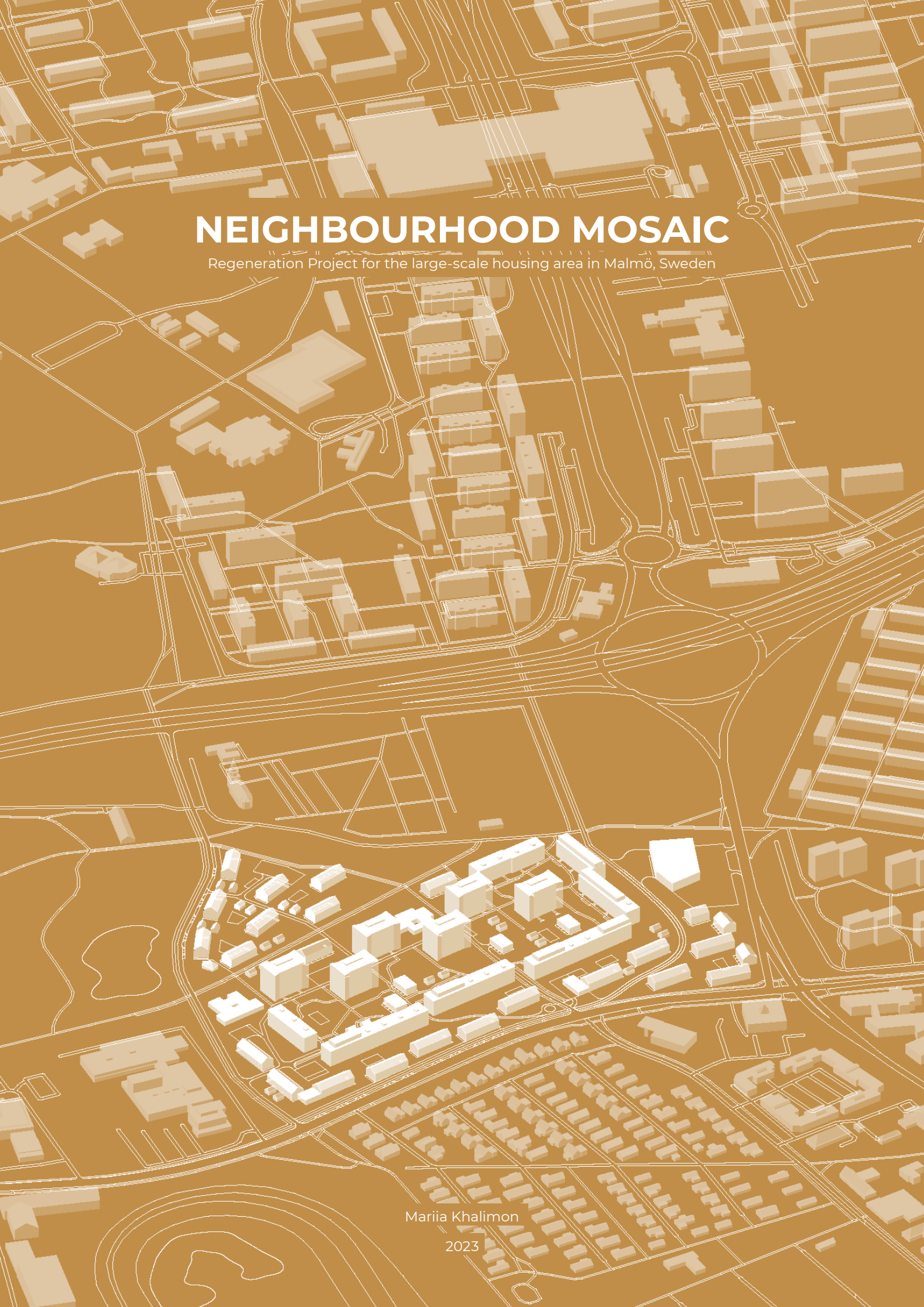

NEIGHBOURHOOD MOSAIC

Regeneration Project for the large-scale housing area in Malmö, Sweden

Mariia Khalimon

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Faculty of Architecture
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ASBM01: Degree Project in Sustainable Urban Design
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ABSTRACT

The problem of outdated large-scale housing estates has been prevalent in many cities, resulting in unbalanced social issues, uncomfortable living conditions, and a lack of response to climate change. The research focuses on the Almgården area in Malmo, Sweden, and aims to address these challenges by proposing a sustainable design solution that can improve the quality of life for residents while reducing environmental impact.

The design methodology involved a comprehensive analysis of the existing urban features, connections, built environment and community needs, followed by the development of a design proposal that emphasizes densification and the introduction of diversified programs. The design also utilizes digital tools to test the proposed solutions' impact on the local climate and environmental sustainability.

The proposed design solutions include providing additional links and physical connections to the area, introducing a mixed-use environment and diverse building typologies, establishing magnets to invite new users, enhancing the existing park use, and creating recognizable public spaces. These interventions aim to create an attractive and connected community, provide a range of housing types, to impact on the local climate and environmental sustainability, also improve issues of social sustainabilty.

The outcomes of the research indicate that creating a connected and attractive community, incorporating a mix of housing types, and utilizing climate testing tools can significantly improve social qualities, create economic benefits, improve wellbeing, and contribute to environmental sustainability. The proposed design solution can serve as a model for future urban regeneration projects to promote more sustainable and liveable communities.

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INTRODUCTION

BACKGROUND

WHAT

This design project is focused on the regeneration of outdated large-scale housing estates with a goal of improving the life quality of their residents, considering ongoing climate challenges. This project aims to address urban issues by introducing sustainable design solutions to create comfortable, and cohesive spaces.

WHY

Most of these housing estates were built in the mid-20th century and are now outdated. Its residents suffer from poor living conditions, lack of connectivity, and limited access to community services. In addition, with the time flow, such housing areas face cultural and urban changes, becoming socially vulnerable and unbalanced. Also, examples of large-scale typological housing estates are present in most countries. Thus, facing global environmental issues, this existing large number of buildings does not meet current climate mitigation demands.

HOW

To resolve these challenges, extensive regeneration is the answer. With a strategy, including densification and introduction of diversified program of new uses, the upgraded area shall contribute to the local wellbeing. This to be achieved by introducing different forms of accomodation (condominums, owner-occupied apartments) in order to attract wider resident groups and thereby contributiong to a more balanced mix in the area. As well as, the prolonged life cycle of existing buildings contributes to reduction of operational and embodied emissions and environmental sustainability of existing buildings. Besides, the aim is to improve green spaces and outdoor recreational areas, update access to public transportation, promote social interaction and community engagement. Ultimately, this project aims to create a new model for sustainable housing that can be replicated in neighbourhoods around the world.

HISTORY

The origins of large-scale housing estates can be traced back to the early 20th century when modernist architects and urban planners sought to improve living conditions for the working classes by providing high-quality, affordable housing.

1900

1920

The Garden City movement was an early example of a housing development, which began in the UK in the early 1900s. Garden cities were designed to provide a healthier and more pleasant living environment for working-class families by incorporating open spaces, greenery, and community facilities (Fainstein, et al., 2003).

With the depression and urgent housing need after the Second World War, demand for quick and new dwellings was extremely high. In the post-World War II period, many European cities faced a severe housing shortage due to the destruction of existing housing stock and the large number of people who had been displaced by the war. (Fainstein, 2010).

1939

To address this, many governments and private developers turned to large-scale housing estates as a means of quickly and efficiently providing new housing units.

Followed by new modernist philosophy, massive building programmes were born, representing the replication of housing typologies on a large scale. Across Europe and all post-soviet countries, several people inhabit public housing estates built after 1950. The districts and buildings were designed with a particular focus on construction efficiency and functionality, often using prefabricated building elements.

1950

Estonia, France, Kazakhstan, the Netherlands, Poland, Sweden, the United Kingdom, Ukraine and many others possess these replicable projects almost in every city. (Kempen, R. van. 2005)

Nowadays these estates still accommodate an enormous amount of population. hese housing areas are often characterised by lack of variation, poor aesthetic qualities and a poor outdoor environment.

?

x2 OF THE GLOBAL BUILDINGS STOCK IN 40 YEARS

39% OF GLOBAL CARBON EMISSIONS CAUSED BY BUILDINGS

UP TO **70%** OF A REDUCTION IN CARBON EMISSIONS IN URBAN REGENERATION PROJECTS

FUTURE RESPONSIBILITY

Moving towards a sustainable future, the responsibility to regenerate outdated large-scale housing estates has become increasingly important. With the challenges of climate change and social inequality on the rise, urban design must prioritize sustainable solutions to ensure that the built environment is not only functional, but also contributes positively to the well-being of its inhabitants. However, urban regeneration must also address the threat of gentrification, which can lead to displacement of existing communities and further social inequality. This requires a balance between preserving the cultural identity of these areas while also creating more livable and sustainable spaces.

According to a report by the European Commission, many large-scale housing estates built in the mid-20th century are now outdated and require significant investment to modernize their infrastructure and extend their lifespan. The report estimated that around 43% of the EU's housing stock was built before 1960.

Additionally, according to Architecture 2030, Global ABC the global buildings stock will double in 40 years. It is equal to building a New York City every month. From this expansion alone embodied carbon will accelerate climate change by six years.

Buildings are responsible for 39% of global carbon emissions: 28% from operational emissions and 11% from materials and construction.

Regenerating a large-scale housing estate can lead to significant environmental benefits, such as reduced carbon emissions, improved air quality, and increased use of renewable energy. For example, a study by the European Environment Agency found that to a reduction of up to 70% in carbon emissions.

Investing in urban regeneration projects can help extend the lifespan of these estates and reduce the need for costly repairs in the future, while also improving the quality of life for their residents.

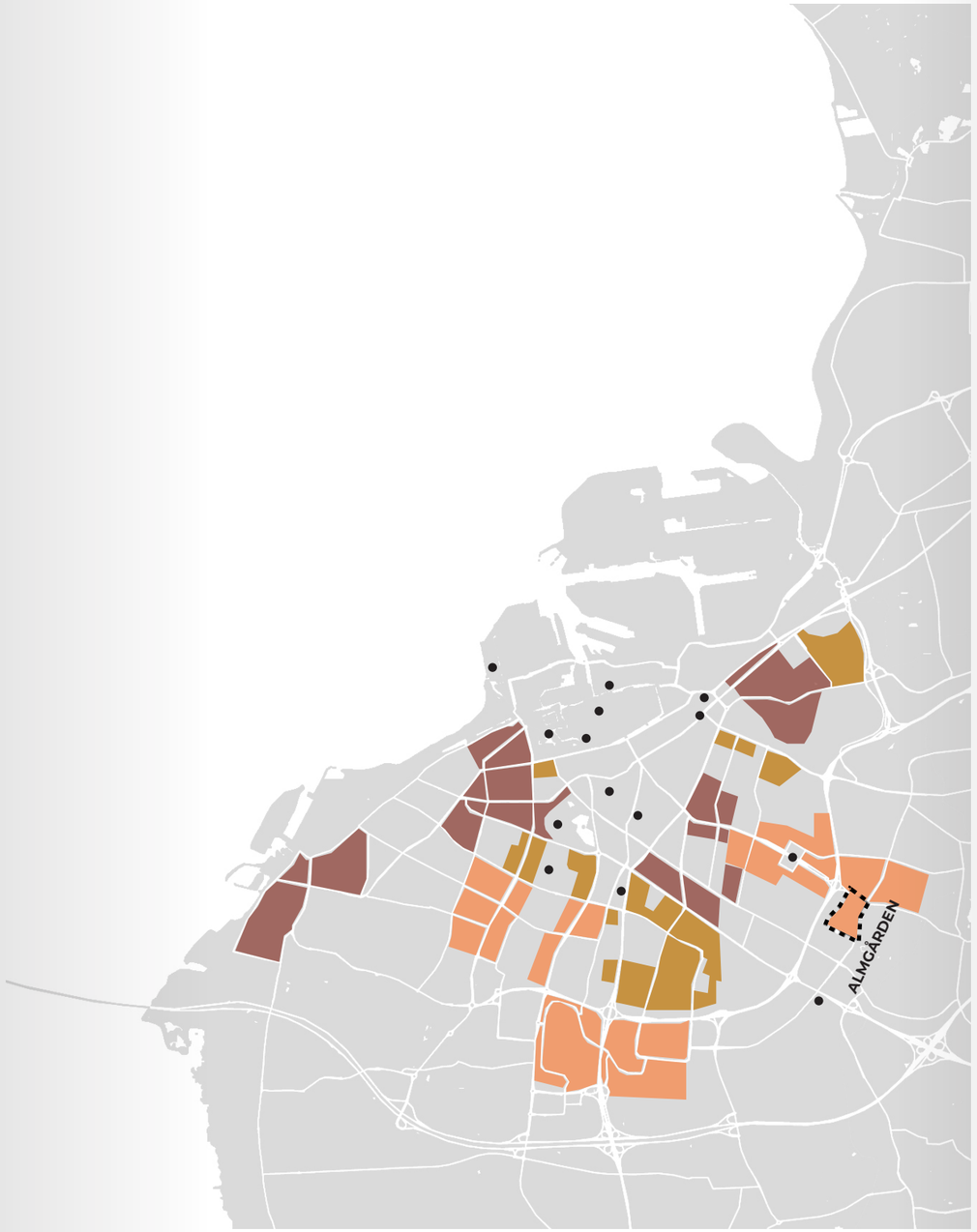
FRAMEWORK

The research is based in Sweden, a country with a significant number of large scale housing estates. Sweden has a history of promoting sustainable development and urban planning, making it a suitable context for this study. Through a case study approach, this research aims to explore how large scale housing estates regeneration can contribute to achieving sustainability goals in the Swedish context.

