

DARTFORD SUSTAINABLE HOME ENERGY STRATEGY 2005 – 2008

	Page
1. Why a Sustainable Home Energy Strategy for Dartford	2 - 3
2. How the Strategy is set out	4
3. Profile of Sustainable Energy in Dartford	5
a) domestic energy use	5
b) housing and energy use	6 – 7
c) hotspots project	8
d) housing analysis by ward including cavity wall insulation and loft insulation	9 – 10
4. Affordable Warmth	11 - 13
5. Renewable Energy and Heat Generation	14 – 15
6. Current activities in Dartford	16
a) Creative Environmental Network	16
b) Kent Energy Efficiency Partnership	16
c) Affordable Warmth	17
d) Warm Front	18
e) Renewable Energy and Heat	19 – 20
7. What does Dartford Borough Council hope to achieve through The Sustainable Home Energy Strategy – aims and objectives	21
8. Performance Indicators	22 - 23
9. Policy Background	24
a) Home Energy Conservation Act 1995	24
b) Decent Homes	24
c) Local Government Act 2000	24
d) Warm Homes and Energy Conservation Act 2000	25
e) Planning Policy Guidance 22	25
f) Building Regulations Part L	25
g) Energy White Paper	25
h) Energy Efficiency the Governments Plan for Action	26
i) Sustainable Energy Act 2003	27
j) Energy Act 2004	28
k) The Housing Act 2004 including the Housing Health and Safety Ratings System	28 – 29
10. Local Policy Drivers	30
a) Kent Health and Affordable Warmth Strategy	30
b) Kent and Medway Structure Plan	30
c) Regional Planning Guidance 9	30
d) Kent Renewable Energy Network Action Plan	30
e) Kent Environment Strategy	31
f) Dartford and Gravesham Community Strategy	31
g) Local Agenda 21	32
h) private sector renewable strategy and policy 2003	32
11. Glossary	33 – 36
12. Further information	37
13. Organisations and Agencies involved in the Consultation Process	38 – 39

1. WHY A HOME ENERGY STRATEGY FOR DARTFORD?

a) Energy is fundamental to almost everything thing we do, the way we heat our homes and how comfortable our lifestyle is, is likely to be affected by how we use energy and how we can afford to use it.

Households in the Dartford Borough currently use more energy than they need to for heating and using household appliances, and as a consequence, the limited resources used to produce energy are wasted. Each household spends more on energy than it needs to and carbon dioxide emissions created through the unnecessary production of energy are high.

Additionally during the winter months some householders are suffering cold temperatures and poor health due to the poor heating, insulation and having homes which because of their construction type, are harder to keep warm.

IT IS OUR GOAL TO ENSURE THAT EVERYONE IN DARTFORD BOROUGH HAS ACCESS TO AFFORDABLE WARMTH AND THAT THE ENERGY USED IN HOMES HAS A REDUCING IMPACT ON CARBON EMISSIONS

b) The energy market in the UK is a changing one, (including recent price increases and a change in supply), and the National government has responded with new policy drivers such as the Energy White Paper “Our energy our future”, the Sustainable Energy Act and the Housing Act. These policies increasingly place local authorities in a central role for ensuring that sustainable energy is used in local households.

It is becoming increasingly necessary for Local Authorities to have a coherent strategy for delivering energy efficient homes that local people can afford to keep warm. They are also being expected to take the lead in promoting renewable energy. This is largely because the Government has a goal of cutting carbon dioxide emissions by 20% below 1990 levels by the year 2010.

In particular, the Government is pushing for local authorities to give energy issues priority at a strategic level, for example through their community plans and transport and housing strategies. Two local energy strategies also have clear links to home energy: the Kent Health and Affordable Warmth Strategy launched in November 2001, and the Kent Renewable Energy Action Plan, whose aim is to overcome the barriers to increased renewable energy installations.

The duties and obligations of Local Authorities relating to domestic sustainable energy are expressed both in legislation and government guidance and the policy background and policy drivers are detailed later in this document.

c) This Sustainable Home Energy Strategy sets out a framework for Dartford Borough Council to work in partnership with other agencies to ensure that households and community buildings conserve energy and have adequate warmth. Dartford Borough Council has already been successful in developing many projects and initiatives towards the aims of this strategy, through robust

partnerships. This strategy builds upon the previous work of these partnerships and the activity of the Kent Energy Centre and its parent company, Creative Environmental Networks (CEN).

d) The concept of sustainable energy includes:

- Reducing energy demand
- Improving the efficiency with which it is used
- Increasing the generation of energy from renewable sources
- Utilising Combined Heat and Power (CHP)

Energy use, supply and moderation have an impact across the Borough and combined they form the basis for sustainable communities and some of the work of the Council's Local Agenda 21 (LA21) Officer. Other benefits delivered through sustainable energy include:

- Improving the general health of householders and reducing cold related respiratory diseases by increasing the thermal qualities of a building.
- Increasing the disposable income of householders by reducing the amount they spend on energy.
- Increasing the awareness of the impact of personal actions on the wider environment.
- Reduced dependence on centralised supply for renewable installations.
- Benefits for landlords include: maintained or increased asset value, lower maintenance costs and fewer voids, reduced rent arrears, as tenants will be spending less on fuel and lower demand for tenant transfers away from damp cold houses
- Reducing the demand on the health sectors by having a population who are better equipped to deal with cold weather.
- Creating and securing jobs in installation, engineering, surveying, consultancy and design.

There are also wider global benefits to sustainable energy:

- Reduction in the rate of climate change
- Improved air quality through reduction in emissions
- Less acid rain in other countries such as Germany and Scandinavia that receive part of the UK's polluted atmosphere
- Lower dependence on polluting unsustainable generation such as waste incineration, nuclear power, coal, oil and gas
- Slower depletion of natural energy resources.

e) There is now firm evidence that average global temperatures are rising in response to the "greenhouse effect". The UK has signed up to the Kyoto Agreement, committing us to reduce our CO₂ emission levels by 12.5% of 1990 levels by 2010. The Government has also set its own target of a 20% reduction.

2. HOW THE STRATEGY IS SET OUT

a) This strategy gives a snapshot of the current domestic energy profile for Dartford Borough and also an outline of current activities.

From this information the document addresses what can be achieved through implementing the strategy and then outlines the action plan to achieve these objectives.

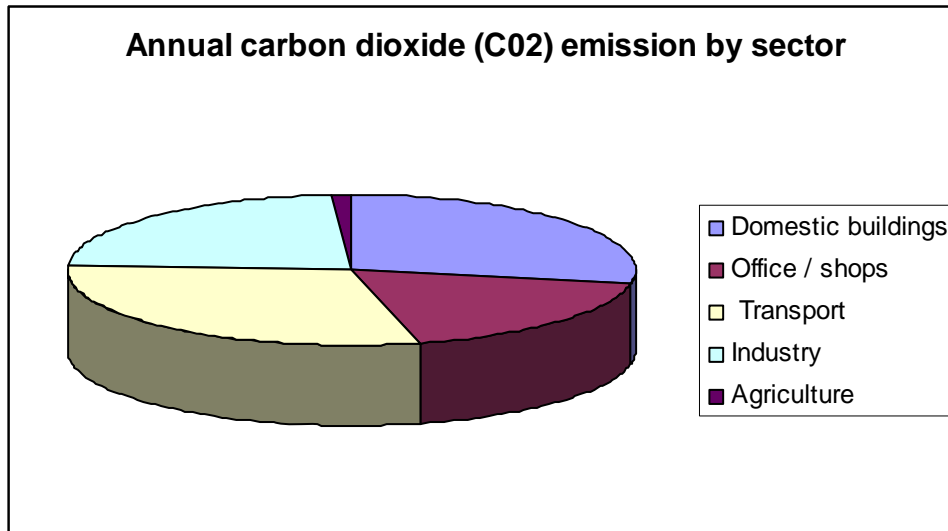
b) The challenges that Dartford Borough Council face, cannot be tackled by a Sustainable Home Energy Strategy alone, however rigorous and comprehensive it may be. It is for this reason that it is linked to a number of other initiatives underway in Kent, and draws upon their collective strengths.

The strategy has a timeframe running from 2005 – 2008, with the action plans being reviewed annually to take account of new partnerships, opportunities and initiatives.

3. PROFILE OF SUSTAINABLE ENERGY IN DARTFORD

a) Domestic energy use

This strategy focuses on home energy. As can be seen in the diagram below, domestic buildings are an important contributor of Carbon Dioxide (CO₂) emissions.



