

Assessment of the impact of Warm Front on decent homes for private sector vulnerable households

Introduction

In 2002 the Government set a target to increase the proportion of vulnerable private sector households living in decent homes (the overall national PSA7 target). A home is classed as decent if:

- it meets the **current statutory minimum** standard for housing – (the fitness standard for the period relevant to the data presented here)¹,
- is in a reasonable state of **repair**,
- has reasonably modern **facilities and services**, and
- provides a reasonable degree of **thermal comfort**.

¹ From April 2006 the fitness standard was replaced by the Housing Health and Safety Rating System (HHSRS).

Each of these criteria is defined in detail in guidance published by Communities and Local Government². The thermal comfort criterion, which is the focus of this analysis, is discussed below. For the purposes of measuring this target, vulnerable households are defined as households in receipt of one of a specified list of means-tested or disability-related benefits³.

At the baseline, set at 1 April 2001, it is estimated that 57 per cent of vulnerable households in the private sector were living in decent homes, so that around 1.2 million of these households were living in non-decent homes. The government is seeking to increase the proportion of vulnerable private sector households living in decent homes to 65 per cent by 2006⁴, 70 per cent by 2010 and 75 per cent by 2020. The most common reason for failing the Decent Homes Standard is failure to provide a reasonable degree of thermal comfort. According to the 2003 English House Condition Survey, 73 per cent of all non-decent homes fail on the thermal comfort criterion and over 58 per cent of non-decent homes fail on this criterion alone.

The Warm Front programme provides grants for packages of heating and insulation measures to households in the owner-occupied and private rented sectors. To qualify for the scheme, households must contain either a child or an older or disabled person and be in receipt of one of the qualifying means-tested or disability-related benefits (see Annex A for further details of the eligibility criteria). Hence, there is a close match between the groups prioritised by the decent homes target and those eligible for Warm Front.

Until recently and over the entire period covered by this analysis, only older people (aged 60 or over) in receipt of means-tested benefits could receive a new central heating system under the scheme, as well as improved insulation (Warm Front Plus). Other qualifying households were eligible for insulation measures only, including loft and/or cavity wall insulation, as well as 'minor' measures such as draught-proofing and energy efficient light-bulbs. From the introduction of the scheme in June 2000 to the end of December 2005, over 1.1 million households received assistance under the scheme. Additional funding announced in the 2005 Pre-Budget Report means that funding for the Warm Front Scheme in England will exceed £300 million in 2006/07 and over £800 million over the 2005-08 period. Warm Front is, therefore, expected to make a substantial contribution to progress towards the Decent Homes target.

² An updated report, *A Decent Home: Definition and guidance for implementation*, was published by Communities and Local Government in June 2006 and is available on-line (www.communities.gov.uk/pub/191/ADecentHomeDefinitionandguidanceforimplementationJune2006update_id1152191.pdf).

³ Vulnerable households are defined as households in receipt of at least one of the following benefits: income support, housing benefit, council tax benefit, disabled persons tax credit, income based job seekers allowance, working families tax credit, attendance allowance, disability living allowance, industrial injuries disablement benefit, war disablement pension, child tax credit, working tax credit, or pension credit.

⁴ Estimates for April 2006 will be available in early 2008.

Objectives

The purpose of this work is to quantify the impact of Warm Front on the decent homes target. This report builds on initial analysis undertaken in 2003 of the potential impact of Warm Front in those areas previously administered by Eaga Partnership. This work updates that analysis up to 2005 and extends the coverage to the whole of England, including those areas previously administered by Powergen (Yorkshire & Humberside, East Midlands, and East of England)⁵. It aims to provide a comprehensive picture of Warm Front activity and the progress being made in terms of the decent homes target.

The specific objectives of this study are as follows:

- To develop a database of all Warm Front grant recipients from mid-2000 until early/mid 2005, including consistent data on the characteristics of applicants, their homes, and the measures installed under the scheme.
- To use this database to help assess the potential contribution of Warm Front scheme to achieving the Decent Homes target, including an analysis of the number of homes that fail the thermal comfort criterion prior to Warm Front, an analysis of the measures installed under the scheme, and the numbers made decent as a result.

Approach

The analysis is based on two separate databases of Warm Front grant recipients provided by Eaga Partnership and Powergen, who between them were responsible for managing the scheme across the whole of England (until mid-2005). This data provides an invaluable source of information on all households who received a Warm Front grant from the launch of the new scheme in April 2000 up to the beginning of 2005 (in the case of Powergen) or mid-2005 (in the case of Eaga Partnership). Social sector households are no longer eligible for Warm Front and have been excluded from our analysis, which is concerned with the scheme's contribution to meeting the decent homes target for the private sector. Where households appeared more than once in the database (eg because they had several measures installed at two or more different points in time), information on these applicants has been amalgamated into a single entry.

The integrated database includes details on each household that received a grant, the characteristics of their home and work carried out under the scheme. Annex B provides a list of the key variables in the database. Where the data collected by the two scheme managers differs, new variables have been created that are, as far as possible, consistent across the two data sets. Postcode data has also been used to merge in information on the local area, including a ward-level index of deprivation and identification of work carried out in one of the 88 Neighbourhood Renewal Fund (NRF) districts.

⁵ When the new phase of Warm Front was launched in June 2005, Eaga Partnership took over responsibility for managing the scheme across the whole of England.

Using the information contained in this database, it is possible to identify those grant recipients who are living in homes that do not meet the Decent Homes Standard on the thermal comfort criterion. It is not possible to identify whether these homes would meet the other criteria of the Decent Homes Standard, although we know from analysis of the 2003 English House Condition Survey (EHCS) that most homes that do not meet the thermal comfort criterion fail the Decent Homes Standard on this criterion (73 per cent). **Therefore all references in this report to decent homes or making homes decent are in terms of the thermal comfort criterion only.**

The contractor has consulted with staff at the Building Research Establishment (BRE) to ensure that the interpretation of the thermal comfort criterion is consistent with the methodology they use to produce the official statistics on decent homes. To meet the thermal comfort criterion of the Decent Homes Standard, a dwelling must have either:

- Gas or oil central heating and at least 50mm of loft insulation OR cavity wall insulation; or
- Electric or solid fuel central heating and at least 200mm of loft insulation AND cavity wall insulation (where there is a cavity wall).

The standards of insulation are lower for those dwellings with gas or oil central heating, because these systems are more efficient. The model assumes that all homes built after 1981 meet the thermal comfort criterion⁶. A more detailed definition is provided in Annex C.

