Willem van Rijn // Accessibility in the double sense

How to transform the Willem van Rijn building in Amsterdam-West into an entrepreneurial factory with apartments and a business center in which accessibility for all plays a leading role.

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Research question
Before starting the graduation studio within R-MIT, I already chose the combination of the redesign of an existing building and the integration of accessibility for disabled people within the design and the design process as my research topic. Due to personal experience I feel that the combination of choosing R-MIT as my specialisation and accessibility for disabled is very interesting and could lead to an integral design in which both play an important role. The reason for choosing to redesign an existing building instead of the design of a new building is because I feel that integrating accessibility within the existing is more complicated than within a new design.

Within architecture I regard R-MIT to be an enrichment for my design knowledge. At R-MIT you have to deal with something that is already there and built by someone else. The walls and the history are already there and you have to create something new in between taking in account the past and the building limitations.

My research question within the thesis plan therefore resulted in:

How to combine reuse and accessibility for disabled in an existing building into a coherent and user friendly project?

Mixed projects & Willem van Rijn
Within the Amsterdam at sea mixed projects studio we were given the possibility to choose an existing building in Amsterdam-West. The selection of projects covers a large range of the possibilities within the available cultural heritage of this country. Amsterdam as city is a very representative city in history, development, water, economy, industry and modernization. After analysing the Hendrick de Keyserschool in the Scholendriehoek, also in Amsterdam-West, I eventually chose the Willem van Rijn building situated in the inner-city industrial area of Landlust along the Haarlemmerweg due to my research topic.

Personally I feel many design projects lack an integral design approach towards accessibility. While in the same time there are many disabled people and we are facing a large group of aging people and we keep on economizing on health care and benefits. I feel many disabled and aging people could improve their functioning within society if our society would be more appointed.

Most people don’t realize how many obstacles there are in daily life. Because when you have no experience with disabilities you simply don’t see them. Everywhere there are curbs, stairs, narrow corridors and spaces. It is very difficult to find a restaurant without a threshold and sanitary facilities for disabled. But also regular dwellings are in general not suitable and need to be adjusted. In public buildings a disabled person often needs to take a different (backdoor) route to reach the same place. And almost always doors can’t be opened, buttons are too high. Think about getting money out of a cash machine or pay by card in the supermarket while you are sitting down. These are all very simple basic daily life experiences many people tend over overlook.
The Willem van Rijn building contains height differences on the ground level and several building phases. This causes the routing and accessibility of the building to be very unclear and difficult.

Value
As I wrote in my essay for Heritage development, The Willem van Rijn building is an ordinary building. There are many ordinary existing buildings in The Netherlands which could be given a new life and new function instead of always choosing the easier way, building a new one. Writing the essay made my choice for the Willem van Rijn even more clear. Initially I didn’t analyse the building for the P1 report and the essay helped me to understand the building and its values and my ideas towards the building better. Namely, because of my focus on accessibility issues within the daily life routine I felt the choice for an ordinary building is more suitable than a monument. In daily life there are simply more ordinary buildings than monuments.

Being an ordinary building, The Willem van Rijn has an indifferent value. The Willem van Rijn has been built in several phases. The first phase was built by Merkelbach and Karsten. Merkelbach is a known architect and a former city architect of Amsterdam. He was also involved in the General Expansion plan, the development of Landlust and dissociated from the closed building block. The Willem van Rijn is certainly not his most interesting work. Remarkable is that due to the several building phases of the Willem van Rijn it eventually developed into a closed building block with an inner court in the centre. The second phase was designed by Piet Elling and constructed accordingly the first phase. Elling and Merkelbach also worked together for a period. The third phase was designed by the former agency of Elling: Bureau Elling, Visser, Van Gelderen, De Leeuw and Hoogewoning. This phase was designed according to its own time and therefore in a totally different style than the first two phases. It makes the building very unbalanced. Though construction wise the building is in a very good condition and therefore very suitable for redevelopment.
Specifying the research question

After analysing the Willem van Rijn building and its context and choosing a program to incorporate in the redesign I rephrased my research question by specifying it more specific to the current situation.

How to transform the Willem van Rijn building in Amsterdam-West into an entrepreneurial factory with apartments and a business center in which accessibility for all plays a leading role?

The chosen program relates to the location of the building, the future plans of the municipality of Amsterdam with the industrial area, to the current function in the building and to the fact that I wanted to deal with an everyday function in combination with my research topic. The research question and the analysis of the Willem van Rijn building lead to several sub question which I wanted to find a solution for during the design process.

