



**Association for the  
Conservation of  
Energy**

Westgate House  
2a Prebend Street  
London N1 8PT

020 7359 8000  
[pedro@ukace.org](mailto:pedro@ukace.org)

## The Cold Man of Europe – 2015

*How the UK's housing performs against comparable European countries in terms of fuel poverty and energy efficiency. Written by Pedro Guertler, Jack Carrington and Antonia Jansz*

### Summary

This briefing compares the state of the UK housing stock and fuel poverty levels with 15 other European countries. It concludes that no other country of the 16 assessed performed as poorly overall as the UK across the range of indicators. The UK has among the highest rates of fuel poverty and one of the most energy inefficient housing stocks in Europe.

Despite the fact that it has amongst the lowest energy prices, the UK ranks very poorly in terms of the affordability of space heating (it ranks last out of 16) and fuel poverty (ranking 14<sup>th</sup>).

It is the poor state of our housing stock that is the main cause of these problems. In terms of households reporting that their home is in a poor state of repair, the UK ranks 12<sup>th</sup> out of 16.

In terms of energy efficiency, out of 11 countries for which data is available, the UK's walls are ranked 7<sup>th</sup>, roofs are ranked 8<sup>th</sup>, floors are ranked 10<sup>th</sup> and windows are ranked 11<sup>th</sup>.

The key results are shown in Table 1 below. The latest official European data are used for this briefing, and the UK's performance compared to a previous assessment two years ago<sup>1</sup>.

<sup>1</sup> <http://www.ukace.org/2013/03/fact-file-the-cold-man-of-europe/>

Table 1: UK's ranking across 9 key indicators (number of countries varies according to data availability)

Indicator	2011 (previous assessment)	2013 (this briefing)
Affordability of space heating	14/15	16/16
Arrears on utility bills in last 12 months	(9/16)	14/16
Level of fuel poverty	13/16	14/16 <sup>2</sup>
Homes in poor state of repair	12/16	12/16
Thermal performance of...		
<i>Walls</i>	6/8	7/11
<i>Roof</i>	n/a	8/11
<i>Floor</i>	n/a	10/11
<i>Windows</i>	n/a	11/11

## The least energy efficient homes in England

Added to this year's update is an analysis of the homes that seem to be dragging the UK's rankings down. There are 26 million households in the UK and 21 million with a poor level of energy efficiency (Band D, E, F and G on an Energy Performance Certificate). The energy efficiency of all these homes has to be raised. The average energy efficiency of a UK home is Band D which is not high enough to protect households from fuel poverty.

In this report we use the latest English Housing Survey to analyse those homes in England that are least energy efficient, with a worse than average energy rating (worse than D on the A to G scale). In England, approximately one third of homes – 6.6 million – are rated E, F or G.

The average required energy expenditure across the housing stock is £1,210. In E-rated homes, it is £1,640, in F-rated homes, it is £2,140, and in G-rated homes, it is £2,670, over twice the national average. Using Energy Performance Certificate data for England up to October 2012, the English constituencies with the highest proportions of E, F and G-rated properties are shown in Table 2. A full list of English constituencies and how they perform is available in the Appendix to this report.

Table 2: Top 10 Parliamentary constituencies with highest share of worse than average homes for energy efficiency

Parliamentary constituency	Share of homes rated E, F or G	MP	Party
St Ives	50.4%	Derek Thomas	Conservative
Southend West	47.6%	David Amess	Conservative
Derbyshire Dales	44.8%	Patrick McLoughlin	Conservative
Ludlow	42.9%	Philip Dunne	Conservative
West Worcestershire	42.7%	Harriett Baldwin	Conservative
North Cornwall	42.3%	Scott Mann	Conservative
Birmingham, Hall Green	42.2%	Roger Godsiff	Labour
Croydon South	42.1%	Chris Philp	Conservative
Penrith and The Border	41.9%	Rory Stewart	Conservative
Southport	41.8%	John Pugh	Liberal Democrat

Our housing is infrastructure and the UK's is in a very poor condition, resulting in high levels of fuel poverty and unaffordable energy bills. The solution to this crisis is for the UK Government to designate home energy efficiency as an infrastructure priority and use infrastructure funds to deliver the stable, long-term investment needed to implement a locally-led infrastructure programme to upgrade all UK homes up to Band C on an Energy Performance Certificate.

<sup>2</sup> The indicator used in the original (EC 2010) has not since been updated. A new indicator has been developed (Thomson and Snell 2013), used in this update and applied to the 2011 data.

# 1 Introduction

This briefing focuses on the position of the UK's housing stock in comparison to other European countries in terms of fuel poverty and energy efficiency.

On the latest available data, the housing stock was the cause of 29 per cent of our CO<sub>2</sub> emissions<sup>3</sup>, and 27 per cent of final energy consumption<sup>4</sup>. Fuel poverty remains a serious and growing problem in the UK: estimated at 4.5 million households in 2013, the same as in 2009 and the joint-highest level this century<sup>5</sup>. Upgrading the housing stock to high standards of energy efficiency would capture multiple opportunities:

- **Social opportunity:** Making homes highly energy efficient is by far the best solution to end fuel poverty. It can also reduce NHS costs. It is estimated that cold homes cost the NHS £1.3 billion every year.
- **Economic opportunity:** Recent research by Frontier Economics<sup>6</sup> confirms that energy efficiency can be classified as infrastructure and that based on the Government's own economic cost benefit data, an energy efficiency programme has comparable net economic benefits to other infrastructure programmes such as HS2, Crossrail and roads. An energy efficiency programme could generate economic benefits of £8.7 billion to the UK economy.
- **Energy security:** Cambridge Econometrics estimates that bringing all UK homes up to a reasonably high standard of energy efficiency (EPC Band C) would reduce UK gas imports by 26%, strengthening UK energy security<sup>7</sup>.
- **Environmental opportunity:** Reducing CO<sub>2</sub> emissions from housing is imperative to meet the UK's Carbon Budgets; using aggressive and ambitious energy efficiency improvement as the core means of achieving this brings additional benefits in terms of energy security and reduced energy imports.

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<sup>3</sup> (DECC 2015c)

<sup>4</sup> (DECC 2015b)

<sup>5</sup> (DECC 2015a)

<sup>6</sup> (Frontier Economics 2015)

<sup>7</sup> (Cambridge Econometrics and Verco 2014)

## 2 Methodology

### 2.1 Rationale for choice of countries to compare

In order to achieve a significant degree of comparability with the original *Cold Man of Europe* briefing published in 2013, we chose to retain the same countries for comparison with the UK. The countries compared in this update are those in Europe that are fairly prosperous and have ‘full’ heating seasons (in other words, that usually need to heat their homes throughout the winter). The purpose of this was to avoid including countries that are either significantly less prosperous than the UK, or have warm climates, or both. As such, the countries that we are assessing are shown in Table 3. Further detail is provided in Appendix I.

Table 3: Countries included in original *Cold Man of Europe* briefing and in 2015's update

Indicator	Included in comparison
Austria	✓
Belgium	✓
Czech Republic	✓
Denmark	✓
Finland	✓
France	✓
Germany	✓
Iceland	✓
Ireland	✓
Luxembourg	✓
Netherlands	✓
Norway	✓
Slovenia	✓
Sweden	✓
Switzerland	✓
UK	✓

### 2.2 Choice of data to compare and use of updated data

The selection of data for comparison in the original briefing was based on two principles. First, the data needed to relate to the heating of the housing stock. Second, the data needed to have been collected and compiled authoritatively, and on a consistent basis for each country. These principles yielded four principal sources and corresponding data, described in Table 4 below alongside the more recent data used for this year's update.

Table 4: Sources of data and datasets used

Data source	Dataset used in 2013 briefing	Dataset used in 2015 update
<b>Eurostat, the European Commission's statistics agency</b>	The annually conducted Statistics on Income and Living Conditions (SILC) survey of households in the EU. This includes two questions which relate to the heating and quality of housing. The latest survey data available was for 2011 and used in the original briefing	The latest full SILC dataset is for 2013 <sup>8</sup> and is used here. In addition to the two survey questions used in the original briefing, we have added a third – on households experiencing arrears on utility bills in the last 12 months. Taken together, data from these three questions have been used by researchers at York University as a composite and comparable indicator of fuel poverty across the EU. We have replicated their methodology and applied it using the 2011 data as well.
	Data from Eurostat's Household Budget Survey was used by the Commission to estimate and compare energy poverty across the EU in 2010.	The Commission have not since updated their energy poverty estimates. As mentioned above, we have used the latest SILC survey data to replicate the methodology put forward in a peer-reviewed paper from York University <sup>9</sup> .
	Eurostat data on incomes and domestic retail gas and electricity prices for 2011.	Eurostat data on incomes and domestic retail gas and electricity prices <sup>10</sup> for 2013.
<b>Buildings Performance Institute Europe (BPIE)</b>	The BPIE's Data Hub for the Energy Performance of Buildings provided data about the housing stock in EU countries, including total floor area, number of dwellings and wall U values.	The European Commission-funded iNSPiRe project has combined data from the BPIE's Data Hub with data from other Commission-funded projects: ODYSSEE (see below) and ENTRANZE. This covers more countries and has data on average U values for walls, roofs, floors and windows <sup>11</sup> .
<b>English Housing Survey</b>	n/a	The latest available English Housing Survey data for 2013 is the basis for our closer look at homes rated E, F or G <sup>12</sup> .
<b>National Energy Efficiency Database</b>	n/a	We have used NEED's anonymised dataset containing EPC data up to October 2012 <sup>13</sup> , as produced by the Centre for Sustainable Energy, to identify the share of homes rated E, F or G in Parliamentary constituencies in England.