Of the 35240 households with residents in Dartford, many households use more energy than needed to heat and service appliances. ¹

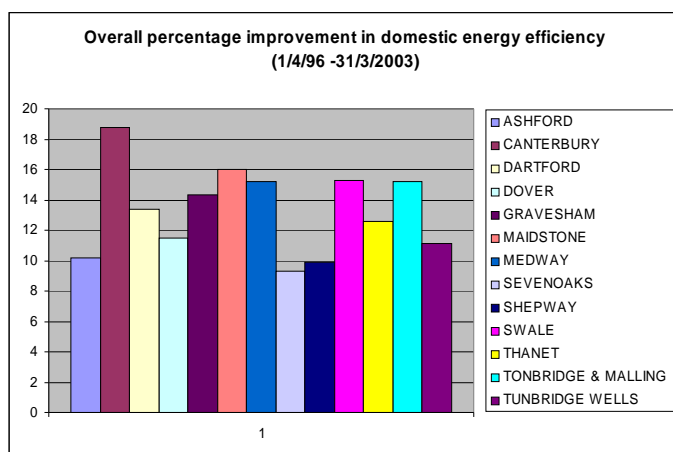
Housing Stock figures for Dartford:

Local Authority Properties	4683
Privately Rented Properties	2612
RSL Properties	1065
Owner Occupier	26163

The Local Authority has a duty under the Home Energy Conservation Act 1995 (HECA) to have a strategic approach to reduce domestic energy usage and to report the annual progress on this strategy to Government. To-date Dartford Borough Council has a reported progress of 14.72% ². The chart below displays Dartford's progress in comparison to the other Local Authorities of Kent as at 2003 HECA returns.

¹ Census 2001

² reported in 8TH Progress Report in Sept 04



b) Housing and energy use

The build qualities of housing have direct links with how energy is used in the home. The majority of energy used in a domestic setting is used for space heating and the provision of hot water. By looking at the build qualities of a home, an energy rating can be provided this energy rating is known as Standard Assessment Procedure (SAP) (see glossary) and gives an indication of how much energy would be required to heat the home to an adequate level and provide hot water. The main influences on SAP ratings are age of dwelling, location and building type. Generally the more exposed and older the dwelling is, the lower the SAP rating. Households with particularly low SAP ratings also appear to show quite distinct characteristics such as single people, those with low incomes and the elderly.

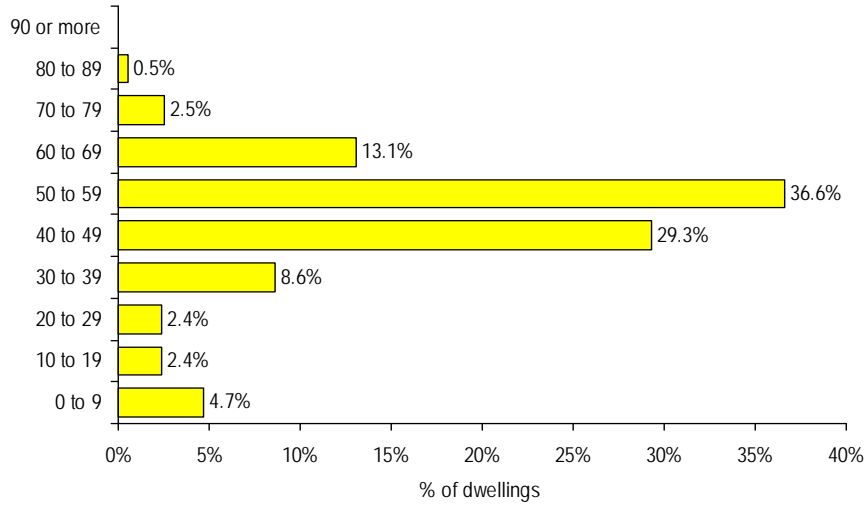
Dartford Borough Council's Private Sector Stock Condition Survey 2001 showed that the average SAP rating for Dartford is 48. This compares with a national average of just under 44 (1996 EHCS). The majority of dwellings have a SAP rating between 40 and 59 (65.9%). Only 7.1% of dwellings have a SAP of below 20 (compared with a national average of 8%) whilst 16.1% had a rating of 60 or more (compared with a national average of 14%).

Table showing dwellings/households with particularly high/low SAP ratings:

Low SAP ratings		High SAP ratings	
Group	SAP rating	Group	SAP rating
Private Rented	35	Housing Association	53
Pre- 1919	42	Post - 1964	49
Purpose-built flats	34	Mid terraced house	54
Single Pensioner households	41	2+ adults with 2+ children	53

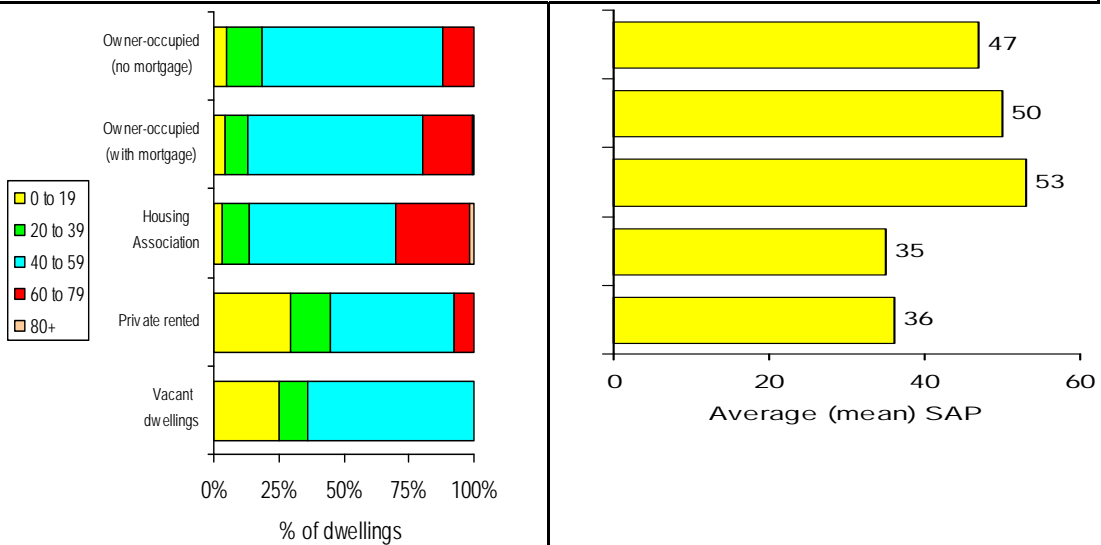
SOURCE: Dartford Borough Council 2001 Private Sector Stock Condition Survey

Frequency distribution of SAP rating



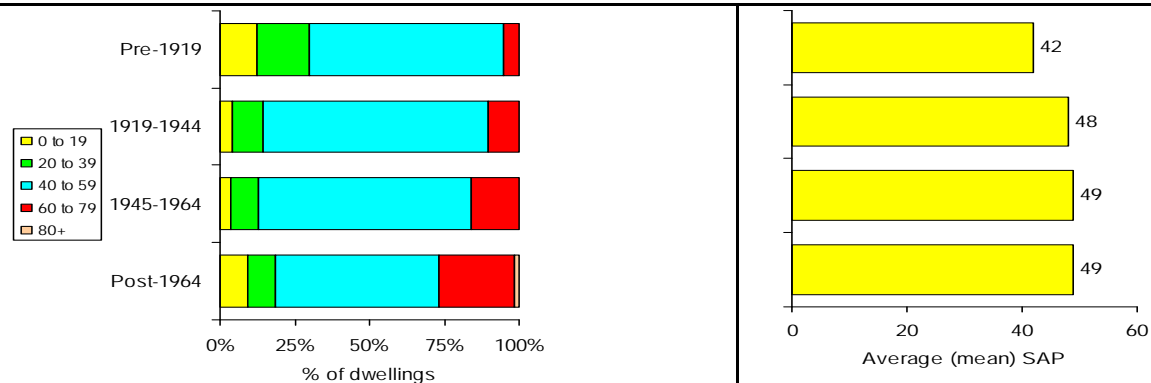
SOURCE: Dartford Borough Council 2001 Private Sector Stock Condition Survey

SAP rating by tenure



SOURCE: Dartford Borough Council 2001 Private Sector Stock Condition Survey

SAP rating by age of dwelling



SOURCE: Dartford Borough Council 2001 Private Sector Stock Condition Survey

From the Stock condition survey it can be seen that while the highest proportion of SAP ratings are within the range of 50 – 59 range there are still a significant number of households with ratings below 40 and 9.5% have a SAP below 30. The occurrence of low SAP ratings is more prevalent in the Private Rented Sector with an average for this tenure type of 35.