In Sweden the first large-scale housing estate was built in the 1930s in the Stockholm suburb of Vällingby, which became a model for future developments. However, it was after World War II that the real boom in large-scale housing estates took place. During the 1950s and 1960s, thousands of new apartments were built in large, multi-story blocks in cities all over Sweden. As part of the country's ambitious social welfare policies, the goal was to provide affordable housing for everyone, regardless of income or social status, and to create modern and functional living environments that could improve people's quality of life.

This research focuses on the regeneration of large scale housing estates with a sustainability perspective. In this study, sustainability refers to establishment of social balance, wellbeing, and recucing environmental impact.

- Social balance to be understood as the reduction of marginalisation and the promotion of social cohesion.
- Wellbeing is defined as the provision of accessible services and amenities that meet the needs of residents and more attractive outdoor environments.
- Environmental impact relates to the regeneration and reuse of built structures to reduce waste and promote sustainable practices.



Urban development in Malmö 1955-1990: 1955-1965 1965-1975 1975-1990 the site magnets

CONTEXTUAL RESEARCH

ALMGÅRDEN, MALMÖ, SWEDEN

In Sweden some of the most famous large-scale housing estates were built under the Million Programme (Miljonprogrammet). The Million Programme was a government initiative launched in the late 1950s with the aim of building one million new homes over a ten-year period. The initiative resulted in the construction of around 700,000 apartments and 300,000 single-family houses, mainly grouped in large-scale housing estates in cities and suburbs across Sweden. The apartments were often built in large, functionalist-style blocks, with communal green spaces and shared facilities. (Hall & Vidén, 2005)

Almgården is a neighbourhood in Malmö, Sweden's third largest city, developed as a part of Million Programme in 1969-1972. It is located in the south-eastern part of the city and is part of Rosengard's district administration. The area is outside the Inner Ring Road, east of Västra Skrävlinge church and Ögårdsparken. It borders in the north to Amiralsgatan, in the east to Agnesfridsvägen and Jägersro villastad. South of the residential area is the Jägersro business area. (Tykesson, 2002)

Almgården is located approximately 4 kilometres from Malmö's city centre, making it a relatively accessible location for residents and visitors alike. There are several bus lines that serve the neighbourhood, including lines 2, 5, 6, and 8, which provide access to other parts of the city. The line 5 is rapid bus transport ("Malmöexpressen") with which you can get to the city centre in 20 minutes.

Almgården's location is a significant factor in its development and character. Also, it has played an important role in the neighbourhood's history and development.

▲ Almgården (Image author: Tore Bergman)

DEVELOPMENT

The history of Almgården dates back to the 19th century when the area was primarily used for agriculture, with several large farms situated in the area. The area is named after a farm that was demolished during the construction of the apartment buildings. It was located in the north-eastern part, and the yard also included a plasterwork workshop. Past the fence, Husievägen went out towards Husie church. The land was otherwise used for agriculture. (Tykesson, 2002)

The neighbourhood began to develop in the early 20th century when several small-scale industries and warehouses were built in the area. However, as the economy shifted towards a service-based industry, many of the factories and warehouses were abandoned, leading to a decline in the area's economic fortunes.

The land was gradually sold off to developers, who began building residential properties as well. In the post-war years, the district continued to develop, with the construction of new apartment blocks and public facilities such as schools and sports facilities.

In the 1956 masterplan plan, the area was intended to continue to be used as arable land In the revised plan from 1962, the land had been reserved for hospital purposes. Later, the neighbourhood underwent significant changes with the construction of several large residential buildings and the transformation of the area into a primarily residential neighbourhood. (Tykesson, 2002)

The area also saw an influx of immigrants from countries such as Turkey and Yugoslavia in the 1970s and 1980s, who settled in the newly constructed apartment blocks.

Today, the Almgården district has a diverse urban background that reflects the changing social, economic, and architectural trends of the 20th century. The area is home to parks and green spaces such as the nearby Ögårdsparken. It remains a distinctive part of Malmö, with a unique character that sets it apart from other areas of the city.

Birdview on Jägersro stadium and Almgården (Image author: Jimmy Wigren)

URBAN QUALITIES

Almgården is a predominantly residential neighborhood surrounded by some green areas, other large-scale residential estates, private houses, horse racing track (Jägersro) and some offices on the former industrial land. However, amenities such as shops, clinics, and schools are situated within up to 3 km distance, making them less easily accessible for the residents. Two kindergartens and a pizzeria are located in the neighborhood, but more amenities are needed to improve the quality of life for residents.

Two extensive projects are planned to be implemented in the future, the Jägersro redevelopment and interventions along the Amiralsgatan in Rosengård. These projects have the potential to boost new amenities, services, and connectivity development in the neighborhood.

Almgården is surrounded by busy roads, including Inre Ringvägen, Amiralsgatan, and Agnesfridsvägen, creating visual and physical barriers for the residents of the estate. The limited pedestrian and cycle links further compound this issue, making it difficult for residents to travel to neighboring areas and access amenities. However public transport connections are available with several bus lines operating in the area.

Vegetation in Almgården is characterized by growing trees and significant lawns between the buildings and streets, as well as towards the west. However, the cemetery located right behind the site border creates another barrier. To the south, Ögårdsparken, a decent park with a lake, is located, providing opportunities for recreation and leisure for residents.

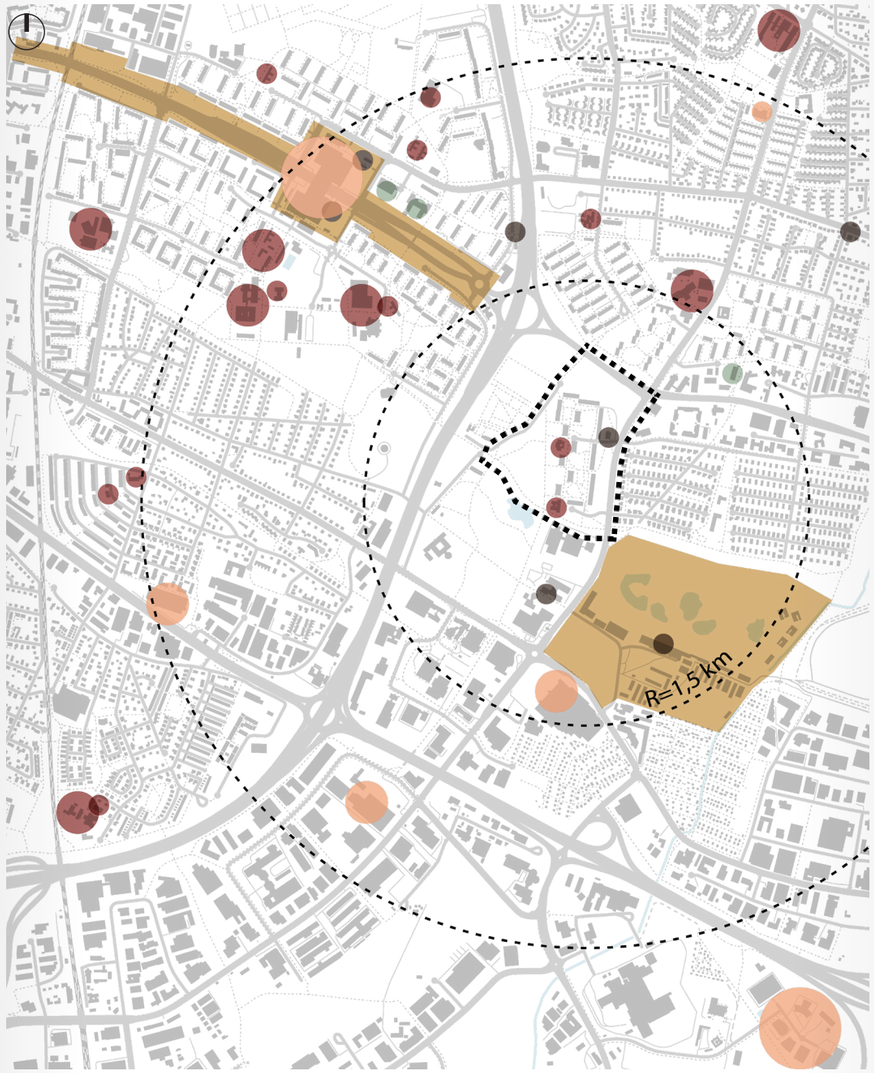
The neighborhood has a significant amount of unused space, including large areas of asphalt that contribute to inefficient land use. This can lead to a feeling of emptiness and a lack of vitality in some parts of the neighborhood.

Almgården has a somewhat monotonous appearance due to the replication of two architectural typologies. Additionally, the unused spaces and lack of maintenance contribute to a run-down appearance in some areas of the neighborhood. The estate itself is characterized by wide dimensions and decent underground parking. Improving connectivity, increasing access to amenities, and creating more green space are some of the key priorities for urban design interventions in Almgården.

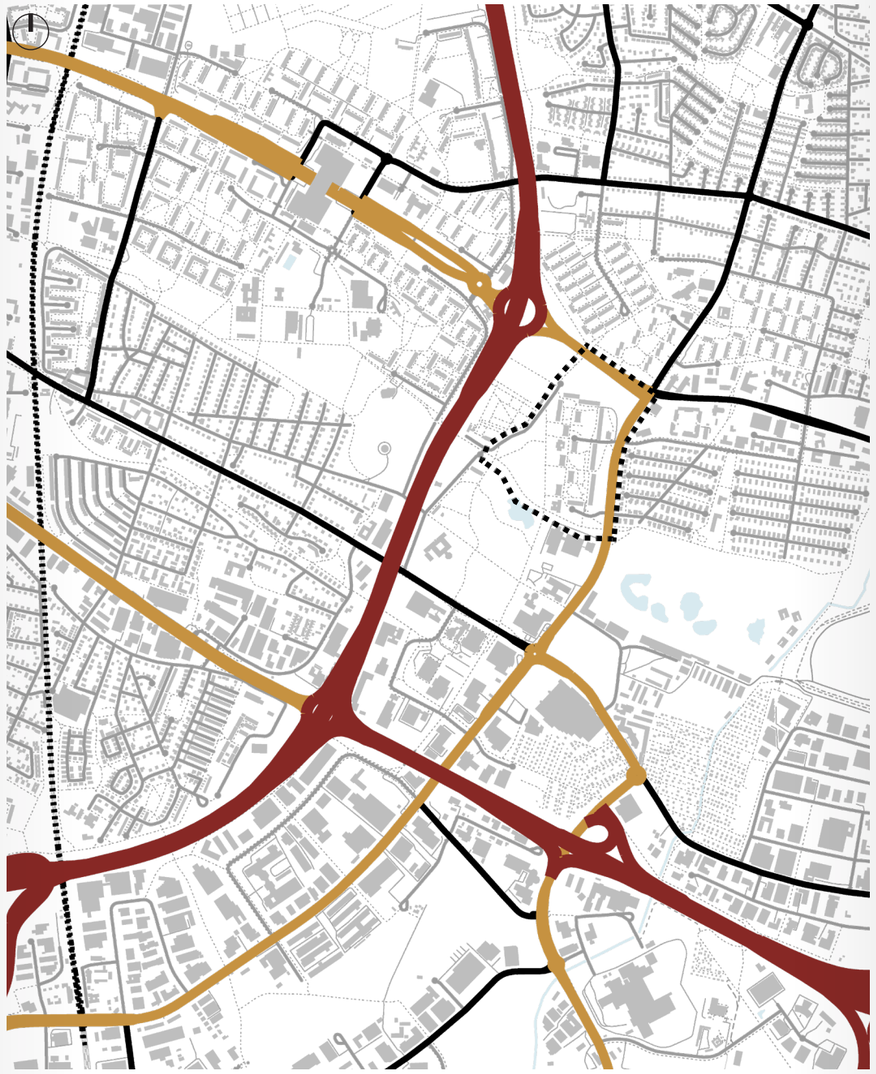
Finally, Almgården is a low status area with a relatively high proportion of low-income residents. This can lead to social challenges such as reduced access to services and amenities and a higher level of crime in some areas.

