

Harbour Ward Energy Project 2004/05

Project Report

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Aims and Objectives

The project's main aim was to proactively encourage residents to increase energy efficient measures in their own home and to take advantage of the Grants available. It was designed to reach those who have not, for whatever reason, made use of services such as the Warm Homes Project.

- 100 Homes will have an energy audit
- To get 20 grant referrals
- To get 100 energy saving measures into residents households
- Production of the Harbour Ward Energy Project Report
- Reduce energy consumption within the survey area by 13200 kWh (equivalent to 47500 kW) per year
- Reduce carbon dioxide (CO²) production by 20 tonnes per year in the survey area.

Introduction and Background

This project was set up as a pilot scheme to tackle the issues of Fuel Poverty through Energy Efficiency and consequently Greenhouse Gas (GHG) emissions in the Harbour Ward of Colchester.

Similar projects have been conducted throughout the UK, which are well documented. This project was developed using the lessons learned and best practices from a number of these projects through the Community Action for Energy Network¹, the Energy Saving Trust (EST) workshops² and using data from the Centre for Sustainable Energy on Fuel Poverty³.

The project was developed with all the Project Partners (see below) as well as the Energy Saving Trust (EST), British Gas, Scottish Power and the Chelmsford Environment Partnership (CEP).

Partners

Project Partners:

- a. Colchester Borough Council's (CBC) Warm Homes Project: The Warm Homes Project aim is to promote energy efficiency especially in relation to Fuel Poverty. The project provided a link to energy saving work and grants for residents of the Borough.
- b. CBC Welfare Rights Service: a Council officer assisted us where residents, wished to know whether they were eligible for certain benefits, which in turn, could make them eligible for full energy-saving grants
- c. CBC Street Warden Service: The Street Wardens gave us an insight into the project area and helped with publicity.
- d. CBC Harbour Ward Task Group: The group consists of CBC Members, Officers, and local community leaders who were concerned with the general welfare of residents living in the ward.
- e. CBC Environmental Policy: This department provided funding and advice to the project.
- f. Essex Energy Efficiency Advice Centre (EEEAC) : The EEEAC is the regional EST funded organisation responsible for delivering energy saving in the domestic and transport areas regionally.

Service Level Agreements were agreed with both CBC and the EEEAC regarding the respective roles and responsibilities of the signatory parties in ensuring the smooth progression of the Project during its relevant stage.

¹ <http://www.est.org.uk/cape/index.cfm>

² <http://www.est.org.uk/cape/resources/projects/>

³ www.fuelpovertyindicator.co.uk

Project Details

Project Area

The Project area was chosen on the recommendation of CBC Community Development Officer and consisted of The Barn Hall Road Estate and Speedwell Road in Old Heath. Both areas lie within one of its four most socially deprived wards in the borough. The properties can be characterised as:

- Largely developed since World War II
- A mixture of mainly Colchester Borough Homes & privately owned housing, with small elements of other Housing Associations and privately rented properties.
- The properties were predominantly semi-detached with a small proportion of detached and blocks of three-storey flats
- The overall housing stock generally seemed to be in a very good state of repair, with little evidence of graffiti, vandalism or litter
- Many householders had already carried out energy-saving measures. In particular, there was a consistently high level of double-glazing. It was apparent that CBC had, in recent years, carried out extensive property improvements including energy-saving and other measures (e.g. improving access to front doors for people with disabilities) in a good number of its own properties

The estate's residents had good access to a reasonable range of local shops, community facilities & green spaces (*see Appendix 2*), whilst there was a bus service that ran through the estate. The Project area itself is only 2 miles south east of Colchester's town centre

Timetable

The project was due to start on 15 October 2004 and be completed by 28 February 2005. However for a number of reasons the timetable was extended until October 2005.

Staffing

The project team consisted of en-form's project manager, responsible for project guidance and financial control, and two part time project officers, responsible for delivering the project. The project was based at en-form's offices at 15 Church Walk, Colchester CO1 1NS.

Training:

A 1-day training course was held covering:

- The nature & purpose of energy advice
- How fuel is used
- Fuel poverty
- A review of heating systems, appliances, controls and meters
- Ways of paying for energy
- Cost-free Tips for saving energy on a daily basis
- Energy saving measures involving capital outlays
- Making sense of energy bills



Methodology

The system chosen was the established format of the Home Energy Check, which subject to small variations is used nationally. The project team met with The Essex Energy Efficiency Advice Centre (EEEAC), The National Energy Service (NES) and the CEP to discuss their data

collection methods and result production systems. The method chosen was based on ease of use, cost and the usefulness and efficiency of the data produced.

