



# SHARE

Social Housing Action to  
Reduce Energy Consumption



## Case Study 14



## Tackling condensation and mould growth in non- profit and social housing stock in Celje

Celje is the 3<sup>rd</sup> largest town in Slovenia with around 50.000 inhabitants. Nepremicnine Celje d.o.o. (Real Estate Celje Ltd) is a non-profit company owned by the Municipality of Celje, and a direct legal successor of the former Municipal Housing Fund of Celje.

The Nepremicnine Celje company currently owns 2300 apartments, primarily in multi-apartment buildings, which represents just over 10% of the apartment stock in the area. These apartments are categorised as non-profit (or social) housing. The company also performs activities and duties as the building manager of the apartments in their ownership.

Following several complaints by the tenants about problems with surface condensation, mould growth on walls and in corners, a scheme of in-house

inspections was set up. Mr. Janko Arnus, Head of investments and maintenance, said "In the framework of the SHARE project, and following the forum discussions, experts from Building and Civil Engineering Institute ZRMK were appointed to execute inspections, which included infrared thermography, and monitoring of microclimate in the individual apartments. This has helped us to identify the problems and to plan appropriate solutions."

SHARE is an Intelligent Energy Europe Project working in eight European areas to develop energy efficiency and low carbon technologies in social housing. For more information about the SHARE project and for other case studies see the project website:

[www.socialhousingaction.com](http://www.socialhousingaction.com)

It was interesting to note that complaints came from tenants in new buildings, in old buildings, and in refurbished old buildings as well.

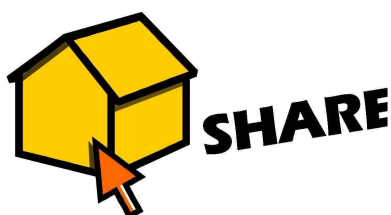
Another significant observation was that only some apartments were affected in buildings in question. During inspections it became clear that - apart



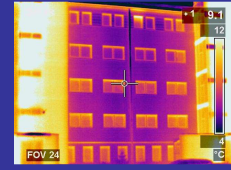
from minor construction problems - the main issue was user behaviour, in particular the need for adequate and regular ventilation and heating of apartments.

Mr. Mitja Dvornik, the company Maintenance Manager, stated that following these results even more emphasis will be put on education and information of the tenants, and added:

“We want our tenants to live in a healthy and suitable environment, but they should also be made aware of the crucial role of their occupational patterns. On the other hand, reducing condensation and mould growth also reduces our maintenance costs, which in the end makes everyone happier.”



## Observed common problems in non-profit and social apartments



If the distribution of costs is more or less proportional (“centralised” bills with distribution according to floor area or number of users), the impact of energy wasted in a particular apartment is “hidden” in the overall balance and distributed among all users. In this way the tenants in question do not feel the consequences of their behaviour. They may even not be aware of it.

If the costs are distributed according to readings of individual meters - actual individual consumption - tenants often tend to reduce these bills by heating and ventilating the apartments less.

An obvious and frequent outcome is lower thermal comfort in such apartments, accompanied by problems with surface condensation and mould growth, for which then the owner (or, indirectly, even the architect or the constructing company) is blamed. This can also have an impact on maintenance and repair requirements. These tasks represent an expense paid by owners – municipalities and non-profit housing organisations.

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