Dwellings that have been built after 1944 when more properties were constructed with cavity walls and Building Regulations were more stringent, have higher SAP ratings. Those built after 1964 have an average of SAP of 49, while the pre 1919 dwellings have a lower average rating and a higher proportion with SAP ratings below 40. Typically these households have solid walls.

c) Hot Spots Project

Hot Spots is an Energy Savings Trust Innovation project, funded in March 2004. The scheme uses GIS technology to correlate data to provide a profile of the neighbourhoods in the borough where there is most potential for the installation of domestic energy efficiency measures by residents - 'Hotspots' for energy efficiency targeting. These are areas where the promotion of energy efficiency measures will be most effective.

The analysis has focused on loft and cavity wall insulation potential and 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;
- Home Energy Survey data, collected by the Local Authority 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.

The Hotspots Project specifically targeted:

- Householders who could afford to pay for measures
- Owner occupier households
- Householders who live in houses rather than flats

Housing analysis by ward:

Cavity Wall insulation

The cavity wall 'Hotspots' wards are concentrated in the South part of the borough, with quite a clear divide with the north of the borough. The table below shows more specifically that there is a dramatic range in the potential for cavity wall insulation in the various wards, with 3.4 times more potential on Joydens Wood Ward (27%) compared with Princes Ward (3%).

Table to show the proportion of unfilled cavity walls in Dartford by ward

Source: A targeting strategy for Domestic Energy Efficiency in Dartford – CEN 2004

Ward Name	Housing with unfilled cavity walls
Joydens Wood Ward	27%
Longfield, New Barn and Southfleet Ward	26%
Sutton-at-Hone and Hawley Ward	23%
Brent Ward	21%
Heath Ward	20%
Wilmington Ward	20%
Greenhithe Ward	17%
West Hill Ward	17%
Bean and Darenth Ward	16%
Castle Ward	13%
Swanscombe Ward	13%
Joyce Green Ward	10%
Littlebrook Ward	10%
Stone Ward	10%
Town Ward	8%
Newtown Ward	5%
Princes Ward	3%

Loft Insulation

The table overleaf shows the proportion of completely uninsulated lofts in Dartford by Ward. The uninsulated lofts have a very different geographical pattern from the cavity wall insulation 'Hotspots'. In addition it shows that Dartford in general has very well insulated lofts, and no wards have more than 10% uninsulated lofts. However, the partly insulated lofts have a rather different pattern, rather similar to the cavity wall pattern.

Table to show levels of loft insulation in Dartford by ward

Ward Name	Housing with empty lofts	Housing needing top up insulation (4 inches or less)
Longfield, New Barn and Southfleet Ward	2%	61%
Joydens Wood Ward	6%	58%
Heath Ward	2%	57%
Sutton-at-Hone and Hawley Ward	4%	54%
Wilmington Ward	3%	54%
Bean and Darenth Ward	1%	51%
Brent Ward	4%	50%
West Hill Ward	5%	49%
Greenhithe Ward	3%	48%
Newtown Ward	6%	41%
Castle Ward	3%	40%
Swanscombe Ward	5%	39%
Stone Ward	4%	37%
Town Ward	3%	37%
Littlebrook Ward	5%	36%
Princes Ward	7%	35%
Joyce Green Ward	4%	31%

Source: A targeting strategy for Domestic Energy Efficiency in Dartford – CEN 2004

No wards are designated 'Hotspots', but the data shows that it would be worth promoting loft insulation alongside cavity wall insulation, with emphasis on topping up partially filled lofts.

4. Affordable Warmth

a) Deaths in the UK in winter exceed those in summer by more than 20% at an average of 30,000 excess deaths each winter. This is one of the worst rates in Europe (Source National Energy Action (NEA)). There is an average of 70 excess winter deaths per year in Dartford with a peak in excess winter deaths during the winter of 1998/99 of 120. The excess winter deaths differ depending on how severe the winter is and whether or not there is a flu epidemic. By far and away the most susceptible to higher death rates in winter are the elderly. There are likely to be three main reasons why these excess winter deaths happen. The first is behavioural – older people are more vulnerable to the effects of cold and though they do wear more, especially when going outside, it is still not sufficient. Secondly, they are more prone to infection in cold weather. This is why flu immunisation is particularly important. Either flu itself or a subsequent chest infection may well prove fatal. Thirdly there are many older people who live in homes which are relatively expensive to heat. These tend to be older properties, many of them owner-occupied.

Source: Annual Report of the South East Regional Director of Public Health 2005

Excess Winter Deaths for Local Authorities in England and Wales

Winter 1997/98 to 2003/04

Dartford	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
	20	120	100	60	50	50	20

Source: information provided by Kent Energy Centre

It is recognised that many householders on low income are not able to afford to heat their homes to adequate levels of comfort in the winter months. This results in a higher incidence of cold related illnesses, condensation and mould growth, and in extreme cases hypothermia. Cold homes have been shown to exacerbate existing illness such as asthma and reduce resistance to respiratory illnesses. Many people choose to cut back on heating to avoid getting into debt

b) Fuel poverty has a social as well as health dimension e.g. not being unable to invite friends to the home because it is too cold, children unable to do homework in their bedroom or quiet spare room, having less money to spend on socialising because of high fuel bills. Improved home energy efficiency can provide affordable warmth for low-income households.

Fuel poverty is said to occur when a household needs to spend more than 10% of total disposable income on total fuel bills. Fuel poverty is caused by several interrelated factors:

Low income

- Poor levels of insulation in the home
- Inefficient heating systems
- Under occupation of large homes
- The price of fuel

c) While it is difficult to say exactly how many people in Kent are suffering from fuel poverty, various data can be used to indicate the extent of the problem, including information on deprivation, benefit status, housing type and tenure, age, illness and the presence of central heating. According to the Centre for Sustainable Energy (CSE) Fuel Poverty Indicator, 6255 Households in the borough are in fuel poverty. The Fuel Poverty Indicator (FPI) is a powerful new tool for predicting levels of fuel poverty in each electoral ward in England. The FPI uses statistics from 1991 Census and 1996 English House Condition Survey. The table below shows the fuel poverty information by Ward. It should be noted that the 1991 census data has been used therefore the table shows the old Dartford Borough Wards:

Ward	Fuel poverty percentage	Fuel poverty number	Total households
Joyce Green	33	430	1309
Princes	30	629	2119
Galley Hill	28	354	1256
Swanscombe	27	317	1188
Littlebrook	25	408	1655
Newtown	24	476	1990
Horns Cross	23	124	545
Stone	21	491	2290
Darenth	21	296	1434
Miskin	21	239	1158
Gundulf	20	342	1700
Priory	19	159	827
Wilmington East	19	121	647
Sutton at Hone and Hawley	16	260	1581
Brent	16	307	1887
Southfleet	16	71	443
Wilmington Central	16	135	842
Heath	16	309	1953
Greenhithe	16	201	1289
Bean	16	93	598
Maypole	13	158	1247

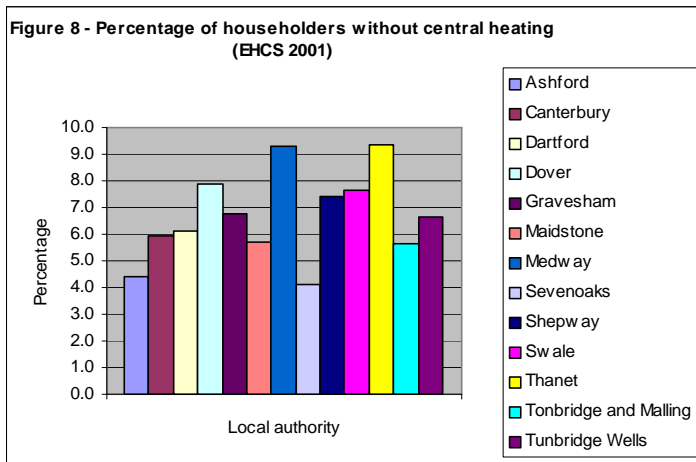
Wilmington West	12	136	1175
Longfield	11	199	1813

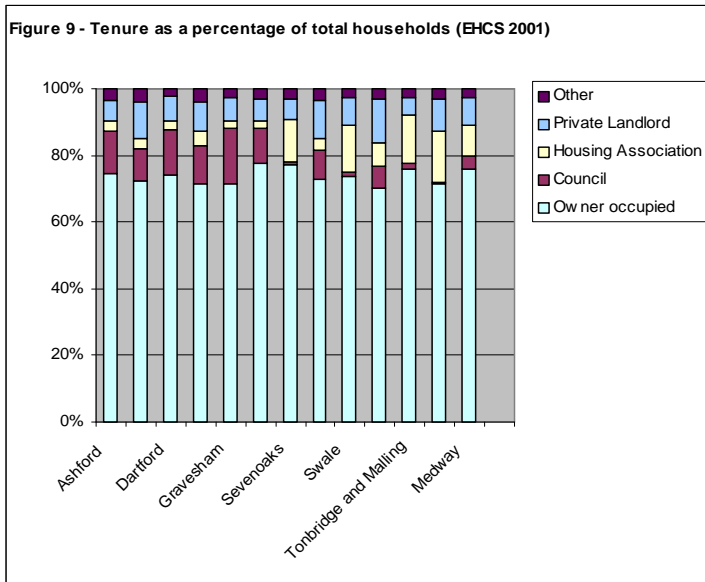
Source: Centre for Sustainable Energy

d) The English House Condition Survey (EHCS) collects information on the conditions and energy efficiency of housing in England.

