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**Master thesis title:**

Regeneration of Industrial heritage. Case study of hydroelectric power-plant revival in Banja Luka, Bosnia and Herzegovina.

**Brief description:**

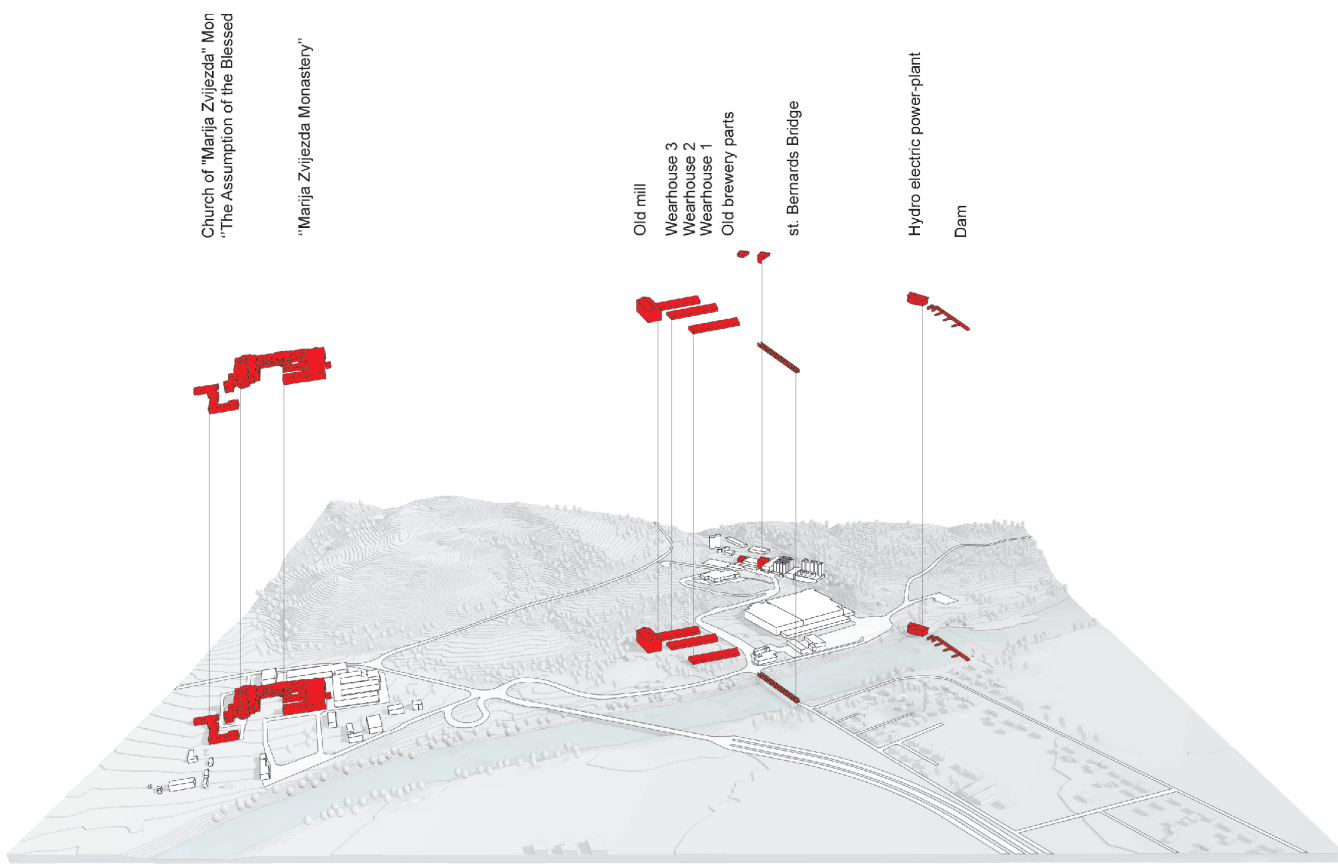
Abandoned industrial facilities are not often perceived as places of great potential for the city development. Accelerated lifestyles, global trends, and inefficient industrial property management systems lead to the state they are in today. The global problem is also a global potential. As places of historical and cultural value they have potentials to be better integrated into contemporary trends of cities development. As a place of great potential for the city is also the Delibascas' village in Banja Luka. The industrial and cultural heritage of the area has been abandoned over time due to various external influences but also by insufficient integration of the same to modern needs.

This work deals with research of new models of heritage regeneration as a potential method of regeneration of the settlement. Through a detailed analysis of archival material, the work gives a critical overview of the previous state, the origin and the life of the settlement in the past. Prolonging life cycle of abandoned facilities has impact on the environment since the prolongation of buildings' life cycle eliminates need for demolition, waste disposal, future construction with new materials. Mixture of different values such as historical, infrastructural and cultural, calls for necessity for theirs' implementation in future site development.