Land Use

Nodes & magnets



Connection



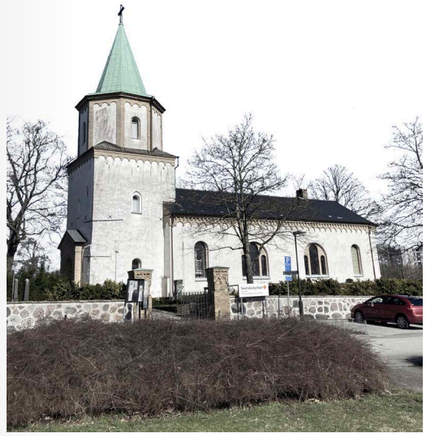
Transport

1. Cycle/pedestrian access from the Northwest (Inre Ringvägen)

2. Junction on the Southeast (Agnesfridsvägen)

3. View to the North (towards Amiralsgatan)

Links & barriers



1. Västra Skrävlinge kyrka

2. Almgårdens pizzeria

3. Islamic Center i Malmö - Moskén

Building uses

1. View to the North (towards Höia)

2. View to the East (towards Almgården)

3. View to the South from the entrance point

Vegetation

ARCHITECTURAL QUALITIES

Appearance

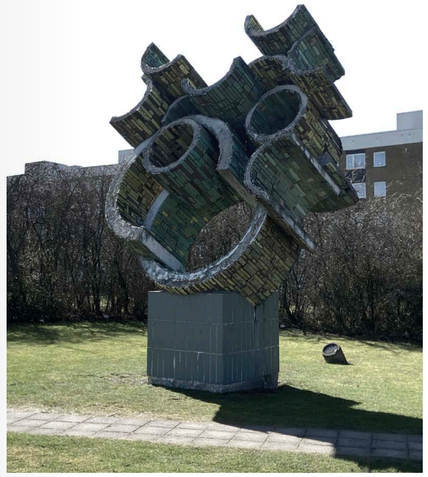
Almgården is a typical and an atypical high-rise area for its time. The area was built in 1969-1972, designed by Thorsten Roos' architectural office and are today owned by Akelius Residential Property AB, formerly Hugo Åberg's property management. It is special, because it was built by a single private builder. (Tykesson, 2002)

The buildings have been grouped in a way typical of the time, with high-rise buildings closest to a park area and lower buildings facing traffic routes. The area derives its identity from the characteristic figures of the higher buildings. The character is also given by the perfectly rhythmic facades and the contrasting effect between the heavier brick facades of the lower houses and the light and lighter facade design of the higher houses. (Tykesson, 2002)

Birdview on Almgården (Image: source: Chris Offer)

One of the key features of the Almgården district is its architecture. All of the buildings in the area were constructed in the functionalist style, a design movement that emerged in the early 20th century and focused on creating buildings that were practical and efficient. The functionalist style is characterised by clean lines, flat roofs, and the use of modern materials such as concrete and glass. The six tall houses also had a relatively peculiar design with their angled gables. At the same time, the combination of lower houses in yellow brick and higher houses covered with sheet material is characteristic of the time. (Tykesson, 2002)

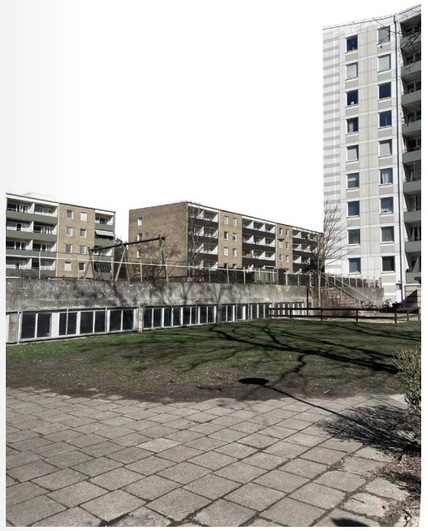
Atmosphere



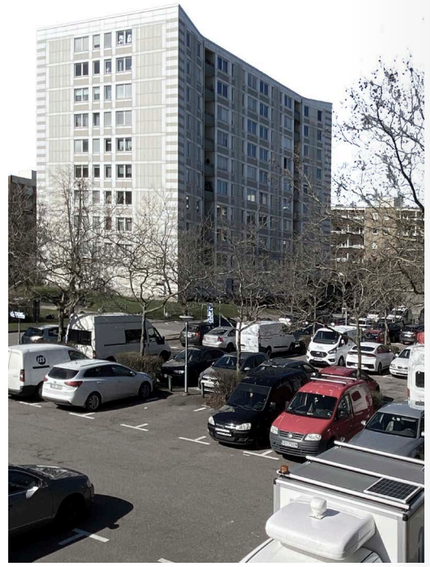
Sculpture near the entrance to Almgården estate

The entrance to Almgården estate

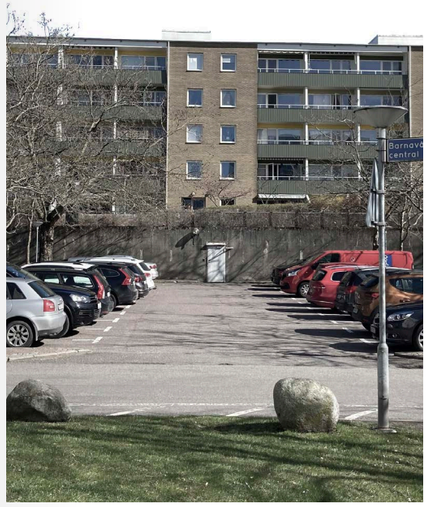
South entrance to the underground parking



Courtyard in the North

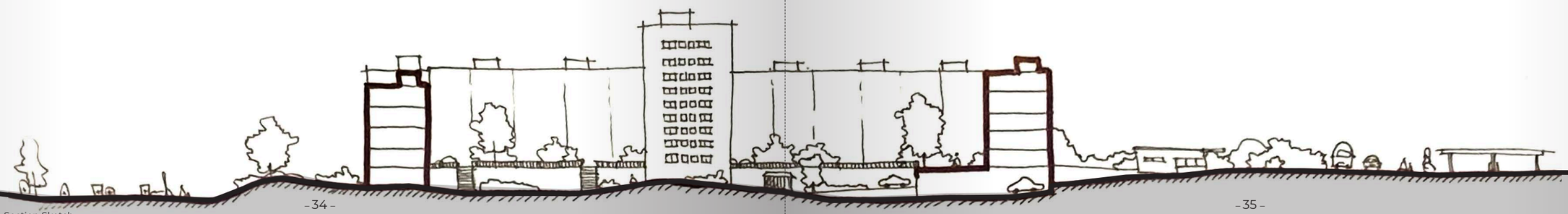


Parking in the North



The courtyard - underground and overground parking

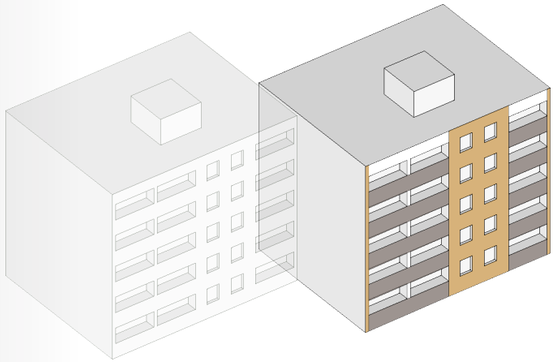
Behind the entrance



Section Sketch

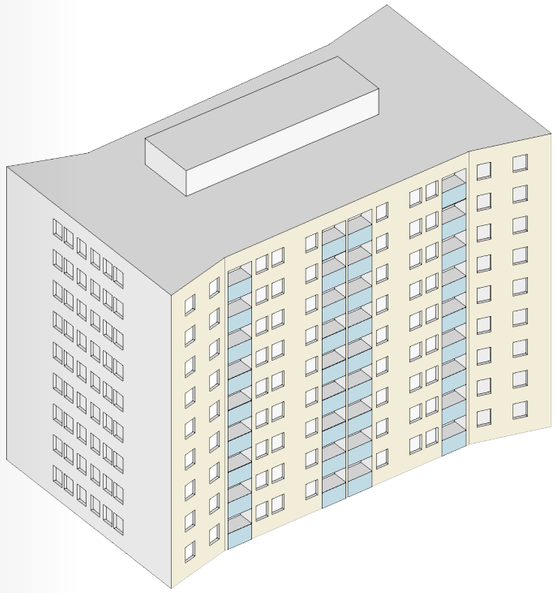
Typologies

Architects: Thorsen Roos, Kurt Hultin,
Carl Nordström within Hugo Åbergs
Fastighetsförvaltning AB



Type A

Type: Blocked
Buildings: 7
Typologies total: 31
Storeys: 5
Apartment quantity: 441

