

# Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners ([Examencommissie-BK@tudelft.nl](mailto:Examencommissie-BK@tudelft.nl)), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information		
Name	Anouk Sanders	
Student number	4478096	

Studio		
Name / Theme	Greening and gentrification / Urban Ecology & Eco-Cities	
Main mentor	dr. ir. Nico Tillie	Landscape Architecture / Urban Ecology & Eco-Cities
Second mentor	ir. Leo van den Burg	Urbanism / Urban Design
Argumentation of choice of the studio	<p>The studios focus on transforming cities to eco-cities and urban ecology, this focus relates to the transformation and implementation of green space which is the focus of my graduation project. By choosing the urban ecology lab I hope to be able to design attractive and functional green spaces that also function on an ecological level. Most projects within the studio focus on a Rotterdam casus which is also what I propose to do. On a more personal level the studio speaks to me because it operates in both urbanism and landscape architecture fields, in my master I followed courses in both departments, and I want to continue working with this dual scope.</p>	

Graduation project	
Title of the graduation project	Liveability in Rotterdam – greening pre-war neighbourhoods
Goal	
Location:	Rotterdam Noord (Bergpolder, Liskwartier, Agniesebuurt, Oude Noorden, Provenierswijk)
The posed problem,	<p>In short: To maintain and improve the liveability of cities there is a need to add and transform green public spaces, through greening initiatives green gentrification threatens the (inclusive) liveability of the city.</p> <p>In Rotterdam greening the pre-war neighbourhood threatens the (inclusive) liveability of the city through gentrification that is initiated by greening initiatives that make these neighbourhoods more attractive.</p>
research questions and	<p>Main question: How to green pre-war neighbourhoods to increase liveability for all residents, with minimizing the risk of gentrification?</p> <p>Subquestions:</p> <ol style="list-style-type: none"> <li>1. How does the transformation of green structures influence the liveability of a neighbourhood, through the process of green gentrification?</li> </ol>

	<ol style="list-style-type: none"> <li>2. What is liveability for all residents?</li> <li>3. What are the characteristics of pre-war neighbourhoods and greening policies in Rotterdam?</li> <li>4. How do other cities deal with environmental gentrification and green space?</li> <li>5. How to green pre-war neighbourhoods in Rotterdam to increase liveability for all residents, with minimising the risk of gentrification?</li> </ol>
design assignment in which these result.	<p>The five outcomes of the graduation project are a public space design, greening strategy (neighbourhood scale), green space rule, greening principles and a manifesto. The different outcomes will have a direct influence on each other, and the outcomes will be worked out simultaneously. Some outcomes, like the manifesto, will come early within the process but will advance throughout the whole process. Even though some of the outcomes will form the base for another outcomes the outcomes will be developed simultaneously to deliver input back and forth.</p> <p><b>PUBLIC SPACE DESIGN</b></p> <p>The public space design will be focussed on a specific public space within the chosen neighbourhood. This outcome will be closely related to the greening strategy for the neighbourhood and the green space rule, since it will be implementing both these outcomes. The public space design will serve as an example on how to implement the neighbourhood strategy and green space rule with consideration of the site-specific conditions.</p> <p><b>GREENING STRATEGY</b></p> <p>The greening strategy will focus on the scale of the neighbourhood. The strategy will implement the green space rule on the level of one or two neighbourhoods to show implementation of such a rule could work on the scale of a neighbourhood. The green strategy design will respond to the bigger conditions that are present within the city.</p> <p><b>GREEN SPACE RULE</b></p> <p>The green space rule is an outcome of the thesis which will cause discussion. Most Dutch cities do have many rules that which set requirements that the built environment should meet. Public (green) space however is not embedded within these rules. This is why within this thesis there will be a proposal for green spaces. The rule should be calculable to make sure that urban designers implement a certain amount of green within the city. Within the neighbourhood and public space scale this rule will be operate to serve as an example on how to implement such a rule. This thesis will form an input for the discussion on if we should implement this type of rules regarding public green space.</p> <p><b>GREENING PRINCIPLES</b></p> <p>The greening principles will form the theoretical output of this thesis. This theoretical output will try to fill part of the void within the green gentrification discourse. This void is the lack of literature about how to deal of prevent green gentrification from the perspective of design. Within literature there is mostly a focus on providing evidence that green gentrification took place or on policy to prevent green gentrification. This thesis will deliver some insight</p>

on how designers could deal with green gentrification.

