

Public Sector sustainability awards 2012



IFORE – Innovation for Renewal
Greene homes for a brighter future

We're passionate about IFORE (Innovation for Renewal). An exciting and cutting edge international partnering project. It's leading the way in reducing residents' energy bills by nearly 40%.

We're retrofitting 100 homes with the latest technological eco-measures.

What makes this really different is we're also training residents to maximise home energy.

This produces an amazing:

- Annual saving of around £500 per household, based on average fuel bills of £1,300 – **nearly 40%**. A massive difference to the lives of residents, especially if they're experiencing fuel poverty.
- 80% reduction in energy usage:
 - 60% through insulation, air tightness measures and renewable technologies
 - 20% reduction through training/educating residents how to use the technology so they can reduce energy and save money.

We know the success of energy efficiency depends on combining technical measures with community engagement. They're inextricably linked. Both have to be tackled to ensure real change. We're creating a 'green neighbourhood' where people are really confident about saving energy and money. It'll help alleviate fuel poverty beyond the lifetime of the project.

We chose Rushenden, on the Isle of Sheppey, Kent because it's an area facing economic challenges and fuel poverty. 74% of residents are on full or partial housing benefit. Residents asked for ways to help them save money and run their homes more efficiently – so we did!

We're a housing association providing 28,000 homes for people unable to afford to rent or buy on the open market. We help some of the most vulnerable and disadvantaged people in society. This project is just one of many where we improve the lives of residents through:

- Improving the quality of our homes
- Reducing energy costs
- Training and employment.



Communication:

Our residents are at the heart of IFORE. They've have been with us through the entire IFORE journey. We keep them involved in the plans for their neighbourhood and homes - what's happening, why & when.

Examples of our extensive community engagement:

- Weekly drop in coffee mornings
- Resident Liaison Officer
- Resident training
- Launch days for key stages of the project
- Bi-lingual newsletters
- Consultation on finishes/ colours for doors and wall insulation
- Creation of IFORE logo by French & English children
- IFORE website – www.ifore.eu
- Promotional film focusing on the resident experience



Cost Effectiveness:

The project is worth approximately £3.8m and is funded by:

- AmicusHorizon
- DECC Community Energy Saving Programme
- DECC Renewable Heat Premium Payment 2
- Technology Strategy Board
- European Regional Development Fund - A standard European Commission Interreg 1V programme funding and delivery agreement.

By leveraging in as much grant as possible, it's enabled us to do more for our residents.

We've also achieved more for less by:

- Use of existing procurement framework agreements which have already demonstrated value for money. It means we've not had to tender again for this project
- Joint procurement of specialist products with French colleagues
- Using technologies with long term advantages, so we ensure investment decisions are future proofed

- Our partners share their skills and help us learn about property energy modelling. This enables us to understand what technology works best in each type of house and for different resident profiles. So we make the right decisions.

Partnerships:

IFORE partners are:

- AmicusHorizon
- University of Brighton
- Université D'Artois
- Pas de Calais Habitat



IFORE also forms part of a wider retrofit programme/regeneration plan for Rushenden. We're working in close partnership with Swale Borough Council to deliver lasting regeneration. The wider programme is unique as it involves both private homes and social housing. This collective approach is the first programme of it's kind in the country.

We've also been working with Kent County Council & Institute for Sustainability to help share learning. The Energy Savings Trust is on our steering committee. Developing collaborative links and strategies with European partners and the local authority helps share ideas and learn from each other. We're jointly procuring specialist products, sharing technical innovations and community engagement techniques.



Innovation & Product Selection/Diversity:

We've used what's best, to maximise for energy saving.

Measures include:

- Loft insulation
- Ground & air source heat pumps
- 'A' rated boilers
- New entrance doors
- Draught proofing
- Photovoltaic & solar thermal panels
- Mechanical ventilation heat recovery units
- External wall insulation



There're also high levels of innovation in two distinct areas.

i. Innovative techniques & unique 'whole house' data monitoring

Trombe Walls - A sun-facing wall, built from material acting as a thermal mass providing:

- Free passive heat
- Reduced heating costs
- Sustainable heating

Wattbox- A unique and revolutionary type of heating controller. It contributes to the success of energy efficient retrofits by:

- Simplified controls
- Monitoring electricity consumption to learn how the building is used by residents
- Collects energy usage data/detailed statistics for scientific analysis and national studies of recognised bodies. The data also supports our research into the most appropriate energy-saving technologies and educational programmes. It's enabling us to develop knowledge & experience, whilst formulating a strategy for rolling out energy efficiency



- Using data to automatically set heating time and temperature. Energy is only used when needed. Automated temperature routines provide energy savings of 10-15%
- Using combinations of different energy sources for maximum efficiency. E.g. selects best methods for heating hot water out of options
- Automatically changes the temperature inside the home. Makes it warmer during winter, cooler during summer.
 - **Air-Supply windows** - Both passive solar and heat reclaim technology.
 - The windows draw in air from outside, solar energy heats the air between the glass layers. This warm air is then drawn into the building. They provide:
 - Free passive heat
 - Reduced heating costs by pre-heating fresh air whilst ventilating the home
 - Sustainable heating with no energy costs.



ii. Introduction of resident education/community involvement programmes

Our Community Investment Manager, Education Officer and a University of Brighton physiologist are delivering the ongoing resident engagement.

We've designed an extensive training programme, teaching residents' to change the way they use and control energy. It's helping break down the resistance to change we initially found. Increased knowledge, skills developed and awareness amongst residents will help with employment and volunteering opportunities.

