

## **2009 UK Ashden Awards case study**

### **Kirklees Council**

**Finalist's work:** Kirklees Warm Zone: Rolling out insulation across a large metropolitan borough

**Organisation:** Metropolitan Borough Council, established 1974, income £303m (2008-09), 13,800 staff

**Location:** Huddersfield, West Yorkshire

#### **Summary**

Cavity wall and loft insulation are two of the simplest and most cost-effective measures to reduce energy use and carbon emissions from homes, and make them more comfortable. Many programmes across the UK have been set up to provide these measures. The funding available often allows measures to be free for priority households, for instance those in fuel poverty, but with some contribution from households regarded as able to pay. Although many programmes have achieved some success, the possible need to pay a contribution puts some people off, and the geographically scattered installations can require significant travel time for surveyors and installers.

Kirklees Council has made use of its considerable experience in energy efficiency work, and strong political support, to launch a new insulation scheme: Kirklees Warm Zone (KWZ). The measures are offered free of charge to all households and the scheme is area based, tackling council wards one or two at a time.

- Area-based delivery, using contact with community and voluntary groups, intensive marketing campaign and letters to households. Trained assessors make door-to-door visits to check insulation status, and also refer people for other services.
- Contractor surveys homes and installs mineral-fibre insulation in lofts and cavity walls. Area-based approach has increased contractor productivity by 50%. Average cost of £224 per measure.
- 115,000 households visited so far, 82,000 homes assessed and 64,800 referred for insulation surveys. 25,300 have received insulation measures (March 2009).
- Currently installing 600 measures per week.
- 40,000 referrals for measures such as benefits advice, water saving and fire safety.
- 1,700 households referred for Warm Front grants for heating system improvements.
- Avoided emissions of about 18,000 tonnes/year CO<sub>2</sub> so far, will reach about 40,000 tonnes/year by the end of the project.
- 96 full-time equivalent jobs, 50-60 part-time roles created at Kirklees Energy Services and Miller Pattison.
- £9m funding from Kirklees Council, with £11m CERT funding from Scottish Power.

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## **Context**

Cavity wall and loft insulation are two of the simplest and most cost-effective measures to reduce energy use and carbon emissions from homes, and make them more comfortable. Many programmes across the UK have been set up to provide these measures. Such programmes usually receive funding (originally EEC and now CERT), from the energy supply companies, who are obliged by law to invest in carbon reductions in the domestic sector. However, the funding is not sufficient to pay the full cost of installations. Some programmes provide free insulation to households in fuel poverty, with members over a certain age or in receipt of benefits, and provide subsidised insulation to others. However, people who are eligible for free insulation may be reluctant to admit to their social needs, and 'able to pay' households may be put off by having to contribute financially towards the installation.

An alternative approach is to pull together sufficient funding to provide insulation free to all suitable homes in an area. This 'area-based' approach avoids the administrative cost of arranging different payment structures for different homes, and the social stigma associated with means testing. It can also reduce the cost of installation, because installers use their time more effectively. The approach has been shown to work well in limited areas, for instance by the Energy Audit Company (2006 Ashden Award winner) which worked in rural Northumberland. However, to make substantial reductions in national CO<sub>2</sub> emissions, many more homes need to be reached.

The metropolitan borough of Kirklees is in West Yorkshire, and includes the towns of Huddersfield and Dewsbury, and several other towns and villages. The borough has a population of 401,000 living in 172,000 households, and includes some areas that are relatively deprived from the point of view of income and employment. The housing mix in Kirklees is typical for the UK, including some older houses with solid walls, many others with cavity walls, and blocks of flats. Kirklees Council has had a long history of work in energy efficiency, having started using it to tackle fuel poverty in 2002. It also won an Ashden Award in 2006 for its work with solar photovoltaics. The council recognised the need to increase the take-up of insulation, and set up the Kirklees Warm Zone (KWZ) - an area-based insulation scheme offering free cavity-wall and loft insulation to all households within the Borough that can make use of it. The insulation is offered to people in all types of home ownership (although the majority of council homes had already been insulated before the programme started).

