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	Puck van der Pluijm
Student number	4698428

Studio		
Name / Theme	Urban Architecture graduation studio / Last Green in Town	
Main mentor	Sam Stalker	Design
Second mentor	Craig Martin	Design
Third mentor	Eireen Schreurs	Research
Argumentation of choice of the studio	Captivated by the studio's dedication to delving into the urban context of Brussels and its green spaces, the opportunity to explore optimal positioning within such a design challenge and respond with careful and sensitive consideration is inherently appealing. The chance to engage with this challenge and craft responses marked by careful, thoughtful, and sensitive consideration resonates with a passion for contributing meaningfully to urban environments. Eager to immerse in the dynamic research environment of the studio, skills and creativity will be leveraged to contribute innovative insights to the exploration of sustainable and harmonious urban designs for Brussels.	

Graduation project	
Title of the graduation project	Industrial Ecosystems: Unveiling the Potential of Aging Industrial Zones for Sustainable Urban Revitalization.
Goal	
Location:	Brussels, Belgium
The posed problem,	Demolishing buildings not only leads to unnecessary construction waste and a lot more environmental consequences, but also dismantles social structures associated with this architecture. A trauma has been suffered by the people of Brussels by demolishing the working-class Noordwijk and turning it into an business district (called 'Brusselisation') as people lost their homes and breaking their social networks. This demolition culture is recurring often in Brussels and Brusselisation of the Friche must be prevented. There is also little cohesion and unity among residents around the Friche area. As architects should recognize their significant

	political role in maintaining crucial connections with humans who will live in the surrounding area or on the design site itself and try to connect them with each other. The disconnection among people extends beyond human relationships to a lack of connection with the built environment. This disassociation stems from the post-war consumer boom, which replaced handmade items and building components with mass production. The rapid pace of construction led to a diminishing appreciation for materials and architecture. Reflecting on Ruskin's concerns during the industrialization era, he highlighted the negative impact on people's spiritual and emotional well-being. He argued for the importance of craftsmanship to provide individuals with agency and moral purpose. However, reverting to a craft movement may be deemed too conservative and economically impractical. The challenge lies in creating buildings that leverage modern technologies while honoring human creativity and giving due attention to the existing world.
research questions and Sub questions	What approach can be employed to foster sustainable development in an aging industrial area, enhancing its value while ensuring the preservation of its current importance? Sustainable development *How can you develop sustainably?* - What kind of materials do industrial buildings typically consist of and what can be seen on the site in Brussels? - What are the potentials of these building materials when repurposing? - What are the local available sustainable building materials? - How do you respond to the current needs of people in and around the Friche but leaving enough room for changing needs in the future? -Which procedures are required for repurposing salvaged materials and components in constructing a new building? -In what way can the utilization of recycled materials contribute to the redevelopment of the aging industrial zone?

	Enhancing value while ensuring the preservation of its current importance *How do you determine the value of a building and its materials?* - How did the buildings came to be and evolve through time to keep up with the changing needs? (functional, historical, economical value) - What are perspectives of users on the buildings in the industrial zone of the Friche? (functional, emotional, cultural, social value) - What are material cultures on the industrial zone and if they are now labelled as bad or worthless, could you change that? (aesthetic value) - What are the needs of the current population?
design assignment in which these result.	Crafting a sustainable design using reclaimed materials from the industrial zone's existing buildings, seamlessly merging an existing structure with a new project to enhance the area's value without erasing its current significance. The design aims to attract locals to utilize the building, fostering community and bridging social contrasts in Schaerbeek. The goal is to create architecture that encourages people to come together, promoting intimacy and a sense of slowness in the midst of a rapidly changing societal and urban landscape.

Process

Method description

Writing and collecting
Creating a Catalogue | Collecting all the information of the existing buildings and their potential into a catalogue to create an overview.

Conducting interviews
Public Engagement | Gather insights into the building's cultural, social, and emotional significance. I will ask for the users opinions towards the building they make use of and the general functioning of the industrial zone. Collecting them in a catalogue.

Drawing
Historical Analysis | Explore the cultural, functional and historical significance by drawing the evolution of the buildings through time capturing the form and function. Collecting them in a catalogue.

Model making
Spatial and Material Analysis | Creating an overview of the used materials.
Researcing their potential of repurposing by different scenarios. Collecting them in a catalogue.

Researching scenario's
Design methods | The final phase involves researching the design approaches using reclaimed resources through literature review and interviews with architectural firms practicing in this field.

Literature and general practical references

Literature:
Companion to Cotemporary Architectural Thought – Ben Farmer & Hentie Louw
The image of the city – Kevin Lynch
The concise townscapes – Gordon Cullen
Permanences – Aldo Rossi
Urban Mining – Rotor & others
The Stones of Venice – John Ruskin
As Found. Experiments in Preservation - VAi

Architecture offices:
Marcel Raymakers (architect)
Assemble
A+ archiects
Rotor

References:
Laguna – Productura
Keile Pand – Group A
Atelier Luma - Assemble

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)?

My research delves into the reevaluation of existing urban environments, aiming to preserve ample green spaces within the cityscape. It addresses the challenges associated with built environments, seeking suitable solutions. Given the growing emphasis on sustainability at TU, my work aligns with the current focus on researching sustainable solutions in architecture, particularly addressing the complexities within urban development.

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

I would like to develop a kind of demonstration plan that can inspire architects who have been commissioned to (re)develop an industrial area. So that they can better assess the value of existing buildings and understand their potential. I see the role of the architect as one that is increasingly political and I want to bring that out in this research. By exploring what not only the potential can be in terms of reusing materials and preserving structures but also the value people attach to existing buildings. That way, you could mix the existing with the new in the best way possible.

The effects by understanding potential in terms of social sustainability:
- Ways to retain value on social, emotional, cultural, historical, functional, aesthetic, economic.
- Create a strong connection to the existing environment.

The effects by understanding potentials in terms of environmental sustainability:
- which materials you can reuse well & which sustainable materials are available to you.
- what possibilities for applications there are with these materials.

Ultimate results are a clear insight into environmental and social sustainability:
- the choice of what to do with the existing buildings: preservation/renovation/restoration/extension or reuse materials. And how to reuse when desired.