

# **Energy Use in Homes 2004**

**A series of reports on domestic energy use in  
England**

## **Thermal Insulation**



# Energy Use in Homes 2004

## A series of reports on domestic energy use in England

**This is one of a series of three reports on the energy characteristics of the stock as observed by the 2004 English House Condition Survey.**

**The reports in this series are:**

- 1. Space and Water Heating**
- 2. Thermal Insulation**
- 3. Energy Efficiency**

*The English House Condition Survey is funded and provided courtesy of Communities and Local Government. More information about this survey can be found at [www.communities.gov.uk/ehcs](http://www.communities.gov.uk/ehcs)*

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## Energy Use in Homes 2004: Thermal Insulation

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### Executive Summary

70% of the housing stock (15.0 million dwellings) have predominantly cavity walls and 29% (6.3 million dwellings) have predominantly solid masonry walls. There are 5.8 million dwellings with cavity wall insulation; this represents 39% of stock with cavity walls.

Of all dwellings with a loft space, 46% have loft insulation of depth 51-100mm, 13% have over 150mm and 4% have no loft insulation.

Approximately 85% (18.3 million) of dwellings have at least one double glazing window. 57% of stock have the entire dwelling double glazed, whilst 24% have less than half of the windows double glazed.

The extent of thermal insulation measures in a property depends greatly on the type and age of the dwelling. Generally, the older the dwelling, the poorer the thermal insulation measures. Levels of cavity wall insulation, double glazing and the thickest loft insulation all increase as building age decreases. Converted flats generally have the lowest levels of thermal insulation when looking at building type, whilst detached dwellings have the highest levels, which may be attributed to the generally older age of converted flat stock compared to younger detached dwellings.

Private rented properties have the poorest thermal insulation measures when looking at all tenures. They have the lowest levels of full double glazing (40%), lowest levels of loft insulation (only 8% having more than 150mm of insulation), and the lowest levels of cavity wall insulation (30% of those dwellings with cavity walls).

Thermal insulation measures in dwellings have increased dramatically from 1991 to 2004. Entire household double glazing has increased from 4% in 1991 to 57% in 2004. Loft insulation >150mm has increased from less than 1% of pre 1980 houses in 1991 to 11% in 2004. Loft insulation >150mm for the entire stock has increased from 11% in 2003 to 13% in 2004. Cavity wall insulation (in predominantly cavity walled dwellings) has increased from 17% in 1991 to 39% in 2004.

## Thermal Insulation Update Report 2004

### Summary

- § Thermal insulation measures in dwellings have continued to increase into 2004.
- § Private rented dwellings still show the worst thermal insulation characteristics on average, with Registered Social Landlords (RSL) the best.
- § The age of a dwelling is likely to greatly determine the extent of thermal insulation measures present.

### Introduction

This report examines thermal insulation measures within the English housing stock in 2004 as observed by the English House Condition Survey (EHCS). It is based upon a sample of approximately 16,500 dwellings. This report follows on from the 2003 report and provides an update of the housing stock over the year. Cavity wall insulation (CWI), loft insulation and double glazing are examined in detail and the levels of these three measures are analysed using a number of dwelling and household variables. Temporal analysis is also undertaken incorporating data from previous EHCS datasets where appropriate.

2004 saw large rises in fuel prices which look set to continue into the future. The installation of thermal insulation measures can significantly reduce household fuel bills by reducing energy use and therefore additionally contributes to the Government's carbon saving targets. The payback periods for measures such as CWI and loft insulation are becoming more favourable as fuel prices rise, and this is encouraging older housing to be renovated and upgraded to include these measures. Installation of these measures is also being encouraged by the availability of grant schemes and other incentives offered by the Government and energy suppliers, as well as through a higher awareness of energy efficiency within the general public.

70% of the housing stock has predominantly cavity walls and 27% of all the stock is cavity walled with insulation (39% of all those with cavity walls) (Figure 1).

Of all dwellings with a loft space, 46% have loft insulation to a depth of 51-100mm, 3% have over 200mm and 4% have no insulation (Figure 2).

Approximately 85% of dwellings (18.3 million) have some double glazing. 57% of the stock have the entire dwelling double glazed, whilst 15% have no double glazing (Figure 3).

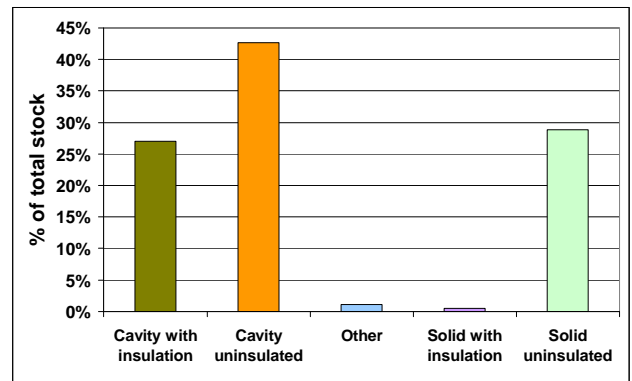


Figure 1: Overview of wall type

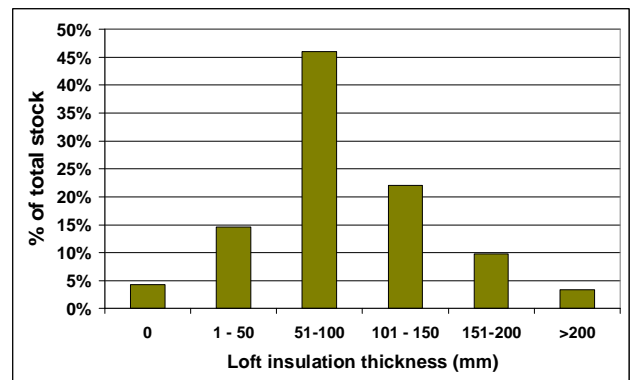


Figure 2: Overview of loft insulation thickness (dwellings with loft space only)

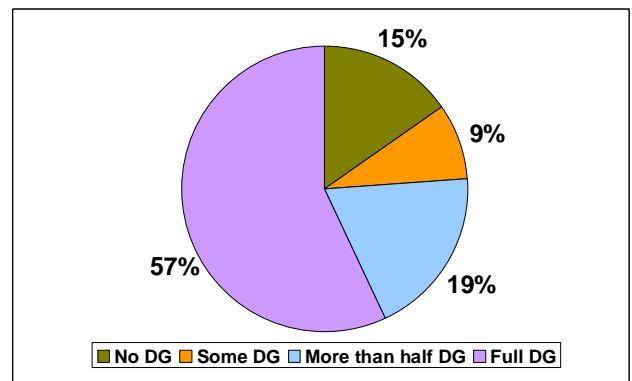


Figure 3: Distribution of double glazing extent

Of dwellings with a hot water cylinder (69% of total stock), 99% have some kind of insulation present. 64% of those dwellings with an insulated cylinder have factory fitted foam insulation and the remaining 36% have loose jackets. No further analysis on the 1% with no insulation is presented in this report due to small sample sizes. Further information on heating systems can be found in the Space and Water Heating Update Report.

## Dwelling Analysis

### Wall Type

Wall type is mainly dependant upon the age of a property. Older dwellings are less likely to have cavity walls (16% of pre 1919 dwellings, compared to 98% of post 1980) (Figure 4). This reflects the changes in the method of construction over the 20th century, from solid to cavity walls.

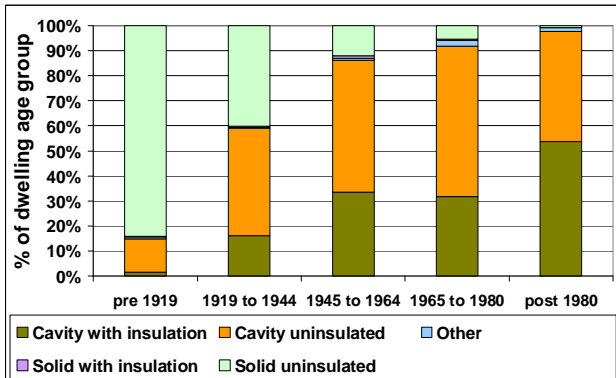


Figure 4: Wall type by age of dwelling

A high proportion of converted flats have solid uninsulated walls (78%) reflecting the older average age of these dwellings. This compares to 18% of purpose built flats and 15% of detached houses. Semis, detached and purpose built flats are most likely to have cavity walls (between 78% and 82%), reflecting the younger profiles of these housing types.

The London region is a clear anomaly when considering wall type. 62% of dwellings in this region have solid walls, which is double or in some cases even triple that in other regions (ranging from 18% in the North East to 33% in the East Midlands). This trend reflects the older age of dwellings (a large number of converted flats and lack of detached properties) in the capital.

### Cavity Wall Insulation

Newer dwellings are more likely to have CWI. This is probably due to changes in building methods and the current standard practice of new dwellings having CWI installed at the time of construction. 55% of post 1980 cavity walled dwellings have CWI compared to 35% of 1965-1980 and 11% of pre 1919 dwellings (Figure 5).

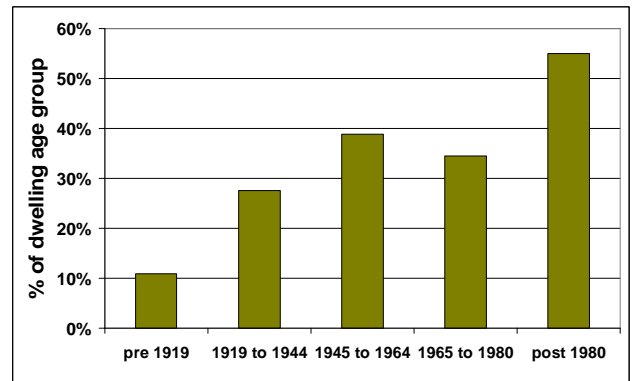


Figure 5: CWI by age of dwelling (dwellings with cavity walls only)

The type of dwelling can also indicate the presence of CWI. Converted flats have low levels of CWI (13% of dwellings with cavity walls). All other housing types are between 33% (mid-terraced) and 45% (detached) (Figure 6). This trend is again mainly linked to the age of the dwelling; i.e. converted flats are generally older.

