These professionals did it, when will you?

Target group:
Energy Consultants

Make a Virtue out of Necessity

Oberursel, Hesse, GERMANY

Year of construction: **1902**

Number of units: **10**

Current status: **completed**

Project Summary

A chimney sweep informed the co-owners that the roof showed signs of damage. 5 years later a technical appraiser determined that the roof was significantly damaged and ordered for the roof to be completely reconstructed. Due to the high costs incurred by this provision, the co-owners deliberate intensely on approach and financing. An energy consultant and architect is tasked with carrying out the reconstruction. The recommendation was to simultaneously retrofit insulation on the newly constructed rafters. Supported by KfW Loan 152 a company was commissioned to reconstruct and insulate the roof based on the recommendation of the consultant and architect. The project was concluded in July 2019.

Main Successes

Due to the very long delay between the initial damage report and the roof being reconstructed, the coowners faced high costs. However, by adding an energy retrofitting component to the project, the running costs for the entire building were reduced significantly and the quality of life, especially in the upper living units improved.

Facts and Figures

- Total cost for roof reconstruction & insulation: approx. 325.000 Euros
- Reduction of heating energy expenditure from approx 83.000 kWh to 63.000 kWh per year
- Stable temperatures on upper floors
- Increase in property value due to KfW «Energy Efficient Building 100» certification

Advice to Others

- When commissioning larger constructional projects in combination with energy retrofitting it is prudent advice to keep communication between the architect and the energy consultant as tight as possible in order to be able to dynamically adjust to any unforeseen changes.

Technique and Methods

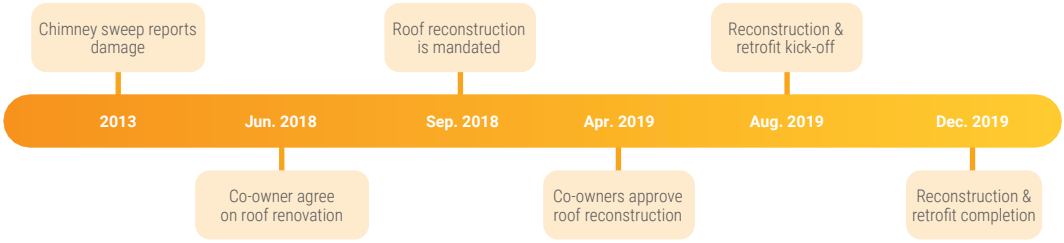
- **Technique used:** Affixing insulation on to the rafters and under the roof tiles reduces the risk of thermal bridges, saves space and is very energy efficient. The high costs can be weight up against the saved energy over the lifespan of the insulation.

- **Challenges:** Costs for the reconstruction spiraled drastically once it became clear that the entire roof needed to be reconstructed. Only when financing had been recalculated and backing from the KfW had been secured did the co-owners approve the project.

- **Alternative methods:** Alternative and above all cheaper methods of roof insulation were considered: attaching insulation between or under the rafters. However, as the entire roof had to be reconstructed these alternatives were dismissed.

- **Positive ancillary effects:** It is to be expected that the running costs for all co-owners will drop significantly - a tangible, positive effect. The temperatures on the upper floors of the building should be far more stable, especially during the summer months.

Milestones



Any questions?

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Information

Department of Energy website:
https://frankfurt.de/themen/klima-und-energie/klimaschutz/angebot-energiereferat

Department of Energy project page: www.sanierungsWEGweiser.info

Building service provider index (WEG-Bereiter-Liste):
https://www.sanierungswegweiser.info/weg-bereiter-liste-0

You too are facing the challenge of the energy retrofitting of privately-owned condominiums in your city?

The ACE-Retrofitting project aims to develop a governance model facilitated by cities linking owners and building professionals to accelerate condominium energy retrofitting. The French CoachCopro tool will be upgraded and adapted to other countries. The consortium is composed of Agence Parisienne du Climat (France), Maastricht University (the Netherlands), Energy House Antwerp (Belgium), the City of Liège (Belgium), Aberdeen City Council (UK), Frankfurt Energy Agency (Germany), the City of Maastricht (the Netherlands), Changeworks (UK) and Energy Cities (coordinator). Study visits are organised in the partner cities of the consortium.

Interreg North-West Europe ACE-Retrofitting

www.nweurope.eu/ace-retrofitting

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