-How can be dealt in such a way with the routing that it will be clear for everyone and can be used by everyone?

-How can be dealt with the height differences in relation to the accessibility of the building?

-How can the fragmented building become more of a unity?

-How can the inside routing be designed in a way that the orientation within the building stays clear?

-How can the inner court be integrated into the design and start play a role within the building?

Multidisciplinary approach

In the thesis plan I stated, A redesign demands a different approach than making a total new design since there are more aspects to take in account. The existing building has already lead a life within a certain situation and context. There is already a history, a meaning, a (former) function, a current function, another architect or perhaps even more. There is already a design and used technology within a specific timeframe, and perhaps the building has a monumental status. Therefore I feel a redesign project asks for more than the method ‘design by research’.

Therefore I chose the redesign method of Job Roos to support me. The spiral, as a method of thought, which he wrote about in his ‘Discovering the assignment’. (Roos, 2007) I see this spiral as an aid to keep focused and keep overseeing the whole process, the whole design and the whole existing building. Within the spiral all preconditions, issues, values and decisions within the redesign are combined. Reflection is very important during a design process. You need to keep looking back, keep asking yourself questions and stay in touch with your design principles and concept to avoid drifting away from them and getting lost.

In earlier experiences I noticed I tend to focus too much on one aspect, causing me to forget other more and less important aspects of the design. I chose not to exactly follow the spiral of Job Roos but to use the principle. I wanted to keep on linking all aspects of the building to establish a coherent redesign. I’m an intuitive designer and therefore looked for a method to guide me and help structuring my design process and design steps. Now looking back I can say this succeeded quite well. I started working on several aspects almost from the beginning and tried to solve issues and undertake design steps by making use of an integral approach.

One thing I did learn about myself and my design process, is that I tend to keep on experimenting and making variants. I always see another possibility. All this experimenting and thinking and linking takes a lot of time. Time which you don’t have within this graduation process. So where on the one hand jam myself by taking to much time, I feel on the other hand it is not a bad thing to really think your design decisions through. Designing is a process and not something you do in one instant. I have the tendency wanting everything to be perfect and work everything out. Something that isn’t possible in 9 months. It is impossible to work out a redesign on your own of a 10.000 m² building.
My design phase
My eventual design goal was not to only answer my research and sub-research questions but to actually make the Willem van Rijn a more beautiful and more pleasant building. I wanted to improve and reshape the building on the inside and outside. The Willem van Rijn building was my redesign assignment and in my opinion the Willem van Rijn building is really asking to be more.

I started the design process by getting to know the Willem van Rijn building and its situation. Since I didn’t actually analyze the building for the P1 presentation and report, the heritage development essay was very helpful. It forced me to think about the Willem van Rijn building, its value and take my own position towards the building.

During the design process I developed on which architectural aspects of the building I wanted to focus: routing & orientation (accessibility), the composition, the facade and reinstating the former main entrance. Especially the visit to the building played a big role. I truly was astonished by experiencing the unlogical routing and the disorienting effect of the closed walls on both sides of the corridors. Also the mass of the tower on the south-west corner displaying a totally different facade in comparison to the other building parts and disbalancing the Willem van Rijn as a total. The appearance of the tower seems to be a totally different building, although on the inside the building parts are connected.

Complex building
The weeks before the P2 presentation, while working on the program, defining my starting points and working on my first floor plans, I more and more started to understand the complexity of this building. The Willem van Rijn building has 10,000 m2, height differences on the ground level, several building parts with differences in levels built around an inner court, the spaces are very large with depths of 25 meters, the grid changes in every phase and the tower has columns with a thickness of 700 mm every 3,225 meters.

Reference projects
To understand the needs and functioning of an entrepreneurial factory I visited De Caballerofabric in The Hague, Binck 32 in The Hague, De Machinist in Rotterdam, De Dru in Ulft, De Fabriek in Delfshaven. De Dru in Ulft spoke the most to me, but the Caballerofabric was the best match in size, the corridors, the daylight problems and their non-accessible spaces. The wide corridors with the semi-transparent corridors were totally the opposite to my experience in the Willem van Rijn and therefore an eye opener. Everything is linked together in the Caballerofabric which makes it a network of companies under one roof supporting and making use of each other. Something I also pursued in my redesign. I did feel the main entrance was hidden in a corner, while the former main entrance has no function and is adjacent to a plantation. Inside there are too many little stairs leading to meeting rooms and smaller offices which are inaccessible for a disabled person. For me these were examples on how not to do it. De Fabriek in Delfshaven made use of an open inner space covered by a glass roof to connect all the working spaces.
Accessibility

The first aspect of the design I started to work on was the accessibility and routing. This issue had to be solved before I could really make other design decisions. And not just because of my research question but also because the Willem van Rijn is really in need of a clear and accessible routing. Not only accessible for disabled persons but for everybody. The routing has to be designed in such a way that users are guided through the complicated building with all its diversity and transitions. These reasons lead to my graduation project title ‘Accessibility in the double sense’. Within the project the main goal became the accessibility for all users and visitors of the building.

