

Graduation Plan

Master of Science in Architecture, Urbanism & Building Sciences

MSc Landscape Architecture 2024 - 2025

Qianlin Xu



Graduation Plan

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), your mentors and delegate of the Board of Examiners one week before the P2 date at the latest.

I Personal information

Full name	Qianlin Xu
Student number	5970091

II Studio / Lab information

Name / Theme	FLOWSCAPES – Urban Forestry Lab	
Main mentor	René van der Velde	Landscape Architecture
Second mentor	Leo van den Burg	Urban Design
Argumentation of choice of the LA graduation lab	<p>My fascination with trees lies in their cultural significance and their role as living symbols of resilience, memory, and transformation. Trees have long served as spiritual symbols across cultures, representing life, growth, and wisdom. Beyond their ecological benefits, I believe trees are the most insightful recorders of human history and natural evolution. The way trees grow, adapt, and respond to their environment encapsulates invaluable knowledge about the past and provide guidance for the future. Ancient woodlands, in particular, record the long history of a place. In these age-old woods, one can trace the marks left by centuries of interaction between humans and the forest. As a cultural landscape, the way we treat ancient forests mirrors humanity's relationship with nature.</p> <p>Therefore, I chose the Urban Forestry Lab. I am particularly drawn to how the studio explores the role of trees as agents of transformation in urban environments, bridging the gap between nature and human life. Trees not only shape landscapes, but also influence human culture, identity, and well-being. I want to learn more about how urban forestry can strengthen the connection between people and nature, while addressing contemporary challenges such as climate change, biodiversity loss, and urban expansion. This studio offers the platform for me to integrate the cultural and environmental significance of trees into urban design.</p>	

III Graduation project	
Title of the project	Roots and Boundaries: Creating a Legible Landscape Transition from Utrechtse Heuvelrug to the Urban Area
Context and aim of the project	
Location (region / area / site)	Utrechtse Heuvelrug, the Netherlands
Problem statement	<p>Overall Landscape-related Challenges</p> <p>The forests of the Netherlands have undergone profound transformation over the centuries. Initially covered by vast woodlands, the landscape was gradually cleared for agriculture, infrastructure, and urban development. By around 1850, centuries of intensive deforestation left only about one percent of the land forested (van der Meulen, 2003). In the 19th and 20th centuries, the government and various landowners initiated reforestation projects, transforming the country's remaining forests into carefully managed and restored areas. More recent plans, like the National Forest Strategy, aim to reconnect fragmented habitats and increase forest cover by about 10% by 2030 (Interprovinciaal Overleg & Ministerie van Landbouw, Natuur en Voedselkwaliteit, 2020). Although these efforts have brought back some trees and wildlife, but nearly all of the woodlands in Netherlands are now human-influenced rather than naturally evolved. Despite the appearance of being a "green" country, the reality is that most of these green spaces are agricultural, with true forest landscapes remaining highly fragmented and often disconnected from the surroundings.</p> <p>Contemporary Dutch forests face several challenges. <i>Spatially</i>, they remain fragmented, often existing as small and disconnected patches. <i>Culturally</i>, forests lack a deep-rooted significance within national identity. With an agricultural and water-management heritage dominating the cultural narrative, forested areas struggle for recognition as a valued part of the country's heritage. Other challenges include impacts of climate change such as drought and flooding (<i>Environmental</i>), high recreational demand (<i>Social</i>), and a delicate balance between economic activity and environmental conservation (<i>Economic</i>).</p>

