

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 | Kira Zeinstra |
| Student number | 5890195 |

| Studio | | |
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| Name / Theme | A Matter of Scale (Methods of Analysis and Imagination) | |
| Main mentor | Willemijn Wilms Floet | Architecture |
| Second mentor | Niels Tilanus | Building technology |
| Argumentation of choice of the studio | I selected the Methods of Analysis and Imagination studio because it is flexible, allowing students to explore methodologies and scales that align with their specific interests and the objectives of their projects. | |

| Graduation project | |
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| Title of the graduation project | The Living Stage: Reimagining Skåne Bastion |
| Goal | |
| Location: | Skåne Bastion, Rannamägi Park, Tallinn, Estonia |
| The posed problem, | <p>Architecture always reflects contemporary societal values. My project engages with the recent discourse that a human-centric approach to architectural design often neglects our integral role within the ecological web. Incorporating nature more prominently into architectural design is essential to address issues such as climate change, habitat degradation, and biodiversity loss.</p> <p>Buildings often reflect human priorities at the expense of plants, animals, and other living beings. This mindset separates humans from the web of life, reinforcing the harmful notion that nature is “out there” rather than something we are “intrinsically part of”, fostering a mindset of separation rather than coexistence.</p> <p>For children in urban environments, this disconnection is even more profound. In Tallinn, suitable public spaces that allow children to connect with nature, which is crucial for their well-being, are often lacking. Järv et al. (2020) argue that playgrounds are typically designed for younger children, causing older children to feel excluded. The absence of an ecological approach in urban planning limits</p> |

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| | <p>opportunities for children to remain connected to their environment (Vacht et al., 2018). This lack of exposure risks reinforcing anthropocentric thinking, where decisions are made primarily for human benefit, overlooking the needs of other life forms.</p> <p>Additionally, engaging with plants, animals, trees, and other living beings is crucial in promoting mental and physical well-being. In Estonia, the report indicates a concerning decline in the overall well-being of children, driven by several interconnected factors (Kersa, 2023).</p> <p>The Skåne Bastion, constructed during the fortification of Tallinn in the 17th century, is an integral part of a larger historical defence network. Since it lost its military function in 1867 and was transformed into a park in 1881 minimal alterations were made; its bunker and underlying tunnel system remain largely intact. The primary modifications involved the introduction of several Lime trees and other vegetation, transforming the bastion into a park with a small playground. At this moment the park is underutilized and dilapidated.</p> |
| Research questions | <p>Main research question: How can the theme of "human and nature coexistence" be integrated into architecture to enhance children's awareness in Tallinn, encouraging them to learn about and reconnect with this essential relationship</p> <p>Sub-questions:</p> <p>Which specific architectural program is capable of creating a playful and engaging environment for children, thereby fostering positive interactions with plants, animals and other living organisms?</p> <p>How can architecture provide experiences that foster interactions between children and plants, animals and other organisms?</p> <p>What are the characteristics and uses of parks in Tallinn's Urban landscape?</p> |
| Design assignment in which these result. | <p>The design assignment encompasses the reactivation of the Skåne Bastion into a vibrant park that serves as a communal hub for children and local residents. Importantly, the design will also prioritize the inclusion of non-human living beings, thereby fostering a comprehensive sense of belonging within a broad ecological network. This space will facilitate engagement with various forms of artistic expression, including art, dance, poetry, theatre, and music in relationship with nature.</p> |

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| | <p>My goal is to link people's positive experiences at exhibitions, performances, or concerts with the beauty of interactions with other living beings. Every positive memory is inherently tied to an environment, and when that environment is connected to the non-human world, it can promote a biocentric perspective.</p> <p>The architectural design of the theatre will prioritize the utilization of bio-based materials, with a commitment to employing substances that evoke a sense of natural origin or exhibit characteristics of ageing on the surfaces with which the audience will interact.</p> <p>Moreover, the architectural form of the theatre will draw inspiration from biomorphic shapes and patterns that resonate with nature.</p> <p>In conclusion, the assignment will culminate in a comprehensive design that seamlessly integrates the theatre and landscaping, revitalizing the Skåne Bastion within Tallinn's eco-system and expressing its ecological vitality to its visitors.</p> |
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Process

Method description

My research revolves around play, biophilia, and experience in the field of architecture. Initially, I engaged with a range of theories surrounding biophilia, which grounded my understanding of this field and highlighted the significance of childhood connections with the non-human world.

