

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	Petra Malinská
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Studio		
Name / Theme	Explore Lab	
Main mentor	Roel van de Pas	Architecture
Second mentor	Georgios Karvelas	Building Technology
Third mentor	Janina Gosseye	Research
Argumentation of choice of the studio	<p>I chose Explore Lab because it allowed me to select a topic for my thesis project that I am personally interested in. For the past three years, I have been closely following and commenting on the future of Masaryk Barracks, so choosing it as the subject of my thesis project felt like a natural culmination of my long-standing civic engagement. No other studio would have given me the opportunity to work on this topic. In addition to being able to choose the topic, the option to select tutors was also essential.</p> <p>One more reason for my choice is that my research extends beyond the traditional format of a research paper. Instead, I have the opportunity to develop a conservation management plan as the outcome of my research. While this document is grounded in research, it is more practically oriented and serves as a foundation for the design phase.</p>	

Graduation project	
Title of the graduation project	Post-Military Landscapes: The Future and Transformation of Masaryk Barracks in Pardubice

Goal	
Location:	Pardubice, Czech Republic
The posed problem,	<p>Military heritage landscapes often evoke emotional responses tied to traditions and historical events in those places, significantly influencing community identity. While barracks may lack high aesthetic value, the historical and social values can be substantial. Post-military sites can enhance community life by being repurposed, similar to the restoration of 19th-century one-room schoolhouses that create social centres that strengthen community ties.</p> <p>The standardisation of one-room schoolhouses, the practice of repetition, and the uniformity of the buildings show similarities to the construction of military barracks. In addition, these schoolhouses often lack formal protection, and local communities take the initiative to organise their preservation, relying heavily on volunteer efforts.</p> <p>The Czech National Heritage Institute does not list any extant military barracks built after 1908 in the present-day Czech Republic as culturally significant. Furthermore, investors in the Czech Republic fear potential risks and prefer developing greenfields rather than reusing military brownfields. The lack of protection and the hesitance of investors to adaptively reuse military brownfields are putting these 20th-century military barracks at risk of disappearing.</p> <p>Sustainability is also essential for preserving 20th-century military barracks, in addition to their cultural significance. The European Commission emphasises the importance of transforming buildings sustainably while respecting aesthetics, heritage, craftsmanship, and overall quality of life. This focus is outlined in the Davos Declaration and the Davos Baukultur Quality System, which defines eight criteria for high-quality building culture: governance, functionality, environment, economy, diversity, context, sense of place, and beauty. Demolishing former military barracks may not align with these priorities. It is, therefore, necessary to find convincing arguments</p>

	to support the adaptive use of Masaryk Barracks instead of their demolition.
research questions and	<p>The main research question investigates why the owner should consider adaptive reuse of the Masaryk Barracks. To address this question, I examined several sub-questions that explore the relationship between the site's cultural significance, spatial configuration, typical characteristics, and the overall spirit of the place. Thus, I formulated the main research question as follows.</p> <p><i>What cultural heritage values do abandoned military sites in the Pardubice Region hold, how does spatial configuration influence their perception, and what are the reasons for their adaptive reuse?</i></p> <p>research sub-questions:</p> <p>Q1: <i>To what extent do the inhabitants of Pardubice perceive the Masaryk Barracks as valuable, and what cultural heritage values do they associate with them?</i></p> <p>Q2: <i>What architectural details do the abandoned military barracks in the Pardubice Region have in common?</i></p> <p>Q3: <i>What is the connection between the spatial configurations of Masaryk Barracks and the perception of its cultural significance?</i></p> <p>Q4: <i>What do the residents of Pardubice believe the spirit of Masaryk Barracks is?</i></p> <p>Q5: <i>To what extent are abandoned military barracks in the Pardubice Region integrated into the urban structure?</i></p>
design assignment in which these results.	<p>The research focused on understanding the site's cultural significance, its spatial configuration, and how the community perceives it. This groundwork helped me identify key elements and their importance to the community, enabling me to design a project that will restore the site's meaning.</p> <p>I began with the premise that the Masaryk Barracks should be adaptively reused, preserving certain areas while rebuilding others due to their significant social and historical value. Located along a major development axis</p>

