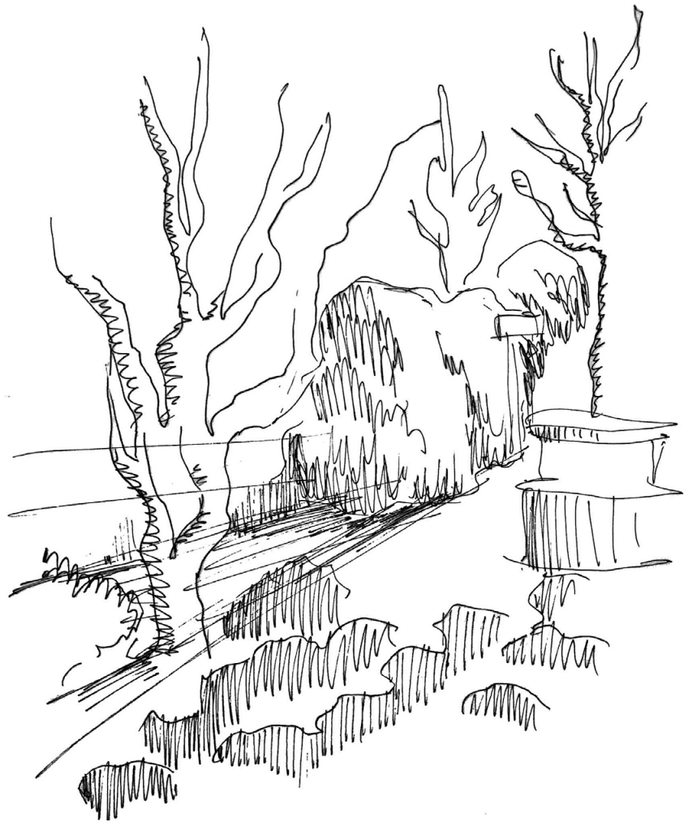


Figure 9. Sketch of a green room by the facade of an old building. Inspiration for creating enclosed green spaces on a small area.

Figure 10. Abstract illustration of experiences from the intuitive walk at Malmö hospital area. An investigation of greenery, density and the overall experience when walking through the site. The black line represents the route of the walk. The flow of the pen reflects the overall impressions. A soft wave-like line represents tranquility while the hard pointy line and the amplitude of the wave correspond to experienced stress levels. The green color stands for green elements and the pink color for the built environment.

perhaps connect to the long hedge line along Pildammsvägen.

At the end of Jan Waldenströms gata a green area caught my eye. Soft bushes and coniferous trees by a brick building (figure 8.). The vegetation was dense and varied in height, it was a nice contrast to the stiff buildings. I was inspired by the soft wavy expression of the shrubberies; they were like clouds. They softened the transition from high building to street. Across the street another dense green area was located with a variety of bushes, one with pink flowers. I walked around it to see how big of an area it was. Even though the size was relatively small it felt like a rich area with its dense vegetation. I continued to walk around an older building with a strip of green along the facade. Low trees and bushes in a mosaic pattern created nice rooms, some with seating (figure 9.). Even though the strip was narrow the vegetation created a feeling of enclosure, a disconnection from the road.

I passed by the south part of the construction site and saw another old, one-storey high building. In front of it a muddy lawn and a low tree. I walked around the building on a tight path between the fenced off construction site and the facade. The ground had patches of grass and on the backside, I could see a handful of mature trees behind the fence, in the midst of construction. I then continued north again, following the street Inga Marie Nilssons gata and Ruth Lundskogs gata. The stretch offered a nice flower bed by a building, a shaft with bushes by the emergency hospital. Otherwise, nothing new. I continued on the same path as earlier, on Carl Gustafs väg and then made my way towards the entrance of the emergency by the psychiatric facility. I had passed the park before but not from this direction, a stretch of low bushes followed the car lane towards the entrance. The park by the entrance was dark and looked a bit rough. I wonder how it would look on a sunny day in summer. I then made my way to my bike. I passed a small patch with three trees by the parking lot and saw a larger area of trees by the north entrance. I cycled out between a small opening in the cut hedges.

The park Hälsokällan by Södervärn. The site is characterised by the avenue, cut grass, flower beds and sculptures. The green structures are framed by a low fence. The area is quite open.

A green connection between the hand surgery and the rheumatology clinic. The area has a winding gravel path, there is a metal rink between the lawn and the path. The path widens in some parts to include benches.

A green area by the surgical clinic and the psychiatric emergency. Low shrubs work as a border to Jan Waldenströms gata. The site is dark and looks unmanaged. A couple of benches under a tree can be reached through a small ramp.

Jan Waldenströms gata outside CRC. An avenue of plane trees highlights the street. The trees are squeezed into the walkway which makes the pedestrian path narrow. Geometrical hedges hide the bike parking.

South of the otorhinolaryngology building. A dense patch of shrubs constitutes the left-out area between the building and the road.

The entrance to the rheumatology department. A flower bed with an arch-like form marks out the entrance. A sculpture of a deer in front of it. Footpaths have been made in the grass.

Plantings by facades of buildings were common. Here is a strip of shrubs outside the endocrine reception.

Entrance to the mammography reception. Low vegetation and a winding path create a soft entrance.

Figure 11. Photos from intuitive walk.

REFLECTION AFTER SITE VISIT

In summary, SUS Malmö seemed dull and gray. The outdoor space didn't seem to be a place to linger. Several factors probably affected my feelings towards the site. First of all, it was a rainy day in early April and most trees were not in bloom yet, which probably contributed to the gray impression. Secondly, several areas were closed down due to construction. It was impossible for me to walk freely around the site, I was often stopped on my excursion. My aim with the walk was to get to know the site and focus on the relationship between the built environment and the greens structures. It became strikingly clear that the green space was very limited which left me feeling sad. The larger green structures were some large trees in clusters, the avenue, and the western green strip. Apart from that, I could find small pots of flowers and planting beds along buildings and entrances, but this only felt like a sad attempt to implement something living in the paved and built environment. I was sad because I knew that this had been a site where a hospital park had been located but for some reason it had not been valued as important as the new hospital buildings were built. I wondered if I had seen any remnants from the park, perhaps the larger trees? What had been the driving forces to expand the hospital at the expense of the green structures? What are the implications of densification? And why isn't green space prioritised? The intuitive walk had raised several questions regarding the development of the site as well as ideas of further design improvements. In the upcoming chapter I further explore the implications of densification to get a better understanding of the driving forces behind the expansion of the hospital.

QUESTIONS TO TAKE WITH ME IN FURTHER RESEARCH

- What did the site look like historically?
- What have been the driving forces for the expansion?
- What are the implications of densification?
- Why hasn't green space been prioritized in the development?

DESIGN INSPIRATION

- Connect the green areas
- Create coherency through choice of material and vegetation
- Establish clear paths for pedestrians, and clarify areas for employees, visitors, and patients
- Establish a larger park in the area
- Establish connections to Pildammsparken

LITERATURE REVIEW

Nature/city relations

NATURE/CITY RELATIONS

To understand some of the driving forces behind the development of SUS Malmö densification as a design strategy is reviewed. This chapter touches upon the consequences of densification. Associations are drawn to nature/city relations and the dualistic view that permeates our idea of nature and people. Finally, ideas on socio-nature are presented as an alternative view of nature and the city, that perhaps can inspire new ways of addressing development issues.

DENSIFICATION

Densification has been a common strategy within urban planning and design since the middle of 1990s (Haupt et al. 2020). In the second half of the 1800s the concept of density was used for the first time in urban planning to acknowledge and tackle health issues that arose in densely built, industrialised, cities. At that time restrictions on density were recommended. Today densification is considered the best way to tackle climate change, fragmentation and loss of biodiversity. It is also argued to support innovation and productivity, public transport, and municipal service opportunities. What is not mentioned as frequently in planning documents are the negative effects that densification brings. Reports have shown that densification has a negative impact on well-being, water management, social issues, and biodiversity (Haupt et al. 2020). In research by Haupt et al. (2020) the motives of densification in Swedish comprehensive plans are compared with scientific research on the impact of densification. Their research shows that there are several arguments for densification mentioned in planning documents. The categories of motives found are divided into *Technical infrastructure, Resource efficiency, Service, Economics, Ecology, Urban environment, Transport, Social* and *Health*. The most used motives are related to transport and the second most used relates to Service. The least used arguments are within ecology, infrastructure, and health (Haupt et al. 2020). The study shows that the arguments used in comprehensive plans are dominantly positive compared to scientific studies that present a varied result. Haupt et al. (2020) comparison of motives between comprehensive plans and scientific reports clearly shows that some motives used in planning are not supported in scientific research. Empirical studies have for example shown that densification has a negative effect on physical and psychological health, safety, wellbeing, micro-climate, air quality, ecology, and biodiversity. Research does show that densification has a positive effect on transport and economics. Despite this research, Swedish comprehensive plans tend to express that densification has a positive impact on these categories (Haupt et al. 2020). In conclusion densification strategies in comprehensive plans are presented as positive for sustainable urban development even though these motives have no scientific support (Haupt et al. 2020).

SOCIO-NATURE

In the book *City of Flows: Modernity, Nature and the City* (2005) the author Maria Kaika opposes the nature/city dualism that has permeated our view of ourselves, society and nature. Historically nature has been viewed in two ways. Either as good or bad, as something that needs to be dominated or as something holy, wild or pristine. The same goes for the city. Ideas of the city as a sphere that brings out the worst side of humans or on the contrary as a reflection of the progression of civilization, a step forward in taming nature and human barbarism (Kaika 2005). Kaika (2005) argues for a new concept of nature and city that can't be divided as either good or bad. Cities are full of contradictions, and they are continuously in a process of production, they are hybrids. Erik Swyngedouw (1996) describes this dynamic process of cities as *socio-nature*. Cities are produced of various processes that are natural and human at the same time, there is no separation of society and nature (Swyngedouw 1996). Socio-nature is a socially produced ecosystem, a produced nature. The ongoing production of socio-nature generates new nature over space and time. Our environment therefore inherent social, physical, cultural, economic and political processes that can't be separated (Kaika 2005). The product is a hybrid of space, place and time which can be described as a historical-geographical process (Swyngedouw 1996). Various domains (narratives) together form a product, each domain is dependent on each other. Swyngedouw (1996) argues that when nature and society are seen as separate, humans will project the laws of society onto nature, which creates conflict between the two. Instead, nature and society is a whole, continuously in a process of production, it is a product that is never purely one or the other and cannot be organised as such. Kaika (2005) is further exploring the nature/city dualisms and its spatial implications. To create a healthy urban environment has been key in urban planning since it became a practice. The development of modern cities has been based on ideas of nature and city. It can for example be seen during the industrialisation where the densely built cities were accused of causing disease and social disorder. Planning of modern cities have since the 18th century counteracted various forms of nature. During the 18th and 19th century the goal was to sanities the city, in the 20th century the aim was to rationalise the city and later strive for a sustainable city where carbon dioxide has been the biggest threat. Kaika (2005) argues that environmental issues and climate change cannot be solved by "saving the environment", since the pristine natural environment suggested no longer exists. The ongoing processes of production of nature are slowly

creating a new “normal” in nature. Therefore there cannot be an unsustainable environment, there are only environments that are beneficial for some while negatively affecting others (Kaika 2005). Kaika summarises it like this “In sum, the environment of the city (both social and physical) is the result of a historical geographical process of the urbanization of nature. Excavating the flows that constitute the urban would produce a political-ecology of the urbanization of nature.” (Kaika 2005, p. 25). The landscapes we live in consist of multiple flows, all interrelated to each other.

DENSIFICATION THROUGH THE LENSE OF SOCIO-NATURE

Densification of cities has been a well-established and accepted design strategy within urban planning for about three decades. Haupt et al. (2020) criticise the arguments used for densification in Swedish planning documents. Haupt et al. (2020) touches upon something important in the article which is the various categories within urban cities that are affected by densification. As concluded in the article, densification has a positive effect on some instances while the effect is negative on others. The categories used for motivating densification are divided into *Technical infrastructure, Resource efficiency, Service, Economics, Ecology, Urban environment, Transport, Social* and *Health*. Reviewed through the theory of Kaika (2005) and Swungedouw (1996) these categories could be seen as flows that produce the city. Inseparable. One factor affects the other. The flows are various viewpoints, some more prioritised in urban planning than others. Since empirical studies have shown that densification has a negative effect on social and ecological factors, it can be concluded that these are in reality not prioritised in urban planning. At least if looking at the result of densification as a planning strategy. It raises the question: *How would cities develop if viewed through the lense of socio-nature?* Could a new concept of landscape, built up of various flows, contribute to other priorities in the planning practice?

FURTHER EXPLORATION

Since this project seeks to develop strategies to design resilient health promoting environments for patients, workers and visitors at SUS Malmö, it is necessary to study alternative approaches when cities expand. To get inspiration on alternative design strategies I visited the Danish hospital Bispebjerg. Bispebjerg has, like SUS Malmö, a 100-year-old history and has met similar challenges which have been solved differently from the hospital in Malmö. The next chapter exposes thoughts and inspiration from a site visit at Bispebjerg hospital.

REFERENCE LANDSCAPE

Bispebjerg hospital

THOUGHTS FROM THE SITE VISIT

2022.04.21

On my first visit to Bispebjerg Hospital area I was struck by the green environment and the calm atmosphere. I got the impression that the green environment had the same amount of space as the built environment. The size of the area did not differ considerably from Malmö hospital area but the scale of the buildings and the atmosphere was totally different. On my visit I came from the park Lersøparken, south of the hospital area. The entrance was calm and a bit deserted. Cars could not enter through the portal. The corners of the brick building had fenced in plantings with low trees, and flowering magnolia in each corner. When walking through the portal in the building I was met by the sight of stairs going up to the main building. I crossed the asphalt road with a row of newly planted trees and walked up on the walkway that was in a beige brick material that gave a warm impression. The straight broad path was surrounded by low brick buildings, each with a garden in front. Car lanes crossed the central pedestrian path but did not disturb the flow of pedestrians. There were no clear crossings, instead the ground material of the pedestrian paths continued while the asphalt road was disrupted. I noticed that there was no difference in levels between the car lane and the pedestrian lane, the transition was seamless and probably good for accessibility. The asphalt roads crossing the pedestrian paths were surrounded by cut grass lawns and trees framing the road.

The activity in the area was low. I reached a larger landing, a square, with a long flowerbed in the middle. Along the brick walls there were bushes, flowers and vines and niches with seating. An older man in a wheelchair and a hospital worker took a pause by the benches. I continued my way up the flight of stairs and made a detour to explore the gardens of the adjacent buildings. The gardens were similar with its formal design, cut grass. Pollarded willows in cubic forms were placed in rows and the hedges were cut in round shapes. In the western garden there was a pavilion and seating along the gravel road. A handful of spruces gave shade to the facade of the building. A strip of flowers and bushes ran along the wall. The eastern garden was similar, but instead of coniferous trees there was a birch and a flowering cherry tree, and instead of a pavilion there was a glasshouse.

I made my way up the last flight of stairs and was met by a small fountain and a flower bed. I crossed the car lane and glimpsed the main hospital building behind a little park with a small pond framed by bushes, trees, rocks and a sculpture. Benches were placed along the path, overlooking the park. In front of the adjacent buildings on either side of the small park a green area of pollarded willows and large flower beds were located.

I continued towards the main hospital where the activity was higher but still not stressful.

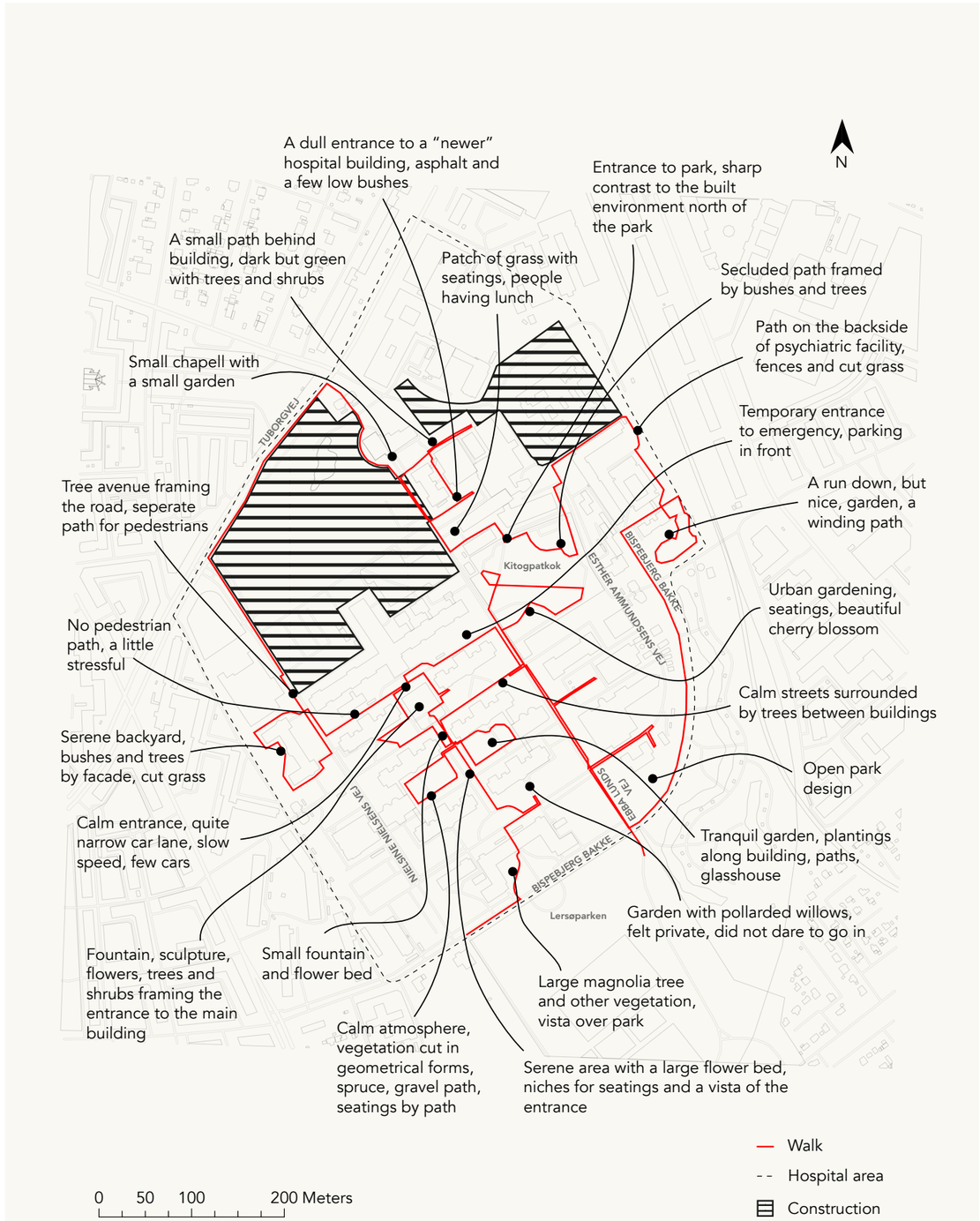


Figure 12. Map of Bispebjerg hospital with route and notes from the site visit.

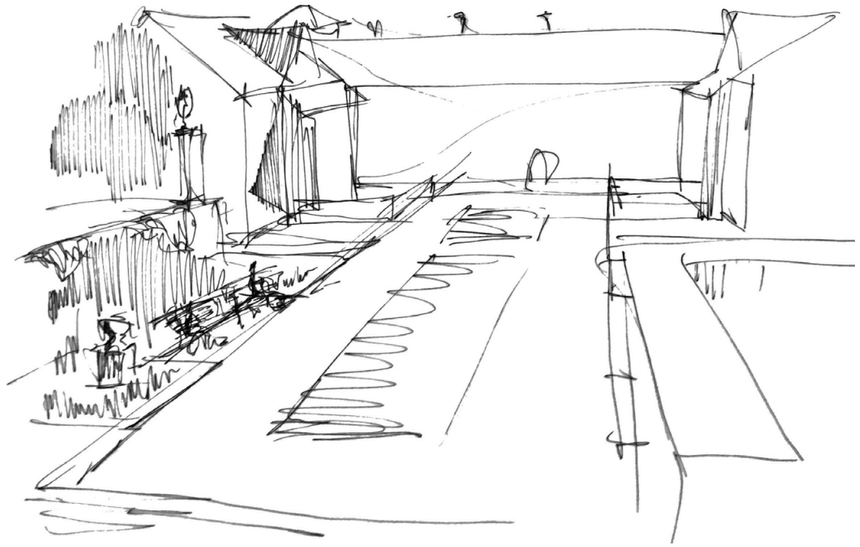


Figure 13. Sketch of the central avenue at Bispebjerg hospital.

Figure 14. Sketch of two lounge chairs under flowering cherry trees.

Cars could drive up to the entrance on a small ramp. I was struck by the human scale, the buildings were low and the car lanes were narrow. A small coffee cart stood outside the entrance. The flight of stairs leading to the entrance had parking for bikes on both sides. Grass lawns and trees ran along the buildings. I followed the street in a west direction. I was a bit surprised that there wasn't a pedestrian path, only an asphalt road. People and cars had to share the space. At first it felt stressful to not have a designated area for pedestrians, but it also indicated that the streets were foremost for humans. Cars had to adapt. There were some parking lots on the street, but cars had relatively little space.

I reached Nielsine Nielsens Vej, tree rows on either side of the road. A separate pedestrian path. I walked around the audiology clinic, a four-storey high brick building with a calm backyard with a variety of trees, coniferous and deciduous, some flowering. There was no path so I had to walk on the cut grass lawn. A small parking lot was located on the south side of the building, a man sat on a bench overlooking the parking lot. I came back to Nielsine Nielsens Vej and continued north. I passed the large construction site north of the main hospital building, a garage building to the left. The street was quite calm. Between the main hospital building and the construction site there was a small street with trees that screened off the view. I followed a larger street bordering the hospital area in the north, Tuborgvej. I reached the chapel in the northeastern part of the hospital. It was green and had a cozy garden. I saw the psychiatric emergency behind it, it looked fenced off for construction. Southeast of the chapel a newer hospital building was located. The entrance was quite dull, with only a small patch of cut grass and a couple of flowerpots. The small grass lawns were sparse with vegetation, some had hedges, some had seating where hospital workers had lunch in the sun. I tried to walk around the building, but the east part was closed off due to construction. The path along the building on the north side was quite dark, there was a strip of cut grass and bushes and trees on the other side. At least the vegetation was quite rich even though the amount of space was limited.

