



IT TAKES A VILLAGE

A cancer rehabilitation center
focusing on community and support for
"cancer- affected"

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Abstract

This thesis investigates how architecture can bridge the gap in Sweden between clinical cancer care in hospital environments and the psychosocial support offered by community support initiatives for cancer-affected individuals. Although hospitals do offer essential medical care and nonprofit centers such as Kraftens Hus do provide emotional and psychological support services, many cancer-affected, including patients and their loved ones, struggle with the transition between these two phases of care. Through this study, a set of architectural design strategies that foster homeliness, biophilic design, social interaction and therapeutic environments are identified via literature reviews, interviews with health-care professionals and case studies such as Maggie's Centers and Center for Kraeft og Sundhed. These design strategies form a design proposal for a rehabilitation center in Örebro, located in close proximity to the main university hospital in the city. The proposal emphasizes integration of greenspaces and daylight, as well as therapeutic environments constructed for flexible

spaces supporting rest, physical activity and social interaction. Moreover, it highlights the importance of connection to nature, health promoting environments and the smooth transitions between different spatial zones, from active to calmer areas. The project aims to create a well balanced care environment, inclusive of diverse cancer-affected individuals, while promoting healing, belonging and a more holistic approach to cancer rehabilitation, ultimately bridging the gap between medical cancer treatment and long-term psychosocial support.

Keywords: Biophilic design, Homeliness, Therapeutic environments, Cancer rehabilitation, Community in cancer rehabilitation, Social support

Dedication

Till min mormor och morfar.

Introduction

Why cancer Rehabilitation?

Every year in Sweden around 75 000 people receive a cancer diagnosis (Cancerfonden, n.d.). Even though the cancer research is improving and the mortality rate of the disease is considerably lower (Cancerfonden, n.d.), living with cancer and its side effects can be a long term illness (Harrington et al., 2010). Cancer-affected often experience post-treatment symptoms such as depression, pain and fatigue (Harrington et al., 2010). The need for rehabilitating services is evident, despite the progress in the clinical field of cancer care. Existing rehabilitation services are currently not fully serving the holistic need of the cancer-affected. This is especially the case in terms of the architectural design of the rehabilitation centers, effectively not including the psychological and physical needs of cancer-affected in the design of the spaces.



Figure 1

Sharing Coffee

Handsketch of people sharing a cup of coffee
(Authors own)

Purpose & Aim

The aim of this research is to investigate how architecture can support and promote cancer rehabilitation both through medical accessibility, creating a space for a community and achieve a home likeness in healthcare design.

Why?

Cancer affects everyone, when we are in the middle of our lives it can be hard to slow down and accept that you need to adapt your life. Many want to, or have to, continue working as usual and talk less about the disease even though their minds might be in a scramble. Combining therapeutic environments from Maggie's centers with care facilities for treatments can therefore be a stepping stone for them to interact with each other and find a community and comfort within these centers.

What?

A rehabilitation center for cancer affected- that tends not only to the direct effects of cancer, but also the indirect effects such as psychological and therapeutic needs combined with community initiatives and sense of belonging.

Who?

Cancer affected adults; both people directly affected by a cancer diagnosis but also including loved ones, whose lives also are greatly affected by the disease and its side effects.

Design Proposal

The scope of this thesis is to investigate possible scenarios in improving cancer support and aftercare for cancer affected, investigating both how architecture can contribute to nudging people towards taking part in a community, as well as investigating the different effects and possible ways of incorporating biophilic design elements. The results will be shown in a project that will take its design base from literature research and case study examples as well as personal interviews.

Academic Deliveries

The thesis will deliver an analysis of both the psychological, as well as the physical, needs for rehabilitation among cancer affected. The research aims to find what is missing in the current field and to provide a good knowledge base within the fields of biophilic design and timeliness in healthcare environments in order to support a holistic approach. The findings will be established from the literature studies, case studies as well as qualitative semi structured interviews. This foundation will in its turn provide the outlines for the design strategies and will build upon the current knowledge within the field.

Design Deliveries

The project will stem from the outcomes of the academic research and through the formulated design strategies form a comprehensive hypothetical project within Cancer rehabilitation. The final design will show elements from home likeness and biophilic design and incorporate them into a therapeutic and health promoting environment. The application to the local context and potential site will also be discussed within the proposal. The final deliveries will include floorplans, sections 3d Models and renderings that will showcase and give a comprehensive image of how the center could look like.

Finally, the combined academic and design work will work together in building onto the already existing research and knowledge base in how cancer care can develop and evolve.

Delimitations

For who?

Adults in the "middle of life". A group heavily affected by cancer diagnosis. Work, family future plans, for many a cancer diagnosis means everything gets put on hold, not only for the person with a diagnosis, but also for their families and friends (Sandén 2021). The rehabilitation center focuses on psychological wellness as well as physical rehabilitation and is aimed towards all types of cancer.

Size

The center will be on a smaller scale with the aim to treat, rehabilitate and support people affected by a diagnosis in a homelike environment. More acute treatments, normally performed at hospitals such as surgical treatments or radiation and chemotherapy, will not be included in the project.

Clinical requirements

Due to the Scale and the type of physical therapy and psychological therapy provided at the center the focus will lie within creating a homelike environment rather than focusing on the need for clinical spaces. The center is meant to support and add value to the community of cancer affected rather than being a clinical treatment environment.

Place

The project will be located in the Örebro near the university hospital. The site chosen has regulations regarding building height for part of the site maximum height for a building is 3,5m. However, this thesis aims to create atmospheric and qualitative spaces for cancer affected while this thesis acknowledges the requirements, it will not take this fully into consideration. The focus lies within creating supporting and therapeutic environments. However, the project will still be a smaller scale project with the human centric scale in mind therefore the building will emulate the scale of single family housing in its proportions.

Rehabilitation

There are hundreds of different cancer types and therefore the rehabilitation can vary depending on both the severity of the illness as well as the type. Within this project the rehabilitation will focus mainly on psychological wellness in the form of therapy rooms and creating spaces encouraging a sense of community. For physical rehabilitation there will be spaces for outdoor activity, yoga rooms and also gym equipment provided in order to encourage mobility and movement. There will also be examination rooms that will be created on a larger scale in order to be suitable for flexibility and a larger variety of treatments. However, due to the scale not all rehabilitation treatments will be brought up within his thesis.

Design elements

In this thesis the focus will lie within biophilic design, homeliness and therapeutic environments. In designing healthcare facilities such as this, there are many other factors that play into the project being feasible. However, this thesis will mainly be focusing on these themes.

Problem Description

The path through treatment and recovery is different for each person experiencing it. It can vary in treatment type, length and need for additional support. For some, the journey can look very linear, and for others it can require different steps back and forth.

The step between clinical care and community support can feel intimidating. It means confronting your illness and taking on a new identity where cancer is in the center. For some, the transition between the support and clinical care is seamless, for others it can take some time. Some seek out support several years later when experiencing late effects of cancer treatments. For others, the

initiative to seek out community support feels too overwhelming so they avoid it, even though they might benefit from the support (A Hellström, personal communication, January 29, 2025; M Seroka, personal communication, January 28, 2025).

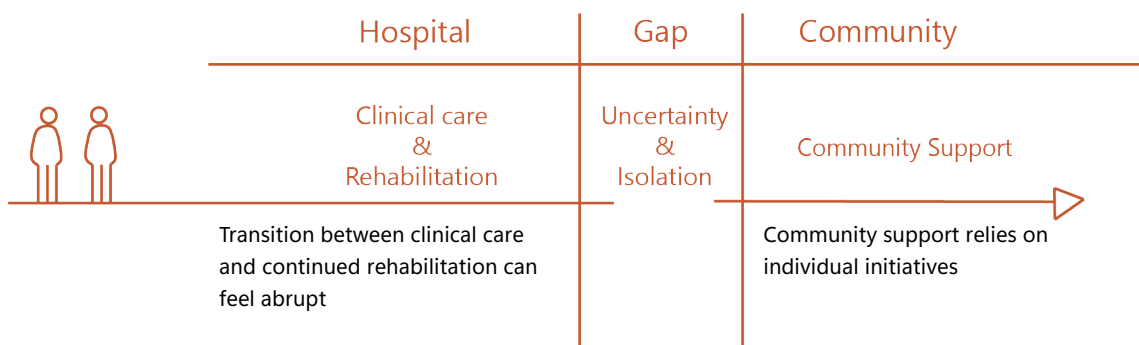
The majority of people that seek out community support after a cancer diagnosis are women (A Hellström, personal communication, January 29, 2025). This indicates that a large portion of men choose not to visit centers.

It is therefore evident that today in Swedish cancer care, there is a clear gap between clinical rehabilitation in hospitals and community support.

Figure 2

Today: A fragmented Journey

Diagram illustrating a description of the problem
(Authors own)



Research question

RQ 1: How can a cancer rehabilitation center be designed to create a bridge between medical and rehabilitation care in hospital and social community support?

RQ 1.1: What are the physical and psychological needs of cancer-affected, and how do existing cancer rehabilitation centers take these into consideration?

RQ 1.2: How can biophilic design and homeliness be employed into cancer rehabilitation centers to better accommodate for the physical and psychological needs of cancer-affected?

RQ 1.3: What architectural design strategies can be applied in order to encourage social interaction and create a sense of community.

Methods and Tools

The methodology was designed to investigate how cancer rehabilitation centers can be designed in order to include both physical and psychological wellness of cancer-affected people, as per the first research question. The study will follow an inductive approach (Bell et al., 2019), meaning it will have its basis in data collection and build theories based on the analysis of said data. The research will be of an exploratory nature, seeking to uncover new insights in how cancer rehabilitation centers can be better designed. A mixed-methods approach (Bell et al., 2019) will be utilized, combining interviews with health-care professionals to identify the physical and psychological needs of cancer-affected people with case studies and literature review to examine pre-existing theory and cancer rehabilitation centers.

The interviews will be conducted following a semi-structured interviewing method (Bell et al., 2019). This method has been chosen in order to allow for a balance between consistency and flexibility in data collection. It allows for a rigid framework while still allowing exploration of unexpected topics that arise during the interviews.

Furthermore, the reasoning for choosing experts within the field is because it enables the study to form a comprehensive view of the healthcare experience from multiple angles and does not only explore the patient, but also the collective “cancer-affected” individuals.

In regards to the case studies, the selection process of cases will aim to include projects that have incorporated elements of biophilic design and home-liness. Furthermore the aim is to find projects that are varying in size, and location, allowing for a comprehensive analysis in different environments.

The aforementioned interviews and case studies will be complemented with a literature review, which will help to contextualize and validate the previous findings. The literature review will explore several key themes.

Finally, the results will be analyzed and translated into design strategies and considerations which will help answer the research questions.

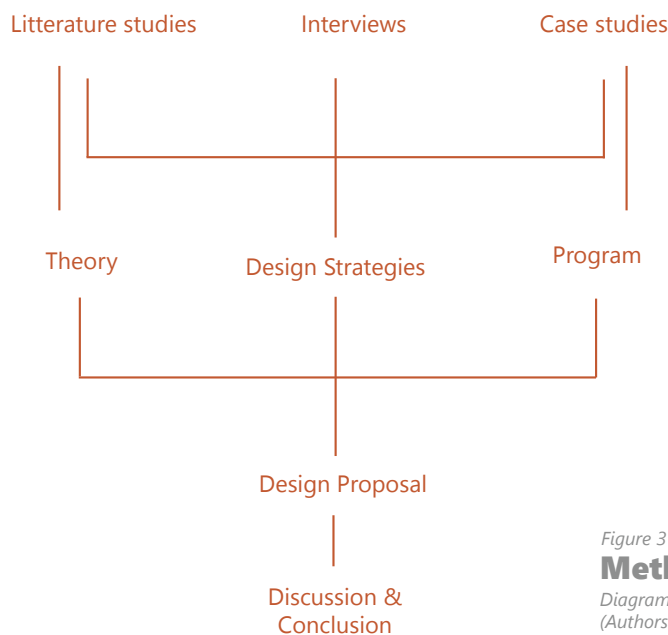


Figure 3
Methodology
Diagram illustrating methodology and process
(Authors own)

Background

Cancer rehabilitation in Sweden

Cancer care and rehabilitation Hospitals

Kraftens Hus

A common misconception about rehabilitation is that it starts after the treatment is completed (M Seroka, personal communication, January 28, 2025). In reality, rehabilitation is a journey that accompanies the patient throughout the treatment phase and continues after. The first interaction with rehabilitation starts in a clinical environment. It thereafter continues at the hospital for a limited period after completed medical treatment, after which patients are referred to "vårdcentraler", i.e. local primary care centers.

Derived from a study performed by a multi-professional team consisting of representatives from RCC Väst (Regional Cancer Center), Center for Healthcare Improvement (CHI) at Chalmers, Academy of Art and Design at University of Gothenburg as well as representatives from patient perspective, "Kraftens hus", a non-profitable organisation, even though partly funded by regional public funds, was started in 2018 as a way to better meet psychosocial needs, which in the study was found to be missing in the regional public healthcare (Hellström, 2020). There are currently four Kraftens hus in Sweden, located in Göteborg, Borås, Stockholm and Östersund. The activities at Kraftens hus aims to give emotional, social and practical support to cancer affected people and their families and close friends, This is managed through informal talks with the personnel or with others being in the same situation, lectures and workshops around e.g., nutrition, yoga and other training activities or group discussions (Hellström, 2020).

In the study, the importance of having adapted facilities creating a warm atmosphere, was expressed, and this was also the case for the first Kraftens hus in the city of Borås where the facilities were designed by, for and with cancer-affected people. However, for the subsequent three locations the facilities are rented and therefore only to a limited degree adapted for its purpose (Hellström, 2020).



Figure 4

Waiting Area

Handsketch of Waiting area in Sahlgrenska oncology department (Authors own)

Background

Cancer rehabilitation Europe

Maggie's centers

The concept of Maggie's centers started in the UK where as of today, there are 24 centers and it has also spread to e.g., Spain and the Netherlands. Maggie's centers are private initiatives with the aim of providing a complement to the medical treatment, providing information, emotional support and a place to go to for people with cancer diagnosis as well as their families and friends (Maggie's | Everyone's Home of Cancer Care, n.d.).

" The center was to be a haven, where the range of use would extend from a cup of tea you could make yourself in a friendly kitchen to attending weekly support groups led by a clinical psychologist " (Keswick, 1995).

Maggie's centers are always built with renowned architects to create an environment with light colour and contact with nature (Maggie's | Everyone's Home of Cancer Care, n.d.). Another important design element is the informality and natural conversations that occurs around the kitchen tables, which is why the placement of the kitchen is an important aspect of the design of Maggie's centers (Jencks, 2017).

Center for Kræft og Sundhet

The non profit organisation "Kraeftens bekempelse" and the city of Copenhagen have together built a center for cancer rehabilitation. The center offers dialogues and conversation groups, advice around health and exercise as well as exercise activities. It also offers crafts, gardening work and social advice etc. The center also includes a café (Arkitektur | Center for Kræft og Sundhed, n.d.).

The building is designed inspired by "evidence based research of healing architecture". The assignment for the architectural firm was to create a health care center, being more like a home than a hospital building. In order to create a welcoming environment and also to differentiate itself from the hospital, the architects chose to exclude any large reception areas, and instead created a more informal lounge area by the entrance. An inspiration for the building typology was the atmosphere of monasteries, e.g., inspiring the inner courtyard as the core of the building (NORD Architects AS n.d.).



Figure 5

Views Out

Handsketch illustrating views out (Authors own)

Sustainability

Social sustainability

Good health and wellbeing is one of the 17 UN goals in accomplishing total sustainability. (United Nations, n.d.) This is also the core of the project. World Health Organisation refers to well-being as not only the lack of disease but instead a state of overall meaning and purpose (World Health Organisation, n.d.).

Following a cancer diagnosis, the path to recovery can be long and difficult, it also extends beyond physical rehabilitation. It includes the need for emotional and psychological support. The article "Cancer rehabilitation a nordic and european perspective" written by Hellbom et al. (2011) highlights the importance of addressing not only the disease but also the side effects accompanied by it. Including both the physiological and psychological needs. Directing cancer care towards a holistic perspective in the discussion of cancer rehabilitation. Research shows that including both social and physiological needs reduces overall time for recovery and induces an improved feeling of wellness (Hellbom et al., 2011). The project addresses social sustainability by designing environments that aid in fostering social connections and research-based health-promoting spaces designed to create both emotional and physical resilience.

Ecological sustainability

One of the UN sustainability goals states that a "fundamental shift in humanity's relationship with nature is essential" (United Nations, n.d.). This refers to the need to protect biodiversity and prevent further loss of the larger forests. A large portion of CO2 emissions comes from the building sector, which makes it crucial to address how to reduce the environmental impact in early stages of the design process .

Architects and designers have a responsibility to ensure that the building and its surroundings respect the existing nature and biodiversity. The material choices, transportation and on-site construction emissions also play a vital role in the general emissions in the building process (Haines, 2010). In this project the choice of wood plays a central role in reducing the CO2 footprint.

Furthermore, the project will also take into consideration current placement of trees and green spaces in order to avoid disrupting existing ecosystems and greenery. Sustainability in this project includes both large and small scale solutions extending to the interior choices as well as the building skeleton. The reuse of furniture will also be applied in the project .

Theory

Keywords: Biophilic design, Homeliness, Therapeutic environments

Biophilic design

Biophilic design refers to the incorporation of natural design elements including views to greenery and access to natural lighting as well as and connection to the outdoors in architecture as an integral part of the project (Bengtsson, 2015). This has been proven especially useful in healthcare environments in reducing stress, anxiety and aiding recovery from different types of trauma (Joarder et al., 2009). There are multiple ways of accessing nature and experiencing the outdoors. In healthcare environments it can be difficult to adapt to a wide array of people with different levels of mobility, therefore implementing different zones in connection to healthcare facilities can be a useful tool in catering to different needs. There are four zones of access to greenery, which are connected to wellbeing, which includes both staying inside and overlooking greenery as well as exiting the building and walking around in a garden landscape (Bengtsson, 2015). The Rehabilitation Gardens of Alnarp has utilized different zones of greenery in an effort to create a therapeutic experience meant to target different groups of people. The garden layout and landscape is designed in order to promote healing and wellbeing. The garden is created and based on current research within biophilic design and landscape architecture. It focuses on rehabilitation and stress relief connected to stress related disorders, which has also proven useful in other types of trauma relief (Pálsdóttir et al., 2014). The garden is created using mixed methods and focusing on different zones with different levels of activity. It includes the Supportive Environment theory but also makes a connection to the research using the four zones of contact. The different zones are not only adapted by activity but also connected to what type of vegetation fits best for the zone (Adevi & Mårtensson, 2013). While experiencing stress related illnesses, some people have difficulties interacting or even seeing other people. Some parts of the garden are therefore shaped in wilderness/unkept-like style, whereas others are designed for interaction and activities, which are more structured and fit different interactive elements such as green houses and playgrounds (Grahn et al., 2022).

Biophilic design also includes access to natural daylight. "Light is very effective to remedy some of the root causes of depression. Bright light causes an anti-depressant response, activating the production of brain serotonin." - (Joarder et al., 2009)

Homeliness

Homeliness refers to the positive and calming atmosphere, sense of safety and comfort. Research shows that "sense of homeliness in health care contexts has been highlighted as a key contributor to wellbeing" (Duque et al., 2019). The environments play a critical role in patient wellness. Research has shown that access to natural light and views to greenery as well as calming environments that communicate a sense of familiarity lead to quicker recovery rates (Altimier, 2004). This becomes of extra importance within cancer rehabilitation where patients seek to recover from illness or psychological trauma. The concept of homeliness is not fixed to a certain place, nor is it necessarily a space that is inhabited by family but more so an inviting feeling, a sense of home and belonging. It is also suggested that a sense of home implies some sort of freedom, for example a flexibility to change and "personalize the spaces to meet changing needs" (Duque et al., 2019). Key Factors that can contribute to a sense of homeliness in interior design are soft elements and textures such as adding color and fabrics (Duque et al., 2019). For the first Maggie's Center created, the philosophy behind the building was the blueprint that Maggie Keswick along with her husband created.

"At first glance it looks reassuringly familiar, a small rectangular stone stable-block with a pitched roof. Then you look again: what is going on here? People wondering whether to come over can easily recognise and identify with the small scale and shape of the building" (Keswick, 1995).

Theory

Therapeutic environments

Therapeutic environments refer to designed spaces that emphasize the sense of calm and serenity, slowing down the pace and providing a sense of overall wellness (Roessler et al., 2021). The environment refers to both the physical and the psychological. After experiencing treatments for Cancer diagnosis regardless of the severity of the diagnosis, using therapeutic environments can serve a useful purpose in grounding and calming the mind (Roessler et al., 2021). Research has mentioned that a connection to nature and serene and calming environments have positive effects in cancer affected during rehabilitation (Roessler et al., 2021). An important aspect to consider when designing is the first impression of a building. Once we enter a building we decide immediately if we like or dislike the building just based on the atmosphere (Zumthor, 2006). The impression is made from not only what we see but also our other senses. The sound of a space makes an impression as well. The muted sound from a wooden floor makes the acoustics much more soft, altering our view of the space (Zumthor, 2006). Materiality has a great impact on how we experience space. Different compositions and combinations of materials and in different lights can completely alter how we see a room (Zumthor, 2006).

Cancer treatment and rehabilitation

"The increasing incidence of cancer, combined with prolonged survival times seen throughout the western world increases the need for rehabilitation. Diagnosis and treatment for cancer may have substantial effects on the patients' physical, psychological, social and existential well-being." (Hellbom et al., 2011).

