



# Architectural Heritage of Hungarian Brick Factories

Protection and re-use of values with the complex investigation  
of the built heritage and the industrial landscape

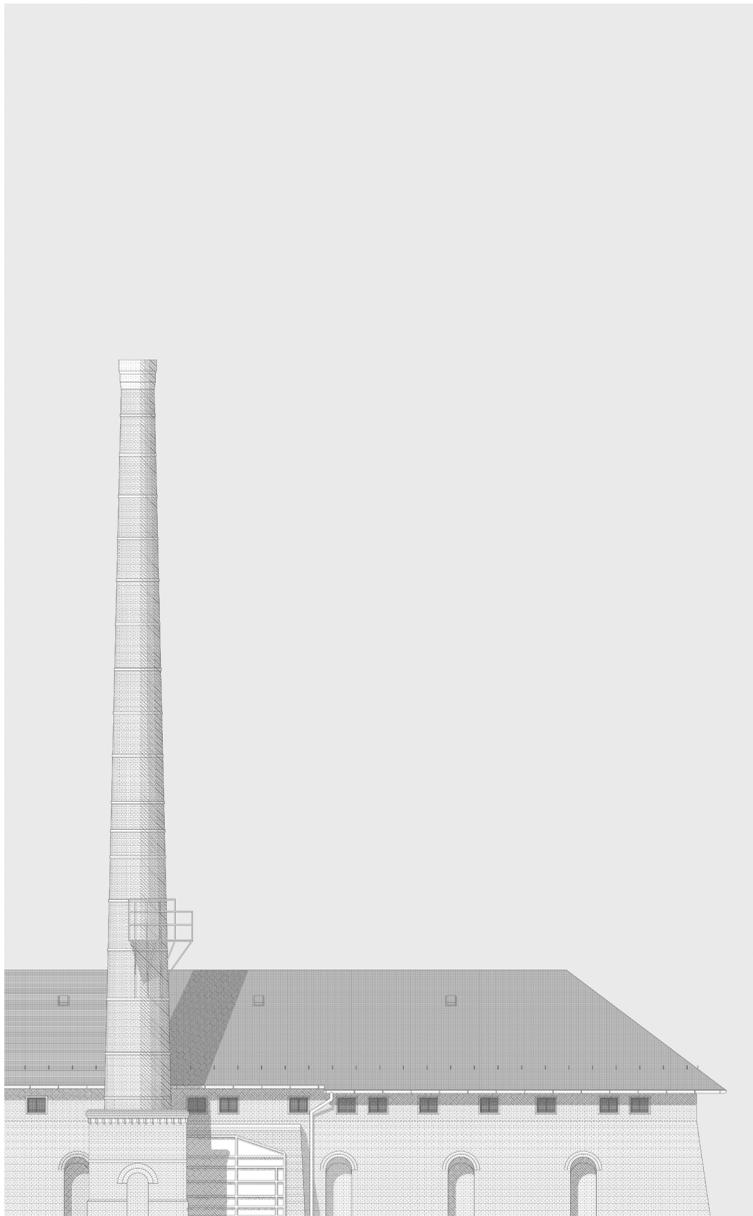
Péter Kronavetter

Supervisors: Bálint Marosi DLA † and Levente Szabó DLA

Budapest University of Technology and Economics

Doctoral School of Architecture

Theses 2019



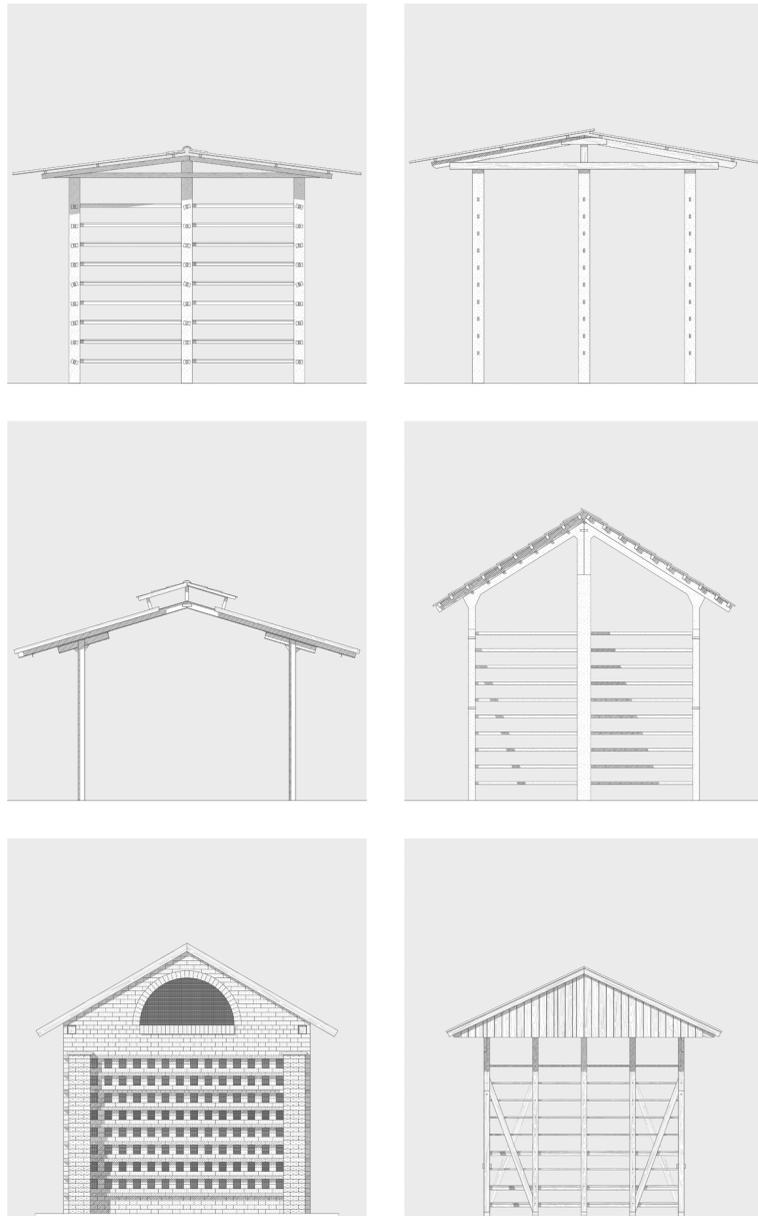
## Abstract

The post-industrial sites of the Hungarian brick manufacturing and the industrial landscapes of abandoned clay-fields are both inseparably part of our architectural heritage. The network of the former brick factories stands as an important imprint of the brick manufacturing tradition in the country, while their products, as a secondary network relate them to the architectural culture. Still, no matter how obvious are the values of many of the former factories, due to their limited potential for reuse, these decaying structures can hardly count on any protection.

The dissertation focuses on the background and heritage of the Hungarian brick industry as well as on mapping and evaluating its present state. During the research I examined the conditions of the brick industrial heritage from three different views. First, as a theoretical approach, after reviewing the literature on industrial heritage protection, I set up new value categories and a value cadastre specifically to describe the values of brick factories. The second approach was the study of international practices and of good examples of brick factory rehabilitation, to reveal experiences and the possible re-use strategies. Finally, focusing on the situation in Hungary, by the practical adaptation of the previously defined value cadastre, I made an attempt to record this legacy and to select the most significant sites worthy of protection and rehabilitation.

