Project Case Study
FutureFit

KEY FACTS
Project name: FutureFit
Location: Nationwide
Classification: Large-scale refurb domestic building
Type: 102 homes drawn from 22 common archetypes with varying size, built form, wall types and construction age
Total Capital Cost: £1.2m
Client: Affinity Sutton

Project team details:
Consultants: Baily Garner, Camco, EST, Fontenergy, Parity Projects
Contractors: Apollo, Community Building Services (CBS) Keepmoat, Rydon

PROJECT SUMMARY
FutureFit is exploring the challenge of greening Affinity Sutton’s 56,000 homes. In this practical project we have retrofitted 102 homes, drawn from 22 common archetypes, around the country using three different budgets: low (£6,500), medium (£10,000) and high (£25,000). Instead of being led by the 80% carbon reduction target, FutureFit aimed to find out what could be achieved in practice for each budget. The low and medium budgets reflect figures proposed for the Government’s Green Deal, meaning that any results can help the industry to understand the implications of this policy.

The project covers the three key elements of retrofit: the works (through retrofitting 102 homes nationwide), people (by working with existing supply chains and staff and incorporating lifestyle advice in combination with and independent of the works) and finance (using a financial model to identify the true costs and energy savings of retrofit). All properties that have been retrofitted as well as an additional group receiving energy lifestyle advice will be monitored for one year. The first FutureFit report on the installation phase has been released and the second report will be out next year, showing actual energy and fuel bill savings and the impact of lifestyle advice.

ENVIRONMENTAL IMPACTS
Building orientation/site issues:
FutureFit centres on the re-use of existing buildings - its overarching aim is to fully understand the implications of retrofitting homes in practice, so that it can produce valuable learning for Affinity Sutton and the wider sector for how to approach greening the UK’s housing stock.

Energy Efficiency:
One of the main objectives of the project was to identify realistic ways in which energy use in UK domestic housing can be reduced in a value-based and realistic way. The interventions were broadly
based upon the energy hierarchy with a fabric first approach to increase energy efficiency. The measures will have reduced supply of energy and some packages included retrofitted Photovoltaic panels to generate power. Material and component specifications were selected to reduce embodied and in use energy demand.

Water Efficiency:
The project recognised the limitations of the existing SAP energy calculation software and specified some green measures such as low water use tap fittings and low flow shower heads that would have no impact in SAP but reduce resident’s fuel bills and water usage.

Indoor environmental quality:
When reviewing specifications and work items reference was made to BRE Green Guide and account taken of toxicity of materials in relation to air quality. Air tightness works were specified but in some dwellings this can have a detrimental effect on the air quality therefore most packages included new extract fans with heat exchangers.

Operations and maintenance:
The FutureFit project is being closely monitored both qualitatively – through on-site remote-transmitting monitoring equipment in every property – and quantitatively – through one-on-one interviews and surveys before, during and at several stages after the works until one year’s worth of data has been collected. Repairs and maintenance issues are also being logged and Affinity Sutton has produced a FutureFit repairs manual for all contractors as a guide.

Waste reduction:
Affinity Sutton is signed up to the WRAP commitment to help halve construction waste to landfill, and this process was adhered to throughout the FutureFit project installation phase. WRAP is working with us and our contractor partners to measure, report and reduce the waste sent to landfill from our major works and void processes, and in our new build schemes.

OVERARCHING SUSTAINABILITY ACHIEVEMENTS
FutureFit will have a long-lasting impact on Affinity Sutton’s future sustainability activities since its learning will directly inform both Affinity Sutton’s Property Investment and Environmental and Sustainability strategies. The aim is for our findings to also impact on a wider scale by feeding into the ongoing consultation around the formation of the Green Deal to make it viable and realistic. FutureFit is an innovative project because it never had aims for lofty carbon savings, regardless of cost. Instead its practical and replicable approach means that any learning will be useful and applicable to anyone looking to carry out wide-scale retrofit.

Affinity Sutton has worked closely with staff and residents during this project in particular with the FutureFit stakeholder led design sessions. These one-day workshops were held around the country for staff and residents not involved directly in the project. Attendees were introduced to retrofit, FutureFit and Government policy and given the chance to design a package of retrofit works for an empty Affinity Sutton property. These were installed and are now being monitored as part of the project. Feedback from the workshops was excellent and we are now considering incorporating these sessions into any ongoing retrofit work in communities.
WHAT LESSONS WERE LEARNED AND WHAT CONCLUSIONS CAN BE DRAWN FROM THIS PROJECT?

Conclusions so far following phase one report:

- The proposed Green Deal as an initiative can work, but some serious obstacles must be overcome.
- There is a significant funding gap identified by the FutureFit project: if the low package were to be applied to Affinity Sutton’s stock, the value of energy savings would cover roughly half of the investment, leaving a £130m gap which is nearly £3,000 per property.
- Allowing registered providers, who have shown an ability to deliver works at scale with Decent Homes, more control in the process would help the Green Deal to succeed as it could help to create the economies of scale required to start reducing the massive funding gap.
- This low package reduces the carbon emissions of the stock by just 18% - if packages are designed solely to meet the ‘golden rule’ (so funding is not provided to cover the gap) this percentage will fall significantly. Learning from FutureFit could be applied to refine packages of works so that greater carbon savings are achieved.
- To deliver this agenda and ensure support from residents, training is required for all delivery staff - from surveyors and contractors to supply chains and resident facing staff.
- There is little appetite for these works among previously unengaged residents: initial response to an invitation to take part in FutureFit was just 4.8% and dropout rate during the project was 23%. Without strong encouragement and support, take up is likely to be low, calling into question the viability of a consumer-led approach under the Green Deal.

AWARDS FOR THE PROJECT

Shortlisted for three Sustainable Housing awards and the Sustain Magazine Refurbishment award

PROJECT COMMENTS/PRESS/QUOTES:

“My home was quite draughty and we could even hear through to our neighbours upstairs. Also running a bath cost us a fortune and the hot water would run out half way through but the FutureFit works have really helped with this.”

*Miss Tubbritt, resident from South Shields*

“At first I assumed it would just be a recycling project or something where we’d get a water butt for the garden. But actually we had quite a lot done to the house. The workmen were very quick and a lovely bunch so we weren’t disrupted too much.”

*Mrs Hannah, resident from Midhurst in Sussex*

“The project really allowed us to demonstrate that in retrofit some things are better value than others. It was great to see real people on the ground engage with this and become enthused about what can actually be done.”

*John Milner, Equity Member, Baily Garner*

“We have really enjoyed being involved in this forward-thinking project and we look forward to seeing how our retrofit work has changed the impact that these homes have on the environment and the residents’ lifestyles within them.”

*Chris Doyle, Divisional Director, Apollo*
“The reports being produced on this project will be an invaluable asset towards choosing the most effective path for carbon reduction within existing homes and communities.”

Dean Strawbridge, Assistant Contracts Manager, Keepmoat

“Finding ways to make our homes more sustainable is an important part of Rydon’s business. Through Future Fit we have been afforded an invaluable opportunity to contribute to its development.”

Steve Blake, Refurbishment Director, Rydon