A Transformation of Helsingborg Hospital

Sofia Mattsson

Chalmers School of Architecture
Department of Architecture &
Civil Engineering

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Examiner: Björn Gross
Supervisor: Filip Rem

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Building Design and Transformation

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CHALMERS
UNIVERSITY OF TECHNOLOGY

Abstract

Helsingborg Hospital, built in 1975, will in the upcoming years be replaced by a new hospital outside of the city. The existing structure, a massive concrete structure of brutalist style, faces an uncertain future: demolition or transformation. At the same time, Sweden is facing a persistent housing shortage, while the construction industry accounts for a significant share of Sweden's carbon dioxide emissions. The arguments for reusing what is already built are therefore strong. Beyond the environmental aspects, the hospital represents an example of unique brutalist architectural heritage and is a prominent landmark in the city of Helsingborg.

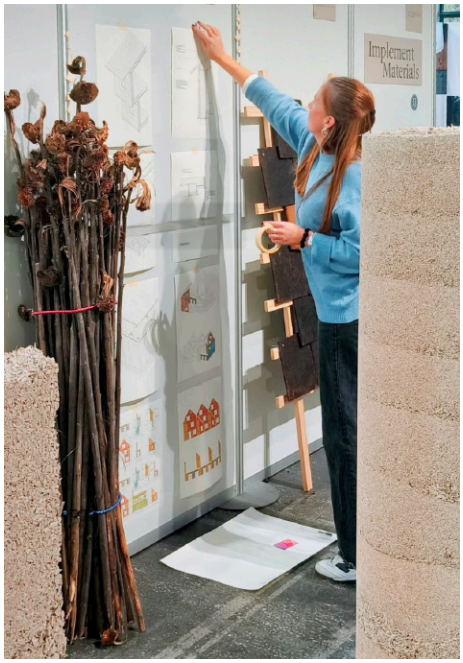
This thesis investigates how Helsingborg Hospital can be transformed into housing while preserving the architectural identity of the existing structure. The hospital, often criticized for its raw appearance, presents several challenges for residential use, including monumental scale, limited daylight, and material monotony.

With Helsingborg Hospital as a case study, the thesis combines the adaptive reuse approach of aemulatio and theories on architectural atmosphere and residential quality to analyze qualities of the existing building and to develop design strategies for its transformation. The result is a design proposal that explores how the hospital's institutional character can be reinterpreted and transformed into a unique residential environment with mediated scale, sufficient daylight, and variation in materiality.

This thesis challenges the skepticism often directed toward brutalist buildings from the 1960s and 70s, and argues that these buildings possess potential for adaptive reuse into unique living environments where new and old is merged.

Key words: transformation, adaptive reuse, brutalist heritage, atmosphere

Student Background



Sofia Mattsson

+46762129260
sofiamattsson@outlook.com

Education

2023 - 2026 MSc in Architecture and Urban Design (MPARC)
Chalmers University of Technology

ACE381 Sustainable development and the design professions
ACE400 Architecture in the anthropocene
ACE460 Building on context
ACE 355 Color and light in spatial contexts
ACE 420 Architectural competitions
ACE575 Sustainable building transformation

2024 Erasmus Exchange
Universidad Politécnica de Madrid

1805 Experimental workshop
1702 Construction and building technology

2020 - 2023 Bachelor in Architecture
Chalmers University of Technology

Work

2025 Internship/Junior architect
Tegnestuen LOKAL, Copenhagen

2024 Summer internship
City planning office, Municipality of Varberg

2019- 2023 Internship/Architectural assistant
MagasinA Arkitekter, Landskrona

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Introduction

Figure 1. Aerial photo of Helsingborg Hospital. (Silversson, 1984).

Background

Helsingborg Hospital – a Building at Risk

When Helsingborg Hospital opened in 1975, it marked a new era in the city's healthcare provision (Helsingborgs Dagblad, 2025). Designed by the office of architect Sten Samuelsson, the building replaced the earlier hospital that had become too small for the city's growing population. The new hospital consists of a large low rise structure on which a high rise cross-like structure of four wings stands. When finished, it was considered a modern healthcare facility built to meet the anticipated standards of future healthcare.

For the past 50 years, the hospital has served the citizens of Helsingborg from its central location. Yet history now repeats itself, and the facilities no longer meet contemporary demands. In 2012, a major renovation and expansion project was launched to modernize and expand the hospital on its existing site. However, after seven years of work and investments exceeding 1.1 billion SEK, the project was stopped in 2019. Escalating costs, technical challenges, and infrastructural constraints on the site led the municipality to cancel the project. By then, two of four wings had been renovated, and the foundation and basement for the extension building had already been cast.

Instead of continuing the redevelopment, the municipality in 2021 decided that a new hospital is going to be built outside of the city. Within approximately 15 years, the current hospital will be replaced by the new. The existing building will lose its original purpose and a prominent landmark of Helsingborg is facing an uncertain future: demolition or transformation.

Figure 3. Helsingborg Hospital viewed from medieval tower *Kärnan*. (Author's photograph, 2025).

Demolition or Transformation

The construction sector accounts for roughly 20 percent of Sweden's total carbon emissions (Boverket, 2025b), with new construction and demolition generating resource waste and large quantities of embodied carbon. Every time a building is torn down, large investments of energy and material are lost. Beyond its environmental cost, demolition also erases pieces of architectural history (Plevoets & Van Cleempoel, 2019). To demolish does not only mean loss of resources, but also a loss of identity and weakens the collective memory of a place.

Instead of demolition, adaptive reuse offers a sustainable alternative by extending the life of buildings and giving them new purpose when the current functions have become obsolete (Plevoets & Van Cleempoel, 2019). Adaptive reuse acknowledges the value of the existing building, not only as a resource with embodied energy, but as a carrier of authenticity, memory and identity, of which brutalist heritage is an important part of the story.

Brutalism and its Reputation

Brutalism is an architectural style that emerged in the 1950s and 1960s (Banham, 1966). It is characterized by bold geometric forms, exposed structures, minimal ornamentation and the use of raw materials, especially raw concrete or *betón brut*, as seen in for example Le Corbusier's Unité d'Habitation. Buildings are typically large-scale and monumental, often with repetitive modular elements, as seen in Helsingborg Hospital. Helsingborg Hospital in many ways exemplifies the ideals of brutalism, with its massive, concrete structure expressing functionality and material honesty.

Brutalism brought technical advancement and freed architects in their designs, however despite the advantages the style is often criticized for being cold, harsh and intimidating (Imani & Imani, 2021). Generally, people love to hate buildings from the mid twentieth century and brutalist buildings are increasingly under threat of demolition (Lange, 2015; #SOSBrutalism, n.d.). Helsingborg Hospital has been named the ugliest building in Helsingborg (Helsingborgs Dagblad, 2015), and one of the ugliest buildings in Sweden (Sveff, 2015). The skepticism toward the hospital appears to stem mainly from its scale and material expression. Critics claim it to be drab and cold, with an abandoned expression that brings up associations to the former DDR and their authoritarian institutional buildings.

From Institution to Habitation

Sweden is facing a persistent housing shortage, especially in expanding cities such as Helsingborg (Boverket, 2025a). Meeting the demand solely through new construction is neither sustainable nor resource efficient. Reusing the existing building stock therefore emerges as an ecological and socially sustainable alternative that addresses both the environmental impact of new construction and the need for more housing.

Adaptive reuse and transformation into residential use of a brutalist institutional building such as Helsingborg Hospital presents both opportunities and challenges. The deep-plan structure is characterized by a dark core and extensive hallways for communication, qualities that enable efficiency for healthcare but limit daylight access and gives an institutional feeling. Simultaneously, the cold and intimidating aesthetics represent values that people generally do not associate with a living environment. A hospital building might also evoke feelings of fear and anxiety.

On the other hand, features connected to the original function of efficient healthcare such as the rational pillar-beam structure and flow, generous ceiling heights for installations, and the continuous balconies offers potential for spacious and interesting apartments with unique qualities. The criticized aesthetics can be preserved and reinterpreted and become a quality that represents identity and make for a unique residential experience. Furthermore, the central location makes the site attractive for urban housing and the building's position provides views of the Öresund Strait and Denmark already from the third floor.

Purpose, Aim, Research Questions

Purpose

Growing up in Helsingborg, the hospital has long been a topic of discussion in the city. Many citizens describe the building as ugly and drab, which is a general criticism often directed toward brutalist architecture. The hospital is currently in an interesting situation, as it will stand empty in about 15 years. It represents an extreme yet relevant example of a typology that today often risks demolition because of its extremity and complexity, resulting in the loss of both resources and cultural heritage.

> *"Something strange happens when a building ages past a human generation or two. Any building older than 100 years will be considered beautiful, no matter what. Having outlived its period of being out of fashion, plus several passing fashions since that, it is beyond fashion"*
>
> Brand (1994, p. 181)

Referring to the quote of Stewart Brand, it is unfortunate to neglect buildings that are considered aesthetically "ugly" today since trends and preferences change over time. Furthermore, transforming instead of demolishing does not only preserve architectural heritage and values identity, but also offers a more sustainable way of addressing the housing shortage.

Despite its challenges, Helsingborg Hospital also has unique traits and qualities and is an important part of the city's identity. Rather than seeing the criticism as limitations, this thesis approaches the critique as the starting point for a transformation, where interventions has the possibility to balance the raw expression and make a unique residential environment.

Aim

The thesis aims to investigate how atmospheric parameters such as daylight, materiality and scale can be merged with the brutalist traits of the building to reimagine the hospital into a unique living environment and to show transformation as an alternative to demolition.

Research Questions

How can theory on atmosphere in terms of scale, daylight and materiality inform design strategies for a transformation that promotes residential quality while preserving the unique traits of Helsingborg Hospital?

Method & Delimitations

Method

This thesis project will commence with a research and inventory phase consisting of information gathering on theories of atmosphere, residential quality, and adaptive reuse. Parallel, an inventory and analysis of the site and building will be carried out. Studies of municipal documents and archival drawings will be made and the existing hospital building will be further examined through site visits, drawings, photographic studies, and digital and physical modeling.

The analysis of the building will include an atmospheric interpretation based on theories by Steen Eiler Rasmussen and Gernot Böhme, focusing on how the building is perceived through the senses, with particular attention to scale, daylight and materiality. The research and inventory will feed into the concept phase to develop design strategies that respond to the challenges of the building and cater to residential quality. Through the mediation of scale, and introduction of daylight and materiality, the project aims to adapt the building into a residential environment.

The design will be developed during an iterative design process where different solutions will be explored and evaluated through mainly atmospheric parameters. Basic daylight analysis will also be carried out.

In the delivering phase the iterations will be concluded in a final design proposal presented through drawings, models and renderings. The final design will be discussed and reflected over in response to the research questions.

Delimitations

Due to the large scale of the building, the main focus of the design exploration has been limited to the high rise structure of the building where potential for residential use is explored in detail. Ideas for the site and low rise section will be presented principally.

Atmosphere is a broad topic and this thesis will not go into depth of all parts of atmosphere. For the scope of this thesis and based on the challenges of Helsingborg Hospital, the focus will be on scale, daylight and materiality.

The work focuses on architectural and spatial qualities, particularly how interventions regarding daylight, materiality and scale can enable adaptive reuse into housing. Topics such as urban planning, heritage conservation and economic feasibility are considered in the decision making but not explored in detail.

Theory

Theory

In this thesis, theory on architectural atmosphere is used to understand aspects that form our architectural experience. The findings serve to inform key parameters for analyzing the existing structure, and to inform design strategies in the transformation proposal of the hospital from institutional into residential use.

Atmosphere and Perception

In recent years architectural theory has increasingly emphasized atmosphere as a central phenomenon to how architecture is understood and felt. A key theorist within this field is the german philosopher Gernot Böhme. In his book *Aestethics of Atmospheres*, Böhme (2017b) describes atmosphere as a metaphor for a tuned space, a space with a certain mood. Atmospheres can be produced consciously through arrangements of for example material or light. However, while there are certain things that shape atmosphere, such as lighting, the perceived atmosphere is always dependent on the perceiving object. If a person enters a room with a certain mood, the feedback to the production of the atmosphere will most likely differ from the next person with another mood. It is in this in-between, between the perceived object and the perceiving subject, that atmosphere occurs. Atmospheric qualities are embedded within a space, and can only be experienced through physical presence.

In *Experiencing architecture*, architect Steen Eiler Rasmussen echoes the view of Böhme that atmosphere is perceived through personal experience through our senses (Rasmussen, 1962). He emphasizes that we experience architecture through light, color, material, texture, scale, rhythm and sound. A child can already tell at a young age if something feels hard or soft, light or heavy, cold or warm, taut or slack. It is deeply programmed in us through our senses.

Desired Residential Qualities

In the context of housing, atmospheric qualities take on particular importance as they are part of shaping our everyday experience, comfort, and wellbeing. Vitruvius argued buildings of good architectural quality should consist of equal parts of durability, commodity and beauty (Nylander, Forshed, 2011). The quality of a dwelling can be determined based on criteria such as functionality, spaciousness, daylight, flexibility, atmosphere and wellbeing, organization of space, communication and structure of the house, as well as the yard and its territories (Nylander, 2021).

To be able to move around, have an outlook and overview, and experience relationships between rooms as well as between the inside and the outside are beneficial features for our wellbeing (Morichetto, 2017). Light, sound, materiality and tactility also play important roles. A well-designed space can bring peace, safety, stability and sense of identity, whereas poorly designed spaces can cause stress and discomfort (DAC, 2025a). In an urban environment, aspects such as for example appropriate scale, proportion, the organization and definition of rooms, and the relationship between buildings and the ground can influence how residents regard the quality of the space (Forshed, 2024).

Staging Atmosphere

Material, color and light always work together and the composition of materials can create unique spaces and elevate the quality of a space (Rasmussen, 1962; Zumthor, 2006). Materials radiate, and when combined and resonated to each other, there are even more possibilities than when only using one material (Zumthor, 2006). Two identical rooms can be completely different simply because of curtains, wallpaper and furniture (Rasmussen, 1962).

There is a difference between intended atmosphere and perceived atmosphere (Kotler, 1973). Intended atmosphere refers to the choices of the designer that aim to evoke a certain mood or feeling. The perceived atmosphere is the actual experience of the person experiencing, which might be something different than what the designer intended for. How we work with material and light has the ability to change the perception of a room. We can stage atmosphere in order to attempt to achieve an intended atmosphere (Böhme, 2017b; Rasmussen, 1962; Kotler, 1973).

Böhme argues there are three generators that are part of creating atmosphere (Böhme, 2013; Canepa, 2024). Generators can be both physical objects, as well as non-material such as light or music. The first of the three are geometric generators, which can suggest movement and create impressions of volume and load. Properties are for example proportions, dimensions, form and geometry. The second are sensorial generators, such as light, material, color and texture. Sensorial generators are highlighted as a particularly important tool for architects, since the architect can make design choices with the intention to create a certain experience. The third are social generators, such as sense of home, power or wealth. Certain materials or objects can have a certain symbolic charge based on the context. For more hands-on tools for staging atmosphere, one can work with for example defining boundaries, making connections or creating sequences and staging levels (Morichetto, 2017). Light, sound, materiality and tactility often take form in the way details, material choices and craftsmanship are carried out. Among many aspects, contrast, variation and robustness are highlighted as important features.

Figure 5. Staff and patients enjoying the sun. (Author's photograph, 2025).

Key Atmospheric Elements

Among many factors that contribute to atmosphere in architecture, certain elements are mentioned repeatedly in the research field. Rasmussen and Böhme mentions scale, daylight, and materiality as important aspects, and based on the conditions and features of Helsingborg Hospital and desired qualities in residential environments, this thesis will focus on these three mentioned.

Scale

Scale and proportion play a very important role in architecture (Rasmussen, 1962). A skyscraper can look small seen from above from an airplane, but when seen from the side compared to the contour of other buildings, the buildings take on human scale and become something relatable. We experience scale through comparison with our own body and other objects. Architecture is formed around man.

According to Böhme, geometric generators in forms of volume and mass can suggest movement and influence how we feel within a space (Böhme, 2013). An interpretation of that is for example, a large enclosed building block may force us to move around it, while an open building block divided into multiple buildings may allow us to move through it. Geometric generators can have us feel expanse or confinement, proximity or distance, openness or entrapment (Böhme, 2013). A low ceiling height can promote intimacy and focus, but it can also give a sense of confinement. A higher ceiling height on the other hand promotes spaciousness and can give a feeling of freedom (Meyers-Levy & Zhu, 2007).

The modernist architecture is often criticized for neglecting the human scale. Böhme argues that the modernist focus on technology had it loose the importance of the human and its mindful physical presence (Böhme, 2013). Architect Jan Gehl makes a similar point, and claims modern planning have had tendencies to ignore human scale with consequence of uninviting spaces that are difficult to relate to and navigate through (DAC, 2025b).

An example of a way to meet the critique of the loss of human scale can be seen in Sweden's million program neighborhoods, where attempts to break up the monotonous large-scale structures have been made by building row-houses in between. These types of interventions create variation in the urban environment, variation in housing typologies and inhabitants, and help give more identity to the neighborhood.

Daylight

Light and daylight has the ability to change the perception of a room (Rasmussen, 1962). For example, changing the size and location of a window can change the character of a space. The movement between different lighting situations can also generate feelings in us. For example, to move from a small room with limited lighting, into a large room flooded in light can give a feeling of great relief. Light can make a space feel serene, uplifting, gloomy, festive or homey (Böhme, 2017a).

