NATIONAL HOUSING FEDERATION

Taking stock

Understanding the quality and energy efficiency of housing association homes

Contents

Introduction

"If you want a great place to live come to a housing association" was the first statement of the 20-year vision the sector set out in An Ambition to Deliver in 2014. By 2033, housing associations want to be widely recognised as building, maintaining and managing good quality homes across all tenures and for all income groups. So where are we now?

This research set out to explore the condition of homes in the sector, both in terms of their physical quality and how energy efficient they are, and crucially how these physical features impact on people's lives. The research was undertaken in two phases, drawing on data from the English Housing Survey (EHS[1]) unless otherwise stated.

The first phase consisted of an in-house analysis of the energy efficiency of the housing association stock by the National Housing Federation and a case study analysis of five typical housing associations by Sustainable Homes. The second phase, carried out by the Building Research Establishment (BRE), examined the physical quality and the state of repair of housing association homes. This paper presents some of the key findings from both phases.

The analysis shows clearly that housing associations provide some of the best homes in England. Housing association homes are:

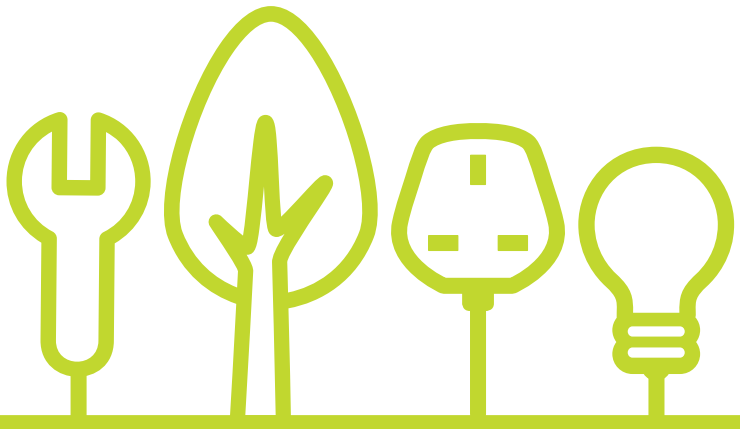
- more energy efficient than any other sector
- in a better state of repair than any other rented tenure, and on a par with owner occupied homes
- significantly more accessible to wheelchair users than any other tenure
- less likely to be located in poor quality neighbourhoods than private rented and local authority homes.

The research also highlights some of the particular challenges faced by housing associations. Although their homes are more energy efficient, annual household incomes in the sector are around £20,000 lower than those in privately owned homes, which means that fuel poverty is still a significant problem. Social tenants are also more likely to be in a worse state of health than those living in other tenures so the impacts of fuel poverty can be more severe.

Good quality and energy efficient homes have many positive impacts on people's lives. They support better physical and mental health, which in turn saves money to the public purse and the NHS. A warm home results in lower energy bills and a higher disposable income available to households and individuals. Well-maintained homes mean lower repair costs and higher tenant satisfaction. Importantly, the quality of life that a home provides does not end at the doorstep but is equally dependent on the quality of a neighbourhood and community.

Delivering these benefits is not easy. As the research shows, the worst performing homes in the sector are those that require substantial investment and overhaul – the very old properties, those with solid walls, those off the gas grid, and some converted properties that may not be fit for purpose. The challenge becomes even greater as the cumulative impact of recent policy changes such as the 1% rent cut and changes to Local Housing Allowance (LHA) mean that associations need to think more closely than ever about all expenditure.

But the sector is committed in its ambition to deliver great places to live – through efficiency and innovation, working with partners across industry and government, and collaborating on solutions to ensure we provide efficient and effective asset management and investment programmes.



The statistics

State of repair

Housing association homes are in a better state of repair than local authority and private rented homes, and broadly similar to owner-occupied homes. The housing association and owner-occupied stock have a higher proportion of homes requiring no repairs expenditure (38% and 41%, respectively) compared with local authority (24%) and private rented (29%) homes.

It is estimated that the level of investment required to carry out all basic (day to day) repairs across the whole housing association stock was around £1.9 bn in 2012. The estimated cost to undertake the more comprehensive repairs likely to be required over the next 10 years was £4.7 bn, an average cost of £2,000 per dwelling. The investment estimated to be necessary in private sector homes is around double this – £4,100 per dwelling for owner occupied and over £4,300 for private rented.

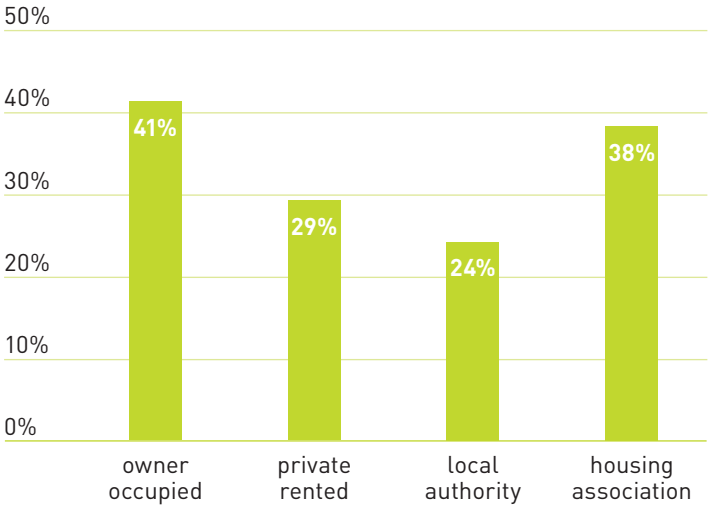
At around just 4%, housing association homes are less likely to have dampness and mould problems when compared to other tenures. Although this proportion was fairly similar for all types of housing within the sector, there was variation according to dwelling age, ranging from 9% of homes built before 1919 with damp or mould issues to just 2% for homes built after 1980.

4% of housing association homes had some form of structural defects. Again, this compares favourably to other tenures: around 6% of local authority homes, 7% of owner-occupied homes and 10% of private rented stock were found to have structural defects in 2012. The most common defects were foundation settlement, lintel failure, differential movement and roof sagging.

Figure 1. Standardised basic repair costs[2] per sqm by tenure

Source: EHS 2011–2014

Figure 2. Proportion of homes requiring no repair expenditure



Source: EHS 2011–2014

Accessibility of the housing stock

It is estimated that 376,000 housing association homes were fully accessible for wheelchair users in 2012. Not surprisingly these homes mainly comprised of those built after 1980 (296,000). Overall a far higher proportion of housing association homes (16%) were fully accessible compared with other tenures, particularly owner-occupied homes (4%).