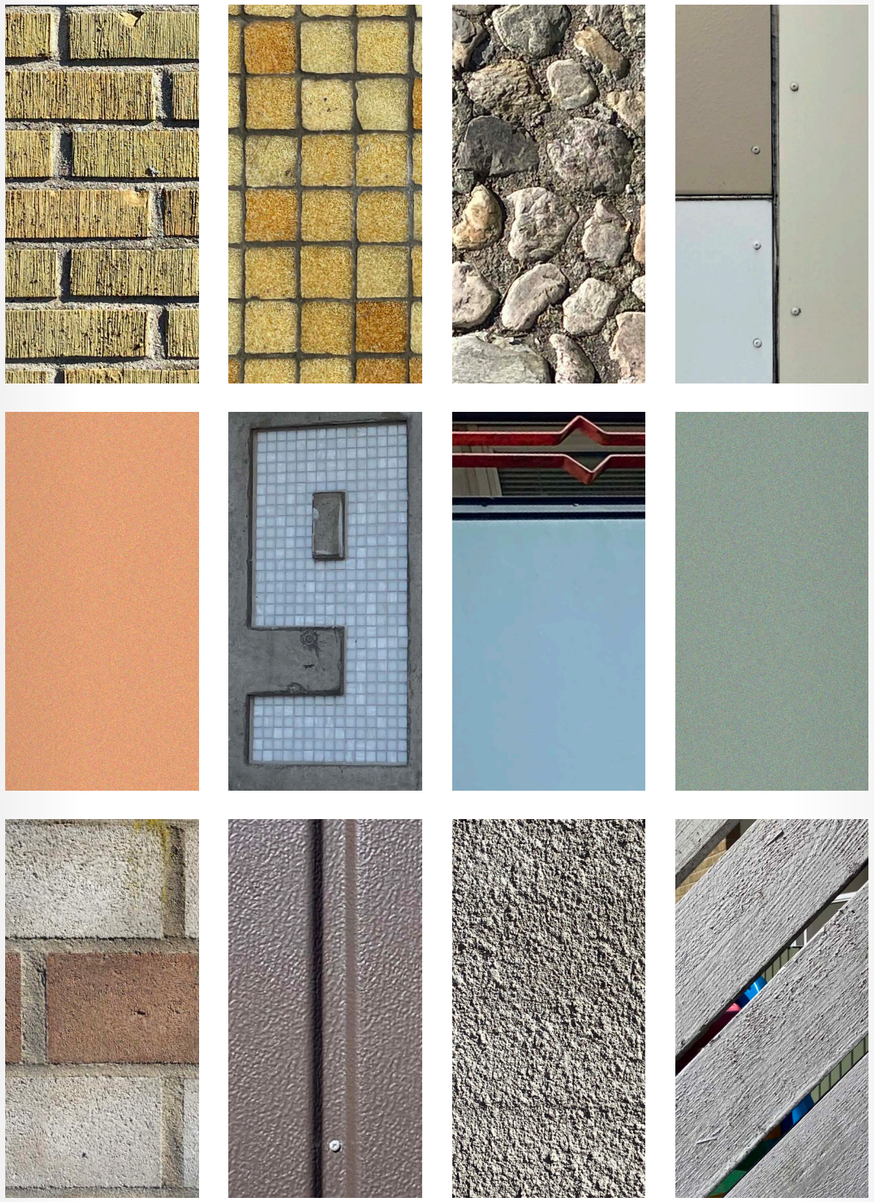


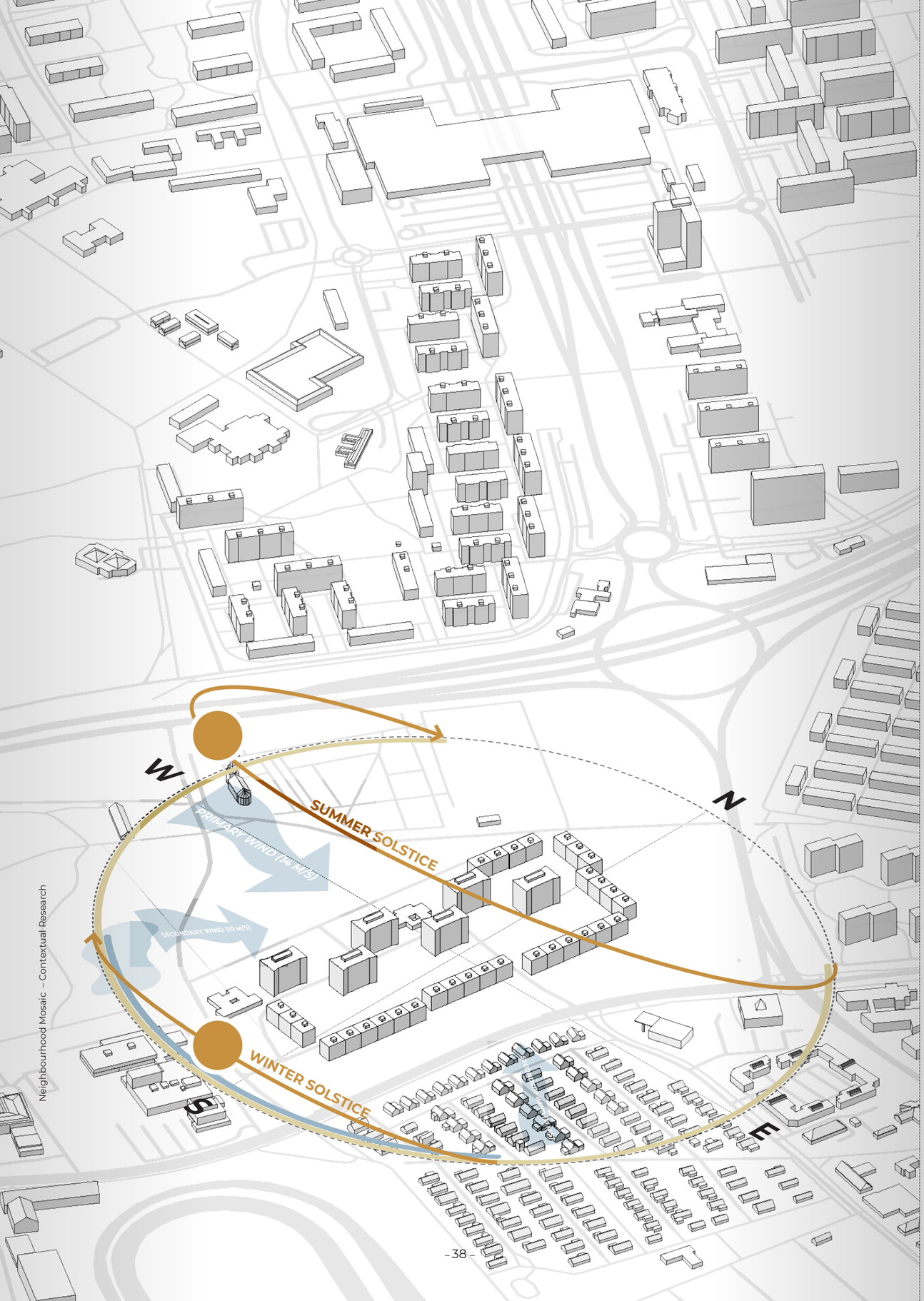
Type B

Type: Free standing
Buildings: 6
Sections in the building: 2
Storeys: 9
Apartment quantity: 554

Apartmens total: 995
Inhabitants total: ~1800

Materiality

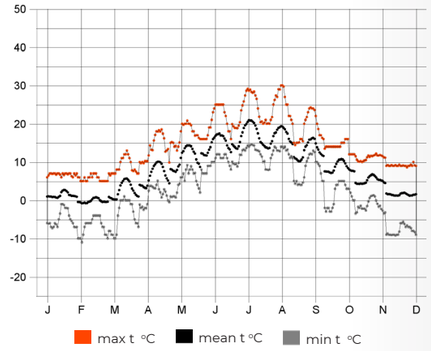




ENVIRONMENTAL QUALITIES

Local Climate

Malmö, located in southern Sweden, experiences a humid continental climate characterized by relatively mild temperatures, with an annual average temperature of approximately 9°C. This climate type is distinguished by a significant difference between the summer and winter seasons, with relatively warm summers and cold winters. The city receives moderate rainfall throughout the year, with the majority of precipitation occurring in the autumn months.

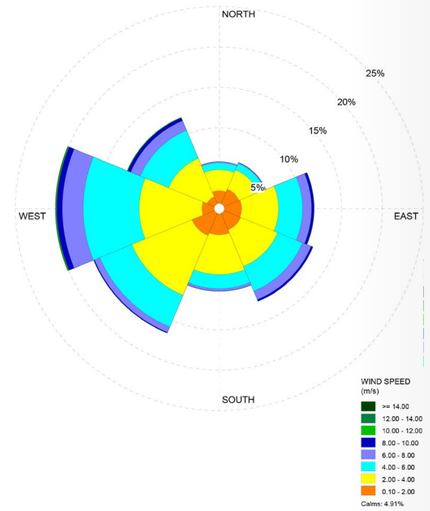


Solar Access

Malmö's location at a high latitude means that the sun's angle of incidence is relatively low throughout the year, resulting in less direct sunlight than locations closer to the equator. At noon solar altitude ange is 11° in December, 33° in March and September, 56° in June. Additionally, Malmö's proximity to the coast can lead to more frequent cloud cover and precipitation, further reducing solar access.

Wind

The area experiences moderate to strong winds throughout the year, with the highest wind speeds occurring in the autumn and winter months. This is largely due to the influence of polar maritime air masses and the low-pressure systems that typically move across the North Atlantic towards Scandinavia during this time. Additionally, the coastal location can contribute to higher wind speeds due to the influence of sea breezes and offshore winds. Dominating wind directions are West and South-west.



CHALLENGE & VISION

ISSUES

Weaknesses & threats

Weaknesses:
- Visual and physical barriers
- Lack of services and activities
- Mono-use
- Noise pollution
- Ageing buildings and structures
- Limited access to dense parks
- Unused spaces

Threats:
- Further disconnection
- Social inequality
- Air quality
- Temperature increase
- Lost atmosphere and uniqueness
- Housing prices increase

Urban

Almgården faces several significant urban challenges that make its situation quite complex. The area is currently dealing with future massive redevelopment plans in Jägersro and Rosengård, which will bring about substantial changes in functionality and social dynamics. Additionally, the neighborhood is physically disconnected due to the presence of heavy traffic roads such as Inre ringvägen (the Inner Ring Road), Amiralsgatan, and Agnesfridsvägen. These roads act as barriers, exacerbating the sense of disconnection. The wide lawns and cemetery surrounding the area further contribute to this feeling of isolation from neighboring sites.

The lack of a variety of communal and commercial uses within the neighborhood results in a monotonous and undervisited environment. This absence of diversity hinders the vibrancy and attractiveness of the area. Furthermore, the lack of accessible public services is another pressing issue.

Social

The absence of a diverse mix of uses, such as commercial, and recreational, limits the opportunities for interaction among different social groups. At the moment no environmnet for the creation of work places, decent meeting points is present.

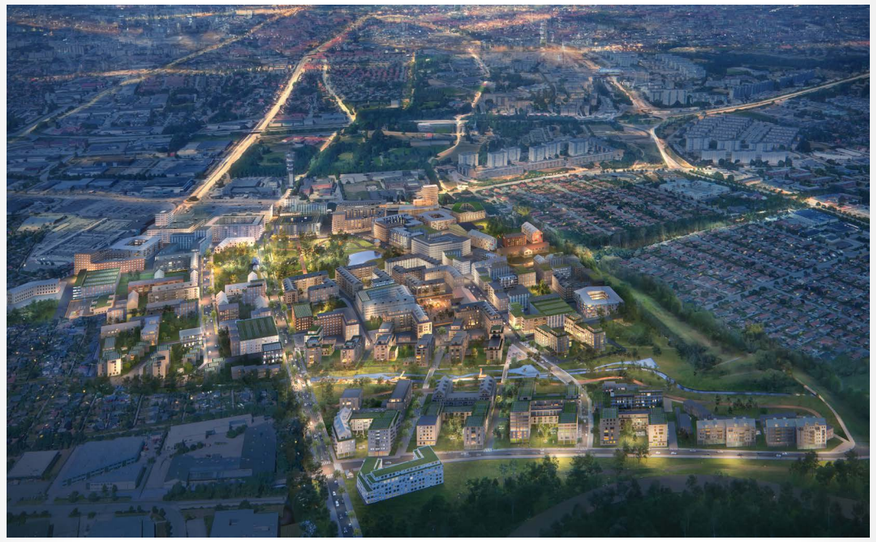
It also restricts the potential for future developments nearby to seamlessly integrate with the existing urban fabric. Since all housing is rental, it prevents residents from naturally mixing with people from different income groups.

These social issues in Almgården have implications for the overall livability and well-being of its residents. Without a balanced social mix and diverse range of uses, the area may struggle to foster social cohesion, economic vitality, and a sense of belonging.

Environmental

The neighborhood also consists of aging buildings and infrastructure, which require renovation and repair to ensure their functionality, safety, and sustainablilty. Now and in a long run, this can contribute to higher greenhouse gas emissions and energy costs for residents. The option of demolition of a large area, such as Almgården, is not environmentally sustainable for several reasons. It leads to significant depletion of natural resources, increased energy consumption, and the generation of construction waste, all of which contribute to environmental degradation and climate change.

