

Accessibility in a Attefall house and Friggebod

I will try to assess different levels of usability and accessibility in a small house. I will look in to different architectural solutions and what benefits they have and what negative aspects in term of usability they have. I will use my own experience to assess the architecture.

The study object is Villa Frigatto

Villa Frigatto is a project that students in the fourth and fifth year at KTH have designed and built. The fall semester 2014 it was built by us students.

The house will be the study space for our studio and the later it is going to be moved to another location and become a small house for rental. The site at KTH is temporary and the house has a special building permission. We had no accessibility criterias when we designed the house, and no person in the studio had any impairment issues. Accessibility was not thought of in the design process. But it needs to follow the Swedish building laws on the new site where it will be permanently.

Question

How is the the built project accessible to us, the intended users and where is it not accessible to other users. The Frigatto project has not been focused on accessibility but I want to study accessibility in a broad sense, more as a question of usability.

Method

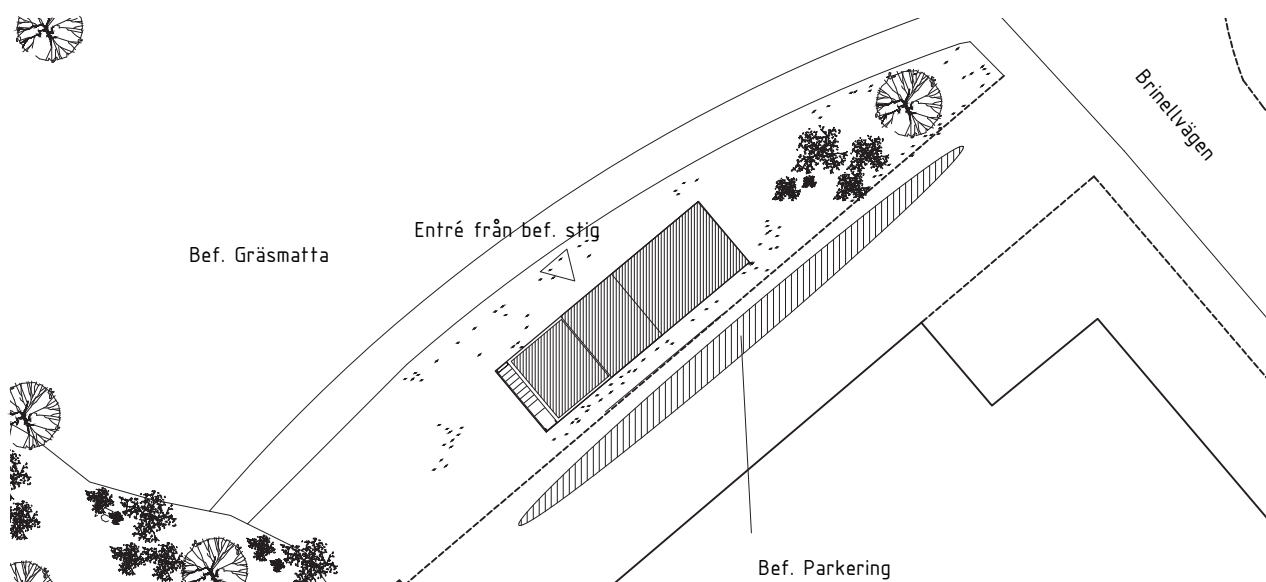
Using the building, photo documentation, sketches, assessment protocol.

Attefall and Friggebods houses

The Attefalls house is a small house that can be built without buildingpermission. It can maximum be 25 sqm. The Attefalls house can be used as a independent building and be used permanently. It is also possible to use the Attefalls house as a complimentary house to the main House such as a garage storage house, greenhouse, guesthouse or a boathouse. If the Attefalls house is going to be used as a living space it needs to follow Boverkets buildingrules. The Attefalls house needs to have a main building already existing on the plot and it needs a permission to start building.