Light has a great impact on how we understand materials, and materials are also essential to understanding light in architecture hence they affect the quantity and quality of the light (Millet, 2006). Out of many aspects, the color and the texture of material have the most important effect on the behavior of light (Millet, 2006). Light from the side is generally better than a front light, since it allows a better impression of texture and relief (Rasmussen, 1962). However, if the lighting source is too light the texture will be washed out, and if it is too dark it is difficult to distinguish. Good lighting is not about having as much light as possible, but about its quality. Carefully controlled light can give depth and character to a room, while uncontrolled light can create glare and confusion.

Dwellings with daylight from multiple directions enriches the experience of the dwelling (Nylander & Granath, 2025). In addition to providing more outlooks, this allows different types of light to enter at different times of the day, in form of indirect light, direct sunlight, sun glitter and plays of shadow that affect the atmosphere.

Besides being part of creating atmosphere, good access to daylight is crucial to our health and wellbeing as it influences circadian rhythms, mood, sleeping cycles and stress levels (Folkhälsomyndigheten, 2017). Furthermore, an outlook towards the outside is of great importance and helps us to stay informed about our outdoor environment, gives us an aesthetic experience and has benefits for our health and recovery (Bülow Hübe et al, 2022).

Materiality

Color is always experienced as a feature of a material (Rasmussen, 1962). Color can help express the mood of a space and can influence how large, small, light, heavy, warm, cold, busy or calm a space feels. It can emphasize important architectural elements or reduce the visual impact of others. Color is not needed to comprehend the world, but there is a common feeling that color generally enriches our surroundings (Hurlbert & Ling, 2017). For example, when watching a black and white movie the viewer can easily recognize objects, but the lack of color effects the atmosphere and makes for a different experience.

The combination of colors and their saturation has an impact on the mood and the behavior of the observer (Haller, 2017). Although color preferences are influenced by for example culture, trends, age and personal experience, studies show that some responses to color are universal and connected to evolution (Hurlbert & Ling, 2017; Haller, 2017). For example red can be associated with ripe fruit and blue with daytime and beneficial weather. Generally red excites and is consider a warm color, while blue and green calms and are considered colder colors.

The quality, temperature, and direction of light has a great influence on the perception of color (Haller, 2017). Darker colors reflect little light and can make a room feel smaller and are often used as accent colors. Paler colors can be used on larger surfaces and can make a space appear larger and more airy because they reflect more light. Also latitude, weather, time and season influence the behavior of light and therefore also color. In the Nordic hemisphere such as Scandinavia, the natural light has a more cool tone.

Besides color, texture has a great impact on how materials are perceived and a space is felt. One material in itself is endless (Zumthor, 2006). As an example, a stone can be ground, drilled, split, or polished and take on a new texture and shape every time. Textures can be defined as polished, rough, and matte and different textures influence how materials reflect, absorb, or diffuse daylight (Taylor, 2000). The texture of a surface can impact the color that is reflected. For example rough textures such as carpet, brick, natural wood and stone absorb light making them appear darker, while smoother textures reflect more light and make them appear brighter (Haller, 2017).

Texture can also make a building appear heavy or light (Rasmussen, 1962). A wall built of large, rustic stones can appear heavy and seem to have required hard labor to build, while a smooth wall can appear light while it in fact might have required more work and is physically heavier. Some designers aim for a hard effect that highlights structure and material through rough and visible surfaces, while others hide the structure behind smooth and refined finishes to achieve a softer effect. Many buildings also combine both hard and soft effects, both coarse and fine textures, to enhance the qualities of certain materials. As an example, Rasmussen mentions Frank Lloyd Wright's Fallingwater, where contrast is achieved by placing rough limestone against smooth blocks of white cement, glass and steel.

It is difficult to state the perfect color scheme that suits everyone in every situation. But it is evident that color can enrich the experience of space and influence how a space is perceived. Same goes for texture, it is difficult to state general preferences. But color and texture are two sensorial generators that can enhance and stage atmosphere, and they can contribute to contrast and variation as mentioned by Morichetto (2017) as important features of atmosphere in living environments.

Figure 6. Facade toward northwest. One of few trees on site. (Author's photograph, 2025).

Figure 8. View overlooking the Öresund Strait and Denmark with Kronborg Castle. (Author's photograph, 2025).

Adaptive Reuse Approach

The discussion on how to approach heritage and deal with the existing building stock has long been a central topic within architectural theory. In the nineteenth century, conservative John Ruskin argued against restoration, advocating for buildings to remain as they were built (Plevoets & Van Cleempeol (2019). In contrast, the more liberal Eugene Emmanuel Viollet Le Duc argued for interpretation, allowing for buildings to evolve and change.

Emerging from the debate between preservation and transformation are the concepts of *translatio*, *imitatio* and *aemulatio* which describe different adaptive reuse approaches (Plevoets & Van Cleempeol, 2019). Translatio aims for similarity and to reproduce as closely to the original as possible. Imitatio aims for equality and allows for subtle changes while remaining true to the original. Aemulatio aims to improve upon the existing, and allows for reinterpretation.

Plevoets and Van Cleempoel illustrates the differences between the concepts through the work of painter Pieter Paul Rubens. Rubens started by copying master painters exactly as close to their originals as possible, which corresponds to the approach of translatio. In other works, he introduced small modifications, such as only changing the placement of the hands of the people painted in the original, corresponding to imitatio. Lastly, in an interpretation of Caravaggio's *Entombment of Christ*, Rubens altered the light and the color, and removed and added objects. But he preserved the original painting's way to portray Christ, in order to preserve the main intention of the original. This corresponds to the approach of aemulatio, where continuity of the original is valued while also allowing for creative interpretation.

The perspectives of the aemulatio approach relate to Steward Brand's idea of *"Shearing Layers"*, that buildings are constantly changing over time as a result of new users and changing needs (Brand, 1994). They are not static objects, but structures that continue to adapt throughout their lifespan. Brand describes buildings as a weave of different parts with varying lifespans. Each layer develops at its own pace. The layers are: the *site* which changes very slowly and could be considered having an eternal lifespan, the *structure* being the load bearing system which is intended to last for approximately 30-300 years, the *skin* such as facades and roofs which will last approximately 20 years, *services* including technical systems which last 7-15 years, the *space plan* which defines the interior layout and changes every 3-30 years, and finally *stuff* which includes furniture and things that change most frequently on a daily or monthly rate.

Summary

Although a subjective experience, atmosphere can be staged to attempt to achieve an intended atmosphere. Among many aspects, scale, daylight and materiality play important roles in the creation of atmosphere.

In order to balance the large-scale and raw appearance of Helsingborg Hospital, the adaptive reuse approach of aemulatio will be applied. The thesis aims to preserve and enhance existing qualities, as well as deal with the challenges the building beholds. Interventions that mediate the scale, introduce daylight, and add materiality in form of color and texture will aim to stage an atmosphere that balance the current atmosphere of the building without erasing its unique traits. The aim is to balance continuity with change as a natural development of the life of the building, as explained by Brand.

Built References

Royale Belge

Architect:	Caruso St John Architects, Bovenbouw Architectuur, DDS+
Location:	Brussels, Belgium
Year:	2019-2023
Size:	80 000 sqm

Royale Belge is a heritage-listed office building from the 1970s, originally designed by René Stapels and Pierre Dufau for the Belgian insurance company Royale Belge (Caruso St John Architects, n.d.). The renovation project transformed the former office building into a mixed-use complex with conference spaces, offices, co-working areas, a hotel, health club, and restaurant.

The approach of the project was to change as little as possible. The architects focused on reusing existing materials, making minimal structural changes, and improving the building's energy performance while keeping the character of the original design. The original facade was kept with new glazing that closely matches the original appearance but meets modern energy standards. One of the most important interventions is the addition of a large central atrium cut into the podium of the building. This new circular space brings daylight deep into the interior and connects different levels with a spiral staircase. On the ground floor, new openings were added to the entrance hall to better connect offices and public functions.

The building is similar in size and overall form to Helsingborg Hospital. The project shows how subtractive interventions, such as cutting an atrium into an existing structure, can improve light and spatial quality in large buildings. It also demonstrates how a strong brutalist identity can be preserved while adapting a building to new uses through bold interior changes.

Figure 9. Exterior view of Royale Belge and park. (Stijn Bollaert, 2023). CC0 1.0

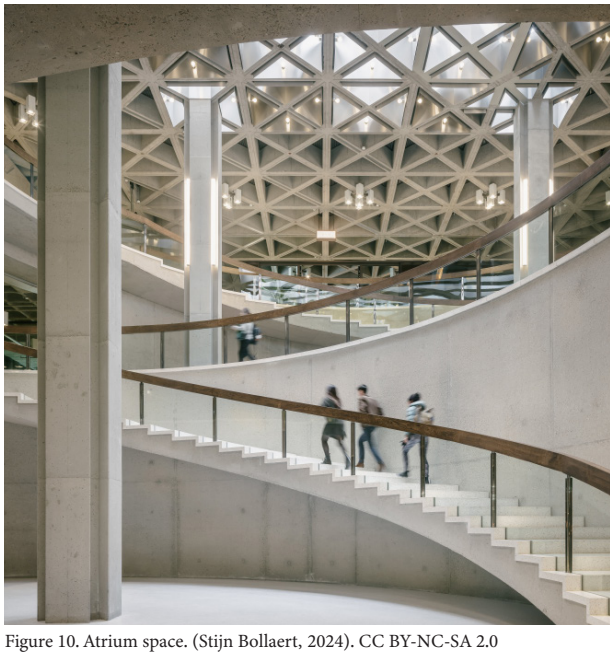


Figure 10. Atrium space. (Stijn Bollaert, 2024). CC BY-NC-SA 2.0

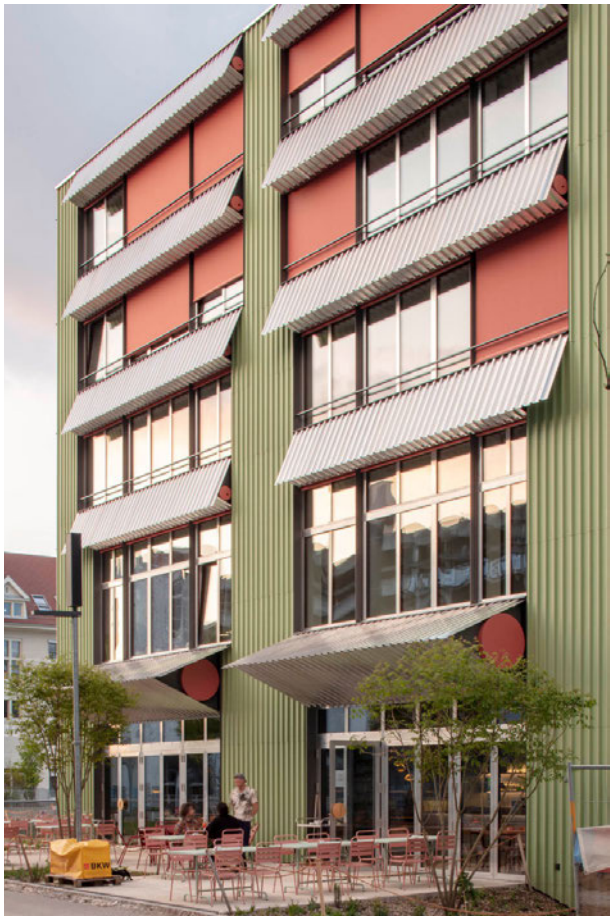


Figure 11. Exterior view. (Corsini, n.d.). Reprinted with permission.

Figure 12. Interior view. (Corsini, n.d.). Reprinted with permission.

Conversion of a Wine Storage into Housing

Architect:	Esch Sintzel Architekten
Location:	Basel, Switzerland
Year:	2018-2023
Size:	11 100 sqm

The project is a transformation of a former wine storage into a housing complex consisting of 64 apartments, common areas, a roof terrace, a café and commercial units (Esch Sintzel Architekten, n.d.). According to the architects, the massive concrete mushroom-like pillars were the starting point and defining objects for the program. The concrete structure was preserved, but interventions such as in the facade with the addition of openings, reconfiguration of the layout, and introduction of new materials were made in order to make the building into a residential one. By introducing light, wood and color such as green and red, the rough concrete become a qualitative element, almost like a piece of furniture in the dwellings, with the result of a homey residential environment.

Context

Figure 13. Satellite image of Öresund Strait. (Google Earth Pro, 2026).

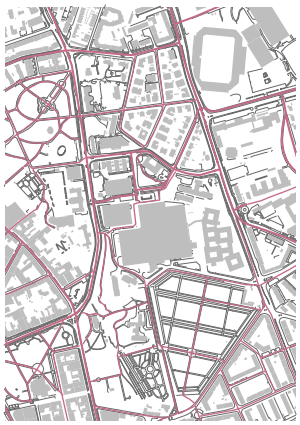
Site

Helsingborg is a coastal city on the southwest coast of Sweden, situated at the narrowest point of the strait of Öresund only four kilometers from Denmark. With approximately 150 000 inhabitants, the city is the ninth biggest city in Sweden and continues to grow. It is also a commuter node, with many residents traveling south toward Copenhagen and north toward Gothenburg for work.

The hospital occupies a central and highly unique location in the city. It stands prominently on Landborgen, a defining topographic ridge that runs parallel to the coastline and shapes the city's urban form. The hospital area consists of two plots, Lasarettet 4 and Lasarettet 5. Lasarettet 4 is a smaller plot with a parking garage, while Lasarettet 5 of approximately 100 000 sqm houses the main hospital complex. The plots form a coherent site with buildings under the ownership of Region Skåne, except for a parking garage on Lasarettet 4 which is privately owned.

The hospital is located within 10–15 minutes walking distance from Helsingborg Central Station. Drottning Margaretas gata serves as the main traffic route to and from the site, providing access to the main hospital entrance. According to Helsingborgs Stad and Region Skåne (2024), pedestrian and bicycle connections are currently of inadequate standard, with limited accessibility and poor flow. Visitor and staff parking is accommodated in both public and private garages, offering approximately 800 parking spaces in total.

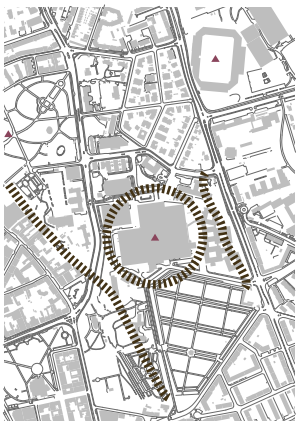
East of the main hospital lies the beginning of what was supposed to be the new expansion of the hospital. After being halted in 2019, it was in December of 2025 decided that the casted foundation is going to be demolished and reestablish into a parking garage, resulting in a 1,1 billion SEK wasted investment.



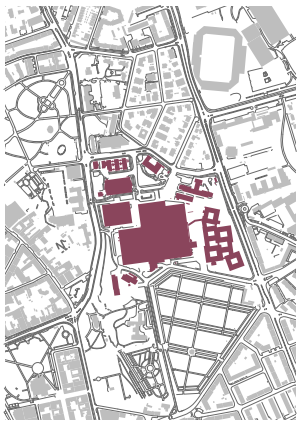
Flow
Pedestrian and bicycle

Car

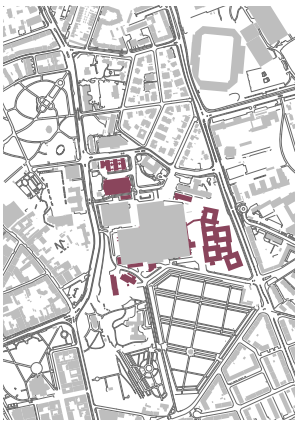
Public transport



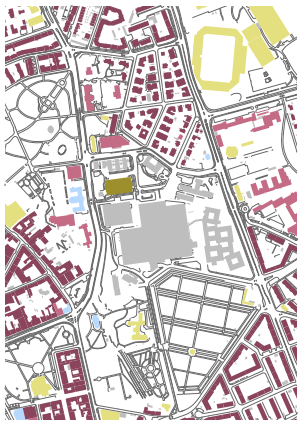
Barriers and landmarks
Barrier
Landmark



Buildings
Hospital buildings



Buildings
Additional extensions to the hospital since 1975



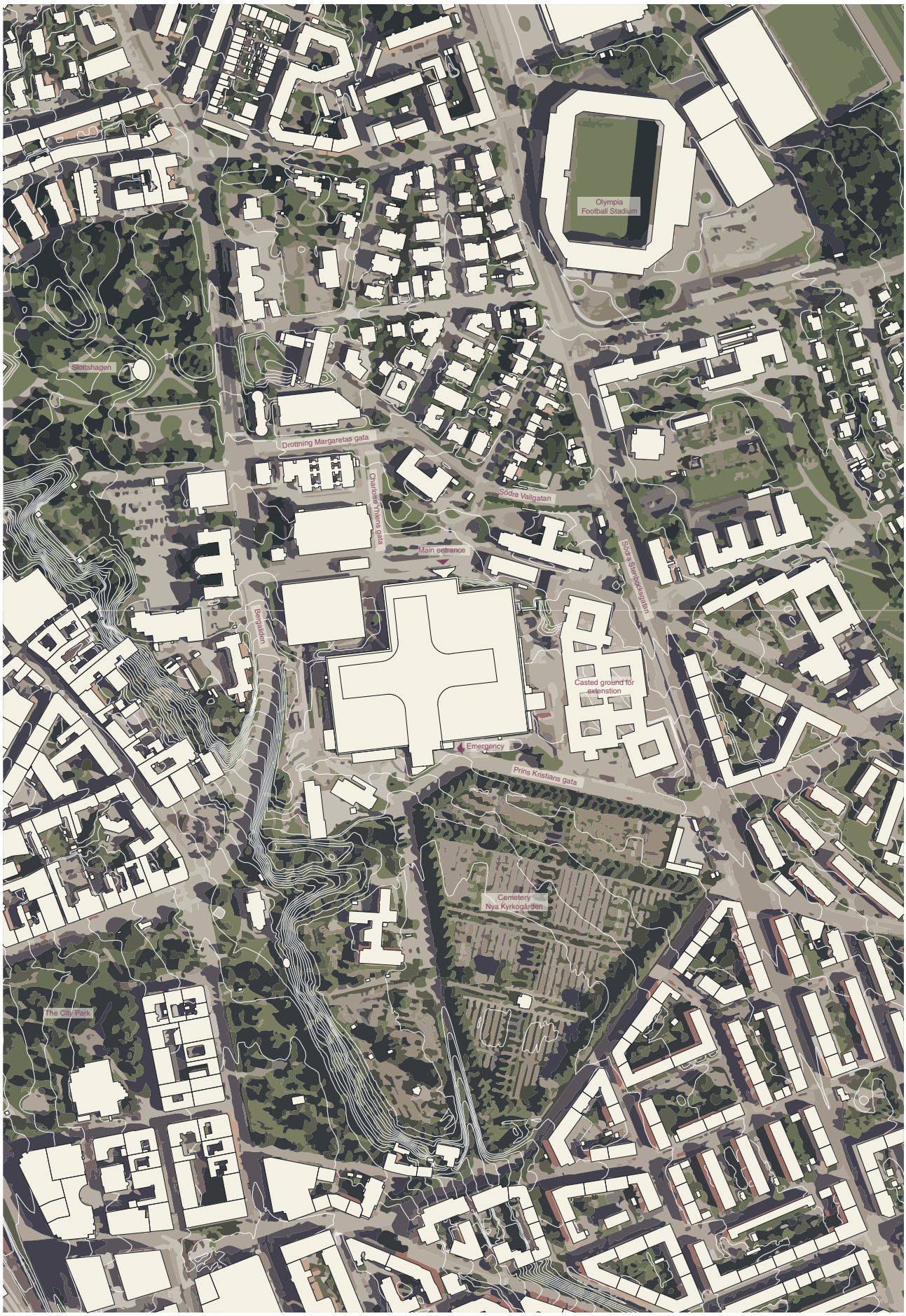
Buildings
Housing Education Office
Parking Public

