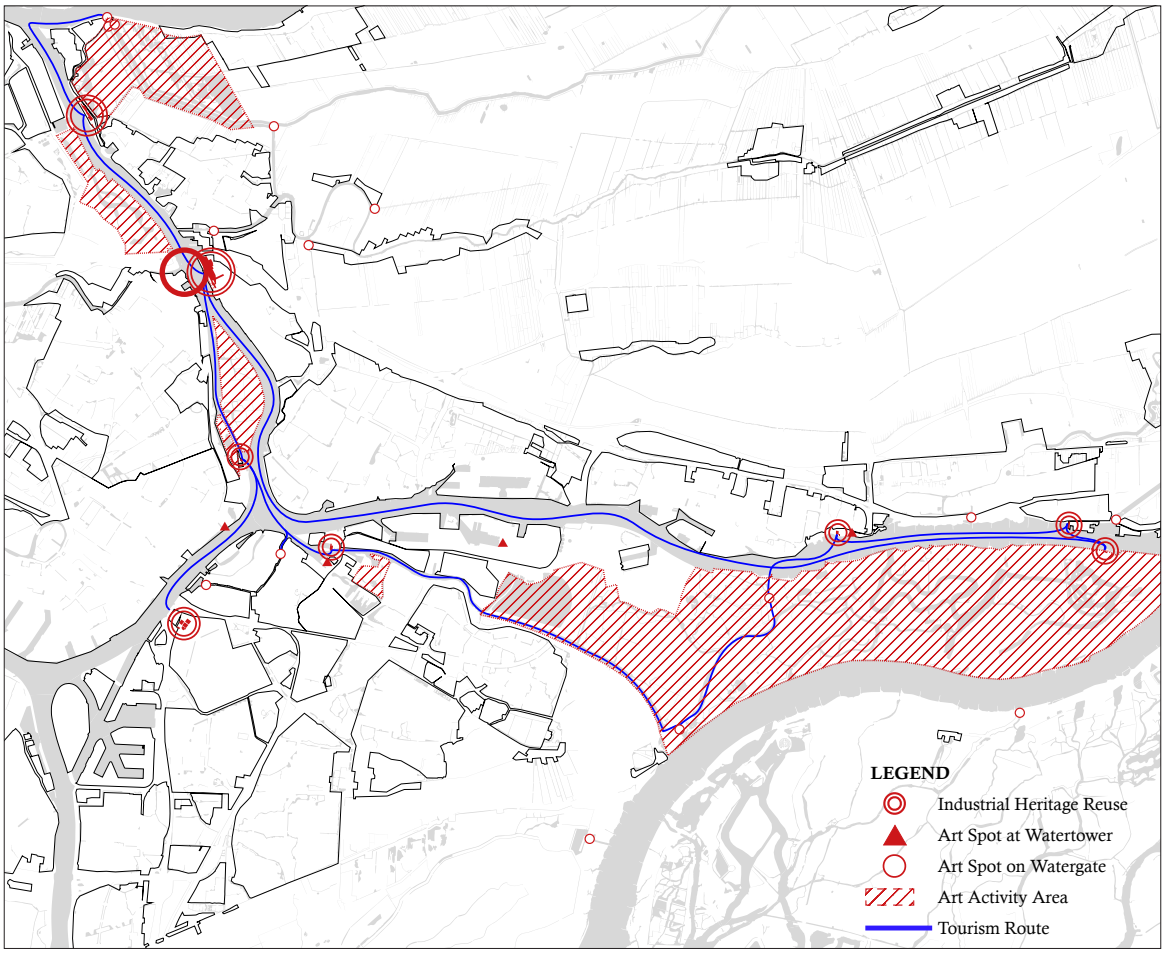
HERITAGE & ARCHITECTURE – MARITIME HERITAGE STUDIO

Social Tides In Post-Industrial Cultural Landscapes

A Water-Environment Art Destination & Local-benificial Complex In Waterdriehoek

Reflection in P4
Boyang Shen 5693918


LEGEND
Industrial Heritage Reuse
Art Spot at Watertower
Art Spot on Watergate
Art Activity Area
Tourism Route