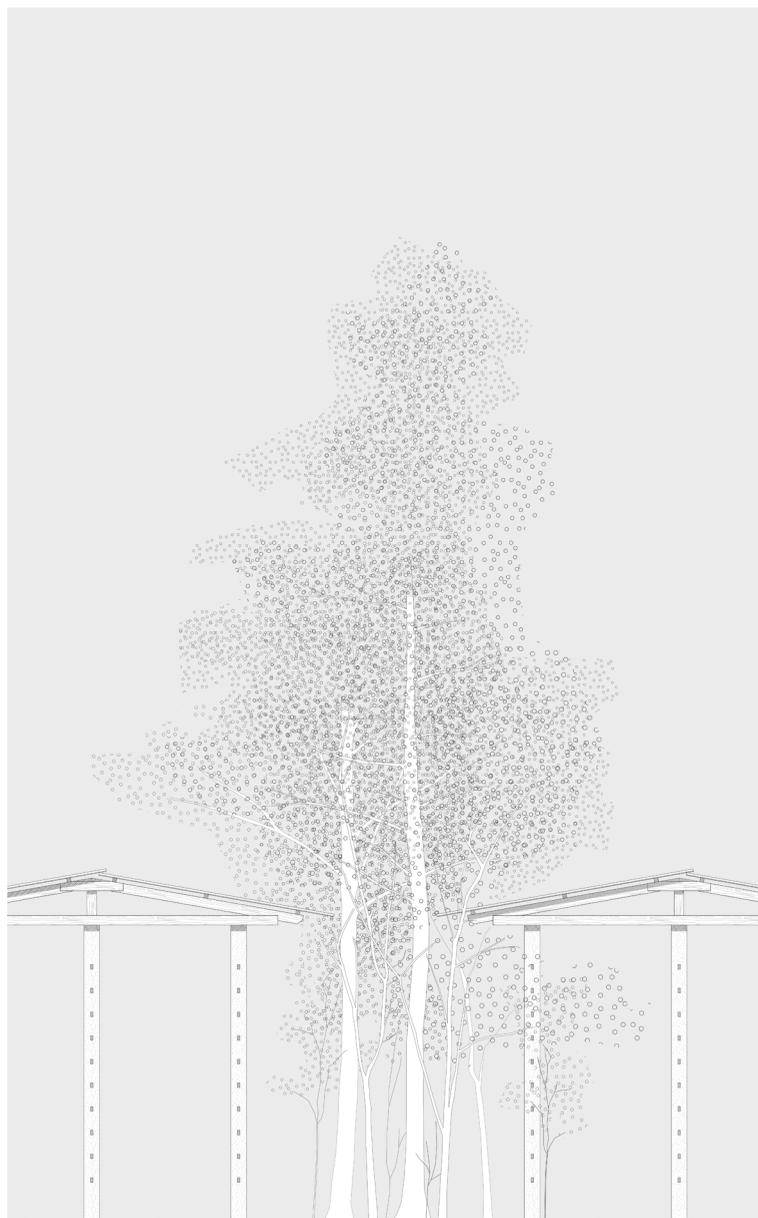
During the study of each factory I tried to evaluate the different aspects of the historical and network background, the urban context, the landscape and of the built heritage with equal weight. The research itself is an attempt both to give an overall view on the heritage of brick manufacturing and both to gain a deeper, personal understanding of each site.

## 01 Imprint



The decaying, heterogeneous network of former brick factories and clay-fields is an imprint and an indirect reminiscence of the history of Hungarian architecture.