Green structure

The hospital is a large-scale building occupying a significant portion of the central city. Several barriers can be identified on different levels. On a site-specific level, the hospital with its large low rise structure causes challenges in the flow on the site and is like a separating block between north and south, which are areas with differences in socio-economic status. Also the canceled expansion project disrupts movement through the hospital area. On an urban scale, the land ridge can be experienced as a barrier for pedestrians due to the difference in elevation. At the same time, this topographical feature also contributes positively to the spatial experience of the area of the hospital by offering pleasant views. Bergaliden, the road west of the hospital, is also one of the city's main routes up the ridge, which is evident from the number of bus routes that passes here.

The hospital is located in a mixed-use area with buildings from various time periods. Prominent on the hospital site are older hospital buildings from the 19th and 20th century. The surrounding functions are mainly residential, ranging from large villas to apartment blocks. Later additions and extensions of the hospital, such as temporary solutions like demountable modules, have resulted in a incoherent expression that disrupts the original outline of the structure.

Nearby landmarks include the football arena Olympia and the medieval tower Kärnan. The area also has several elementary schools and high schools. The hospital plot itself lacks green structures, but it is framed by green spaces such as the cemetery to the south, Slottshagen park to the northwest, and the city park in southwest.

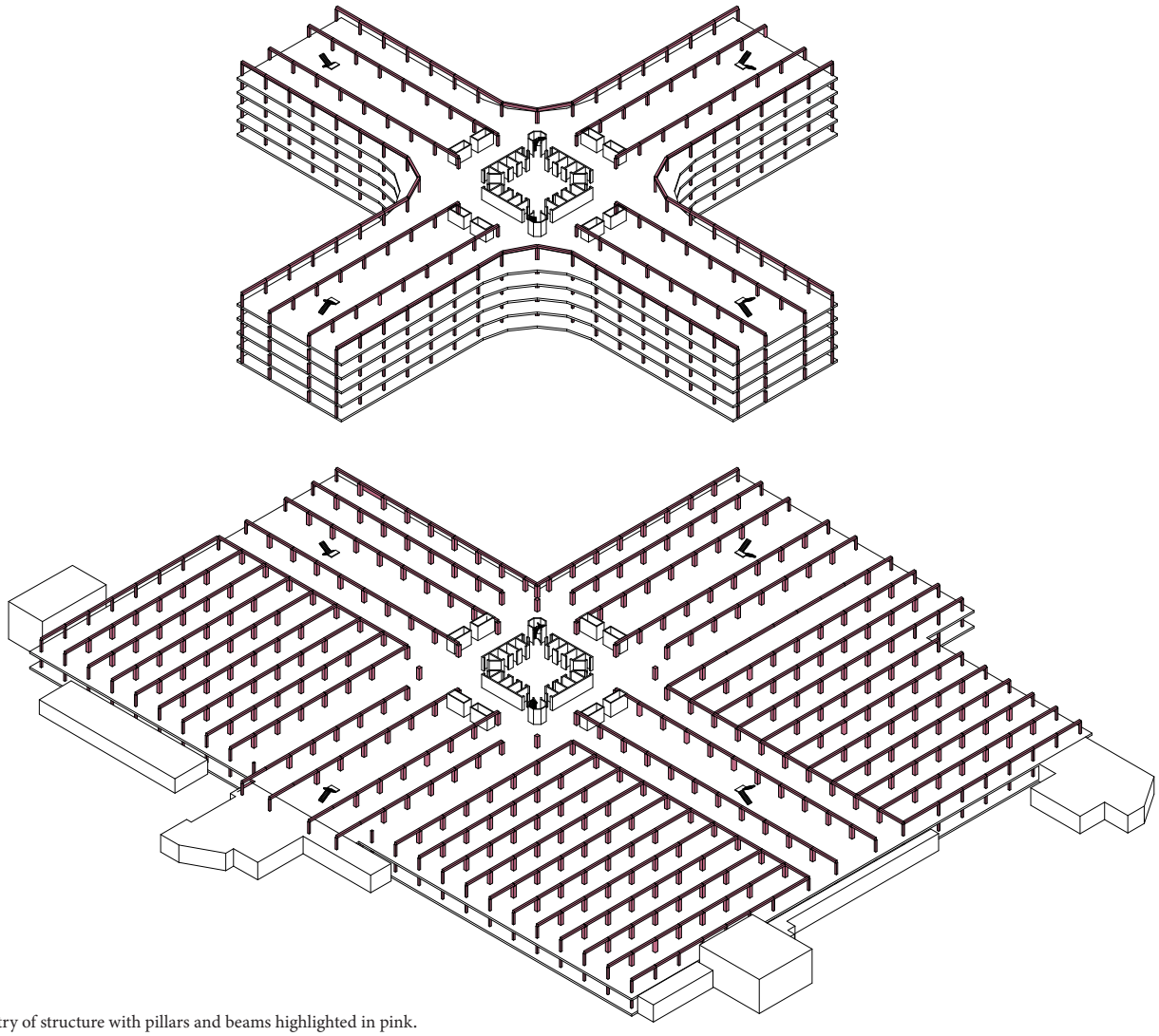


Existing site plan

1:5000

Figure 12-14. Images of exterior. Figure 12 showing the casted foundation of canceled expansion. (Author's photographs, 2025).

Figure 15-17. Images of interior. (Author's photographs, 2025).



Axonometry of structure with pillars and beams highlighted in pink.

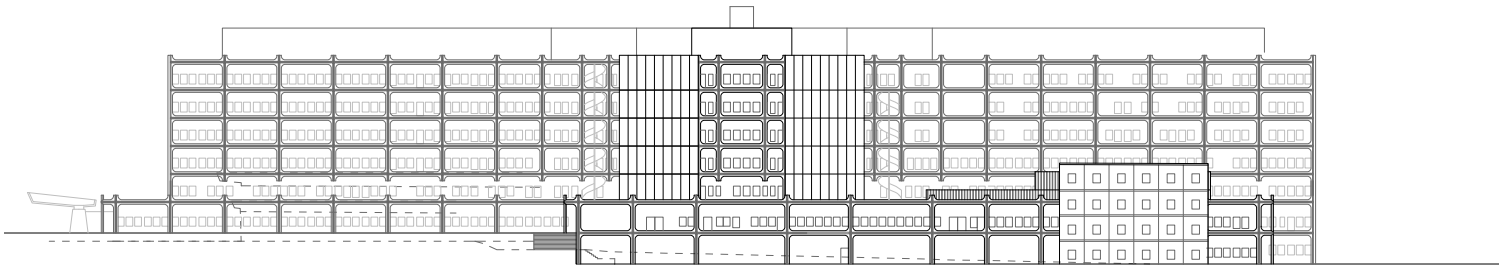
Structure

The 108 707 square meter hospital building is divided over a low rise structure and a high rise structure (Helsingborg stads bevarandeplanskomitté, 2019). Structurally the building consists of in-situ casted concrete pillars that carry pre-fabricated concrete primary beams on which continuous ribbed floor slabs are casted, with elevator and stair shafts as stabilizing elements (Tyréns, 2023). The central elevator hall with 12 elevators provides vertical communication to each floor and wing, with complementary staircases in the gable of each wing. The structural grid measures 7.2 meters, with exceptions to the gables with larger spans of 8.4 and 12 meters. The floor-to-floor height is 3.7 meters in the high rise structure, and 4.1 meters in the low rise structure.

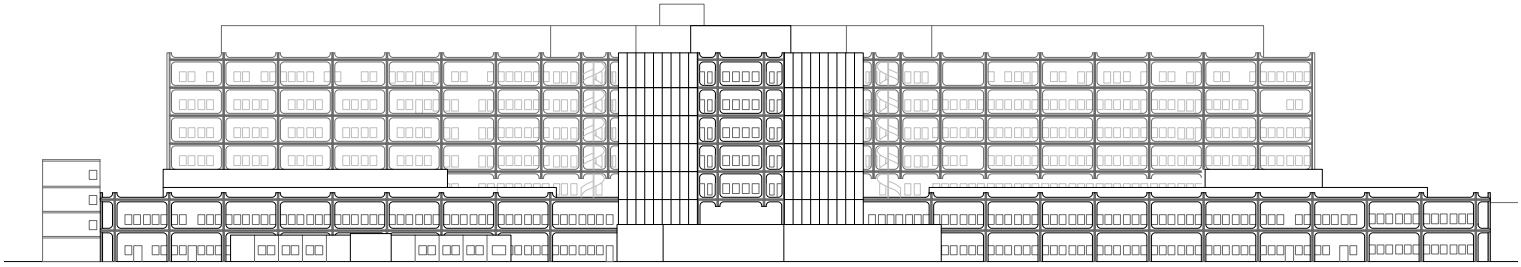
The low rise structure consists of two floors which make a large foundation for the high rise structure. The low rise structure does not have a load-bearing function and is not needed for structural purposes for the high rise structure, however much of the building's technical infrastructure is organized in or beneath it in the basement. There is also a partial culvert floor for technical installations. The high rise structure consists of seven floors in a cross-like shape with softly rounded inner corners. Each wing has a depth of approximately 30 meters, resulting in a dark core. Skeleton-like concrete elements create continuous balconies in front of the recessed non-bearing facade wall. The gables are closed except for larger windows and balconies in the mid parts.

The building is not listed (q- or k-marked), however the city's preservation program (Helsingborgs stads bevarandekommité, 2019), states that the hospital building is of high cultural heritage value.

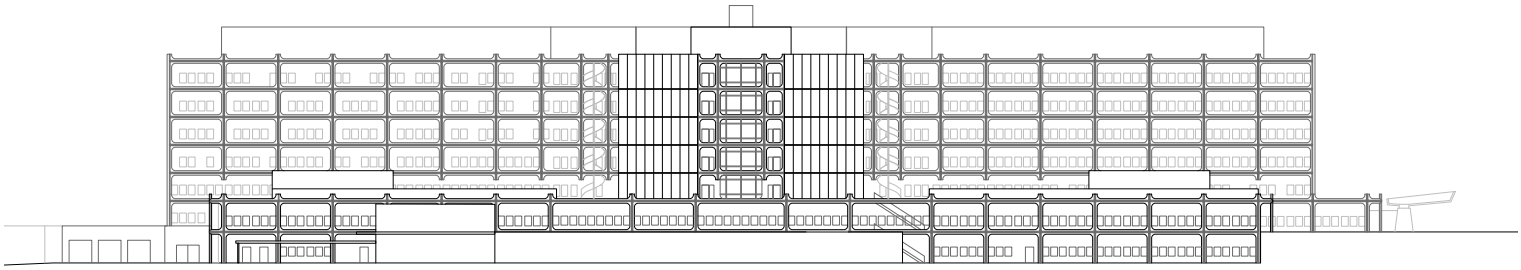
The east wing was renovated in 2017, and the north wing was renovated in 2021 (Tyréns, 2023).