In the next section, data from the above sources are presented and compared for each country.

<sup>8</sup> (Eurostat 2015b)

<sup>9</sup> (Thomson and Snell 2013)

<sup>10</sup> (Eurostat 2015a)

<sup>11</sup> (Birchall et al. 2014)

<sup>12</sup> For more information, see [https://data.gov.uk/dataset/english\\_housing\\_survey](https://data.gov.uk/dataset/english_housing_survey).

<sup>13</sup> For more information, see

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/332169/need\\_anonymised\\_dataset\\_accompanying\\_documentation.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/332169/need_anonymised_dataset_accompanying_documentation.pdf).

## 3 Results from comparing countries

### 3.1 Affordability of heating, arrears on utility bills and energy poverty

The SILC survey mentioned above asked households whether they could afford to adequately heat their home. Since we published the original Cold Man briefing, the UK's position relative to the other countries has worsened. On the latest available SILC data (2013) the UK is ranked last out of 16 countries, with 10.6% of households saying they cannot afford to keep their home adequately warm.

Table 5: Proportion of households who say they are unable to afford to adequately heat their home

Proportion who say they cannot afford adequate heat [%]				
Rank	Country	2011	Country	2013
1	Switzerland	0.7	Switzerland	0.4
2	Luxembourg	0.9	Sweden	0.8
3	Norway	1.2	Norway	0.9
4	Sweden	1.6	Finland	1.2
5	Netherlands	1.6	Iceland	1.4
6	Finland	1.8	Luxembourg	1.6
8	Iceland	2.0	Austria	2.7
7	Denmark	2.6	Netherlands	2.9
9	Austria	2.7	Denmark	3.9
10	Germany	5.2	Slovenia	4.9
11	Slovenia	5.4	Germany	5.3
12	France	6.0	Belgium	5.8
13	Czech Republic	6.4	Czech Republic	6.2
14	UK	6.5	France	6.8
15	Ireland	6.8	Ireland	10.0
16	Belgium	7.1	UK	10.6

It remains important to note that 'adequately' warm is a subjective measure of an expectation of comfort which varies from person to person and country to country. People may also have different interpretations of what it means to 'afford' their heating. It is also important not to view the data in Table 5 as equivalent to fuel poverty. When reported on by the Department of Energy and Climate Change (DECC) for the UK as a whole, this is measured as having to spend more than 10% of disposable income to provide adequate energy services<sup>14</sup>. So a household that is defined as fuel poor would not necessarily say they could not afford adequate heating. Conversely, a household that says it cannot afford its heating may not technically be fuel poor. In the UK, approximately 4.5 million households (17 per cent) were estimated to be fuel poor in 2013<sup>15</sup>, many more than the number who say they cannot afford adequate heat – which highlights how this can be different to struggling to keep warm, being at risk of energy debt, or having to cut back in other areas of household spending. In any case, the table is a robust indicator of where the UK stands in comparison to other countries.

Table 6, also drawn from the SILC survey, shows the proportion of households in each country who reported that they experienced arrears on utility bills in the last 12 months. This has been included

<sup>14</sup> When measured in England only, a different definition is used, based on having higher than median required fuel costs and income below the poverty line.

<sup>15</sup> The latest official statistics available (DECC 2015a).

because experiencing financial difficulties with utility bills may indicate a household is struggling to afford adequate energy services as well.

**Table 6: Proportion of households who report they are in arrears on utility bills within the last 12 months**

Proportion who report they are in arrears on utility bills [%]				
Rank	Country	2011	Country	2013
1	Luxembourg	2.2	Netherlands	2.4
2	Netherlands	2.4	Switzerland	3.0
3	Switzerland	3.5	Luxembourg	3.1
4	Denmark	3.9	Germany	3.6
5	Germany	3.9	Denmark	3.7
6	Austria	4.0	Czech Republic	4.0
8	Sweden	4.1	Sweden	4.2
7	Czech Republic	4.3	Norway	4.5
9	UK	5.0	Austria	4.6
10	Belgium	6.0	Belgium	5.0
11	Norway	6.9	France	6.2
12	France	7.1	Iceland	7.5
13	Iceland	7.5	Finland	8.4
14	Finland	7.8	UK	8.7
15	Ireland	14.8	Ireland	17.9
16	Slovenia	17.3	Slovenia	19.7

By a clear margin, the proportion of households in the UK who experienced arrears changed the most of any country, moving the UK's ranking of 9<sup>th</sup> in 2011 to 14<sup>th</sup> out of the 16 countries in 2013. This may be partly accounted for by the fact that domestic energy prices rose considerably between 2011 and 2013.

In our original briefing, we reported that the UK had the highest level of fuel poverty amongst the 13 EU countries in our list of 16, as estimated by the European Commission in 2010. The Commission has not since updated its estimate. Instead, we provide a new comparative estimate based on a methodology put forward by Harriet Thomson and Carolyn Snell at York University. This 'composite' level of fuel poverty is based on the results from three SILC survey questions:

- The inability of households to afford adequate heat (shown in Table 5 above)
- Households experiencing arrears on utility bills (shown in Table 6 above)
- Households living in homes with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor (presented and discussed separately in Table 8 in section 3.2.2)

Giving the results from each of these survey questions equal weighting<sup>16</sup>, gives the composite levels of fuel poverty in each of the 16 countries shown in Table 7.

<sup>16</sup> (Thomson and Snell 2013) presented alternative weighting options, all of which result in the same ranking for the UK and for most of the other countries.

Table 7: Composite levels of fuel poverty in the 16 countries

Rank	Proportion of households in composite fuel poverty [%]			
	Country	2011	Country	2013
1	Sweden	4.7	Norway	4.1
2	Switzerland	4.9	Sweden	4.2
3	Finland	5.1	Finland	4.9
4	Norway	5.2	Switzerland	5.0
5	Luxembourg	6.2	Austria	6.6
6	Netherlands	6.2	Luxembourg	6.7
8	Austria	6.9	Czech Republic	6.7
7	Denmark	7.5	Netherlands	7.0
9	Czech Republic	7.5	Germany	7.3
10	Germany	7.6	Denmark	8.2
11	France	8.0	France	8.7
12	Iceland	8.5	Iceland	9.0
13	UK	9.1	Belgium	9.6
14	Ireland	10.9	UK	11.7
15	Belgium	11.4	Ireland	14.1
16	Slovenia	19.1	Slovenia	17.2

On the basis of the 2013 SILC data, the UK ranks 13<sup>th</sup> out of the 16 countries for fuel poverty, one position worse than it did based on the 2011 data.

## 3.2 Energy prices, income and state of the housing stock

### 3.2.1 Energy prices and incomes

Rising domestic energy prices may have contributed to the UK's lower rankings for 2013 compared to 2011 presented in section 3.1, as domestic gas and electricity prices rose approximately 15% and 10% in real terms over the period.

However, in 2013, UK domestic gas prices were the lowest amongst the 13 EU countries in our list, and electricity prices were mid-ranking, at 6<sup>th</sup> out of 13. In 2011, the UK's gas price was the lowest amongst these countries and electricity was the fourth-lowest. 'Real adjusted gross disposable income of households per capita' in 2013 places the UK at 9<sup>th</sup> out of the 13 EU countries for which we have consistent data – at €21,800 per head of population. This position has not changed relative to 2011<sup>17</sup>. Adjusting for household size ranks the UK 7<sup>th</sup> out of the 13.

### 3.2.2 State of the housing stock

To shed additional light on why the UK performs poorly in terms of heating affordability and utility bill arrears despite low to middle ranking energy prices and middling household income, the condition of people's homes needs to be considered. With the comparative data available, we have two ways of looking at this. First, we examine the number of households living in a dwelling with 'a leaking roof, damp walls, floors or foundation, or rot in window frames or floor' based on the SILC survey. The latest data are for 2013, and are shown alongside the data for 2011 we presented in our original briefing, in Table 8 below.

<sup>17</sup> In our original briefing, using 2011 data, we reported that the UK ranked 7<sup>th</sup> amongst the same 13 countries. The 2011 data has subsequently been adjusted by Eurostat, which puts the UK in 9<sup>th</sup> position.



**Table 8: Proportion of households living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor**

Share of total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor (%)				
Rank	Country	2011	Country	2013
1	Finland	5.7	Finland	5.2
2	Norway	7.6	Norway	7.0
3	Sweden	8.4	Sweden	7.5
4	Switzerland	10.6	Czech Republic	10.0
5	France	10.9	Switzerland	11.5
6	Ireland	11.1	Austria	12.5
8	Czech Republic	11.9	Germany	13.1
7	Germany	13.7	France	13.2
9	Austria	13.9	Ireland	14.3
10	Netherlands	14.6	Luxembourg	15.3
11	Luxembourg	15.5	Netherlands	15.6
12	<b>UK</b>	15.9	→ <b>UK</b>	15.9
13	Iceland	16.0	Denmark	17.1
14	Denmark	16.0	Iceland	18.0
15	Belgium	21.2	Belgium	18.1
16	Slovenia	34.7	Slovenia	27.0

The UK ranks 12<sup>th</sup> out of the 16 countries, the same as previously and with just under 16% of households reporting poor conditions. Finland, Norway and Sweden continue to occupy the top three spots with less than 10% of their respondent households reporting problems.

