

Homeowners Advice Facility

How best to support homeowners as they consider the options, issues and costs involved with retrofitting their homes available through a single point of contact.

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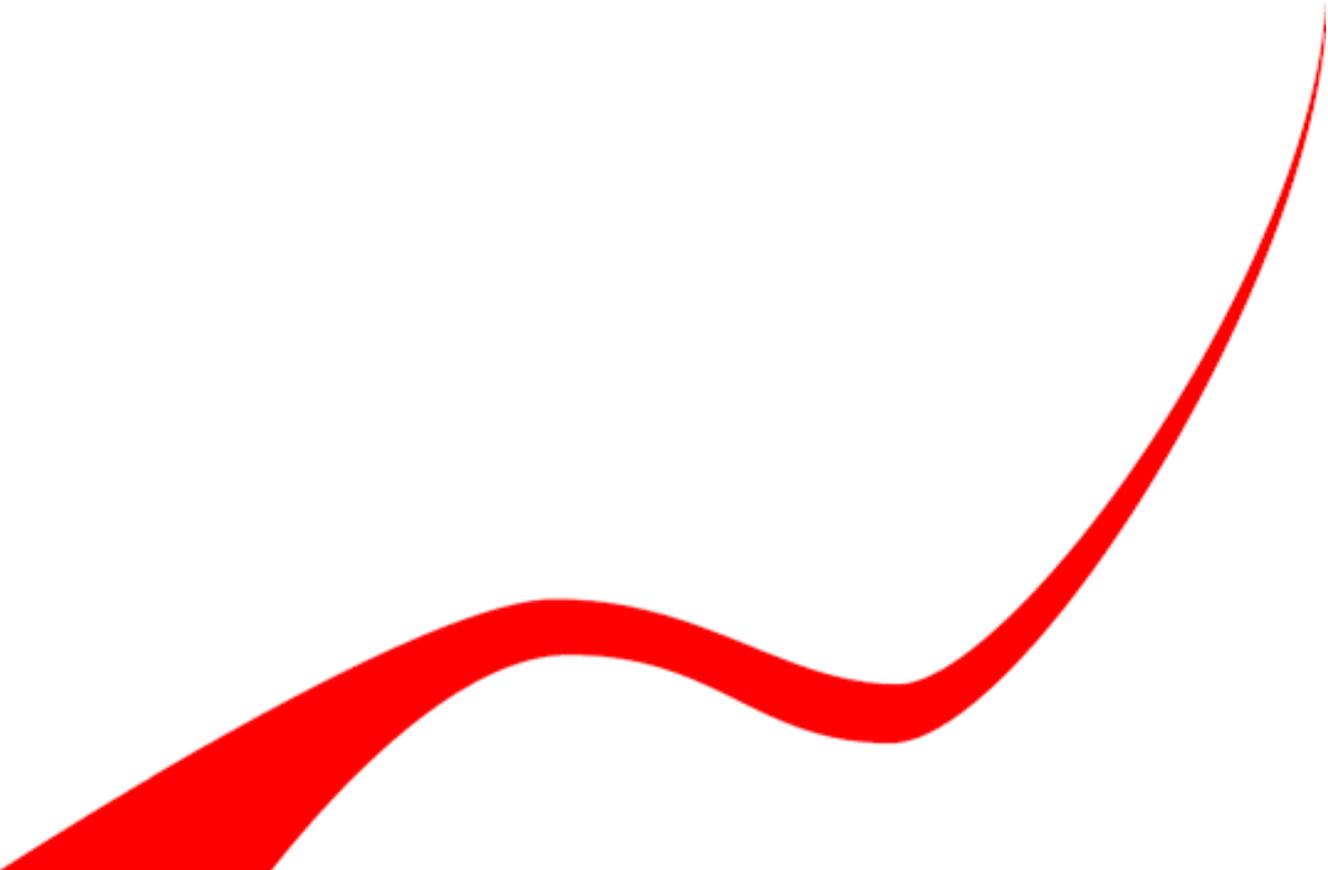
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EXECUTIVE SUMMARY

This research, commissioned by the BECCI project, investigates how best to support homeowners as they consider the options, issues and costs involved with retrofitting their homes available through a single point of contact. The aim is to provide the information and evidence base to consider how best to engage with homeowners to encourage an increased uptake of retrofit measures. This report presents a review of the physical and demographical characteristics of the West Midlands housing sector and existing examples of one-stop-shop advice services, before analysing the opportunities and challenges associated with one-stop-shop advice provision and recommending an approach for developing such a service in the West Midlands.

The need for a one-stop-shop arises from the long and complicated customer journey associated with energy improving refurbishments and home improvements. The customer journey is complicated by the wide range of options available in terms of measures, materials, and delivery and finance models, and the fact that the most suitable options vary between homeowners depending on their preferences, personal circumstances, and the characteristics, location and use of their property. This is particularly relevant in the West Midlands, where there is a diverse range and distribution of property types and ages, as well as socioeconomic and cultural characteristics.

At the same time, major skills and knowledge gaps exist amongst installers and suppliers, such that they are not always able to recognise, advise on or deliver retrofit options. Supply chain fragmentation and a lack of coordination and mutual understanding between different trades not only further complicates the customer journey, but prevents the supply side from maximising the potential market opportunities and economies of scale.

A one-stop-shop can help to address these issues by offering a clearer, more structured, efficient, trusted and convenient route for accessing advice and services, whilst also helping to drive consumer demand and tackle knowledge and skills barriers in the supply chain. The key recommendations for developing a one-stop-shop in the West Midlands are to:

- Support homeowners throughout the entire customer journey
- Develop a strong marketing campaign to raise awareness and promote the value and benefits of retrofit
- Build trust and confidence by providing quality assurances and promoting vetted installers
- Drive demand by developing influential and innovative partnerships and connections
- Provide advice that is relevant to the full range of household and property types remotely and face-to-face
- Offer advice on available funding streams and alternative financing options
- Promote a 'whole house plan' approach to assessments
- Provide a project management service or other coordination role
- Prioritise support for and involvement of small local installers
- Provide post-installation monitoring services and guidance on use and maintenance
- Seek a diverse funding stream and aim to build a strong reputation to charge for services in the long term

Given the range of services a one-stop-shop can provide and the diversity of needs in the West Midlands, the most appropriate approach will depend on the specific focus in terms of both customers and suppliers and the outcomes sought. Setting clear priorities and objectives for the one-stop-shop will be key for determining the services to provide and the collaborations and partnerships to pursue.

1. Introduction

Retrofitting existing homes is essential if the Government's targets to reduce CO₂ emissions by 80 percent by 2050 are to be met. Occupants of the UK's 23 million homes account for 27 percent of total UK carbon dioxide emissions through their energy use, and it is estimated that 86 percent of these properties will still be in use in 2050 (Sustainable Development Commission, 2006). There is therefore an urgent need to increase the uptake of energy efficient refurbishments and home improvements. This presents both a huge challenge and a major opportunity, with the retrofit and refurbishment market estimated to be worth between £200bn and £400bn over the next 20 years, and offering benefits for homeowners in the form of lower energy bills, increased property values and improved health, comfort and wellbeing.

There is still a long way to go before the benefits of energy improving refurbishments are properly understood and recognised by homeowners on the ground. Even where there is appreciation of the benefits, the customer journey is long and complicated by the wide range of options available in terms of measures, materials, and delivery and finance models. What measures are suitable for a particular homeowner will vary depending on their personal circumstances, preferences as a consumer, and the characteristics, location and use of their property, meaning there is no standard set of advice, package of works or process for homeowners to follow.

In addition, major skills and knowledge gaps exist amongst installers and suppliers, such that they are not always able to recognise, advise on or deliver retrofit options. Supply chain fragmentation and a lack of coordination and mutual understanding between different trades not only further complicates the customer journey, but prevents the supply side from maximising the potential market opportunities and economies of scale.

There is therefore a need to support homeowners through the customer journey as they consider the options, issues and costs involved with undertaking energy improving refurbishments and home improvements. Providing such support via a "one-stop-shop" has the potential to overcome barriers to homeowners pursuing retrofit measures by offering a clearer, more structured, efficient and convenient route for accessing advice and services, and can also help increase supply chain collaboration and address knowledge and skills barriers. This report considers how such support could best be provided in the West Midlands.

2. Objectives

The purpose of this report is to present the options, opportunities and challenges associated with providing retrofit advice for homeowners in the West Midlands through a "one-stop-shop". This in turn will provide the information and evidence base to consider how best to engage with individual homeowners to encourage an increased uptake of retrofit measures. It will do this by:

- Reviewing the characteristics of the West Midlands housing sector, making comparisons with the national position, in order to determine possible implications for providing retrofit advice to homeowners in the region;
- Reviewing existing examples of one-stop-shops within the UK and in other countries in order to illustrate the variety of services that can be involved and the strengths and weaknesses of different approaches;
- Analysing the opportunities and challenges associated with providing advice through a one-stop-shop;
- Recommending how homeowners in the region may best be supported as they consider the options, issues and costs involved with retrofitting their homes through a single point of contact, given the characteristics of the West Midlands housing sector and learnings from existing examples of one-stop-shop advice provision.