A big park, Kitogpatkot, stretched out south of the facility, the borders of the park consisted of trees, bushes and flowers. Framing the park from the built environment. Gravel and asphalt paths were located on the outskirts of the area and the middle consisted of a big grass lawn. The northeastern part of the park had a nice, secluded path surrounded by hedges and trees, on the other side of the hedge a small meadow with seating was found. A man sat there alone. I continued north on Esther Ammundsens Vej, a road that was lined with trees. The North part of the road was closed off due to construction. I made a turn to the

right and rounded a building. The east side was characterized by cut grass lawns, a deserted playground and a fenced outdoor area where some teenagers hung around. This area was quite deserted.

I reached a rundown garden with a winding path. In the middle of the path there was a small wooden portal with planter boxes on either side. The path then proceeded to a wooden deck of which I did not understand the function, but it was quite nice to walk on. I then followed the road Bispebjerg Bakke, a green road that led back to Lersøparken. I continued north again but on Ebba Lunds Vej. A larger parking lot on my left-hand side and a park on the right. The road was lined with trees. I made small detours between the buildings and found a small garden with seatings and a glasshouse. The geometrical forms recurring, a central path leading to the building, surrounded by plantings.

I came back to the park Kitogpatkot and found a cozy area of urban gardening. The area had a glasshouse and several benches and tables. There was a row of mature cherry trees. Their canopy created low rooms underneath (figure 14.). Two lounge chairs under the trees were occupied by a couple of friends. I made my way back to Malmö, happy with the pleasant site visit.

Figure 15. Experiences from the site visit at Bispebjerg hospital area. An investigation of greenery, density and the overall experience when walking through the area. The black line represents the stretch of the walk. The flow of the pen reflects the overall impression. A soft wave-like line represents tranquility while the hard pointy line and the amplitude of the wave correspond to experienced stress levels. The green color stands for green elements and the pink color for the built environment.

The centerline of the hospital area consists of a broad path with flower elements, seating, sculptures, water features and stairs. Areas of vegetation are well managed and clearly framed in geometrical shapes.

Area between pavilions. The asphalt street is surrounded by grass and trees. The pedestrian path in a beige brick material continues across the car lane which indicates a crossing. There is no clear pedestrian path by the car lane which indicates a living street.

Straight lines and well managed vegetation characterises the design of the gardens. A pergola in the midst of a garden.

Pruned shrubs, flower beds by the wall of the building and a patio with the possibility to sit in the shadows from the coniferous trees.

Niches for seating along the path, creepers on the facade and flower beds situated in front of seating. Trees and hedges pruned in geometrical shapes.

Northern part of Lersøparken. Seating in different directions are placed by the gravel path. To the right an area with planting boxes and seating. The dense vegetation around the park creates a wall from the streets.

The entrance to the main building. There is no clear crossing, pedestrians and cars need to share the space. A narrow ramp to the entrance makes it possible for cars and disabled people to reach the entrance.

The backside of the mammography reception. A dark narrow path with a cut grass lawn and lighting by the facade and a dense strip of trees and shrubs on the left side of the path. The windows face a green wall.

Figure 16. Photos from the site visit at Bispebjerg hospital.

Figure 17. Collage of Bispebjerg hospital in the past (left side) and today (right side). Collage: Bispebjerg Hospital

REFLECTION AFTER SITE VISIT

Bispebjerg had a completely different atmosphere than SUS Malmö. To enter the area was to enter a tranquil neighborhood. It was calm with barely any traffic. I felt a sense of relief. The day was so sunny and warm, summer was on its way. The distance between buildings was spacious and each building had its own garden. I believe that the close proximity between buildings and green space can have a positive effect on usage. How easy it must be for employees and patients to just go out the backdoor and find themselves in a garden! The gardens looked so tidy, I could see that they were well managed. But during my visit I didn't see people use the gardens that were adjacent to the buildings. Perhaps because of the time I was there, morning. The people that I saw in the hospital area were mainly in the areas that were more "public". People lingered on benches on the main avenue that led to the main hospital building. The avenue was wide, and the landings had plantings, sculptures and seating. The large park in the east, Kitogpatkot, was also well used. It had become lunchtime and hospital workers poured out from the buildings to the park with their lunch-boxes. My overall impression was that this area was used to a larger degree than SUS Malmö. It was so peaceful and beautiful to walk through the hospital area, no disturbances, mainly peaceful gardens and lots of space. I wonder how this area had been developed in such a different way from SUS Malmö. I know that the hospital in Malmö once was surrounded by a park much like Bispebjerg. But instead of expanding inwards and outwards like Malmö, Bispebjerg seemed to only expand outwards, which hasn't affected the green space between the hospital buildings as much, I assume. In Malmö, the hospital has had a lot of pressure to afford various medical specialties. The old facilities have not been compatible with the aims of the hospital development. In Bispebjerg it seems like the activities have been adjusting to the prerequisites of existing facilities instead of the other way around. My impression is that history, the buildings, the park, and the users have been prioritized in a larger sense in Bispebjerg than in Malmö.

What characterizes a health promoting environment? Is it as important with green hospital parks as modern hospital facilities? What are the motives to develop and preserve green space in hospitals? In the next chapter these questions are further explored through literature on evidence-based design. The literature is reviewed to provide knowledge on health promoting environments and their characteristics. The next chapter will also provide historical knowledge on restorative environments and how patients have been viewed.

QUESTIONS TO TAKE WITH ME IN FURTHER RESEARCH

- How has history and green space been prioritized in this project?
- What characterise a health promoting environment?
- What are the motives for green hospital environments?
- How have hospital parks looked historically, can we learn from them?

DESIGN INSPIRATION

- Proximity to green space - each building should have easy access to restorative green space
- Prioritize pedestrians through seamless pedestrian paths
- Importance of maintenance - thoughtful, and well cared for, outdoor environments is fundamental for an attractive park

LITERATURE REVIEW

Supportive environments, history and principles

SUPPORTIVE ENVIRONMENTS, HISTORY AND PRINCIPLES

In this chapter the eight perceived sensory dimensions are presented to provide knowledge and tools for designing restorative environments based on evidence. To put the method into context a historical review of hospital design and healing practices are examined. This will provide knowledge of processes that have shaped our hospital environments historically and up till this day. This chapter is divided into two parts. First a historical review of hospital design and medical care, which is then followed by a part on the eight perceived sensory dimensions.

THE HISTORY OF HOSPITAL ENVIRONMENTS AND MEDICAL CARE

Healing outdoor environments are not a new phenomenon but can be traced back to ancient Greece (Marcus & Sachs 2014). The first healing facility known is the Sanctuary of Asclepius at Epidaurus which was built 400 years BC and was dedicated to the medicinal god Asclepius (Sanctuary of Asclepius at Epidaurus, Greece | World Heritage Journeys of Europe n.d.). The site included different sorts of facilities such as library, sport facilities, theatre and temples to support visitors in their journey of recovery. The practices taking place at the sanctuary were influential in ancient Europe and today it is considered the birthplace of European medicine.

During the Middle Ages healing sites were strongly influenced by Christianity (Marcus & Sachs 2014). Monastic hospices and infirmaries were established to provide care for the less fortunate in society. Gardens grew to be an integral part of the Monastic hospices during the twelfth century and it was believed that a view over greenery would help the healing process (ibid). The first written design suggestions of hospital gardens are from the eighteenth century, written by horticultural theorist Christian Cay Lorenz. The German theorist expressed that hospital rooms should be in direct connection to a garden since the view would revitalise the patient and encourage them to go out.

In the seventeenth century hygiene and ventilation became important in the architecture of hospitals. This led to the development of so-called pavilion hospitals that were characterised by separation of wards and buildings to improve ventilation (Cook 2002). Between the buildings courtyards and gardens were implemented and considered important for recovery (Marcus & Sachs 2014). The British nurse Florence Nightingale was an influential promoter of the pavilion plan. Her experience of treating patients in tents and temporal buildings during the Crimean War showed that mortality could be counteracted through hygiene, good ventilation, and care (ibid). Nightingale argued that sunlight, a colourful view from a window and fresh air would affect the mind on a positive note which in turn would help the healing process of the body. The connection between the mind and body and the power of nature were dominant philosophies of that time (Marcus & Sachs 2014). The pavilion type became the ideal shape and spread over Europe and North America (Mens 2018). The pavilion design was considered very flexible since the hospital could start out with a few buildings and easily expand with new ones if needed. What was positive with the design was also its weakness, the more pavilions that were added the larger the distance between them which decreased efficiency (Mens 2018).

The design of hospitals progressed when sepsis and bacteria was discovered in the 1860s. It was understood that a physical separation of buildings was not necessary anymore since bacteria could be kept away through antiseptics and good hygiene (Marcus & Sachs 2014). The hospitals became more efficient and functional, instead of having several buildings it was common with one larger building. Illness was treated with medicine and the connection between mind and body had become less dominant. The mind was studied in psychology while the body was studied in anatomy and medicine. The outdoor environment did not matter as much, gardens gave way to parking lots, but some greenery could still be found by the main entrance. The scientific progress within medicine had a huge impact on the healing practice, but also on the view of patients (Wagenaar & Mens 2018). Hospitals were called healing machines due to the rationality of the medicinal practice. The buildings were seen as technical machines that the doctors, the “machine technicians”, ran. In this era the patients were treated more like objects that the medical professionals needed to fix. It was believed that the mind and body were separated, which meant that the body was only affected by physical laws (Wagenaar & Mens 2018).

In the first half of the 20th century, it was understood that people’s mental state was connected to their physical environment and social factors. In the 1950s and 1960s the modern architecture was criticised for being cold and stressful. The large-scale hospitals were too intimidating and authoritarian. Instead, a more human-scale and domestic architecture was promoted (Mens 2018). This criticism led to a different view on hospital design and a more patient oriented and friendlier architecture was encouraged (Wagenaar & Mens 2018).

Focus was on exercise and diet methods to improve health instead of curing illness when it occurred, illness could be prevented beforehand (Marcus & Sachs 2014). Nature and natural elements in health facilities were during this time valued as important for the healing process. This led to the development of several theories on the impact of physical environments on health and wellbeing (Marcus & Sachs 2014). Roger Ulrich's work is perhaps the most influential of this period of time. His research has proved that patients that have gone through surgery were more likely to recover faster if they had a view of a natural setting from their hospital room instead of a brick wall (Ulrich 1984). This scientific research led to the recognition of green hospital environment in the medical sphere. Several guidelines on how to design restorative environments have come about in the last decades (Marcus & Sachs 2014).

THE EIGHT PERCEIVED SENSORY DIMENSIONS

In the article Perceived sensory dimensions: An evidence-based approach to greenspace aesthetics Jonathan Stoltz and Patrik Grahn (2021) summarise studies of health promoting qualities in urban green space carried out between 1984 to 2018. Their research departures from the challenges of the ongoing densification in cities where large green areas have been replaced by roads and buildings. Stoltz and Grahn (2021) argue that this development needs to be challenged through evidence-based arguments on the importance of green outdoor environments. Stoltz and Grahn (2021) aim to provide tools for landscape architects and planners that are based on evidence instead of artistic preferences. They claim that such designs will afford more sustainable solutions. Evidence that has been collected over a period of approximately 40 years have been summarised in eight perceived qualities that are general (Stoltz & Grahn 2021). This means that these qualities are generally agreed to be important amongst people, regardless of age, cultural background, education etc. The eight qualities discerned as important for people are called the eight perceived sensory dimensions, the PSDs, which are further interpreted in terms of qualities that can be used as design principles within design and planning of green space. The PSDs are as following:

1. Natural quality - This quality is characterised by a sense of wilderness, an environment that is perceived as untouched and natural instead of cultivated. Animals and plants that are related to wildlife can strengthen the natural feeling. Research has shown that a natural quality can give a sense of freedom and relief from societal demands and everyday life (Stoltz & Grahn 2021). This type of environment is

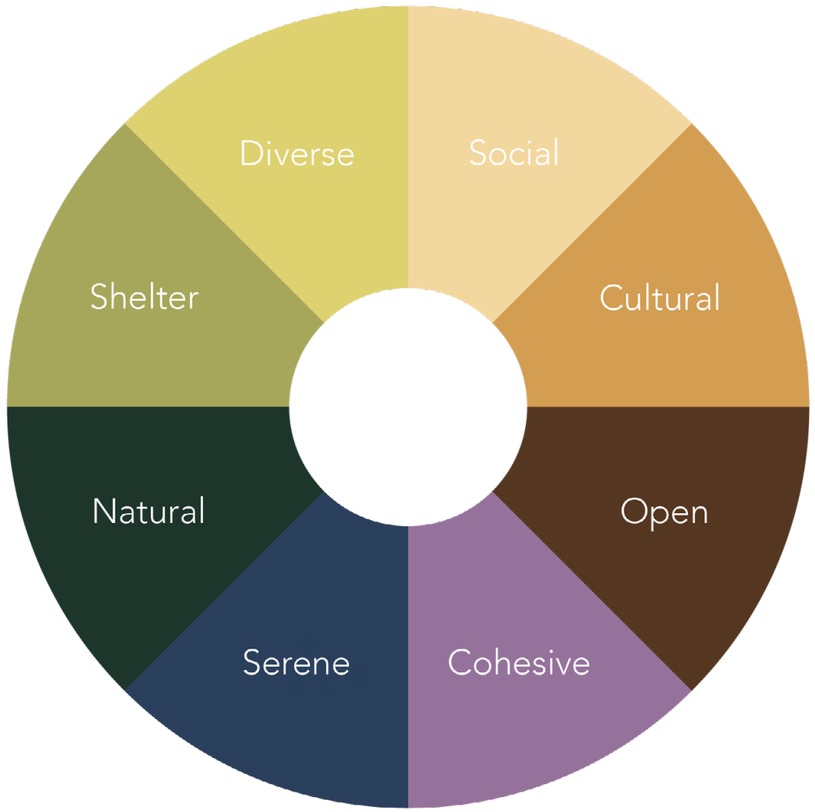
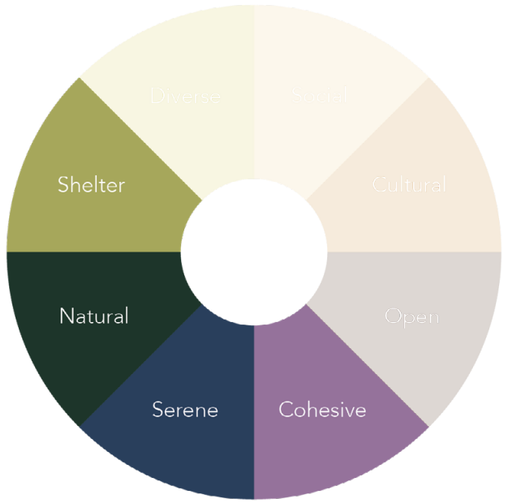


Figure 18. Illustration of the PSDs, based on illustration by Stoltz and Grahn (2021).



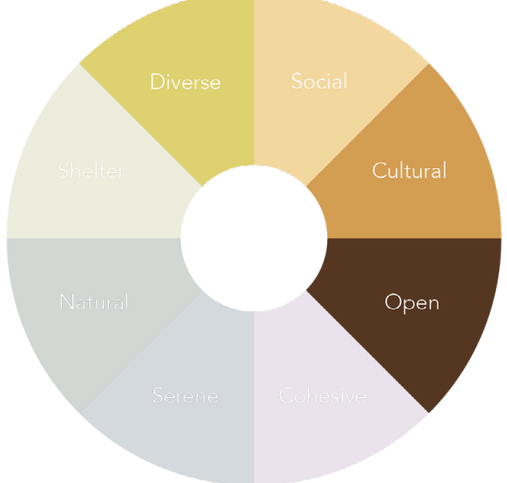
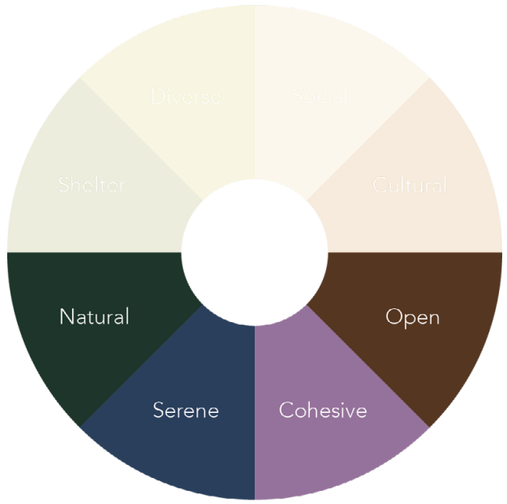


Figure 19. Above the PSDs that afford restoration for people who suffer from fatigue are highlighted. Below the opposite PSDs are highlighted.



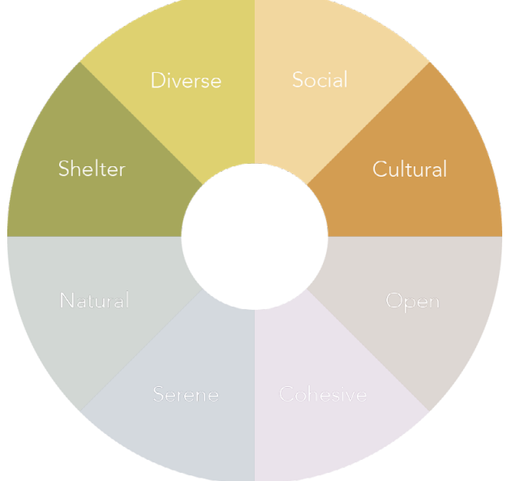


Figure 20. Above the PSDs that are better perceived in larger areas are highligted. Below qualities that can be achieved in smaller areas are highlighted.

easiest achieved in a larger area.

2. Cultural quality - The cultural quality refers to an environment that has traces of human activity. In this interpretation culture and cultivated are terms that refer to cultivated land, social patterns, religious or artistic endeavours and artefacts. In summary, it is the opposite of the natural quality (Stoltz & Grahn 2021). This quality is associated with small areas.
3. Cohesive quality - This quality describes an environment that is spatially coherent and experienced as a unified whole. This can be achieved through a coherent structure without disturbing elements that cut off the area. Such an area should make the visitor feel like it is within another world. This type of environment requires a large area to be perceived strongly.
4. Diverse quality - In contrast to the cohesive quality, diverse refers to a sense of variation and complexity. It is characterised by a rich and living environment full of various colours, textures and shapes. Elements that support this quality are edibles, combinations of stones, water and vegetation, multi-layered vegetation or undulations. Studies show that this quality is important in schools, preschools and elderly homes (Stoltz & Grahn 2021).
5. Sheltered quality - Is, as implied by the name, an environment that affords shelter and protection. The quality is characterised by enclosed spaces where visitors can find solitude or spend time in smaller social gatherings. This quality is argued to be highly important for restoration (Stoltz & Grahn 2021).
6. Open quality - The open quality is found opposite to the sheltered quality. The open quality refers to an open space where various activities can take place. Such an environment is characterised by vistas and prospects where the visitor has an overview of the area. This type of environment requires larger areas with few obstacles (Stoltz & Grahn 2021).
7. Serene quality - This quality refers to a need for peaceful surroundings that are not affected by disturbances from, for example, traffic noise. Sounds from nature are on the other hand welcome. The site should be clean, well managed and preferably without disturbing human activity. A serene environment should support reflection and thoughts to wander freely. This quality is highly important for restoration and stress relief (Stoltz & Grahn 2021).
8. Social quality - The final quality, social, is characterised by the presence of other people. A social space where there is opportunity for interaction, either immediate or remote interaction. This type of environment can include areas to eat, drink, shop, play and socialise, an urban quality if you will. The social quality is the least restorative of the eight

perceived sensory dimensions (Stoltz & Grahn 2021).

These eight qualities are related to each other and fulfil various needs. Stoltz and Granh (2021) illustrates the eight qualities along four axises: Natural-Cultural, Cohesive-Diverse, Sheltered-Open, Serene-Social. In the presented illustration adjacent qualities are closely related while opposite qualities are each other's antipodes (figure 18.). They argue that a design should be built on adjacent dimensions since they will support each other and add value to a site. Studies have shown that some PSDs are more restorative than others within rehabilitation. The dimensions Sheltered, Natural, Serene, and Cohesive are considered to minimise stress levels among people who suffer from fatigue, while the dimensions Open, Cultural, Social and Diverse tend to have the opposite effect. The restorative PSDs are also concluded to be less dominant than the other dimensions. If a restorative environment is to be successful, the perception of other qualities need to be minimised (Stoltz & Grahn 2021).

Stoltz and Grahn (2021) bring up the importance of scale for the various qualities to be perceived strongly. In their study it has been shown that the qualities Sheltered, Diverse, Social, and Cultural can be designed for in smaller areas. The qualities Natural, Cohesive, Serene, and Open are on the other hand in need of a larger space to be perceived strongly.

The perceived sensory dimensions will be used as guidelines in the development of the design in SUS Malmö. The aim is to mainly create green areas that are resilient and that are perceived as restorative for patients, employees and visitors. Stoltz and Grahn (2021) bring up the importance of green areas in urban green space. Through this evidence-based principle, development and protection of urban green space will hopefully be better prioritised in urban planning practice.

The study of the history of supportive environments and the principles of the eight perceived sensory dimensions motivates me to further study the history of SUS Malmö. What driving forces have shaped the site? What narratives are hidden in the landscape? What are the conditions for creating health promoting green space in the area? In the next chapter examination of maps, from the end of 19th century up to this day, has been used as a tool to understand the physical expansion of the hospital. The study of maps is then complemented with the study of the history of the site through narratives. By examining narratives, former use of the area are brought forward as well as voices from people and activities layered in the landscape. How the landscape has been shaped, the driving forces behind the expansion and personal stories provide information on contestations in the landscape.

