Degree Project in Architecture
Second Cycle 30.0 hp

FLEMINGSBERG
Under Construction

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The project explores the possibilities for more sustainable urban development by studying the impact of construction sites on the living environment and public space. The project is focused on the area of Flemingsberg, which in the coming years will be in an extensive development period with a lot of planned new construction and infrastructure. The transformation is planned to last until at least 2050, and for residents and visitors to the area, this means a major intervention in the living environment. Where cranes, fences and excavated materials define the cityscape. To create a bridge through time, the project proposes built interventions for meeting places and focus on the existing needs in the area. The project thus surveys Flemingsberg in depth while trying to create solutions that can be applied in similar situations where large building areas affect the living environment for a long time. As part of a more socially sustainable urban development.
The area of Flemingsberg will be in focus in this thesis project. Flemingsberg is a suburb located south west of Stockholm and a part of Huddinge municipality. It is a vital part of the southern commuter train line, 20 minutes from central Stockholm. Flemingsberg is diverse in terms of functions, being both a big residential area as well as a center for research, healthcare and law enforcement.
Looking at the history of the area, traces of human activity dating back to the stone age have been found. The terrain and waterways have been suitable for the establishment of settlements. In the 1400s a homestead was established, which 200 years later became the facilities for running larger scale agriculture under the name of Flemingsberg's gård. The building still lies on one of the hills and the valley below was typically farm land.

Flemingsberg is named after this homestead, and for hundreds of years the area consisted mostly of smaller farm houses and agricultural lands and forests. Around the 1910s a building company made a business of selling plots for small family houses, some of which can still be found in the outskirts of Flemingsberg. This due to the new railway line that started to connect the outskirts to the city, enabling workers to commute.

In the start of the 60s the number of residents in Flemingsberg was around 300, but this would soon change. In 1963 the first industrial complex, Billmans Regulator factory, was built, and more came after. In the 60s and 70s two large new residential areas appeared, a part of the national million programme. These housing blocks were built on both sides of the railway, in what is today called Visättra and Grantorp. The latter was planned along with the hospital Huddinge Sjukhus, since the region needed housing for staff and students at the new hospital. The housing area is characterized by its bright color scheme and careful placement in the rocky terrain between the pine trees. The hospital was as mentioned part of the same development plan and finished in the early 1970s and became the biggest both building project and health care building in Sweden. The prefabricated concrete element of which the building is constructed dominates the facades, along with blue and clear glass. These projects were a huge investment and change in the area, from farmland to housing blocks, hospital and industry.

Like similar million programme areas of the 70s in outer Stockholm, issues of socio-economic segregation arouse quite early on, partly due to the problem of finding tenants (relating to the economic change during the oil crisis etc). Noteworthy in Flemingsberg is that unlike similar areas, the vision of cultural venues, meeting spaces, large schools and a large service & commercial center “fell between the chairs”. Both the foundation planning Grantorp and the municipality thought it would fall on the other party. With the economic crisis and issue of finding tenant for the hundreds of apartments in construction the plans changed and a smaller center was opened in 1976.

Visättra on the other side of the railway multiple residential blocks were constructed at the same time. Both rentals and housing cooperatives were built, by both private and municipality companies. Therefore there is a certain variety of design and arrangement, but all with the principle of common outdoor spaces. Further southwest, lies Björnkulla which was built mainly as housing & care homes for elderly.

In the years after the million program the expansion of Flemingsberg continued, with more housing, university and research buildings like Novum which was built with connection to the hospital in the 1980s. The area Visättra ängar was developed mostly in the 90s.

Between the 2000-10s the police office, jail and later the courthouse was built below Visättra ängar and Södertorns Högskola got its new campus facilities. The need for student housing increased and thus more of it was formed in existing and new buildings.
Aprox. 6000 BCE
First signs of settlement.

