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Net Zero Carbon Retrofit

PROJECT	OVERVIEW
CLIENT	Dacorum Borough Council
SECTOR	Local Authority Housing
SCOPE	Link planned enhancement with retrofit for social housing
TIMESCALE	7 Years



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The Challenge

All existing homes must reach EPC Level C by 2030 and generate net zero carbon by 2050. It will need a 'whole house' retrofit approach to improve the building fabric with a combination of external/internal insulation and new windows/doors alongside the installation of green heating technology. A tall order for social landlords and for the industry.

One route is to combine planned enhancements with the retrofit activities. In this way it utilises existing contract arrangements, asset data, and resident relationships to better control costs and allow residents to stay safely in their homes. A recent retrofit programme for Dacorum Borough Council (DBC) demonstrates how this can be achieved and how it could be scaled to meet the demands.



The Solution

On the Total Asset Management (TAM) contract with DBC we maintain 10,500 properties and deliver enhancements. Part of DBCs enhancement plan was to move 126 units towards net zero carbon. The whole house retrofit scheme aimed to improve the building fabric with external insulation, upgraded internal insulation, replacement windows, and the addition of low carbon air source heat pumps. To drive the best outcomes, we controlled the end-to-end process from design through to commissioning. This holistic approach had advantages:

- Asset condition data was readily available at design stage
- Our suppliers and green technology experts had early input to the design
- Residents' concerns were resolved during design and planning
- On completion, residents knew how to operate their new heating efficiently



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The Solution

Better design solutions: One example was the window design. Working with suppliers during design development, it became clear the windows would have to be adjusted for the increased depth of the new insulation. Changes were made to the off-site manufacturing which then accelerated on-site installation.

Better delivery solution: Access is often an issue on retrofit for safe erection of scaffold, material deliveries and work inside properties. At design stage we maximised off-site manufacturing to allow 'just in time' deliveries and reduce site storage needs. This was supported by early consultation using our full-time Resident Liaison Officer, who kept people fully informed and ensured good co-operation throughout.



The Outcome

Landlords will approach retrofit in different ways. The 'whole house' approach taken on this scheme by Dacorum using their existing framework has delivered efficiencies and residents have benefited from lower energy costs and a better living environment. A knock-on benefit to Dacorum has been a decrease in the number of repairs for those properties. Following this scheme, a further retrofit package was delivered in 2020/21. It was partly funded through the Green Homes Grant: Local Authority Delivery from the Department for Business, Energy & Industrial Strategy and we assisted in maximising this funding using our supply chain alliances.

Going forward, we are part of the £10billion GLA Innovation Partnership which brings together housing providers, contractors, and suppliers to research, develop and deliver optimum low carbon retrofit solutions.

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