Hej Stacken


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1. Introduction

1.1 Project Description

Our project aims to explore potential renovations of the collective house Stacken, built in Bergsjön, a suburb in Northeastern Gothenburg, during the Swedish Million Homes period. The changes aim to reinvigorate Stacken’s spirit of collective living and increase its sustainability. This work has been made in cooperation with and based on the ideas of the residents of Stacken.

The residents have expressed interest in making large-scale changes, in part because the house needs renovations and the spirit of their collective has fallen in recent years. Because of the themes of this course, we have placed particular emphasis on collaborative communication and have used the ideas and wishes of residents to inspire our work. We also therefore see our renovation proposals as only suggestions to inspire and guide Stacken’s future development.

With diverse backgrounds in architecture and engineering, we have personally chosen this project out of interest in cohousing, residential design, and sustainability.

1.2 Methods

Over the course of our project we have communicated with Stacken to understand their challenges, needs, and wishes through an idea box, workshop, and blog. The workshop involved several different interactive methods to encourage residents to reflect on and discuss their lives in Stacken and wishes for improvements. To better understand the background of co-housing in Sweden and the particular history of Stacken, we have referred to a variety of first and second-hand information sources including diaries, videos and interviews. In addition, we have used information from an energy workshop and kitchen survey recently conducted by Stacken members.

We have also considered the physical and legal constraints of building extensions from information gathered from the City District Office about the land use plan (detaljplanen) and consultations with the original building engineer, Helmut Junkers.

1.3 History of Swedish Co-housing

Co-housing and community life, as a utopian, sociological experiment has been discussed for hundreds of years by European philosophers as a way to reform society and promote gender equality (Caldenby 1992).

The first wave of cohousing in Sweden began in the early 1900s as an economic alternative to private servants for middle-class families with central kitchens and shared staff. In the 1930’s, co-housing rose in popularity as a way to improve general living conditions and lessen women’s chores (Vestbro 1979 and Vestbro 1982).

In the 1980s, the BiG group (Bo i Gemenskap) developed the concept of co-housing for social improvement and Swedish urban development, in which individual apartment space was minimized and common space was maximized with shared cooking, dining, and childcare facilities. Co-housing became a way to make everyday work easier and more enjoyable, in addition to reducing energy consumption and housing expenses.

Today there are 43 co-houses (2000 apartments) in Sweden and more are being planned because of growing public interest.

1.4 History of Stacken

Stacken was constructed in 1969 as part of the Swedish Million Homes Project and is located on Teleskopgatan in Bergsjön. Because the focus at the time of construction was economy and efficiency, Stacken embodies a new star-shaped design and, at the time, newly invented prefabricated concrete construction scheme.

After being used originally as an apartment building, was used as an building until the 1970s when it was converted into apartments. When the housing crisis saw low occupancy in the late 1970s, the municipal company converted Stacken into a collective, a process that included changing apartment layouts to increase residential options. The changes were undertaken with input from residents and Chalmers Architecture. Stacken has remained a co-house since, but in 2002, Stacken residents formed a cooperative and purchased the building from the municipal company, giving themselves full self-ownership and decision-making control.

Today it is home to about 80 people (60 adults and 20 children) with 35 apartments on nine floors. All adult residents are members of the Stacken Association and responsible for participating in working groups and annual workdays organized by a four member board. In return, members have full access to a number of shared spaces on the ground and fifth floors.
2. Project Process

- **Preparation Phase**
  - W. 46: Study visit
  - W. 47: Collect idea box
  - W. 48: Idea box

- **Workshop Phase**
  - W. 49: Mid-handin
  - W. 48: Workshop

- **Designing Phase**
  - W. 49: Study visit
  - W. 50: Evaluation of workshop
  - W. 51: Choosing focus areas

- **Final Submission**
  - W. 50: Division of work
  - W. 51: Consultation with experts, engineer, architect etc.

- **Exhibition**
2.1 Study Visits

Majbacken - Majorna

We visited the co-house Majbacken at Chapmanstorg in Majorna and met with two members of the board who gave us a tour and shared their stories with us.