In contrast to acute medicine and other medical treatments, rehabilitation includes a broader aspect of care, including both physiological and psychological wellness. Taking family situations, stress factors as well as chronic pain into consideration (Hellbom et al., 2011). This requires the field of rehabilitation to broaden and adopt a holistic approach when designing healthcare facilities.

The rising number of cancer diagnoses, increases the need for rehabilitation. Along with this, it has also become evident that the need for communities within cancer rehabilitation is of great importance (la Cour & Cutchin, 2013). Although the number of cancer supporting communities are increasing, there is still a lot of uncertainty in how to implement and create the best environments for this community (la Cour & Cutchin, 2013). However, meeting and talking to others in similar situations can be a valuable experience throughout the journey of cancer rehabilitation and lessen the feeling of loneliness (Vågen framåt - Kraftens hus Göteborg, 2024). In the text "A view from the frontlines" Maggie Keswick (1995) describes her own cancer journey explaining how the suffering of her loved ones was one of the hardest consequences after being told her cancer had returned for a second time.

"The diagnosis had been as hard on my family as it was for me. For oneself it is possible to accept anything; not so for those one loves. Seeing the suffering of my husband, mother and teenage children affected me physically.... Later, yoga helped me re-establish some equanimity. Counselling helped me think more calmly about my children's future." (Keswick 1995) .

This highlights the importance of broadening the scope for whom cancer rehabilitation is for and how to include and cater to different needs.

Interviews

Interviewees

Mikael Seroka, licensed dietitian and acting unit manager at Sahlgrenska Cancer rehabilitation.

Andreas Hellström, lecturer at Chalmers University of technology and vice chairman of the board at Kraftens hus.

Summary

The interviews and visits at Sahlgrenska and Kraftens hus gave thoughts both related to organisation and design. From an organisational perspective, it was clear that a design fully adapted for wellbeing is not possible for a non profit organisation, such as Kraftens hus. Another aspect which sets limitations for such organisations is that they are not allowed to give clinical care, which includes support from psychologists and professional therapy sessions. From a site perspective it is important with good access to public transport, and it is important to have the site separated from the hospital, however, there may also be an advantage with closeness to the hospital to enable walking distance for e.g., hospital personnel to the premises. From a design perspective, a central kitchen and a secluded entrance are very important factors. Textile and wooden details enhances a homely atmosphere.

Reference Project I

Maggie's Southampton AL_A Architects

Maggie's Southampton was finalized 2021, the location of the center is in direct connection to the local hospital. The preconditions of the Site had challenges in privacy in the sense of it being surrounded by a car park and being in very close proximity of residential housing (Maggie's - AL_A, n.d.). The strategy in order to both create a calm outdoor and indoor environment was to frame the site with greenery, effectively shielding views from the busy car park and housing located in proximity to the site. The floorplan is based on a Pinwheel structure dividing the different zones. The central core of the building is the common kitchen area, from where you can reach all other different areas of the building (Maggie's - AL_A, n.d.).

These insights guided my decision to

The building shape naturally creates a lot of smaller nooks both inside and outside the building shell. The serene garden landscape is effective in shielding the building from surroundings and the building acts as a divider creating a wider variety of different rooms outdoors. This can be further explored by combining the different rooms from the building shape with the theory of different levels of outdoor activity (Bengtsson, 2015).

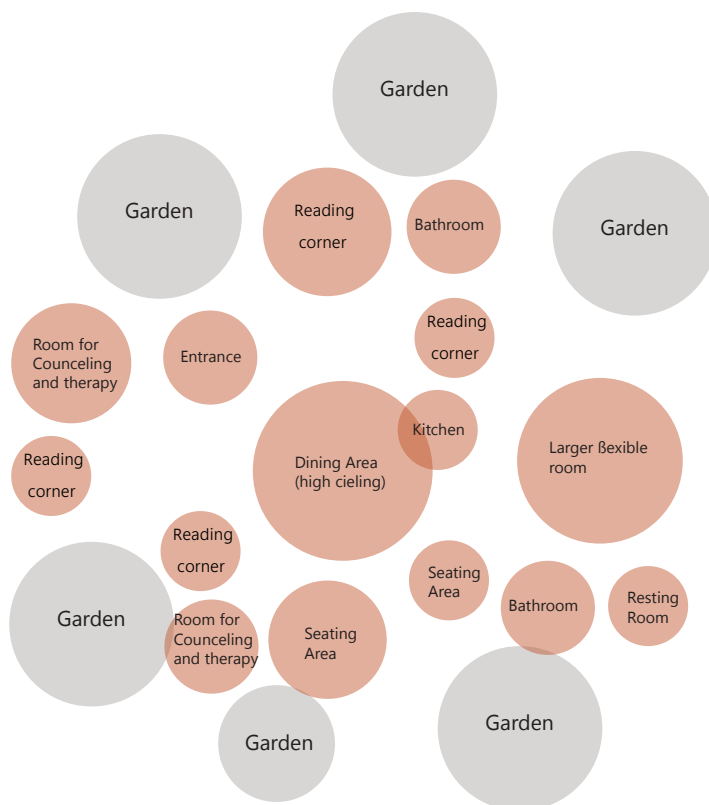


Figure 6

Spatial Layout

Diagram illustrating spatial layout of the entrance floor of Maggie's Southampton (Authors own)

Project analysis: Architect's Description

Area: 360 sqm

Location: Southampton, UK

Project finalized: 2021

Reference Project II

Centro Kàlida Sant Pau Miralles Tagliabue EMBT

Figure 7

Seating Area

Photo from Kalida Saint Pau showing Seating Area (Authors own)



Figure 8

Living Room

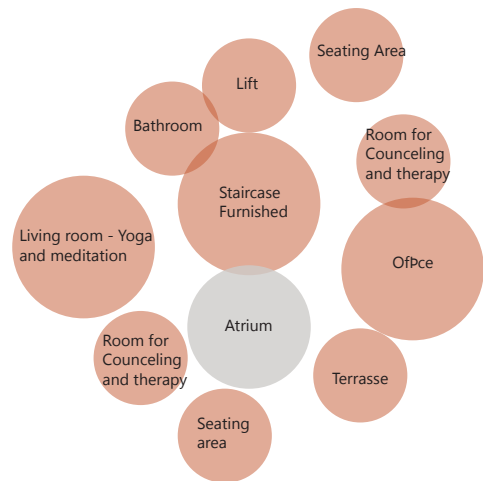
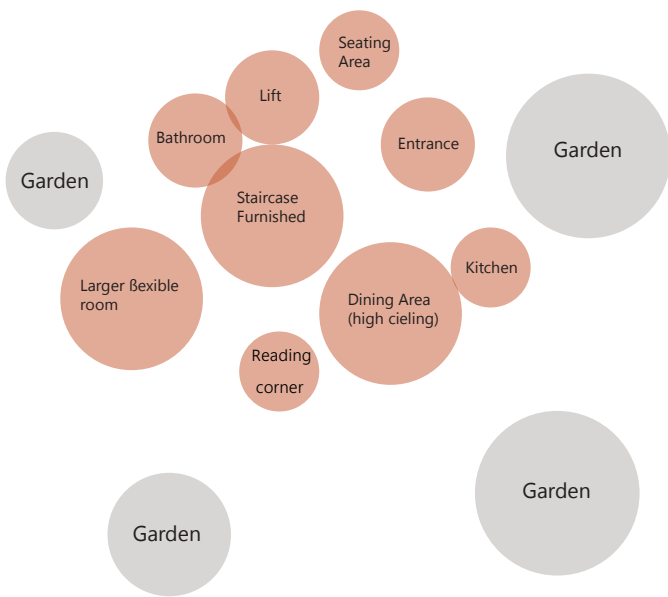
Photo from Kalida Saint Pau showing Living room (Authors own)



Centro Kàlida Sant Pau is part of Maggie's foundation, representing a thoughtfully designed cancer support center. The project is placed in the center of Barcelona adjacent to the Hospital. The proximity to the hospital offers seamless access, and close collaboration with the hospital. Patients from the hospital can visit the center after a visit and can even be accompanied by staff from the hospital.

The Spatial layout of the building allows for a circular flow and easy navigation within the building. The building layout also allows for staff to quickly notice people entering the building and thus they can respond to users' needs quickly. The interior of the building is warm and inviting, showcasing careful thought in composition and

spatial atmosphere with both furnishing and materiality. The Maggie's are privately owned and therefore they rely heavily on donations from other companies and healthcare facilities. The furniture of the center mainly consists of donated items. The furnishing is also placed scattered throughout the building which provides a homelike atmosphere to the project. The rooms are flexible in their use and furniture is easily moved around to cater to different activities. The connection to Nature is evident in the project. The facades open up with large glazed parts creating a view to the surrounding garden area. The climate also allows for all year greenery which promotes further the heavy connection to nature.



However, the project also has some challenges in its position. The view from the building is directly to the hospital which can in spite of the high internal atmospheric value become distressing for visitors of the center evoking challenging memories of treatments and can potentially cause distress. The position being placed in a quite steep slope with some distance to the nearest bus stop can also become somewhat of a hindrance to access the building. The entrance, although hidden away, is placed so that in order to enter the building you must pass by the glazed social areas. This conflicts with the idea of a so-called hidden retreat and can make visitors feel too exposed entering the building. The shape of the building is quite complex, which can limit the flexibility long term in adapting to the needs in the future. The small scale rooms also make it difficult to cater to larger groups of visitors for events or activities.

Figure 9
Spatial Layout

Diagram illustrating spatial layout of both floors of Kalida Sant Pau (Authors own)

Project analysis: Site visit
 Area: 400 sqm
 Location: Barcelona, Spain
 Project finalized: 2019

Figure 10

Kalida Sant Pau

Photo from Kalida Saint Pau showing the exterior of the building and the gazebo (Photograph taken by Author)



These insights guided my decision to

The added furniture and attention to detail adds a comfortable and warm feeling when entering the building. Just like entering a home. The placement of furniture and the freedom of moving around the decor and furniture to make room for activities further provided the homelike feeling. Making sure to fill the space with softer elements and details will be an important aspect to implement in this project. Finally, the two floors also created a homelike atmosphere, which is an integral aspect for my project.

Reference Project III

Center for Kræft og Sundhed

Nord Architects

"For some people, visiting the center is a difficult decision because it means confronting their illness. That's why it's crucial that the building welcomes them in the right way." – Morten Rask Gregersen, Nord Architects (Arkitektur | Center for Kræft og Sundhed, n.d.).

The building is on the larger scale compared to the other reference projects however the silhouette is broken down into smaller portions with pitched rooftops creating an illusion of the building being smaller. The indoor scale is varied from larger social areas to smaller rooms where you can retire and rest. The structure is also connected to the outdoor environment via terrasses in different scales as well as a central courtyard creating the very core of the building. The inner courtyard is protected from outside views creating a sense of privacy and safety. Window placements also allows for daylight to enter the building from the courtyard side while having smaller openings towards the public street.

Figure 11
Center for Kræft og Sundhed
Photo from Center for Kræft og Sundhed showing the facade facing street (Photograph taken by Author)



Figure 12 & 13

Transition Space

Photos showing the entrance space for the exercise area (Photograph taken by Author)

Project analysis: Site visit

Area: 1885 sqm plus basement 361 sqm

Location: Copenhagen, Denmark

Project finalized: 2011



These insights guided my decision to

A protected courtyard, situated away from public views and the street, provided a strong foundation in the project. The courtyard as an oasis adds therapeutic and atmospheric value.

It can be translated to different sizes to create different types of environments.

Reference Project IV

Höghult

Architects: Fabel Arkitektur

Traditional timber methods in a modern take. The material and building techniques provide a warm and welcoming atmosphere connecting with its surroundings and creating interesting mirroring spaces with keeping one of the building shapes open and the other ones closed. The windows are seamlessly placed into the timberstructure with a wooden frame. Creating a balanced facade expression.

The summer house is a smaller scale building with the aim to create a homelike atmosphere with minimal means, thus focusing on the materiality and connection to the outdoors, in order to achieve the homelike atmosphere. A summer house is like a retreat, a place where you get away from everyday worries and focus on relaxation. This atmospheric scaled down approach reminds of and can also be applied to health care settings where homeliness is an important aspect to consider in rehabilitation.

These insights guided my decision to

Utilizing the natural qualities of wooden constructions to create therapeutic and homelike spaces. The unique atmosphere that wooden buildings provide is both an homage to old building traditions and provides a feeling of comfort and warmth. Utilizing wood in healthcare settings is effective due to the natural familiarity it provides.

Figure 14

Facade Höghult

Photo showing the facade of Höghult Summerhouse (Photograph taken by Author)

Project analysis: Architect's Description

Area: 85 sqm

Location: Karlsborg, Sweden

Project finalized: 2020



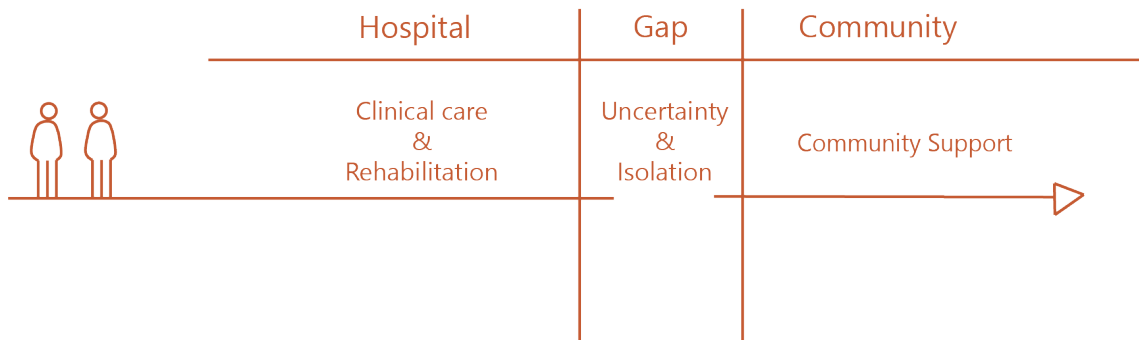
Translating Theory

Figure 15

A New Tomorrow

Diagram illustrating the gap and the proposed bridging project between clinical care and community support in cancer rehabilitation (Authors Own)

Today: A Fragmented Journey



Proposal: A Seamless Transition

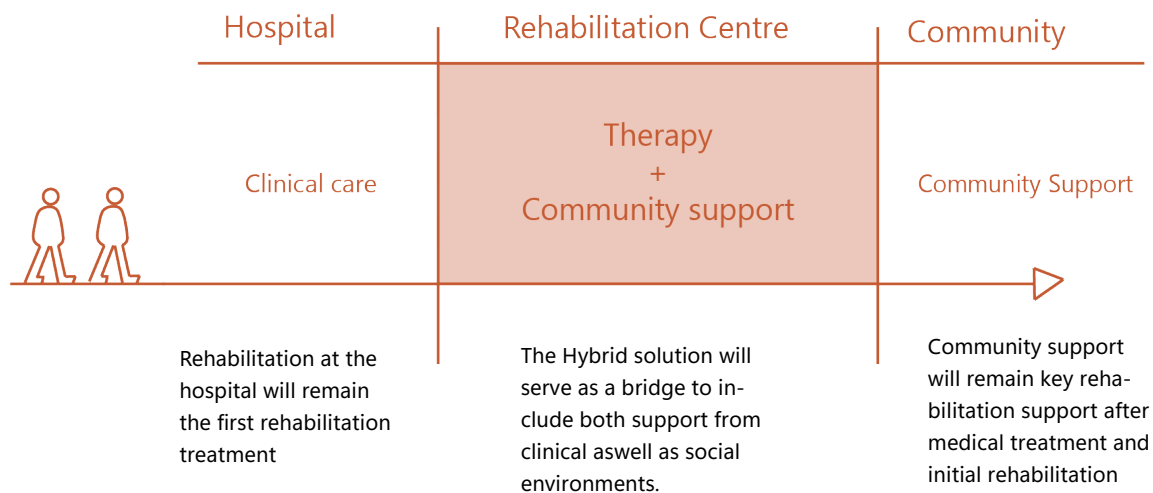


Figure 16

Translating Theory

Diagram illustrating the spatial translation of site visits, interviews and literature (Authors Own)

	Maggies Centers + Kraftens Hus + Center for Kraeft og Sundhed	Peter Zumthor + Roessler et al + Maggies Centers	Anna Bengtsson + Joarder et al + Center for Kraeft og Sundhed	Maggies Centers + Kraftens Hus + Höghult
Social interactions	Therapeutic environments	Biophilic Design	Homeliness	
Activities <i>Organisation of different activities can foster a sense of community and belonging while also catering to a broad spectrum of people</i>	Care and Integrity <i>Maintaining privacy and dignity is one of the most important aspects of care. Therefore designing the spaces meant for privacy is crucial.</i>	Natural Daylight <i>Creating comfortable environments encouraging movement and activity.</i>	Small scale <i>In order to create a atmosphere that is homelike, it is important to scale down the larger elements in order to cater to a more personal and warm environment.</i>	
Spontaneous interactions <i>The unforced conversations help foster a sense of community. The informal meetings can help lessen the feeling of loneliness; seeing other people that are in the same situation.</i>	Composition <i>Movement between the different spaces should feel natural, the shift from one room to another should be seamless. Important to adapt to levels of sound and quietness</i>	Different Zones of Greenery <i>Experiencing connection to nature from different perspectives aiding in blurring the boundary between indoors and outdoors</i>	Familiarity <i>Within the familiarity also lies the importance of distancing the familiar home environment from the clinical hospital environment.</i>	
Scale and Flexibility <i>Adapting the building to not feel empty when few people visit the center but also being able to convert and adapt rooms to hold lectures and events for more people.</i>	Light and color <i>Color and light both have a great sensory impact on how we experience a space.</i>		Materials and Furniture <i>Sense of home lies within the details. The use of textiles and colors is what we regularly pay attention to when creating our homes</i>	

Composition of a program

The following program is compiled from the theoretical framework in combination with site visits and interviews.

Therapy rooms

The need for additional support and psychiatric counseling in cancer rehabilitation is growing (la Cour, K., & Cutchin, M. P., 2013). It plays a great role in recovery and for many people this can become a lifelong commitment. The discussion on therapy rooms and counseling differs between the different organisations. Kraftens hus is a non profit organisation and they do not offer "healthcare" but instead focus only on the community support with the addition of lectures from psychiatrists (A Hellström personal communication January 29, 2025). However with the closer connection to a hospital the possibility of collaboration in a more relaxed homelike setting has advantages (M Seroka personal communication January 28, 2025). Being able to book appointments in the center can also nudge and give people a purpose to visit the center, thus exposing more people to the community. Therefore the therapy rooms and the possibility to receive active counseling in combination with the community aspects of the project is a vital foundation to the rehabilitation program.

Kitchen and Dining area - *The heart of the building*

The importance of creating a comfortable setting, encouraging a sense of community and creating a space for spontaneous and unplanned conversations. The role of the kitchen is evident both in the philosophy of Maggie's centers as well as in Kraftens hus (Maggie's | Everyone's home of cancer care; A Hellström, personal communication, January 29, 2025).

Gym and Yoga areas

The active areas help maintain a healthy lifestyle, supporting and aiding in everyday tasks. Physical rehabilitation is an important aspect of the rehabilitation process and can both encourage group activities as well as provide a foundation for the individual to build and maintain body strength (Aktiv Hverdag | Center for Kræft og Sundhed, n.d.).

Library and Reading nooks

A setting for a more quiet and calm sense of community, inspired by site visits to both Kraftens Hus in Gothenburg and Kalida saint pau center. These areas provide opportunities to be included in a communal environment but in a calmer setting. A quiet sense of belonging (A Hellström personal communication January 29, 2025). The reading nooks act

as transition spaces creating an opportunity to move away from active spaces and take a step back.

Entrance and Lounge area

The entrance is the first impression of the building, it makes an impression on how we experience the entirety of the building (Zumthor, 2006). It is important to design the entrance with the possibility of a "hidden retreat", enabling the choice to enter the building calmly into a comfortable space without being "observed", but also to have the choice of changing your mind, and exiting the building in a dignified and discrete way (A Hellström personal communication January 29, 2025).

Living room

The living room has the same purpose as a kitchen in a home: they make out the heart of the social areas. A flexible room meant for conversations and meetings, as well as spontaneous gatherings of larger groups.

Workshop space and activity room

The need to cater to different types of crowds is of great importance (A Hellström personal communication January 29, 2025). Kraftens hus is a great example of where they arranged activities and subsequently saw a larger spectrum of people wanting to visit the center, a positive trend aiming to reach out to more men who normally would shy away from visiting.

Support areas

The movement of a building is based not only on the composition of rooms but also the in-between spaces connecting them. The support areas allow for seamless transitions and creating means for accessibility.

Garden and outdoor environment

The garden environment becomes a tool that can create different settings and create atmospheric value to the project as well as to the surroundings. Adding different zones of movement caters to a broader spectrum of people adapting the level of activity from calmer settings to more active ones (Adevi & Mårtensson, 2013).

Room Program

Showing the room zonation of the project.