1400 - 1900s
- Homesteads & Agriculture

1900 - 1950s
- Establishment of railway & housing for commuting

Early 1960s
- New industry & planning

1960s
- Start of construction & planning

1970s
- Extensive construction and moving

1980s
- Novum completed

1990s
- The south station opens & construction of Södertörn

2000
- New institutions & housing

2010s
- Housing & ICA in Flemingsbergsdalen

2020s
- Construction & planning

2030-40s
- Construction, planning & new station?

2050s
- Completion of Flemingsbergsdalen?
Today about 15,500 people live in the area, the main housing form is that of the million program era, some newer apartment buildings and some smaller areas of one family houses. 90-100% of the housing is located within 300m from green areas, such as small parks and forests. The average age is 35, and the employment rate is 64% (between the ages 20-64). The mean income is lower in comparison to the Stockholm region as a whole and the higher education rate is slightly below average.
Flemingsberg has for the past years been developed further and plays an important role in the infrastructure of outer Stockholm with a railway station, hospital, university, research facilities and law enforcement offices. Flemingsberg is relatively divided by functions, consisting of sole residential areas, the nature reserve, an industrial area, and the hospital and university area (See Fig.01 & Fig. 03). The main road and railroad acts as barrier between the Flemingsbergs center (which is Grantorp, the hospital, university and local supermarket) and the industrial area and Visättra. The terrain also creates certain borders, framing Grantorp on top of a hill, dividing the industrial area from Visättra. There are two main crossing over the railroad, one for cars connecting to Hälsovägen and Huddingevägen, the other a bridge for pedestrians which connect the police house to the station and further to Södertörns Högskola.

Another important part of Flemingsberg is the nature reserve which lies in the south east part behind the housing blocks and sports center in Visättra. The reserve is important as a place for leisure in the area and also acts as a connection between other forests in the Stockholm region.

“The forth urban revolution city has many names. Ruhr, città diffusa, desakota, banlieue radieuse, zwischenstadt, agropolis, rurbanisation, the dilution of architecture, postmetropolis, planetary urbanity, mongrel city, the horizontal metropolis, orten, sprawl.” – L Raattamaa, fjärde urbana revolutionen, s. 14.
To conclude, Flemingsberg is a complex part of Stockholm's urban sprawl, not quite a suburb not quite a city.

“Hälsovägen cuts like a straight line between two Flemingsbergs. I don’t see anyone crossing it. The crosswalks are empty. On the right side is the workers’ city and on the left side the knowledge city.” - Per Wirtén, 2010, p. 17.
Flemingsberg is as mentioned important to the infrastructure of Stockholm and named as a regional city core in Stockholm regional development plan, RUFS 2050. This has led to further plans of development, with the goal of 50,000 residents and 50,000 jobs in Flemingsberg by 2050. The development will be focused in the current industrial area along the railway and through densification of existing neighborhoods. A big part of the development is the new infrastructure, one being a light train railway to Skärholmen (going through the center of Flemingsberg) and a highway (along the edge of Flemingsberg and the nature reserve) towards Nynäshamn. To conclude, the area has changed a lot since the 300 inhabitants in the 1960s, and is now on the verge of another big expansion.
Flemingsberg’s future development plans, as outlined in the RUFS 2050 regional development plan & Huddinges planning programme, hold many promises for the area’s transformation. However, it is crucial to recognize potential challenges. The current lack of cultural and leisure spaces in Flemingsberg is still not answered. While the relocation of the library and youth centers to the new Fleminghall may contribute to a sense of center, it raises questions about the impact on existing neighborhoods that will lose their current meeting spaces.

Furthermore, since most of the land intended for exploitation in today’s industrial area is being sold off from the municipality to investors. For the planning office this in reality means that detail planning will be held in dialogue with investors, whose primary responsibility lies with stockholders, rather than the current residents of Flemingsberg. This dynamic raises concerns about ensuring the promises of investing in public life and cultural venues. It is important to bridge the gap between visions and actions. Through the thesis project I therefore wish to question this by bringing back the focus on what should not be forgotten in future planning, current residents. Trying through architecture to articulate the discussion of long term developments impacts on the public space and possible solutions.