The two Software systems available (Maxim and NHER) were deemed too costly and unnecessary for a project of this size. However both would have enabled us to produce quick and easy data for immediate analysis and dissemination but required a significant financial outlay for software, registration, some training and hardware.

The Paper systems available were the HEC used by the EEEAC and the Energy Assessor form created by CEP. The CEP system was a little more advanced and closer to the NHER system but to be used effectively the Energy Assessor would need to spend more time with the client, more time producing the report and be computer literate. It was decided that the EEEAC HEC should be used for this project. It was initially produced for the resident to complete and therefore simple. Data processing and analysis could be carried out off site, releasing Project Officer time and processing of the form produced a basic (level 0) SAP⁴ rating.

Database

A simple Microsoft Access database was created which enabled easy tracking of client/project contact.

Publicity

The publicity was designed to produce the best response from the target area with the smallest financial outlay.

Two methods of making direct contact with the relevant households were quickly identified:

- Sending a standard letter on CBC-headed paper to all households within the defined Project area. This would detail the benefits of and offer an invitation to participate in the Project. It would include a tear-off reply slip and a return envelope.
- Door-to-door leafleting, using a standard A5 format, highlighting the same benefits to the residents of participating, followed up by door-to-door canvassing.

Following a test with the Harbour Ward Task Group the latter was chosen.

Publicity was focussed on the target area and consisted of the following:

- Ward specific newsletters
- Parish magazine - An A5 advert was placed in December 2004 prior to leafleting and canvassing.
- Old Heath Task Group - The Task Group meeting held in December 2004 was an excellent opportunity to present the project to the people who would benefit. The exercise provided key insights into how the community may receive the project and what may be successful.
- Posters
- The Old Heath Fun Day - A stall giving energy efficiency advice and promoting the project at which local residents and interested people gave contact details for follow up by the HWEF team or the Warm Homes Project if they were not in the desired target area.

⁴ SAP = Standard Assessment Procedure, a standardised government system for the comparison of energy requirements for a building, ratings are given from 0-100, the higher the rating the better the energy performance of the building. A calculation based on averages of property size, location and use.

- Leafleting - 500 leaflets were produced detailing the benefits of a free Home Energy Check and the associated energy savings and the levels of grant aid that are available. (see appendix)

Canvassing

Both Project Officers worked together for the first 5 interviews for following reasons:

- To see how the first canvassed residents at the doorstep responded to our visit and to assess how we might need to adapt our approach when it came to canvassing on an individual basis.
- To gain confidence in asking residents to participate in our Project - there was an initial worry that we would be regarded as another couple of door-to-door sales people.
- To verify the advice from CBC Street Wardens that there would be no personal safety issues

In canvassing residents, we followed a few simple rules:

- Always to wear or present our Colchester Borough Council contractor ID cards.
- Always to display a copy of the leaflet that had been previously posted through the resident's door
- Visiting residents at reasonable hours of the day – never before 9.30 a.m. and not after 5.00 pm.
- To arrange a date and time for the first interview for those who were interested.

If residents were out at the time of the first visit, another two visits were subsequently made.

Client Home Energy Check

The interview package was initially tested on a 'dummy run' with a local ward councillor and a resident who was a member of the Task Force. The strategy for delivery seemed to work reasonably well without any modification.

The four main aims of the Home Energy Check were:

- To explain the Project's aims.
- To carry out a Home Energy Check that would provide information on energy use, insulation and a zero level SAP rating.
- To ascertain whether interviewees needed particular types of help in using, or paying for, the energy that they were consuming (e.g. to overcome any difficulties in reading meters) or to find a cheaper supplier of gas and/or electricity.
- To supply an A4 information sheet, which listed 10 simple energy-saving tips and a small number of energy saving 'freebies': including most usefully a temperature chart and 4 CFLs.



Follow Up Interview

The information package for this round of interviews consisted of the Home Energy Reports prepared by EEEAC and information concerning the prices charged for insulation measures by 5 Energy Efficiency Commitment funded schemes.

The structure of these second round interviews was:

- The presentation of the EEEAC Home Energy Report and running through the principal recommendations with the householder.
- To discuss the grants available for energy saving measures.
- Asking the interviewee for his/her likely intentions in implementing each recommendation
- A reminder by a telephone interview in 2/3 months time to check how far the resident had acted on recommendations

Interviews lasted about 15-20 minutes. Interviewees were happy to retain the EEEAC report for their household and pricing information where applicable.

