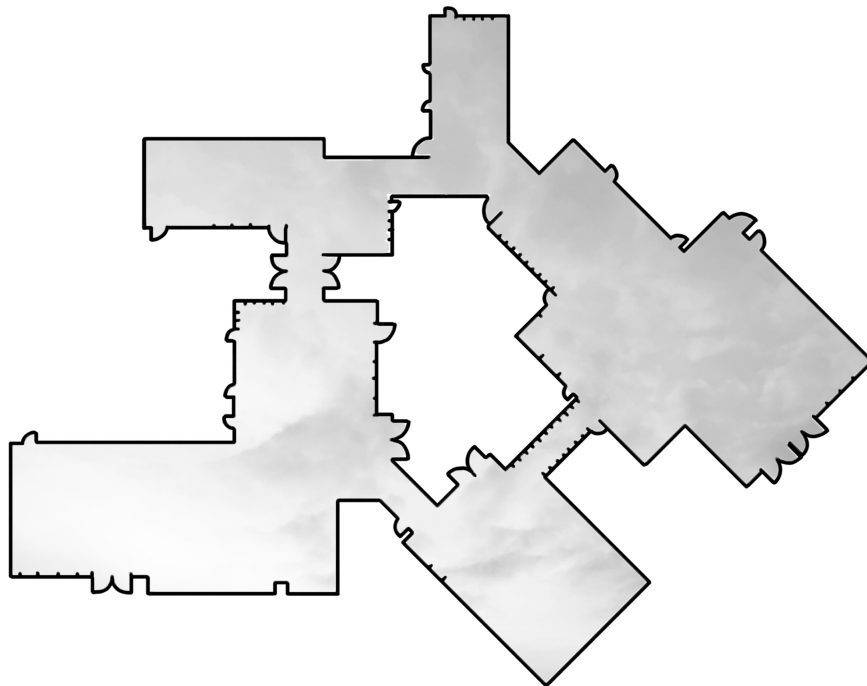


The Architecture of Hope

The power of architecture
in cancer care



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Abstract

Statistics show that 1 in 3 will get cancer during their lifetime. However, 72% of everyone diagnosed with cancer in Sweden survives and many live on with cancer as a chronic disease. As the number of people surviving with cancer increases, so does the need for additional support besides medicinal care.

In 2023, a cancer care centre was opened in Gothenburg, Kraftens Hus (eng. *the House of Power*). The centre would by focusing on life, not the disease, provide care continuum, long-term psychosocial support and a community for sharing thoughts and experiences. Today, the centre is renting space at a local church. However, there are issues with privacy and freedom of movement within the building and when the organization of Kraftens Hus grows, there will also be an issue of space.

Evidence suggests that a building could have a healing effect on a physical state. There is also a discussion on a building's possibility to affect a mental state by atmosphere. A building could embody a sense of hope.

This thesis's purpose is to investigate: *How can a future vision of Kraftens Hus in Gothenburg be designed for spatial and contextual needs while influencing physical health and an emotional state of hope?*

Literature studies, case studies and interviews are conducted to investigate the spatial needs and context for a future Kraftens Hus. Relevant theory is gathered on healing architecture and hope through atmospheric architecture. Findings are presented as a site proposal, an architectural program and 6 design strategies for healing and atmospheric architecture. The design strategies include movement, social scale, light, nature, sensory experience and volume. A design proposal is made to combine findings and to answer the research question.

I believe that a future vision of Kraftens Hus can be designed for spatial and contextual needs while influencing physical health and an emotional state of hope. The different factors could even complement each other and foster the experience of hope and hopefully, the thesis can contribute to the discussion on cancer care and physical and emotional support besides medicinal care.

Keywords: *Kraftens Hus, Cancer Care Centre, Healing Architecture, Atmospheric Architecture, Hope.*



CHALMERS
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The Architecture of Hope
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My grandmother, Mormor, was taken from me by cancer. Growing up on a generational farm, Mormor was always there. But so was cancer. In the recipe book I inherited from her, there were notes on notes on appointments and treatments but it was never something that we talked about. But I saw. I saw her lose her hair. I saw her get frail. I saw her get operated and I saw her get better. I saw the cancer coming back, and eventually, I saw the cancer take her away from me.

Losing my Mormor had a vast impact on me. At the time, I was an architectural engineer, but in my grief I began to rethink my life path and what mattered. I wanted to help people and my love for architecture brought me back to school to become an architect and closer to, by my own hand, designing healthcare environments.

Tack Mormor, för allt.

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My Relation to the Subject

Education

Studios

Work

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1. Introduction

This chapter presents the purpose of this thesis and the research questions that will be investigated based on a short background and problem description. This chapter also presents this thesis's delimitations and methods.

1.1 Background

Statistics show that during one's lifetime, 1 in 3 will receive a cancer diagnosis (Cancerfonden, 2023). The message of the illness, regardless of the prognosis, is often associated with fear, anxiety, grief and a sense of an inhuman situation. A vast industry and governmental machinery are however in place to provide medicinal care and there is constant research on the subject (Visel, 2006). In 1970, only 3 out of 10 survived more than ten years after their diagnosis, today, despite more people being diagnosed with cancer, 7 out of 10 survive more than ten years after their diagnosis (Cancerfonden, 2023). Cancer is becoming more of a long-term disease with an uncertain course rather than a fatal diagnosis.

The rising survival rate presents new challenges for governmental policies and the healthcare structure (Lee, 2015). There is a need for a well-thought-out structure for follow-ups, monitoring, attention to possible late effects of the treatment and the disease and attention to patients' medicinal and psychological needs (SOU 2009:11). Many patients and stakeholders can however report that this is easier said than done and that patients falls between the cracks and there is a need for additional support, both during and after medicinal care (Mannefred, et al., 2016).

As a patient-driven social innovation between private and public sectors in Sweden, the new approach to cancer as a life-event, and not solely as a medical condition, resulting in a new type of cancer care centre called Kraftens Hus (*eng. the House of Power*) (Smith, et al., 2021). The centre acknowledges that cancer affects a person on all levels: physical, mental, social and existential (Mannefred, et al., 2016). By providing long-term psychological support at Kraftens Hus, the centre can provide a care continuum alongside medicinal cancer treatment to improve the emotional, social and practical well-being of all those affected by cancer, including patients, family, friends, staff members and local community representatives (Smith, et al., 2021). As Tomas Björk Eriksson stated (seminar 30 Jan, 2024), Kraftens Hus is committed to humanising an inhuman situation.

Researchers argues that this type of additional support, besides medicinal care, affects survival

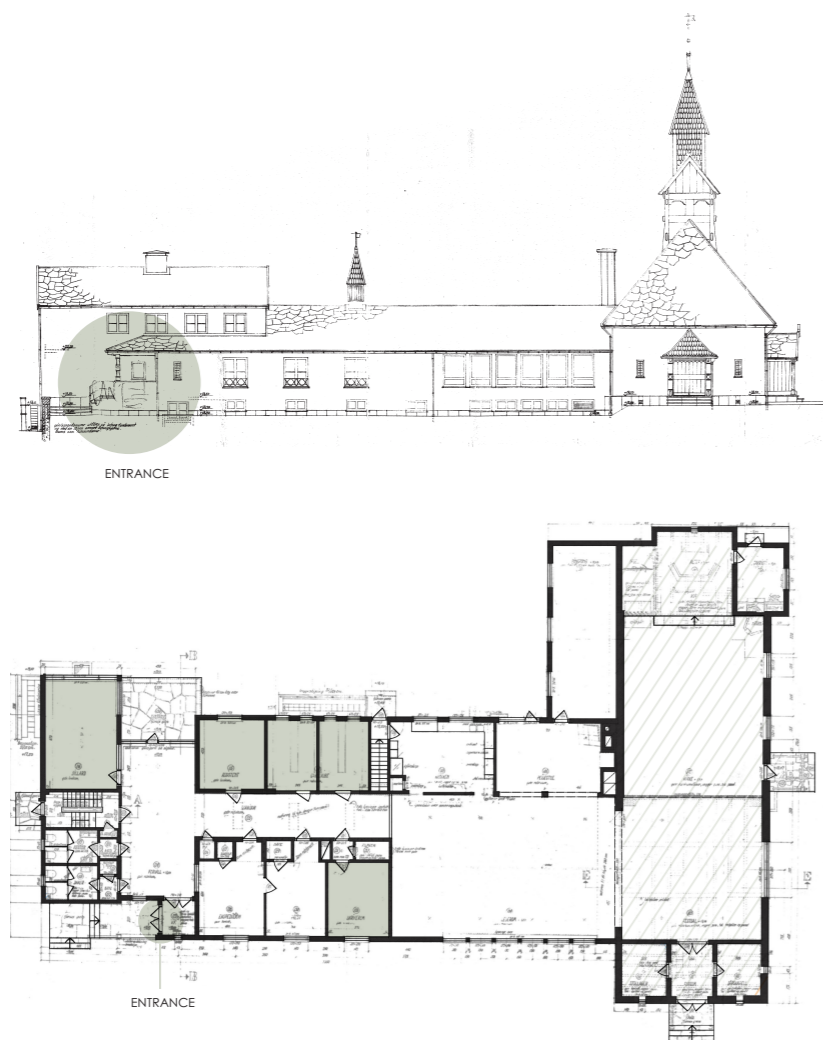
rates with a cancer diagnosis (Greer & Watson, 1987; Lee, 2015). Reducing anxiety and a feeling of helplessness and increasing a sense of control can have a significant positive impact on their immune system function and their prognosis.

1.2 Problem Description

In November 2023, a Kraftens Hus was opened in Gothenburg (Kraftens Hus Göteborg, 2023). The centre is currently renting separate rooms at a centrally small-scale detached church at Skånegatan. Though many positive attributes of the building, such as a garden and centrality and a continuous dialogue between the property owner and Kraftens Hus, there are challenges. In this setup, there are issues with privacy and freedom of movement within the building. Visitors to Kraftens Hus report that they are receiving reprimands when lingering outside the rented rooms or approaching of limit spaces. Furthermore, visibly enclosed in the church, Kraftens Hus has issues with appearing as a neutral space to all people and being noticeable by people passing by. Finally, when the organization of Kraftens Hus grows, there will also be an issue of space.

When Kraftens Hus is renting spaces designed for other functions than their own, potentials of healing architecture and a spatial experience can be lost. Evidences suggest that ambient environmental features could affect healing and coping (Evan & McCoy, 1998). Features such as access to natural daylight, outdoor views, the reflection of everyday life, quality in materiality and external stimuli can promote a faster recovery, coping, reduction of stress levels and even a positive placebo effect making patients experience that they are getting better care than in spaces lacking these features (Fradsen, et al., 2009; Rehn & Schuster, 2017; Lundin, 2015).

Architecture also has the potential of creating certain atmospheres that evokes feelings and emotions (Zumthor, 2006). Jencks (2015) argues that a spatial experience can evoke hope and bravery to deal with heavy thoughts and encourage acceptance or courage to take new steps in treatment. The building in itself can raise the fighting spirit of patients, lifting their hearts at a time of depression.



The currently rented spaces by Kraftens Hus

1. 3 Aim, Purpose & Research Questions

The aim of this thesis is to present a future vision of Kraftens Hus in Sweden that can add to the discussion on cancer care and physical and emotional support besides medicinal care. The purpose of this thesis therefore is to investigate the spatial and contextual needs of Kraftens Hus in Gothenburg and how it could be combined in a design proposal with theories on architectural design that influence the emotional well-being and physical health of patients and their relatives. The purpose of this thesis results in the following research question:

How can a future vision of Kraftens Hus in Gothenburg be designed for spatial and contextual needs while influencing the physical health and an emotional state of hope?

1. 4 Delimitations

In this thesis, a design proposal is made in Frihamnen as a result of analyses that will be presented later in this booklet. This thesis will not comment on the ongoing planning of Frihamnen but rather analyse where in the planned structure Kraftens Hus would advantageously be placed. This thesis will not take into account any remediation work that needs to be carried out on the site.

Kraftens Hus is a non-profitable organisation with no financial means to plan and build a centre but through this thesis, a future visionary scenario is investigated, guided by spatial needs and context to add to the discussion on cancer care.

1. 5 Reading Instructions

This thesis will be driven by investigations in three parts leading up to a design proposal. Firstly, relevant theories on the concepts of healing architecture atmospheres in cancer care will be gathered and visualized in tables and images and summarised into 6 design strategies. Secondly, the spatial needs of Kraftens Hus will be investigated to conclude a program. Thirdly, the contextual needs of Kraftens Hus will be analysed to conclude on a site. The program and site analyses will be combined with the theory-based design strategies to present a design proposal, see diagram on the previous page.

1.6 Methods

To gather relevant material, a combined method of literature study, case study and interviews will be conducted and seminars attended. This combined

method aims to be exploratory and yet anchored in relevant science to gain reliability (Kvale & Brinkmann, 2015).

The literature study is conducted to explore theories on healing architecture and atmospheres, but also to explore written material on Kraftens Hus. To organise findings from theories on healing and atmospheric architecture, design factors that are mentioned will be listed in tables. When all factors are identified, they will be categorised into design strategies.

Case studies will be conducted to investigate cancer care centres in Kraftens Hus and abroad and what spatial needs the organisations have identified and how the chosen cases have organized the spaces. Cases will be based on the following criteria; The centres must

1. focus on additional support, besides medicinal care in cancer care.
2. be located in the context of a bigger city similar to Gothenburg.
3. represent a variety of organizations and drawn by different architects.

To gain insight into the daily work at Kraftens Hus and to gain an understanding of the target group, informal conversations will be held at the centre and interviews with relevant parties conducted.

Here follows a list of presenters at seminars and interviewed parties that will be quoted in this thesis:

- Maria Hultman Gonzales, Manager at Kraftens Hus Gothenburg
- Andreas Hellström, Board Member at Kraftens Hus / Senior Lecturer and director of the research center: Center for Healthcare Improvement (CHI) at Chalmers University of Technology
- Catrin Anderson, Project Manager at ByBrick
- Ylva Ralph, Project Leader - Urban Design and Architect SAR/MSA at Mareld Arkitektur
- Eva Angenete, Associate professor of surgery / Chief Physician at the Department of Surgery at Sahlgrenska University Hospital
- Tomas Björk Eriksson, Manager at RCC Väst (Region Cancer Centre) / Senior physician in oncology and adjunct professor at the Department of Clinical Sciences, Sahlgrenska University Hospital
- Leine Persson, PNR (Patient and relatives council) / Cancer-afflicted
- Carina Mannefred, Manager at Kraftens Hus Sjuhärad (Borås)



Reading instructions visualized combined with methodology

2. Theory

This chapter begins by presenting some additional background on cancer, the experience of living with cancer and how Kraftens Hus came to be. The chapter will then proceed to present theories on healing architecture and atmosphere. The concepts will be decoded and explained by factors. The chapter will conclude by summarising the factors and combining them in new design strategies. This chapter will also address the importance of sustainability in the building sector and this design proposal.

2.1 Additional Background

Cancer

The generic name Cancer refers to a genetic disease with more than 200 variations where every manifestation holds a level of uniqueness on a molecular level (Cancerfonden, 2023). The disease originates from a disturbance in the cell division where cells normally reproduce through duplication and cleansing of dead cells. The disturbance can cause cells to divide uncontrollably and create clusters of sick cells; tumours, or disturb blood stem cell development and cause blood cancer.

Every cancer treatment is highly individualized to get the best effect for every patient with a focus on patient history and genetics, the tumour's origin, growth and how likely it is to spread (Cancerfonden, 2023). According to the senior physician professor of surgery, specializing in colorectal surgery, Eva Angenete (seminar, 15 Nov, 2023), removal of a tumour is the only definite curing treatment for cancer today. A full cancer treatment however commonly includes radiation and chemotherapy to reduce growth and to kill off remaining sick cells after a surgery or if the cancer is inoperable.

The prognosis varies for different kinds of cancer, generally, however, the expected survival rate has increased significantly during the recent decades (Cancerfonden, 2023). The survival rate has increased due to improved treatments but also because cancer is discovered in earlier stages. For some cancer diseases, the survival rate is estimated to be 90 %, but in other cases, such as pancreas cancer, the survival rate is 10 %.

To Live With Cancer

A cancer diagnosis often affects a person on many levels: physical, psychological, social and existential. This can include pain, lymphoedema, nausea, depression, anxiety, worries about finances, family, sexual health and existential concerns. Treatments are often long and side effects are pronounced (Hellström, 2020).

Kevin Donaghy is currently living with incurable cancer and states that cancer is first and foremost a lonely place (Donaghy, 2024). Even though a third of us will be diagnosed with cancer when you receive your diagnosis, you are and feel alone.

It took me quite a while to realise I couldn't handle cancer on my own, as I was missing people who understood what I was going through physically and mentally (Donaghy, 2024. s. 6).

A medical team is crucial and one's survival can depend on it. However, a medical team has a clinical point of view and was never trained to, and never supposed to, console (Dellson, 2019).

Don't read too much into what the doctors tell you medically [...]. They will try and take the emotions out of your diagnosis as they are very factual. Be prepared for that. (McGarry, 2024. s. 9).

The emotional loneliness I felt when I stepped through the doors to receive my first chemotherapy treatment... I wouldn't wish that feeling upon anyone (Leine Persson, seminar 30 Jan, 2024).

Psychological aid can lighten one's spirit, but additional support in itself can also affect survival rate (Lee, 2015). Studies suggest that people who are able to express their emotions tend to have thinner tumours that grow more slowly and when combined with medicinal treatment, the psychological intervention has a transformational effect on survival rates.

Since one in three in Sweden will be afflicted by cancer, all of society is affected (Maria Hultman Gonzalez, personal communication, 24 Jan, 2024). It is a burden enough to be afflicted or affected by cancer, without adding the stigma.

The Creation of Kraftens Hus

In 2009, the Swedish government launched a new national cancer strategy (SOU 2009:11). The strategy aimed to create closer collaboration between social actors in care by establishing six Regional Cancer Centres, RCCs, one in every healthcare region in Sweden (Socialstyrelsen, 2016). The RCCs would have a structural patient-orientated focus and educate and manage research and knowledge in cooperation with the internationally qualified Comprehensive Cancer Care Centres established in the Swedish university hospitals.



“ The loneliness I felt when I stepped through the doors to receive my first chemotherapy treatment... I wouldn't wish that feeling upon anyone (Leine Persson, seminar 30 Jan, 2024)

To involve patients and to challenge existing structures between separate entities within the healthcare system, RCC in the Västra Götaland Region established an independent council of patients and their relatives, PNR, to gain insight into the patient perspective within cancer care (RCC Väst, 2020).

One of the most prioritised issues that PNR pursued was the lack of psychosocial support in cancer care, for all people afflicted by cancer, not just the individual diagnosed with cancer (Smith, et al., 2021). In 2016, RCC conducted a pilot study on a physical cancer care centre (VGR, 2016). The pilot study was enabled and driven through multidisciplinary collaborations.

After the first meeting ended, I wept with joy. Finally, we might have a place to meet (Leine Persson, seminar 30 Jan, 2024).

In February 2018, the first Kraftens Hus was opened in Borås (Hellström, et al., 2019). Kraftens Hus is a non-profit organisation run by a board of cancer-affected persons and representatives from the local hospital, the municipality, the region and local businesses (Smith, et al., 2021). The centre is not part of the hospital and is located close to the city centre to be accessible to all citizens.

To grasp the bigger patient admission area provided by the bigger hospitals in Gothenburg, RCC in the Västra Götaland Region formed a project group to develop a Kraftens Hus in Gothenburg (personal communication Catrin Anderson 8 Feb, 2024). Eventually, a rental contract was signed for three years at a local church located centrally in Gothenburg at Skånegatan (Catrin Anderson, personal communication, 8 Feb, 2024). The Kraftens Hus in Gothenburg was opened November 2023 (Kraftens Hus Göteborg, 2023a).

2. 2 Healing Architecture

Evans and McCoy (1998) state that we spend upwards of 90% of our lives within buildings. During the last century, the harmful effects of ambient environmental conditions have therefore been studied; the effects of poor lighting, air pollution, temperature or noise. Recently, a discussion on healing architecture has emerged, referring to the possibility of the architecture strengthening or promoting a healing process in the individual (Fradsen, et al., 2009).

According to Lundin (2009), architectural design has the potential to affect a person's psychological healing and mental state. A positive mental state, thus, has a physical impact on a body's healing.

Lundin (2015) presents therefore the following paradox; Architecture is a non-medicinal measure that can contribute to medicinal outcomes.