Public and social interaction Areas	Transition Areas	Private Therapeutic Areas
Kitchen 33m ²	Entrance 15m ²	Therapy/ Psychology room 16m ²
Dining Area 51 m ²	Lounge area 30m ²	Therapy/ Psychology room 16m ²
Living room smaller 29m ²	Bathroom 6m ²	Therapy/ Psychology room 16m ²
Larger living room 88m ²	Bathroom 6m ²	Therapy/ Psychology room 16m ²
	Winter Garden 91 m ²	Resting Room 16m ²
	Conversation room 7 m ²	Staff administration area 26 m ²
Active Areas		Reading nook/ Lounge 33m ²
Yoga/ Meditation Room 36m ²	Support Areas	Reading nook 10m ²
Gym / Exercise room 44 m ²	Elevator	Library 49m ²
Physical therapy consultation 22m ²	Staircase	
Changing room 29 m ²	Storage larger 15 m ²	Total:
Creative room 28m ²		Rooms 763 m ²
Room for activities 22 m ²		area 1015 m ²
Workshop Room 29 m ²		

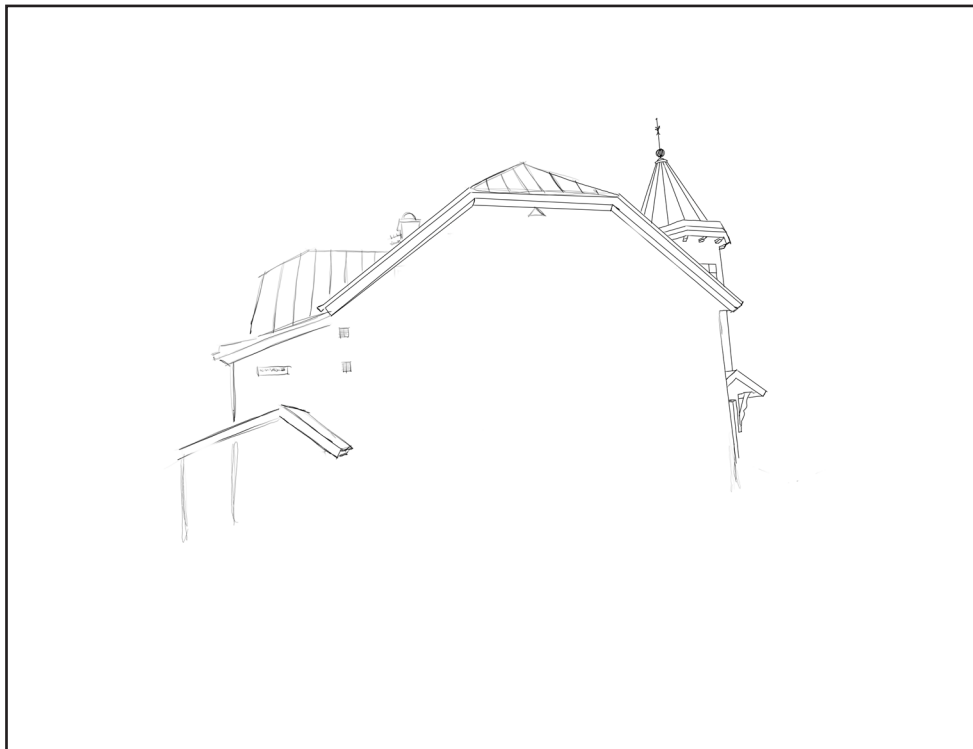


Figure 17

Roofscape

Hand-sketch illustrating roof silhouette near the site in Örebro (Authors Own)

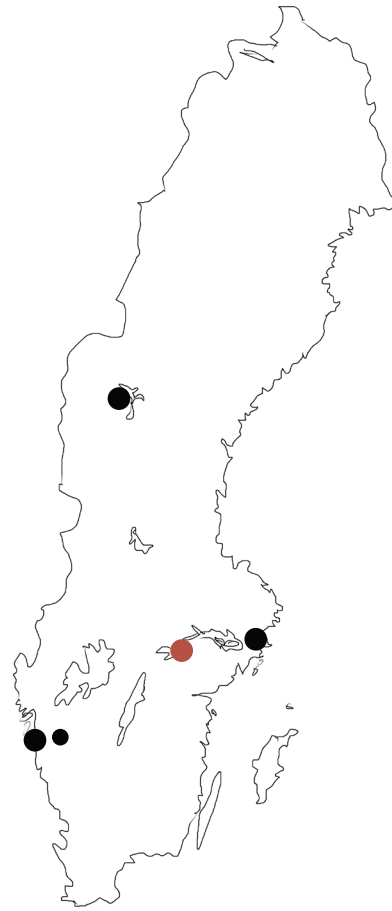
Criteria for choosing site

Scale

The site must be in a larger city with a reach to as many residents as possible. The project should also take into consideration the current locations of kraftens hus initiatives and adjust placement in order for it to be an addition to the already existing network of cancer support. The location should also be within reach of surrounding cities and communities in order to expand and reach more people.

Centrally located

The site must be located close to the hospital with an oncology department in order for hospital staff to visit the center, but especially for patients to be able to visit the center after a hospital visit, thus closing the beforementioned gap. There should be already existing greenery on or in immediate connection to site. There should also be good connection to public transportation and parking areas and it should be located near residential areas in order to reach a larger clientele. In terms of ownership, the site should be owned by municipality in order to enable and simplify collaboration with local healthcare programs.



● Kraftens Hus Locations ● Site



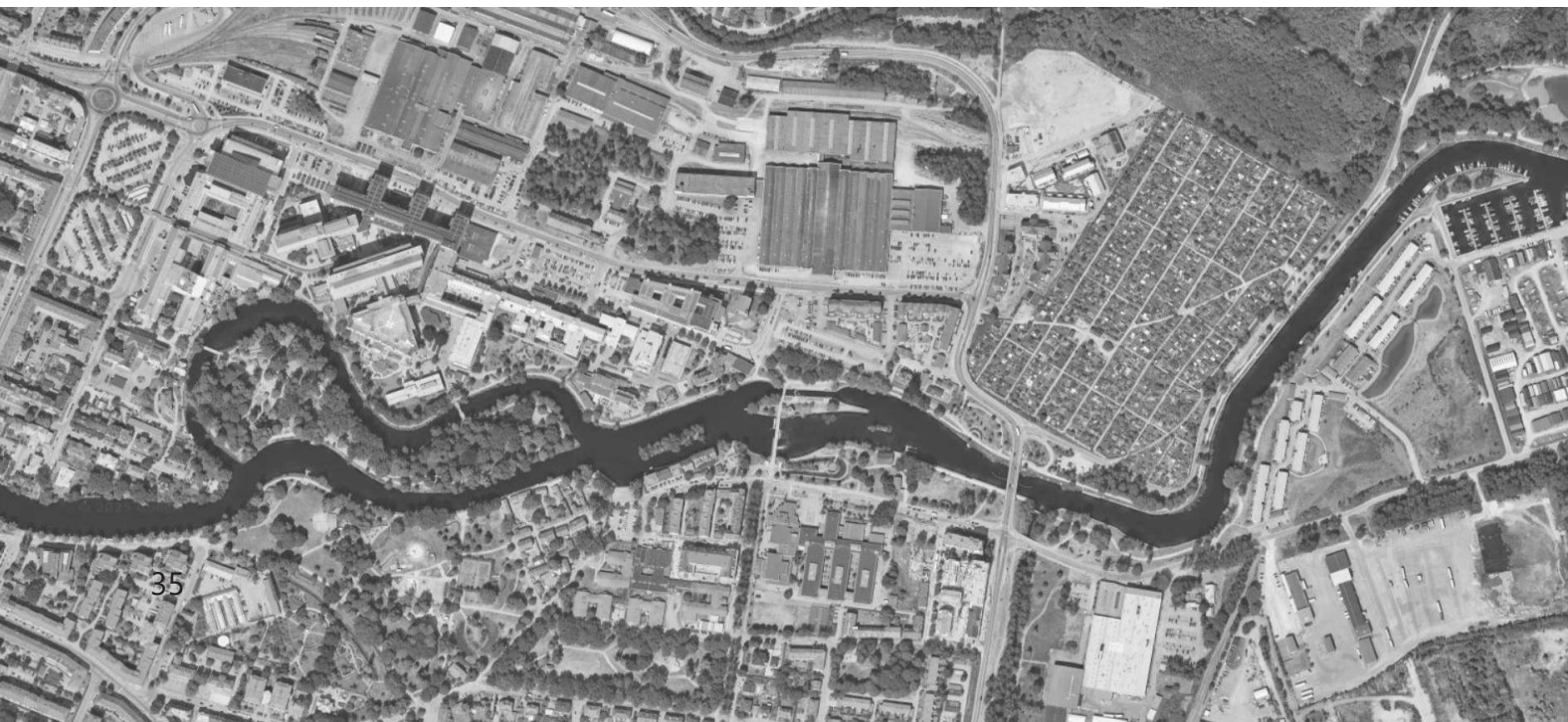
~968 ~1256 ~1544

Figure 18
Central Örebro
Map showing Central Örebro (Lantmäteriet, 2025a)



Figure 19
Kraftens Hus
Illustration of kraftens hus locations in relation to Örebro (Authors own)

Figure 20
Cancer Statistics
Illustration of Cancer statistics in Sweden per County (Statistik – Cancer I Samhället, 2023).



Site Analysis

The Site is located in central Örebro in close proximity to the Hospital. Örebro is the 7th largest city in Sweden with a total population of 160 000 inhabitants.

In addition, the choice of location is favorable in terms of the close connection with train between Örebro and surrounding cities with larger hospitals such as Karlstad, Uppsala, Västerås, Linköping and Stockholm.

Karlstad

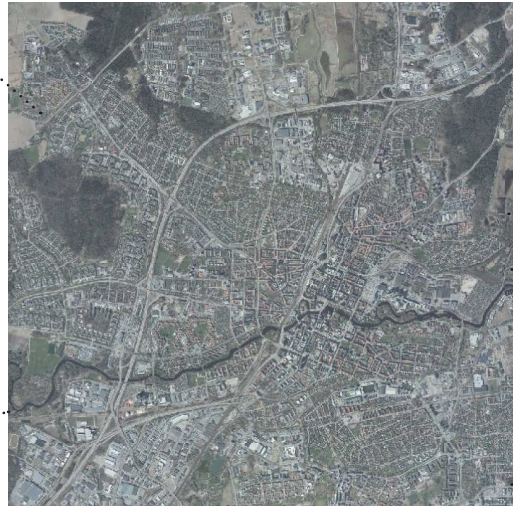


Figure 21
City Örebro
Map showing central Örebro with connections to surrounding cities. (Lantmäteriet, 2025b)

Linköping

The area called CV- staden is expanding, the ongoing plan is to expand with a residential area and at the same time restore and keep some of the older buildings with significant historical meaning. This expansion of housing will lead to larger flow of people in the area and will change the traffic patterns and walking flows.



Figure 22
CV-staden
Map showing the area of CV-staden zoomed in perspective. (Lantmäteriet, 2025c)

The Site "Slussen" is today a parkinglot however, the plans for the future is to to develop part of the site towards the west, to an educational facility for medical studies. The other part of site is planned for lower scale buildings.

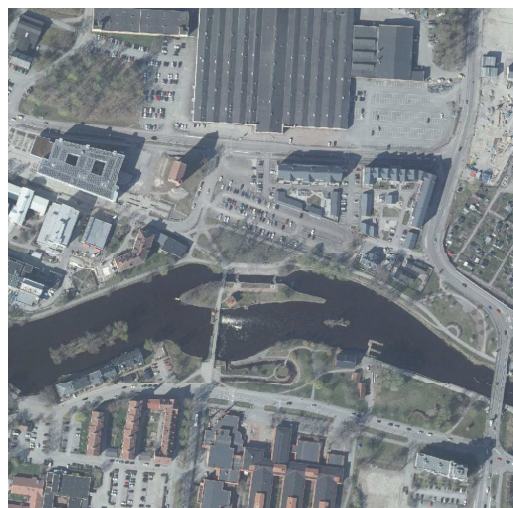


Figure 23
Slussen
Map showing the chosen site of slussen Örebro zoomed in perspective. (Lantmäteriet, 2025d)

CV- staden tomorrow

The area in Örebro is currently under development. The image displays the affected areas and its future vision including new buildings, residential and public as well as displaying how the movement through the area will look in the future.



City Center

Figure 25

Site Visit

Collection of hand-sketches from site visit (Authors own)

Figure 24

Future Development

Map Adapted from (Lantmäteriet, 2025e;White/Jernhusen, 2017).
Future developments in the area.



Site



Busstops

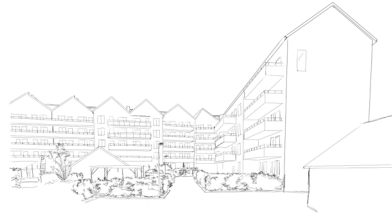


Bikepaths

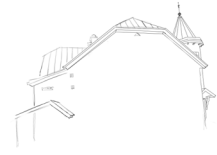




Wadköping



Housing in Slussen area



Building in Slussen area

Walking paths

New development

Hospital



First impression of site

Photos and handsketches made during the initial site visit show the surrounding buildings as well as the close proximity to the river and greenery neighbouring the site.

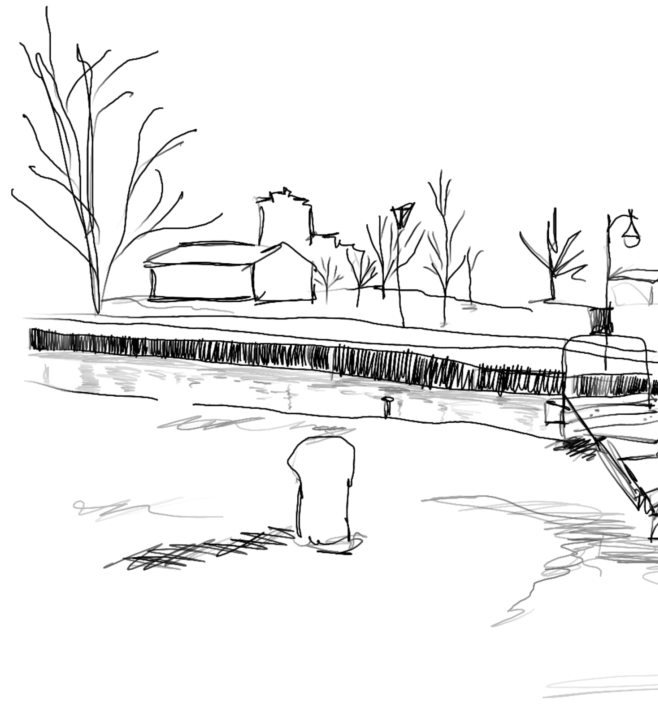


Figure 27
First impressions
Hand-sketch of walking path along Svartån (Authors own)

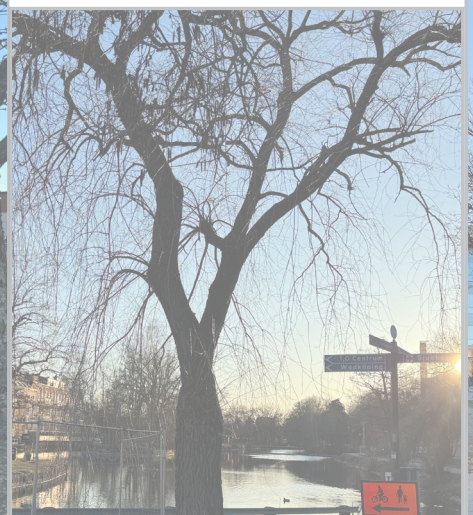




Figure 26

First impressions

Hand-sketch of Slussen (Authors own)

These insights guided my decision to

The hospital proximity creates opportunity for close collaboration. This was also a guiding contributor to placement of the main entrance. However the views should not be towards the hospital buildings, but rather towards the river and greenery in close connection to the site. The future building plans of an educational facility within medicine also provides a good foundation to how the building, even if freestanding, needs to take into consideration a future neighboring building. A strategy to work with a neighboring building is to create an offset and a parklike structure between the two plots. This will add value to both buildings.



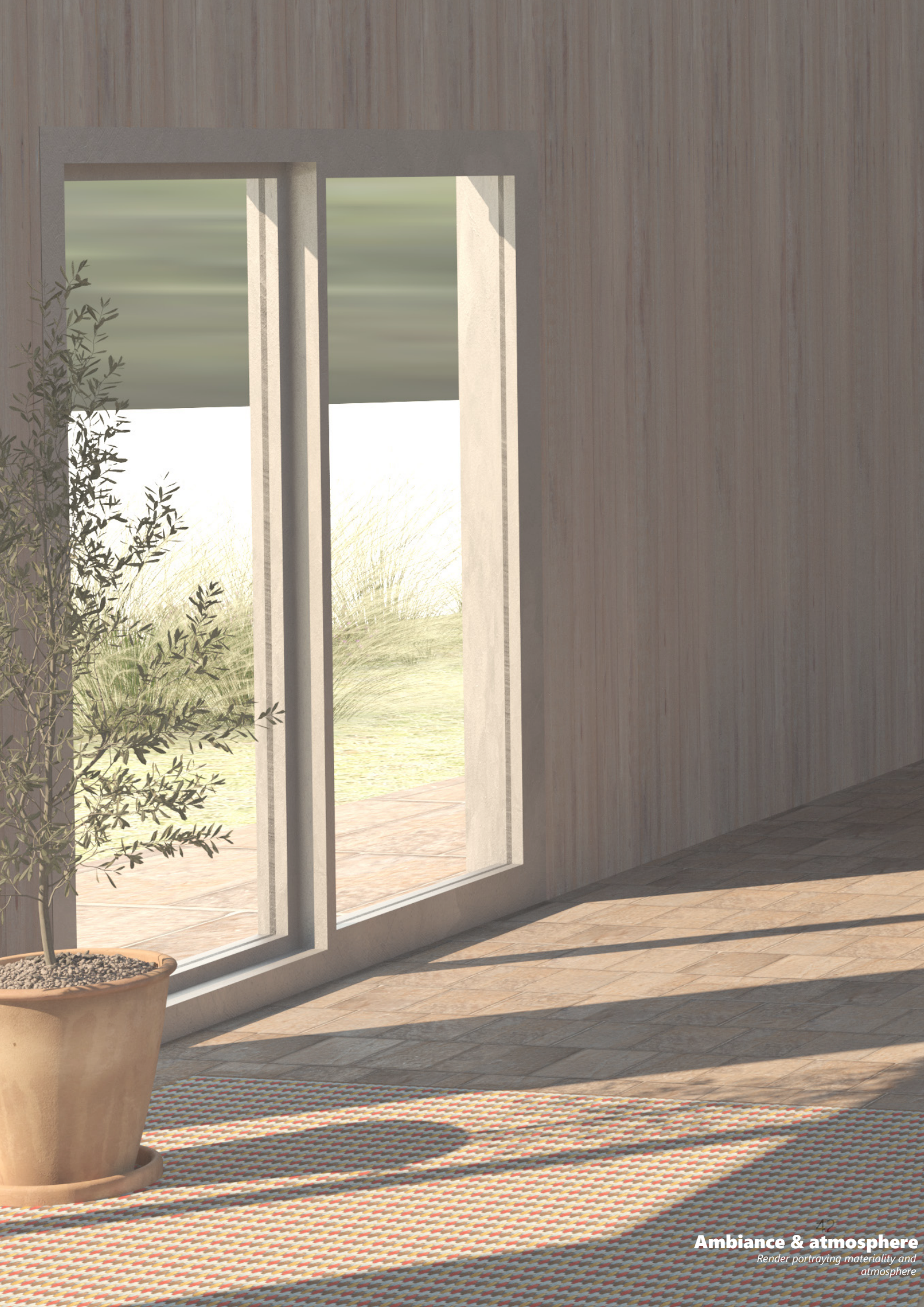
View towards CV Water tower



View towards site (currently parking area)



View along river "Svartån" towards east



Design Strategies

Compiled of Research in combination with interviews.

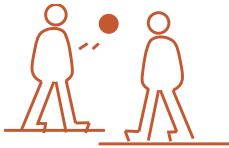
Figure 29

Design Strategies

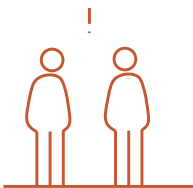
Compilation of research translated into spatial strategies guiding the project in the design moving forward (Authors own)

Social interactions

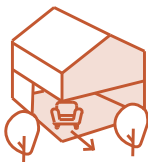
Activities



Spontaneous interactions



Scale and flexibility

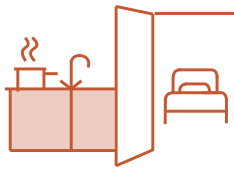


Therapeutic environments

Care and Integrity



Composition



Light and color

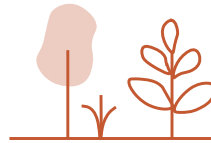


Biophilic Design

Natural Daylight

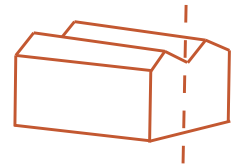


Different Zones of Greenery



Homeliness

Small scale



Familiarity



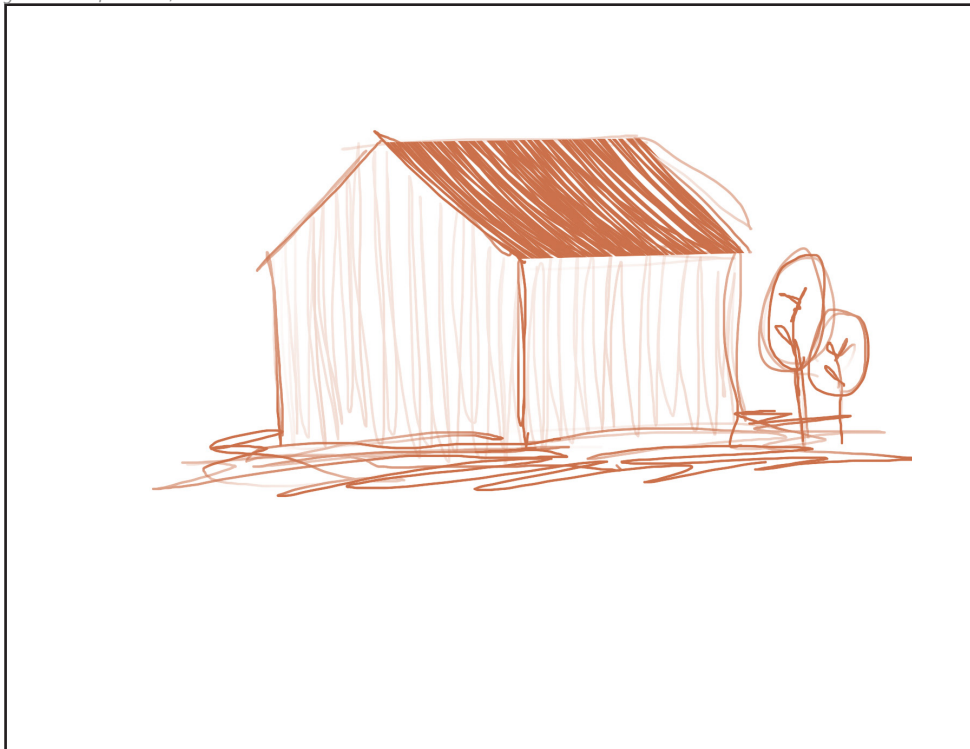
Soft Elements



Figure 30

Finding Home in New Places

Hand-sketch illustrating the nostalgic notion of a home,



*A space that is neither the clinical hospital nor the personal comfort of a home, yet deeply necessary, **a third place of healing**. A space where a simple hello or a chat with a friend can create an environment where people gather, belong and feel seen. A bridge between treatment and recovery.*

Healing is not linear, it allows for pause, return and reflection. And sometimes, it needs a helping hand, a village of support.