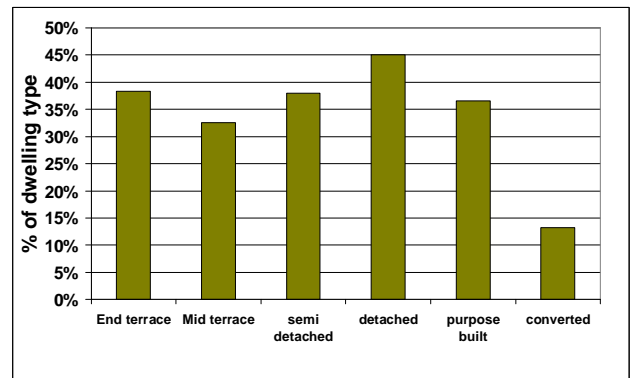


Figure 6: CWI by dwelling type (dwellings with cavity walls only)

Insulated cavity walls are most prevalent in the East Midlands and Eastern England (49% and 46% of cavity walled dwellings respectively). They are least prevalent in London (30%), the West Midlands and the North West (both 34%).

### Loft Insulation

The age of a dwelling is a key determinant of the presence and thickness of loft insulation. 12% of pre 1919 dwellings have no loft insulation compared to less than 1% of those built post 1980. 2% of pre 1919 have greater than 200mm compared to 5% of post 1980. Insulation less than 100mm thick dominates the pre 1919 group, whereas insulation over 100mm dominates in post 1980 dwellings (Figure 7).

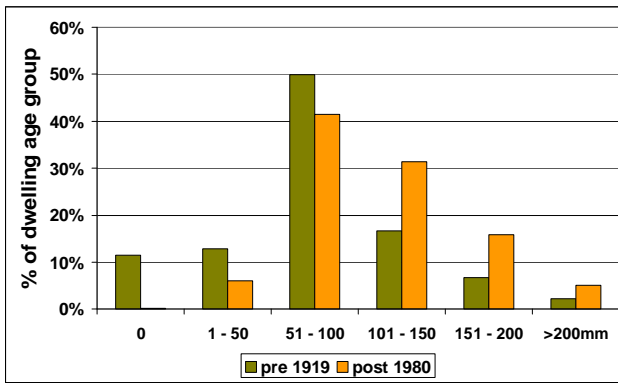


Figure 7: Loft insulation thickness (mm) by age of dwelling (pre 1919 and post 1980 only)

Converted flats show the poorest profile of loft insulation with 14% having no insulation (compared to an average of 4% for other build types) (Figure 8). Unsurprisingly, converted flats are also extremely unlikely to have over 200mm of loft insulation, with virtually none being insulated to this level.

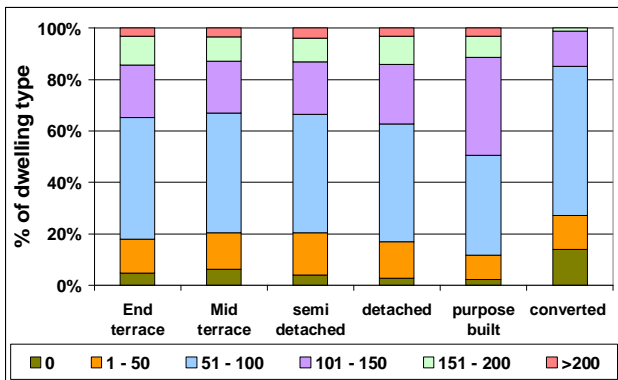


Figure 8: Loft insulation thickness (mm) by dwelling type

London has the highest proportion of uninsulated lofts at 7%, followed by the North West at 6%. However the North West also shows a high proportion of >200mm at 5%, just below the best region – the North East with a value of 6% (Figure 9). These relatively low proportions are set to grow in the future in all regions and across the age profile as current installation schemes expand further.

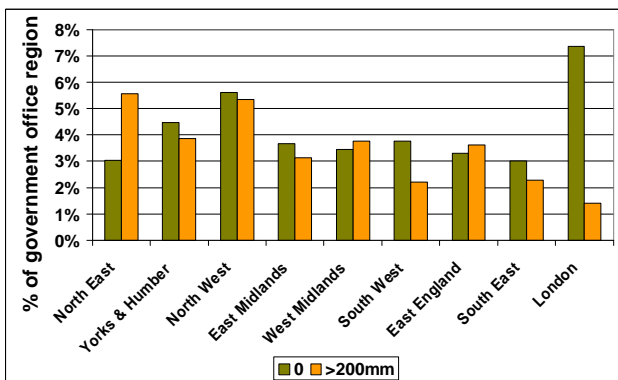


Figure 9: Loft insulation thickness (mm) by region

The type of loft insulation installed is dominated by mineral wool/fibre glass– accounting for 93% of all those lofts with some insulation. There is further discussion of insulation type in the comparison over time section, where changes in loft insulation material from 2003 to 2004 are discussed.

### Double glazing

In general, older dwellings tend to have less double glazing than those built more recently. In particular only 34% of pre 1919 dwellings have the entire house double glazed compared to 76% of the post 1980 stock. Almost one third of pre 1919 dwellings have no double glazing whatsoever (31%). This is compared to the 11% average for all post 1919 dwellings (Figure 10).

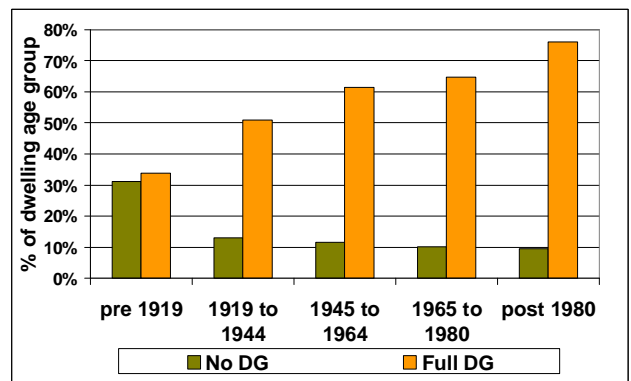


Figure 10: Double glazing by age of dwelling

Converted flats show the lowest double glazing levels with only 27% having full double glazing, compared to between 51% (purpose built flats) and 64% (detached) for the remaining stock. 48% of converted flats have no double glazing which is at least twice as bad, and in some cases nearly five times worse, than the proportion in other build types (lowest is 10% for detached) (Figure 11).

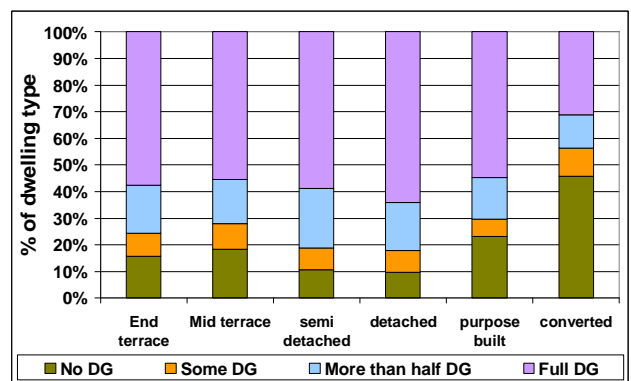


Figure 11: Double glazing extent by dwelling type

London has the highest incidence of dwellings with no double glazing at 25% and the lowest proportion with the entire dwelling double glazed at 45%. This is compared to 12% and 60% averages respectively over the rest of the stock (Figure 12).

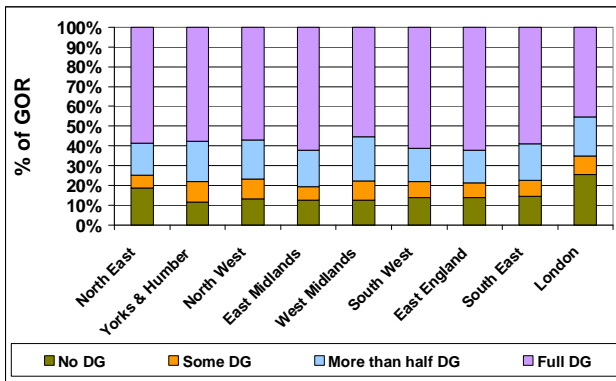


Figure 12: Double glazing by region

## Household Analysis

### Tenure

Private rented dwellings have the lowest levels of thermal insulation. This includes the lowest levels of full house double glazing (40%) (Figure 13), the lowest CWI (30% of cavity walled dwellings), the lowest percentage of dwellings with over 200mm of loft insulation (2%) and the highest with no loft insulation (9%).

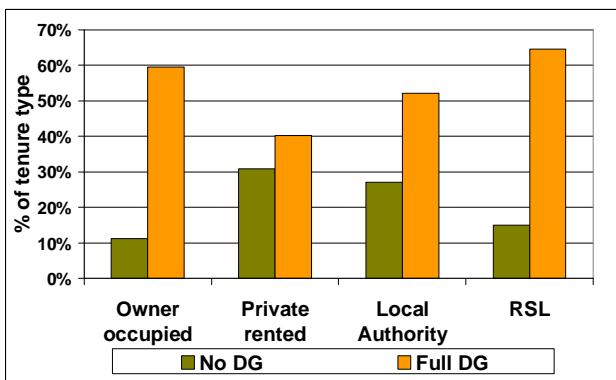


Figure 13: Double glazing by tenure

Conversely, RSL and local authority dwellings have the best level of thermal insulation. For example 65% of RSL dwellings have full house double glazing (Figure 13). 48% of local authority dwellings and 46% of RSL dwellings have CWI (in those dwellings with cavity walls), and both of these tenures have the highest proportion of dwellings with >200mm of loft insulation (6%), and the lowest with no insulation (2% each).

### Neighbourhood

The nature of the surrounding area can be indicative of the level of thermal insulation in a dwelling. The two extremes of 'rural'<sup>1</sup> and 'city centre'<sup>2</sup> tend to show the worst thermal insulation profiles.

'Rural' dwellings exhibit generally poor thermal insulation, with the least CWI (27%) (Figure 14), low full house double glazing (42%) and the highest proportion of dwellings with no loft insulation (9%).

'City centre' areas have the highest proportion of dwellings with no double glazing at 33% and the lowest with full double glazing at 37%. There is also a low prevalence of CWI (32% of those dwellings with cavity walls) and relatively low levels of >200mm loft insulation (2%).