Our second indicator of housing quality covers the U values of walls, roofs, floors and windows<sup>18</sup>. A U value is a measure of how much heat is lost through a building's fabric. Low values represent less heat loss through that part of the building. To reflect the fact that each country's climate is different (with colder climates necessitating lower U values), we have also considered the optimal U values for buildings in each country. Each optimum was calculated to reflect the most cost-efficient standard for buildings in each country to make the contribution to the EU's 2050 climate goals<sup>19</sup>.

For the 11 of our 16 countries for which data were available, the UK ranks 7<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> for the U values of walls, roof, floor and windows respectively. When looking at the gap between actual and optimal U values, all countries achieve the same rankings<sup>20</sup>. For this reason, and for the benefit of clarity, we have not included data on the gap in Table 9.

<sup>18</sup> In our original briefing, the only comparative data we could find pertained to the U values of walls in single-family dwellings (houses) for eight countries.

<sup>19</sup> (ECOFYS 2007)

<sup>20</sup> Data on optimum U values for windows are not available.

Table 9: Average U values of walls, roofs, floors and windows in homes

Rank	Country	Walls	Country	Roof	Country	Floor	Country	Windows
1	Sweden	0.3	Sweden	0.2	Sweden	0.2	Finland	1.9
2	Finland	0.4	Denmark	0.3	Denmark	0.4	Austria	2.3
3	Denmark	0.5	Finland	0.3	Finland	0.4	Denmark	2.4
4	Czech Republic	0.8	Czech Republic	0.6	Germany	0.8	Sweden	2.5
5	Austria	0.9	Austria	0.6	Czech Republic	0.9	Germany	2.7
6	Germany	0.9	Ireland	0.7	Belgium	0.9	Czech Republic	2.7
7	<b>UK</b>	1.0	Germany	0.7	France	1.0	France	3.1
8	Netherlands	1.1	<b>UK</b>	1.1	Ireland	1.0	Netherlands	3.2
9	France	1.2	Netherlands	1.2	Austria	1.0	Belgium	3.8
10	Ireland	1.2	France	1.3	<b>UK</b>	1.2	Ireland	3.8
11	Belgium	1.5	Belgium	1.6	Netherlands	1.3	<b>UK</b>	3.9

Together, these data suggest that the UK's buildings perform poorly in terms of energy efficiency. This is a key reason why comparatively many UK households cannot afford adequate heating, are at risk of cold homes, fuel poverty, and adverse impacts on their health and wellbeing. In the next section, we take a closer look at the UK's most energy inefficient housing.

## 4 A closer look at England's worst housing

The poor energy efficiency of the UK's housing stock is likely to be a major contributing factor in our poor performance in the fuel poverty and associated rankings.

For this reason we will now look in more depth at the worst performing housing in England.

### 4.1 England's most energy inefficient homes

An Energy Performance Certificate (EPC) rating is the government's official assessment of a home's energy performance which is completed whenever a property is bought or let. It is based on the cost of energy needed to provide a good level of energy services to the home. The EPC rating is an asset rating, based on the fabric of the dwelling and does not depend on the behaviour of people living in it. The EPC rating is an official government rating with detailed reporting and statistics available.

The 2013 English Housing Survey (EHS) is a detailed survey of nearly 13,000 homes and their occupants across England. The survey includes an assessment of each home's EPC rating and an estimated cost to provide basic energy services used in the Government's measurement of fuel poverty.

The EHS shows that the average EPC rating of a home in England is Band D. The homes with worse EPC ratings are rated E, F or G.

We find that:

- 30% of homes in England have an EPC rating of E, F or G.
- 6.6 million homes in England have an EPC rating of E, F or G
- These homes require, on average, fuel costs of £1,750 to achieve an acceptable level of energy service, which is 37% higher than the average for all homes and 56% higher than the average in homes rated A, B, C and D.

## 4.2 Finding the most energy inefficient homes

The most energy inefficient homes are found all across England but there are some areas in which they are more common which can provide some insight into the problems of poor housing infrastructure faced across the UK.

### 4.2.1 Tenure

The chart below shows the prevalence of homes in each housing tenure group with an EPC rating of E, F and G.

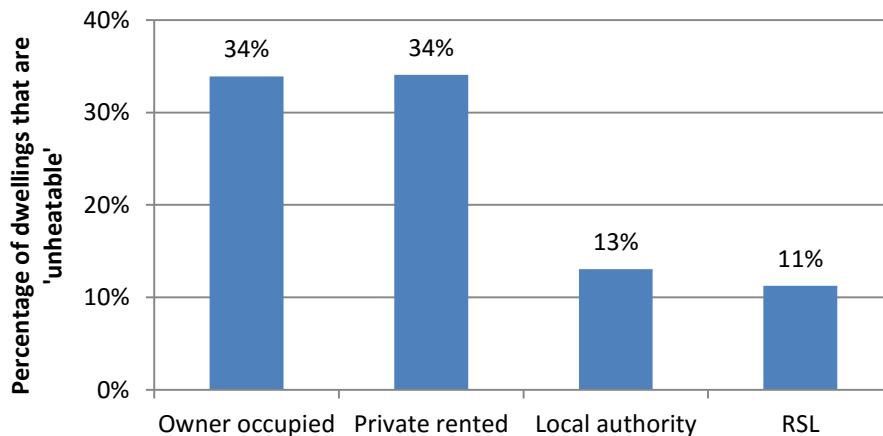


Figure 1: Percentage of dwellings in each tenure that have EPC rating of E, F and G

There is a clear division between public and private sector housing. Homes that are privately rented or owned by the occupier are more than twice as likely to be very energy inefficient than local authority or registered social landlord housing. The fact that there is a greater prevalence of flats in social housing partly explains why there are proportionately fewer homes rated E, F or G. At the same time, however, many years of investment via the Decent Homes programme – essentially an infrastructure investment programme – has made a significant contribution<sup>21</sup>.

### 4.2.2 Rurality

The proportion of homes with a poor level of energy efficiency increases as we move out from urban centres. The most rural properties are twice as likely to have a poor level of energy efficiency than homes in an urban setting.

<sup>21</sup> Most homes that did not meet the Decent Homes did so on the basis of inadequate thermal comfort (assessed based on insulation levels and the standard of the heating system).

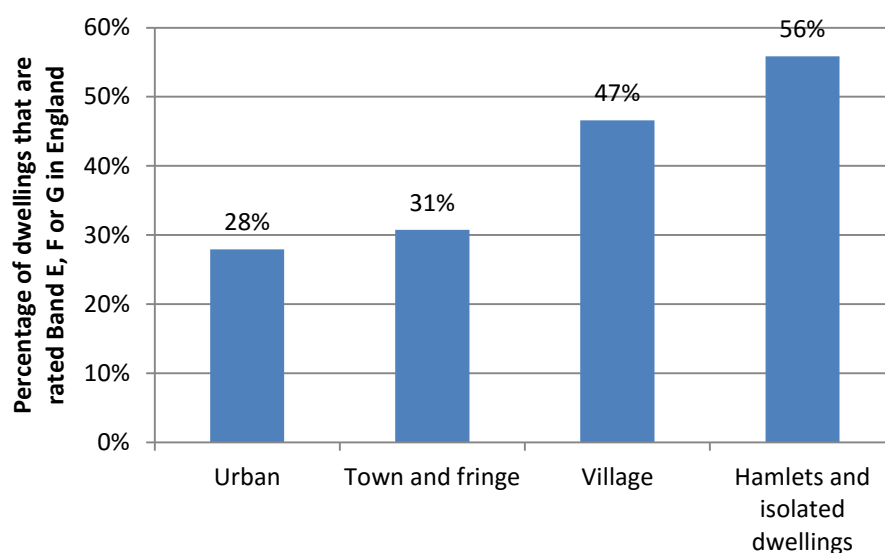


Figure 2: Percentage of dwellings that have EPC rating of E, F and G by rural-urban classification

This pattern is likely to be caused by the additional cost of fuels other than mains gas and the increased number of detached and semi-detached homes in rural areas. Compounding these problems has been the difficulty energy efficiency programmes have had in reaching less densely populated parts of the country.

### 4.2.3 Geography

Figure 3 shows Westminster Parliamentary constituencies in England, and the prevalence of the most energy inefficient homes in each. The ten constituencies with the highest share of E, F and G-rated homes are highlighted in yellow below and listed in Table 10 on the next page. They represent a mixture of urban, suburban and rural areas. A full table is provided in Appendix II.