In a publication from Aalborg University by Fradsen, et al. (2009), existing academic evidence on healing architecture in a hospital environment is gathered, presented and listed. The publication lists factors that impact physical and mental state. Inspired by the list by Fradsen, et al. (2009), in this thesis, factors relevant to a healing environment in a cancer care centre are presented and combined with other relevant references. The factors are; light, sensory experience, air, movement, social scale, and nature.

Light

The access to daylight, no matter the spatial function, is effecting well-being and satisfaction (Fradsen, et al., 2009). Daylight can even promote faster recovery from illness and have a positive therapeutic effect on people suffering from depression. Exposure to daylight can ease a depressive mood and encourage pleasant thoughts (Tekin, Corcoran & Gutiérrez, 2022).

Daylight and sunshine have a positive effect on pain and stress (Fradsen, et al., 2009). Patients who spend time in bright rooms consumed in a study 22% less pain medication and rated themselves as less stressed (Walch et al., 2005).

When cancer patients were asked to describe their experience of daylight it was stated that daylight could provide characteristics such as peace and calmness (Tekin, Corcoran & Gutiérrez, 2022). The softness of light was associated with the feeling of safety, privacy and protection.

Sensory Experience

In a hospital environment and the context of art as visual, tactile or auditory, research suggests that art can be a positive mental distraction, be calming and have a positive effect on pain (Fradsen, et al., 2009). The physical effect of art seems to provide a positive stimulation of the senses.

According to cancer patients, the fragrance of blooms, grass and the smell of the soil when it rained had a calming and meditating impact, particularly on the cancer patients who were feeling vulnerable and experiencing a lack of capacity to feel sensations due to diagnosis or treatments (Tekin, Corcoran & Gutiérrez, 2022).

The healing effects of sounds are both due to the presence of positive sounds as well as the absence of negative noise. The general noise level should be low to reduce stress and promote rest (Fradsen, et al., 2009). Positive experiences of sound in cancer care centre often originate from the garden as moving

leaves, rain pattering, water clucking, and joyful singing of birds or bumble of bees (Tekin, Corcoran & Gutiérrez, 2022). The aliveness in the gardens was described as an uplifting feeling by cancer patients, highlighting their endeavouring to survive.

Air

One of the main routes of infection is aerial (Fradsen, et al., 2009). When air movements are handled poorly, it can therefore spread diseases, especially in vulnerable groups such as cancer patients who due to treatments often have a lowered immunological response. Poor handling of air can also cause displeasing drafts causing discomfort and stress.

Good ventilation is crucial in a cancer care centre, but also the possibility to regulate it easily by openable windows (Tekin, Corcoran & Gutiérrez, 2022). Fresh air is associated with a relaxed and homey feeling.

Movement

Lack of way-finding can cause stress and is mostly dependent on the layout of a building and sight lines (Fradsen, et al., 2009). There is a correlation between the complexity of a plan by the number of "choosing points" and way-finding. However, when the choice in movement is introduced in a smaller building as a cancer care centre, it is a positive thing. Choice can in this context break the rigid focus on the diagnosis and introduce a sense of control (Maggie's, 2015). Even smaller choices, such as deciding where to sit or the amount of light and usability can be empowering.

Social Scale

Jencks (2015) states that when people who go through similar events interact, it has a healing effect and can reduce anxiety, fear and nervousness. Martin and Roe (2022) argue that the environment is shaping the encounters between people and that place is key for social relations. Fradsen et al. (2009) agree and state that a variety of spaces, their connections and furnishing enable a variety of conversations and encounters.

A space that enables eye contact and visual overview increases the degree of interaction and socialising (Fradsen, et al., 2009). Evidence also suggests that spaces intended for socialising, such as kitchens, dining spaces and living rooms, that have a home-likeness in colouring and furnishing increase the degree of socialising and the experience of privacy and quality.

The cancer care centres; Magge's Centres, are often designed with an open space concept to allow visitors to socialise (Tekin, Corcoran & Gutiérrez, 2022). One could imagine that the concept would

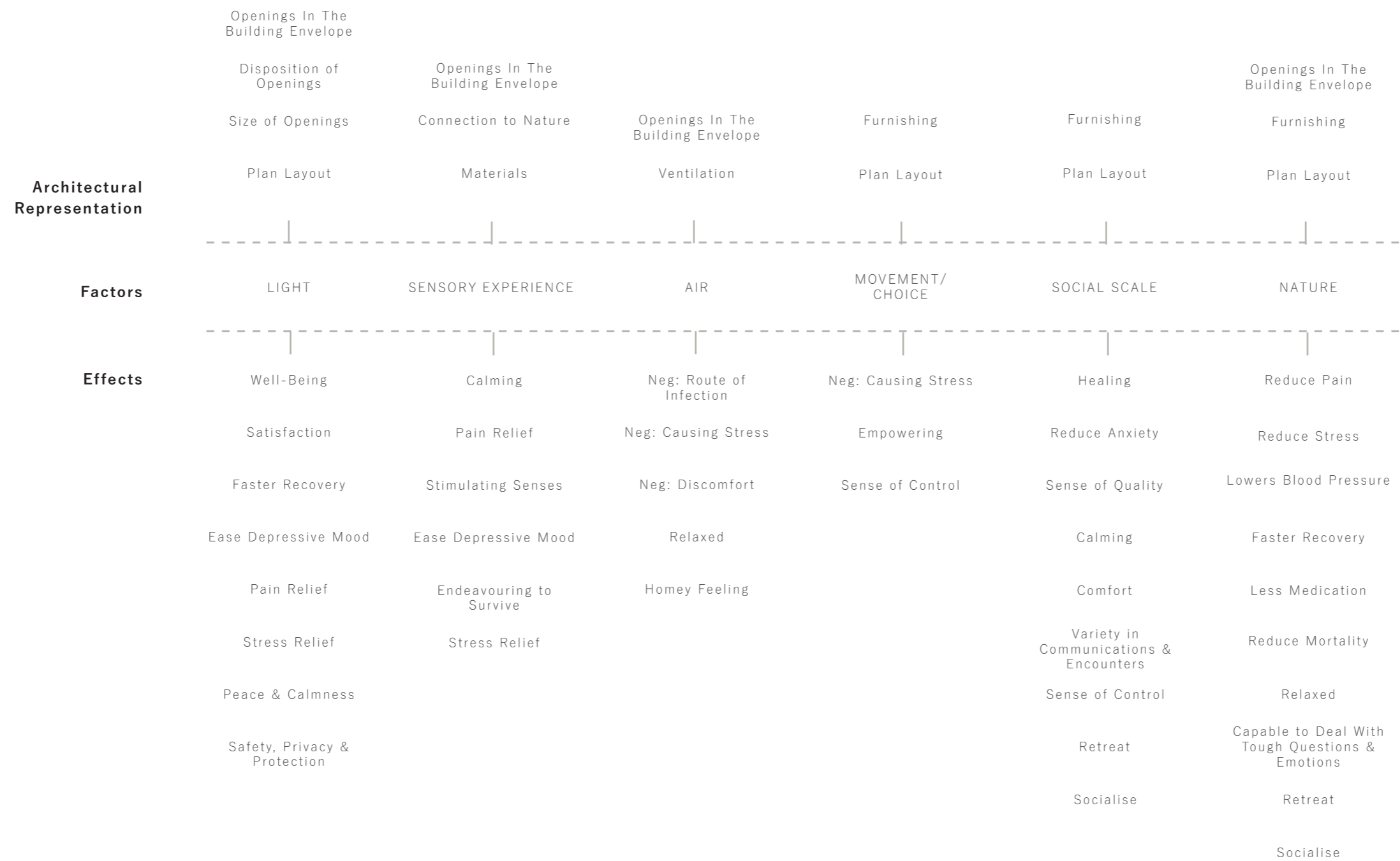
threaten privacy, but as long as it allows withdrawal, privacy and socialisation can co-exist and offer a visitor a sense of control. The option of privacy in a fully private space, enclosed with walls, is however important for the ability to have confidential conversations (Fradsen, et al., 2009). A private enclosed space could also present the possibility to rest, listen to one's music, sleep, cry or meditate privately (Maria Hultman Gonzalez, personal communication, 24 Jan, 2024).

Visitors to a Maggie's Centre stated that a fireplace encouraged certain types of encounters (Tekin, Corcoran & Gutiérrez, 2022). As a cancer patient often has a sensitivity to cold, the fireplace became a comfortable, calming space for socialising and sharing thoughts.

Nature

Historically, healing environments have often been associated with places where nature is present (Lundin, 2015). Garden paradises, medieval bathhouses and spa resorts for bathing and recuperating were organised around the life-giving force of water, cultivating the land and fresh air. Today, there is evidence of nature's positive influence on physical and mental health. Exposure and views on nature include reduced pain and stress, less medication, lower blood pressure, faster recoveries and decreased all-cause mortality in general (Tekin, Corcoran & Gutiérrez, 2022; Fradsen, et al., 2009; Evans and McCoy, 1998). Spending time in a garden also seems to create positive mood changes, making you feel more relaxed, refreshed, stronger and capable of dealing with tough questions and emotions (Fradsen, et al., 2009). A garden can also provide social aspects such as the ability to retreat to secluded places, as well as places that provided opportunities for socialising.

In a built environment, the accessibility, location and appeal of a garden are important to reduce barriers and increase use (Fradsen, et al., 2009). The garden itself should also be furnished with practical items that promote use and increase enjoyment of using the garden; as chairs, tables and canopies that provide shade and shelter from rain. Studies suggest that adults primarily use gardens to sit in, either to relax, chat, eat or just look. Children tend to have a more active need to play or explore.



An overview of presented factors for healing architecture, their architectural association and physical and mental effects

2.3 Hope & Atmosphere

Cancer care centres in the UK, Maggie's Centres, with the same ambitions as Kraftens Hus; to be a centre for social inclusion, education and psychological aid was described by Jencks (2015) as follows,

It is like a house which is not a home, a collective hospital which is not an institution, a church which is not religious, and an art gallery which is not a museum.

Centres in the organisation of Maggie's follow an architectural brief that, more than anything, is about the feelings the design should convey (Maggie's, 2015). The brief describes that the centres must feel bold as well as inviting and safe. They must look and feel joyous, they must have zest as well as calm. The impression they must give is;

I can imagine feeling different here (Maggie's, 2015).

The main feeling that a centre must convey is hope (Jencks, 2015). It is described in the architectural brief of a Maggie's Centre that;

The object is to help ordinary people who have cancer find the hope, determination and resources they need to cope with one of the toughest challenges any of us is likely to have to face (Maggie's, 2015).

Hope is not a light-hearted optimism based on an assumption of a positive outcome (Hopper, 2020). Hope is a motivation to persevere toward a goal or an end state, even if one is sceptical that there will be a positive outcome. Psychologist states that the main difference between hope and optimism is hope's focus on agency.

Studies suggest that an experience of hope results in better life quality, lower levels of depression, lowered classifications of pain, a stronger sense of purpose and less loneliness (Hopper, 2020; Schiavon et al., 2017). As an explanation for this outcome, psychologist states that hopeful people are coping with stressful events in healthier ways: they are less likely to avoid problems and are seeking opportunities to change their disease experience (Schiavon et al., 2017).

The architecture of hope could be described as spatialities that develop or acquire agency that expands an individual's capacity for action, even if only temporarily (Marin & Roe, 2022). Martin and Roe (2022) argue that it is the physical features and the atmosphere of a space and the social practices that it fosters that enables the experience of hope.

Jencks (2015) describes the architecture of hope as an imaginative projection, something striking, iconic or suggestive and enigmatic.

How are the physical features of atmospheres defined? Bille et al. (2015) identify atmosphere as a tension between subject and object that forms an emotional and a sensory experience and therefore a process of transformative rather than absolute. The philosopher Böhme (2013) argues however that atmospheres can be staged when an architect is not focusing on the imaginative idea of what the observer receives through the object.

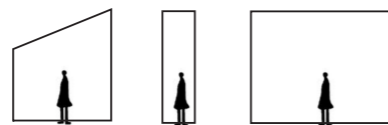
The art of atmospheres is in the staging (Böhmne, 2013). According to Zumthor (2006), 8 themes can be identified as the conveyor of atmosphere; the body of architecture, material compatibility, the sensory experience in a space, between composure and seduction, tension between interior and exterior, levels of intimacy and the light on things. In this thesis, Zumthor's (2006) 8 themes are listed and complemented with relevant sources and my own experiences to formulate philosophy in practise.

To present my own experiences of atmospheres in the process of staging atmospheres is dual. There is a discussion on pre-reflexive experiences and to what degree actions and moods are shared by different users. What I feel is not necessarily what you feel. Bille et al. (2015) argue however that the intentional orchestration of atmospheres can not be shaped in a vacuum, only oriented toward ideals of how a place should or could feel. Staging atmospheres always offer the potential to seize the individual, and as the architect in this thesis, I can only present my intent and how I imagine that atmosphere is created based on Zumthor's (2009) themes.

The Body Of Architecture

Zumthor (2006) describes that architecture is an architectural body. As a body, it can affect you. You can touch it, and it, by existing, has a relationship with you. Böhme (2017) argues that the geometric created space affects our emotions and minds. It can be concluded that the size and shape of a space are crucial for the experience of the atmosphere.

In a larger space, if alone, I slow my pace and am more tempted to linger and let my mind wander. In a smaller space, I am more task-oriented and focused on what is at hand. An interesting ceiling shape makes my eyes wander upwards, making me feel inspired and a sense of serenity.



Material Compatibility

When materials are combined, they react to one another and create a composure with different outcomes (Zumthor, 2006). In a composition, the distance between the materials is important. If components are too far or too close they do not interact.

When exploring this theme, I think of how hard and soft materials enhance each other when combined. I think of how a white flat surface can make a wooden texture more vivid and stronger in its presence.

The Sensory Experience In A Space

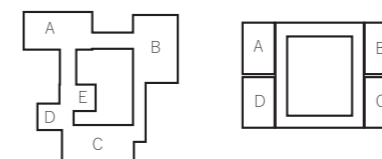
According to Zumthor (2006), every space makes a sound and has a temperature. There is a sound from walking on different materials. There is a sound from different rooms and functions; the slamming of pots in a kitchen or the water moving in a swimming hall. The noises can make you feel a certain way, but so can the absence of noise. A quietness can be uncomfortable when with new acquaintances or comforting when one is meditating.

To this discussion I would like to add that in modern buildings, there often is a sound from air being moved through ventilation or a buzz from electrical equipment. I often identify these technical sounds as stressful and exhausting. A truly quiet space can be an indescribable ease, especially when experienced in contrast to other sounds.

The sensory experience of temperature is physical but with a psychological effect (Zumthor, 2006). A place that is cool during a warm summer day is relaxing and a warm place to sit on a cold day is comfortable. The temperature can ease stress and discomfort.

Between Composure And Seduction

This theme is about how architecture influences movement (Zumthor, 2006). The way that spaces connect can direct or seduce people to explore. For example, a corridor takes you from A to B efficiently, but what if spaces were designed so that I am drawn around a corner via an odd bit of orientation (Zumthor, 2006)? It can be the way the light falls over there, a sound, or how it opens up. A direction is introduced, and I am being seduced. When I walk, the movement introduces a new space with a new direction and seduction. This combination of spaces conveys a feeling of strolling, exploring and voyaging rather than directed and rushed.



The composure of spaces should not be as a labyrinth. There are always odd bits of orientation in the spaces and a way to go, which has a calming effect (Zumthor, 2006).

Tension Between Interior And Exterior

Architecture often defines an inside and outside (Zumthor, 2006). In the connection of inside and outside, a special tension is made. A sense of being enclosed and protected. Openings in the building envelope are gateways between the two spheres, making objects in the gateway important for the atmosphere; thresh holds, glass and curtains can all make the tension stronger or not by merging indoors and outdoors or not.

In an interactive setting with doors and sliding sections, visitors can explore and set the tension between the spheres themselves (Martin & Roe, 2022).

Levels Of Intimacy

An individual always understands a space from a personal perspective. Zumthor (2006) states that rooms can be for me, me in a group or me in a crowd and that setup provides different atmospheres. You act and feel differently whether you are in a kitchen with other people or a secluded counselling space and a session (Martin & Roe, 2022).

To do something for you conveys a certain feeling (Zumthor, 2006). Help yourself to your cup of tea makes you feel at home (Martin & Roe, 2022).

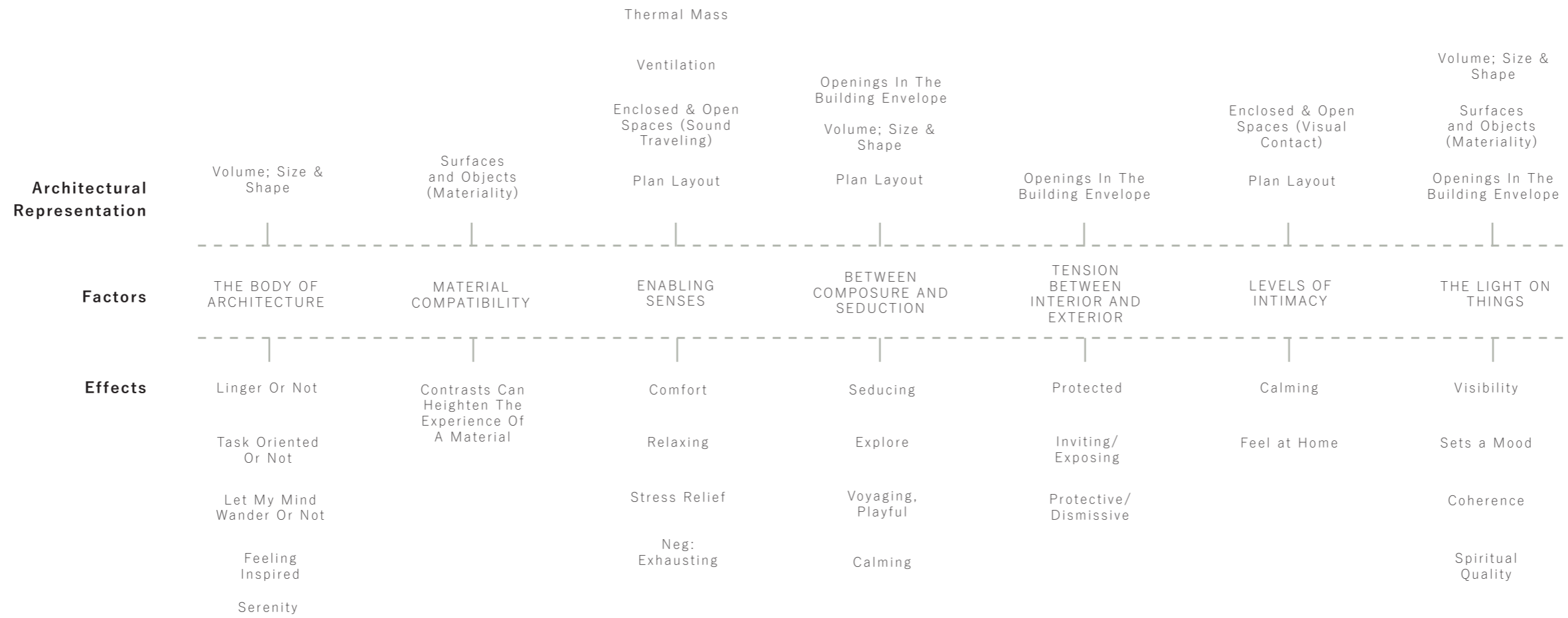
To be alone in a group, visually seeing but not taking part, provides a bit of background noise, which is quite helpful if you are a very distressed person (Martin & Roe, 2022).

The Light On Things

The first function of light is to make things visible, second to express characteristic moods through the ethereal effect of brightness, and third to generate coherence between the individual structures (Böhme, 2013). Daylight, and the way light can shine on things, create shadows and reflections is almost of a spiritual quality (Zumthor, 2006).

My strongest atmospheric experiences of architecture are often in the presence of a light that does all three; makes the space visible, sets a certain mood and creates a sense of coherence and wholeness. The light on things and reflections in a room make the cohesion between elements in a space stronger and perceived together.

The atmospheric factors are presented in an overview on the following page and then exemplified in two cases on pages 20-23.



An overview of presented factors for atmosphere, their architectural association and physical and mental effects



The atmospheric factors at
Louisiana Museum of Modern Art, Denmark

I can see a clear seducing direction and feel a tension between inside and outside. The ceiling and flooring materials stretch outwards while the strong mullions in the window keep me inside.