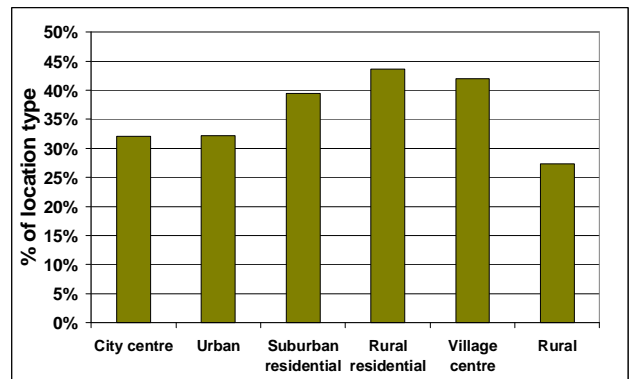


Figure 14: CWI by situation of dwelling (dwellings with cavity walls only)

Conversely 'rural residential'<sup>3</sup> dwellings have the highest proportion of cavity walls insulated (44%) (Figure 14) and the highest proportion of entire house double glazing (67%).

### Household Type

There are some slight trends evident when considering household type and thermal insulation. For example single adult households are more likely to have no double glazing than couple households (Figure 15).

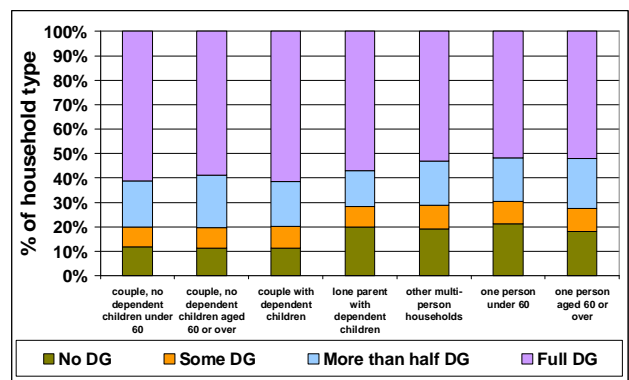


Figure 15: Double glazing by type of household

CWI is more likely to be present in households over 60 years of age (single and couple) than any other household type (Figure 16), which may reflect current schemes to retrofit this measure in vulnerable households via

<sup>1</sup> Isolated dwellings, small hamlets

<sup>2</sup> The area immediately surrounding the core of large cities

<sup>3</sup> The suburban areas of villages, often meeting the housing needs of people who work in nearby towns and villages

programmes such as Warm Front, or other factors which typify this group (e.g. tenure and dwelling type).

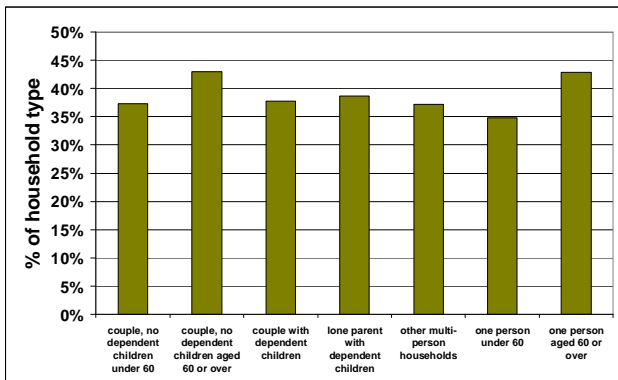


Figure 16: CWI by household type (dwellings with cavity walls only)

The prevalence of thicker loft insulation (.200mm) is proportionately very similar for all household types (between 3% and 4% for all groups) (Figure 17). However, multi-person households show the highest levels of no insulation at 6%.

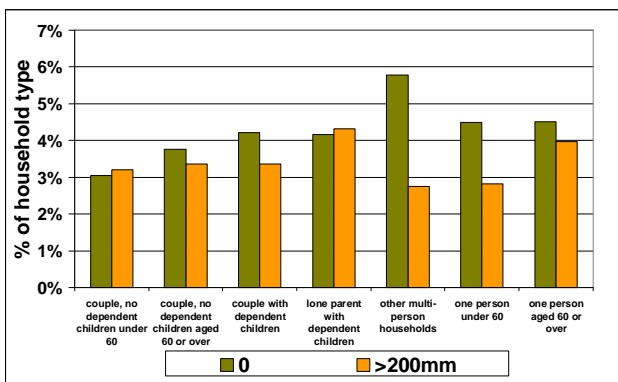


Figure 17: Loft insulation thickness (mm) by household type

### Household Reference Person (HRP) Age

All ages of households have around 40% of dwellings with full double glazing, but no double glazing is lowest in the dwellings with middle aged HRPs (35-64), rising at either end of the scale, with a larger rise at the young end (22% of 16-24 year olds).

Generally the oldest HRPs are more likely to have CWI. Cavity walls are insulated in 38% of households with HRPs up to 65 and 43% with HRPs over 65 (Figure 18).

All age groups have between 3% and 4% of >200mm loft insulation. 6% of the 16-24 age group have no loft insulation compared to 3% of 55-64 year olds (the lowest band).

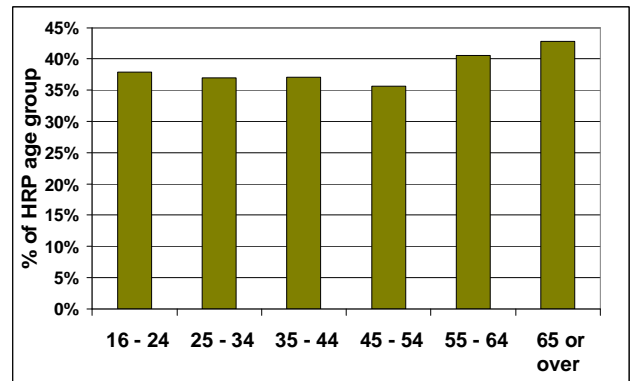


Figure 18: CWI by age of HRP (dwellings with cavity walls only)

### Household Income

The 4<sup>th</sup> highest income quintile generally shows the highest levels of thermal insulation measures compared to all other income groups. This may seem surprising when considered alongside other analyses such as by tenure. However, this group probably includes a high proportion of owner occupiers with a sufficient level of funds to carry out insulation improvements to their homes.

Generally, as income increases the proportion of double glazing increases. The lowest quintile has the lowest percentage of full double glazing at 52% and the 4<sup>th</sup> quintile the highest at 61%. The lowest quintile also unsurprisingly shows the highest proportion of dwellings with no double glazing.

As income increases the proportion of cavity walls that are insulated decreases to the 4<sup>th</sup> quintile and rises in the 5<sup>th</sup> quintile, from 43% in the 1<sup>st</sup> quintile to 36% in the 4<sup>th</sup> quintile and 40% in the 5<sup>th</sup> quintile.

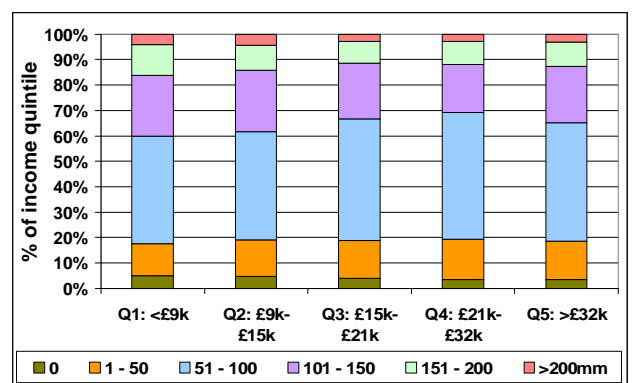


Figure 19: Loft insulation thickness (mm) by income quintile

Loft insulation thickness generally decreases as income increases (Figure 19). Lower incomes tend to be found in the RSL and local authority tenures, which, as shown previously, have good levels of thermal insulation. This is probably a result of local authority and RSL schemes to improve energy efficiency in their stock.



The different direction in trends between double glazing increasing with income and both loft and CWI decreasing with income can be explained to a certain extent by current grant schemes which aim to help lower income households by installing mainly loft and CWI, but not double glazing. Other trends related to tenure type and installation of measures such as double glazing may also be apparent, as described earlier in this report.

## Comparison over time

### Double Glazing

Double glazing is the most common of all the thermal insulation measures examined in this report. In 2004 57% of dwellings had all windows double glazed, with 85% having some double glazing present.

The number of dwellings with double glazing has shown impressive increases over the past 15 years. The proportion of dwellings with all windows double glazed has risen from 26% (5.3 million) in 1996 to 49% in 2001 and a value close to 60% (12.3 million) in 2004 (Figure 20) (data for 1991 not included as variables available are not comparable). This is due to new dwellings tending to be installed with double glazing as standard, and a large amount of retrofitting among older stock.

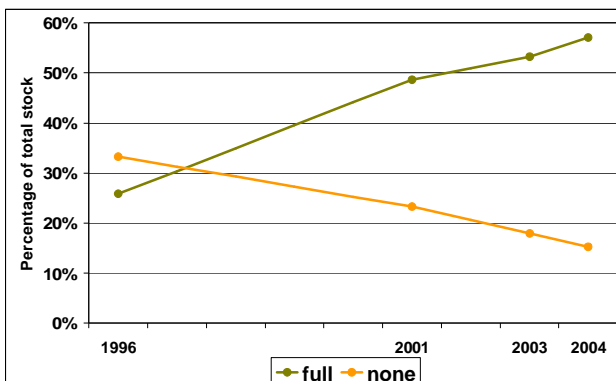


Figure 20: Double glazing extent 1996 – 2004

A smaller decrease in those dwellings with no double glazing is evident – from 33% (6.4 million) in 1996 to 15% (3.3 million) in 2004. These residual dwellings with no double glazing could represent older dwellings where double glazing is not likely to be installed for aesthetic reasons or planning restrictions– such as listed building status. Less well maintained dwellings may also be represented in this sample –for instance private rented dwellings which typically tend to be less energy efficient (with a lower SAP – see Energy Efficiency Update Report for more information) than other tenures.

Most energy efficiency grants available do not cover double glazing, and so the upward trend in dwellings with full double glazing installed seen here can be attributed to owner occupiers and landlords (social and private)

wanting to retrofit stock, together with a small proportion of new build. Double glazing is a more visible measure (than loft or cavity wall insulation) and therefore householders may be more likely to install it by choice. Perceived thermal comfort is also higher due to the elimination of drafts which may exist with single glazed windows, and double glazing also has sound insulation properties.

### Tenure

All tenures have shown significant improvements in levels of full double glazing since 1996. At that time all four tenures had between 3-5% of full double glazing. The RSL and owner occupied sectors have shown the greatest increases over the past 15 years, with full double glazing proportions reaching 65% and 60% respectively. Private rented dwellings have shown the lowest increase, with full double glazing levels at 40% in 2004. However this level represents a marked increase on 2003 (16% higher). The current state of double glazing in each tenure, and how this relates to 2003 is shown in Table 1.