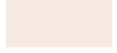


Site Flows and Connections

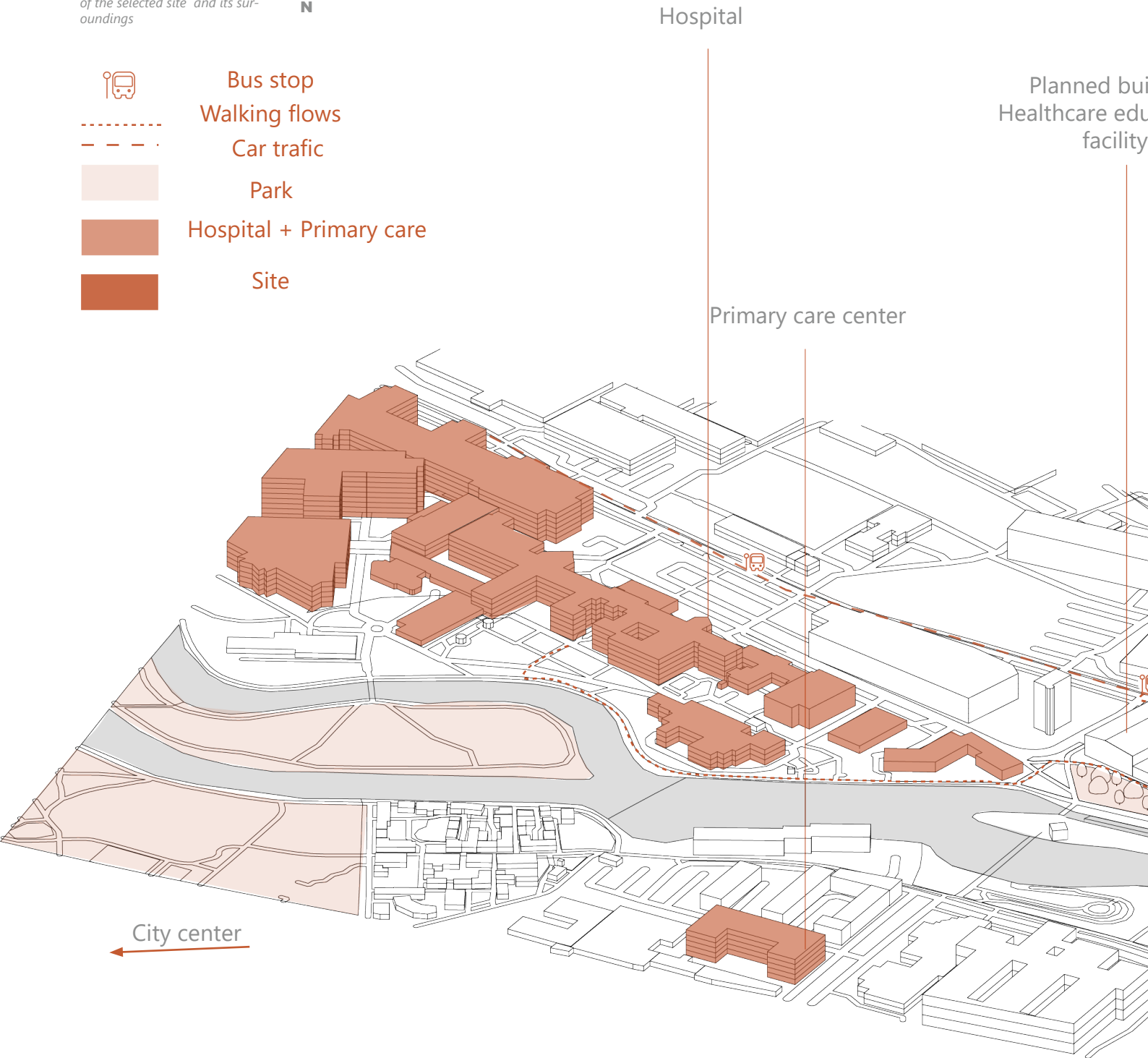
Figure 31

Context

Diagram illustrating the context of the selected site and its surroundings



-  Bus stop
-  Walking flows
-  Car traffic
-  Park
-  Hospital + Primary care
-  Site

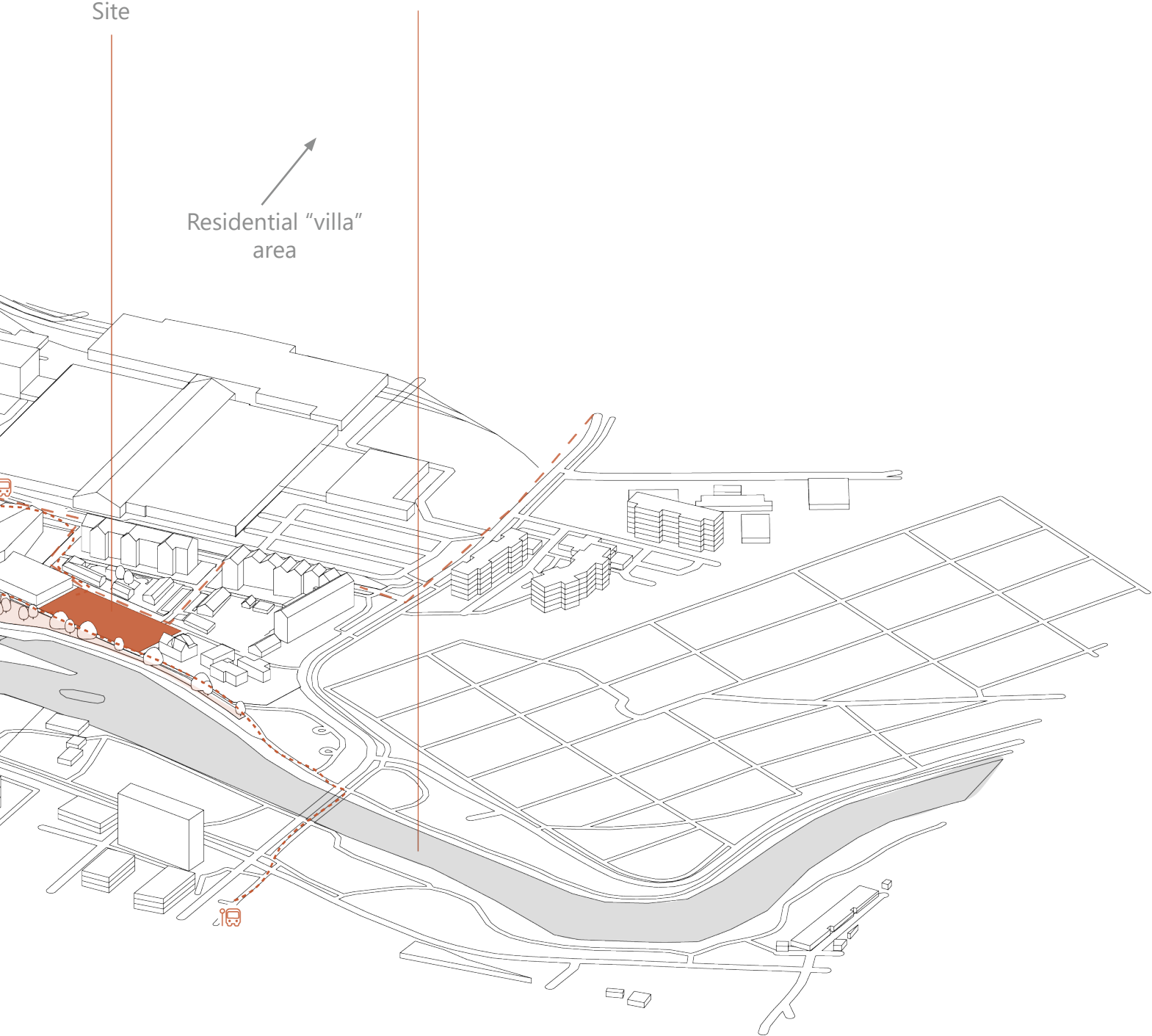


lding
educational

Svartån (River)

Site

Residential "villa"
area

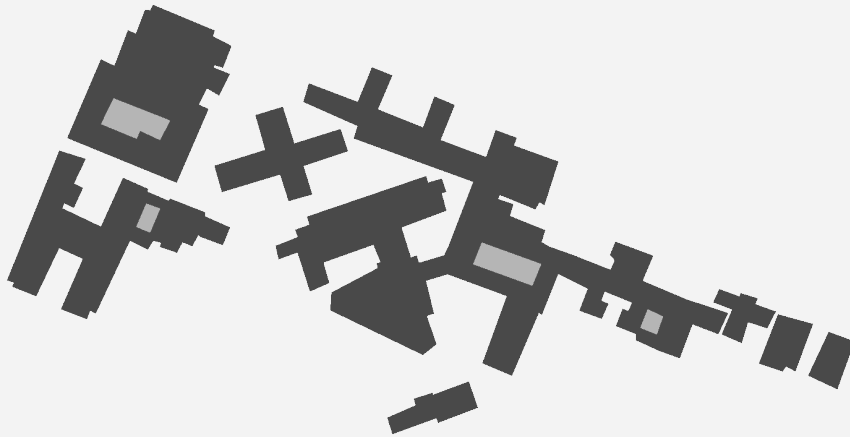


Volume Development

Figure 32

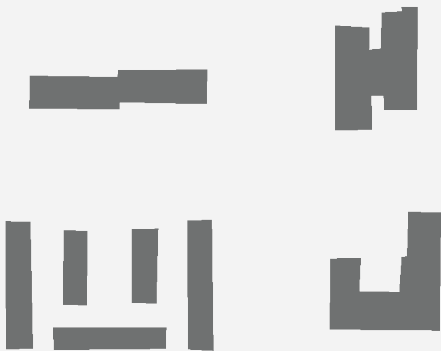
Volume Analysis

Diagram illustrating a selection of building footprints near the site. All buildings are located in the center of Örebro (Authors own)



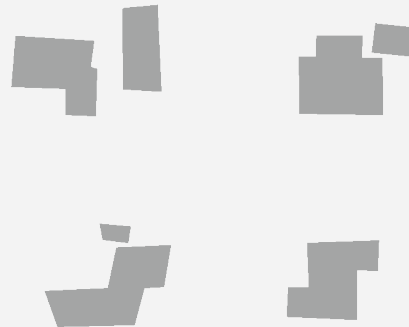
Complex shape structured divided into different buildings depending on purpose. Navigation can be difficult. The Outdoor areas are for greenspaces or parking areas.

Multi Unit Residential Housing Typology



Lamellas combined with either connectors or courtyards creating different outdoor spaces between the buildings. The offset of the lamellas each gives the outdoor space different levels of privacy

Single Family Residential Villas Typology



Clustered shape with core combined with additional angles. The corners create good opportunity for different outdoor spaces. Comfortable flow and easy connection to all areas within the building.

Building Size and shape

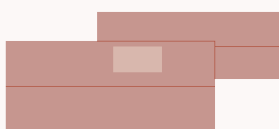


Internal core and connections



Proposal Cancer Rehabilitation Centre Typology

The shape is made to be simple and familiar, human scale, Replicate Housing rather than a public building.



Combining the lamellas for size and function but keeping the clustered core for social areas. The lamellas connection in the center. The shape provides both unique opportunities for outdoor spaces as well as possible division and seamless flows for the program.

Figure 33

Step by step development of volume

The step by step development of the building volume is described in the volume diagram below.
(Authors own)

- "At first glance it looks reassuringly familiar, a small rectangular stone stable-block with a pitched roof. Then you look again: what is going on here? People wondering whether to come over can easily recognise and identify with the small scale and shape of the building." - Maggie Keswick

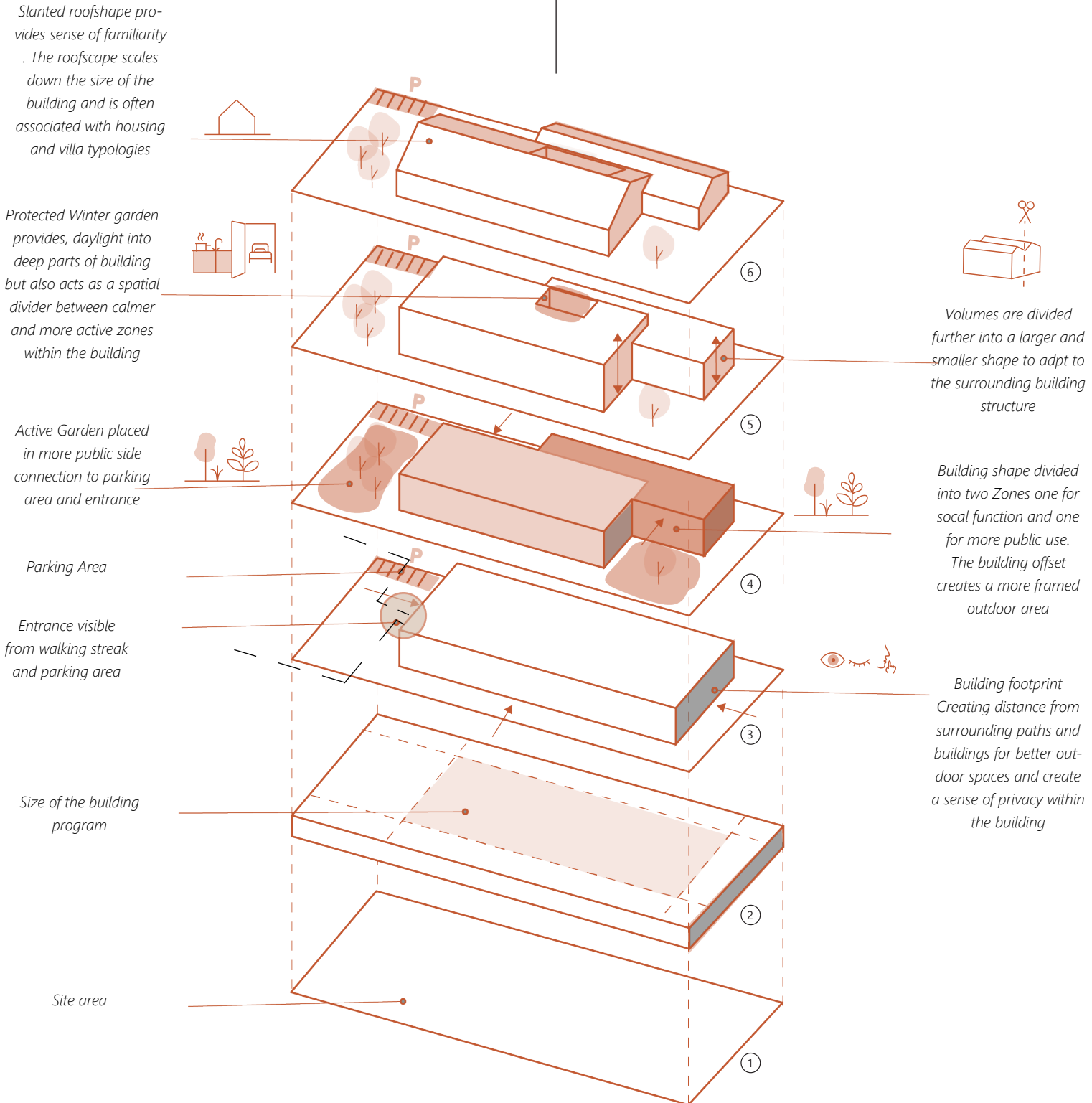
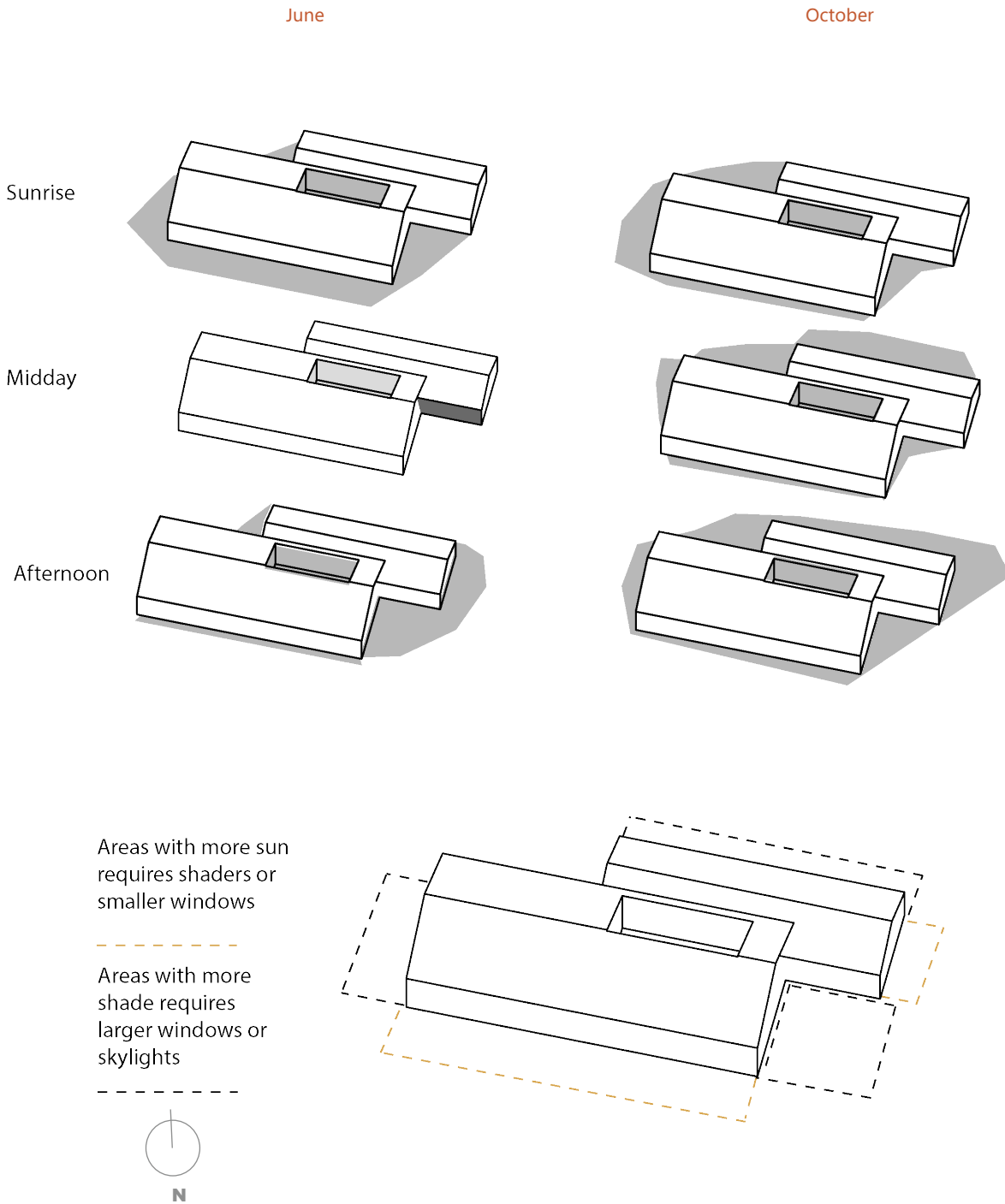


Figure 34

Daylight Diagram

Diagram illustrating the building in relation to the sunpath influencing placement of windows and openings in the facade (Authors own)



Garden and Landscape

Alnarps rehabilitation Gardens

The philosophy of Alnarps rehabilitation gardens developed by the Swedish University of Agricultural sciences, was derived from combining various biophilic design theories. The gardens explore nature and landscape design as a tool for therapy and rehabilitating practices. By exploring different levels of activity in the garden landscapes the so called rooms are adapted to different needs. There are calmer more therapeutic areas used for rehabilitation in various stress-related disorders as well as more social areas used to treat different kinds of trauma (Pálsdóttir. et al 2014).