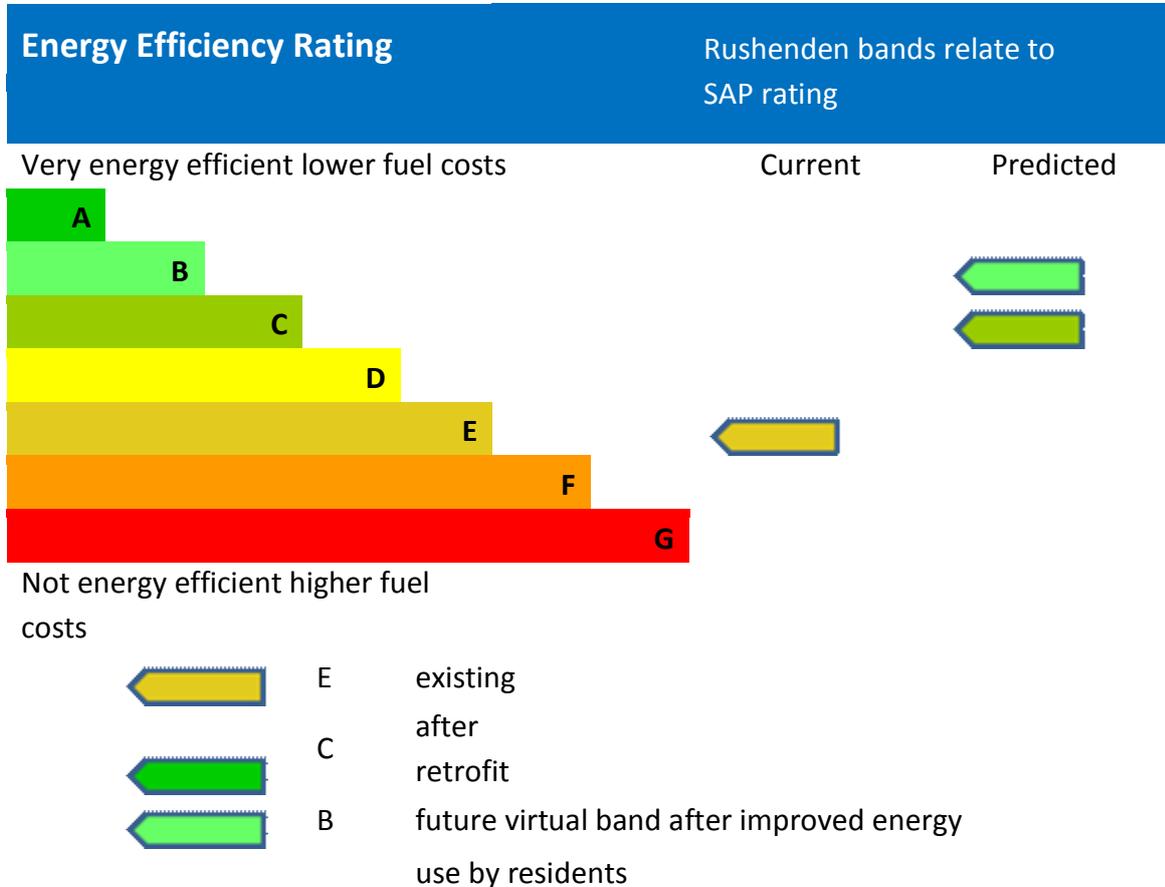
A 'Green Doctor' (an advisor who shows residents how to make their homes more environmentally friendly and cheaper to run) is also employed. She visited all homes and carried out a Home Energy Assessment Package survey. We wanted to get residents excited about energy use and saving money. We provided simple advice on how to save energy and water consumption - estimated savings of £130 per household. The exercise was also a brilliant way to gather information on previous energy usage, as well as the profile of people in each household.

Key community involvement achievements to date include:

- Interaction with 807 residents
- Equipping 260 households with tools to reduce environmental impact
- Involving 900 children as 'Energy Champions'
- Establishing 5 sustained community groups/projects
- Involving 150 people on green construction/installation activities

- Engaging 65 people in vocational training
- Employment for 5 people
- Developing links with 20 schools - piloting new energy champion certificate

Carbon Reduction Commitment:



We'll achieve a 60% reduction in carbon emissions, normalised relative to 1990 figures, by improvements to the fabric of the houses/renewables. The 80% target will be reached by resident behaviour change.

The fabric measures will be equivalent to raising the homes from EPC band E (as defined by the Energy Performance Certificates established in response to the EU Energy Performance of Buildings Directive) to band C. This improves to a 'virtual' band B (although only fabric measures can be accommodated within the EPC classification) with the additional 20%.



In terms of carbon emissions, 80% energy reduction throughout all 100 properties equates to annual savings of 238 tonnes CO₂. Using pre-retrofit energy use data, this

represents on average a reduction of over 2 tonnes per household. A fantastic achievement.

Stakeholder feedback:

Irma, resident, Manor Close – *“Shows somebody really cares and they’re trying to do something to help us.”*

Brian Horton, Strategic Housing Advisor, Kent County Council commended the success of the launch day - *“This is an excellent event. It clearly demonstrates both the value of the project and the care being taken in the joint working with local people.”*

Andrew Creed, Vice Chair of the AmicusHorizon Residents’ Council said: *“The project will have a fantastic impact for Rushenden residents. It’s brilliant. It’s been so interesting working with the French Housing Association. It really shows how we can work together on energy saving best practice.”*