Final Interview

The third round interviews were conducted in the first half of August 2005, approximately 3 months after the second round interviews took place. This was felt to be a reasonable amount of time allowing interviewed residents the chance to implement, or at least start implementing, the energy saving recommendations.

These third round interviews:

- Were conducted over the telephone
- Generally lasted 5-10 minutes
- Established whether any of the recommendations had been implemented or were planned.
- The householder was also asked for their feedback on the project.

Funding

Funding totalling £4971 was obtained from:

The Chiron Fund operated by the Essex Community Foundation
Colchester Borough Council Environmental Policy Unit

Results

All 44 households installed at least 1 Compact Fluorescent Light bulb (CFL). 60% of households used at least 2 of the CFL's they were given. This equates to a reduced approximate annual energy saving of 23,884 kWh.

The Harbour Ward Energy Project achieved the following results.

Outcome	Target	Actual
Home Energy Checks	100	44
Grant referrals	20	9
Energy Saving Measures installed	100	53 ⁵
Energy Saved annually	13,200kWh ⁶	29,131kWh ⁷
Carbon Dioxide saved annually	5.7tonnes	8.0tonnes

Table 1. Shows the project performance against outcomes.

Energy or Carbon Dioxide saved

In calculating the annual energy savings from the project it is important to note the difference between kWh (Kilowatt hours or units) and kW (Kilowatts) a kWh is equal to 3.6megajoules of energy a second where as a kW equals 1megajoule a second. The figure of 13200 kWh was produced by calculating the amount of energy saved annually per CFL and then multiplying by 400 (the amount to be distributed).

The table above shows the project targets against the project results. Although the project did not achieve the target of 100 HECs and the distribution of 400 CFLs it did manage to encourage participants to install larger energy saving measures such as cavity wall insulation and energy efficient boilers. These measures meant the stated target based on the distribution of CFLs alone was accomplished. The energy saved from these measures was produced from gas heating systems and not electricity like the lightbulbs, this means that the final calculated figure of 8.0tonnes of carbon dioxide saved annually is not proportional to the target figure of 5.7 tonnes.

The scheme has saved the equivalent amount of CO₂ usually produced by 1 western European family per year.

Product	Quantity
Loft Full	0
Loft Top-Up	3
Condensing Boiler	1
TRV's	0
Cavity Wall Insulation	4
CFL's	308
Draught proofing	0
Energy Efficient Appliances	2

Table 2. Shows the number of energy saving measures installed

⁵ If we add the people that installed Cavity Wall insulation (4) and Loft insulation (3) to the number or people purchasing EE appliances (2) and these to the homes that installed new CFL's then we accomplished the installation of 53 energy saving measures.

⁶ 13,200kWh = 47,500kW

⁷ The figure for energy saving and carbon dioxide reduction is based on each household using all four energy saving lightbulbs.

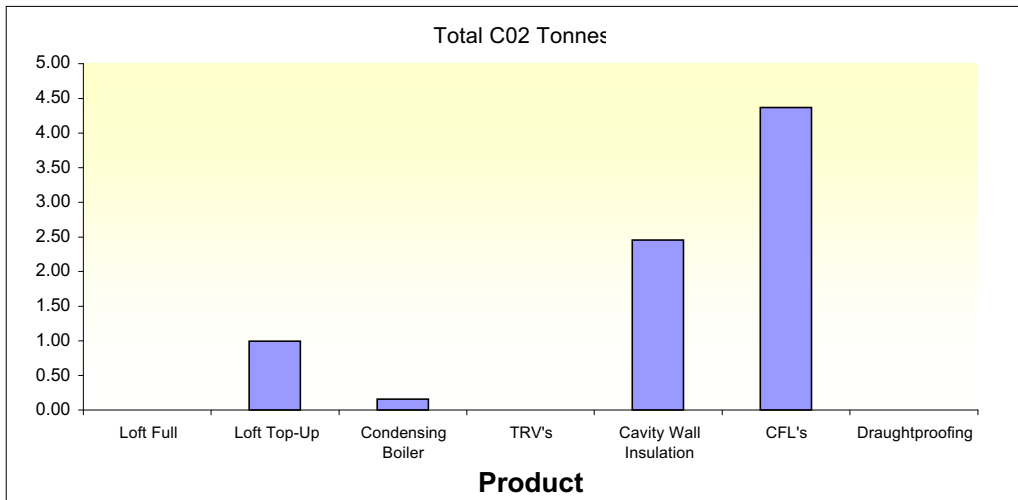


Figure 1. Carbon Dioxide savings from measures installed.