SITE ANALYSIS

History, maps and narratives

CARTOGRAPHY

1896

The main hospital in Malmö was historically situated at Slottsgatan across the royal park in central Malmö (Ersgård et al. 1996). In 1896 the hospital was moved to its current location between Pildammsparken and Södervärn. The relocation was initiated since the first hospital was heavily burdened with many patients. The new site was located strategically in the outskirts of the city to afford further expansion if needed. The hospital was "general" which meant that all people, despite class belonging, were welcome (Ersgård et al. 1996). The doctor, Anders Bergstrand, was employed in 1879 and he saw the need for a new hospital at an early stage. When discussions of the new hospital started Bergstrand proposed that it should be built in a pavilion style (Ersgård et al. 1996). He argued that a pavilion system would have the possibility to expand as the city grows. After many discussions and proposals on the table a castle-like hospital was built and ready for use in 1896. The main building had a pointy tower, and the entrance façade overlooked the doctors residence (Ersgård et al. 1996). In total the hospital had seven buildings.

The map shows how the hospital is surrounded by a park with both winding paths and some in more geometrical shapes. An avenue connects Södra Förstadsgatanan to the hospital.

Figure 21. The hospital area in 1896.

1915

Despite Anders Bergstrand's long fight for the new hospital his relationship to the hospital board was too infected and a new head doctor, Fritz Bauer, was employed at the new hospital. He considered that the hospital was too small and poorly planned. He proposed a new building, the administration building, that was established in 1907 with the façade towards Södra förstadsgatan. The new building included several departments, administration, housing for the head doctor of the maternity house, outpatient department and a council chamber. More departments were established in the first half of the 20th century (Ersgård et al. 1996). Among them a surgical department, a psychological ward, a tuberculosis ward, an evacuation pavilion among others. The new departments that were built in the beginning of the century were not enough and Bauer applied for further development.

In 1914 another surgical building was built together with a bathhouse and an orthopedic department. The hospital area grew in a western direction towards Pildammsparken. Malmö hospital had developed from a small hospital to a modern hospital with various special care-facilities (Ersgård et al. 1996).

The park has grown to the south and west. The feeling of "a house in a park" is still prominent. The paths are winding, and the green areas are dominant.

Figure 22. The hospital area in 1915.

1940

Already in 1914 there were discussions of further expansion to the west, and beyond Pildammsvägens former stretch (Ersgård et al. 1996). At the time the hospital area was described as a tranquil and beautiful place. In 1933 a new outpatient department was built right by pildammsvägen. The location was proposed by the head doctor of that time, Otto Löfberg, with the argument that the new department should be located close to the surgical department and the x-ray ward (Ersgård et al. 1996). The women's clinic was opened in 1924 and included a maternity house (Ersgård et al. 1996). Today the women's clinic has moved into a building by Pildammsparken, and the former building has been torn down. Since Malmö kept growing the need for more hospital beds grew and at the end of the 1920s planning for further development began. In 1931 a new department for elderly care was built by Pildammsparken. The area was formerly a site of allotments and the new buildings met plenty of resistance from members of the association *Föreningen Pildams kolonier* whose allotments were threatened. Despite the large resistance, the elderly care-facilities were built. Several other buildings were built as well, among them an x-ray ward and a new medical department.

In this map a transformation in the green areas can be discerned. The tree row along Jan Waldenströms gata has been planted. Some parts of the park have a barocke style, implied by the straight rows of trees. The south area looks more naturalistic with its winding paths and random tree placements.

Figure 23. The hospital area in 1940.

1960

In 1946 a new lung clinic was built, and the preceding allotment gardens were replaced by a scenic landscape with grazing sheep (Ersgård et al. 1996). During the 1950s the hospital underwent several transformations. In 1948 the hospital became a university hospital and Jan Waldenström became the first professor. The hospital grew to be able to conduct medical research and education. The familiar hospital became less so as the scale changed. In the 1950s the staff that had formerly lived on site were not required to do so anymore. To meet the new challenges, plans for a block-like design of the hospital area was brought to the table. The plan met resistance and was not pursued, it was argued to threaten the pavilion style and the park that was so characteristic for the hospital (Ersgård et al. 1996). Even though the block-plan was not realised, several buildings were built. Most of the buildings had yellow brick facades, characteristic for the period. New laboratories, a new medical department, a building for microbiology and a chapel in the south were some of the new additions to the hospital.

From examining the map indications of densification is visible. Several buildings have been added between old ones. Large park areas are available in the south and in the northwestern corner. Even though some green areas have been claimed, almost all buildings are surrounded by green space.

Figure 24. The hospital area in 1960.

2022

In 1999 when Region Skåne was founded it was decided that all hospital activities should take place in the north part of the hospital area (Region Skåne/Regionfastigheter 2017). This has led to heavy flows in the northern part of the site. The hospital has changed gradually since it was built in 1896. The lack of a long-term plan has led to the fragmented character of the site. Few buildings, parks and avenues are left from the original site that was characterised by winding paths, art, and exotic trees (Region Skåne/Regionfastigheter 2017). Today the public spaces are small, the green areas are small and fragmented, and the cultural traces are barely visible. The historical design of “a hospital in a park”, its former pavilion character, is not discerned in the area today.

Today the hospital is undergoing construction. New care facilities, service facilities, a morgue house and a culvert is presented in the plan for 2023 which affects a third of the hospital area. Region Skåne/Regionfastigheter (2017) describes that the area today is fragmented and that the new general plan for the outdoor environment aims to be coherent and with a strong identity. The goals for the hospital environments are good flows, recreation, and an attractive working environment. Region skåne/Regionfastigheter (2017) argues that green space and cultural characteristics should inspire the development.

Figure 25. The hospital area in 2022.

2050

In 2017 Region Skåne/Regionfastigheter presented a general plan for the hospital area in Malmö. The plan for 2050 focuses on the spatial qualities of the outdoor environment. Region Skåne/Regionfastigheter (2017) emphasise on the importance of integrating green space in the outdoor environment. The aim is to create a health promoting medical care in a sustainable urban environment. The structure of the site is planned as follows: Research and education takes place in the west, like in the current structure. The central parts of the area will have a focus on health care, new buildings and extensions will be added. Built environments with cultural historical values in the east will be kept and complemented. The environments by the old buildings should give the buildings context (Region Skåne/Regionfastigheter 2017). The vision for the facilities and activities at the site have four focus areas: activites, development, economy/industry, and urban environment. These are further specified in the general plan through the perspectives of the actors: patients, contributors, education, research, care and society. For patients it is stated that the hospital should afford coherent environments that are accessible, safe, medically safe, clear, support integrity, are welcoming and enjoyable (Region Skåne/Regionfastigheter 2017). This will ensure patient safety and shorter hospital stay. The contributors include the healthcare staff, students, and researchers who should have a good work environment, functional facilities and places for rest and meetings. Meeting places to support cooperation between various actors in the area will support education, research and care. For Society it is of importance to have a health care environment that is available, safe, and integrated to support a vibrant city (Region Skåne/Regionfastigheter 2017).

The 2050 plan recognises that the development of the hospital has over time lead to fragmentation of green space. One of their aims is to integrate green space in the outdoor environment which they plan on doing by establishing a park and green streets. Even though they acknowledge the importance of green space the plan shows new development plans in the area that will have an impact on existing green structures. The light grey areas are showing construction rights, not buildings (Region Skåne/Regionfastigheter 2017).

Figure 26. 2050 plan for the hospital.

NARRATIVES

In this subchapter a review of historical narratives within the landscape of SUS Malmö is presented. The narratives are mainly found in the book *Från lazarett till universitetssjukhus* by Ersgård et al. (1996), but also through examination of historical photos. I have selected stories that I have been intriguided by. Narratives that tells something about the former activities and use of land. Personal stories will be connected to geographical locations and give insight to former use of the area. Photos and narratives, provide knowledge on historical geographical processes that have shaped the landscape. This subchapter will shed light on the green structures that have survived the process of densification.

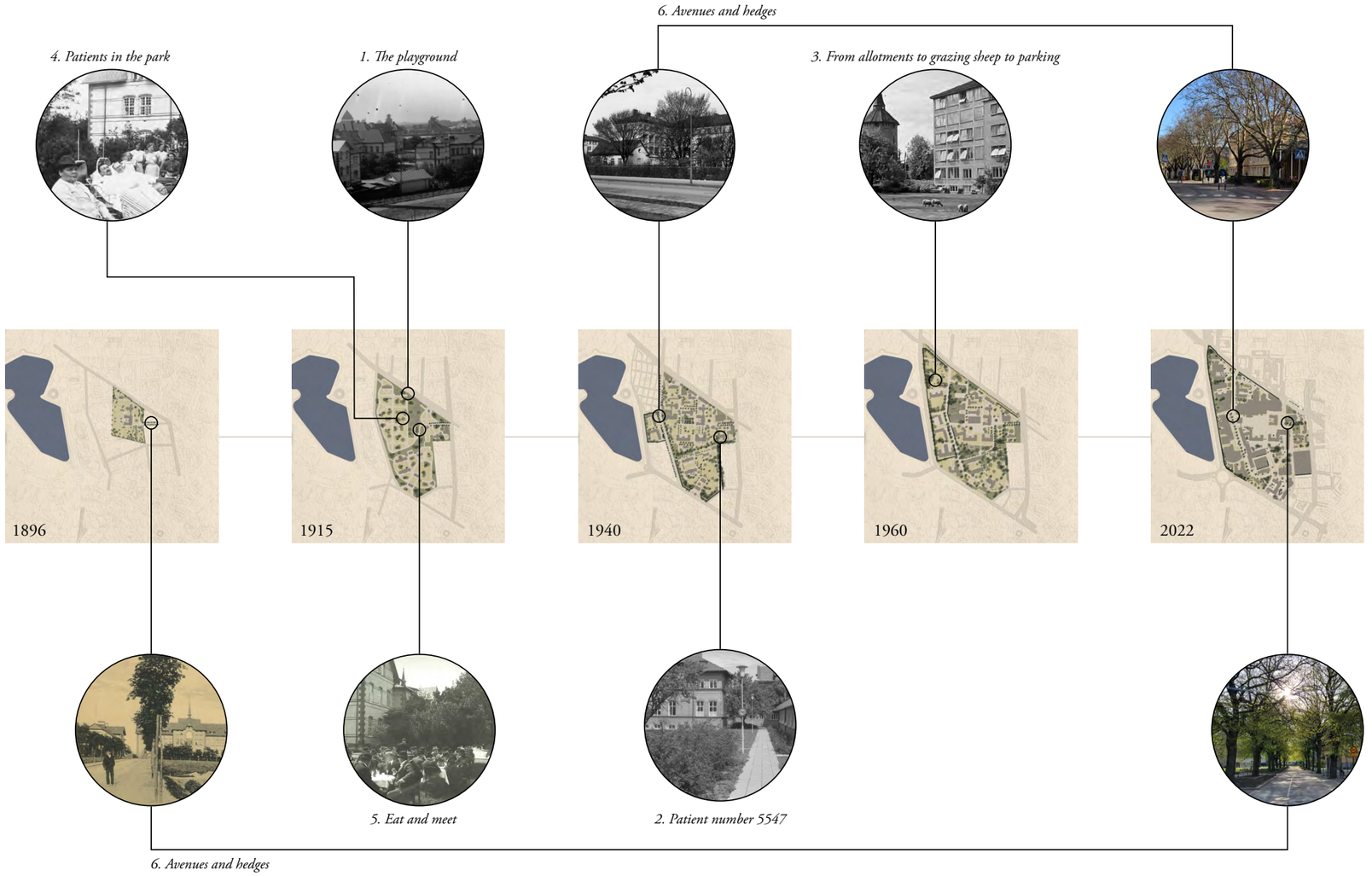


Figure 27. Illustration of narratives connected to historical geographical locations.

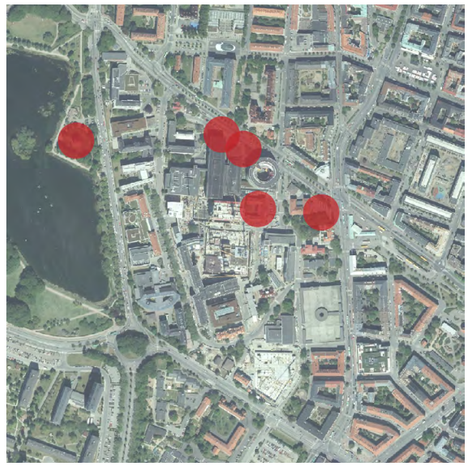


Figure 28. Orthophoto of SUS Malmö with locations of found narratives.

In 1910, Doctor Otto Löfberg and wife Beda Löfberg welcomed their first child, Ove Löfberg, to the world (Ersgård et al. 1996). He was born at ward 8A in the surgical building where the family also lived. Later on they would move into the doctor's villa next to the surgical clinic. Ove Löfberg grew up in the hospital and came to know much about the area. In an interview from *Från lazarett till universitetssjukhus* he looks back at his childhood with fondness (Ersgård et al. 1996). He describes how exciting it was to explore the hospital area since it withheld niches to play in. Ove Löfberg and his friends were especially fond of playing by the ice storage where the ground was covered in sawdust. During the winter ice blocks were brought from Pildammen to the ice storage. Ice was important for the hospital kitchen and for the various wards (Ersgård et al. 1996).

The hospital had its own local radio station where Ove and his family and other hospital staff were sometimes working as presenters. The antenna was installed in the chimney of the powerhouse, next to the ice storage. The chimney was the tallest one in Malmö at that time.

Ove was quite mischievous as a child. One night he and his friends tried to scare the janitor Nils Jönsson by sneaking up at him on his nightly rounds. Instead of being scared Jönsson became angry and chased the fleeing children. One kid tripped and was caught by Jönsson who gave him a slap. The Löfberg family were close to the staff and the patients in the hospital. Every Christmas the family walked through every ward to wish the patients a happy Christmas. In the corridor of the surgical building patients and staff would have a celebration with music and singing. Ove Löfberg describes how his father would invite former patients who lived in poor conditions to join the celebration and get some food (Ersgård et al. 1996).

Ove and his brothers would later follow their father's footsteps and become doctors at Malmö hospital.

Figure 29. Malmö hospital 1914. Chimney to the left, and what is assumed to be the ice storage in the lower middle. Photo: Berndt Johnsson / Malmö Museer

Figure 30. The doctors residence. Photo: Berndt Johnsson / Malmö Museer

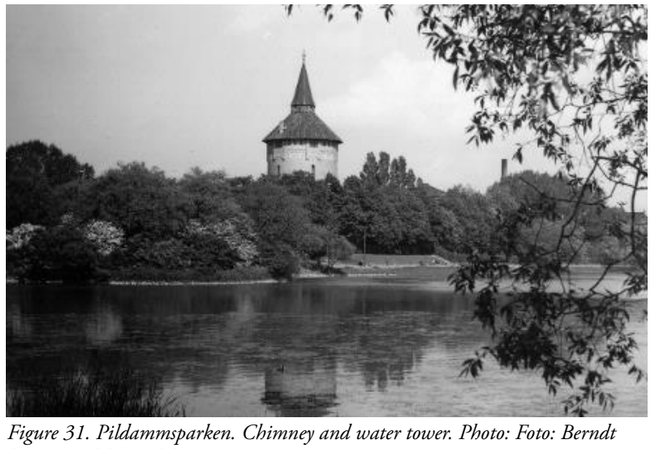


Figure 31. Pildammsparken. Chimney and water tower. Photo: Foto: Berndt Johnsson / Malmö Museer

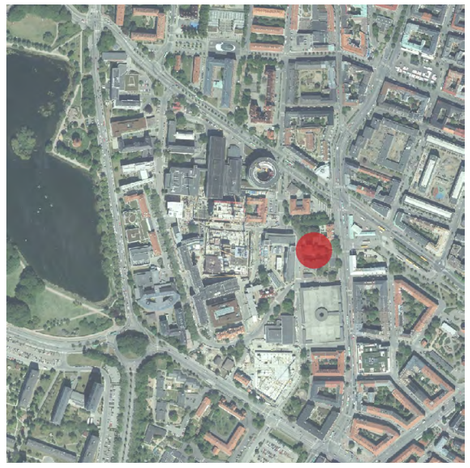


Figure 32. Orthophoto of SUS Malmö with location of found narrative.

In the poem *Till en näktergal i Malmö* (1942), in english *To a nightingale in Malmö*, the poet Hjalmar Gullberg writes about the nightingale in the hospital park, singing to patients in the night.

I sjukhusparken hänger månens lykta;
det glittrar genom rullgardinens dok.
Nu lyssnar alla sorgsna och betryckta
till höga visan ur naturens bok.
Den största sångaren på denna jorden
har kommit för att skingra våra kval.
Jag hör musik och letar efter orden.
Sjung näktergal, min hemstads näktergal!

Hjalmar Gullberg, 1942 (Ersgård 1996:182)

The poet had a close friendship with the doctor Sture Berggren who was working at the hospital between 1917-1950 (Ersgård et al. 1996). Berggren was an appreciated doctor and head of the ear outpatient clinic where Hjalmar Gullberg was often hospitalised. He became well known to the nurses at the ear clinic and he was said to cherish the staff. The nurse Dora Nilsson describes in an interview that she once found Gullberg in a colleague's room, reciting poems to a group of nurses (Ersgård et al. 1996, p.181). *The poem To a nightingale* in Malmö was written when Hjalmar Gullberg was hospitalised as patient number 5547 at the ear outpatient clinic, May 26-28 1942. The nurse Dora Nilsson describes how the park outside the clinic was full of nightingales that sang so intensely that it was hard to sleep. The poem describes how the song of the nightingale gives comfort to the patients in the ward.

Figure 33. Front of ear clinic 1974. Photo: Ninny Nilsson / Malmö Museer

Figure 34. Ear clinic, backyard 1974. Photo: Ninny Nilsson / Malmö Museer

Figure 35. Former ear clinic in the foreground.

3. FROM ALLOTMENTS TO GRAZING SHEEP TO PARKING

Figure 36. Orthophoto of SUS Malmö with locations of found narratives.

In 1895 allotment gardens were founded in the area east of the park Pildammsparken. The area, named Pildammskolonin, was one of the first allotment areas in Sweden (Drost et al. 1997). The allotments were in close proximity to the city so that owners could easily walk there after work. The aim with the allotment gardens was to provide rest and tranquility in a beautiful garden environment and to provide food for the poorer families. The concept was popular, and the area grew, eventually owners started to build small cottages and the city of Malmö provided the area with paths, lawns and playgrounds (Drost et al. 1997).

In 1927 Pildammskolonin was threatened by the ever-expanding Malmö hospital. The plans for new care facilities in the north part of the allotment area resulted in great resistance from the allotment owners, especially from the members of the association *Föreningen Pildams kolonier* (Ersgård et al. 1996). The main arguments against the new buildings were the important experience of nature in close proximity to the city center and the benefits of being able to escape the city's polluted air. Not only the allotment association protested, newspapers were allso active in the matter. Despite the attention the new hospital buildings were built on the allotment area and in 1945 all traces of Pildammskolonin were erased (Hansson & Hansson 1997). A memorial monument by artist Edward Trulsson was raised the same year with the inscription Minne av Pildammskolonien 1895-1945 (In memory of Pildammskolonien 1895-1945) (Ersgård et al. 1996). Today the monument is located south of the heart clinic, in the former allotment area.

When the lung clinic was built a park was established around it. The area was scenic with its great lawn and trees. The site was used by patients and their visitors as well as sheep that grazed the area. When the hand surgery was built the nature like park was exchanged for a small strip of green around the building and a parking lot.

Figure 37. Allotments, water tower, and the baltic exhibition 1913. Photo: Albert Wilhelm Rahmn / Malmö Museer

Figure 38. Water tower, lung clinic and grazing sheep. Photo: T. Landberg / Sydsvenska medicinhistoriska sällskapet

Figure 39. Parking by the hand surgery to the left, memorial monument by the former lung clinic to the right.

4. PATIENTS IN THE PARK

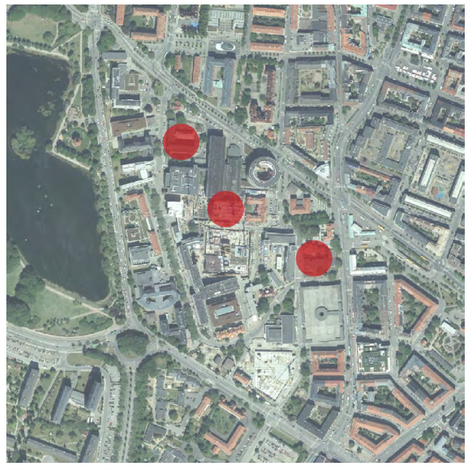


Figure 40. Orthophoto of SUS Malmö with locations of found narratives.

The parks and gardens of the hospital area have been used by both patients, staff and visitors. The lush green outdoor environment was considered important for the wellbeing of the patients (Ersgård et al. 1996). The first photo (figure 41.) is assumed to be on the backside of the ear clinic, the children have bandages over their heads and the nurse Inga Ehn who worked at that department is in the background. The second photo (figure 42.) displays a gathering of patients lying in bed and staff in a garden. The photo is assumed to be taken somewhere around 1910. The last photo (figure 43.) is of a patient sitting on a bench in the hospital park. The building could be the tuberculosis ward.

Figure 41. Nurses and children in the park outside the ear clinic, 1925. Photo: Unknown / Från Lazarett till universitetssjukhus

Figure 42. Patients and nurses enjoying fresh air in the hospital park. Photo: Sydsvenska medicinhistoriska sällskapet

Figure 43. Patient sitting on a bench in the hospital park. Photo: Berndt Johnsson / Malmö Museer

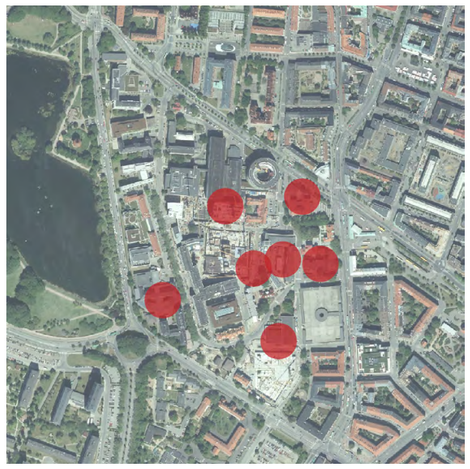


Figure 44. Orthophoto of SUS Malmö with locations of found narratives.

