A targeting strategy for domestic energy efficiency in Ashford

An action plan to address domestic energy efficiency locally.

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CEN
September 2004

This report is part of the Energy Saving Trust Hotspots Innovation Programme, a partnership between 20 Local Authorities in South West London and Kent

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Contents

1. Introduction

This report is a detailed analysis of the potential for domestic energy efficiency installations in Ashford, and has been completed in partnership with Ashford Borough Council as part of the Energy Saving Trust Hotspots Innovation Programme.

The report provides a profile of the neighbourhoods in the borough where there is most potential for the installation of domestic energy efficiency measures by residents. It is the aim of the report to provide a framework for the coordinated promotion of energy efficiency measures in the borough.

In particular, the report identifies 'HotSpots' for energy efficiency targeting. These area areas where the promotion of energy efficiency measures will be most effective.

1.1 Background: the Hotspots project

The report has been completed as part of the Hotspots project. The project is a partnership of organisations in South West London and Kent with an interest in domestic energy efficiency. The project is designed to bring together the large amount of data that has been collected about domestic energy efficiency in order to target the promotion of energy efficiency measures to residents.

Many organisations in the public sector have responsibilities and commitments to facilitate energy efficiency improvements in domestic homes. Key among these organisations are Local Authorities, regional Energy Efficiency Advice Centres, Energy Suppliers, and the Energy Saving Trust. These organisations typically also collect data to provide tailored advice to householders, or to measure progress towards HECA and other statutory targets. However, the data has typically not been used to target the installation of measures in households.

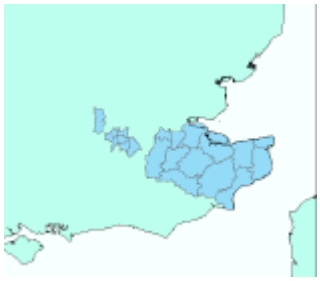
The Hotspots project meets this opportunity, and will facilitate energy efficiency improvements in domestic homes by collating this householder data in order to find and target the geographical areas with most potential for energy efficiency improvements. The project will also provide match funding to assist promotional activities in each partner borough in terms of part-funding for promotional activity from the Energy Saving Trust and up to 60% subsidies on energy efficiency measures for householders through EDF Energy's Energy Efficiency Commitment funding.

The project represents a partnership between 20 partner Local Authorities and two partner Energy Efficiency Advice Centres with support from EDF energy and

the Energy Saving Trust. The project is part-funded by the Energy Saving Trust until 2006, and aims to provide a framework which the project partners can use for the coordination of the facilitation of energy efficiency improvements in domestic homes.

1.2 Project partners

The project is led by Creative Environmental Networks and the London Borough of Hillingdon, and receives core funding from the Energy Saving Trust. Creative Environmental Networks is a not for profit environmental company that runs the two regional Energy Efficiency Advice Centres in South West London and Kent.



The following organisations are project partners. The project covers the area of the 20 Local Authority partners below.

- Ashford Borough Council
- Canterbury City Council
- Creative Environmental Networks
- London Borough of Croydon
- Dartford Borough Council
- Energy Saving Trust
- Gravesham Borough council
- Kent Energy Centre
- Royal Borough of Kingston upon Thames
- London Borough of Hillingdon
- Maidstone Borough Council
- Medway Council
- London Borough of Merton
- London Borough of Richmond upon Thames
- Sevenoaks Borough Council
- Shepway Borough Council
- London Borough of Sutton
- Swale Borough Council
- Thanet Borough Council
- Tonbridge and Malling Borough Council
- Tunbridge Wells Borough Council
- London Borough of Wandsworth

2. Analysis

The analysis below uses existing datasets to determine the areas of Ashford where there is maximum potential for the uptake by householders of domestic energy efficiency measures.

2.1 Summary

The first part of the analysis aims to find the areas of the borough where the domestic housing has high potential for energy efficiency improvements. The analysis has focussed on loft and cavity wall insulation potential (see section 2.1.2).

The analysis has only been possible where there is sufficient Home Energy data coverage, so before the analysis was started the data coverage was investigated (see section 2.2). The analysis concluded that in Ashford the data coverage fairly poor: there is sufficient data to conduct a meaningful analysis at ward level, but not for an analysis at census output area level. A census output area is a sub-ward classification, containing approx. 60-200 households as illustrated in Figure 1. Of the 20 boroughs involved in the HotSpots project only 9 have sufficient data for the more detailed study. (Appendix 1 contains suggestions for future data gathering work to make the data coverage uniform.)

