

# Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners ([Examcommissie-BK@tudelft.nl](mailto:Examcommissie-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	S.R. Stapel (Rosa)
Student number	4022254
Telephone number	06-43787733
Private e-mail address	<a href="mailto:rosa.stapel@gmail.com">rosa.stapel@gmail.com</a>

Studio	
Name / Theme	Department of Urbanism – research group: Design of the Urban Fabric
Teachers / tutors	1 <sup>st</sup> mentor: Daan Zandbelt 2 <sup>nd</sup> mentor: Egbert Stolk
Argumentation of choice of the studio	The project relates to one of the group's research questions: 'What are the dynamics of the urban fabric and how does this relate to different design strategies?' The project is about the dynamics between metropolitan development on a regional/city scale and its consequences for the future of a part of the city. Also, the study of urban form and the interventions and changes in urban form play a central role in the methodology of the project.

Graduation project	
Title of the graduation project	Exploring Ringculture in 21 <sup>st</sup> century Amsterdam – A search for new urbanity at the Ring of Amsterdam
Goal	
Location:	The 'Ringzone' in Amsterdam – the zones around the A10 ring road south of the IJ
The posed problem,	<p>The city of Amsterdam is facing a major challenge in housing the coming years: the expectations are a need for 50.000 units before 2025. The city appointed the zone around the ring road A10 as one of the major building locations.</p> <p>This project investigates the possibilities of urban densification in the zones around urban car infrastructures in the context of mobility transitions and urban growth. The case is Amsterdam and its A10 ring road. What opportunities do the asphalt and the areas connected to it offer as future building locations to house the new urbanites? Can we transform urban highway environments into attractive living environments?</p> <p><b>Problem Statement</b></p> <p>The ring road that was once made to release pressure of the city network is now putting pressure on the growth of the city. The Ring A10 is getting incorporated within the urban fabric, which causes new questions about the future of the ring. The privilege of the cars to have a place for themselves, orbiting around the city, is over; the time has come to share the new central space in the city! Therefore, the development of spatial concepts for the integration of road and new urban areas is necessary, in order to create attractive living environments.</p> <p>The aim of the municipality to extend the of city center into a highway environment is easier said than done, especially with the knowledge that smart solutions for city and highway integration are hard to find or extremely expensive (see Trends). From another point of view, the ring road is an undeniable part of the network and structure of the city and changes have to</p>