The eight story building was built in 1956 as an apartment building for elderly people run by the city administration. Originally all apartments were one room and kitchen. In the 1980s an extension was built on the ground floor to house a new dining room and kitchen. The rest of the bottom floor was converted into other services for the elderly including home-service office and foot-care.

In 2004, the collective Majbacken was formed and was slowly converted into a collective apartment by apartment. Some of the ground floor spaces were changed into common rooms, including a movie room, meeting room, guest room, library, gym and workshop.

Mandatory participation for residents is two-fold: cleaning common areas and cooking. Food for shared cooking is bought locally and is often organic. Residents also share cars and have discussed buying a collective electric car.

The kitchen and dining room are integrated into one multi-functional space and get large amounts of natural daylight through large glass windows. All common spaces feel very inhabited with hand-made art, flowers, and pictures.
BiG Kornet - Mölndal

BiG Kornet is a newly built, 11-story collective house in Mölndal, outside Gothenburg. Unlike Stacken, Kornet was designed with the intention of being a collective house, with common spaces on the ground and top floors planned from the beginning. On the bottom floor there is a kitchen, dining room, large living room (divided into different sections), workshop, office and laundry room. On the eleventh floor they have a TV room, sauna, jacuzzi, guest rooms, gym and terrace. There are 44 apartments ranging from 1 room and a kitchen (40m²) to 3 rooms and a kitchen (70m²).

There are no specifications for new residents, but because the collective prefers not to have children in the house the majority of tenants are over 40 years old. All tenants at Kornet are members of a cooperative that rents the building from Mölndal’s municipal housing company and are required to participate in regular house maintenance and common cooking.

Kornet is a useful case study for potential changes at Stacken, particularly in the division of common spaces between the ground and top floor, with the most essential and frequented rooms on the ground floor. Additional inspirations include the multi-functionality of the dining room and openness to the outside (through large windows and doors). Also, the success of mandatory common cooking at Kornet suggests that it could also be possible at Stacken, especially with improved kitchen and dining facilities.
Teleskopgatan 4-14 - Bergsjön

We have also visited two housing associations that own neighboring buildings on Teleskopgatan. All of the houses on Teleskopgatan were built at the same time with the exact same design and construction method (prefabricated concrete slabs). These study visits show both a comparison of similar buildings to Stacken that are maintained by an external company and examples of renovations and extensions made to buildings structurally the same as Stacken and regulated under the same land use plan.

Brf Teleskopet (images below)

Brf Teleskopet owns five houses on Teleskopgatan which is run by an elected board and has a 30-year maintenance plan with the company Riksbyggen. However, the association does organize twice annual working days for the tenants to participate in outdoor maintenance.

Past building renovations include windows, replaced prefabricated elements, façade repainting and façade renovation for energy conservation. Today tenants pay for electricity by area, but Teleskopet has calculated that they could achieve energy savings up to 34 percent with individual electric metering.

Common spaces are shared between the five buildings and include a laundry, saunas, a gym, and storage spaces. All five houses have external storage sheds that were built in the 1990s.

Brf Teleskopgatan (images above)

Brf Teleskopgatan owns one building on Teleskopgatan that they purchased newly renovated in 2006 from the real estate company Västerstaden, who previously bought it from the municipal housing company. Renovations included an extension on the roof to allow for the construction of three two-story luxury duplex apartments. Shared common spaces include a guest room, board room, garden storage, laundry, and external garbage station.
2.2 Idea Box

The first step in creating communication and interaction with the residents of Stacken was to make an idea box. We wanted the residents to write down and draw their thoughts on the future of Stacken, the conditions today and the changes they would like to make. The task was very open and meant as a general introduction to our process with Stacken.

We introduced Stacken to our box and project with information posters on site that showed the dates the box would come. The president also mentioned us and the box at the prior monthly meeting and we made a post about it on our blog. When we brought the box we had a "cosy night" with fika to encourage people to place ideas in the box. Two of us also attended a working day where we presented the results of our urban farming week to further inspire ideas.