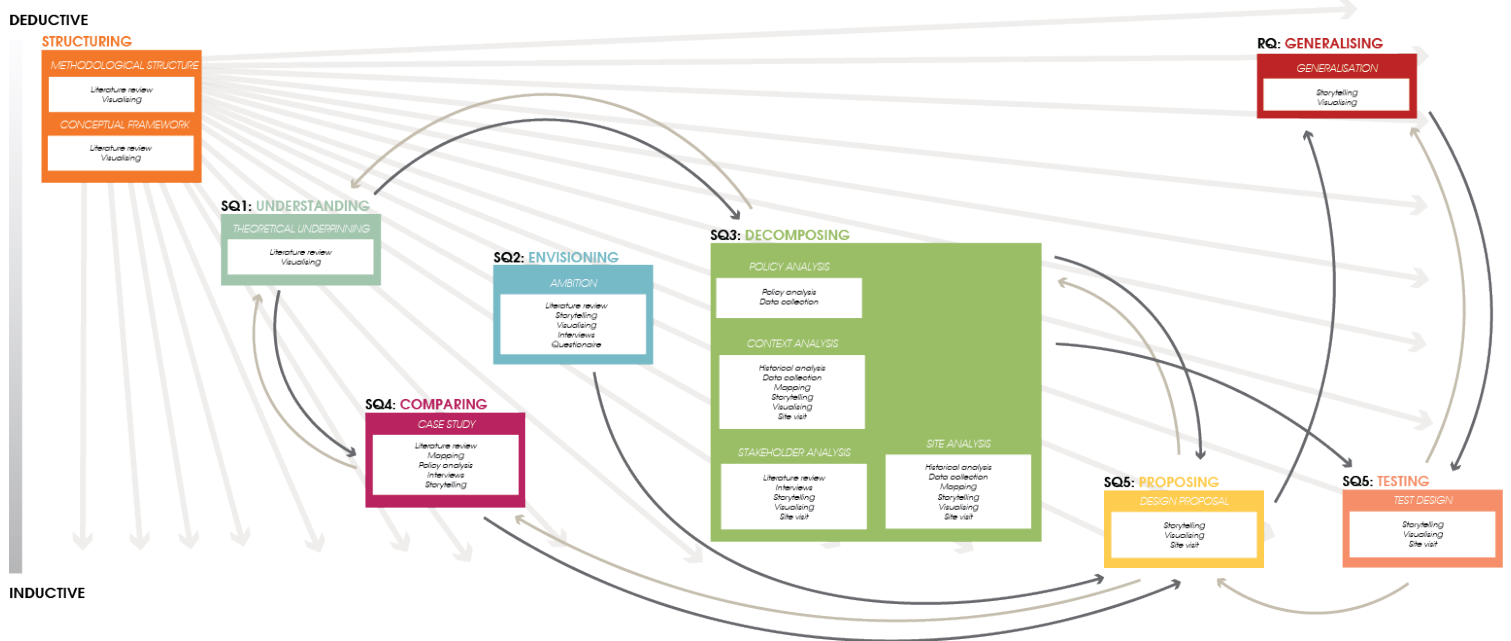
## MANIFESTO

The manifesto will form the basis for all the other outcomes, the manifesto should be interpreted as a goal for the design to reach. The manifest will put forth how the ideal liveable city will look. It will open the discussion on how we want our cities to look in the future and what we should be working towards. The manifesto will be based upon the authors vision of liveability. Within the design of the rule, neighbourhood and public space the manifesto will be translated into a design for specific locations.

