

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	Aljona Kourchine	
Student number	5732832	

Studio		
Name / Theme	Revitalising Heritage: Maritime heritage	
Main mentor	Lidy Meijers	Architecture
Second mentor	Wido Quist	Research
Argumentation of choice of the studio	The themes of this graduation studio address current issues and focus on interesting architectural challenges. For example the theme of heritage and dealing with the existing, provides new opportunities on how we look at architecture and designing the space we live in, and use on a daily basis. Also the thematic of Maritime intrigues me, as this is not a topic I have encountered before, but already it showcases to be of cultural and historical significance for our society.	

Graduation project	
Title of the graduation project	A new future for Maritime Heritage: Repurposing a shipyard into a sustainable community

Goal	
Location:	The location is positioned within the Waterdriehoek, an area that is strongly connected through water in the Province of South-Holland. As it is filled with various typologies that resonate with historical developments in the Netherlands, it projects the maritime industry and creates a distinctive identity. One of these typologies is shipyards, a man-made place where ships or other vessels are build or repaired. These shipyards have been a constant present along the riversides in the Waterdriehoek, expressing our rich maritime history and Dutch traditions.

	<p>For my graduation project I have selected one of these historical shipyards along the riverside, called Neptune repair. It is positioned along the Merwede river and Rivierdijk in Hardinxveld-Giessendam, a small village between Sliedrecht and Gorinchem.</p>
The posed problem,	<p>After World War II, economic growth in the Merwede zone resumed from 1948 onwards, with shipbuilding, machinery, and construction industries dominating the northern areas. However, the economic crisis of the 1970s and the continuous increase in scale during the 1990s impacted inland shipping, marking the decline of large-scale industrial activities. Small scale industry found themselves unable to accommodate the construction and repair needs of large and heavy vessels (Ned Vereniging Binnenhavens, 2014a). These developments led to the merger and relocation of shipyards away from city centers. Consequently, many attributes like cranes, man-made docks, railway tracks, and shipyard halls began to disappear (Arcadis, 2019).</p> <p>With the current rise in urbanization in the area, there is a risk that these character-defining attributes along the riverside could vanish for good. The Arcadis report (2019) provides an inventory of valuable maritime heritage assets along the Erfgoedlijn, revealing that shipyards lack protected status. A study by Van Lier (2023) also indicates that stories of maritime heritage are largely unknown and that maritime heritage lacks legal protection and financial support.</p>

	<p>The central issue is the preservation of the entire ecosystem of maritime heritage and maintaining its relevance. Heritage that remains unused loses its significance and function (Alzer, 2021). The lack of recognition could lead to the disappearance of many shipyards along the Waterdriehoek, and thus risking losing the attributes and the maritime identity.</p>
research questions and	<p>How do structural and operational attributes contribute to the functionality of shipyards in the Waterdriehoek, and what is their value as potential maritime heritage?</p> <p>How have historical events or technological advancements driven changes in the structural design, layout and operational capabilities of the shipyards?</p> <p>How can these structural and operational attributes be valued as maritime heritage?</p>
design assignment in which these result.	<p>The research results will provide a good base for the design challenge. Whilst looking at the values of the existing, I would like to repurpose the shipyard into a green community along the Waterdriehoek as a future scenario.</p> <p>To continue on the problem statement, I want to look at a possible future scenario. As times progresses, the influence of urbanization will admit a lot of space that is reserved for industry, whilst this will disappear. Also the dynamic of the area will change as smaller villages will merge and combine into bigger areas. This could result in places that have solely the purpose of living and deal with an aging demographic.</p>