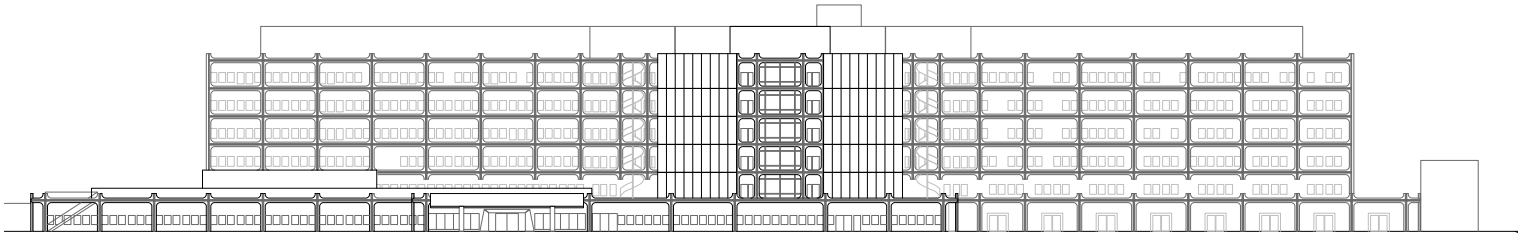
West elevation 1:1000



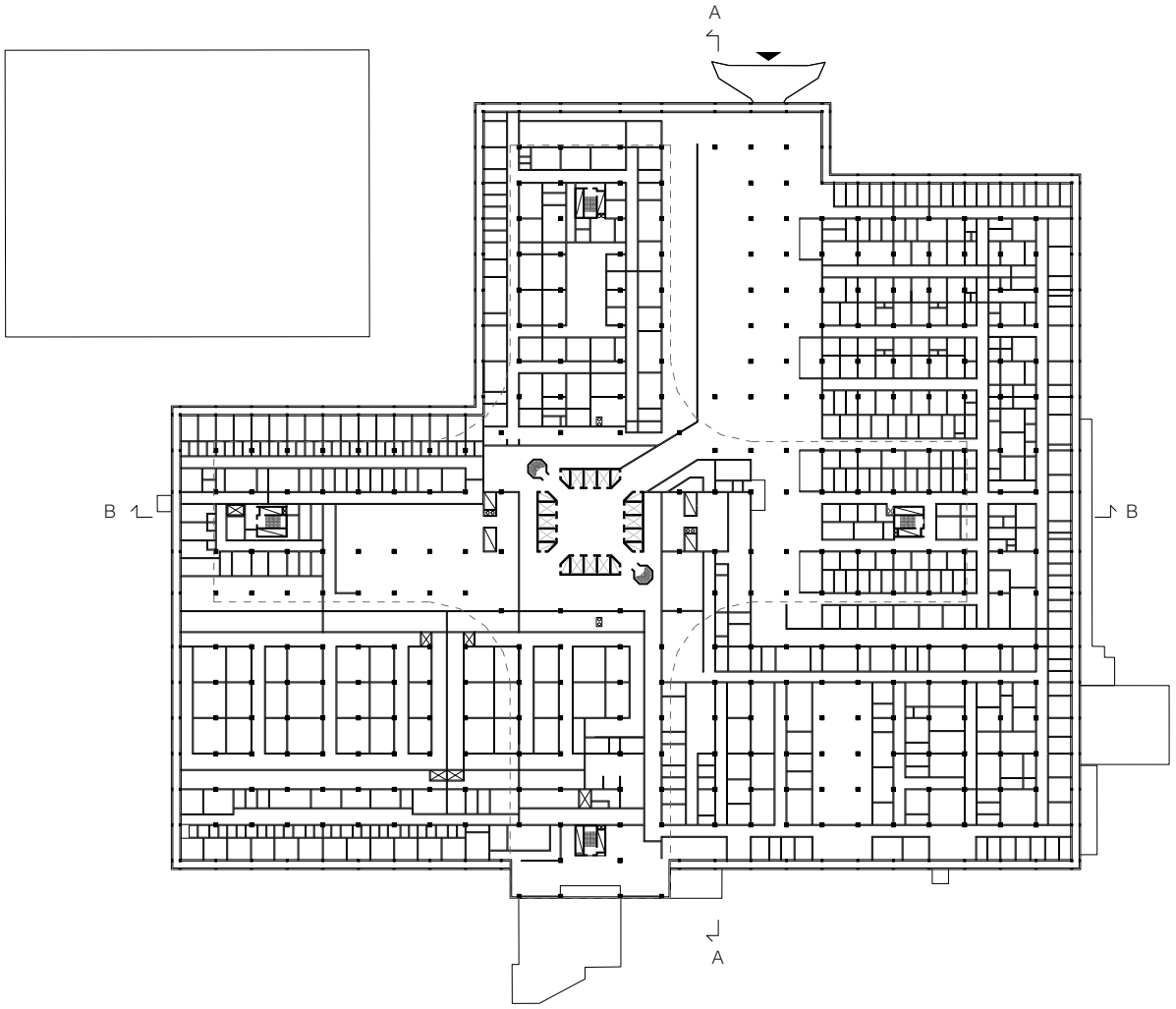
South elevation 1:1000



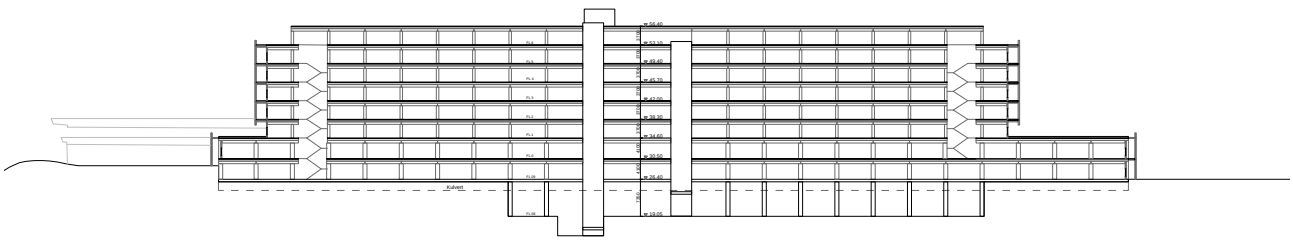
East elevation 1:1000



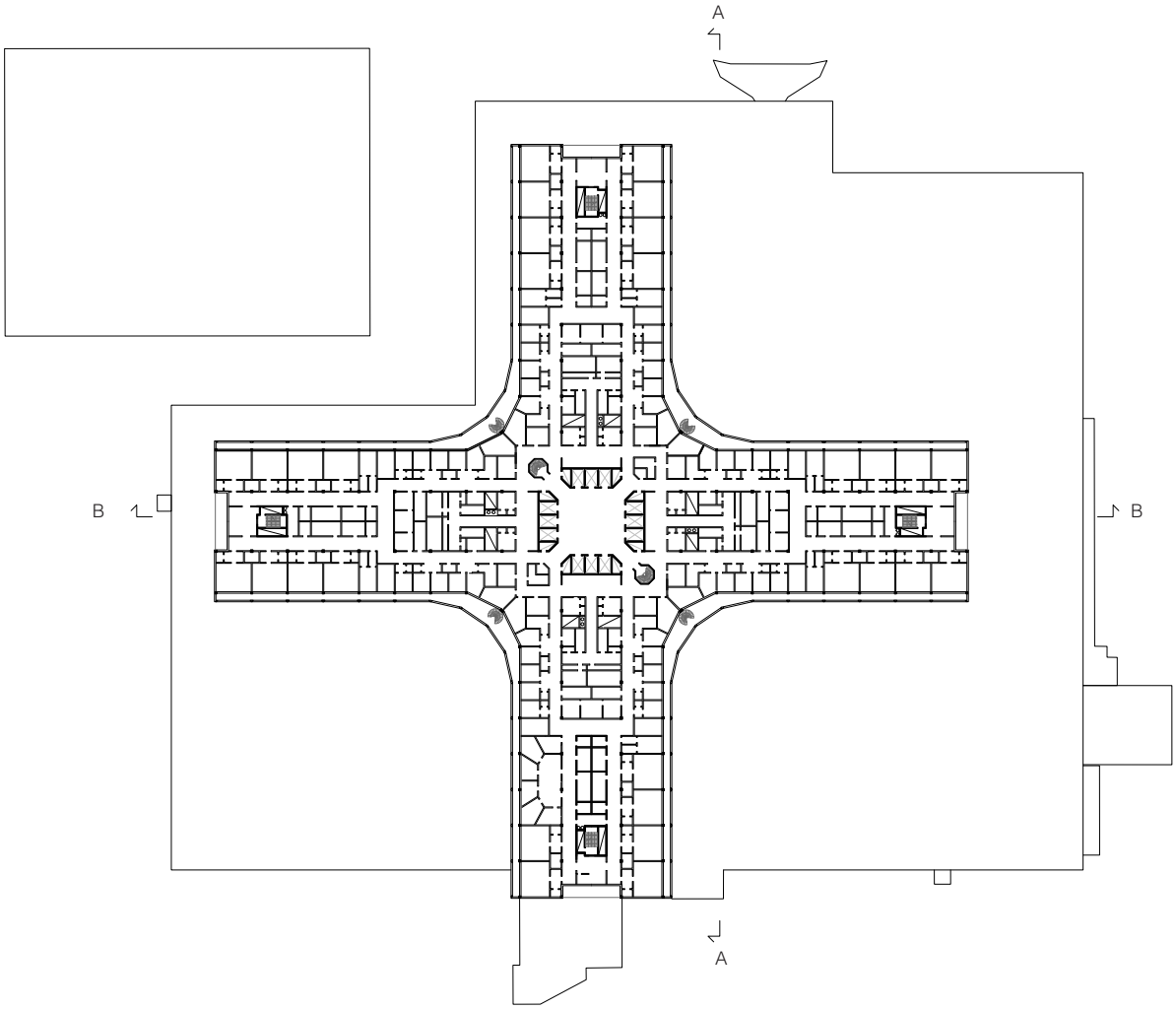
North elevation 1:1000



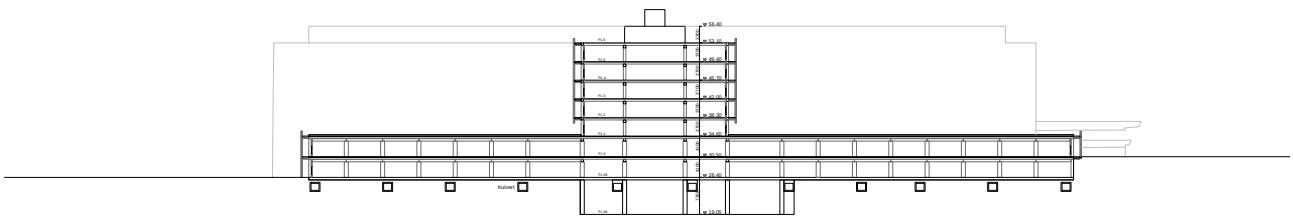
Floor 0, floor of main entrance 1:1500



Section B-B 1:1500



Floor 4, typical floor 1:1000



Section A-A 1:1500

Atmospheric Interpretation

The atmospheric interpretation focuses on three aspects of atmosphere as described by Rasmussen: scale, daylight and materiality. These can be categorized into Böhme's three atmospheric generators being geometric generators, sensorial generators and social generators. In the following section, the building is interpreted through the lens of geometric and sensorial generators as described by Böhme.

Scale

The facade wraps the hospital in a robust, concrete envelope that immediately communicates mass and permanence. It is clear that the geometric generators of scale and proportions play a big role on how the hospital is perceived. The scale can become overwhelming and you feel physically small in relation to the building, and it can feel like an obstacle to get around.

The scale of the building is unmistakable when walking inside the building. The rational organization is clear and you sense the efficiency of the premises through the cross-like structure with the four wings, the long corridors and the repetitive sequences. Structural elements such as pillars are not consistently exposed in the interior, but other structural elements become atmospherically present. For example details in the elevator hall where waffled ceiling slabs create an interesting play of shadow and artificial light, adding texture to the space. The elevator hall feels spacious with its generous ceiling height, while the corridors feel more compressed because of lower ceiling height.

The continuous balconies introduce an important atmospheric feature. The boundary between inside and outside is blurred and besides the "heavy" expression of the exterior, the facade can also offer moments of openness and relief.

Daylight

Patient rooms are rationally placed a long the facade, offering daylight and splendid views overlooking the Öresund Strait and greenery in nearby parks. The outlooks have a calming effect and as a visitor, it is clear that you are drawn towards the windows that provide visual escape. The rooms along the facade are the most pleasant spaces of the building, whereas the inner core consisting of offices and storage have a less pleasant atmosphere, most likely correlated to the limited access to daylight.

The ideas rooted in brutalism are clear. Efficiency and functionality are prioritized. The depth of the building corresponds to the functions of a hospital and access to daylight is selective. However, the windows on the gables by the end of the long corridors gives a quite pleasant experience of this selectiveness, and a feeling like you are walking towards something. Other rooms, for example offices in the core can feel claustrophobic and limiting.

Materiality

In addition to daylight, materiality as another sensorial generator has a great impact on how the building is perceived. The main material of gray concrete gives away a cold and rough expression. However, the concrete facade is also rich in sculptural detailing, particularly in the skeleton-like repetitive elements. The craftsmanship is experienced uneven, where some parts such as the brown metal sheeting appear poorly attached and weathered, and feels cheap and fragile in comparison to the robust concrete. Similarly, the meeting between ground and building lacks coherence, consisting of scattered materials and unresolved transitions and thresholds. These details weaken the sense of care and precision, however they were not the intention of the original building. When time passes, additions, extensions and remodeling result in this patchwork of layers. As Brand claims, it is a natural part of the building's lifespan.

The interior spaces are clearly shaped by the functional demands of healthcare. Materials are smooth and sterile, often linoleum or plastic for hygienic reasons. White is the dominating color, although colors and wooden details occur on some walls and floors but they remain muted tones. Compared to the hard exterior, the interior feels more soft and welcoming despite being a sterile environment.

Overall Atmospheric Interpretation

To summarize the atmosphere of the current building from the perspective of daylight, materiality and scale, these concluding keywords could be stated:

Scale: massive, repetitive, rational, brutal, impressive

Daylight: Generous in facade, absent in core, high contrast, impressive outlooks

Materiality: gray, raw, cold, harsh, heavy, weathered, unique, detailed, honest, warmer on the inside







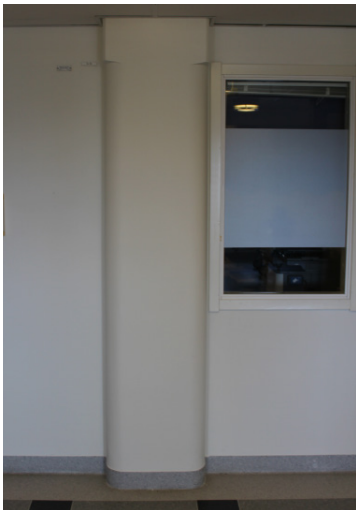


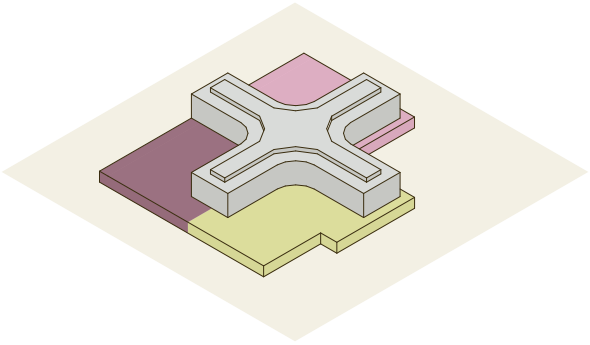
Figure 18-26. Exterior and interior. (Authors photographs, 2025).

Possible Future Scenarios

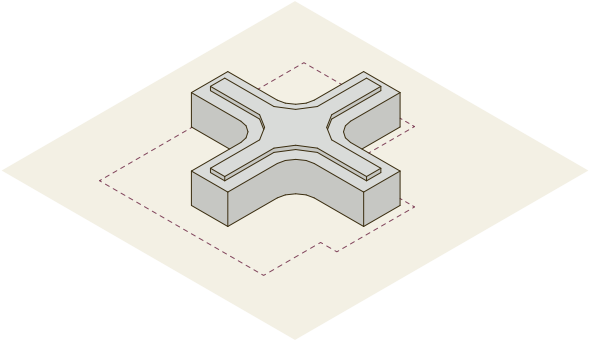
In 2024, the municipality made a preliminary investigation of the current condition and the possible future of the hospital building (Helsingborgs stad & Region Skåne, 2024). A conclusion of the building's strengths, weaknesses, opportunities and threats was carried out. Concluded strengths were the central location, the generous elevator hall, the flexible pillar-beam structure, and the technical infrastructure. Weaknesses were that it is built for specialized health care, limited access to daylight, low space efficiency, large communication zones, need for maintenance, and challenges with heating and water provision through the hospital's pipes. To add daylight with the addition of atriums and lanterns was defined as an opportunity, and a defined threat was that a more thorough economic analysis is necessary in order to be able to properly compare scenarios of transformation with scenarios of demolition with new construction. The building's versatility is quite low and specialized for healthcare. However, the building's flexibility is quite high.

For an internal workshop with representatives from Helsingborg municipal departments and companies, as well as Regionfastigheter, the municipality defined three different scenarios for the future hospital area in year 2044 (Helsingborgs stad & Region Skåne, 2024). In the first scenario, the hospital building is kept as it is today with the high rise and the low structure. In the second scenario, a partial demolition is presented where the low rise structure is removed. In the third scenario, a total demolition where the site is given a new purpose is proposed. It was concluded that the area is unique and has a great potential of growth, but how to handle the main hospital building remains a question mark for now.

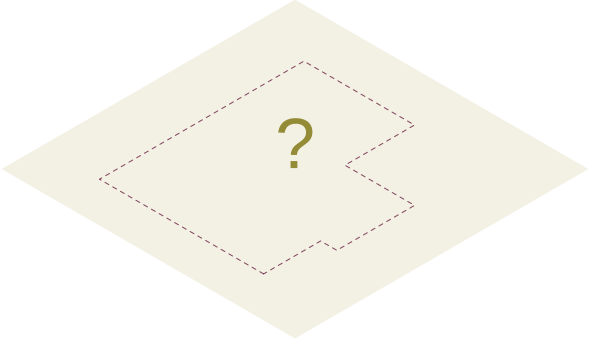
For the scenario where the main building is kept as it is, the municipality has scenarios where the high rise structure is used for educational purposes, as offices and as apartments of one to three rooms. Possible use of the low rise structure is separated in three categories: entertainment and culture, shopping and restaurants, and healthcare and wellbeing. Each scenario requires different needs and organization and the use of the low rise structure faces bigger challenges regarding the daylight situation and possible scenarios are therefore more accepting of darker conditions. Examples of activities in the low rise structure are gym, sporting hall, swimming hall, bowling and furniture store.



First scenario: Building is kept as it is. Low rise structure is divided for different premises.



Second scenario: Low rise structure is demolished.



Third scenario: Building is demolished and plot can be given other use.

Summary

Based on takeaways from the inventory, qualities and challenges of both the site and the building will be concluded here.

Qualities

- Robust structural system and flexible pillar-beam grid provide opportunity and allow interventions to be made
- Generous floor to floor height of 3.7 meters create opportunities for residential quality in terms of spacious dwellings
- Continuous balconies provide potential for outdoor spaces for all apartment units
- Strong and unique architectural identity
- Central location with good access to public transport, services, and surrounding neighborhoods
- Beautiful outlooks and proximity to the ocean and green areas

Challenges

- Large and deep structure creates an extensive dark core with limited access to daylight
- Monumental scale can feel overwhelming and difficult to relate to at a human level. The logic of the hospital prioritizes efficiency. Long and repetitive corridors reinforce the institutional expression and lacks variation and intimacy
- Uniform material palette, dominated by raw concrete, contributes to a cold and harsh exterior expression
- Later additions and extensions weaken the coherence of the original structure and causes a fragmented relationship to the site
- Absence of green areas in direct connection to the building

With these qualities and challenges in mind, the design phase will commence with the main focus on atmospheric parameters of scale, daylight and materiality.

Concept

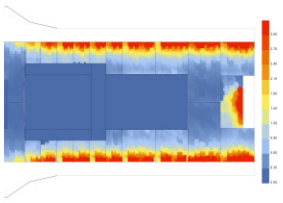
Design Process

The design process can be divided into two main parts that have partly been running in parallel throughout the thesis. One part concerns how the building should be functionally transformed to accommodate housing, and how to solve practical issues with the conditions of the building and the site. The other part concerns how the design can resonate with atmospheric aspects, which are central in this work.

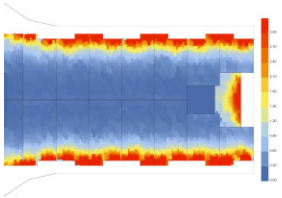
The Issue of Daylight

The project commenced with the most evident challenge of managing daylight access to apartments due to the building's depth, which is not particularly suitable for residential use. The wings have a depth of about 30 meters, compared to 12 meters that is typical for residential buildings.

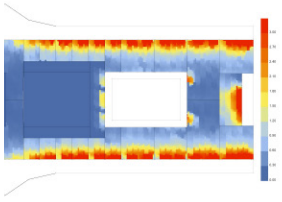
To investigate possibly solutions to the challenge of daylight, basic daylight analyses were carried out using Grasshopper and Ladybug (examples shown to the right). The analyses showed that introducing daylight through some form of atrium would be necessary to achieve pleasant apartments. This in turn led to the challenge of balancing how many square meters of the building could be removed against how many residential square meters the intervention would generate.



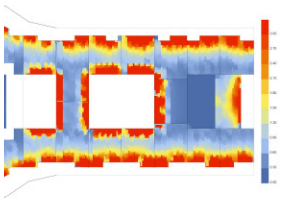
Analysis 1. Wing without any alterations. Dark core used for storage and auxiliary spaces.