Material's compatibility is measured with white walls between a wooden ceiling and a brick floor and the body of the architecture is urging me onwards. The light in the space is vivid and bright with shadows from nature outside, hitting a white surface and an earthy brick floor. The short passage is empty, giving a sense of privacy and that it is my voyage. I feel tempted to move closer to the warm wall rather than the colder window.



The atmospheric factors at
Villa Beer, Austria

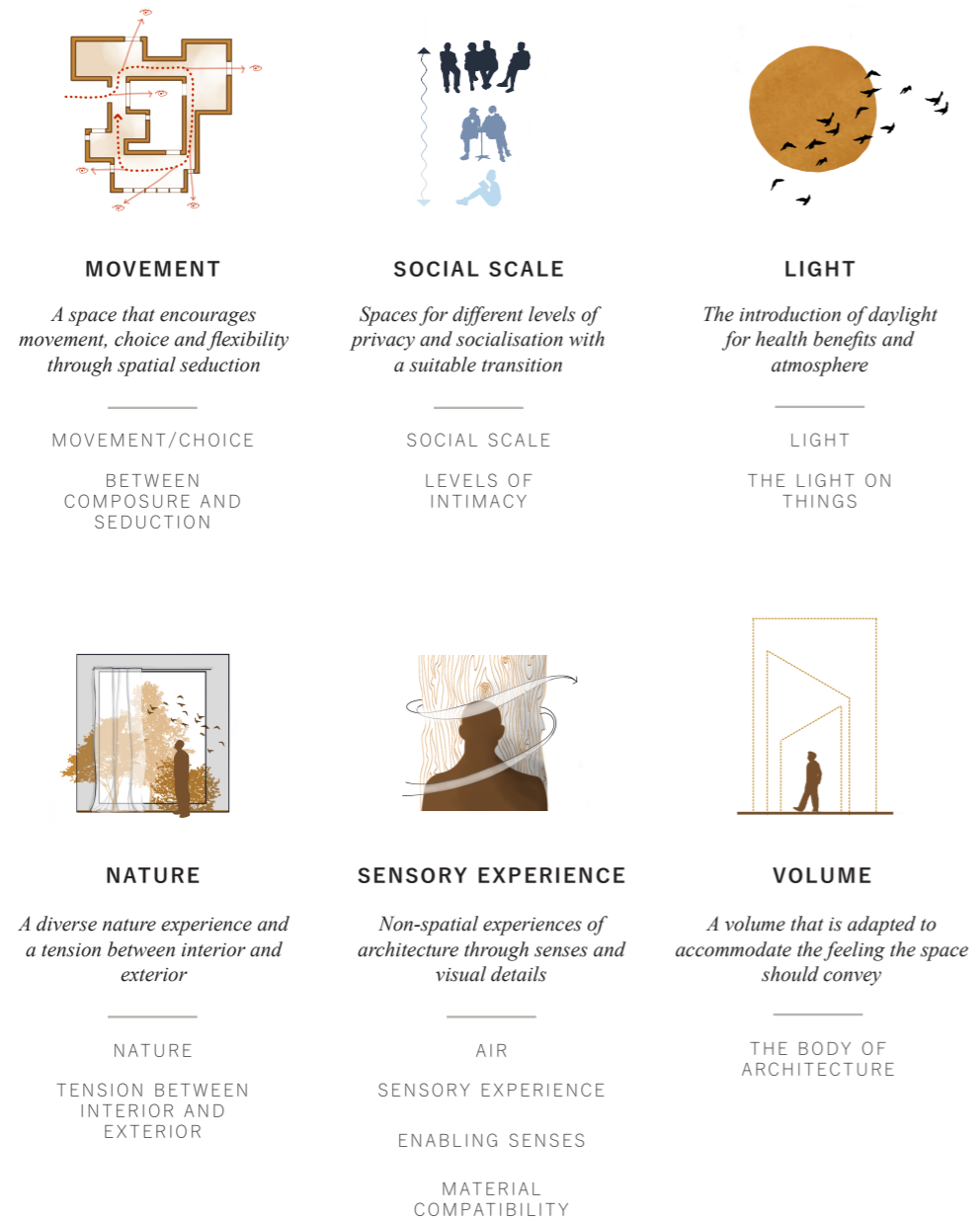
The architectural body is high and introduces bright light with shadows from a nearby tree. The high windows, with a seating bench, create a tension between inside and outside, providing a space to meet and be surrounded by nature and sky while protected in a slightly separated space with a level of privacy. The white walls and ceiling are compatible with the softer wooden flooring, radiating a softer light.

A concrete frame surrounds the radiator, collecting heat, making it a comfortable and inviting place to linger.

A slight asymmetry in the floor plan, making the high window area slightly off-axis from the entry point to the room draws you to it with an urge to explore, and privacy when arriving due to broken sight lines.

2. 4 Summary of Theories

All factors found in this thesis on healing and atmospheric architecture are categorised and sorted into 6 final design strategies. The categorised factors and the strategies they create are visualised below. The strategies are; movement, social scale, light, nature, sensory experience and volume.



An overview of how all factors presented in this thesis are combined into design strategies

2. 5 Sustainability

A cancer care centre such as Kraftens Hus can affect survival rates by providing social inclusion, education and psychological aid, this project is therefore strongly associated with the social Sustainable Development Goals (SDG) that the UN has agreed on. Target 3.4 of the SDG:s reads:

Reduce mortality from non-communicable diseases and promote mental health (UN, 2015).

The setting for Kraftens Hus is a building, ecological sustainability must therefore be considered in the design proposal since site management, construction and building systems have a high impact on ecological sustainability and are addressed by Target 11 of the SDG:s;

Make cities and human settlements inclusive, safe, resilient and sustainable (UN, 2015).

Construction & Materials

40% of all carbon emissions are derived from the building and construction sector due to the usage of materials with a high level of embedded carbon, such as steel, cement, and concrete (Sayigh, 2022). Wood, on the other hand, can absorb carbon, and when sustainably produced and shipped, be an unmatched construction material in terms of sustainability. In this thesis design proposal, the load-bearing structure will therefore be conducted in wood.

When applied indoors, wood can also provide health benefits for visitors. It has been verified that indoor wooden panelling can be easier than other surfaces to regulate air humidity to prevent the spreading of respiratory infections and some bacteria and volatile organic compound (VOC) emissions, which can be bad for one's health (Kotradyova et al. 2019). A wooden interior is therefore suggested in this project.

Building Systems

Several of the presented factors in this thesis on healing architecture and atmospheres are associated with building performances such as heating, ventilation and acoustics to optimise the experience of thermal comfort, fresh air flows and noise. The choice of building systems is therefore relevant to consider for the experience of the design proposal, but also since building systems can be more or less sustainable due to energy consumption.

In this thesis design proposal, cross-flow ventilation is proposed to reduce energy consumption and to provide continually ventilated air. Furthermore, cross-flow ventilation has been described to amplify

the positive homely feeling in a cancer care centre (Tekin, Corcoran & Gutiérrez, 2022).

Since thermal comfort is subjective, it is important to present a level of control to the user, which can manifest in the access to operable windows and shades or heaters (Browning, Ryan & Clancy, 2014). Cancer patients are often extra sensitive to cold, which makes the heating aspect extra important in this design proposal. Heating is therefore proposed to be presented in the building as local electrical radiators.

Site Management

The exterior environment, from where fresh air is collected, can affect the interior air quality. Browning, Ryan and Clancy (2014) describe that vegetation can filter the air and reduce particulate matter in the air. Vegetation can also reduce the perceived levels of noise pollution and reduce the urban heat island effect.

A diverse vegetation on site can also aid biodiversity and handle flood mitigation (Browning, Ryan & Clancy, 2014). On site, diverse vegetation and water management are therefore proposed.

3. The Program

This chapter will present a spatial program for this thesis design proposal based on case studies of existing cancer care centres and literature studies of Kraftens Hus own Pilot study on spatial needs and wishes. The chapter concludes with program analyses and connection diagrams.

3.1 Case Study 1: Kraftens Hus Sjuhärad

Background

In 2016, the Regional Cancer Centre (RCC) in Västra Götaland initiated a pilot study on a physical cancer care centre (VGR, 2016). The idea had been presented by the independent council of patients and their relatives (PNR) and based on the identified psychosocial needs of the group. It was stated that being diagnosed with cancer is affecting all aspects of an individual's life and therefore described as a life-event. When the diagnosis is viewed from a life-event perspective in care, additional rehabilitation is enabled, focusing on emotional and social support for all people affected by cancer, not just the individuals with a diagnosis (Smith et al., 2021).

The pilot study was conducted as a social innovation project in Borås, due to the city's representativeness in the Västra Götaland Region in terms of size and the presence of a local hospital with cancer care (Hellström, 2021). The process was enabled and driven by multidisciplinary collaborations with representatives from RCC, PNR, the local hospital, primary care, municipality, Social insurance agency, Employment agency, academia, local businesses and civil society (Hellström, et al., 2019).

Seven workshops were conducted to investigate both concrete and abstract issues (personal communication Andreas Hellström, 1 Feb, 2024). When the future visions for a centre were discussed spatially and what emotions the visitors expected from the environment, the visions included the following statements (Mannefred, et al., 2016); the centre should be;

- welcoming, inclusive and a space for spontaneous meetings and companionship.
- harmonic and be a place where one can find serenity and gain strength.
- a happy place with a positive atmosphere.
- providing space for activities, workouts, good food, coffee and creativity.
- a place where one could feel pampered, treat oneself and feel beautiful.
- physically far from a hospital to mentally distance the centre and visitors from the illness.
- close to nature.
- inviting to entire families and children.

Case

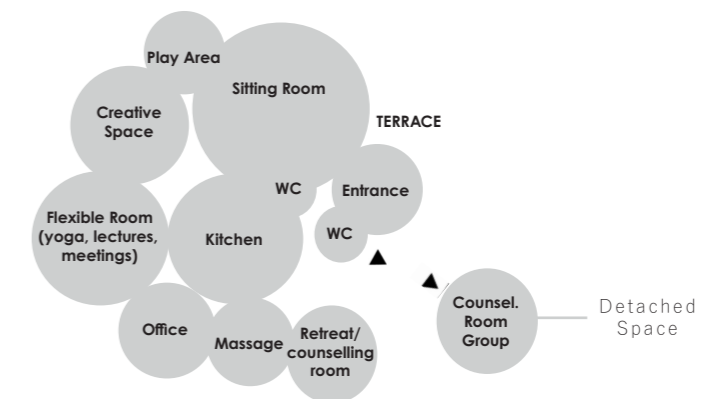
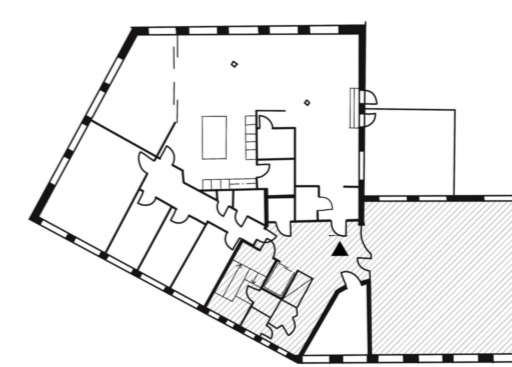
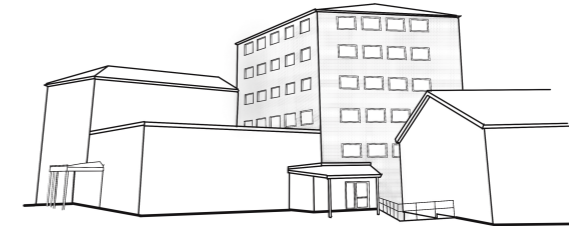
The pilot study was concretized and named Kraftens Hus Sjuhärad and was opened in February 2018 in a 300 sqm venue in central Borås (Hellström, et al., 2019). The venue is located on the 6th floor in a building with multiple uses, mostly offices of a non-profit organisation nature (Eriksson & Elf, 2020). The centre includes an entrance, sitting room, kitchen, creative room, a larger meeting room for 30 people, offices, room for massage and a smaller meeting room for two, a terrace and a library.

In 2020, an evaluation of the pilot study on Kraftens Hus Sjuhärad was conducted and based on surveys and interviews with visitors and key stakeholders (Hellström, 2020). Results stated that Kraftens Hus had accomplished what they were primarily aiming for; providing a community. It was also stated that the centre had been a place for visitors to gather strength and find energy through exchanges of experiences, new knowledge, creativity and activity.

When the spatial aspect of Kraftens Hus was evaluated, the location and rooms at Kraftens Hus were discussed. It was stated that the parking situation was important to consider when planning a Kraftens Hus (Hellström, 2020). The context of the placement was also important. When the context was inviting to a larger group, a visitor to Kraftens Hus experienced a positive distancing from the disease.

Finally, the financing of Kraftens Hus was mentioned. The financial model of Kraftens Hus is divided into three parts with findings from the Region of Västra Götaland, the municipality and the business sector (Hellström, 2020). The evaluation identified a possible future challenge to attract the business sector and the need for Kraftens Hus to show and offer the benefits of investing in the association. During an interview, Mannefred (20 March, 2024) explained that they now provide businesses with various educational materials and lectures when offered a donation and are holding events where donators can meet.

Today, Kraftens Hus is renting their space from the municipality in a favorable deal (personal communication C. Mannefred, 20 March, 2024). Kraftens Hus is renting for free, and in return, the municipality is using the centre's rooms after closing hours for other activities.



Comments on the plan: The plan is somewhat zoned in public and private functions, where the office, massage room and retreat space are accessed by a corridor that has a second exit point for a private sortie after a meeting.

Case 1: Kraftens Hus Sjuhärad, Borås, Sweden

3. 2 Case Study 2: Maggie's Centre

Background

In late 1987, a woman named Maggie Keswick felt a small lump in her breast and was soon diagnosed with cancer (Jencks, 2015). Maggie underwent several surgeries and received modern and experimental treatments, but in 1993 Maggie and her husband were told that the cancer had spread and the prognosis was very dimmed. She was told that she only had a couple of months to live and there was no hope of recovery. The couple had to deal with the message in a long windowless corridor with neon lights, full of sad exhausted people. The couple stated, there must be a better place to deal with a death sentence.

Maggie was a writer, gardener and designer (Maggie's, N.d. a). During her last chemotherapy, Maggie worked closely with her medical team to develop a new approach to cancer care. Maggie outlived her diagnosis by 15 months but passed away in 1995. The following year, the first Maggie's centre was opened opposite the hospital where she was treated. Today, there are 28 built Maggie's Centres and in 2022, the Maggie's Centres combined received 293 660 visitors (Lee, 2022; Maggie's, N. d. b.).

The program for all Maggie's Centres is based on the need for information, education, psychological therapy and social inclusion (Jecks, 2015). At the centres one is therefore offered information and means to search for information to get a sense of control (Lee, 2015). At Maggie's, there is therefore always a library with books, magazines and computers but also constant lectures and workshops to educate on cancer but also on how to manage it practically and mentally (Jencks, 2015). Lee (2015) describes that when someone walks into a centre with a practical concern, it often leads to support with emotional and social issues that they may not have otherwise been able to address.

Emotional support at Maggie's can be informal or booked and provided in one-on-one sessions or in groups (Lee, 2015). However, the main support provided at Maggie's is the opportunity to meet others with whom one can identify (Maggie's, N. d. c.). To hear personal stories of how others have overcome cancer obstacles can be one of the most powerful means of helping people increase self-efficacy and gain confidence.

As mentioned in chapter 2. 3 Hope & Atmosphere, the architectural brief is mostly about the feelings the design convey, rather than spatial composure (Maggie's Centres, 2015). Maggie's Centres are therefore unique physical environments, designed to acknowledge a cancer suffering's plight and affirm their worth (Jencks, 2015). The brief states that while

the centres should look friendly and welcoming, they should not belittle what people are going through (Maggie's Centres, 2015).

The placement of a Maggie's is always built within the grounds of cancer specialist hospitals (Maggie's Centres, 2015). The hospital and the centre play different but complementary roles: each recognises that to recover from cancer you need both kinds of help. The design and scale of a Maggie's Centre draw inspiration from the concept of being the antithesis of a hospital.

The architectural brief for a Maggie's states that a centre must have a set of sitting rooms for different kinds of sessions ranging from yoga to workshops and larger counselling in a friendly space to private one-one-one counselling (Maggie's Centres, 2015). It is also stated that there should be a domestic kitchen that can be used as a main hub in the building which anyone can and is encouraged to use. Furthermore, the brief also states the importance of outlooks and the possibility of stepping out from as many of the internal spaces as possible, but, the building envelope should not be so open that people feel watched or unprotected.

Case A: Swansea

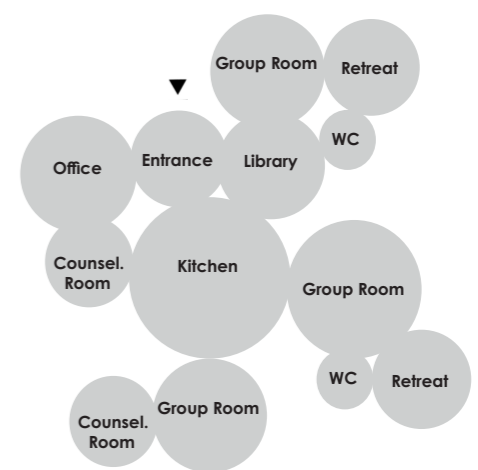
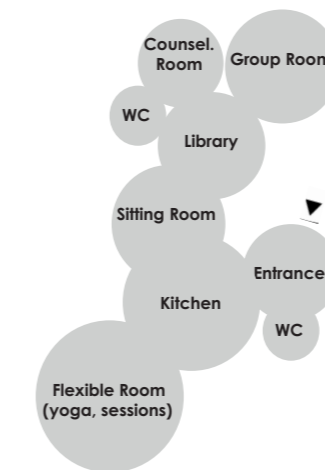
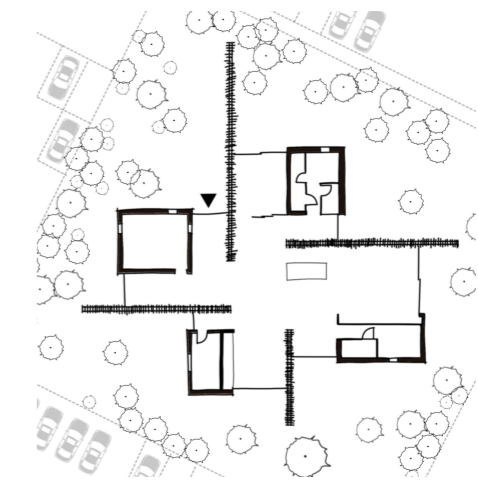
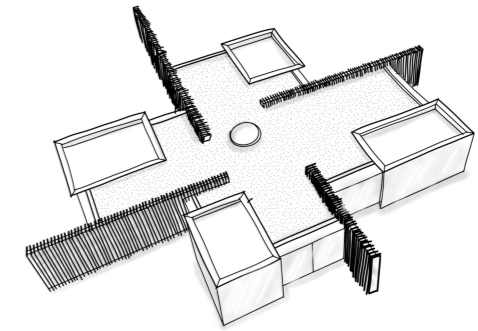
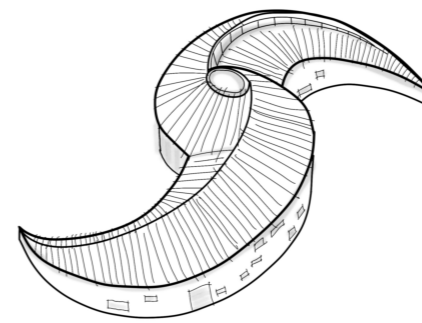
The centre was completed in 2019 and based on the idea and image of a constant cosmic expansion and dynamism (Heathcote, 2015). Kurokawa's idea was to create an outward radiating shape that still has an inward sucking motion. I identify that the first swirling wing both guides and embraces a visitor. The path is clear and one is presented to a fully glazed door, showing the space within, making the entry easy. A small slit at the top of the swirling gable roof introduces skylight sweeping on the sloping ceiling, emphasising the ceiling height.

The first room one encounters is the light kitchen with a big table. The kitchen has large openings towards the other sitting areas, one with a fireplace and another for yoga and workshops.