Thinking about the inner court and its uselessness, despite being used for parking, in the current situation I came up with the idea to make the inner court the heart of the building. All the building parts are connected through the inner court on the ground level.

Another important design aspect was creating an opening towards the inner court in every facade and connecting the street level with the heart of the building. This step opened up the building and made it connect and interact with its context. The Willem van Rijn has become more accessible compared to the hidden main entrance in the current situation. By partially increasing the height of the inner court and using ramps, stairs and platform elevators within the openings the inner court has become accessible for all users and visitors.

Within the whole Masterplan of the inner-city industrial area of Landlust the accessibility aspect is visible. The area is redeveloped from a closed off and dead end area into a working and living area. Hereby following the future plans of the municipality of Amsterdam for this location in Amsterdam-West. Redeveloping an area into a living area is more than just adding dwellings, apartments and parking spaces. A living area asks for the availability of a pleasant area to live in. Therefore the scale of the structure and the layout of the area needs to be changed.

The dead end main road is connected to a road on the other side of the water through a bridge and through the whole area there are slow traffic routes to make the area more accessible and user friendly. In the master plan some buildings are torn down and replaced by apartments as are the open spaces.
Functions
From the start I had the same idea on where to locate the several functions within the building. This way the several functions would interact and connect with each other and the surroundings.

The restaurant and business centre connect to the Haarlemmerweg, the city and the A10. The dwellings connect to the water, the mill, the view on the green and the quiet side of the building. The offices connect to Landlust as being still partially an working area.

Inner court
The former main entrance has become the formal main entrance in the redesign and directly connects to the business centre and the restaurant. To the outside these functions connect to the Haarlemmerweg and the city. To provide comfort to the users of the buildings in combination with the central role of the inner court I chose to develop the inner court into a roofed outer space, with an outside climate though free of rain and wind.

Within the inner court a ramp and stairs are bridging the height difference between the first phase and the second and the third phase. The lowered part of the inner court contains the restaurant terrace which is located behind it on the north side of the building.

The inner court is decorated with terrace tiles and seating’s. I want the inner court to be an open space and avoid many obstacles because it is all about routing within the inner court. On the other hand I want the inner court to be a pleasant space and combine the industrial with green.

Therefore I decided to combine the new facade design of the tower with a green facade to bring green into the inner court in a vertical way and bring green into the industrial area of Landlust. The Brettenzone and the area around the mill are very green, though the rest of the area is lacking green. An element that is needed to develop the area into a living area as well.
I made many variants for the facade and trying to match the green facade with the new addition and the earlier phases. Some variants made use of the current window framing and others had a totally different window arrangement. I chose the latter since now I’m using the windows to combine the phases together. The new windows in the addition and in the third phase are based on the windows within the first phase. Also by using glass reinforced concrete panels in the new addition and window frame rims around the windows in the third phase to keep the green away from the windows I made a link with the concrete lintels in the first and second phase. They are very visible above the windows and the former main entrance.

The 1st and 2nd phase being constructed out of brick, the new addition out of concrete panels and the green tower kept on being fragmentated. A remark I also received at the P4 presentation. Then I came across an image on the internet for a new city hall in Venlo by Kraaijvanger. And it gave me an idea. The tower brings vertical green into the inner court and enters the inner-city industrial area of Landlust as green fingers. Just like the municipality of Amsterdam states in their future plans, in which they want to bring the green fingers back into the city to reverse the process of the past 150 years where the city swallowed the green by expanding into it.

The green fingers wrap around the tower from the inside and show themselves to the surrounding area. The plint of the third phase and the new addition are of the same material, glass fibre reinforced concrete, still linking to the concrete lintels in the first and second phase.

**Composition**

As I wrote before the third phase disbalances the building. The first phase connected to the tower is only one level high which cause a large height difference between the two phases and strengthens the fragmentation.

By making a context model and little 1:500 scale models I tested several options to improve the composition of the building as a whole. The image below shows the current situation.