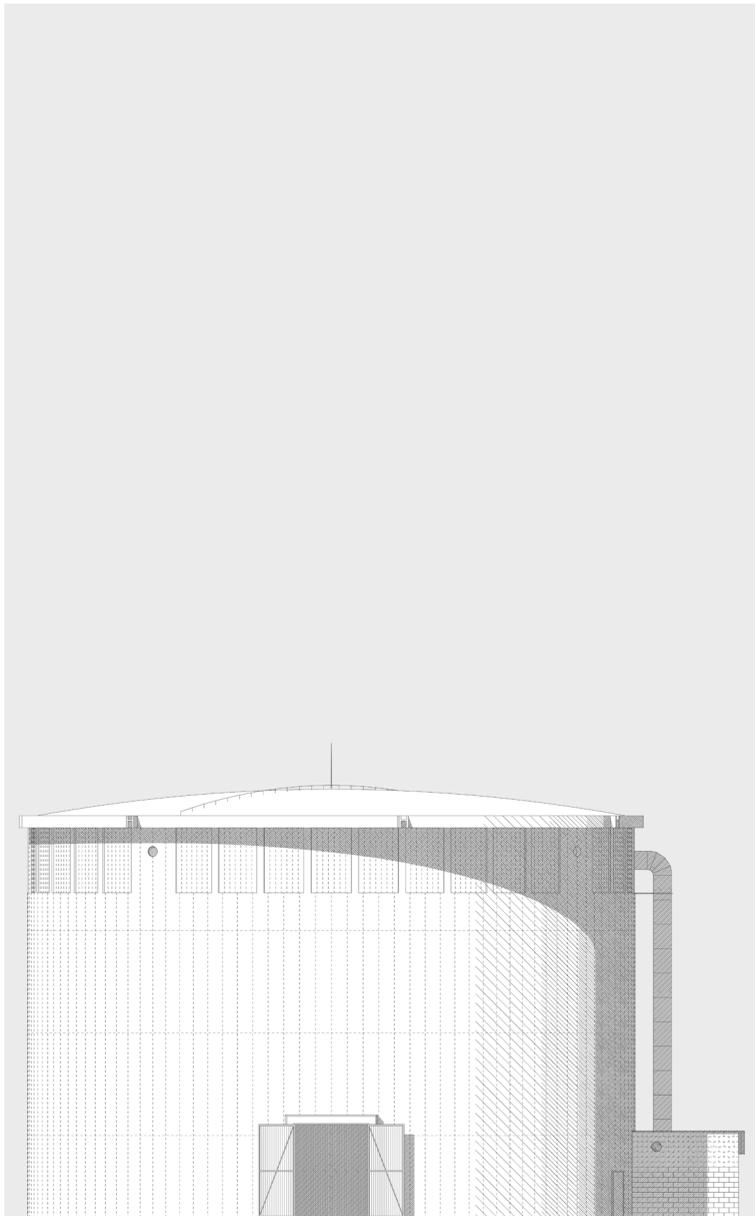
By investigating the location, the quantity and the technology of the brick factories we can also comprehend the building technology, the economical status and the architectural culture of different historical periods. The analysis of brickworks of specific periods reveals not only the technological evolution of brick-making, but also the impacts of fluctuation in economy (crises, secularization, change of regime). On the other hand each brick factory itself can either be a pure, characteristic example of its own period, or as a result of several extensions and conversions, it can survive as complex, layered heritage.



## 02 Value Categories

For the classification of hungarian brick factories six relevant value-categories can be defined (historical value, network value, indirect historical value, use-value, aesthetical value and environmental value). Through the evaluation of their buildings, condition, surrounding environment and urban context, factories and specific factory types can be connected to these value categories.