Case B: Southampton

The Southampton Centre is described as emerging from an abstract plan with ethereal clarity (Heathcote, 2015). The building is based around four walls radiating from a central space creating four blocks with a common centre, the kitchen. The four walls are slightly higher than the blocks, creating a mental shelter and stretch out from the building blocking outside views into the large glazed walls. The centre was completed in 2020.

Thou more condensed than Case A, this centre seems to provide more functions and has plenty of smaller seating spaces. All spaces are however connected to the central kitchen.



Case 2a: Maggie's Centre Swansea, UK

Case 2b: Maggie's Centre Southampton, UK

Comments on the plan: The cases are both surrounded by nature in different forms; water or greenery. Both cases have grand gestures by guiding walls to lead a visitor to the entrances. In both cases, there is a variety of spaces providing a privacy scale ranging from social spaces such as the kitchen, semi-privacy where larger spaces are divided into sections by furnishing rather than walls, and fully secluded rooms.

3.3 Case Study 3: Kræftens Bæmpelse

Background

Kræftens Bekæmpelse (Eng: *The Fight Against Cancer*) is the largest disease-fighting association in Denmark (Nedenskov Madsen, 2023). The association's aim is to reduce the cancer occurrence in the Danish population, to increase the survival rate and to enhance the quality of life for those with cancer by working for high-quality treatments and to ensure consistency in the cancer care process between hospitals, general practice and municipalities.

To ensure this, Kræftens Bekæmpelse works in both the scientific field and the social field. Kræftens Bekæmpelse supports cancer research at the university hospitals in Denmark and has its own research centre (Kræftens Bekæmpelse, 2023). To spread awareness, but mainly to socially support people with cancer and their relatives, Kræftens Bekæmpelse offers counselling and support at physical meeting places, by phone and digitally via online forums, apps and web pages. On these platforms, Kræftens Bekæmpelse is in contact with 107.000 people annually.

The physical meeting places provided by Kræftens Bekæmpelse consist of two kinds. Firstly, there is a network of employees and volunteers all over Denmark in several small offices at the local volunteer and self-help centres where one can book a private counselling appointment (Kræftens Bekæmpelse, 2023). Secondly, there are 12 cancer care centres open for drop-in where patients and their relatives can meet others in the same situation, attend various activities or relax between hospital appointments.

The cancer care centres in Denmark are a result of a change in the National Health Act that in 2007 stated that retraining and rehabilitation should from then on primarily be a matter for municipalities (Center for Kraeft og Sundhed, N.d.). The municipalities therefore connected with the foundation Kræftens Bekæmpelse and created spaces to meet the demands conducted by the Danish National Board of Health's Pathway Programme for Rehabilitation and Palliation in Cancer (Center for Kraeft og Sundhed, N.d.).

The centres are designed according to 6 principles (Center for Kraeft og Sundhed, N.d.);

- to have the individual and their everyday life in focus.
- provide special support for the individuals with the greatest needs.
- equal focus on mental and physical health.
- broad collaborations between stakeholders to ensure high-quality solutions.

- focus on health, not the disease.
- utilise knowledge and explore new ways to ensure an improved quality of life for patients and their relatives.

A rehabilitation program at a centre aims to prevent and reduce the consequences of cancer and the treatments so that an individual can achieve the best possible functional ability to live a meaningful everyday life (Center for Kraeft og Sundhed, N.d.). This is achieved by:

- offering rehabilitation to all cancer patients and their relatives who are in need.
- having rehabilitation programs that support physical, mental, social and existential needs.
- offer programs tailored to the individual's needs and possibilities.
- collaborate with other sectors and actors to achieve a coherent and safe cancer pathway.

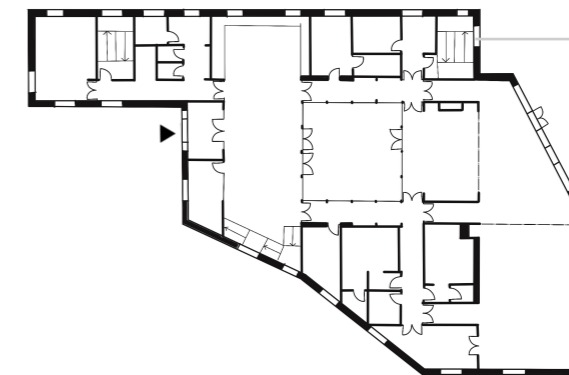
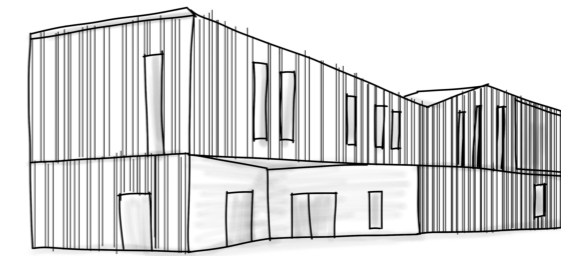
Case

In 2020, the cancer care centre Livsrum was completed in Herlev, northwest of Copenhagen (Cornelius Vøge, N.d.). The centre is physically close to a hospital with cancer care, but not on the hospital premises. The idea is to provide a calm place that patients and their relatives can reach when being in contact with the hospital care (Realdania, N.d.).

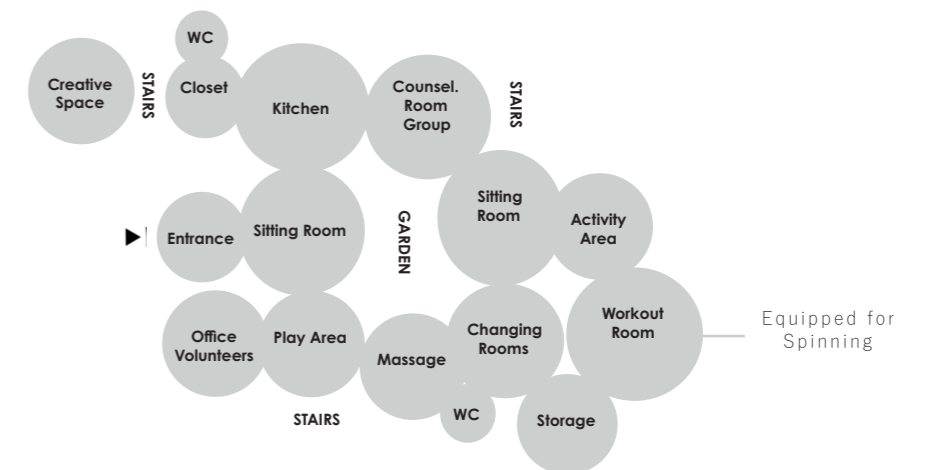
The brief was somewhat based on the cancer care centres in the UK, Maggie's, but there is a stronger focus on physical rehabilitation and the need for all relatives to be included in care, including a patient's kids (Arkitema, 2008). There is a special focus on the kitchen and the domestic feeling it can provide at one end of the building and changing rooms with showers and spaces for workouts and activity on the other end.

3.4 Summary of Case Studies

Three organisations with a focus on additional cancer care besides medicinal care have been presented in four cases. All cases have a focus on a domestic feeling, with a kitchen and various sitting rooms for different conversations. All centres have spaces for some physical activity, but the Danish example, Livsrum, has the strongest focus on activity due to having a physical rehabilitation focus besides the mental support. Both the Karftens Hus in Borås and Livsrum have spaces for kids and creative rooms, while the Maggie's Centres are generally less coded with more flexible rooms.



Leading to a second floor containing more social areas, group rooms and offices (not visualised)



Comments on the plan: The floor plan is organised around a central courtyard to introduce light in the broad volume and green outlooks. The centre is less domestic than the other cases in its layout and holds more function. There is a second floor with more counselling rooms and offices.

Case 3: Livsrum
Herlev, Denmark

3. 5 Creating a Program

This section presents spatial needs and findings from case studies, interviews and literature studies. The section will be summarised into a program.

Target Group

Kraftens Hus is for a vast target group. 1 of 3 receive a cancer diagnosis during their lifetime, however, 9 of 10 who receive a cancer diagnosis are over 50 years old (Cancerfonden, 2023).

Even though men and women are equally afflicted by cancer, Kraftens Hus, today, has a majority of visitors from the demographic group of senior women. Maria Hultman Gonzalez (personal communication, 24 Jan, 2024) explains that Kraftens Hus is for all people, but not all feel attracted. There is a need for spaces to be flexible to suit a variety of groups and a specific need for spaces that can attract men. Hultman Gonzalez suggests that to attract men, one could invite them to specific events and activities that later on could lead to conversations and a community, such as football events on a big screen, games or clubs.

Kraftens Hus is not a centre that provides support for children afflicted by cancer, however, there are often children in the vicinity of adults with cancer. There is therefore a need for Kraftens Hus to be welcoming to children and teenagers. In the Danish centre, Livsrum, there is a large play area for kids that is supervised from a sitting area and kitchen. There is also a discussion on providing a youth corner in the library area where they can use computers or play video games (Arkitema, 2008).

Entrance

Studies have shown that it often takes three or four attempts before a new visitor dares to enter a Maggie's Centre (Maggie's Centres, 2015). It takes courage to come in. To facilitate the approach to a centre, the centre must, first of all, be notable and stand out in the context and declare its presence. Secondly, the surroundings and gardens must be designed to guide a visitor towards the entrance, the building must be easy to approach.

There is a need for the entrance to be welcoming and with visual contact to other areas, especially the kitchen, to draw a new visitor inside. In Kraftens Hus Sjuhärad, there was an attempt to have this visual contact, but the building structure could not allow it, therefore an automatic doorbell is installed to make a sound upon entry and alert staff to greet those who have arrived (Carina Mannefred, personal communication, 20 March, 2024).

The entrance is also a place to prepare yourself and pause before moving forward (Maggie's Centres, 2015).

Kitchen

In all cases, the kitchen is described as the most important space and a main hub due to the feelings a kitchen can convey. It has a very strong domestic feeling to it, making the space different from a hospital environment (Arkitema, 2008).

The kitchen is also a neutral and natural meeting place, where visitors can instinctively know how to use the space, make little choices and socialise on different levels (Marion & Roe, 2022). In a kitchen, there is a special capacity for quiet sociability and it allows for many conversations to be conducted at the same time and for visitors to choose their level of interaction with each other. When Martin and Roe (2022) interviewed visitors to a Maggie's Centre on the matter, one visitor explained;

I think just going to help yourself to your cup of tea, you feel at home a bit, people come and, also, they don't necessarily want to talk. [...] they'll go and find some space to sit and they just, it's just that feeling of being safe and you don't have to talk if you don't want to.

To encourage visitors to use the kitchen by themselves and feel at home, there should be a small domestic coffee maker, domestic washing machines and open cabinets for the china (Andreas Hellström, personal communication, 1 Feb, 2024).

The kitchen is also an important space for nutritional workshops or mingling at events, there should therefore be a large kitchen island where a group could gather or set up a buffet or small fika (Maggie's Centres, 2015).



Sitting Room

In the case studies, there are sitting rooms of multiple types. In Maggie's Centres, the sitting rooms are flexible and used for lectures, activities, workshops and group meetings and group counselling. In the Scandinavian cases, spaces are generally more coded and there are multiple sitting rooms or divisions in a sitting room with varied furnishing. All cases acknowledge that different furnishing and spaces foster different conversations and meetings. In an interview on a Maggie's Centre by Martin and Roe (2022) a visitor however stated that it was the space with a fire that gave him the strongest calming and domestic atmosphere;

I spend a fair, half my day in the lounge with the fire... I find that particularly homely, [...] I'm sure the room helps to put people at ease and to feel more comfortable and able to talk.

Big sitting rooms with diverse furnishing can, as the kitchen, allow for quiet socialising where one can be in the same space as others but choose to be private.



Retreat

The general aim for all centres is to bring people together, but there is a need for quiet secluded spaces for privacy too. The spaces provide a safe space to retreat to when one needs rest, private meditation, sleep or to cry (Maria Hultman Gonzalez, personal communication, 24 Jan, 2024).

Often toilets are used as a retreat too (Maggie's Centres, 2015). It can sometimes feel less exposed to visit a toilet than a specially labelled room. Toilets therefore need to be as soundproof as a quiet room, easy to access and private. There should be a mirror and a domestic feeling to them. Maggie's architectural brief suggests that toilets should be big enough for a chair and maybe a shelf.

Counselling

Unlike Maggie's centres, Kraftens Hus is not providing personalised therapy or treatments. However, at Kraftens Hus Sjuhärad there is group counselling where people can meet with a staff member in the room. In the Danish centre, group sessions vary in size from 8-10 participants and up to 30 (Arkitema, 2008). The group counselling is often based on the need to talk about a specific topic or subject teaching.

During interviews, there was a disagreement on the need for more rehabilitative support at Kraftens Hus Sjuhärad, for example, some requested the presence of psychologists and therapists while others wanted Kraftens Hus to purely remain a social meeting place (Hellström, 2020). Hultman Gonzalez (personal communication, 24 Jan, 2024) describes that Kraftens Hus does not want to provide treatments today but is occasionally inviting professionals such as psychiatrists, nutritionists or the social insurance agency for workshops or lectures and then have bookable one-on-one sessions about that.



Lectures

The education and exchange of knowledge is important in all cases. Kraftens Hus invites speakers for lectures and workshops and has visions of inviting economic donors to educate them too (Carina Mannefred, personal communication, 20 March, 2024).

Library

To seek information is described in Maggie's centres as important since it can offer a sense of control (Lee, 2015). To have information at the centres is also described in all cases important since visitors then have someone to discuss findings with and can verify to some extent and take concerns back to a doctor's appointment. There should be computers and books and brochures.

Activity

In the pilot study resulting in Kraftens Hus Sjuhärad, patients voiced a need to have the means to actively heal one's body and treat it through yoga and massage (Mannefred, et al., 2016). In Kraftens Hus Sjuhärad and Maggie's centres there is space for yoga, while Livsrum in Denmark introduces higher intensity workouts for rehabilitation. Since Kraftens Hus is not providing treatments, it will not be a forum for clinical rehabilitation but recurring yoga for well-being in a secure forum.

Spa

To have cancer or to receive cancer treatments is hard on the body and is often combined with pain and a sensitivity to cold (Tekin, Corcoran & Gutiérrez, 2022). As mentioned in the section above, there is a will among cancer patients to actively heal one's body, by working out, but also by pampering (Mannefred, et al., 2016). In the pilot study on Kraftens Hus a small spa was mentioned, but deprioritised due to economic aspects. In centres in Denmark, there is often a sensory room for heating and relaxation (Arkitema, 2008). A small spa for heat therapy and pampering is therefore suggested.

Creative Space

In both Kraftens Hus Sjuhärad and Livsrum, there is a creative space for art therapy. Besides the therapeutic function, artwork is displayed in the centres, adding to the domestic feeling and some crafts are specifically made to ease treatments and donated to the hospitals (Carina Mannefred, personal communication, 20 March, 2024).

Offices

All cases have office spaces for staff, but some lack break rooms which is needed in a full-time workplace. Today, there are three people employed for Kraftens Hus Gothenburg, but there is a need to have workstations and co-working for more people since there is a will to invite other cancer organisations to sit at the centre occasionally (Maria Hultman Gonzalez, personal communication, 24 Jan, 2024). There is also a need for meeting rooms.

Garden

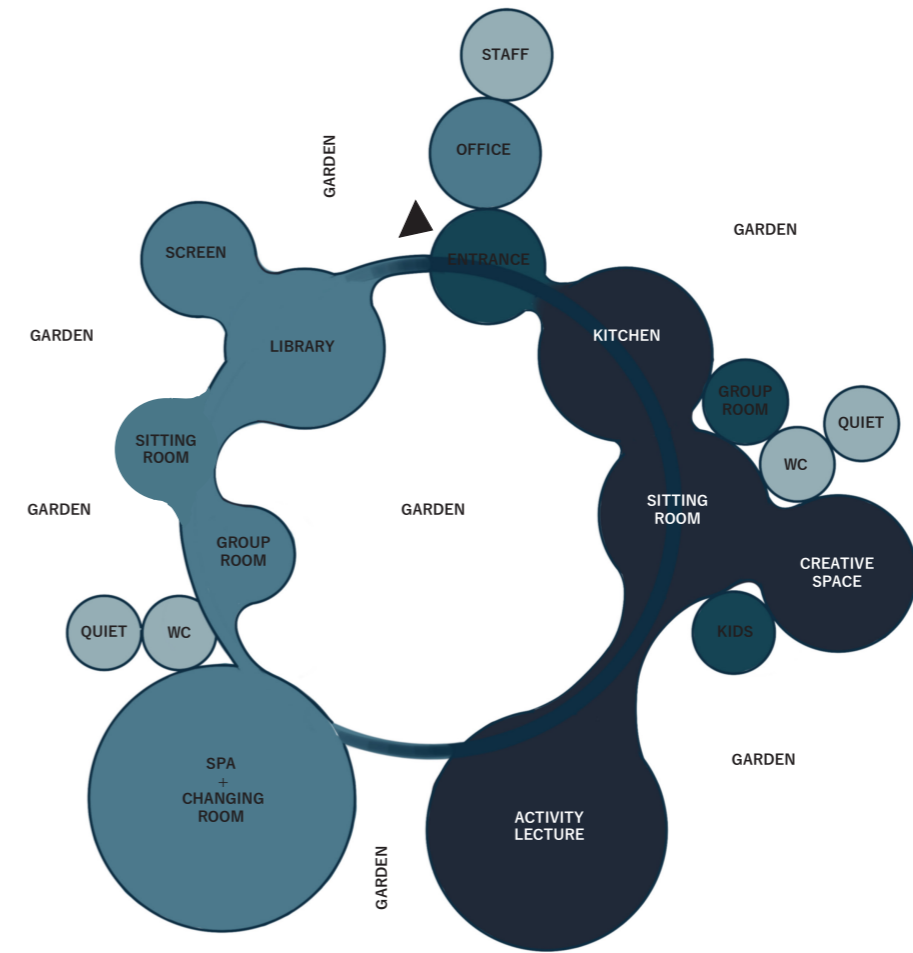
As earlier chapters have presented, nature exposure and outlooks are important and are so in all cases. The garden should be diverse for biodiversity, but also to stimulate divers' needs of gardening or smelling flowers.

Privacy	The Space	Summary	People
●	ENTRANCE	A welcoming space for greeting, pause before proceeding. Overview, drawn inwards.	2-5
●	KITCHEN	Main Hub in the centre. Providing a domestic feeling and socialisation on many levels. Workshops. Buffets and fika.	12-16
● ● ●	SITTING ROOM	A place for socialisation on different levels of the socialisation scale. Different meetings and conversations that are enabled by furnishing and spaces.	15-20
●	QUIET ROOM	Space for retreat. A space for relaxation, sleep, private meditation or crying. Could be furnished for one-on-one sessions.	2
●	TOILETS	Restrooms, but also retreat spaces when a quiet room feels to visually exposed.	1
● ● ●	GROUP ROOM	Space for group sessions, group counselling and meetings for staff. Flexible for different groups' needs. Storage.	8-10 5-6
●	ACTIVITY/LECTURES	A bigger room with high flexibility and nearby storage to accommodate lectures, big meetings and yoga sessions.	40
●	LIBRARY	A space to seek information. Bookshelves and computers. Seating.	3
●	SPA	A small spa for heat treatments with a small warm bath and sauna.	6
●	CHANGING ROOMS	Small gender-neutral changing possibilities and showers to primarily serve the spa, but reachable from activities.	8
●	CREATIVE SPACE	Space for art therapy and creation.	8-10
●	OFFICE	Office space for employees. Desks and shelves. (Co-working space in group room.)	4-5
●	STAFF	Break room. Kitchenette.	4
●	KIDS	A kids' area with toys and books.	4
●	SCREEN/TV	A group room equipped with a large TV.	12-15
● ● ●	GARDEN	A space similar to the sitting room, but outdoors. A place for socialisation on different levels. Fika.	15-20

SOCIAL ● ● ● PRIVATE ●

An overview of the program. How many people the space is intended to hold and the privacy aspect.

The social scale indicates if the space enables larger gatherings where one can socialise or quieter with smaller meetings or full privacy.



3. 6 Connection Diagram

This diagram illustrates how all the functions in the program can be arranged

The functions are situated around a continuous loop that provides flexibility in movement and encloses a garden. The loop also enables functions to be spread out on the site and zoned by social or private characters. The lowered density of the program will result in multiple façades where light, outlooks and openable windows can be introduced in multiple directions in every space. When spaces are physically divided, gardens can be introduced in the gaps.

The spaces intended for larger groups and more intense socialisation (dark blue) are situated close to

the main entrance to embrace a visitor. The first space one will encounter is the kitchen due to its domestic feeling and its natural and neutral character.

