

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	Zhaotun Chen
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Telephone number	
Private e-mail address	

Studio		
Name / Theme	Designing resilient heritage landscapes	
Main mentor	Eric Luiten	Heritage landscape
Second mentor	Lidy Meijers	Heritage architecture
Argumentation of choice of the studio	Landscape architecture studio	

Graduation project	
Title of the graduation project	Urban Estate-scape Integrate the estates as urban landscape infrastructure in the city
Goal	
Location:	Gelderland, between Arnhem and Velp
The posed problem,	<p>The estates in Gelderland at previous time were private estates in the countryside, but nowadays part of them are surrounded by urban settlement and have completely different functions. The estates in the city are not functioning very well and cannot meet the demands of the city development. Also, there are some urban spatial problems in the neighborhood which also requires solutions.</p> <ol style="list-style-type: none"> 1. The city Highway has a severe influence in this area, separating it into two isolated parts that are not connected very well. On the other hand, due to urban traffic infrastructures, including vehicle ways, highway and railway, urban land pattern in the neighborhood is fragmented. Additionally, the distribution of social and cultural facilities in this area are so unbalanced that cannot meet the demands of the street, which means more facilities should be added. Also, high-qualified green spaces are not enough to serve the public. 2. The estates Although the estates are surrounded by the urban environment, they are lack of connection with the urban context, including inappropriate entrance from the city to the estates, unnecessary fences and incoherent with surrounding land use pattern. There are

	also not enough effective services to the public in the estates. The layout of the estates are also not working well which need to be reorganized
research questions and	<p>As the problems involved city and estates and the link between them, the research questions are elaborated as three aspects.</p> <ol style="list-style-type: none"> 1. For the urban aspect, <ul style="list-style-type: none"> -How did the urban fragmented spaces form? 2. For the city and estates aspect, <ul style="list-style-type: none"> -How did the urban context especially urban infrastructures affect the estates in the history? -What is the influence of the urban infrastructures has on the estates? -Are there any connections between the urban context and the estates? If there are, what are they and how they are working? 3. For the estates aspect, <ul style="list-style-type: none"> -How did the estates develop? When the function and ownership changed, what happened to the landscape components in the history? -What are the current features and values of each estates? What are the specific problems of each one?
design assignment in which these result.	<p>Based on the problem and research questions, the design goals are also proposed in three aspects.</p> <ol style="list-style-type: none"> 1. For the city, connect the fragmented space which was separated by the highway and other urban infrastructures 2. For the city and estates aspect, see and strengthen the links between the estates with the surrounding urban context 3. For the estates aspect, improve the quality/facilities/the functions of the estate to satisfy the public
<p>[This should be formulated in such a way that the graduation project can answer these questions. The definition of the problem has to be significant to a clearly defined area of research and design.]</p>	

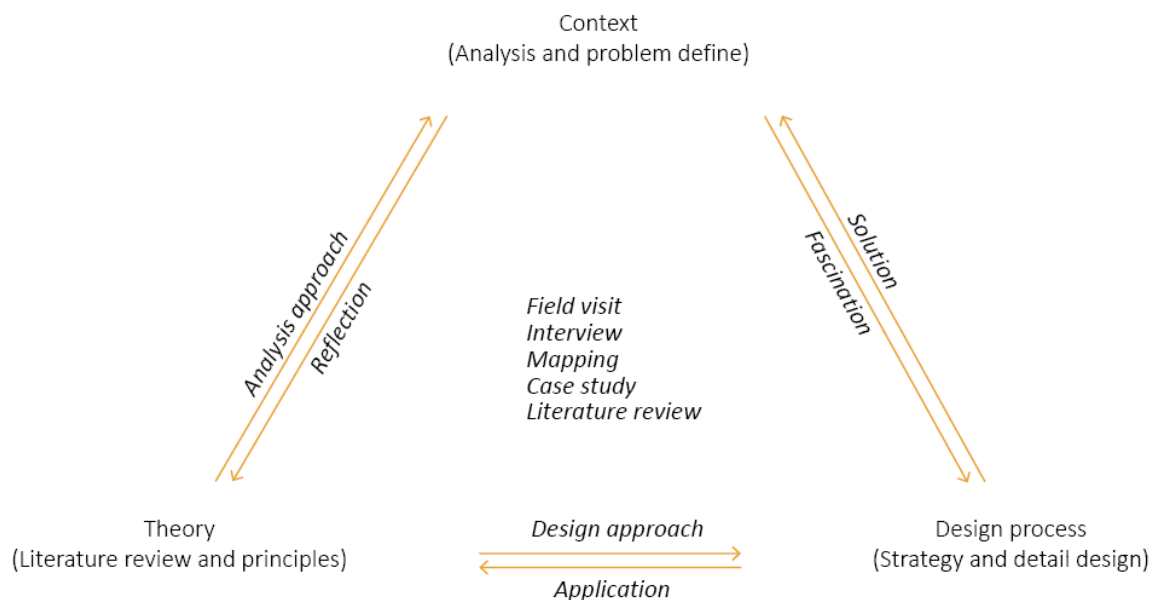
Process

Method description

The whole project is carried on by context, theory and design process, which are linked with each other.