The literature review uncovered specific design principles that I plan to apply thoughtfully and intentionally, while actively testing these principles during my design journey. I applied the following research:

To gain a comprehensive understanding of the local context, I conducted a contextual analysis of the green belt surrounding the edges of Tallinn's old city centre. This analysis involved a detailed examination of the historical development of various sites, assessing their evolution and current utilization.

To comprehend the perspectives of children in Tallinn, I reviewed news articles that explore their perceptions of mental and physical health. This investigation included research on how they relate to their environment, particularly concerning their sense of belonging and the space allocated to them within the urban landscape.

A pivotal methodological approach applied in my research is "Dialogue with the Voiceless," as conceptualized by Saskia de Wit (2023). This framework is integral to incorporating the interests of non-human entities, such as plants, trees, animals, and other living organisms, into the design process. By utilizing this approach, I aim to

understand and integrate the ecological requirements of the site, emphasizing aspects that are often overlooked in traditional human-centred design paradigms.

In my design methodology, I will employ a diverse array of techniques, including the creation of games, the development of study models using both natural and synthetic materials, and three-dimensional sketching of envisioned spaces, as well as traditional plans and sections.

I will analyse relevant precedents, such as the National Library of Estonia designed by Raine Karp, a notable Estonian architect whose work exemplifies a deep connection to local materials and building practices. Additionally, I will examine the work of Aldo van Eyck, particularly his Pavilion, where elements of play and spatial experience are profoundly articulated. Frank Lloyd Wright will be a significant source of inspiration, particularly in his approach to designing in harmony with the landscape, his innovative use of light and sightlines, and his integration of principles that align with biophilic design, even though they were not explicitly defined as such during his time. His Marin County Civic Centre will exemplify flexibility in the design of a theatre hall.

Literature and general practical references

Literature

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Precedents

“NO99 Straw Theatre”, Tallinn, Estonia. Saalto Architects, 2011.

“Veterans Memorial Auditorium for Marin County Civic Center”, San Rafael, California, United States. Frank Lloyd Wright, 1971.

"Theater aan het Spui", Den Haag, Netherlands. Herman Hertzberger, 1993

"Sonsbeek Pavilion", Arnhem, Netherlands. Aldo van Eyck, 1966

"The National Library", Tallinn, Estonia. Raine Karp. 1992

"The Eden Pavilion", OXMAN

Reflection

My graduation studio topic, titled "A Matter of Scale," examines the various scales present within the urban environment of Tallinn. My project endeavours to analyse the spatial dimensions pertinent to different stakeholders, including the human scale (encompassing both adults and children), as well as the scales of diverse flora and fauna, such as animals, plants, trees, and other organisms indigenous to the project site in Tallinn. Through this inquiry, I will explore how these individual scales manifest within the design of a theatre building while simultaneously considering their relationship to the broader landscape of the site. Furthermore, this analysis will extend to the urban scale, investigating how these personal and ecological dimensions integrate into the larger fabric of the city. The aim is to establish a comprehensive understanding of interconnectedness across scales, facilitating a more holistic approach to landscape- urban design and architecture.

In an increasingly urbanized global context, children are experiencing a disconnection from the natural environment, leading to a diminished sense of belonging within the ecological web. This project seeks to address this critical disconnect by designing a multifaceted space that facilitates meaningful and playful interactions between children and various ecological elements, including plants, animals, and other living beings. Through the reactivation of the Skõne Bastion, the project aims to transform an underutilized park into a vibrant community space, thereby promoting ecological awareness, enhancing well-being, and fostering a deeper understanding of coexistence with the more-than-human world.

This project challenges architects and urban planners to transcend anthropocentric paradigms and to consider the needs of all living organisms in the design process. The design prioritizes not only human engagement but also the enhancement of biodiversity, thereby setting a significant precedent for the incorporation of ecological considerations into urban redevelopment efforts.

Moreover, this initiative contributes to the ongoing discourse within architectural domain regarding the potential for built environments to reflect and support ecological systems. By integrating biocentric design elements. It provides valuable insights into how architecture can cultivate a sense of ecological belonging, particularly for children, while advancing research on the importance of play and interactive experiences in shaping human relationships with the natural world.