Quiet rooms are situated together with toilets to make them easy to find and less visually exposed. The approach to a quiet room can be disguised as a visit to a toilet and less stigmatised.

The library for information research is close to social spaces so that one easily and naturally can reach out when in need to talk.

4. The Site

This chapter presents the chosen site for this thesis design proposal based on contextual needs identified in presented case studies, conducted interviews and literature studies.

4.1 Contextual Needs

Distance from a Hospital

Both Maggie's Centres and Kræftens Bekæmpelse centres are located physically close to hospital areas, but Kraftens Hus has a different approach to where to locate a centre. Kraftens Hus is always located closer to the city centre than a hospital.

There are pros to being close to a hospital that the organisation of Kraftens Hus acknowledges. When physically close, there can be collaborations where medical staff can walk a patient to a Kraftens Hus centre or staff from Kraftens Hus can easier visit the hospital to inform about the centre (personal communication Carina Mannefred, 20 March, 2024). Also, when physically close, a centre can be visited in relation to treatments at the hospital, and the architecture of a centre can easier be designed and recognised as the antithesis of a hospital (personal communication Andreas Hellström, 1 Feb, 2024).

Some employees at Kraftens Hus are debating the need for the centre to be closer to a hospital, due to the possible collaborations (personal communication Carina Mannefred, 20 March, 2024). As a group, the visitors to the centre are however positive about the distance. During a survey conducted by Kraftens Hus Sjuhärad, most visitors to the centre expressed that (Hellström, 2020);

[...] it's good that it's not a hospital environment and that the centre is relatively central in the city.

Some cancer patients even expressed the absolute need for a Kraftens Hus to spatially distance itself from a hospital (Mannefred, et al., 2016). During an interview, a patient expressed that (Hellström, 2020);

[...] I associate the hospital so much with my treatments, [...] the whole fear of death and this particular nausea... You can taste the chemotherapy in your mouth. It is very special. You feel it when you get there.

Despite Maggie's Centre and Kræftens Bekæmpelse closeness to hospitals, both associations also describe that the location can be problematic. Both associations describes that the centres must not

resemble or be associated with the hospitals, which is almost impossible to achieve when located on hospital grounds (Arkitema, 2008). The architectural brief by Kræftens Bekæmpelse states;

The centres are expected to provide cancer patients with a break. This is a real challenge for the building itself when located close to the hospital.

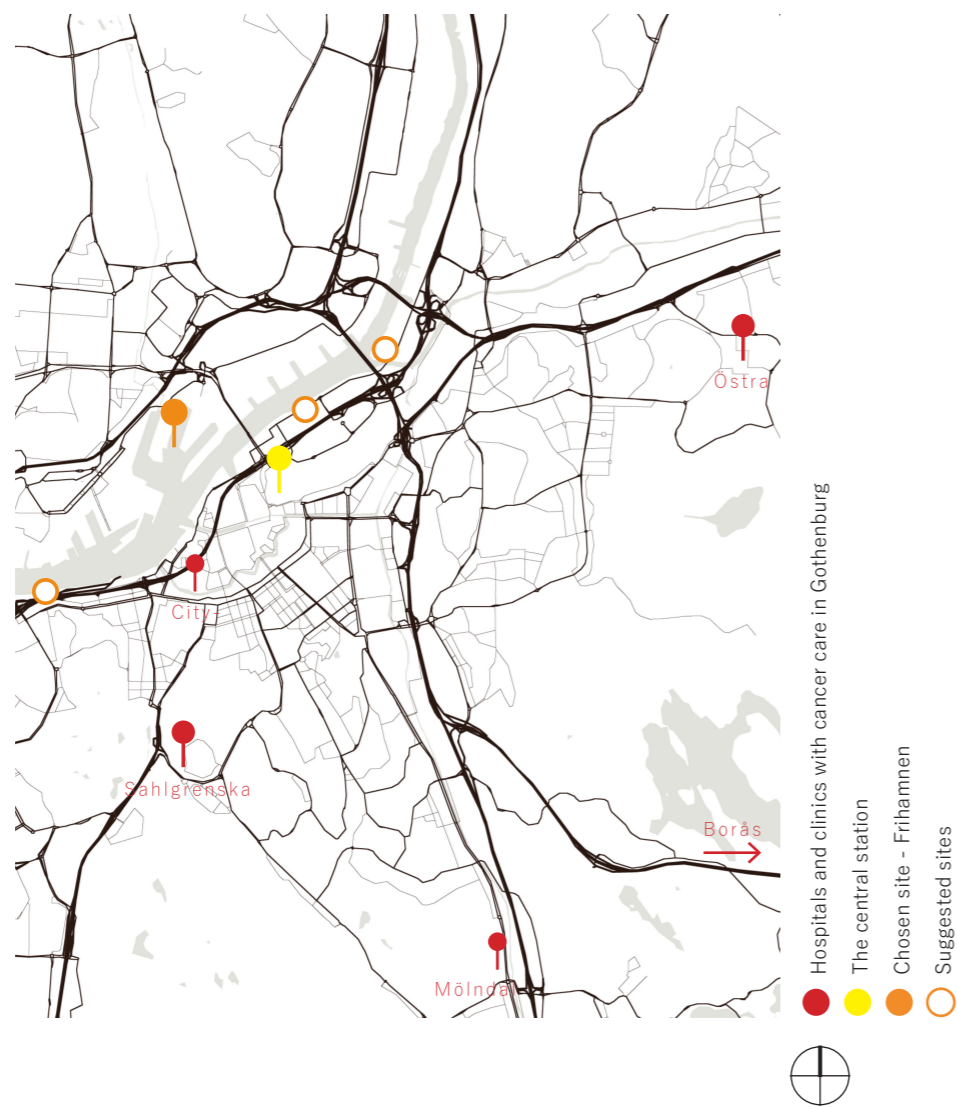
Furthermore, Kraftens Hus's target group differs slightly from the other associations and is not only for individuals during cancer treatment. Kraftens Hus is a centre that primarily focuses on support when medicinal care can not reach. Kraftens Hus is therefore, besides a meeting place for cancer patients during treatments, also a meeting place for patients that are going back to everyday life after cancer treatments, relatives that have lost a loved one, and employees looking for assistance in dealing with the situation (Maria Hultman Gonzalez, personal communication, 24 Jan, 2024). To place the centre on hospital grounds can contradict the centre's aim to reach groups of people beyond the specific target group of patients during treatment.

Accessibility

In Gothenburg, there are several hospitals and clinics that offer medicinal cancer care and treatments. Many cancer patients in Gothenburg's care are even referred to the hospital in Borås, 40 km from Gothenburg, for daily treatments and chemotherapy. To place a Kraftens Hus centre close to a specific hospital or clinic due to the assumed benefits of collaborations and assumed visits to a centre in relation to treatments therefore risks the exclusion of many patients and can even be described as presumptuous or nonchalant.

The centre's location in the city and its accessibility for traveling patients from outside the city are also important to consider due to Gothenburg hospitals' large patient catchment area.

Visitors to a Kraftens Hus express that the connections to the hospital by car or public transport are important, and a stop-point for public transport must be located within 50 meters due to accessibility (Catrin Anderson, personal communication, 8 Feb, 2024).



Connections by tracks and roads in Gothenburg and marked hospitals and clinics, the central station, suggested sites and the chosen site.

Context

Maggie's describes that it is often hard for new visitors to approach a cancer centre (Maggie's Centres, 2015). To visit a centre is to acknowledge that one has cancer and to approach a new place when stressed or anxious takes a lot of determination. As mentioned previously, p. 32, studies have shown that it often takes three or four attempts before a new visitor dares to enter a centre.

A central and buzzy context could ease the process of approaching the building since a diversely coded group on and near the site could enable a visitor to Kraftens Hus to distance itself from the disease and just be an individual (Hellström, 2020). In a survey conducted by Kraftens Hus Sjuhärad, visitors to the centre expressed that it is (Hellström, 2020);

[...] positive that it is a diverse group of people on the site because it allows visitors to the centre to distance themselves from the disease and not experience being labelled as cancer patients when visiting the centre.

The context of a cancer care centre could also help to destigmatise cancer generally and the centre specifically and therefore make it easier to approach. When the centre is located in a central context and introduces the centre to a vast diverse group of people, the centre is easily recognised as a part of the city and part of normal everyday life (Maggie's Centres, 2015). To place a centre in a typical context of the city, making the centre not just accepted, but a place to be proud of as a citizen can lower the thresholds for a new visitor even further.

In Roman times, Heathcote (2015) describes that centres for health have been positioned at the heart of the city and designed as monuments to gods and to cipher mercy. In more modern days, when modern health care was developed around hygiene, Lundin (2015) describes that buildings for healthcare and rehabilitation often were located in peaceful, beautiful places with dramatic views of landscapes and bodies of water. Medicinal care has advanced immensely, but today, the previously stated fact that the environment and context could add to the healing experience is somewhat lost, but on the rise. Today, it has been proven that a nature experience can reduce the experienced pain, be a stress relief and be therapeutic when suffering from depression (Fradsen, et al., 2009).

4. 2 Localising a Site

To summarise the contextual needs of Kraftens Hus in Gothenburg, a list of criteria is made. The list follows;

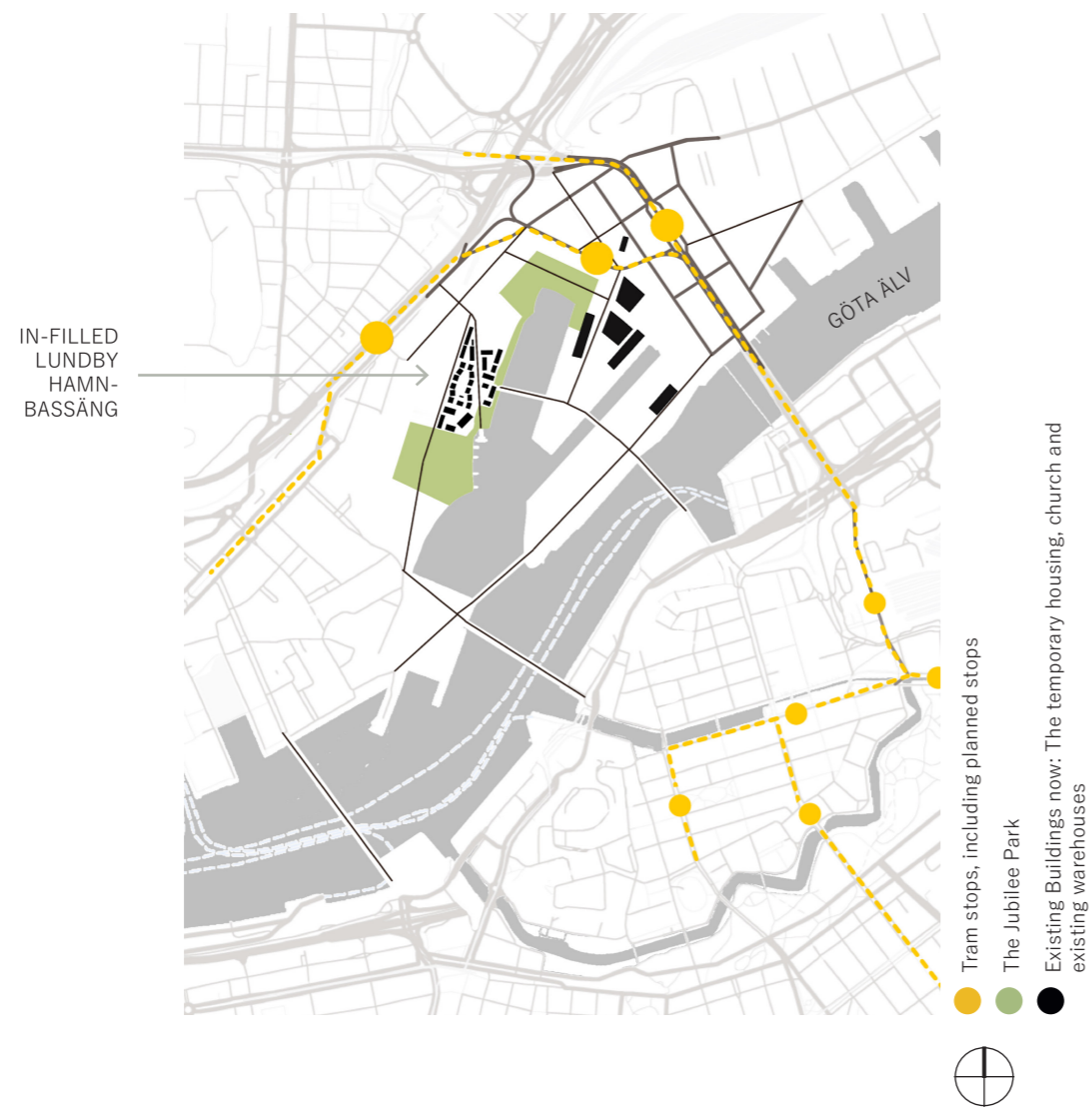
- A central context that introduces the centre to a vast and diverse group of people to destigmatise cancer in general and the centre specifically, to lower thresholds and make a first approach for a new visitor easier.
- A site that is typically for the city to encourage citizens to be proud of *their* Kraftens Hus.
- A site that is easy to access when traveling from outside the city by train and car.
- A view of nature with healing and atmospheric capacities and dramatic views of large bodies of water.
- A site close to walking possibilities to enable walking gatherings organized by Kraftens Hus.
- A site distanced from hospitals physically.

When the criteria above are studied, 4 sites are identified; Marieholm, Gullbergssvass, Masthugget and Frihamnen. Finally, Frihamnen is chosen due to its superiority in centrality, exposure, connections to the central station and the public transportation grid, proud context in the city, the presence of the public jubilee park and the future visions for the area. The following sections will present the site in detail.

4. 3 The Site

Frihamnen has a character that typical for Gothenburg but is under planning for remodelling and rebranding. Frihamnen holds many layers of Gothenburg's history in the shapes of the water docks and the existing buildings for storage. The area has a strong connection to water and sight lines from and to prominent sites in the city. The new Karlatornet, Skansen Kronan, the Gothenburg Opera, Opalen and Läppstiftet are just a few of the typical Gothenburg constructions that are visible from the area, and all views are visible via the water, making it even more present.

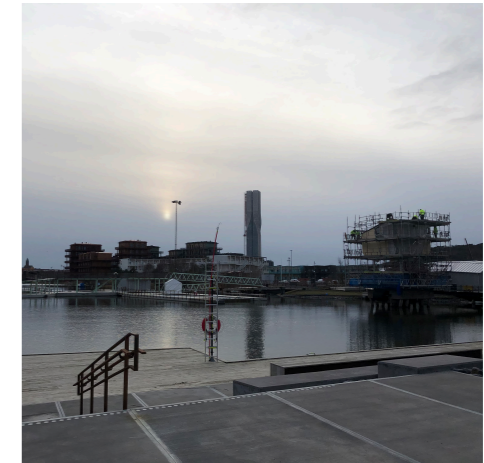
Future visions and city plans for Frihamnen are gathered and investigated on the following pages. There will be new lines drawn for public transport with three new tram stops in the area (Göteborgs Stad, 2022). The third basin, to the west, Lundby Hamnbassäng will be in-filled to create more buildable land and to cover dredging sites (Göteborgs Stad, 2019). The east pier, Bananpiren, is unstable and will therefore be redone and widened. New bridges and connections will be created between the piers and over Göta Älv. As a part of Gothenburg 400 years celebration and to strengthen the city's connection to water, the Jubilee Park is planned.



The new planned landscape for Frihamnen, planned tram stops and existing buildings.



View towards east; a yellow warehouse that will be preserved, Opalen, Hisingsbron and Läppstiftet.



View towards southwest; the public bath and sauna, temporary housing and the Karlatornet.



The first new addition to Frihamnen; the church Smyrnakyrkan and a lot of hard surfaces.



Today, the Coast Guard uses the south of Frihamnsbassängen to dock



Ramp towards the water, the Jubilee Park and Sauna



A newly constructed large playground as part of the Jubilee Park

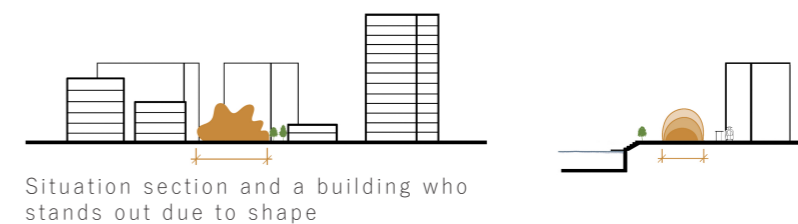
Pictures from Frihamnen 2024 Feb 5.



Planned city structure and the chosen site based on publications by Göteborgs Stad (2019; 2022).



Situation section and a building who stand out due to materiality



Situation section and a building who stands out due to shape



Situation section and a building who stands out due to greenery

The planned phases for construction are in 7 parts. Phase 1 was initiated in 2019 with the construction of the public Jubilee Park and the remodelling of the public sauna. The next phase is ongoing now with the new lines for public transport, north of the area. The final phase, with the in-filling of the Lundby Hamnbassäng and the reconstruction of Bananpiren, will be initiated in 2045.

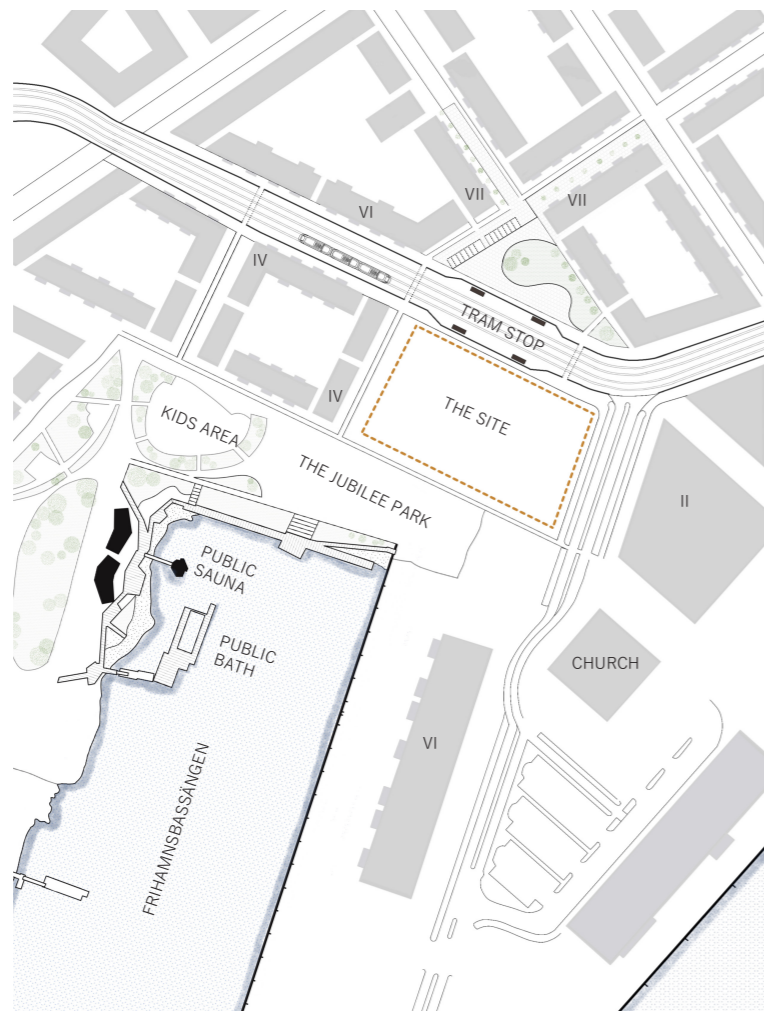
There is no set detail plan for Frihammen but the office Mareld Arkitektur is currently investigating the area regarding structure and building heights in preparation for a detail plan (Ylva Ralph, personal communication, 2 Feb, 2024).

Due to high ground construction costs, the area must be highly exploited, reaching 2,2 in exploitation figures for Bananpiren (Göteborgs Stad, 2019).

The architecture will however be lower towards the Jubilee Park to ensure better light conditions for housing, 1,3 in exploitation figures.

Two favourable sites for Kraftens Hus are identified. One by the tram stop by the Jubilee Park, and a second on the edge of the Frihamnspiren. Both are profiling sites with strong connections to water, however, the site by the tram stop is chosen due to the important closeness to public transportation and direct access to the park.