The idea box was located in the common dining room to which every resident has access. After about ten days we collected it for analysis. Results from the boxes are summarized in the graph below. Main ideas were sustainability, renovation of the common spaces, maintenance, and communication.

<table>
<thead>
<tr>
<th>IDEA BOX SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sustainability</strong></td>
</tr>
<tr>
<td><strong>Growing</strong></td>
</tr>
<tr>
<td><strong>Greenhouse</strong></td>
</tr>
<tr>
<td><strong>Alternative Energy &amp; Conservation</strong></td>
</tr>
</tbody>
</table>

2008-11-18 16:00

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2.3 Workshop

To gather information on the residents’ use of and ideas about their common spaces we arranged a workshop at Stacken. We also invited two guests to the event: original building engineer Helmut Junkers and architect Siv Carlsson who participated in the renovations during the 1980’s.

In total, about 20 people participated in the workshop. Some of them dropped off while others joined later in the day. The day was divided in five parts: movements, mental mapping, garden and roof discussions, post-Its and conclusion.

**Movements**
The first task was to map out everyday movement in the building based on normal daily activities. This was done by handing out sheets with different rooms of the building, including private and common spaces. The participants drew lines between rooms based on how they spend their day. They were also able to write down comments on how they use these rooms.

**Mental Mapping**
The task at this station was to map out the existing qualities in the common spaces of the fifth floor. By handing out symbols representing different qualities (noisy, too big, etc.) the participants walked around and placed the icons where they found them fitting.

**Garden and Roof Discussions**
This station was located outdoors. The purpose of this task was to find out where the residents wanted to garden, where and for what they wanted to build an extension and what they wanted to do with the roof. This station was mostly based on discussions.

**Post-Its**
To gather more specific information and thoughts about the current situation we placed a “comment station” on the ground floor. Participants could put up post-Its with ideas and comments about the existing common rooms and their functions.

**Conclusion**
We ended the workshop by discussing what we discovered during the day.
2.4 Additional Stacken Communication

Kitchen Survey

A Stacken resident recently completed a kitchen survey with 55 other tenants. The survey asked a series of questions about interest and challenges to common cooking in the building. The results suggest that less than 50 percent of Stacken residents want mandatory cooking. This is less than the 2/3 majority required for Stacken’s democratic decision making process.

At the same time, the survey concludes that the main challenge with common cooking is lack of organization and participation. The layout of the kitchen and dining room is an additional problem pointed out. Noise is also an issue.

However, it is possible that with the existing interest in common cooking and improved facilities Stacken could adopt collective meals.

Energy Workshop

Stacken organized an energy workshop last year and the board has shared the results of this workshop with us. Many of the ideas that arose from this meeting match the comments we have received from the idea box and workshop. In addition, many of their thoughts match the ideas that we developed during our course’s urban farming week, when we explored the idea of Stacken becoming self-sufficient in energy and food production. See section 9 for our posters from the urban farming week. Because we have focused on construction changes in our design suggestions, we have not included many of the less architectural ideas here. However, we still feel that they hold potential and should be implemented by Stacken.

Blog

As a part of our communication strategy we launched a blog to inform the residents of Stacken and the general public about the progress of our project. We have posted information about our study visits, important dates and general information about our course, Design and Planning for Social Inclusion.

The blog is meant to remain as an information site and documentation of this assignment after we have completed our project.

The address to the blog is www.hejstacken.wordpress.com
3. Stacken Today

Today the common spaces are separated between the ground and fifth floor.

From the idea box and workshop, we have heard complaints from the residents about existing common spaces. Main concerns with the fifth floor areas revolve around general quality, poor maintenance and being physically closed to the staircase and between rooms (no windows and doors are always shut), discouraging informal use of the spaces. Specific complaints include bad lighting, poor sound insulation and space allocation. As a result, residents spend the majority of their time in their apartments, even to socialize, and rarely make use of the common areas. However, there is interest in using common spaces if they would be improved.