The hospital park has been used as a meeting spot for celebrations and coffee breaks. The photos from different time periods give an idea of the surroundings and how they have been used throughout time. In figure 45. the hospital park is used for a dinner party. The photo is from the 1920's when a Finnish professor visited the hospital. It was common that the park was used for representations of similar sorts (Ersgård et al. 1996). Figure 46. shows a midsummer celebration in the beginning of the 1980's. This is supposedly in a pear garden of which the location is not certain. The building in the background suggests that it is located by the old women's clinic or by the old ear clinic.

Fruit gardens and cultivation land was an important feature in the hospital area in the first half of the 20th century. The gardens and cultivation plots were both for private use and to provide the hospital kitchen with fruit, vegetables, and potatoes (Hedar 2016). Figure 47. is of the fruit garden by the administration building and the doctor's residence. A fruit garden was also established by the former ear clinic and administration building. In a map from 1910 a cultivation plot can be seen north of the linden-tree avenue by Södervärn (Hedar 2016). Cultivation land was also located in the epidemic hospital park and southeast of Pildammen.

Figure 45. Dinner party in the hospital park, ca 1920. Photo: Unknown / Från Lazarett till universitetssjukhus

Figure 46. Midsummer celebration in the pear garden. Photo: Unknown / Sydsvenska medicinhistoriska sällskapet

Figure 47. Fruit garden by the administration building, 1903. Photo: Gunnar Dahlgren / Malmö Museer

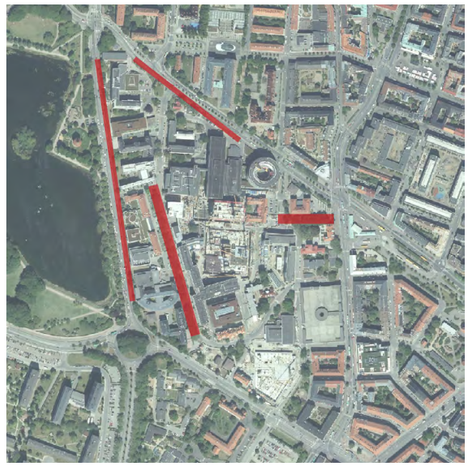


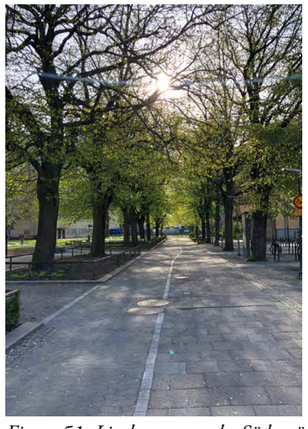
Figure 48. Orthophoto of SUS Malmö with locations of found narratives.

the hedgerow dividing the hospital area from Pildammsvägen. There are several hedges left in the area, which are of cultural historical value (Hedar 2016).

The linden avenue that goes from Södervärn to the first hospital building was established when the hospital was constructed in the end of the 19th century (Hedar 2016). When comparing the early photos it becomes clear that time has been key to give the avenue its current character. In figure 49. the area looks quite sparse in terms of vegetation compared to the photo taken in May 2022 (figure 51.) where the thick canopy creates a tunnel towards the current administration building. The avenue has been kept intact since it was established. The same goes for the tree row along Jan Waldenströms gata (formerly Pildammsvägen). Figure 50. shows

Figure 49. The linden tree avenue and the main hospital building in the background. Photo: Unknown / Malmö Museer

Figure 50. Pildammsvägen and hospital, divided by hedgerow. Photo: Berndt Johnsson / Malmö Museer



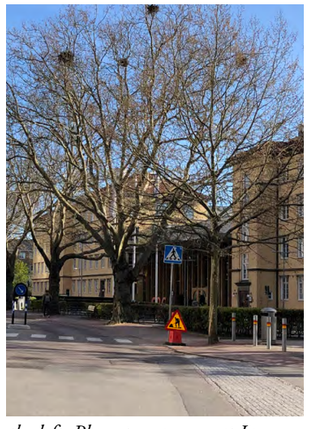


Figure 51. Linden avenue by Södervärn to the left. Plane tree avenue at Jan Waldenströms gata to the right.

THE LAYERED LANDSCAPE

The hospital in Malmö has undergone several changes since 1896 when the first building came about. New facilities have been added, poems have been written, places that were once important for people have been torn down. Left are memorials, a few buildings and a handful of strong green structures. The development of the site has to a degree been necessary to provide good healthcare and to meet the needs of the growing population of Malmö. But when visiting the area, it is hard to imagine what it once looked like, the former structure is almost completely gone. It is only in the east, by the entrance of Södervärn, where history is visually present. The review of maps and narratives have given insights on the processes that have shaped the site, and still do. The landscape is in a continous process of change, which is natural. But SUS Malmö has undergone change in a particular fast pace. As mentioned in the general plan, the fast pace and the lack of a long-term plan has led to fragmentation and much of the historical structure fading away. When investigating the maps, I found a clear shift after 1960. Expansion had been going on for a while then, and some parts of the hospital became densely built. Even though the hospital grew it seems like the green space was still important, large parks and gardens surrounded the buildings. From examining narratives of the site, it becomes clear that the outdoor environment has been well used by both staff and patients. Historically it seems to have been a familiar environment. Pictures of patients and staff in the garden, celebrations of holidays and narratives from the hospital is proof of that. But how is the site used today? My earlier visit had not given so much insight to that, a revisit was necessary.

Figure 51. Illustration of the narratives layered on map of the hospital area.

SITE ANALYSIS

Revisit SUS Malmö

FOCUS AREA

After the research on the history of SUS Malmö through study of maps and narratives I became increasingly interested in the landscape in the northwest part of the site. A site that carries several layers of history. By the time the hospital was built the area had been a site for allotments, an appreciated area that despite fierce resistance had to make way for new hospital facilities. At first the area was green with grazing sheep, but as the hospital grew more and more green space turned into gray space. I had to narrow down my project, I had to decide for an area to further work with in the design process. And this area seemed like a good place to start.

In this section the layered landscape in the northwest part of the hospital will be analysed according to the eight perceived sensory dimensions, observations of usage and traces of history. The aim is to give an idea of values and characteristics of today in relation to former values. The analysis will give an idea of whether the site, that withhold historical narratives, are restorative today, and where there is room for improvement. The analysis is divided into four sections, east, west, north and south of the hand surgery.

Figure 52. Location of focus area.

Figure 53. Sections of focus area where observations took place.

1. EAST - THE ENTRANCE

Percieved sensory dimensions

I analysed the site through the eight perceived sensory dimensions. The main qualities found on site were the cultural and open quality. Both qualities are regarded as non-restorative among people who suffer from stress.

Cultural qualities were discerned in the hedgerow, the copper beech, and the brick chapel. Cut hedges have been a common feature in the hospital area historically. The geometrical form gives associations to barock gardens and a tradition of shaping and managing nature. The copper beech adds a time layer to the site, it is old, one can imagine it standing there throughout the various states of development. The brick chapel connects to religious beliefes and ceremonial practices. People have been born in this hospital. People have died in this hospital. People have mourned in the chapel.

The open quality is not completely clear. There are some spots where you have an overview of the site. The bench by the entrance has a vista over the grass lawn with gingko trees, the parking lot, and the entrance to the hand surgery. It is not a very sheltered area, you are quite exposed to people passing by.

Traces of history

The large red copper beech was majestic and as tall as the surgical building south of the hand surgery. It must have stood there for quite some time. A tree inventory shows that it is from 1890-1910 (Hedar 2016). The beginning of the avenue on Jan Waldentröms gata could be discerned further south. The oldest trees in the tree row of plane trees were planted in 1930. Hedges have framed the hospital area since it was built and there are still hedgerows around parts of the hospital (Hedar 2016). A hedgerow is located by the entrance in the north, a clear separation between Carl Gustafs väg and the hospital. No traces of the allotment area or the scenic nature of grazing land are visible in the landscape today. The only clear trace from the early days of the hospital was the brick chapel east of Jan Waldenströms gata in the north.

Usage

This area was mainly used for transportation. People walked by on Jan Waldenströms gata or went by in cars or by bike. I saw two construction workers sitting on a bench by the main entrance for a while. The view from there was quite nice, overlooking the larger green lawn and the cluster of gingko trees. Otherwise people hurried by, mainly on Jan Waldenströms gata. There was a limited number of benches in the area and I only saw one in use.

Overall impression

The area was quite busy and noisy. Cars regularly passed on Jan Waldenströms gata and you could hear the traffic from Carl Gustafs väg. I enjoyed the clusters of trees, the copper beech, and the gingko trees created some shelter from the road. Otherwise, the area felt a bit scattered. The green space was divided by roads and paths, the patches were quite small and hard to use. They seemed to be there for decoration, so the area wouldn't be completely gray. The entrance was indistinct, and it was somewhat hard to navigate. The pedestrian path changed material and the area mainly felt like a junction. It was not a place to linger in.

Entrance to Jan Waldenströms gata from Carl Gustafs väg

Patch of green by entrance, hand surgery in background


Gingko trees, parking and hand surgery in background

Parking and pedestrian path by hand surgery


Parking, copper beech in the background


The chapel

Figure 54. Photos of the east area - the entrance.

Southeast of hand surgery, bike storage, path, street lighting

Benches surrounded by bushes and trees

Path between road and building, high dense bushes screen of the road

A more open character in the northwest

Cut hedges divides the area from Pildammsvägen, traffic is visible

Niche for seating, the rheumatology clinic in the background

Figure 55. Photos of the west - area between building and road.

Perceived sensory dimensions

Several qualities could be found in the area west of the hand surgery. But there was a shift in character between the south and the north part of the stretch. The qualities Sheltered, Natural, Social and Diverse were found in the south part. The sheltered quality was established through dense vegetation that gave some protection from the road. The natural character could be seen on a short stretch along the hedgerow, where dense bushes in various height were located, I could hear birds roaming around in there. There was one pergola on the site and another area for seating which implied a social quality as well, but in small gatherings. The seating was surrounded by vegetation in various colours which suggests the quality diverse. The north part of the area had fewer qualities, the area looked well managed and you could get a good overview of the site, the site could therefore be described as open.

Traces of history

The only sign of history in this site was the hedgerow and perhaps the trees along the stretch. According to a tree inventory presented in the General plan for cultural environment in Malmö hospital area by Hedar (2016), the trees in this area were planted between 1940-1960. In other words they were planted when the lung clinic was built, and the site became a grazing area.

Usage

The site was empty on my visit. The seats and tables suggested that lunches and coffee breaks took place here. The seating were mainly in connection to the building, and I as a visitor, did not feel comfortable using the seating. I concluded that the area was mainly for employees at the hand surgery.

Overall impression

The area was quite nice and looked well managed. There were some disturbances from Pildammsvägen. But the dense bushes along the road were a good visual shield, and I think it would have been in favour to continue with bushes and low trees along the norhtern part of the stretch as well. I did feel a bit as an intruder though, like going thorugh someones backyard. The north and south part of the area felt a bit disconnected since they had very different characters. The temporal building of the rheumatology clinic cut off the site a bit. I believe the area would benefit from having a larger park area in connection to it. Better sightlines and a nice transition from narrow and dense to open and airy could be achived.

3. NORTH - THE SPACE BETWEEN ROADS

Perceived sensory dimensions

The area north of the temporal rheumatology clinic is not part of the hospital area today. But it caught my eye on my way to the hospital, on my first site visit in April. There are no qualities found in line with the perceived sensory dimensions, but there was something about the cluster of trees and the volume that spoke to me. A room without walls but with a ceiling.

Traces of history

When examining maps, it seems like this area has not been a part of the hospital area, but the allotments stretched out to this part. According to the tree inventory an old fruit tree from that time remains (Hedar 2016).

Usage

There is no clear usage in this site. It is a little patch squeezed in between two busy roads and a building. A muddy path suggests that people take detours through this area when walking between Pildammsvägen and Carl Gustafs väg.

Overall impression

I had dismissed the area since it was not part of the hospital area. But when going back to sketching I found that the design proposal would benefit from extending the park to the north. The site is tricky since it's very exposed to traffic. There are no restorative qualities in the area today, even though it is a splash of green by the junction. As mentioned, the cluster of tree and the room it created spoke to me, and to include this area in the design proposal would in my mind strengthen the character of the park.

Junction of Pildammsvägen to the right and Carl Gustafs väg to the left, Cluster of trees in between.

Cluster of trees north of the rheumathology clinic, Pildammsvägen in the background.

Canopy

Figure 56. Photos of north area - the space between roads

South of the hand surgery, terrace to the right, Pildammsparken in the background, surgical building to the left

Terrace and landing

Southwest of the hand surgery, winding path, cut grass, quite open

View of the south facade of the hand surgery

Steps down to the landing

View from landing, the terrace, water tower in the background

Figure 57. Photos from revisit, south - space between two buildings.

Perceived sensory dimension

The area between the hand surgery and the surgical clinic had both an open and sheltered quality. The path between the buildings and the area along Pildammsvägen were characterised by cut grass and nothing else apart from the cut hedgerow. This created a clear sightline towards Pildammsparken. A sheltered character was found right by the south wall of the hand surgery. A terrace of vegetation made up for the height difference, creating an enclosed landing by the facade of the building. From the landing the watertower could be discerned.

Traces of history

Glimpses of the water tower from the landing created the feeling of a seamless transition between the hospital and Pildammsparken. The road wasn't visible anymore. No other clear historical traces were found, except for the ever present hedgerow.

Usage

No people used the site during my visit. The area mainly felt like a site to walk through. I could see some plastic chairs stacked in a corner of the landing. When the sun glimpsed through the clouds a pretty play of light appeard on the landing, I could imagine it being a good site to sit and have lunch at.

Overall impression

I perceived this area as an "in between"-area. There was no clear function. But I found that the site had potential. I immediately started to imagine an opening in the hedgerow and a connection to Pildammsparken. The terrace was a nice feature that perhaps could be developed by creating easier access to it. I imagined the landing as a meeting spot for lunch breaks, a perfect spot with the south facing wall.

CONCLUDING REMARKS

The site visit had given insights on the characterstics of the area around the hand surgery. Through observations and analysis of the sensory dimensions, ideas of improvements regarding restorative characteristics, usage and traces of history were found. This gave further inspiration for design. What was evident during the visit was the scale of the area. The green environments were quite small in scale which is challenging when trying to achieve some of the restorative characteristics. For additional inspiration on how to work with a small area, as a landscape architect, I decided to visit yet another reference landscape. In the next chapter the oncological clinic in Lund is visited. Landscape architect Monika Gora shares her experience of working with a limited area and her role during the implementation of the project.

REFERENCE LANDSCAPE

Oncological clinic in Lund

THOUGHTS FROM THE SITE VISIT 2022.05.10

I was excited to finally visit the Oncological Clinic which I had only seen in pictures and illustrations beforehand. I walked from the central station in Lund and made my way to the western part of the hospital area (Skåne University Hospital in Lund). The garden of the Oncological clinic was adjacent to the street and was easy to access from outside of the hospital area. I was met by the sight of a footbridge hanging in the air, surrounded by trees and bushes. The contrast between the built straight lines and the green irregularities was beautiful. My first impression was that there was a lot of vegetation, but when looking closer it seemed like the park was under some construction. Pipes were sticking out of the ground and parts of the ground was covered with bark. It looked like some of the grass and bushes were recently planted. A short winding path led to the oncology building where a spiral staircase reached the footbridge. The area by the building was quite open and hard with its pavement meeting the brick wall of the building and the brick wall framing the pond. The pond was central in the design, everything seemed to revolve around it. In the east the pond was met by a low brick wall, the upper bricks were painted in a dark green colour. The wall followed the shape of the pond and framed it. The western part of the pond did not have a wall, instead the shore consisted of rocks and boulders, flowers and grass. The landscape was undulating and trees that just started to blossom surrounded the park which made it feel like an enclosed private space. There were two benches in a niche in the brick wall path. Grass and trees hung over the seating that looked over the pond. I made my way up to the footbridge. From the bridge the shape of the site became clearer, and I could see carps in the pond. I tried to go inside the oncological clinic since I knew that there was a plantation inside as well. The door was locked. I went to the main entrance instead where a kind nurse told me that I unfortunately could not go inside due to covid restrictions. He told me that the park and the atrium are very appreciated though.

CONVERSATION WITH MONIKA GORA

In conversations with Monika Gora, the landscape architect of the garden, I could get some insights to the process (Gora, M. 2022, personal communication, 1 June). The project was carried out in 1992 and it was one of Monika's first commissions. She was part of the whole process, from sketching, projection and throughout the whole construction phase. Something she describes as unusual today. Monika explains how it all started with a drawing of a section. The illustration became a key vision that made it easier to cooperate with everyone involved. The section (figure 59.) had the title *A house in the woods - the woods in the house* ("Huset i skogen, skogen i huset") and illustrated a lush

Figure 58. Illustration of the park by the oncological clinic.

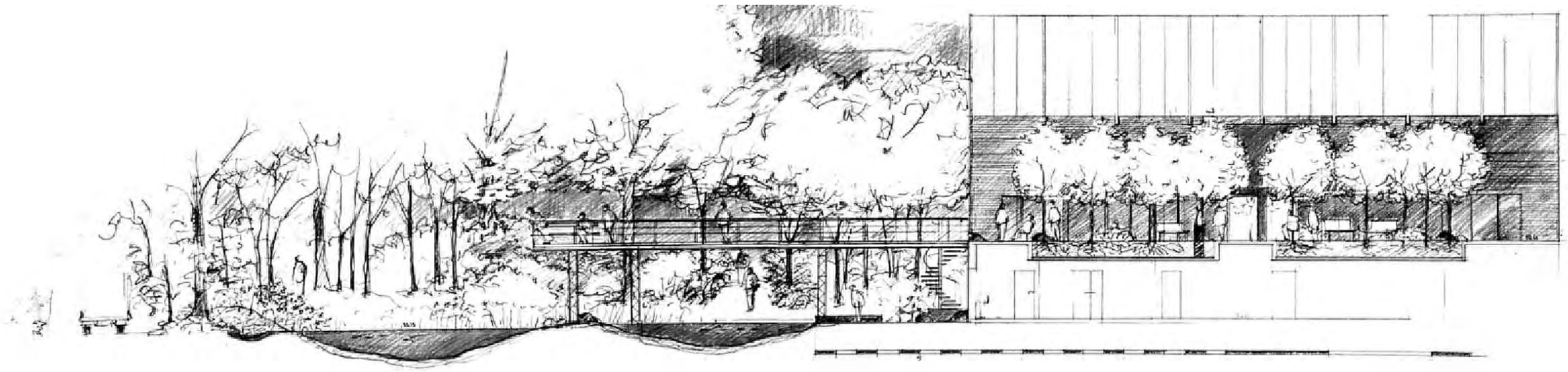


Figure 59. Section of the oncological clinic. Illustration: Monika Gora

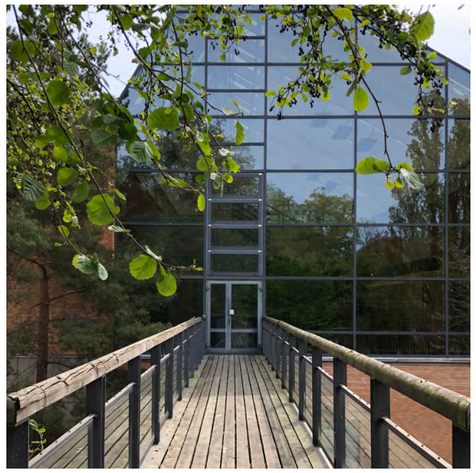
and dense forest where the building extends into the forest through a bridge. Inside the building the forest continues. I think it looks like an inversion, a yin and yang symbol. The illustration was printed out in colour copies and handed out to everyone. Staff hung it up in their offices. The illustration made it possible to argue for the design, since everyone had already accepted it and wanted it to come true. Monika argues that an idea, a design, needs to be clear and substantial to survive. A solid design will be harder to take away. The trees that were already on the site were kept since they were important in the fulfilment of the vision. The trees that were planted inside the building were met by some resistance during the construction phase. Monika had planned for the tree species *Ficus nitida* but the hospital wanted to exchange them to plastic trees since new reports showed that they could cause allergic reactions. Monika asked for the report that said that Ficus nitida gave allergic reactions. After reading the report she concluded that reactions only occur among people who worked with the trees all day without gloves. She explains that she was happy to be involved in the project in the construction phase, otherwise the trees in the waiting room would have been removed. Monika explains that there is a fear of vegetation in hospitals since vegetation is considered unsanitary. It is also a matter of management, living plants need to be taken care of which creates unnecessary work.

View of the oncological clinic from the street.

The bridge over the pond. The straight architectural lines meet the soft vegetation. The ground seems to be under construction. Tubes are visible and some vegetation look newly planted.

View over pond, the street is visible in the background.

A small winding path leads to the building.



View of the oncological clinic from the bridge.

View over the path and the pond, from the bridge.

Brickwalls frame the pond and vegetation by the facade of the building. Niches for seating.

A playful shape of the brick wall. The wall meets the undulating land.

Figure 60. Photos from visit at the oncological clinic in Lund.