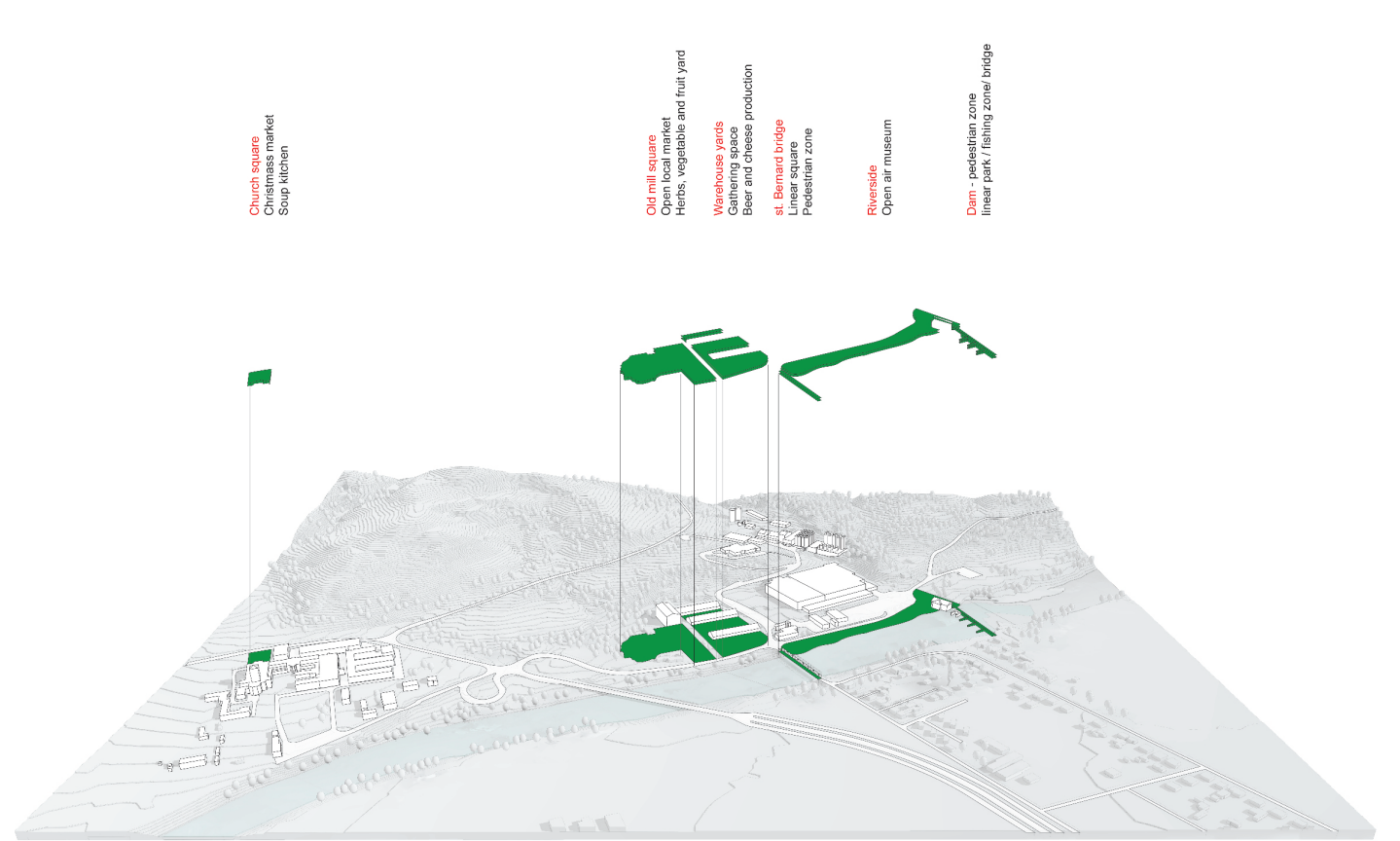
Work presents an analysis of Delibascas' village and its' abandoned heritage facilities potentials for involvement in future sustainable site re-development. It reaches multiple scales from XXL to S dealing with interconnecting facilities into one system and presents adaptive re-use model application on the case study of the abandoned hydroelectric power plant as the initial point in the long term regeneration process.

Special emphasis is given in the design process, to connect multiple layers of the past and to respond to the contemporary users. They need to coexist, and past needs to be highlighted, or at least its' traces. A space is analyzed as a whole, not as series of individual sequences. A long promenade along the river connects the layers, it clarifies them, gives an introduction to the museum and research center. It emphasizes the river. The museum is a long house, anchoring the public space, losing its' real entrance; it needs to be spontaneous and to serve to the visitors. The materials are re-interpreted. The special brick masonry made is used as a module, it changes its' layout and builds sequences, it plays with light and shadow, making changeable effects on the surfaces. Black boxes are intimate spaces in the power-plant, chambers for movie projections and music. A house is interactive. Children will adore it, they can climb on the turbines and feel the power of water. Whole space is considered as an eternal museum, that loses its' boundaries. Proposed infrastructure needs to loosen up the communications, to provide access to all and to erase boundaries, to extend the spatial experience and makes user friendly and interactive open air museum.