3. Scope

The primary focus of this report is on the provision of retrofit advice for homeowners through a single point of contact: a “one-stop-shop”. To provide important context in which to consider the potential for supporting homeowners through a one-stop-shop in the West Midlands, the region’s housing sector is reviewed in terms of both the physical characteristics of the housing stock and the demographics of the people living there. This review is conducted at a high level, intending to provide an overview of the broad issues to be considered across the region as a whole, rather than delving into the details at the sub-regional level.

Existing examples of one-stop-shop advice provision have predominantly been taken from within the UK, where examples and learnings will be most relevant to the West Midlands due to the similar social, technological, economic and political contexts. The majority of these examples relate to advice provided to homeowners in the domestic sector, but also include examples of advice provided in the non-domestic sector and for other tenures, as many lessons are relevant across sectors and tenures. Additional international examples and research has also been drawn upon. The review focusses on examples that illustrate aspects of one-stop-shops that provide the most interesting and useful lessons for developing such an approach in the West Midlands.

The report recommendations set out a recommended approach for supporting homeowners as they consider the options, issues and costs involved with improving the energy efficiency of their homes, based on the analysis of the West Midlands housing sector and the opportunities and challenges associated with retrofit advice provision.

4. Research Approach

Desk based research was undertaken to profile the UK and West Midlands housing sectors and to identify existing examples and experiences of one-stop-shop retrofit advice services. The review of the West Midlands housing sector is based on the most comprehensive and reliable data available in the public domain. The datasets predominantly drawn upon include the 2011 Census (ONS, 2011a) and the National Energy Efficiency Database (NEED) (DECC, 2014a). These are the largest available datasets and therefore have been prioritised over other data sources, being based on national samples of 23 million and 4 million records respectively, and samples for the West Midlands region of 2 million and 385,350 respectively. Other sources include the English Housing Survey (DCLG, 2014) and various smaller national and regional ONS statistics. A review of the West Midlands housing sector and a discussion of the possible implications for developing a one-stop-shop in the region can be found in Section 5.

Internet research was undertaken, as well as drawing on internal knowledge and experience, to identify existing examples of retrofit advice provided through a single point of contact, both within the UK and internationally. Given that homeowners can require advice along every stage of the customer journey, examples have been selected that demonstrate the range of different approaches which can be taken at different stages. These examples provide an illustration of the opportunities and challenges associated with providing retrofit advice through a one-stop-shop, evidence of which was drawn from key research and publications such as the Energy Efficiency Partnership for Buildings’ Breaking Barriers report (EPPB, 2014) and the UK Energy Research Council’s project exploring the “Value propositions for Energy Efficient Renovation Decisions” (UKERC, 2013). These findings were then used to inform recommendations for developing a one-stop-shop approach in the West Midlands. A review of existing examples of one-stop-shops, a discussion of the opportunities and challenges associated with developing such an approach, and key recommendations for developing a one-stop-shop in the West Midlands can be found in Section 6. The conclusion in Section 7 summarises the findings and suggests next steps.

5. The West Midlands Housing Sector

The nature of the West Midlands housing sector is an important context in which to consider the potential for supporting homeowners through a one-stop-shop. The physical characteristics of the housing stock and demographic features of the people living in the region will determine the scale and type of retrofit opportunities, which in turn has implications for the advice that will be required and the skills that will be needed to deliver on the opportunities that emerge. The characteristics of the West Midlands housing sector and possible implications are discussed in the following sub-sections; summary diagrams can be found in the Appendix.

5.1 Overview of the West Midlands Housing Sector

Physical characteristics

According to 2011 Census data (ONS, 2011a), the West Midlands contains 9.8 percent of the total housing stock in England and Wales, with 2,294,909 dwellings within its boundaries. Between 2007 and 2014, the average number of new dwellings completed in the West Midlands per year was 9,577 (DCLG, 2012a). Even assuming that all new dwelling constructions were to replace existing dwellings, this implies a replacement rate in the region of just 0.4 percent per year, suggesting that it would take 240 years (at best) to replace the existing stock. This demonstrates the importance of retrofit, compared with building new more energy efficient dwellings, as a solution to tackling the energy demand from existing homes. Constructing new dwellings to improve the energy efficiency of the overall housing stock is more carbon intensive in many circumstances and carries wider environmental impacts and so is not the complete answer for these reasons alone. Based on the current rate of replacement it is also wholly infeasible.

Overall, the physical characteristics of the West Midlands housing stock are not too different from that of the country as a whole. 20 percent of homes in the West Midlands were built before 1930, 16 percent were built 1930-1949, 20 percent 1950-1966, 21 percent 1967-1982, 12 percent 1983-1995, and 11 percent were built after 1996 (DECC, 2014a). Compared to the national position, the West Midlands has fewer properties in the oldest bracket, with 4 percent fewer homes built before 1930 and slightly more (1-2 percent) built 1930-1949, 1950-1966 and 1967-1982. See Figure 1 opposite.

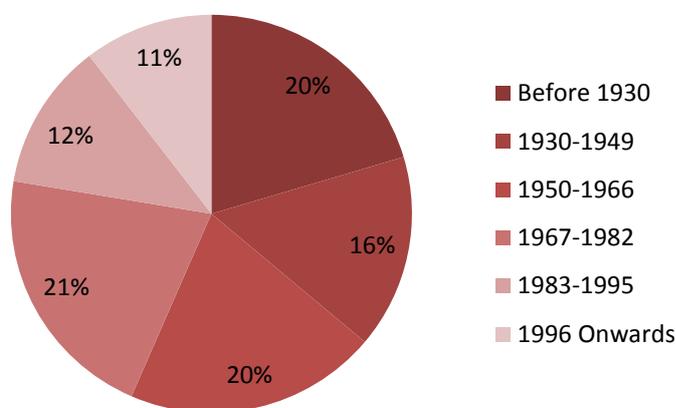


Figure 1 – Property age in the West Midlands

When it comes to property type, 28 percent of homes in the West Midlands are semi-detached, 15 percent are detached, 22 percent are flats, 19 percent are mid-terraces, 9 percent are end-terraces and 7 percent are bungalows. Compared to the distribution of property types for the country as a whole, the West Midlands has a higher percentage of detached (+2%) and semi-detached (+5%) properties, and a lower percentage of mid-terraces (-2%), bungalows (-2%) and flats (-3%) (DECC, 2014a). This chimes with the property age profile, suggesting that the West Midlands has fewer pre 1930 terrace type properties and perhaps a higher proportion of inter and post war detached and semi-detached properties. Figure 2 below illustrates how property types vary across the region, with flats and maisonettes being most predominant in the more urbanised and densely populated West Midlands county compared with the other counties, in which detached properties are more common (ONS, 2011).

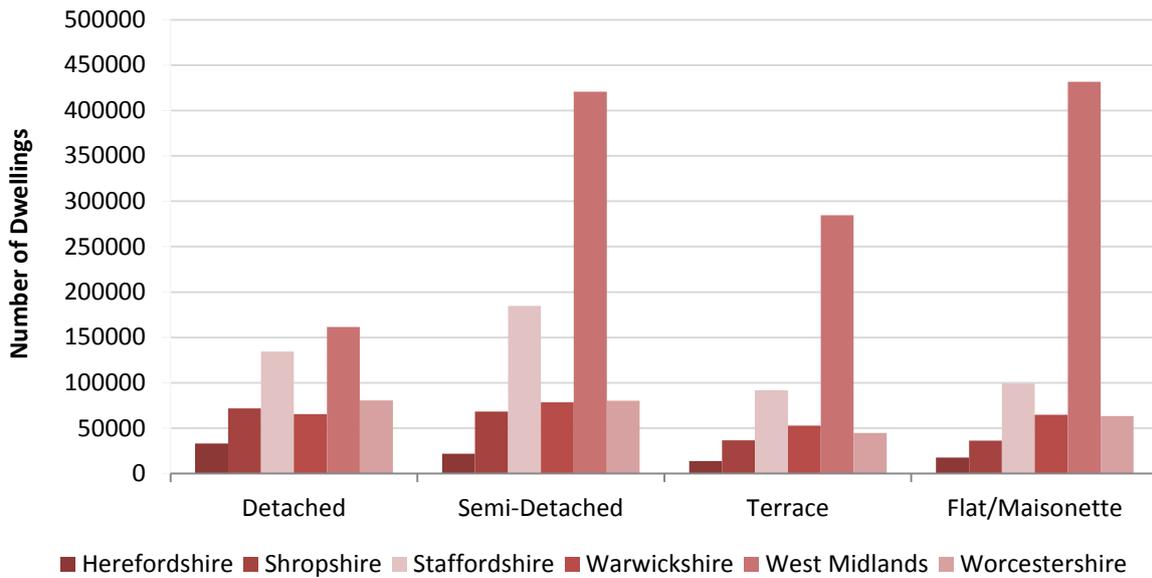


Figure 2 – Property type by county in the West Midlands

The current energy performance of the West Midlands housing stock is of particular relevance when considering regional retrofit opportunities. As might be expected, the housing stock is clustered around the middle EPC ratings, with data from NEED (DECC, 2014a) suggesting that the largest proportion by far (43 percent) of the housing stock has a Band D rating. The performance of the West Midlands housing stock is slightly worse than that of the overall national housing stock, with 4 percent fewer properties falling into Bands A to C, and 4 percent more at Bands D to G. See Figure 3 below.