Dwellings that have a central heating system and adequate insulation are assumed to meet the thermal comfort criterion of the standard, even if the system is not fully functional⁷. In practice, many of these homes would fail the Decent Homes Standard on the repair criterion (even if they met the thermal comfort criterion.) Information on the number of heating systems repaired or replaced under Warm Front is used later in this report to provide a broad indication of the scheme's 'hidden' contribution to the decent homes target.

About a quarter of grants are for minor measures only, such as draught-proofing or energy efficient light bulbs, which are relatively inexpensive, but have no impact on the decent home status of the dwelling. Statistics are presented separately for all grant recipients and for recipients of non-minor measures, in order to isolate the impact of 'significant' measures, such as loft insulation, cavity wall insulation, and/or new central heating systems. Other measures, such as the installation of fixed room heaters, are significant in cost terms, but do not affect the decent home status of the property (which requires central heating to be present). These are referred to as significant non-relevant measures for the purposes of this analysis, though of course they do make a valuable contribution to reducing fuel poverty.

⁶ This is based on the initial assumption that dwellings built after 1980 automatically meet the Decent Homes Standard. This assumption has been subsequently revised in published EHCS statistics to all dwelling built post 1990. This assumption leads to an underestimate of vulnerable households living in homes which fail the thermal comfort criterion by between 4 and 5%.

⁷ Eaga's database does not contain information on whether the main heating system is non-functioning, though we can infer this in cases where the system has been replaced or repaired under Warm Front.

Characteristics of Warm Front recipients

Over the five period covered by this analysis (from mid-2000 to early/mid 2005), 808,244 private sector households in England received measures under the Warm Front scheme. By definition, all these households were “vulnerable” (as defined for the purposes of the decent homes target) as they have to be in receipt of a means-tested or disability-related benefit to be eligible for a grant⁸.

Table 1 provides a breakdown of grant recipients and grant expenditure by household and dwelling characteristics, using data from the 2003 English House Condition Survey (EHCS). For comparison, these are presented alongside the characteristics of all home owners and private sector tenants in England. Certain groups are represented disproportionately among grant recipients, including pensioner households who comprise 42 per cent of Warm Front recipients (and 45 per cent of recipients of non-minor measures), but only around 30 per cent of all private sector households. Not surprisingly given the eligibility criteria, grant recipients are much more likely than average to be in receipt of a means-tested benefit and much more likely to be living in one of the most deprived areas. (The latter effect is accentuated by the area-based marketing strategies used by both scheme managers).

Again, not surprisingly, grants are skewed towards people living in the least energy efficient dwellings, including a disproportionate share of homes without central heating, who stand to benefit most from this scheme. Grant expenditure is even more strongly skewed towards the least energy efficient homes, because they generally receive more expensive measures than more efficient homes that already have many or all of the significant measures available under the scheme. Thus, homes without central heating comprise 6 per cent of all private sector households in England, but account for 20 per cent of all Warm Front recipients and 36 per cent of all Warm Front expenditure. Older dwellings are also over-represented among grant applicants, except for the very oldest age category (pre-1900).

Private tenants are under-represented among recipients of non-minor measures, accounting for 12 per cent of all private sector households, but only 8 per cent of recipients of non-minor measures. This is in spite of the fact that private rented sector dwellings are, on average, less energy efficient and more likely to fail the Decent Homes Standard than owner-occupied dwellings. Detached properties are also under-represented, presumably because the occupants are generally better-off (and, therefore, less likely to qualify for Warm Front). Single non-pensioners and couples with and without children are also under-represented among Warm Front recipients.

⁸ All Warm Front grant recipients are “vulnerable”, but not all “vulnerable” households are eligible for Warm Front.

Table 1: Characteristics of Warm Front recipients*percentage*

	Share of Warm Front grants All grants	Share of Warm Front grants All non- minor grants	Share of all Warm Front expenditure	All private sector households ¹
Occupancy type:				
Single non-pensioner	4	4	3	17 ²
Single with children ²	14	13	11	4 ²
Couple with children ²	20	19	15	22 ²
Single older person	23	24	30	13 ²
Older couple	19	21	21	18 ²
Other (incl. non-pensioner couples)	19	20	20	26 ²
Tenure:				
Owner-occupier	89	92	92	88
Private rented	11	8	8	12
Receipt of benefits:				
In receipt of means-tested benefit ³	57	56	59	11
Local deprivation:				
NRF districts ⁴	58	58	59	37
Dwelling type:				
Detached	12	12	11	26
Semi-detached	39	42	39	33
Terraced	45	43	45	29
Flat/maisonette	5	3	4	11
Dwelling age⁵:				
Pre-1900	11	10	11	14
1900-49	48	47	49	29
1950-64	20	22	21	18
1966-81	16	17	15	21
Post-1981	5	4	4	18
No central heating system:	20	21	36	6
SAP rating⁶:				
Less than 25	17	19	31	6
25-45	30	31	35	27
45-65	46	45	31	51
65 or over	7	5	3	16

1. Own estimates based on data from the 2003 English House Condition Survey This brings together data from the first two years of the EHCS continuous survey (i.e. 2002/03 and 2003/04).

2. Based on the composition of main benefit unit (incorporating the household reference person). Anyone aged under 16 is counted as a child and anyone aged 60 or over is counted as an older person (matching the eligibility criteria for Warm Front). There is some uncertainty about how certain types of household are categorised in the Warm Front data base (e.g. whether an older couple who were living with their grown up son or daughter would be counted in the "older couple" or "other" category). So, the definitions used in our EHCS-based analysis may not match precisely those applied by Warm Front surveyors in practice.

3. One of the following: Income Support, Housing Benefit, Working Families Tax Credit or Disabled Person's Tax Credit, Disability Living Allowance, Attendance Allowance, War Disablement Pension, Industrial Injuries Disablement Benefit.

4. The 88 most deprived districts in England supported by the Neighbourhood Renewal Fund.

5. Age categories in the EHCS do not quite match those in the Warm Front database. They are: pre-1900, 1900-44, 1945-64, 1965-80, post-1980).

6. SAP ratings based on the 2001 SAP methodology.

Proportion of Warm Front recipients living in non-decent homes

Given the profile of Warm Front recipients (low income households in less efficient dwellings), we would expect the prevalence of non-decent homes to be greater among this group than among the population as a whole. According to our estimates, 44 per cent of all grant recipients (and 47 per cent of those receiving non-minor measures) were living in homes that failed the thermal comfort criterion when they applied to the scheme, compared with only 25 per cent of all private sector households. Thus, Warm Front applicants are nearly twice as likely to be living in a non-decent home (on the thermal comfort criterion) than other private sector households. The prevalence of non-decent homes is particularly high among Warm Front recipients in the private rented sector (57 per cent) and among single pensioners (49 per cent), as well as applicants living in the oldest and least energy efficient dwellings. It also varies considerably between the least deprived areas (35 per cent) to the most deprived areas (48 per cent) and between regions (from 31 per cent in the North East to 53 per cent in Yorkshire and Humberside). These figures are presented in Table 7 alongside estimates of the proportion of these homes made decent as a result of Warm Front.