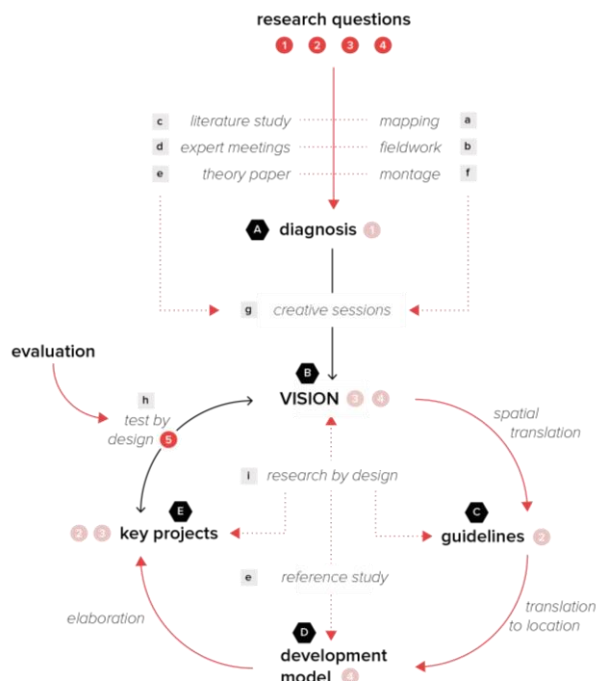
	<p>be considered very carefully. Infrastructure objects are barely construction works anymore – their future position has to be rethought in the context of the city.</p>
<p>research questions and</p>	<p><b>Main research question</b>          What overall vision and strategic urban development model, set against the housing task for 2025 in the A10 Ringzone in Amsterdam, provide the conditions for a form of urbanity where highway and city are integrated?</p> <p><b>Sub questions</b></p> <ol style="list-style-type: none"> <li>1. Can the Ringzone be described by the term 'zone', what is the current spatial condition of the area and what generic phenomena can be found?  <i>This sub question aims to grasp the characteristics of the Ringzone: what are generic elements that you find in the whole area and what are elements that differ?</i></li> <li>2. What (spatial) interventions for better integration of city and highway are applicable in the Ringzone to support the transformation from highway environment to an urban residential area?  <i>Whatever may be the conceptual idea for the Ringzone development strategy, it is essential to have knowledge about possible interventions in for better integration of city and highway in the context of the Koers 2025 task.</i></li> <li>3. What form(s) of urbanity can be realized in the Ringzone and what strategic interventions on city level are necessary to facilitate this urbanity?  <i>The answer to this sub questions forms the foundation for the vision and development model. The challenge is to develop a coherent argumentation with room for creativity here.</i></li> <li>4. How can an urban development model for the Ringzone be created that supports the overall vision for new urbanity?  <i>This question uses information from several sources in order to be able to conclude if and in what form a development model can be useful for the Ringzone area. It is connected to the conclusions of question 1 and the diagnosis and it has to lead to the final product of a development model, related to the vision.</i></li> <li>5. How can the new urban development model lead to urban design solutions that are flexible in various future scenarios of mobility and housing demands?  <i>This question evaluates the applicability and sustainability of the vision and development model by test by design: creating key projects within the model shows how the vision can be translated into projects. The projects will be evaluated by the use of (simple) future scenarios with changing parameters of mobility development and housing demands.</i></li> </ol>
<p>design assignment in which these result.</p>	<p><b>Hypothesis</b>          "The A10 is forced to take its final position in the urban fabric, with possibly another function or capacity. The zones surrounding it will gradually transform from buffer zones with transit functions into central areas that are a destination in itself, where city and highway are integrated. This new urban typology has a unique identity: recognizable as 21st century Ring Culture."</p> <p>With this hypothesis the challenge for the project is defined. It is an explorative search towards future possibilities of the Ringzone and the infrastructure of the A10 in Amsterdam. My aim is to propose an alternative form of urban development based on the specific potentialities that the highway environment has to offer. This means a search for an overall concept for the area, the '21st century Ring Culture'.          Divided into smaller steps this results in four research and design objectives.</p> <ol style="list-style-type: none"> <li>1. Researching the Ringzone area in its totality to discover generics and</li> </ol>

- uniqueness in it, which can provide guidance in the development of the Koers 2025 project areas;
2. Understanding the characteristics of the urban highway environment and research the relationship between city and ring road, to discover good possibilities for integration;
  3. Exploring possibilities of developing the area by the use of an overall concept for new urbanity;
  4. Create a strategic development model that shows the possibilities and crucial interventions on city and regional scale for the success of the area.

## Process

### Method description

As defined in the main research question, the main goal is to create an urban development strategy for the Ringzone that is based on a new vision on urbanity in the urban highway environment in Amsterdam. To get to this, there is a process that consists of several methods and 5 end products that interact with each other:



There are several methods that connect to the research questions. The methodology is based on the principle of research by design: design questions are raised and stimulated by the chosen methods. In the process of creating the end products, there is a continuous interaction between them.

List of methods:

**Mapping.** This is the spatial exploration of the city and the Ringzone by desk analysis. Essential basic information will be studied and documented.

**Fieldwork.** In the period before P2 I visited the area three times. This results in extra information for the process of mapping, provides the experience of the 'ring atmosphere' at the moment and is documented in a large inventory drawing and pictures.

**Literature study** is represents all the reading and researching that will be done for the project.

**Expert meetings.** Mainly in the context of the BNA research (see Position Statement) I joined several meetings with stakeholders and design teams that work on various locations on the ring. This is a very fruitful source for understanding the complex relations between stakeholders and what influences decision-making in highway environments. Also, it provides inspiration and specific knowledge (i.e. from the traffic engineers involved in the teams) for my own design.

