

ABSTRACT

This thesis has been written as final paper of the Master Degree course in Sustainable Architecture and Landscape Design at Politecnico di Milano, Piacenza Campus, during the academic year 2018/2019.

The topic of the study has been chosen starting from the title of the Master Degree course and from a personal interest, grown up during the years of studies, for the concept of Sustainability and for the national and international actual debate connected to this topic and applied to Architecture.

The starting point of this thesis is an in-depth study on the fundamentals of Bioclimatic Architecture; on current construction techniques for the energy saving of buildings and the relationship with the local traditional architecture.

The purpose of the thesis is the development of a project proposal that establishes a symbiotic relationship with the surrounding area: the aim is to have a final result well integrated with the local context and, in the same time, to face with new functional needs, suggesting new landscapes and new ways of living the space.

The selected project site is collocated in the historical centre of Corano Val Tidone, in the municipality of Borgonovo, as part of Tidone Valley in the province of Piacenza. The site is an interesting study case because it is placed in a context of historical and landscape significance.

The thesis is structured in three parts: the first part is an overview on the concept of Sustainability and Bioclimatic Architecture, and it gives a theoretical introduction about the national and international legislative framework and the basic principles that have driven the analysis and the following project phases.

The second part is focused on an in-depth study of the project site, performed mainly through on-site surveys. The analysis give a detailed description of the area and they have been used as basis for the final project. In particular, the climate and sun light analysis offer important guidelines for the bioclimatic planning; the historical analysis underlines the architectural layers that are still visible in the project area; the visual analysis shows the close connection between the site project and its architectural and landscape context.

Finally, the third part exposes the different faces of the design process, starting from bioclimatic architecture's guidelines and the functional program. The final project wants to put the attention on the architectural renovation and energy improvement of the selected building. The project has also the aim to improve the surrounding of the building with a new design of outdoor spaces, in particular for the adjacent park, and with a careful selection of the used materials, with referments to the local architectural tradition and to the new aesthetic trends and contemporaneous construction techniques.