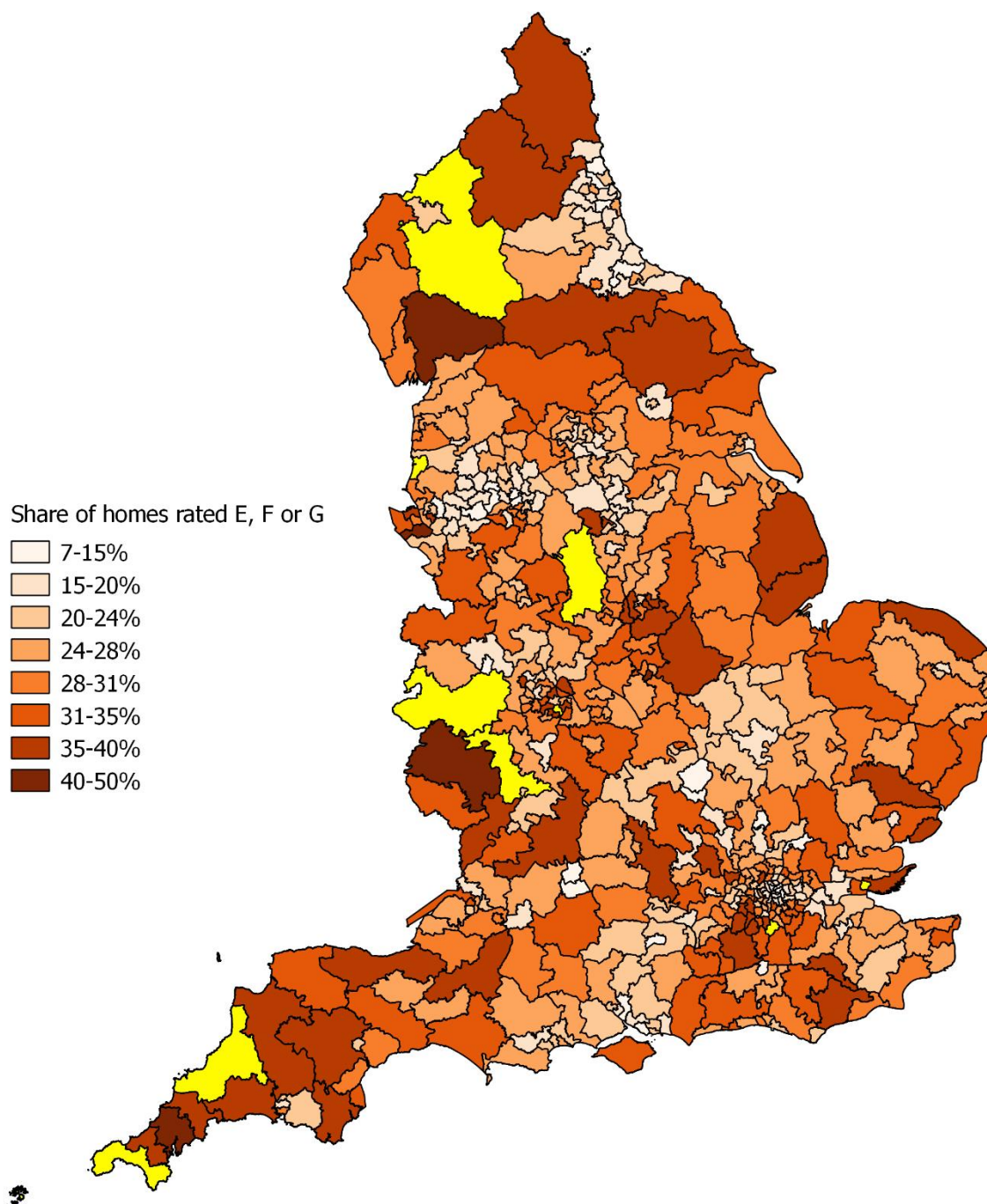


Figure 3: Share of homes rated E, F or G by English Westminster constituency

Table 10: Top 10 Parliamentary constituencies with highest share of worse than average homes for energy efficiency

Parliamentary constituency	Share of homes rated E, F or G	MP	Party
<b>St Ives</b>	50.4%	Derek Thomas	Conservative
<b>Southend West</b>	47.6%	David Amess	Conservative
<b>Derbyshire Dales</b>	44.8%	Patrick McLoughlin	Conservative
<b>Ludlow</b>	42.9%	Philip Dunne	Conservative
<b>West Worcestershire</b>	42.7%	Harriett Baldwin	Conservative
<b>North Cornwall</b>	42.3%	Scott Mann	Conservative
<b>Birmingham, Hall Green</b>	42.2%	Roger Godsiff	Labour
<b>Croydon South</b>	42.1%	Chris Philp	Conservative
<b>Penrith and The Border</b>	41.9%	Rory Stewart	Conservative
<b>Southport</b>	41.8%	John Pugh	Liberal Democrat

## 5 Conclusions

A comparison of European countries with similar levels of prosperity and heating need show that the UK has one of the highest levels of fuel poverty. The main cause of this high level of fuel poverty is the fact the UK has one of the least energy efficient housing stocks in Western Europe.

The UK has 21 million homes in the UK with an inadequate level of energy efficiency, rating Band D, E, F and G.

In England the average UK home has a rating of Band D. There are 6.6 million UK homes that are the most energy inefficient, with a rating of Band E, F and G. The majority of these homes are privately rented or owned and households in rural areas are twice as likely to be to the most energy inefficient.

The solution to this crisis is for the UK Government to designate home energy efficiency as an infrastructure priority and use infrastructure funds to deliver the stable, long-term investment needed to implement a local authority led infrastructure programme to upgrade all UK homes to at least Band C on an Energy Performance Certificate.

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## Appendix I – Basis for selection of countries to compare

The basis for the selection of ‘prosperous’ European countries was the 2012 Legatum Prosperity Index<sup>22</sup>, selecting European countries that rank as having ‘high prosperity’ according to the index. The basis for choosing countries with ‘full’ heating seasons was to use the average annual heating degree days for each country as collated by Eurostat<sup>23</sup>. Appropriate thresholds for heating degree days – to characterise different climate zones according to heating need – have been developed by the International Energy Agency in support of the G8 Gleneagles Plan of Action for Climate Change<sup>24</sup>. These thresholds are presented in Table 11. The ‘cold’, ‘heating based’ and ‘combined’<sup>25</sup> climates each share the same threshold for heating degree days of more than or equal to 2,000 HDDs, so this was used.

**Table 11: Heating and cooling degree day thresholds used by IEA to characterise different climatic zones for buildings**

	Heating degree day (HDD) threshold	Cooling degree day (CDD) threshold
<b>Cold climate</b>	HDD $\geq$ 2000	CDD < 500
<b>Heating based</b>	HDD $\geq$ 2000	500 $\leq$ CDD < 1000
<b>Combined climate</b>	HDD $\geq$ 2000	CDD $\geq$ 1000
<b>Moderate climate</b>	HDD < 2000	CDD < 1000
<b>Cooling based</b>	1000 $\leq$ HDD < 2000	CDD $\geq$ 1000
<b>Hot climate</b>	HDD < 1000	CDD $\geq$ 1000

Table 12 shows the 16 European countries which meet the two criteria. The remaining 16 countries meet either none or only one of the criteria, and have therefore been excluded from this comparison<sup>26</sup>.

**Table 12: Selection of countries by prosperity and heating criteria**

	2012 Legatum Prosperity Index 'High' ranking	HDD $\geq$ 2000 (Eurostat)	Country included in comparison
<b>Austria</b>	✓	✓	✓
<b>Belgium</b>	✓	✓	✓
<b>Czech Republic</b>	✓	✓	✓
<b>Denmark</b>	✓	✓	✓
<b>Finland</b>	✓	✓	✓
<b>France</b>	✓	✓	✓
<b>Germany</b>	✓	✓	✓
<b>Iceland</b>	✓	✓	✓
<b>Ireland</b>	✓	✓	✓
<b>Luxembourg</b>	✓	✓	✓
<b>Netherlands</b>	✓	✓	✓
<b>Norway</b>	✓	✓	✓
<b>Slovenia</b>	✓	✓	✓
<b>Sweden</b>	✓	✓	✓
<b>Switzerland</b>	✓	✓	✓
<b>UK</b>	✓	✓	✓

<sup>22</sup> (Legatum Institute 2012); The Index comprises a global assessment of national prosperity based on both wealth and wellbeing. The ranking is based on data encompassing eight indicators: economy, entrepreneurship and opportunity, governance, education, health, safety and security, personal freedom, and social capital.

<sup>23</sup> Heating degree days (HDDs) are a measure of the need for space heating. The data and thresholds used in Table 11 and Table 12 are based on an expectation of an internal temperature of 18°C. Heating is assumed to be required when the average daily external temperature is more than 3°C colder than this (i.e. colder than 15°C). For example, if the average external temperature on January 1 was 4°C, then January 1 had 11 HDDs. These are added up over the course of a year to provide annual HDDs. For the original briefing, we used the average annual HDDs from 1980 to 2009 – the years for which Eurostat had data available. For the UK, for example, the average annual HDDs over this period was 3,115. In contrast, Sweden has average annual HDDs of 5,444 over the same period.

<sup>24</sup> (Laustsen 2008)

<sup>25</sup> So-called because it has both significant heating and cooling needs to maintain indoor comfort.

<sup>26</sup> The 32 European countries assessed comprise the EU28, plus Iceland, Norway, Switzerland and Turkey.