**Reference study.** In order to generate a vision on the desired urbanity for the Ringzone and the structure of the strategic map/model references and the study of other designs is essential.

**Montage.** Translating the other references into the context of Amsterdam is done by a montage method. This will help to determine the right scale, experiment with the location of certain interventions and give insights in the spatial possibilities of the area (showing possible spatial developments).

**Creative techniques.** To process all information and conclusions from the above methods and the diagnosis, in the period after the P2 creative brain-storm techniques will be used to accelerate the formulation of the vision towards P3.

**Test by Design.** By designing key projects and elaborate in detail, the vision and development model will be tested and evaluated.

## Literature and general practical preference

The theoretical framework of this project consists of three parts to support the research questions:

1. The 'tradition' in urban highway (design) research

*Here I study writings on city and highway relationships in chronological order. Maarten van Acker defined paradigms in the planning practice of ring roads. This is the frame that I use to put other studies in perspective.*

2. The history and future city development of Amsterdam

*Here I study the urban development of Amsterdam. This is useful because my research focuses on the future position of the ring road in the city, so understanding the growth process and future possibilities is necessary. I study the city's expansion process; analyze the current situation using the books *4x Amsterdam* (2005) and *Atlas Amsterdam* (1999) and future growth scenarios.*

3. Precedential design on urban ring roads

The topic of the research paper. Abstract:

*The development of urban highways in the 20th century in European cities created infrastructural zones between the old city center and other city districts. Thirty years ago architect Willem Jan Neutelings conducted a research about the ring road zone of Antwerp and developed a model in which the manifestation of mass culture ('Ring Culture') in the city takes place in this zone (Neutelings, 1991). In this paper the work of Neutelings will be reviewed and related to the current situation in the ring road zone in Amsterdam. In section 2 the work of Neutelings will be described and contextualized within other research on urban highways. In section 3, the comparison of his work and the spatial situation in Amsterdam will be made. In section 4, the societal and spatial changes that influence the value and applicability are described. The main observations are the spatial differences between the rings of the two cities that strongly determine the development approaches. The conclusions about the current manifestation of Neutelings' ideas are that many aspects are still visible, but that current trends of more permanent use (Amsterdam, 2016), focus on public transport (Bertolini and le Clercq, 2003) and public interaction environments (de Hoog and Balz, 2012) create a different design task for the Ringzone, that is oriented on the presence of people in the ring zone instead of just cars.*

## Core literature list:

- BANHAM, R. 1971. *The Architecture of Four Ecologies*. London, England: University of California Press.
- BANISTER, D. 2008. The sustainable mobility paradigm. *Transport Policy*, 15, 2, 73-80. Architectura & Natura Press.
- CALABRESE, L. M. 2004. *Reweaving UMA*. PhD, Delft University of Technology.
- COLLEGE VAN RIJKSADVISEURS & HEESSEN, M. 2016. Goed voor de infra, goed voor de stad. Transformatie van de ringweg in de stad. College van Rijksadviseurs.
- DE HOOG, M. 2005. *4x Amsterdam: Ontwerpen aan de stad*, Bussum, Uitgeverij THOTH.
- DE HOOG, M. & BALZ, V. 2012. *De Hollandse Metropool: Ontwerpen aan de kwaliteit van interactiemilieus*, Bussum, Thoth.
- DIJKSTRA, C., REITSMA, M. & ROMMERTS, A. 1999. *Atlas Amsterdam*, Thoth.
- KLOOS, M., KORTE, Y. D., WENDT, D., VENHOEVEN, T. & ZUYL-MOORES, J. 2010. *Ring A10*, Amsterdam, ARCAM.
- NEUTELINGS, W. J. 1988. *De ringcultuur*, Mechelen, Vlees & Beton.
- PROVOOST, M. 2002. Infrarchitecturbanism. In: CRIMSON (ed.) *Too Blessed To Be Depressed*. Rotterdam: 010 Publishers.
- VAN ACKER, M. 2016. Stedelijke integratie van de Antwerpse ringinfrastructuur.
- VAN DER HOEVEN, F. D. 2001. *RingRing: ondergronds bouwen voor meervoudig ruimtegebruik boven en langs de Ring in Rotterdam en in Amsterdam*. PhD, Delft University of Technology.
- VENHOEVEN, T. & VAN DEN BOOMEN, T. 2012. *De mobiele stad*, Rotterdam, nai010.

