

19 June 2012

This document includes revised estimates of home insulation levels for April 2012, originally published on 7 June 2012. Changes to the 7 June publication are a result of revisions to data from Ofgem on measures delivered through the Carbon Emissions Reduction Target (CERT). Changes affect estimates of the number of properties with cavity wall insulation, professional loft insulation and solid wall insulation. Ofgem's revised CERT update and explanation of revisions can be found here:

<http://www.ofgem.gov.uk/Sustainability/Environment/EnergyEff/CU/Documents1/Ofgem%20CERT%20Q16%20June%202012.pdf>

STATISTICAL RELEASE: EXPERIMENTAL STATISTICS

Revised estimates of Home Insulation Levels in Great Britain: April 2012

Key points

It is estimated that at the start of April 2012:

- There are 26.7 million homes in Great Britain. Of these 23.4 million have lofts, 19.0 million have cavity walls with the remaining 7.8 million having solid walls.
- Through Government schemes since April 2008 (the start of CERT), there have been 4.2 million lofts insulated, 2.1 million cavity walls insulated and 63,000 solid walls insulated.
- Compared with January 2012, 378,000 more properties had loft insulation, 206,000 more had cavity wall insulation and 5,000 more had solid wall insulation.
- 14.5 million homes had loft insulation of at least 125mm (62 per cent of homes with lofts).
- 11.4 million homes had cavity wall insulation (60 per cent of homes with cavity walls).
- 128,000 homes had solid wall insulation (2 per cent of homes with solid walls).

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Introduction

This publication presents DECC estimates for the number of homes in Great Britain with loft, cavity wall and solid wall insulation. It gives headline estimates for the number of insulated homes and a summary of how these estimates are derived from different data sources.

DECC set out in its Departmental Business Plan 2011-15¹ that these data for cavity wall and loft insulations would be used as one of the departments key impact indicators.

Sources and methodology

The English Housing Survey (EHS) and Scottish House Condition Survey (SHCS) collect information on insulation measures in homes. The estimates in this Statistical Release use the 2008 survey data, which coincides with the start of the Carbon Emissions Reduction Target (CERT), and adds known measures delivered through Government schemes including CERT², the Community Energy Saving Programme (CESP)³ and Warm Front. This is supplemented with data on house building from Communities & Local Government.

These estimates are released as Experimental Statistics while the methodology is developed further. As part of ongoing efforts to ensure these estimates are robust DECC is welcoming input into the assumptions used in the production of these estimates. Alongside this release DECC is publishing a note detailing proposed changes to the methodology. Subject to users views on the changes, the new methodology will be implemented in future publications. A detailed methodology showing the current approach and assumptions is set out in the Methodology Note⁴.

Headline results

Table 1 shows the number of properties in Great Britain with cavity wall, loft and solid wall insulation (see Appendix A for explanation of measures). At the start of April 2012, 11.4 million had cavity wall insulation (60 per cent of properties with a cavity wall), 14.5 million had loft insulation (62 per cent of properties with a loft) and 128,000 had solid wall insulation.

Table 1: Insulated homes in Great Britain: April 2007 to April 2012 (Thousands)

Date	Cavity wall insulation	Loft insulation >=125mm	Solid wall insulation
April 2007	8,500	9,500	n/a
April 2008	8,700	9,860	65
April 2009	9,420	10,630	74 r
April 2010	10,140	12,150	94
April 2011	10,730	13,220	102
July 2011	10,850	13,430	111 r
October 2011	11,020	13,710	117 r
January 2012	11,180	14,080	123 r
April 2012	11,380 p	14,460	128

¹ <http://www.decc.gov.uk/assets/decc/About%20us/decc-business-plan-2011-2015.pdf>