Additionally, addressing the sense of safety in Flemingsberg and creating comfortable atmospheres is crucial. While the proposed development plans aim to improve connectivity by establishing a clearer center, there is a risk (even stated in municipality documents) of further dividing Flemingsberg. This will particularly be seen during the extensive construction period. What does 30-40 years of living in a construction site mean?
THESIS QUESTION

How to improve the sense of public space and community around construction sites during extensive development projects?

Answering to current needs and public interests in a planning process that currently seems to be driven more and more by other interests.

“— but today’s urban planners face an existential crisis: if the city is an investment strategy, are they just wealth managers?”

- Samuel Stein, Capital City

“What’s buildin’?”
Purpose

The project aims to study the existing and planned built environment in Flemingsberg, Stockholm to better understand the effects on the spaces after and especially during the construction process.

In coming years the area will be in an extensive development phase with a lot of planned new construction and infrastructure, which poses a lot of questions of how the area will change but also how it will be for the current residents during these long years of construction. The thesis will investigate this and aims to form a dialog with residents and municipality on what qualities can be preserved and what possibilities lie in making interventions in the construction landscape that will form in coming years. The purpose of the interventions is to create temporary meeting spaces for culture & leisure (both public & commercial), aiming to strengthen the sense of public space during the construction period.

Method

The method could be classified as a theoretical case study. Investigating the area of Flemingsberg from multiple perspectives, with careful registrations of spaces and mappings of spatial qualities. Thereafter, a mapping of developments, recent and planned construction. Through an in-depth study of Flemingsberg and planned construction sites the project will try to identify relevant forms of interventions. Supported by relevant literature, architectural references along with documentation & reports on the area.

Limitations

Sites

The thesis project focuses on the two main residential districts of Flemingsberg, Grantorp & Visättra and the land which connect the two, which is the industrial valley currently under redevelopment. As seen in fig. 02 both the valley and Visättra will be under extensive construction the coming years. Grantorp on the other hand will not be densified in the same manner as Visättra, likely due to the areas marking as cultural value, and previous plans of new housing in near proximity have been changed. It can also be argued that more effort has been spent on parks and general upkeep of the public space in Grantorp, than in Visättra. Therefore the main effort of this project is on Visättra and the valley, with at the same time the goal to tie them together more. Thus the interventions in Grantorp have a relation to current construction though not as extensive as it will be in Visättra. But the ultimate aim of the project being to take the interests of current residents, making them feel heard in this process both areas are very much relevant in the project.

In further work with this principle, it could easily expand with more interventions in neighboring residential districts such as Björnkulla, and the road along Kästa where the construction phases will also have a great impact on the living environment.

Program

As with the limitation of certain areas, the amount and variety of programs and interventions had to be set. After studying compilations of citizen dialogues, spending time in Flemingsberg as well as looking at personal experience, there are multiple things that are of interest to the public. For this project however I had to focus on those that were reoccurring as well as could in a positive way give temporary space for certain activity or function, since the base of the project is the non-permanence.

One example of this is a place for community planting, which would be suitable in both neighborhoods, however this is better suited as a permanent investment. While the interventions can be temporary substitutes for coming building the idea of creating a community around a garden that will be removed was less suitable. To summarize, the program does not fulfill all interests. The idea is instead that the different interventions could be rearranged or have multiple uses and push understanding of what needs to be a part of the permanent development plans.
CONSTRUCTION

Development stages
Estimated years of completion

- 2020s (Current construction)
- 2040s
- 2060s

Road and railway projects

Fig. 02: (Based on planning & data from Huddinge Kommun & Trafikverket)
Images from current construction in Flemingsberg, February 2023
FUNCTIONS

Functions

- Housing
- Temporary or specialized housing
- Education (all levels)
- Public functions
- Public institutions
- Commercial, service and industry
- Other (parking, transport, service buildings)
PROPOSAL

The project consists of 5 types of built interventions as well as public furniture.
The interventions represent different forms of gathering spaces for culture & leisure, both public and commercial programs.