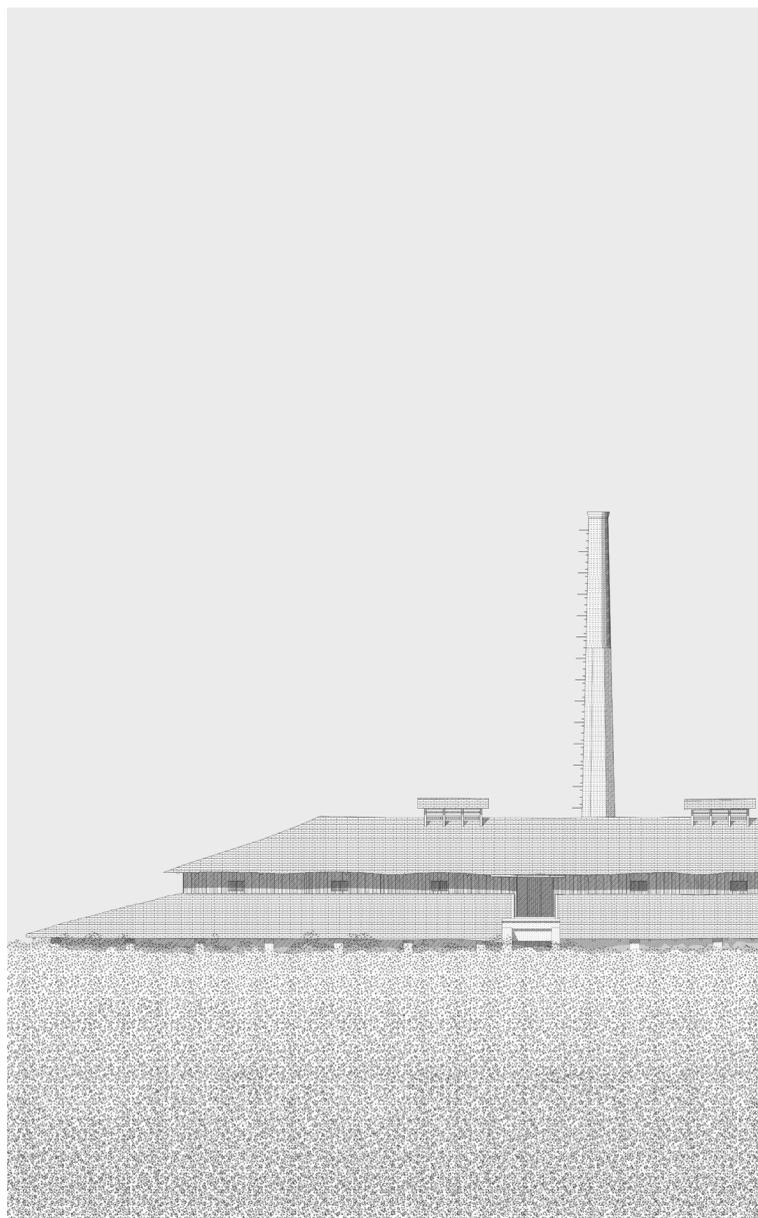
With the help of the six defined categories the intrinsic values of each factory can be revealed, and also possible re-use strategies can be discovered in the repeating, typical situations. These values can equally describe both the values of the past and the values derived from their current, altered context.



## 03 Reality

The re-use of the industrial heritage connected to brick factories is problematic. Based on the experience of international case studies, adaptive re-use as a strategy is rarely feasible in the case of brick factories with traditional technologies.