## References

The project 'Ring Cultuur', a study on the development possibilities on the ring of Antwerp by Willem Jan Neutelings (1986) is the most important precedent for the project. The structure of my project is inspired on his study. Part of the project is a research paper that compares the study of Neutelings to Amsterdam and reflects on his ideas 30 years later.

## Reflection

### Relevance

#### Scientific relevance

The future of the urban ring roads is currently questioned in practice – illustrated by the research done by the College van Rijksadviseurs and the BNA Snelweg and Stad – as well as in science. The paradigms of van Acker (2016) clearly sketch a new task for the future: how to develop a healthy neighbourhood in the proximity of an urban highway? This is a question that can very well be researched by the research by design method that will be used in this graduation project.

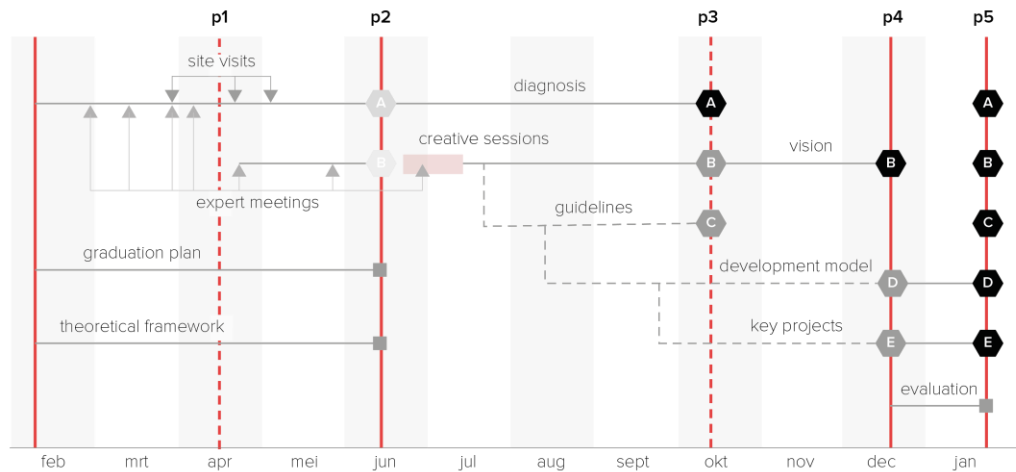
Within the research group of 'The Design of the Urban Fabric' the question about the influence of mobility changes in the future is also a topic for future research. This graduation project can add to the body of knowledge by testing different ways of intervening in the urban fabric of a former highway environment to transform it to a living environment at an infrastructure that has to adapt to future forms of mobility.

## Social relevance

The issues of the municipality of Amsterdam considering the urban growth have been studied in the previous chapters of this report. Working on new ways to coop with this growth by finding ways to deal with it within the existing city can add to the success of future developments.

Also, the pressure on the municipality is large and the study of the future of the urban fabric is most of the time not on the agenda. I can use my freedom as a graduate student to freely explore and design in a broader context that may result in discoveries that can benefit the future of the city.

## Time planning



The overall graduation planning is based on the intended end products. I projected several deadlines for these projects:

- A. Diagnosis: preliminary at P2, and final at P3
- B. Vision: first idea at P2, preliminary at P3 and final at P4
- C. Guidelines: most defining ones have to be final at P3, but can be adjusted by discoveries in the research by design process. The guidelines form the base for the model and the key projects, therefore I need them at P3
- D. Development model: with the final diagnosis, the vision and the basis of the guidelines it can be developed in the period between P3 and P4
- E. Key projects: similar process as the Development model

Evaluation: In the process towards D and E, the vision can be evaluated by the designs that resulted from it. This will be final at P4-P5.