REFLECTION AFTER SITE VISIT

What struck me with the oncological clinic was the scale. It was so small! But still so rich. The site was packed with vegetation that closed off the site from the adjacent road. The landscape was undulating, which created a larger surface to plant on compared to what a flat surface would afford. The area was small, but it felt big even though the pond ate up most of the surface. I didn't see any people using the site. Perhaps because it was a cloudy day or perhaps it was due to the building undergoing some construction. I would believe that the bridge from the waiting room afforded easy access at least. From my conversations with Monika, I learned that for this project to be successful her presence as landscape architect through the planning process as well as the construction phase was key. Without it fast decisions, without clear motivation, could change the whole outcome. Another learning from the process of creating the Oncological clinic was the strength in a section drawing. Through one illustration the design was secured. It became this dream picture that everyone involved wanted to come true. The illustration made the design proposal resilient even before it was built. I associate it with the large visualisations you can see at construction sites for new neighborhoods. Perhaps the illustration by Monika in a sense was similar. But what I believe made her illustration special was the distribution of it. It was not only the stakeholders and decision makers that were given this section. The employees of the hospital were also involved. The illustration of the section was hung up in the offices of the hospital workers which must have given the place an importance long before it was finalised. The visit at the oncological clinic and the interview with Monika did raise questions regarding the landscape architects involvement in development projects. But mostly it inspired design solutions and ideas on how to secure green space in development projects.

In the following chapter theory and guidelines on how landscape architects can work to include aspects of time, humans and non-humans in landscape design projects is further examined.

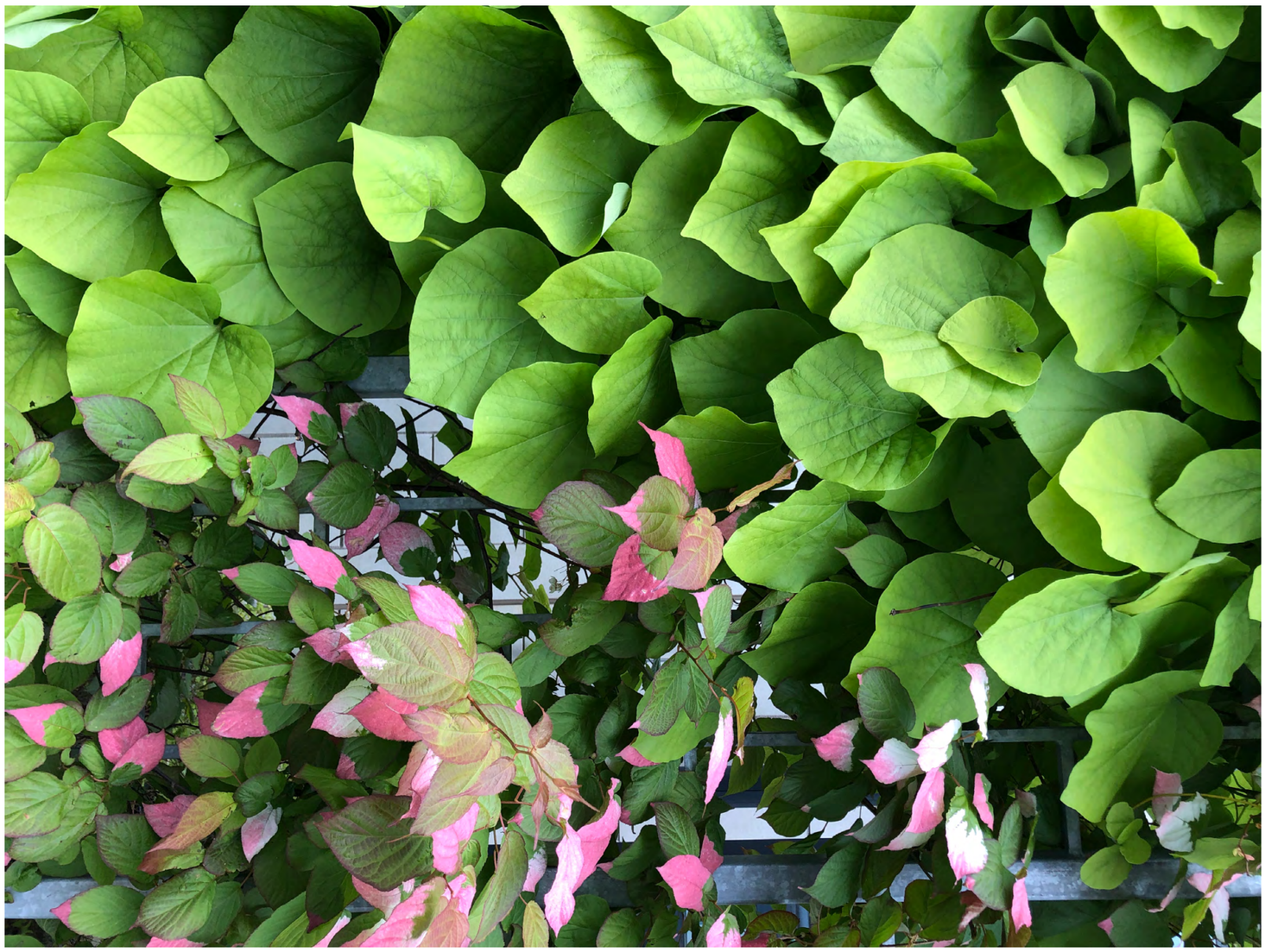
QUESTIONS TO TAKE WITH ME IN FURTHER RESEARCH

- Why are landscape architects not as involved in the whole process anymore?
- In what ways can a space be secured in stakeholders, decision makers and users minds?

DESIGN INSPIRATION

- Small areas can be enclosed and rich through a variety of plants and vegetation
- Undulating landscapes provide larger areas to plant on
- Fortify design through visualization. Users and stakeholders need to find the area important for it to be resilient. This can be done by creating an environment that people want to use, by making it aesthetically pleasing and practical.

LITERATURE REVIEW



Design through entanglements

DESIGN THROUGH ENGTANGLEMENTS

In this chapter design theory is examined through the article *Designing landscapes of entanglement* by Martin Prominski (2018). Literature on design related to time will provide a better understanding of how design can survive over time and how the past can be considered in future development. The concept of entanglements considers the various parties that are involved in our lived environments, human and non-human, a design concept which works in accordance with theory on socio-nature (see chapter *Literature review - nature/city relations* pp. 22-24).

ENTANGLEMENTS

The dichotomy between nature and culture has permeated western philosophy and not the least the philosophy of landscape architecture (Prominski 2018). Prominskis' (2018) main argument for questioning the nature-culture dichotomy is the proposed geological epoch, the *Anthropocene*. An era where human impact can be seen on every inch of the earth's surface. The anthropocene is described as an era where the human impact on earth has gone so far that there is no going back to the conventional geological situation, the Holocene (Prominski 2018). In an era where traces of humans creep through the sediments of earth and even the atmosphere, nature and culture can no longer be separated. Prominski (2018) presents anthropologist Philippe Descolar and sociologist Bruno Latour's theories on the human and non-human relationship. Prominski (2018) presents Descolars idea of 'naturalism'. According to Descolar the philosophy in the western world has put humans in a position of power since humans are argued to possess a mind and soul as opposed to non-humans. Descolar argues that one solution to mitigate the consequences of human impact on earth is to rethink the human and non-human dichotomy. By acknowledging that non-human life has the same qualities as humans, nature would be better cared for (Prominski 2018). Bruno Latour describes how the Anthropocene has made it impossible to differentiate humans and non-humans, since humans permeate all structures. Humans live in symbiosis with a great number of organisms, entangled with each other. The anthropocene sheds light on this entangled state. According to Latour this changes the concept of design. He proposes the concept of *Composition*. Latour means that design has become much deeper than superficial details in objects, it has become a matter of shaping societies, cultures, landscapes, and cities. Latour argues that entanglements are in fact entanglements of composition of these processes, which makes it a design matter. All matters are entangled, and everything is designed (Prominski 2018).

The idea of the Anthropocene, the inseparability between humans and non-humans, can, according to Prominski (2018)

Figure 61. Planting in front of hand surgery in SUS Malmö.

be used to motivate sustainable development. The role of landscape architects in such processes is further discussed by Prominski. He promotes the concept of *Entanglement*, brought forward by Descolar and Latour, as a design strategy to include non-humans, humans, and time. Prominski (2018) divides the concept of entanglements in three sections, entangling non-humans, entangling humans and entangling time.

Entangling non-humans

Entangling non-humans in landscape architecture is about creating spaces where plants, animals and humans are included and relate to each other. To just address non-human life, which has been common within landscape architecture, is different from entangling non-humans (Prominski 2018). Mainly it is about integrating non-human elements in our landscapes instead of separating non-human and human. Prominski (2018) describes nature conservations as an example of failing entanglements of non-humans and humans. In many conservation areas, humans are completely cut off, which creates a separation between people and nature. Prominski (2018) argues that there doesn't need to be a differentiation between these two. Protection of biodiversity can also bring joy and meet the needs of humans as well. Through design both perspectives can be acknowledged.

Entangling time

Entangling time within landscape architecture relates to the ongoing process of the anthropocene, a process that has several possible outcomes. Prominski (2018) argues that dynamic processes of landscape can be used as a design strategy to support the interplay between past, present, and future. Prominski (2018) claims that most landscape designs today are fixed and not intended to change over time, which unfortunately suppress the dynamic processes of landscapes. A field to be inspired by is ecosystem design, especially within river landscapes. Prominski (2018) describes that there are many projects where channels are dismantled. This results in rivers running freely, creating new spontaneous patterns in the landscape, entangling water, sediments, humans and non-humans. The historical linear canal meets the new organic water pattern, entangling the past with the present, and the future.

Entangling humans

Finally, entangling humans is a concept that Prominski (2018) presents which focuses on the social interaction between people and landscape. It is described as a strategy where the public collaborates with professional designers in projects. Through participatory design projects, humans will be entangled, not only in the final design, they will also permeate the whole process (Prominski 2018). This demands that the designer takes the role of a listener, since it is mainly the public who are shaping the space.

Prominski (2018) concludes that these three approaches should be included in landscape architecture projects to succeed with great design. The three categories of entanglements should coincide with each other so that the layers of humans, non-humans and time can be recognised in the landscape.

The concept of entanglements will be considered in the development of SUS Malmö, with focus on entangling time. By looking at the past and the present of SUS Malmö, speculations of a future design can be explored. Through sketching the dynamic processes of landscape will be investigated, which will hopefully lead to a result that considers humans, non-humans, and time.

DESIGN PROPOSAL

GREEN STRATEGY

The current green areas in Skåne University Hospital Malmö are small and fragmented due to the historical, and ongoing processes of expansion. The main strategy for the area is therefore to develop larger coherent green areas and connections between them. The larger streets will be green with tree rows and hedges which will create natural connections between streets and parks. All healthcare facilities should have an adjacent park or pocket park that patients and staff can easily access. In densely built environments, like the central part of the hospital area, where it is not possible to construct a proper park, vegetation should be integrated in the buildings, mainly through green rooftop gardens. The rooftop gardens will be connected through bridges. A new park is suggested south of the hospital, in the former parking lot of Mobilia. The aim is to create increasing possibilities to visit nearby parks and to connect the green environments of the hospital to the larger city of Malmö. Pildammsparken that today is separated from the hospital through Pildammsvägen will have better connections. A new entrance for cars will be located on the west side as well as two entrances for pedestrians. Pildammsvägen will have clear crossings by these entrances so that pedestrians can safely cross. Lower speed limits, speed bumps and clear ground material marks the crossing. The ground material that marks the pedestrian path in the hospital area is suggested to be used in the crossing to create cohesiveness and lead visitors into the area. Some entrances to the hospital area will be added, and the existing entrances should be developed with the aim to afford clarity, easy orientation, and cohesiveness. The square by CRC will become a green square and meeting point.

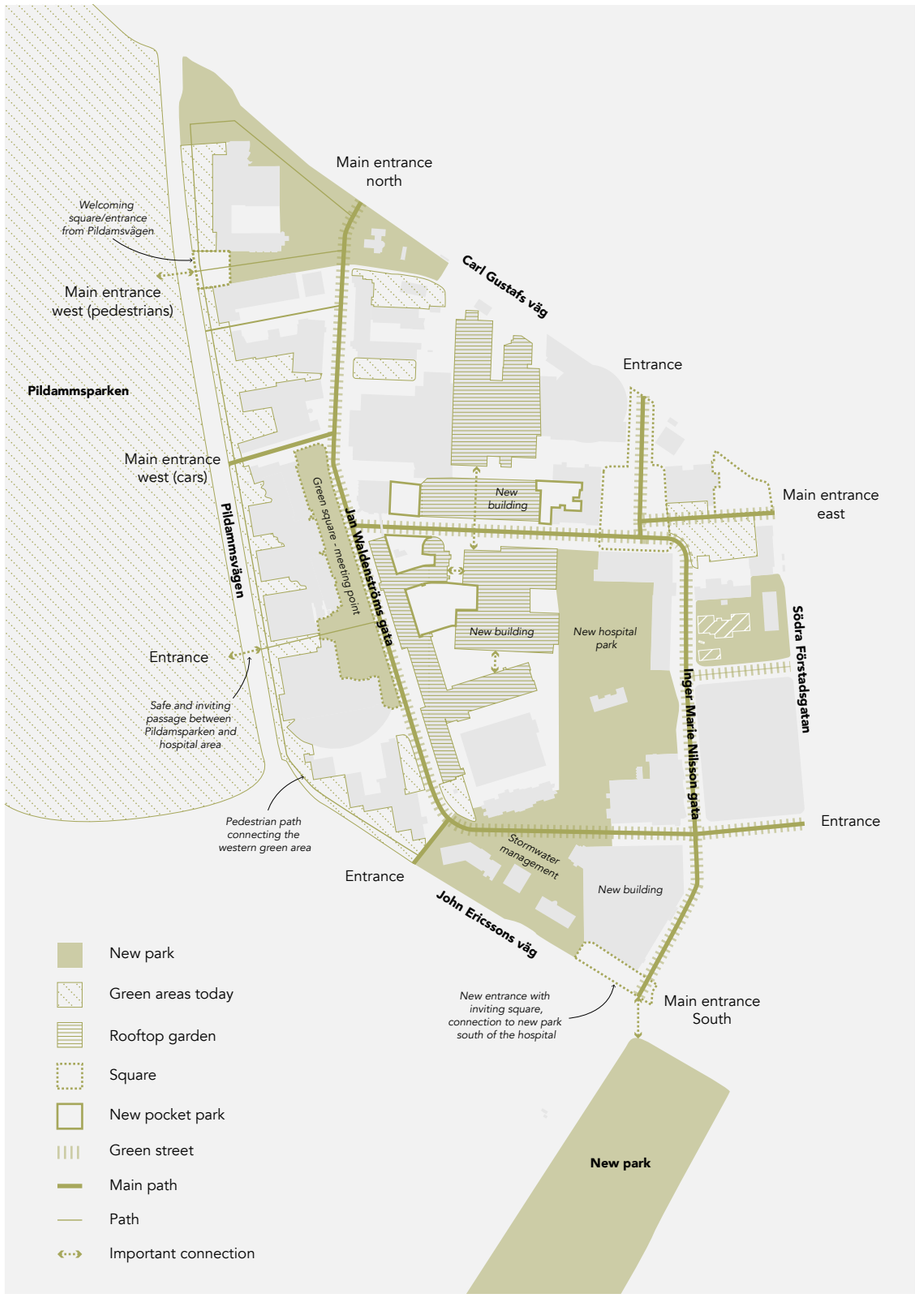


Figure 62. Conceptual plan of the green strategy.

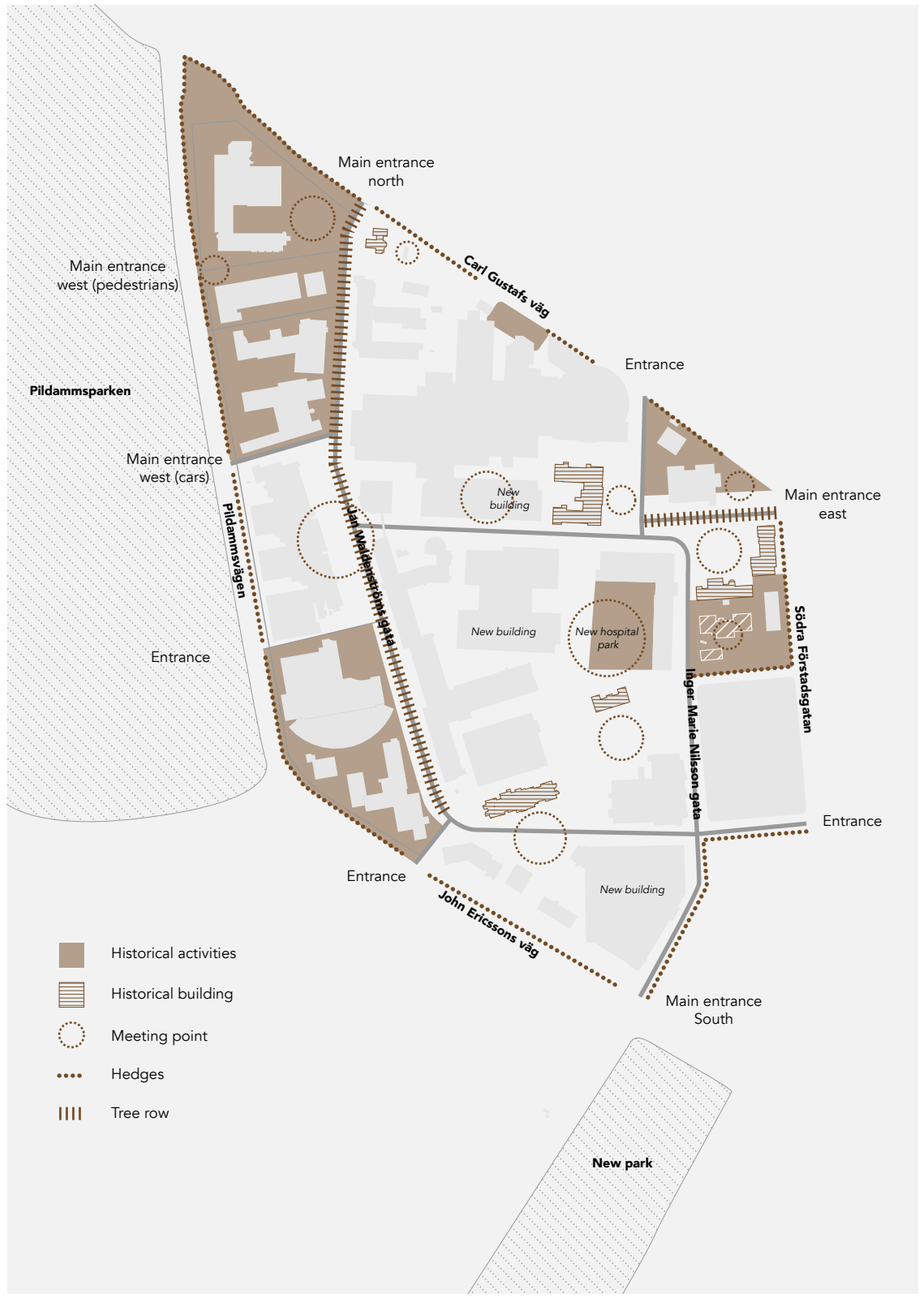


Figure 63. Conceptual plan of the cultural strategy.

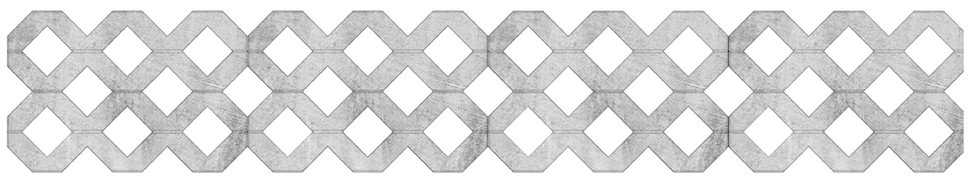
CULTURAL STRATEGY

Narratives and activities that have taken place in the hospital area throughout its hundred-year-old history will be acknowledged and enhanced through a cultural strategy. Green cultural heritage as the tree row on Jan Waldenströms gata and by the entrance of Södervärn will be kept intact. The tree row at Jan Waldenströms gata will be extended towards the north to enhance the entrance and clearly lead the way inwards. Hedges frame the hospital area. The history of the northwestern area as a site for allotments and grazing is suggested to be considered in the development of the area. Through design the former usage can be subtly recognised. Signs and memorials will provide historical background. Social spots to eat and meet are distributed across the site. Some on the same location where fruit gardens, cultivation and outdoor coffee breaks have been taking place historically. The southwestern area has formerly been cultivation land and the design will encourage activities of urban farming as social activity. The same goes for the area in the northwest. South of the former ear clinic a fruit garden will be established with room for pause and reflection. A sign with the poem of Hjalmar Gullberg will be placed here. The north part of the new hospital park will be inspired by the former garden of the doctor's residence. Here a lush garden with flowering bushes and fruit trees will pay tribute to the former site and the villa that has been torn down.

DESIGN

A new park is proposed around the hand surgery, located east of Pildammsvägen, south of Carl Gustafs väg and west of Jan Waldenströms gata. Various activities have historically taken place at the site of the design proposal. During the end of the 19th century to the middle of 1940 the site consisted of allotment gardens. When the lung clinic was built in 1946, a scenic pastoral landscape replaced the allotments. In the book *Från lazarett till universitetssjukhus* the area is described as a relaxing space where patients could take walks through the great lawns (Ersgård et al. 1996). Sheep grazed the meadows and were a natural element in the hospital environment. When the hand surgery department was built in the 1990s the the scenic park had to make way for the new building and for parking. Left was a strip of green around the building. Today a temporary building, the rheumatology clinic, is located north of the hand surgery as well.

In the presented design proposal associations to former allotments and the scenic meadow landscape are brought forward. A grid of turfstones constitutes the basis of the concept. It creates a pattern of squares of 72 m^2 (8x9 m), the size of the first allotments (Hansson & Hansson 1997; Drost et al. 1997). From east to west the pattern fades, the turfstone lines dissolve and new, more natural environments takes place. The principles of the eight percieved sensory dimensions have been used as guidlines in the concept development. Two axis are formed across the area. From south to north the qualities social to serene and natural are aimed for. From east to west the qualities cultural to sheltered and diverse inspire the design. The aim is a coherent green design around the hand surgery.



Turfstones create a grid pattern over the area, they provide paths, if not used they will be overgrown by grass.