Attefalls house can be used as a permanent living space but then it needs to follow laws regarding accessibility and construction. It needs to have equipment to prepare food, hygiene space and storage.

The Friggebod house needs no buildingpermission. the maximum footprint of the building is 15 sqm It needs to have a main building already existing on the plot. It is not allowed to use a Friggebod as a living space. The Friggebod is mostly used as a complimentary house.



Source: Studio 1 KTH

The object to assess: Villa Frigatto

The Project

The goal was to design a studiospace for ourselves that we could use.

The house needed to follow the buildingrules after it has been moved to the new site.

We were divided in groups, interior, exterior, landscape and main structure, the house was designed in these groups.

The Frigatto will later be moved to a new site and become a small house for rent, at the new site a kitchen and toilette will be installed and the house will have to follow the Swedish buildingrules.

Our main goal was to create a space for us to be able to work in, have lectures, hang out in and later become a living space for two persons.

One aspect of the project was bending the rules for Villa Frigatto, what is allowed to be built?, how could a small space be designed to feel bigger than it is?,

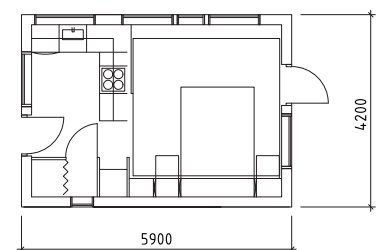
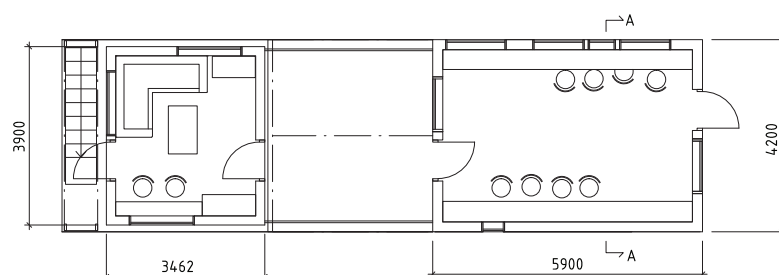
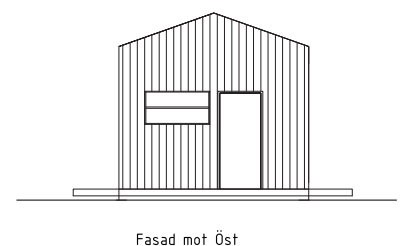
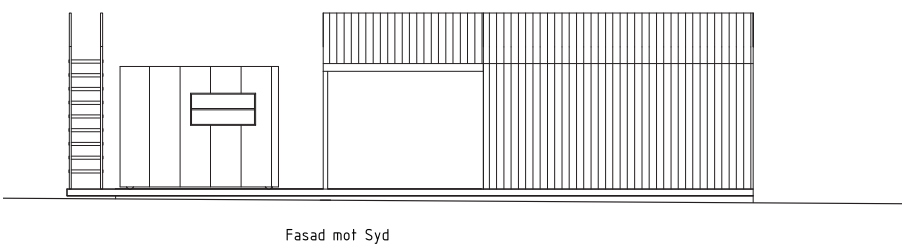
that is where the expanding/ sliding structure comes from. We also wanted to have built in furniture such as tables and storing.

The house

One part of the house is 25 sqm the other part is 15 sqm

The building is orientated towards the park. It has a deck surrounding it for easy movement around the house. The Friggebod is movable and is standing on steelwheels on rails.

To open the house the Friggebod needs to slide out. and it becomes a space between the two houses. The Attefallshouse is made of a classic wood structure with insulation in between. The Friggebod is made of a sandwich construction made of polystyrene and plywood. The outer roof is as big as it can be according to the rules.





The closest way from the subway or the main campus is to enter the building is from behind. But this side is deliberately closed off to guide people to the entrance towards the park. This still poses some confusion to where the entrance is.



The first lecture in the Attefallshouse was cold since we did not have any heat source, but it became warm by our bodies after a while.