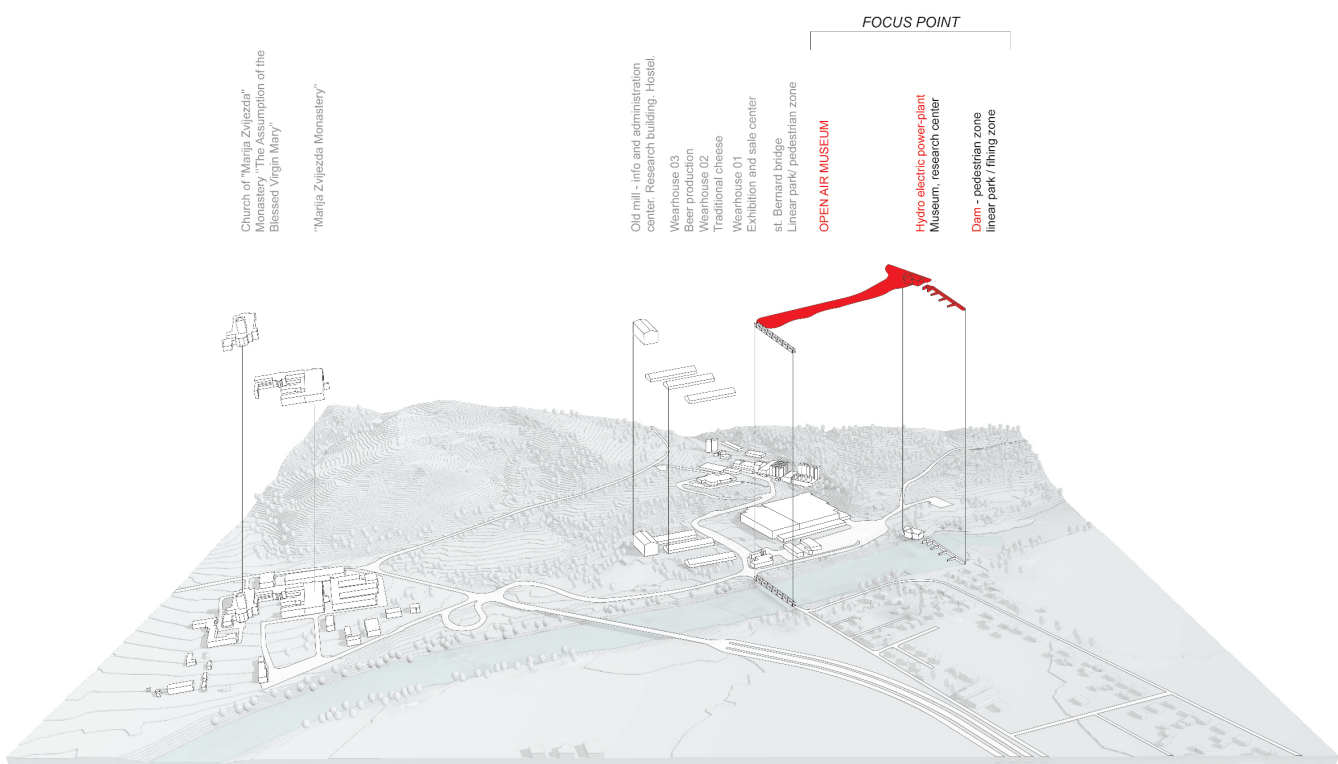




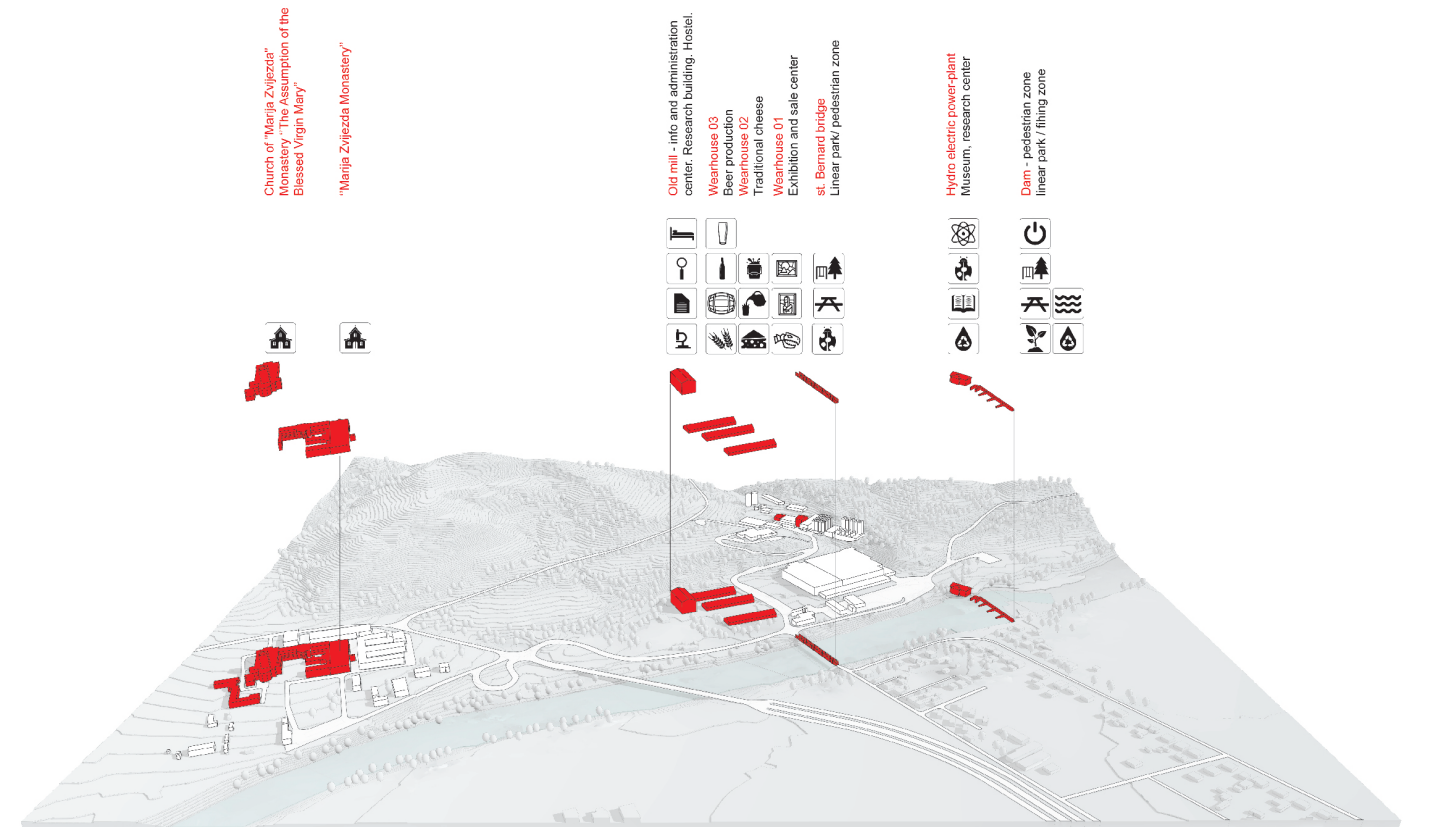
Regeneration points diagram. Source: Authors figure.



Regeneration possibilities. Source: Authors figure.