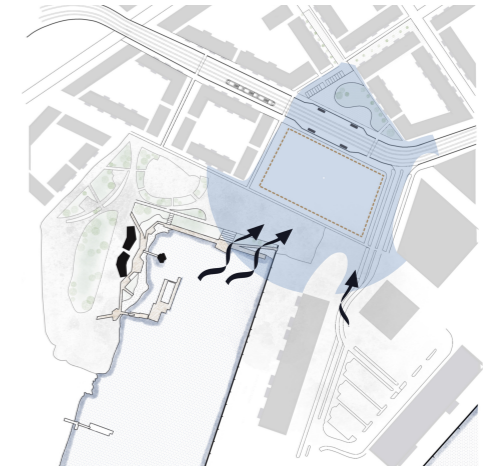
The sections above show a possible height situation for the area. The low two-story building is an existing warehouse. The sections investigate how Kraftens Hus could be designed to stand out in the context.



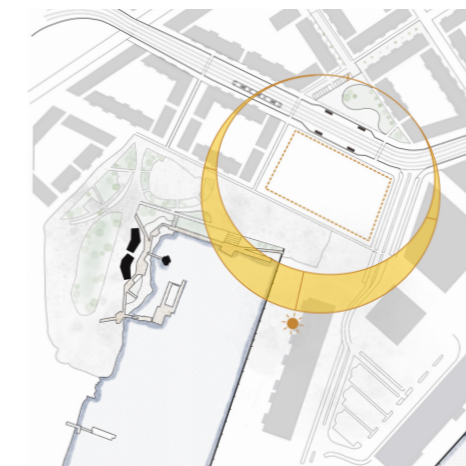
Site in a possible city structure. The site is large since the grid was developed for a block. 60x95 meters.



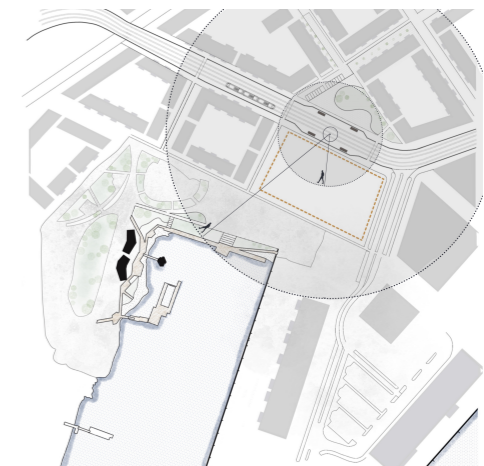
1. Roads.
Red indicates the fastest traffic; public transport and cars passing by. Orange indicates local road serving the buildings. Green indicates slow traffic, bikes and pedestrians.



2. Wind
The site is windy with a constant flow from the water south-west of the site.



3. Sun
Since the sun angles mostly from the water area, there is little shade from surrounding constructions in the afternoon.



4. Distances
The bigger circle has a diameter of 150 meters, and the smaller 50 meters, from the tram stop.

4. 4 Site Analyses

When the site is analysed, both strengths and weaknesses are identified. The first analysis, 1. Roads, show that the site is passed by at relatively low speeds, ranging from pedestrians and bikers to local traffic by car and public transport. The lowered speeds allow the site to be noticed, since it will take time to pass. The local road north of the site with the most traffic is also angled so that approaching cars will see the site early on.

The road with the most traffic and with the highest speeds is located north of the site, which is positive since it will be the most shaded side and the most recreational spaces will be placed towards the south, with water and sunlight.

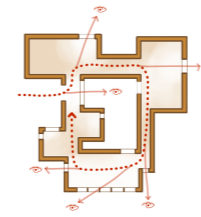
The other buildings surrounding the site are located with an offset from the site, exposing it to the sun and view, but it also makes it less sheltered from wind. The area is windy, with constant flow from the water.

Visitors to Kraftens Hus have expressed their need for short distances. The tram stop, directly north of the site, is very positive due to accessibility. As shown in analysis 4. Distances, half of the site can be reached within 50 meters of the stop.

The site was originally created in a grid of housing blocks and is large, 60x95 meters.

5. Design Proposal

This chapter presents a design proposal based on design strategies, program and site analyses. The chapter will first present a quick diagrammatic overview to introduce the proposal and how the design strategies are used to create a building for Kraftens Hus. When the overview is presented, the building's position on the site and the near environment is presented, followed by a detailed description of how the different design strategies are represented in the proposal.



MOVEMENT

A space that encourages movement, choice and flexibility through spatial seduction



SOCIAL SCALE

Spaces for different levels of privacy and socialisation with a suitable transition



LIGHT

The introduction of daylight for health benefits and atmosphere



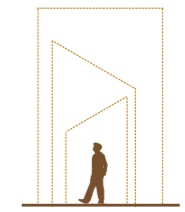
NATURE

A diverse nature experience and a tension between interior and exterior



SENSORY EXPERIENCE

Non-spatial experiences of architecture through senses and visual details



VOLUME

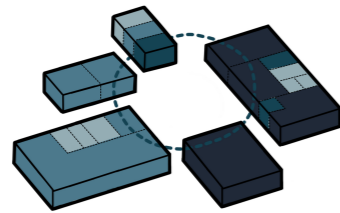
A volume that is adapted to accommodate the feeling the space should convey

Design Strategies

5.1 Introducing the Volume

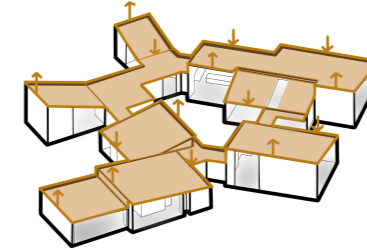
In 8 steps, a volume is created based on the earlier presented program, p. 35, by implementing the design strategies in this thesis; volume, movement, social scale, nature, light and a sensory experience for healing and atmospheric architecture.

1. PROGRAM & SOCIAL SCALE



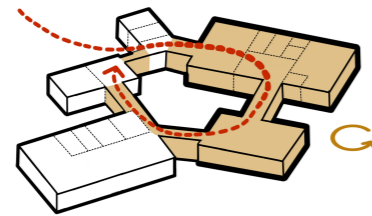
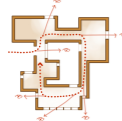
The program is arranged by social functions in five volumes with a possible connection.

5. VOLUME ADAPTATIONS BY ROOFING



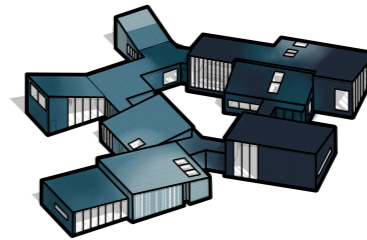
When the footprint is set, the volume is adapted to accommodate the feeling the spaces should convey. Social spaces have a higher roof, while intimate spaces are lower. Roofs are then angled for larger openings towards the light and views. The volume is identified as suitable for CLT as a load-bearing system.

2. MOVEMENT



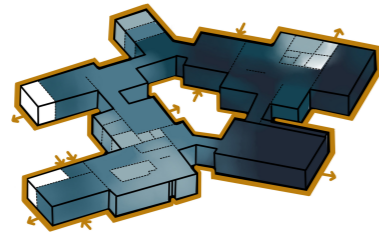
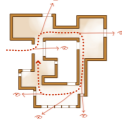
The five volumes are connected to direct and encourage movement from space to space. Two volumes are rotated to create sight lines and a natural direction to guide a visitor from the entrance to the social functions.

6. TENSION BETWEEN INSIDE & OUTSIDE



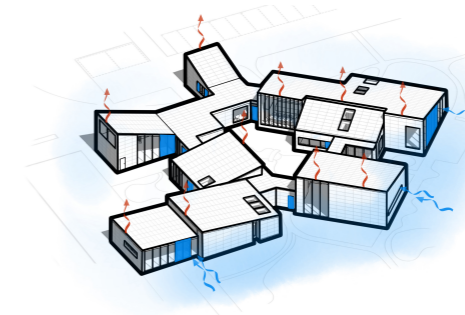
The openings are adapted to create tension between interior and the exterior. Openings are sized and complemented with mullions and frames to suit the function and social level inside and filter the tension accordingly.

3. ITERATION



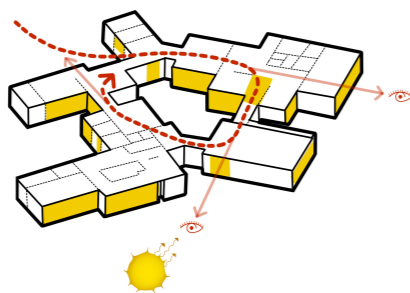
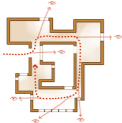
When the general movement is set, a second iteration of how spaces are arranged along the path is done to ensure the social scale and the program's needs.

7. AIR & WIND



Volume management is used to guide natural ventilation and all spaces are complemented with openable sections. On site, different meetings with the wind are identified as a still courtyard and windy garden to the south.

4. LIGHT TO GUIDE THE MOVEMENT

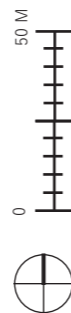
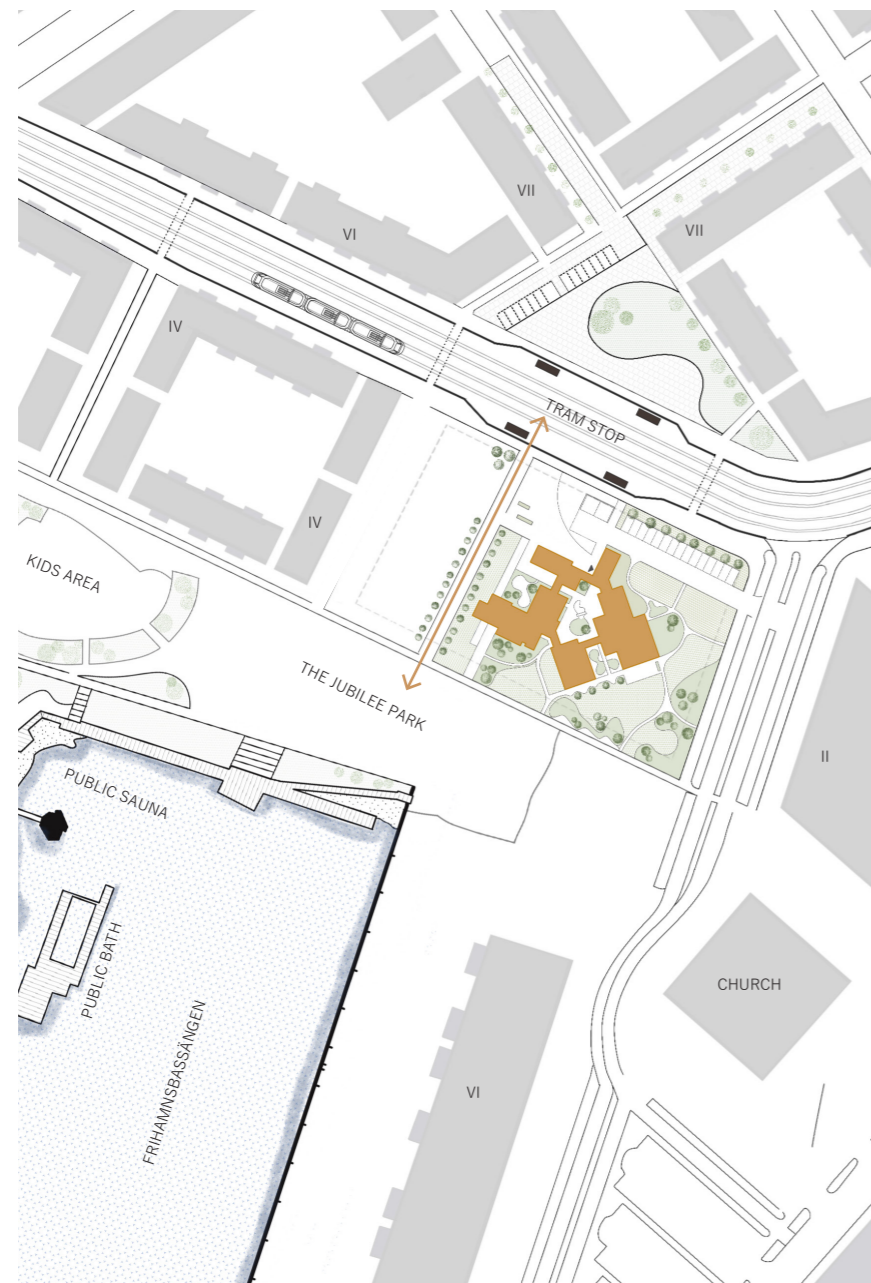


To guide the movement and introduce daylight for health and atmospheric benefits, openings are made as focal points of sight lines and on façades with interesting outlooks.

8. SENSORY ENVIRONMENT



Nature is introduced in the outside environment with diverse spaces and functions. Materials are introduced on surfaces in harmonic compositions with a white stone facade, dark wooden window frames and exposed CLT interiorly.



The division of the site, the footprint and its relation to the area



5.2 Site Plan

The large site is divided by a new broad promenade from the tram stop to the Jubilee Park that strengthens the connection between the areas and provides the design proposal with an offset to other buildings, making it stand out. The architecture is additive and with many niches and corners that can be coded differently.

Two wings are stretched out north and west of the entrance to frame the area between the tram stop and the entry point and to guide a visitor inside. The area is of square character and a natural extension of the tram stop. To handle flood mitigations and to further guide a visitor, a curved water mirror is introduced.

A second water mirror is introduced to the west of the building to provide a soft barrier to the promenade and enclose a smaller garden.

Parking is situated north of the building, close to the main entrance to gather all hard surfaces and cars to

the north, close to the most trafficked road.

The south and east parts of the site are softer with mowed or wilder grass, plantings and trees to create a soft environment that will stand out among the surrounding hard surfaces of concrete or asphalt. This area is open to the public and will provide a soft place to relax close to the public bath.

The garden will be described in detail further in chapter 5.3 The Design Explained Through the Design Strategies.



North: The Entrance

This view shows the north part of the building, between the tram stop and the entrance. Two wings stretch out to frame the area and a pool of water and vegetation guides a visitor towards the entrance. The entry door is glazed to show the interior when approaching under a sheltering roof.

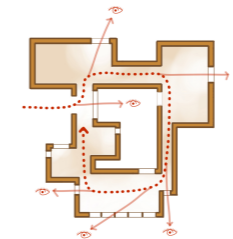


South: The Soft Area

The south area of the site is soft and lush to create a comfortable and inviting area for recreation and contrast the hard surrounding surfaces. The building volume is relatively low in the context and divided into smaller segments, making it appear even smaller in scale and easy to approach and offers plenty of corners and niches where one is invited to linger.

5.3 The Design Explained Through the Design Strategies

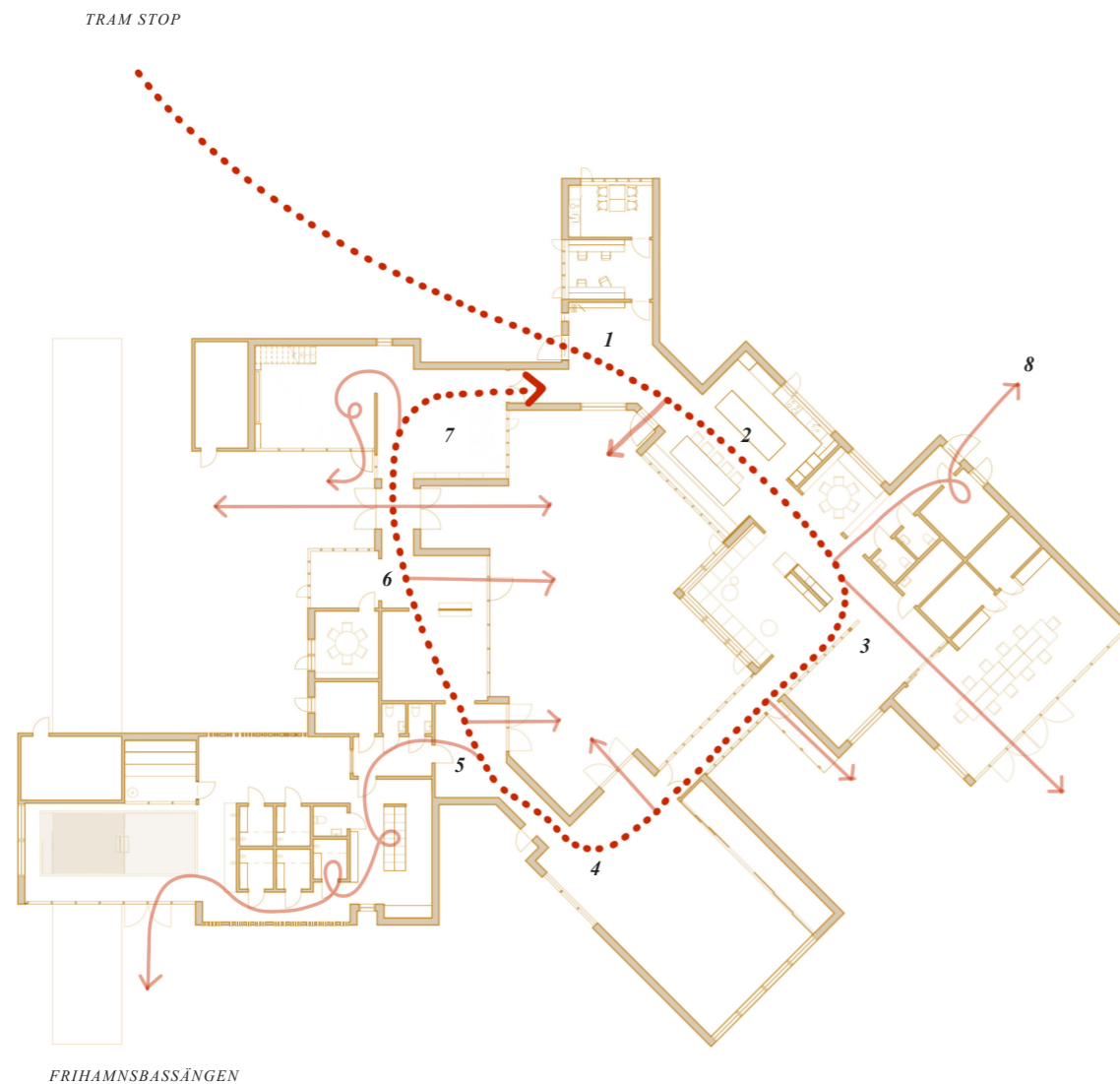
The following section explains the design proposal in detail, based on the design strategies; movement, social scale, light, nature, sensory experience and volume.



MOVEMENT

A space that encourages movement, choice and flexibility through spatial seduction

The aim of this design strategy is to create a space with easy wayfinding through sight lines but with multiple choosing points to create a feeling of empowerment and not to resemble a hospital with complicated corridors. The way that the spaces are connected should seduce and encourage a visitor forward rather than force. A choosing point will encourage a visitor to reach social spaces rather than intimate corners.



The movement towards the entrance is embraced by two wings, guiding the movement towards the entry point. The door is sheltered from the outdoor elements and visual exposure by being slightly pushed into the volume. The first space, the entrance (1), is slightly secluded to allow a visitor to pause and gaze ahead before continuing, but the path is very clear towards the first social space, the kitchen (2). There is a possibility to turn, towards (7), making the path not forced, rather than guided.

A door is placed along the path (5), visible but closed to create an intimate space, the spa. The space is gender-neutral. The first space is lockers that can serve the activity room too. Secluded shower rooms separates the space from a warm pool and sauna.

From the entrance, there is a long sight line through many rooms and out, making the space easy to read and understand. When walking along that path, a wall (3), catches one's attention and guides a visitor towards the next space, the activity space (4). At the end of that sight line, a tall window is introduced with a view towards Frihamnsbassängen. Then arriving at the windows, a new path is introduced. The new path is not visible early on, and therefore more private.

At the end of the sight line (6) a new set of rooms is introduced. A wall separate the space, making a right turn along the room (7) easy, guiding a visitor to the end of the loop.

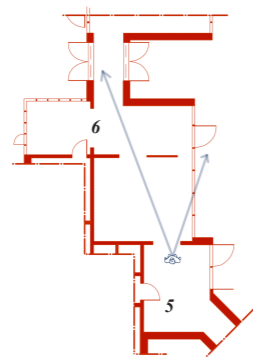
There are multiple exit points to provide choice. The exit close to the quiet space at the east end of the building is extra important (8) to allow a visitor to exit from the quiet space without having to pass the social area.