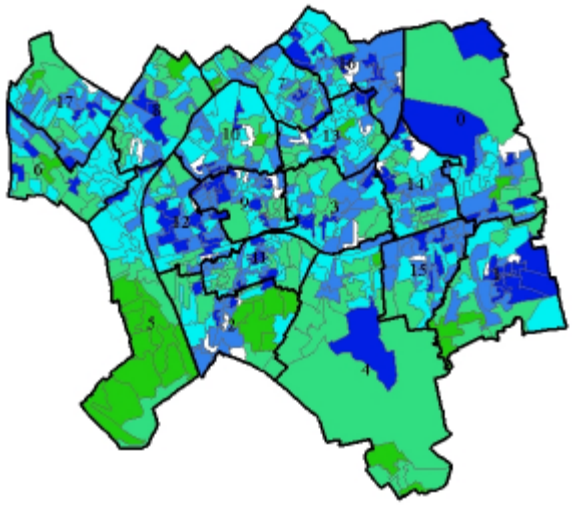


Figure 1: A census output area analysis of LB Sutton, a HotSpot borough with very good data coverage. The figure shows the power of good data coverage.

This analysis of home energy efficiency potential by ward is described in section 2.3, and HotSpot areas at each level are tentatively identified in these sections. The patterns of uninsulated lofts are likely to be quite independent of the pattern for houses with uninsulated cavity walls so the analysis has been conducted in two parts.

The second part of the analysis (see section 2.4) concerns population, housing type, and tenure. The strategy is designed with the overarching aim of reducing CO_2 emissions through improved energy efficiency, and the

demographic data has been used to target the 'able to pay'. We are aiming to target residents with the aim of maximum uptake of energy efficiency measures, so we should seek:

- householders who own or who are buying their home
- householders who have significant disposable income
- householders who live in houses rather than flats.

Census data has been used to produce this population / housing type / tenure analysis. It has then been used as an overlay for the home energy efficiency data: in this section the HotSpots tentatively identified in section 2.3 are confirmed or discarded based on the suitability of the population, housing type, and tenure.

The strategy is not designed to target fuel poverty, although it acknowledges that there is scope for a similar approach to target people who have to use a large proportion of their income to keep their homes sufficiently heated. We aim to publish a sister strategy designed to take this approach before the end of 2004.

2.1.1 Data sources

The data analysis has made use of three main data sources. These are:

- Home Energy Check data, collected by the local Energy Efficiency Advice Centres and owned by the Energy Saving Trust; this data has only been available at ward level, but this may change in future editions of the strategy.
- Home Energy Survey data, collected by the Local Authorities in order to report on the energy efficiency of the borough to the government, and meet their Home Energy Conservation Act (HECA) responsibilities;
- Data from the 2001 Census, available from the Office for National Statistics.

There is potential for additional data to be integrated with the report. Additional Home Energy Survey and Home Energy Check data will increase the significance of the analysis. If original data can be incorporated from the Local Authority's Home Condition Survey this will also increase the significance of the analysis. We are working to progress this work and will aim to incorporate this information into the second editions of these Strategies in 2005.

2.1.2 Choice of energy efficiency measures

Although there are a wide variety of energy efficiency measures available for housing, the study has focussed on loft and cavity wall insulation, as they are both effective and cheap compared with other measures, especially in the present climate of increasing fuel prices. Loft and cavity wall insulation are available to householders for about £300 per measure before subsidies. Through Hotspots, subsidies of 40-60% will be available allowing the measures to pay for themselves within 2-3 years. This makes them suitable

as investment measures, and promotion to householders will result in high takeup.

Measures such as efficient heating systems, double glazing, and solid wall insulation are all comparable with loft and cavity effective in terms of energy efficiency but are typically more expensive by a factor of 4-10. This makes them measures that should be installed during the normal course of household refurbishment and maintenance, rather than as an investment measures. Potential for installation of these measures has therefore been judged outside the scope of this study.

2.2 Data Coverage

The Home Energy data coverage in Ashford is reasonably poor.