Neighbourhood and environmental quality

Based on the assessment of EHS surveyors, owner occupied (11%) and housing association homes (12%) were less likely to be located in poor quality environments[3] compared with local authority (15%) and private rented homes (18%). The oldest homes (built before 1919) and those in urban areas were more likely to be located in poor-quality environments irrespective of tenure. For all tenures except housing association homes, terraced homes were more likely to be in poor quality environments.

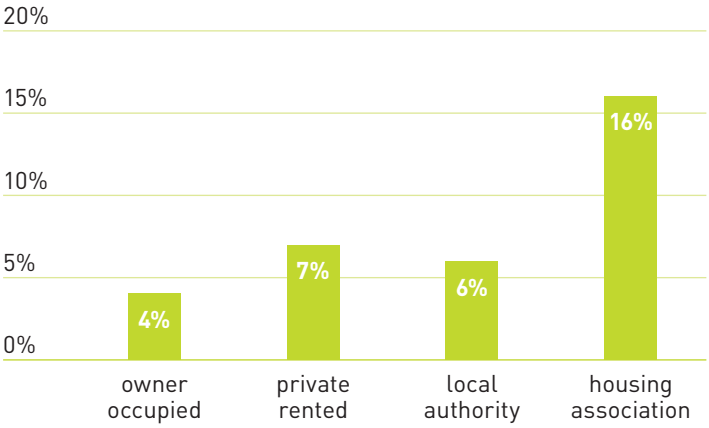
Tenant satisfaction

The vast majority of housing association tenants (1.8 million or 80%) were either fairly or very satisfied with their accommodation, a slightly higher proportion than tenants in other rented tenures. The proportion of households who indicated that they were dissatisfied with their current accommodation was similar across all rented tenures, although it appears that a slightly higher proportion of local authority tenants (15%) were either slightly or very dissatisfied with their accommodation compared with housing association tenants (12%) and private renters (10%).

A far higher proportion of local authority (81%) and housing association (79%) tenants indicated that their current tenure was a good way to occupy a home compared with private renters (51%).

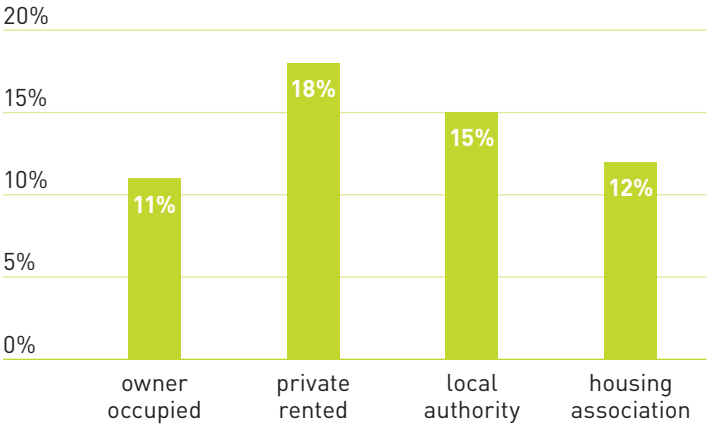
We may also see void frequency broadly as an indicator of tenant satisfaction with their property. In 2012 around 4% of housing association homes were vacant – a similar figure to local authority and owner-occupied homes (both 3%). Private rented stock was more likely to be vacant (10%).