This is the main Entré of the house towards the park with a temporary bridge to avoid the mud in front of the house.



Lots of people in a small space i takes time to get in and out. And the level difference in the house caused some stumbles.



Level difference in the Attefalls-house with also works as a natural border for shoes. This level of also of course makes it hard for any one coming in a wheelchair. The space under the floor is used for storing.



About 15 cm level difference at the threshold in to the Friggebod. When stepping out of the Friggebod the level makes you fall if you do not think about the level. The friggebod had to have this level to allow it to move on the rails.



Visually clear entré/exit, this space can be varied to form a big more open space or a tight corridor space, guiding people to the doors.



Worktables are built in under the windows for good lighting.



The facade smells of tar which most of us students think is nice but this could be less pleasant for someone else.



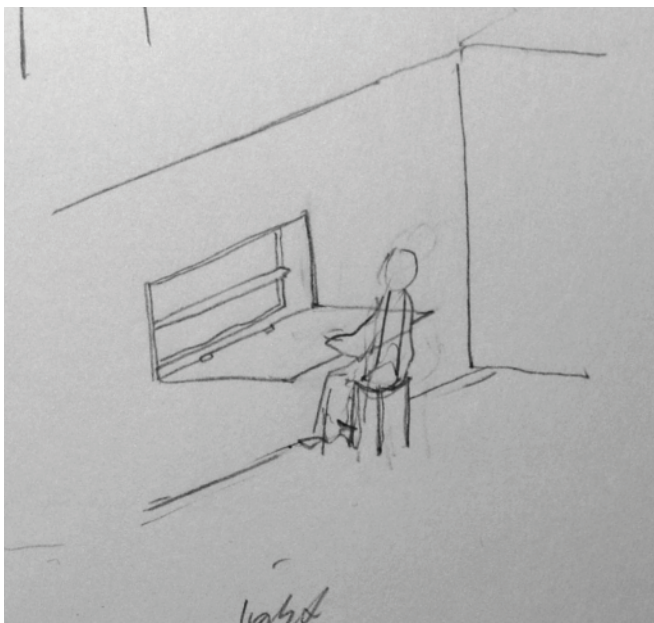
A deck is surrounding the whole Frigatto. Once you get up on the deck it is easy to move around the house.



A temporary bridge over the mud is crossing the existing walkingpath. This almost caused an accident in a late afternoon when a man on a bicycle crashed in to the “bridge”, it was dark and he couldn’t expect it to be there. Now the “bridge” is gone.



Staircase in construction to access the roof of the Friggebod. This is where the deck is almost at the same level as the ground. The entrance could have been located here to make the hole deck more accessible.



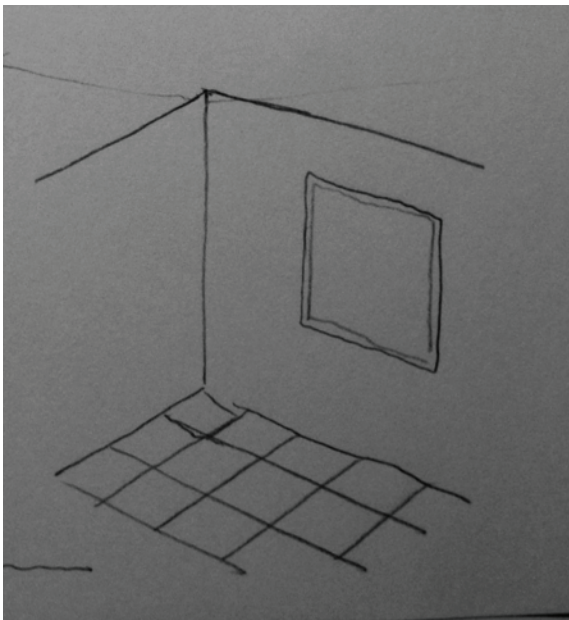
Built in tables under the windows. The thought is to have good lighting from outside. but this could also be a problematic light situation when you have to sit towards the light source with a computer.