1. Context is what we called research for design, which basically is the understanding of the research field, including analysis and problem defined
2. Theory is what we called research on design. It is conclusion and design principles from existing theories and practical relevant landscape cases study.
3. Design process is what we called research by design, strategies and detail design included. Our project is one of the solutions that could be an effective approach for the problems in the studied field.

The precise methods includes field visit, interview, mapping, case study and literature review, all of which are utilized through whole project, from previous analysis to the final design decision.



Literature and general practical preference

Literature

1. Mısırlısoy, D., & Günçe, K. (2016). Adaptive reuse strategies for heritage buildings: A holistic approach. *Sustainable Cities and Society*, 26, 91-98.
2. Labadi, S., & Logan, W. (2015). Approaches to urban heritage, development and sustainability. In *Urban heritage, development and sustainability* (pp. 1-20). Routledge.
3. Kiruthiga, K., & Thirumaran, K. (2019). Effects of urbanization on historical heritage buildings in Kumbakonam, Tamilnadu, India. *Frontiers of Architectural Research*, 8(1), 94-105.
4. Storms-Smeets, E. (2016). From elite to public landscapes. The case of the Klarenbeek estate in Arnhem, 1880-1950. *Virtus| Journal of Nobility Studies*, 23, 147-168.

5. Janssen, J., Luiten, E., Renes, H., & Rouwendal, J. (2014). Heritage planning and spatial development in the Netherlands: changing policies and perspectives. *International Journal of Heritage Studies*, 20(1), 1-21.
6. Agapiou, A., Alexakis, D. D., Lysandrou, V., Sarris, A., Cuca, B., Themistocleous, K., & Hadjimitsis, D. G. (2015). Impact of urban sprawl to cultural heritage monuments: The case study of Paphos area in Cyprus. *Journal of Cultural Heritage*, 16(5), 671-680.
7. Janssen, J., Luiten, E., Renes, H., & Stegmeijer, E. (2017). Heritage as sector, factor and vector: conceptualizing the shifting relationship between heritage management and spatial planning. *European Planning Studies*, 25(9), 1654-1672.
8. Benthem, R. J. (1973). Recreational and environmental planning. *Biological Conservation*, 5(1), 1-5.
9. El Menchawy, A., Aly, S. S., & Hakim, M. A. (2011). The impact of urban sprawl on the heritage areas through the urban fabric of cities. *WIT Transactions on Ecology and the Environment*, 150, 299-314.
10. Mrak, I. (2013). A methodological framework based on the dynamic-evolutionary view of heritage. *Sustainability*, 5(9), 3992-4023.
11. Ottens, H. F. (1990). An interpretation of recent trends in urbanization in the Netherlands. *The Netherlands journal of housing and environmental research*, 49-64.
12. Seung-Seok, B. (2014). Conservation and Management of Agricultural and Fishery Heritage System in South Korea. *Journal of resources and ecology*, 5(4), 335-341.
13. Howard, P., & Ashworth, G. J. (Eds.). (1999). *European heritage, planning and management*. Intellect Books.
14. Muhammad, S. (2007). *Future urbanization patterns: in the Netherlands under the influence of information and communication technologies* (Vol. 363). Utrecht University, Royal Dutch Geographical Society.
15. Orbasli, A., & BArch, D. (2009). *Re-using existing buildings towards sustainable regeneration*. School of Architecture: place and Culture Identity Group Working Paper.
16. Marshall, S. (2005). *Urban pattern specification*. Institute of Community Studies, London.

Cases

1. Sonsbeek city park in Arnhem
2. Haagse Bos park in Dan Hague

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)?

Our studio topic is to study heritage landscape with resilient approaches. My graduation topic is studying the heritage in the urban context and seek a resilient approach for them. In my project, resilient means how to build up the real connections between heritage and urban contexts for a sustainable development of the estates which are surrounded by the urban environment in the future. The way to connect them are applied in many aspects, like functions of the estates, policies and cooperation between the owners and government, etc. As my master track is landscape architecture, the project will be emphasized on the landscape approach, to integrate the estates within the urban context as urban landscape infrastructure. Actually, it involves many disciplines. The surrounding urban context analysis requires

urbanism knowledge. The building technologies are applied for the heritage building transformation.

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

With the fast urbanization process happening in Gerlderland even all over the world, the heritage are faced with challenges even threats. Under this situation, how to deal with the relation of the estate heritage and urban context and seek the connections in between is very essential. Many approaches can be applied for this study field. My project is one of the approaches in landscape architecture discipline. I am trying to build a framework to deal with the urban context and the heritages in landscape approach. The scientific value basically is that tt will contribute to the methodology and assessment which could be applied to the similar circumstance.

Time planning

	Expected outcome	Process	Scale
P1	1. Understanding the context of the field 2. Figuring out general questions of the study area	Historical research Feature classification Field visit Theory study	Regional
P2	1. Chosing site 2. Figuring out the specific problems of site 3. Proposing strategies and concept	Urban context analysis Historical analysis Layer and spatial analysis Site visit Case study	Local Neighbour
P3	1. Building up the connection between the estates and the city 2. Cluster planning and design	Case study Workshop Interview and survey System design Pattern design	Cluster
P4	Improving the estates	Detail design	Ensemble
P5		Visualizing Presentation	