

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	Marie Benninghoven
Student number	5858283

Studio		
Name / Theme	Explore Lab	
Main mentor	Roel van der Pas	Architecture
Second mentor	Georgios Karvelas	Building Technology
Third mentor	Inge Bobbink	Research
Argumentation of choice of the studio	<p>I chose the "Explore Lab" graduation studio because it offers the opportunity to combine my interests in architecture and landscape architecture. After completing the first year of the architecture master's program, I switched to the landscape architecture track to deepen my understanding of the relationship between humans and nature—a curiosity that had grown during my earlier studies.</p> <p>This graduation project allows me to merge these two disciplines by exploring a deeply personal topic: Gardening, industrialized agriculture and the future of farming. By investigating the complexity of industrialized agriculture through the lens of a small farm in the western part of Germany—a place that I have known for many years— I can study how the cultivation practices shape our environment and develop a design for its future.</p> <p>My goal is to create a project where the boundaries between architecture and landscape architecture are fluid, reflecting the interconnectedness of built and natural environments.</p>	

Graduation project	
Title of the graduation project	The Local Taste: Cultivating Reciprocity through regenerative farming in the Münsterland Region
Goal	
Location:	Laer, Germany
The posed problem	The idyllic image of the countryside and farms often contrasts sharply with reality. Globalization and industrialized agriculture have transformed cultivation

	<p>practices, leading to changes in landscapes and ecosystems. Locally grown food, which once served as a vital mediator between humans and their environment through communal efforts of cultivation, has been replaced by global food systems that alienate people from the origins of their food. This shift has resulted in degraded ecosystems and disrupted natural cycles. The disruption of natural cycles caused by industrialized agriculture pressures local ecosystems in Laer, Münsterland, Germany.</p>
<p>research questions and</p>	<p>How did industrialized agriculture change the cycles of a farm in the Münsterland region? How did the cultivation practices in the region shape the landscape?</p>
<p>design assignment in which these result.</p>	<p>This leads to the following design question(s):</p> <p>How can a farm be designed to support a new generation of small-scale farmers in forming an ecological identity, using food production as a means to reconnect communities with their ecosystem?</p> <p>What role does the architecture of the farm play in shaping our relationship with nature and influencing the way we cultivate our land?</p> <p>Given the role of food as a mediator between humans and their ecosystem, the design of the farm will go beyond accommodating vegetable cultivation. It should also provide spaces for local food processing and preservation practices, allowing visitors to engage with and experience the "local taste," fostering a deeper connection to the land and its cycles.</p>
<p>Process</p>	
<p>Method description</p>	
<p><u>Research Methods</u></p> <p>The research is site-specific, focusing on a small farm in the Münsterland region of Germany as a case study. It begins with an exploration of Germany's agricultural structure and the role of the Münsterland region within it. From there, the focus narrows to the municipality of Laer. Understanding the landscape on a territorial scale involves analyzing how topography, hydrology, and geomorphology shape the region.</p> <p>Next, the spatial development of the landscape around the farm is examined through archival research to build a model of the landscape over time. This step explores how</p>	

cultivation practices have transformed the area and how farming cycles have changed. To further investigate the impact of farming practices, soil chromatography will be conducted on three soil samples from different cultivation areas on the farm. This tactile method provides a detailed understanding of how cultivation practices influence soil health, complementing the broader landscape analysis. By connecting scales—from the territorial to the soil level—this approach reveals the cycles of farming across time and space.

Layering is a key method used throughout the research to uncover relationships and underlying patterns that are not immediately visible. Territorial mappings, soil chromatographs, and other elements are combined to analyze these connections in depth. This layering is done through territorial models, drawings over existing photographs, and visual analysis to highlight essential elements. This method reflects the palimpsest nature of the landscape, where visible features carry traces of their history. By understanding these layers thoroughly, they can inform the design process.

Design Methods

For the design, the same layered approach is applied to the farm building. Historical analysis of the farm's floor plans and orientation shows how its spatial composition evolved alongside changing cultivation practices. The practical needs of farming have always shaped this typology, and by understanding how these changes influenced the layout, the design can build on this palimpsest to create the next generation of a farm. This method ensures that both the landscape and the architecture honor their past while adapting to new ecological and practical demands.

Literature and general practical references

This research tackles a problem that exists on many levels, from global to local, so it draws on theories and materials that address these connections. The theoretical framework is built around key ideas like questioning the current economic system, decolonizing the global economy, and emphasizing the importance of local contexts. It also looks at concepts such as the planetary garden, farming as an act of care, the role of food in creating connections, and the importance of soil health. These ideas help to understand how global systems influence local practices. In addition, archival materials like old cadastral maps, records of cultivation practices, and historical photographs provide insight into how the site has developed over time. Combining these theoretical and historical resources creates a strong foundation for the research, linking the larger context of global agriculture to the specific case study of the farm. These references not only helped frame the complexity of the problem but also showed that change must begin at the individual level, forming an ecological identity through acts like farming and food production. The farm, therefore, is understood as an anchor point—a space where these ideas converge and offer opportunities to reconnect with the cycles of nature and the local ecosystem.

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Reflection

The Explore Lab studio provides me with the freedom to navigate between the disciplines of landscape architecture and architecture, allowing me to experiment with their boundaries. This flexibility is essential for my graduation project, which focuses on a deeply personal topic: my grandparents' farm in Germany. Working on this project is not only meaningful on a personal level but also allows me to see a familiar place through a new perspective as a researcher and designer, helping me reflect on how I've perceived it over the years.

In our profession as architects, it is our role to critically look at the challenges we face in times of a global climate crisis. We have the responsibility to act accordingly, but also the chance and the need to envision other futures. This is our task as designers. Soil health can contribute largely to planetary health. While farming is now a big part of the problem, fostering the climate crisis, it can actually become part of

the solution. The essential link that is missing is for people to understand this necessity. This is why it is in the hands of architects and landscape architects to design a place that allows humans to see, taste, and experience through food. Creating the place where this can happen is the role of the architect. Or, as Gilles Clément said, the architect is the gardener of the planetary garden, which is in urgent need of care at the moment. One could ask, why is an architecture student working on a graduation project about farming? I believe it's because we need to think in a much more interdisciplinary way. In this project, I aim to challenge the boundaries between architecture and landscape architecture, questioning what we define as the built environment and what we consider "nature." To design for something means to see it clearly and take the issue seriously. I view the industrialized typologies of farm buildings scattered across our landscapes as architectural manifestations of the so-called "farmers' crisis." These buildings represent the globalized, standardized practices imposed on our landscapes and can even be seen as Anthropocenic in nature. They lack roots in local context, designed instead as components in a production chain of anonymous products.

These problems highlight the need to create a place where humans can rethink and change their relationship with nature. A place that respects all parts of the ecosystem. How that might look is something I am eager to explore through this graduation project.