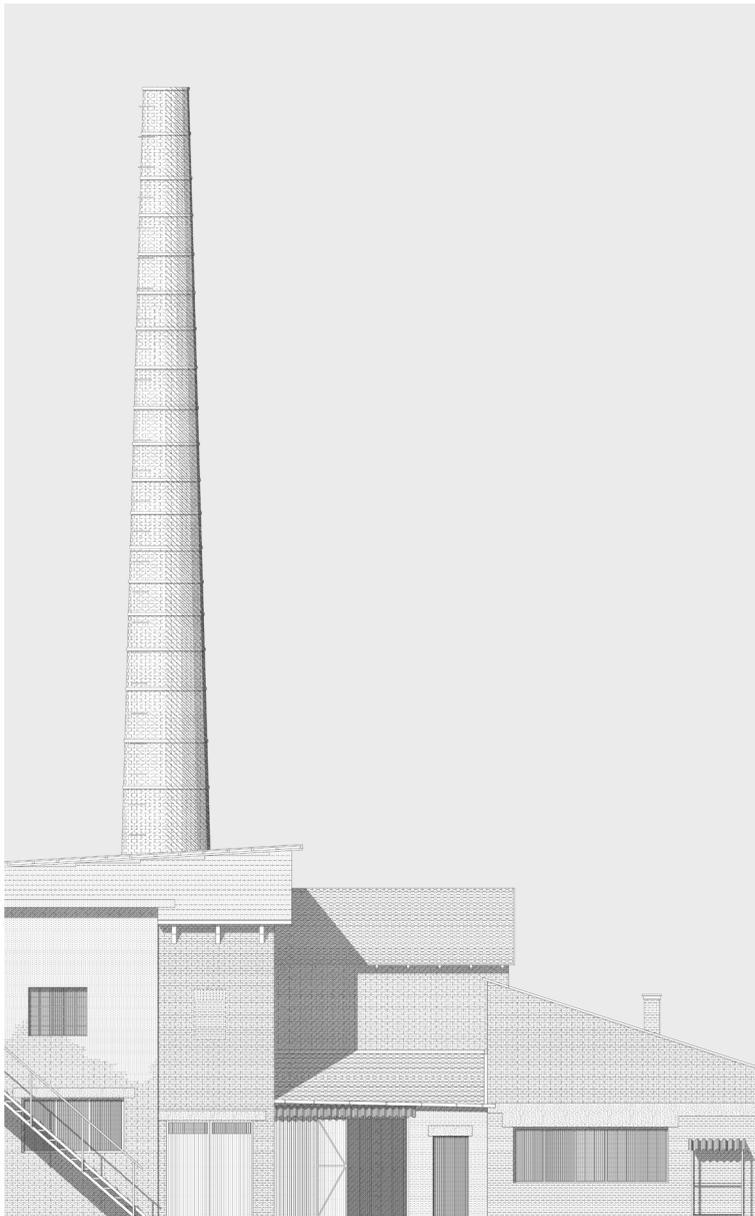
The structures and buildings of this heritage are optimized for technological processes. Reusing these spaces for new functions can only be feasible in a few significant cases. The low number of good practices explored worldwide and the rare exemplary adaptive re-use strategies discovered in brick factories indicate that universal formulas or solutions can not be found. Only those strategies can be successful, that rely on the historical values, and at the same time reinterpret the factory in its new environmental, urban, social and economical context.



## 04 Redrawing

The industrial heritage of the Hungarian brick production is disappearing unnoticed at an accelerating pace, and the former brick factories are far beyond the scope of the industrial heritage protection in Hungary. Recording them as a snapshot is an inevitable first step to preserve their memories.