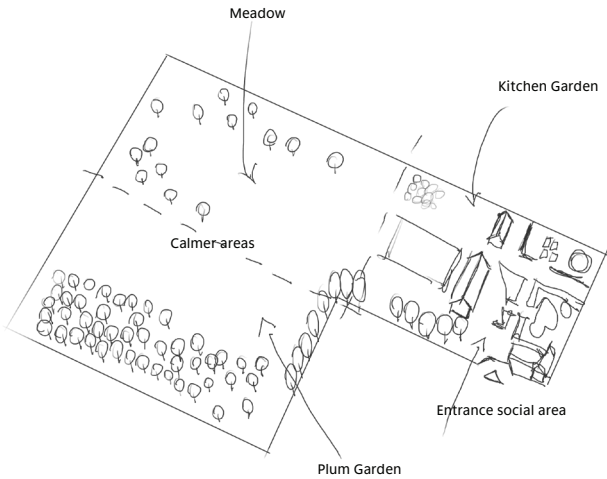


Figure 35

Alnarps Rehabilitation Gardens

Hand-sketch illustrating composition and layout of Alnarps rehabilitation with zonations (Authors own)

Zone	Alnarps Rehabilitation Garden	Cancer Rehabilitation garden Layout
Social / Active	Entrance	Entrance
Sensory / Structured	Plum / Kitchen Garden	Fruit tree Garden
Therapeutic / Silent	Meadow / Calm	Meadow / Winter Garden

Figure 36

Implementation Strategy

Diagram showing zonation in relation to alnarps and the implementation of the garden landscape of the cancer rehabilitation project (Authors own)

The Design of the Cancer rehabilitation Center is inspired by the structure of Alnarps rehabilitation gardens. The placement of the structured parklike areas are in close connection to entrance and public streaks. The calmer areas are places adjacent to the buildings therapeutic Zone. effectively dividing the garden landscape into different levels of activity and movement.

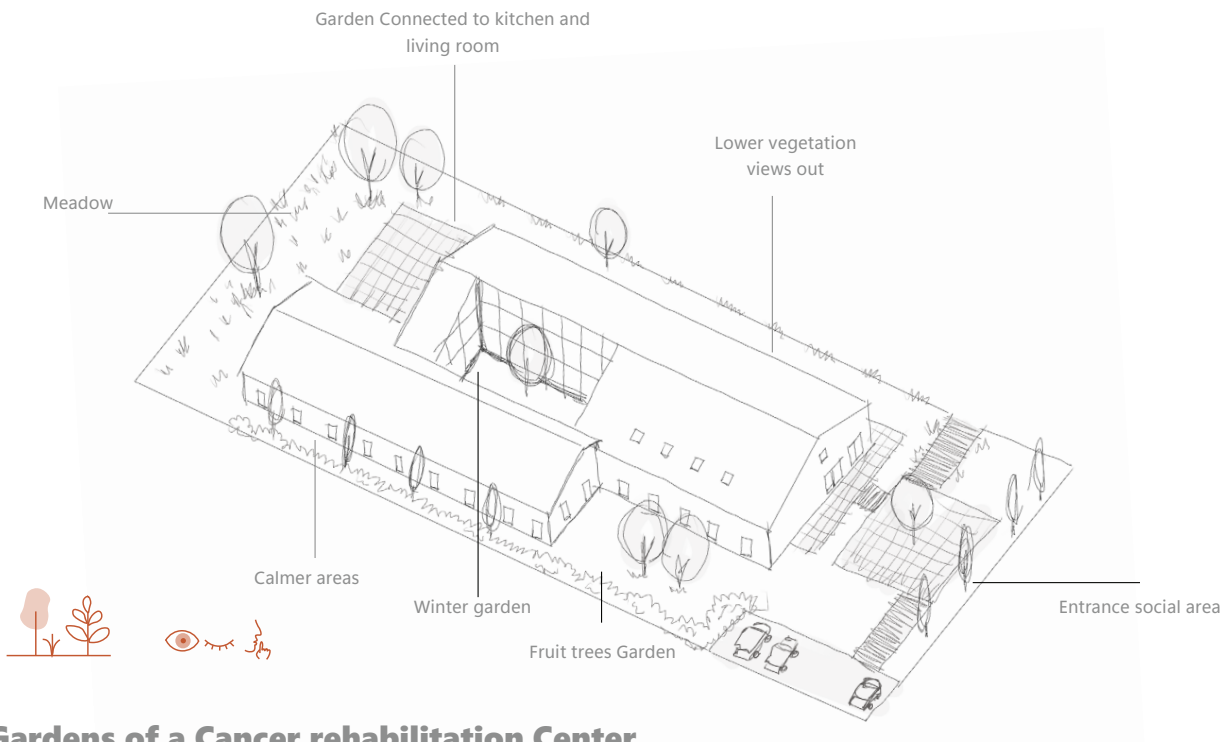


Figure 37

The Gardens of a Cancer rehabilitation Center

Hand-sketch showing the placement and composition for the projects garden. (Authors own)

Garden and Landscape

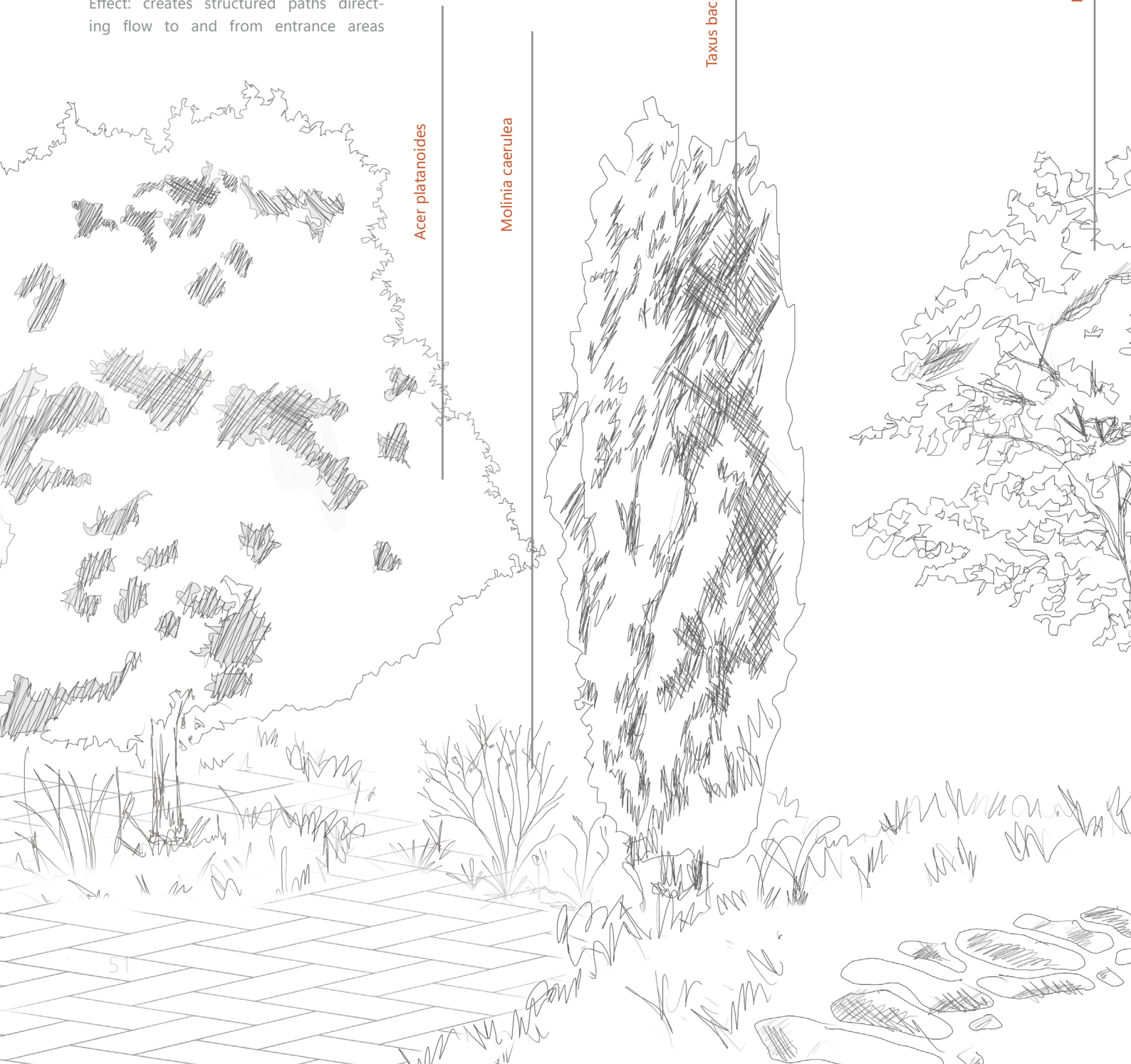
Inspired by the philosophy of "Maggies centers", "Alnarps rehabilitation gardens" and "From Experiences of the Outdoors to the Design of Healthcare Environments" the Importance of designing the surrounding Greenery Becomes a vital tool that helps create therapeutic and calming environments. The essence of the literature and site studies emphasizes the importance of catering to different needs and thus creating different zones of greenery and outdoor environments with different purposes in mind. The Garden will be based on Swedish climate with an all year perspective focusing on plants that can survive winter seasons.



Public areas

- Park structure
- Plantations rational with paved paths

Effect: creates structured paths directing flow to and from entrance areas



Acer platanoides

Molinia caerulea

Taxus baccata

Malus domestica

Figure 38

The architecture of Vegetation

hand-sketch showing the vegetation strategy, the gardens focusing on the atmospheric composition and experience walking through the landscapes of the gardens.

Semi public areas

- Fruit garden
- Mixed heights and focus on creating comfortable and framed garden areas

Effect: Showing that the areas are not public, it is a more homelike setting and will be used by visitors of the center.



Therapeutic zones

- Meadow like structure
- Natural placement of plants focusing on creating effortless vegetation mimicking the natural landscapes of Alnarp's rehabilitation gardens.

Effect: It provides a comfortable setting, allowing to connect further with nature.

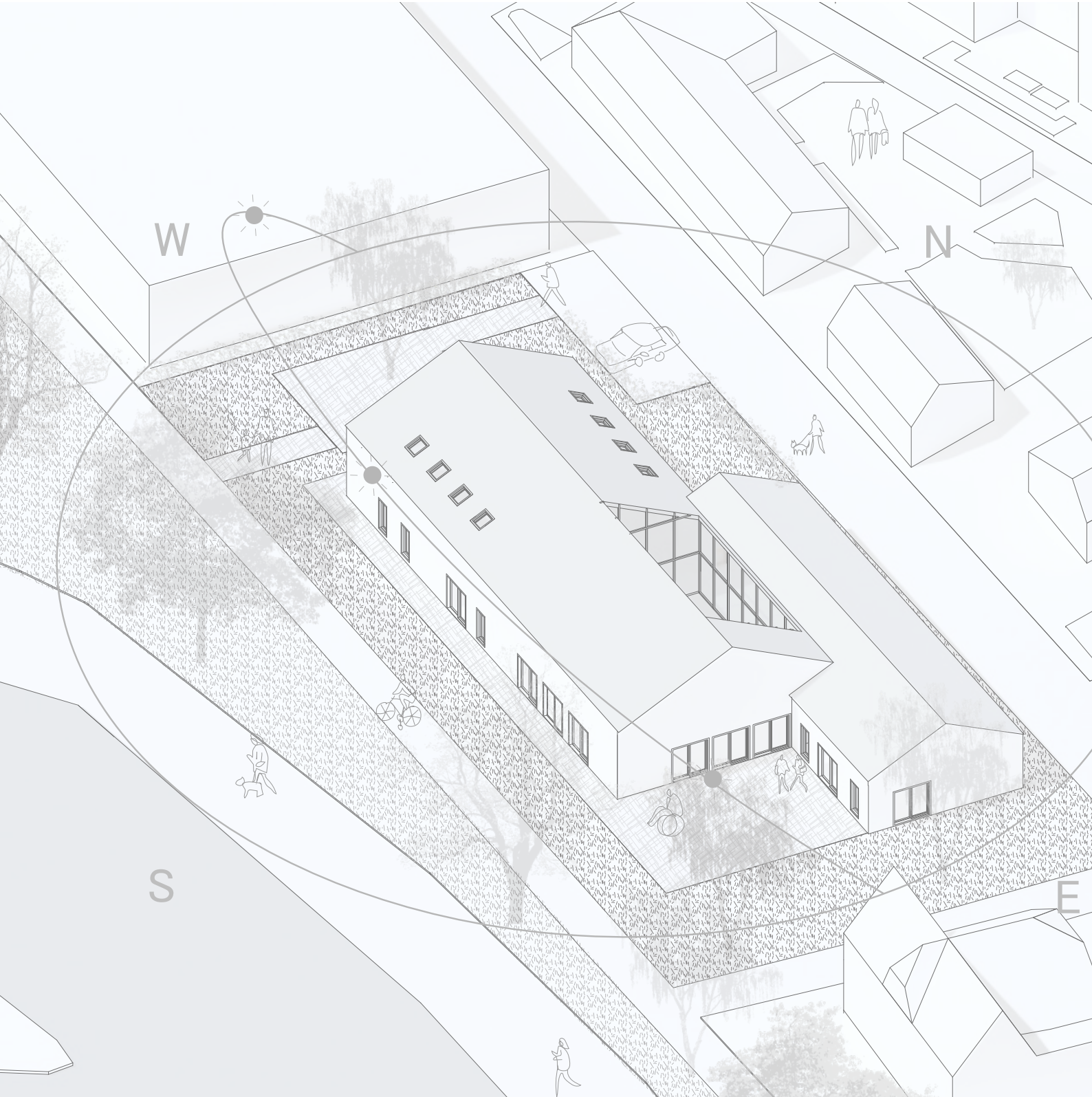


Site & Context

Figure 39

The neighborhood on a regular monday

Isometric illustration showing the surrounding context including buildings, roads and vegetation in direct connection to the center. The illustration also shows the area populated for scale.



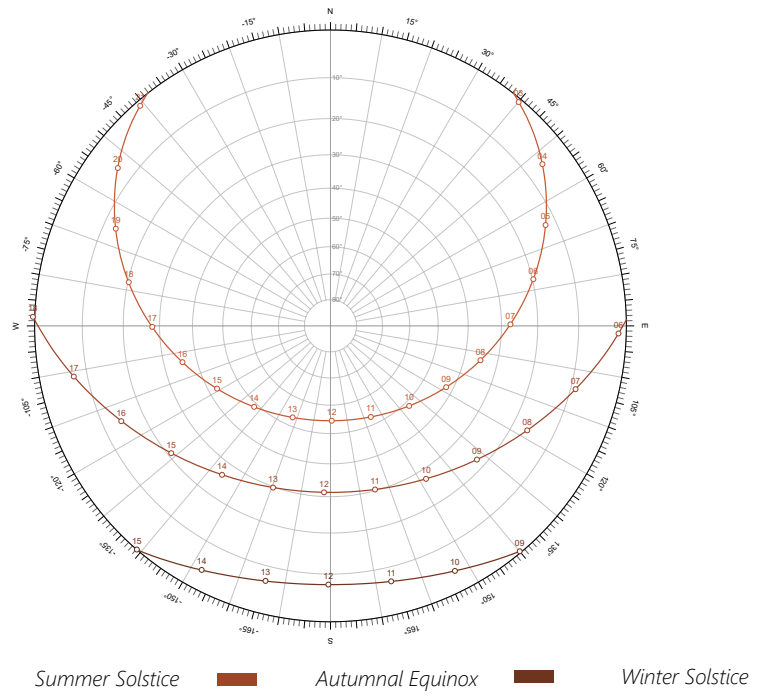
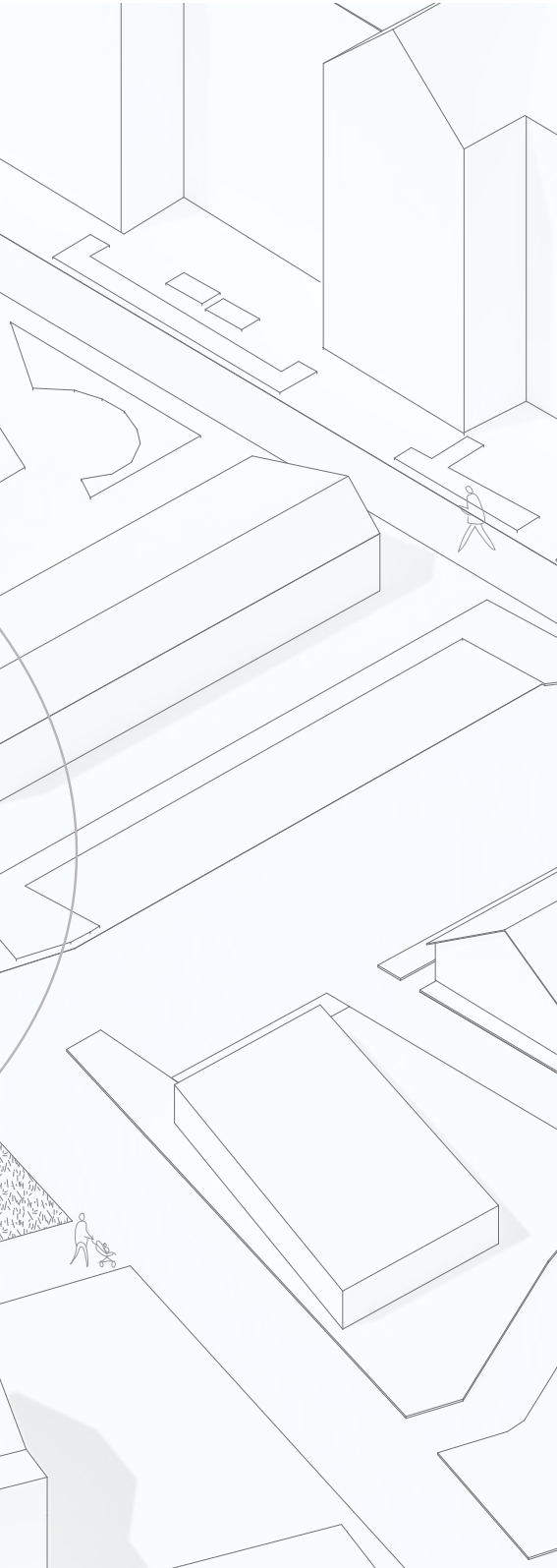


Figure 40
Örebro Sunpath
 Sunpath diagram during Summer Solstice, Autumnal Equinox and Winter Solstice (SMHI, 2025a)

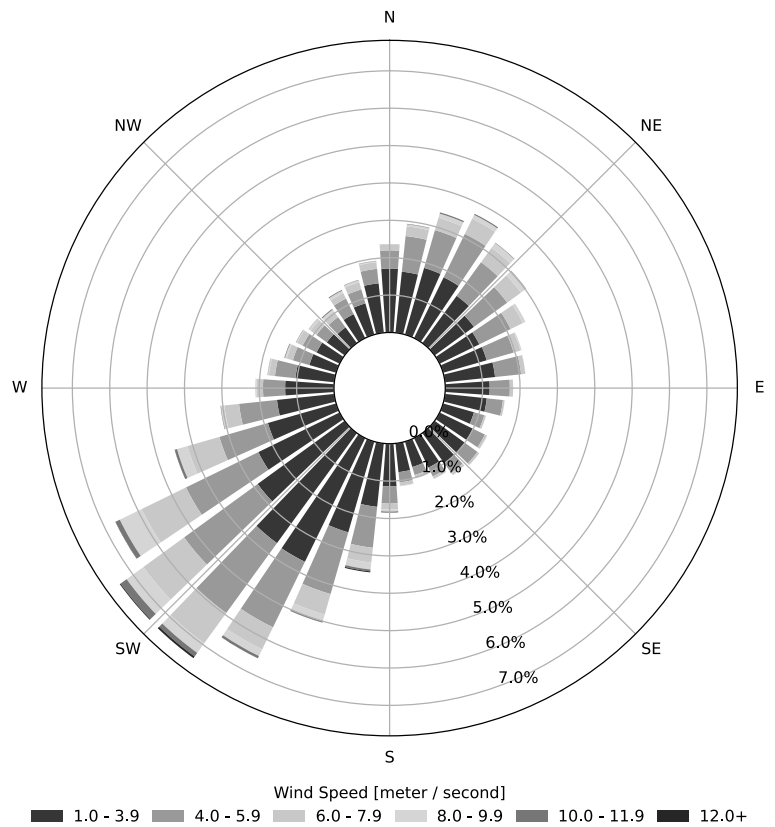


Figure 41
Örebro Wind Rose
 Diagram showing the wind speed and direction in Örebro from January 2020 to January 2025 (SMHI, 2025b).

Entrance

The Main entrance is placed on the short end of the larger building, clearly visible from both walking streaks along the water as well as parking areas and walking routes from the nearest bus stop. The Area is a parklike structure with tiles creating easy and accessible paths to the entrance of the building. The paths are framed by vegetation in varying heights and benches placed along the structure. This makes the space welcoming and allows for a nice seating area while waiting for transport such as taxis. The parklike structure does not only create a micropark in direct connection to the building but will also act as a bufferzone in the scenario of a neighboring building. Thus providing a shared outdoor space and creating a sense of distance and privacy for the cancer rehabilitation center.

Figure 42

The Journey starts here...

Image showing the view from the parking area approaching the main entrance of the building. Moving through the park-like structure introducing the building softly (Authors own creation)



Garden

The Garden connected to the social areas is a flexible space that can be used for various different outdoor activities. There are planting boxes placed next to the area, allowing for visitors of the center to take part in keeping the building running, and also making sure to keep up with more simple everyday tasks in a calm non clinical setting.