Reasons for failing standard

The reasons for failing the thermal comfort criterion are examined in Table 2 (see Annex D for a breakdown by household and dwelling type). As already noted, nearly six in ten grant recipients already meet the standard prior to any improvements made. Of those homes that did not meet the standard (the right-hand column), just over a half (55 per cent) required improved insulation measures only in order to meet the standard. In most of these cases, loft insulation would be sufficient. In the remaining 45 per cent of cases, central heating is required to meet the standard. In the majority of these homes, gas central heating alone would be sufficient to meet the standard, though a significant proportion would require both central heating and better insulation (either loft or cavity wall insulation).

Table 2: Reasons for failing thermal comfort criterion of the Decent Homes Standard

	All grant recipients ¹	All homes failing thermal comfort criterion
Passes thermal comfort	57%	–
Inadequate loft insulation	10%	22%
Inadequate loft OR cavity wall insulation	10%	24%
No cavity wall insulation	2%	4%
Inadequate loft AND cavity wall insulation	2%	5%
Inadequate heating only ²	14%	33%
Inadequate heating AND insulation	5%	12%

1. In a small number of cases, the reasons cannot be discerned due to missing or incomplete information on the standard of heating and/or insulation prior to Warm Front.

2. Dwelling would meet thermal comfort criterion if fitted with gas central heating (though not necessarily with electric central heating).

Measures installed under Warm Front

Table 3 provides information on the different measures installed under Warm Front (see Annex C for a breakdown by household and dwelling type). The most common measures, other than minor measures such as energy efficient light bulbs, are loft insulation (47 per cent of all Warm Front recipients) and cavity wall insulation (34 per cent). New central heating systems were installed in 12 per cent of all homes, whilst existing systems were repaired or replaced in 19 per cent of cases. These proportions are higher still when recipients of minor measures only are omitted from the analysis.

Table 3: Individual measures installed under Warm Front

	Number of households	As a percentage of:	
		All Warm Front recipients	Recipients of non-minor measures
Individual measures			
<i>Significant, relevant measures:</i>			
New gas central heating	81,009	10	13
New electric central heating	19,849	2	3
Cavity wall insulation	277,248	34	46
Loft insulation	379,129	47	63
<i>Significant, non-relevant measures:</i>			
Replacement boiler	53,495	7	9
Repairs to existing heating system	75,442	9	13
Fixed gas or electric heaters	32,542	4	5
New water heating system	3,450	<0.5	1
Connection to gas network	3,804	<0.5	1
<i>Minor measures:</i>			
Draught-proofing	333,581	41	44
Hot water tank jacket	105,381	13	16
Energy efficient light bulbs	796,437	99	98
Security measures	33,701	4	4

Table 4 shows the different packages of measures installed under Warm Front in terms of their significance and relevance for decent homes. In around a quarter of cases, only minor measures were installed, although these account for only 3 per cent of total grant expenditure. A further 6 per cent of grants and 11 per cent of expenditure is on significant measures that are not relevant to the thermal comfort criterion of the Decent Homes Standard, such as fixed room heaters, new hot water systems, and repairs to existing heating systems⁹. Thus, around two thirds of grants and five sixths of grant expenditure are on packages of measures that are directly relevant to the thermal comfort criterion of the Decent Homes Standard, including one or more of the following: loft insulation, cavity wall insulation, and new central heating systems. Most grants are for insulation measures only, though the installation of new central heating systems (with and without insulation measures) accounts for over a third of total grant expenditure.

⁹ These measures will still have a positive impact on the thermal comfort of occupants and, in the case of repairs to existing heating systems, may contribute to the repair criterion of the Decent Homes Standard.

Some of these grants are on dwellings that already meet the Decent Homes Standard: for example, installing cavity wall insulation in a property that already has gas central heating and adequate loft insulation. However, grants to homes that already meet the Decent Homes Standard are, on average, smaller than grants to homes that initially fail the standard (£480 versus £810). As a result, non-decent homes account for a larger share of grant expenditure than of grants. Hence, just over a half of all Warm Front expenditure (52 per cent) and just over a third of all grants (34 per cent) goes on significant and relevant measures in homes that do not initially meet the thermal comfort criterion (the shaded boxes in Table 4) – and which will have helped to convert non-decent into decent homes. 57 per cent of all expenditure on significant measures and 60 per cent of all expenditure on significant and relevant measures goes on homes that do not initially meet the thermal comfort criterion.

Table 4: Packages of measures installed under Warm Front

	All Warm Front recipients:		Decent homes:		Non-decent homes:	
	% of grant recipients	% of grant expenditure	% of grant recipients	% of grant expenditure	% of grant recipients	% of grant expenditure
Packages of measures:						
Minor measures only ¹	25	3	17	2	8	1
Significant, non-relevant measures ²	5	11	3	8	2	3
Non minor relevant measures:						
Loft insulation only ³	25	19	14	10	11	9
Cavity wall insulation only ³	14	10	11	8	3	3
Cavity wall and loft insulation ³	18	19	9	10	9	10
New central heating	6	16	1	3	5	13
New central heating and insulation	6	20	1	3	5	17
Total	100	100	56	43	44	57
<p>1. Draught-proofing, energy efficient light-bulbs, hot water tank jacket, and/or security measures, but with no significant measures.</p> <p>2. Fixed gas or electric heaters, new water heating system, repairs to existing heating system, connection to gas network.</p> <p>3. May include other significant measures that are not relevant to the thermal comfort criterion.</p>						

Impact on non-decent homes

The overall impact on the number of non-decent homes is summarised in Table 5 below, which shows the number of homes made decent by Warm Front (on the thermal comfort criterion), as well as the number of homes remaining decent and non-decent. Between mid-2000 and early/mid-2005, we estimate that nearly 200,000 homes were made decent in terms of thermal comfort as a direct result of the measures installed under the Warm Front programme. This corresponds to a quarter of all Warm Front recipients (or one third of all recipients of non-minor measures). This share increased from 20 per cent in 2000 to 29 per cent and then fell marginally in the two most recent years. The peak in 2003 coincided with a substantial increase in the number of new central heating systems being installed, possibly because the scheme managers were dealing with a back-log of applications that had built up in the early years of Warm Front (due to a shortage of qualified heating installers). Twenty-one per cent of grants in 2003 were for new central heating systems, compared with only 5 per cent in 2000 and 12 per cent over the period as a whole. This also accounts for the relatively high level of expenditure in that year and the relatively high proportion spent on non-decent homes.