The English House Condition Survey 2001 reveals that 31.5 per cent of households with no central heating in their home are fuel poor and that those living in the private rented sector have a greater chance of suffering from fuel poverty than those in any other tenure, with 13.1 per cent of all private residents estimated to be in fuel poverty.

The tables below indicate the percentage of householders without central heating and the number of dwellings in the private rented sector for each Kent local authority area.





5. Renewable Energy and Heat

a) While it is at present difficult to measure the number of renewable energy installations in the area, (this information is to be collated from January 2005 and to be fed into the national renewable energy statistics). There is currently potential for some forms of renewable energy and indications that there are suitable sites for these installations in the borough.

Under the proposed amendments to Regional Planning Guidance for the South East 9 (RPG9), Kent has a sub regional target of generating

b) Kent Renewable Energy Network

The Kent Renewable Energy Network was formed to ensure that Kent has a realistic chance of achieving the national and regional targets for renewable energy capacity. This is an open partnership of regional organisations, local authorities, industry and local Non Governmental Organisations.

The objectives of the network are to:

- Raise awareness of renewable energy within the county
- Facilitate renewable energy installations through project management and grant support
- Promote sustainable energy from these beacon installations
- Stimulate local and national investment into renewable energy in Kent

The network has an annual action plan for the wider network to progress these objectives and CEN has developed the services to deliver many elements of this plan.

c) Through CEN the following renewable services are available to Dartford:

Renewable Energy Installation Programmes

Staff at the Centre work with householders, communities and businesses to help them make affordable installations using trusted installer and quality equipment. The team helps these people and organisations access discounts and grants and assists with planning and design

Sunrise – Discounted Solar Installation Scheme

Sun Rise is a discounted solar water heating and solar PV installation scheme, providing systems for domestic properties throughout the county.

Community Renewable Energy Services

Support for community scale projects, including schools, community groups, visitor centres and social housing is available. This support is necessary to enable these diverse groups to take advantage of the financial support currently available

Workshops for planners and developer support services

Training is available for Development Control and Planning Officers across Kent and support for developers and architects

Pre-investment feasibility studies – Kent Watermills Hydropower project

The aim of the Kent Watermills Hydropower project is to facilitate the installation of micro hydropower in Kent

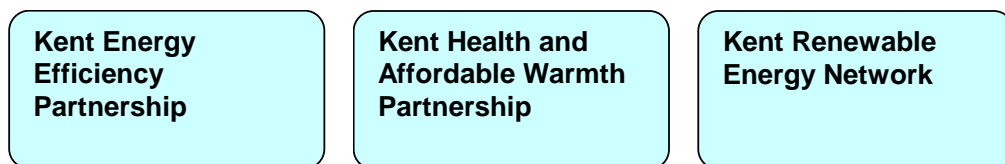
Mini Combined Heat and Power (mini CHP) project

This initiative is designed to help develop the market for a new innovative technology. Sheltered housing and student accommodation have been identified as ideal sites of CHP and are provide the focus of this project.

6. CURRENT ACTIVITIES IN DARTFORD

a) The partnerships with other local authorities, Creative Environmental Network (CEN), public sector organisations, businesses and the public are seen as the main catalyst for delivery of sustainable energy in the county. The Council has already been successful in developing many projects and initiatives towards the aims of this strategy through these partnerships.

This strategy builds upon the previous work of these partnerships and the activity of CEN in the county and links into the range of local regional and national strategies.



b) Kent's thirteen Local Authorities formed the Kent Energy Efficiency Partnership (KEEP) in response to the Home Energy Conservation Act 1996. The Kent Energy Efficiency Partnership has developed and implemented a range of initiatives that continue to be held up as examples of best practise. From this partnership the Kent Energy Centre (parent company is CEN) was supported and is now the expert not for profit consultancy, advice and implementation service for the County.

The Council takes part in the following services offered by Kent Energy Centre:

Energy Efficiency Advice Centre - the Kent Energy Centre provides a 'one stop shop' advice service to the public as one of 52 Energy Efficiency Advice Centres (EEACs) operating nationally with funding from the Energy Saving Trust (EST). As such the Centre provides a free, impartial and individually relevant advice service to all Kent residents, covering general information, details on specific grants and discounts and options to apply.

Additionally the EEAC offers:

- Energy efficiency reports based on the information residents provide on Home Energy Survey Forms. During the period January 2000 to March 2004, 10120 Dartford residents completed survey forms and received advice packs, whilst the 'hotline' received 1250 enquiries.
- Community and school presentations and road shows
- Training
- Marketing
- Community Advisors support
- An initiative to support Private Sector Landlords

Kent Action to Save Heat (KASH)

KASH gives Kent residents an easy, straightforward route to discounted energy saving measures from reliable installers. The scheme was devised by Kent's local authorities and is managed by the Kent Energy Centre. Originally an insulation discount scheme, this has been expanded to include heating installations, boiler discounts, solar hot water systems and 'A' Grade appliances offering substantial discounts for able to pay householders.

Energy Net

Energy Net is the Kent Energy Centre's interactive web based advice service which offers information on all aspects of saving energy at home including generative grant and discount information.

Hotspots Project 2004

The Hotspots scheme used GIS technology to correlate data from Home Energy Checks and Local Authority databases and census data to provide a profile of the neighbourhoods in the borough where there is most potential for the installation of domestic energy efficiency measures by residents. Targeted promotional work has taken place in the form of:

- Press releases.
- Direct mailings – over 3000 households in Hotspot areas have been written to.
- Street / outdoor posters to be displayed in bus shelters, shopping areas, etc in hotspot areas.
- Targeting of discrete districts -leaflets and small posters through local distribution points (such as libraries, restaurants, shops) in Hotspot areas of the borough.

Installer Groups

The CEN Installer Group provides good quality installer coverage for all Kent discount and grant schemes. The group consists of over 350 heating and insulation installers across the UK. We have full UK coverage for insulation installations and can provide heating installations across London and Kent

c) The Kent Health & Affordable Warmth Strategy 2001 (KHAWS) has been developed by a consortium of Kent's 13 local authorities, the Kent Energy Centre, the health and social care sector and other partners. The Strategy set out six main aims:

- Establish a coordinating mechanism to oversee the continuing development, delivery and review of the Strategy
- Ensure that the Strategy is integrated with other relevant national and local initiatives and strategies
- Raise awareness of fuel poverty and to promote the Strategy in Kent
- Work towards ensuring that the housing stock is capable of delivering

- affordable warmth
- Promote benefits awareness and take up with the aim of maximising the income of vulnerable and socially excluded residents
- To establish a single referral system

Since the KHAWS launch, excellent progress has been made on all of the aims and Kent are now recognised as being the leader in fuel poverty work in the South East. Progress includes the following:

- Established a steering group
- Influenced, strategies/local plans
- Raised awareness of fuel poverty and promoted KHAWS in Kent to Strategic partners, frontline professionals and the general public
- Worked towards ensuring that the housing stock is capable of delivering affordable warmth
- Promoted benefits awareness and take up with the aim of maximising the income of vulnerable and socially excluded residents
- Established a single referral system; Health Through Warmth.