Figure 43
Garden area

Image shows building Facade and Garden from the south east.
(Authors own creation)

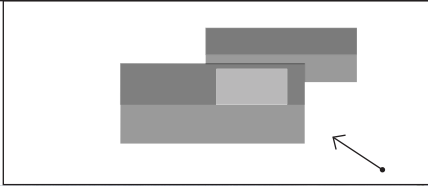


Figure 46

From the Loud to the Quiet

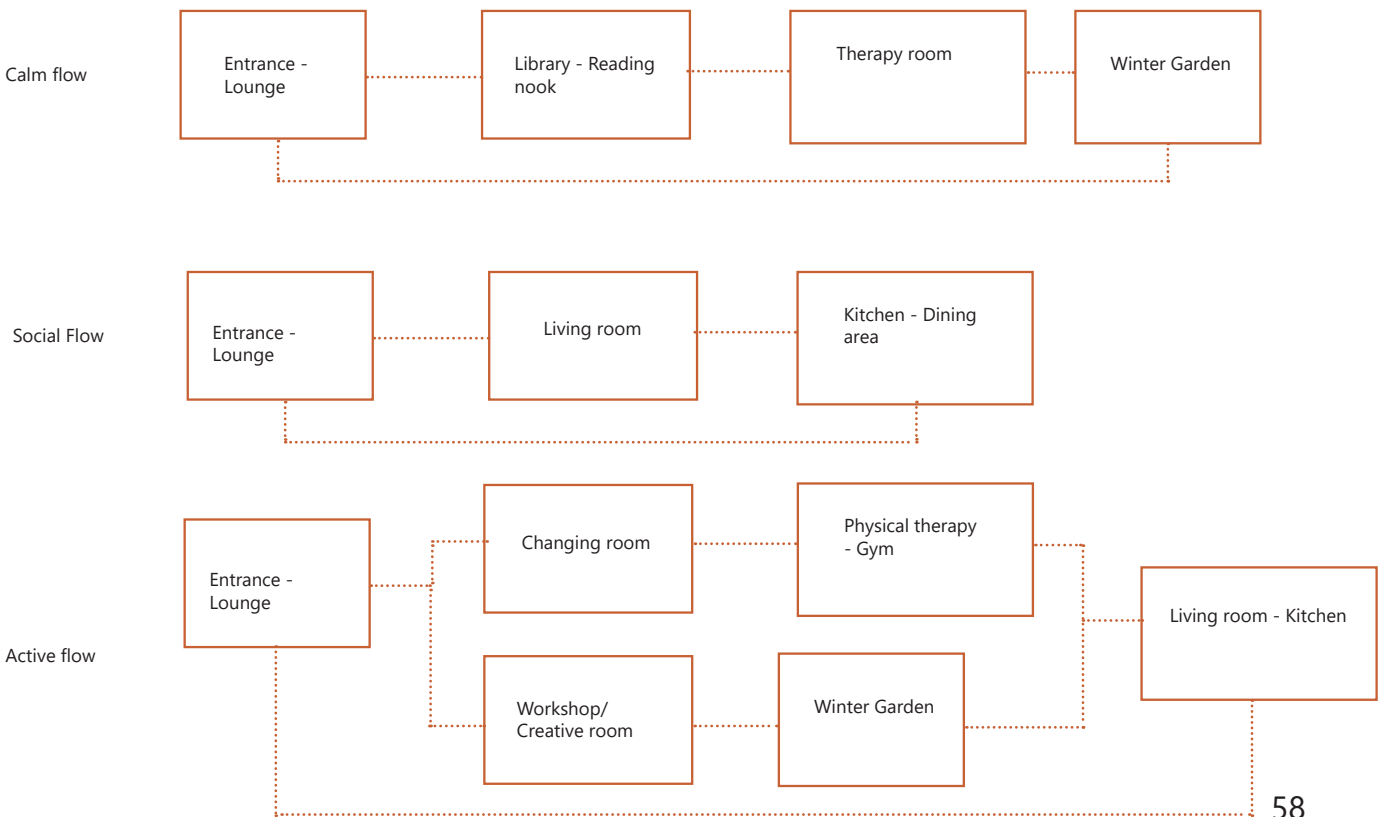
Diagram and composition of the program based on cluster diagrams. Imagining the individual journeys that the visitors of the center have and catering to their experience of the zonations of the center (Authors own)

Public and social interaction Areas	Active Areas	Transition Areas	Private Therapeutic Areas
Kitchen Dining Area Living room smaller Larger living room	Yoga/ Meditation Room Excercise/ Therapy Room Changing room Creative room Workshop room Room for activities	Entrance Lounge area Bathroom Bathroom Elevator Staircase Corridor area Conversation room flexible Winter Garden	Physical therapy consulta- tion Therapy/ Psychology room Therapy/ Psychology room Therapy/ Psychology room Resting Room Staff administration area Reading nook Library

Figure 47

How can your experience of the center look like?

Illustration of different visitor experiences and movements through the building. All visitors of the center have their own journey and their own storey, they all enter with their own experiences and expectaqtions of the visit. They can look very diferent and it is therefor vital that the center can be experienced in different ways catering to and respecting both the calm, the active and the social experience (Authors own)



Experiencing The Building

Figure 48

Zones Entrance floor

Illustration of the Entrance floor and the different zones, with varying levels of activity. Explaining how you should move depending on your purpose for the visit to the center. (Authors own)

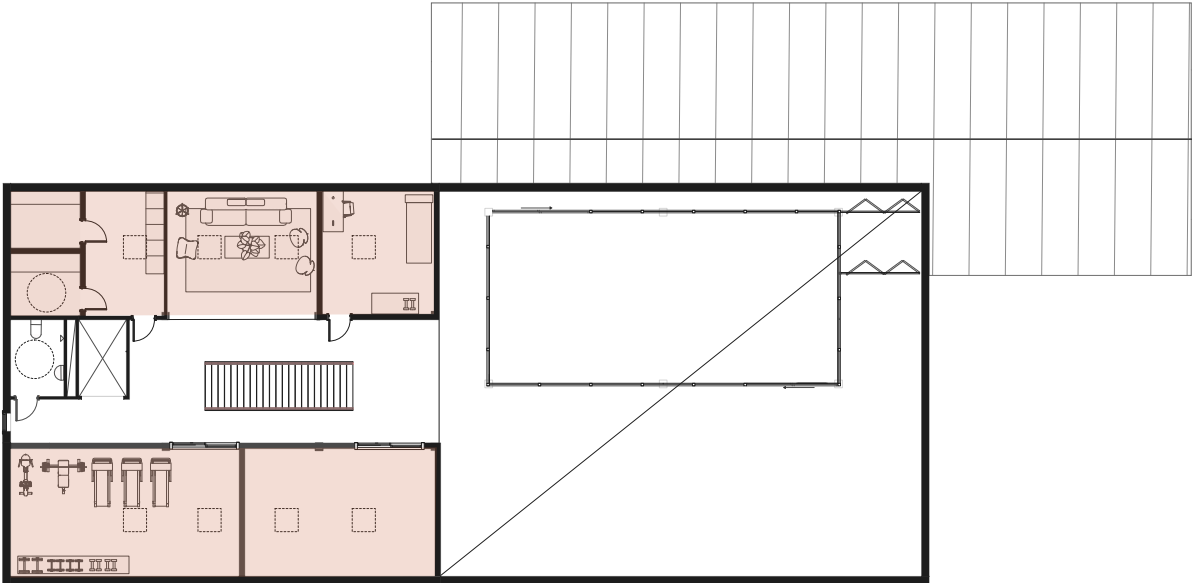


- Transition zone
- Calm Zone
- Social Zone
- Active Zone

Figure 49

Zones Floor 1

Illustration of Floor 1 Showing the Active part of the building. (Authors own)

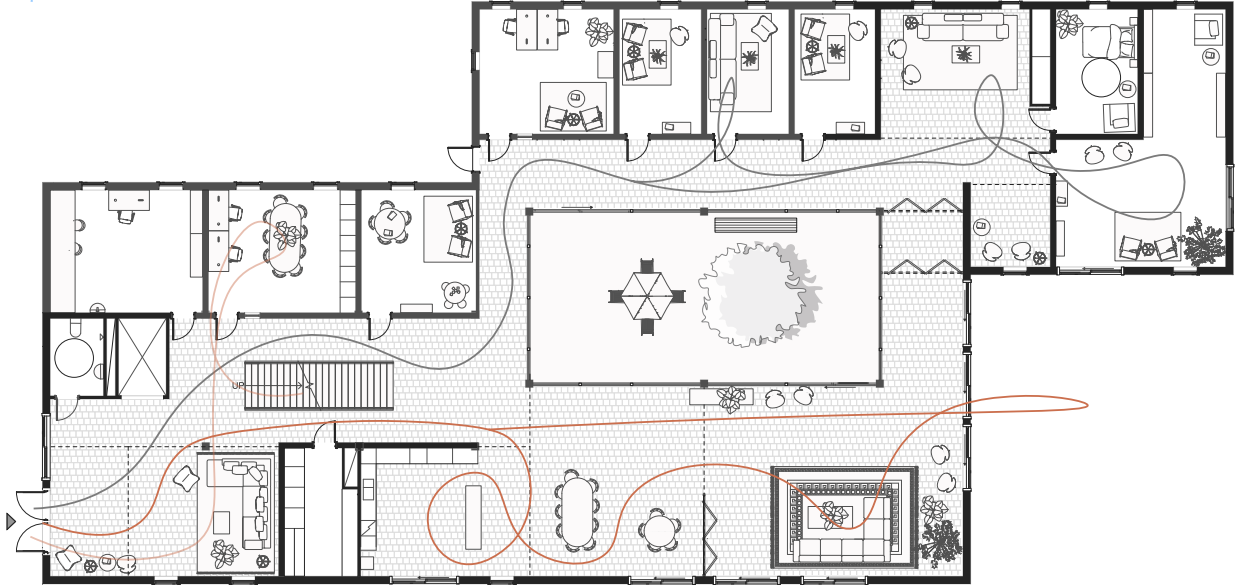


Movement

Figure 50

Different journeys in one building

Illustration illustrating potential walking flows in the entrance floor, depending on the purpose of the visit. (Authors own)

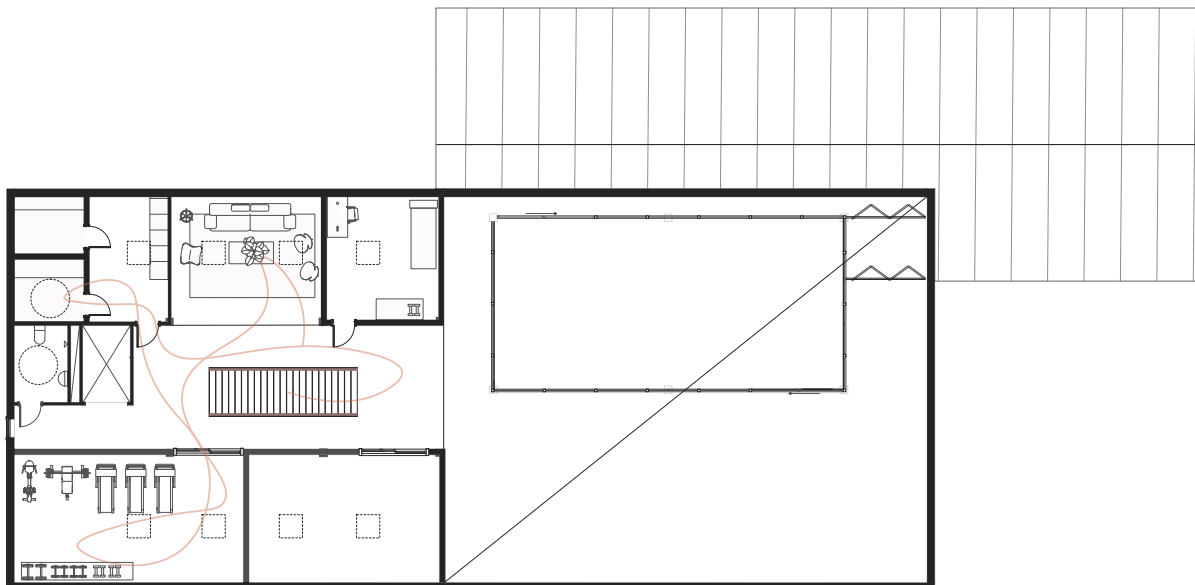


- Walking paths focusing on the social areas of the center.
- Walking path for the active visitors engaging in exercise and or workshops.
- Walking path for visitors of the therapy rooms wishing for a quiet and calmer visit to the center

Figure 51

Different journeys in one building

Illustration illustrating potential walking flows on floor 1. Visiting the active areas of the building. (Authors own)

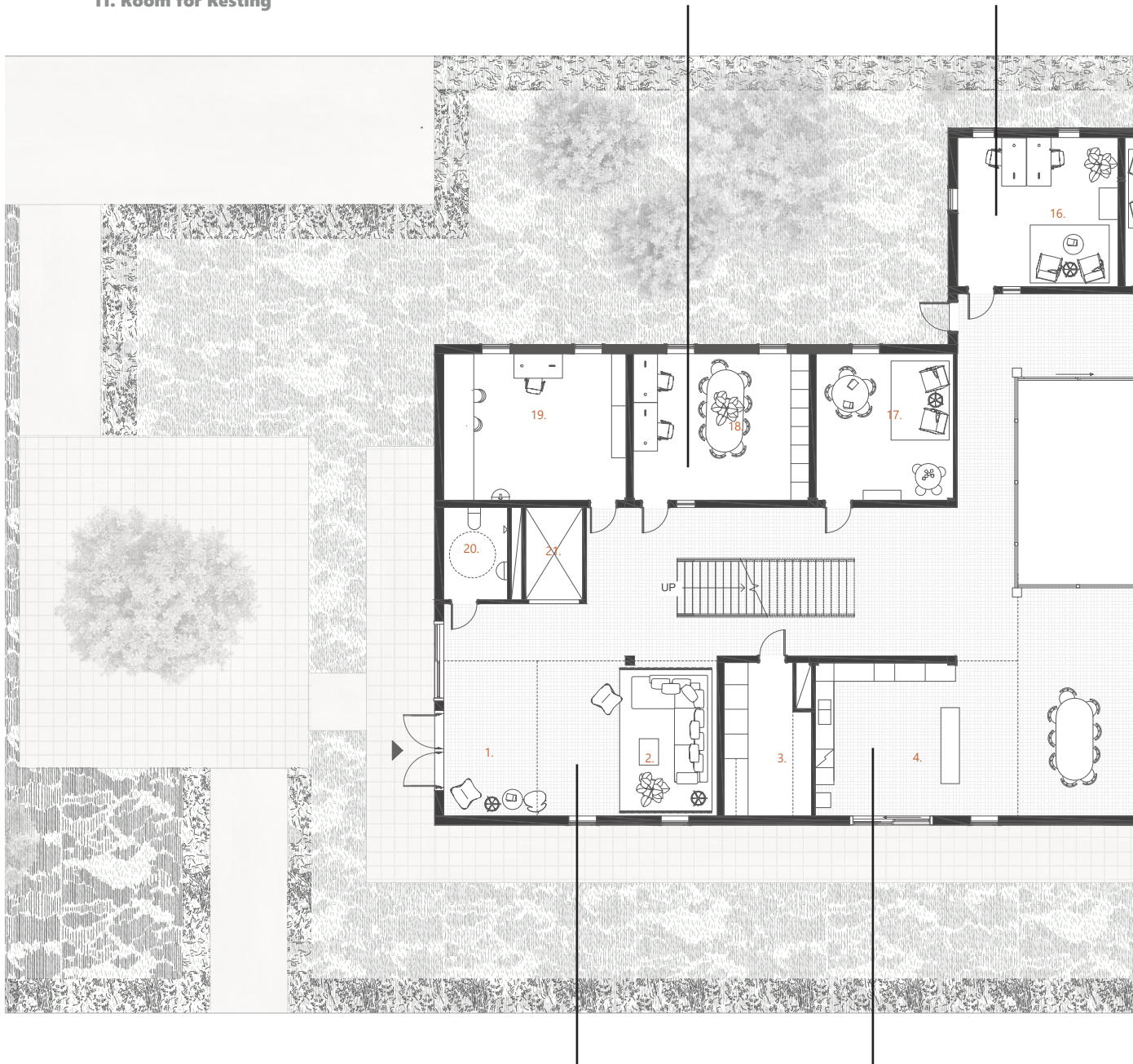


Floorplan

- 1. Entrance
- 2. Lounge
- 3. Storage
- 4. Kitchen
- 5. Dining Area
- 6. Living Room Large
- 7. Winter Garden
- 8. Conversation Room
- 9. Reading Nook
- 10. Library
- 11. Room for Resting
- 12. Reading nook/Lounge
- 13. Therapy Room
- 14. Therapy Room
- 15. Therapy Room
- 16. Staff Administration
- 17. Room for Activities
- 18. Creative Room
- 19. Workshop Room
- 20. Bathroom
- 21. Elevator

Active rooms are flexible and can be used for different workshops, activities and classes. These rooms are meant to be flexible in placement of furniture and spacious enough for smaller group activities.

The Staff area is placed in a quiet and calm part. The staff can work quietly on their tasks while still having access towards both social areas.



The Entrance is not in direct contact with the social areas, in order to allow for a Hidden retreat. The space should allow for a person to enter slowly while feeling protected. The space softly directs the visitor further into a smaller calm lounge area where the visitor can sit down and land before moving further into the building.

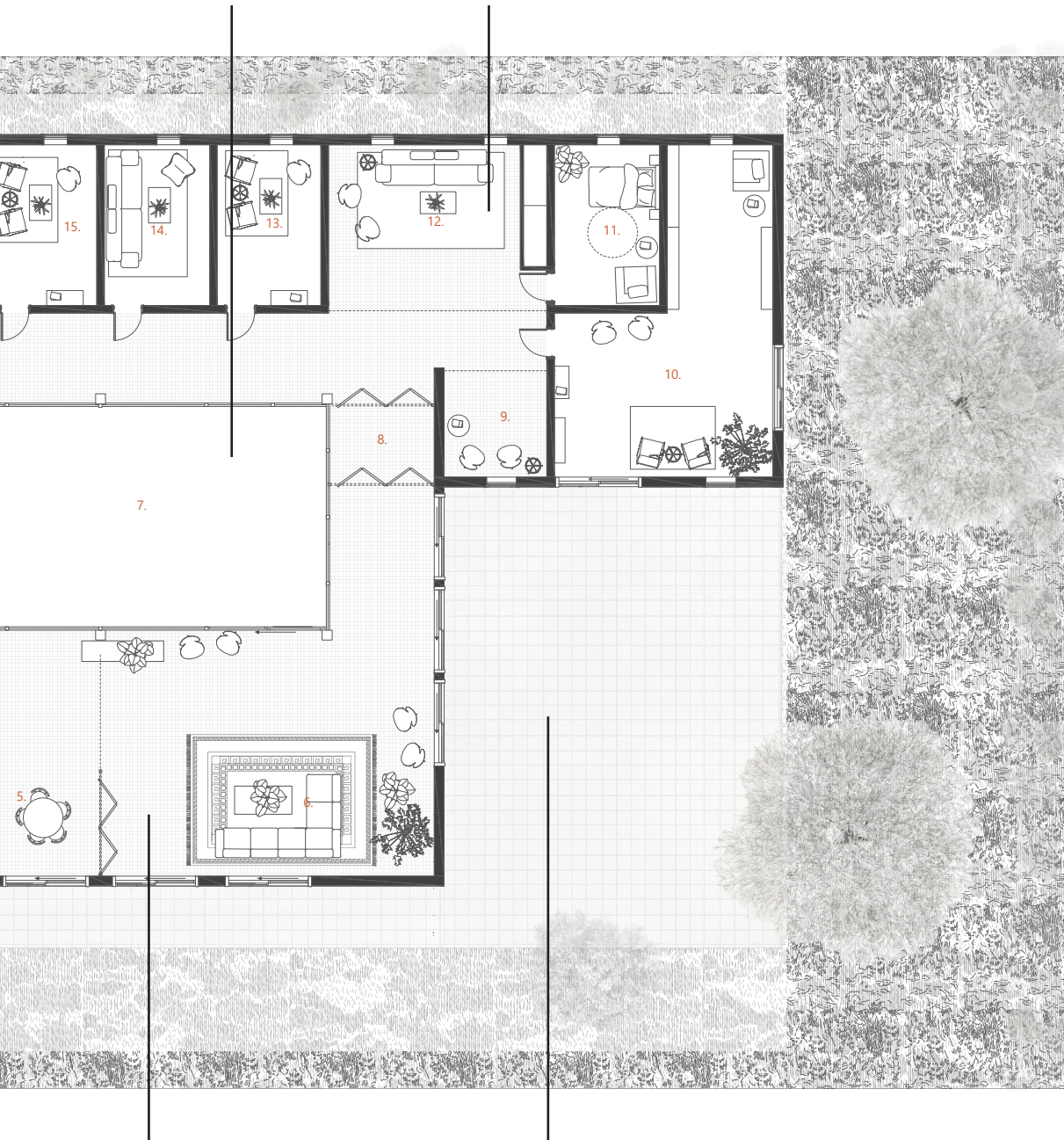
The Kitchen is placed with views towards the waterfront and in direct connection to the more social areas to invite spontaneous interactions. It remains the core of the social areas. Similar to the function in Maggie's centers, but placed hidden away from the entrance.



ed in a central posi-
 ing in the more qui-
 e position allows for
 y with administrative
 ng a clear view to-
 as and Therapy zones.

