

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	Kelin Mu
Student number	5818605

Studio		
Name / Theme	Circular Water Story	
Main mentor	Inge Bobbink	Landscape Architecture
Second mentor	Lei Qu	Urbanism
Argumentation of choice of the studio	<p>I've been living in large cities on the North China Plain and water is not common in my living environment. It appears only during summer rainstorms and when people mention the water shortage crisis here. So, when I came to the Netherlands, I was surprised by the environment and history of water and human symbiosis. I enjoy this beautiful environment and want to explore more about the relationship between people and water, so I chose CWS Studio.</p> <p>During my search for a traditional water system, I found that the North China Plain has a large freshwater lake, Baiyangdian. It is surprising that the most water-scarce region in China use to have a large and unique human-water symbiosis system. Today this is under risk which makes me feel sad and obliged to learn about its past and explore changes to interact with water again in the future.</p>	

Graduation project	
Title of the graduation project	Symbiosis in modern society: translating and renovation the traditional cultural landscape in Baiyangdian lake, Hebei province, China
Goal	
Location:	Baiyangdian lake, Hebei, China
The posed problem,	Baiyangdian Lake was initially a natural freshwater lake, and around 900 AD, the government initiated reclamation for military purposes. By around 1600, a circular landscape of dikes, reed polders, water villages, and lakeside villages had

formed, with residents engaging in activities such as fishing, reed cultivation, handicrafts, aquaculture, and more. Due to frequent upstream floods and the symbiotic relationship between residents and water, a unique settlement pattern emerged.

Between 1960 and 2020, Baiyangdian water system suffered serious damage due to urbanization, industrial development, and climate change. After government combating water pollution and leading water recharge, the area has improved, but still faces some problems.

Biodiversity loss: After upstream reservoirs projects, Baiyangdian shifted from flooding to water scarcity, requiring regular recharge from other rivers to maintain water levels. Both drying up and regular replenishment have disturbed the biological rhythms, consequently biodiversity has declined.

Water Pollution: Garbage and sewage discharged from the surrounding villages have caused a decline in water quality, and current control measures are unsustainable.

Landscape protection: Urbanization, installing private weirs, and the reclamation of dried reed fields in Island Village and lake-side Village, resulting in the shrinking and fragmentation of water bodies.

As a result of uncontrolled expansion the villages have lost their old looks of roads, riverbank and architectures. The environment is poor, and there is a lack

	<p>of healthy interaction between people and water.</p> <p>Local culture loss: Due to the lack of economic benefits of traditional industries, young people have left their hometowns, villages are aging, existing lifestyles are stagnant, and traditional culture tends to die out.</p> <p>So far, Baiyangdian faces many problems and needs to rebalance the relationship between people and water.</p>
research questions and	How can landscape design help the Baiyangdian area to reestablish a new relationship between villages and water in a resilient and sustainable way in public place?
design assignment	Developing design principles for spatial enhancement in the Baiyangdian area, in which the relationship between human, flora and fauna and water gets more enhanced and develops over time. Build up typologies for two villages in the lake and design the public spaces in villages as places for people to connect with water, which include water front areas, heritage area and living area.

Process

Method description

I will conduct research on traditional water systems through various methods. This includes organizing and analyzing the site's topography, soil, climate, hydrology, and more using GIS. Additionally, I will gain insights into the spatial morphology, residents' lives, culture, historical changes, and current issues of the system through historical photos, literature, news, articles, documentaries, and other materials.

I will visually represent the structure and changes of the water system in the area by redrawing historical satellite maps and converting textual information into diagrams. Drawing maps will showcase the spatial characteristics and cyclic patterns of the

system. Develop awareness of sites through field trips and living in traditional villages.

The landscape, ecological, and social conditions of the site will be analyzed through mapping to get the design site and possible spatial development typology. Establish design principles by reading literature related to rural planning, placemaking, and landscape identity. Do case studies and literature reading for toolbox for design public spaces.

Literature and general practical references

1. Anxin county annals, 2000
2. Anxin Water Conservancy Journal, 2000
3. From the Soil: the Foundations of Chinese Society, Fei Hsiao-tung, 1947
4. The Rural Planning Perspective at an Opportune Time, Kathryn I. Frank, 2014
5. Study on the Spatial Evolution and Restructuring Strategy of Villages in Baiyangdian Lake, Xiongan New Area, QIn Xueying, 2020
6. Translating a wicked problem: A strategic planning approach to rural shrinkage in Denmark, Anne Tientjn, 2016
7. Character assessment and planning rural landscape, Chen Yingjin, 2012
8. Protection and renewal on North riverside towns—a case study of Quantou town in Anxin county, LIU Huijian, 2008
9. Study on Rural Construction Planning Based on Ecological Bearing Capacity: Taking Baiyangdian District, Anxin County, Hebei Province as an Example, WANG Yu, 2017
10. Popular Subculture and County Youth Development, HUANG Jinqin, 2020
11. Perspectives on landscape identity: A conceptual challenge, Stobbelaar, D. J., & Pedroli, B. (2011).
12. Spatial Structure of Shallow Lake Settlement Landscape in Northern China: A Case Study of Baiyangdian, He Ding, 2019

Reflection

1. What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)? programme (MSc AUBS)?

Traditional water systems, which embody the possibilities of human-water symbiosis under the productive conditions of the past and have a distinctive regional cultural and landscape character, face various dangers, challenges and opportunities for change in today's social context, requiring adaptive transformation strategies.

On this basis, following the process of landscape design, a comprehensive understanding of the site, combined with comprehensive considerations of site values and strategies, and drawing on past experience, we propose a forward-looking and persuasive design strategy, which is ultimately embodied in the transformation of the landscape space in response to the human need for a better living environment.

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

In rural areas, especially in developing areas, balancing the relationship between development, nature, and traditional culture, embodied in spatial renewal to adapt to the rapidly developing society, is an aspect of social development, one of the fields of landscape design, and a point of interest for me.

Recognising and comprehensively analysing the area, judging the problems, establishing a clear and convincing design logic, clarifying the design task and carrying out the design are the abilities needed by landscape designers. The Baiyangdian area, with its large size and complex problems, is a good exercise for my abilities.

In modern society, public space has significance for human habitats. It can carry a variety of functions such as culture, ecology, aesthetics, communication, economy, etc. and has a role in placemaking and creating a sense of identity, which helps to bring vitality to the site and connect people together.