The Kent Health & Affordable Warmth Steering Group are now revising the Strategy, giving us the opportunity to improve our efforts to tackle fuel poverty and achieve affordable warmth for the counties residents. The Council, as a partner in the Strategy is working towards the following aims for 2004 – 2008:

- to improve the coordination of delivery
- set up and maintain appropriate internal and external partnerships
- to influence strategy
- to raise the profile of fuel poverty & KHAWS at a strategic level in Kent, the South East and nationally
- to raise the profile of fuel poverty and solutions to frontline professionals
- to carry out effective campaigns to increase take up of existing assistance from the domestic sector
- to increase levels of funding for intervention
- to maximise income

d) Warm front is a Government funded scheme to help people in receipt of income or disability related benefits to improve the insulation and heating in their home. Private householders or private tenants could have a range of insulation and heating improvements installed if they match eligibility criteria. This scheme can be accessed by the Kent Energy Centre advice services and referral systems. From April 2002 to March 2004 there have been 408 Warm Front installations in Dartford.

e) The Health Through Warmth project aims to bridge the gap of existing schemes by training visiting health, social, care and voluntary workers to identify vulnerable people whose health is being adversely affected by their living conditions. The trained worker then refers them to sources of help through a

single referral system. Those whose health is at risk and have an immediate need are referred to a crisis fund. In the 18 month period from December 2002 to July 2004 twenty referrals to the Health Through Warmth Scheme were made for Dartford residents.

f) Renewable Energy and Heat

The Kent Renewable Energy Network is an open partnership of regional organisations, local authorities, industry and local non government organisations (NGOs) with an interest in achieving environmental benefit through the development of the market for renewable energy.

The Kent Renewable Energy Network was formed to ensure that Kent has a realistic chance of achieving the national and regional targets for renewable energy capacity.

The core mission of the Kent Renewable Energy Network is to facilitate the development of the market for renewable energy in Kent, with a focus on medium and domestic scale installations.

The objectives of the network are to:

- Raise awareness of renewable energy within the county
- Facilitate renewable energy installations through project management and grant support
- Promote sustainable energy from these beacon installations
- Stimulate local and national investment into renewable energy in Kent

The network has an annual action plan for the wider network to progress these objectives and CEN has developed the services to deliver many elements of this plan.

Through CEN the following renewable services are available to Dartford:

Renewable Energy Installation Programmes

Staff at the Centre work with householders, communities, and businesses to help them make affordable installations using trusted installers and quality equipment. The team helps these people and organisations access discounts and grants, and assists with planning and design.

Sunrise - Discounted Solar Installation Scheme

Sun Rise is a discounted solar water heating and, from 2004, solar PV installation scheme, providing systems for domestic properties throughout the county.

Community Renewable Energy Services

Support for community scale projects, including schools, community groups, visitor centres and social housing is available. This support is necessary to

enable these diverse groups to take advantage of the financial support currently available.

Workshops for Planners, developers and architects

Training is available for Development Control and Planning Officers across Kent.

Pre-investment feasibility studies - Kent Watermills Hydropower project

The aim of the Kent Watermills Hydropower project is to facilitate the installation of micro-hydropower in Kent.

Mini Combined Heat & Power (mini CHP) Project

This initiative is designed to help develop the market for a new innovative technology. Sheltered housing and student accommodation have been identified as ideal sites for CHP and are provide the focus of this project.

7. WHAT DOES DARFORD BOROUGH COUNCIL HOPE TO ACHIEVE THROUGH THE SUSTAINABLE ENERGY STRATEGY?

The strategy offers an integrated approach to achieving the following aims:

To fulfil the authority's statutory requirements regarding energy efficiency and sustainable energy.

To improve the energy efficiency of the housing stock, eliminate fuel poverty in the borough, and reduce Carbon Dioxide (CO₂) emissions.

OBJECTIVES

- To encourage and support local residents to improve the energy efficiency of homes in the area
- Carry out improvements to Council owned stock to maximise energy efficiency, reduce fuel bills, reduce CO₂ emissions and the incidence of condensation and mould growth, as cost effectively as possible
- To encourage and support local housing providers to improve the energy efficiency of their stock of houses
- To achieve affordable warmth for all by 2012 (eradication of fuel poverty)
- Achieve at least 20% of electricity generation from renewable sources by 2026
- Achieve maximum value to the above objectives through partnership working
- Establish a mechanism to oversee the development, implementation and monitor the Sustainable Home Energy Strategy

The objectives will form the basis of the Workshop to develop an action plan to be facilitated by Kent Energy Centre staff . A wide variety of Council Officers will be invited to attend the workshop including planning, development control, housing, benefits, finance and external agencies including Care and Repair, Groundwork Trust, Kent Energy Centre and Creative Environmental Networks.

8. PERFORMANCE INDICATORS

Indices		April 2003/04	April 2004/05	April 2005/06	April 2006/07	April 2007/08	Target	Source
% improvement in energy efficiency for all households		1.5%	1.9 %				1.5%	Annual HECA return
Number of calls to the Kent Energy Centre advice team each year			513	529			540	Kent Energy Centre report
Number of schools involved in energy awareness activities	Solar car challenge		4	3	Kent Energy Centre promotion ceasing 06 -07			Kent Energy Centre and KCC Eco Schools
	Talks/assembly		5	2			8	
Number of energy efficiency installations (KASH)	Loft insulation		23	16			25	Kent Energy Centre
	Cavity wall insulation		36	34			35	
	Hot Water/Heating Improvements		7	15				
Number of properties with work fully completed as part of Warm Front			183				190	EAGA
Number of household				13			14	DBC Private

s assisted by Dartford Borough Council grant budget								Sector Housing
Average SAP (NHER) of whole stock by tenure type	Buying own/occupier		56				58	Creative Environmental Networks
	Local authority		56				58	
	Rent-housing association		66				67	
	Rent – private landlord		52				54	

9. POLICY BACKGROUND

It is becoming increasingly necessary for Local Authorities to have a coherent strategy for delivering energy efficient homes that local people can afford to keep warm. They are also being expected to take the lead in promoting renewable energy. This is largely because the Government has a goal of cutting carbon dioxide emissions by 20% below 1990 levels by the year 2010.

The duties and obligations of authorities relating to sustainable energy efficiency are expressed in a number of ways.

a) The **Home Energy Conservation Act 1995 (HECA)** required Local Authorities (called Energy Conservation Authorities - ECAs for the purposes of HECA), to report on energy consumption levels in the residential sector as at 1 April 1996, and how they were going to increase the energy efficiency in those dwellings by 30% over the next 10 to 15 years. Since the first HECA reports, local authorities have been required to produce annual returns to DEFRA to report on progress made. The authority has to report on the annual % improvement in energy efficiency across tenures and to report on practical actions taken and planned. Progress in tackling fuel poverty also needs reporting, although there is no single agreed performance indicator for this.

HECA focussed the attention of local authorities on improving the energy efficiency of all homes and, in so doing, seeks to tackle the two very serious problems of fuel poverty and climate change. It puts a duty on local authorities to draw up strategies to improve energy efficiency in all housing – both public and private sector – and to report on the progress made. Many authorities in Kent have responded to HECA with enthusiasm, implementing innovative and effective strategies, which have improved the lives of thousands of residents.

b) Under The **Decent Homes** Standard Local Authorities and Housing Associations have to report annually on the numbers of "non - decent" homes in their stock, together with progress in reducing the number of such homes. The main reason for non – decent homes is usually because properties fail the Thermal Comfort part of the Standard; this will include both adequate insulation and heating. A property that provides Affordable Warmth will automatically satisfy the Thermal Comfort standard. In 1996 83% of non-decent homes did not satisfy the Thermal Comfort standard and the percentage is thought not to have dropped drastically since then. This means that the current Government drive to eliminate non Decent Homes will further drive improvements in energy efficiency. In 2002, the government extended the Decent Homes standard and requires Local Authorities to increase the proportion of properties in the private sector to a decent home standard where they include vulnerable households and families with children, by 2010.

c) The **Local Government Act 2000** places a duty on local authorities to promote the social, economic and environmental well being of their areas. As such, energy efficiency, climate change and fuel poverty should form a core part of this work.

d) The **Warm Homes and Energy Conservation Act 2000** led to the publication of UK Fuel Poverty Strategy by DTLR (2001). The Strategy sets the aim of eradicating fuel poverty from vulnerable households by 2010 and removed from all households by 2016. The Act formally recognises fuel poverty as a major issue of public well being. It is intended to demonstrate how policies can meet multiple social, environmental and economic objectives, thereby contributing to sustainable development. The Fuel Poverty Strategy will be integrated with other Government strategies for housing, energy, health, poverty and social exclusion.

e) **Planning Policy Guidance 22** is a planning guidance document for the installation of renewable energy technology, which explains how local planning authorities should include renewable energy policies in their plans and encourages councils to consider what contribution renewables will make locally to achieve national targets.

f) **BUILDING REGULATIONS PART L** was updated in 2002 to include extended minimum requirements for energy efficiency works for all new build and retrofit works on properties.

g) In February 2003, the government published its **Energy White Paper** entitled "Our energy future – creating a low carbon economy". This defines a long-term strategic vision for energy policy combining environmental, security of supply, competitiveness and social goals

In particular, the Government is pushing for local authorities to give energy issues priority at a strategic level, for example through their community plans and transport and housing strategies.