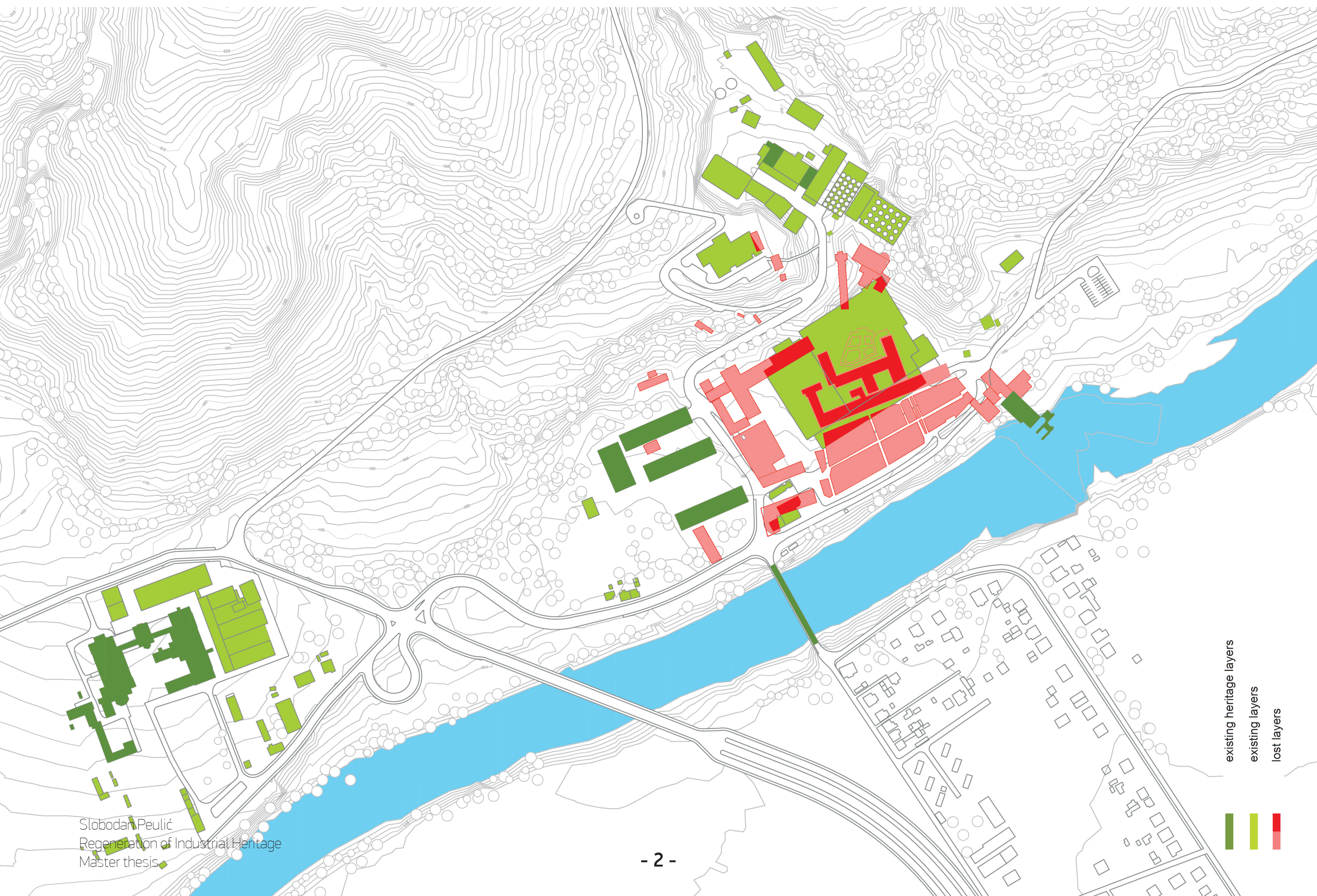


Case study. Source: Authors figure.



Regeneration possibilities. Source: Authors figure.

