

Information Paper

Greener homes for Redbridge

Sustainable refurbishment of 19 dwellings

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During 2010, East Thames Housing Group refurbished 19 dwellings in order to improve the homes' environmental performance. As a minimum requirement the dwellings had to be refurbished to meet the requirements of the Decent Homes Standard, but 10 dwellings were refurbished to higher levels of sustainability mandated by the Code for Sustainable Homes.

Prior to the refurbishment, each dwelling underwent detailed SAP modelling and physical monitoring (including airtightness testing, infrared thermography and air quality measurements) to establish its existing performance, and the dwellings were physically monitored again after refurbishment.

Reductions in predicted carbon dioxide emissions arising from the provision of heating, lighting and hot water ranged from 10% to over 80%. The physical testing showed some good improvements in dwelling airtightness and fabric performance, although it also highlighted areas where site workmanship could be improved. The total costs of undertaking the work ranged widely from about £10,000 per dwelling for refurbishment to the Decent Homes Standard to nearly £60,000 for the most energy-efficient refurbishment.

This Information Paper analyses the savings, costs and cost-benefits for each dwelling, including the implications for the Green Deal (the government's programme to stimulate domestic refurbishment), and highlights the lessons learned for undertaking large-scale sustainable refurbishment. It is aimed at housing associations, architects, surveyors, engineers, contractors and those involved in the refurbishment of homes.



Figure 1: Refurbished dwelling (House 18)

Box 1: Project partners and funders

Partners

- East Thames Housing Group – Client
- Wates Living Space – Main contractor
- Pellings – Employer's agent
- BRE – Provided the technical support for developing a highly sustainable refurbishment standard and carried out the dwelling performance monitoring, both pre- and post-refurbishment
- SPI nPower
- Essex and Suffolk Water
- Thames Water

Funders

- Homes and Communities Agency
- London Borough of Redbridge