Conversely, 18 per cent of Warm Front grants (and 15 per cent of grant expenditure) went to homes that remained non-decent following the measures installed under this scheme (though some of these homes will now be closer to meeting the Decent Homes Standard).

The effectiveness of the scheme in reducing the number of non-decent homes varies significantly depending on the nature of the measures installed and the characteristics of the dwelling and their occupants. Table 6 shows that, as we would expect, the proportion of homes made decent is higher the more intensive (and expensive) the package of measures installed. Over 80 per cent of homes that received both a new central heating system and either loft and/or cavity wall insulation were made decent as a result of the measures installed under Warm Front. (In principle, all homes that require a new central heating system should be non-decent prior to installation. This is not the case in practice either because these homes already had a (non-functioning) central heating system prior to Warm Front or because the dwelling was built post-1981 (and was, therefore, automatically assumed to meet the Decent Homes Standard, even if it did not have central heating¹⁰.) At the other extreme, none of the dwellings that received minor measures only were made decent.

Table 5: Impact of Warm Front on decent home status by calendar year¹¹

	Homes remaining non-decent	Homes made decent	Homes remaining decent	Total
Number of grants:				
2000	4,354	4,779	15,092	24,225
2001	28,288	31,942	68,061	128,291
2002	40,075	41,246	107,831	189,152
2003	35,191	57,086	103,790	196,067
2004	25,170	39,639	101,187	165,996
2005 ²	9,909	19,297	41,338	70,544
Total	142,987	193,989	437,299	774,275
Percentage of grants:				
2000	18	20	62	100
2001	22	25	53	100
2002	21	22	57	100
2003	18	29	53	100
2004	15	24	61	100
2005 ²	14	27	59	100
Total	18	25	56	100

¹⁰ This is to be consistent with the initial assumption used to produce the government's statistics on the number of decent homes (using data from the English House Condition Survey). This assumption has since been revised for all EHCS based analysis to all dwellings built after 1990 automatically meet the standard.

¹¹ Up to July 2005 (for Eaga applicants) and January 2005 (for Powergen applicants).

**Table 5: Impact of Warm Front on decent home status by calendar year¹
(continued)**

	Homes remaining non-decent	Homes made decent	Homes remaining decent	Total
Grant expenditure (£m):				
2000	1	3	4	8
2001	12	21	22	55
2002	15	30	40	85
2003	19	73	49	140
2004	15	41	55	111
2005 ²	9	33	42	84
Total	71	201	211	483
Percentage of expenditure:				
2000	15	34	51	100
2001	23	38	39	100
2002	17	35	47	100
2003	13	52	35	100
2004	13	37	49	100
2005 ²	11	40	50	100
Total	15	42	44	100
<p>1. Around 4% of grant recipients are excluded from this analysis, because there is not enough information to establish whether their homes would have met the Decent Homed Standard either before and/or after the measures installed under Warm Front.</p> <p>2. Up to July 2005 (for Eaga applicants) and January 2005 (for Powergen applicants).</p>				

Table 6: Decent home status pre- and post-scheme by household characteristics

percentage

	homes remaining non-decent	homes made decent	homes remaining decent	all homes that were non-decent prior to Warm Front	non-decent homes that were made decent by Warm Front
Measures installed:					
Central heating + insulation	4	81	14	86	95
Central heating	23	58	19	81	72
Cavity wall + loft insulation	7	42	51	49	85
Cavity wall insulation only	13	10	77	23	45
Loft insulation only	14	31	56	44	69
Other non-relevant measures	36	0	64	36	0
Minor measures only	33	0	67	33	0
All Warm Front recipients	18	25	56	44	58
Recipients of non-minor measures	14	34	53	47	71

Of the other packages of measures, “loft insulation only” appears to be a very cost-effective means of reducing the number of non-decent homes, because it is relative inexpensive¹² and yet has a relatively high success rate in terms of making non-decent homes into decent homes (31 per cent of all homes that receive loft insulation alone are made decent, including 69 per cent of those homes that were initially non-decent). Cavity wall insulation appears to be less cost-effective in these terms, largely because a high proportion of these homes already met the thermal comfort criterion of the Decent Homes Standard prior to receiving this measure. (A dwelling that has central heating and a moderate amount of loft insulation will meet the thermal comfort criterion without the need for cavity wall insulation.) This does not mean that installing cavity wall insulation is not worthwhile, especially if the occupants are fuel poor, because it will still improve the thermal comfort of the occupants and/or reduce their heating costs, but it will not contribute to meeting the decent homes target.

The next two Tables examine the impact of Warm Front measures according to the characteristics of the household (Table 7) and the dwelling (Table 8). The proportion of homes made decent is greatest for dwellings occupied by older people (especially those in receipt of means-tested benefits), partly because these households were more likely to be living in non-decent homes (pre-Warm Front) and partly because many of these households were eligible for new central heating systems, as well as insulation measures, under Warm Front Plus¹³.

¹² The mean and median cost of the different packages of measures are as follows: minor measures only (£80, £35), significant non-relevant measures (£1250, £1060), loft insulation only (£490, £300), cavity wall insulation only (£460, £330), loft and cavity wall insulation (£710, £570), central heating only (£1660, £1730), central heating and insulation (£2050, £2140).

¹³ Until June 2005, other qualifying groups were not eligible for new central heating systems.

Table 7: Decent home status pre- and post-Warm Front by household characteristics

All Warm Front recipients, including recipients of minor measures only

percentage

	homes remaining non-decent	homes made decent	homes remaining decent	all homes that were non-decent prior to Warm Front	non-decent homes that were made decent by Warm Front
All households	18	25	56	44	58
Household type:					
Single non-pensioner	27	20	53	47	42
Single with children	23	19	58	42	46
Couple with children	22	20	57	43	48
Single pensioner	17	31	51	49	64
Pensioner couple	13	27	60	40	68
Other	16	25	58	42	61
Tenure:					
Owner-occupied	17	25	58	42	60
Private rented	34	23	43	57	41
Qualifying criteria:					
Old + means-tested benefit	16	34	50	50	69
Child + means-tested benefit	28	18	54	46	39
Child + tax credit	21	21	58	42	50
Disability-related benefit	17	20	63	37	54
Region:					
North East	11	20	69	31	64
North West	22	25	53	47	53
Yorks & Humbs	25	28	47	53	53
East Midlands	14	26	60	40	66
West Midlands	17	27	55	45	62
East of England	16	25	58	42	61
London	17	24	60	40	58
South East	16	22	62	38	58
South West	19	27	54	46	58
Local deprivation:					
20% most deprived areas	24	24	52	48	50
20-40%	18	26	56	44	59
40-60%	16	27	58	42	63
60-80%	13	26	61	39	66
20% least deprived areas	11	24	65	35	69
NRF-88 authority	20	25	55	45	55
Non NRF-88 authority	16	25	59	41	61