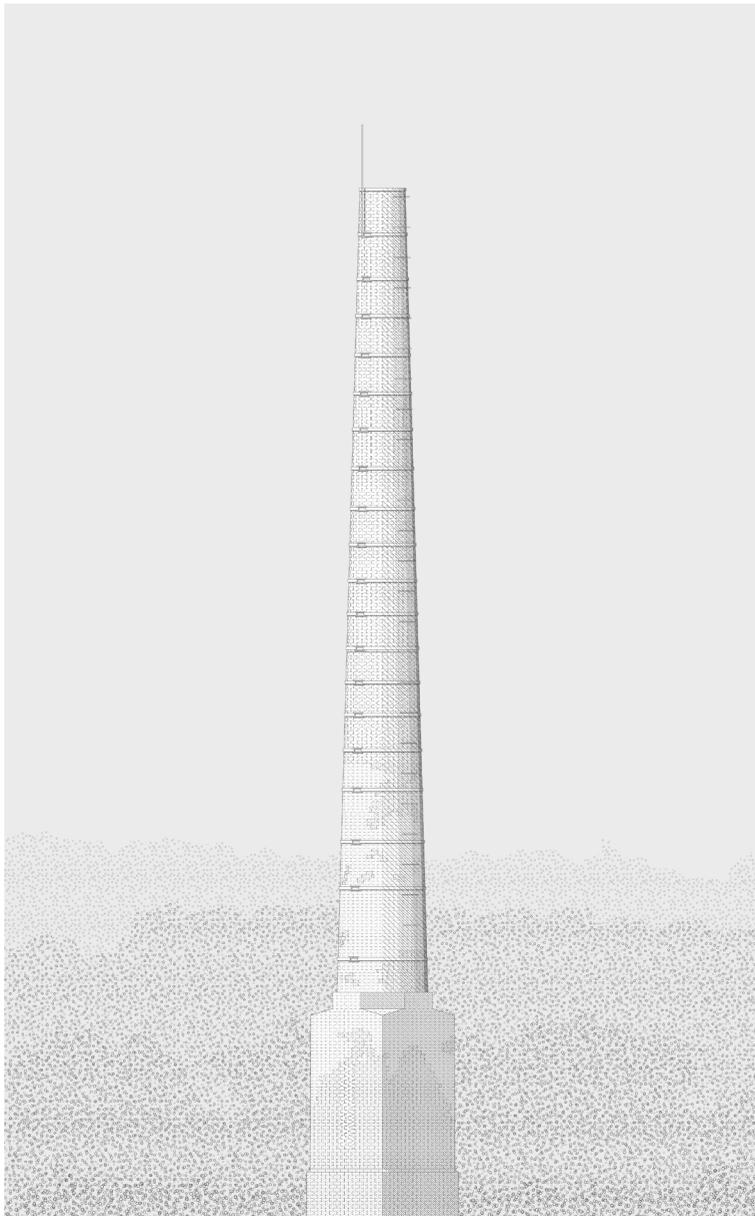
As the industrial brick structures erode the terracotta becomes part of the soil again, nature recaptures the territory of clay-fields through spontaneous recultivation. The snapshots can record the process of decay as well, while redrawing these images can be a special method of recollection and preservation. The drawings highlight and interpret specific qualities of the brickworking heritage's current condition (ad hoc extensions, typologies, homogeneity of the buildings, signs of decay an spontaneous vegetation).



## 05 Screening

Using the previously specified six most significant values of the brick factory sites, remarkable examples of closed brick factories in Hungary might be selected. The protection and rehabilitation of these buildings - adjusted to the given value category - may be a reasonable objective.

Throughout the selection of these significant sites, the internal characteristics of the factory (typology and condition of the buildings, the potentials of the surrounding landscape), and the external context of the factory (historical background, urban relation, connection to a complex network) should be regarded as equal aspects. Focusing the attention and resources on these examples might ensure at least the partial protection and presentation of the brick industry heritage.



## o6 Unbuilding Strategies

During the evaluation of brick factories, the investigation of environmental and natural values – presented as a new value category connected inseparably to the industrial landscape – is an important and relevant aspect. The brick factory sites keeping significant natural values can be regarded as natural reserves for their urban surroundings.

The brick factory sites can be protected as urban green areas, using digestive strategies, that cooperate with the natural environment. This approach defines recultivation as an important tool of the urban development. Although in most cases the clay-fields of the factories are marginal damage in the landscape, in urban context, the sites remained as inclusions, can be regarded as valuable territories. The preservation of natural reserves is the responsibility of architects as well.



## Masterwork

Private residence at Remetehegyi street, Budapest III.  
conversation and interior architecture (under construction)  
2016-2019

architecture and interior architecture:  
Zsuffa Kalmár Architects  
László Kalmár, Zsolt Zsuffa, Péter Kronavetter

associate architect: Gábor Nagy  
structural engineer: Csaba Harsányi  
mechanical engineer: Benedek Végh  
electrical engineer: Dávid Sándor  
landscape architect: Edina Massány

✦ PÉTER KRONAVETTER  
ARCHITECTURAL HERITAGE OF HUNGARIAN BRICK FACTORIES  
Protection and re-use of values with the complex investigation  
of the built heritage and the industrial landscape

BME Doctoral School of Architecture  
Budapest 2019