**Information center:** Space for exhibiting the future plans, for sending in thoughts on the plans etc as well as a viewing tower. Here you will also find information on the city fragments, their timeplan, location and events.

**Club & bar:** The club offers outdoor dancefloor which can be used during daytime and by night the interior opens to a bar and club. A meeting space for the many young adults and students in Flemingsberg.

**Kiosk:** The kiosk is a place for commercial service/sales and informal meeting place. Which can be in the form of a typical street food place or rented for other businesses or civil society.

**Library:** Compact library serving as a local compliment to the current library which is currently moving location. The library will be unmanned and accessed with the local library card. The outdoor patio also creates seating.

**Theater:** A place for rehearsals, workshops and showcases. The theatre will function as a public building for the municipalities culture school which can also be rented by the public.

**Furniture:** The furniture can take different forms, the project presents three suggestions for seating, display & lighting and recreation & play.
TEMPORALITY

Time is of the essence in this project. The construction of the development plans will take a relatively long yet limited time, during this period the proposed interventions will be assembled and disassembled around Flemingsberg.

Movements and change of interventions relates to the current construction at the time, as well as to the specific function of each intervention. The project is mapped out in fig. 04 (the colors represents time of assembly/movement) and this translates to the timeline in fig. 05.

The project is not intended as a permanent proposal, or a utopia. But rather to question the current way of planning, somewhat disconnected from site and public life. The interventions are a suggestion of what an intermediate stage could look like in city planning. Where these artifacts can temporarily fulfill more permanent needs in the stage of planning and construction of the future.

The vision would be that this principle could be adopted by the municipality, as a part of their strive for a more socially sustainable city development. While also setting demands of some of financing and collaboration with the companies that want to buy land and develop in the area. The project would then be a part of the city planning system, a way to more directly connect to residents. A more hands on citizen dialogue, where previous dialogues set the initial frame of the design project, and then the interventions set the starting point for further discussions between residents and municipality.
Schematic timeline over the interventions placing and moving in Flemingsberg.
Photos of some of the selected sites
Information center 01

Initial site next to the intersection Hålsövägen & väg 226 on a pedestrian walkway connecting to the train station.
INFORMATION CENTER

Current construction
Siteplan A, Information center 01

Construction at the time
Siteplan B, Information center 02

Construction at the time
Siteplan C, Information center 03

View of current pipe work at the location for Information center 02
INFORMATION CENTER

Information center 01
Crossroads Hälsavägen & 226

The information center offers space for exhibiting the future plans, for sending in thoughts on the plans & a place to discuss the future. It also acts as a viewing tower.

This is also where you will find information on the temporary interventions, their timeplan, location and events.
Schematic isometric drawing of assembly
ELEMENTS

Building components

Concrete base

Steel pipes: Ø - 40 mm
- Cold formed construction steel

Steel lattice frames:
- ranging from aprox. 1.2 - 9 m.

Wood pillars:
50x50 mm

Plywood walls:
- Weather protected boards
- 2400 x 1200 mm / 1200 x 1200 mm / 2400 x 600 mm
Used as single sheets and sandwich elements.

Windows:
- Wood frame & insulating glass
- 2400 x 1200 mm / 1200 x 1200 mm / 2400 x 600 mm / 1200 x 600 mm

Plywood floors & roof:
- Weather protected boards
- PIR insulated sandwich elements

Pressed metal sheet floors:
- For outdoor flooring

Metal sheet roofing
All the interventions are constructed in a light element system of plywood walls and an outer steel pipe structure. The idea is to use affordable and common materials that can easily be assembled and disassembled during the development time. They should also allow for a flexible system, where plans can be rearranged and elements replaced or removed.