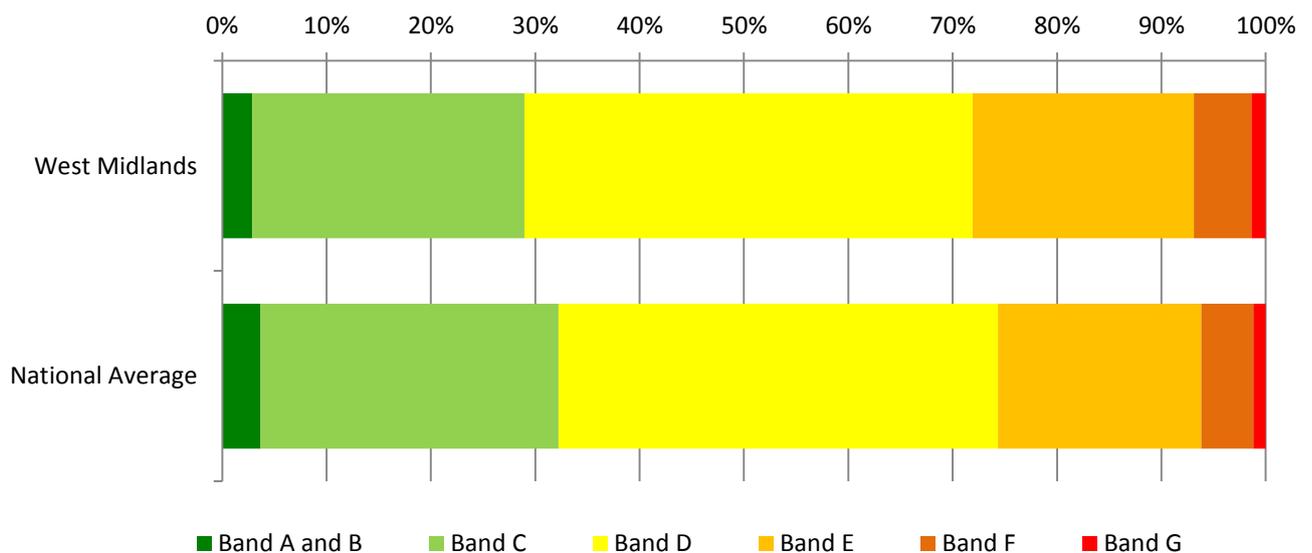


Figure 3 – EPC bands in the West Midlands

Demographic features

66 percent of the population in the West Midlands are owner occupiers, 19 percent rent from social landlords, 14 percent rent from private landlords and 1 percent live rent free (ONS, 2011a). There are slight variations between the national tenure distribution and the West Midlands distribution. Owner occupation is 2 percent higher, private renting is 3 percent lower and social renting is 1 percent higher in the West Midlands compared with the overall national position.

Greater differences between the West Midlands and overall national position exist in relation to the social characteristics of the housing sector. Of particular significance is the proportion of households in fuel poverty. Compared to the country as a whole, the West Midlands has a much larger proportion of Lower Super Output Areas (LSOAs) falling into the highest fuel poverty band 5 (14-100 percent of households in fuel poverty). According to NEED (DECC, 2014a), in 40 percent of LSOAs in the West Midlands, between 14 and 100 percent of households are fuel poor, compared with 19 percent of LSOAs in the country overall (see Figure 4 opposite).

Similarly, the West Midlands has a significantly higher proportion of LSOAs falling into the most deprived category (1) and a significantly smaller proportion falling into the least deprived category (5) of the Index of Multiple Deprivation (IMD) (see Figure 5 opposite). According to NEED (DECC, 2014a), 30 percent of LSOAs in the West Midlands fall into the most deprived category of the IMD, compared with 22 percent of LSOAs in the country as a whole. The IMD brings together seven dimensions of deprivation (income; employment; health and disability; education, skills and training; barriers to housing and services; living environment; crime) and therefore illustrates the incidence of poverty in the West Midlands more broadly than simply in terms of the ability of households to pay for their energy bills.

A further characteristic worth noting is the rural/urban location of households in the West Midlands. According to census data (ONS, 2011a), the West Midlands has a significantly higher proportion (81 percent) of households within urban areas compared with the country as a whole (65 percent). However, this contrast may be explained by the large proportion of households across the whole country responding that their rurality is “unknown” (18 percent) compared with the West Midlands (3 percent).

Figures on repairs, maintenance and improvements in the West Midlands provide an illustration of the pattern of household expenditure in the region. Figure 6 below illustrates how expenditure on home improvements which are contracted out is 8 percent higher in the West Midlands compared with the UK as a whole, whereas expenditure on DIY improvements is 54 percent lower in the West Midlands than the UK average (ONS, 2013a). This implies that there could be a greater potential market for a one-stop-shop that provides advice on installations to be undertaken by contractors rather than to be undertaken by homeowners themselves.

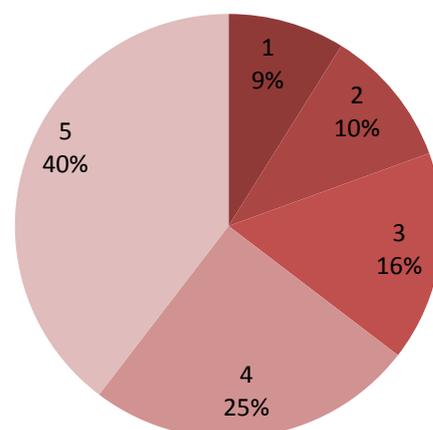


Figure 4 – Fuel poverty in the West Midlands

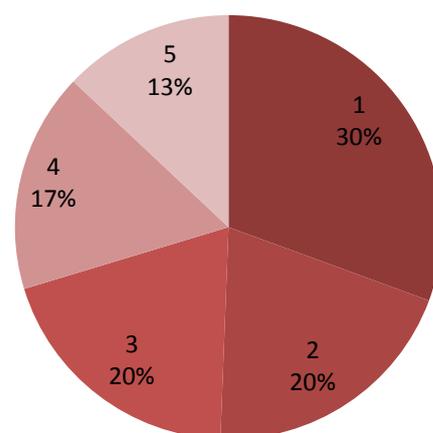


Figure 5 – IMD in the West Midlands

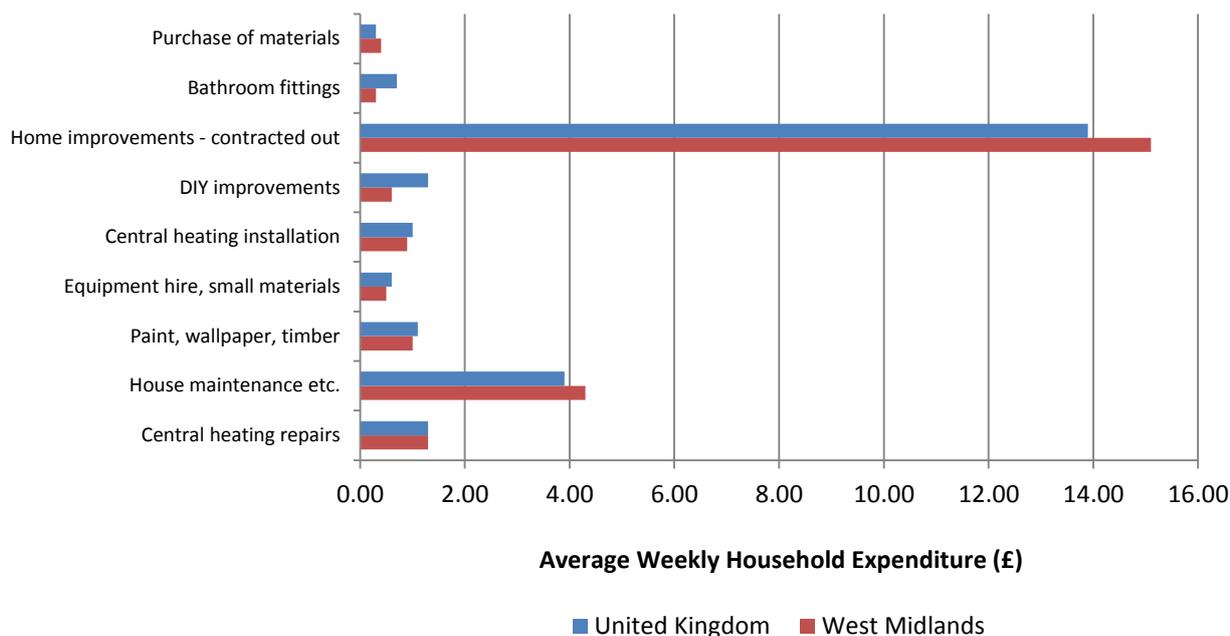


Figure 6 – Household expenditure on repairs, maintenance and improvements in the West Midlands

