National Housing Maintenance Forum Case Study: Harlow Council

USING FUEL POVERTY TO PRIORITISE INVESTMENT

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Introduction

Harlow Council has a social housing stock of approximately 9,800 homes, including 393 flats in high-rise blocks. Most of the stock dates from Harlow's post-war development as a New Town. Since 2012-13 the Council's Modern Homes programme has been delivered by Savills, and has involved an investment of £41.6 million in new kitchens, bathrooms, boilers, doors and windows, with 91.5% customer satisfaction. Full compliance with the Decent Homes standard was achieved in April 2015. In parallel, a detailed housing stock condition survey has been completed, and 80% of dwellings have EPCs.

Housing Stock Energy Study

Savills and Harlow Council commissioned Rickaby Thompson Associates to undertake a Housing Stock Energy Study during the summer of 2015, in order to guide future investment strategy. The objectives of the study were to identify and cost improvements to bring each dwelling *type* in the stock to SAP 80 (as a proxy affordable warmth standard) and to reduce the carbon dioxide emissions associated with energy use by 50% (an environmental standard); and to establish the scope and cost of the work required to improve the *whole* housing stock to the same two standards. The study also calculated whole stock KPIs: average SAP 68, average fuel cost £968/yr, average carbon dioxide emissions 3.9 t/yr.

Twenty-eight dwelling types were identified, and their energy performance was assessed using *NHER Plan Assessor* software. For each type, improvement options to meet the two standards were identified and evaluated, and a medium-term improvement plan was established. When the results were scaled-up to stock level they revealed that to achieve the SAP 80 standard 8,918 dwellings would have to be improved, at a capital cost of £113.4 million (of which £4.8 million had been completed and £5.8 million had been programmed and budgeted, leaving a residual cost of £102.8 million. The average fuel cost saving would be £252/yr and the average reduction in emissions would be 1.5 t/yr.   To achieve the 50% reduction in emissions additional improvements would have to be made to 4,226 dwellings, at a total residual capital cost of £110 million, with average fuel cost savings of £300/yr and average emissions reduction of 1.68 t/yr. These sums could only be spent over a long period, so it was necessary to prioritise improvements in order to establish an affordable investment programme.

The Affordable Warmth Matrix

To assist with prioritisation, Savills and Harlow Council also commissioned Rickaby Thompson Associates to develop an Affordable Warmth Matrix for the stock. The Matrix is based on the principle that fuel poverty is the result of a *combination* of a low-income household with an inefficient dwelling. The Matrix tabulates household types against dwelling types, and compares 'worst case' income (i.e. income based only on benefits, from DWP[1] data) with predicted fuel costs (from the *NHER Plan Assessor* analysis), using either the 'Hills' Low Income High Cost (LIHC) definition of fuel poverty, or the older definition based on fuel costs amounting to 10% of income. Household-dwelling type combinations that would be in fuel poverty are shown in red; those at risk of fuel poverty in amber; and those with affordable warmth in green. The Matrix also calculates the 'fuel poverty gap' for each fuel-poor combination, i.e. the sum by which the household's income would have to be increased, or its fuel costs reduced, to lift it out of fuel poverty.

The Matrix can be run for the housing stock as existing or with planned improvements; and with both fuel costs and household income data inflated[2] to 2020, 2025 or 2030. Thus, the Matrix can be used to identify household dwelling type combinations currently at risk of fuel poverty, and to predict future risk, in the context of a range of improvements.

Asset Management

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1 DWP: Department of Work and Pensions
2   Household incomes are inflated using DWP data; fuel costs are inflated using data from the Department of Business, Energy & Industrial Strategy (BEIS – formerly DECC).

The work described above has established improving energy efficiency and alleviating fuel poverty as Harlow Council's primary housing asset management principles. The Council's HRA Business Plan for 2016-17 explicitly prioritised initiatives that alleviate fuel poverty, and the analyses underpinning the plan provide a robust platform for engagement and consultation with Council Members and residents. The Housing Stock Energy Study and Affordable Warmth Matrix are now used alongside stock condition data to plan, prioritise and schedule improvement work.

388 households were identified as in or at risk of fuel poverty, in dwelling types with high fuel costs. The 54 worst performing dwellings (with band F or G EPCs) were targeted for improvements to raise them to EPC band C. A further 771 dwellings in EPC band E have been scheduled for improvement. Appraisal of heating options has been undertaken for fourteen tower blocks with obsolete communal warm-air systems. Replacement of 10 district heating systems and 15 communal heating systems has been brought forward, after repeated deferment, as a result of raised awareness of energy efficiency and fuel poverty issues. A dedicated budget of £1.96 million was established for 2016-17 to support targeted interventions to improve energy efficiency and alleviate fuel poverty. Finally, disclosure of EPCs and fuel poverty risks has been incorporated into the letting process.

Conclusions

Harlow Council believe that their investment plan prioritised by fuel poverty is effectively 'resident driven', with buy-in by all stakeholders. They cite the value and impact of bringing in specialist expertise, and the importance of having good quality data, but they assert that it is the narrative around the technical analyses that creates impact, changes thinking and influences decision-making.

The Council still faces big challenges: the environmental target of reducing carbon dioxide emissions by 50% is very costly, and it is difficult to sell alongside more immediate concerns such as fuel poverty. However, they suggest that housing organisations should not underestimate the value and impact of success stories.

Footnote

An interesting spin-off from Harlow Council's Affordable Warmth Matrix analyses is the observation that the Hills LIHC definition of fuel poverty, when applied to the stock via the Matrix, reveals approximately half as many household-dwelling type combinations in fuel poverty as the old 10% of household income definition. Furthermore, whereas the old 10% definition associates fuel poverty primarily with household types, the LIHC associates fuel poverty primarily with dwelling types. These results will be investigated by further applications of the Matrix, in due course.