Table 8: Decent home status pre- and post-Warm Front by dwelling characteristics

All Warm Front recipients, including recipients of minor measures only

percentage

	homes remaining non-decent	homes made decent	homes remaining decent	all homes that were non-decent prior to Warm Front	non-decent homes that were made decent by Warm Front
All households	18	25	56	44	58
Dwelling type:					
Detached	9	23	69	31	72
Semi-detached	13	26	62	38	67
Terraced	24	26	50	50	52
Flat/maisonette	38	15	47	53	28
Age of dwelling:					
Pre-1900	30	31	39	61	51
1900-49	22	27	52	48	55
1950-65	14	25	61	39	63
1966-81	13	24	63	37	65
Post-1981 ¹⁴	0	0	100	0	–
Heating system:					
Central heating	8	22	70	30	73
of which: Gas	5	20	75	25	80
Oil	4	25	71	29	87
Electric	43	33	24	76	43
Solid fuel	42	50	9	91	54
Room heaters	59	38	2	98	39
of which: Gas	57	41	2	98	42
Electric	73	23	4	96	24
Solid fuel	61	38	1	99	39
Wall construction					
Solid/stone/timber	26	28	46	54	53
Unfilled cavity	16	28	56	44	63
Filled cavity	9	9	82	18	49
Other	22	9	68	32	29
Loft insulation					
No loft space	39	17	44	56	30
<50mm	27	64	9	91	71
50-149mm	14	10	77	33	42
150mm+	12	12	76	24	52
SAP rating:¹⁵					
<25	41	32	27	73	44
25-35	32	39	30	70	55
35-45	17	36	46	54	68
45-55	10	23	67	33	70
55-65	8	11	81	19	60
65 and over	8	5	87	13	40

¹⁴ All buildings built post-1981 are automatically assumed to meet the thermal comfort criterion.

¹⁵ SAP figures are based on the SAP 2001 methodology.

The effectiveness of Warm Front measures (in terms of their contribution to meeting the Decent Homes target) does not vary substantially either between tenures, regions, or more or less deprived areas. Private rented dwellings and dwellings in more deprived areas are more likely to fail the Decent Homes Standard prior to Warm Front, but the measures installed under the scheme are more likely to fall short of what is required to meet the standard.

For the same reasons, the proportion of homes made decent is higher for dwellings with moderate/low energy efficiency rating (with a SAP of between 25 to 45 prior to Warm Front) than it is for the least energy efficient dwellings (with a SAP of less than 25). But, as we might expect, the impact of the scheme is least for those dwellings with the highest initial SAP ratings, because most of these homes already meet the Decent Homes Standard (including 87 per cent of dwellings with a SAP rating of 65 or over).

The proportion of homes made decent is relatively high for older dwellings, homes without central heating, and those with low levels of loft insulation pre-Warm Front. In the latter case, topping up the existing loft insulation is often all that is required to meet the Decent Homes Standard (when, as in most cases, these homes already have gas central heating). The proportion of homes made decent is relatively low for flats, compared to other dwelling types; though many of these do not meet the thermal comfort criterion prior to Warm Front, the majority of these homes remain non-decent after the measures installed under the scheme. Most of these dwellings have no loft space and would require cavity wall insulation to meet the thermal comfort criterion, but this is only installed in a small minority of cases. Hence, a very high proportion of flats receive minor measures only (54 per cent of all flats and 44 per cent of non-decent flats). Even when new central heating systems are installed in flats, around half of them still fail the thermal comfort criterion, because of inadequate insulation.

Adequacy of measures installed under Warm Front

Table 9 examines the adequacy of the measures installed under Warm Front, focusing on those homes that were initially non-decent. In around fifth of cases, only minor or non-relevant measures were installed even though these dwellings needed improved insulation and, in some cases, a new central heating system in order to meet the Decent Homes Standard. In a further fifth of cases, some significant measures were installed, but these were insufficient to meet the standard. The majority of these are homes that required a new central heating system, but received insulation measures only, in most cases because they were not eligible for Warm Front Plus. (Under the new rules of the scheme, these households will now be eligible for a new central heating system.) In the remaining cases (57 per cent of applicants in non-decent homes), the measures installed were sufficient to ensure they met the thermal comfort criterion and, in some cases, more than what was strictly required. Most of the latter group are homes that required either loft or cavity wall insulation, but received both. Some homes required a new central heating system only, but received additional insulation measures, too.

The proportion of dwellings that received the required (or more-than-the-required) measures was significantly greater for low income older people who (at the time) were the only group eligible for Warm Front Plus (nearly 70 per cent of this group, compared with 50 per cent of those only eligible for Warm Front.).

Annex E provides a more detailed cross-tabulation of the measures installed under Warm Front against those required to meet the thermal comfort criterion.

Table 9: Adequacy of Warm Front measures installed in non-decent homes

percentage

	All non-decent homes	<i>of which:</i>	
		Warm Front Plus	Warm Front
Minor measures only	19	15	22
Other non-relevant measures	5	2	6
Some measures, but not sufficient	19	14	22
Required measures installed	34	42	29
More than required measures installed	23	27	21
Total	100	100	100

Impact of replacement and repairs of central heating systems

As noted earlier, the thermal comfort criterion of the Decent Homes Standard is assessed on the basis of the heating system recorded in the survey regardless of whether that system is operational. Thus, homes that have a non-functioning central heating system prior to Warm Front are assumed to meet the thermal comfort criterion of the standard. (Although these homes may well meet the thermal comfort criterion of the Decent Homes Standard, they may fail on the repair criterion and therefore be non-decent.). This means that our previous analysis will tend to under-estimate the number of Warm Front applicants living in non-decent homes. It will also tend to under-estimate the contribution of Warm Front to the achievement of decent homes objective, by not taking into account the positive impact of replacing and/or repairing non-functioning central heating systems.

This ‘hidden’ contribution of Warm Front to the decent homes target can be estimated, by assuming that central heating systems that are replaced or repaired under Warm Front would previously have failed the Decent Homes Standard. This will be an upper bound estimate, because not all the homes with systems that are replaced or repaired would necessarily have failed the Decent Homes Standard¹⁶.