## Process

### Method description

Both inductive and deductive research with the use of mixed methods (data collection, historical analysis, interviews, literature review, mapping, site visit, questionnaire, policy analysis, storytelling and visualizing). The image below shows which methods are being used to answer which questions and within what type of research. The gradient on the left gives an indication on the level of deductive/inductive per type of research.



## Literature and general practical preference

Selection of used literature, books, documentaries and experts used until this point organised by theme. More research is being used within the P2 report but this selection of sources shows which research was important for the theory development, inspiration etcetera.

Gentrification:

- Gertten, F. (2019). *PUSH*.
- Glass, R. (1964). *Aspects of Change*. London Aspects of Change.
- Hutak, M. (2020). Jij hebt ons niet ontdekt, wij waren hier altijd al.
- Marcuse, P. (1985). Gentrification, Abandonment, and Displacement: Connections, Causes, and

Policy responses in New York City. *Washington University Journal of Urban and Contemporary Law*, 28(January), 195–240.

- Milikowski, F. (2018). *Van wie is de stad, de strijd om Amsterdam*.  
(to be continued...)

#### Green gentrification:

- Checker, M. (2011). Wiped out by the “Greenwave”: Environmental gentrification and the paradoxical politics of urban sustainability. *City and Society*, 23(2), 210–229.  
<https://doi.org/10.1111/j.1548-744X.2011.01063.x>
- Crompton, J. L. (2007). *The Role of the Proximate Principle in the Emergence of Urban Parks in the United Kingdom and in the United States*. 4367.  
<https://doi.org/10.1080/02614360500521457>
- Goossens, C., Oosterlynck, S., & Bradt, L. (2020). Livable streets? Green gentrification and the displacement of longtime residents in Ghent, Belgium. *Urban Geography*, 41(4), 550–572.  
<https://doi.org/10.1080/02723638.2019.1686307>
- Gould, K. A., & Lewis, T. L. (2016). *Green Gentrification: Urban Sustainability and the Struggle for Environmental Justice*. Routledge.
- Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities “just green enough.” *Landscape and Urban Planning*, 125, 234–244. <https://doi.org/10.1016/j.landurbplan.2014.01.017>  
(to be continued...)

#### Policy documents:

- Gemeente Rotterdam. (2019). *Een groene sprint: Rotterdam gaat voor groen 2019*.  
(to be continued...)

#### Experts consulted:

- Pieter Boone - Municipality Rotterdam
- Rutger Henneman - Social entrepreneur Rotterdam
- Stéphan Lam - resident Rotterdam
- Results from survey  
(to be continued...)

#### Other literature:

- Konijnendijk, C. (2021). *Promoting health and wellbeing through urban forests – Introducing the 30-30-300 rule*. <https://www.linkedin.com/pulse/promoting-health-wellbeing-through-urban-forests-rule-cecil/?published=t&trackingId=gY40Q61JS1uzjKp3vuCLmg%3D%3D>
- Swyngedouw, E. (2010). Making Strategies in Spatial Planning. *Making Strategies in Spatial Planning*, 185–205. <https://doi.org/10.1007/978-90-481-3106-8>
- United Nations Department of Economic and Social Affairs. (n.d.). 11. *Make cities and human settlements inclusive, safe, resilient and sustainable*. Retrieved April 3, 2021, from

<https://sdgs.un.org/goals/goal11>

(to be continued...)

## Reflection

1. What is the relation between your graduation (project) topic, the studio topic (urban ecology & eco-cities), your master track (Urbanism), and your master programme (MSc AUBS)?