	Full double glazing 2004	%	Total number (000s)	% increase from 2003
Owner occupied	60		9,106	6
Private rented	40		940	16
Local Authority	52		1,216	4
RSL	65		1,074	9

Table 1: Full double glazing by tenure

### Government Office Region (GOR)

All GORs have shown large increases in the proportions of full double glazing since 1996. Most regions have risen from a value of 20-30% of full double glazing in 1996 to around 55-65% in 2004 (Figure 21). The one exception to this is the London region. This started at a similar position to other regions in 1996, but has gradually diverged by increasing at a slower rate than other regions, rising to only 45% in 2004. This indicates that the rate of double glazing installation in London has been much lower than in other regions.

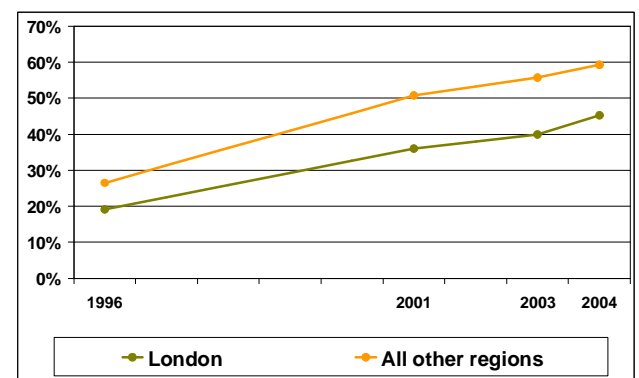


Figure 21: Full double glazing proportions over time by GOR

### Age of dwelling

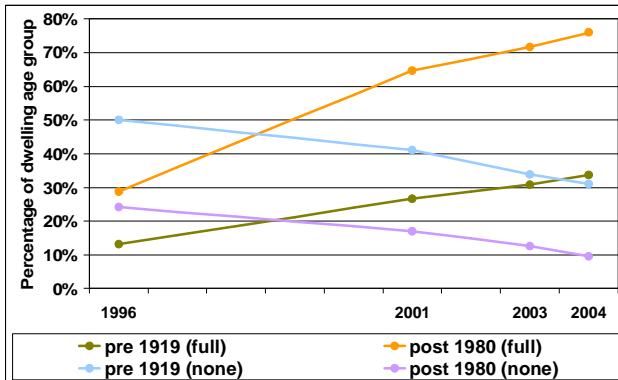


Figure 22: Double glazing over time by age of dwelling

There has been a marked increase in full double glazing across all property age groups over time. In 1996 13% of pre 1919 dwellings had full double glazing compared to 29% of the post 1980 stock. Since 1996 the proportion of dwellings with full double glazing has increased across all age groups. However, unsurprisingly newer dwellings have increased at a higher rate than older dwellings from this base position. Full double glazing in the post 1980 stock has increased at a higher rate than the pre 1919 stock, with post 1980 dwellings at 76% in 2004 compared to only 34% of pre 1919 dwellings (Figure 22).

A higher proportion of pre 1919 dwellings are without any double glazing (31%) compared to only 10% of the post 1980 stock. This may link to earlier points made regarding a residual of stock left with no double glazing.

### Dwelling Type

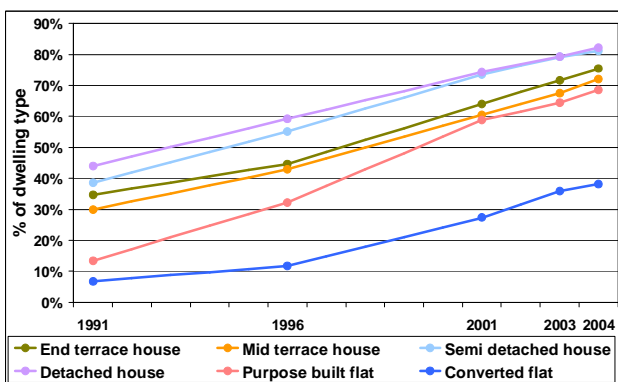


Figure 23: At least 50% of window area double glazed by dwelling type

Whilst the proportions of all dwelling types with at least half-house double glazing have steadily risen the comparative rate of increase in purpose built and converted flats is noticeable (Figure 23). Starting from 1991 incidences of 7% and 13% within each type category respectively, purpose built flats have risen by 55% and converted flats only 31% by 2004. This can be partly attributed to the high proportion of converted flats that are

in the poorly insulated private rented sector, 42% in 2004, compared to 19% of purpose built flats.

### Cavity Wall Insulation

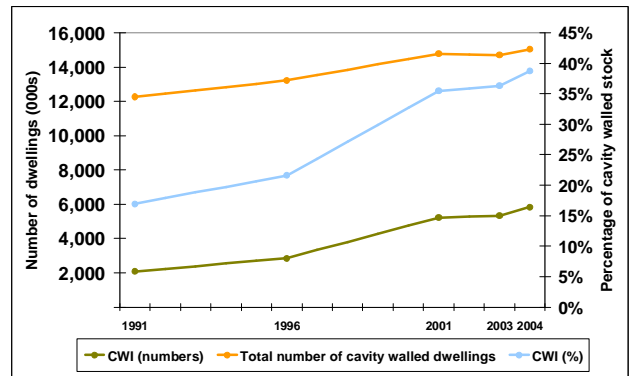


Figure 24: CWI proportions and numbers over time

There are 5.8 million dwellings with CWI in 2004, which represents an increase of nearly 500,000 since 2003 (36% in 2003 to 39% in 2004 when considering only dwellings with cavity walls) (Figure 244).

There is still huge potential available in the stock for installation of CWI. Overall 15 million dwellings have cavity walls, around two thirds of which (10 million) are uninsulated.

The limits to the installation of these measures may include: industry capabilities and resourcing, availability and awareness of grants, wariness of householders to installing CWI and the suitability of some properties for CWI installation.

### Tenure

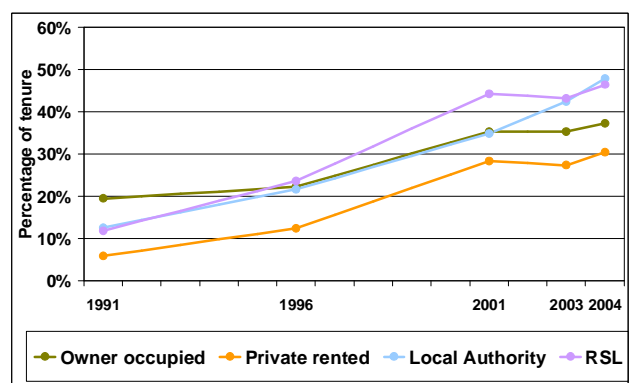


Figure 25: CWI over time by tenure (dwellings with cavity walls only)

All tenures have shown an increase in the proportion of dwellings with CWI since 2003. The overall trends since 1991 show a significant rise in all tenures with slight discontinuities around 2001 for some tenures (Figure 255). These discontinuities can be explained by changes in total number of dwellings in each tenure, and

corresponding changes in the relative proportions of those dwellings having cavity walls. Also survey sampling and grossing discontinuities may be partly responsible as the survey moved from a 5 yearly to a continuous survey in 2001-2003.

As outlined earlier the private rented stock shows the lowest levels of insulated cavity walls compared to other tenures at all times since 1991. There does not seem to be any signs of convergence with other tenures, but this tenure may improve over the next few years with the introduction of the landlord's energy saving allowance in 2004 which acts to promote all types of insulation.

Social housing shows the best overall performance in terms of CWI and in 2004 local authority dwellings showed a slightly higher overall proportion of filled cavity walls than RSL dwellings, reversing the trend of 2003.

Looking at absolute numbers of dwellings shows clear upward trends in all tenures over time. There has been an increase of nearly 300,000 dwellings with CWI in the owner occupied, 76,000 in the local authority, 56,000 in the RSL and 67,000 in the private rented tenures between 2003 and 2004 (Figure 266). These numbers must be taken in context within the total number of dwellings and cavity walled dwellings within each tenure. For example the total number of local authority dwellings with cavity walls seems to be decreasing overall. Therefore the percentage increase may not be as large as first observed from the graph below.

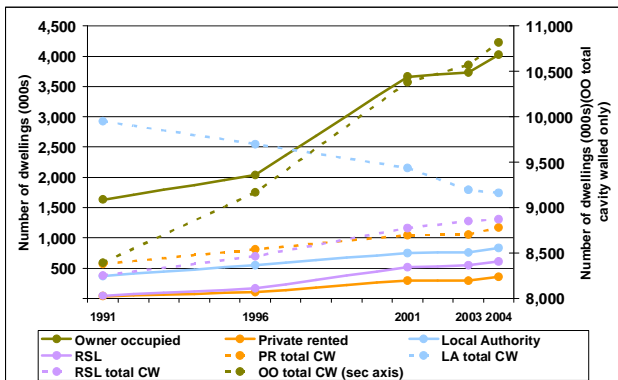


Figure 26: CWI over time by tenure – number of dwellings (owner occupied total number of dwellings on secondary axis)

*Government Office Region (GOR)*

All GORs show a rise in CWI both in proportions and number between 2003 and 2004.

The East Midlands and the Eastern regions have consistently shown high levels of cavity wall insulation. The East Midlands overtook the Eastern region in total percentage of cavity walls insulated from 2003 to 2004.

The West Midlands and London have consistently shown the worst levels of cavity wall insulation. The West Midlands showed a large increase in proportion of insulated cavity walls from 2003 to 2004 and overtook London by a large margin, as London showed a very small increase. The increase in the proportion of dwellings with CWI split by GOR is shown in Table 2 as a percentage.

GOR	Increase in the percentage of dwellings with cavity walls 2003-2004 (%)
<b>North East</b>	2%
<b>Yorkshire &amp; Humberside</b>	4%
<b>North West &amp; Merseyside</b>	0%
<b>East Midlands</b>	16%
<b>West Midlands</b>	11%
<b>South West</b>	12%
<b>Eastern</b>	9%
<b>South East</b>	3%
<b>London</b>	3%

Table 2: Change in percentage of dwellings with cavity wall insulation by government office region from 2003 to 2004

*Age of dwelling*

Post 1980 dwellings show the highest level of CWI, and this proportion insulated has grown from 33% in 1991 to 55% in 2004 (Figure 277). 2004 data shows an increase of 269,000 dwellings with CWI from 2003 to 2004. These can be accounted for by both construction of new dwellings and retrofitting to the existing stock. Again within this data we see the discontinuity in levels of CWI in 2001.