When the data was collated by ward, the 95% confidence intervals were calculated as being similar to or smaller than the size of the 10 category classification intervals used in the analysis below. However, less than 1% of the census output areas in the borough had enough data for the confidence intervals to feasibly allow more than 2 category bands (a census output area is a sub-ward classification, containing approx. 60-200 households). For this reason analysis was not conducted at census output area level.

[Appendix 1 contains suggestions for future data gathering work to make the data coverage more uniform.]

2.3 Housing analysis by ward

The ward level data analysis has been conducted using Home Energy Check data from the Energy Saving Trust and Home Energy Survey data, collected by the Local Authorities. The data is a compilation of data collected between 1999 and 2004.

2.3.1 Cavity Wall insulation

The map (figure 2) and table (table 1) overleaf show the proportion of unfilled cavity walls in Ashford by Ward.

The map shows that the cavity wall 'Hotspots' wards are concentrated in the South and North East parts of the borough, and that there is a large amount of Cavity wall insulation potential in the borough.

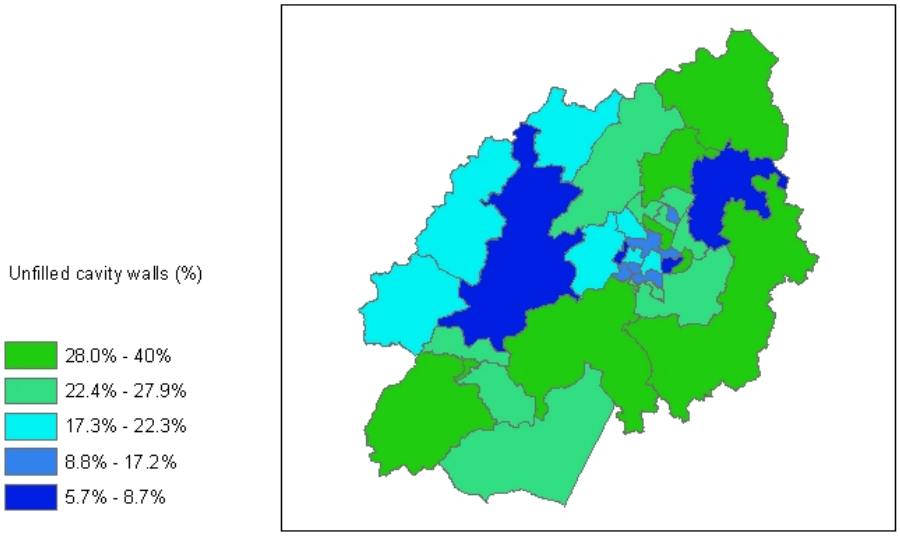


Figure 2: proportion of unfilled cavity walls in Ashford by ward

Table 1 shows more specifically that there is a dramatic range in the potential for cavity wall insulation in the various wards, with 8 times more potential on Downs North Ward (40%) compared with Singleton South Ward (5%). This is among the largest ranges of potential of all the HotSpot boroughs.

Ward Name	**Housing with unfilled cavity walls**
Downs North Ward	***40%***
Tenterden North Ward	***30%***
Boughton Aluph and Eastwell Ward	***30%***
Stour Ward	29%
Highfield Ward	29%
Rolvenden and Tenterden West Ward	28%
Saxon Shore Ward	28%
Weald South Ward	28%
Weald East Ward	27%
Tenterden South Ward	27%
Park Farm South Ward	27%
St. Michaels Ward	26%
Bockhanger Ward	26%
Isle of Oxney Ward	25%
North Willesborough Ward	25%
Bybrook Ward	24%
Kennington Ward	23%
Downs West Ward	22%
Biddenden Ward	21%
Great Chart With Singleton North Ward	21%
Weald North Ward	20%

Beaver Ward	20%
Charing Ward	20%
Godinton Ward	20%
Norman Ward	18%
Stanhope Ward	17%
Victoria Ward	16%
Little Burton Farm Ward	15%
Park Farm North Ward	14%
Aylesford Green Ward	12%
Washford Ward	12%
Wye Ward	8%
South Willesborough Ward	8%
Weald Central Ward	7%
Singleton South Ward	5%

Table 1: proportion of unfilled cavity walls in Ashford by ward

Based on this data, the top 3 wards (those with potential of 30% or more) are tentatively designated 'Hotspots'.