Figure 3. Proportion of homes fully accessible for wheelchair users



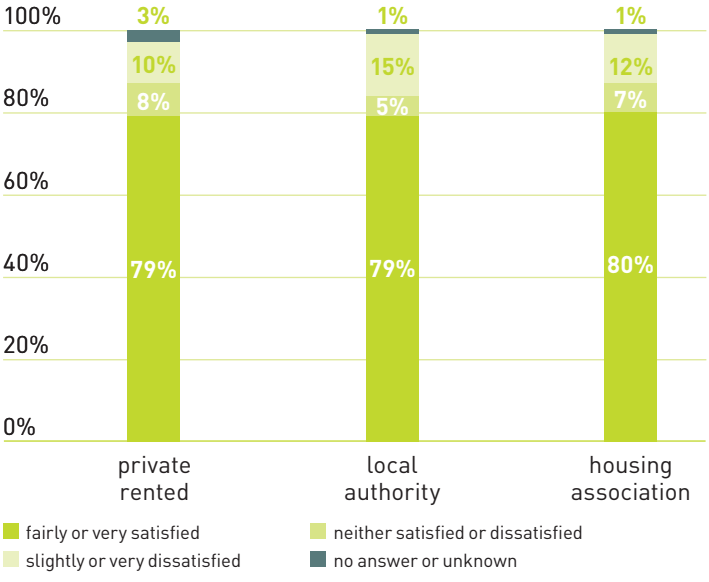
Source: EHS 2011–2014

Figure 4. Proportion of homes located in poor-quality neighbourhoods



Source: EHS 2011–2014

Figure 5. Tenant satisfaction with accommodation

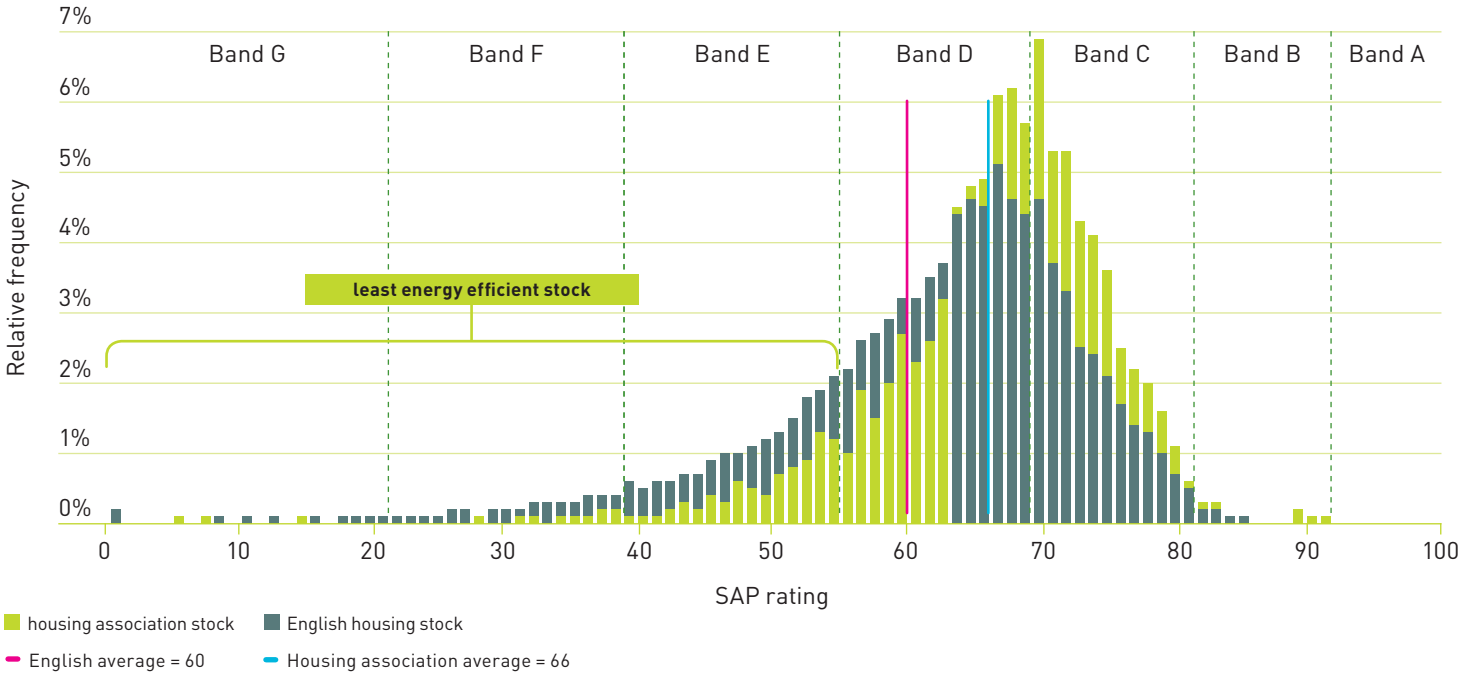


Source: EHS 2011–2014

Energy efficiency

The average housing association home is significantly more energy efficient than the average home across England. With an average Standard Assessment Procedure (SAP) rating[4] of 66, the typical housing association home lies more than seven SAP points above owner occupied and private rented stock. Housing association stock is also slightly more energy efficient than local authority stock.

Figure 6. Relative frequency of SAP ratings and EPC bands in housing association stock and total English housing stock



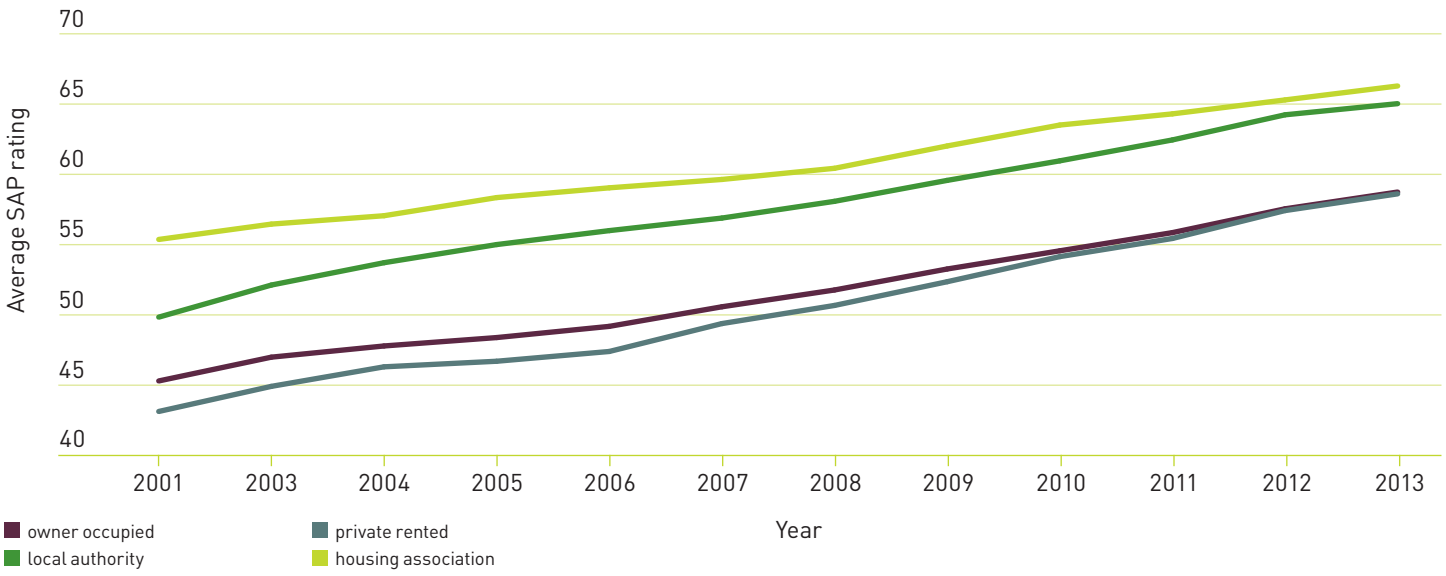
Source: EHS 2013–2014

Average (mean) SAP rating by tenure

Tenure	Mean SAP rating
Owner occupied	58.7
Private rented	58.8
Local authority	65.0
Housing association	66.2
Total English stock	**60.0**

While improvements in energy efficiency have been made in all sectors in recent years, housing association homes have kept ahead of other tenures. In 2001, the average SAP rating for a housing association dwelling was 55. This has increased by another 11 SAP points in the last twelve years, reaching 66 in 2013/14.

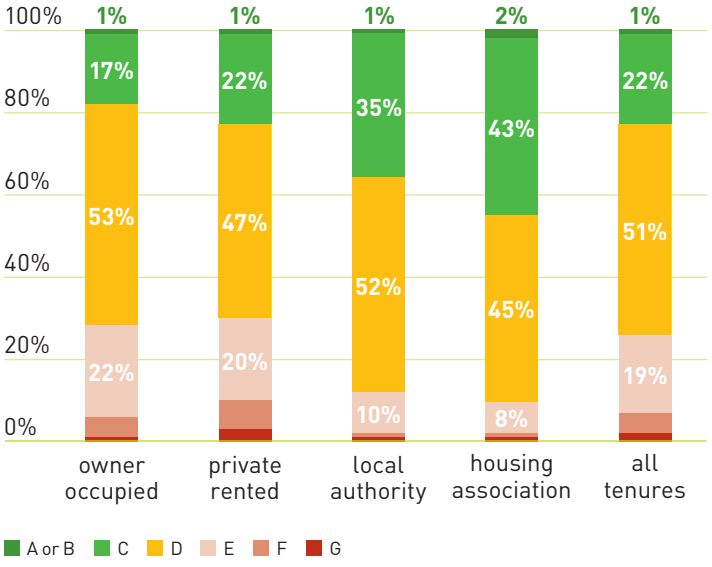
Figure 7. Average SAP rating by tenure, 2001–2013



Source: EHS Headline Report 2013/14

While A or B rated stock is still rare across all tenures, including housing association stock, 43% of all housing association homes fall into band C, a band which is considered to be of good energy efficiency. This represents almost double the proportion found in the total English housing stock (22%). Another 45% of housing association stock is classed in Energy Performance Certificate (EPC) band D – considered as average energy efficiency – and around 10% of housing association stock is grouped in EPC bands E–G, which are of low energy efficiency. This compares to around a quarter (26%) of all homes across England rated E–G.