¹⁶ To fail on the repair criterion, the central heating system would have to be in need of major repair and be older than its standard lifetime (assumed to be 15 years for gas boilers, 40 years for central heating distribution systems, and 30 years for other heating components).

Over the five year period covered by this analysis, around 96,000 homes (or around 12 per cent of all grant recipients) had their central heating system repaired or replaced under Warm Front. Of these 25,000 had new (mostly gas-based) systems installed, 39,000 had replacement boilers, and 31,000 had repairs done to an existing heating system. Two thirds of these dwellings meet the thermal comfort criterion of the Decent Homes Standard. If, however, we assume as an upper bound estimate that all these homes would have failed the Decent Homes Standard on the repair criterion, then the proportion of all grant recipients living in non-decent homes (pre-Warm Front) rises from 44 per cent to 52 per cent. There is also a corresponding rise in the proportion of homes made decent by Warm Front (from 25 per cent to 33 per cent), since virtually all these homes will meet the Decent Homes Standard following the repairs (and other work) carried out under the scheme.

Table 10: Estimation of the ‘hidden’ contribution of Warm Front to the decent homes target (upper bound estimates)

	Homes remaining non-decent	Homes made decent	Homes remaining decent
Original estimates: (unadjusted for replacement/repairs)			
Number of dwellings	142,987	193,989	437,299
% of Warm Front recipients	18%	25%	56%
Adjusted estimates: (adjusted for replacement/repairs)			
Number of dwellings	143,166	258,951	373,839
% of Warm Front recipients	18%	33%	48%
1. All homes that have had their heating system replaced or repaired under Warm Front are assumed to fail the Decent Homes Standard (on the repair criterion) prior to this work being carried out.			

Thus, the ‘hidden’ contribution of Warm Front to the decent homes target is potentially very significant, increasing by 65,000 the numbers of dwelling made decent as a result of the measures installed under the scheme (see Table 10). This will be an upper bound estimate, because some of the faults repaired by Warm Front may be quite minor (eg a faulty thermostat) and not sufficient to have failed the repair criterion of the Decent Homes Standard¹⁷.

¹⁷ Even more serious faults would not necessarily mean that a property failed the repair criterion if the system were younger than the assumed standard lifetime.

Summary

Over the period covered by this analysis (mid-2000 to early/mid-2005), over 800,000 vulnerable private sector households in England received a Warm Front grant. Just under half of all these grants (44 per cent) went on homes failing on the thermal comfort criterion and less than a fifth of all grant recipients (18 per cent) were still living on non-decent homes post-Warm Front. Thus over the first five years of the scheme, nearly 200,000 dwellings were made decent as a direct result of the measures installed under the scheme – a quarter of all Warm Front recipients or one third of all recipients of non-minor measures. On the one hand, this may over-estimate the reduction in non-decent homes, because some of these homes, whilst meeting the thermal comfort criterion, may still fail the Decent Homes Standard on one of the other criteria. On the other hand, this estimate does not take into account the scheme's 'hidden' contribution to the decent homes target from repairs to existing heating systems, increasing by up to 65,000 the number of dwellings made decent by Warm Front. Table 11 summarises the potential contribution of the Warm Front scheme to meeting the decent homes target for the private sector.

The effectiveness of the scheme is due in part to the way the scheme is targeted. All Warm Front recipients are "vulnerable" (as defined for the purposes of the decent homes target) as they have to be in receipt of a means-tested or disability-related benefit in order to qualify for the scheme. Certain 'high-risk' groups are represented disproportionately among grant recipients, including pensioner households, occupants of less energy efficient dwellings, and low income households living in the poorest areas. Private tenants and occupants of the oldest dwellings are, however, under-represented, even though they are more likely than average to be living in a non-decent home.

Of those homes that did not satisfy the thermal comfort criterion prior to Warm Front, just over half required improved insulation alone (mostly better loft insulation) to meet the standard and just under half required a new central heating system. The majority of non-decent homes (nearly six in ten) had all the required measures installed under Warm Front. In the remainder of cases, the measures were either insufficient to meet the standard (mostly homes that were lacking central heating, but received insulation measures only) or only minor measures were provided (possibly because the occupants turned down other measures). Since June 2005, grants for new central heating systems are no longer restricted to low income pensioner households, which should help to increase the effectiveness of the scheme, by redressing the imbalance between the measures required to meet the thermal comfort criterion and the measures available to grant applicants. It is noteworthy that the peak in the effectiveness of the 'old' scheme in 2003 coincided with a surge in the number of new central heating systems installed in that year. For the same reason, the proportion of homes made decent by Warm Front was significantly greater for older people in receipt of means-tested benefits, who (until recently) were the only group eligible for Warm Front Plus. The proportion of homes made decent is also relatively high for dwellings which initially have low levels of loft insulation, since topping up the existing loft insulation is often all that is required for these homes to meet the Decent Homes Standard. The proportion of homes made decent is relatively low for flats and lower-than-expected for the least energy efficient dwellings, at least in part because these homes are more difficult or more expensive to raise up to the standard.

Table 11: Key statistics summarising the impact of Warm Front on the Decent Homes Standard

	Mid-2000-early/ mid-2005
No. of Warm Front recipients	808,000
% of all recipients in non-decent homes pre-Warm Front	44%
No. of homes receiving new gas/electric central heating system	101,000 (12%)
No. of homes receiving cavity wall insulation	277,000 (34%)
No. of homes receiving loft insulation	379,000 (47%)
No. of homes receiving minor measures only	207,000 (26%)
% of grant expenditure on minor measures only	3%
% of grant expenditure on non-decent homes	56%
Number of homes made decent as a result of Warm Front	194,000-259,000 ¹
% of homes made decent by Warm Front	25-33% ¹
% of homes remaining non-decent (post-Warm Front)	18%
% of homes remaining decent	49-56%
% of non-decent homes made decent by Warm Front	58%
% of non-decent homes receiving minor measures only	19%
<p>1. Upper bound estimate includes all homes that had their heating systems repaired or replaced under Warm Front on the assumption that they would have failed the disrepairs criterion of the Decent Homes Standard (see Table 10 and accompanying text).</p>	

ANNEX A

Warm front eligibility

Warm Front is available to home owners and private sector tenants, who may be able to claim a grant of up to £2,700. The following groups are eligible for a grant under the Scheme:

1. Householders aged 60 or over **and** are in receipt of one or more of the following benefits:

- Income Support
- Council Tax Benefit
- Housing Benefit
- Job Seekers Allowance (Income Based)
- Pension Credit

OR

2. Householders who (a) have a child under 16, or (b) are pregnant and have been given maternity certificate MAT B1 in relation to the pregnancy concerned, and are also in receipt of one or more of the following benefits:

- Income Support
- Council Tax Benefit
- Housing Benefit
- Income Based Jobseeker's Allowance
- Pension Credit

OR

3. Householders in receipt of one or more of the following benefits:

- Working Tax Credit with income of less than £15,050 and which must include a disability element
- Disability Living Allowance
- Child Tax Credit with an income of less than £15,050

- Housing Benefit + Disability Premium
- Income Support + Disability Premium
- Council Tax + Disability Premium
- War Disablement Pension (+ Constant Attendance Allowance or Mobility Supplement)
- Industrial Injuries Disablement Benefit + Constant Attendance Allowance
- Attendance Allowance

NOTES:

- **Householder includes the applicant's spouse, or partner, if they are living with the applicant. Partner means the spouse of the person with whom the applicant lives as husband or wife or civil partner**
- **If the property has previously received any measures under Warm Front, the value of the grant available to the existing householder under Warm Front will be the balance of £2,700 or £4,000 if oil central heating is involved, less the value of all works previously completed in the property under Warm Front since June 2000.**

ANNEX B

Table B1: List of key variables in the integrated Eaga/ Powergen database of Warm Front recipients

Tenure	Owner-occupied or privately rented. (Social sector dwellings are excluded from the database.)
Household composition	Eight categories: single adult, single adult with one child, single adult with two or more children, two adults with one child, two adults with two or more children, single pensioner, two pensioners, none of above (includes couples without children)
Benefits received	Benefit received, including: income support, housing benefit, council tax benefit, job-seeker's allowance, working families tax credit, attendance allowance, and disability living allowance.
Location	Postcode sector, which is used to map in ward-level index of deprivation and to identify NRF-88 authorities.
Property type	Derived variable with four categories: detached, semi, terraced or flat.
Construction date	Derived variable with five categories: Pre-1900, 1900-49, 1950-65, 1966-81, Post-1981.
Other property characteristics	Number of bedrooms and floor area (Eaga only).
Main heating system	Derived variable with seven categories: gas central heating, oil central heating, electric central heating (storage heaters), solid fuel central heating, gas room heaters, electric room heaters, and solid fuel room heaters.
Main heating fuel	Derived variable with five categories: mains gas, oil, on peak electric, off peak electric, or solid coal/other.
Wall insulation	Derived variable with four categories: solid/stone/timber, empty cavity, filled cavity, other.
Loft insulation	Derived variable with four categories: no loft space, <50mm insulation, 50-149mm, 150mm or more.

Table B1: List of key variables in the integrated Eaga/ Powergen database of Warm Front recipients (continued)

Individual measures installed under Warm Front	Thirteen derived variables flagging the individual measures installed under Warm Front: energy efficient light-bulbs, hot water tank jacket, security measures, draught-proofing, fixed heaters, repairs to heating system, boiler replaced, connected to gas network, new water heating system, lofty insulation, cavity wall insulation, new electric central heating system, new gas central heating system.
Package of measures installed under Warm Front	Derived variable with seven categories: minor measures only, significant non-relevant measures, loft insulation only, cavity wall insulation only, loft and cavity wall insulation, central heating only, central heating and either loft and/or cavity wall insulation.
Installation costs	Total cost of measures installed under Warm Front, excluding administrative costs.
Energy efficiency rating (SAP), before (and after) measures installed under Warm Front.	Based on information on the type of property, construction date, heating system, and insulation (plus information on measures installed under the Warm Front scheme for the post-Warm Front SAP rating).
Completion date	Year and month that invoice was processed.
Decent Home status	Derived variable identifying whether the dwelling meets the thermal comfort criterion of the Decent Homes Standard, as defined in Annex B.
Reasons for failing Decent Home standard	Derived variable, identifying the (minimum) measures required to meet the thermal comfort criterion (for non-decent homes only). Six categories: loft insulation only, loft or cavity wall insulation, cavity wall insulation only, loft and cavity wall insulation, central heating only, central heating and loft/cavity wall insulation.
Adequacy of measures installed under Warm Front	Derived variable identifying the adequacy of measures installed (in relation to what was required to meet the thermal comfort criterion). Five categories: minor measures only, significant non-relevant measures, significant but insufficient measures, required measures installed, more than required measures installed.

ANNEX C

Definition of thermal comfort criterion

Dwellings that lack central heating automatically fail the Decent Homes Standard. Most systems are considered adequate (with the exception of electric warm air systems).

Dwellings with systems that are not fully operational can still meet the thermal comfort criterion (although they may fail on the repair criterion).

Dwellings with central heating also need to meet certain specified standards of insulation, depending on the type of central heating system.

Gas or oil central heating systems

	No cavity wall space	Cavity wall space, but not filled	Cavity wall and filled
No loft space	Pass	Fail	Pass
Loft space and less than 50mm insulation	Fail	Fail	Pass
Loft space and between 50-150mm insulation	Pass	Pass	Pass
Loft space and at least 150mm ¹ insulation	Pass	Pass	Pass

Electric or solid fuel central heating systems

	No cavity wall space	Cavity wall space, but not filled	Cavity wall and filled
No loft space	Pass	Fail	Pass
Loft space and less than 50mm insulation	Fail	Fail	Fail
Loft space and between 50-150mm insulation	Fail	Fail	Fail
Loft space and at least 150mm ¹ insulation	Pass	Fail	Pass

1. Strictly, this should be 200mm, but 150mm is used in order to be consistent with EHCS-based definition.

The Decent Homes Standard is designed to measure the scope for improvement. So, for example, a dwelling with electric central heating and no cavity space or loft space would pass, even though it may not be very energy efficient, because there is no easy or cost-effective way to make it more energy efficient. On the other hand, a similar dwelling that had adequate loft insulation, but an unfilled cavity wall, would fail the standard, because there is scope for cost-effective improvements to be made (by filling the cavity space).

Dwellings are automatically assumed to meet the standard if they were built after 1981, which is as near as we could get to the assumption made in the EHCS-based analysis that all dwellings built after 1980 automatically meet the standard¹⁹.

In some cases, information on measures installed under Warm Front is used to fill in some missing details about the characteristics of the dwelling prior to improvements or over-ride information provided elsewhere in the questionnaire. For example, where dwellings have had cavity wall insulation installed, then it is assumed that they must have had a cavity space that was previously unfilled, even if the data reported otherwise.

¹⁹ This assumption has since been revised for EHCS-based analysis, to all dwellings built after 1990 automatically meet the standard.