Analysis 2. Wing with deep apartments with entrance from outer facade. Facade with partial recesses.



Analysis 3. Wing with a central atrium.



Analysis 4. Wing with two atriums and a partially recessed façade.

Building Flow

With the decision to introduce daylight through atrium cut outs, apartment layouts and a plan for internal circulation on the typical floor plan were developed. The movement flow was based on the idea that the existing elevator hall should continue to function as the building's communication hub. This was intended in order to preserve the function of this unique space, with its 12 elevators, while also making use of the existing elevator shafts. New elevator shafts and stairwells further out in the wings were investigated, but were considered too major an intervention in relation to the large number of stairwells and elevators already present in the building.

Horizontal circulation is required to reach the outer ends of the wings from the elevators. These circulation paths were placed along the atriums in order to create bright passageways instead of the dark corridors that exist in the building today. The corridors leading from the elevator hall were also designed to provide views out from the building. When moving along the atrium, one also has views through the building's gable ends, much like in the current corridors. At the gable ends of the wings, a shared common area is placed adjacent to the large balconies.

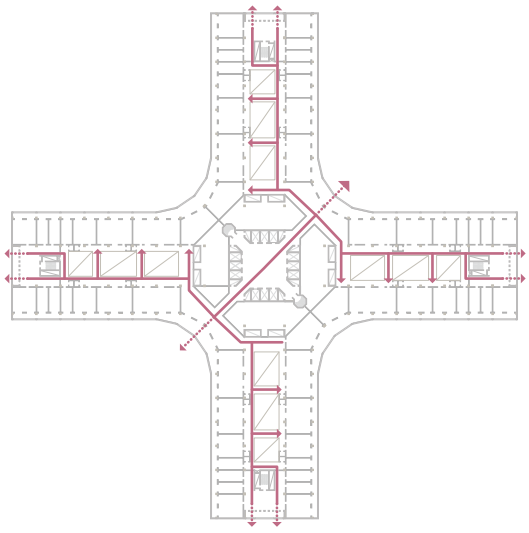


Diagram showing the circulation movement on a typical floor.

Figure 22. Balcony walkway. (Author's photograph, 2025).

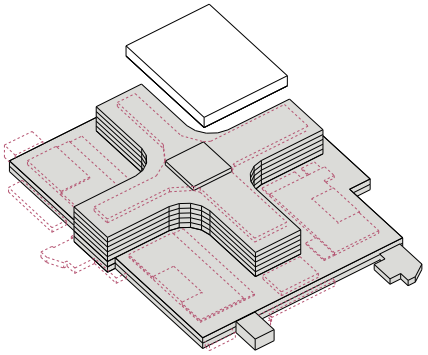
Main Interventions

While it in the beginning was a delimitation to not work with the low rise structure, it was proved to be necessary to address it more to understand how a transformation would work as a whole. The structural interventions are connected both to the function of the building, as well as the atmospheric experience.

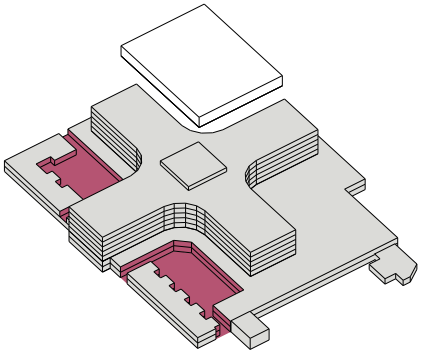
Arbitrary additions and extensions will be removed to reduce the scattered expression on the site that was identified in the inventory phase.

Through partial removal of the low rise structure, two residential courtyards will be created and new entrances with more direct connection to the main elevator core will work as a geometric generator to reduce the large scale and promote easier access to the building.

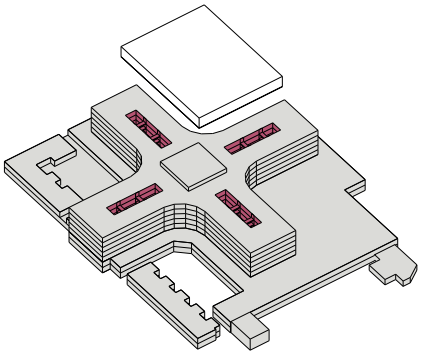
In each wing, based on the takeaways from the initiating daylight analyses, an elongated atrium is created through floors 2–5, with two intersecting bridges to maintain the structural stability of the building.



Removal of arbitrary and later extensions.



Partial demolition and addition of residential courtyards.



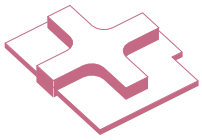
Addition of atriums to the four wings.

Atmospheric Design Strategies

The project addresses atmosphere across multiple levels, from site to building to apartment unit. The design as been developed by thinking in sequences, where the facade, the entrance situation, the atriums and the dwelling have been the main focus areas.

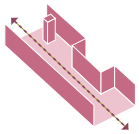
Based on the theories of atmosphere and residential quality presented earlier in this work, together with the conclusions from the inventory phase, the following design strategies have been developed to guide the work regarding atmosphere in the building and of its surroundings.

Scale



Keep current volume

Preserve the outlines of the existing volume

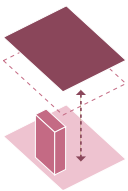


Variation in corridor

Divide long corridors into shorter and varied sequences

Break patterns

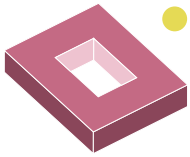
Divide horizontal lines with the use of vertical elements



Spatial variation

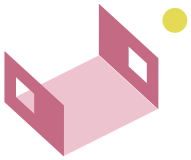
Use different ceiling heights and halfwalls and pillars for spatial variation

Daylight



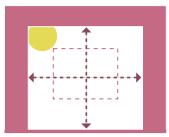
Daylight to core

Introduce daylight to core through the addition of atriums



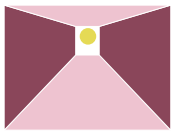
Two-sided apartments

Daylight from multiple directions



Open up facade

Increase openings to introduce more daylight and have more outlooks



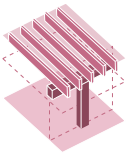
Guiding light

Use daylight to guide orientation and movement

Materiality

Preserve exterior

Let the robust building show its unique material traits by keeping the skeleton facade

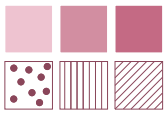


Highlight interior structure

Expose concrete slabs, beams and pillars

Green presence

Add greenery to courtyards, roof tops, balconies and the atrium to be visible from the dwellings



Color and texture

Use color and texture to enrich and create variation

Facade

The skeleton-like facade is a strong feature of the building's identity and gives the building its unique expression. This expression of the exterior will be kept, but merged with additional geometrical and sensorial generators. To create variation while having the contours of the volume remain, the facade behind the skeleton frame will in the low rise structure have a green wood panel, while the high rise structure will have a natural wood panel with railing in a green tone. Wood is chosen for its textural and warm features that resonate with the natural stone-like texture of concrete. The wood is combined with green accents, and the panel has an alternating direction for subtle variation. To create a more inviting expression, more glazing is added and a row house typology on the south and west side of the building will activate the facade through the use of the dwellers. The relationship between building and ground will be more pleasant and welcoming while the unique expression of the existing building remains.

Entrance

The residential courtyards that are each on different levels will create spatial variation where you can reach the building on different levels while passing through a green courtyard. Brutalist features of the existing building will be exposed such as for example the robust pillars that will add to a rhythm and create spatial variation.

Atrium

The atriums are used as a sensorial generator to bring daylight to the dark core, and the placement of the cut outs are slightly shifted between floors to create variation and break up the scale. Daylight from the facade is used for spatial experience and guidance. A sight line across the elevator hall gives diffuse daylight to the core and make for an experience where you walk from the dark core out towards the facade and into the wing with light coming from above. The sight line toward the gable end is kept to preserve the feeling of you walking toward something.

The atriums are part of a communication zone, and scale is addressed by using geometric generators to break up the repetitive corridors and reduce the institutional character. Storage units are placed next to the apartment entrances as dividing elements in the access balcony walkway to create varied sequences and a level of privateness for the apartments. The storage units placement on top of each other also creates vertical elements that rise in the atrium.

Previously hidden brutalist features such as the concrete ribbed floor slabs will be exposed by removing installations ceilings in order to showcase the robustness of the structure and take advantage of the floor to beam height. The concrete pillars are also exposed and will create a rhythm in the balcony walkway working as visually dividing elements. The material palette aims to resonate with the natural stone like feeling of the concrete, but adding color that enriches the experience. As well as in the facade, wood is introduced to add more of the tactile natural texture, as well as to give warmth to the interior. Greenery is allowed to grow wildly and climb along the railing.

Dwelling

On the apartment level, scale is addressed mainly through working with geometric generators of volume and spaciousness. The existing grid system is used to divide the units. The generous floor to beam height is taken in advantage by removing installation ceilings and increasing spaciousness. Some walls are left not touching the ceiling to become free standing elements to amplify the spacious ceiling height as well as creating spatial variation. Leaving some space between the ceiling and wall will also create a diffused lighting situation for the hallway. To be able to circulate is highlighted as a residential quality and will be provided in most units.

Daylight in the apartments is addressed by enabling daylight from multiple directions, with light from the atrium but mainly from the outer facade that will have more generous glazing. A sight line from the entrance toward the outer facade allows for visual connection to the outside when you enter the apartment. Some zones like for example the hallway are allowed to have less daylight to create an experience of walking from a more compressed and dimmed space, into a larger and more airy space that is flooded with light.

The robustness of the concrete is enhanced as a quality also in the apartments. The concrete will be present in the ceiling in some rooms and on the balcony. A mix of textures of coarse and fine, shiny and matte, hard and soft will be used to stage an atmosphere of variation and contrast.

Design

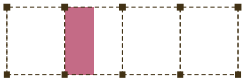
Program

The high-rise structure consists of housing with studios, 2-room apartments, 3-room apartments and 4-5-room apartments. The division of apartments follows the existing grid of cc 7.2 meters. The largest apartments spread over two grid squares, meanwhile the smaller apartments are 1.5 and 1 grid square. With the layout of two 4- to 5-room apartments, three 3-room apartments, two 4-room apartments, 6 studio apartments, two 3-room apartments and four 4-room apartments one wing can consist of 15 apartments, resulting in 60 apartments per floor.

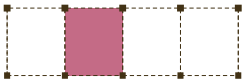
The partial demolition of the low rise structure provides two residential courtyards that enable row houses on the south and western sides of the building. Toward the east and north is a more public side, where a gym and wellness center resides and spaces are available for premises, for example a grocery store or other retail businesses. Furthermore, the low rise structure provides necessary functions for the residents which includes parking garage, bicycle parking, storage units, recycling rooms, package delivery room, and common areas such as for example workshops, atelier, co-working space and rentable guest apartments and event space. In connection to the elevator core on every floor there are shared spaces that for example could be co-working space, workshop, or a rentable guest apartment. Services such as laundry and storage is also provided in the core. The top floor has a shared roof top garden.

Key figures

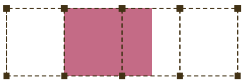
Gross floor area:	108 707 sqm
Floor area removed:	9640 sqm
Residential floor area:	20 700 sqm
Non residential floor area:	15 000 sqm
Apartments:	320
Row houses:	20



Studio apartment
26 sqm

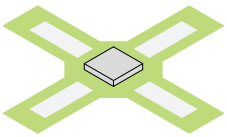


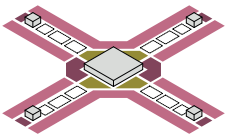
2 room apartment
52 sqm

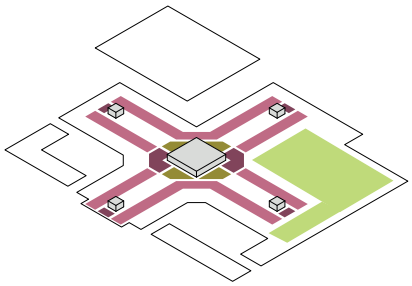


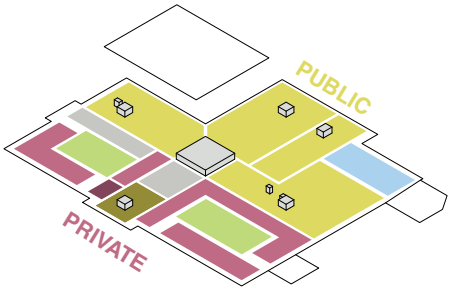
3 room apartment
79 sqm

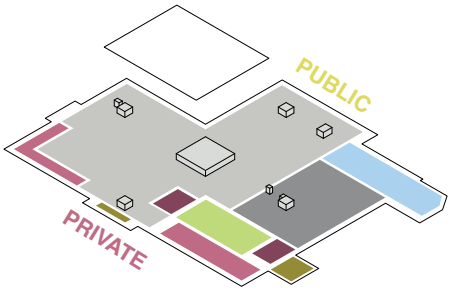
4-5 room apartment
105 sqm







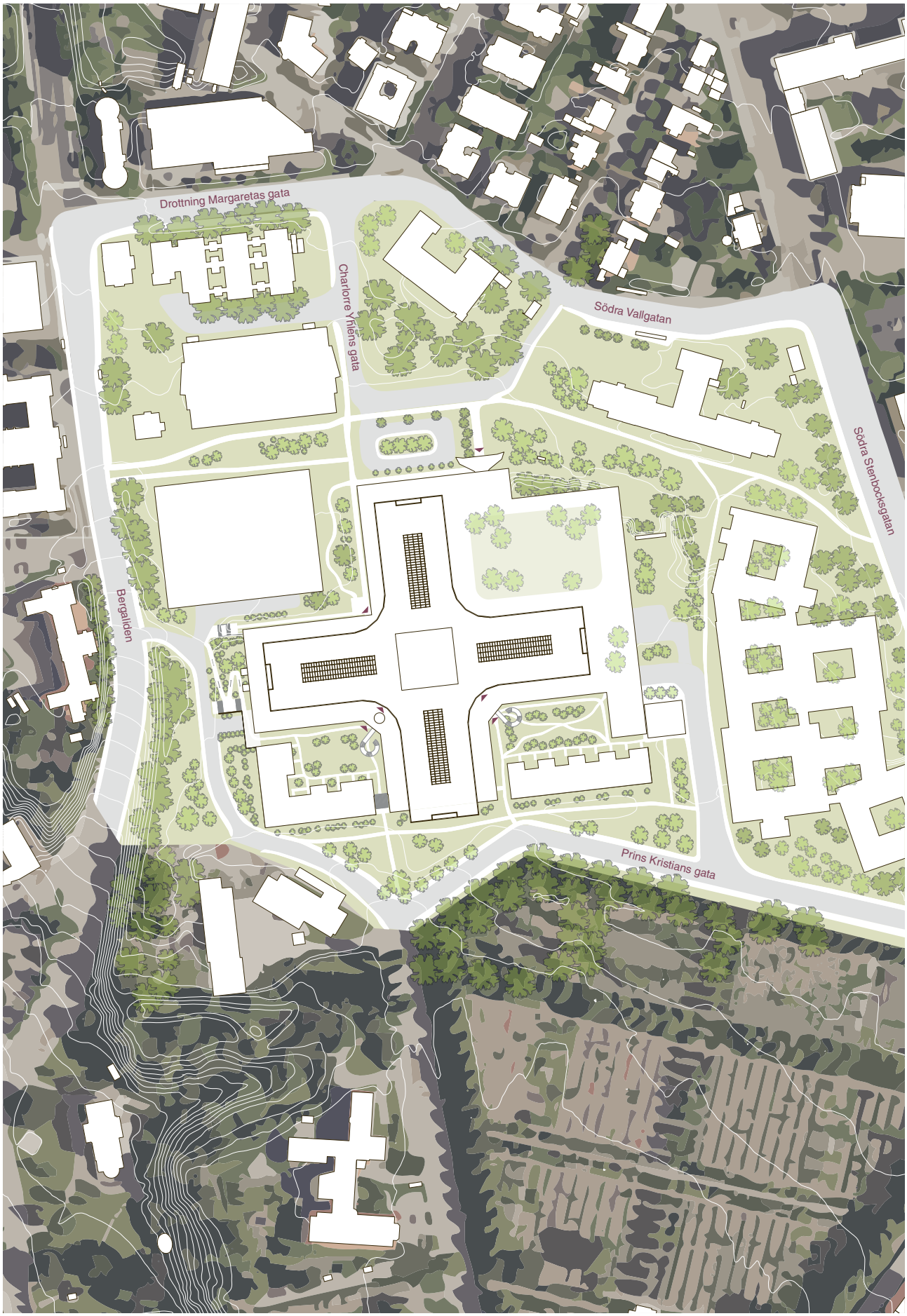




Housing
Shared spaces
Residential courtyard
Services for dwellers e.g. storage, laundry, recycling
Available for premises
Gym/wellness
Parking
Delivery/logistics