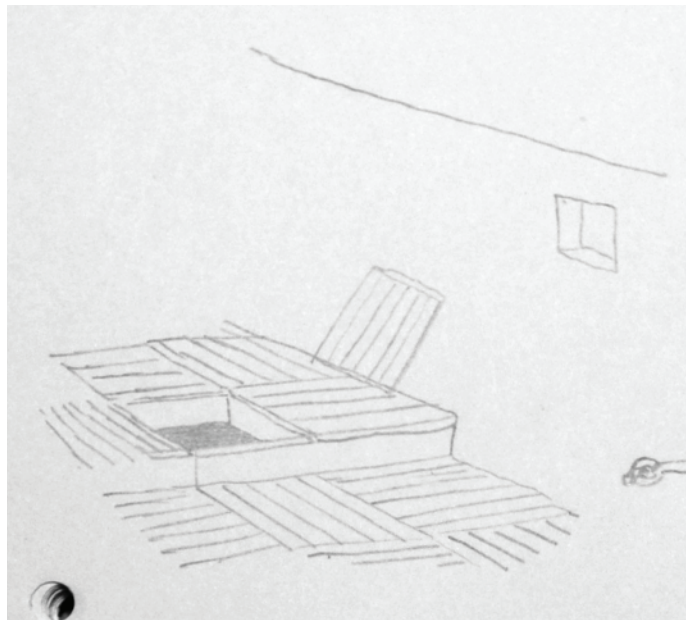
Threshold almost at the same level as the deck makes it easy to enter.



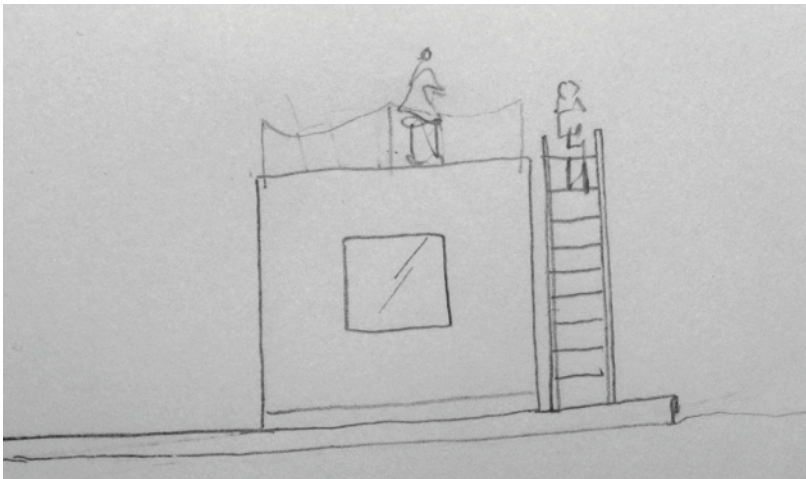
The rails in the deck is for the Friggebod to slide on. Dirt and leaves has been collecting on the inside of the rail, therefore it is hard to sweep the deck clean with a broom.



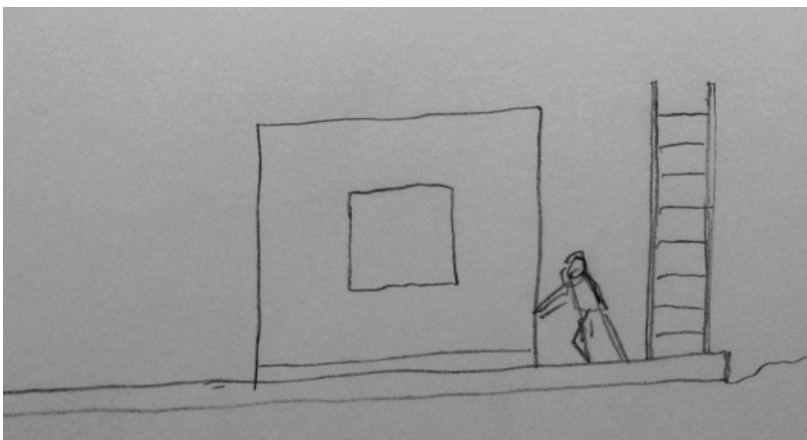
Leatherfloor in the Friggebod has a stong smell.