2.3.2 Loft Insulation

The map (figure 3) and table (table 2) show the proportion of completely uninsulated lofts in Ashford by Ward. The map shows that the uninsulated lofts have a pattern almost inverse to that of the cavity wall insulation 'Hotspots'. In addition it shows that Ashford in general has very high potential for loft insulation; potential of greater than 15% is quite unusual at ward level.

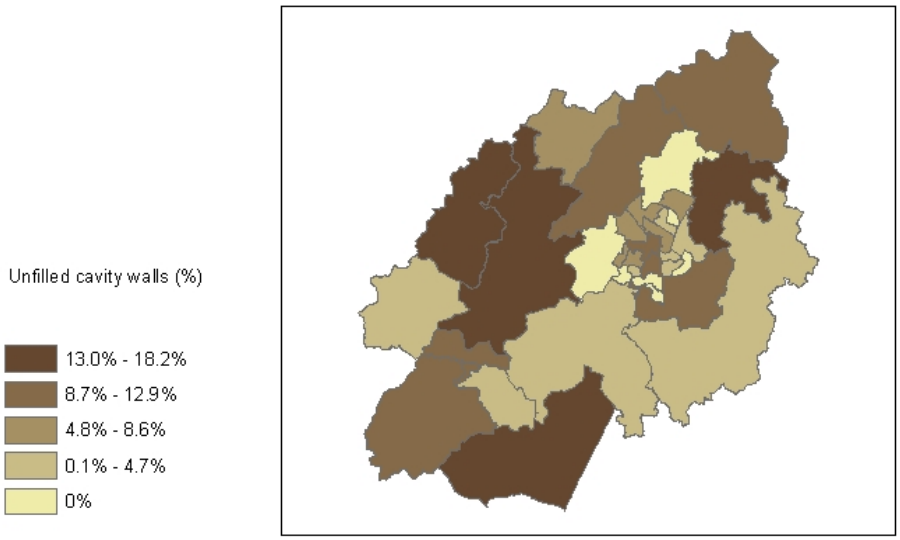


Figure 3: proportion of empty lofts in Ashford by ward

Table 2 shows the actual proportions of insulated houses in Ashford, and emphasises the high potential for loft insulation in Ashford.

Ward Name	Housing with empty lofts
Isle of Oxney Ward	***18%***
Wye Ward	***17%***
Weald North Ward	***16%***
Weald Central Ward	***15%***
Downs North Ward	12%
Downs West Ward	12%
Norman Ward	11%
St. Michaels Ward	11%
Tenterden North Ward	11%
Weald East Ward	11%
Rolvenden and Tenterden West Ward	9%
Victoria Ward	9%
Beaver Ward	8%
Singleton South Ward	8%
Bockhanger Ward	6%
Charing Ward	6%
Godinton Ward	5%
Kennington Ward	5%
Stour Ward	5%
North Willesborough Ward	4%
Saxon Shore Ward	4%
Aylesford Green Ward	3%
Biddenden Ward	3%
Bybrook Ward	3%
Stanhope Ward	3%
Tenterden South Ward	3%
Weald South Ward	3%
South Willesborough Ward	2%
Boughton Aluph and Eastwell Ward	0%
Great Chart With Singleton North Ward	0%
Highfield Ward	0%
Little Burton Farm Ward	0%
Park Farm North Ward	0%
Washford Ward	0%

Table 2: proportion of empty lofts in Ashford by ward

Based on this data, the top 4 wards (those with potential of 15% or more) are tentatively designated ‘Hotspots’.

2.4 Demographic analysis

The demographic analysis has been conducted to screen the hotspots identified in the previous sections for the purposes of targeting. The census in 2001 provides a huge variety of demographic information, including information about:

- economic activity of householders
- tenure of households
- type of household (ie houses or flats)

We are ideally seeking:

- householders who can afford to pay for measures
- owner occupier householders

In addition, for cavity wall insulation we are seeking householders who live in houses rather than flats.

In general Ashford has a varied proportion of householders in the higher income brackets, a varied level of owner occupancy, and a varied number of houses rather than flats. This is all positive for the project.

2.4.1 Analysis at ward level; confirmation of 'HotSpots'

Cavity wall Hotspots

The owner occupancy, income levels, and proportion of houses are all high in the wards tentatively identified as hotspots, and they are all confirmed as hotspots.