At the P2 I made an addition of one layer on top of the first phase to improve the connection with the tower and the composition. Later I realized that adding one layer in between could appear to be a bit crammed in.

Therefore I decided to make the addition two levels and add an extra floor to the plinth by extending the tower outwards. Since the division between tower and plinth became three and three levels I added one level to the tower to create asymmetry. I also tried taking a level off, making jumps in
the facade, create openings in the facade and many more.

**Entrance part**
Another design element I have been working on and struggling with is the entrance area. The entrance part has a depth of 25 meters which makes guiding people into the inner court from the entrance a big challenge. I located the restaurant behind the north facade from the start and couldn’t get the dimensions right. The restaurant kept being approximately 700 m² and the entrance area 400 m².

One option was to demolish half of the space on the inner court side which would enlarge the inner court and make the entrance space more pleasant in size and routing. But in the beginning I wanted to locate dwellings on the first floor above the restaurant enjoying the view over the Brettenzone. The flat roof I wanted to develop into a roof garden for the inhabitants of the building. As an extra, more private layer within the building. I ended up moving the restaurant to the east side at the p3 presentation. The restaurant became 300 m². The entrance apart took part in the business centre.

After the P3 I structured my whole story and concluded I had to demolish the part with the roof terrace. I wanted the restaurant to be in the north part and the dwellings to be in the east part. In the first floor of the north part I made openings to emphasize the entrance area and use the opening as the guiding element towards the inner court through shape and light. The floor above the restaurant also incorporates openings but they are smaller and incorporate individual working spaces. Roof lights bring light into the first floor and the restaurant on the ground floor.
Final moments
At this moment just before the final presentation and looking back I can say I answered to my research question and sub questions. The routing & accessibility of the Willem van Rijn building has been the leading aspect throughout the design phase and has become a clear element in the building.

I tried to deal with the accessibility issue on several scales. For instance the adjustments within the masterplan to create a more liveable area by creating pedestrian routes, adding green, and connect the road.

Around the Willem van Rijn I integrated the direct context within the accessibility of the Willem van Rijn by designing a sloping walking path into the building on the east side and by making openings in the facades to create more direct contact between the building and its surroundings and let all facades play a role in the accessibility of the building.

Within the building the height differences are solved by the inner court. An element of the building I wanted to make more valuable within the building from the start and now plays the central role in connecting the several building phases, the several functions and entering the building. On the upper levels the routing circulates which makes everything connect within the building.

Throughout the process I tried to keep focusing on the whole building and the separate starting points I started with, as I aimed for from the start. The complexity of this building makes it impossible to finish the design within the timeframe. Also my urge to want to deal with the whole building didn’t make it easier. A possible next student I would advise to set more boundaries. To pick a few elements to focus on instead of focusing on everything. In my design there are many interventions. Perhaps there are too many, but I keep on feeling this building needs it.

The integral approach did work in the sense that I managed to establish a complete redesign and worked on everything in the same time to make everything work together and justifiable. On the other hand I kept working to long on the separate elements. For instance the facade or the floor plans. In this sense I should have made a more strict planning to force myself to make decisions.

After the P3 I realized I focused so much on the separate elements that I lost track of my story. I adjusted this by going back to the beginning and ask myself why I made certain steps and decisions and if they still corresponded with my initial starting points. I reconsidered a few design decisions also following the advice of my teachers. There were only 4 weeks to go to the P4 which meant I had to work non stop. I worked by hand till after the P3. I chose to do this because I felt it gave me more freedom and I wanted to avoid focusing on to small details instead of the bigger scale. Though this meant I had to digitalize my plans, facades and sections afterwards, continue to work on building technology and make new impressions due to the changes I made. After the P4 I took a step back for a while and started up again after a week. I improved the facades and the entrance area and I have mainly been working on the building technology part. My conclusion is that I did right by focusing on everything from the beginning instead of working on the plans for weeks and not integrating this with for example the new facade design.

I really enjoyed working by hand for such a long period of the process. Something I’m really going to continue. I managed quite well to integrate everything within the process and realize an integral approach and redesign. Although the project is certainly not finished.

Now when looking back I realize time has flown by and that in the beginning I truly expected to work out a total project with everything on it. But designing a 10.000 m² existing building within 6 months individually is not possible. There is still much to improve, but the general design is certainly there. At this point I can even say, it is a pity it is coming to an end. But hopefully there is much more to come.

[Image: Img 30 interventions in the Willem van Rijn]
Sources