The aesthetic then plays on the idea of scaffolding, like in the surrounding construction sites, while the colors and warmth of the wood brings an approachable playfulness to the interventions.
Visualization of information center stair & façade.
Information center facade in section through site
INFORMATION CENTER

Visualization of information center stair from pedestrian bridge

Plan, entrance floor
OVERVIEW

Project map

Interventions marked according to the time of assembly and movement within Flemingsberg. This also in relation to ongoing construction and so forth.
Nightlife is at the moment not on the top of the municipalities wish list but on many of its young residents, currently there are a few student pubs in the campus area, and some events in the local pizzerias. A central bar and club allows Flemingsberg to be more active around the clock.

The club offers outdoor dancefloor which can be used during daytime and by night the interior opens to a bar and club. A meeting space for the many young adults and students in Flemingsberg.
Below Regulatorbron
Program: Bar / Club / Public dance floor

Construction at the time

Siteplans of club and construction development around site
View of entrance to the bar.
Plan of Club 01

View of bar interior, facing the connection to the dance floor
KIOSK

Visättra Centrum, previous location of a kiosk that burnt down in 2019.

Program: Kiosk

The kiosk becomes an informal meeting place for local commercial service. Positioned as a temporary replacement for the old one which burnt down in 2019. In the semi-urban fabric it is a common typology, popping up in the streets. Gathering people on their daily routes.
KIOSK

Plans of kiosk variations

01

02

03
LIBRARY

Path behind the police building towards Visättra
Program: Compact library

The library will serve as a local compliment to the Flemingsberg library which is currently changing premises. A place to stop on your way home from school or work to borrow a book or rest on the patio. The library is accessed through a personal library card. It will change location every five years.
LIBRARY

Plan

Interior view, library
Model photos, built in 1:100
OVERVIEW

Project map

Interventions marked according to the time of assembly and movement within Flemingsberg. This also in relation to ongoing construction and so forth.
THEATER

Parking garage on Sågstuvägen in Visättra

Program: Theater

The theatre consists of one heated space, with the stage & backstage area. This will function for rehearsals, workshops and smaller showcases during the cold months. The other part is the light structure attached that can be pulled out, expanding the theatre for a larger audience.
THEATER 01

Isometric drawing of theater expansion
Exterior view of the expanded theater.
DETAILS & FURNITURE

Furniture 01, Seating

Furniture 02, Display & lighting

Furniture 03, Recreation & play

Wall & window detail in plan

Base detail, isometric

Floor detail in section
FURNITURE

Intersection between Kvarnängsvägen & Regulatorvägen.

Program: Furniture for seating

The furniture like the larger interventions will move around the different routes and construction in Flemingsberg. Making space for seating and play as well as places to display information, art etc. Aiming to create this bridge in time for the current residents in a Flemingsberg that’s under construction.
Huddinge Municipality:
https://www.huddinge.se/stadsplanering-och-trafik/huddinge-bygge/sydsvastra/flemingsberg/#Webbplats-for-Flemingsberg
https://www.huddinge.se/op2050/inriktningar-for-geografiska-omraden/regionala-stadskarnor-och-utvecklingsomraden/flemingsberg/#Flemingsberg-%C3%A5r-2050
https://www.huddinge.se/bjornkulla
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https://karta.huddinge.se/spatialmap

Stadsplan för Västra Flemingsberg II, 1971
Huddinge & Botkyrka Kommun, (gh 2022).
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Kulturmiljöanalys Flemingsbergdalen.
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Befolkningsundersökning.

Other websites:
https://stockholmslansmuseum.se/platsverkstan-i-flemingsberg/#content
https://archive.is/20130418103832/http://www.webbhotell.sll.se/Kultur/kanal-i-landstinget/Projekt/Karolinska-Huddinge/
https://flemingsbergscience.se/sv/2020/12/18/saablenovum-tillkyrkan-mitt-byn/
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Litterature:
Raattamaa, L. (2020), Den fjärde urbana revolutionen. Modernista
APPENDIX

Selection of process sketches