On the ground floor, residents were overall quite pleased with the laundry room and sauna, which have been recently renovated. However, they were generally unsatisfied with the entry hall and entrance and would like more storage space (possibly divided by apartment) and renovations to the café. Many acknowledged that the workshop and photolab are generally under-utilized for their size.

Floor plan of the 5th floor
4. Construction Constraints

4.1 Structural Constraints

When Stacken was built in the Million Homes Period, the main goal of construction was to limit costs with structural efficiency. As a result, Stacken was largely constructed with pre-fabricated concrete panels and slabs (newly invented during the time) which were very efficient economically and structurally in 1969, but allow for only limited structural modifications today.

We have consulted the original building engineer, Helmut Junkers, who has identified walls that are load bearing and cast in-situ. Because modifications to these walls are difficult and expensive they should be limited.

Junkers also advised that should openings be made in external load bearing and cast in-situ walls, it is best that they are made in the same placement as the windows on the floors above.

4.2 Land Use Plan (Detaljplan)

We have reviewed the land use plan for Bergsjön in consultation with a Gothenburg city architect at the City District Office. The plan, which has remained unchanged since Stacken was constructed in the 1960s, specifies the property line and construction limit for building extensions. According to the city architect, any building additions outside of the land use plan require a change in the land use plan, a process that, if approved, requires considerable time and money. The current construction limit is only 1.5 meters perpendicular to the building wall at each apex forming a tight pentagonal shape around the star building outline.

The land use plan also allows a small, unheated (15 square meter) additional building on site (friggebod).
5. Design Section

5.1 Introduction

We have created two suggestions in response to the information we have gathered from Stacken residents over the course of our communication with them. The following designs reflect our interpretation of the most important needs and wishes of Stacken in the development of their house as a collective.

The main motivation of both suggestions is to make the common spaces more accessible and transparent, encouraging spontaneous and organic use. This is achieved by moving the fifth floor common spaces to the ground floor, designing multi-functional spaces, and making physical openings in non-load bearing walls and minimal openings in load bearing walls.

To make space for these additional rooms, the ground floor is extended. However, the land use plan as it stands today restricts the allowed size of such an extension. As a result we have decided to make two design suggestions: one that stays within the existing land use plan and one that assumes a change can be made to the land use plan and extends the building further.

Both suggestions also reflect the interest in sustainability and growing with an added greenhouse and increased accessibility to the outdoor garden and growing allotments. Interaction with the outdoor space and natural light is also increased with large glazed windows and doors in the new extension. Because we have concentrated on the construction changes, we have not included other sustainability ideas that we received, such as alternative energy or facade growing.

We have also acknowledged the structural restrictions of the existing structure as explained by engineer Junkers. Our design suggestions thereby seek to provide new spaces while minimizing the modifications to the existing structure both to ensure structural stability and reduce the costs of renovation.

In both suggestions the common spaces on the fifth floor are converted into apartments. The rental revenues from these new apartments could then be used to finance refurbishments and new building additions.
6. Suggestion A

6.1 Introduction

This suggestion follows the existing land use plan with a small greenhouse addition on the ground floor and rearrangement of common spaces inside the existing ground floor boundaries. Because this space is quite restricted, this suggestion also includes an extension of the attic to an additional floor with extra common rooms. Because the most essential spaces are fit into the ground floor, the new roof floor is an additional option that could take place at a later time once sufficient funds are collected.
6.2 Ground Floor

This plan shows an arrangement of essential common spaces on the ground floor with a small extension. The choice, size and placement of common rooms in this plan reflect the space limitations of staying within the land use plan.