Ward Name	Housing with unfilled cavity walls
Downs North Ward	***40%***
Tenterden North Ward	***30%***
Boughton Aluph and Eastwell Ward	***30%***

Table 6: cavity wall insulation 'Hotspot' wards

Loft Insulation Hotspots

As in the Cavity wall insulation hotspots, the owner occupancy, and income levels are all high in the wards tentatively identified as hotspots, and they are all confirmed as hotspots.

Ward Name	Housing with unfilled cavity walls
Isle of Oxney Ward	***18%***
Wye Ward	***17%***
Weald North Ward	***16%***
Weald Central Ward	***15%***

3. Proposed action plan

The HotSpots project is conceived as a tool for Local Authorities, Energy Efficiency Advice Centres, Regional Authorities and so on to use in the effective promotion of energy efficiency measures to householders. The Hotspots project has some budget for publicity, but we aim to work closely with Local Authorities and other interested partners to

The Hotspots project has a publicity budget over 2 years to promote energy efficiency measures using the findings in each of the 20 partner Local Authorities. This budget will be divided as evenly as possible between the partner areas and will be used to fund core activities as described below. However, there will be considerable scope for the core activities to be significantly strengthened by linking closely with energy efficiency promotional activities of Local Authorities and other partners.

There is considerable scope for additional activity to link with each of the activities described below. CEN can provide support with this, from providing lists of Hotspot areas not yet mailed, to providing designs and materials and support with complementary activities.

Timescale
We plan to conduct the publicity in October, November, and early December 2004, to coincide with the onset of winter.

Branding
As demonstrated in this report, the cavity wall insulation hotspots and the loft insulation hotspots are quite different. With this in mind we will be aiming for two discrete messages.

We will be aiming to support the brands currently existing (the Ashford council KASH scheme), but we are keen to use an attention grabbing message that links the local area directly. We propose a ‘(many people in XXX area) haven’t got much upstairs’ ‘teaser’ message for loft insulation, and a ‘(many people in XXX area) have got cavities?’ ‘teaser’ message for cavity wall insulation.

Activity 1: Press releases.
We plan three press releases between October and December. These will be sent direct to local papers, and in partnership with Local Authority press officers.

We hope to be able to work with the councillors of Hotspot wards in press release related publicity activities.

Activity 2: Direct mailings
We plan to write to about 1250 households randomly selected from Hotspot wards in each borough. There would be potential to target additional households with Local Authority support.

Activity 3: Street / outdoor posters
We are planning two or three street / outdoor posters (to be displayed in bus shelters, shopping areas, etc) in hotspot areas. The poster design will be customised to suit the specific area where the poster is located. There would be potential for additional posters with Local Authority support.

Activity 4: Targeting of discrete districts.
We plan to distribute leaflets and small posters and through local distribution points (such as libraries, restaurants, shops) in Hotspot areas of the borough. The posters will be designed with the messages already described, and will be customised to the local area. If the distributions could be arranged by the Local Authority we could divert budget to other activities.

We have not got resources to distribute letters and leaflets to houses in Hotspot areas, but we would recommend this activity in small Hotspot areas, and would provide support with materials.

Activity 5: Advertisements in Local Authority magazines.
We plan to arrange an advertisement and some editorial about the project in the Local Authority magazine.

Appendix 1: Future work

Additional data

Additional data gathering

Of the total 343 census output areas in Ashford, the average number of surveys per census output area is 4.6, and only a handful have more than 10 surveys. 10 surveys per census output area is a minimum for meaningful analysis. If future data gathering mailings were to concentrate on producing a uniform coverage at this level or higher, data analysis would be possible.

On request we can provide information that would be of assistance in securing uniform data coverage most efficiently, including mailing lists or lists of full postcodes of households to be targeted.

Home condition survey

The Local Authority home condition survey includes information that could be used to increase the data resolution of future strategies. However, we have had compatibility problems with home condition survey databases. If we can access home condition survey data in a suitably compatible format we will incorporate it into the HotSpots project.

Evaluation and future strategy editions

We are planning to publish a second HotSpots strategy in September 2005.

This will include any extra data that we can access in the meantime, and the strategy will also include an evaluation of the energy efficiency promotion outlined in section 3 for the winter of 2003 / 2004. This will give us a good indication of the effectiveness of the HotSpots approach, which may be modified based on the findings of this strategy.