To address the issues of Climate Change, decline in energy supplies and the need to update the UK's energy infrastructure the White paper sets out four key goals:

- To put the country on a path to cut the UK's carbon dioxide emissions - the main contributor to global warming - by some 60% by about 2050 with real progress by 2020;
- To maintain the reliability of energy supplies;
- To promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and to improve the country's productivity; and
- To ensure that every home is adequately and affordably heated.

Increasingly the government will place emphasis on local authorities and regional bodies working in partnership with the private sector to help deliver real change on the ground, to reflect their local community needs. The Government has:

- Endorsed the Sustainable Energy Act (see later)
- Published the white paper implementation plan (see later)
- Established a new Beacon Council theme on sustainable energy.
- Promoted energy efficiency and the roll-out of new technologies as areas

- in which local authorities can consider Local Public Sector Agreements
- Encouraged local authorities to take the lead, acting as catalysts for change, developing and facilitating cross-sectoral partnerships and providing advice and encouragement;
- Reformed planning guidance PPS 22 to facilitate planners in delivering sustainable energy.
- Proposed revisions to Building Regulation Part L to make new installations more efficient.
- Considered with the Local Government Association whether at the next review to include energy as a shared central-local priority.

h) In April 2004, the government published its **plan** for delivering the energy efficiency elements of the Energy White Paper. Key areas of interest for local authorities include:

- A new Beacon Councils theme will be established on Sustainable Energy, due to run in 2005/06
- An increased level of activity under the Energy Efficiency Commitment (EEC), which will bring expanded opportunities for local authorities to work with energy suppliers, particularly in regeneration areas and on Decent Homes related work
- New guidance will be issued on how to comply with the Home Energy Conservation Act (HECA)
- The Government will publish a Fuel Poverty Implementation Plan - Fuel Poverty In England: The Government's Plan For Action was published in November 2004 and sets out how the Government proposes to meet its statutory obligation to eradicate fuel poverty by 2016 and its own target to eradicate fuel poverty for vulnerable households in England by 2010.
- Extension of the Government's energy-related procurement targets to the rest of the public estate as soon as practicable;
- Planning Policy Statement 1, which puts sustainable development at the heart of the planning process and draft Planning Policy Statement 22 which addresses the inclusion of renewables in new developments
- The forthcoming review of the Climate Change Programme which will assess whether the policies already in place will deliver the expected carbon savings.

The implementation plan details how the Government intends to deliver savings of around 4.2 million tonnes of carbon per year through a combination of policies:

- The Warm Front programme;
- Continuation of the Energy Efficiency Commitment to 2011, with the level of activity for the period 2005-08 roughly double that of the present EEC;
- Social landlords continuing to improve the heating and insulation of their properties through the Decent Homes programme in England and its equivalents in the Devolved Administrations;
- Provision of information and advice to local authorities and households through the Energy Saving Trust;

- Provision of grants for community heating (the Community Energy Programme) and small-scale renewable generation (Clear Skies and the PV demonstration programme);
- Updates to the Building Regulations in 2005, and support for this via installer training;
- Implementation of the Energy Performance in Buildings Directive;
- Continuing negotiations for rising EU energy efficiency standards for appliances; and
- Fiscal incentives, including the newly announced tax relief for landlords installing insulation.

i) The need for an Act aimed at tackling climate change was highlighted by the fact that figures showed carbon dioxide emissions in the UK had risen to their highest levels since 1997. The intention is that the measures outlined below will help to ensure that the UK sets itself targets to reduce these levels and also puts in place the correct policies to reach those targets.

The overall aim of the **Sustainable Energy Act 2003** is “to make provision about the development and promotion of a sustainable energy policy” in the UK, using the following measurable objectives:

- _ cutting carbon emissions;
- _ maintaining the reliability of energy supplies;
- _ promoting competitive energy markets;
- _ reducing the number of people living in fuel poverty.

The key areas of the Act include:

- The Government is to report annually to Parliament on the 135 commitments in the Energy White Paper regarding reducing emissions of CO₂ and ending fuel poverty. The first annual report was published in April 2004, covering the period from 24 February 2003 to 23 February 2004.
- The Secretary Of State is to set aims for residential accommodation.
- Section 4 of the Act provides “a power for the Secretary of State, following consultation with bodies representing local authorities, to direct one or more local authorities to take measures to improve the energy efficiency of residential accommodation” (a so-called energy efficiency direction). “There is also a duty on local authorities when so directed to give preference to measures that would also contribute to tackling fuel poverty.” Essentially this power will be used by the Government to set binding targets for local authorities who are falling short of their targets under the Home Energy Conservation Act 1995. Once an energy efficiency direction is given, the Home Energy Conservation Act will cease to apply to that authority or authorities.
- It requires the Government to set a target for Combined Heat and Power in Government buildings.
- It requires Ofgem (the gas and electricity regulator) to publish environmental impact assessments of its actions.
- It releases £60 million for developing renewable sources of energy.

An energy efficiency aim for the residential sector in England has been set and CHP target for the Government estate is already in force. Section four (so far as it relates to England) will come into force when the Secretary of State deems it appropriate. The other provisions of the Act are already in force.

Section four of the Sustainable Energy Act makes it clear that those Energy Conservation Authorities (ECAs) in England and Wales who are falling short of their targets under the Home Energy Conservation Act 1995 (HECA) can be held to account and may become subject to energy efficiency directions requiring them to improve their performance. This should lead to a higher profile for energy efficiency and by extension fuel poverty activities and should also act as a wake-up call to those local authorities that are currently under-performing in this area.

Although the Government and the Welsh Assembly do have the power to issue energy efficiency directions, it is likely that a less confrontational approach will be used to ensure that local authorities' energy efficiency performance improves. For example, by setting Public Service Agreement (PSA)

j) The Energy Act 2004 reaffirms the commitments laid down in the Energy White Paper and the Energy Efficiency Implementation Paper, and reasserts the importance of local authority activity in promoting sustainable energy.

k) The Housing Act 2004 is a key piece of legislation that will protect the most vulnerable in society and help create a fairer and better housing market. It will also strengthen the Government's drive to meet its 2010 decent homes target. The Act received Royal Assent in November 2004. The Housing Act accepted a 20% target for the improvement in energy efficiency from 2000 levels, by 2010. It comprises of a wide range of reforms to deal with poor housing, including introducing the mandatory licensing of larger houses in multiple occupation.

It introduces the Housing Health And Safety Rating System (HHSRS) which replaces the current housing fitness standard. This will help local authorities target the worst-condition properties, often housing some of the most vulnerable people. Local authorities will in future base enforcement decisions on assessments under HHSRS. It assesses twenty-nine broad categories of housing hazard, including factors which were not covered or covered inadequately by the housing fitness standard, such as damp, cold, asbestos and food safety. The HHSRS assessment is based on the risk to the potential occupant who is most vulnerable to that hazard.

Together, these reforms will improve physical and management conditions in those properties that pose the greatest risk to the health and safety of their occupants. The provisions show a Government awareness of the close link between poor housing and poor health

The Home Information Pack (HIP) was also introduced which will require sellers of residential properties in England and Wales, or their agents, to make a HIP

available before marketing homes for sale. The pack would include standard documents and information for prospective buyers.

The HIP will include a Home Condition Report containing an energy report. The report will include an SAP energy rating to enable consumers to understand how energy efficient the property is and to make comparisons between homes. The SAP rating depends on such matters as the thermal efficiency of the building fabric and the type of heating system and its controls. The energy report would also provide information on energy efficiency measures that would reduce fuel costs, increase comfort and also help the environment, and a potential SAP rating that the property could achieve if those measures were carried out. The packs will come into force from January 2007, following a six month trial period.

