Changeworks delivers:

Groundbreaking consultancy on energy in historic homes

The Georgian tenements of Edinburgh are one of the UK’s most closely protected urban areas, but characteristics like single glazing have traditionally meant poor energy efficiency. Many tenants are on lower incomes and fuel poverty is common, with more than 10% of household income spent on energy. Working with key partner Lister Housing Co-operative, Changeworks spearheaded a long-term initiative to tackle the problem by delivering warmer homes and renewable energy to 49 listed flats. The initiative has not only lowered energy costs for tenants, but published guides on energy efficiency and microgeneration for historic buildings, the first handbooks of their kind in Europe.

With nearly 200 properties in central Edinburgh, a UNESCO World Heritage Site, Lister Housing Co-operative knows more than most about the challenges of managing older, listed housing stock. Over the years Lister has come to trust the Changeworks consultancy team for its insight on a broad range of green issues, from determining energy ratings of properties to exploring improvements for the buildings.

It was in 2007 that another Changeworks project, Top of Tenements, inspired Lister to engage closely with Changeworks to examine the potential for clean energy generation in Lister’s own housing stock, much of which dates to the 1820s.
“Top of Tenements was a fascinating project which involved putting solar thermal panels on the roofs of other tenemental Edinburgh properties,” recalls Alistair Cant, Director of Lister Housing Co-operative. “We wanted to do something similar. The rise in fuel prices was concerning us, and we knew there may be grant support available.”

**Knowledge of the funding landscape brings an idea to life**

Changeworks understood that achieving Lister’s goal would be a long-term undertaking. Its knowledge of funding sources proved critical in what became a two-part process – an investigation into improving energy efficiency of historic homes, followed by a detailed exploration of micro-renewable technologies, which work on-site to generate energy from sustainable sources for a building’s own use.

Changeworks researched a wide range of funding options which enabled Lister to attract the necessary financial support for what became known as the Energy Heritage project. Any microgeneration project must be prefaced by an examination of how the buildings can be made more energy efficient. Through the year-long Energy Heritage consulting engagement, Changeworks led a team which examined the fabric of the 1820’s buildings in detail and took the lead on extensive negotiation with stakeholders, from planning officials to tenants.

The project also trialled specific thermal improvements designed to satisfy conservation as well as energy concerns, from sympathetic, slim-line secondary glazing to the restoration of wooden shutters. All stakeholders – including planning, conservation experts, World Heritage and Lister staff and tenants – were satisfied with the outcomes of Energy Heritage, proving that energy improvements can enhance listed buildings and ensure their continued use.

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Alistair Cant, Director, Lister Housing Co-operative
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**Success paves the way for rooftop microgeneration on historic houses**

The second phase of the process would be even more ambitious than the first, as Alistair recalls.

“The second phase was a project that became known as Renewable Heritage. Changeworks looked at all possible technologies that could deliver microgeneration – biomass, wind, even hydro – they concluded that solar thermal was best for these 49 flats, and they wrote an extensive report which was certainly one of the chief successes of this project,” Alistair says.

A key objective was to reduce the use of expensive fossil fuels by letting tenants get most of their hot water from solar energy – even for tenants in basement flats. This unusual approach required extensive and sensitive negotiation with tenants, all of whom would stay living in their homes while work was ongoing.

**Changeworks delivers: groundbreaking consultancy on energy in historic homes**
TRUSTED EXPERTISE AND A SENSITIVE APPROACH TO STAKEHOLDER VIEWS

Alistair recalls that Changeworks’ position as subject experts and their considerate approach to tenants was vital in securing the goodwill that would be necessary to deliver a successful project outcome.

“We know our tenants well, but it’s a landlord type relationship, mostly covering rent and repairs. We were trying to encourage people to take on something that would be beneficial but would also require quite a commitment: having work done in their homes and adjusting how they use their heating,” he says. “Changeworks was the expert in those meetings who could answer questions in detail, and because they have authority from a renewable energy point of view, that was reassuring to people.”

“PEOPLE ARE AMAZED TO HAVE THEIR BOILER OFF FROM SPRING TO MID-AUTUMN”

Installation of the microgeneration technology was managed by Lister, and the reaction from tenants has been positive, Alistair says.” The vast majority are very pleased, and some are quite amazed that from late spring to mid-autumn, they don’t have their boiler on. We installed the solar thermal panels on parts of the roofs not visible to the street – if a planning decision is ever made that allows panels on street facing slopes of listed buildings, we’ll be ready!”

AN IMPARTIAL APPROACH IS KEY TO SUCCESS

Alistair points to Changeworks’ success in securing permission for roof panels on World Heritage site buildings as a major success of the work, and he points to Changeworks’ ability to drive consensus as a key success factor across both projects.

“The great thing about Changeworks is that they know the Edinburgh situation very well, they have expertise on a range of green issues, and they’re very good at working with people at a high level, who have the power to change things,” he said.

“Because I’m not having to heat my hot water for five or six months of the year, I’m saving money. It’s also amazing how much it educates you... it makes you think about the energy you do use. Even in the winter, when we use the immersion, it’s only for an hour or so, because that’s all we need.”

Ron Clarkson, tenant
Changeworks delivers:
groundbreaking consultancy on energy in historic homes

The published reports from Changeworks, Energy Heritage and Renewable Heritage, are recognised as ground-breaking works and are increasingly relied upon by planning authorities and conservationists as a blueprint for tackling energy use in traditional and historic buildings.

“The reports are extremely thorough,” Alistair says. “Often, reports like these are very specific and don’t have much to teach readers. But the great strength of Changeworks is the context they provide, and their openness about the difficulties encountered as well as the things that went well.

“It’s refreshing to work with consultants, especially in the renewable energy sector, who will be open about technical constraints with certain technologies. With Changeworks, I know I’m not dealing with somebody who has a vested interest – they know the industry, but they’re not part of the industry, and that is an approach that works very well.”

Alistair Cant, Lister Housing Co-operative

Contact the Consultancy team at Changeworks:

Stuart Hay
Senior Consultant
t: 0131 538 7945
e: shay@changeworks.org.uk
w: www.changeworks.org.uk