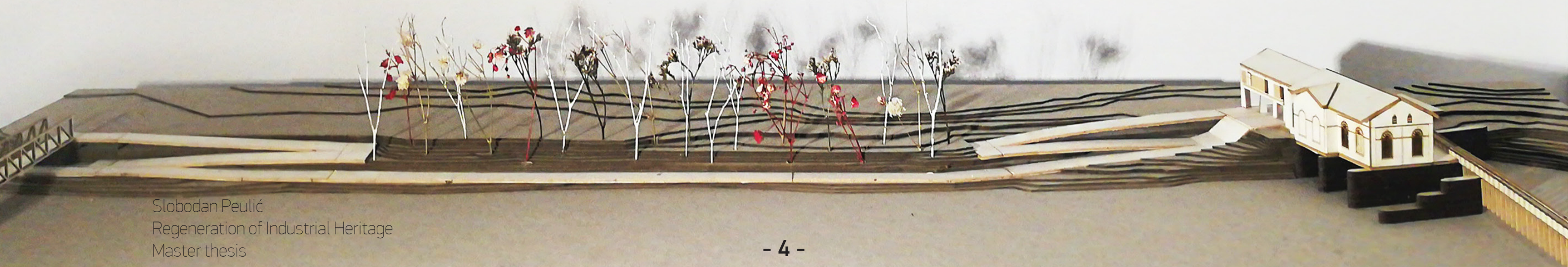
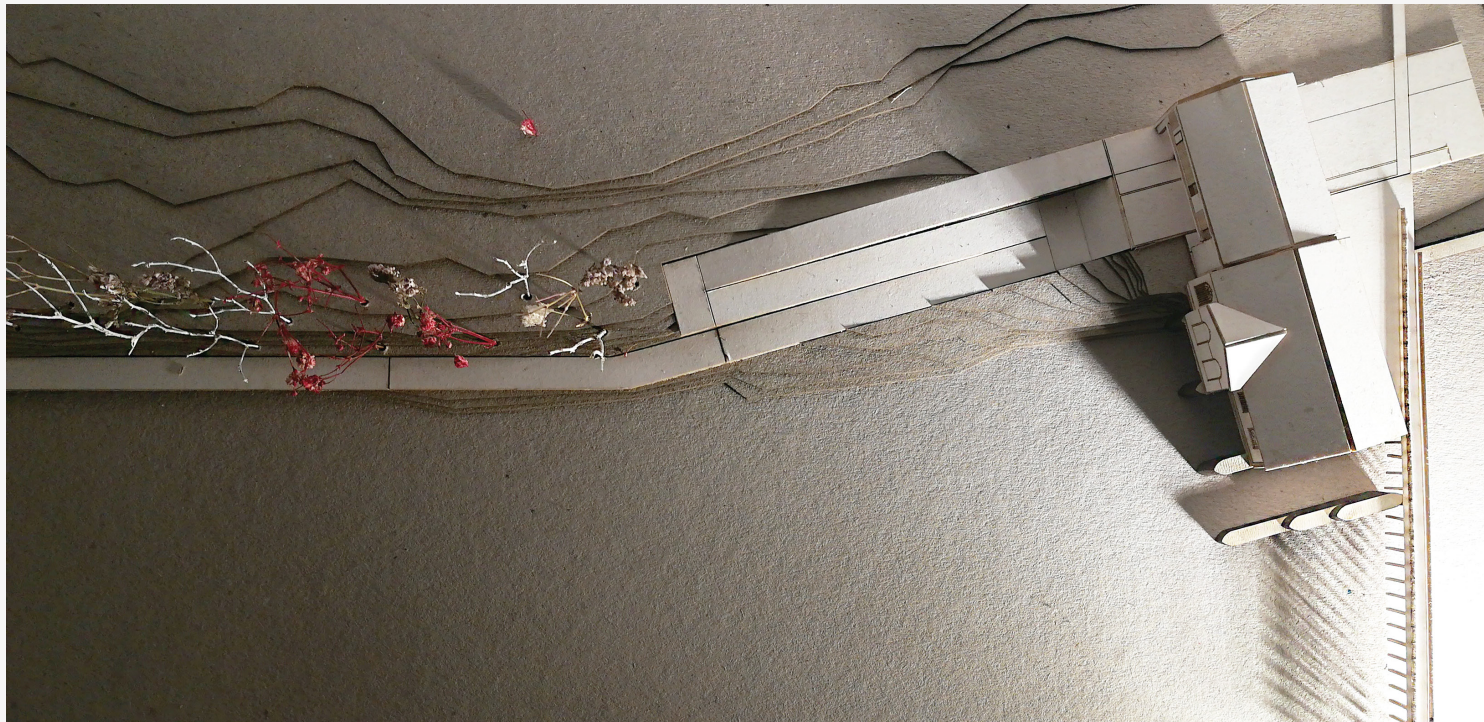
