

# Reflection Paper

DWELLING GRADUATION STUDIO, DUTCH HOUSING 2017-2018

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## *1. Relationship between project and wider social context*

The city of Amsterdam grows annually with approximately 12,000 inhabitants. However, one of the problems Amsterdam encounters is the fact that the housing stock appears to be scarce. Especially for the low- and mid-income group it is very difficult to find suitable housing. The main reason why more and more people are looking for rental property in the middle segment is because this group of people do not qualify for social housing and are locked out of home ownership, due to a lack of income and savings. The mid income group is therefore large and diverse, consisting of singles, couples and families that strongly contribute to the socio-economic power of the Metropolitan region of Amsterdam.

The so-called 'Woonagenda 2025' (Housing Agenda 2025), a framework and directional document for residential policy in Amsterdam until 2025, finds great shortages in mid-sector rental housing. Therefore the municipality of Amsterdam is committed to realizing more affordable housing for the middle class in the price range of € 710, - and € 1.100, - per month. As a result Amsterdam strives to build 20.000 new mid-sector rental homes by 2025. This new development in the mid-rent sector reduces the pressure on the housing market and increases the success rate for the middle income group. This leads to a more differentiated, attractive and undivided city of Amsterdam, in all parts of the city. Another advantage is that, moving people with middle income from the social sector to suitable middle-class sector creates opportunities for new entrants in the social housing sector. Availability of suitable living space for employees in the business sector and public sector (teachers, nursing staff, assistants, etc.) promotes the business environment and the quality of the city and is thus the basis for further economic growth.

The aim of my graduation project is to develop housing for the free market rental segment with a rent between € 710 and € 1,100. The project mainly focusses on housing young professionals (people in their 20s and 30s who are employed in a profession), by designing affordable dwellings which meet the needs of mid-income households.

## *2. Relationship between theme of graduation lab and subject*

The underlying theme of the graduation lab is 'urban densification'. Whenever I discuss this topic with different people I often experience that the majority of these people have a negative perception about densification. In most cases the response was: "The city is already a crowded place and this will only make it worse." In reaction to this perception I often give reasons to support urban densification, in the terms of spatial, social and economic benefits. In my opinion densification can be seen as a strategy that helps us create a city that remains vital and livable in the future. Densification allows for welcoming more people into a neighborhood and providing more spaces where people can interact.

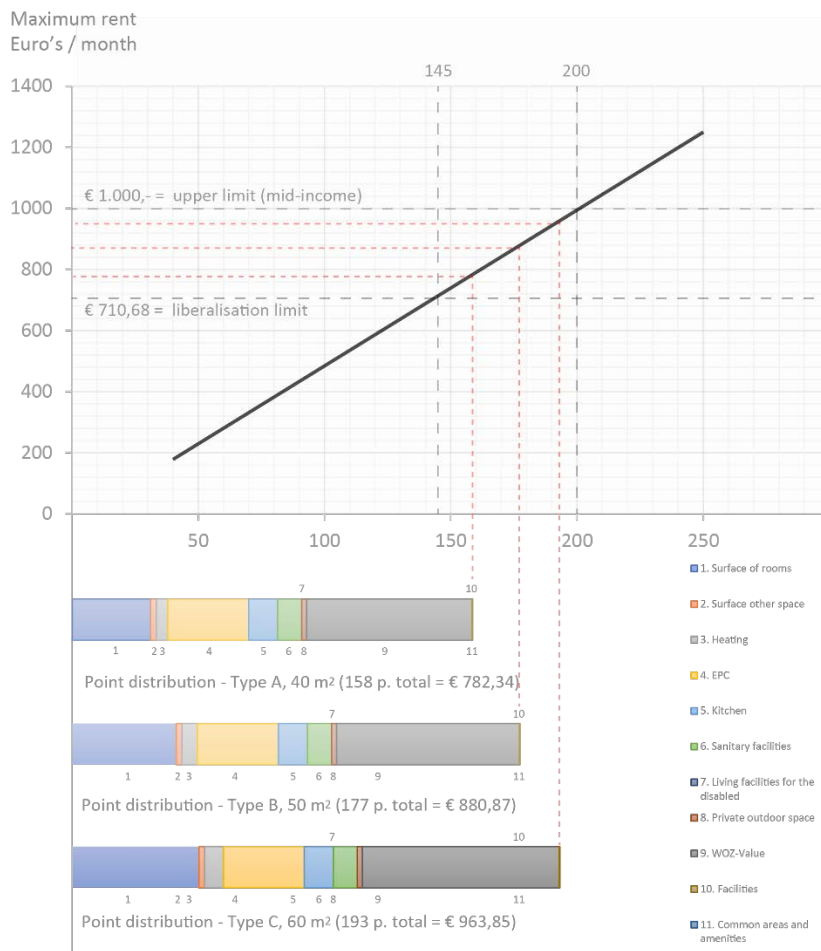
This creates vibrancy and more diversity in the public realm and encourages efficiency and sustainability of the city as a whole.