## Appendix II – full list of Westminster Parliamentary constituencies in England

Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party	Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party
1	St Ives	50.4%	Derek Thomas	Conservative	51	Henley	36.3%	John Howell	Conservative
2	Southend West	47.6%	David Amess	Conservative	52	Rutland and Melton	36.3%	Alan Duncan	Conservative
3	Derbyshire Dales	44.8%	Patrick McLoughlin	Conservative	53	Kingston and Surbiton	36.3%	James Berry	Conservative
4	Ludlow	42.9%	Philip Dunne	Conservative	54	Bridgwater and West Somerset	36.2%	Ian Liddell-Grainger	Conservative
5	West Worcestershire	42.7%	Harriett Baldwin	Conservative	55	Sheffield Central	36.1%	Paul Blomfield	Labour
6	North Cornwall	42.3%	Scott Mann	Conservative	56	Finchley and Golders Green	36.1%	Mike Freer	Conservative
7	Birmingham, Hall Green	42.2%	Roger Godsiff	Labour	57	Clacton	36.0%	Douglas Carswell	UKIP
8	Croydon South	42.1%	Chris Philp	Conservative	58	Richmond (Yorks)	35.9%	Rishi Sunak	Conservative
9	Penrith and The Border	41.9%	Rory Stewart	Conservative	59	Birmingham, Edgbaston	35.8%	Gisela Stuart	Labour
10	Southport	41.8%	John Pugh	Liberal Democrat	60	South Suffolk	35.8%	James Cartlidge	Conservative
11	Westmorland and Lonsdale	41.5%	Tim Farron	Liberal Democrat	61	Bexhill and Battle	35.6%	Huw Merriman	Conservative
12	North Herefordshire	41.1%	Bill Wiggins	Conservative	62	Twickenham	35.6%	Tania Mathias	Conservative
13	Truro and Falmouth	41.0%	Sarah Newton	Conservative	63	Berwick-upon-Tweed	35.6%	Anne-Marie Trevelyan	Conservative
14	Wirral South	41.0%	Alison McGovern	Labour	64	Chesham and Amersham	35.5%	Cheryl Gillan	Conservative
15	Leicester South	40.5%	Jon Ashworth	Labour/Co-operative	65	North Devon	35.5%	Peter Heaton-Jones	Conservative
16	Broxtowe	40.5%	Anna Soubry	Conservative	66	Scarborough and Whitby	35.4%	Robert Goodwill	Conservative
17	Camborne and Redruth	40.2%	George Eustice	Conservative	67	Skipton and Ripon	35.4%	Julian Smith	Conservative
18	Wolverhampton South West	40.1%	Rob Marris	Labour	68	Beckenham	35.3%	Bob Stewart	Conservative
19	Mole Valley	39.5%	Paul Beresford	Conservative	69	West Dorset	35.0%	Oliver Letwin	Conservative
20	Sutton Coldfield	39.4%	Andrew Mitchell	Conservative	70	Buckingham	34.7%	John Bercow	Speaker
21	Wallasey	39.4%	Angela Eagle	Labour	71	Tatton	34.7%	George Osborne	Conservative
22	Thirsk and Malton	39.3%	Kevin Hollinrake	Conservative	72	Reigate	34.7%	Crispin Blunt	Conservative
23	Torridge and West Devon	39.1%	Geoffrey Cox	Conservative	73	Wirral West	34.6%	Margaret Greenwood	Labour
24	Sheffield, Hallam	39.0%	Nick Clegg	Liberal Democrat	74	South West Surrey	34.6%	Jeremy Hunt	Conservative
25	Gedling	38.7%	Vernon Coaker	Labour	75	North West Leicestershire	34.6%	Andrew Bridgen	Conservative
26	Rochford and Southend East	38.5%	James Duddridge	Conservative	76	Saffron Walden	34.6%	Alan Haselhurst	Conservative
27	Totnes	38.4%	Sarah Wollaston	Conservative	77	Altrincham and Sale West	34.5%	Graham Brady	Conservative
28	St Austell and Newquay	38.4%	Steve Double	Conservative	78	Guildford	34.4%	Anne Milton	Conservative
29	The Cotswolds	38.3%	Geoffrey Clifton-Brown	Conservative	79	Arundel and South Downs	34.4%	Nick Herbert	Conservative
30	Tunbridge Wells	38.2%	Greg Clark	Conservative	80	Eddisbury	34.4%	Antoinette Sandbach	Conservative
31	Nottingham East	38.2%	Chris Leslie	Labour/Co-operative	81	Stratford-on-Avon	34.4%	Nadhim Zahawi	Conservative
32	Erewash	38.1%	Maggie Throup	Conservative	82	North Shropshire	34.2%	Owen Paterson	Conservative
33	Forest of Dean	38.1%	Mark Harper	Conservative	83	Suffolk Coastal	34.2%	Therese Coffey	Conservative
34	Birmingham, Selly Oak	38.1%	Steve McCabe	Labour	84	Castle Point	34.1%	Rebecca Harris	Conservative
35	Hexham	38.0%	Guy Opperman	Conservative	85	Harwich and North Essex	34.0%	Bernard Jenkin	Conservative
36	North Norfolk	38.0%	Norman Lamb	Liberal Democrat	86	Staffordshire Moorlands	33.9%	Karen Bradley	Conservative
37	South East Cornwall	38.0%	Sheryll Murray	Conservative	87	East Surrey	33.9%	Sam Gyimah	Conservative
38	Ruislip, Northwood and Pinner	37.7%	Nick Hurd	Conservative	88	Devizes	33.7%	Claire Perry	Conservative
39	Richmond Park	37.7%	Zac Goldsmith	Conservative	89	Birmingham, Erdington	33.7%	Jack Dromey	Labour
40	Central Devon	37.7%	Mel Stride	Conservative	90	Brentwood and Ongar	33.7%	Eric Pickles	Conservative
41	Louth and Horncastle	37.6%	Victoria Atkins	Conservative	91	Warley	33.7%	John Spellar	Labour
42	Rushcliffe	37.6%	Kenneth Clarke	Conservative	92	Orpington	33.7%	Jo Johnson	Conservative
43	Liverpool, Wavertree	37.3%	Luciana Berger	Labour/Co-operative	93	Old Bexley and Sidcup	33.6%	James Brokenshire	Conservative
44	Carshalton and Wallington	37.2%	Tom Brake	Liberal Democrat	94	Charnwood	33.6%	Edward Argar	Conservative
45	Birmingham, Yardley	37.0%	Jess Phillips	Labour	95	Workington	33.5%	Sue Hayman	Labour
46	Epsom and Ewell	36.8%	Chris Grayling	Conservative	96	Luton South	33.5%	Gavin Shuker	Labour/Co-operative
47	Birmingham, Perry Barr	36.8%	Khalid Mahmood	Labour	97	Chichester	33.4%	Andrew Tyrie	Conservative
48	Boston and Skegness	36.7%	Matt Warman	Conservative	98	Sutton and Cheam	33.4%	Paul Scully	Conservative
49	Somerton and Frome	36.4%	David Warburton	Conservative	99	Kenilworth and Southam	33.4%	Jeremy Wright	Conservative
50	Esher and Walton	36.4%	Dominic Raab	Conservative	100	Tiverton and Honiton	33.3%	Neil Parish	Conservative

Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party	Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party
101	South Thanet	33.3%	Craig Mackinlay	Conservative	151	Eltham	30.6%	Clive Efford	Labour
102	Newark	33.3%	Robert Jenrick	Conservative	152	Bromsgrove	30.5%	Sajid Javid	Conservative
103	Bristol West	33.0%	Thangam Debbonaire	Labour	153	Beverley and Holderness	30.5%	Graham Stuart	Conservative
104	Chingford and Woodford Green	33.0%	Iain Duncan Smith	Conservative	154	Beaconsfield	30.5%	Dominic Grieve	Conservative
105	Solihull	32.9%	Julian Knight	Conservative	155	East Devon	30.4%	Hugo Swire	Conservative
106	Wealden	32.8%	Nusrat Ghani	Conservative	156	Lewes	30.4%	Maria Caulfield	Conservative
107	Maidenhead	32.7%	Theresa May	Conservative	157	Derby North	30.4%	Amanda Solloway	Conservative
108	Stroud	32.7%	Neil Carmichael	Conservative	158	Derby South	30.4%	Margaret Beckett	Labour
109	South West Norfolk	32.6%	Elizabeth Truss	Conservative	159	Ealing Central and Acton	30.4%	Rupa Huq	Labour
110	Isle of Wight	32.6%	Andrew Turner	Conservative	160	North Warwickshire	30.4%	Craig Tracey	Conservative
111	Hereford and South Herefordshire	32.6%	Jesse Norman	Conservative	161	Bassetlaw	30.3%	John Mann	Labour
112	Bromley and Chislehurst	32.5%	Bob Neill	Conservative	162	Mid Derbyshire	30.3%	Pauline Latham	Conservative
113	Worthing West	32.5%	Peter Bottomley	Conservative	163	Stourbridge	30.3%	Margot James	Conservative
114	Sevenoaks	32.4%	Michael Fallon	Conservative	164	Leeds North East	30.2%	Fabian Hamilton	Labour
115	Pendle	32.4%	Andrew Stephenson	Conservative	165	Hastings and Rye	30.2%	Amber Rudd	Conservative
116	Torbay	32.4%	Kevin Foster	Conservative	166	South Norfolk	30.2%	Richard Bacon	Conservative
117	Dulwich and West Norwood	32.4%	Helen Hayes	Labour	167	Selby and Ainsty	30.1%	Nigel Adams	Conservative
118	Burton	32.4%	Andrew Griffiths	Conservative	168	Keighley	30.1%	Kris Hopkins	Conservative
119	Cheadle	32.3%	Mary Robinson	Conservative	169	Daventry	30.0%	Chris Heaton-Harris	Conservative
120	Bristol North West	32.2%	Charlotte Leslie	Conservative	170	Epping Forest	29.9%	Eleanor Laing	Conservative
121	East Yorkshire	31.8%	Greg Knight	Conservative	171	South Holland and The Deepings	29.9%	John Hayes	Conservative
122	North West Norfolk	31.8%	Henry Bellingham	Conservative	172	Barrow and Furness	29.9%	John Woodcock	Labour/Co-operative
123	Northampton North	31.8%	Michael Ellis	Conservative	173	North East Hertfordshire	29.8%	Oliver Heald	Conservative
124	Central Suffolk and North Ipswich	31.5%	Daniel Poulter	Conservative	174	North East Somerset	29.8%	Jacob Rees-Mogg	Conservative
125	Darlington	31.5%	Jenny Chapman	Labour	175	Calder Valley	29.8%	Craig Whittaker	Conservative
126	Birkenhead	31.4%	Frank Field	Labour	176	Runnymede and Weybridge	29.7%	Philip Hammond	Conservative
127	Harrow West	31.3%	Gareth Thomas	Labour/Co-operative	177	Newton Abbot	29.7%	Anne Marie Morris	Conservative
128	Doncaster North	31.3%	Ed Miliband	Labour	178	Nottingham South	29.7%	Lilian Greenwood	Labour
129	Romford	31.3%	Andrew Rosindell	Conservative	179	Stockport	29.6%	Ann Coffey	Labour
130	Enfield, Southgate	31.3%	David Burrowes	Conservative	180	Leeds North West	29.6%	Greg Mulholland	Liberal Democrat
131	Amber Valley	31.3%	Nigel Mills	Conservative	181	Brigg and Goole	29.5%	Andrew Percy	Conservative
132	Haltemprice and Howden	31.1%	David Davis	Conservative	182	Salisbury	29.4%	John Glen	Conservative
133	Wyre Forest	31.1%	Mark Garnier	Conservative	183	Wimbledon	29.4%	Stephen Hammond	Conservative
134	Hornchurch and Upminster	31.1%	Angela Watkinson	Conservative	184	Halifax	29.3%	Holly Lynch	Labour
135	West Suffolk	31.0%	Matthew Hancock	Conservative	185	Walsall South	29.3%	Valerie Vaz	Labour
136	Hove	30.9%	Peter Kyle	Labour	186	Wells	29.3%	James Heappey	Conservative
137	Spelthorne	30.9%	Kwasi Kwarteng	Conservative	187	Kettering	29.2%	Philip Hollobone	Conservative
138	Loughborough	30.9%	Nicky Morgan	Conservative	188	Folkestone and Hythe	29.2%	Damian Collins	Conservative
139	Manchester, Withington	30.9%	Jeff Smith	Labour	189	Manchester, Gorton	29.2%	Gerald Kaufman	Labour
140	Sleaford and North Hykeham	30.8%	Stephen Phillips	Conservative	190	Macclesfield	29.2%	David Rutley	Conservative
141	Sefton Central	30.8%	Bill Esterson	Labour	191	Grantham and Stamford	29.1%	Nicholas Boles	Conservative
142	Worcester	30.8%	Robin Walker	Conservative	192	Fylde	29.1%	Mark Menzies	Conservative
143	South West Wiltshire	30.8%	Andrew Murrison	Conservative	193	Harrogate and Knaresborough	29.0%	Andrew Jones	Conservative
144	Leicester West	30.8%	Liz Kendall	Labour	194	Halesowen and Rowley Regis	29.0%	James Morris	Conservative
145	Copeland	30.8%	Jamie Reed	Labour	195	Maldon	28.9%	John Whittingdale	Conservative
146	Bosworth	30.7%	David Tredinnick	Conservative	196	South West Hertfordshire	28.8%	David Gauke	Conservative
147	Chipping Barnet	30.7%	Theresa Villiers	Conservative	197	Blackpool South	28.8%	Gordon Marsden	Labour
148	Gainsborough	30.7%	Edward Leigh	Conservative	198	Hornsey and Wood Green	28.8%	Catherine West	Labour
149	Stone	30.6%	Bill Cash	Conservative	199	Harborough	28.8%	Edward Garnier	Conservative
150	Bath	30.6%	Ben Howlett	Conservative	200	Newbury	28.8%	Richard Benyon	Conservative

Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party	Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party
201	North Thanet	28.8%	Roger Gale	Conservative	251	South Staffordshire	26.9%	Gavin Williamson	Conservative
202	Plymouth, Sutton and Devonport	28.7%	Oliver Colvile	Conservative	252	Leyton and Wanstead	26.8%	John Cryer	Labour
203	Great Grimsby	28.7%	Melanie Onn	Labour	253	Croydon Central	26.8%	Gavin Barwell	Conservative
204	Coventry North West	28.7%	Geoffrey Robinson	Labour	254	Dover	26.7%	Charlie Elphicke	Conservative
205	Windsor	28.7%	Adam Afriye	Conservative	255	Blackpool North and Cleveleys	26.7%	Paul Maynard	Conservative
206	Coventry South	28.7%	Jim Cunningham	Labour	256	South Leicestershire	26.7%	Alberto Costa	Conservative
207	Brentford and Isleworth	28.6%	Ruth Cadbury	Labour	257	West Bromwich East	26.7%	Tom Watson	Labour
208	Ilford North	28.6%	Wes Streeting	Labour	258	Sherwood	26.6%	Mark Spencer	Conservative
209	Croydon North	28.5%	Steve Reed	Labour/Co-operative	259	Newcastle upon Tyne East	26.6%	Nick Brown	Labour
210	Brent North	28.5%	Barry Gardiner	Labour	260	Rugby	26.6%	Mark Pawsey	Conservative
211	South Dorset	28.4%	Richard Drax	Conservative	261	Cambridge	26.6%	Daniel Zeichner	Labour
212	Shipley	28.4%	Philip Davies	Conservative	262	Stretford and Urmston	26.6%	Kate Green	Labour
213	Doncaster Central	28.3%	Rosie Winterton	Labour	263	Hazel Grove	26.6%	William Wragg	Conservative
214	Mid Norfolk	28.3%	George Freeman	Conservative	264	Liverpool, Riverside	26.6%	Louise Ellman	Labour/Co-operative
215	St Albans	28.2%	Anne Main	Conservative	265	Leicester East	26.6%	Keith Vaz	Labour
216	Broadland	28.2%	Keith Simpson	Conservative	266	Lewisham West and Penge	26.6%	Jim Dowd	Labour
217	Lancaster and Fleetwood	28.1%	Cat Smith	Labour	267	Hyndburn	26.6%	Graham Jones	Labour
218	Mid Worcestershire	28.1%	Nigel Huddleston	Conservative	268	North Somerset	26.5%	Liam Fox	Conservative
219	South Cambridgeshire	28.0%	Heidi Allen	Conservative	269	Romsey and Southampton North	26.5%	Caroline Nokes	Conservative
220	Harrow East	28.0%	Bob Blackman	Conservative	270	Ipswich	26.5%	Ben Gummer	Conservative
221	Yeovil	28.0%	Marcus Fysh	Conservative	271	South East Cambridgeshire	26.5%	Lucy Frazer	Conservative
222	Shrewsbury and Atcham	27.9%	Daniel Kawczynski	Conservative	272	Burnley	26.4%	Julie Cooper	Labour
223	East Worthing and Shoreham	27.9%	Tim Loughton	Conservative	273	Watford	26.3%	Richard Harrington	Conservative
224	Bishop Auckland	27.9%	Helen Goodman	Labour	274	Braintree	26.3%	James Cleverly	Conservative
225	Waveney	27.8%	Peter Aldous	Conservative	275	Witham	26.3%	Priti Patel	Conservative
226	Bournemouth East	27.8%	Tobias Ellwood	Conservative	276	Birmingham, Northfield	26.3%	Richard Burden	Labour
227	High Peak	27.8%	Andrew Bingham	Conservative	277	Lincoln	26.3%	Karl McCartney	Conservative
228	Warwick and Leamington	27.8%	Chris White	Conservative	278	Morecambe and Lunesdale	26.3%	David Morris	Conservative
229	North Wiltshire	27.8%	James Gray	Conservative	279	Coventry North East	26.3%	Colleen Fletcher	Labour
230	Hitchin and Harpenden	27.8%	Peter Lilley	Conservative	280	Gravesham	26.3%	Adam Holloway	Conservative
231	Birmingham, Hodge Hill	27.7%	Liam Byrne	Labour	281	Reading East	26.3%	Rob Wilson	Conservative
232	Dudley South	27.7%	Mike Wood	Conservative	282	Tooting	26.3%	Sadiq Khan	Labour
233	Brighton, Pavilion	27.6%	Caroline Lucas	Green	283	Horsham	26.2%	Jeremy Quin	Conservative
234	Taunton Deane	27.6%	Rebecca Pow	Conservative	284	Congleton	26.2%	Fiona Bruce	Conservative
235	Bexleyheath and Crayford	27.4%	David Evennett	Conservative	285	Cleethorpes	26.2%	Martin Vickers	Conservative
236	Tonbridge and Malling	27.4%	Thomas Tugendhat	Conservative	286	Oxford East	26.1%	Andrew Smith	Labour
237	Cheltenham	27.4%	Alex Chalk	Conservative	287	Colne Valley	26.1%	Jason McCartney	Conservative
238	Maidstone and The Weald	27.3%	Helen Grant	Conservative	288	Woking	26.1%	Jonathan Lord	Conservative
239	Uxbridge and South Ruislip	27.3%	Boris Johnson	Conservative	289	Bury St Edmunds	26.1%	Jo Churchill	Conservative
240	Ashfield	27.3%	Gloria De Piero	Labour	290	South Derbyshire	26.1%	Heather Wheeler	Conservative
241	Stoke-on-Trent Central	27.2%	Tristram Hunt	Labour	291	Great Yarmouth	26.0%	Brandon Lewis	Conservative
242	Bolsover	27.2%	Dennis Skinner	Labour	292	Lewisham East	26.0%	Heidi Alexander	Labour
243	Streatham	27.2%	Chuka Umunna	Labour	293	Lichfield	26.0%	Michael Fabricant	Conservative
244	North Dorset	27.1%	Simon Hoare	Conservative	294	Kingston upon Hull North	26.0%	Diana R. Johnson	Labour
245	Wycombe	27.0%	Steven Baker	Conservative	295	Mid Sussex	25.9%	Nicholas Soames	Conservative
246	North East Cambridgeshire	27.0%	Stephen Barclay	Conservative	296	West Lancashire	25.9%	Rosie Cooper	Labour
247	Thornbury and Yate	27.0%	Luke Hall	Conservative	297	Gillingham and Rainham	25.8%	Rehman Chishti	Conservative
248	Crewe and Nantwich	27.0%	Edward Timpson	Conservative	298	Hendon	25.8%	Matthew Offord	Conservative
249	Nuneaton	27.0%	Marcus Jones	Conservative	299	Hertsmere	25.8%	Oliver Dowden	Conservative
250	East Hampshire	27.0%	Damian Hinds	Conservative	300	Wyre and Preston North	25.8%	Ben Wallace	Conservative

Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party	Rank	Parliamentary Constituency	Share of homes rated E, F or G	MP	Party
301	Luton North	25.8%	Kelvin Hopkins	Labour	351	Sheffield, Heeley	23.6%	Louise Haigh	Labour
302	Middlesbrough	25.8%	Andy McDonald	Labour	352	Ilford South	23.6%	Mike Gapes	Labour/Co-operative
303	City of Chester	25.8%	Chris Matheson	Labour	353	Stoke-on-Trent North	23.6%	Ruth Smeeth	Labour
304	Bedford	25.8%	Richard Fuller	Conservative	354	Meon Valley	23.5%	George Hollingbery	Conservative
305	Bognor Regis and Littlehampton	25.7%	Nick Gibb	Conservative	355	North East Bedfordshire	23.5%	Alistair Burt	Conservative
306	Weston-Super-Mare	25.7%	John Penrose	Conservative	356	Hampstead and Kilburn	23.5%	Tulip Siddiq	Labour
307	Bootle	25.7%	Peter Dowd	Labour	357	Liverpool, Walton	23.4%	Stephen Philip Rotheram	Labour
308	Rayleigh and Wickford	25.6%	Mark Francois	Conservative	358	Walthamstow	23.4%	Stella Creasy	Labour/Co-operative
309	New Forest West	25.6%	Desmond Swayne	Conservative	359	South West Devon	23.4%	Gary Streeter	Conservative
310	Sunderland Central	25.6%	Julie Elliott	Labour	360	Birmingham, Ladywood	23.3%	Shabana Mahmood	Labour
311	Enfield North	25.6%	Joan Ryan	Labour	361	Tamworth	23.2%	Christopher Pincher	Conservative
312	Wantage	25.5%	Ed Vaizey	Conservative	362	Tynemouth	23.1%	Alan Campbell	Labour
313	Wakefield	25.5%	Mary Creagh	Labour	363	Normanton, Pontefract and Castleford	23.0%	Yvette Cooper	Labour
314	Ribble Valley	25.5%	Nigel Evans	Conservative	364	Scunthorpe	23.0%	Nicholas Dakin	Labour
315	Rossendale and Darwen	25.5%	Jake Berry	Conservative	365	Brent Central	22.9%	Dawn Butler	Labour
316	Faversham and Mid Kent	25.4%	Helen Whately	Conservative	366	Denton and Reddish	22.9%	Andrew Gwynne	Labour
317	Kensington	25.3%	Victoria Borwick	Conservative	367	Wolverhampton South East	22.8%	Pat McFadden	Labour
318	Bristol East	25.3%	Kerry McCarthy	Labour	368	Eastbourne	22.7%	Caroline Ansell	Conservative
319	North East Derbyshire	25.2%	Natascha Engel	Labour	369	Dagenham and Rainham	22.7%	Jon Cruddas	Labour
320	Mansfield	25.2%	Alan Meale	Labour	370	Winchester	22.7%	Steve Brine	Conservative
321	Dudley North	25.2%	Ian Austin	Labour	371	Hemsworth	22.7%	Jon Trickett	Labour
322	Battersea	25.1%	Jane Ellison	Conservative	372	North West Durham	22.7%	Pat Glass	Labour
323	Canterbury	25.0%	Julian Brazier	Conservative	373	Reading West	22.6%	Alok Sharma	Conservative
324	Oxford West and Abingdon	25.0%	Nicola Blackwood	Conservative	374	Garston and Halewood	22.6%	Maria Eagle	Labour
325	Kingston upon Hull West and Hessle	25.0%	Alan Johnson	Labour	375	Stoke-on-Trent South	22.5%	Rob Flello	Labour
326	Huddersfield	24.9%	Barry Sheerman	Labour/Co-operative	376	Surrey Heath	22.5%	Michael Gove	Conservative
327	Witney	24.8%	David Cameron	Conservative	377	Bristol South	22.5%	Karin Smyth	Labour
328	Meriden	24.8%	Caroline Spelman	Conservative	378	Newcastle upon Tyne Central	22.5%	Chi Onwurah	Labour
329	Newcastle-under-Lyme	24.6%	Paul Farrelly	Labour	379	New Forest East	22.5%	Julian Lewis	Conservative
330	Chelsea and Fulham	24.6%	Greg Hands	Conservative	380	Leeds West	22.5%	Rachel Reeves	Labour
331	Mid Bedfordshire	24.6%	Nadine Dorries	Conservative	381	Rother Valley	22.5%	Kevin Barron	Labour
332	Elmet and Rothwell	24.6%	Alec Shelbrooke	Conservative	382	Portsmouth North	22.4%	Penny Mordaunt	Conservative
333	Sittingbourne and Sheppey	24.5%	Gordon Henderson	Conservative	383	Norwich South	22.3%	Clive Lewis	Labour
334	Putney	24.4%	Justine Greening	Conservative	384	Corby	22.3%	Tom Pursglove	Conservative
335	Brighton, Kemptown	24.3%	Simon Kirby	Conservative	385	Chelmsford	22.3%	Simon Burns	Conservative
336	Bury South	24.2%	Ivan Lewis	Labour	386	Hayes and Harlington	22.3%	John Martin McDonnell	Labour
337	Aldershot	24.2%	Gerald Howarth	Conservative	387	South Northamptonshire	22.3%	Andrea Leadsom	Conservative
338	Aldridge-Brownhills	24.1%	Wendy Morton	Conservative	388	Tewkesbury	22.2%	Laurence Robertson	Conservative
339	Stafford	24.1%	Jeremy Lefroy	Conservative	389	Christchurch	22.2%	Christopher Chope	Conservative
340	Pudsey	24.0%	Stuart Andrew	Conservative	390	North West Hampshire	22.1%	Kit Malthouse	Conservative
341	Northampton South	24.0%	David Mackintosh	Conservative	391	Ellesmere Port and Neston	22.1%	Justin Madders	Labour
342	Cannock Chase	23.9%	Amanda Milling	Conservative	392	Don Valley	22.1%	Caroline Flint	Labour
343	Leeds East	23.9%	Richard Burgon	Labour	393	Exeter	22.0%	Ben Bradshaw	Labour
344	Hertford and Stortford	23.8%	Mark Prisk	Conservative	394	Ashford	22.0%	Damian Green	Conservative
345	Banbury	23.8%	Victoria Prentis	Conservative	395	Weaver Vale	22.0%	Graham Evans	Conservative
346	Bury North	23.8%	David Nuttall	Conservative	396	Nottingham North	21.8%	Graham Allen	Labour
347	Bradford West	23.7%	Naseem Shah	Labour	397	Wellingborough	21.8%	Peter Bone	Conservative
348	Broxbourne	23.7%	Charles Walker	Conservative	398	Rochester and Strood	21.8%	Kelly Tolhurst	Conservative
349	Edmonton	23.6%	Kate Osamor	Labour/Co-operative	399	Gloucester	21.7%	Richard Graham	Conservative
350	Bournemouth West	23.6%	Conor Burns	Conservative	400	York Central	21.7%	Rachael Maskell	Labour/Co-operative

