

Since 1988, the city of Franeker has many historic and listed buildings. The law guarantees maintained all these monuments. These buildings often do not meet the comfort requirements demanded by the user and also with the current standards. Current users are now facing the problem of using a lot of energy to acclimate their homes, which results from high costs on their bills.

My idea is to resolve this problem, through energetic measures and to reduce consumption. In this study, it is illustrated all the possible variants and the best option for each case. Moreover, it has explanations and a clear view that the used solution respects the historical values. The problem described above leads us to ask the following research question:

“How can we update the energy efficiency of an historical building without compromising the architectural value?” (In the house in Eise Eisingastraet 10)

The thesis is a closer look at the various studies, analyzes and reports that are designed to answer the main and sub-questions during the graduation period.

The research is roughly divided into three phases. These are the theoretical stage, the problem and the design phase. The theoretical phase of this study contains mainly for research. During this research, there is essentially a literature research has been done with the aim of obtaining of the problem and the related factors, a better understanding. Based on these factors, the research looked at the monumental regulation, energy metabolism, thermography, comfort, comfort, Enorm element program and the use of the EPC. In addition, I looked at the influence of

architectural backgrounds such as moisture and ventilation. After analyzing the information obtained, it is used for filling of the steps in the next phase, the phase problem.

The phase problem has started with a thermographic survey. After this has occurred, there is an analysis of the energy transmission. This has happened with Enorm program. Also, this model is verified with the theory. In addition, the program is also used to calculate the EPC value. I also used a Multi-criteria Analysis to find the best measures for the house. With this obtained information, I proceed to formulate the solution phase.