A sight line through many spaces is introduced to guide a visitor and to make the space easy to read, without being a corridor but domestic and free (6).

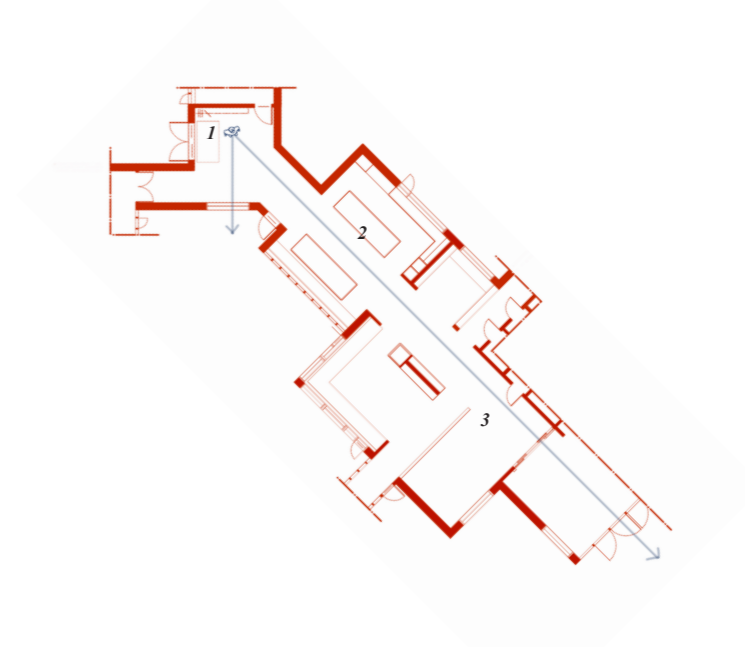
An overview of the floor plan and the movement it encourages. All lines are possible walking routes.



A rendering of how the movement is directed without being forced via a corridor. Space 5-6 on p. 54.



A rendering of how the entrance is slightly secluded but with a clear path, guiding a visitor towards the social spaces, but with an option to turn. Space 1, p 54.





SOCIAL SCALE

Spaces for different levels of privacy and socialisation with a suitable transition

One of the main purposes of the centre is to provide a community and place where people can meet and share experiences, to provide different rooms for different interactions is therefore crucial. When a space is designed for a crowd, group or an individual and different activities, there are different atmospheres that can lead to different interactions and conversations.

The image to the left illustrates how the floor plan is coded on a social scale. The social scale is based on the number of people that can be expected to use the room and the visual or noise transmission it has to and from other spaces. Due to that definition, a space can have multiple colours, and a flowing colour depending on how exposed the area is to people passing by and visually interacting with the space or the background noise transmitted from other rooms.

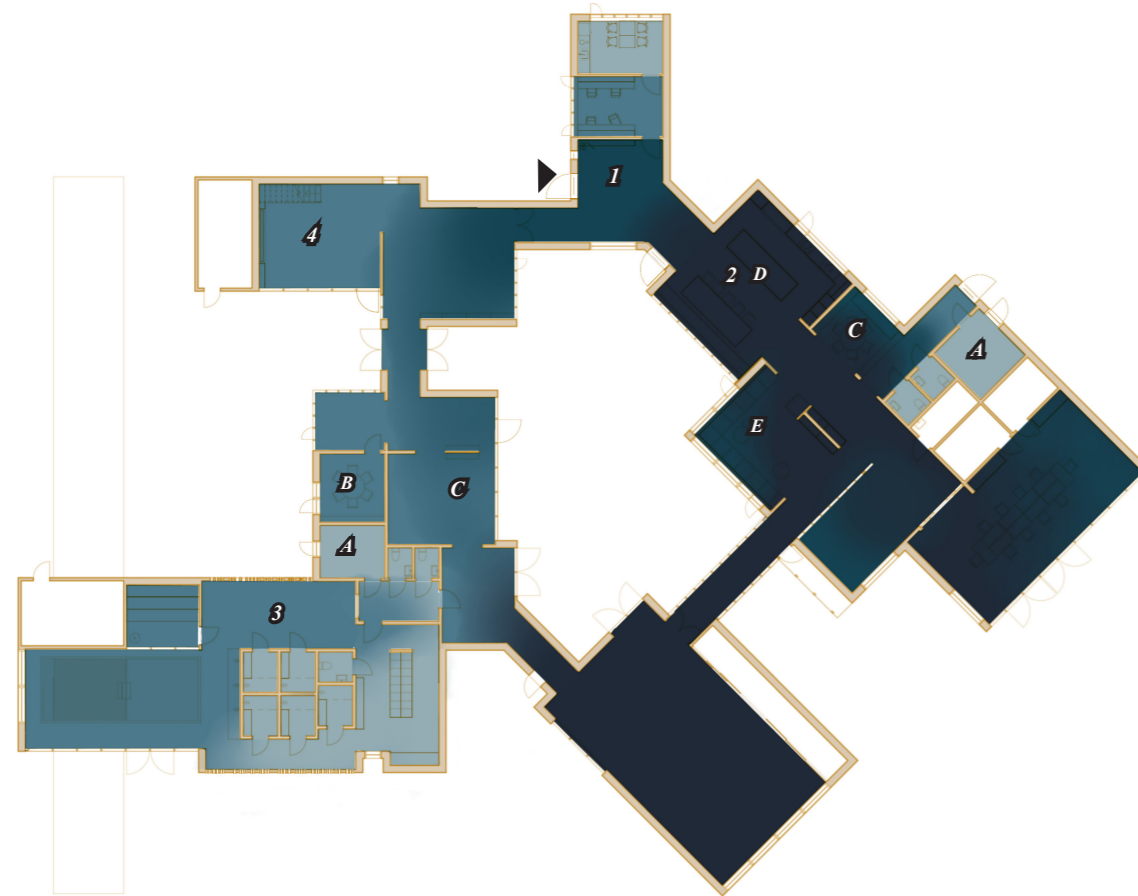
The floor plan is based on the idea by Fradsen, et al., (2009), that a space that enables eye contact and visual overview increases the degree of interaction and socialising and that a home-like space increases the degree of socialising. The floor plan is also designed for background noise according to findings from Martin & Roe (2022), that to be alone in a group, visually seeing but not taking part and background noise from other activities, is calming to a distressed person. There are also fully secluded rooms for privacy.

The first space, the entrance (1) is secluded and it is not expected that people will linger there for long conversations, however, the space is rather social in this illustration due to the strong connection to the fully social kitchen (2).

In the spa area (3), the shower rooms create a division in the large space. South of the package, the narrowness allows for a more private passage to the pool, while the broader northern side is furnished as a relaxation and a place to linger for quiet conversations.

Space 4, a group room/sitting room, is private in its location, with few people passing by, but not fully private since it is not fully enclosed. In this room, a stair leads up to a small entresol for a secluded area dedicated to teenagers, far from the most social spaces for privacy.

The different social interactions in the centre are illustrated below. For a more detailed description of the spaces, see program p. 34.



SOCIAL ● ● ● ● PRIVATE

An overview of the floor plan, coloured according to social scale



A PRIVATE SPACE



B SECLUDED CONVERSATION



C VISUAL CONTACT BUT PRIVATE



D NEUTRAL KITCHEN



E CONVERSATIONS WITH A FOCUS POINT



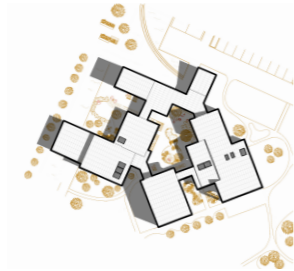
E GROUPS FACING EACH OTHER

**SPRING
EQUINOX**

**SUMMER
SOLSTICE**

**FALL
EQUINOX**

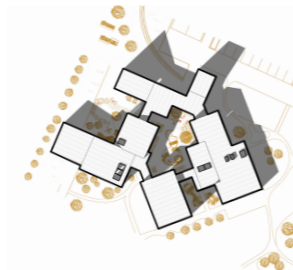
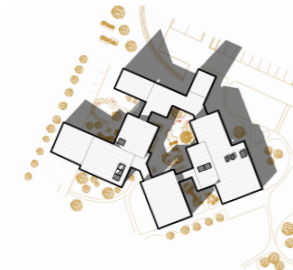
09.00



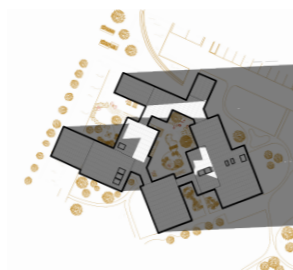
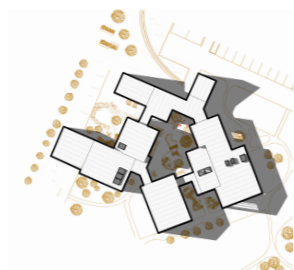
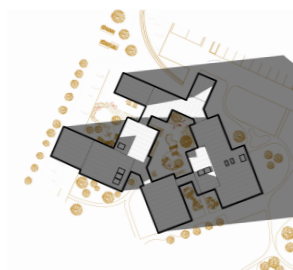
12.00



15.00



18.00



Solar Study



LIGHT

*The introduction of daylight
for health benefits and
atmosphere*

Daylight provides health benefits such as a faster recovery or pain relief, but it can also increase well-being and have a positive therapeutic effect on people suffering from depression. How light is implemented can affect the atmosphere and feeling of the room. Softer light is associated with safety while brightness and reflections on surfaces can make space feel coherent and vibrant.

A solar study is made to investigate the sun exposure on site. The dynamic building allows the light on site to be dynamic with a broad representation of light implemented in different spaces.

The narrow building volume around a courtyard allows daylight and direct sunshine to be exposed in every space and in some cases two times a day.

The kitchen (1) is facing southwest and exposed with bright daylight most of the day. The space is high with a sloping roof towards the opening, making the sun shine on the ceiling, floor and furnishing, making the whole space feel coherent and bright. The kitchen

table is placed by the window exposed to the bright light and therefore perceived as a focus point in the space. Openable windows help with ventilation.

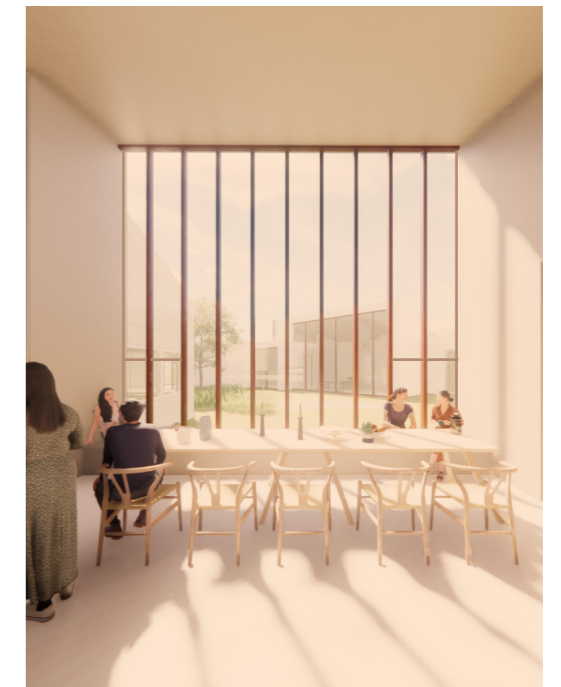
Softer light is implemented in the spa's relax area (2). The facade is facing north and the light is shining in through narrow slits in the wall. The soft light will encourage quiet conversation and a calmer atmosphere.

The solar study also shows that the garden and courtyard are satisfyingly exposed to sunlight and are arranged and furnished to suit the provided conditions.



2

SOFT LIGHT IN
THE SPA



1

BRIGHT LIGHT
IN THE KITCHEN



NATURE

A diverse nature experience and a tension between interior and exterior

This design strategy deals with both the healing experience of being enclosed by nature, but also how the outside environment is exposed to the interior to create an atmospheric space interior. The opening is the gateway between the two spheres interior and exterior. Every element placed in the opening effects the experience.



An overview of the floor plan and the nature experiences provided on site

The nature experience on site is planned to be diverse close to the centre so that it can be inviting many different visitors and yet private and not open to the public. The sheltered private spaces are provided in the courtyard and the semi-enclosed space west of the building. Other spaces on the site are open to the public and for everyone to enjoy.

The courtyard is mostly made up of stone pavement to be accessible and furnishable. The northern, most sun-exposed area is full of bushes and trees with eatable fruits and the courtyard centre is lush and with a small pond with moving water (D). Outside the kitchen window, in the most sun-exposed part of the courtyard, a long dinner table (B) and parasol are

placed for outside fikas and hangouts in larger groups.

In the courtyard centre, there is a gazebo (A) for a protected nature experience in a smaller group and more intimate setting and for those who are sensitive to draft and wind.

There is space for gardening (E) of vegetables and flowers that is collective so that one can enjoy gardening without the full commitment.

The public spaces are less coded but arranged in sections of mowed grass for outside activities (C) and longer wilder grass and plantings for shade, sectioning of the large area and biodiversity.



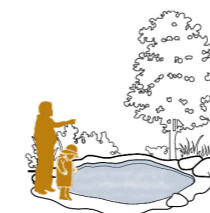
A
GAZEBO FOR SHELTERED NATURE EXPERIENCE



B
PLACE FOR OUTSIDE DINNERS



C
SOFT SHORT GRASS FOR OUTDOOR ACTIVITIES



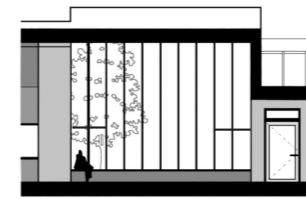
D
PONDS WITH MOVING WATER AND SHALLOW WATER MIRRORS



E
SPACE FOR COLLECTIVE GARDENING



F
SQUARE TO GREAT THE CITY ATMOSPHERE AND SHOWCASE THE CENTRE



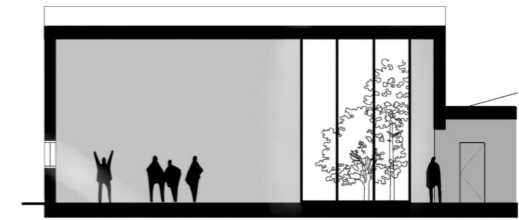
1
The kitchen with a high window for light but closer mullions for enclosure



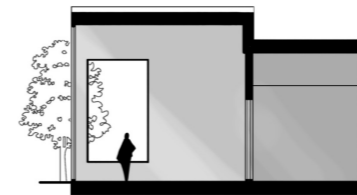
2
Low sill heights and no mullions for a free view. The WC and quiet spaces have roof windows for a calming experience, different from the social spaces



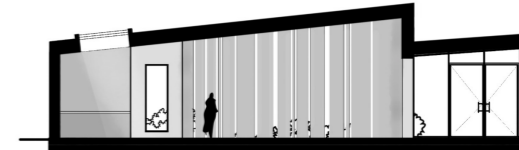
3
Smaller windows for a sense of privacy and a sill height that allows a view when seated



4
A large opening with fewer mullions for a less hindered nature experience and smaller windows further in at standing height, that will expose the sky when seated



5
A long room ends in a large tall window for a nature exposure that presents the sky and emphasises the volume of the space and the large body of air



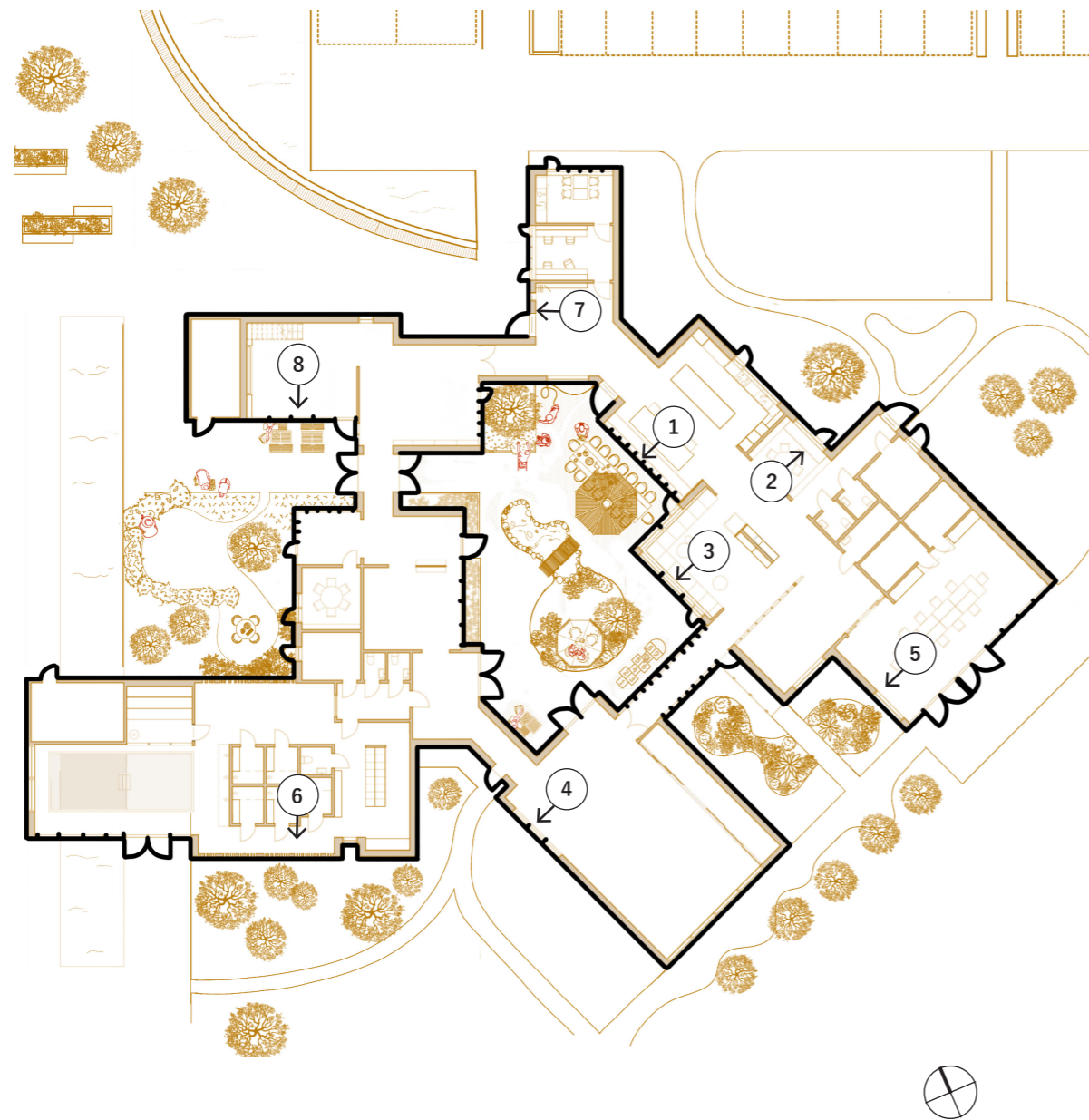
6
Small slits where the exterior can be sensed when walking by, but otherwise hidden for a private feeling



7
A tall glazed door in the entrance to expose the next space. Close-situated mullions in the office for a private feeling but with a view of the square



8
A fully glazed space, yet private since the garden outside is secluded and private. An entresol for teenagers or other secluded hangouts with a new view



An overview of the floor plan and the different openings between the interior and exterior

Views of the different tensions between the interior and exterior in the centre



EXTERIOR

The façades are clad with white, reflective panels that contrast the nature and interior CLT, making them more vivid and the facade apparent.

INTERIOR

The constructional CLT is viable on the majority of all surfaces in the centre for a soft and calm experience. Door and window frames and mullions are proposed in dark teak to emphasise openings. Soft and transparent linen is introduced as curtains and drapes.

FURNISHING

The furnishing is earthy and natural in colouring, as the rest of the colour scale but with more textures to experience by touch.

An overview of the materials in the centre



SENSORY EXPERIENCE

Non-spatial experiences of architecture through senses and visual details

This design strategy deals with non-spatial experiences of architecture through touch, smell, sound, taste and visual details. The sensory experience on site is therefore explained through materiality, building systems, noises and tastes on site.

Touch & Air

A cancer patient who is undergoing treatment or in the healing process can be extra sensitive to felt discomfort from touch, heat, cold and drafts. To reduce discomfort, the centre is designed to provide a visitor with choices to improve the experienced comfort for the individual. The centre is proposed with natural ventilation to eliminate fan noise and large bodies of air to be moved by fans, causing drafts that can't be altered. Openable windows or doors are introduced in every room so that the individual can control fresh air flows or heat ventilation.

