



POLITECNICO
DI TORINO

Honors thesis

ARCHITECTURE HERITAGE PRESERVATION AND ENHANCEMENT

Abstract

**Economic and environmental sustainability of the
architectural heritage.**

**Comparison elements between English and the Italian
case.**

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Over the last years, the topic of sustainability has become increasingly important and necessary for our civilization, embracing several sectors among which the construction industry, considered responsible for most of CO₂ emission and energy consumption. We must focus not only on increasing the performance of new buildings but also on improving energy performance of existing buildings which have a high potential in terms of energy improvement. However, research in this direction seems to be little explored and considerably complex.

As a matter of fact, two different issues should be taken into consideration: on the one hand, the peculiarities of each building, which requires full respect of its historical material; on the other hand, the multiple overlapping values of which it bears witness.

These co-existing data, along with the current need to redevelop property assets, bring about the necessity to verify whether the European laws currently in force can actually be applied to energy saving in cultural heritage.

The aim of this study is to examine the possibility to combine improvement of energy performance with preservation and enhancement of cultural heritage.

An essential premise was to highlight the same cultural matrix of the two disciplines. They both aim to preserve the *resources* in terms of "limited goods, perishable and non-renewable": restoration, focused on architectural and cultural resources, and energy sustainability, relating to the energy-environmental aspects.

The study outlines the framework of the European policies and practices concerning the field of energy efficiency in housing stock through a critical analysis of Charters, Conventions, directives, norms and policies related to both conservation of cultural heritage and sustainable energy.

The analysis carried out shows that a great difficulty lies right in the European legislative framework, which reveals the lack of a comprehensive theoretical elaboration of an international framework about operations on existing buildings. The European directive entrusts each State with the task of drawing up its own guidelines, tailored according to needs, in compliance with its legislation on Cultural Heritage.

After outlining the European scene, the study focuses on the responses provided by two Member States: Italy and England. This part of the study describes the different governmental systems covering the fields of restoration and sustainability, the priorities and the methodological practices carried out in drafting national directives and, to conclude, the guidelines and initiatives promoted by the two countries over the last years in order to fill the gap in the relevant law.

While England has reshaped its policies according to sustainability, with good use practices drawn up several years ago, establishing the measures to be followed in energy retrofit of historical heritage, it was only in 2011 that Italy started working in this direction, through the MiBACT, and the guidelines are not yet official.

The leading position of England, however, has to be reconsidered in view of the differences between the two nations: different method, sensitivity and approach to the values of historical heritage and a significant difference in the number and type of assets, which allows easier drafting of best practices and their implementation.

For this reason, we should consider English policies and practices adapting them to the Italian context. This is an essential point, as only through the convergence of the different kinds of knowledge involving the world of the heritage conservation, in its widest meaning of resource, it is possible to exercise the awareness of the cultural values which represent the foundation of the definition of heritage.

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