The following energy related facts arose from this project:

- 4 households in two streets, Cavendish Avenue and Canwick Grove, were unable to have their cavity walls insulated because the cavities are too small.
- 44 households already had loft insulation installed. 22 households had insulated lofts and cavity walls and 10 of these properties had over 200mm of loft insulation.
- 2 households were planning to install loft top-up and/or cavity wall insulation in the next 6 months
- 6 households were referred for a benefits check. For one resident this referral turned into an extra £65/week Working Tax Credit

Project Area

The type of properties contained within the target area is crucial to the success of the project. The following shows the detailed breakdown of the properties that took part in the project.

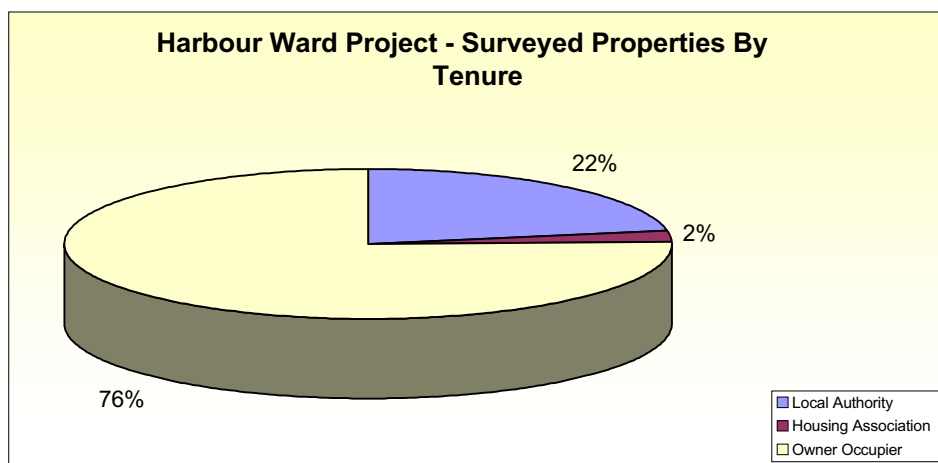


Figure 2. Tenure of households in Barn Hall Estate. 76% of the householder's owned/or were in the process of buying their own property. The Local Authority housing formerly Colchester Borough Council has now been transferred to the Arms Length Management Organisation Colchester Borough Homes. Therefore the remaining 24% of households are all Housing Associations.

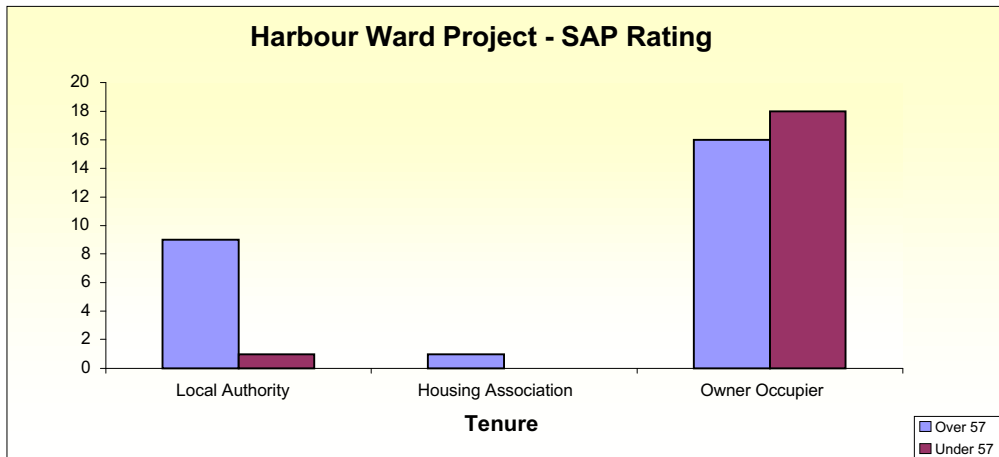


Figure 3. This graph displays the number of properties below the CBC Housing Condition Survey 2003 target level SAP of 57. It is clear that the greatest amount of properties in need of increasing energy efficiency are the Owner Occupier properties.