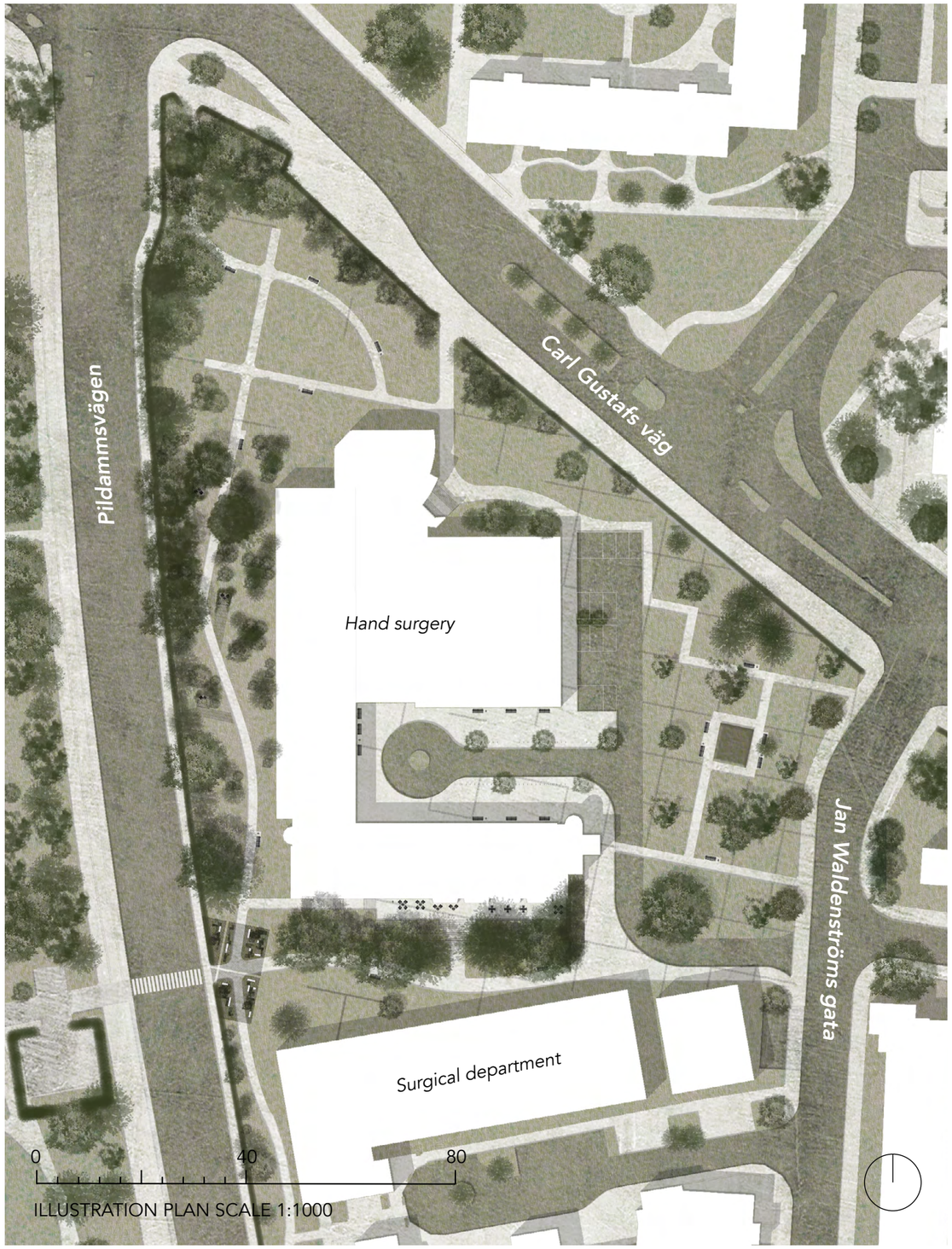


Figure 64. Illustration plan.

Figure 65. Past, past and present. Overlay of maps from three periods of time: 1940, 1960 and today.

Figure 66. Development of concept past, present and future through sketching. The grid of allotment layered over the present plan.

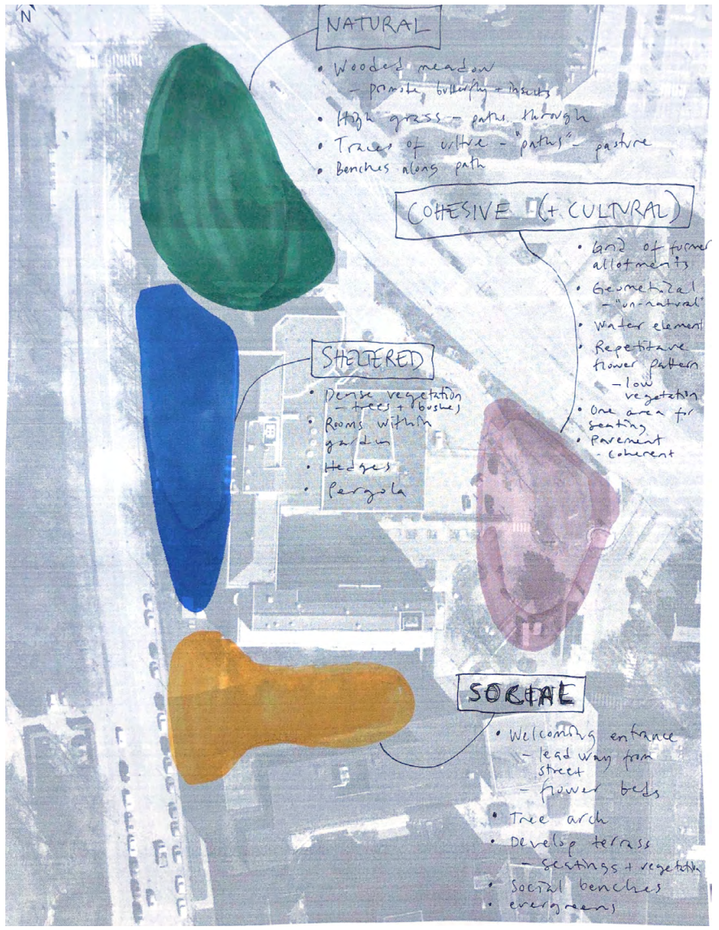


Figure 67. Development of PSD concept.

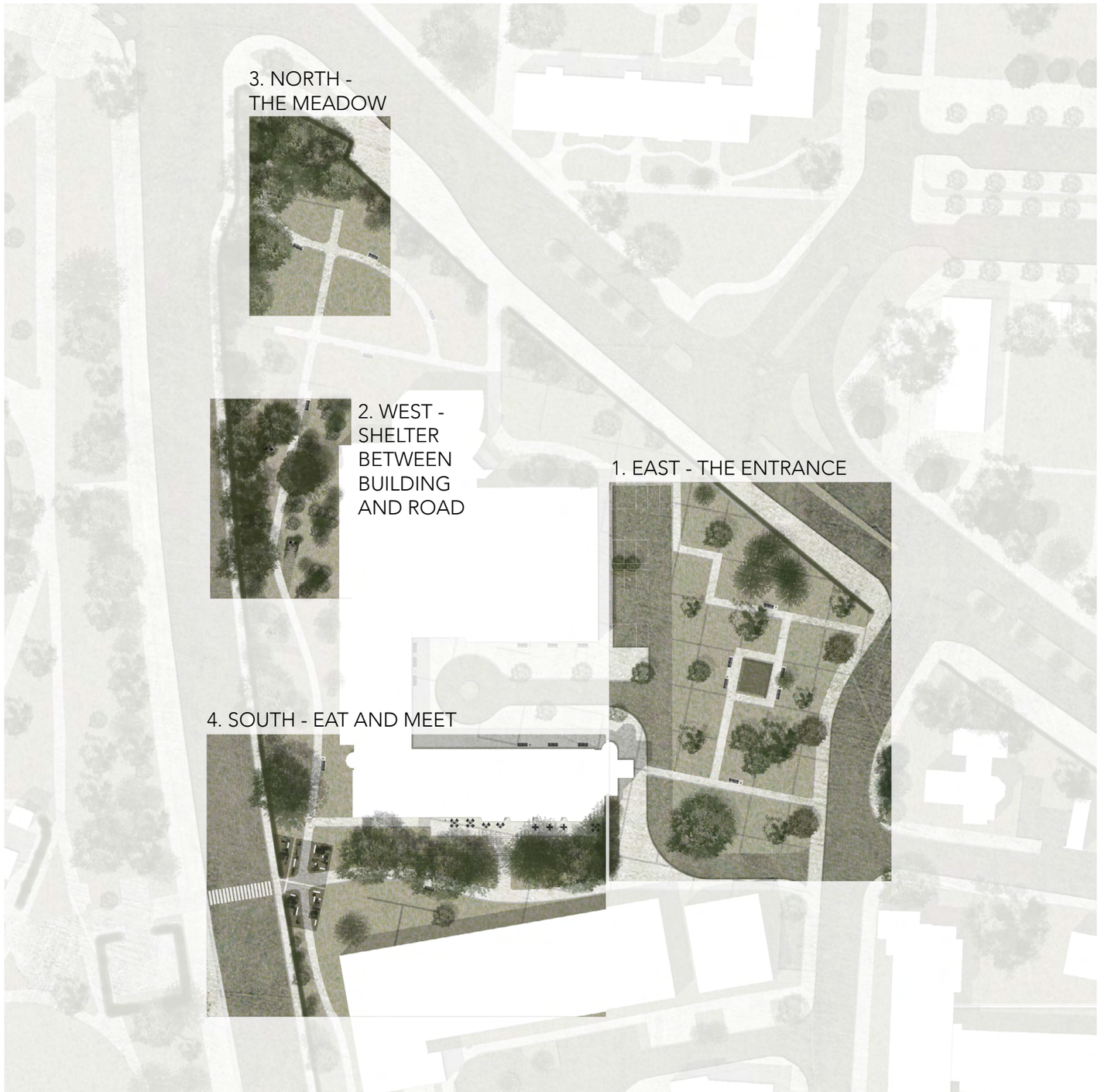


Figure 68. Site plan with sections.

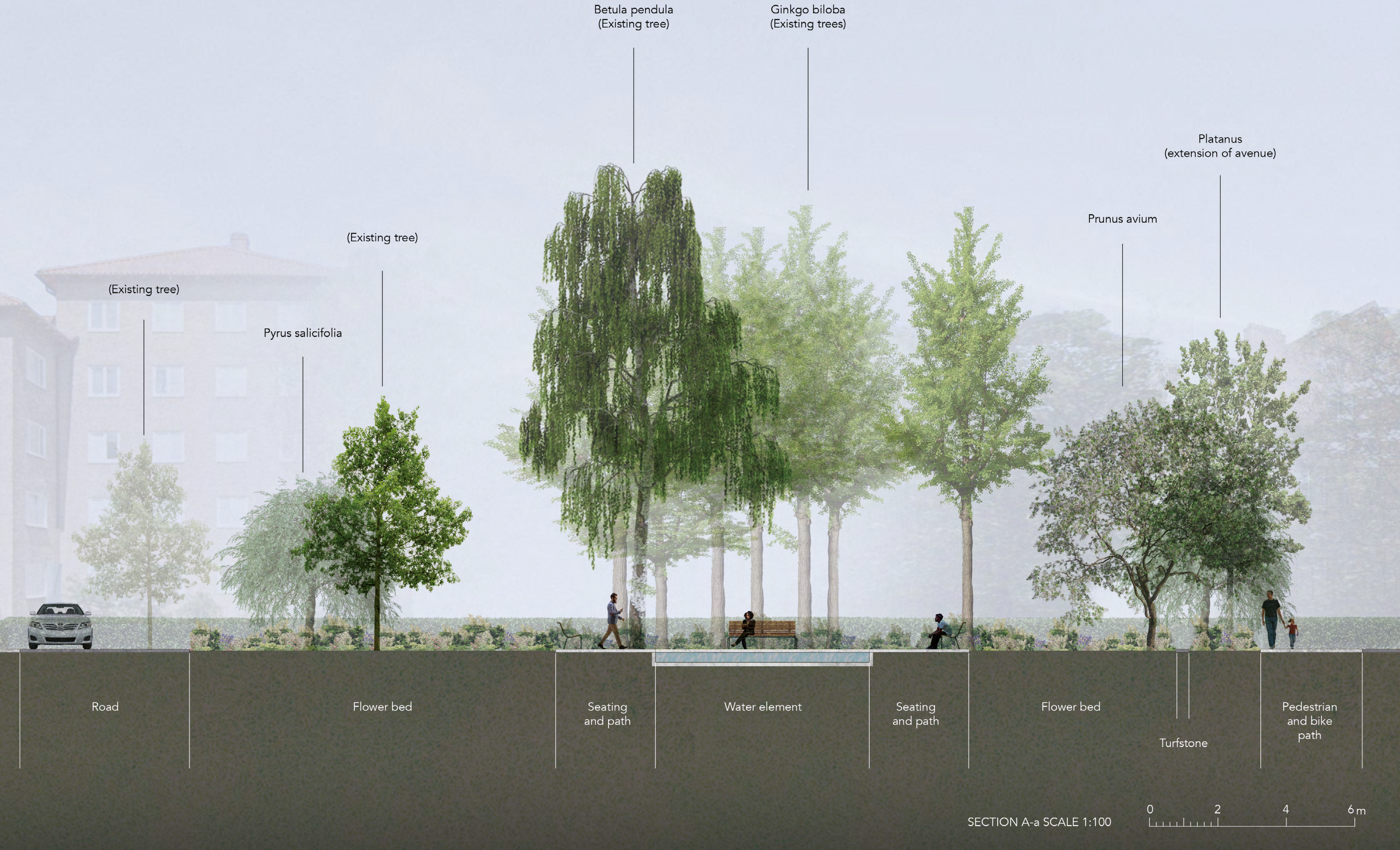
1. EAST - THE ENTRANCE

The eastern part of the proposal aims to contribute with a welcoming green entrance to Jan Waldenströms gata in the north. To create a more cohesive green area the road has been redrawn and the parking lot has been made smaller. In this area the grid structure is tangible. Pedestrian paths follow the grid and turfstone lines continue out from the park and into the walkway. The turfstones create squares where decorative plantings are established in a romantic nationalistic style. Plants that were common in Swedish gardens in the beginning of the 20th century are chosen to connect to the decorative plantings in the former allotment gardens. Since the main function of the allotments, at least in the early 1900s, were to provide food some fruit trees will be planted in the area (Drost et al. 1997). The turfstone frames can also be used as small paths where visitors can come closer to the plantings. A small square is proposed in the midst of the park, a rectangular pond the key feature. This will provide a natural meeting spot for visitors and a site where one can enjoy the surroundings. Most trees in the area will be kept except for a few small, newly planted trees, by the entrance of the hand surgery. The avenue of plane trees that are located further south on Jan Waldenströms gata will continue all the way up to the entrance. This will strengthen the entrance to the street and support navigation. The pedestrian crossings will be in the same ground material as the walkway. This way the road is disrupted instead of the pedestrian path. This will visually show that pedestrians are prioritised.

Figure 69. Visualisation of the green square, east of the hand surgery.

Figure 70. Site plan of the area east of the hand surgery.

Figure 71. Section A-a.



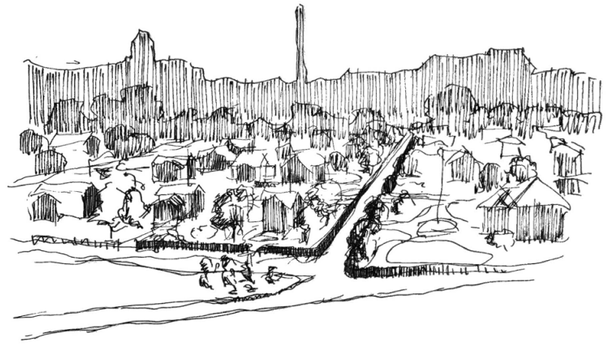


Figure 72. Past - allotments - the chimney mentioned in Ove Löfbergs story is discerned.

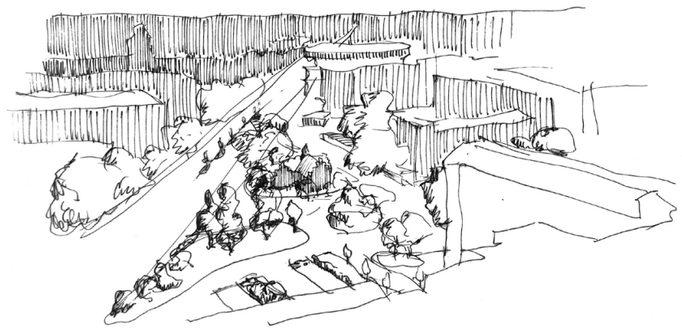


Figure 73. Present - parking and islands of green.

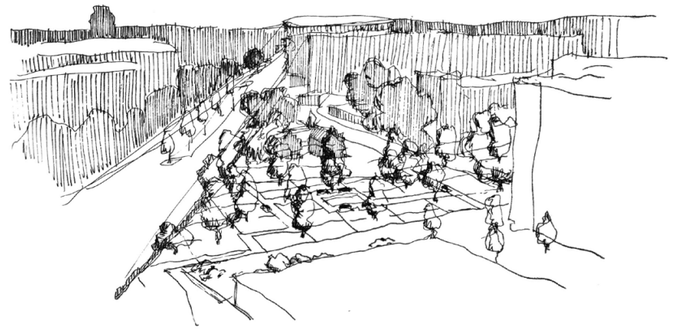


Figure 74. Future - A green square, a welcoming entrance to the area, the extended avenue guides and frames the main road.

2. WEST - SHELTER BETWEEN BUILDING AND ROAD

West of the hand surgery an area of shelter and diversity is proposed to support refuge and small gatherings. Since the area between the building and Pildammsvägen is quite narrow the strategy has been to implement dense vegetation to cancel out noise from the road. The trees and the hedge towards the road will be complemented by shrubberies in various forms and colours, some of which are evergreens providing colour during the winter months. The dense planting will hopefully create a space that becomes a world of its own. Small pergolas are placed in this part of the park. Here visitors and workers can come to have a coffee break and find some refuge. The pergolas are small in size, like the small allotment houses that could be found on the site a hundred years ago. Climbing vegetation will enhance the feeling of shelter and privacy.

Figure 75. Visualisation of the area west of the hand surgery.

Pildammsvägen

B

Existing tree

Existing tree

Existing tree

Existing hedge

Existing tree

Turfstone line, reminder of former allotment border

Pergola, the size of historical allotment houses

Existing tree

Pergola with seating, with room for a wheelchair

Turfstone path to Pergola

Existing tree

a

0 2 4 6 m

ILLUSTRATION PLAN SCALE 1:100

Figure 76. Site plan of the area west of the hand surgery.

Hand surgery

Figure 77. Section B-b.

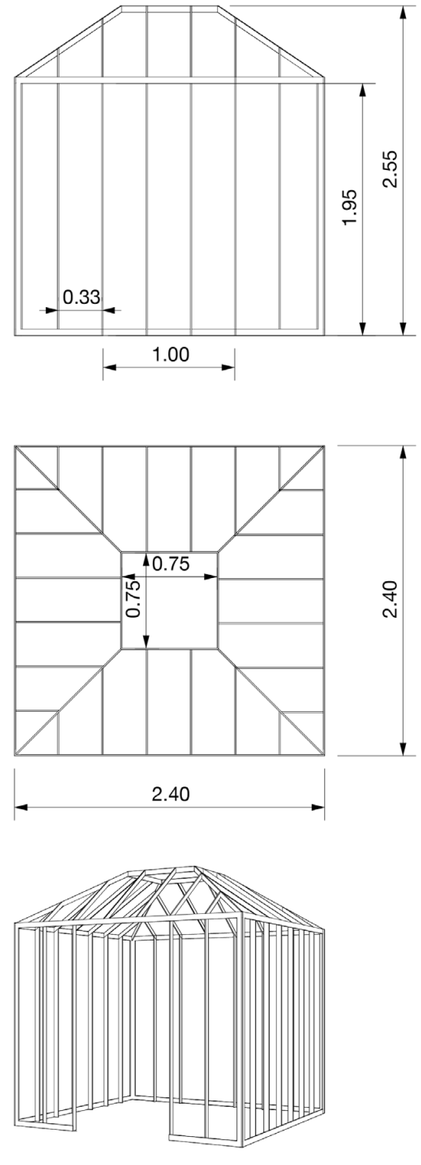


Figure 78. Design of pergola.

Figure 79. Past - wooded meadow - sheep grazing

Figure 80. Present - cut grass and trees, pedestrian path, seating and shrubs

Figure 81. Future - a winding path, pergolas, an extensive shrub layer that offers protection from the road and creates enclosed spaces within the area

3. NORTH - THE MEADOW

North of the hand surgery a wooded meadow is established. The temporal rheumatology clinic and the fast-food stand *Snabbt&Gott* by Carl Gustafs väg will in this proposal make way for the park. The path becomes more winding in this part of the park in contrast to the eastern part. A gathering of trees which today are not part of the hospital area are included in this proposal to achive volume and the character of a wooded meadow. Some turfstone lines run through the site, becoming a symbol of former usage. The meadow flowers will over time cover the turfstones, hiding the traces of the allotments. But when summer is over the turfstones will reappear. The character aimed for is serene and natural, a calm environment to stroll through.

Figure 82. Visualisation of the area north of the hand surgery.

C

Turfstone line, reminder of former allotment border

Existing trees

Meadow flowers

Meadow flowers

C

Meadow flowers

Hedge, extension of existing hedge to frame the northern border of hospital area

Seating with view over the meadow

Meadow flowers

Meadow flowers

0 2 4 6 m

ILLUSTRATION PLAN SCALE 1:100

Figure 83. Site plan of area north of the hand surgery.