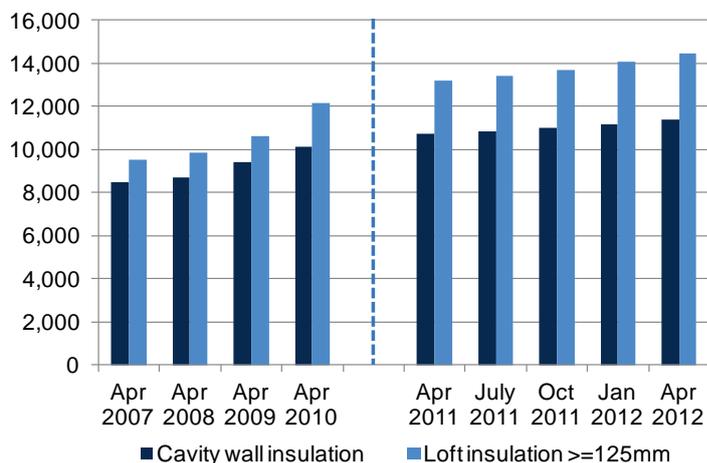
² <http://www.ofgem.gov.uk/Sustainability/Environment/EnergyEff/CU/Pages/CU.aspx>

³ <http://www.ofgem.gov.uk/Sustainability/Environment/EnergyEff/cesp/Pages/cesp.aspx>

⁴ <http://www.decc.gov.uk/media/viewfile.ashx?filetype=4&filepath=11/stats/energy/energy-efficiency/1917-methodology-note-for-stats-may2011.pdf&minwidth=true>

Taking into account Government schemes and new properties built during the last quarter, there were 378,000 more homes with at least 125mm of loft insulation and 206,000 more homes with cavity wall insulation compared with the previous quarter.

Chart 1a: Homes in Great Britain with cavity wall insulation and loft insulation: April 2007 to April 2012 (Thousands)



- The number of properties with cavity wall insulation increased by 6 per cent between the start of April 2011 and April 2012.
- The number of properties with loft insulation of 125mm or more increased by 9 per cent between the start of April 2011 and April 2012.

Chart 1b: Homes in Great Britain with solid wall insulation⁵: April 2008 to April 2012 (Thousands)



- The number of properties with solid wall insulation increased by 25 per cent between April 2011 and April 2012, an increase of approximately 26,000 properties.

Sources of increases in insulation levels

Increases in the number of properties with insulation result from new properties being built⁶ and from retro-fit insulation, predominantly through Government schemes. Table 2 and Chart 2 show what has driven the increase in the number of insulated cavities and lofts since the 2008 survey baseline. Delivery of measures through CERT has made the largest contribution since April 2008, for both lofts and cavities.

⁵ Solid wall insulation has been defined throughout this report as internal or external wall insulation installed through Government programmes. In addition, in April 2008 about 900,000 properties are known to have had other forms of non-cavity wall insulation that fall outside this definition.

⁶ Information is not available on the wall construction of new homes. Typically Building Regulations would be met by insulated cavity walls but other construction types could be used. In this publication it is assumed that all new builds since April 2008 have cavity wall insulation.

Table 2: Insulated homes in Great Britain by source: April 2012 (Thousands)

	Cavity wall insulation	Loft insulation >=125mm	Solid wall insulation ^{7,8}
2008 survey (April)	8,700	9,860	65
New build since April 2008	560	420	0
CERT delivery (Professional) since April 2008	2,100	2,620	47
CERT delivery (DIY) since April 2008**	0	1,470	0
CESP delivery since January 2010*	-	-	15
Warm Front delivery since April 2008	20	80	0
TOTAL	11,380	14,460	128
Homes in Great Britain†	18,960	23,360	7,780
Percentage of homes insulated ‡	60%	62%	1.6%

* CESP commenced in September 2009 with the first measures installed in January 2010 (CESP data is reported 6 monthly, activity up to the end of June is reported in September and end of December in March).

