

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), 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	Stefania Saridou
Student number	5866308

Studio		
Name / Theme	Design of the Urban Fabrics	
Main mentor	Prof.ir. R.J. Dijkstra	Section of Urban Design
Second mentor	Prof.ir. K.P.M. Aalbers	Section of Environmental Technology & Design
Argumentation of choice of the studio	<p>The selection of a graduation project regarding the future image of a city, was based on the preference to design for a complicated project. As an urban designer, it is essential to approach every problem and project throughout all the trajectories (design/planning/technology).</p> <p>But, in the case of my graduation project, although I acknowledge the importance of all three trajectories, I will be focusing on design. The argumentation behind that is that you cannot have a clear vision/image of the future if not 'picturing' it, which is not possible to happen without designing. By exploring past design approaches/concepts and implementing them in a new way, a door opens to the exploration of new possible design futures.</p>	

Graduation project	
Title of the graduation project	Dioptase Horizons: Envisioning a biophilic blueprint for Zwolle's future
Goal	
Location:	Zwolle, Netherlands
The posed problem,	A steadily growing population and an urgent need for urban expansion are the main drivers of the dual crisis the Netherlands is currently facing: the housing crisis and the climate change crisis. Due to constant external and internal migration flows, the government needs to take action in tackling the problems regarding the housing

	<p>shortage, with the aim to create an environment that is also climate resilient.</p> <p>Zwolle, is one of the Dutch cities that also is affected by this dual challenge: the city needs to accommodate a growing population and protect itself from future climate change impacts. The creation of strategies to manage this two major crises is crucial in order to maintain not only the ecosystem, but also protect and accommodate the needs of the people.</p> <p>A strategic plan needs to be created to both close the gap in the housing market and integrate nature into the urban fabric, in order to also align with the needs of a climate-resilient future environment.</p>
research questions and	<p>Main Research Question: "To what extent can densification and biophilic design strategies help Zwolle achieve resilient urban development by 2100?"</p> <p>Research Sub-questions: SQ1: What are the key challenges Zwolle has to overcome by 2100 to become resilient?</p> <p>SQ2: How can Zwolle densify to accommodate population growth without losing the sense of the city?</p> <p>SQ3: How can the biophilic components of green and blue structures contribute to make the city of Zwolle more sustainable and resilient?</p> <p>SQ4: What will the new model of greener environments of Zwolle be like by 2100?</p> <p>SQ5: How can the proposed spatial strategy increase the adaptability of the city to the changes in climate and urbanization, providing an environment that is safe, healthy and liveable for both human and non-human populations?</p>

design assignment in which these result.	The expected outcome of this graduation project will be an understanding of the context, the opportunities & limitations, and the development of a spatial strategy for a resilient, biophilic and greener urban development of Zwolle.
Process	
Method description	
<p>The methods that will be used for this graduation project are:</p> <ul style="list-style-type: none"> -<u>Literature review</u>: Reading through scientific papers and theoretical design approaches in order to understand the underlying theories of biophilia, density, climate adaptation, resilience, healthy city and perception of space. -<u>Document and Policy review</u>: Reading through different types of policy documents in order to understand what the current situation regarding strategies and plans are for my case study, but also to explore whether or not future policies, goals and strategies have been developed that can be used as a backbone for my strategy. -<u>Field work</u>: Visiting the city of Zwolle is important to understand the urban tissue as a inhabitant of the area, walk through the city to locate problems/opportunities and understand better the scale of the project. -<u>GIS mapping</u>: Through GIS mapping I will be conducting my initial analysis and exploration of different topics like green infrastructure and areas with potential of development. As I am working on a city scale, GIS mapping is in important tool to providing me all necessary data and visualizations of the city of Zwolle. -<u>Research by Design</u>: One of the most important aspect of the development of my graduation project. In the analysis and experiment part, I will be using the Delft approach method to produce different variations of conceptual ideas, in a way that can help analyze, design and conduct preliminary conclusions. Through this method, a number of design possibilities can be produced and provide insight into what can actually be applied into a site specific area. 	

Literature and general practical references

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Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

My graduation topic aims to combine the knowledge of Urban Design and Ecology, and contribute to narrowing the knowledge gap of how we can build human environments without constantly destroying natural habitats. I will use my knowledge to explore whether or not this kind of model can be created, and if so, to what extent, as it is important to maintain the value of the natural environment as intact as possible. Through my graduation project I believe I can propose a design that is both valuable for human and non-human species, as the MSc of Urbanism is not only about designing and accommodating people's needs, but also designing for a better future of our environment and society.

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

From a **scientific aspect**, the project contributes to the scientific field of urban ecology, as it explores potential strategies of implementing biophilic design in existing structures. It also addresses the climate change crisis and the aim is to develop through this project strategies of living with nature and water, incorporating flood protection adaptations and climate resilience design interventions. The project's aim is to integrate design principles from different scientific disciplines like urban planning, ecology and social sciences. By exploring the past, learning from it and adapting existing design aspects to the future, new design models can occur.

From a **societal aspect**, the project will be addressing the topic of densification, and how people can live in an environment more dense and comfortable at the same time. By exploring the topic of biophilic design, a societal need for resilient urban environments is created. A biophilic blueprint is the tool to envision Zwolle as a city that accommodates more people but also ensures that their cohabitations is pleasant. Biophilic design addresses also the topics of public health and well-being.

From a **professional aspect**, this project can not only contribute to the field of practise of urban design and propose a new strategy/model of denser and greener environments, but it may also start the discussion of how this new model can be designed and implemented throughout the Netherlands, and what the realisation of this kind of project would mean for both the academia and practise of urban design.