Figure 8. Energy efficiency rating (EPC bands) by tenure



Source: EHS 2013/2014

Characteristics of energy inefficient homes

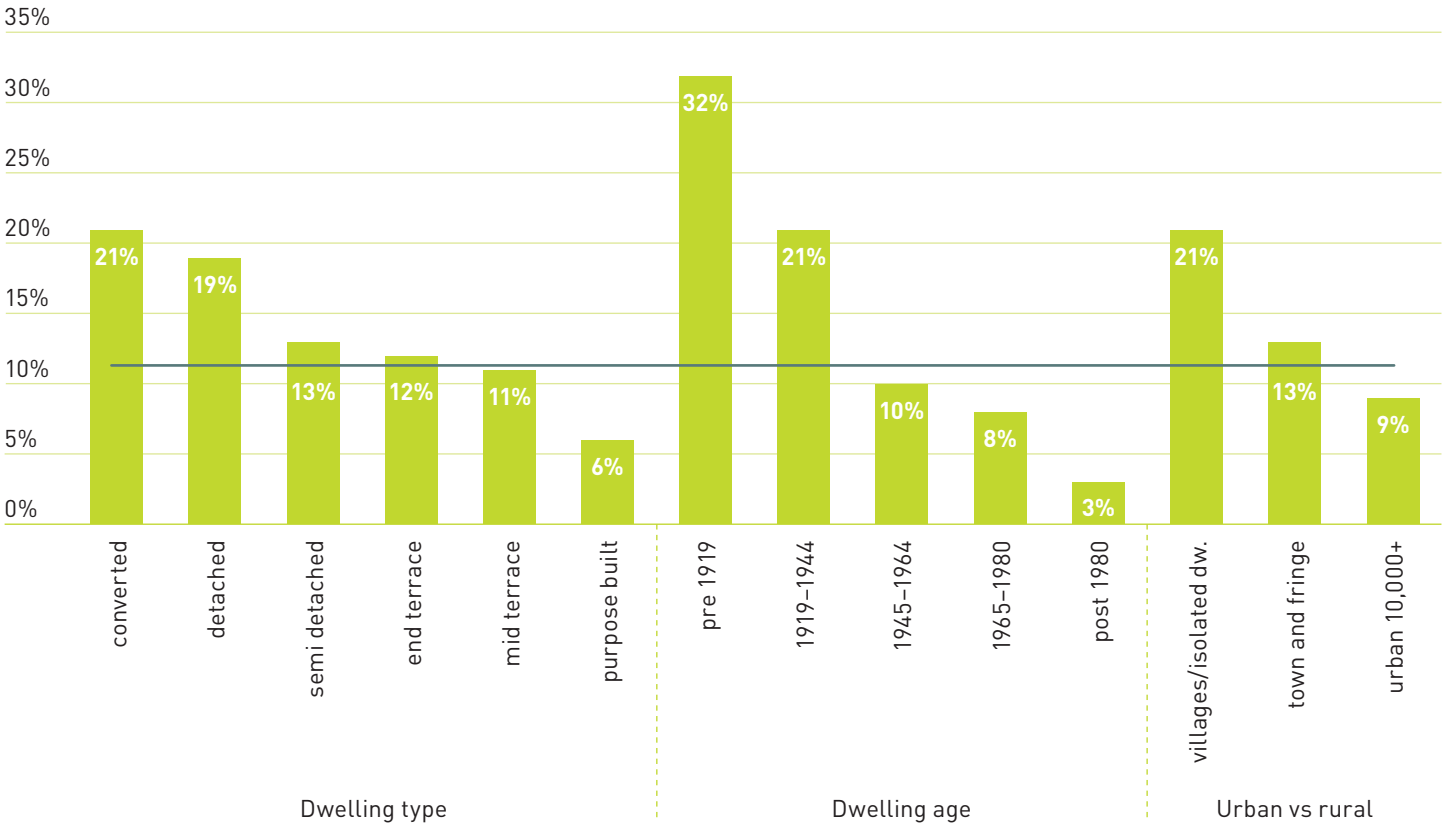
Energy efficiency in housing association homes is clearly related to property age, size and type, with the least energy efficient dwellings tending to be older, converted homes and located in rural areas. Regional differences are less significant, as are differences by useable floor area.

Housing association homes are built to or have been upgraded to a higher energy efficiency standard than the average English home when it comes to elements such as wall insulation, double glazing, loft insulation or boiler type. However, when we look at the least energy efficient housing association homes (E–G rated), they have a high incidence of property characteristics that are typically difficult or expensive to treat:

- 45% have uninsulated solid walls, representing around 99,000 housing association homes. While around 3 in 4 of uninsulated solid wall homes are connected to the gas grid, there remains almost a quarter which is off-gas (23,000 properties).
- While the vast majority of all housing association homes and the total English housing stock have gas fired central heating systems, which are more energy efficient, only 51% of the least energy efficient housing association stock is on the gas network. 44% use electrical fuel systems.
- The least energy efficient housing association stock also stands out in terms of the main heating system of the home with around 40% using storage or fixed room heaters rather than central heating.