Future of Jägersro

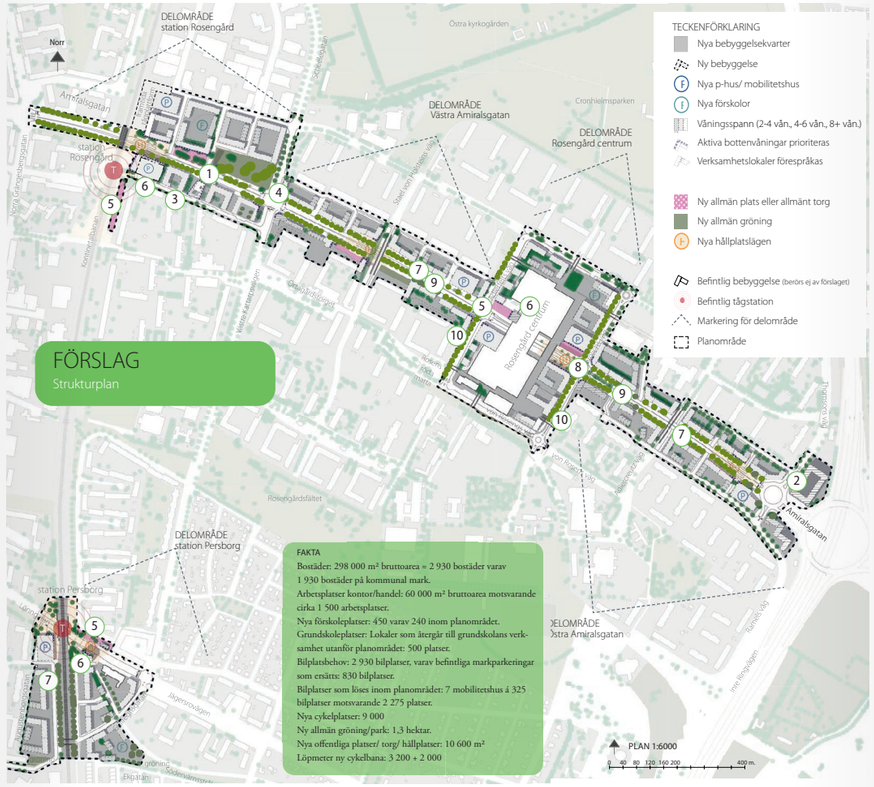


Jägersro birdview (Author: SMT 2023)

Jägersro masterplan (Author: FOJAB)

Future of Rosengård

Rosengård birdview (Author: Malmö Stad)



Planprogram Amiralsgatan och Station Persborg (Author: Malmö Stad)

POTENTIAL

Strengths & opportunities

Strengths:
- Significant available space
- Significant green space
- Cycle connection
- Public transport connection
- Proximity to kindergartens
- Typological structures
- Architectural typology aesthetics

Opportunities:
- Optimised renovation
- Mixed-Use
- Density
- Increased activity over the day/week
- Improved social balance & sustainability
- Climate change resistance
- Maintained architectural aesthetics

The area holds immense potential to become a thriving and active neighbourhood, acting as **a connector** between Rosengård and Jagersro. By prioritizing access, communal activities, social balance, and green links, the area can attract and engage residents from both neighbouring regions. In adition, the park presents a unique opportunity to establish the central attraction within the area. **A meeting place,** to draw people from surrounding areas. This creates the potential for the establishment of green links, connecting the neighborhood with the wider urban fabric and enhancing the overall appeal and sustainability of the area.

Furthermore, the incorporation of new cycle connections and transport links offer opportunities for easy commuting and within and beyond the neighborhood. This accessibility facilitates the **integration of different social groups**, promoting a balanced and diverse community.

By leveraging the strengths of the available space (unused lawns), convenient access, and **diverse typological units**, the area can be optimized for a **mixed-use** approach. This will increase the density and activity levels throughout the day and week, creating a new workpalces, inviting visitors and providing vibrant atmosphere. The establishment of new typologies can lead to **different forms of ownership**, attracting residents with diverse incomes, statuses, and more. This inclusivity in ownership options promotes a varied and inclusive community within the area.

Simultaneously, the development should prioritize climate change resistance and the preservation of architectural aesthetics to ensure the **long-term sustainability** and character of the neighborhood. The area holds the potential to extend the life-cycle of existing buildings by investing in their **renovation**, while also benefiting from the introduction of new economic opportunities and businesses to the site.

Vision

- Response to the future Jägersro and Rosengård developments
- Link between areas
- Magnet for businesses and customers
- Activation of unused space
- Creating of attractive public spaces
- Establishment of diverse functions
- Improvment of local social climate
- Improvment of local microclimate
- Contribution to environmental resilience

Garden city overview (Author: Benjamin Maltry)

Garden city overview (Author: Benjamin Maltry)

SCENARIOS TO KNOW

Garden City, Drewitz, Germany

The Garden City Drewitz is an example of an already regenerated estate. The goal is to develop Drewitz into an emission-free city district by 2050. One crucial element here is reduced heating consumption in energy-remediated flats. Moreover, one does not necessarily need a car in Drewitz, as the quarter is very well integrated into the public mass transport system. New tenants of one-room flats are even given a year's ticket for the municipal transport system free of charge.

According to the data collected (Schwiontek, 2016), 952 tonnes of CO_2 were conserved per household annually. The creation of the park, renovated and remediated flats, and the declining number of vehicles per household worked towards the achievement. The emissions balance will continue to improve since the renovation and remediation are continuing. Starting from January 2017, Drewitz supplied green, CO_2-free district heating. Part of the garden city's concept is to remain rents affordable after renovation and remediation. Likewise, the community centre "Oskar," which opened in 2013 in the neighbourhood school Am Priesterweg, provides space for leisure activities, entertainment and socialising.

The importance of Drewitz residents' participation in the conversion of their quarters is crucial. Residents give positive feedback about the outcomes of the renovation, especially about the use of the open and green spaces that have emerged. (Schwiontek, 2016)

The Garden City is characterized by its integration with the surroundings, a fine-grained neighborhood structure, mixed housing types, socially affordable housing, barrier-free accessibility, communal spaces, and sustainable energy concepts. It aims to create a well-planned and inclusive community that harmonizes with the surrounding environment.

The neighborhood offers a mix of housing options to accommodate diverse needs and emphasizes the provision of socially affordable housing. Accessibility is a key aspect, with all apartments designed to be barrier-free and some fully accessible for wheelchair users. Communal spaces foster social interaction and a sense of belonging, while sustainable energy concepts contribute to a more environmentally conscious neighborhood.

Findings to reflect: public transport system, diverse community, social cohesion, use of green spaces, affordability,

View towards Drottninghög (Source: DrottningH)

Drottninghög, Helsinborg, Sweden

Drottninghög was the initial area developed as part of the Million Programme. Initially known for its homogeneous design and lack of diversity, the district is now undergoing a transformation through the DrottningH project. This initiative, which is expected to span at least twenty years, prioritizes environmental, social, and economic sustainability.

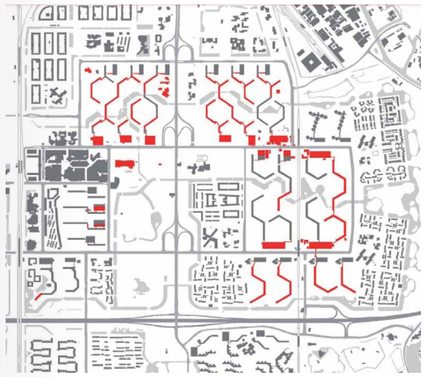
In collaboration with the property owner Helsingborgshem, four key objectives have been established. The first goal is to foster an open and collaborative process, promoting engagement from all stakeholders. The second objective is to enhance connections and remove barriers within the community. The third goal is to increase the density of the district and introduce architectural variations to enhance its visual appeal. Lastly, there is a specific focus on addressing the needs of children and young people, ensuring that their requirements are met through dedicated efforts (Drottninghög. H22., 2021).

The regeneration project involved the renovation and upgrading of existing housing units and the construction of new diverse ownership energy-efficient homes. The project also included the creation of public spaces and green areas, such as parks and community gardens, as well as the improvement of transport links and the promotion of sustainable transportation options, such as cycling and public transit.

In addition to the physical improvements, the Drottninghögsprojektet regeneration project placed a strong emphasis on social inclusion and community development. The project involved extensive community engagement and collaboration, with a focus on building strong social networks and promoting active citizenship (DrottningH, 2015).

Findings to reflect: densification, architectural variations, active community, social blend.

Renewal F-section Bijlmermeer in 1999 (Author: Lea Olsson and Jan Loerakker)



Bijlmermeer, before demolition
(Source: Projectbureau Vernieuwing Bijlmermeer)

Bijlmermeer, after renewal
(Source: Projectbureau Vernieuwing Bijlmermeer)

Bijlmermeer, Amsterdam, the Netherlands

The regeneration of Bijlmermeer involved several key features aimed at transforming the area and improving the living conditions. The project involved the demolition of several thigh-rise buildings that were associated with social issues and the redesign of the urban layout. This allowed for a more varied and diverse architectural approach and the creation of a more balanced urban environment.

The regeneration focused on creating a mix of residential, commercial, and community spaces. This included the construction of new housing units, retail areas, and public amenities. The goal was to promote a vibrant and inclusive community with a range of services and facilities. The project also incorporated the creation of green spaces and parks, providing residents with recreational areas and promoting a healthier living environment. (Cosmopolitan Urbanism, 2006).

The demolition of the high-rise buildings was part of a larger urban restructuring and redesign effort. The goal was to create a more varied and diverse architectural approach, reducing the density of high-rise buildings and replacing them with a mix of low-rise and mid-rise structures.

The demolition and subsequent renewal efforts aimed to transform the neighborhood physically, socially, and economically. It involved a comprehensive approach that included improvements in infrastructure, public spaces, housing options, and community facilities.

Various social programs and support services were introduced to address the needs of the residents. This included initiatives focused on education, employment, healthcare, and social welfare. The aim was to provide opportunities for personal and social development, improving the overall well-being of the community (Wassenberg, F., 2021).

Findings to reflect: demolition, balanced urban environment, renewal, mixed-use, community facilities, provision of green spaces.

DESIGN & PROPOSAL

GOALS & VALUES

Urban regeneration, also known as urban renewal or urban redevelopment, is a process of revitalizing and renewing large scale housing estates in cities that have suffered from urban decay. The main aim of urban regeneration is to improve the economic viability of a given area by attracting external private and public investment, encouraging business start-ups and survival, and creating opportunities for higher class housing and businesses.

The concept of urban renewal emerged in 19th century England as a means of social reform to address the unsanitary and overcrowded living conditions of the urban poor in industrialized cities. It was believed that improved housing conditions would have moral and economic benefits for residents.

In addition to revitalizing housing estates and creating economic opportunities, urban regeneration can also contribute to the achievement of the United Nations' sustainable development goals (SDGs). Specifically, urban regeneration can help achieve SDG 11, which seeks to make cities and human settlements inclusive, safe, resilient, and sustainable. This goal can be supported by improving the living conditions of residents, creating safer neighborhoods, and enhancing the resilience of cities to natural disasters and other hazards.

Moreover, urban regeneration can contribute to SDG 8, which aims to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. This can be achieved through attracting external investment and supporting business start-ups, which can create job opportunities and contribute to local economic growth.

Finally, urban regeneration can also contribute to SDG 13, which seeks to take urgent action to combat climate change and its impacts. By promoting sustainable urban development, reducing greenhouse gas emissions, and promoting clean energy, urban regeneration can support efforts to mitigate climate change and promote sustainable living.

APPROACH

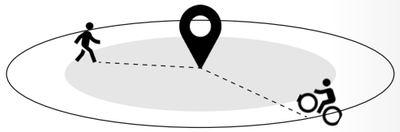
Circularity

Encourage the development of a self-sustaining neighborhood. Designed such that the different structures and buildings within the neighborhood would be improved and reused, minimizing resource consumption and maximizing resource efficiency.

Five minutes city

Promote a robust and complete neighborhood by adding new functions and bringing various daily activities closer.

Promote puclic transportation and prioritize pedestrians and cyclists.