After London, the West Midlands contains some of the most culturally diverse areas in the country. Of potential significance to a retrofit advice facility is the prevalence of religious groups whose faith prohibits the payment of interest. This may in turn prevent them from financing energy efficient refurbishments and home improvements through loans or other funding mechanisms involving the payment of interest. For example, compared to the national average, the West Midlands has a significantly high proportion of people of Muslim faith. 6.7 percent identify themselves as Muslim in the West Midlands (ONS, 2012) compared to 4.8 percent of the population across England and Wales. This is the highest proportion of Muslim population of any region outside London, where 12.4 percent of the population identify themselves as Muslim (ONS, 2012). The largest concentration of Muslim population in the West Midlands is in Birmingham, where 234,411 are Muslim, representing 21.8 percent of the total population in Birmingham (ONS, 2012). Furthermore, 54 percent of the Muslim population in the West Midlands are owner occupiers, compared to 43 percent in England and Wales as a whole (ONS, 2011b). Thus not only does the West Midlands have a relatively large proportion of people of Muslim religion, but a relatively large proportion of the Muslim population in the West Midlands are owner occupiers, making an advice facility for homeowners particularly relevant to the Muslim population in the region.

5.2 Implications for Developing a One-Stop-Shop

The characteristics of the West Midlands housing sector have a number of important implications when considering how best to support homeowners to retrofit their homes. Firstly, the physical characteristics of properties will determine what retrofit opportunities and risks will be relevant, and in turn what advice may need to be provided for homeowners. The data outlined above clearly demonstrates the wide range of property ages and types present in the West Midlands, and how property types vary between counties within the region. While this is not unusual, it does mean that any advice facility would need to be able to cater for homeowners whose properties involve different retrofit options, issues and costs, and advice required in the more urbanised West Midlands county is likely to be different to that required in other counties where detached properties are more common than flats and maisonettes.

The West Midlands potentially contains a significant number of Hard to Treat (HTT) properties. HTT properties typically emit higher CO₂ emissions than properties that aren't HTT (BRE, 2008b), and are defined as homes that for a variety of reasons cannot accommodate 'staple' energy efficiency measures (Energy Saving Trust, 2004). HTT properties are therefore particularly problematic when it comes to retrofitting. They may include homes that are off the gas network; homes with solid 'system built' walls; homes with no loft space; homes that are in a state of disrepair; high-rise blocks; and any other homes where for technical and practical reasons 'staple' energy efficiency measures, such as loft and cavity wall insulation, cannot be fitted. While the proportion of the West Midlands housing stock which was built before 1930, and therefore almost certainly is of solid wall construction, is less than the proportions across the country as a whole, the West Midlands does contain a higher proportion of properties built in the 1950s and 60s. The 'non-traditional' construction methods adopted during this period, such as concrete walls, metal and timber frames and mixed wall types, often mean that these homes cannot be treated using staple energy efficiency measures, and thus a one-stop-shop would need to be able to provide advice on what may be possible based on a sound understanding of such construction methods and general building pathology. For example, many homes of this type can require detailed surveys, extensive enabling works, bespoke insulation solutions and thermal details.

Other significant implications relate to the nature of the households in the West Midlands. The high rates of fuel poverty and deprivation in the West Midlands indicate that there are substantial opportunities for retrofit to unlock social and economic benefits through improving warmth, comfort and health. Energy inefficient homes are more difficult and costly to heat due to increased heat loss, resulting in cold living conditions which are associated with health problems such as cardiovascular, respiratory and rheumatoid diseases, as well as hypothermia and poorer mental health. In total, the health impacts of cold private housing are estimated to cost the NHS £859m annually (Department of Health, 2009), and when the wider costs to society of poor housing are considered, it has been suggested that this figure could be as high as £1.5bn (BRE, 2010).

The West Midlands not only has the largest proportion of LSOAs falling into the highest fuel poverty band 5 (14-100 percent of households in fuel poverty) in the country, but also the highest rate of excess winter deaths in England (APHO and Department of Health, 2010). While this means that the West Midlands is in a position to unlock the social and economic benefits associated with tackling fuel poverty and deprivation, the consequence for developing a one-stop-shop is that a significant proportion of households are unlikely to be early adopters of retrofit measures who would proactively approach a one-stop-shop for advice, or who would have the financial means to purchase services or install measures without additional support. If a one-stop-shop is to support these fuel poor households, it will need to offer advice on no and low cost measures, guidance on tackling damp and mould, and perhaps provide additional support to access funding. Although the incidence of fuel poverty is higher amongst those who rent than those who own their homes, in terms of the total number of fuel poor households, owner occupiers make up the largest proportion of those in fuel poverty (DECC, 2014b). This is therefore a relevant consideration for a one-stop-shop for homeowners and would help to ensure those that are in most need also benefit from its services.

While 81 percent of the population in the West Midlands live in urban areas, there is still a significant number who live in rural areas. This includes those living in the Peak District National Park, as well as those in remoter rural areas in Shropshire and Herefordshire (ONS, 2011c). As rural areas are relatively inaccessible, remote access to resources and advice, either by phone, online or via an exhibition vehicle, for those who are unable to access a physical advice centre may be an essential characteristic of a one-stop-shop. There may also be a potential role for local installers to engage rural households face-to-face on behalf of, or as part of, the one-stop-shop provision.

A one-stop-shop would also need to consider the cultural context in which it operates. If it is to serve areas where a large proportion of the population are from religious groups, such as Islam, whose faith prohibits the payment of interest, a one-stop-shop may need to be able to provide advice on funding options which do not involve interest payments or have links with relevant organisations in the community that can provide assistance, such as Islamic banks.

Ultimately, the significance of the implications outlined above depends on the area being considered. While the focus of this discussion has been on the region as a whole, the West Midlands is “an area of contrasts” (ONS, 2011c). The profile of the housing sector and therefore the recommendations for an advice facility designed for Birmingham, the largest urban area outside of London with high rates of deprivation and greater cultural diversity, would be very different to one designed to support homeowners in remote countryside locations in Shropshire and Herefordshire or in very prosperous areas in Solihull, South Warwickshire or Evesham (ONS, 2011c). As a result, it is unlikely that a standard ‘offer’ would meet all the wants and needs of all homeowners in the West Midlands, and so a one-stop-shop would need to provide several ‘customer journey options’. Setting priorities and considering the objectives and scope of a one-stop-shop will be crucial for determining the ‘options’ to provide.

Specific opportunities and challenges for developing a one-stop-shop in the West Midlands are discussed in more detail in 6.3 Analysis of Opportunities and Challenges.

6. A One-Stop-Shop for the West Midlands

6.1 Definition of a “One-Stop-Shop”

In order to consider the role of supporting homeowners through the retrofit process via a one-stop-shop, it is important to first define what is meant by a “one-stop-shop”. A “one-stop-shop” is a single point of contact which offers customers access to a range of different products and services. Providing access to everything that is needed in just “one stop” is efficient and convenient for both the customer and service provider, as customers are saved the time of approaching different providers for different products and services, in turn allowing one-stop-shop providers to attract more business and to benefit from economies of scale.

The concept of a one-stop-shop is particularly relevant to the retrofit sector, as supply chain fragmentation and the lack of a structured way for homeowners to access advice and services are renowned barriers to the uptake of retrofit measures (EEPB, 2014). The retrofit process is complicated by the wide range of options available in terms of measures, materials, and delivery and finance models. What measures are suitable for a particular homeowner will depend on their personal circumstances, preferences as a consumer and the characteristics, location and use of their property. Understanding the implications and significance of these factors in order to plan and deliver retrofit works requires technical knowledge and input, often from across a range of professions, from surveyors, architects and engineers, to plumbers and electricians.

Due to the complexity of this process, homeowners require support at every step along the way as they consider the benefits, options, issues and costs involved with retrofitting their homes. Providing such support via a one-stop-shop has the potential to overcome barriers to homeowners pursuing retrofit measures by offering a clearer, more structured, efficient and convenient route for accessing advice and services.

A one-stop-shop in the retrofit sector may therefore be defined as a single point of contact, in a physical and/or remote location, which offers advice in the form of guidance and recommendations of a range of different types

and/or during different stages of the customer journey. The stages of the customer journey and possible types of advice are illustrated in Figure 7 below. A one-stop-shop's services could be limited to the "Advice" stage, when homeowners are initially considering options, issues and costs, or a one-stop-shop could be actively and directly engaged in the whole customer journey, from the initial marketing to drive "Demand" right through to "Assessment", "Installation" and "Aftercare". This could involve anything from a phone line or web portal that provides signposting to information on a range of topics, to a physical centre where staff offer expert advice, energy assessments, installation and maintenance or monitoring services. Examples of and between each of these extremes are discussed in 6.2 Existing Examples below.