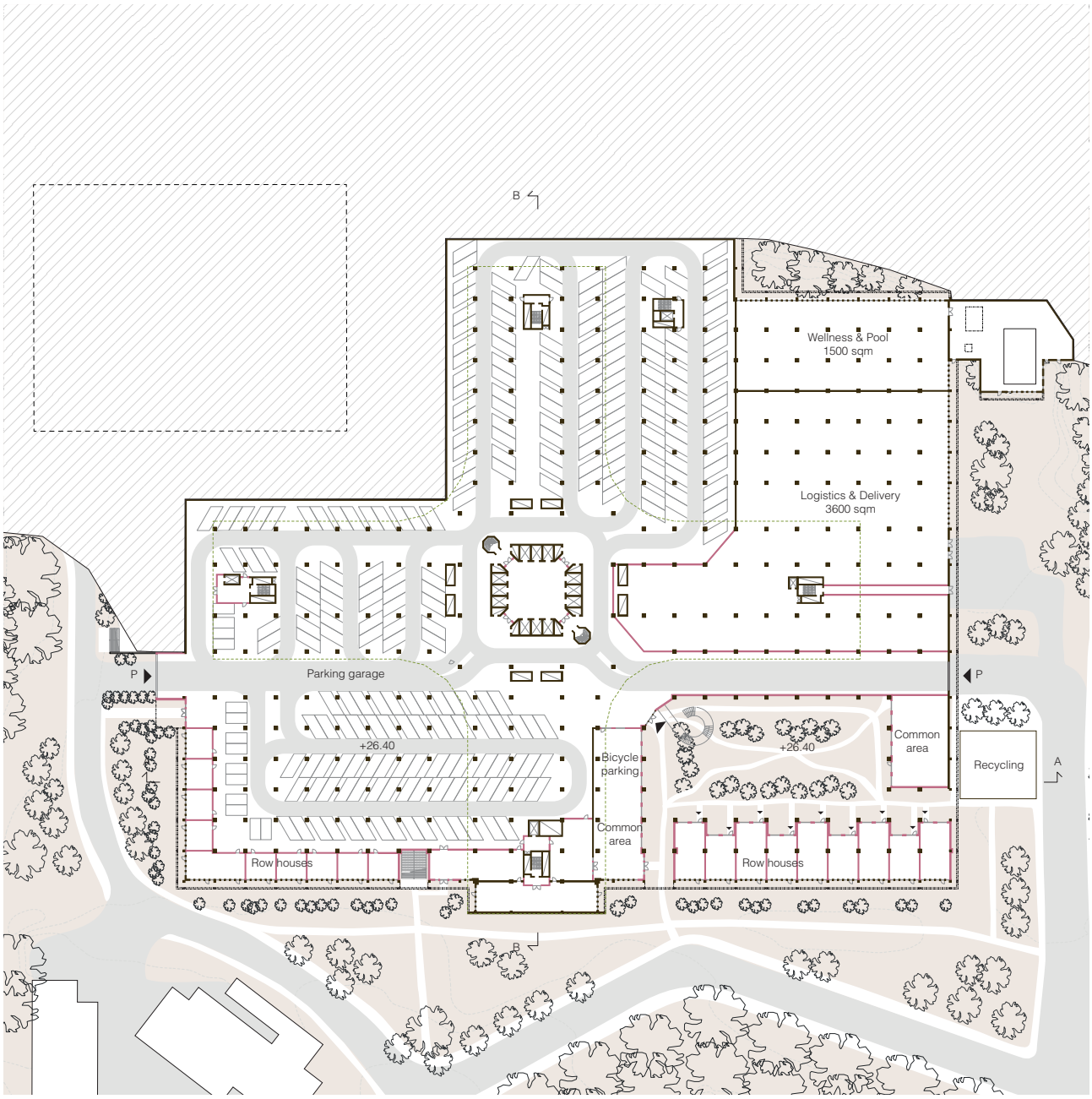
Proposal

Visualization of gable end facing west. The addition of a ramp-like park leading up to one of the added residential courtyards adds greenery to the site and creates a pleasant entrance experience.