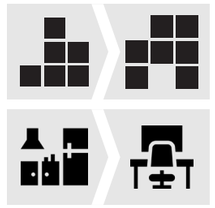


Respond to local needs

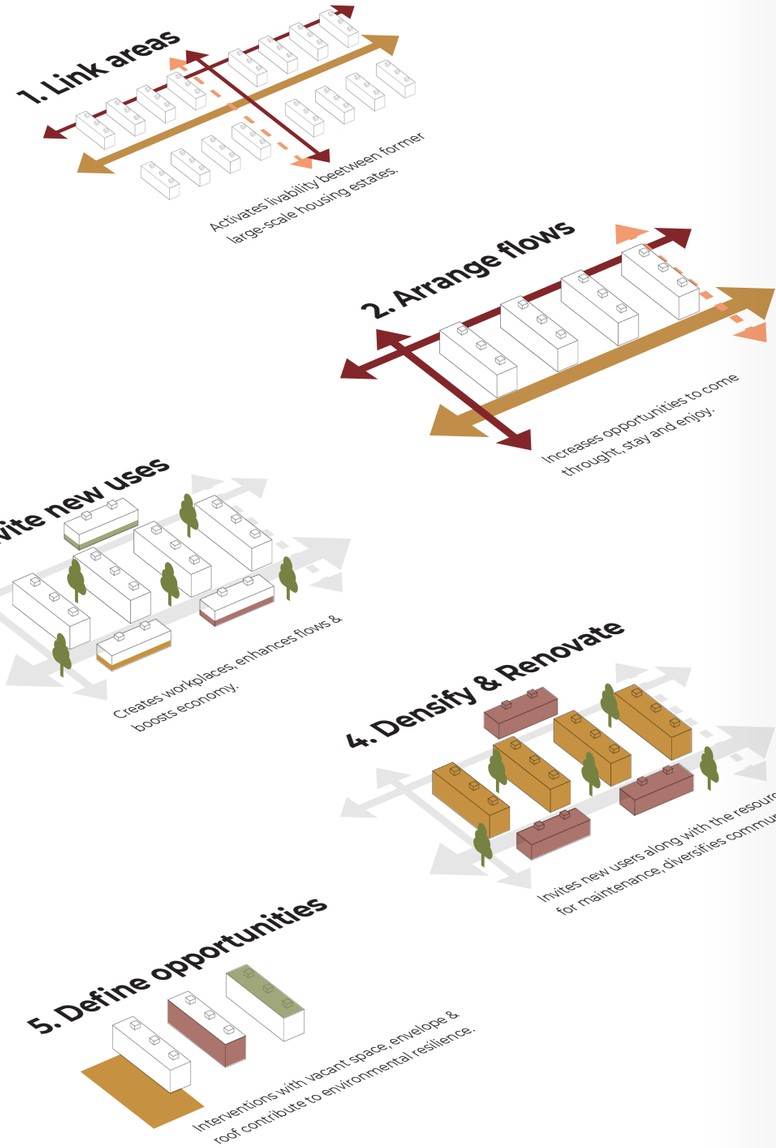
Strengthen the connections;
Bring social mixes;
Incorporate green and blue;
Create meating places;
Activate street life.

Future responsibility and resilience

Design with long term thinking is to consider the impacts of the transformations, include future generations in the planning process, and also give opportunity for changes to happen when the time comes.



STRATEGY



PROGRAM

Functions and spaces

redeveloped mixed-use | existing residential | new active | existing magnets | existing offices | park | cemetery

Interraction

housing & mixed use | park | active zones | office & services area | magnets

pedestrian & cycle link | pedestrian & cycle link

REGENERATION

The area's location demands a forward-thinking approach, with the creation of a new link from Inre Ringvägen to Agnesfridsvägen, a cycle link towards Rosengård in the north of the cemetery, and improved existing connections towards private housing on the east.

The plan includes the establishment of magnets and public nodes, such as a new supermarket on the north, a café facing the park on the south, and an improved pizzeria and cycle kitchen along Agnesfridsvägen.

Furthermore, the rethinking of the park offers a remarkable chance to create a focal point that serves as a central attraction within the area. It will serve as a vibrant meeting place, drawing people from the surrounding areas and fostering a sense of community. It presents an opportunity to establish green links, seamlessly connecting the neighborhood with the broader urban fabric. These connections not only enhance the area's overall appeal but also contribute to its long-term sustainability. By integrating the park into the fabric of the community, it becomes a catalyst for social interaction, recreation, and a harmonious relationship with the natural environment.

Densification is also proposed to address social issues, with a network of new buildings to be established. The first floors of these buildings, along the new street and Agnesfridsvägen, will be reserved for local mixed-use establishments with a larger ceiling height of up to 3.5 meters.

The location of these buildings has been designed to address sun access to existing buildings and improve the wind conditions of the area. The height of the buildings will gradually increase from the outer borders of the site to the middle of Almgården.

The proposed design also incorporates three types of spaces: public, semi-private, and private, which will gradually develop from the outer borders of the site to its heart. Furthermore, densification will also be provided on the roofs to utilize the unused spaces.

Overall, the proposal aims to create a sustainable and integrated community that responds to local needs and future developments while promoting a sense of community and social cohesion.

Access

Green links

New buildings & Nodes

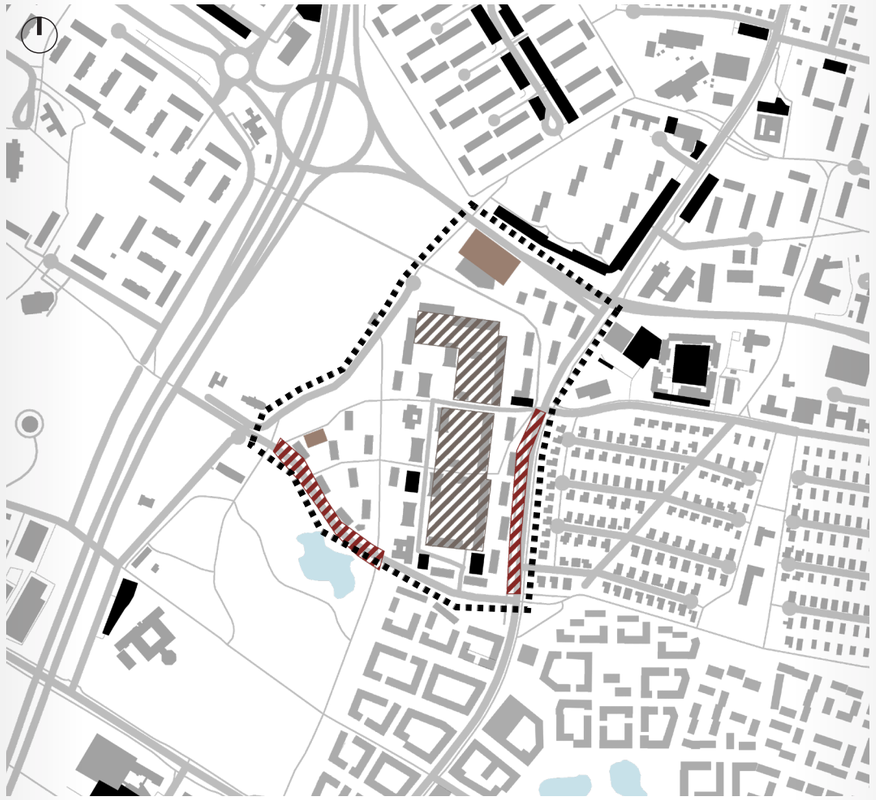
proposed buildings magnets

Typologies Placement

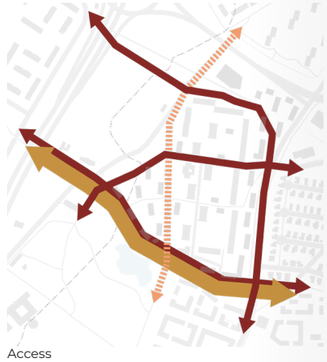
commercial apartment blocks with mixed-use ground floor row houses rooftops

Public & Private

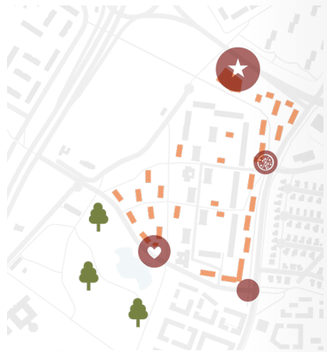
Parking



MASTERPLAN



Access



New buildings & Nodes

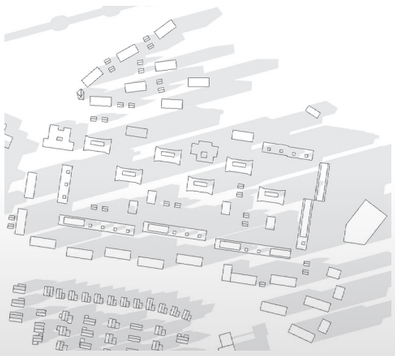
Parking

Public & Private

SUN STUDIES

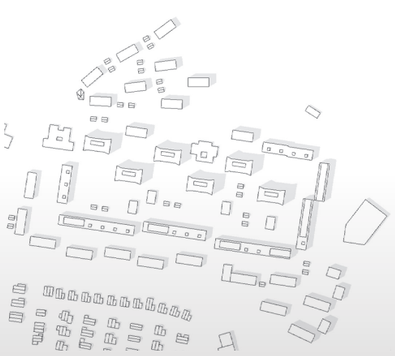
December

08.00

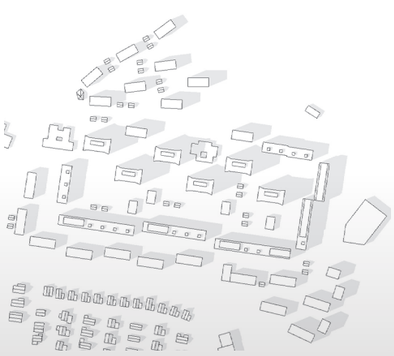


11.00

June

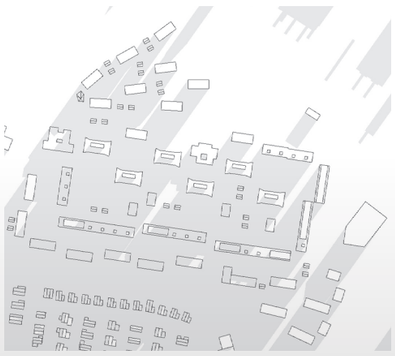


March



20.00

17.00



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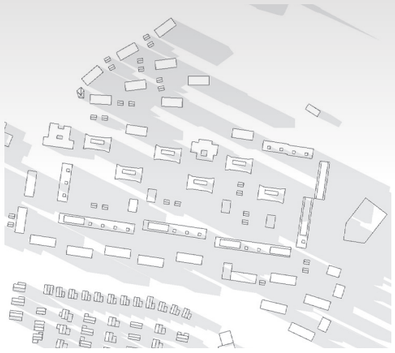
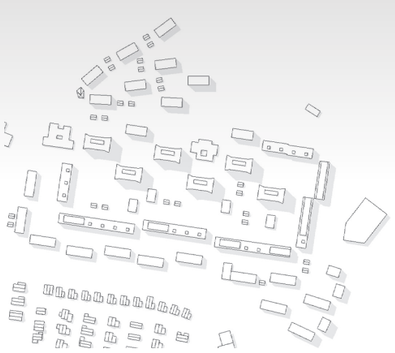
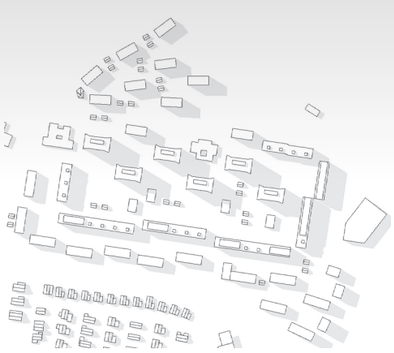
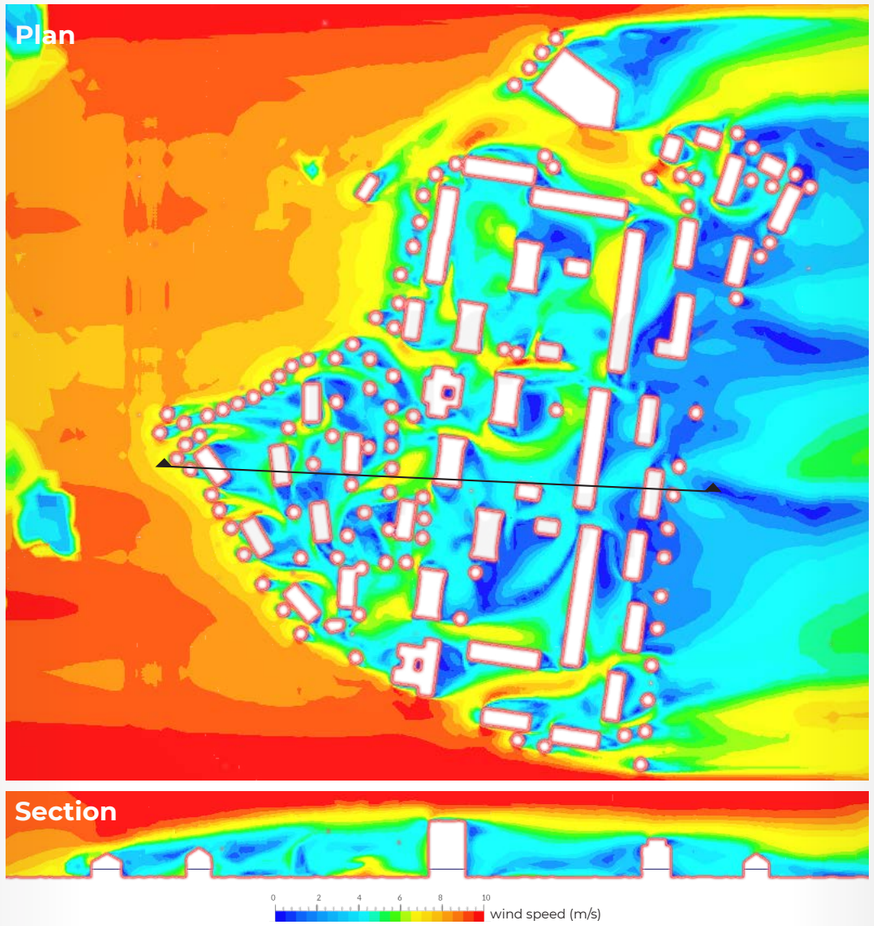