## **How the project works**

The council works with three key partners that deliver KWZ. The first is Kirklees Energy Services (KES), which manages the implementation of the scheme, including the ward by ward approach, customer service, assessment visits and community engagement. KES is a not-for-profit company, which also runs the Energy Saving Trust Advice Centre for South and West Yorkshire. The second key partner is the co-funder (CERT provider) Scottish Power. The third partner is Miller Pattison, who is the contractor responsible for installing the insulation.

## **Technology**

The technology used is standard cavity-wall and loft insulation, both made using mineral wool fibre. Some houses in the area have non-standard cavity walls, and for these the installation contractor is currently researching other products. Households that are not suitable for cavity wall insulation, or need other measures such as more efficient heating systems, are screened to check whether they are eligible to be referred to other schemes for further assistance.

### **Area based delivery**

KWZ is an area based scheme, and works with one or two council wards at a time. The insulation is offered free for every home where it is possible to use it, including topping up those that have insufficient loft insulation. Kirklees Council has put a lot of effort into designing the 'customer journey' for KWZ, which proceeds as follows:

- The councillor for a ward is contacted and briefed about the work before it starts, so is ready to answer questions from residents.
- Four weeks before the work begins in a ward, a marketing campaign is started, using signs on roundabouts, billboard adverts and distinctive 'red hand' promotional flyers delivered to every household. All registered community and voluntary groups in the ward are also contacted to make them aware of the scheme, for instance the tenants' association or parent-and-toddler group. There have been 200 community events over the last two years to raise the profile of the Warm Zone programme.
- Just before the scheme starts in the ward, official letters are sent to every household, giving people details on the scheme and telling them what to expect.
- Self-employed assessors start door-to-door visits. The assessors can choose when and how much they work, because they are paid per completed assessment form. A co-ordinator manages all the assessors working in a ward. Assessors have been selected to have a range of ages, backgrounds and ethnic groups, which helps improve take up. They wear Warm-Zone branded clothing and carry ID, so that they can be easily recognised.
- Assessors will often visit households on weekends or in the early evening to make sure they get to talk to people. If there is no answer, a calling card with a free-phone number is left for the household to book another visit. Three visits are attempted, and if there is still no response a self-assessment form is left for the household to complete. In addition to checking insulation, the assessor is able to refer people to other agencies for benefits and debt advice, long term carers, fire safety checks, water conservation and Warm Front grants for heating system upgrades. Each household is also offered a free carbon monoxide detector.
- If the assessment indicates that the household may be suitable for cavity wall or loft insulation, then Miller Pattison, the installation contractor, telephones them to arrange a survey of the property. The telephone calls are made in the evenings and on Saturday as well as during working hours.
- The Miller Pattison surveyor visits the household at the agreed time and checks the cavity and loft to check there are no barriers to installation going ahead, and will provide the relevant advice on the benefits of installing the measures. If loft space needs clearing but the household is physically unable to do this, then free assistance can be arranged. Loft hatches are also cut where required, and scaffolding provided when working at heights is required – all free of charge.
- After the survey, Miller Pattison telephones the household to arrange a date for installation, and a team will visit at the agreed time. Separate teams are used for walls and lofts, but they can usually be booked to come on the same day if desired.
- Although the prime focus of KWZ is area-based work, the local NHS Primary Care Trust has a priority referral process, so that people whose health is at risk because of cold or damp can be assessed quickly.

There are several advantages to a free, area based insulation scheme:

- It is easier to do a concentrated marketing campaign for the scheme.
- There is no need to check a household's eligibility on the basis of receipt of benefits.
- It is practical for the assessors to go door-to-door, tackling one small area at a time.

- A lot of time and transport fuel is saved for the surveyors and installation teams, who will only travel a short distance between appointments. Miller Pattison has found that the installation teams can complete 50% more jobs per day than they would normally due to reduced travel time.
- All these benefits reduce the cost of providing measures. The average cost per measure is approximately £224.
- The basic information on housing types which has been collected by the assessments will be valuable for future programmes. For instance, an area-based programme providing solid-wall insulation could be carried out without the need for repeat assessment visits.