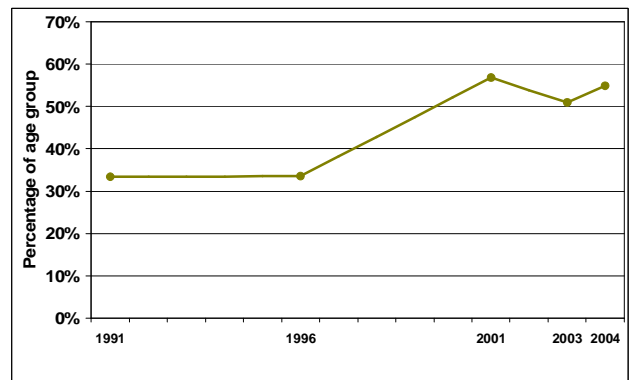


Figure 27: CWI in post 1980 dwellings over time (as a proportion of dwellings with cavity walls)

### Household Income

Figure 28 compares CWI ownership with quintiles (20% intervals) of household income. We see that the proportion of insulated cavity walls in the lowest quintile has moved from the least (17%) in 1996 to the most (42%) in 2004, with the second lowest quintile also seeing a 20% rise compared to only 12% in the highest income quintile. This can be seen as an important indicator in the targeting of low income households for key thermal insulation measures.

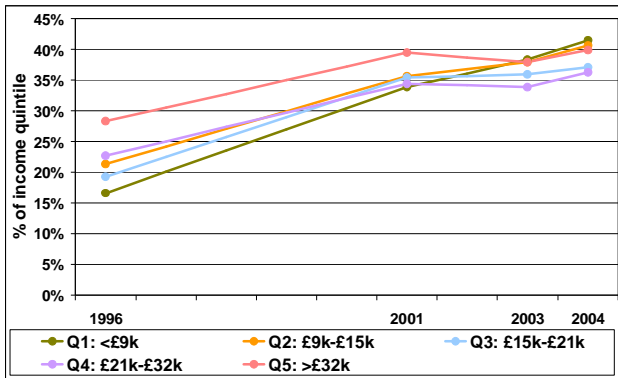


Figure 28: CWI by household income quintiles over time (dwellings with cavity walls only)

### Loft Insulation

The proportion of dwellings with loft insulation of >150mm has increased over time (Figure 299 shows pre 1980 stock only to allow comparison to pre 2003 survey data). This is partly due to the standard installation of thicker loft insulation in new dwellings and also the relative ease of retrofitting existing dwellings assisted by grants and other incentive schemes.

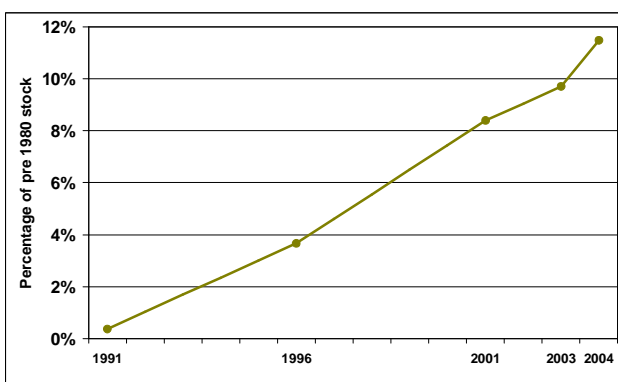


Figure 29: Proportion stock with loft insulation over 150mm for 1991-2004 (only pre 1980 stock to allow comparison to pre 2003 surveys)

Overall levels of loft insulation over 150mm across the entire stock have increased from 11% in 2003 to 13% in 2004.

Thicker loft insulation continues to increase in prevalence, particularly in the 200-300mm categories, which reflects

current standards and schemes which insulate to this level. A detailed breakdown of these increases is shown in Table 3 below.

Loft insulation thickness (mm)	(000s, %) 2003	(000s, %) 2004
151-200	1,595	1,892
201-250	254	399
251-300	139	189
>300	57	62
	0.3%	0.3%

Table 3: Numbers (000s) and proportions of dwellings with thicker loft insulation comparing 2003 and 2004

Loft insulation is a relatively cheap and easy measure to install with favourable payback periods. Current standards suggest a loft insulation thickness of 200-270mm and therefore the larger rise in the 201-250mm category may reflect the installations from programs such as EEC and Warm Front.

The type of loft insulation used is slowly moving away from the traditional mineral wool/fibre glass and towards more innovative and less bulky materials as they become more established and costs decrease. However, mineral wool still represents the majority of new insulation installed (Table 4).

Loft insulation types	2004
Mineral wool/fibre glass	92.4
Vermiculite beads	1.2
High performance quilt	0.5
Rigid foam board	1.0
Unknown	4.9

Table 4: Types of loft insulation present in dwellings which have loft space

### Tenure



Figure 30: Change from 2003 to 2004 in loft insulation thicknesses split by tenure

All tenures have shown an increase in thicker loft insulation and a corresponding decrease in lesser

thicknesses over time. These changes (by %) are shown in Figure 3030 above. It is clear that all tenures are showing decreases in the 51-100mm band and increases in the 151-250mm bands, particularly in the owner occupied, local authority and private rented stock. RSL stock seems to be decreasing in the thicker 101-150mm band by increasing thicknesses up to 300mm.

*Government Office Region (GOR)*

Most GORs have shown increases in the proportion of dwellings with greater than 150mm of loft insulation since 2003. In 2003 all GORs had between 7% and 15% of dwellings with loft space with over 150mm of loft insulation (Figure 3131). In 2004 there is a larger range of values – from 7% for London to 19% for the North East, reflecting the difference in installation programmes and property make up in each region. London has the lowest overall profile over time and is lagging behind the rate of increase shown by other regions, similar to its profile for CWI and full double glazing.

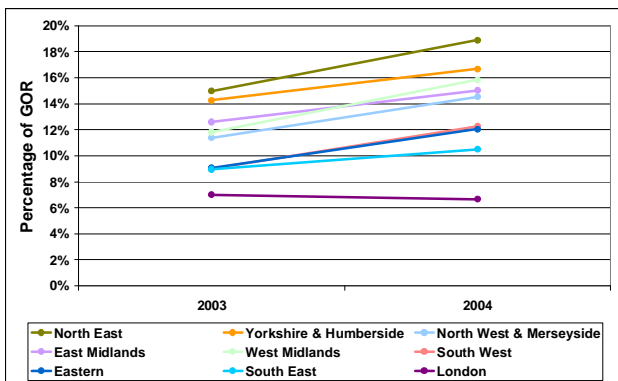


Figure 31: Loft insulation over 150mm (for only those dwellings with lofts) by GOR

*Age of dwelling*

Loft insulation over 150mm has increased in all age groups from 2003 to 2004. Pre 1919 dwellings have shown a slower increase than those built post 1980 (Figure 322).

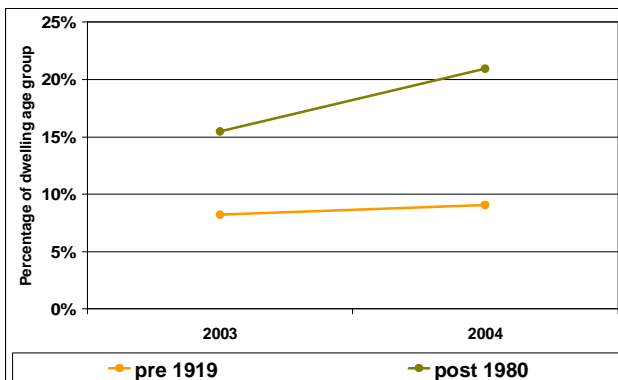


Figure 32: Loft insulation over 150mm by age of dwelling

**Conclusions and Future Issues**

There are encouraging patterns showing increases in thermal insulation measures from 2003 to 2004 despite the short time frame monitored. As more data become available from the continuous survey a consistent time series for these measures can be produced.

As loft insulation, CWI and double glazing become more prevalent it is likely that these increases over time will become less marked. Although at present there remains considerable scope for the installation of these measures, in the future it will be necessary to consider other insulation measures which deal with different types of properties e.g. solid walls, flat roofs, high rise flats. This is discussed further in the Hard to Treat Report.

## Thermal Insulation Update Tables 2004

These tables give detailed breakdowns of the three main housing insulation groups (double glazing, cavity wall insulation and loft insulation) against key variables, as an appendix to the Thermal Insulation Update Report 2004.

### Index

Table 1.1 Double glazing - Proportion of dwelling double glazed

Table 1.2 Double glazing - Proportion of dwelling double glazed by dwelling age

Table 1.3 Double glazing - Proportion of dwelling double glazed by dwelling type

Table 1.4 Double glazing - Proportion of dwelling double glazed by dwelling tenure

Table 1.5 Double glazing - Proportion of dwelling double glazed by household composition

Table 1.6 Double glazing - Proportion of dwelling double glazed by floor area

Table 1.7 Double glazing - Proportion of dwelling double glazed by household income

Table 2.1 Loft insulation - Thickness of loft insulation

Table 2.2 Loft insulation - Thickness of loft insulation by dwelling age

Table 2.3 Loft insulation - Thickness of loft insulation by dwelling type

Table 2.4 Loft insulation - Thickness of loft insulation by dwelling tenure

Table 2.5 Loft insulation - Thickness of loft insulation by household composition

Table 2.6 Loft insulation - Thickness of loft insulation by floor area

Table 2.7 Loft insulation - Thickness of loft insulation by household income

Table 3.1 Cavity wall insulation - Proportion of cavity wall dwellings with cavity wall insulation

Table 3.2 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by dwelling age

Table 3.3 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by dwelling type

Table 3.4 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by dwelling tenure

Table 3.5 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by household composition

Table 3.6 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by floor area

Table 3.7 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by household income

Table 1.1 Double glazing - Proportion of dwelling double glazed

	count (000s), (column%)
<b>Double glazing present?</b>	<b>Dwellings</b>
No double glazing	3,303 ( 15.3)
Less than half	1,886 ( 8.7)
More than half	4,088 ( 18.9)
Entire house	12,337 ( 57.1)
Total	21,613 ( 100.0)