WIND STUDIES

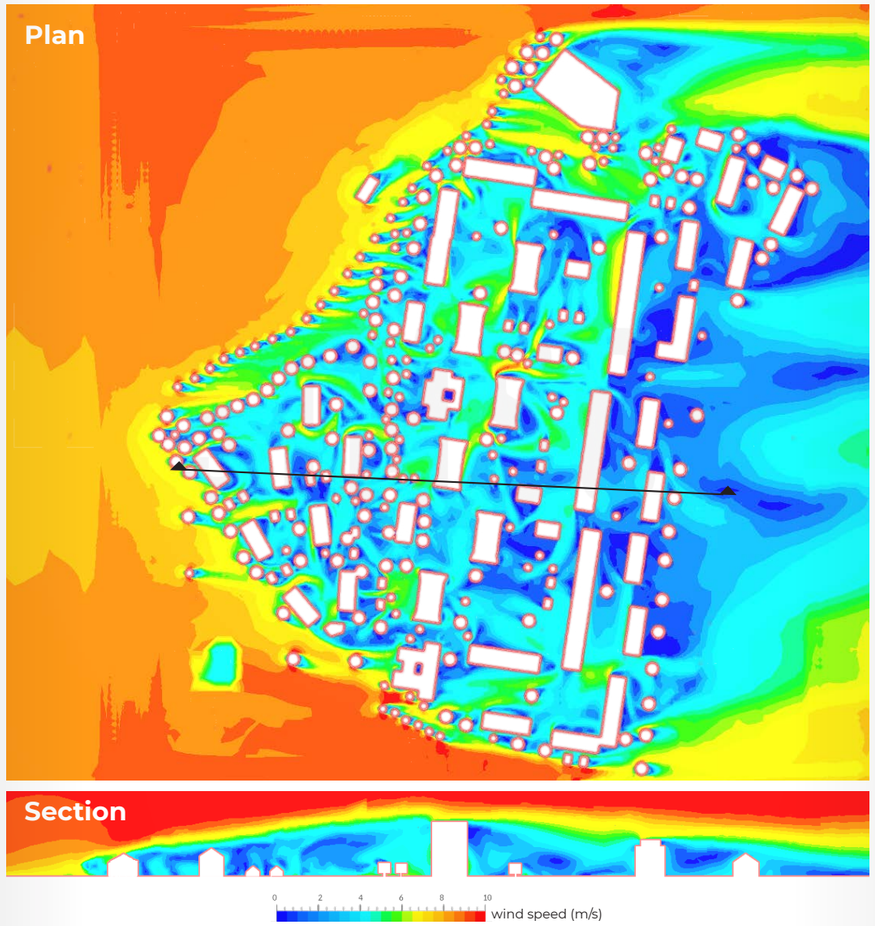
Study 1



The wind test diagrams for Almgården with the wind direction from the West and the maximum speed tested 10 m/s.

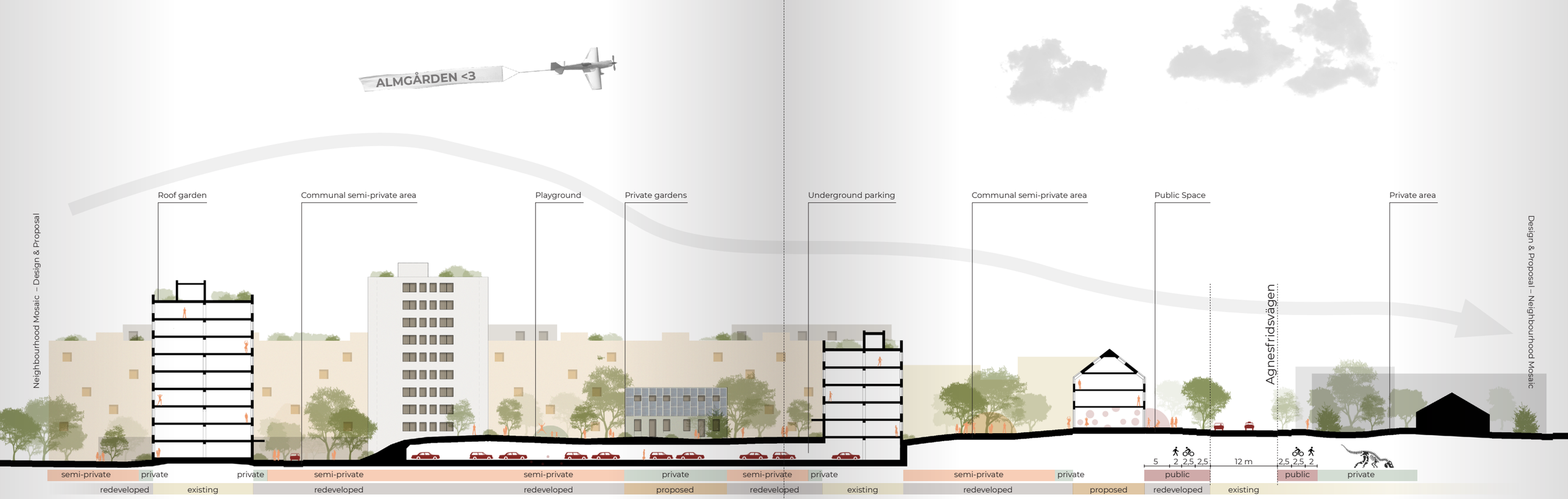
Study 1 indicates areas where additional trees and vegetation are needed to provide protection against the wind. As well as indicating that the irregular arrangement and gradual height of new buildings could help to shield the site from the wind.

Study 2



Study 2 suggests other measures to prevent wind (such as growing dense trees on the weak places of Study 1), adding more outdoor elements, such as greenhouses, or altering building orientations. Effective wind protection can help to create a more comfortable and sustainable environment for residents, as well as reducing the risk of damage to property and structures.

SECTION A-A


ALMGÅRDEN <3
Roof garden
Communal semi-private area
Playground
Private gardens
Underground parking
Communal semi-private area
Public Space
Private area
Neighbourhood Mosaic – Design & Proposal
Design & Proposal – Neighbourhood Mosaic
Agnesfridsvägen
5
2
2,5
2,5
12 m
2,5
2,5
2
semi-private
private
private
semi-private
semi-private
private
semi-private
private
semi-private
private
public
public
private
redeveloped
existing
redeveloped
redeveloped
proposed
redeveloped
existing
redeveloped
proposed
redeveloped
existing

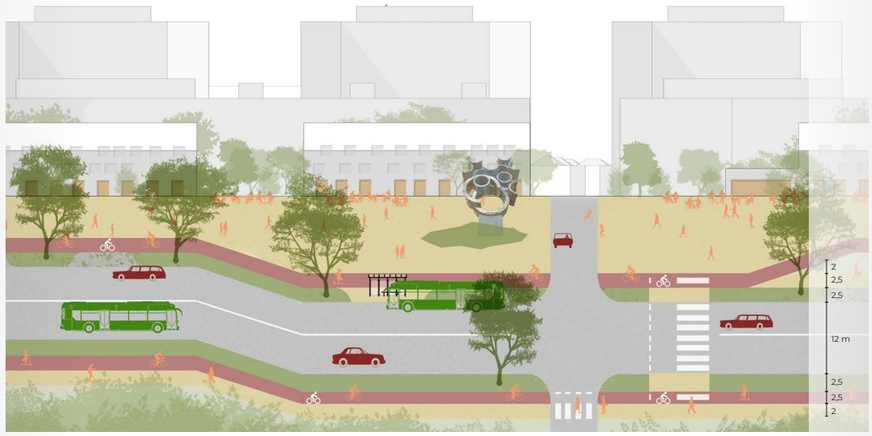
Bird View

STREETSCAPES

By incorporating different typologies, the streets become more vibrant and active, fostering better connections between various parts of the community and enhancing transit options.

The streets are designed to accommodate cars with convenient spaces for temporary parking. Additionally, the establishment of cycle access promotes a healthier lifestyle for residents. By providing dedicated pathways for bicycles, the community encourages and supports alternative modes of transportation, reducing reliance on cars and promoting physical activity.

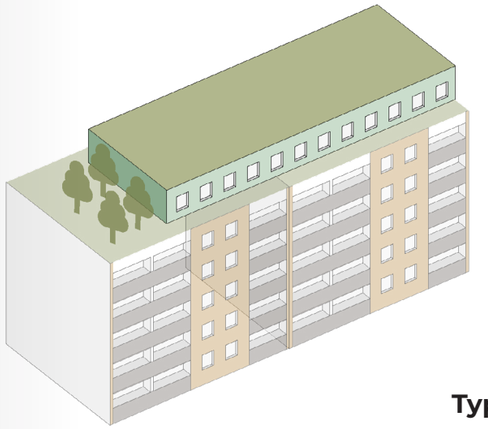
Type



Type

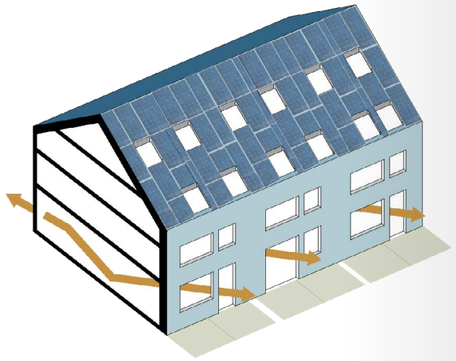
Type

Type C - Roof Extension



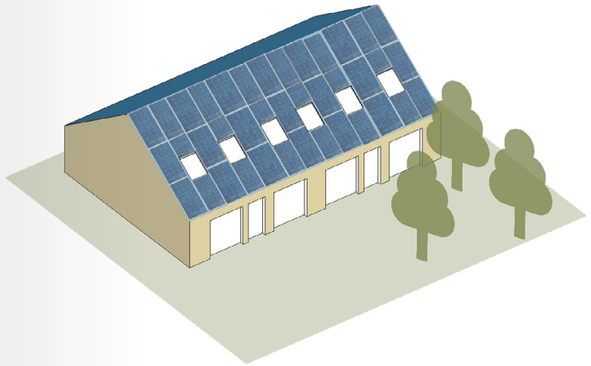
Rooftops: 8
Storeys: 1
Apartment quantity: 20
Residents: ~80

Type D - Apartment block



Buildings: 23
Sections in the building: 2
Storeys: 4-6
Apartment quantity: 630
Residents: ~1575

Type E - Row Housing



Buildings: 4
Sections in the building: 2
Storeys: 2
Apartment quantity: 8
Residents: ~32

PROPOSED TYPOLOGIES

Combining different architectural typologies on a single site creates a social mosaic by attracting various social groups. Row houses cater to more affluent individuals who value ownership, while apartment blocks with commercial spaces promote social balance and provide diverse amenities. Moreover, the utilization of rooftops presents an opportunity for property owners to generate economic benefits that can be reinvested in the improvement of the existing buildings.