	<p>in Pardubice, it has the potential to become a new local centre.</p> <p>I will aim to enhance the site's values of safety, pride, belonging, historical importance, and monumentality, while also addressing challenges such as barriers and low aesthetic appeal. A key theme for me is the juxtaposition of old and new, prioritising the preservation of as many buildings as possible and finding new uses for them. When preservation would not be feasible, I plan to reuse materials from demolished structures in the new constructions.</p> <p>I will focus on the former third barracks building and the kitchen building, which I will reuse as an elementary school. I aim to adapt these buildings rather than opting for demolition. My goal is to highlight the positive impact this intervention might have, preserving the building's historical legacy. Additionally, I aim to integrate a sports facility within the elementary school that could be beneficial for both the school and the public.</p> <p>For the remaining buildings, I plan to propose a concept of reusing the headquarters building as a retirement home and reusing the two barrack buildings for community or social housing. Additionally, I am considering that the owner could sell the rest of the site to private investors for development. The proceeds from this sale could then be used to fund the repurposing of the existing buildings.</p>
Process	
Method description	
<p>Research methods:</p> <p>This research methodology combines various data sources and analytical techniques to examine the historical, cultural, and spatial significance of barracks sites in the Pardubice region, particularly focusing on the Masaryk Barracks in Pardubice. I utilized publicly accessible databases, such as the National Heritage Catalogue, the National Brownfields Database, and the Prázdné Domy Database, to identify potential sites for analysis. This approach led me to discover four relevant sites</p>	

in the region. While this method has its limitations, it effectively serves the study's goal of understanding abandoned military sites in the region.

Literature Review

I focused the literature review on defining and assessing cultural significance and providing historical context for the development of Masaryk Barracks in Pardubice in the early 20th century.

Archival Research

I reviewed historical photographs, plans, and documents from local archives to compare the current and past conditions of Masaryk Barracks. I retrieved building plans from the building archive to support my analysis of potential reuse strategies.

Questionnaire

I designed the questionnaire to assess the cultural significance of Masaryk Barracks using both closed-ended and open-ended questions. I included visual data, such as current and historical photographs to explore the aesthetic, historical, scientific, social, and spiritual values of the site.

Follow-up Interviews

I conducted semi-structured interviews with respondents who completed the questionnaire. These interviews delved deeper into individual perceptions of Masaryk Barracks' cultural significance, motivations for adaptive reuse, and other relevant topics.

Field Trip

I conducted site visits at four locations in the Pardubice region. During these visits, I took photographs to develop a questionnaire that compares the architectural details and materials, while identifying the uniqueness or repetitiveness of regional military sites.

Spatial Analysis

I analysed historical maps of Pardubice to examine the spatial evolution of Masaryk Barracks in Pardubice over time.

Design methods:

The design phase started with a townscape view of a 1:2000 physical model of Masaryk Barracks in Pardubice. This model served as a tool for identifying connections within the neighbourhood, particularly to explore new linkages in the barracks area and integrate them into the surrounding environment. I also aim

to examine the concepts of blue-green infrastructure and transportation at the site scale.

The design of the buildings will be based on the insights gained during the research phase. This included identifying valuable aspects of the existing structures that should be encouraged and preserved, as well as studying case examples that illustrate principles applicable to the reuse of the barracks.

Initial conceptual diagrams and sketches will be created at a scale of 1:500, with the design gradually moving into greater detail, such as construction materials and the façade details at a 1:50 scale, along with detailed interior design parts.

A essential aspect of this process will be incorporating recycled materials from the site into the design. I intend to keep as many original materials and visible traces of the existing structures as possible in the design phase. In instances where using existing or recycled materials is not feasible, I will aim to use bio-based materials as much as possible to ensure that the design would have a minimal carbon footprint.

Literature and general practical references

Literature:

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Practical references (adaptive re-use projects):

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2. Queen Martha's School, Kaunas, Lithuania, 2021
3. Militärkaserne, Zürich, Switzerland, 2020
4. Caserne de Reuilly, Paris, France, 2019
5. La Remunta Buildings Restoration, Barcelona, Spain, 2016

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)?

Architecture, urbanism, and building sciences are closely interconnected, making it challenging to establish clear boundaries between them. My project operates at the intersection of architecture and urbanism.

From an architectural standpoint, it emphasises the importance of reusing existing buildings. It is essential to learn how to work with what already exists rather than constantly constructing new structures. In terms of urbanism and landscape, the goal is to integrate new buildings into the surrounding environment and infrastructure. At the construction level, my focus is on materials, technologies, and other essential aspects that contribute to a building's functionality.

As a student in the architecture track, I believe it is essential for architects to understand the connections between all areas of the MSc AUBS program. This understanding is the first step toward learning how to collaborate with other professionals involved in the design process.

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

My project originates from several years of civic engagement. Even if I maybe cannot influence the future of the Masaryk Barracks, I believe it is important to highlight that similar sites, of which there are many in the Pardubice region and beyond, can be approached in ways other than demolition. Viewing these sites solely as burdens to be disposed of sets a precedent which may affect the future

of many other sites. It is important to acknowledge their existence, explore potential uses, and articulate their cultural significance, even if this significance may sometimes be obscured by layers of dirt and overgrown vegetation or hidden in old memories.