	<p>Site-specific Problems</p> <p>The Utrechtse Heuvelrug region has been selected as the design site. It is the second largest forest area in the Netherlands after Veluwe and has been designated as a core area of the Natuurnetwerk Nederland.</p> <p>However, urban expansion and infrastructure development have fragmented the ancient woodlands in this region, leaving them as isolated patches rather than continuous landscapes systems. These forests also lack spatial connections to the surrounding urban fabrics. Therefore, although the green heritage here is rich, the cultural identity associated with forests is not strong. For example, in the Utrechtse Heuvelrug region, there are hundreds of old forest cores that contain valuable native species (Provincie Utrecht, 2022). These forests also feature distinctive planting patterns and forms. However, the forest’s character has not permeated the surrounding urban fabric. In the neighboring cities, the cultural attributes of these woodlands are not reflected in residents’ daily lives or in the broader community landscape. As a result, the forests become a backdrop rather than a defining feature of local identity, hindering the formation of a shared narrative that ties human activities closely to the surrounding natural environment. Over time, this lack of embedded cultural significance can reduce public stewardship, making it more challenging to support for conservation and restoration efforts.</p> <p>Additionally, Utrechtse Heuvelrug faces a series of environmental issues such as declining groundwater levels caused by historic coniferous tree planting, longer periods of drought, and excessive drainage systems (Flux Landscape Architecture, 2021); reduced biodiversity and ecosystem resilience caused by nitrogen deposition, acidification, drought, and nutrient loss (Provincie Utrecht, 2022); and increased risk of forest fires and diseases. Lastly, the growing population and increasing number of visitors also place pressure on the region, particularly in terms of housing and recreational needs.</p>
<p>Research question(s)</p>	<p>In this graduation thesis, ancient woodlands are studied as the key to strength the human-forest cultural connection. They act as a repository of inspiration when re-imagining the urban-forest interfaces through</p>

	<p>designing a new forest infrastructure. This thesis will explore how cultural identity, environmental sustainability, and urban growth can coexist through the reintegration of forests into the heart of urban life.</p> <p>The main research question is:</p> <p>How can the transitional landscapes between urban areas and ancient woodlands be designed to strengthen the human-forest cultural connection in Utrechtse Heuvelrug?</p> <p>The sub-questions are posed from three perspectives in order to better understand and answer the main question:</p> <p><i>Background Understanding</i></p> <ul style="list-style-type: none"> - What are the historical and cultural connections between humans and forests in the Utrechtse Heuvelrug and in the Netherlands? - How have historical land use practices contributed to the current situation of the ancient woodlands in the Utrecht Heuvelrug? <p><i>Design Principle & Strategy</i></p> <ul style="list-style-type: none"> - How can transitional landscapes enhance forest spatial continuity and strengthen connections with surrounding urban areas while balancing ecological preservation and human engagement? - What historical essentials from ancient woodlands can be adapted or reinterpreted in the new urban forests? <p><i>Reflection</i></p> <ul style="list-style-type: none"> - How can the design be implemented over time to adapt to future challenges and provide lessons for similar urban-forest interfaces?
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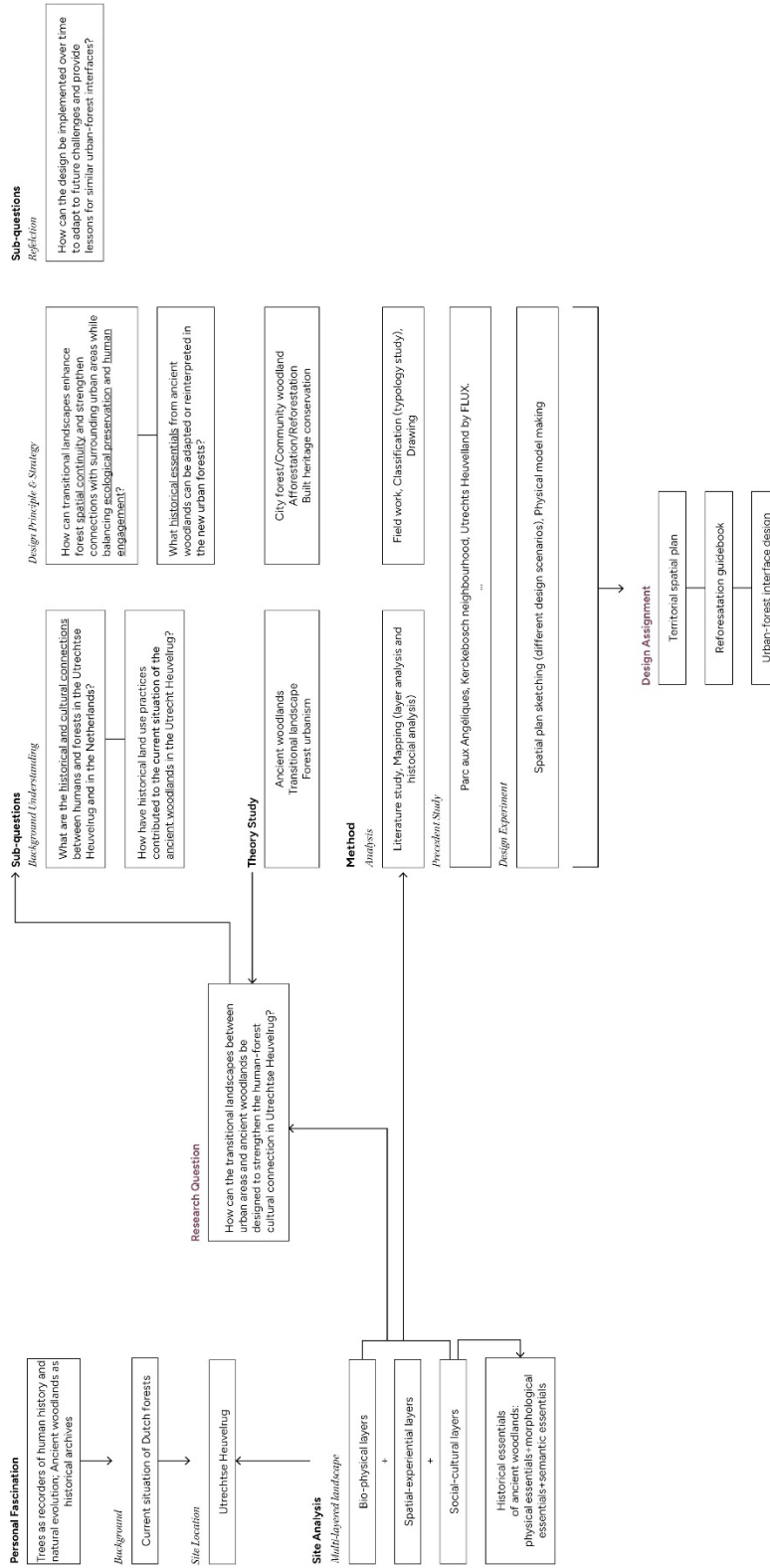
Design assignment	<ol style="list-style-type: none"> 1. Territorial spatial plan 2. Reforestation guidebook 3. Urban-forest interface design
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IV Graduation process