Some rooms in the ground floor are unchanged.
- Laundry
- Sauna
- Storage

This proposal adds two larger multi-function common areas. The south-facing café with an open kitchen and side dish washing room creates a more casual, living room feeling. The attached play or reading room encourages multiple uses and allows children and parents to share the common space at the same time (parents can monitor children while cooking or socializing in the café). Direct access from the kitchen to the greenhouse and garden allotments facilitate the growing of kitchen vegetables and herbs. The West-facing dining room is also multi-functional and can be additionally used for meeting, movies or games. Both areas have easy access to the new greenhouse to encourage gardening.
- Dining room
- Café
- Kitchen
- Playing/reading room
- Greenhouse
- Toilet

Several existing common spaces are modified to fit the new common spaces. Note that the bicycle storage has been removed from the plan but could be added as an external building (friggbod).
- Workshop
- Garbage
- Entrance with windbreak

Interior perspective

Ground Floor Plan
6.3 Roof Floor

Because of the limited ground floor extension, this suggestion includes an addition on the roof floor with more common spaces. These are additional and therefore do not require elevator accessibility. The current ventilation and elevator control rooms in the existing roof space remain where they are and the additional rooms are built around them.

New common spaces include a multi-functional room with office and living room sections that can be divided with a temporary wall for meetings or casual movie gatherings. There is space in the office for storing the Stacken archives which are currently kept in the storage room on the ground floor.

The roof floor also includes a large guest room and a multi-purpose space with a small kitchenette for guests or smaller gatherings. The rest of the space is divided between an unheated greenhouse and an external terrace. Despite the greenhouse being unheated, the physical protection from the outdoors still works to prolong the growing season. It can also function as a café during warmer seasons. Because this space is unheated, insulation is added to the floor (hence the stairs up from the staircase). The terrace can be used for growing and recreation in summer.

**New rooms on the roof:**
- Guest Room
- Office
- Bathroom
- Living Room
- Multi-purpose Room
- Greenhouse
- Terrace
7. Suggestion B

7.1 Introduction

With a change of the land use plan, the ground floor can be extended beyond today’s border. This will now only allow the move of fifth floor common spaces to the ground floor, but the new land use plan also allows new rooms to be added in an extension. The café and dining room, among the other new rooms, are placed in the new extension. While the extension to the West is unbounded by the land use plan is it kept moderate for economic reasons and to limit intrusion on the garden. The extensions to the south are more narrow to respect the property line and to integrate with the sidewalk.
7.2 Ground Floor

This plan shows space allocation in the proposed new ground floor, where functional existing common spaces are mixed with new and modified spaces, according to the comments we have heard.

The rooms that the residents were happy with are unchanged. The grey lines in the storage area suggest space allocations for individual storage by apartment as requested during our workshop.

- Laundry
- Sauna
- Storage
- Garbage room and garden tool storage

All common rooms on the 5th floor are moved to the ground floor:
- Kitchen & dish washing room
- Dining Room
- Play room with toy storage
- Guest room

Several existing rooms on the ground floor are modified. The workshop is smaller because of temporary use by only a few residents. The café is enlarged because of its popularity and the widespread desire for an improved café. The bicycle storage room is moved and modified to have enough space for 34 bicycles.

- Workshop
- Café
- Bicycle Storage Room

New rooms are added. Following strong interest in sustainability we have added a green roof to the western extension, additional garden allotments to the south, and the new southern greenhouse extension.

- Green house
- Office
- Entrance lobby with windbreak
- Outdoor patio on the west and small patio on the south

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**Interior perspective**

**Ground Floor Plan**
7.3 Fifth Floor

By moving the common spaces to the ground floor, the empty space on the fifth floor can be refurbished into new apartments. Various designs and sizes of apartments are possible, including collective or student apartments and family apartments similar to those on other floors.

The design here shows one example where the existing playroom (southeast room) is made into an apartment with the same size as the other apartments (80m²). The dining room and the kitchen are made into one larger collective apartment with six bedrooms and a shared kitchen and bathroom.

Developing apartments on this floor would both increase the number of Stacken residents and the annual income for a relatively small initial cost (the plumbing and electricity is still the same from when this floor was originally apartments). These funds can also help offset the cost of a ground floor and, or roof extension.

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8. Comparison

The table below shows the size of existing spaces and modified and new spaces in both suggestions.