	<p>For my design assignment I want to redesign my shipyard, Neptune repair, into a green neighborhood. I will focus on creating a community, by introducing diverse housing solutions and facilities by looking at community living.</p> <p>I also want to create a green environment to reflect the Biesbosch across the river, and create a biodiverse space for animal and humans. At last I will deal with the existing situation by respecting the values of this maritime heritage by looking at the diverse attributes. The challenge for the design will be finding the right balance between introducing a new function and application and respecting the existing.</p>
Process	
Method description	
<p>The research will focus on defining the relation between attributes and their values in shipyards, that could provide a basis for managing this particular heritage.</p> <p>Over the years a discussion has arisen focussing on not solely the physical fabric, but also the significance conveyed by the heritage properties. A study done by Havinga et al., (2020) clearly separates these elements by explaining that the physical fabric, distinct through attributes or features of a site, indicates the 'what' and these attributes represent values, indicating the 'why'. This is elaborated by the study of Freheim and Khalaf defining three stages of significance assessment. First, the identification of the heritage, followed up by looking at the reason of the value and finally where the value is applied. Current studies shifted their attention more towards intangible heritage, to the point that there is no tangible heritage (Having et al., 2020). A book by Jane Smitt (2006) delves into such extremes exploring the concept of heritage as a cultural and social phenomenon, instead of a 'thing', stating all heritage is intangible. A less extreme version is also visible within the attitude towards the built environment. From a traditional focus on only tangible attitudes, to a current focus of value-based approach including intangible values. Another example is the scale of the site, whilst traditionally only the object, often with individually designated monumental status, was looked upon, a shift arose towards including a broader context and setting of the site.</p> <p>For this research I will analyze the shipyard Neptune repair, which will be used as a case study for this research.</p> <p>The case study will first be analyzed using the methodology of chrono-mapping. This method is introduced in the study of Clarke and others to give insight on the evolution of the ongoing developments. This method responds as a timeline of interventions and allows to discover, quoting Clarke et al. (2019) that which is and that which was, revealing lost elements, forms and spatial relationships.</p>	

This will provide a better understanding of changes in structural and operational attributes of shipyards. Literature and additional archival material will provide a comprehensive historical overview.

The second sub-question will focus on the significance of these attributes. Continuing using the methods introduced in the study of Clarke et al. (2019) the research will be implementing the heritage value matrix, which is designed to establish a direct relationship between values and the built environment. Whereas this matrix touches upon different scale levels, the UNESCO historic Urban Landscape Approach (HUL) emphasizes to look at a broader urban context, like ensembles and settings. This will be adjusted by introducing a bigger range of scales following the study of Havinga et al., (2020), which includes area, ensemble, building and building elements.

By looking at the structural and operational attributes of shipyards in the Waterdriehoek, and what their value is I can determine their contribution as potential maritime heritage?

Literature and general practical references

Dealing with industrial heritage is vastly emerging over the last years. Delving into the historical developments, attributes and values associated with such heritage is of great importance to truly understand and manage the existing in new ways. For instance, a studies of the Werkspoorhallen in Amsterdam, shows a similar case study for focusing on maritime heritage. In literature, the focus is mostly on industrial heritage. For example ICOMOS, an organization that dedicated to the conservation and protection of cultural heritage places around the world. It plays a crucial role in advising governments, organizations and communities on practices for conserving and managing heritage sites. Additionally ICOMOS collaborates with UNESCO and other international bodies to develop policies and guidelines for the protection of cultural heritage. One particular division focusses on the study of industrial heritage, the international committee for the conservation of the industrial heritage (TICCIH) and created 'The Dublin Principles'. Another more local organization is called BOEi, a Dutch organization dedicated to the revitalization and reuse of heritage buildings and sites in the Netherlands.

The last organization provides successful practical references in the Netherlands. One in particular that has an interest of mine is DRU industriepark, a formal factory where iron was melted, 'ijzergieterij'. The project has a rich history and has been transformed into a multifunctional area, where the industrial atmosphere is intertwined with culture and nature. The area provides divers facilities like: housing, office spaces and multifunctional spaces for creating and meeting others. Another practical reference is Fenix I, a formal storage units that has been transformed into a mixed program of dwelling, recreation and working. Both projects consider the past and implement it in the redesign.

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

My graduation project focuses on the adaptive reuse of a historic shipyard into a sustainable community with primarily a housing function, while also incorporating biodiversity and heritage values. This aligns with the studio theme of revitalizing maritime heritage and the value-based design methodology implemented in the studio. Within my master track, Architecture, this project emphasises the practical application of designing by using sustainable strategies while considering the existing. Also the integration knowledge from architecture, urban planning and heritage architecture creates an interdisciplinary complex challenge dealing with the future.

My project addresses the urgent need for affordable housing and community spaces, enhancing social cohesion and quality of life in urban areas. While being considerate of future urban developments.

It showcases innovative approaches to heritage conservation and sustainable design, serving as a reference case study for others. The project celebrates local identity and cultural heritage by preserving a historical shipyard and integrating its industrial heritage into a new, green community.