ANNEX D

Table D1: Reasons for failing thermal comfort criterion and measures installed by household characteristics

Percentage

	Reasons for failing standard:		Measures installed under Warm Front:			
	Inadequate Insulation only	Inadequate heating	Minor measures only	Other non-relevant measures	Insulation only	New central heating
Type of household:						
Single non-pensioner	24	22	32	7	52	9
Single with children	27	16	32	7	57	4
Couple with children	26	16	28	7	61	4
Single pensioner	21	27	24	4	48	24
Pensioner couple	23	17	21	5	60	14
Other	23	18	23	6	59	12
Tenure:						
Owner-occupier	23	18	23	6	58	12
Private tenant	27	30	46	2	39	13
Qualifying criteria:						
Old + means-tested benefit	20	29	22	5	46	27
Child + means-tested benefit	26	19	38	7	50	5
Child + tax credit	26	15	25	7	64	4
Disability-related benefit	25	12	25	5	65	5
Region:						
North East	23	7	22	4	67	7
North West	21	25	25	6	54	15
Yorks & Humbs	23	30	27	6	56	11
East Midlands	26	13	28	6	60	6
West Midlands	22	22	22	5	55	17
East of England	27	15	28	5	60	6
London	28	12	35	8	46	11
South East	24	14	26	5	57	12
South West	26	20	21	5	56	19
Local deprivation:						
Worst 20% of wards	21	27	30	7	50	14
20-40%	24	19	25	5	57	13
40-60%	26	16	22	5	60	12
60-80%	26	12	21	5	64	10
Top 20% of wards	26	9	22	5	66	8
NRF-88 authority	23	22	27	6	54	13
Non NRF-88 authority	25	16	24	5	60	11

Table D2: Proportion of Warm Front recipients in non-decent homes pre- and post Warm Front by dwelling characteristics

Percentage

	Reasons for failing standard:		Measures installed under Warm Front:			
	Inadequate Insulation only	Inadequate heating	Minor measures only	Other non-relevant measures	Insulation only	New central heating
Dwelling type:						
Detached	25	6	22	5	67	6
Semi-detached	24	15	19	5	66	11
Terraced	23	27	29	6	50	15
Flat/maisonette	30	23	54	9	18	19
Age of dwelling:						
Pre-1900	27	33	34	7	40	19
1900-49	24	24	27	6	53	14
1950-65	24	15	19	4	66	11
1966-81	29	8	20	5	68	7
Post-1981	0	0	37	6	49	7
Heating system:						
Central heating	29	0	27	5	64	4
<i>of which:</i> Gas	25	0	26	5	73	3
Oil	29	0	23	4	39	1
Electric	72	4	34	3	65	24
Solid fuel	91	0	26	5	29	4
Room heaters	0	98	20	7	29	44
<i>of which:</i> Gas	0	98	20	5	29	46
Electric	0	96	21	18	29	32
Solid fuel	0	99	19	5	26	51
Wall construction						
Solid/stone/timber	25	29	36	8	39	17
Unfilled cavity	29	15	13	2	75	10
Filled cavity	5	13	40	9	39	12
Other	–	19	42	9	37	12
Loft insulation						
No loft space	25	31	62	13	9	17
<50mm	71	20	14	3	72	11
50-149mm	5	18	23	5	60	12
150mm+	3	21	44	10	30	16
SAP rating:						
<25	23	49	16	17	39	28
25-35	33	37	20	9	45	26
35-45	37	17	24	4	61	12
45-55	24	8	23	2	70	5
55-65	11	8	34	1	60	5
65+	5	8	49	1	45	5

ANNEX E:

Table E1: Measures installed by reason for failing Decent Homes Standard

(a) All Warm Front recipients, including minor measures only

% of grants by category

Measures installed: Reasons for failing Decent Homes Standard:	Non-relevant measures	Loft insulation Only	Cavity wall insulation only	Loft and cavity wall insulation	Central heating only	Central heating and insulation
Did not fail	20.7	14.0	11.1	9.1	1.2	0.9
Inadequate loft insulation only	2.7	6.2	0.0	0.0	0.3	0.4
Inadequate loft OR no cavity wall insulation	1.0	1.5	1.0	6.7	0.0	0.2
No cavity wall insulation	1.0	0.0	0.6	0.0	0.1	0.0
Inadequate Loft AND no cavity wall insulation	0.3	0.2	0.5	0.8	0.1	0.2
Inadequate heating only	4.2	1.6	1.1	0.7	3.8	2.8
Inadequate heating AND insulation	1.0	1.5	0.2	0.6	0.6	1.6

(b) All Warm Front recipients, excluding minor measures

% of grants by category

Measures installed: Reasons for failing Decent Homes Standard	Non-relevant measures	Loft insulation Only	Cavity wall insulation only	Loft and cavity wall insulation	Central heating only	Central heating and insulation
Did not fail	4.7	18.7	14.9	12.2	1.5	1.2
Inadequate loft insulation only	0.5	8.3	0.0	0.0	0.4	0.5
Inadequate loft OR no cavity wall insulation	0.2	2.0	1.2	8.9	0.1	0.3
No cavity wall insulation	0.2	0.0	0.8	0.0	0.2	0.0
Inadequate Loft AND no cavity wall insulation	0.0	0.3	0.7	1.1	0.1	0.3
Inadequate heating only	1.4	2.2	1.5	0.9	5.0	3.7
Inadequate heating AND insulation	0.3	2.0	0.2	0.8	0.7	2.1

White: homes that do not require further measures to meet the Decent Homes Standard.

Red: homes that require further measures to meet standard, but these are not installed.

Green: only measures needed to meet standard are installed.

Yellow: more measures installed than are strictly needed to meet the standard.

Table E1: Measures installed by reason for failing Decent Homes Standard (continued)

(c) Warm Front recipients in non-decent homes, including minor measures only

% of grants by category

Measures installed: Reasons for failing Decent Homes Standard	Non- relevant measures	Loft insulation Only	Cavity wall insulation only	Loft and cavity wall insulation	Central heating only	Central heating and insulation
Inadequate loft insulation only	6.3	14.3	0.0	0.0	0.7	0.8
Inadequate loft OR no cavity wall insulation	2.3	3.5	2.1	15.5	0.1	0.5
No cavity wall insulation	2.1	0.0	1.4	0.0	0.3	0.1
Inadequate Loft AND no cavity wall insulation	0.7	0.5	1.2	1.9	0.1	0.5
Inadequate heating only	9.7	3.8	2.6	1.6	8.7	6.4
Inadequate heating AND insulation	2.4	3.4	0.3	1.3	1.3	3.7

Red: homes that require further measures to meet standard, but these are not installed.

Green: only measures needed to meet standard are installed.

Yellow: more measures installed than are strictly needed to meet the standard.

Further Information

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