<table>
<thead>
<tr>
<th>Room</th>
<th>Existing (m²)</th>
<th>Suggestion A (m²)**</th>
<th>Suggestion B (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchen</td>
<td>53</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td>Dish Washing Room</td>
<td>7</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Dining Room</td>
<td>68</td>
<td>67</td>
<td>62</td>
</tr>
<tr>
<td>Play Room</td>
<td>55</td>
<td>9</td>
<td>64</td>
</tr>
<tr>
<td>Guest Room</td>
<td>7</td>
<td>14 (RF)</td>
<td>9</td>
</tr>
<tr>
<td>Cafe</td>
<td>35</td>
<td>36</td>
<td>39</td>
</tr>
<tr>
<td>Workshop**</td>
<td>60</td>
<td>17</td>
<td>26</td>
</tr>
<tr>
<td>Bicycle Storage</td>
<td>19</td>
<td>--</td>
<td>21</td>
</tr>
<tr>
<td>Greenhouse</td>
<td>--</td>
<td>56 (GF) + 94 (RF)</td>
<td>78</td>
</tr>
<tr>
<td>Office (w. archive)</td>
<td>--</td>
<td>35 (RF)</td>
<td>13</td>
</tr>
<tr>
<td>Multi-purpose room (music / gym)</td>
<td>25 (RF)</td>
<td>67 (GF) + 379 (RF)</td>
<td>241</td>
</tr>
</tbody>
</table>

*Areas correspond to effectively used areas and values are approximate
**Photo lab and district heating system excluded
*** GF = ground floor and RF = roof floor
Vi är fyra studenter från kursen "Design and planning for social inclusion" på Chalmers Tekniska Högskola, en kurs som fokuserar på deltagande processer. Vi har applicerat dessa metoder i vårt skolprojekt som vi har gjort i samarbete med kollektivhuset Stacken.

Våra förslag baseras på visioner från de med-
10. Conclusions

The biggest problems we faced over the course of our project involved communication with Stacken residents and legal and structural constraints with the building.

During the initial analysis phase of our work, we struggled to encourage the members of Stacken to participate in our idea box and workshop. Despite putting up numerous flyers on site and having the Stacken president advertise our workshop at the preceding mandatory monthly house meeting, we had only about a quarter of the residents participating. It is therefore impossible to assume that the information we have received from our communication is truly representative of the entire house. This is particularly important when the Stacken’s democratic decision making process requires a two-thirds majority. However, because of time and practical restraints we were forced to assume that the ideas of these members at least generally represent those of the whole community. But, this makes it even more important to emphasis that our suggestions are only suggestions meant to guide discussions going forward with the entire house, including voices we haven’t heard.

In hindsight we could have improved our communication methods and workshop to reach out to more members and to receive more valuable information. It was difficult to plan a suitable workshop when we did not know how many of the 80 residents would show up. It was also difficult to adapt the workshop methods we have learned in the course from a urban scale to a building scale. While we did attain valuable information from our workshop, we learned from experience how we could have improved our methods. It was thus also difficult because of time restraints for us and Stacken that we could only organize one workshop and could not apply lessons learned from one workshop to another. Ideally we would have been able to hold several workshops and possibly specialize one workshop just for children.

We also learned that it is important to define and re-clarify our roles and project throughout the process of communication to be sure that the residents understand and do not assume incorrect information.

The other main challenge that we faced along our process was discovering the restraints of the land use plan (detaljplan) that severely restrict the size of potential building extensions on the ground floor. Because we had limited time to investigate the feasibility of changing the land use plan, we decided to develop two suggestions, one based on not changing the land use plan and one assuming that the detailed plan could be changed. In that way we could assure that at least one of the suggestions is of interest and use for the residents in their further development of Stacken. Because this project has been more practical as more of a pre-study for a real project than a theoretical school project, we have learnt much about how the design process works in reality. We have been forced to take into consideration and follow the restrictions of the land use plan and structural restrictions of the building. Having engineer Junkers as a resource was invaluable for the process.

In order to communicate the results of our work to Stacken and make our work as useful as possible in their future proceedings, we will attend one of their monthly meetings in February or March to discuss our project. At that time we will also give Stacken all the materials we have found and produced.

11. References