The winter Garden acts both as protected access to greenery away from public views in a calmer setting but also a spatial divider separating the social areas from the therapeutic and calm zone. The greenery creates a more atmospheric experience while walking through it, being more of an experience rather than a simple passage.

The Lounge areas and Reading nooks are calm spaces for people to read books or relax while waiting for appointments. It is furnished like a smaller living room with views towards the winter garden and the outdoor greenery. The purpose of the space is to have a calm and more quiet space to wait, away from the more social areas.



The Dining Area and Living room are larger rooms with high ceilings. The space has good connections to the outdoor environment both via the more protected winter garden as well as the sliding doors opening the space up towards the garden areas. The spaces are softly furnished with textiles and carpets framing the spaces and making them feel more homelike.

The Garden area is connected to the social spaces. The tiles resemble the indoor patterns creating a smooth transition between indoor and outdoor. The area enables for different types of activities such as gardening and having outdoor events during nice weather.

Figure 52
Entrance Floor 1:200

Floorplan illustrating furnishing and room composition. (Authors own)



Floorplan



- 22. Bathroom
- 23. Elevator
- 24. Changing Room Small
- 25. Living Room Small
- 26. Physical Therapy Consultation Room
- 27. Yoga Room
- 28. Gym

Daylight is crucial in all areas of the building in order to create a balanced and health-promoting environment. However, the access to daylight should not conflict with the need of privacy in sensitive environments. A solution to this is to place windows in the roof allowing for views out and daylight in but keeps the privacy for the users of the gym, yoga room and also the physical therapy consultation room. When entering the second floor you can overlook the social areas on the floor below.

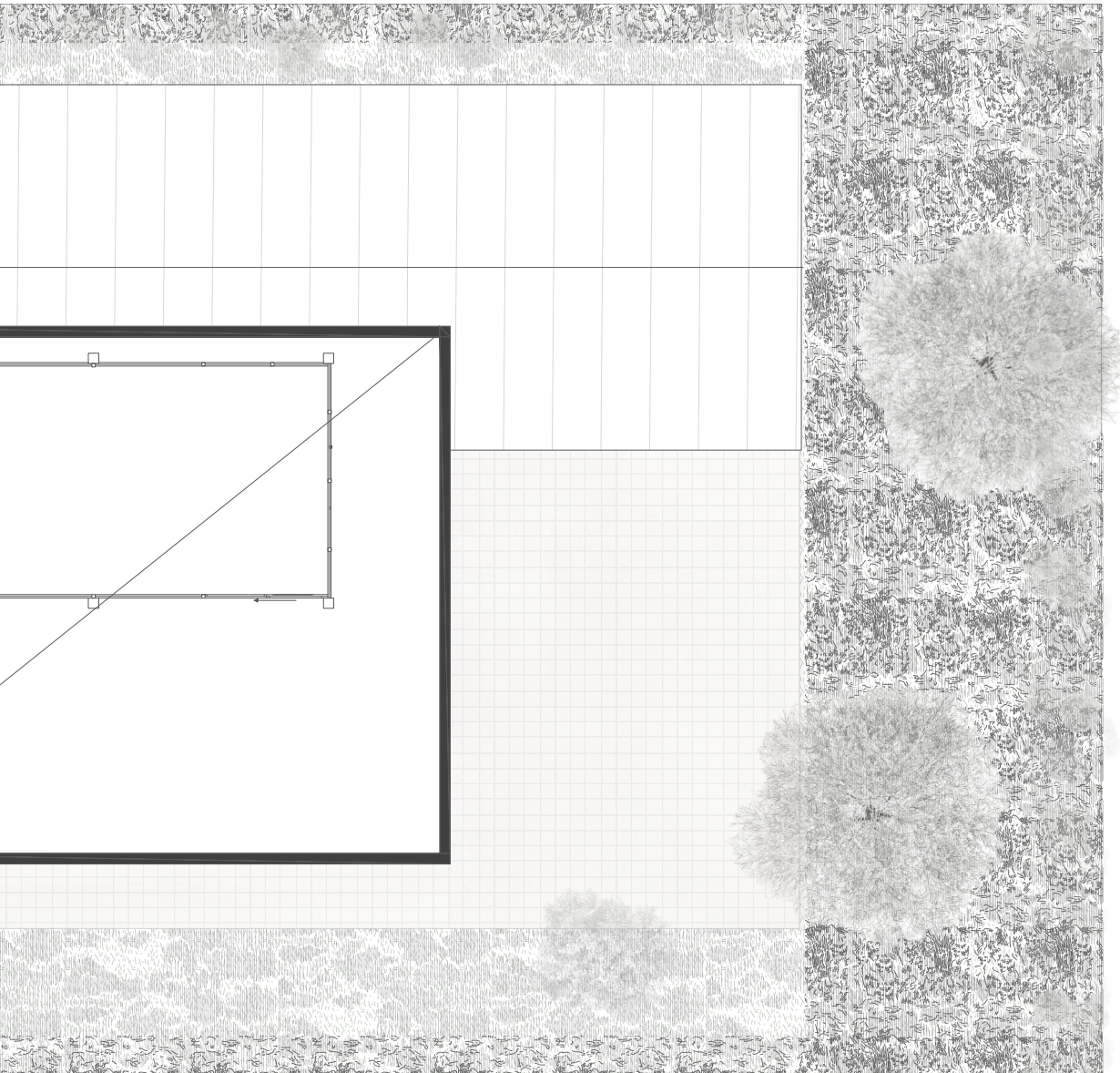


The Physical therapy consultation room is an important aspect of rehabilitation. Here, the room is a bit larger than the therapy rooms in the bottom floor to allow for more movement and more extensive consultations. Furthermore, the room is in connection to the gym and yoga room that can be used as an extension, in physical rehabilitation recovery.





The Smaller living room is used for rest after or before a visit to the Yoga room or the Gym. The area is in close connection to both the changing room and the Physical therapy consultation room. The area should be furnished with soft textiles and carpets in order to achieve a more homelike feeling.



Changing rooms are shared with lockers and divided into changing booths for privacy. The Gym is of smaller scale and can be used for rehabilitation treatments, different types of classes in the center and also freely for the visitors of the center when available. The same applies for the Yoga room.

Figure 53
Floor 1 1:100

Floorplan illustrating furnishing and room composition. (Authors own)

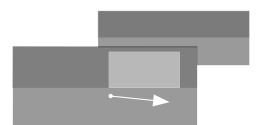




Figure 54

Entering the Living Room

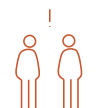
*Image showing the soft ambiance of the living room and wintergarden. Take a seat in the sofa, read a book or talk about the weather or perhaps ask someone about their journey to the center.
(Authors own Creation)*





The Living room connects to the dining area and is an important social area for the building. The possibility to stay inside while seated and look out towards the different gardens makes it an atmospheric and therapeutic experience. The higher ceiling height also makes the room feel spacious and allows

for larger groups of people to connect. The room is framed by the softer elements such as carpets and fabrics creating a soft ambiance in the space. The room size and the possibility to open up the space further via sliding doors to the outside, makes the room adaptable in its use.



Sections

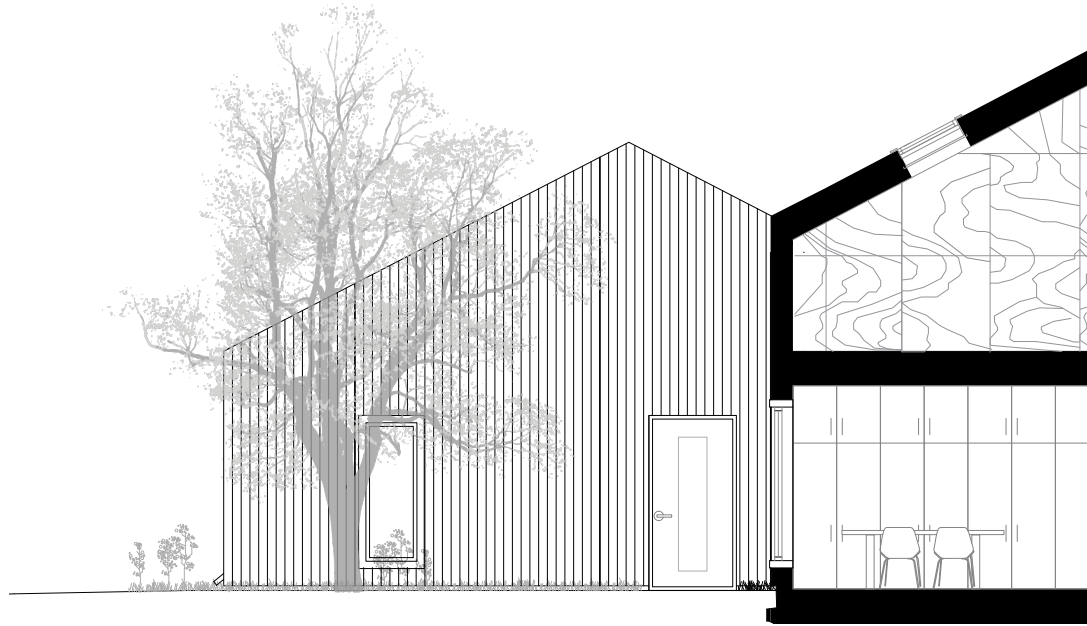
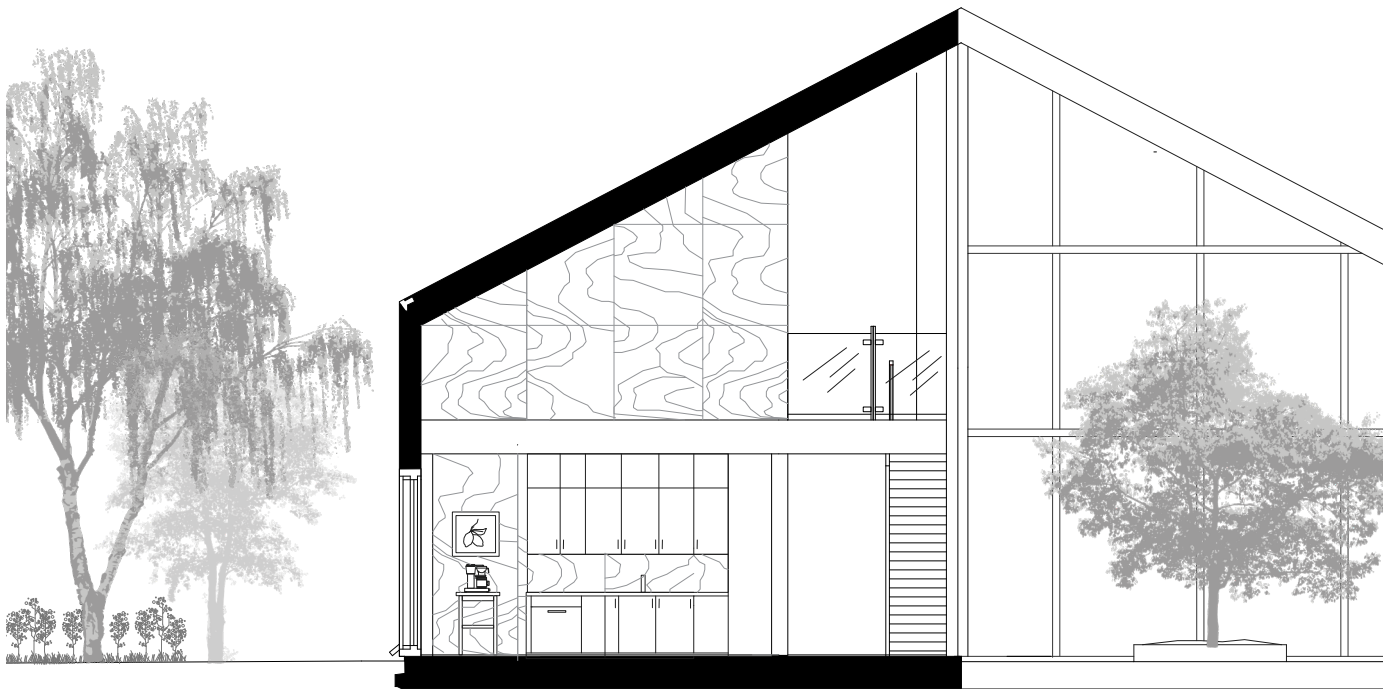
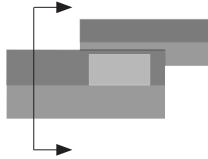


Figure 55

Section Through the Lounge Area 1:100

Section drawing, welcoming the visitor into the building. The section illustrates The lounge by the entrance, Creative room and the Gym and smaller living room on floor 1. (Authors own Creation)



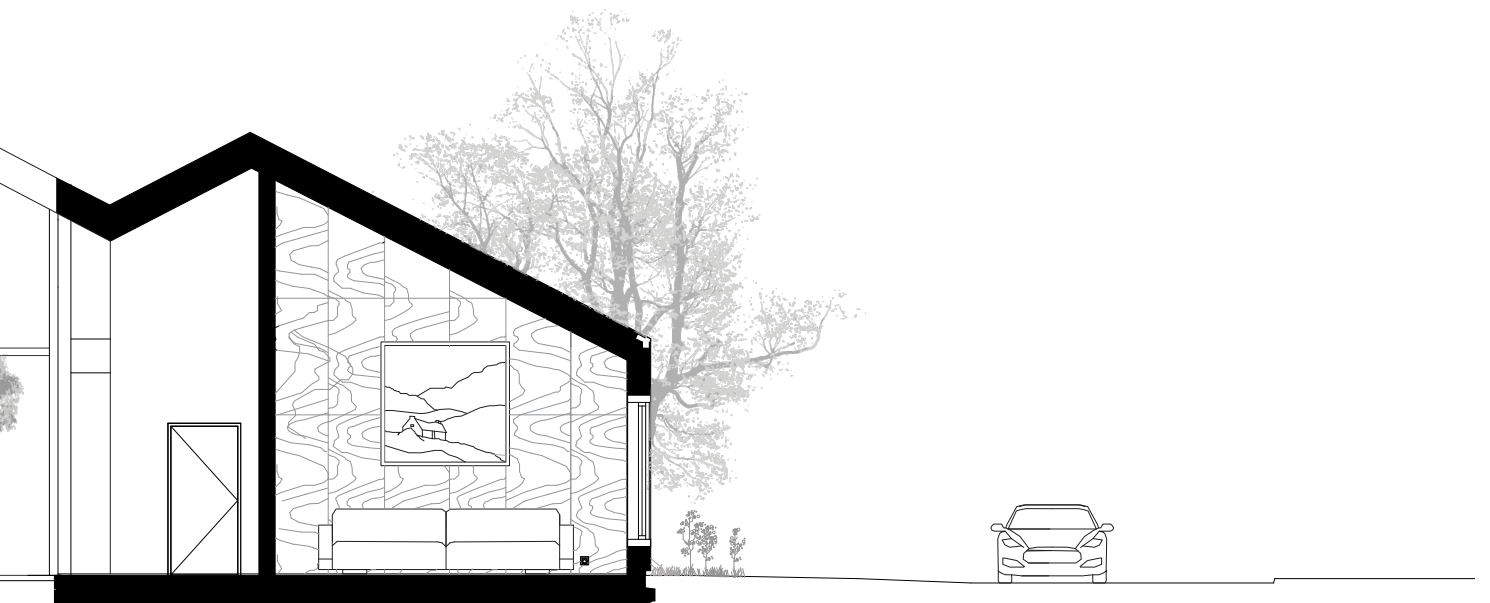
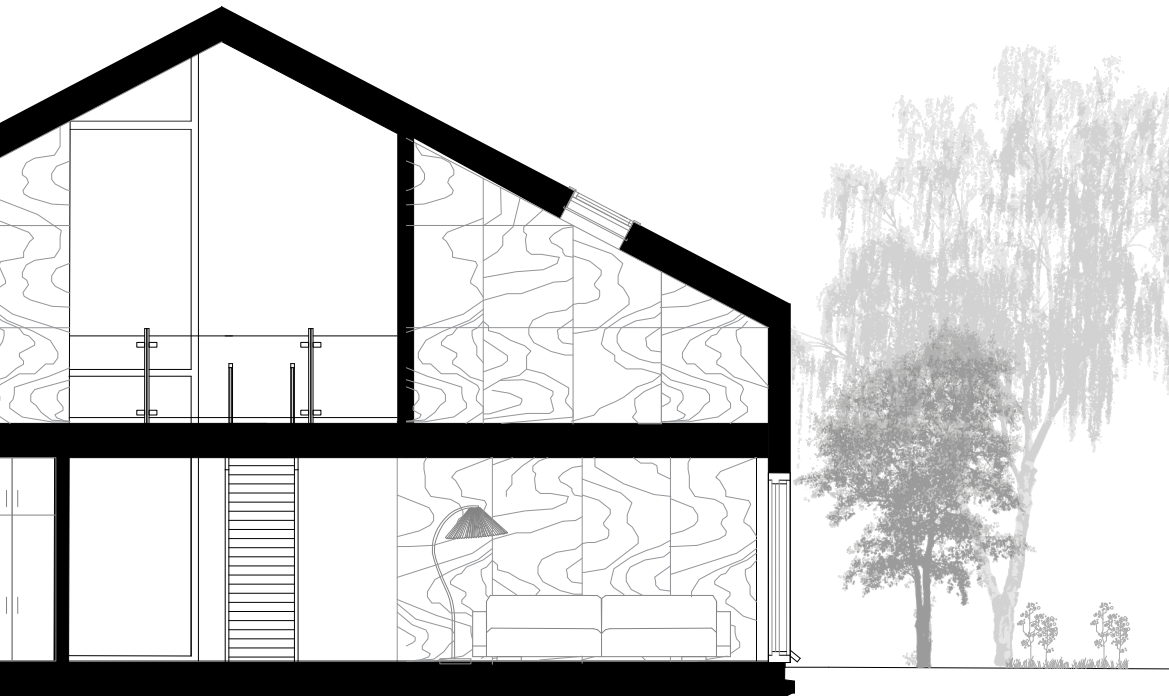
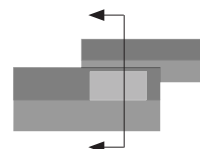


Figure 56

Section Through the Winter Garden 1:100

Section drawing, Illustration the atmospheric wintergarden, that divides the social Dining area/ Living room from the calmer Therapyrooms. Illustrating the importance of the in between transitional areas. (Authors own Creation)



Construction & Detail

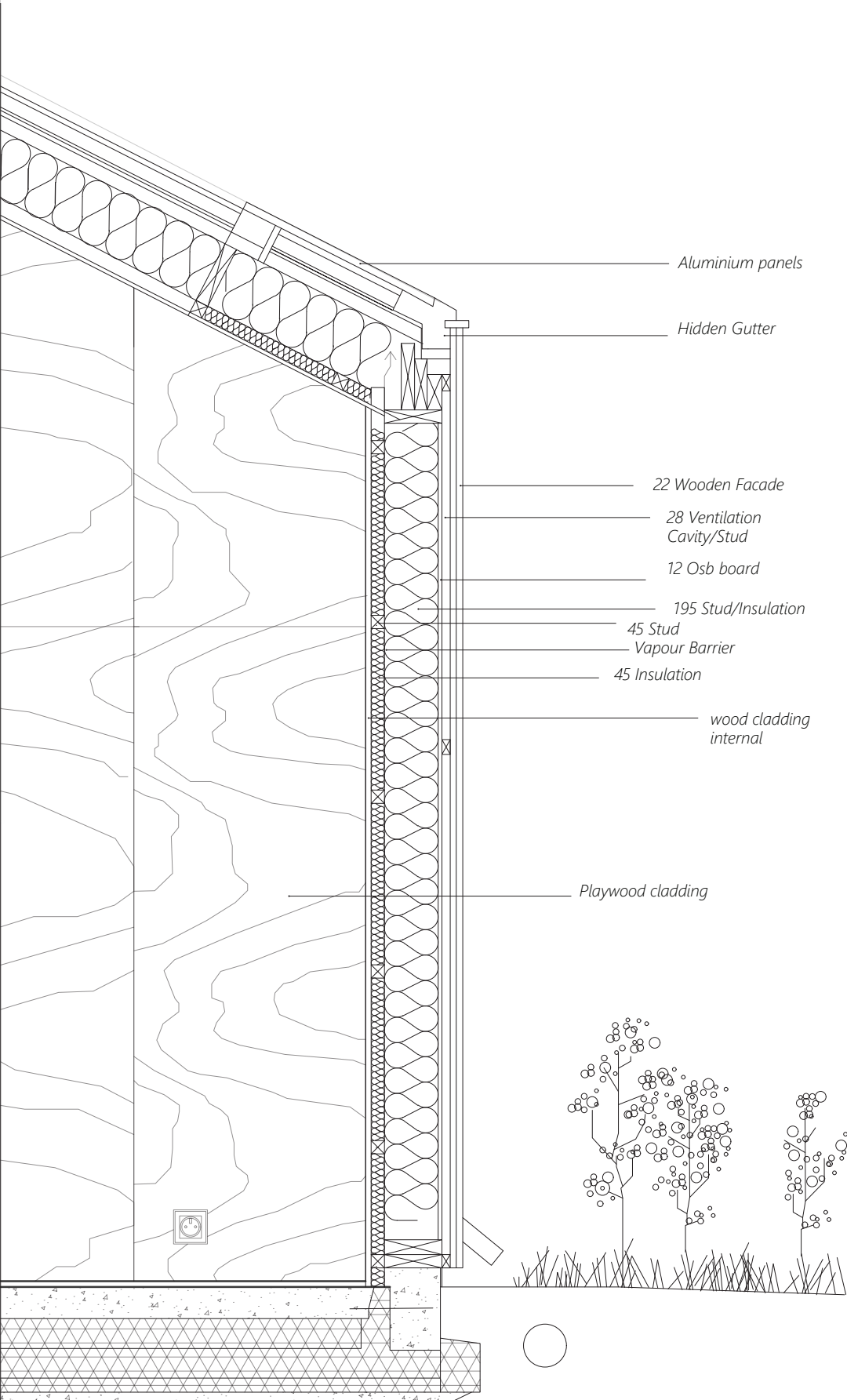


Figure 57

Detail Section 1:20

Detail Drawing through Therapy room. The drawing shows the construction of the exterior wall. (Authors own)



Figure 58

Facade Elevation 1:20

Detail facade elevation Showing the material composition and detail. (Authors own)

Facades

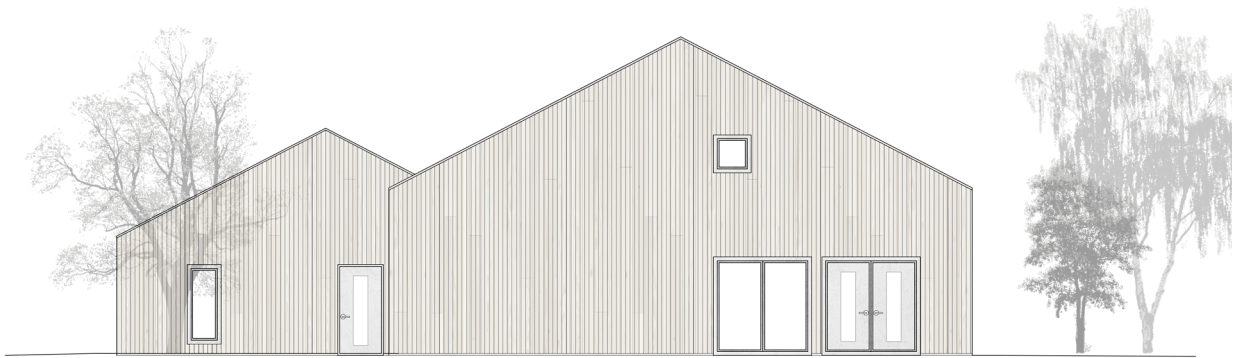


Figure 59

West Facade 1:200

Drawing of the West facade The first impression of the building welcoming visitors into the center (Authors own)
The short facade of the building shows the slanted roofscape creating a scaled down effect of the building and mimicing a more homelike sillhouette. The Western facade faces the public square. The layout clearly indicates the whereabouts of the entrance. It is visible from both walking paths and parking area.