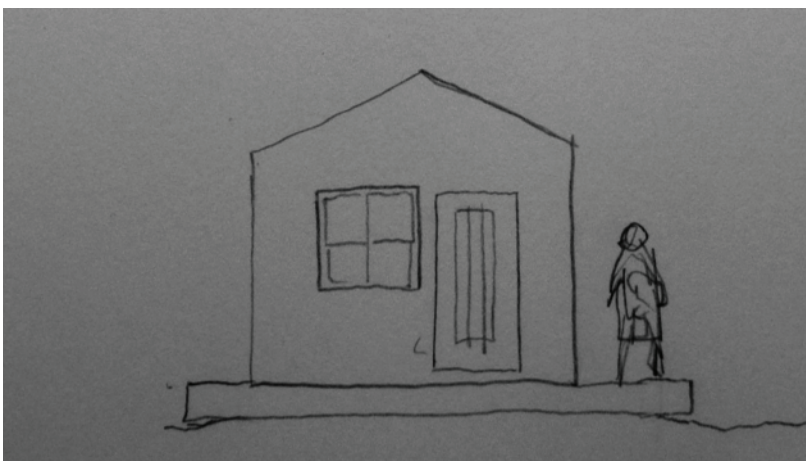
The storage under the floor is a bit tricky, you have to remember where the things you need is, and sometimes you have to move tables and chairs to get access to the right compartment. The floor storage has been good to hide expensive tools during the construction time.



The space on top of the Friggebod.



Moving the Friggebod is done by hand with takes some physical effort and some of us students can not move the friggebod alone.



The deck surrounding Villa Frigatto suddenly ends.

Assessment protocoll of Villa Frigatto

Performative ability. 3 points

The entrance is a bit confusing because it is two doors with the same dignity. The main space is quite general with possibility for different happenings. It has built in workspaces that has not been tested.

Visual performance. 4 points

The facade consists of burnt wood with a deep black colour. The windows and doors are refurbished and have different expressions. A light coloured plywood is used on the inside and gives a nice contrast to the dark outside.

Acoustic performance 5 points

The acoustics are good. We have had a first lecture in the Attefallshouse. It was easy to hear and communicate in the house.

locomotive capacity 4 points

The building takes time to get in to, first the Friggebod needs to be slided away to get to the entré. The Villa Frigatto is a place where you go to if you are going to spend a longer time there, because of the procedure of open and close the building.

Thermal capacity 2 points

At the moment we do not have any heating source, but both the Frigge and Attefallshouse gets warm when it is full of people. The first lecture was okey because of we where so many people in a small space.

Olfactory capacity 3 points

The houses smells of tar that is used on the walls to resist the wether elements. The inside of the Attefallshouse smells nice but in the Friggebod there is a new floor made of leather that smells unpleasant. There is no ventilation in the friggebod witch makes the smell closed in.

Overall performance 4 points

The architectural experience is interesting. Villa Frigatto has a lot of memories for us students who built it that makes it harder to be objective about the architecture. There is many different designs and decisions that is visible in the architecture and that takes some explaining or knowledge to appreciate.

Conclusions

Smaller buildings install several opportunities for individual users to adjust the space to personal needs.

Governmental building rules about accessibility and usability are not applicable fully to smaller buildings, since these depend upon individual solutions.

However, accessibility and usability in the Frigatto project have to be implemented from the start and not afterwards.

Accessibility can be seen as a matter of usability for the user, and small buildings can be adjusted to personal needs.

In contrast, a public building has a variety of users, and therefore, a general level of accessibility and usability comes of necessity.

Sources: text, photos, sketches: Adils Runkvist