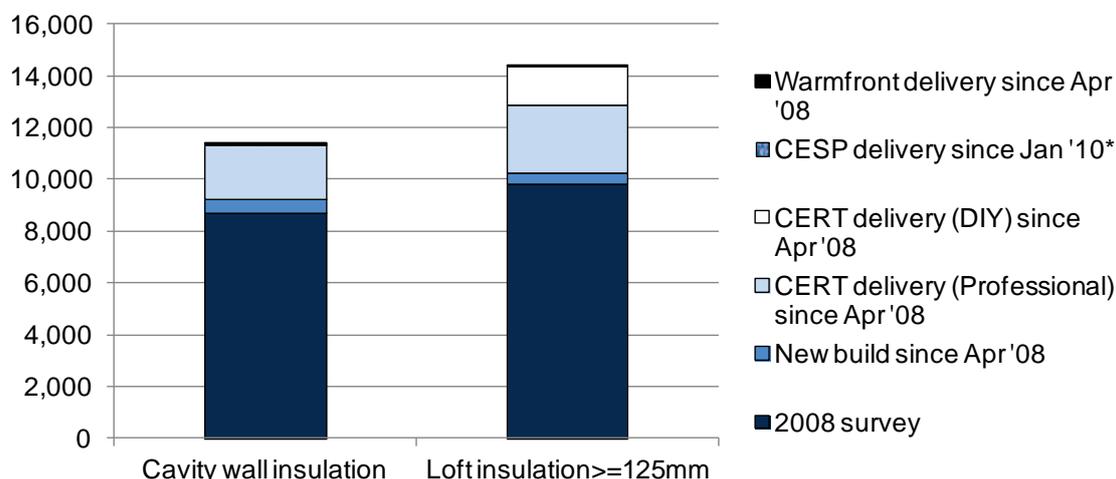
**Loft insulation is the only measure that can be delivered through DIY methods under CERT.

†The number of homes in Great Britain with cavity walls, lofts and solid walls respectively.

‡The solid wall insulation (SWI) percentage is calculated based on number of homes with SWI delivered through Government schemes divided by number of homes with non-cavity walls, although SWI can be applied to homes with cavity walls.

- nil, cavity wall or loft insulation count less than 10,000 (SWI is reported to the nearest thousand).

Chart 2: Number of homes in Great Britain with cavity wall insulation and loft insulation by source: April 2012



There are a number of factors that affect the amount of insulation delivered throughout any year, including some seasonal variation and promotional offers run by insulation providers. Table 3 shows a breakdown of CERT delivery by quarter.

⁷ 2008 estimates for solid wall insulation are taken from EEC1 and EEC2 reported activity rather than a survey.

⁸ Solid wall insulation is present in 1.6% of homes with solid walls based on the definition used in this report. If all forms of non-cavity wall insulation (installed outside Government schemes) were included, 12.7% of solid wall homes have some form of wall insulation.

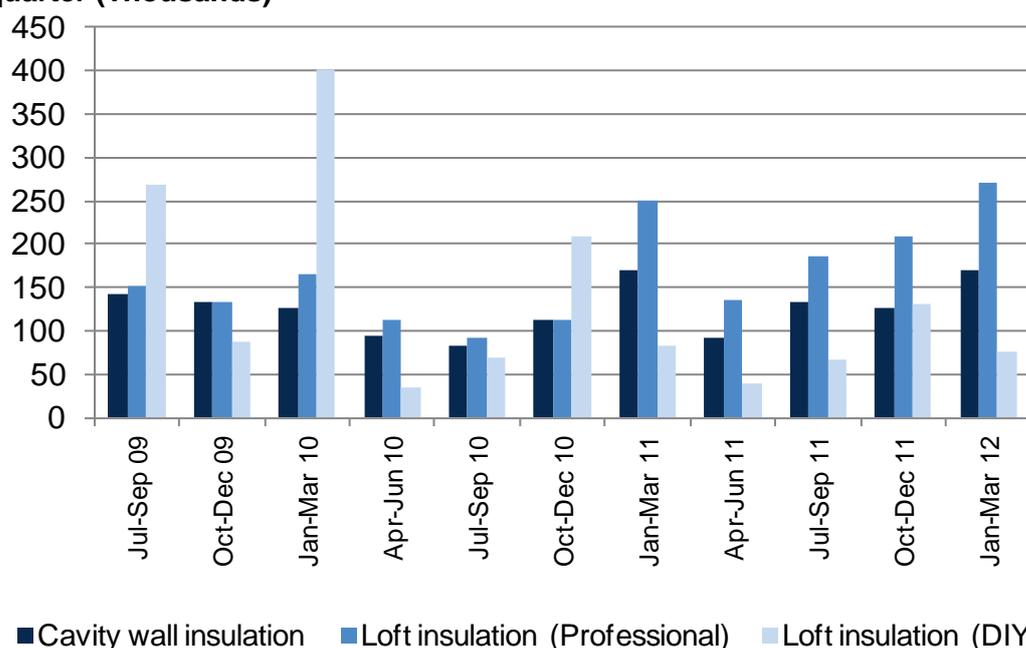
Table 3: Number of new CERT insulations: January 2011 to March 2012 (Thousands)