Heat is introduced in the centre's the spa area, but also in the main sitting area where a fireplace is proposed.

The furnishing is tactile in materiality and every space should be furnished with extra blankets and pillows.

Smell & Taste

When the kitchen is used to cook or bake in, a domestic and inviting smell is introduced. In the garden, flowers and greenery are introduced to emit soft smells and eatable fruits and vegetables are introduced so that there can be an experience in taste. All spaces are equipped with openable windows to ventilate if smells are overpowering.

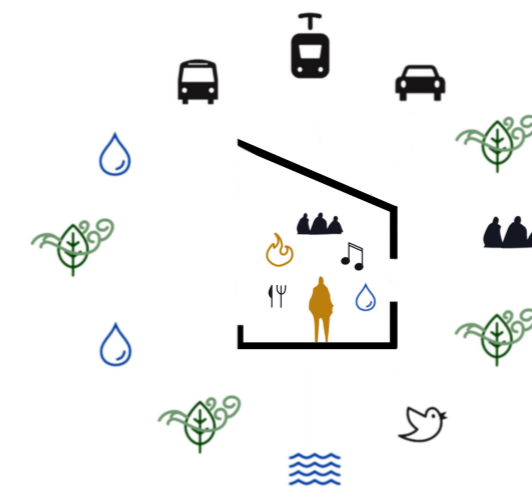
Sound

As the diagram below shows, a mapping of sounds shows that the experience on site is diverse. Outside the centre, the tram line and traffic introduce the sounds of a city, while the water in the south and the garden can introduce sounds of a softer character. Around the centre, greenery is introduced to muffle noise and implement the sound of leaves moving in the wind. Water is introduced near the centre in a pond with rippling water and a more quiet water mirror. Inside the centre, moving water and a soft echo is introduced in the spa area, while a crackling fire is introduced in the main sitting area.

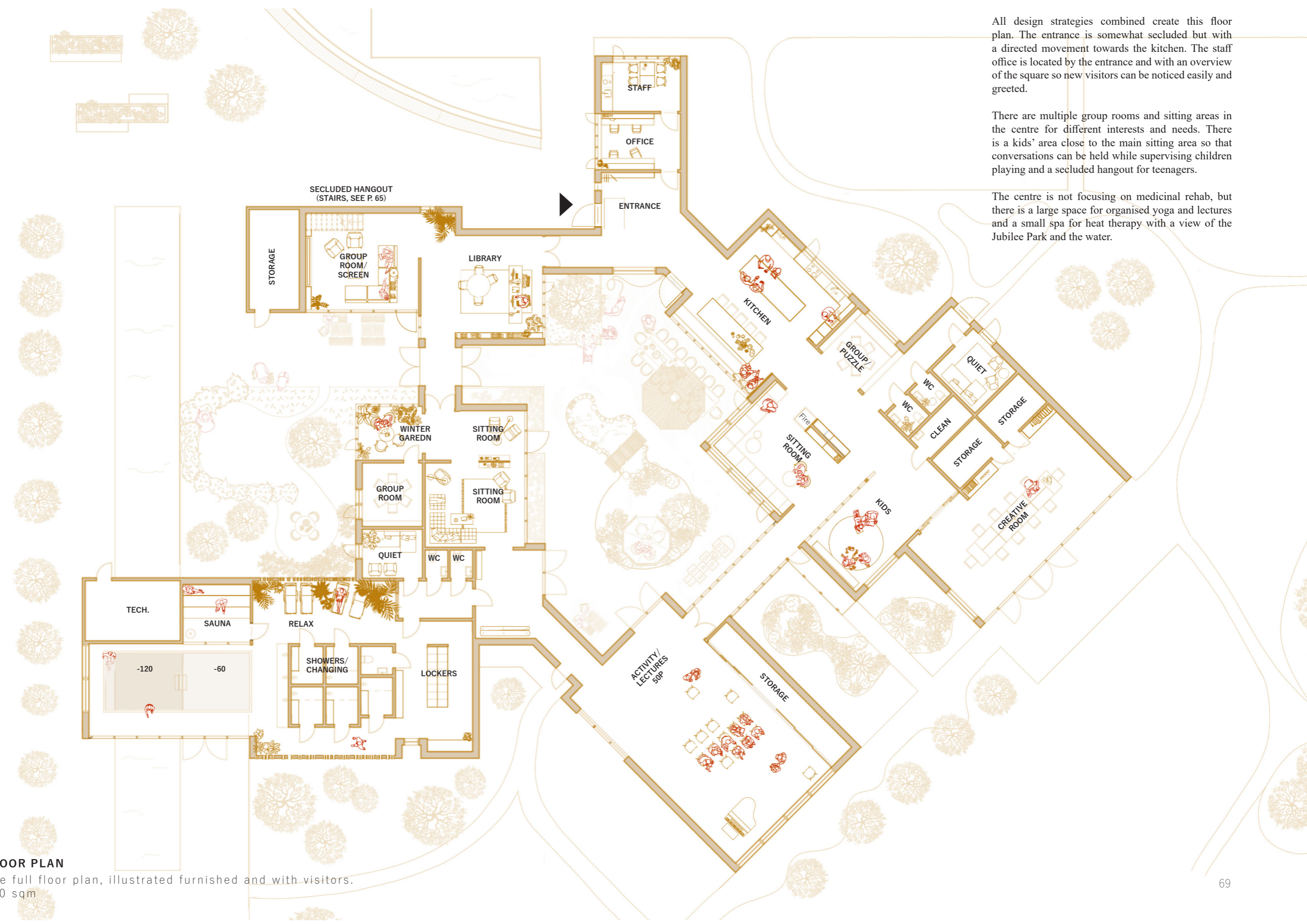
The social spaces in the centre are often visually separated by walls, but not enclosed so that sounds from groups can spread and indicate activity and life. Conversation, the clinking of utensils and music. Silence is offered in smaller enclosed spaces.

Materiality

Visual stimuli besides the spatial experience of a space can be provided by materiality. The combinations and structures are investigated and shown on page 66.



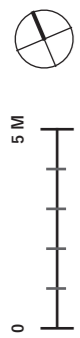
Sound Mapping



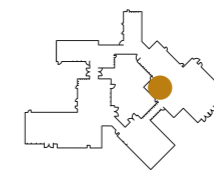
All design strategies combined create this floor plan. The entrance is somewhat secluded but with a directed movement towards the kitchen. The staff office is located by the entrance and with an overview of the square so new visitors can be noticed easily and greeted.

There are multiple group rooms and sitting areas in the centre for different interests and needs. There is a kids' area close to the main sitting area so that conversations can be held while supervising children playing and a secluded hangout for teenagers.

The centre is not focusing on medicinal rehab, but there is a large space for organised yoga and lectures and a small spa for heat therapy with a view of the Jubilee Park and the water.



FLOOR PLAN
The full floor plan, illustrated furnished and with visitors.
710 sqm



A view of
The Main Sitting Room

The centre is open to everyone but designed to be domestic and home-like in feeling to create a safe atmosphere. This view is of the main sitting area in the most open and social part of the centre.

The movement is directed to pass by and not directed into the space to create a slightly more private area and the roof is getting lower locally to, in volume, embrace the space and a sense of intimacy. The kids' area is fully visible and the creative space and kitchen can be seen partly or sensed in sound or smell. There is a crackling fire for heat and as a focus point. The windows can be opened for fresh air or to sense the garden. Light is introduced from many directions and the closest window has a low sill height so that the exterior can be viewed when seated.



Like the Kraftens Hus Sjuhärad, this centre is proposed to be used by other associations and groups during the evening for economic benefits and to destigmatise the centre further.

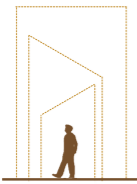
In the evening, the small spa can be used by private renters or the rheumatism association that also has a need for heat therapy.

Group rooms are proposed to hold book clubs or other gatherings organised by the municipality or private events. The kitchen is suitable for cooking classes while the creative space and activity room are suitable for cultural associations like dancing, acting classes or creative expressions in art and music.

When the centre is used like this, it will also enrich the area and provide a meeting place in Frihamnen that otherwise will be mostly housing.

FLOOR PLAN - EVENING

The full floor plan, illustrated furnished and with visitors in the evening



VOLUME

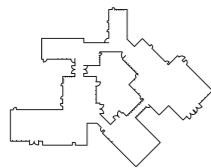
A volume that is adapted to accommodate the feeling the space should convey

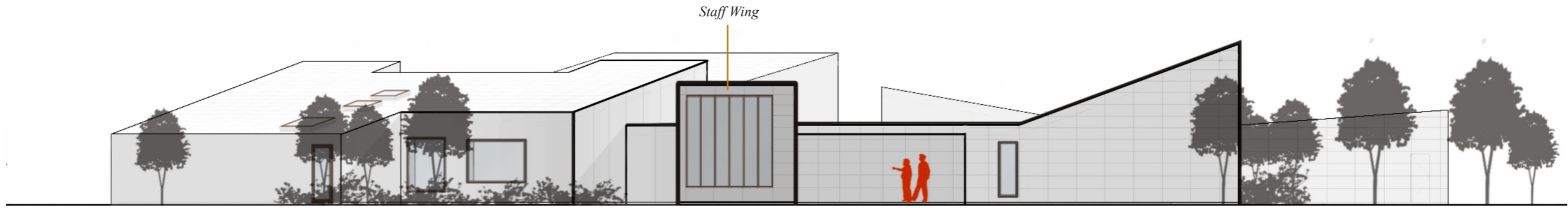
The volume is adapted to suit the spaces and their coding. Generally, social spaces have a bigger volume to create an inviting atmosphere, while private spaces are smaller for an intimate feeling.

The connection from the entrance to the kitchen is broad to not hinder a movement and the contrast from the lower ceiling in the entrance to the high ceiling in the kitchen invites a visitor to experience the kitchen's importance and feel a difference in atmosphere.

This section is private in its functions and is therefore higher towards the courtyard and lower to the public. The most intimate parts are the lowest.

The activity room
A large volume to invite to activity and a large body of air and high windows towards a view for serenity





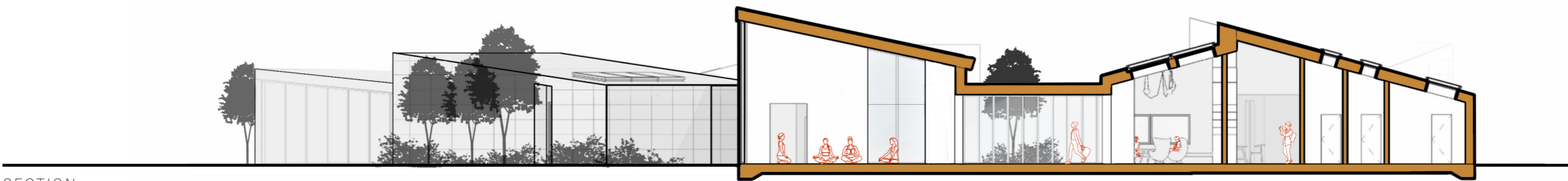
NORTH

From the tram stop towards the entrance. The staff wing, part of the embracing of the square, is the only volume facing the tram stop to emphasise the open character of the area.



SOUTH

From the Jubilee Park. A more open and diverse facade that imitates the stormy water.



SECTION

A section showing how the volume is lower in more intimate rooms and higher where a visitor is invited to a social space such as the kitchen and the activity room.

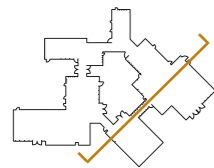
Activity Room

Sitting Room

Towards the
Kitchen

WC

Quiet Room



6. Discussion & Conclusions

This chapter presents a summary of the design proposal, a discussion of how this thesis's research questions have been investigated and what conclusions that can be drawn.

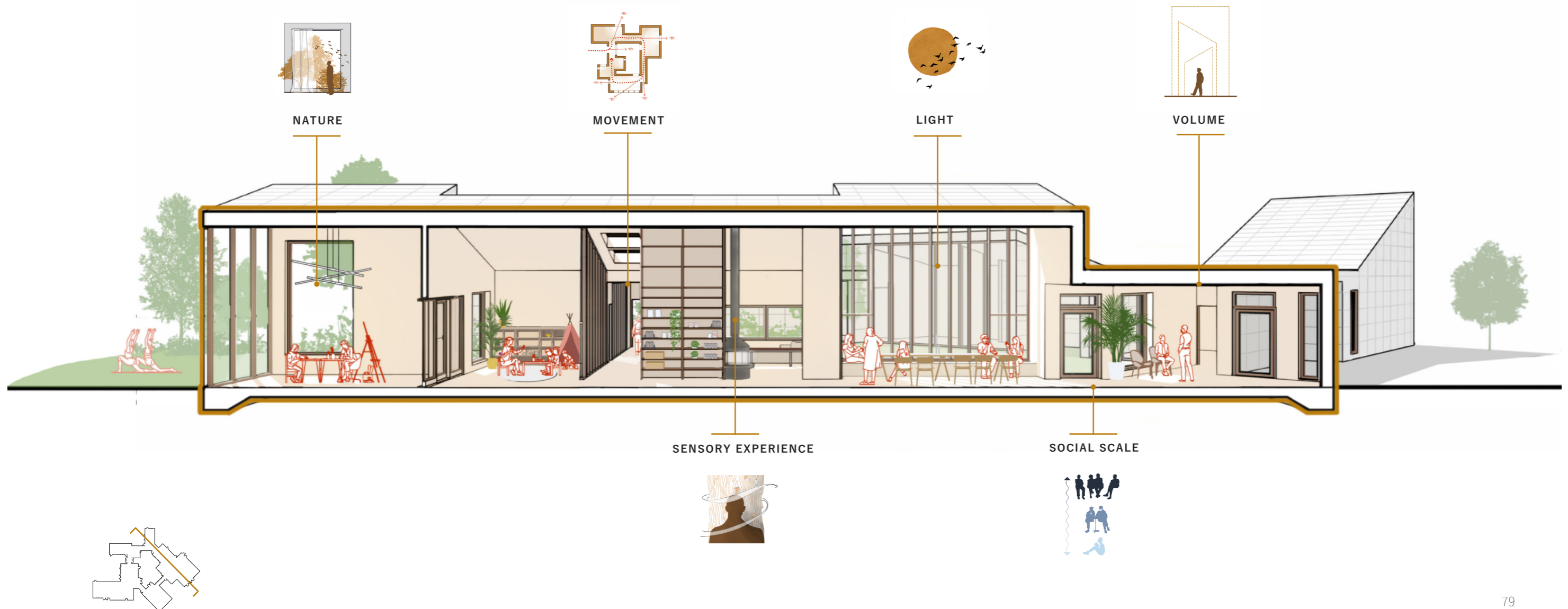
6.1 Summary

The design strategies; movement, social scale, light, nature, sensory experience and volume are combined to create a healing and atmospheric environment so that a visitor to Kraftens Hus can experience a place that heals one's body and inspires hope while embraced into a community.

The design strategies that were identified have separated focuses, but they all affect each other and can not fully be separated. How and where light is introduced affects the inspired movement,

and the movement affects the experienced social scale of socialisation and privacy, the social scale and need for intimacy affects the volume, and so on. Although the design strategies are intertwined, some distinctions can be made. The movement and social scale seem to influence the floor plan the most, while light and nature affects façades, and sensory experience affects furnishing. The view on this spread summarises the project by presenting how all the strategies coexist in a sequence.

The healing factors are represented in the design and a secure, domestic and inspiring atmosphere.



6. 2 Result Discussion

This thesis's purpose was to investigate the spatial and contextual needs of Kraftens Hus in Gothenburg and combine findings with theories on healing and atmospheric architecture in a design proposal that supports patients and their relative's physical health and emotional state of hope. The research was guided by the research question; *How can a future vision of Kraftens Hus in Gothenburg be designed for spatial and contextual needs while influencing physical health and an emotional state of hope?*

To investigate the research question in a design proposal, design strategies were found in theories on healing and atmospheric architecture, the spatial needs defined in a program, and contextual needs in a site proposal.

Hope is in this thesis not defined as a light-hearted optimism based on an assumption of a positive outcome. Hope is a motivation to persevere toward a goal or an end state, even if one is sceptical that there will be a positive outcome.

The architecture of hope could be described as spatialities that develop or acquire agency that expands an individual's capacity for action, even if only temporarily. Martin and Roe (2022) argue that it is the physical features and the atmosphere of a space and the social practices that it fosters that enables the experience of hope. In that case, the parts of the research question do not contradict each other but complement each other.

The physical features of a healing environment and the program including spatial functions and means to actively heal one's body and mind, combined with a context that is separated from a hospital environment and encourages an individual to be distanced from their diagnosis in a domestic and inspiring atmosphere is the architecture of hope.

6. 3 Method Discussion & Development of the Proposal

Generally, the methods in this thesis are deemed relevant. The method of literature search to investigate healing and atmospheric architecture was relevant since material were gathered from publications of architects studying the healing and psychological aspects of architecture. However, further case studying of the topics could have influenced the outcome positively since that would allow design solutions to be implemented rather than just the theoretical description.

The process of combining factors on healing and atmospheric design strategies was interesting since it

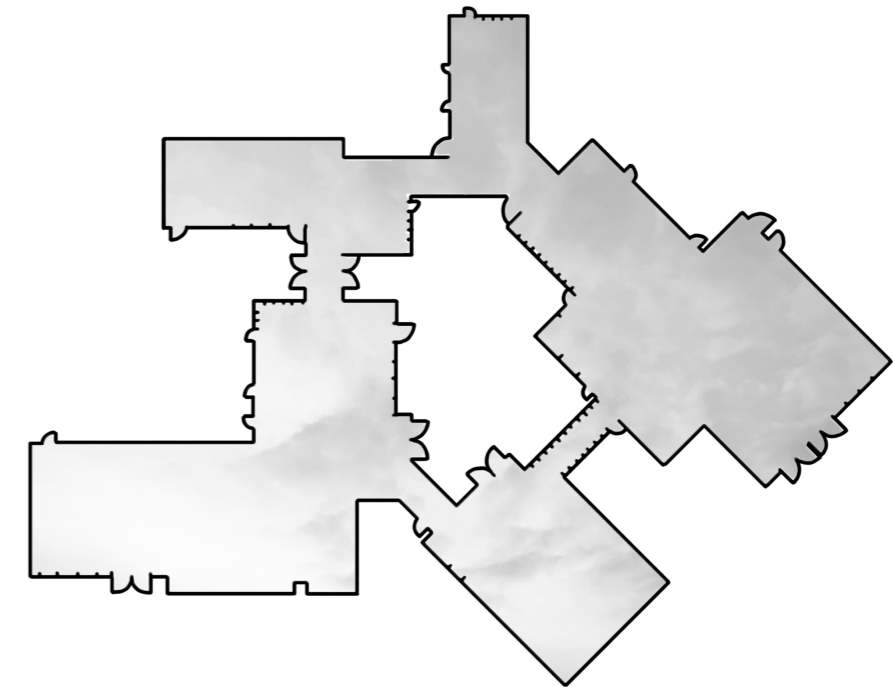
was possible to combine the two concepts and that they often emphasised the same design qualities, such as an inviting and stimulating movement, levels of intimacy, nature exposure, light and a sensory experience. I believe that all the strategies are relevant, however, since there were so many, less focus could be disturbed between them. With more time and further iterations of the design, a stronger experience could maybe have been created.

The program holds a new function that is different from other cancer care centres, a small spa. The need for heat therapy, pampering and relaxation is evident in interviews and literature studies of the pilot study of Kraftens Hus. Heat and relaxation are often implemented in Maggie's centres as a fire. The concept is not tested practically, but I imagine that the function can be a driving force to visit the centre both during the day and as an evening activity.

In contrast to the studied cases of cancer care centres abroad, Kraftens Hus expresses a need for the centre to be physically separated from a hospital. In this thesis, the context is investigated and several criteria on a hypothetical site are concluded based on Kraftens Hus's needs since this thesis focuses on that specific association. A site separated from the hospital was proposed. There are theoretical strengths and weaknesses to the site proposal, but there are few practical examples of cancer care centres on similar sites. Further research has to be conducted on the topic before general conclusions can be drawn.

6. 4 Conclusions

I believe that a future vision of Kraftens Hus can be designed for spatial and contextual needs while influencing physical health and an emotional state of hope. As discussed, the different factors could even complement each other and foster the experience of hope.



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