During my graduation project I have developed a so-called 'rotten-teeth'-strategy. This strategy involves carefully mapping outdated and low-densified properties in the city center of Amsterdam which do not contribute to the city at all. Such properties qualify for 'extraction' (demolition) and are considered as possible locations for new densified development. In the belt of Amsterdam (Singelgrachtzone) I have detected a 'rotten tooth', located at Marnixplein, which turned out to be a suitable plot for my project. On the location of this 'rotten tooth' I propose to develop a residential high rise building with affordable rental housing for mid-income households. Affordability for mid-income households is the subject that I have done research on throughout my graduation project. The link between density and affordability in my project is based on the following hypothesis: Increased housing supply through densification is a measure to making housing more affordable. By being strictly organized and efficient I came up with a building design that contains more than three times the amount of dwellings compared to the existing building. On top of that the building's footprint has been reduced, leaving more spaces for pedestrians. The building is provided with an active plinth, full of amenities that serve the city of Amsterdam.

The main goal of my 'rotten teeth'-strategy and design proposal is to illustrate that new densified developments can be seen as a means of improved quality of urban living, rather than it being a burden.

## ***2. Relationship between research and design***

Throughout the design process different types of research and studies were conducted to further explore the target group's needs, possibilities, and potential design solutions. A research on the Dutch Property Valuation System (Woningwaarderingstelsel) has played an enormous role in determining the dwelling typologies, its facilities and on the living space (dwelling's surface). The Property Valuation System can be seen as an instrument that translates the dwelling's characteristics into a number of points, on which the rental price is determined. In this research the Property Valuation System is used to determine a minimum and a maximum set of characteristics for newly-built dwellings in the price range € 710 and € 1000 per month. In other words, the price determining characteristics of the Property Valuation System are used to generate dwellings, suitable for the mid-income group. The result of this research is a functional excel sheet that can be used as a tool to test whether the dwellings design characteristics correspond with the desired rental price. Throughout the design process I was able to keep track of the estimated (according to the Property Valuation System) rental price of the different dwelling typologies. An example of the results are shown in the graphs below. The bar charts show the amount of points rewarded for each set of characteristic and the corresponding rental rates.



#### 4. Relationship between methodical line of approach of graduation lab and chosen method

The methodical line of approach of the graduation lab as follows:

##### P1-Presentation

- Thematic research
- Site analyses
- Situational research

##### P3-Presentation:

- Plans, facades, cross-cuts, 1:200 / 1:100
- Part of the building, plan and cross-cut 1:50
- Façade with hor. and vert. cross-cut 1: 20
- Details 1:5

##### P2-Presentation

- Urban draft / master plan 1:1000 / 1:500
- Programme /list of requirement
- Draft design (plans, sections, elevations)

##### P4-Presentation:

- Site 1:5000 / 1:1000
- Plan ground level 1:500
- Plans elevations, sections 1:200 / 1:100
- Part of the building, plan and drawings 1:50
- Façade with hor. and vert. cross-cut 1: 20
- Details 1:5

As shown in the table, the methodical line of approach during the project was from large scale (thematic and site research) to small scale (building fragments and details). The first period, regarding the thematic and site research, consisted of group work and went fairly smooth. The group really felt like a team, where everyone took his/her responsibilities and contributed in a positive manner. I was very content with the

products that we were able to deliver (ranging from models to research conclusions) and the knowledge that we have gained from this group work. I feel that this part of the project has played an important role in formulating the individual research and forms the foundation of the individual design.

In the second period (up to P2-presentation) site selection and individual thematic research played a crucial role in formulating the design assignment. In this phase I have developed my 'rotten teeth'-strategy, which I held onto the entire project. Also in this phase, the first building proposal was presented. However, many of the choices that were made in this preliminary design stage turned out to be of no more value in later stages of the design process. This doesn't mean that the work that was done was completely worthless, because it was a good way to step back and reflect on the project. During the P2-presentation, numerous decisions were already 'made' too early for the time being.

In the following stage, up to P3-presentation, I have spent a lot of time on self-reflection and on formulating the programme. The main challenge that I was facing during this phase was the question: How to deal with high-rise and its adjacent properties on a relatively small plot on a location where high-rise is uncommon? Implementing high-rise in a low-rise residential neighborhood requires extreme precision and therefore I spent a lot of time experimenting with mass-models. The goal of this model was to develop a building mass that takes into consideration the potential negative impacts on its surrounding (overshadowing etc.). Reflecting on this method of designing, I believe that I have spent a lot of time on defining the mass of the building, but it was time well spent. I feel that, within the limitations of the plot (namely its size) I have managed to design a building that suits the surrounding neighborhood. However, the project could have been even more attractive on a slightly larger plot, with more freedom to design the public realm on the ground floor (urban landscape). From this point on I've acquired a grip on working with models and continued to work on (sketch)models throughout the rest of the project.

In the last stage, up to the P4-presentation, I have worked on the production of (technical) drawings. In this period I was much focused and made a few drastic changes (for the better) which led to the final design. In the final design, detailing played an important role. The challenge that I was facing is how to make an affordable building, which is relatively straight forward, interesting by making thought through details. I have tackled this challenge by researching building materials and contacting manufacturers to gain additional information in order to finalize the design.