Table 1.2 Double glazing - Proportion of dwelling double glazed by dwelling age

	count(000s), (row%), (column%)				
	No double glazing	Less than half	More than half	Entire house	Total
pre 1919	1,424 ( 31.1) ( 43.1)	679 ( 14.8) ( 36.0)	932 ( 20.3) ( 22.8)	1,549 ( 33.8) ( 12.6)	4,584 ( 100.0) ( 21.2)
1919 - 1944	498 ( 12.9) ( 15.1)	364 ( 9.4) ( 19.3)	1,027 ( 26.6) ( 25.1)	1,966 ( 51.0) ( 15.9)	3,856 ( 100.0) ( 17.8)
1945 - 1964	519 ( 11.6) ( 15.7)	302 ( 6.7) ( 16.0)	914 ( 20.4) ( 22.4)	2,754 ( 61.4) ( 22.3)	4,489 ( 100.0) ( 20.8)
1965 - 1980	483 ( 10.2) ( 14.6)	338 ( 7.1) ( 17.9)	847 ( 17.9) ( 20.7)	3,070 ( 64.8) ( 24.9)	4,738 ( 100.0) ( 21.9)
1981 - 1990	298 ( 15.4) ( 9.0)	169 ( 8.8) ( 9.0)	218 ( 11.3) ( 5.3)	1,246 ( 64.5) ( 10.1)	1,931 ( 100.0) ( 8.9)
post 1990	81 ( 4.0) ( 2.4)	33 ( 1.6) ( 1.8)	150 ( 7.4) ( 3.7)	1,752 ( 86.9) ( 14.2)	2,015 ( 100.0) ( 9.3)
Total	3,303 ( 15.3) ( 100.0)	1,886 ( 8.7) ( 100.0)	4,088 ( 18.9) ( 100.0)	12,337 ( 57.1) ( 100.0)	21,613 ( 100.0) ( 100.0)



Table 1.3 Double glazing - Proportion of dwelling double glazed by dwelling type

	count(000s), (row%), (column%)				
	No double glazing	Less than half	More than half	Entire house	Total
End terrace	330 ( 15.8) ( 10.0)	182 ( 8.7) ( 9.7)	375 ( 17.9) ( 9.2)	1,205 ( 57.6) ( 9.8)	2,093 ( 100.0) ( 9.7)
Mid terrace	793 ( 18.4) ( 24.0)	409 ( 9.5) ( 21.7)	712 ( 16.6) ( 17.4)	2,385 ( 55.5) ( 19.3)	4,299 ( 100.0) ( 19.9)
Semi detached	722 ( 10.7) ( 21.9)	549 ( 8.1) ( 29.1)	1,511 ( 22.4) ( 37.0)	3,956 ( 58.7) ( 32.1)	6,738 ( 100.0) ( 31.2)
Detached	469 ( 9.7) ( 14.2)	390 ( 8.1) ( 20.7)	874 ( 18.1) ( 21.4)	3,092 ( 64.1) ( 25.1)	4,824 ( 100.0) ( 22.3)
Purpose built	678 ( 22.6) ( 20.5)	263 ( 8.8) ( 14.0)	539 ( 17.9) ( 13.2)	1,525 ( 50.7) ( 12.4)	3,005 ( 100.0) ( 13.9)
Converted & non-residential	312 ( 47.7) ( 9.4)	93 ( 14.2) ( 4.9)	76 ( 11.6) ( 1.9)	173 ( 26.5) ( 1.4)	654 ( 100.0) ( 3.0)
Total	3,303 ( 15.3) ( 100.0)	1,886 ( 8.7) ( 100.0)	4,088 ( 18.9) ( 100.0)	12,337 ( 57.1) ( 100.0)	21,613 ( 100.0) ( 100.0)

Table 1.4 Double glazing - Proportion of dwelling double glazed by dwelling tenure

	count(000s), (row%), (column%)				
	No double glazing	Less than half	More than half	Entire house	Total
Owner occupied	1,703 ( 11.1) ( 51.6)	1,262 ( 8.3) ( 66.9)	3,208 ( 21.0) ( 78.5)	9,106 ( 59.6) ( 73.8)	15,279 ( 100.0) ( 70.7)
Private rented	718 ( 30.8) ( 21.7)	283 ( 12.1) ( 15.0)	393 ( 16.8) ( 9.6)	940 ( 40.3) ( 7.6)	2,334 ( 100.0) ( 10.8)
Local Authority	631 ( 27.0) ( 19.1)	229 ( 9.8) ( 12.1)	259 ( 11.1) ( 6.3)	1,216 ( 52.1) ( 9.9)	2,335 ( 100.0) ( 10.8)
RSL	251 ( 15.1) ( 7.6)	112 ( 6.7) ( 6.0)	228 ( 13.7) ( 5.6)	1,074 ( 64.5) ( 8.7)	1,665 ( 100.0) ( 7.7)
Total	3,303 ( 15.3) ( 100.0)	1,886 ( 8.7) ( 100.0)	4,088 ( 18.9) ( 100.0)	12,337 ( 57.1) ( 100.0)	21,613 ( 100.0) ( 100.0)

Table 1.5 Double glazing - Proportion of dwelling double glazed by household composition

	count(000s), (row%), (column%)				
	No double glazing	Less than half	More than half	Entire house	Total
couple under 60	499 ( 11.9) ( 16.2)	336 ( 8.0) ( 18.5)	791 ( 18.9) ( 20.1)	2,554 ( 61.1) ( 21.3)	4,179 ( 100.0) ( 20.1)
couple 60 or over	380 ( 11.4) ( 12.4)	277 ( 8.3) ( 15.3)	722 ( 21.5) ( 18.3)	1,970 ( 58.8) ( 16.4)	3,349 ( 100.0) ( 16.1)
couple with children	561 ( 11.4) ( 18.2)	427 ( 8.7) ( 23.5)	903 ( 18.4) ( 22.9)	3,015 ( 61.4) ( 25.2)	4,906 ( 100.0) ( 23.6)
lone parent with children	294 ( 19.9) ( 9.6)	123 ( 8.3) ( 6.8)	216 ( 14.6) ( 5.5)	843 ( 57.1) ( 7.0)	1,476 ( 100.0) ( 7.1)
large adult household	273 ( 19.1) ( 8.9)	138 ( 9.7) ( 7.6)	257 ( 18.0) ( 6.5)	759 ( 53.2) ( 6.3)	1,426 ( 100.0) ( 6.9)
one person under 60	535 ( 21.3) ( 17.4)	232 ( 9.2) ( 12.8)	445 ( 17.7) ( 11.3)	1,299 ( 51.7) ( 10.8)	2,511 ( 100.0) ( 12.1)
one person 60 or over	535 ( 18.0) ( 17.4)	283 ( 9.6) ( 15.6)	609 ( 20.5) ( 15.5)	1,538 ( 51.9) ( 12.8)	2,966 ( 100.0) ( 14.3)
Total	3,077 ( 14.8) ( 100.0)	1,816 ( 8.7) ( 100.0)	3,944 ( 18.9) ( 100.0)	11,977 ( 57.5) ( 100.0)	20,814 ( 100.0) ( 100.0)

Table 1.6 Double glazing - Proportion of dwelling double glazed by floor area

	count(000s), (row%), (column%)				
	No double glazing	Less than half	More than half	Entire house	Total
Quintile 1: < 63m <sup>2</sup>	930 ( 21.5) ( 28.2)	388 ( 9.0) ( 20.6)	690 ( 16.0) ( 16.9)	2,314 ( 53.5) ( 18.8)	4,323 ( 100.0) ( 20.0)
Quintile 2: 63m <sup>2</sup> - 78m <sup>2</sup>	693 ( 16.0) ( 21.0)	335 ( 7.7) ( 17.8)	666 ( 15.4) ( 16.3)	2,627 ( 60.8) ( 21.3)	4,320 ( 100.0) ( 20.0)
Quintile 3: 78m <sup>2</sup> - 90m <sup>2</sup>	569 ( 13.1) ( 17.2)	287 ( 6.6) ( 15.2)	869 ( 20.1) ( 21.3)	2,601 ( 60.1) ( 21.1)	4,325 ( 100.0) ( 20.0)
Quintile 4: 90m <sup>2</sup> - 114m <sup>2</sup>	487 ( 11.3) ( 14.7)	352 ( 8.2) ( 18.7)	947 ( 21.9) ( 23.2)	2,535 ( 58.7) ( 20.6)	4,321 ( 100.0) ( 20.0)
Quintile 5: > 114m <sup>2</sup>	624 ( 14.4) ( 18.9)	523 ( 12.1) ( 27.7)	916 ( 21.2) ( 22.4)	2,260 ( 52.3) ( 18.3)	4,323 ( 100.0) ( 20.0)
Total	3,303 ( 15.3) ( 100.0)	1,886 ( 8.7) ( 100.0)	4,088 ( 18.9) ( 100.0)	12,337 ( 57.1) ( 100.0)	21,613 ( 100.0) ( 100.0)

Table 1.7 Double glazing - Proportion of dwelling double glazed by household income

	count(000s), (row%), (column%)				
	No double glazing	Less than half	More than half	Entire house	Total
Quintile 1: < £9k	861 ( 20.8) ( 28.0)	398 ( 9.6) ( 21.9)	742 ( 17.9) ( 18.8)	2,148 ( 51.8) ( 17.9)	4,149 ( 100.0) ( 19.9)
Quintile 2: £9k - £15k	665 ( 16.0) ( 21.6)	345 ( 8.3) ( 19.0)	758 ( 18.2) ( 19.2)	2,390 ( 57.5) ( 20.0)	4,158 ( 100.0) ( 20.0)
Quintile 3: £15k - £21k	520 ( 12.5) ( 16.9)	301 ( 7.2) ( 16.6)	826 ( 19.9) ( 21.0)	2,505 ( 60.3) ( 20.9)	4,153 ( 100.0) ( 20.0)
Quintile 4: £21k - £32k	476 ( 11.4) ( 15.5)	374 ( 9.0) ( 20.6)	794 ( 19.0) ( 20.1)	2,533 ( 60.6) ( 21.1)	4,177 ( 100.0) ( 20.1)
Quintile 5: > £32k	555 ( 13.3) ( 18.0)	398 ( 9.5) ( 21.9)	824 ( 19.7) ( 20.9)	2,400 ( 57.5) ( 20.0)	4,177 ( 100.0) ( 20.1)
Total	3,077 ( 14.8) ( 100.0)	1,816 ( 8.7) ( 100.0)	3,944 ( 18.9) ( 100.0)	11,977 ( 57.5) ( 100.0)	20,814 ( 100.0) ( 100.0)