TU Delft

2024-2025

Heritage & Architecture
Maritime Heritage Studio
AR3AH115

student
Boyang Shen_5693918

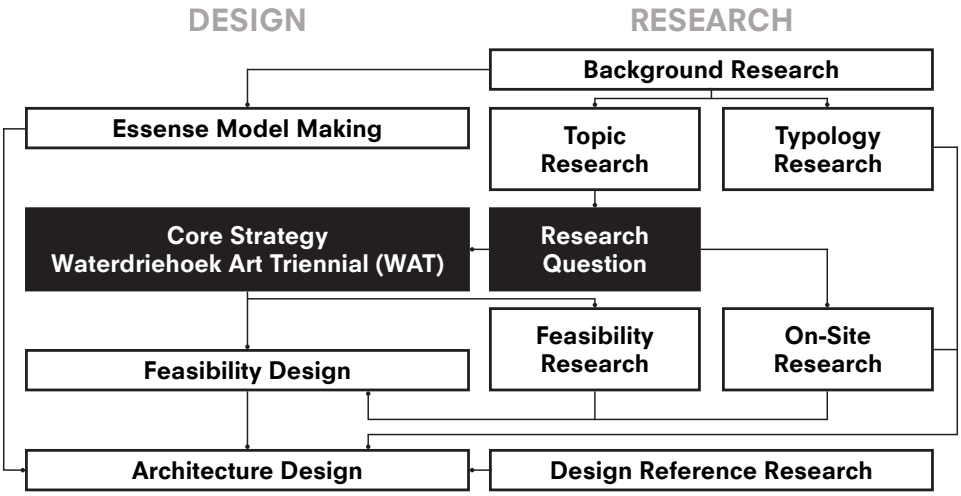
design mentor
Lidy Meijers

BT mentor
Thijs Bennebroek

research tutor
Wido Quist

RELATIONSHIP BETWEEN RESEARCH & DESIGN

My graduation project involves the adaptive reuse of the former FN Steel waterfront industrial complex in Alblasserdam, transforming it into an arts and public life complex. This complex will serve as the main gallery for the Waterdriehoek Art Triennial, with a focus on water-environment art, while also providing multidimensional mixed-use spaces that support local on-water life and maritime traditions. This dual identity is inspired by research into the current development and future prospects of the integrated heritage zone of Waterdriehoek.



After having a basic understanding of the Waterdriehoek, this program raises a question: ***What an arts tourism that fits Waterdriehoek's heritage and local community could be like?***

Through examining the potential for combining water heritage sites with art tourism, this project synthesizes existing approaches and best practices of non-permanent exhibition tourism in heritage sites and adapts these methods to the specific conditions of Waterdriehoek. As a result, the project envisions a multi-tier spatial structure for the Waterdriehoek Art Triennial, comprising Core Exhibition Areas, Art Regions, Art Spots, and Tourism Routes, taking it as the macro feasibility design. Based on this structure, the former FN Steel waterfront industrial complex was selected as the main gallery for the Waterdriehoek Art Triennial and as a key port on the water-based Art Route.

Additionally, this project incorporates insights from a local survey conducted as part of the research. Besides residents' preferences for heritage tourism development, the survey provided valuable information on three main aspects: their concerns for tourism planning, their attitudes toward maritime heritage and functional needs for waterfront spaces. The findings support two guiding principles for tourism development: maintaining an appropriate distance from community life and ensuring that tourism infrastructure benefits local residents. Furthermore, the project proposes five functions that align with community needs: a seasonal maritime school, a maritime culture club, a water sports and equipment shop, a place for small boat sales and rentals, and a maintenance and repair center.

The above research development in both directions responds to the research questions, resulting in specific design questions: ***How can FN Steel factory buildings be transformed to host main exhibition area of water-environment art triennial but also serve locals' daily life and maritime culture in non-event period?***

In the process of architectural design, the non-synteny of specific spatial functional requirements and the graded assessment of heritage value have in turn led to new research, that is: ***the exploration of suitable transformable structure schemes***, ***the transformation of the old structure*** and ***the possibility of transforming the declining volume into nature***.

RELATIONSHIP BETWEEN GRADUATION & STUDIO TOPIC

The theme of this H&A Graduation Studio is 'Maritime Heritage'. From the perspective of the architectural design object in this project—the former FN Steel waterfront industrial complex—this site is the largest waterfront steel industrial complex in the area, with over fifty years of industrial production history. Both its production and transportation processes were closely linked to local shipbuilding and waterway transport, clearly making it one of the significant maritime heritage sites within the Waterdriehoek region.

Beyond this, the project also explores the spatial potential and local significance of maritime heritage from the perspectives of art, nature, and economics.

This project introduces the concept of water-environmental art, specifically tailored to complement existing environmental art types within heritage-art projects. The water-environmental art is actually a new concept that has not been systematically defined, it includes all means of visual art and performance art on the theme of water environment, water works or industries along the river. Whether in the conception of Waterdriehoek Art Triennial or in the design of the main art museum conducted by the original FN Steel, this project actively tries the possibility of the original space of maritime heritage to accommodate, carry, present and even participate in the water-environmental art.

One of the basic ideas of the current situation of the original FN Steel area is to introduce the natural landscape and water features into the current declining or demolished space on a considerable scale. A portion of the factory structures will be exposed to the outdoors after necessary treatment, serving as sculptural landscape elements and as frameworks for plant growth. The open space after demolishment on the site should be bisected into two parts, landscape and waterscape, replace the concrete-covered dam domain with a natural environment. The curated decay and rewilding of artificial hardscapes mentioned above will explore the relationship between maritime heritage and nature in a critical perspective.