Figure 7 – Types of advice at different stages of the customer journey

6.2 Existing Examples of "One-Stop-Shops"

The range of services that could be offered by a one-stop-shop is best illustrated through past and current examples of advice provision for homeowners. Reviewing existing examples will enable identification of both successful and unsuccessful practice, allowing lessons to be learned about the potential strengths and weaknesses of different approaches. This in turn will help to reveal the opportunities and challenges of developing one-stop-shop advice services in the West Midlands, and will inform recommendations for adopting such an approach in the following sections.

Examples of one-stop-shop advice services are outlined below according to the different stages of the customer journey mentioned in Figure 7 above, starting with "Advice". An overview of the services provided by each of the examples discussed can be found in Table 1 at the end of this sub-section.

Advice

Advice for homeowners who are initially exploring the options, issues and costs involved with retrofitting their homes are perhaps the most common form of service currently offered. This often involves remote advice provided over the phone or internet, provision of guidance documents or lists of FAQs.

A key example of this form of advice is the **Energy Saving Advice Service** delivered by the Energy Saving Trust and HGS UK in England, Wales and Northern Ireland. Launched in April 2012, this service is funded by the Department of Energy and Climate Change (DECC) and provides free and impartial advice over the phone and by email about how to save energy in the home. The service provides advice on energy saving technologies, funding options and all aspects of the Green Deal and Energy Company Obligation (ECO) and other government schemes. It also signposts

homeowners to a range of other organisations that can help with installing energy saving measures and reducing fuel bills. While advisers are not retrofit experts, they do have access to a knowledge base populated with around 800 questions and answers, enabling consistent and accurate information to be communicated across the whole country. The Energy Saving Advice Service answered 300,147 calls and had 3,714,333 views on its Green Deal webpages in 2013 (DECC, 2014c).

**energy
saving
trust**

The merits of this service are that it is free and available to all, costing only the price of a national rate call. By providing advice and guidance on a range of topics, including technologies, funding, government support mechanisms and other relevant organisations, it can be considered a one-stop-shop for quick pointers and issues to consider when a homeowner is about to embark on the retrofit journey. However, although the Energy Saving Trust is itself an expert and trusted organisation in the sector, the advisers are not retrofit experts and so are not able to provide tailored advice that will take into account specific local circumstances or property characteristics. The broad coverage of the service (its greatest strength) necessitates provision of generalised and remote advice (arguably its greatest weakness). This service was created specifically to support the introduction of the Green Deal and a very great emphasis is given towards funding options, with expert technical and options advice expected to be delivered by the Green Deal Provider.



An example that overcomes some of these limitations is advice provided by the **Centre for Sustainable Energy (CSE)**. CSE's Home Energy Team provides free, impartial, local energy saving advice in Bristol, Somerset and South Gloucestershire. Advice is offered over the phone, by email and face-to-face at drop-in sessions, local events or through home visits, and covers all local and national offers, schemes and grants for energy saving measures. Referrals are also provided to approved local companies when a homeowner wishes to go ahead with an installation. The service is offered to all residents in the areas covered, although only householders with certain personal circumstances, such as those living on benefits, in fuel poverty or with disabled dependants, are eligible for home visits. Funding for the service is provided by 8 local authorities, with additional funding from some local Primary Care Trusts, given the link between fuel poverty and health problems.

A further example of a more localised and tailored service is **Beat the Cold**, a partnership of local authorities, voluntary and statutory agencies, fuel companies, health and social care agencies and community groups operating in Stoke-on-Trent and Staffordshire. Beat the Cold offers information, advice and referrals for fuel poor households on energy efficiency measures, renewable technology and grant applications. Advice is provided by telephone and through home visits, events, talks, displays and a winter leaflet. All staff are trained and qualified to provide holistic energy advice that includes health, comfort, financial security, and wellbeing.



By providing a more localised service, with the option of face-to-face advice and home visits, CSE and Beat the Cold are able to provide one-stop-shop advice which is more tailored to local and personal circumstances and therefore to the needs of individual homeowners. However, the trade-off is that the service is limited geographically, and much of the service is only available to those with particular personal circumstances. The need to provide both broad coverage as well as tailored and face-to-face advice could be reconciled through adapting the current Energy Saving Advice Service to incorporate local knowledge and presence by collaborating with local actors, such as local authorities or energy organisations. This approach is demonstrated by Act on Energy, which previously operated as the

Warwickshire branch of the Energy Saving Trust's network of 52 sub-regional centres until the service ceased in 2009, since when it has continued to provide advice with the support of local councils.

Assessment

After offering initial information and signposting to further guidance, the next step for supporting homeowners to gain an understanding of the options, issues and costs of retrofit is to undertake an assessment of their home. This enables more bespoke and practical advice to be provided, taking into account the characteristics of a homeowner's property in order to identify specific opportunities and issues which are relevant to them.

In recent years the necessity at this stage has been deemed to be commissioning an Energy Performance Certificate or a Green Deal Advice Report, the latter as a precursor to progressing to access Green Deal finance. Both are limited in the help and guidance they provide, as they consider only a limited range of factors and are based on standardised assumptions. Alternative models include free online tools which empower the householder to undertake their own audit, such as the Energy Saving Trust's Home Energy Check and Knauf Insulation's Heat Bleed online tool. More specialist survey services also exist which go beyond a Green Deal Assessment in providing much more tailored advice and guidance.



One example of a service that provides advice and assessments is **Groundwork's Green Doctor** scheme, which offers energy audits of properties using the National Homes Energy Rating (NHER) assessment and tailored advice to homeowners about their energy use and possible measures to install. "Assessment" advice services tend to be offered as a first step towards procuring "Installation" from the same "one stop" provider. For example, **Birmingham Energy Savers**, a partnership between Birmingham City Council and Carillion Energy Services, offers a single point of contact for obtaining a Green Deal Assessment and a Green Deal Advice Report, which recommends energy saving

improvements to install under the Green Deal. If a homeowner wishes to take up measures identified in the Green Deal Advice Report, a Technical Survey is undertaken to confirm installation details and to price the works. A Green Deal Plan is then produced, detailing the improvements to be made, the finance and terms and conditions of the work. This is a common approach for supporting homeowners to take up measures under the Green Deal, as a Green Deal Assessment, Advice Report and Plan are required in order to unlock finance available through the Green Deal.

A further example of a one-stop-shop at the "Assessment" stage of the customer journey is offered on a commercial basis by **Parity Projects**. Parity Projects produces its Home Energy Masterplan assessment using unique software, creating a report that sets out the current performance of a home and possible improvement options. The probable benefits and costs of each possible measure are calculated to build packages of measures to suit the

needs of the homeowner, whether they are trying to save money on fuel bills, reduce their carbon emissions or simply to make their home more warm and comfortable. Phone consultations are offered to go over the details of the assessment, and if a homeowner wants to install measures identified, Parity Projects will draw up a project specification document outlining the precise details of measures to enable homeowners to obtain accurate quotes and high quality installations from installers. Particular attention is paid to intricacies that are crucial for the in-use performance of measures, such as treatment of junctions with roofs spaces, ceilings and floors; avoiding thermal bridges; and handling electrics, plumbing and drainage issues. Parity Projects also offers a project management



service, through which it plans the works, obtains quotes, chooses contractors, and manages the site and quality of the work on the homeowner's behalf.

Installation

Ultimately it is the complexity, risks and costs of installation itself which is the greatest barrier to uptake of retrofit measures by homeowners. This point can be illustrated by the fact that while 356,514 Green Deal Assessments have been undertaken, only 5,736 Green Deal Plans have been produced and just 5,638 measures have been installed using Green Deal finance to date (DECC, 2014d), although this divergence will partly be explained by a time lag between assessment and installation and the use of alternative sources of finance. The "Installation" stage of the customer journey is therefore likely to be a particularly important element of a one-stop-shops remit, given that this is when additional hand-holding and assistance is often required.



One example of one-stop-shop service provision at the "Installation" stage is **RetrofitWorks**, a member owned co-operative of installers, trade associations and retrofit practitioners in London. It is the only business model of its kind in the UK, and is designed to provide SMEs with a clear and consistent route to gaining and retaining work, allowing them to compete with large providers who are often in a better position to participate in Green Deal projects. After carrying out energy assessments, site surveys and advising on finance options, RetrofitWorks arranges for works to be undertaken by

local installer members, coordinating and facilitating different trades to work together to deliver measures. It has strict membership entry criteria and all installers are quality vetted and referenced, giving homeowners confidence that the work will be of high quality.

A previous initiative in London, the **Green Homes Concierge Service**, provided homeowners with a one-stop-shop for information on how to make their homes more energy efficient and reduce their carbon footprint. The service was subsidised by the London Development Agency, costing just £199, and involved provision of comprehensive telephone advice, a website and a service offering hassle-free tailor-made packages of carbon saving lifestyle improvements. Homeowners would receive a visit from an expert Home Energy Advisor, who would conduct an audit of the property in order to produce a report of recommended improvement options, tailored to individual properties and personal priorities. Homeowners who had purchased a subsidised assessment could access advice over the phone or by email to get guidance on suppliers, prices, products, and available grants for up to 12 months at no additional cost after the assessment was delivered. However, the programme was unable to find funding to continue past 2010.