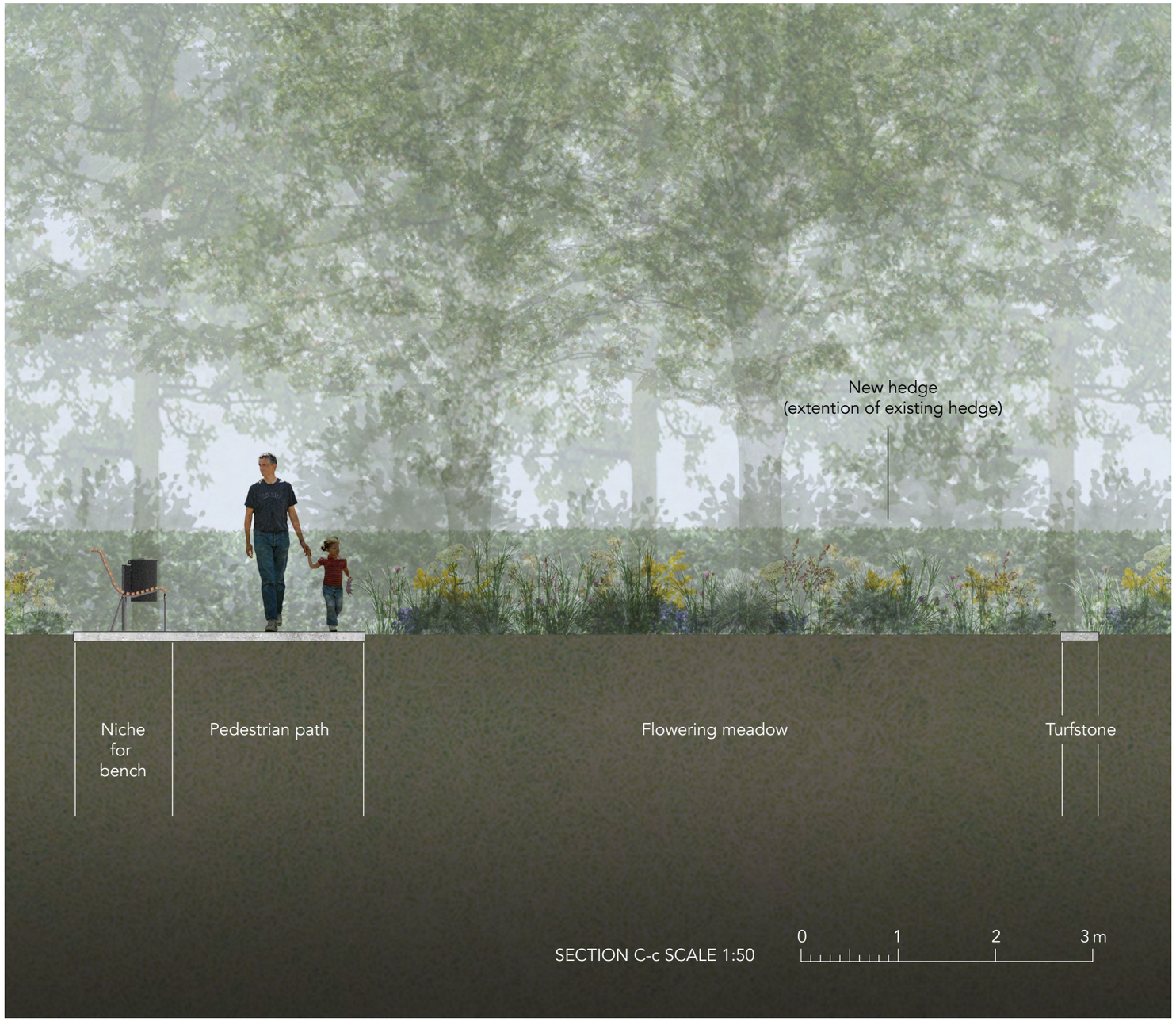


Figure 84. Section C-c.

Figure 85. Past - allotments, fruit trees and flowering bushes.

Figure 86. Present - A cluster of trees and a trampled down path. The rheumatology in the back to the left, Pildammsvägen behind the trees to the right.

Figure 87. Future - Paths and seating, hedgerow is extended, and shrubs are added to protect from noise and visual disturbances from Pildammsvägen.

4. SOUTH - EAT AND MEET

A new entrance and connection to Pildamsparken is proposed south of the hand surgery. The entrance is only for pedestrians and cyclists. This part of the park is developed to support social opportunities. The visitor entering the area from Pildammsvägen will be met by a green square of turfstones, plant beds and seating, which will create a natural meeting spot in close proximity to Pildammsparken. The existing terrace adjacent to the south wall of the hand clinic will be slightly modified. A larger stair will create a better connection to the area where chairs and tables are added to support lunch breaks outdoors.

Figure 88. Visualisation of the entrance from Pildammsvägen, south of the hand surgery.

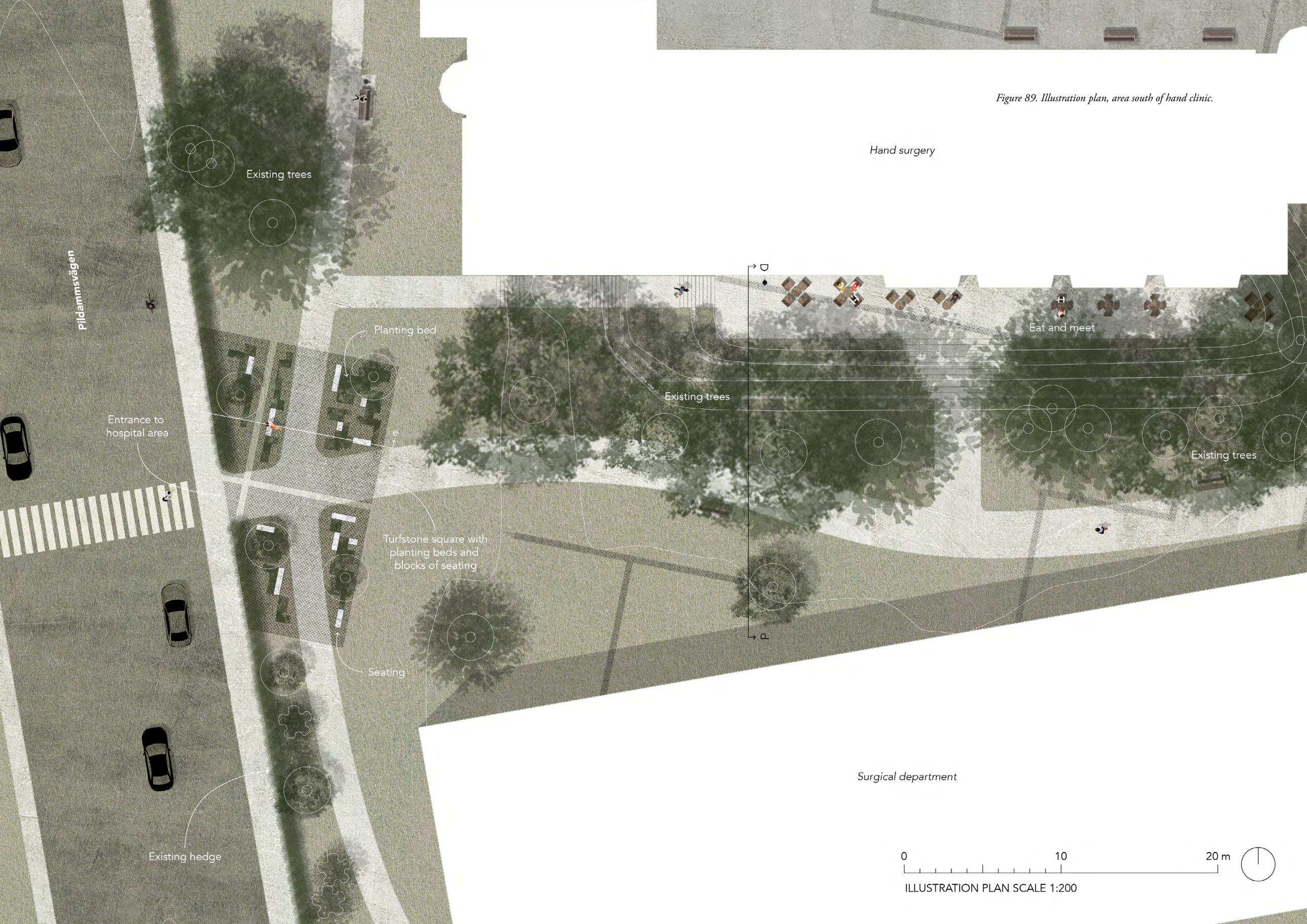


Figure 89. Illustration plan, area south of hand clinic.

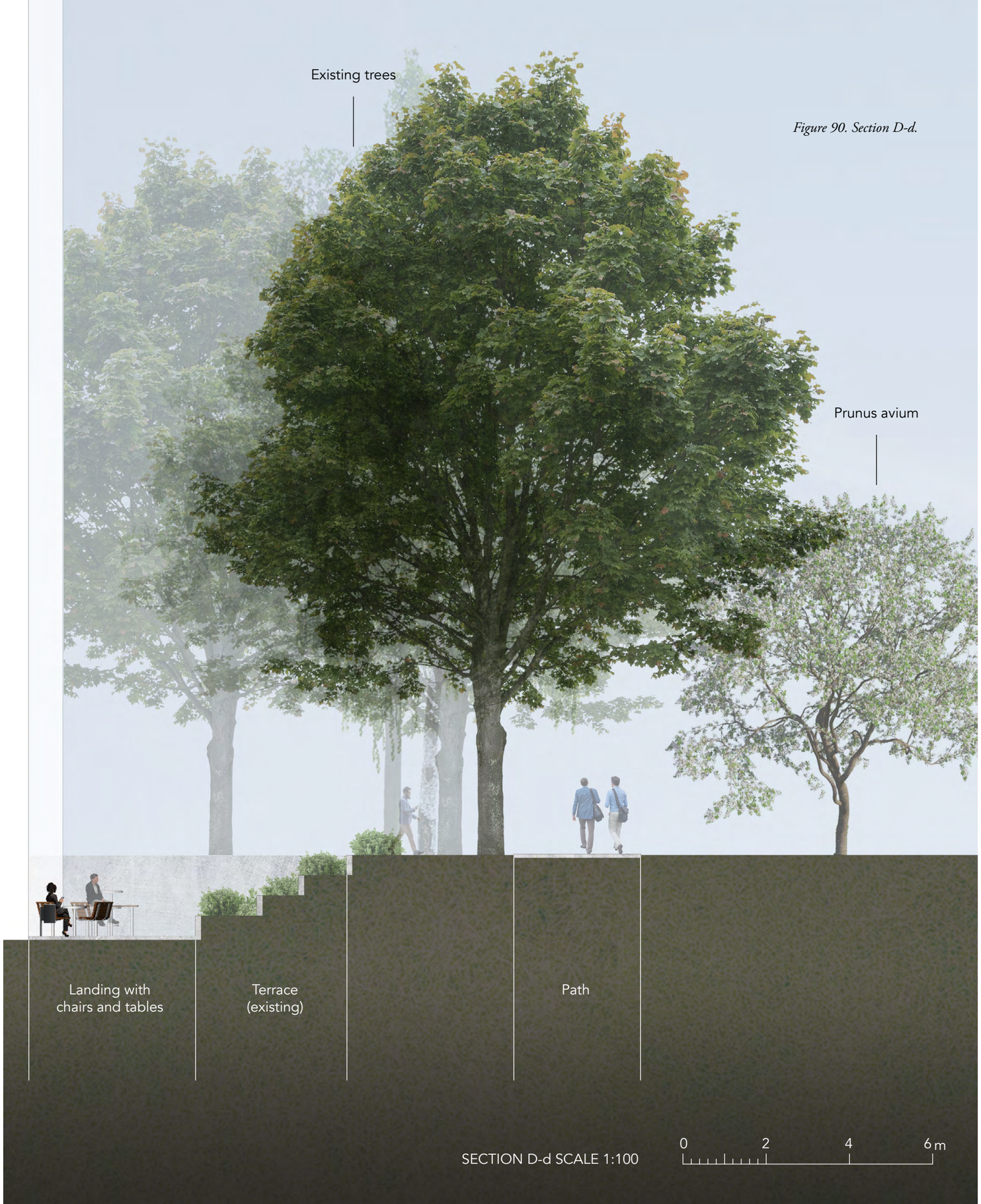


Figure 90. Section D-d.

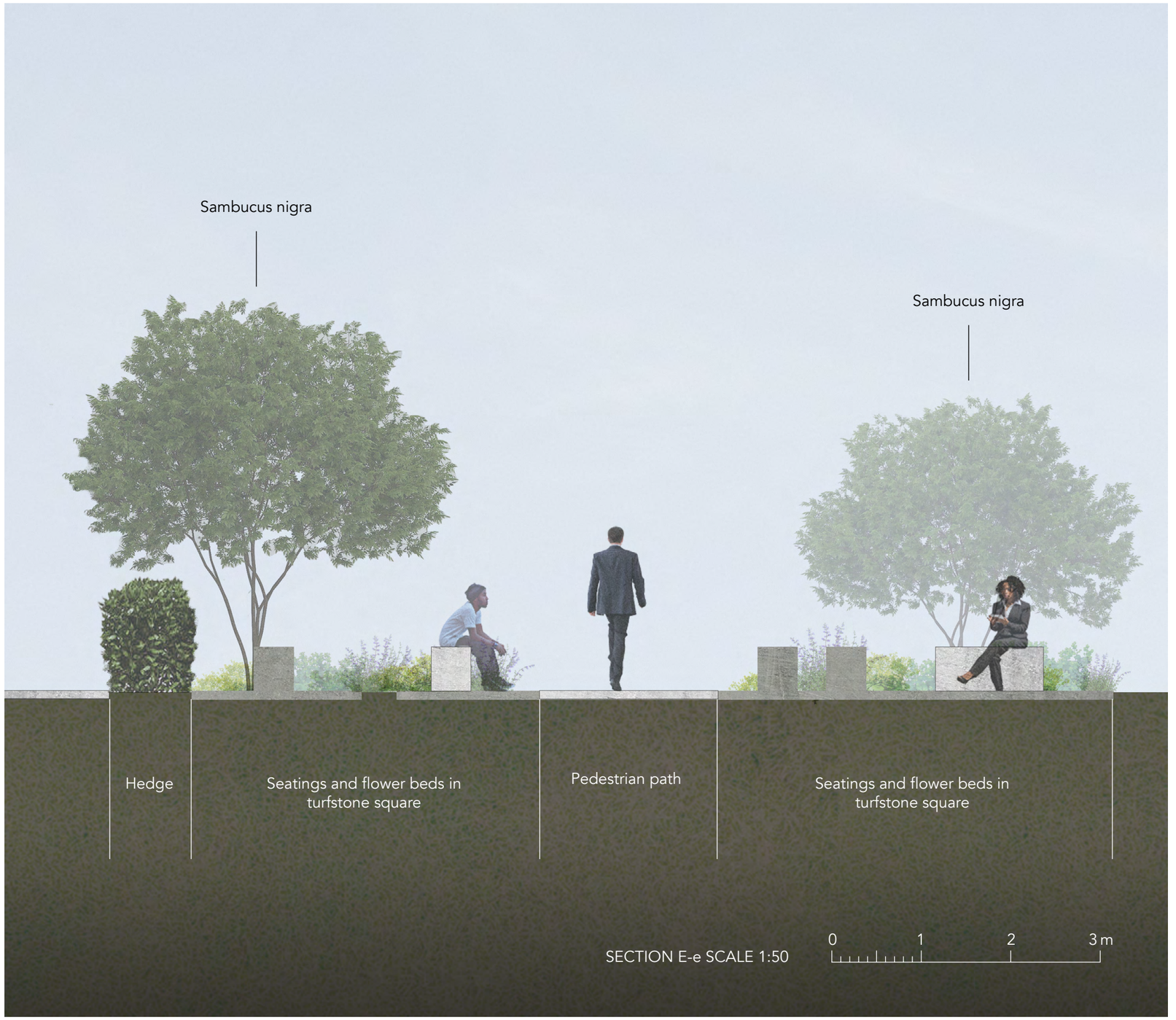


Figure 91. Section E-e.

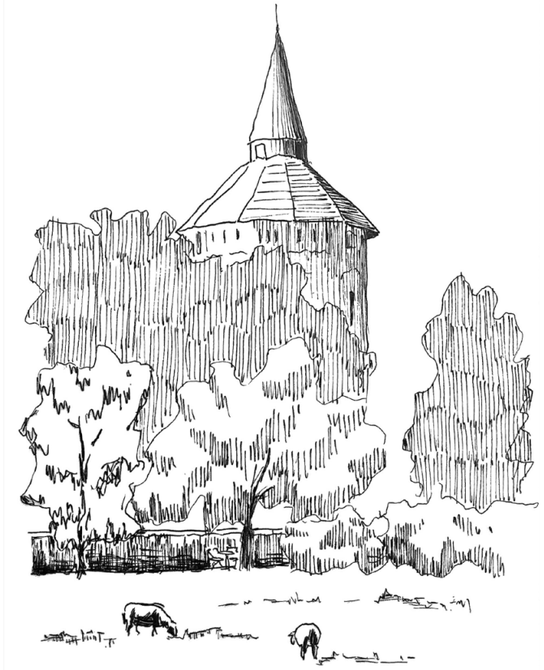


Figure 92. Past - grazing land - trees and bushes along the hedgerow - view of the water tower.

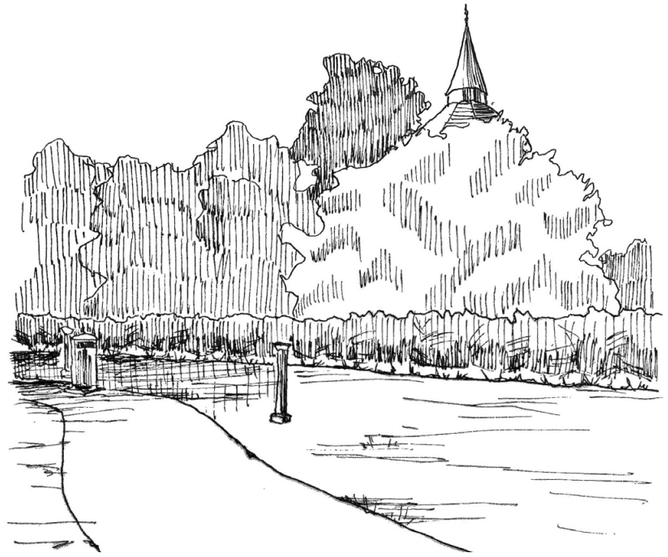


Figure 93. Present - cut grass, hedgerow, lampposts along the stone path.

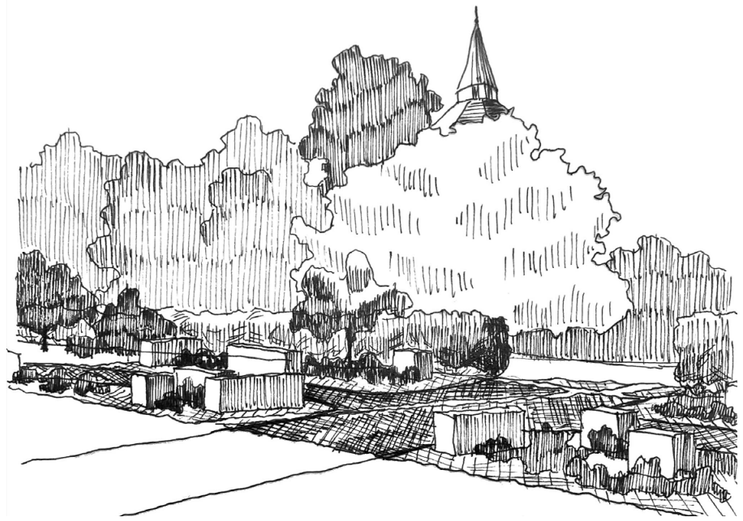
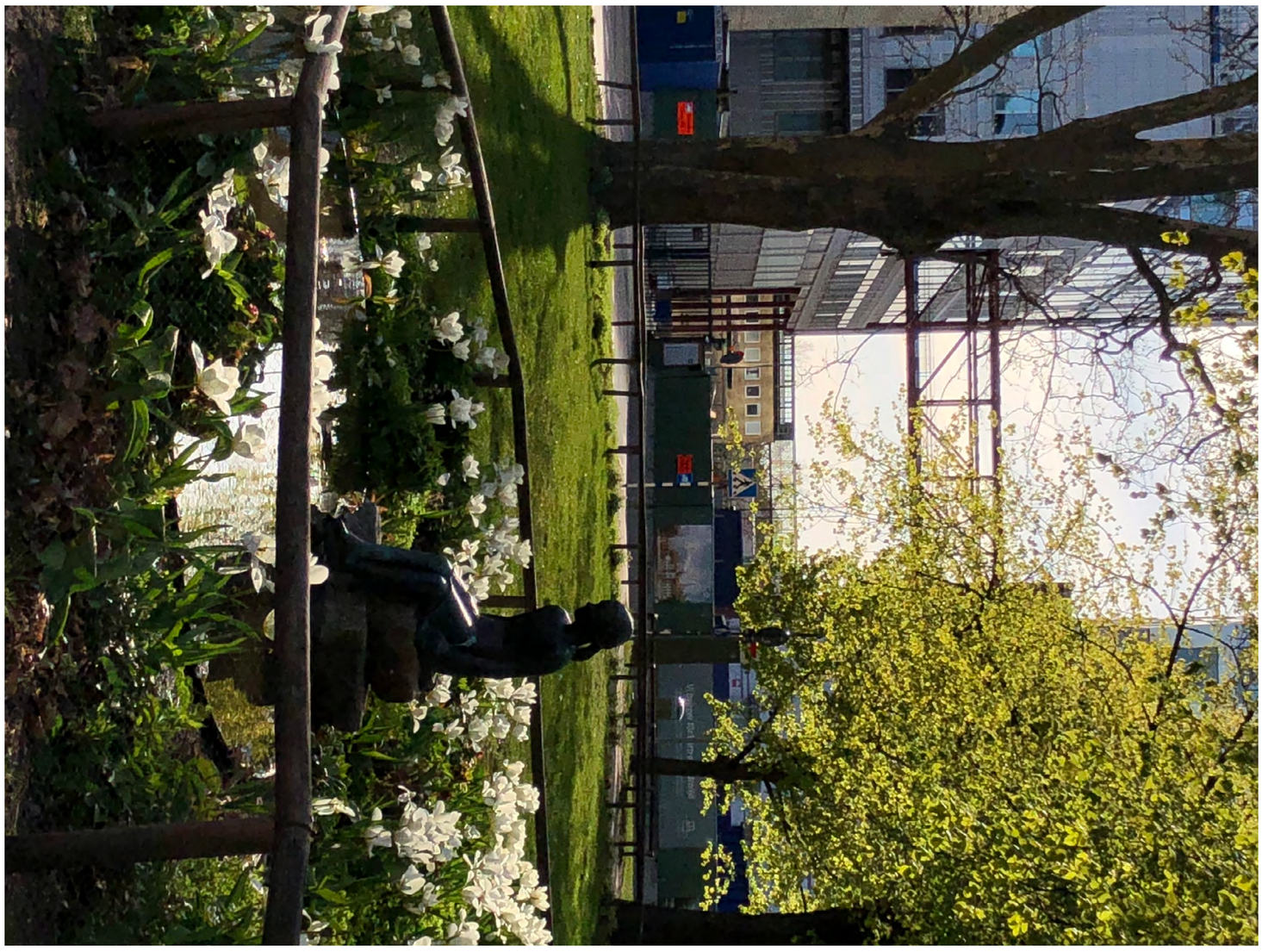


Figure 94. Future - green entrance square - connection to Pildammsparken. Plantings, blocks for seating, low trees, and shrubs.