Table 2.1 Loft insulation - Thickness of loft insulation

Loft insulation thickness	count(000s), (column%) Dwellings
None	825 ( 4.3)
1 - 50	2,829 ( 14.6)
51 - 100	8,914 ( 46.0)
101 - 150	4,283 ( 22.1)
151 - 200	1,892 ( 9.8)
200 +	650 ( 3.4)
Total	19,393 ( 100.0)

(of all dwellings with loft space)

Table 2.2 Loft insulation - Thickness of loft insulation by dwelling age

	count(000s), (row%), (column%)						
	None	1 - 50	51 - 100	101 - 150	151 - 200	> 200	Total
pre 1919	476 ( 11.5) ( 57.7)	535 ( 12.9) ( 18.9)	2,072 ( 49.9) ( 23.2)	693 ( 16.7) ( 16.2)	282 ( 6.8) ( 14.9)	95 ( 2.3) ( 14.6)	4,152 (100.0) ( 21.4)
1919 - 1944	194 ( 5.3) ( 23.5)	620 ( 16.8) ( 21.9)	1,762 ( 47.7) ( 19.8)	686 ( 18.6) ( 16.0)	314 ( 8.5) ( 16.6)	116 ( 3.2) ( 17.9)	3,692 (100.0) ( 19.0)
1945 - 1964	82 ( 2.0) ( 9.9)	675 ( 16.6) ( 23.9)	1,798 ( 44.2) ( 20.2)	946 ( 23.3) ( 22.1)	403 ( 9.9) ( 21.3)	162 ( 4.0) ( 25.0)	4,067 (100.0) ( 21.0)
1965 - 1980	67 ( 1.7) ( 8.1)	793 ( 19.6) ( 28.0)	1,862 ( 45.9) ( 20.9)	882 ( 21.7) ( 20.6)	349 ( 8.6) ( 18.4)	103 ( 2.5) ( 15.9)	4,056 (100.0) ( 20.9)
1981 - 1990	1 ( 0.0) ( 0.1)	158 ( 9.7) ( 5.6)	915 ( 55.9) ( 10.3)	420 ( 25.6) ( 9.8)	98 ( 6.0) ( 5.2)	45 ( 2.7) ( 6.9)	1,636 (100.0) ( 8.4)
post 1990	6 ( 0.3) ( 0.7)	48 ( 2.7) ( 1.7)	505 ( 28.2) ( 5.7)	657 ( 36.7) ( 15.3)	446 ( 24.9) ( 23.6)	128 ( 7.2) ( 19.7)	1,789 (100.0) ( 9.2)
Total	825 ( 4.3) (100.0)	2,829 ( 14.6) (100.0)	8,914 ( 46.0) (100.0)	4,283 ( 22.1) (100.0)	1,892 ( 9.8) (100.0)	650 ( 3.4) (100.0)	19,393 (100.0) (100.0)

(of all dwellings with loft space)

Table 2.3 Loft insulation - Thickness of loft insulation by dwelling type

	count(000s), (row%), (column%)						
	None	1 - 50	51 - 100	101 - 150	151 - 200	> 200	Total
End terrace	98 ( 4.7) ( 11.8)	278 ( 13.3) ( 9.8)	990 ( 47.3) ( 11.1)	427 ( 20.4) ( 10.0)	232 ( 11.1) ( 12.3)	68 ( 3.2) ( 10.4)	2,093 ( 100.0) ( 10.8)
Mid terrace	266 ( 6.2) ( 32.3)	613 ( 14.3) ( 21.7)	1,996 ( 46.4) ( 22.4)	872 ( 20.3) ( 20.4)	409 ( 9.5) ( 21.6)	143 ( 3.3) ( 22.0)	4,299 ( 100.0) ( 22.2)
Semi detached	259 ( 3.8) ( 31.3)	1,112 ( 16.5) ( 39.3)	3,104 ( 46.1) ( 34.8)	1,386 ( 20.6) ( 32.4)	620 ( 9.2) ( 32.8)	257 ( 3.8) ( 39.6)	6,738 ( 100.0) ( 34.7)
Detached	136 ( 2.8) ( 16.5)	679 ( 14.1) ( 24.0)	2,207 ( 45.8) ( 24.8)	1,123 ( 23.3) ( 26.2)	533 ( 11.0) ( 28.2)	146 ( 3.0) ( 22.5)	4,824 ( 100.0) ( 24.9)
Purpose built	26 ( 2.3) ( 3.2)	108 ( 9.4) ( 3.8)	446 ( 38.9) ( 5.0)	435 ( 38.0) ( 10.2)	95 ( 8.3) ( 5.0)	36 ( 3.1) ( 5.5)	1,145 ( 100.0) ( 5.9)
Converted & non-residential	41 ( 13.8) ( 4.9)	39 ( 13.3) ( 1.4)	171 ( 58.0) ( 1.9)	40 ( 13.6) ( 0.9)	4 ( 1.2) ( 0.2)	0 ( 0.0) ( 0.0)	294 ( 100.0) ( 1.5)
Total	825 ( 4.3) ( 100.0)	2,829 ( 14.6) ( 100.0)	8,914 ( 46.0) ( 100.0)	4,283 ( 22.1) ( 100.0)	1,892 ( 9.8) ( 100.0)	650 ( 3.4) ( 100.0)	19,393 ( 100.0) ( 100.0)

(of all dwellings with loft space)



Table 2.4 Loft insulation - Thickness of loft insulation by dwelling tenure

	None	1 - 50	51 - 100	101 - 150	151 - 200	200 +	Total
Owner occupied	613 ( 4.2) ( 74.3)	2,312 ( 15.8) ( 81.7)	6,907 ( 47.3) ( 77.5)	3,021 ( 20.7) ( 70.5)	1,307 ( 9.0) ( 69.1)	438 ( 3.0) ( 67.3)	14,598 ( 100.0) ( 75.3)
Private rented	162 ( 8.7) ( 19.6)	259 ( 13.9) ( 9.1)	982 ( 53.0) ( 11.0)	300 ( 16.2) ( 7.0)	112 ( 6.1) ( 5.9)	40 ( 2.2) ( 6.2)	1,855 ( 100.0) ( 9.6)
Local Authority	28 ( 1.6) ( 3.4)	164 ( 9.6) ( 5.8)	576 ( 33.7) ( 6.5)	569 ( 33.3) ( 13.3)	272 ( 15.9) ( 14.4)	101 ( 5.9) ( 15.6)	1,711 ( 100.0) ( 8.8)
RSL	22 ( 1.8) ( 2.7)	95 ( 7.7) ( 3.3)	448 ( 36.4) ( 5.0)	393 ( 32.0) ( 9.2)	200 ( 16.3) ( 10.6)	71 ( 5.8) ( 10.9)	1,230 ( 100.0) ( 6.3)
Total	825 ( 4.3) ( 100.0)	2,829 ( 14.6) ( 100.0)	8,914 ( 46.0) ( 100.0)	4,283 ( 22.1) ( 100.0)	1,892 ( 9.8) ( 100.0)	650 ( 3.4) ( 100.0)	19,393 ( 100.0) ( 100.0)

(of all dwellings with loft space)

Table 2.5 Loft insulation - Thickness of loft insulation by household composition

	count(000s), (row%), (column%)						
	None	1 - 50	51 - 100	101 - 150	151 - 200	200 +	Total
couple under 60	119 ( 3.1) ( 15.7)	634 ( 16.2) ( 23.1)	1,929 ( 49.3) ( 22.3)	781 ( 19.9) ( 18.8)	326 ( 8.3) ( 17.7)	125 ( 3.2) ( 19.8)	3,914 ( 100.0) ( 20.9)
couple 60 or over	120 ( 3.8) ( 15.7)	519 ( 16.3) ( 18.9)	1,455 ( 45.7) ( 16.9)	712 ( 22.3) ( 17.2)	272 ( 8.6) ( 14.8)	107 ( 3.4) ( 16.9)	3,186 ( 100.0) ( 17.0)
couple with children	200 ( 4.2) ( 26.2)	645 ( 13.6) ( 23.5)	2,152 ( 45.4) ( 24.9)	1,040 ( 22.0) ( 25.1)	539 ( 11.4) ( 29.3)	159 ( 3.4) ( 25.2)	4,736 ( 100.0) ( 25.2)
lone parent with children	54 ( 4.2) ( 7.0)	148 ( 11.5) ( 5.4)	561 ( 43.5) ( 6.5)	322 ( 25.0) ( 7.8)	150 ( 11.6) ( 8.1)	56 ( 4.3) ( 8.8)	1,290 ( 100.0) ( 6.9)
large adult household	73 ( 5.8) ( 9.6)	223 ( 17.6) ( 8.1)	584 ( 46.0) ( 6.8)	245 ( 19.3) ( 5.9)	111 ( 8.7) ( 6.0)	35 ( 2.7) ( 5.5)	1,271 ( 100.0) ( 6.8)
one person under 60	88 ( 4.5) ( 11.5)	240 ( 12.3) ( 8.8)	980 ( 50.3) ( 11.3)	423 ( 21.7) ( 10.2)	163 ( 8.4) ( 8.9)	55 ( 2.8) ( 8.7)	1,949 ( 100.0) ( 10.4)
one person 60 or over	109 ( 4.5) ( 14.3)	336 ( 13.9) ( 12.2)	974 ( 40.3) ( 11.3)	624 ( 25.8) ( 15.0)	279 ( 11.5) ( 15.1)	96 ( 4.0) ( 15.2)	2,417 ( 100.0) ( 12.9)
Total	763 ( 4.1) ( 100.0)	2,745 ( 14.6) ( 100.0)	8,635 ( 46.0) ( 100.0)	4,146 ( 22.1) ( 100.0)	1,840 ( 9.8) ( 100.0)	633 ( 3.4) ( 100.0)	18,762 ( 100.0) ( 100.0)

(of all dwellings with loft space)