10. LOCAL POLICY DRIVERS

There are also a number of local initiatives that have great relevance:

a) **Kent Health and Affordable Warmth Strategy (KHAWS).**

The White Paper introduces a new aim that 'as far as reasonably practical'; nobody in Britain should be living in fuel poverty by 2016 -18. Local authorities are encouraged to implement/review their strategies towards this aim. Dartford Borough Council has fully endorsed the Kent Health and Affordable Warmth strategy which was launched in November 2001 and as partners to it, the council is working towards the following aims for 2004 – 2008:

- to improve the coordination of delivery
- set up and maintain appropriate internal and external partnerships
- to influence strategy
- to raise the profile of fuel poverty & KHAWS at a strategic level in Kent, the South East and nationally
- to raise the profile of fuel poverty and solutions to frontline professionals
- to carry out effective campaigns to increase take up of existing assistance from the domestic sector
- to increase levels of funding for intervention
- to maximise income

b) **Kent and Medway Structure Plan**

Chapter 9 of the Deposit version of the Kent & Medway Structure Plan, (published in September 2003) has policy:

NR1 Energy Generation: explains how proposed generation sites should be assessed.

NR2 Renewable energy Production and Policy: supports renewable energy installations where there is no overriding conflict.

NR3 Combined Heat and Power is supported and invited to include in local development documents.

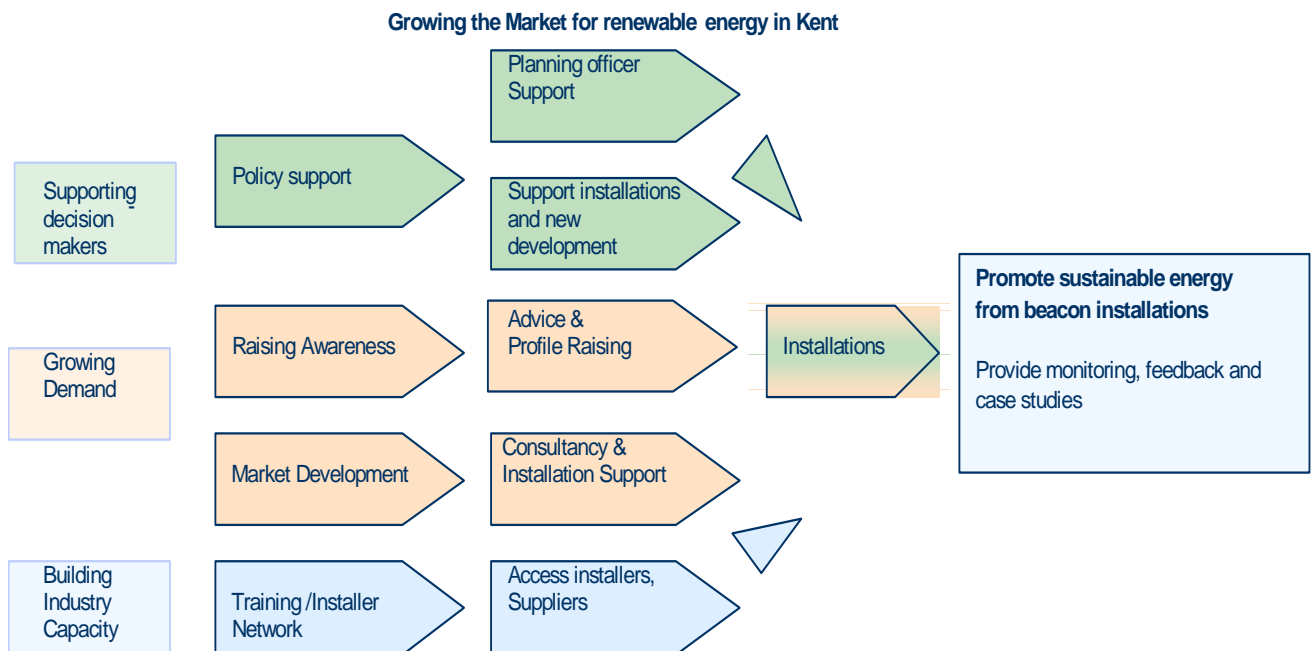
Additionally energy efficiency is included in the chapters on the build environment.

c) **Regional Planning Guidance (RPG 9)**

South East Regional Assembly (SEERA) strategy "Harnessing the Elements – A Strategy for Energy Efficiency and Renewable Energy" sets out regional policies and targets for renewable energy and energy efficiency "... by 2026 at least 16% of the region's electricity generation capacity will be provided from renewable energy sources". There are proposed amendments to RPG 9 requiring districts to split out the sub regional targets. This is under consultation at present.

d) **Kent Renewable Energy Network – Action Plan**

The Action plan sees the following framework as a method to effectively describe the activities necessary to overcome barriers and grow the market for renewable energy in Kent.



e) Kent Environment Strategy 2003

Kent County Council has produced this in conjunction with a range of partners, including the Kent Energy Centre. It includes aims and targets for reducing energy consumption, addressing climate change and tackling fuel poverty and has sustainable energy targets for the County. It is currently under revision with a proposed consultation period which commenced in Spring 2005.

f) Dartford’s Community Strategy

The Council’s Community Strategy for Kent Thameside ‘Towards the Futureplace’ 2003 sets out a long-term vision for the area and identifies local actions that will improve people’s quality of life through co-ordination between the Council and other public, private, voluntary and community organisations operating locally. It has been influenced by a range of social, environmental and economic factors in the Boroughs of Dartford and Gravesham with a central purpose of having all organisations working together to form the Dartford and Gravesham Local Strategic Partnership (DGLSP).

Chapter 4 The Environment states “We will promote action to improve energy conservation and reduce harmful emissions in housing, buildings, transport and all forms of machinery and appliances through a range of measures, including education, regulation and where appropriate direct support. Through private sector renewal policies and the achievement of Decent Homes, those on low incomes will be assisted in combating fuel poverty and, at the same time, minimising energy use.”

Whilst Chapter 5 Housing & the Built Environment states that we will “promote good quality construction, renovation, management and maintenance of homes and buildings by ensuring that all social housing meets Decent Homes standard by 2010, and by introducing by July 2003 policies and funding mechanisms to ensure the provision of safe and well maintained housing in the private sector”. It also states in the promotion of sustainability that we will “ promote high standards of care for the environment in housing and building design by encouraging developers to adopt the best practicable standards of care for the environment – eg energy saving.....”

g) Local Agenda 21 (LA21)

Dartford Borough Council produced a Local Agenda 21 (LA 21) plan in 2000, outlining action to achieve sustainable development. Agenda 21 came out of the 1982 Earth Summit in Rio de Janeiro. It encouraged local authorities to produce a local plan outlining action to achieve sustainable development.

The Government defines Sustainable Development as follows:

- social progress which recognises the needs of everyone
- effective protection of the Environment
- prudent use of natural resources, and
- maintenance of high and stable levels of economic growth and employment

The Council is working to agreed Action Plans which include the compliance of HECA, alleviating fuel poverty and promoting improved and more sustainable energy use. The Council is currently reviewing its approach to the co-ordination and promotion of environmental issues. It is envisaged that a Draft Environmental Policy and Environmental Action Plan for Dartford will be formed which will include areas such as energy use and climate change.

h) Private Sector Renewal Strategy and Policy 2003 included promoting awareness of energy efficiency and providing access to partnership schemes such as insulation and boiler replacement as a Strategic Objective of the policy. The Stock Condition Survey findings indicated that £17.8m in the owner occupied sector and £3.1m in the private rented sector needed to be spent in the borough on energy efficiency improvements:

11. GLOSSARY

Affordable Warmth: The ability to heat your home without incurring excessive fuel bills and developing a debt as a result

Cavity Wall Insulation: The process of injecting insulation into the gap between a property's inner and outer walls. It greatly reduced heat loss through the walls. As a loose rule pre 1930's homes have solid walls with no cavity.

Climate change: A change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural variations in climate

CO₂ - Carbon Dioxide: The main gas which leads to global warming and climate change.

Compact Fluorescent Lamp (CFL): These can replace standard bayonet and screw fit bulbs, and use only 20% of the electricity of standard bulbs.

Combined Heat and Power (CHP): Technology that generates both space heating and electricity on site, ranging in scale from units that supply whole towns (district heating) to individual households (micro CHP). This technology is normally more efficient than producing electricity and space heating separately.

Condensing Boiler: A type of boiler that uses an extra large heat exchanger to achieve very high efficiencies (90%+). The condensing name comes from the fact heat is recovered successfully from the flue gases such that they are cooled to a temperature where the water vapour starts to condense out. Boilers with an 'A' energy efficiency rating will be condensing models.