REFLECTION



The main questions in this study are: *How to design resilient green structures in densifying hospital areas* and *what are the key challenges*. These questions have been explored through a variety of methods, through literature study, site analysis, examination of reference landscapes, historical reviews and through design. In this chapter I will reflect on my research and discuss findings and needs for further investigation. The reflection is divided into subcategories. First questions regarding design challenges in densifying hospital areas are reviewed. Then a section will follow where I reflect on my design process and design proposal. Subsequently a discussion on the method and possibilities for further research are presented.

WHAT IS THE DESIGN CHALLENGE IN DENSIFYING HOSPITAL AREAS?

The study of implications of densification and the historical, and ongoing, development of SUS Malmö has brought forward several challenges in designing densifying hospital areas. The investigation of cartographic material and history of the hospital in Malmö exposes a conflict between the aspiration for medical advancement and the protection of the outdoor environment. Since the hospital was built in 1896 there has been a constant pressure to meet the needs of the growing population in Malmö (Ersgård et al. 1996). For some time, this could be done without harming the park-like character in the area. The reason for this was that expansion was anticipated from the beginning. The location of the hospital and the pavilion style was chosen for the reason to be able to expand outwards (Ersgård et al. 1996). In 1960 the hospital was not able to expand outwards anymore, it had reached the border towards the city in the north, east and south, and Pildammsparken in the west. This led to an expansion inwards instead. The character of a house in a park drastically changed to a dense urban environment, despite former aims to keep the initial character of the hospital. The progress within medical care demanded more facilities, and led to a shift in the conceptualisation of the patient (Wagenaar & Mens 2018). With the medical progress, patients were treated more and more like objects, and efficient recovery through medication was preferred. This led to a shift in the design of hospitals, it was more efficient and functional to have one large building instead of many small ones. The outdoor environment wasn't as important anymore. The shift in conceptualisation of the patient could be a contributing factor to the transformation of SUS Malmö.

The study of reference landscapes has shed light on varying conditions for implementation of green structures. SUS Lund has met similar challenges as SUS Malmö. SUS Lund is located in a central, urban setting, and has undergone fierce densification. In Lund there have been challenges to implement green structures in the sparse outdoor environment. Monika Goras contribution to the oncological clinic park suggests targeted work to enforce green space. The challenge was in that case to persuade stakeholders and users that a forceful design would contribute to the site. SUS Malmö is currently undergoing densification and is in need of targeted interventions to preserve and enhance green space. Bispebjerg hospital is also undergoing densification. The main difference from SUS Lund and Malmö is that Bispebjerg hospital is located in a peripheral urban area, where the densifying process is limited to a specific area. The challenge in Bispebjerg is to resist further densification and to continue to preserve the living park environment.

What is required to strengthen the green environments in the hospital area in the long run then?

There are several factors that need to be considered to achieve a resilient outdoor environment, that can withstand pressures of densification. Overall, there needs to be a shift in how urban development is viewed and what is prioritised. The benefits of green areas, which are often brought forward in planning documents, tend to come second. Instead, buildings, and various forms of infrastructures are prioritised. Values perceived as soft, like nature, biodiversity and restoration, need to transcend and become as forceful as the built structures. Haupt et al. (2020) research shows that the arguments for densification used in Swedish planning practice are rarely based on scientific evidence. This paints a picture of a planning practice that doesn't want to acknowledge the negative impact of depriving green space from urban environments. Kaika (2015), Swyngendouw (1996) and Prominski (2018) all argue that we need to start looking at our environment as built-up of various flows, human, non-human, political, historical, social etc. Dualistic view creates problem in terms of valorization, one part always of higher value than the other. There is potential in conceptualising green structure differently, and see it as part of flows. If we would stop seeing green space as merely green space, but as inherent in human flows, historical flows and flows of non-human life, we might achieve something that is considered more valuable. In this research historical narratives and theory on health promoting design have been a way to shed light on historical and social flows in the landscape. It has been an attempt to articulate green structures beyond the dichotomy enforced by densification strategies.

Is it possible that the well managed gardens and parks of Bispebjerg radiated human flows, the hand of people shaping nature, and therefore added value. Bispebjerg hospital is not only a hospital, it's a public park environment, an everyday environment for people living in the

area, as well as for employees and patients. The landscape includes social flows, and flows of management, flows that seems to support resilience.

Did the cut hedges which remain in Malmö hospital summon up feelings of understanding, a human impact worth keeping? Could the answer be to entangle human, entangle time and entangle non-human, not only in the design practice but also in the planning practice? I believe that conditions for designing resilient green structures need to be favourable in an early stage, in the planning phase. For this to happen, there needs to be a shift in how we view green structures. If the various flows inherent in our lived environment were included in decision making perhaps other values would be prioritised.

REFLECTION ON DESIGN PROCESS AND DESIGN PROPOSAL

The design proposal is based on several findings from the study. The eight perceived sensory dimensions, narratives, entanglements, and the reference landscapes have inspired the proposal. The eight perceived sensory dimensions have been used as an overall concept to develop various characters, four oases, with different aims and functions depending on the need of the patient, visitor, or employee. Aspects important to include in a hospital environment. My design proposal suggests how this could be achieved, starting from the fragmented green areas left. My proposal suggests repair action.

The main challenge in designing was the small scale, there was not much outdoor space to take from. I felt reluctant to tear anything down, since that is constantly happening in the area. A continuous tearing down and building up. I wanted to explore what could be done with the area that was given. There was a challenge in that, in what could be done in an area that had been undergoing intense densification. Even if one of my goals was to create a coherent green area around the hand clinic, the narrow strips of green in between the buildings and the busy roads came with limitations. According to the eight perceived sensory dimensions there are some characteristics that are hard to achieve on a small scale (Stoltz & Grahn 2021). Cohesive is one of them. Stoltz and Grahn (2021) don't clarify how large a space is required for a cohesive character but perhaps my proposal would need a larger space to be perceived as cohesive. The paths that were important for me to include for accessibility and the idea to have a grid of turfstone does in hindsight feel like an intrusion on the little green space there is. The reference landscape, Bispebjerg hospital, was on the other hand an area where the green space felt dominant. To achieve a strong cohesive outdoor environment, as I experienced in Bispebjerg, I believe that a holistic approach to make space for green is necessary in the whole hospital area of Malmö. Change of priorities is needed to achieve this. In my proposal a design that aims for repair and capturing social flows, gives ideas on how to approach a more coherent green structure in the long term perspective.

The concept of entangling time inspired me to enhance aspects of former use in the proposal and to speculate about an alternative future for the site, where old traces and new elements coexist. Narratives and historical knowledge have been considered a tool in strengthening the identity of the site and motivate its being, its importance. The historical research and the cartographic exploration shed light on elements in the landscape that have lived on, despite the densification. Elements such as the avenues, cut hedges and the larger trees. The narratives within the landscape had a huge impact on me. For me they became important when designing. They were stories I wanted to live on in the landscape. The landscape biography method guided the research of narratives. Perhaps I got a bit caught up in them, and perhaps I perceived them literally in the design. By, for example implementing a grid structure and pergolas. These design elements became clear to me, but do they really enhance the historical layer or is it just a superficial attempt to do so? Historical narratives have potential to communicate and reach out to others. In the design I have tried to catch flows of history, as a way to bring social and historical values to the surface. An alternative approach could have been to look more into the future, by learning from the past. What are the narratives of the people of today, and what are their thoughts of the current situation? That is a layer that could be explored further, by entangling humans in the design process, as suggested by Prominski (2018). This is also suggested in the landscape biography and could be subjects for further research.

Overall the character of my design proposal became quite urban in its form. It is perhaps not as drastic a change from the current design. Instead I have worked with repair actions, ways to strategically implement green structures after reading social flows, mainly historical, within the landscape. This study provides knowledge on social flows and their potential to make a site resilient. My work is of careful character, and builds mainly on historical narratives and design for restoration. It works as a basis for discussion on how to approach these sorts of environments. There are other approaches as well, which have been seen in the reference landscapes. Monika Gora had worked drastically in her design for the Oncological clinic, and it resulted in a design which was strong and resilient. She had intruded on the existing landscape and at the same time kept key elements. She dug up soil to establish a pond and created an undulating surrounding landscape packed

with vegetation. In Bispebjerg, social flows of history and management, have resulted in resilience. Bispebjerg is an example of a site where the built environment and the green areas are in close relation to each other. It is a park for not only employees and patients, its a park for the citizens as well.

In the following subchapters I will reflect on inspiration, strengths and limitations with the design proposal in each section of the focus area.

East - the entrance

The goal with the design east of the hand clinic was to create a welcoming but calm entrance to the hospital area and to the hand clinic. The area is quite busy with traffic and is today a site for transport. In my design proposal it is still a site for transport but, there is a difference between my proposal and the current situation. With my proposal the green elements become more accessible, and pedestrians can make their way to the hand clinic without following the car lane. Instead, it becomes possible to move through a green space with clusters of trees and plantings that give colour during the summer half of the year. A square with a water element affords space for lingering. The extension of the avenue and the hedgerow are clear markers in the hospital and help frame the site. This design was quite inspired by the centre avenue in Bispebjerg hospital (see figure 17. p. 30). The avenue in Bispebjerg was also a transport lane for pedestrians, between the hospital buildings along the centre axis of the area. I wanted to establish a calm and clear path for pedestrians with opportunity to linger and pause, perhaps before a meeting or consultation. Flower beds are framed by turfstones and paths, and niches for seating are spread out along the walkway, much like the avenue in Bispebjerg. The design in Bispebjerg has been resilient, the avenue prevails with its rectangular flowerbeds and pollarded willows. The area is more than just a transit from one part to another, it is an experience to go through the area, and the design makes you want to slow down. My interpretation is that this has been one of the reasons the avenue in Bispebjerg has become resilient, it is a part of Bispebjerg that figures strongly in people´s everyday life. My goal with the design was to achieve something similar. An attractive entrance, with the ability to deliver a calm place in a busy area. A lived space.

The strength in this design is the focus on pedestrians and the reinterpretation of transportation. It is of course difficult to answer if my proposal is resilient, only realisation and time can answer that. But my interpretation is that this could be an approach to strengthen this place and make it a site that can play a part in people's everyday life.

West - shelter between building and road

The area in the west was designed to afford shelter, it aims to be an oasis that will cancel out the adjacent road through vegetation. Small pergolas create enclosed spaces for refuge. The main sources of inspiration were the oncological clinic and the former allotment gardens. The park by the oncological clinic had an undulating landscape rich with vegetation which created a soft variation of heights. The design worked as a shield from the adjacent road which created a natural border between park and street. I wanted to create a similar character, through implementation of various bushes that would create a soft undulating landscape without changing the topography. The site was formerly grazing land and allotment gardens. Pergolas which I had seen in Bispebjerg had inspired a specific site for smaller social gatherings. Allotment houses and people gathering by them further inspired a place to sit in a lush garden. The sheltered quality is a highly important quality for restoration (Stoltz & Grahn 2021). In my project it therefore felt necessary to provide a restorative site for patients. The question remains, is this design resilient and how so? The notable difference between the current design and the suggested development is in this case accessibility and shelter. To make the site more attractive the shielding shrub layer by the road has been key to achieve an enclosed space, a world seperated from outer stressors. Another improvement in the design are the pergolas, which can be easily accessed. In the current situation the existing seatings are in connection to the buildings which discourage visitors from using them. To include dense vegetation as a protective shield and an undulating, mosaic, landscape together with built structures to linger in will hopefully transform the site from an in-between space to a site that people want to visit. My interpretation is that the site, in order to persist, needs to become a part of peoples daily life. To achieve resilience in the design I believe that the aimed quality, *sheltered,* needs to be perceived strongly. Stoltz and Grahn (2021) argue that this is possible on a small scale so it should be possible to achieve in this type of environment. Another factor, I would say, is the entanglement of humans of which Prominski (2018) argues for. For a better entanglement, the public, and more specifically the users of the site should participate in the design process (Prominski 2018). To do so inspiration can be found in Monika Goras approach to show early illustrations of the design, to get an instant response from the users. Participation is an important aspect in terms of building up a social network and gain insight to lived space. To get an understanding of whether this design is resilient enough it needs to be tried out, outside of the designers room.

North - the meadow

In the north part of the focus area a wooded

meadow is proposed. It is characterised by thick vegetation along the borders and a more open character within. The design aims to draw the mind to grazing lands, and scenic pastoral landscapes. Inspiration has mainly been taken from the park Kitopatkok in Bispebjerg hospital and elements found in the previous hospital park in Malmö. Both Kitopatkok and former grazing land in Malmö hospital show similar setups. Open fields in the middle surrounded by dense vegetation. The desired character, found in the eight perceived sensory dimensions, was *natural*. The natural dimension is characterised by an (perceived) untouched nature with plants and vegetation associated with wildlife (Stoltz & Grahn 2021). As with most of the focus areas, the scale of the area was a challenge. According to Stoltz and Grahn (2021) the natural quality is easiest achieved in a larger area. Smaller spaces in hospital areas are potentially of great communicative value, many people pass through the hospital area where initiatives to implement green structures are valuable. The hospital area has a strategic locationa and the potential to reach out broadly. I believe that there are several factors that need to be improved for the site to become "natural" in accordence to the PSDs. In the current design proposal, the pedestrian paths are perhaps too notable, which creates a feeling of an urban park instead of a pastoral landscape. The area is very exposed to traffic from Pildammsvägen and Carl Gustafs väg. For a natural quality to be achieved elements of wildlife are necessary (Stoltz & Grahn 2021). Entangling non-humans in the design could have been a guideline in the design process to achieve a natural quality. Prominski (2018) argue that entangling non-humans will provide a site of coexistence between humans, plants and animals. To make non-human life visible and available is, according to Prominski (2018), a way of promoting protection of biodiversity. Biodiversity, creates values that contribute to resilience. The current proposal mainly focused on entangling time, by using a strategy of looking back at former use. That approach could have been developed further. For example by looking at the dynamic processes of change, and to create opportunities for spontaneity. How does the landscape change in a year? Over decades? The design proposal is mainly based on design inspiration from preceding landscapes, and not actually the function of it. Could an improvement be to focus more on choosing plants and design elements with wildlife in mind, creating a world where humans are not prioritised even if they can take part of it? Resilience can come about through inlcusion of non-human flows (design for biodiversity), human flows (design for communication) and future flows (design for spontaneity).

South - eat and meet

The south section is proposed to become a social spot and a connection to Pildammsvägen and pildammsparken. A small square will provide an entrance and a natural meeting spot and the landing in connection to the hand surgery will afford a place to eat and meet. The design proposal is not a drastic one, but it will hopefully drastically change the use of the area. In the current situation there is no clear function of the site, and it doesn't inspire any activities. When approaching this site elements from Bispebjerg and findings of activities in historical narratives were the main inspiration. Lunch breaks in Kitopatkok and narratives of celebrations in the preceding park sparked ideas of creating a space for social gatherings and links to the outside of the hospital. Stoltz and Grahn (2021) argue that a social quality is the least restorative for people who suffer from fatigue. This site is therefore designed with people who would benefit, and be energised, from social meetings in mind. During the design phase I considered the importance of landscapes that could become meaningful to people. Design can support spaces for everyday life. As both reference landscapes have shown, the outdoor environment is important for the users which might be one of the reasons their design prevails. The main incentive for the resilience of this proposal is that it provides a site where people can meet and create memories and narratives together. By opening up the hedge and creating a connection to Pildammsparken, more activies can be layered in the landscape. The design will support access to larger green space, and invite people from the park to the area. The design proposal provides a new entrance for pedestrians and cyclists which will increase the activity and enable a vibrant social spot.

How can design contribute to discussions of resilience?

Design can be used as a tool to create awareness and be used as an eye opener to communicate possible future scenarios. In this project, alternative future scenarios have been brought forward for a specific area within the hospital. It has been an exploration where inspiration has been taken from other hospital design projects which have succeeded in creating resilient green structures. A design with a strong expression has proven to stand strong against changing circumstances and been able to evolve together with societal changes. This can be seen at for example Bispebjerg hospital, where historical photos tell us that most of the landscape architecture has lived on since the hospital was built. When visiting Bispebjerg I felt that this was a site that was cared for, the maintenance was noticeable, a place well cared for is hard to neglect. In the section illustration of the oncological clinic, Monika Gora succeeded to visualise an idea in a way that intrigued people involved in the project. Through visualisation of a design a future scenario was imagined, strengthening the incentive of establishing it.

Design can be used to test out alternative futures. My design proposal is a visualisation of a future scenario. Perhaps it can be argued that my design looks at a close by future, a future that can be realised in a short time span. There could be a strength in that, to give a perceivable future scenario people can relate to. But to be certain the design needs to be tested out; will people answer it? A future step to this project could be to create several alternative future scenarios and try them out on stakeholders and user groups.

REFLECTION ON METHOD

This research has followed a circular process. Literature study has been interspersed with site analysis, sketching, visits to reference landscapes, study of narratives, cartographic research and design. Each study has sparked new questions leading into new research. The overarching method, landscape biography, became a guideline of which I could sketch out various angles of approach. But it was not a strict framework. Landscape biography as a method worked well because it is presented as a method that is interdisciplinary (Kolen & Renes 2014). It encourages inclusion of several other methods as well. I therefore felt confident in including other guidelines as the eight perceived sensory dimensions and designing with entanglements.

The landscape biography approach led me in on research within various fields. The many inputs were sometimes overwhelming. I often felt that I had many threads, and it was occasionally difficult to shift between them, and more so, to connect them. It was hard to narrow down the research and it might be one of the difficulties with the landscape biography method.

The intuitive walks were a way for me to get to know a site, before learning too much of its underlying stories. I photographed what I found interesting and drew what inspired me. The same process was applied in the visits to the reference landscapes. This helped me in the research and design process. I noticed that elements I had seen in the landscape were brought up in the narratives and in the drawing of maps. Literature reviews helped me formulate and understand tendencies in the landscape and the processes within. Things I couldn't formulate were supported by theory. Kaika (2005) and Swyngendouw (1996) inspired reflection of what a landscape is and how it can be viewed. Haupt et al (2020) problematised densifying strategies. Stoltz and Grahn (2021) provided arguments, as well as design principles, for restorative green space. The eight percieved sensory dimensions were helpful in the concept development. The PSDs are quite general and can be interpreted differently. This made them suitable as guidelines in the concept phase. The historical review of hospital architecture gave insight to how new ideas and medical progress have shaped contemporary care facilities.

The learnings from literature, the site analysis and the reference landscape were then brought into the design process. Early in the design phase I got stuck, I felt like the extensive research was impossible for me to summarise and include in the early stages of sketching. It wasn't clear yet what I had learnt, and what was of importance. In the beginning of the design process, I had to detach myself from theory and become practical. To overcome the block, I decided to let go of former learnings and work intuitively, just to get something on the paper. The design process helped me to sort things out. As I began to draw, mainly on maps and photos of the area, learnings from the research became clear to me. Sketching brought forward knowledge that had stuck with me. The grid of allotments, wooded meadows, hedges, and an urge to connect the green areas and make them somewhat available. Skethcing had been part of the whole process. I got to know the site, the challenges within, by drawing. This was knowledge that I couldn't read my way to or learn from reference landscapes. Sketching during site visits was a way to get to know the site, it gave insights and raised questions. It inspired me to work with social flows, of historical character, and to explore how they could be brought forward through design.

Even though sketching was helpful in the design process I felt that there were too many principles to consider. To include entanglements, the eight perceived sensory dimensions and learnings from site analysis and reference landscapes all at once was difficult. My study point out the value of social flows to make places resilient. The landscape biography has been an approach to include social flows, in form of historical narratives. It might be so that our methods need to be developed for better inclusion and understanding of social flows within the landscape. Participation is an important aspect for this. The design proposal is an artefact that can be used in further discussions, and work to unite various stakeholders.

FURTHER RESEARCH

In this project I've examined the design challenges of densifying hospital areas and how to design resilient green structures in hospital areas that undergo densification. The study has provided knowledge of factors which are important for a design to become resilient. One factor that has not been explored is public participation, entangling humans, brought forward by Prominski (2018). This idea is also strengthened by Monika Gora's story of how an engaging illustration encouraged feedback from the user group. By presenting the design proposal to decision makers and user groups, a dialog of the challenges and possible future scenarios could emerge. This would also give instant feedback to whether the proposal is

attractive enough. A further development could be to explore additional future scenarios together with decision makers and users in order to articulate long-term goals.

During the site analysis questions regarding the current users have occured. What do they think of the site? How and when do they use the outdoor environment? To better include current narratives in the landscape interviews of employees could provide knowledge of the present flows. This could be a further step in the site analysis which might bring new important insights of the area.

The concept of flows could be developed into a method suited for landscape architects. The landscape biography as method was a challenge since it required handling of a large material. A targeted method in line with Kaika (2005) and Swyngedouws (1996) concept of flows, might provide a tool for landscape architects in their profession.

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