

Reflection

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Within the field of heritage-based design, there is a lot of research and literature on how buildings can be analysed and used as catalysts for (area) transformation. However, this focus is primarily on building-like structures, defined as structures with walls and roofs, such as factories and houses, built to protect people, animals, or objects. This definition excludes structures that are nevertheless valued as heritage which are more often valued.

My research addresses this gap by focusing on non-building structures, structures without walls or roofs, not built to provide shelter, used as triggers for area development. Despite their increasing importance and monumental status, there is little to no literature on how to approach these structures in design and transformation processes. My graduation project investigates how such non-building structures are valued, how they can best be analysed, and what examples exist for their transformation.

I use existing literature on building-like heritage, applying and testing it on non-building structures, specifically within maritime and industrial contexts. The value typology of Alois Riegl and the shearing layers of Stewart Brand form the foundation of my value assessment method. By adapting and combining these frameworks into a matrix, I developed my own analytical tool. This tool became the starting point for the case study: the crane track in Dordrecht, a non-building structure formerly used for loading coal and later sand from water to land and vice versa. The crane itself is gone, but the track remains and is now officially listed as a monument.

The research directly shaped the design process. The values identified in the analytical framework guided the spatial and architectural choices made. The crane track in Dordrecht is a remaining trace of the area's industrial past and is declared monumental in 2014. I embraced this memory as a design value by referencing the former crane in the design of a staircase, abstracted, yet recognisably inspired by "Piet's crane".

The design responds to the plans and vision of both the municipality and the area developer. A co-creation session with local residents helped inform a key design decision: repurposing the volume on top of the crane track as a community space, a continuation of the square, fostering social interaction.

The form and materialisation were heavily influenced by case studies from the research phase, which showed that a clear distinction, in colour, material, scale, or distance, is often made between old and new. By elevating the new structure above the existing track and using contrasting materials, I aimed to preserve that distinction. The staircase connects past and present, while referencing the crane that once stood there, Piet's crane. Though abstract in form,

it follows the same structural principles while differing in colour and character, symbolising transformation.

The kinetic façade I propose, aims to maintain the dynamic essence of the original function, offering a new way to embed movement and transformation into spatial heritage design. The façade will consist of a lot of small square elements that are individually connected to the supporting structure. This makes that the elements can move separately in the wind creating a waved pattern, which referring to the waterside.

I believe the strength of my approach lies in the combination of heritage theory, design practice, and methodological innovation. By creating a new analytical tool based on established theories of Riegl and Brand, I was able to translate abstract values into concrete design drivers. My iterative process, where research and design continuously informed each other, allowed for both academic depth and contextual responsiveness. The co-creation session added a participatory dimension, strengthening the societal relevance of the design. However, I also believe that this approach can work on other literature on how to (re)use heritage buildings and test in the same way on non-building structures.

Academically, this project contributes to the underexplored domain of non-building heritage within transformation design. By adapting existing theories to this specific typology, the project offers new tools and insights for both research and practice. Societally, the project demonstrates how such structures can foster identity, memory, and continuity in rapidly developing urban contexts.

Ethically, the project respects the intangible values of place while offering contemporary usability. It challenges the tendency to erase or mimic the past and instead proposes a layered, critical engagement with heritage. It advocates for inclusivity by designing a public space that honours both memory and current community needs.

Important to mention is the fact that I mainly focus on industrial and maritime non-buildings. This research can be tested on other non-buildings as well for further research.

The analytical framework and design approach are transferable to other non-building heritage cases, especially in industrial or maritime contexts. While the physical outcome is site-specific, the methodology offers a blueprint for analysing, valuing, and designing with similar structures elsewhere. Future students and or other architects can use my research as a base for valuation, by for example using the matrix introduced in the second sub question or using the same method on other literature on how to transform heritage.

Both the research and the project show that non-buildings, too, can carry meaning and become anchors for transformation.

Critical reflection

However the transformation of non-building structures could raise questions about the necessity of their adaptive reuse. Is it essential to assign a new function to these structures, or can their value be preserved simply through conservation? While adaptive reuse is often seen as a way to ensure their continued relevance, some argue that these structures hold intrinsic value regardless of functionality.

Maintaining these remnants in their original state preserves their historical authenticity. Many industrial and maritime structures serve as visual anchors in the urban landscape, offering cultural and historical significance without requiring active use. This approach aligns with practices seen in the preservation of ruins and monuments that remain untouched beyond basic stabilization.

On the other hand, adaptive reuse is often justified by economic, social, and environmental factors. Without a new function, there is a risk of abandonment, neglect, or eventual demolition. Repurposing these structures into functional spaces, such as public areas, cultural institutions, or commercial venues, can provide financial sustainability and public engagement, ensuring long-term preservation.

The relevance of these transformations in the long term is also uncertain. Industrial heritage and maritime remnants are currently gaining recognition, but will this interest persist? As urban landscapes continue to evolve, the societal value placed on these structures may shift.

Sustainable conservation strategies must therefore balance immediate functional needs with a long-term vision that respects historical authenticity and anticipates future urban development trends.

Ultimately, the discussion highlights a crucial tension: preserving non-building structures as historical artifacts versus repurposing them for contemporary use.

Future research and policy development could explore flexible conservation models that allow for both preservation and transformation, ensuring that these structures remain meaningful elements of the built environment for generations to come.