Energy Performance Contracting (EPC) is becoming an increasingly common approach to retrofit in the non-domestic sector, and is another possible form of one-stop-shop services. EPCs involve an Energy Service Company (ESCO) entering into a contract with a property owner to improve the energy efficiency of a property portfolio at no up-front cost, with the improvements funded solely through energy cost savings guaranteed in the contract. ESCOs operating in the domestic sector are almost non-existent, as guaranteeing energy or cost savings for small scale individual projects is considered less profitable and more risky compared with large scale non-domestic portfolios, which have more consistent and predictable energy consumption levels (Mahapatra et al, 2012). **RENESCO** in Latvia (RENESCO, 2011) is one of the few examples of ESCOs operating in the domestic sector. RENESCO conducts a comprehensive energy audit, from which it develops a contract that fixes the amount of energy that homeowners will pay for the contract period. It then designs and



delivers energy efficiency improvements at its own expense without any additional financial contribution from homeowners, taking on all the financial and technological risks and guaranteeing all works installed. RENESCO earns back its investment solely from the energy savings, equal to the cost difference between the contracted energy consumption level and the consumption level after installation.

Providing support for homeowners at the installation stage of the customer journey does not necessarily involve directly managing or delivering the works. A “retail” approach to one-stop-shop renovation services was piloted in Finland and analysed as part of two European research projects, “SuccessFamilies” (led by VTT Technical Research Centre of Finland 2009-2012) and the ERANET-Eracobuild project “One Stop Shop” (led by the Passive House Platform in Belgium 2010-2012) (Mlecnik et al, 2012). Both projects aimed to establish new pilot business models for bridging the gap between homeowners and segregated offers of single solutions for renovation and/or energy efficiency installations. The “retail” approach was piloted in two Finnish hardware store chains, **K-Rauta and Rautia**, and involved providing products and services needed for housing renovations directly through existing stores. The stores partnered with a wide range of product and material suppliers, renovation service providers and financial institutions in order to offer everything homeowners would need to retrofit their homes under one roof, from heat pumps and ventilation systems, to planning services, energy surveys and flexible financing options. Utilisation of two well-known trusted brands and their existing nationwide distribution networks were key features of this approach, with existing customers and visitors to the stores providing a readymade target market and captive audience (Haavik et al, 2011).

Aftercare

Involvement of one-stop-shop service providers in aftercare is most commonly seen through the provision of warranties and guarantees in relation to products and installations. However, aftercare services can be much broader, including monitoring and testing of installations, and education about how to use and maintain new technologies.

One example of post-work monitoring by a one-stop-shop comes from the **Carbon Co-op**. Carbon Co-op is a group of Greater Manchester residents who have begun to carry out retrofits in their own houses and communities, teaming up with housing specialists URBED to look at what more can be done where they live. They work with the OpenEnergyMonitor project to monitor their current range of home retrofits, and run Ecohome Lab, a monthly hangout for people to learn about their energy use and generation in order improve their use of energy. Ecohome Labs are held in the form of open drop-in sessions where people troubleshoot and develop their monitoring techniques and DIY technologies, and learn more from presentations and other learning opportunities.

Another model for the provision of aftercare services can be seen in the social housing sector. Social Housing Providers throughout the West Midlands offer a responsive repairs, maintenance and aftercare service. While not necessarily relating specifically to retrofit, these services offer a potential model that could be applied in the context of a one-stop-shop for retrofit services. Resident satisfaction is a key priority for social landlords, and many repairs and maintenance services proactively review satisfaction levels in order to understand the expectations and experiences of their customers in order to inform improvements to the service. Specialist aftercare teams may also contact residents who have recently received repairs by phone to record feedback and remedy any problems reported, and paper satisfaction surveys can be sent out with confirmation letters or invoices. These services may operate in-house, or can be outsourced or provided through call centres shared with other Social Housing Providers.


 Demand

A key barrier to the uptake of retrofit measures is a lack of consumer demand (EEPB, 2014). This can be attributed to a mistrust or disinterest in retrofit, a lack of awareness of the benefits and support available to install measures, and the perceived and real complexity of procuring high quality retrofit. There is a need to improve the desirability of retrofit, making upgrading the building fabric as desirable as buying a new kitchen or at the very least a ‘no-brainer’.


**NORTHFIELD
ECO CENTRE**

For a one-stop-shop to maximise its activity and to have the greatest impact, there is a potential additional role to play in terms of driving demand and promoting the value and benefits of retrofit. This has been recognised by some and is illustrated by examples such as **Northfield Ecocentre** in Birmingham. Northfield Ecocentre offers free impartial advice, energy audits and inspiring ideas on all aspects of sustainable living, including home energy. The Ecocentre runs a wide range of activities, clubs, workshops and events and the building itself showcases a wide range of energy saving and environmentally friendly features, including solar panels and an air source heat pump, inspiring visitors to make green changes to their own homes. Similarly, **Groundwork’s EcoHouse** in Leicester also showcases hundreds of environmental features, demonstrating the various retrofit options available to homeowners, with additional information and guidance available through a video presentation, audio guide, touch screen computers, interactive displays and EcoHouse staff who are on hand to answer questions. The EcoHouse has welcomed more than 100,000 visitors through its doors since it first opened in 1989 (GWLL, 2014), and financial support has been provided by Leicester City Council, the National Lottery Fund, the European Union and more than 100 businesses.

A related example is **SuperHomes**, a network of over 190 households who have retrofitted their homes to achieve a carbon emissions saving of at least 60 percent. SuperHomes seeks to drive retrofit demand and inspire other homeowners to take action by holding free Open House events, during which exemplar dwellings from the network are opened to the public. Exemplar properties come in all shapes, sizes and styles, showcase a wide range of energy efficiency measures and renewable technologies, and are spread across the country, enabling homeowners to find a property to visit which is most relevant to them. SuperHomes goes beyond the advice provided by Northfield Ecocentre and Groundwork’s EcoHouse by also offering detailed advice and guidance on their website, including answers to technical FAQs, an online forum for peer-to-peer learning and lists of eco refurbishment advisers and tradespeople used by SuperHome owners, which are rated and reviewed to enable homeowners to find trusted, high quality, tried and tested installers. Advice on technical issues and finance is also offered by phone and email.



Feedback on SuperHomes Open House events demonstrates the value of this approach: 98 percent of visitors were “pleased they came” and felt that the “touch and feel” approach was a very good way of learning about retrofit (Sustainable Energy Academy, 2010). In a wider study of a range of UK and international open homes events, Berry et al (2014) found that “attendee learning” was a consistent benefit reported across all the events, “along with the participant perception of an increase in their capacity to take action due to the experiences gained and knowledge developed at eco open homes events”. Across all the events studied, the satisfaction and enthusiasm rate was found to be consistently high whether individuals attended for personal or professional purposes (Berry et al, 2014).

The **Carbon Co-op** also runs free Open Eco-homes events through which homeowners can meet retrofit pioneers across Greater Manchester. However, the advice provided by Carbon Co-op is more hands-on than that offered by SuperHomes. The Co-op delivers Whole House Retrofit Services with the aim of helping homeowners to achieve carbon emission savings of 80 percent. Carbon Co-op offers whole house assessments for its members, costing £275+VAT for a flat, £375+VAT for a house of 3 bedrooms or less, and £500+VAT for a house of 4-6 bedrooms (Carbon Co-op, 2014). The Co-op will then implement the action plan directly, working with architectural technical partners URBED to design the works, procure services from contractors and undertake project management. Alternatively, Carbon Co-op also offers technical consultancy services for homeowners who wish to implement their action plan themselves or with a different designer or architectural practice. A similar range of services is also provided by **South Yorkshire Energy Centre**, which delivers advice, training, consultancy reports, surveys, energy efficiency improvements and project management, as well as holding events and offering guided tours and technical explanations of its exemplar retrofitted buildings.

In many ways, Carbon Co-op may be regarded as one of the closest existing examples of a true one-stop-shop for retrofit advice – it runs events to promote retrofit (“Demand”); provides seminars, forums and factsheets on planning and delivering retrofit (“Advice”); offers whole house assessments (“Assessment”); delivers whole house retrofit works (“Installation”); and runs post-work monitoring and evaluation projects (“Aftercare”).