The relation between my graduation topic and the studio is the focus on green spaces and their ecological value within an urban context. In my graduation project I relate the development of green space to the process of gentrification, which is referred to as green gentrification within the academic field. Gentrification can have a variety of (social justice) implications towards liveability and inclusivity of neighbourhoods or entire cities. This interrelation between green space, landscape elements, ecology and social justice within an urban context is what urbanism is about for me. The subject also relates closely to landscape architecture, this interface is interesting to me because I think there should not be a strict division between 'urban' and landscape since it all functions as one (eco)system. The different tracks are all closely related to each other through the focus on the built environment. The thesis subject I propose intervenes within the urban form, part of the built environment, to increase the liveability of the city. By intervening in the built environment, design can have a direct effect on the lives of people and other living organisms.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

## SOCIETAL RELEVANCE

Within contemporary society there is agreement on the positive benefits green in the city can have, for example on climate change, healthy urban environments and leisure. Sadly, the greening of the public domain does not only have positive effects, such as the one discussed in this thesis: green gentrification. Forced displacement and feeling out of place due to changing neighbourhood identity, (green) gentrification can have a big impact on the inclusivity of citizens in the city and overall society. Because of these negative externalities it is important to open the discussion about urban green development, to make sure we are aware, and all voices can be heard. Through discussing we can work towards urban greening that benefits all.

The discussion about urban greening should be open to all because we all have a role to play. For planners and designers, it is important to be aware of the societal effects their plan can have and to design in relation to these effects. Real-estate developers should be made aware of the impact their development can have on the current residents. Decision makers should make sure that their aim to make the urban environment more green does not create an exclusive city. Residents should be able to stand up for their homes and neighbourhoods. To achieve a fair starting point for discussion his thesis aims to provide interested parties with an overview to inform them on the phenomenon environmental gentrification and its implications. Apart from that this thesis also gives a proposal as food for thought and to open up the discussion on how we want our urban environment to look in the future.

## ACADEMIC RELEVANCE

Green gentrification is a relatively new subject within scientific literature, it was first mentioned in 2004 (Sieg et al., 2004). Most research focuses on providing evidence that green gentrification is in fact happening (i.a. Black & Richards, 2020; Maia et al., 2020; Yazar et al., 2020) and the social implications (i.a. Dooling, 2009; Goossens et al., 2020). Until now research rarely has discussed how planners and designers could deal with green gentrification and its consequences. Wolch et al. (2014) does focus on a possible strategy on how to deal with environmental gentrification but is one of the few within the

discourse discussing possible approaches.

In combination with the lack of national/regional greening rules and strategies this leaves the designer with a very open-ended design question. Within this thesis a design proposal will be presented from which design principles will be subtracted, this will add to the scientific discourse and provide urban designers with a starting point.

#### Literature:

Black, K. J., & Richards, M. (2020). Eco-gentrification and who benefits from urban green amenities: NYC's high Line. *Landscape and Urban Planning*, 204(July), 103900. <https://doi.org/10.1016/j.landurbplan.2020.103900>

Dooling, S. (2009). Ecological gentrification: A Research agenda exploring justice in the city. *International Journal of Urban and Regional Research*, 33(3), 621–639. <https://doi.org/10.1111/j.1468-2427.2009.00860.x>

Goossens, C., Oosterlynck, S., & Bradt, L. (2020). Livable streets? Green gentrification and the displacement of longtime residents in Ghent, Belgium. *Urban Geography*, 41(4), 550–572. <https://doi.org/10.1080/02723638.2019.1686307>

Maia, A. T. A., Calcagni, F., Connolly, J. J. T., Anguelovski, I., & Langemeyer, J. (2020). Hidden drivers of social injustice: uncovering unequal cultural ecosystem services behind green gentrification. *Environmental Science and Policy*, 112(July), 254–263. <https://doi.org/10.1016/j.envsci.2020.05.021>

Sieg, H., Smith, V. K., Banzhaf, H. S., & Walsh, R. (2004). Estimating the General Equilibrium Benefits of Large Changes in Spatially Delineated Public Goods. *Internatio(4)*, 1047–1077.

Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities “just green enough.” *Landscape and Urban Planning*, 125, 234–244. <https://doi.org/10.1016/j.landurbplan.2014.01.017>

Yazar, M., Hestad, D., Mangalagiu, D., Saysel, A. K., Ma, Y., & Thornton, T. F. (2020). From urban sustainability transformations to green gentrification: urban renewal in Gaziosmanpaşa, Istanbul. *Climatic Change*, 160(4), 637–653. <https://doi.org/10.1007/s10584-019-02509-3>