Site plan

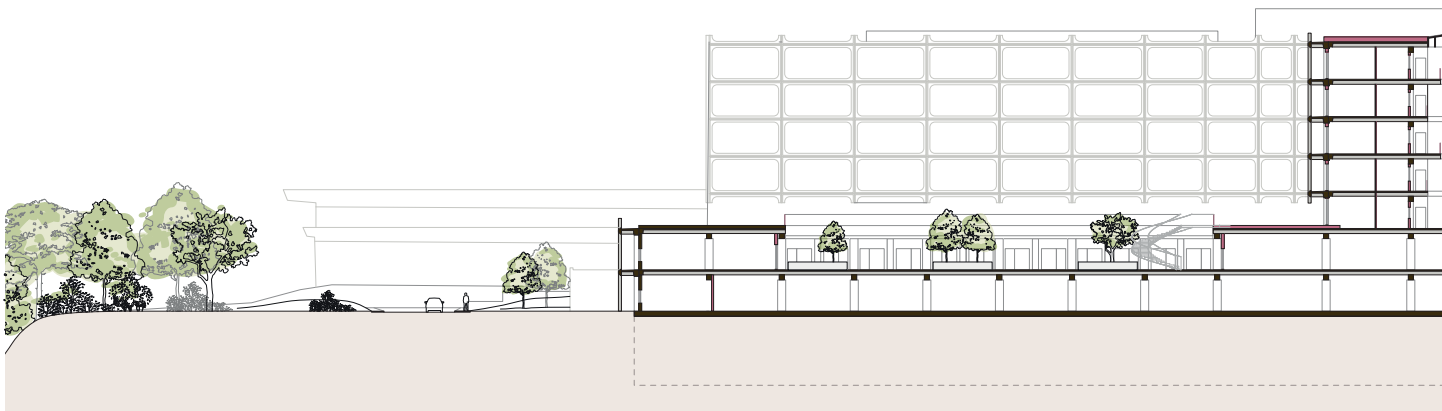
1:2500



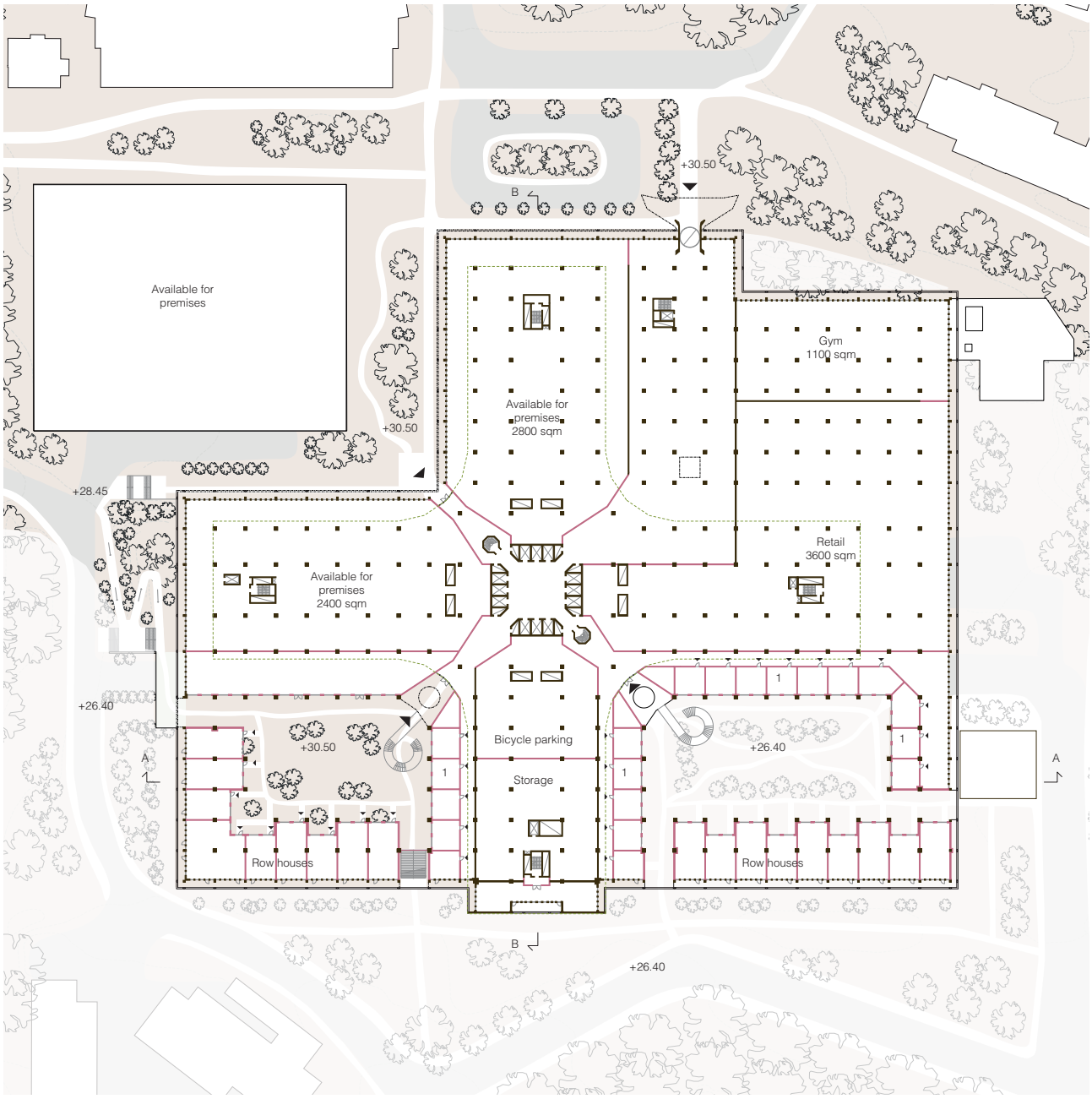
Floor 09

1:1500

Existing
New



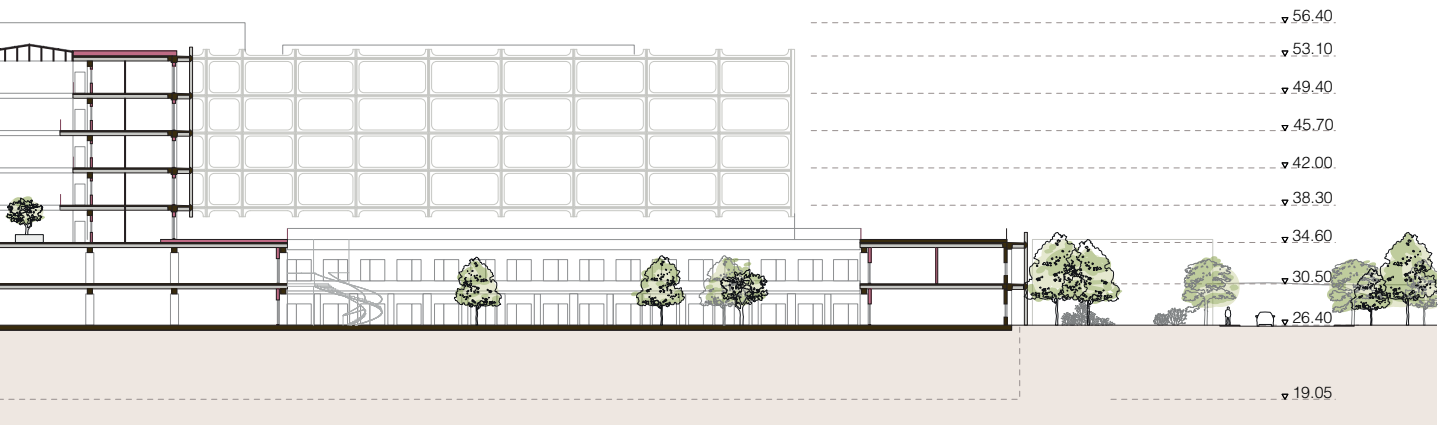
Section A-A



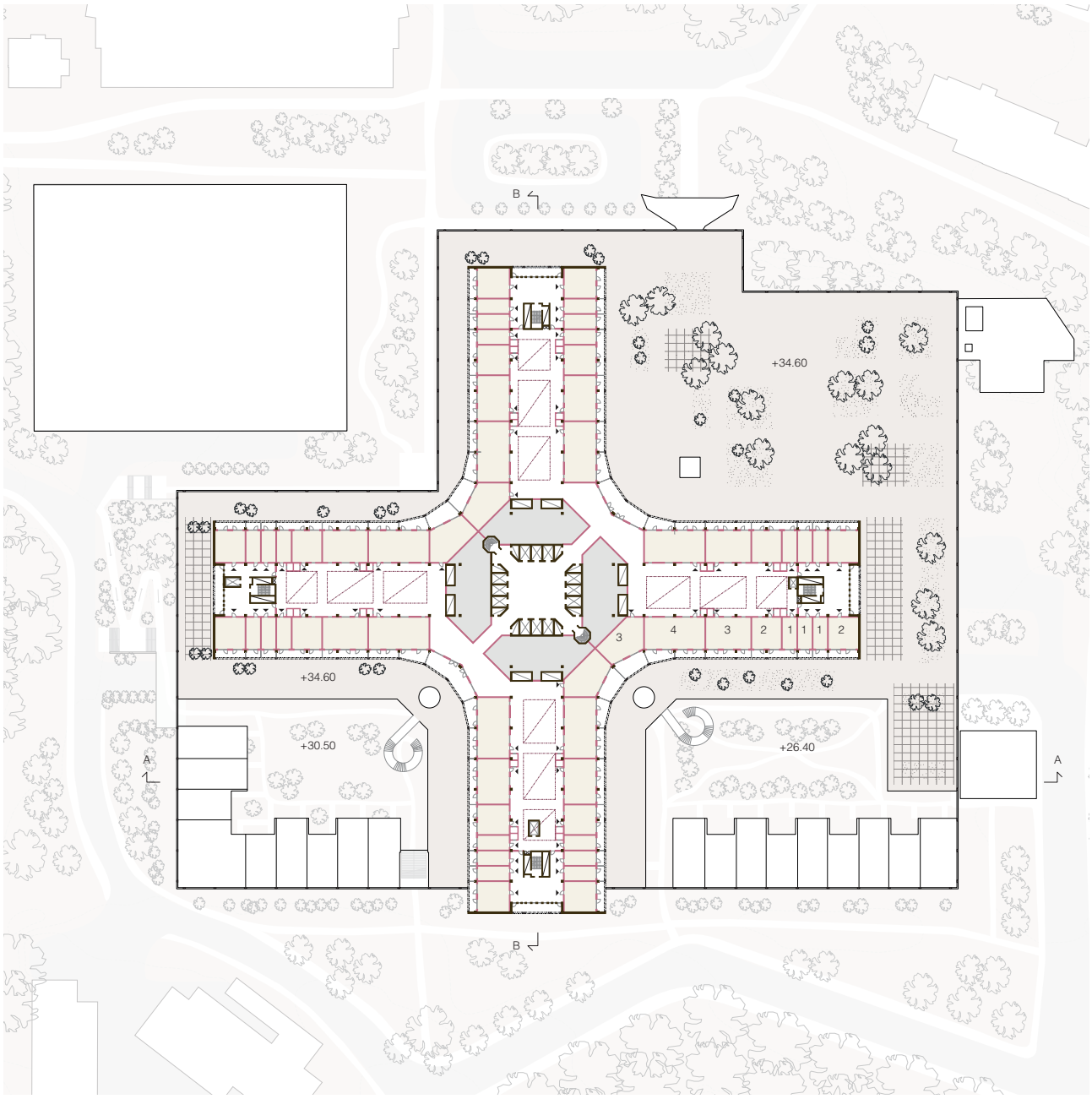
Floor 0

1:1500

1 Studio apartment



1:750



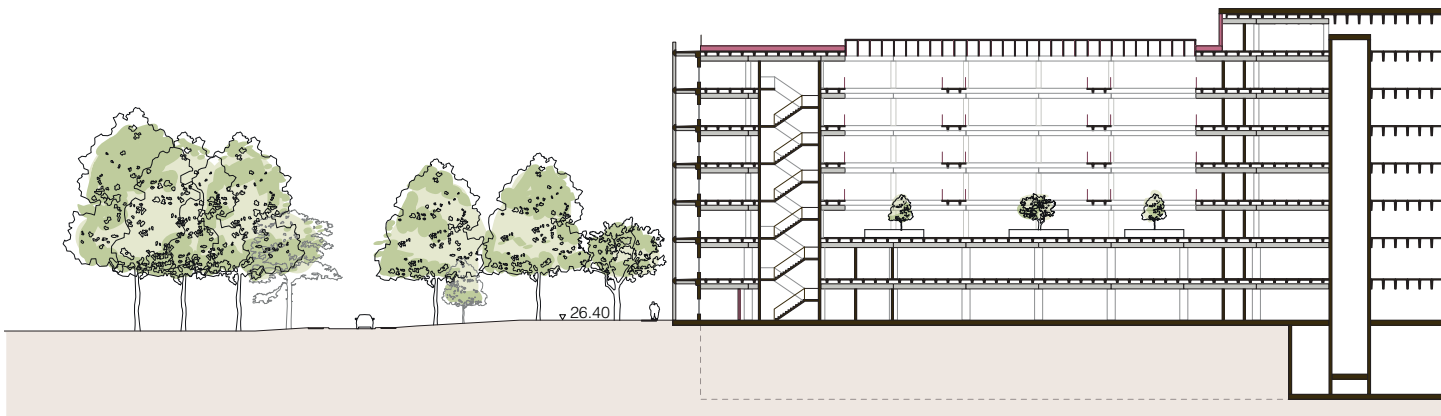
Floor 1

1:1500

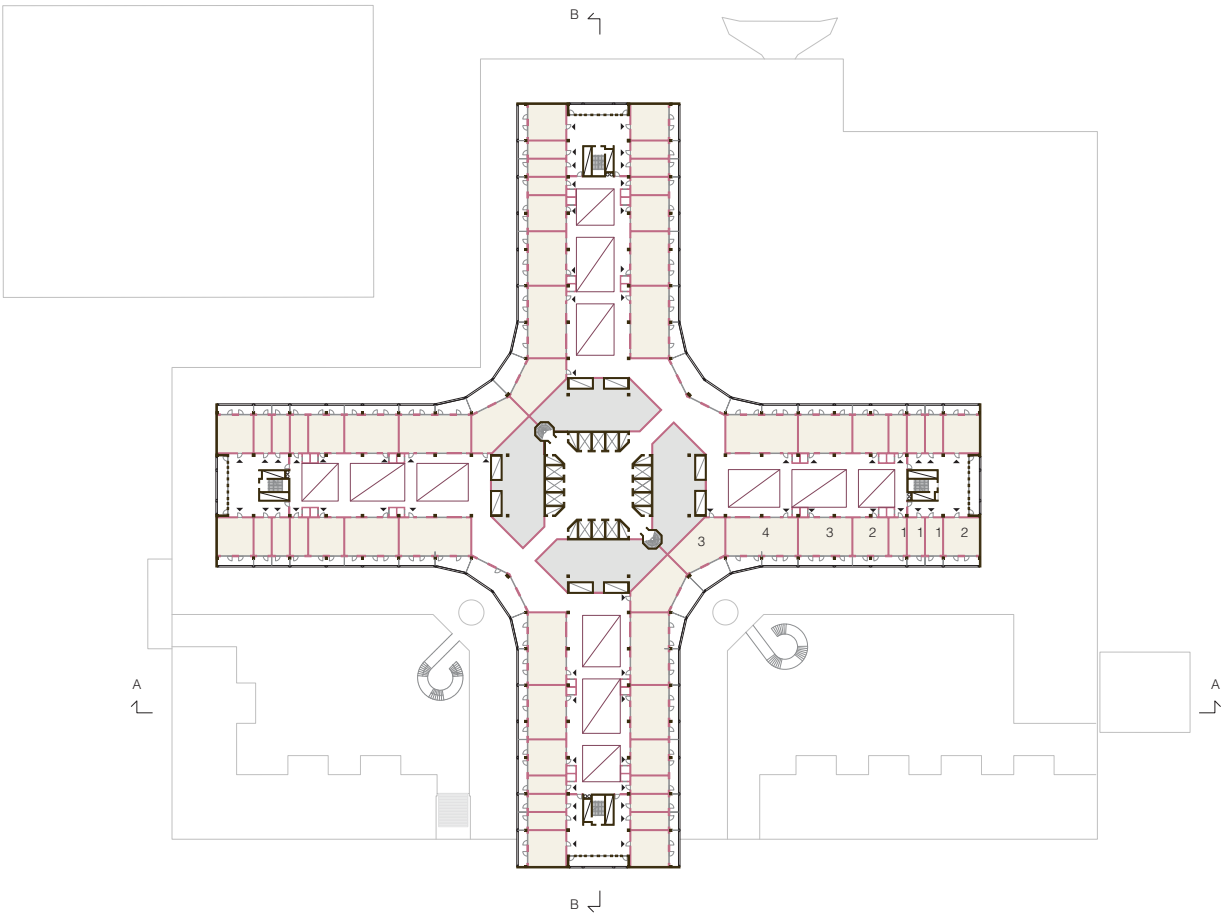
Existing
New

Apartment unit
Shared spaces

1 Studio apartment
2 2 room apartment
3 3 room apartment
4 4 room apartment

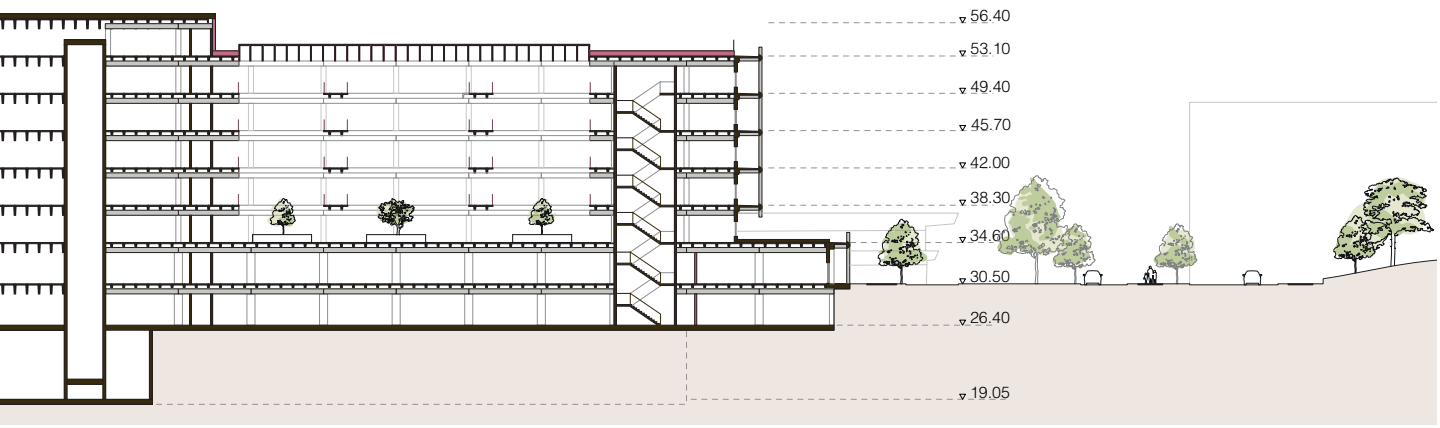


Section B-B



Floor 4, typical floor

1:1500



1:750

Visualization of added residential courtyard facing south west. Greenery and introduction of wood complements and softens the existing building's expression without diminishing it.

Visualization of atrium. The atriums bring daylight to the dark core and contribute to residential quality and make for an atmospheric sequence when moving through the building. Storage units cladded in wood divide the communication zone into sequences and provide a more private zone for the dwellers.

Typical floor

A typical floor contains apartments of different sizes, spreading from studios to larger apartments. The elevator hub is preserved both as a unique space and to make use of the existing infrastructure. An added sight line through the elevator core adds daylight for orientation and leads you into each wing with the atrium room. It goes from a darker and compressed space, into a lighter and more airy space.

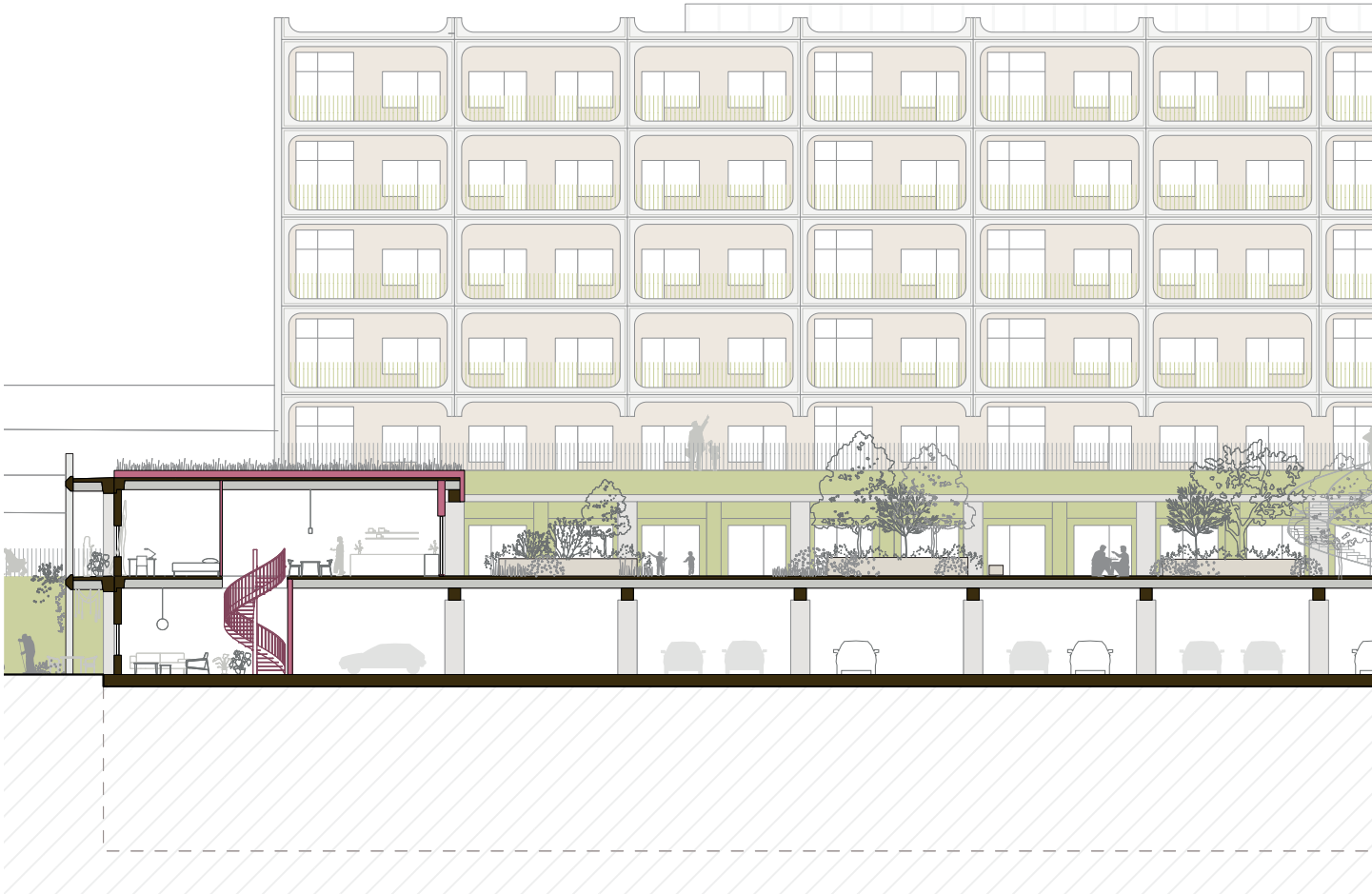
The atrium cuts shift between floors to create variation, and the storage units in connection to the apartment both become vertical elements to break the horizontal pattern of the slabs, and divide the corridor into sequences and more private zones for the dwellers. The existing sight line out toward the gable is kept and on each gable end there is a shared common area.

Features of the existing structure are exposed, such as slabs and columns, adding variation and rhythm to the space.

When you enter the apartment, you can see out toward the facade and the splendid views. The hallway is allowed to be compressed and darker in order to create a contrasting experience when walking into the spacious living area with a large window facing the continuous balcony. The brutalist structure is present by removing the installation ceilings and exposing the ribbed concrete slabs in some rooms. Bedrooms are located toward the outer facade, with the living area as a dividing mid part with visual connection between outer facade and the atrium.