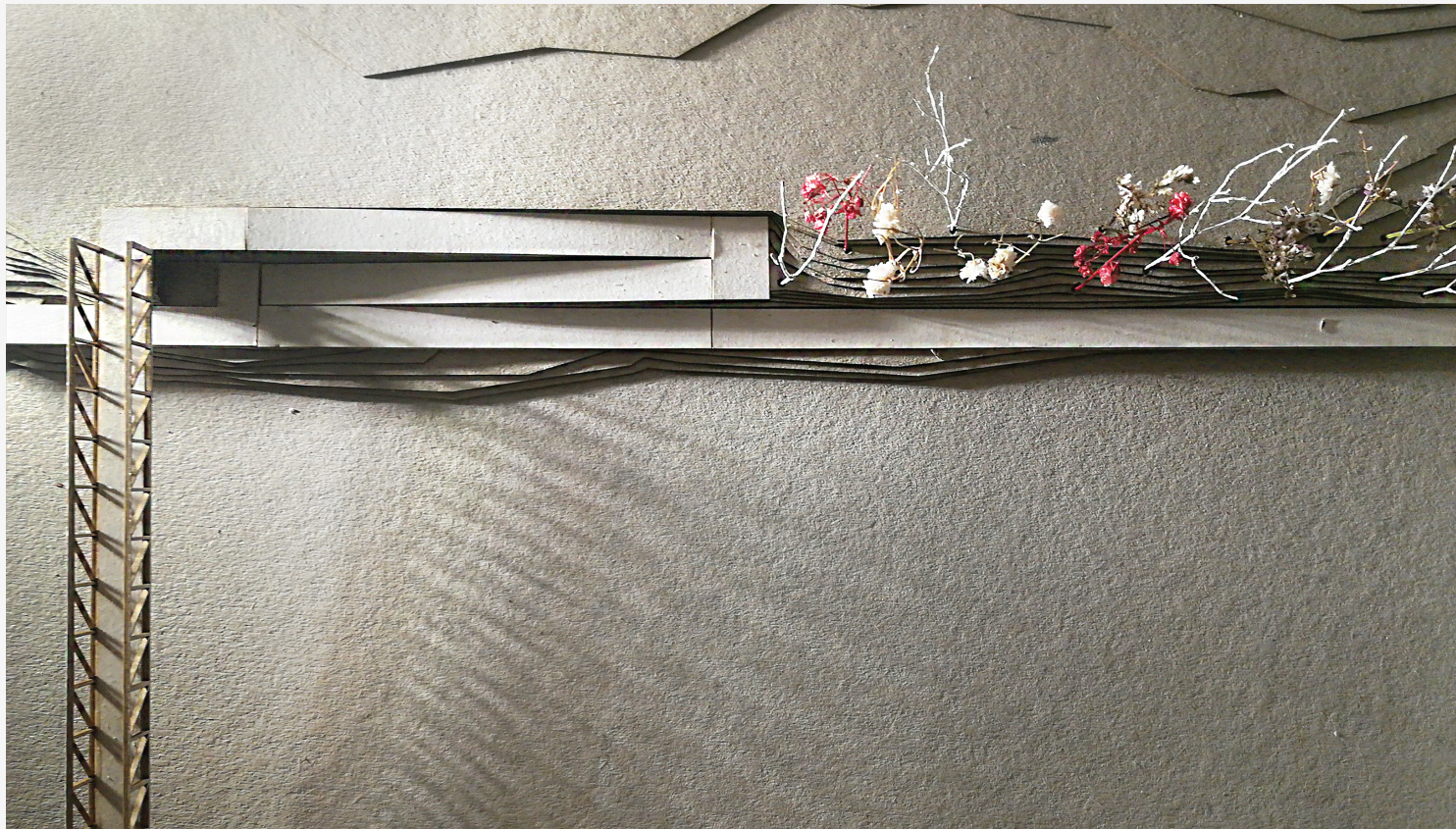
Connecting lost and existing layers of cultural and industrial heritage.