	Demand	Advice	Assessment	Installation	Aftercare*
Energy Saving Advice Service		✓			
Centre for Sustainable Energy		✓			
Beat the Cold		✓			
Groundwork’s Green Doctor		✓	✓		
Birmingham Energy Savers		✓	✓	✓	
Parity Projects			✓	✓	
RetrofitWorks			✓	✓	
Green Home Concierge Service		✓	✓	✓	
RENESCO			✓	✓	
K-Rauta and Rautia	✓		✓	✓	
Carbon Co-op	✓	✓	✓	✓	✓
Northfield Ecocentre	✓	✓	✓		
Groundwork’s EcoHouse	✓	✓			
SuperHomes	✓	✓	✓**		
South Yorkshire Energy Centre	✓	✓	✓	✓	

* Beyond basic warranties and guarantees

** SuperHomes offers assessments for those wishing to join the network

Table 1 – Existing examples summary

6.3 Analysis of Opportunities and Challenges

Consideration of the opportunities and challenges associated with a one-stop-shop approach is crucial for understanding how homeowners could best be supported through the retrofit process. From the examples outlined in the previous section and existing evidence of related merits, risks and barriers, it is possible to identify key factors that need to be borne in mind, which in turn will inform the recommendations contained in the following section. Key opportunities and challenges are outlined in Table 2 and discussed in turn below.

OPPORTUNITIES	CHALLENGES
<ul style="list-style-type: none"> ▪ Supporting homeowners throughout the entire customer journey ▪ Providing face-to-face advice ▪ Involving small local installers ▪ Local economic benefits ▪ Coordinating retrofit ▪ Building relationships with homeowners ▪ Developing an “over time” approach which keeps homeowners coming back for more ▪ Increasing energy security and reducing strain on energy infrastructure 	<ul style="list-style-type: none"> ▪ Lack of consumer demand ▪ Developing a sustainable funding source ▪ Unstable external policy environment ▪ Shortage of skills among tradespeople ▪ Knowledge and understanding of retrofit ▪ Liability when retrofit goes wrong ▪ Ensuring improved properties are operated correctly

Table 2 – Summary of opportunities and challenges

Opportunities

A key opportunity associated with developing a one-stop-shop in the West Midlands is the potential to increase the propensity of homeowners to commission retrofit works. By offering support for homeowners from a single point of contact along every stage of the customer journey, a one-stop-shop has the potential to increase the likelihood and number of homeowners pursuing retrofit measures. This is especially the case where the approach incorporates face-to-face contact and involvement of small local companies. The UK Energy Research Council’s project exploring the “Value propositions for Energy Efficient Renovation Decisions” found that 52 percent of households surveyed preferred customer support services in the form of face-to-face support in their homes, followed by face-to-face support in trade premises (23 percent), with only 9 percent preferring advice given over the phone (UKERC, 2013). Furthermore, households’ preferred contractors for energy efficiency renovations were identified as small, local companies or tradespeople (41 percent), followed by specialist companies (36 percent), with large providers such as energy companies coming in a “distant third place” (UKERC, 2013, p 11). This demonstrates that a one-stop-shop that provides face-to-face advice¹ and is able to coordinate and support small local installers² will better meet the needs of homeowners when they are considering the options, issues and costs of retrofit.

Should advice be provided to homeowners in the preferred form and support be provided to involve small local installers, there is the potential for a one-stop-shop to help boost retrofit activity in the West Midlands, unlocking substantial benefits for the local economy. The West Midlands is considered to have laid foundations for a strong market for retrofit, with the regional retrofit market estimated to be worth c. £3bn per annum with the potential to create 2,000 jobs over the next 20 years (SHAP, 2012). The region is in a particularly advantageous position to tap into this market, given early adopter action taken to date in cities such as Birmingham, with its Birmingham Energy Savers³ and ‘Buy For Good’ programmes and the ongoing work of the region’s housing associations (SHAP, 2012). Economic benefits for the local economy as a whole may also arise specifically from the involvement of small local installers, as the Federation of Small Businesses (2013) estimates that for every £1 spent with a small or medium-sized business,

¹ Compare the **Energy Saving Advice Service** with the **Centre for Sustainable Energy** and **Beat the Cold** examples

² See the **RetrofitWorks** example

³ See the **Birmingham Energy Savers** example

63p is re-spent in the local area compared to 40p in every £1 spent with a larger business. There are also substantial social benefits associated with retrofit, with Arup (2011) estimating that for every £1 invested in retrofit, there is £1.6 of social value created.

A further strength is that a one-stop-shop can fill a key gap in the retrofit process: the role of retrofit coordinator. Poor technical outcomes and customer experiences can arise as a result of a lack of coordination and understanding of how different retrofit measures fit together. Fragmented supply and delivery not only complicates the customer journey, requiring homeowners to source, contact and work with a multiplicity of different tradespeople, but also creates the risk of poor quality work and sub-optimal energy performance. Effective coordination of retrofit can help to ensure that predicted energy savings are delivered in practice, and that common failure points that can jeopardise the quality of the works and success of the outcome are identified and tackled. This coordinating role can help to sequence works to prevent unintended consequences and adverse component interactions; carry out tests to check performance; provide guidance to homeowners at handover to ensure understanding about use and maintenance; scrutinise post-work performance and a place where valuable lessons learned will not be forgotten (CoRE, 2014). Aspects of such coordination could be provided by a one-stop-shop through provision of project management services⁴ or connecting homeowners with installers and providing quality management and assurances for their works⁵, possibly including follow up aftercare and monitoring activities⁶.

Given the length of the retrofit process, with homeowners' decisions about renovating often likely to take over a year (UKERC, 2013), a one-stop-shop has the potential to be able to build and maintain relationships with homeowners. The UK Energy Research Council found that given that homes are "deeply personal, private, and emotionally-laden places", decisions to make structural changes are "'high involvement' decisions" and therefore homeowners prefer to be able to develop and maintain personal relationships with service providers and contractors (UKERC, 2013, p 19). By providing support for homeowners along the entire customer journey, a one-stop-shop could develop relationships with homeowners in order to increase trust and credibility in the process and to better understand the individual motivations of different homeowners.

This in turn could create the potential to increase the propensity of homeowners to pursue retrofit options, especially if relationships are built in a way which sees homeowners identifying the one-stop-shop as the 'go to' place when they are considering retrofit options in the future, as well as when they are carrying out other home improvements which could incorporate retrofit measures. This could be supported by providing assessments in the form of a 'whole house plan' that acts as a medium or long-term strategy for improving a home (Institute for Sustainability, 2011), triggering homeowners to keep coming back to the one-stop-shop over time as they enter different phases outlined in the strategy. Taking a flexible "over time" approach that allows retrofit to gradually unfold can be important for delivering large-scale retrofit, as it goes more "with the grain" of housing renovation practices (Fawcett et al, 2014, p 9).

Challenges

The most fundamental challenges associated with developing a one-stop-shop largely come down to the broader barriers to the uptake of retrofit measures by homeowners. In its review of the barriers to whole house energy efficiency retrofit, the Energy Efficiency Partnership for Buildings (EEPB) (2014) identified 415 financial and non-financial barriers, which were grouped into eight main categories: economic, education and skills, political, consumer,

⁴ See the **Parity Projects** example

⁵ See the **RetrofitWorks** example

⁶ See the **Carbon Co-op** example

coordination and supply chain, practical installation issues, performance and pilots. When these barriers were ranked in order of priority by key professionals and industry stakeholders, consumer barriers came out on top. Lack of consumer demand, lack of incentives and resistance to imposed lifestyle changes and disruption from retrofit were identified as the top three priority barriers. Competing demands on homeowners' time and money, the image of retrofit as unsexy and uninspiring, and the fact that the added value of retrofit is undersold and unrecognised, with many of the benefits being hidden, all create the threat that the number of homeowners that the one-stop-shop is able to engage with and the impact it would have could be limited if its activities are not combined with a strong marketing campaign and other efforts to drive consumer demand⁷, such as efforts to target homeowners at trigger points when renovation works are already being undertaken⁸.

While a lack of consumer demand partially manifests itself in the form of a total disinterest in retrofit, consumers who are interested in retrofit opportunities may be unwilling to pay the price of the services involved. This is particularly the case for advice and assessment services, for which consumers are often unwilling to pay any price at all. This is reflected by the fact that advice providers often offer their services free of charge⁹, and many recent initiatives, such as Energy Performance Contracting¹⁰ and the UK Government's Green Deal policy, have focused on enabling homeowners to install energy efficiency measures at no up-front cost. However, even offering services free or at no up-front cost doesn't guarantee uptake by consumers, as consumers have demonstrated that they are not always interested in taking up measures that are offered free of charge (EEPB, 2014). This is also a challenge in other sectors, such as financial services, where just 8 percent of the population claim that they are willing to pay for financial advice (J.P. Morgan, 2011). The top three drivers that make consumers willing to pay for financial advice are the advice being independent, offered face-to-face and by a member of a reputable recognised body, and willingness to pay almost doubles for households with an income over £55,000 (J.P. Morgan, 2011). These factors are also highly relevant when providing advice in the retrofit sector.