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Insulations	Jan-Mar 11	Apr-Jun 11	Jul-Sep 11	Oct-Dec 11	Jan-Mar 12
Cavity wall insulation	170	92	133	127	169
Loft insulation (Professional)	251	137	187	209	272
Loft insulation (DIY)	83	40	67	131	76
Solid wall insulation	1	2	3	3	2

Source: Ofgem

Chart 3: Number of installations of new CERT cavity wall insulation and loft insulation by quarter (Thousands)



A full review of measures installed through CERT is published quarterly by Ofgem⁹. Key points are summarised below:

- The number of cavity wall insulations (169,000) reported in the last quarter is stable when compared to the number reported in the equivalent quarter the previous year.
- 272,000 professional loft insulations were reported in the last quarter, 8 per cent more than the equivalent quarter the previous year.
- The number of DIY loft insulations reported in the last quarter (76,000) decreased by 8 per cent compared with the equivalent quarter the previous year.
- The number of solid wall insulations reported in the last quarter was around 2,000, approximately 1,000 higher than the number installed in the equivalent quarter the previous year.

⁹ To avoid double counting the number of insulated lofts, 10% of reported installations have been removed. This assumption is explained in the Methodology Note.

¹⁰ Source: Ofgem see footnote 1.

Appendix A - Technical appendix

1. Many homes built in Great Britain have external walls made up of an inner and outer wall with a small cavity in between. These have been typical since the 1930s, but some older properties will also have them. Cavity walls were used initially because they were cheaper (as the inner leaf could use non-decorative brick) and had a greater resistance to moisture moving from outside to inside. The presence of a cavity also improves the thermal performance of the wall, especially if the cavity is insulated. Since the mid 1980s, homes have been increasingly built with pre-insulated cavity walls, though the type of blockwork used for the inner leaf has also contributed to the improved thermal performance required by Building Regulations.
2. Some loft insulation has been installed in new homes since 1965. Current building regulations for new homes require a roof to have a thermal transmittance (U-value) of at least as low as $0.13 \text{ W/m}^2\text{.K}$, which would typically be achieved with 300mm of loft insulation. There is a strong 'diminishing returns' effect with savings from increasing the depth of loft insulation, so the first inch gives about half the savings from full insulation. Therefore, a threshold of 125mm is used in these statistics since homes with less than this would expect to see significant improvements in energy efficiency from a top-up.
3. It is possible to improve the thermal performance of solid walls by adding insulation either internally or externally. There is a wide variety of technical solutions that can be used to insulate either the internal or the external face of the wall. Current building regulations require a target U-value of $0.35 \text{ W/m}^2\text{.K}$ to be reached if this modification to the wall is made. It is likely that installations of solid wall insulation before 2002 (i.e. before the first phase of the Energy Efficiency Commitment) may not achieve this level of thermal performance, so these are recorded separately in the statistics.

Further information and feedback

Any enquiries or comments in relation to this statistical release should be sent to DECC's Energy Statistics Team at the following email address:

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The statistician responsible for this publication is Mary Gregory.

Further information on energy statistics is available at

<http://www.decc.gov.uk/en/content/cms/statistics/statistics.aspx>

Next release

These figures will continue to be updated on a quarterly basis. The next release, containing estimates for July 2012, is due to be published on Wednesday 19th September 2012 at 9:30am.

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