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401	Walsall North	21.6%	David Winnick	Labour	451	Morley and Outwood	19.2%	Andrea Jenkyns	Conservative
402	Ealing North	21.6%	Steve Pound	Labour	452	Stalybridge and Hyde	19.1%	Jonathan Reynolds	Labour/Co-operative
403	Poole	21.6%	Robert Syms	Conservative	453	Rotherham	19.1%	Sarah Champion	Labour
404	Portsmouth South	21.5%	Flick Drummond	Conservative	454	Mitcham and Morden	19.1%	Siobhain McDonagh	Labour
405	East Ham	21.5%	Stephen Timms	Labour	455	Greenwich and Woolwich	19.1%	Matthew Pennycook	Labour
406	Liverpool, West Derby	21.5%	Stephen Twigg	Labour/Co-operative	456	South Basildon and East Thurrock	19.1%	Stephen Metcalfe	Conservative
407	South Ribble	21.4%	Seema Kennedy	Conservative	457	Chesterfield	19.0%	Toby Perkins	Labour
408	Peterborough	21.4%	Stewart Jackson	Conservative	458	Norwich North	18.9%	Chloe Smith	Conservative
409	Sheffield, Brightside and Hillsborough	21.3%	Harry Harpham	Labour	459	Cities of London and Westminster	18.8%	Mark Field	Conservative
410	North West Cambridgeshire	21.3%	Shailesh Vara	Conservative	460	St Helens North	18.8%	Conor McGinn	Labour
411	Oldham East and Saddleworth	21.3%	Debbie Abrahams	Labour	461	West Bromwich West	18.7%	Adrian Bailey	Labour/Co-operative
412	Southampton, Test	21.2%	Alan Whitehead	Labour	462	Mid Dorset and North Poole	18.7%	Michael Tomlinson	Conservative
413	Carlisle	21.1%	John Stevenson	Conservative	463	South Shields	18.6%	Emma Lewell-Buck	Labour
414	City of Durham	21.1%	Roberta Blackman-Woods	Labour	464	York Outer	18.5%	Julian Sturdy	Conservative
415	Ealing, Southall	21.0%	Virendra Sharma	Labour	465	Vauxhall	18.5%	Kate Hoey	Labour
416	North East Hampshire	21.0%	Ranil Jayawardena	Conservative	466	Houghton and Sunderland South	18.5%	Bridget Phillipson	Labour
417	Bradford South	20.8%	Judith Cummins	Labour	467	Wansbeck	18.4%	Ian Lavery	Labour
418	Kingswood	20.8%	Chris Skidmore	Conservative	468	Chatham and Aylesford	18.4%	Tracey Crouch	Conservative
419	Dewsbury	20.7%	Paula Sherriff	Labour	469	Makerfield	18.4%	Yvonne Fovargue	Labour
420	Barnsley Central	20.6%	Dan Jarvis	Labour	470	Blaydon	18.3%	David Anderson	Labour
421	Redcar	20.6%	Anna Turley	Labour/Co-operative	471	Preston	18.1%	Mark Hendrick	Labour/Co-operative
422	Wokingham	20.5%	John Redwood	Conservative	472	The Wrekin	18.1%	Mark Pritchard	Conservative
423	Filton and Bradley Stoke	20.3%	Jack Lopresti	Conservative	473	Barking	18.1%	Margaret Hodge	Labour
424	Colchester	20.3%	Will Quince	Conservative	474	Chorley	18.1%	Lindsay Hoyle	Labour
425	Redditch	20.2%	Karen Lumley	Conservative	475	Slough	18.1%	Fiona Mactaggart	Labour
426	Aylesbury	20.2%	David Lidington	Conservative	476	Stockton South	18.1%	James Wharton	Conservative
427	Wigan	20.2%	Lisa Nandy	Labour	477	St Helens South and Whiston	18.0%	Marie Rimmer	Labour
428	Sedgefield	20.2%	Phil Wilson	Labour	478	Salford and Eccles	17.9%	Rebecca Long-Bailey	Labour
429	Batley and Spen	20.2%	Jo Cox	Labour	479	Camberwell and Peckham	17.9%	Harriet Harman	Labour
430	Lewisham, Deptford	20.1%	Vicky Foxcroft	Labour	480	Gateshead	17.8%	Ian Mearns	Labour
431	Ashton-under-Lyne	20.0%	Angela Rayner	Labour	481	Wythenshawe and Sale East	17.8%	Mike Kane	Labour
432	Middlesbrough South and East Cleveland	20.0%	Tom Blenkinsop	Labour	482	Islington North	17.8%	Jeremy Corbyn	Labour
433	Hammersmith	19.9%	Andrew Slaughter	Labour	483	Hackney North and Stoke Newington	17.7%	Diane Abbott	Labour
434	Feltham and Heston	19.9%	Seema Malhotra	Labour/Co-operative	484	Basildon and Billericay	17.7%	John Baron	Conservative
435	Warrington South	19.9%	David Mowat	Conservative	485	Holborn and St Pancras	17.6%	Keir Starmer	Labour
436	Huntingdon	19.8%	Jonathan Djanogly	Conservative	486	Hemel Hempstead	17.5%	Mike Penning	Conservative
437	Barnsley East	19.8%	Michael Dugher	Labour	487	Leigh	17.5%	Andy Burnham	Labour
438	South West Bedfordshire	19.7%	Andrew Selous	Conservative	488	Welwyn Hatfield	17.5%	Grant Shapps	Conservative
439	Penistone and Stocksbridge	19.7%	Angela Smith	Labour	489	Westminster North	17.4%	Karen Buck	Labour
440	Bradford East	19.7%	Imran Hussain	Labour	490	Blackburn	17.4%	Kate Hollern	Labour
441	Bolton West	19.6%	Chris Green	Conservative	491	Halton	17.4%	Derek Twigg	Labour
442	Havant	19.5%	Alan Mak	Conservative	492	Kingston upon Hull East	17.4%	Karl Turner	Labour
443	Wolverhampton North East	19.4%	Emma Reynolds	Labour	493	Bolton North East	17.2%	David Crausby	Labour
444	Hartlepool	19.4%	Iain Wright	Labour	494	Thurrock	16.9%	Jackie Doyle-Price	Conservative
445	Dartford	19.3%	Gareth Johnson	Conservative	495	Erith and Thamesmead	16.8%	Teresa Pearce	Labour
446	Wentworth and Dearne	19.3%	John Healey	Labour	496	Jarrow	16.7%	Stephen Hepburn	Labour
447	Chippenham	19.3%	Michelle Donelan	Conservative	497	Tottenham	16.7%	David Lammy	Labour
448	Newcastle upon Tyne North	19.2%	Catherine McKinnell	Labour	498	Sheffield South East	16.7%	Clive Betts	Labour
449	Leeds Central	19.2%	Hilary Benn	Labour	499	Oldham West and Royton	16.6%	Michael Meacher	Labour
450	Southampton, Itchen	19.2%	Royston Smith	Conservative	500	Fareham	16.4%	Suella Fernandes	Conservative

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501	Heywood and Middleton	16.4%	Liz McInnes	Labour
502	North Durham	16.0%	Kevan Jones	Labour
503	West Ham	16.0%	Lyn Brown	Labour
504	Plymouth, Moor View	15.9%	Johnny Mercer	Conservative
505	Rochdale	15.8%	Simon Danczuk	Labour
506	Bracknell	15.6%	Phillip Lee	Conservative
507	Easington	15.5%	Grahame Morris	Labour
508	Harlow	15.4%	Robert Halfon	Conservative
509	Blackley and Broughton	15.4%	Graham Stringer	Labour
510	Stevenage	15.4%	Stephen McPartland	Conservative
511	Gosport	15.3%	Caroline Dinanage	Conservative
512	South Swindon	15.1%	Robert Buckland	Conservative
513	Warrington North	14.8%	Helen Jones	Labour
514	Islington South and Finsbury	14.7%	Emily Thornberry	Labour
515	Stockton North	14.7%	Alex Cunningham	Labour
516	Bolton South East	14.3%	Yasmin Qureshi	Labour
517	Worsley and Eccles South	14.2%	Barbara Keeley	Labour
518	Hackney South and Shoreditch	14.1%	Meg Hillier	Labour/Co-operative
519	Milton Keynes North	14.1%	Mark Lancaster	Conservative
520	Eastleigh	14.0%	Mims Davies	Conservative
521	Blyth Valley	14.0%	Ronnie Campbell	Labour
522	Bethnal Green and Bow	13.7%	Rushanara Ali	Labour
523	North Tyneside	13.6%	Mary Glendon	Labour
524	Manchester Central	12.6%	Lucy Powell	Labour/Co-operative
525	Telford	12.3%	Lucy Allan	Conservative
526	Knowsley	12.3%	George Howarth	Labour
527	Washington and Sunderland West	11.9%	Sharon Hodgson	Labour
528	Crawley	11.4%	Henry Smith	Conservative
529	North Swindon	10.7%	Justin Tomlinson	Conservative
530	Bermondsey and Old Southwark	10.6%	Neil Coyle	Labour
531	Milton Keynes South	10.4%	Iain Stewart	Conservative
532	Basingstoke	9.1%	Maria Miller	Conservative
533	Poplar and Limehouse	7.3%	Jim Fitzpatrick	Labour