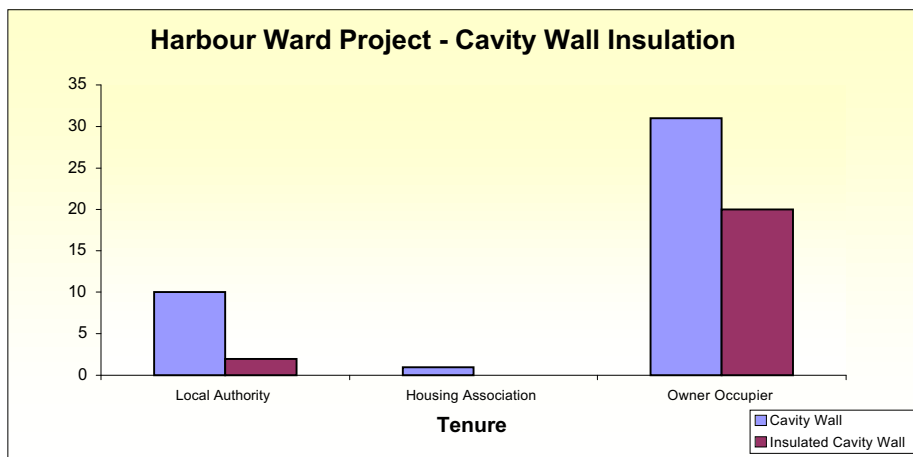


Figure 4. Shows the distribution of cavity wall insulation by tenure for the properties surveyed. It was found that: 60% of Owner Occupied properties with cavity walls were already insulated. In contrast it shows that only 20% of Housing Association properties were insulated. This figure is doubtful given the extensive work already carried out in the area and the Decent Homes requirement that registered social landlords have to conform with. The most likely reason for this low figure is human error during the project or data processing of the forms.

Conclusions

When looking at the results of the project it is possible to comment on three key outcomes; Home Energy Checks Completed, Measures Installed or Grants Applied For and Energy or Carbon Dioxide Saved. When giving comments on these key outcomes there are three areas for consideration; Funding, the Target Area and the Promotional Activities

Home Energy Checks Completed

The target of 100 Home Energy Checks was not achieved because the estate had been predominately Council owned and therefore already insulated to a good standard. The remaining tenants of registered social landlords were less interested in energy saving and house repair as it was considered the landlords responsibility.

Although the target of 100 HEC's was not achieved the project still managed to complete 44 HEC's. It was felt that this outcome could have been improved by targeting an area where a higher proportion of the community would be eligible for full grants and where the housing stock had not had such wide sweeping insulation work completed.

Measures Installed or Grants Applied For

A considerable proportion of the householders in this part of Harbour Ward had already had a substantial range of energy-saving measures (10 homes with insulated cavity walls had at least 200mm of loft insulation). The main reason for this is that most houses were well insulated due to previous energy efficiency work, either by CBC or CB Homes. In addition two streets constructed at the same time were made with narrow cavity walls, which were too small for cavity wall insulation.

The Target Area

The households contacted gave the strong impression that there was a widespread awareness of energy-saving issues, which had already translated into householders taking the most appropriate measures – often helped by the Council, as landlord, itself. Any future project should choose areas with a high proportion of privately owned or privately rented accommodation which was not previously council owned. This is because for a householder to receive a full grant, under EEC rules, they must be in receipt of a qualifying benefit and own their property or rent it from a private landlord.

Funding

This was a small pilot project with enough funding to test a number of models and reach satisfactory conclusions with recommendations on how the project could be developed in the future.

Outside Agencies - To make the most of our own funding it was decided that we would utilise all the appropriate outside agencies and their resources.

Promotional Activity

The main consideration for this part of the project was how to maximise interest, and therefore response, in the community for minimal promotional expenditure. A 10% success rate was accepted as very good. The project actually achieved a 12% success.

It has been shown by other schemes that using launch events, involving the community at the beginning of a scheme and using local and influential "Scheme Champions" are all ways of improving the appeal of such schemes.

Lessons Learned and Future Project Suggestions

This pilot Project has demonstrated that an 'on the doorstep' approach can usefully plug gaps in the energy-saving armoury of a certain proportion of individual households through practical advice and the general promotion of the energy-saving philosophy.

Specific and well researched target area .

Although we used general nationwide data and even more specific Council reports an alternative project area could have produced better results. National Energy Action have identified that 80% of people in Fuel Poverty live in Privately Owned or Privately Rented homes. People eligible for full Grants tend to live in these premises, as they are in receipt of DSS benefits, are older (65+) or they have young children.

Council Backing

A Council's reputation for unbiased information that is for the public good carries a lot of weight. We feel though that a large council input in launch and promotion to raise the profile initially did help results.