Decent Homes Standard: In 2000, the government made a commitment to bring all public sector homes up to a decent standard, establishing a 10 year target and an interim target to: "ensure that all social housing meets set standards of decency by 2010, by reducing the number of households living in social housing that does not meet these standards by a third between 2001 and 2004, with most of the improvement taking place in the most deprived local authority areas".

Energy Efficiency Commitment (EEC): An obligation placed on gas and electricity supply companies by OFGEM as a condition of their licence. EEC places targets for energy savings to be achieved (by energy supply companies) in domestic residences. The target is based on the number of customers the company has. This means the companies deliver schemes to encourage take up of insulation and efficient electrical items. Schemes are delivered by the company itself or in partnership with other organisations or local authorities. 60% of the energy savings achieved under EEC must be in vulnerable households

Energy Conservation Authority (ECA): Every local authority with housing responsibilities became a ECA in April 1996 under HECA. ECAs are responsible for drawing up and reporting on plans to reduce energy use considerably.

English Housing Condition Survey (EHCS): This is a national survey that is carried out every five years on a sample of the housing stock to assess its overall condition

Energy Ratings: An energy rating is a measure of the energy efficiency of a dwelling under standard occupancy conditions. It is designed to help compare the energy efficiency of different homes on a common basis, much like the mileage per gallon figures used to compare the energy efficiency of cars

Energy Saving Trust (EST): A government body set up after the 1992 Rio 'Earth Summit' that attempts to reduce energy use in the UK. The EST is involved in several schemes to aid Local Authorities in their HECA work and also fund the EEAC network.

Energy White Paper: Launched in 2003 'Our Energy Future' sets out the Government's long term plans for energy in the UK. It aims to implement the Royal Commission's carbon reduction target of a 60% reduction in carbon dioxide emissions from 1990 levels by 2050.

Fuel Poverty: A household is said to be fuel poor if it spends more than 10% of its income on fuel.

Greenhouse Gases: Molecules in the Earth's atmosphere such as carbon dioxide and methane that warm the atmosphere because they absorb some of the thermal radiation emitted from the earth's surface

Hard to Treat Homes: homes which can not easily be improved using standard low cost energy efficiency measures. Common features are: older properties, solid wall construction, non standard roof spaces, lack of connection to and/or distance from mains gas network, under occupied homes

Home Energy Conservation Act (HECA) 1995: The Act forms the basis of local authority energy efficiency activities and requires them to report annually on activities and progress around improving energy efficiency. A target of 30% improvement in energy efficiency by 2010 was set in 1996 in support of the Act

Houses in Multiple Occupation (HMO): A building which a number of separate households are resident under separate tenancies or licences. Often involves sharing communal facilities

KEC - Kent Energy Centre: the local office of CEN, a not for profit environmental organisation funded by the European Union, the Energy Saving Trust and local authorities in Kent and London. Staff at the Centre work with Kent's 13 local authorities to reduce carbon dioxide emissions and tackle fuel poverty throughout the county by developing and managing innovative projects. This includes a free

and impartial energy advice service available to all residents.

KEEP - Kent Energy Efficiency Partnership: A consortium of all Kent local authorities working together to coordinate projects, share information, improve domestic energy efficiency and increase access to affordable warmth in Kent.

Kent Action to Save Heat (KASH): A discount scheme targeting the 'fuel rich' to provide insulation and heating. The scheme is run by Kent Energy Centre and Kent's local authorities.

kW (Kilowatt): – a unit of power, one kilowatt refers to a thousand joules being either consumed or produced every second

kWh (Kilowatt Hour): - a unit of energy commonly used on fuel bills. One kWh would power a device that consumes a kilowatt of power for an hour, or a 100 watt lightbulb for 10 hours etc.,

kWp (Kilowatt Peak):- the peak kilowatt input or output of a device, for example the highest possible output from a PV solar panel.

Local Agenda 21 (LA21): This came out of the 1982 Earth Summit in Rio de Janeiro. It encouraged local authorities to produce a local plan outlining action to achieve sustainable development.

Photo voltaic cells (PV): PV technology produces electricity from sunlight, commonly seen in the form of solar panels on roofs.

Registered Social Landlord (RSL): An organisation providing housing on a not for profit basis, registered with the Housing Corporation. Typically a housing association.

Renewable Energy: energy produced from sources that can not be depleted, e.g. wind, solar, geothermal, hydro, tidal. Also known as Sustainable Energy.

SAP - Standard Assessment Procedure: An energy efficiency rating system for homes. SAP scores energy efficiency from 0 (very poor) to 100 (very good).

Solar Power: Energy from the sun can be used to produce hot water by PV (photo voltaic) panels, or used to heat hot water for buildings. Solar hot water heaters are currently more cost effective than PV, and can provide most of a home's hot water demand during the summer months.

Sustainable Development: Living in a way that improves the quality of life without destroying the environment. The Government defines it as follows:

- social progress which recognises the needs of everyone
- effective protection of the Environment
- prudent use of natural resources, and
- maintenance of high and stable levels of economic growth and

employment.

Thermal Comfort :Thermal comfort is the state where a person is entirely unaware of their surroundings – neither considering the space is too hot or too cold

Thermostatic radiator valves (TRVs): A device which control the temperature of an individual radiator and therefore of the room in which the radiator is sited.

Warm Front: A government funded grant scheme managed by EAGA Partnership Ltd . The scheme pays for (pre-determined) insulation and heating packages to households in receipt of qualifying benefits and in certain 'vulnerable' categories.

12. Further Information

DEFRA Web Pages on HECA:

<http://www.defra.gov.uk/environment/energy/heca95/index.htm>

Energy Savings Trust (EST): <http://www.est.co.uk>

EST Web Site on Energy Efficiency for Householders:

<http://www.est.co.uk/myhome>

Practical Help for Local Authorities: <http://www.practicalhelp.org.uk>

Efficiency Best Practice Programme: www.est.org.uk/bestpractice/index.cfm

Kent Energy Centre: <http://www.kentenergycentre.org.uk/>

Creative Environmental Networks: <http://www.cen.org.uk>

13. ORGANISATIONS AND AGENCIES INVOLVED IN THE CONSULTATION PROCESS

Advance Housing and Support	Dartford YMCA Dartford, Gravesham and Swanley PCT
Age Concern	
Age Concern Dartford	Ethnic Minorities Advice Centre
Bean Parish Council	Gravesend Churches Housing Association Limited
Bridge Court Wheelchair Shop	
Broomleigh Housing Association	Greenhithe Community Association
Citizens Advice Bureau	Green Party
Commission for Racial Equality	Groundwork Kent Thameside
Connexions	Gunn Road Executive Committee
Council for Voluntary Service	Holy Trinity Church
Creative Environmental Networks	Homestart
Darent Housing Co-Operative Limited	Horns Cross and Stone Village Residents Association
Darenth Parish Council	Housing Corporation
Darenth Residents Association	Invicta Co-Operative Society
Dartford and District Racial Equality Council	Joydens Wood Residents Community Association
Dartford and Gravesham NHS Trust	Kent Energy Centre
Dartford Acorn Family Initiative	Kent Social Services
Dartford Almshouse Charity	Kent Thameside Team
Dartford Black Minority Ethnic (BME) Community Group	London and Quadrant
Dartford Chamber of Commerce	Longfield and New Barn Parish Council
Dartford Unemployed Group	Mediation in North Kent
Dartford Volunteer Bureau	Moat Care and Repair

Moat Home Ownership

Moat Housing Group
Moving Forward
North Kent Police
North West Kent Carers Support Service
North West Kent College
North West Kent Council for Voluntary Service
Primary Care Trust
Salvation Army Housing Association
Social Services Hospital Care Management Team (Dartford and Gravesham)
Southfleet Parish Council
St John the Baptist Church
Stone Parish Council
Stone Triangle Community Association
Surestart
Sutton at Hone Parish Council
Swanscombe and Greenhithe Town Council
Temple Hill Baptist Church
Temple Hill Community Forum
Temple Hill Residents Association

The Advocacy Project

Tower Homes Limited
Town and Country Housing Group
Tree Community Association
Volunteer Centre
West Kent Health Authority
West Kent Housing Association
West Kent Social Services
West Kent Team
Wilmington Parish Council
Wrott and Hill Charity

Plus Utility Companies:
British Gas Trading
EDF Energy
N Power
Powergen
Scottish and Southern Energy
Scottish Power