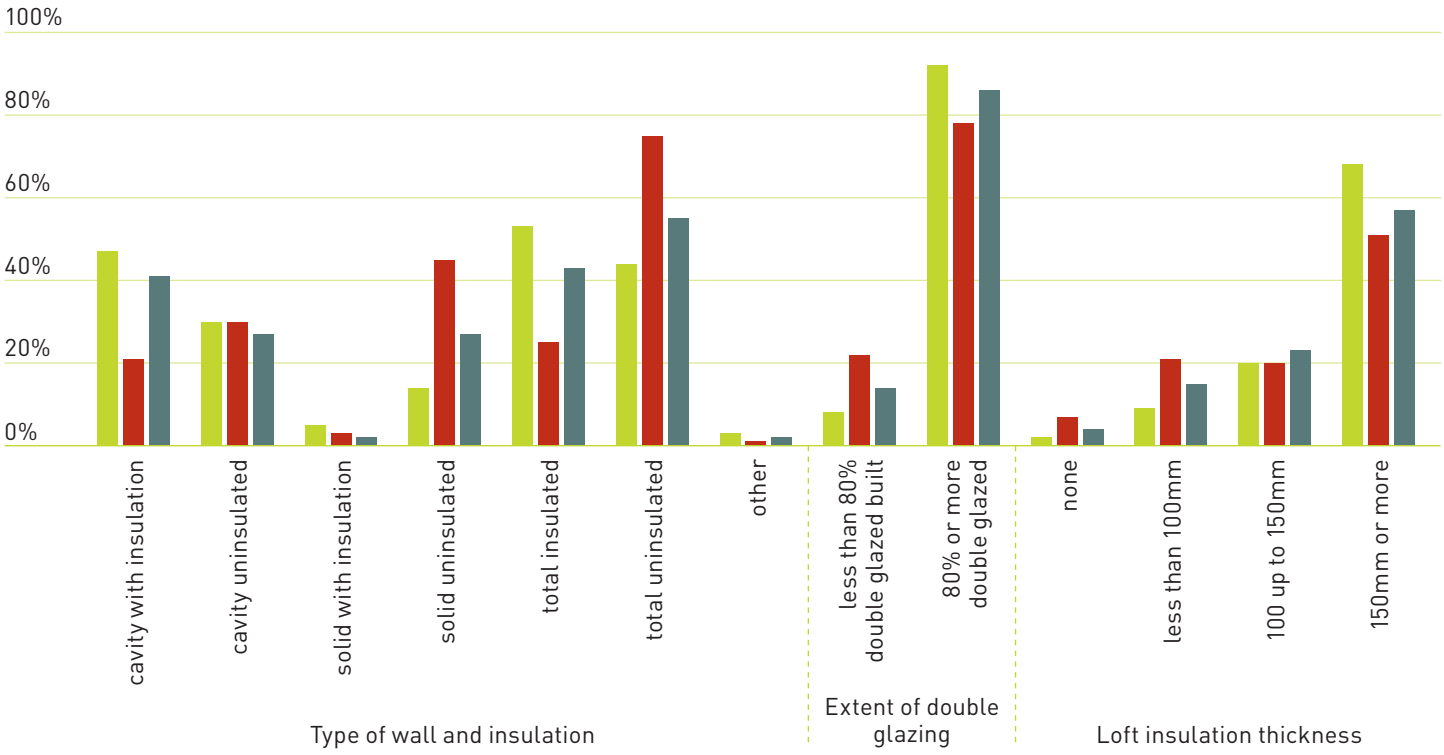
While thousands of housing association tenants have already benefitted from retrofit measures including cavity wall and loft insulation, boiler upgrades, solid wall insulation and renewable energy, the challenge remains to deliver these deeper retrofits and more expensive energy efficiency measures at scale.

Figure 9. Energy inefficient housing association stock by dwelling type, age and location



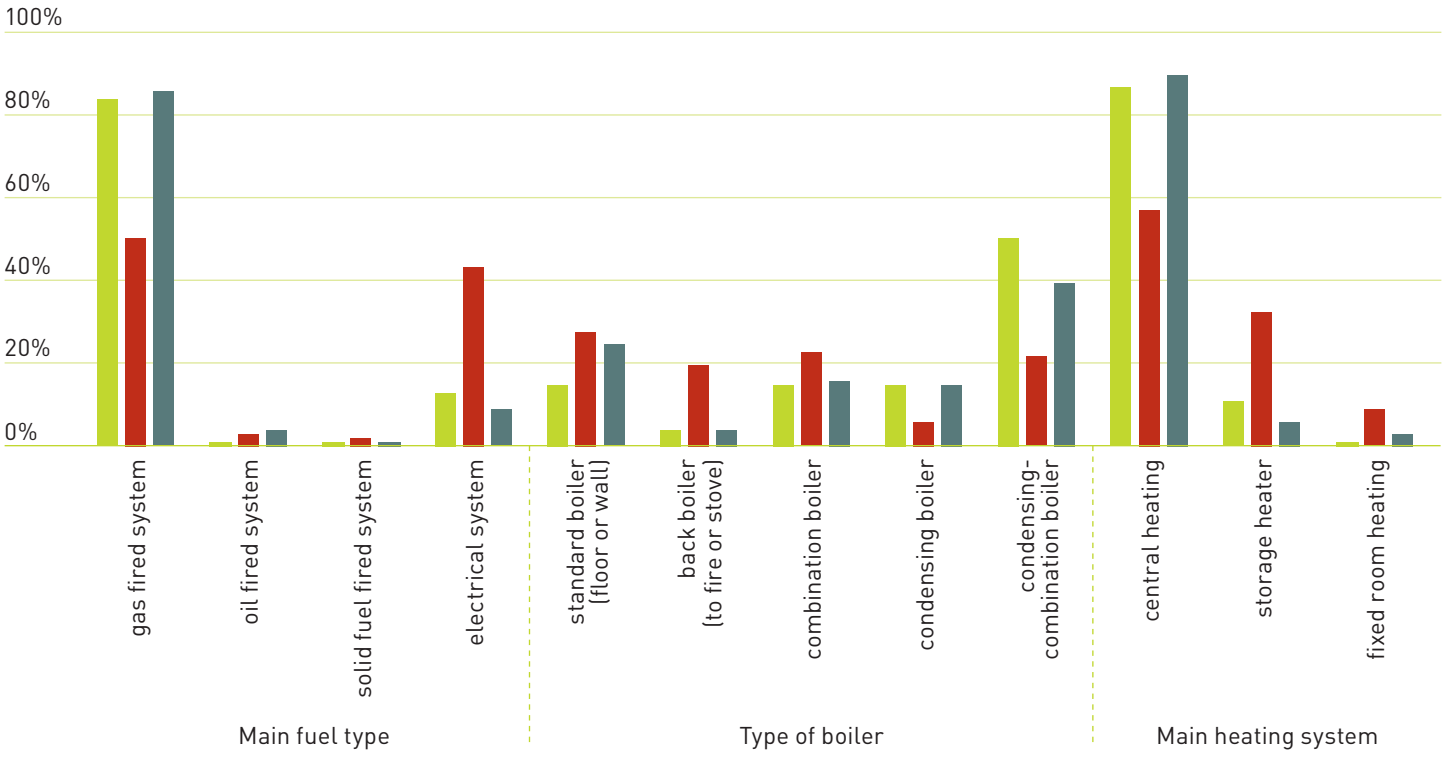
Source: EHS 2013/2014

Figure 10. Insulation standard of total and energy inefficient housing association stock



Source: EHS 2013/2014

Figure 11. Heating and boiler types of total and energy inefficient housing association stock



Source: EHS 2013/2014

Case study

Five housing associations and their potential for improving energy efficiency

Sustainable Homes have analysed five typical housing associations (urban, rural, northern, large and small) in terms of current energy efficiency and the improvements that could be achieved by investing in upgrading these homes to a certain standard.