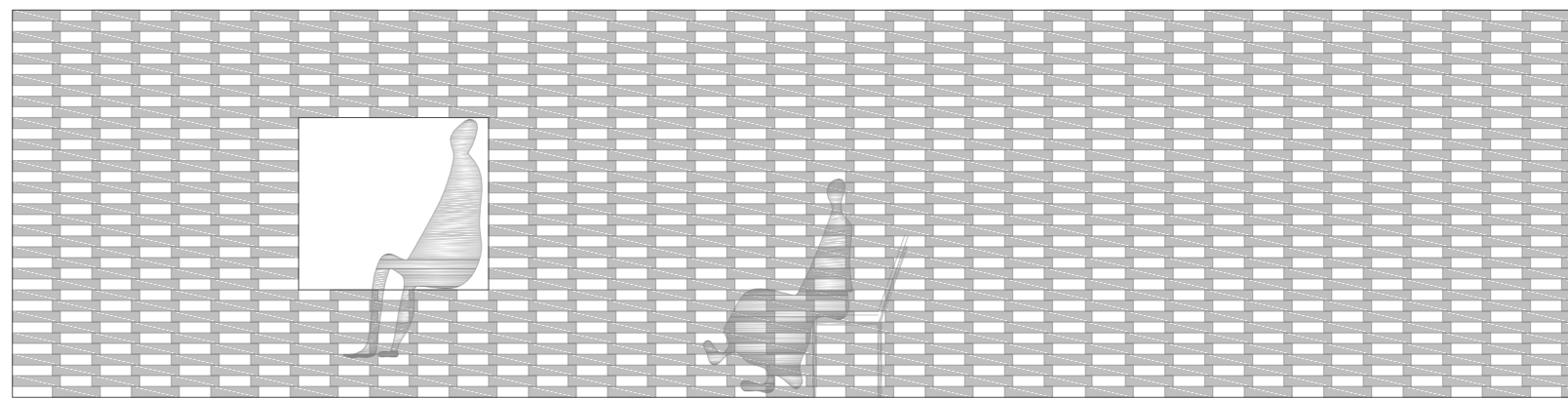
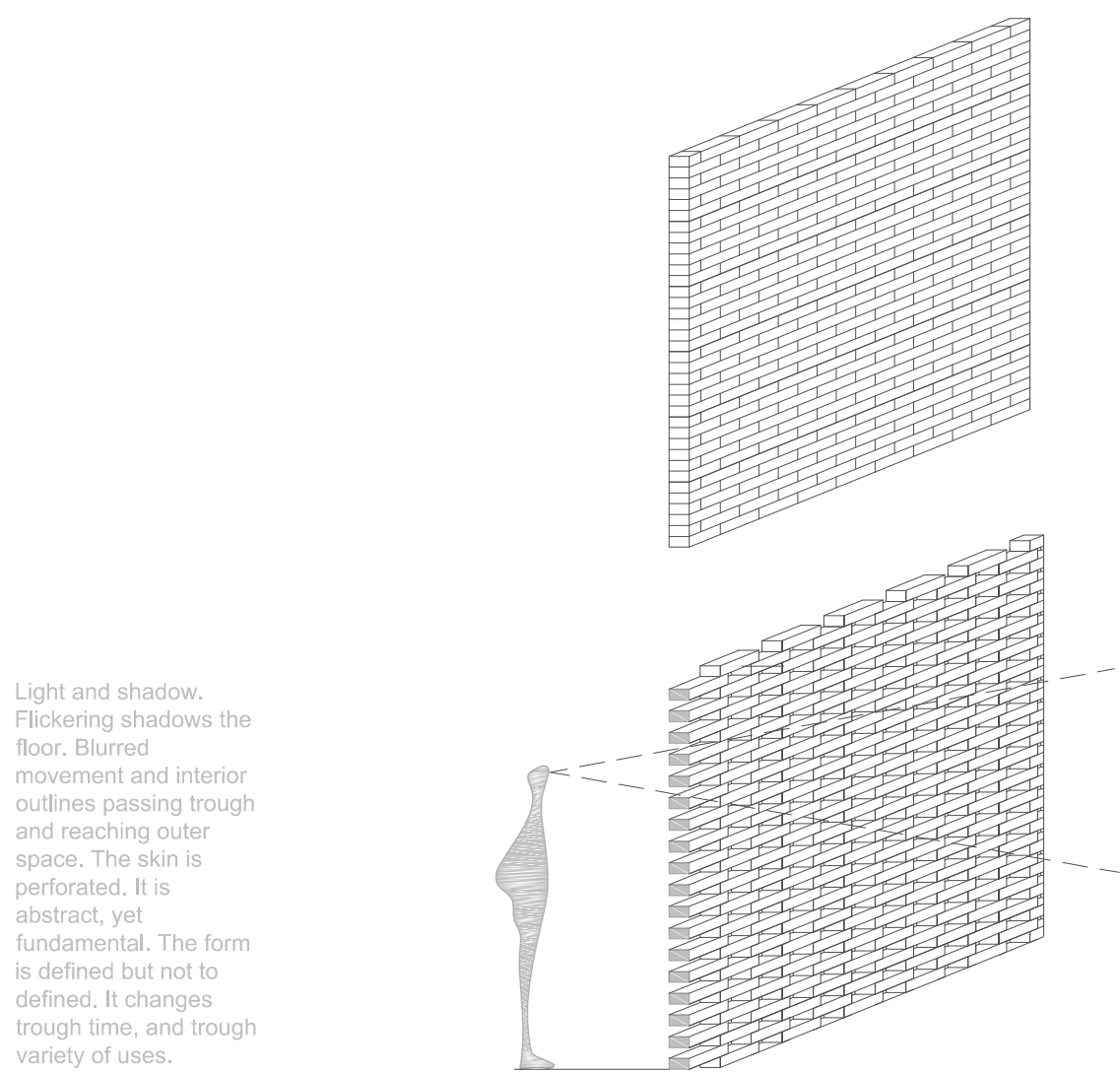