## **How users pay**

In the past Kirklees Council had operated insulation schemes that required a contribution from households that were able to afford it. These schemes had a much lower take-up rate, because people were wary of getting involved as until checks were made they did not know how much they would need to pay. Kirklees Council wanted to make sure KWZ achieved the maximum possible take-up, in order to make progress towards eliminating fuel poverty and reducing carbon emissions. For this to happen, the insulation needed to be offered free to every household.

## **Training, support and quality control**

Customer support is key to KWZ, as shown by the care that has gone into designing the 'customer journey'. Because the household knows exactly what to expect and when people are going to visit, there is little for them to worry about in the process. Quality control starts with the Miller Pattison installation teams, who are trained to assess their work as they carry out each job, and perform tests to ensure the cavity is filled. Data on the density of the cavity filling material is logged for each job and kept for future reference. Quality assessment checks are made on 10% (contractor 5%, Scottish Power 5%) of properties to make a technical inspection of the work – this is more than the 5% common in insulation schemes, and is possible because of the area based approach. The complaint rate is very low, about 0.5%.

All the staff involved in the project are thoroughly trained. KES uses self-employed assessors, but gives each of them the training they need and supplies all the equipment and even clothing they require for their work. Miller Pattison has had to expand its workforce to cope with the demand from KWZ, and as part of this has built a new depot in Huddersfield which includes a national training centre. In addition to the new local recruits, over two hundred other installers have come to the centre for training, and there are plans to run other courses related to energy efficiency at the centre in future.

## **Benefits**

Of the 172,000 homes within the borough, 24,000 are Council-owned, and the majority had already been insulated by mid-2006 under the Decent Homes programmes. However, all homes are being visited by Warm Zone because of the additional support offered through the programme. By March 2009, KWZ had visited 115,000 of the 172,000 households, and assessed more than 82,000 (about 70%). 64,800 of these were referred for insulation surveys. The rest were council homes and were referred to Kirklees Neighbourhood Housing to check any of the homes which might not be insulated (approximately 13% of the homes assessed). Of the private sector homes surveyed to date, 24% were already insulated, 9% were found to not be suitable, and 6% of homes refused the programme.

Of the households referred, 29,200 have had their surveys completed and 25,300 have had measures installed, including 23,300 lofts insulated and 10,100 cavity walls filled. The difference between the number of houses referred, surveyed and insulated is due to timing, as the assessment, survey and installation teams work their way through the wards. Installations are currently proceeding at an average rate of 600 measures every week.

In addition to the insulation measures, 40,000 households have been referred for advice on benefits, debt, health and other issues, 1,700 have been referred for Warm Front grants to install central heating or a new boiler, and 266,400 low energy light bulbs have been distributed.

### **Environmental benefits**

The annual reduction in CO<sub>2</sub> emissions is estimated using standard CERT procedures. The reduction from the work carried out so far is approximately 18,000 tonnes/year CO<sub>2</sub>, and once the work is complete the reduction is expected to exceed 40,000 tonnes/year CO<sub>2</sub>. The area based approach has also resulted in reduced CO<sub>2</sub> emissions and pollution due to transport, and households have been referred to Yorkshire Water for advice on reducing water consumption.

### **Social benefits**

The immediate benefit to households from KWZ is reduced heating bills. The reduction brings some households out of fuel poverty, which is defined as having to spend 10% or more of household income on domestic fuel. Homes are warmer, and more comfortable, with fewer damp problems caused by condensation. Other benefits result from the referrals that the assessors make to other agencies as a result of their door-to-door visiting. These include households referred for installation of central heating or a new boiler, and those referred for advice on health, benefits, debts and energy tariffs.

### **Economic and employment benefits**

KWZ has had significant effects on local employment. KES has taken on 26 full-time-equivalent staff (50 self-employed assessors and 11 full-time staff), while Miller Pattison has taken on 85 new staff and has built a new depot and training centre in Huddersfield. The assessors taken on by KES are given training, so are adding to their skills; some have already moved on from carrying out assessments to work in the local energy efficiency advice centre and other related jobs. Over the period 2007 to 2009 2.5 FTE staff have been funded at the Citizens Advice Bureau to give benefits advice to Warm Zone referred households. There has been additional funding for the remainder of the programme to recruit another one FTE and finance the new 2.5 employees recruited in 2007.