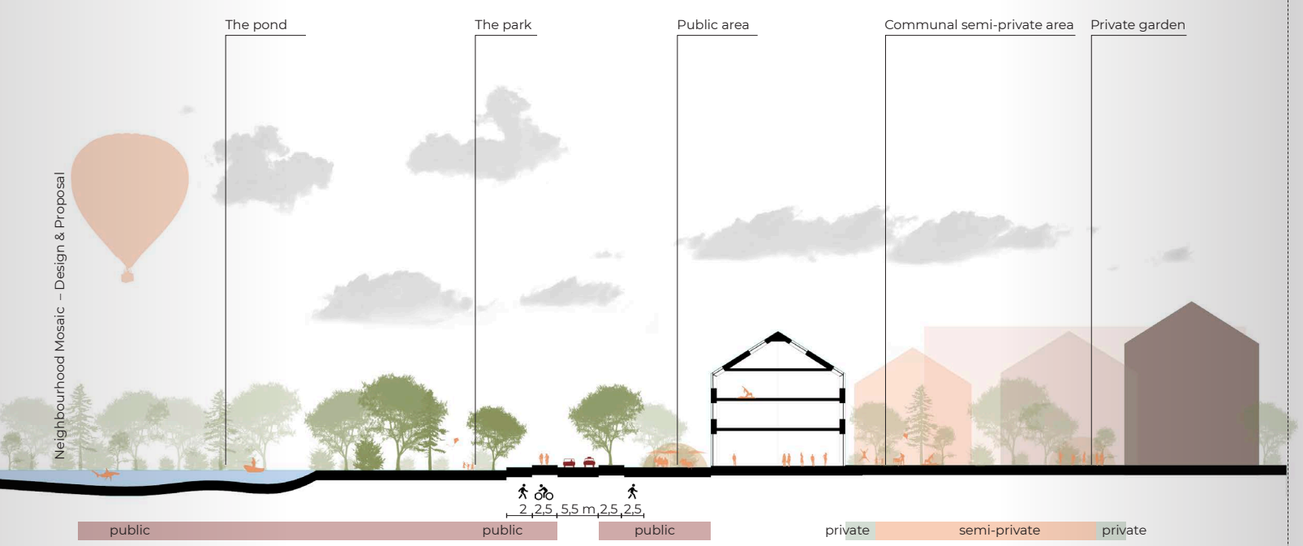
Mixing different architectural typologies on the same site creates a dynamic environment that attracts diverse social groups. The presence of row houses tends to appeal to more affluent individuals due to their ownership characteristics. These individuals are typically drawn to the idea of owning a standalone property and enjoying the associated prestige and privacy.

On the other hand, incorporating apartment blocks with commercial spaces on the ground floor introduces a variety of users and fosters social equilibrium. By reserving these spaces for businesses, the community gains access to new services and amenities while simultaneously encouraging interactions between residents and visitors. This blend of residential and commercial functions helps establish a sense of balance and vibrancy in the neighborhood.

In addition, leveraging the rooftops of existing buildings can bring economic benefits to property owners. By utilizing these spaces for various purposes such as rooftop gardens, recreational areas, or even additional residential units, owners can generate income and increase the value of their properties. The financial returns gained from these investments can then be reinvested into renovating and improving the existing buildings, enhancing their overall quality and desirability.

Assuming all units are fully occupied, the total number of residents in the regenerated area would be approximately 1677 people, in addition to the current 1800 residents.

SECTION B-B



The overall design of the site creates distinct public, private, and semi-private zones, ensuring that each area can accommodate separate activities. Specifically, the eastern part of the site is strategically enhanced with a link that revitalizes the park and the lake, drawing in various commercial establishments located on the ground floors of nearby buildings.

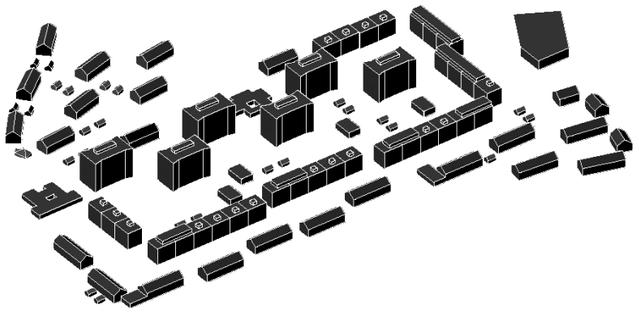
Given the tremendous potential of the park, it becomes crucial to create opportunities for all residents and welcome visitors. Residents can enjoy the privacy and exclusivity of their private gardens, while visitors are encouraged to explore and make the most of the park's offerings. By providing a balance between private and public spaces, the design fosters a sense of inclusivity and ensures that both residents and visitors can fully enjoy the area's amenities and natural surroundings.

The lovely east-south facing aspect of the site presents a highly desirable opportunity for commercial uses. The orientation towards the east-south allows businesses located on the ground floors of buildings to take advantage of natural light throughout the day, enhancing the overall aesthetics and appeal of the commercial spaces. The warm morning sun and pleasant afternoon light create a welcoming environment that attracts customers and encourages them to explore the various offerings in the area.

Additionally, the orientation offers opportunities for outdoor seating areas and terraces, providing an enjoyable experience for customers to relax and enjoy their surroundings. This can be especially appealing for cafes, restaurants, or other leisure-oriented establishments that can capitalize on the pleasant views and favorable climate.

Furthermore, the presence of commercial activities in this area has a positive spillover effect on the park and lake. As visitors frequent the commercial establishments, they are more likely to explore and appreciate the natural beauty of the park and lake nearby. This synergy between commercial uses and natural attractions enhances the overall experience for residents and visitors, creating a dynamic and thriving environment.

Park View



CONCLUSIONS & CONSEQUENCES

URBAN

The proposed regeneration of Almgården has the potential to have positive outcomes in several aspects. From an urban perspective, the creation of new connections (car, bicycle etc.) will improve the accessibility and integration of the area, making it more accessible to residents and visitors alike. The establishment of new magnets and public nodes, such as the new supermarket, cafe, and improved pizzeria, will contribute to the local economy and create new opportunities for social interaction and community building. Furhermore, the park acts as a meeting place itself, attracting more visiroes and interactions happen.

SOCIAL

In terms of social impact, the reserved mixed-use establishments on the first floors of new buildings will create new spaces for local businesses, services, and community activities. This will contribute to the vitality and diversity of the area, as well as providing opportunities for employment and skill-building. The emphasis on the creation of public, semi-private, and private spaces will also contribute to the livability and sense of community in the area. The social mix to be enhanced by inviting various new residents with diverse economic backgrounds, by establishment of new housing typologies and ownerships.

ENVIRONMENTAL

From an environmental perspective, the use of unused roofs for densification and the gradual development of building heights will enhance the green qualities of the area, as well as promoting sustainability. The emphasis on sun access and wind conditions in the design will also contribute to the creation of a healthier and more pleasant living environment for residents.

By prioritizing the avoidance of demolitions and promoting the reuse of existing buildings, the design aims to encourage long-term usage and minimize the impact of potential construction waste from new developments. This approach emphasizes sustainability by harnessing the embodied energy within the existing structures and reducing the environmental burden associated with unnecessary demolitions. It not only preserves the architectural character of the area but also contributes to a more resource-efficient and environmentally responsible design strategy.

Overall, the proposed regeneration of Almgården has to create a livable, sustainable, and socially vibrant community in Malmö.

REFERENCES

LITERATURE

Architecture 2030. (n.d.). Global ABC. Retrieved from https://architecture2030.org/globalabc/

Drottninghög. H22. (2021, June 28). https://h22.se/en/drottninghog/

European Commission. (2016). Housing in the European Union: Current Trends and Policies. Retrieved from https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-02-16-402

European Environment Agency. (2015). Urban adaptation to climate change in Europe 2016: Transforming cities in a changing climate. Retrieved from https://www.eea.europa.eu/publications/urban-adaptation-to-climate-change-2016.

Fainstein, S. S. (2010). The Just City. Cornell University Press.

Fainstein, S. S., & Campbell, S. (2003). Introduction. In Readings in Urban Theory (pp. 1-16). Wiley-Blackwell.

Hall, T., & Vidén, S. (2005). The million homes programme: A review of the great swedish planning project. Planning Perspectives, 20(3), 301–328. https://doi.org/10.1080/02665430500130233

Kempen, R. van. (2005). Restructuring large housing estates in Europe: Restructuring and resistance inside the welfare industry. Policy Press.

London Energy Transformation Initiative (LETI). (2019). Climate Emergency Retrofit Guide. Retrieved from https://www.leti.london/climate-emergency-retrofit-guide

Multicultural urban space and the cosmopolitan 'other': The contested revitalization of Amsterdam's bijlmermeer. (2006). Cosmopolitan Urbanism, 183–198. https://doi.org/10.4324/9780203504079-19

Om Projekt Drottningh. DrottningH. (2015, February 16). https://drottningh.helsingborg.se/om-drottningh/

Pelsmakers, S., & Donovan, E. (2022). Designing for the climate emergency: A guide for architecture students. RIBA Publishing.

Sim, D., & Gehl, J. (2019). Soft City: Building density for Everyday Life. Island Press.

"Statistikmyndigheten SCB." Statistikmyndigheten SCB, https://www.scb.se. Accessed 16 March 2023.

Schwiontek, E. (2016). The Garden City Drewitz in Potsdam. [online] Available at: https://www.goethe.de/ins/et/en/kul/mag/20837044.html. Accessed 18 March 2023.

Tykesson, T. L. (2002). Bostadsmiljöer i Malmö: Inventering. Del 3: 1965-1975. Malmö kulturmiljö.

Wassenberg, F. (2021). Conservation or replacement of large housing estates? experiences from Bijlmermeer, Amsterdam, the Netherlands. Adaptive Re-Use, 95–104. https://doi.org/10.1515/9783868599510-010

IMAGES

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Page 18
Tore Bergman / Malmö museum (1974) [Online] Available at <http://carlotta.malmo.se/carlotta-mmus/web/object/2022871>

Page 20
Jimmy Wigren (2019) [Online] Available at <https://www.jagersrohastcenter.se/#vision>

Page 32-33
Chris Offer (2018) [Online] Available at <https://www.facebook.com/photo/?fbid=10156076561587620&set=gm.2004311236255866>

Page 42
SMT 2023 [Online] Available at <https://projektjagersro.se/vagen-framat/>

FOJAB [Online] Available at <https://fojab.se/aktuellt/fojab-utformar-nya-malmostadsdelen-pa-jagersro/>

Page 43
Malmö Stad (2021) Planprogram 6051. Amiralsgatan och station Persborg: Från nu till år 2040 [Online] Available at <https://malmo.se/Bo-och-leva/Bygga-och-bo/Detaljplaner/Planprogram/Pp-6051-Amiralsgatan-och-station-Persborg.html>

Page 48
Benjamin Maltry [Online] Available at <https://www.propotsdam.de/ziele-fuer-potsdam/kieze-potsdam/gartenstadt-drewitz/>

Page 50
DrottningH [Online] Available at <https://drottningh.helsingborg.se/planer-2/>

Page 52
Lea Olsson and Jan Loerakker, Projectbureau Vernieuwing Bijlmermeer, [Online] Available at <https://failedarchitecture.com/the-story-behind-the-failure-revisioning-amsterdam-bijlmermeer/>

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