The calculations assume a minimum target SAP for the total stock of 69, which falls into the low end of EPC band C. The table below shows the average SAP rating for each type of housing association, the estimated SAP rating if the suggested works were carried out, the total investment needed to bring all homes to a minimum SAP of 69 and the average investment needed per home to increase the current SAP rating by one point.

Sustainable Homes have also calculated what types of measures and interventions would be most cost effective to achieve these improvements. It is important to note that these case studies are all from high performing housing associations with a strong track record of energy efficiency investment. They do not represent the average or poorly performing stock.

(Results based on research by Sustainable Homes, 2015)

Type of housing association	**Current SAP (average) pre-improvement**	**Estimated SAP (average) post-improvement**	**Total investment needed**	**Average investment needed per SAP point per home**	**Most cost effective measures** (less than £500 per SAP point)
Urban housing association (10,000 homes)	68.1	71.3	£19.3m	£635	• cavity wall insulation to pre 1976 cavity walls • removing secondary gas heaters • upgrade inefficient lighting
Rural housing association (4,900 homes)	71.6	73.2	£2.7m	£549	• insulate pre 1976 solid main walls internally • upgrade remaining inefficient lighting • add solar PV panels
Northern housing association (5,900 homes)	68.3	72.3	£6.3m	£245	• upgrade inefficient lighting • cavity wall insulation to pre 1976 cavity walls • remove secondary gas heaters
Small housing association (~1,100 homes)	66.2	69.4	£0.69m	£179	• removing electric heaters (non-portable) • installing cavity wall insulation on remaining pre-1977 properties • upgrade inefficient lighting
Large housing association (24,000 homes)	70.1	74.0	£26m	£258	• fill cavity walls • top up lofts with 55mm or less insulation to 300mm • remove secondary heating

Fuel costs and expenditure on energy bills

Fuel costs in the UK have increased significantly over recent years, with the mean fuel cost for a home in England in 2013 being £1,300 per year. However, fuel costs vary significantly depending on the energy efficiency of a home, ranging from £930 per year in energy efficient homes (EPC rated A, B or C) to almost double (£1,780) in inefficient homes (EPC rated E, F or G). Households in the least energy efficient homes typically spend 6.3% of their income on fuel bills, while it is 4.1% among those living in more energy efficient homes. For a typical housing association household, moving from an energy inefficient home to an energy efficient home would mean an additional disposable income of £850 (or 6%) per year.

Table 1. Annual energy costs and energy spending by EPC bands

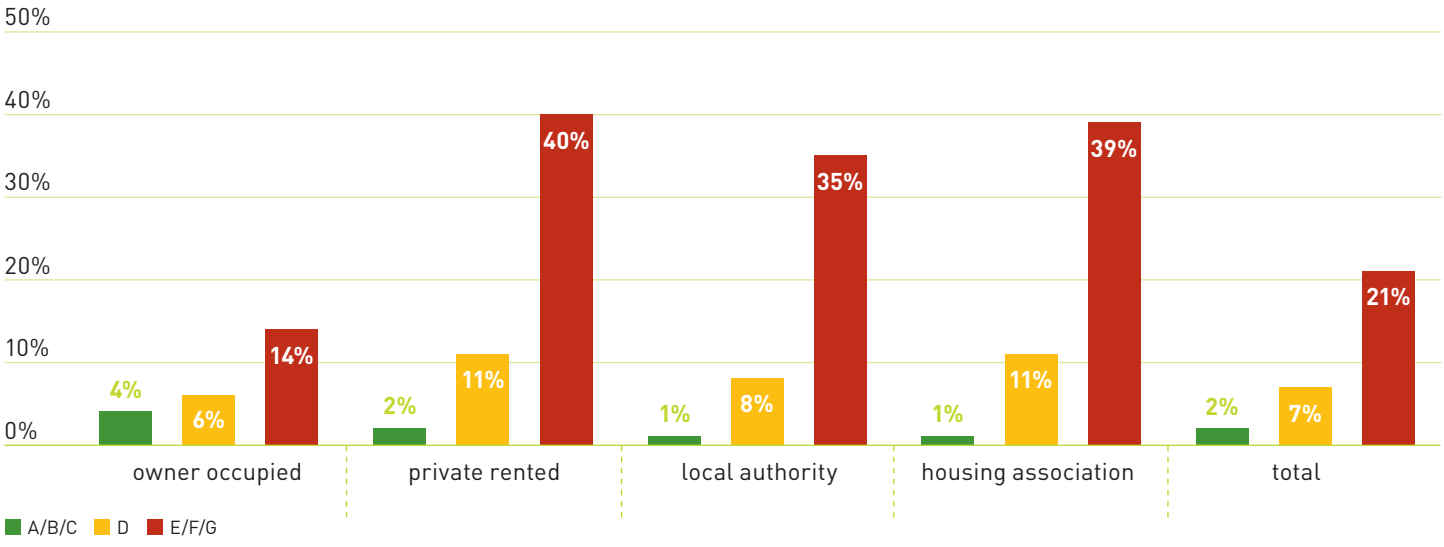
EPC rating	Annual energy cost	Percent of household income spent on energy bills
A/B/C	£926	4%
D	£1,209	5%
E/F/G	£1,779	6%

Source: EHS Fuel poverty dataset 2012

Fuel poverty

Around 1 in 10 (10.4%) of all English households are in fuel poverty, which represents 2.35m homes. A similar proportion (10%) of housing association households is in fuel poverty. While the proportion of fuel poor housing association households is in line with the English average, social tenants have a very different social and demographic profile. Housing associations house a large number of residents who are more vulnerable to suffer from the health consequences of fuel poverty, including older people and single parents with young children.

