Case Study

AIMING TO IMPROVE THE ENERGY EFFICIENCY OF APARTMENT BLOCKS

lowenergyapartments.eu

College Court, Bristol, England

Background

College Court is a 1950's block of flats, comprising 19 dwellings over five floors. The building has a mix of private tenants and owner occupiers. The flats are of brick cavity wall construction, have individual electric heaters and several flats are single glazed.

The property is managed by a board of directors, elected to represent the views of owners and residents. Key decision-making takes place at an annual general meeting, but ad hoc meetings and communications occur throughout the year. In addition, a management company is contracted to manage day-to-day maintenance.

Case study block viewed from front

Motivations for retrofit

The key motivation for the residents was to improve comfort and reduce fuel bills. The energy efficiency ratings of all flats, apart from one, were below the national average. There was also great variability between the flats; the ground floor and top floor dwellings have an energy efficiency rating of almost half of the national average.

Funding became a key motivating factor as it was available to cover 80% of the cost of the main measure, with the remaining costs covered by the building's maintenance sink fund.

Installer checking feasibility of cavity wall insulation

Results

Cavity wall insulation was the main measure recommended to reduce heat loss. Unfortunately, during the project the roof collapsed. As a result, the installation of insulation has been delayed until the roof is repaired and the cavity is fully dry.

Loft insulation was also recommended and there was strong interest from one top-floor resident. However as there was no funding available, this measure was not pursued.

LED lightbulbs were also recommended to the residents as a low cost measure. These have been installed in three of the flats. The projected savings of which are outlined in Table 1, overleaf.

Residents Annual General Meeting

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Measures installed/ recommended	Details	Reasons for installation/ recommendation	Projected annual savings for whole block		
			Kilowatt hours (kWh)	CO_2 (t)	Fuel bill (€)
LED lightbulbs (installed)	LED lightbulbs installed in 3 flats	Easy to install measure provided free of charge by Centre for Sustainable Energy	300	0.16	~10.00 (£7.50)
Cavity wall insulation (recommended)	Recommended for whole block	Unfilled cavity, significant predicted savings and availability of a good funding offer	24,459	13.2	3,523.52 (£2,618)

Table 1: Details and associated savings of the measures installed and recommended

Challenges

The ultimate barrier was the building's leaking roof, which meant that despite buy-in from building residents and owners, cavity wall insulation could not be installed.

Engaging residents and owners, particularly private landlords, also proved very challenging during the project. Whilst resident engagement only began in earnest once funding availability was established, it was very slow to engage residents and owners beyond one key resident contact, an owner and building director. Despite dedicating significant resource and time, there was very little ongoing engagement because of a general lack of interest in the retrofit. The fact that many residents are tenants, and therefore not decision makers, is likely to have compounded this disinterest.

Successes

Whilst communication and engagement were difficult, a very positive relationship was developed with one key contact within the building, who remains the point of contact moving forward. Having a project champion within the building proved critical to its progress.

The availability of significant Energy Company Obligation (ECO) funding meant that a very good offer could be used to secure buy-in from residents. The fact that the funding was accessed and held by the installer meant it was very simple for the whole building to benefit.

Centre for Sustainable Energy's (CSE) established relationship with multiple installers facilitated the process of finding an installer for cavity wall insulation with expertise to overcome the building's narrow access problems. CSE understood both the funding situation and the nature of the measure, and acted as a much needed independent intermediary, who could be trusted by residents and directors.

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