Involvement of private sector utility companies

The project was too small to attract the interest of utility companies in terms of offering special discounts for proposed energy-saving measures. However, the Energy Efficiency Commitment Funding can be utilised by anyone, and this might be worth considering if the scale of any future follow-up project was ambitious enough, although existing discount schemes are operated through both Local Authorities (e.g. Braintree D.C.) and utility companies (e.g. British Gas).

Choice is a good thing but too much can lead to indecision. In a situation such as this a preferential rate and the guarantee of good work is all that householders are looking for. Perhaps having one competitively priced scheme supported by the local council would yield better results?

Measurement of Energy Use

The Project originally intended to encourage families to monitor their own energy readings. This was thought to be important for household energy education, further reference on energy use and to perhaps try and analyse a saving. Work by Global Action Plan and Eco Teams has shown that when householders begin to take responsibility for their energy use their energy bill drops, much like the associated drop when water meters are installed.

However, this proved difficult to implement because of the time taken and the level of interest shown by the clients and the project officers.

Continuing to keep people interested

It was found that interest in energy saving fell off after the initial interview. There is a need to keep people interested.

People have a general interest in energy. They may be concerned over environmental impact, personal consumption levels or just saving money. Lots of people see energy saving as something that other people should do or that they have already done because they have some loft insulation from the 70's or that it is too time consuming to be worthwhile. These people need the right carrot to get them going – proven energy savings of similar families.

Recommendations

Project Area

Should be chosen with a high proportion of Privately Owned or Privately Rented homes. Areas with a high proportion of Local Authority or Housing Association properties should be avoided as National statistics show that very few of these households are in fuel poverty. The majority of properties will also have been improved to Decent Homes standard by the landlord

The Project Should be Borough Wide

Future projects should be inclusive and able to provide information to any interested party.

The Time Table Needs to be Enlarged to Possib ly 3 years.

To achieve results future projects will need more time to properly publicise, implement and report.

There Needs to be Monthly Targets

To keep a project flowing a rolling set of targets should be created. These targets may be revised during the implementation but they will provide the backbone of the project allowing continual feedback on progress made.

We Need to Narrow Down the Choices Offered to Occupiers for Energy

Saving Work.

Working with one supplier/contractor for energy saving work can have three benefits; 1) It may help to reduce costs for the customer helping to make services or products more attractive 2) Choice can be a limiting factor with regard to encouraging people to implement energy saving measures. By recommending one service or product you are able to show an easy path to implementing a change 3) Working with a sole supplier/contractor can provide an income for the sustainability of a project.

We Should Widen the Scope of the Project to Include Other Environmental Issues

This project proved how successful a simple canvassing approach can be. Making first contact with a potential client is widely regarded as the most difficult step. Once talking with the client it is then a perfect opportunity to discuss further issues. This project showed that there was a high level of interest and knowledge within the general public and this grows every time the media reports a new environmental issue. It would make sense to widen the project to include water use and savings, transport, waste and recycling.

Appendices

Winsley Charity Almshouse Visit

Whilst visiting a client the Project Officers were introduced to the Warden of a local Almshouse run by the Winsley Charity. The Warden showed a great deal of interest in the project and it was decided to undertake a small information based visit to the Almshouse properties. Colchester Borough Council had already insulated the properties but it was felt that the residents, who pay for their own electricity, would benefit from some energy saving advice, a room thermometer and using energy saving light bulbs.

Before arriving to canvass the residents the project officers advertised the free Home Energy Checks in the Charities Newsletter and on posters. We arrived early one morning and slowly made our way round the Almshouse properties.

In general there was an encouraging result, we visited 13 properties giving information, freebies and energy saving light bulbs to those who wanted them. We also found that 5 residents had stayed in especially to wait for the Home Energy Check.

As the properties had already been insulated there was no opportunity for large scale energy saving measures but the surveys did show that several properties could have benefited from draught stripping and the community heating system of the charity could potentially make larger energy savings. The Almshouse paid for the heat and hot water distributed to the properties and this was generated through several boilers and then circulated around the properties via large pipes. The Almshouse had considerable heat expenditure and was felt by the project officers that this could be due to poor pipe insulation and poor heating controls within the residents properties. These facts were highlighted to the Manager of the Almshouse together with the work of the Carbon Trust and the Enhanced Capital Allowance Scheme that provides energy saving measures at a reduced cost.

The visit was a good example of how energy saving work in the district could be increased and how the project could link with further organisations. It also showed that further energy saving advice could be given providing links to other existing schemes.