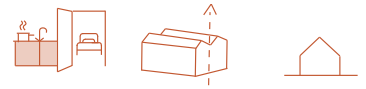


Figure 60

East Facade 1:200

Drawing of the East facade (Authors own) The sliding doors allows for the facade to open up towards the garden area extending the room towards the smaller outdoor area. The Smaller volume is the therapeutic calmer area of the building. The facade lets in light and allows for views out towards the calm greenery but also has a larger portion of the facade closed of for furnishing and privacy.



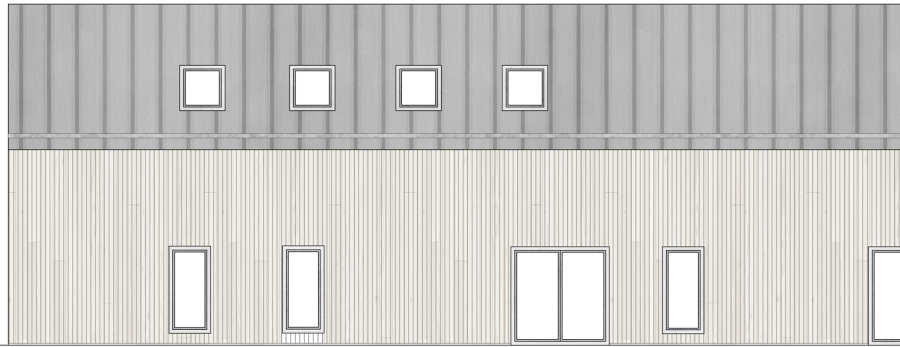


Figure 61

South Facade 1:200

Drawing of the South facade facing the walkingpath and looking out towards the river(Authors own)

The smaller windows on the second floor let in light while protecting from views in. The South facade faces the Walking path along the river. The window logic is based on creating clear views out towards the waterfront.

The functions placed here are in less need of privacy and therefore the windows are generous in size and can function as sliding doors in some areas.

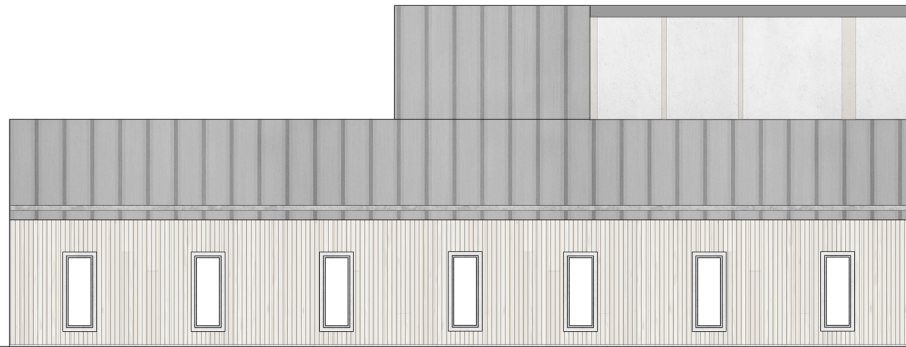


Figure 62

North Facade 1:200

Drawing of the North facade (Authors own) Smaller and more narrow windows are placed in the therapeutic parts of the facade. The windows allow for views out in order to connect with surrounding nature, however the dimensions are more narrow, limiting views in.

To further create privacy in these settings, greenery is placed outside to shield the visitors of the center in these areas. The Winter garden opens up the ceiling and lets in daylight into the core of the building.





Material & Detail

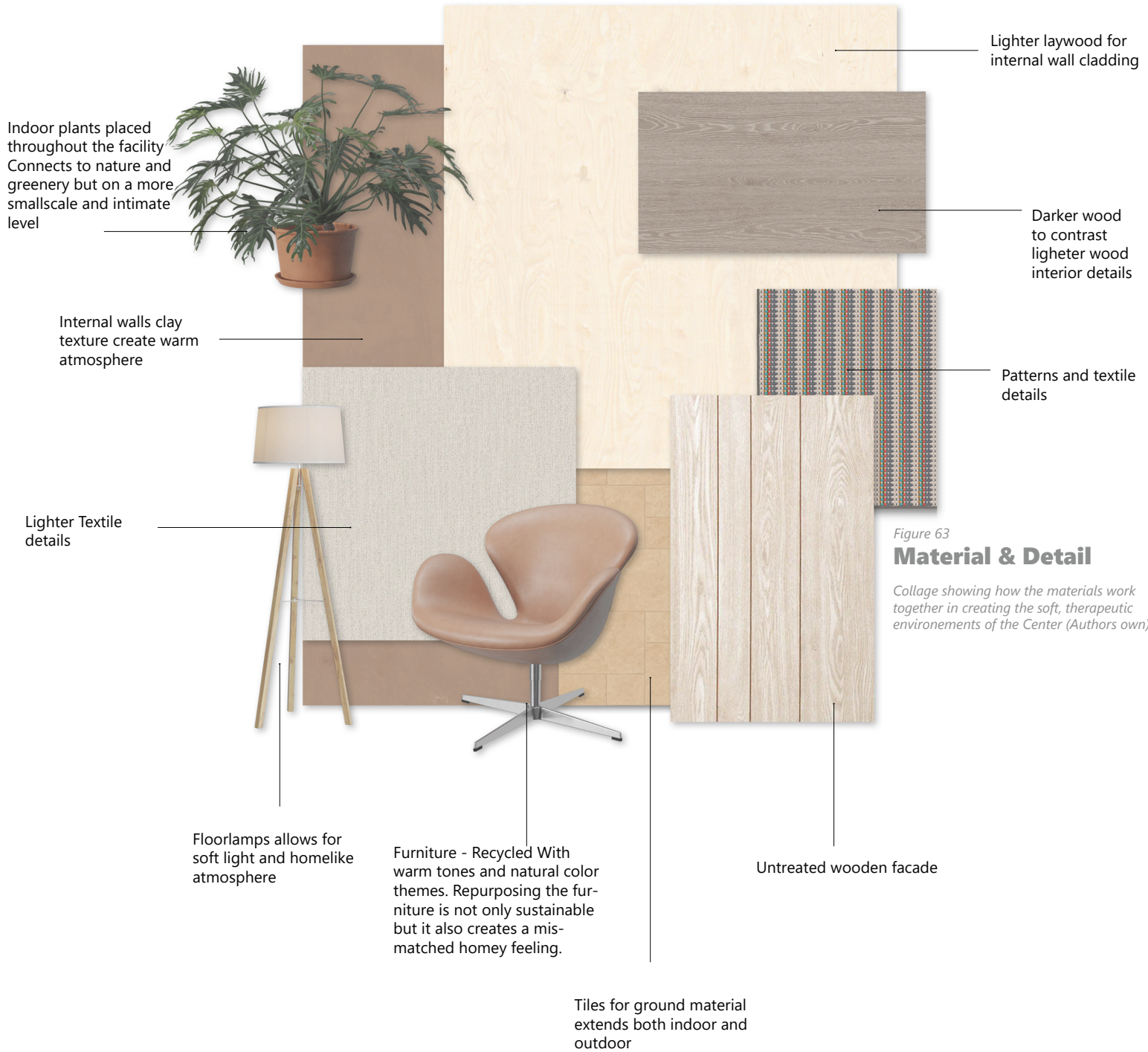


Figure 63
Material & Detail
 Collage showing how the materials work together in creating the soft, therapeutic environments of the Center (Authors own)



Therapy room & Lounge



Figure 64

Sometimes a good conversation can help

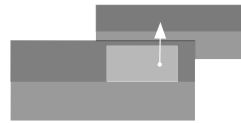


Image showing the Therapy rooms. The room is decorated and softly furnished, the small scale makes it comforting. (Authors own)

Figure 65

Taking a deep breath before entering the space

Image showing the lounge area welcoming the visitor before entering the functions of the building. (Authors own)



Kitchen & Dining Area

Designed as an area for spontaneous social meetings and gatherings. The unforced conversations that occur while waiting for the coffee to brew can be of great importance and can create connections that are not possible in a more clinical setting.

The Dining area and Kitchen are in connection to the living room in order to keep the conversation flowing, even when you have to run and grab the finished cup of coffee. The close proximity allows you to stay within the reach of a conversation, making this solution especially attractive in these types of social contexts. The facade allows for both views out in some areas but also leaves space for furnishing along the exterior walls making the space comforting and protected.



Figure 67

Kitchen

Image showing the Kitchen area. Here you can wait for the coffee to brew while overlooking the gardens and listening in on the conversations in the living room. (Authors own)

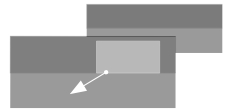


Figure 66

Would you like some Fika?

Image showing the Dining area. A space meant for not only sharing coffee and treats but also a space to talk freely and relaxed. Maybe here is where you meet new friends? or realize that you are not alone in your Cancer journey (Authors own creation)

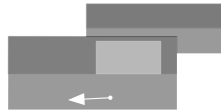




Figure 68

A place to get lost in the books

Image showing Library, looking out towards the gardens.
Finally some peace and quiet. (Authors own)



Summary

The project investigates how to bridge the gap between clinical care and community support for cancer affected individuals. Through Theoretical research, interviews and analysing existing cancer rehabilitation initiatives, the proposal of a design project for a Cancer rehabilitation center emerged. With the purpose to combine and explore the merge of clinical rehabilitation and community support.

The project proposal is based on a hybrid model that is in close proximity to a hospital treating cancer patients but the atmosphere should be in contrast to the hospital environment and emulate a more homelike familiar setting. The project is situated in Örebro, basing the location on reachability to as many people as possible. The university hospital of Örebro has both a cancer department and is centrally located. The reachability from other surrounding cities and communities is also good. And there are currently ongoing initiatives proposing a meeting space for a cancer community. The combination of therapy spaces and more informal meeting spaces for peer-based community support, addresses the gap between the different types of rehabilitation care for cancer affected.

Interviews and Case studies as well as literature, highlight the need for a holistic perspective when considering rehabilitation treatments for cancer affected individuals. This showcases the importance of safe and familiar environments that aid in them feeling a sense of belonging and support. A space where they can turn to when feeling lost. Maggie's Centers and Kraftens hus emphasise the value and positive effect of informal meetings and the sense of feeling supported. The project caters to these needs via spatial zoning, natural material, connection to outdoor environments and use of natural light. The need for a carefully designed material palette designed to promote calm and create a familiar and homelike setting.

Biophilic design and homeliness emerges as the core of the project guiding the design decisions and basing them on already existing research within the field. The project adopts the principle and spatial layout of Anna Bentssons different zones of greenery and Alnarp rehabilitation Gardens. In order to create more health-promoting environments aiding in overall feeling of wellness and comfort and blurring the boundary between indoors and outdoors. The use of natural materials seamless transitions between indoor and

outdoor and access to daylight, provides a holistic perspective of the rehabilitation process. Creating an environment that aids in reducing stress, promoting social interactions and creating an overall comforting and supporting environment during a vulnerable phase of life.

The focus on community and fostering a sense of belonging and connection is a vital part of the project, aiming to reach out to as many people as possible with different interests and experiences of cancer. By creating a hybrid solution, the project aims to gently nudge more people to experience being part of this community reducing the feeling of loneliness. The spontaneous interactions are built upon the philosophy of Maggie's centers, making out the kitchen and dining area to be the heart of the building. The place where you can in a relaxed setting speak freely and easily create new acquaintances. The design supports casual interactions without overwhelming new visitors, making sure to balance the social and active areas with more therapeutic and calm environments. To further accommodate for the different types of people, transition areas, such as a calm lounge by the entrance and a winter garden as a spatial divider were made.

In summary, this project demonstrates how architecture and design can act as a bridge between care systems and the more human experience founded by a compassionate idea of support grounded in empathy, dignity and community.

This thesis aims to build onto the already growing knowledge within holistic cancer rehabilitation care and support. With the increasing need of knowledge about how to live with a cancer diagnosis and how to manage the side effects living with cancer. The project aims to highlight the importance of drawing attention to the gap and current disconnection between clinical environments and community initiatives. The project should act as a reminder to rethink and highlight the current discussion within cancer rehabilitation in a Swedish context. Encouraging an holistic experience that surpasses the hospital walls and also reaches into everyday life.

It takes a village

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UNIVERSITY OF TECHNOLOGY

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Figure 14. Olsson, M. 2022 *Facade Höghult* (Photography). via personal communication

Figure 18. Lantmäteriet (2025a). *Map showing central Örebro*, Lantmäteriet min karta. retrieved May 11,2025, from <https://minkarta.lantmateriet.se/>.

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Figure 21. Lantmäteriet (2025b). *Map showing central Örebro*, Lantmäteriet min karta. retrieved May 11,2025, from <https://minkarta.lantmateriet.se/>.

Figure 22. Lantmäteriet (2025c). *Map showing CV-staden Örebro*, Lantmäteriet min karta. retrieved May 11,2025, from <https://minkarta.lantmateriet.se/>.

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Interviews

Interviews were conducted with Mikael Seroka, licensed dietitian and acting unit manager at Sahlgrenska Cancer rehabilitation and Andreas Hellström, lecturer at Chalmers University of technology and vice chairman of the board at Kraftens hus during February 2025.

These interviews were conducted in a semi-structured form (Bell et al., 2019). The questions below were supplemented by follow-up questions in order to enhance the discussion. The interviews were also followed by site visits.

Questions at Sahlgrenska University Hospital

How does rehabilitation look like at Sahlgrenska, how do you get in contact and how could a schedule look like?

Is the balance right between physical and psychological healthcare today?

Do you see any gaps today in cancer rehabilitation during and after treatment?

What technical difficulties related to rehabilitation do you see, e.g., related to diagnostics or follow-up of patients?

What do you see is missing today in cancer treatment related treatment of families and friends and holistic approach?

What access is there to psychologists and therapy?

What is the biggest challenge with cancer rehabilitation today, and how do you look upon the future?

How do you look upon "Kraftens hus" and similar initiatives?

How do collaborations with these work today and are there any plans for the future?

What opportunities and risks do you see with a closer collaboration?

Do you think people would have been helped by being recommended to visit discussion centers, and if so, how could such a process be structured?

What different types of cancer rehabilitation treatments do you perform?

How is the timeline for rehabilitation and when do patients visit you?

How is the treatment for patients with long lasting or chronic problems

Are these visits normally at the hospital or exercises at home?

Key take outs from interview at Sahlgrenska University Hospital

Care and limitations

Rehabilitation starts already in the early phases of the treatment and is normally ongoing until shortly after treatment is ended, and the patients are referred to "vårdcentraler" (local primary care centers). What support each patient gets by e.g., psychologists or therapy is to large extent driven by the patients' outspoken requests. The same goes for support to families and friends. One item repeatedly answered to many of the questions was the shortage of resources connected to rehabilitation.

Collaboration

The collaboration between the hospitals and the social support organisations, such as Kraftens hus is limited but XX would be positive to a closer collaboration. The patients are informed about them but not specifically recommended to go there.

Aftercare

People suffering from long lasting or chronic effect's will often feel that the local primary care centers do not give the amount of support that they feel needed, as they are often offered exercises to perform at home. Another issue is that there can be late side effects that can occur months or years after treatment is finished. In these cases many turn to the social support organisations instead.

Own reflection on the premises

While some areas are designed with lots of plants and social spaces, other rehabilitation areas are regular examination rooms. Some windows are also covered with cardboard to support privacy, but which at the same time creates less of a welcoming environment.

Questions at Kraftens hus

How do you see the future for Kraftens hus, do you wish to expand, and if so, whereto?

What was your rationale when choosing the location in Gothenburg, what was most important?

What can you see is missing, e.g., related to kitchen and space to socialise, are there enough rooms?

How was the outcome at large?
 What activities and group therapy sessions do you offer?
 How is your collaboration with hospitals, do you e.g., share staff such as psychologists?
 Do you see that a closer collaboration could be beneficial?
 What is your view of the timeline when people need rehabilitation, is it early or late?
 How do you look upon similar centers abroad such as Maggie's centers and Center for Kraeft & Sundhet?
 How do you look upon research related to the impact of vegetation on wellbeing?
 Is this something you can develop further?
 How does rehabilitation look like today, at what stage does cancer affected get in touch with Kraftens hus, during the clinical treatment or afterwards?
 What gaps do you see today in cancer rehabilitation during and after treatment, and how are they met at Kraftens hus?
 What technical difficulties do you see, e.g., how to reach out to affected?
 What do you see is missing today in cancer treatment related treatment of families and friends and holistic approach?
 What is the biggest challenge with cancer rehabilitation today, and how do you look upon the future?
 How do you look upon collaborations with hospitals?
 What opportunities and risks do you see with a closer collaboration?
 Do you think people would have been helped by being recommended by the hospitals to you, and if so, how could such a process be structured?

Key take outs from interview at Kraftens hus

Expansion plans
 Kraftens hus is a growing organisation. A center in mid/northern part of Sweden has recently opened up in Östersund, and there are discussions with a patient community in Örebro to collaborate in opening up premises also there.

Visitors and activities
 Kraftens hus is open to all "cancer affected" people, including friends and families who are all welcome. In addition to just being a place to meet there are various activities, such as group talks, yoga, work-out in collaboration with "Friskis & Svettis" as well as a boule court. People tend to come to Kraftens hus some time later after they have finalised their clinical treatment. In general there are more women than men, and in particular middle aged women tend to come to Kraftens hus. The growing number of cancer affected creates a strain on resources, e.g., requiring

some activities to be pre-booked, even though ideally noone should be excluded.

Premises

The decision to open up a center in Gothenburg was simple as it is, by Swedish definitions, a large city with good communications in the region. An important factor in selection of the premises was a central location, to facilitate access for everyone. As Kraftens hus is a non profitable organisation, there are limitations to what requirements can be met in the design of the premises. The location in Gothenburg is rented and there are limitations as to how it can be adapted. However one key design aspect that has been accomplished is a centrally located kitchen and another important aspect met is a secluded entrance. Andreas appreciates the work done by Kraeft & Sundhet and Maggie's centers, which he believes has the same basic philosophy as Kraftens hus, but emphasises that there are very different financial realities, and that it is not possible for Kraftens hus to fully adapt the design of the premises, which includes the access to gardens and vegetations.

Collaboration

Andreas confirms the picture given by XX at Sahlgrenska that they do not recommend the social support organisations, but gives information, e.g., by handing out brochures. Andreas expresses that there are pros and cons of a closer collaboration. He sees it as positive that the location is not adjacent to the hospital. Kraftens hus cannot provide health-care, which includes support from psychologists and therapy sessions. One thing they do collaborate on is lectures and workshops but, again, not therapy sessions.

Own reflection on the premises

It had a homely design, A nice library and a large lounge where people could meet around a fireplace. Plenty of textile and wooden details enhanced the feeling of homely atmosphere. Another aspect was the secluded entrance where visitors could be met in privacy to determine the best activities for them.

AI- Statement

AI has been used in language adjustments, which includes grammar, general structure and minor language adjustments. It has not been used in generating any images, producing data or developing the design or concept.