This project also considers the transformation of the former FN Steel site from a realistic heritage management perspective. Given the reality of deindustrialization and the vast scale of the remaining structures, introducing multiple new functions is essential. These functions must both strongly attract external tourists and offer a stable, sustainable business model within the local community. Such explorations can benefit the economic future of all Maritime Heritage sites.

VALUE OF RESEARCH METHOD & APPROACH

The development structure of this project differs from that of a typical architectural graduation design project, adopting a more comprehensive approach rooted in heritage management and development. Its most distinctive feature lies in the integration of a research-based activity planning phase between the initial research stage and the subsequent architectural design. Within the geographic scope of a large-scale heritage site, this phase explored the feasibility of an arts triennial, using the resulting design as an open-ended framework and as the foundation for the architectural design brief. This approach broadens the traditional scope of heritage architecture design, enhances the internal logic of research-based design, and responds to the increasingly complex heritage issues and higher demands placed on future architects.

From the perspective of the specific theoretical path of the research process, the Waterdriehoek area is extremely diverse in terms of heritage values, while at the same time the monumental character that is central to the classical concept of cultural heritage is not predominant, which is highly conducive to the application and practice of some of the cutting-edge heritage theories of this century. For example, 'Against Authorized Heritage Discourse (anti-AHD)' and 'Critical Heritage Study' are used in this research. These theoretical research tools are also valid in maritime heritage studies in a general sense.

THE PROJECT'S WIDER SOCIAL, PROFESSIONAL, SCIENTIFIC RELEVANCE & ETHICAL ISSUES

Globally, the problems of industrial transformation and the treatment of industrial heritage in former manufacturing regions are universal. The Waterdriehoek region, however, superimposes on this universality a unique landscape heritage related to shipbuilding, dredging, agricultural water systems, etc., while at the same time these types of heritage have not yet been fully recognized and developed. Based on this premise, the project starts from the entry point of tourism and helps to provide some practical insights and contributions to the broader discussion of the above mentioned areas through research and design. Additionally, it provides a framework for applying the discussed models to other water-related heritage sites.

On the other hand, to achieve the goal of meeting new demands, this project involves designing a new functional form along with complementary materials and spaces. Due to the extensive volume and complexity of internal systems, the project must delve deeply into the development and application of existing or entirely new architectural professional and scientific content. For example, this project includes several important and innovative considerations: the necessary climate adaptation improvements required for the functional repurposing of industrial buildings; issues surrounding the rewilding of artificial hardscapes and the curated decay of abandoned spaces; the design of lightweight, mobile, and collapsible structures.

Of course, Heritage tourism has always been controversial, as there has always been a tension between economic development and the preservation of the many attributes of heritage sites. In this regard, whether through the two design principles derived from the questionnaire, the dual identity assigned to the architectural site, or the specific design interventions, this project seeks to balance tourism development, heritage revitalization, and potential enhancement while preserving the authenticity and intrinsic values of the heritage buildings as much as possible. Furthermore, it aims to create benefits for the broader environment and the local community.

TRANSFERABILITY OF PROJECT RESULTS

This study provides a structure that can be continuously deepened and enriched for the global feasibility design of the Waterdriehoek Art Triennial. This design foundation can be transferred for use by later students, architects and researchers. For example, the designs of other large Core Exhibition Areas on the line, the water ornamental landscape designs of the Art Regions as a wetland, and even the industrial and interior designs of the theme cruise ship.

Also because of the requirement of double identity after building renewal, the final monolithic design is centered on the concept of variable seasonal flexible spaces, will involve two architectural ontological discussions: the spatial juxtaposition of multiple functions and the temporal asynchrony of multiple functions, which will require the introduction of a number of relevant design theories, like integrated functional organization of architecture and transformable architecture. Due to the commonalities of the problems faced, other maritime heritage may also adopt these two when renovating.

OPEN QUESTIONS & DILEMMAS

This research and design propose a substantial development framework within the theme of heritage tourism. It is undeniable that both the conceptual planning of the Waterdriehoek Art Triennial and the specific focus on the FN Steel Factory site represent just one of countless potential approaches and serve as singular examples. Beyond discussing whether there are alternative possibilities for each aspect of this project, there remain many more fundamental and open-ended questions: In the context of ongoing demolition, how can architectural interventions for industrial heritage renewal become lighter, faster to construct, and fully reversible in order to counteract negative societal forces? Beyond using water-based transportation as the backbone of activity, are there other, perhaps even better, strategies to enhance the overall Waterdriehoek tourism brand? Furthermore, for the Waterdriehoek waterfront industrial sites with complex operational and ownership conditions, is there an opportunity to develop heritage conservation and adaptive reuse that partially retains industrial manufacturing capabilities, rather than solely relying on functional replacement?

One risk that cannot be ignored is that undertaking the project requires a huge investment in reality. Attracting sufficiently strong capital support is critical, as the total investment requirements, from the macro regional art triennial to the main venue building designed for this project, are so large that local government or national investment in the arts and sciences alone will not be sufficient.