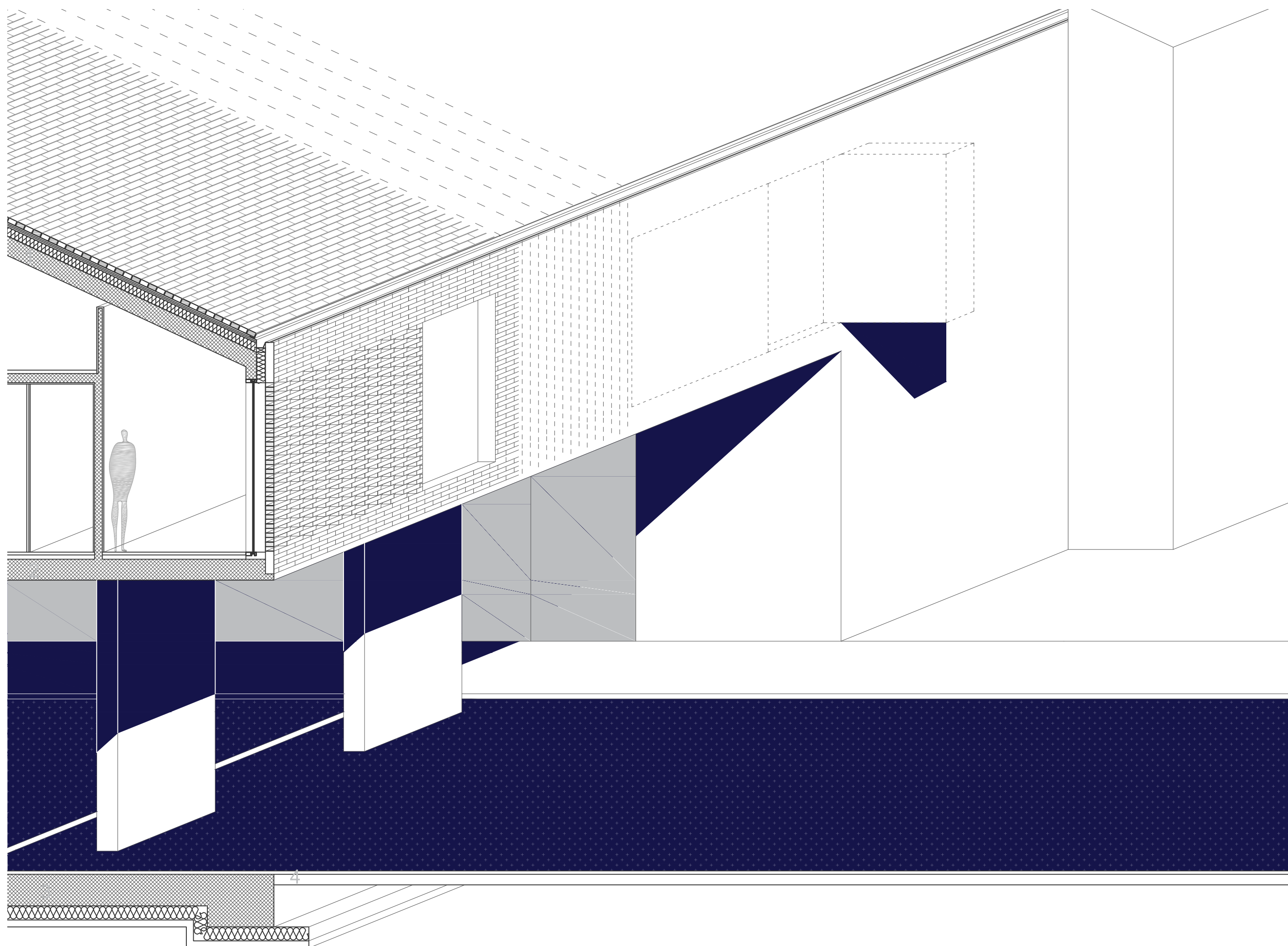








▲ Material definition diagram. Source: Authors figure.



3D Section and material ambiances.