Method description
The methodology of this thesis can be summarized as:
Environmental condition as base,
Ancient woodland as thread,

Reforestation as approach, Transitional landscape as result.

Methodological framework



Methodological framework, created by author

Literature and more applied references

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V Reflection on the project proposal

1. What is the relation between your graduation topic, the lab topic, and your master track?

Our lab focuses on urban forestry, which generally includes five dimensions: spatial, social, environmental, ecological, and economic. The spatial dimension covers aspects like legibility, identity, and structure, while the social dimension includes cultural history, liveability, interaction and health. My graduation project—on the cultural relationship between people and forests—mainly focuses on these spatial and social dimensions. In my design, I explore the complex, dynamic interplay between urban and forest landscapes, and investigate how landscape design can strengthen people’s cultural connection with forests. This is an in-depth study of the cultural perspective within urban forestry.

Today, large-scale urban forestry projects often follow an ecology-first approach, emphasizing specific environmental concerns and sometimes overlooking the cultural value

of the green heritage. I see my project as a complement to these efforts, rediscovering those cultural dimensions.

Regarding my master track, when I reflect on the four principles of landscape architecture, my project aligns more with *historical palimpsest* and *bodily experience*. Moving forward, I plan to think more about the *scale continuum*: how the Utrechtse Heuvelrug might connect with the broader central Dutch forest region—or even the nation as a whole—and how it could link to smaller community green spaces. Finally, because trees are at the heart of all our lab's projects, I'll need to pay closer attention to how they interact with other landscape elements, such as water, roads, and structures.

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

My graduation project emphasizes the significance of cultural narratives in urban forestry. The design approach goes beyond merely functional or ecological solutions. In this sense, it pushes professionals—planners, ecologists, designers, and policymakers—to adopt more holistic frameworks, where cultural values play a vital role in urban development strategies.

From a social perspective, my project engages local communities, encouraging them to find deeper connections with their living environment. It also tries to address social issues in the Netherlands, such as the current housing shortage, by proposing new neighborhood forms that integrate forest and housing. Scientifically, I think this project can contribute to the growing body of knowledge on how cultural value can guide sustainable urban design.