There is also an indirect economic benefit, because local residents are spending less on energy, and therefore have more money to spend on other things, including local goods and services. Allowing for the energy savings, value of insulation and heating improvements and benefits uptake, for the council's £4.5m spend by March 2009, there had been total benefits worth £17-19.5m. By the time the scheme is completed, the council expects to have spent 13m, and delivered a total benefit worth £42-52m.

### **Potential for growth and replication**

In its initial stages KWZ was limited by the capacity of the installer. Miller Pattison has rapidly increased the number of installation teams so that this bottleneck has been removed. KWZ will continue working its way through the council wards, and then allow a 'mopping up' period, to revisit any households not covered, before finishing in 2010. The target is to have a total of 55% of all the homes within Kirklees insulated or about 95,000 homes.

Once the scheme is completed, the Miller Pattison staff will be available to work in neighbouring districts, and in the long term will train in installing other technologies for energy efficiency and possibly renewable energy. For Kirklees Council, the next stage after KWZ will be to devise a scheme to insulate solid wall buildings, which so far have only received loft insulation. The council will be starting this work with an advantage, because as a result of KWZ it has a record of the locations of solid wall properties. Kirklees also plans to carry out a behavioural change survey on a sample of KWZ customers, to find out whether the programme has motivated people to make further reductions in energy use through changed behaviour.

In principal the area-based approach can be replicated anywhere. However, the key to success is locating sufficient funding to be able to offer the insulation free to all suitable homes. Because of the strong, all-party political support within the council, Kirklees was able to commit a significant amount of its own funds to KWZ, in addition to Carbon Emissions Reduction Target (CERT) funding. Some other councils may struggle to bring together similar funds, but the benefits delivered in terms of financial and carbon savings, and improved health and comfort, are enormous. There is therefore a strong argument for more central government support for councils aiming to replicate the work of KWZ. Kirklees Council has already received visitors from several UK cities and regions to hear about how KWZ operates, and will be acting as consultants to some of them.

## **Management, finance and partnerships**

Kirklees Council is responsible for KWZ, but all of the delivery is overseen by Kirklees Energy Services, and all surveying and installation work is carried out by Miller Pattison. A range of partner organisations are also involved with KWZ through referrals, including the NHS, Citizens' Advice Bureau, Carers' Gateway, the Pensions Service, Revenues and Benefits, Kirklees Benefits Advice Service, Yorkshire Water, West Yorkshire Fire Service, Private Sector Housing and Kirklees Neighbourhood Housing.

The way in which KWZ is financed is significant. The council initially committed £9.3m of its own capital funds (equivalent to £52 per household in the borough), however by the end of the project the figure is expected to be close to £13m. The council also secured £11m EEC/CERT funding from the energy supplier Scottish Power. Other funders include £10m (projected) from Warm Front, £960k from the regional housing board, £150k from National Grid Transco and £100k from other energy company trusts.

Kirklees council was given the top rating of four stars by the audit commission for its overall performance. KWZ is just one of the measures the council has taken to meet the National Indicator targets it has signed up to, which include NI186 (per capita reduction in CO<sub>2</sub> emissions), NI187 (tackling fuel poverty) and NI188 (planning to adapt to climate change). Other measures include:

- RE-Charge, offering interest-free loans for households to install renewable energy technology.
- Demonstrating wind turbine installations on council buildings (two 6 kW, two 15 kW).
- Climate change outreach work in schools.
- Waiving the planning application fee for renewable energy installations.

Other ongoing projects include:

- Installation of a 50kW micro-hydro scheme.
- Ten biomass boilers to be installed from 2009 – 11.
- Installation of smart meters in 100 council buildings, including schools.

- Kirklees Climate Change Plan.
- Council carbon budget.

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This report is based on information provided to the Ashden Awards judges by Kirklees Council, and findings from a visit by one of the judging team to see their work.

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