Table 2.6 Loft insulation - Thickness of loft insulation by floor area

	count(000s), (row%), (column%)						
	None	1 - 50	51 - 100	101 - 150	151 - 200	> 200	Total
Quintile 1: < 63m <sup>2</sup>	91 ( 3.2) ( 11.1)	314 ( 10.9) ( 11.1)	1,308 ( 45.5) ( 14.7)	739 ( 25.7) ( 17.2)	312 ( 10.8) ( 16.5)	113 ( 3.9) ( 17.4)	2,877 ( 100.0) ( 14.8)
Quintile 2: 63m <sup>2</sup> - 78m <sup>2</sup>	173 ( 4.5) ( 20.9)	546 ( 14.1) ( 19.3)	1,738 ( 44.9) ( 19.5)	906 ( 23.4) ( 21.1)	359 ( 9.3) ( 19.0)	146 ( 3.8) ( 22.5)	3,868 ( 100.0) ( 19.9)
Quintile 3: 78m <sup>2</sup> - 90m <sup>2</sup>	152 ( 3.6) ( 18.4)	720 ( 17.3) ( 25.4)	1,872 ( 45.1) ( 21.0)	855 ( 20.6) ( 20.0)	407 ( 9.8) ( 21.5)	150 ( 3.6) ( 23.0)	4,155 ( 100.0) ( 21.4)
Quintile 4: 90m <sup>2</sup> - 114m <sup>2</sup>	190 ( 4.5) ( 23.0)	662 ( 15.6) ( 23.4)	1,991 ( 47.0) ( 22.3)	885 ( 20.9) ( 20.7)	371 ( 8.8) ( 19.6)	133 ( 3.1) ( 20.5)	4,232 ( 100.0) ( 21.8)
Quintile 5: > 114m <sup>2</sup>	220 ( 5.2) ( 26.7)	587 ( 13.8) ( 20.8)	2,004 ( 47.0) ( 22.5)	899 ( 21.1) ( 21.0)	443 ( 10.4) ( 23.4)	108 ( 2.5) ( 16.6)	4,261 ( 100.0) ( 22.0)
Total	825 ( 4.3) ( 100.0)	2,829 ( 14.6) ( 100.0)	8,914 ( 46.0) ( 100.0)	4,283 ( 22.1) ( 100.0)	1,892 ( 9.8) ( 100.0)	650 ( 3.4) ( 100.0)	19,393 ( 100.0) ( 100.0)

(of all dwellings with loft space)

Table 2.7 Loft insulation - Thickness of loft insulation by household income

	count(000s), (row%), (column%)						
	None	1 - 50	51 - 100	101 - 150	151 - 200	> 200	Total
Quintile 1: < £9k	166 ( 5.0) ( 21.7)	418 ( 12.6) ( 15.2)	1,412 ( 42.4) ( 16.4)	793 ( 23.8) ( 19.1)	399 ( 12.0) ( 21.7)	140 ( 4.2) ( 22.1)	3,328 ( 100.0) ( 17.7)
Quintile 2: £9k - £15k	174 ( 4.8) ( 22.8)	527 ( 14.4) ( 19.2)	1,551 ( 42.5) ( 18.0)	883 ( 24.2) ( 21.3)	361 ( 9.9) ( 19.6)	156 ( 4.3) ( 24.7)	3,652 ( 100.0) ( 19.5)
Quintile 3: £15k - £21k	148 ( 3.9) ( 19.4)	570 ( 14.9) ( 20.8)	1,839 ( 47.9) ( 21.3)	840 ( 21.9) ( 20.3)	336 ( 8.7) ( 18.2)	105 ( 2.7) ( 16.6)	3,838 ( 100.0) ( 20.5)
Quintile 4: £21k - £32k	136 ( 3.4) ( 17.8)	632 ( 15.9) ( 23.0)	1,978 ( 49.9) ( 22.9)	750 ( 18.9) ( 18.1)	358 ( 9.0) ( 19.5)	115 ( 2.9) ( 18.1)	3,968 ( 100.0) ( 21.2)
Quintile 5: > £32k	140 ( 3.5) ( 18.3)	598 ( 15.0) ( 21.8)	1,854 ( 46.6) ( 21.5)	880 ( 22.1) ( 21.2)	387 ( 9.7) ( 21.1)	117 ( 2.9) ( 18.5)	3,976 ( 100.0) ( 21.2)
Total	763 ( 4.1) ( 100.0)	2,745 ( 14.6) ( 100.0)	8,635 ( 46.0) ( 100.0)	4,146 ( 22.1) ( 100.0)	1,840 ( 9.8) ( 100.0)	633 ( 3.4) ( 100.0)	18,762 ( 100.0) ( 100.0)

(of all dwellings with loft space)

Table 3.1 Cavity wall insulation - Proportion of cavity wall dwellings with cavity wall insulation

	count(000s), (column%)
Cavity wall insulation present?	Dwellings
Cavity with insulation	5,825 ( 38.7)
Cavity uninsulated	9,217 ( 61.3)
Total	15,042 ( 100.0)

(of dwellings with predominantly cavity wall construction)

Table 3.2 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by dwelling age

	Cavity wall insulation?		count(000s), (row%), (column%)
	Yes	No	Total
pre 1919	75 ( 11.0)	609 ( 89.0)	683 ( 100.0)
1919 - 1944	628 ( 27.5)	1,655 ( 72.5)	2,283 ( 100.0)
1945 - 1964	1,505 ( 38.9)	2,365 ( 61.1)	3,870 ( 100.0)
1965 - 1980	1,500 ( 34.5)	2,851 ( 65.5)	4,352 ( 100.0)
1981 - 1990	885 ( 47.2)	990 ( 52.8)	1,875 ( 100.0)
post 1990	1,232 ( 62.3)	746 ( 37.7)	1,978 ( 100.0)
Total	5,825 ( 38.7)	9,217 ( 61.3)	15,042 ( 100.0)

(of dwellings with predominantly cavity wall construction)

Table 3.3 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by dwelling type

	Cavity wall insulation?		count(000s), (row%), (column%)
	Yes	No	Total
End terrace	523 ( 38.3)	842 ( 61.7)	1,366 ( 100.0)
Mid terrace	703 ( 32.5)	1,458 ( 67.5)	2,161 ( 100.0)
Semi detached	1,944 ( 12.1)	3,169 ( 15.8)	5,112 ( 14.4)
Detached	1,805 ( 38.0)	2,206 ( 62.0)	4,011 ( 100.0)
Purpose built	836 ( 31.0)	1,449 ( 23.9)	2,286 ( 26.7)
Converted & non-residential	14 ( 14.4)	93 ( 15.7)	107 ( 15.2)
Total	5,825 ( 0.2)	9,217 ( 1.0)	15,042 ( 0.7)
	( 38.7)	( 61.3)	( 100.0)
	( 100.0)	( 100.0)	( 100.0)

(of dwellings with predominantly cavity wall construction)

Table 3.4 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by tenure

	Cavity wall insulation?		count(000s), (row%), (column%)
	Yes	No	Total
Owner occupied	4,029 ( 37.2)	6,792 ( 62.8)	10,821 ( 100.0)
Private rented	355 ( 30.4)	814 ( 69.6)	1,170 ( 100.0)
Local Authority	835 ( 47.8)	911 ( 52.2)	1,746 ( 100.0)
RSL	606 ( 46.4)	700 ( 53.6)	1,306 ( 100.0)
Total	5,825 ( 38.7)	9,217 ( 61.3)	15,042 ( 100.0)

(of dwellings with predominantly cavity wall construction)



Table 3.5 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by household composition

	Cavity wall insulation?		count(000s), (row%), (column%)
	Yes	No	Total
couple under 60	1,073 ( 37.2)	1,808 ( 62.8)	2,880 ( 100.0)
couple 60 or over	1,088 ( 42.9)	1,446 ( 57.1)	2,533 ( 100.0)
couple with children	1,297 ( 37.7)	2,140 ( 62.3)	3,436 ( 100.0)
lone parent with children	377 ( 38.7)	597 ( 61.3)	973 ( 100.0)
large adult household	328 ( 37.2)	553 ( 62.8)	880 ( 100.0)
one person under 60	573 ( 34.8)	1,076 ( 65.2)	1,650 ( 100.0)
one person 60 or over	959 ( 42.9)	1,277 ( 57.1)	2,236 ( 100.0)
Total	5,694 ( 39.0)	8,896 ( 61.0)	14,590 ( 100.0)

(of dwellings with predominantly cavity wall construction)

Table 3.6 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by floor area

	Cavity wall insulation?		count(000s), (row%), (column%)
	Yes	No	Total
Quintile 1: < 63m <sup>2</sup>	1,218 ( 40.2) ( 20.9)	1,816 ( 59.8) ( 19.7)	3,034 ( 100.0) ( 14.8)
Quintile 2: 63m <sup>2</sup> - 78m <sup>2</sup>	1,107 ( 37.2) ( 19.0)	1,864 ( 62.8) ( 20.2)	2,971 ( 100.0) ( 19.9)
Quintile 3: 78m <sup>2</sup> - 90m <sup>2</sup>	1,163 ( 37.7) ( 20.0)	1,923 ( 62.3) ( 20.9)	3,086 ( 100.0) ( 21.4)
Quintile 4: 90m <sup>2</sup> - 114m <sup>2</sup>	1,208 ( 39.7) ( 20.7)	1,835 ( 60.3) ( 19.9)	3,043 ( 100.0) ( 21.8)
Quintile 5: > 114m <sup>2</sup>	1,129 ( 38.8) ( 19.4)	1,779 ( 61.2) ( 19.3)	2,908 ( 100.0) ( 22.0)
Total	5,825 ( 38.7) ( 100.0)	9,217 ( 61.3) ( 100.0)	15,042 ( 100.0) ( 100.0)

(of dwellings with predominantly cavity wall construction)

Table 3.7 Cavity wall insulation - Proportion of dwellings with cavity wall insulation by household income

	Cavity wall insulation?		count(000s), (row%), (column%)
	Yes	No	Total
Quintile 1: < £9k	1,174 ( 41.4)	1,662 ( 58.6)	2,836 ( 100.0)
Quintile 2: £9k - £15k	1,202 ( 40.7)	1,750 ( 59.3)	2,953 ( 100.0)
Quintile 3: £15k - £21k	1,119 ( 37.6)	1,856 ( 62.4)	2,974 ( 100.0)
Quintile 4: £21k - £32k	1,097 ( 36.1)	1,939 ( 63.9)	3,036 ( 100.0)
Quintile 5: > £32k	1,101 ( 39.5)	1,690 ( 60.5)	2,791 ( 100.0)
Total	5,694 ( 39.0)	8,896 ( 61.0)	14,590 ( 100.0)
	( 100.0)	( 100.0)	( 100.0)

(of dwellings with predominantly cavity wall construction)