

## Exploration of Environmental Parameters on the Evolution of Vernacular Building Techniques in East Austria

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**Abstract :** Due to its location in a transition zone from the Pannonian to the pre-Alpine region, the east of Austria shows a small-scale diversity in the regional development of certain vernacular building techniques. In this article the relationship between natural building material resources, topography and climate will be examined. Besides environmental preconditions, social and economic historical factors have developed different construction techniques within certain regions in the Weinviertel and Burgenland, the two eastern federal states of Austria. But even within these regions, varying building techniques were found, due to the locally different use of raw materials like wood, stone, clay, lime, or organic fibres. Within these small-scale regions, building traditions were adapted over the course of time due to changes in the use of the building material, for example from wood to brick or from wood to earth. The processing of the raw materials varies from region to region, for example as rammed earth, cob, log, or brick construction. Environmental preconditions cross national borders. For that reason, developments in the neighbouring countries, the Czech Republic, Slovakia, Hungary and Slovenia are included in this analysis. As an outcome of this research a map was drawn which shows the interrelation between locally available building materials, topography, climate and local building techniques? As a result of this study, which covers the last 300 years, one can see how the local population used natural resources very sensitively adapted to local environmental preconditions. In the case of clay, for example, changes of proportions of lime and particular minerals cause structural changes that differ from region to region. Based on material analyses in the field of clay mineralogy, on ethnographic research, literature and archive research, explanations for certain local structural developments will be given for the first time over the region of East Austria.

**Keywords :** European crafts, material culture, architectural history, earthen architecture, earth building history

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