

Telford, Edinburgh, Scotland

Background

This case study consists of two blocks which are part-owned by Manor Estates housing association who were keen to find solutions to engaging private owners in energy retrofit. Telford is an area in the north of Edinburgh made up of around 300 properties built during 1950/60s. The majority of the buildings are three stories with two flats on each floor with some terraced housing also present. Improving the energy efficiency has historically been a challenge due to the mixed tenure nature of the flats and the no fines concrete construction.



Case study block pre retrofit

Motivations for retrofit

For residents, the main motivations behind improving these blocks were to reduce energy bills and improve property appearance.

The project was able to benefit from full funding and as such, the residents did not need to contribute financially towards the work. The local authority assigned funding through Home Energy Efficiency Programmes Scotland: Area Based Schemes (HEEPS:ABS), a Scottish Government national retrofit initiative. Additional funding was provided by Manor Estates for their properties and through the Energy Company Obligation (ECO), a UK Government funding stream, for private dwellings.



Case study block during retrofit

Results

Two communal measures were installed into the block: external wall and loft insulation. Alongside individual gas condensing boilers were installed in two dwellings. These measures are expected to result in average annual savings of:

- 1.14 tCO₂ per flat and 6.83 tCO₂ per building, reducing CO₂ emissions by 30%;
- 5,209 kWh in energy consumption per flat and 31,254 kWh per building;
- £226 per flat and £1,357 per building which equates to a saving of 28%.



Case study block post retrofit

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The projected savings achieved by each measure are outlined in the table below. Home energy advice visits were also offered to residents to reduce their bills further through behaviour changes and low cost measures.

Measures installed	Details	Reasons for installation	Projected annual savings for whole block		
			Kilowatt hours (kWh)	CO ₂ (t)	Fuel bill (€)
External wall insulation	Installed on both blocks	The walls, previously uninsulated, were a major area of heat loss and because funding was available for this high-cost measure	57,477	12,42	3,365 (£2,452)
Loft insulation	Installed above one flat	This measure is relatively low cost and funding was also available	728	0,16	54 (£39)
Gas condensing boiler	Two dwellings	Old standard gas boilers replaced with more energy efficient versions	4,121	0,89	305 (£222)

Table 1: Details and associated savings of the measures installed

Challenges

The major barrier in motivating and engaging residents was a previous failed insulation scheme: an installer had engaged residents but was not able to secure funding, leaving residents wary. This factor was compounded by the short term nature of the new funding initiative which required residents to give approval for the measures before the end of March 2015. As household engagement only began in January 2015, this left a short timescale in which to raise awareness of the scheme and obtain agreement, which in turn put pressure on the residents to make a decision quickly. Staff involved in the project alleviated residents' concerns and rebuilt confidence through clear communication of the benefits of the measures, lack of financial contribution required and reassurance of funding stability.

Successes

The case study demonstrates the significant energy saving potential for non-traditional blocks of flats from external wall insulation and loft insulation. Encouraging all residents to sign up to this was critical for the project's success and this was achieved by a range of communications through letters, events and doorstep engagement.

The funding package, built from HEEPS:ABS, ECO funding and support from Manor Estates for their properties, was highly successful. Without this, the project would have been significantly more challenging to achieve requiring financial contributions from residents. This does however mean that the replication of this success is quite dependent on the funding landscape in the region at that time.

Contact

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