Figure 12. Proportion of fuel poor households in each EPC band by tenure



Source: EHS fuel poverty dataset 2012

There is also a difference between fuel poverty figures, which are based on a 'low income – high cost' definition[5], and the subjective experiences of fuel poverty. According to the current definition, households on low incomes with below average fuel bills are not considered to be in fuel poverty, regardless of how easily they can pay their fuel bills. This is of particular importance to social tenants, who have considerably lower household incomes than residents of other tenures.

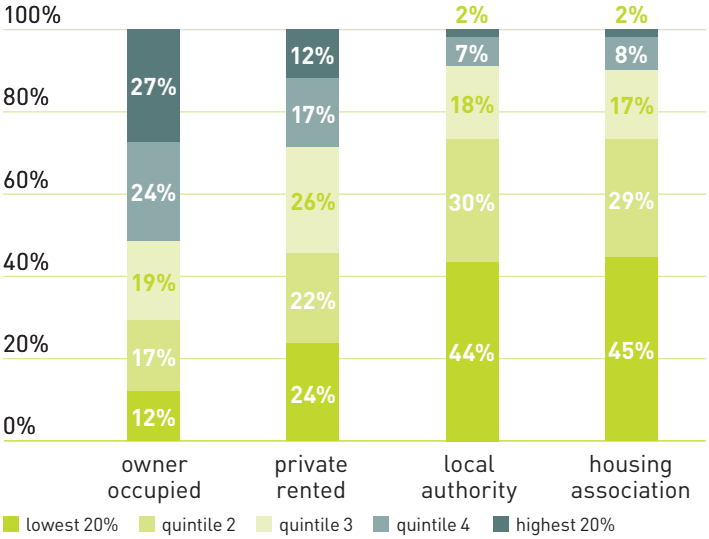
The median annual household income of a typical social housing resident lies below £14,000, compared to £23,000 among private renters and almost £33,000 among owner occupiers. More than 4 in 10 (45%) of all housing association residents fall into the lowest income quintile and only around 1 in 10 are in the top two income quintiles. There are hardly any (around 2%) households in social housing in the top income quintile. High or rising fuel costs will therefore impact most strongly on household budgets of social housing residents, including housing association tenants.

Table 2. Median household income by tenure

Tenure	Median annual gross income of the HRP[6] and partner (excl. housing benefit/LHA)
Owner occupied	£32,781
Private rented	£23,048
Local authority	£13,854
Housing association	£13,676

Source: EHS 2013/14

Figure 13. Distribution of household income by tenure



Source: EHS 2013/2014

Despite living in more energy efficient homes, social renters more often struggle to pay their energy bills or to keep their home adequately warm compared to households in other tenures. Almost a quarter (23%) of all housing association and local authority tenants are unable to keep their living room warm. This is well above the national average of 12% and almost four times the proportion of owner occupiers (6%). Similarly, a fifth (20%) of private renters struggles to keep their living room warm.

Table 3. Proportion of households unable to keep their living room warm

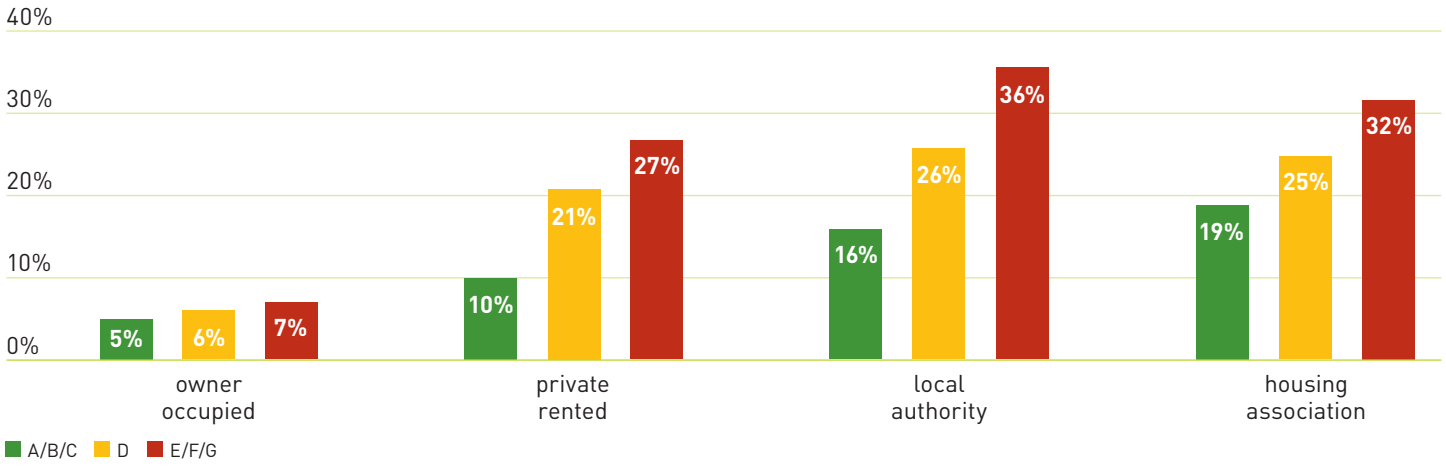
Tenure	Proportion of households unable to keep living room warm
Housing association	23%
Local authority	23%
Private rented	20%
Owner occupied	6%
All tenures	**12%**

Source: EHS 2013/14

While 'under heating' is not restricted to the least energy efficient homes, social tenants are disproportionately affected by cold homes across all energy efficiency bands as a result of their lower average household incomes.

A similar finding was made in the Hills Fuel Poverty Review, which shows that notional and actual energy expenditure differ among all income deciles, however to a much stronger degree among lowest income households[7].

Figure 14. Proportion of households unable to keep their living room warm in each EPC band by tenure



Source: EHS 2013/2014

Conclusion

It is clear that planned investment programmes and the ongoing repairs provided by housing associations have been successful in maintaining and upgrading the stock in recent decades. The indicators of the quality of the stock – shown for example through the investment required to address disrepair – are striking, as privately owned and rented homes are estimated to require double the investment over the next 10 years to bring them into good shape.

As well as investment driven by the decent homes standard, a higher proportion of newer and purpose built homes are another factor pushing up performance averages, reflecting the scale of new development in the sector as housing associations have continued to build new homes that are fit for purpose, accessible and energy efficient.