Part of typical floor 1:300

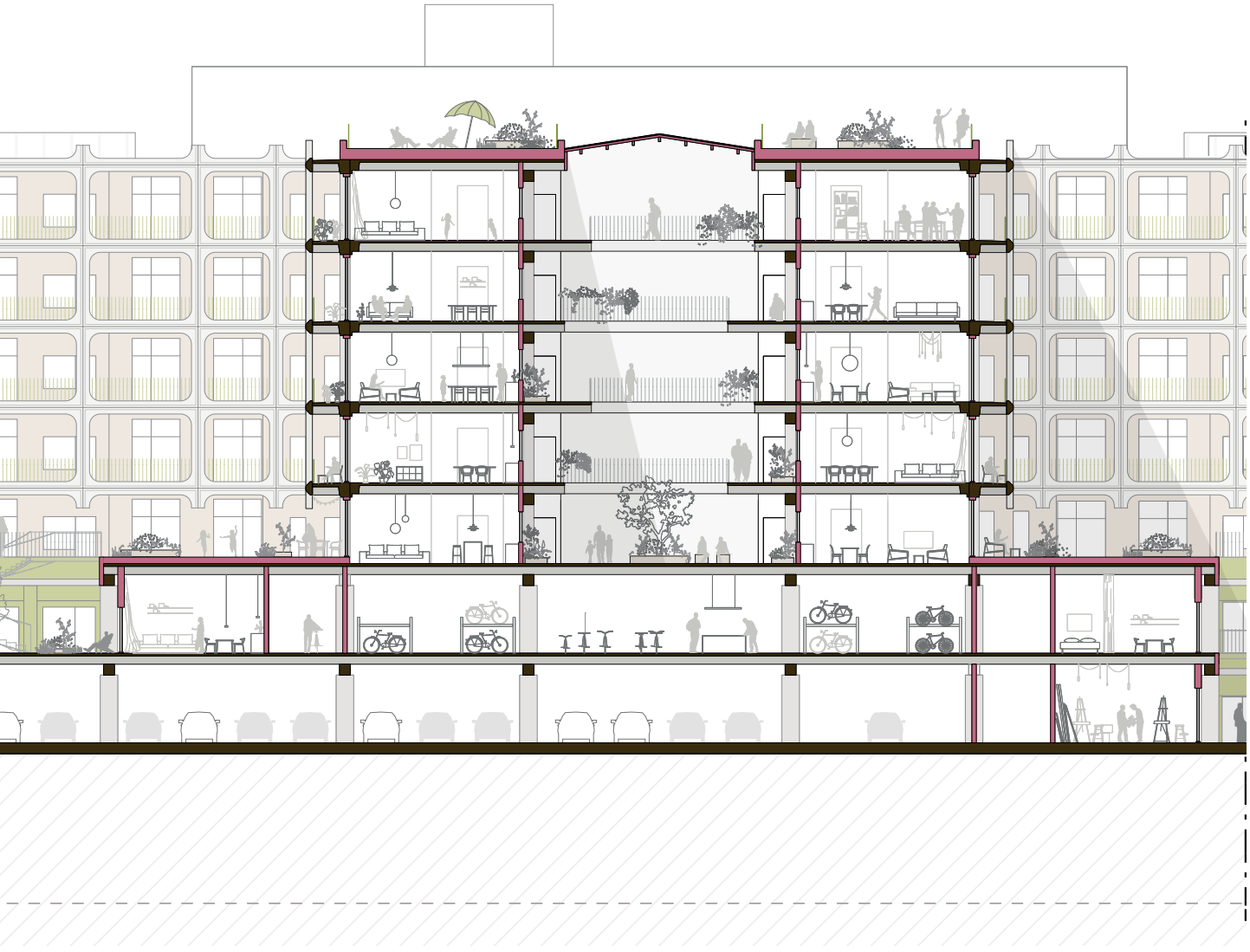
■ Existing
■ New



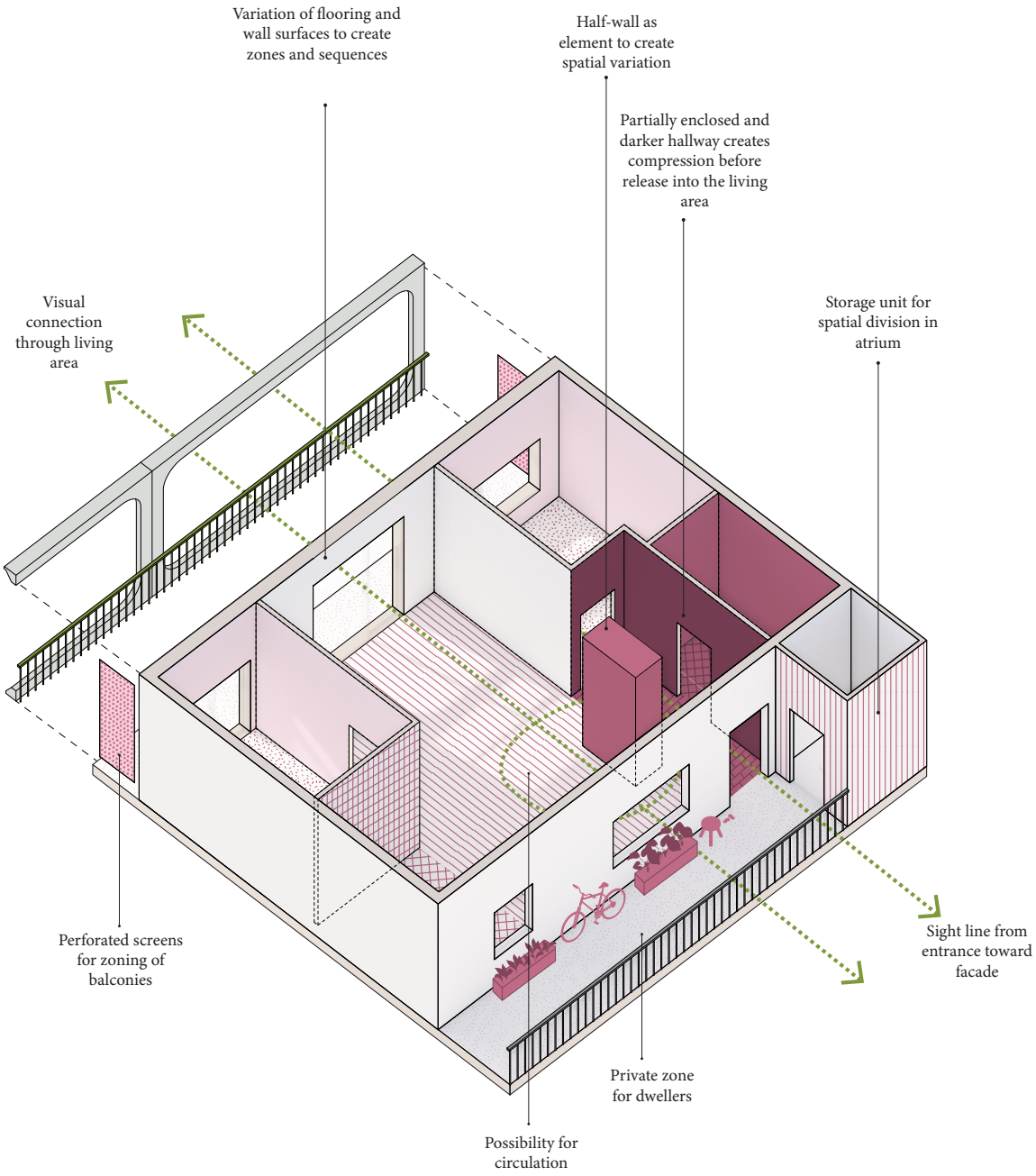
Section C-C

Existing

New

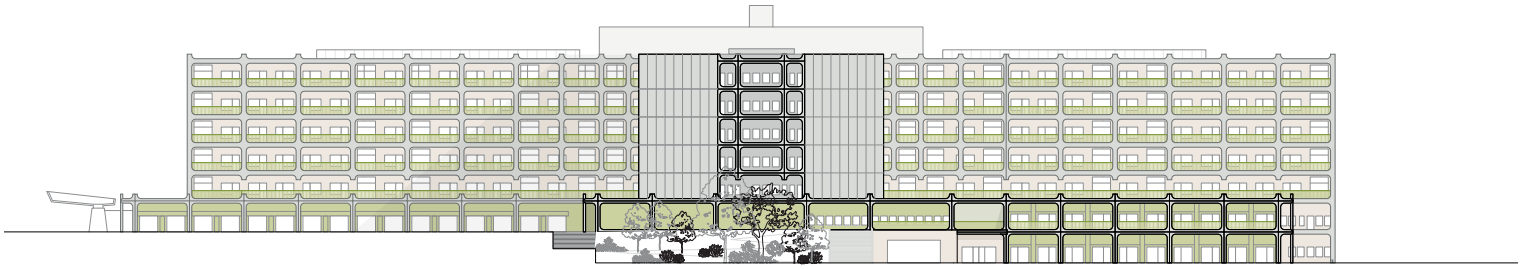


1:300



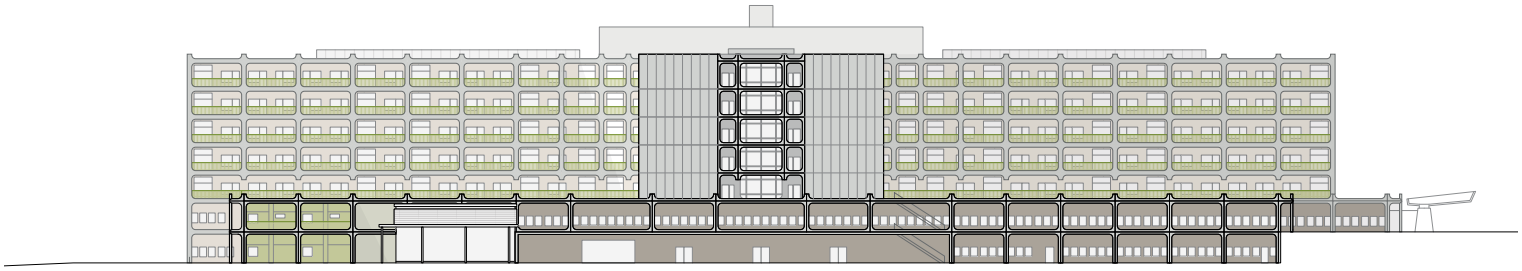
Axonometry explaining the atmospheric interventions on apartment level.

Visualization of living room with view overlooking the Öresund Strait. Removed installation ceiling and increased facade openings make for a spacious and bright room. The concrete in the ceiling is complemented by warm wood and neutral tones.



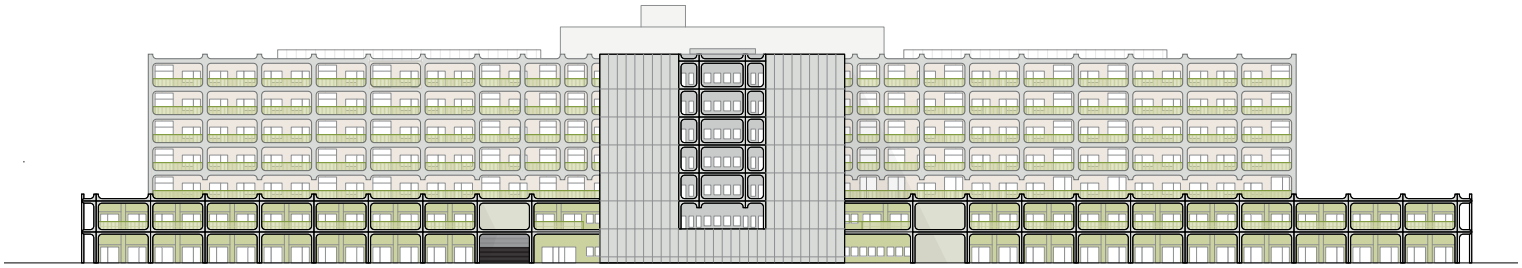
West elevation

1:1000

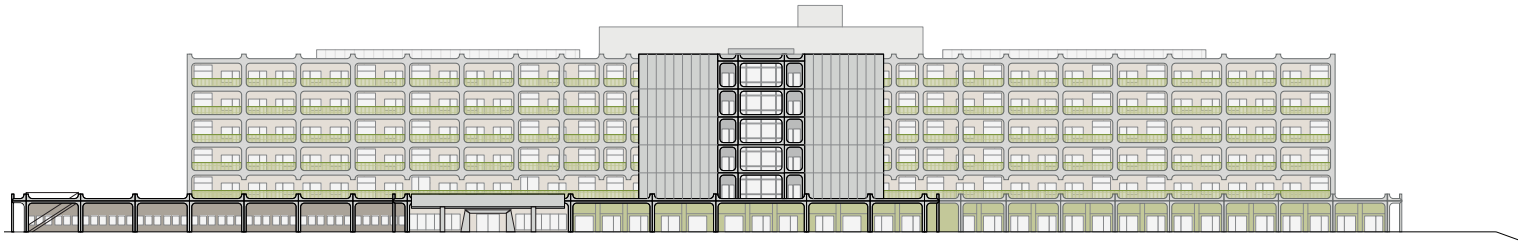


East elevation

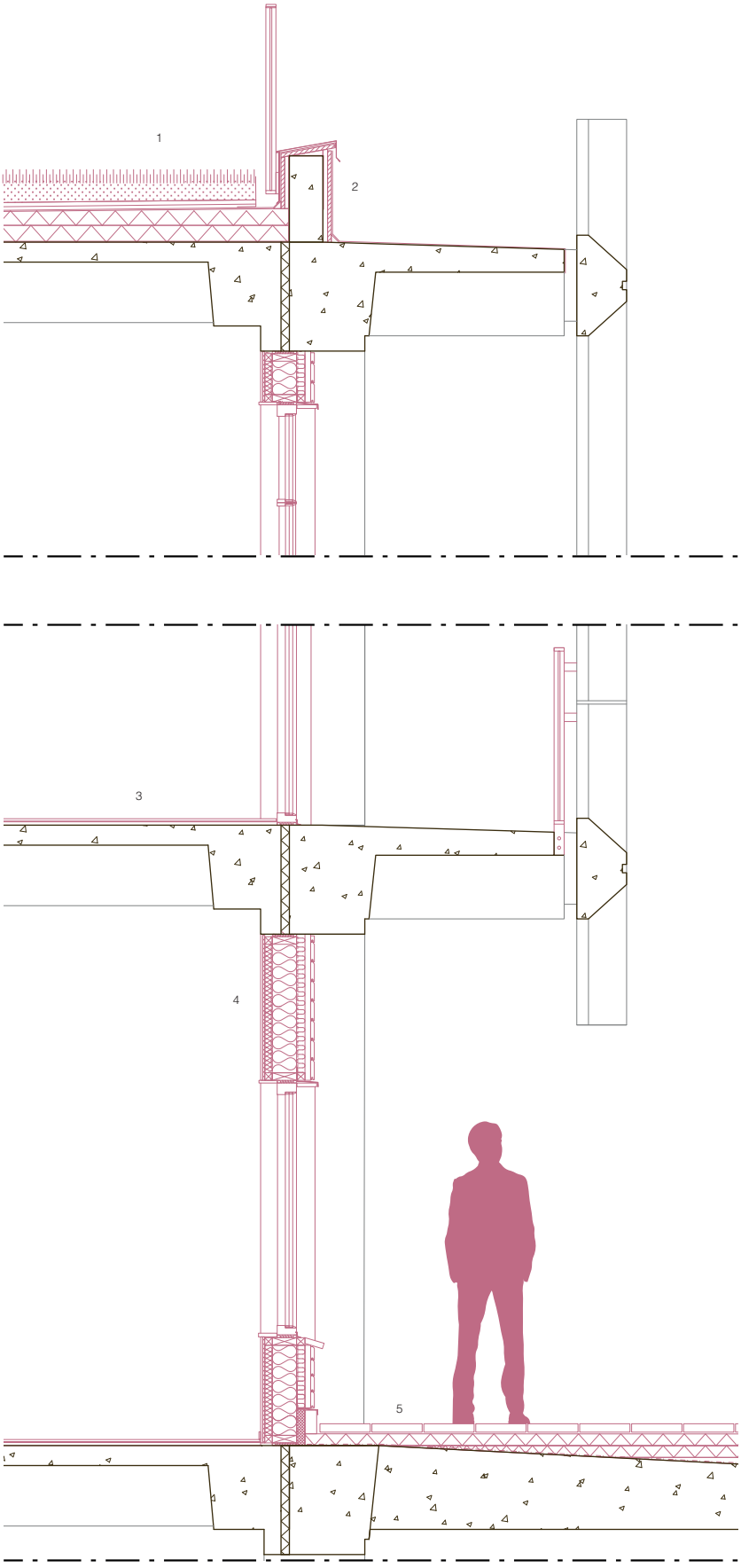
1:1000



South elevation 1:1000



North elevation 1:1000



1 Roof construction: 30 Sedum mat, 120 substrate layer, 25 drainage layer protection, 30 filter fleece sealant, 200 XPS thermal insulation, vapor barrier, existing concrete slab

2 Parapet wall: Sheet metal, water repelling paper, 22 plywood, air gap, existing concrete wall, air gap, 22 plywood, water repelling paper, sheet metal

3 Floor construction: 14 wooden flooring, 2 moisture barrier / soundproofing, 20 leveling compound, existing concrete slab

4 Facade construction: 22 wooden panel cladding, 34 battens, 50 facade board, wind barrier, 145 cellulose insulation, vapor barrier, 45 installation wall, 22 plywood, 12.5 gypsum board

5 Terrace construction: 50 paving slabs, sand, 100 XPS thermal insulation, existing concrete slab

Detail 1:40

Existing
New

Elevation 1:40

Discussion & Reflection

Discussion

How can theory on atmosphere in terms of scale, daylight and materiality inform design strategies for a transformation that promotes residential quality while preserving the unique traits of Helsingborg Hospital?

Helsingborg Hospital represents a building typology often considered too large, too deep, too rigid, and according to some, too ugly to transform. This thesis has instead explored the building's potential through theories of atmosphere, using them both to analyze the existing structure and to inform strategies for its transformation. The discussion reflects on the proposal as well as broader questions of atmosphere, feasibility, and the role of adaptive reuse in the future of buildings.

As stated by Böhme and Rasmussen, atmosphere is a subjective experience, making it difficult to define a universal recipe for a successful transformation based on atmosphere alone. However, in this thesis theories of atmosphere proved valuable in identifying the strengths and challenges of the existing building. These insights were complemented by research on residential quality, which provided a more objective basis for design decisions and helped ground the proposal in qualities that are widely recognized as important in residential environments. Through design strategies that mediate the scale, improve daylight conditions, and introduce material variation the rigid hospital structure is transformed into a unique residential environment where existing brutalist qualities are combined with new interventions that promotes residential quality.

Inspired by Böhme's theory of atmospheric generators, the project primarily worked with geometric and sensorial qualities, while also attempting to create a "sense of home", which can be considered a social generator. In the beginning, atmosphere was chosen as a theoretical basis to respond to the building's greatest challenges of its monumental scale, poor daylight conditions, and the uniform use of concrete. However, the same characteristics also proved to be some of the building's strongest architectural qualities. The monumental scale and generous dimensions for instance, can feel distant compared to human scale, yet they also enable spacious apartments with ceiling heights rarely found in contemporary housing.

Although some studies describe how we experience different colors and textures, the thesis proposal ultimately developed into being less about if the walls are red or blue, or if the flooring is concrete or wood, but more so about what creates sequences, variation and contrast as mentioned by Morichetto as important features of atmosphere in residential environments. It has not only been a task to vary and contrast between materials, but also between balancing existing brutalist features and introducing new elements.

In line with the adaptive reuse strategy of aemulatio, as described by Plevoets and Van Cleempoel, the proposal adds a new layer to the building while respecting the existing architecture. However, it is difficult to negotiate how much intervention is possible before changing too much. The thesis found that scale and daylight were the most difficult atmospheric parameters to address, as they are deeply tied to the building's fundamental structure. For example, to limit long corridors is difficult in a building with long wings. The thesis therefore explored more how atmosphere could make these inevitable circulation spaces more pleasant through daylight, outlooks, and variation. Introducing atriums became essential to improve daylight access and increase residential quality, despite requiring large interventions of partial demolition and less rentable floor area. One could argue a transformation could be possible without major interventions. Yet within the framework of atmosphere and residential quality, partial demolition was considered necessary to address the building's key challenges and contribute to the experience of living here. Nevertheless, much of the original expression has been preserved and in some cases enhanced, for example by exposing structural elements that are currently hidden. Materiality proved to be easier to work with, since it often is about introducing new surface materials which is one of the buildings more interchangeable layers, as described by Brand.

The transformation of Helsingborg Hospital has proved to be a continuous process of negotiation, where there are endless decisions and factors that need to be balanced against each other. A range of different solutions were explored throughout the thesis, like for example making one sided apartments and not introducing atriums, or leaving the low rise structure as it is and try to fit a program into that. The final proposal might be considered to have quite radical interventions, but on the other hand, maybe a brutalist building can withstand brutal interventions. Each decision raises a question on the other end, and due

to the large scale and complexity of the hospital the level of detail possible to explore within the scope of this thesis was limited. Future studies that would be interesting to investigate are how one can work with additional atmospheric qualities, for example with artificial lighting or tactility. It would also be valuable to investigate a more mixed-use program. For example, parts of the building on the north and east side with less favorable daylight conditions could work better as offices or as educational premises instead of housing. Program wise it would also be interesting to explore a co-living use or housing in favor for the elderly. Another relevant continuation of this work would be a detailed study of how the hospital's extensive technical infrastructure could be adapted to residential use. An economic analysis comparing the costs and potential revenues of a transformation versus demolition and new construction would also provide valuable insights for evaluating alternative development strategies. Furthermore, it would have been interesting to examine the potential for reusing materials that are removed in the transformation process. Either within the project itself, or in other projects, and thereby contributing to a more circular and resource efficient building practice.

One could argue the proposal does not value sustainability enough, since partial demolition is suggested. Moreover, large interventions reduce reversibility and may be costly. However, if no interventions are undertaken, the building may ultimately be deemed obsolete and faces a complete demolition instead. The proposal suggests that adaptive reuse is not primarily about finding the cheapest solution, but about creating new forms of value beyond economics, such as identity, heritage, and unique living environments.

Transforming a building already considered beautiful is easy. This thesis instead contributes to adaptive reuse research by exploring the potential of the brutalist style as a difficult and sometimes disliked building style. As Brand suggests, buildings often become appreciated only after enough time has passed. Helsingborg Hospital recently turned fifty years old. What is considered ugly today may be considered beautiful tomorrow. While this proposal may not solve every challenge of this rigid typology, it suggests that buildings like Helsingborg Hospital hold qualities worth preserving and that adaptive reuse can not only offer a more sustainable alternative to demolition, but also the possibility for unique living environments.

Reflection

The idea of the thesis began with the fact that Helsingborg will be getting a new hospital in the upcoming years, and from me always hearing that the building is ugly and drab. I tried to observe it from another point of view, where I see quality in the building's unique features such as its extreme scale and its location. When hearing the municipality has explored whether it is possible to transform into residential use, it sparked an interest in me that I wanted to explore further.

Perhaps unsurprisingly, Helsingborg Hospital has proved to be a highly complex building. Throughout the thesis, I gained a deeper understanding of both the opportunities and limitations involved in transforming existing structures of this type.

Despite the speculative character of the project, the work has deepened my understanding of the complexities of transformation and strengthened my belief in the importance of making use of the existing building stock, which is something I want to carry with my as an important task in my further career as an architect.

Figure 23. North gavel with main entrance. Flag noticing the 50th year anniversary. (Authors photographs, 2025).

AI Appendix & References

AI appendix

During the process of this thesis, AI-based tools were used in a limited capacity to support the work. ChatGPT and DeepL were used for language review, including grammar and spelling correction. Adobe Firefly's Generative AI was used for minor enhancements of renders and diagrams. The thesis content, analysis, and conclusions were produced by the author.

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Figures

Figure 1. Silversson, N-Å. (1984). [photograph]. https://stadslexikon.helsingborg.se/nya-kyrkogrden/

Figure 9. Stijn Bollaert. (2023). [photograph]. WikimediaCommons. https://commons.wikimedia.org/wiki/File:782 _ RYB-1978-credit_Stijn_Bollaert _ LR.jpg

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Figure 11. Corsini, P. (n. d.). [photograph]. Retrieved from Esch Sintzel Architekten. https://www.eschsintzel.ch/de/auswahl/projekte/lysbuechel-sued/?cat=built

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Figure 13. Google Earth Pro. (2026). [screenshot].

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