Approaches to asset management are changing and we expect that these changes will lead to further improvements in asset performance. For some associations, rationalisation means that they will focus more closely on properties with good returns in smaller geographical areas, which will improve the efficiency of their asset management programmes. Associations are also embracing smart technology and modern methods of construction that provide better data on how properties perform, helping them to build and maintain their homes more efficiently in the long term by identifying problems more easily and addressing problems before they even occur.

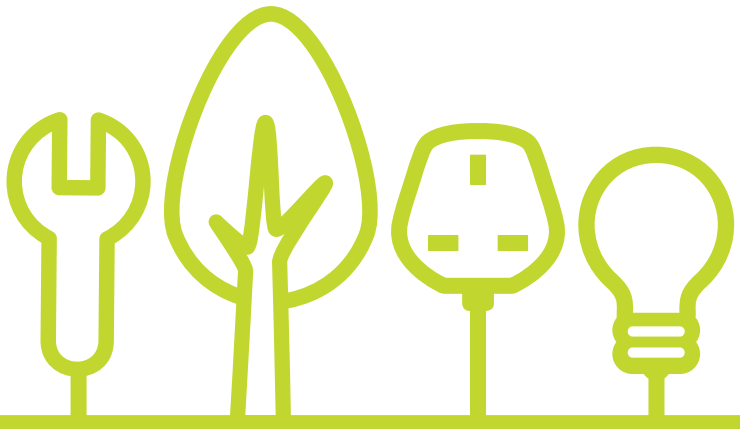
At the same time, however, budget cuts as a result of the 1% rent reduction and the LHA cap will undoubtedly threaten this progress. These changes have taken millions of pounds out of business plans over the next four years and for many associations this will mean scaling back their planned investment programmes, hindering their ability to maintain and upgrade their existing stock.

Despite this threat, the imperative to bring down household living costs and provide affordable warmth remains, as falling wages and welfare reform put more and more pressure on household budgets. Although in general they live in the most energy efficient tenure of home, social renters more often struggle to pay their energy bills or to keep their home warm compared to households in other tenures, and under-heating and even self-disconnecting are not uncommon in the sector.

Housing associations support the Government's ambition for as many fuel-poor homes to achieve EPC band C by 2030 and many share this target for their own stock – but there is no doubt this will be expensive to achieve. As the research by Sustainable Homes shows, for a large organisation with already high energy performance, meeting a minimum EPC band C, will cost more than £25 million. For associations with less energy efficient property this will be more costly.

Of the 10% of housing association homes that are rated E, F or G – 45% of which have solid walls and 29% of which were built before 1919 – the high cost of bringing these under performing properties up to EPC band C or higher means that even highly efficient retrofit programmes struggle to deliver the improvements at a manageable cost to the business.

Ultimately, to deliver the Government's target, some external investment will be necessary and the sector will continue to work with the Government and industry to design and deliver policy that supports this ambition. Improving the poorer performing housing association stock represents a substantial opportunity to use the economies of scale available through housing associations to bring energy efficiency products to a market ready position. New models of delivery that drive innovation, efficiency and collaboration would enable housing associations to do more, creating a competitive and commercial supply chain that would benefit all sectors.



References

[1] English Housing Survey (EHS)

The English Housing Survey is a continuous national survey commissioned by the Department for Communities and Local Government (DCLG). It collects information about people's housing circumstances and the condition and energy efficiency of housing in England.
(Source: **English Housing Survey)**

[2] Standardised basic repair costs

An index of disrepair that expresses costs in pounds per square metre (£/m2) based on prices for a midpoint in the range of prices in England. The same assumptions about contract size are made for houses in all tenures (contract size = five dwellings) and are then divided by the total floor area of the dwelling. The resulting index can be used to compare the relative levels of disrepair for dwellings of different sizes, in different tenures and different locations.
(Source: **English Housing Survey Technical Report)**

[3] Poor-quality environment

'Neighbourhood' or 'local environment' problems are based on the professional English Housing Survey surveyors' assessments of problems in the immediate environment of the home on a scale of one ('no problems') to five ('major problems'). These assessments are based on observed problems (in some cases verified with the resident) rather than any specialised measurement instruments or recourse to other environmental data. The survey assesses three types of problems contributing to a poor quality environment:

- upkeep
- traffic and transport
- utilisation (i.e. abandonment vacant sites; intrusive industry, etc.).

(Source: **English Housing Survey Technical Report)**

[4] Energy efficiency

Energy and environmental performance of buildings are commonly measured by using a methodology called Standard Assessment Procedure (SAP), resulting in SAP ratings. SAP ratings reflect the level of energy consumption per unit floor area: the higher the SAP rating, the more energy (and fuel costs) a household spends per square metre.

Numeric SAP measures can be classified into a banded rating, used for issuing Energy Performance Certificates (EPC rating). EPC ratings were introduced as part of a European Union initiative to drive down energy costs and have seven bands, ranging from A (most energy efficient) to G (least energy efficient). The Energy Efficiency Directive, issued by the EU, requires all buildings that are constructed, sold or offered for rent in the UK to have an EPC. EPCs consist of two modules:

- Energy Efficiency Rating, which measures fuel costs per square metre
- Environmental Impact Rating, which measures CO_2 emissions

(Source: **Government Guideline for the Standard Assessment Procedure)**

[5] Fuel poverty

The current measure for fuel poverty in England is a based on a Low Income High Housing Cost definition (LIHC), superseding the 10% definition, which considered households to be in fuel poverty if they spent more than 10% of their household income on fuel costs. The LIHC measure includes both an absolute (energy cost) and a relative (income) dimension. Accordingly, a household is considered to be fuel poor if they meet the following two criteria:

- if they have required fuel costs that are above the national average (median), which were £1,239 in 2013
- and were they to spend that amount, they would be left with a residual income below the official poverty line (i.e. 60% of After Housing Cost equivalised income = £12,212).

(Source: **John Hills, Getting the Measure of Fuel Poverty, 2012)**

[6] Household reference person (HRP)

The HRP is the person in whose name the dwelling is owned or rented or who is otherwise responsible for the accommodation. In the case of joint owners and tenants, the person with the highest income is taken as the HRP
(Source: EHS 2013/14)

[7] **John Hills. Getting the Measure of Fuel Poverty. Final Report of the Fuel Poverty Review (2012), CASE Report 72.**

NATIONAL HOUSING FEDERATION

The National Housing Federation is the voice of affordable housing in England. We believe that everyone should have the home they need at a price they can afford.

That's why we represent the work of housing associations and campaign for better housing. Our members provide two and a half million homes for more than five million people. And each year they invest in a diverse range of neighbourhood projects that help create strong, vibrant communities.

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