These issues of consumer demand mean that funding a one-stop-shop can be a key barrier to entry. While it may be possible to charge for services provided in the long run once a good reputation has been built and initial success stories have been developed, in the short run funding may need to come from external sources. This involves its own risks, as securing external funding can itself be costly in terms of time taken to identify and negotiate with potential funders, and once external funding is agreed, it may subsequently be cut or reputations can be put at risk if a sponsor falls into disrepute. This threat can be seen in practice from the Green Homes Concierge Service example, which ended in 2010 after funding from the London Development Agency was cut, despite the demonstrated value of the service provided. While there is no magic solution to this issue, it may be considered wise for a one-stop-shop to seek a diverse funding stream to reduce the risks of relying on a particular funding source.

A further related challenge is that the success of a one-stop-shop is likely to be greatly affected by the external policy environment. Interest in the services of a one-stop-shop will inevitably be influenced by financial support available for retrofit measures. Government policy in this area has shown a tendency to be relatively unstable, with changing subsidy rates and requirements creating uncertainty, scepticism and risk aversion on both the supply and demand sides of the market. This can be seen through changes to Feed-in Tariffs, the Renewable Heat Incentive and Green

⁷ See the **SuperHomes**, **Northfield EcoCentre**, **Groudwork's EcoHouse**, **Carbon Co-op** and **South Yorkshire Energy Centre** examples

⁸ See the **K-Rauta and Rautia** example

⁹ See the **Energy Saving Advice Service**, **Centre for Sustainable Energy**, **Beat the Cold** and **Green Homes Concierge Service** examples

¹⁰ See the **RENESCO** example

Deal funding. This instability reduces the incentive for businesses to invest in new products and services or related education and skills within their teams (SHAP, 2012), and means that consumers delay taking action in anticipation of a better scheme coming over the horizon.

After consumer demand, factors associated with the education and skills of tradespeople were highlighted by EEPB (2014) as the fifth, sixth and seventh highest priority barriers to retrofit. There is considered to be a lack of skills amongst tradespeople involved in retrofit, specifically in terms of the technical skills of surveyors, designers and installers (EEPB, 2014). According to Build Up Skills UK (2012), the estimated number of the blue collar workers in the built environment sector requiring training to meet EU 2020 energy efficiency targets amounts to just under a fifth of the total current UK workforce. As retrofit requires an integrated and holistic approach, with understanding of how different fabric and systems components interact in order to avoid adverse unintended consequences, there is a clear need for more multi-skilled installers that deal with all the issues. Yet there are only pockets of specialist courses, and low levels of demand from employers are preventing more widespread development of training programmes (Build Up Skills UK, 2012). This situation isn't helped by the fact that knowledge barriers also exist amongst retrofit experts; key gaps in knowledge remain regarding how retrofit actually works and affects buildings (EEPB, 2014).

While the lack of retrofit knowledge and skills is a potential barrier to the support that can be provided by a one-stop-shop, there could be the opportunity to play a key role in addressing this barrier. A one-stop-shop could provide training courses (or host approved nationally recognised courses e.g. from CoRE, Green Stripes and others) to upskill the workforce and increase the numbers of multi-skilled installers, and could help to improve knowledge and understanding of retrofit by supporting and developing monitoring projects as part of its aftercare activities¹¹. Build Up Skills UK (2012) recommends that flexible training programmes, offering a 'menu' of skills and 'bolt-on' units, along with 'train the trainer' opportunities are most likely to upskill the workforce quickly, easily and in a cost effective manner. Collaborating with regional Registered Social Landlords (RSLs) with an established asset portfolio could help drive this skills development and demand for skilled trades in a mutually beneficial cycle. Not only would this help to ensure higher quality retrofit works with better outcomes in terms of energy performance, but it could also support installers in meeting quality assurance requirements which have shown to be highly valued by consumers (Mlecnik et al, 2012). Although quality assurances can be important to demonstrate that installers have the required skills to deliver quality work, thereby increasing trust among consumers, there are also risks that need to be managed in terms of dealing with complaints and determining who is liable if works by a 'recommended' installer go wrong.

6.4 Recommendations

From analysing the characteristics of the West Midlands housing sector and the opportunities and challenges associated with different approaches to one-stop-shop advice provision, it is possible to identify a number of recommendations for how best to support homeowners as they consider the options, issues and costs involved with retrofitting their homes. Given that the best model will ultimately depend on the priorities of the one-stop-shop, the recommendations outlined below aim to set out a broad approach, rather than prescribing a specific form of operation and structure.

Recommendation 1: A one-stop-shop advice service should seek to support homeowners throughout the entire customer journey. Providing support for homeowners only at a single point in the customer journey, or failing to fill the gaps between the different stages, will leave the risk that homeowners will not complete the journey and install

¹¹ See the **Carbon Co-op** example

retrofit measures. Support is required every step of the way, from initially inspiring interest and raising awareness of the benefits of retrofit (“Demand”), providing initial guidance and signposts (“Advice”), to assessing opportunities and issues in a specific property (“Assessment”), installing appropriate measures (“Installation”) and offering guidance and support on maintenance and performance (“Aftercare”). Recommendations for providing support at each of these stages are dealt with below.

Demand

Recommendation 2: A one-stop-shop must develop a strong marketing campaign and activities to promote the value and benefits of retrofit in order to drive consumer demand. Consumer demand is one of the greatest barriers to the uptake of retrofit measures, and thus without efforts to drive demand and inspire action, the number of homeowners that the one-stop-shop is able to engage with and the impact it would have will be limited. Options for activities to drive demand are many and varied, and could include producing advertising material, promoting initial success stories, running retrofit ‘showhome’ events or developing demonstration sites where homeowners can see measures in-situ. Opportunities to build on or connect with existing activity in the West Midlands, such as Open Homes events run by communities like Whittington & Fisherwick Environment Group and the showcasing of environmental features at Northfield Ecocentre, could be considered as part of this.

Recommendation 3: To build trust and confidence in services provided, a one-stop-shop should provide quality assurances and vet installers who deliver the works. To do this, a one-stop-shop would need to develop an appointment process, code of conduct and procedure for dealing with complaints and liability if installations go wrong. An alternative approach that would achieve a similar aim would be to develop a system for customers to rate and review the work of installers, such that the one-stop-shop isn’t itself recommending or guaranteeing the quality of installations. Existing installer lists for the West Midlands could be drawn upon, such as Act on Energy’s list of approved local heating, insulation and renewable heating contractors.

Recommendation 4: Demand can be driven further by developing influential and innovative partnerships. If a one-stop-shop can receive support or endorsement from bodies trusted by consumers, such as local authorities or community groups (Green Building Council, 2009), it may be easier to attract and engage homeowners. Other potential bodies to work with or who could be involved with referring homeowners to the one-stop-shop include Local Enterprise Partnerships, estate agents, charities, consumer groups, RSLs or local colleges and universities.

Advice

Recommendation 5: A one-stop-shop should provide a variety of advice that is relevant to the full range of different households and property types present in the West Midlands. Advice should be offered face-to-face wherever possible, as well as remotely and through outreach events for rural households who cannot readily access physical centres or demonstration sites (by phone, online and potentially through an exhibition vehicle or library bus that showcases sample products and materials). Advice provided by existing local organisations in the West Midlands could be drawn upon to meet these different needs, such as Beat the Cold’s advice for fuel poor households or Marches Energy Agency’s ‘energy exhibition trailer’, which comes complete with interactive tools, games and fact-sheets. Given that households in the West Midlands tend to spend more on home improvements that are contracted out and less on DIY improvements compared with the national average, detailed primary research into why this is the case and who households are contracting works out to would form a useful evidence base for developing the most relevant advice for homeowners in the region.

Recommendation 6: Staff should be enabled to provide comprehensive funding advice. This should include information on current funding streams, such as the Green Deal, Feed-in Tariffs and Renewable Heat Incentive, but also local or regional grants available. Advice should include guidance on other financial sources, such as mortgage extensions or loans, and financing arrangements appropriate to different cultural preferences. This could extend to the development of an alliance with financing mechanisms which cater for different faiths and cultures, such as Islamic banks. Advice provided will need to take into consideration a homeowner's ability to pay and willingness and eligibility to take out finance. It may be useful to consider having a member of staff who is qualified to provide this advice and registered with the Financial Conduct Authority.

Assessment

Recommendation 7: Ideally, a 'whole house plan' approach to assessments should be taken. This could act as a medium to long-term strategy for improving a home, triggering homeowners to keep coming back to the one-stop-shop over time as they enter different phases outlined in the strategy. Not only will this help to secure repeated business for the one-stop-shop from homeowners, but it would also ensure retrofit opportunities are not missed when homeowners carry out other renovations and that future retrofit opportunities are considered during other home improvement works.

Installation

Recommendation 8: Ideally, a project management service or other coordination role should be provided. This would help to simplify the customer journey, reducing the number of different tradespeople homeowners have to source, contact and work with, and also to reduce the risks of poor quality work and sub-optimal energy performance that can arise from fragmented supply and delivery of retrofit measures.

Recommendation 9: Support for and involvement of small local installers should be a priority, given that evidence shows that small local installers are households' preferred contractors for energy efficiency renovations. In addition, there could be two-way benefits for installers and the one-stop-shop if an agreement is developed whereby the one-stop-shop refers homeowners wanting to install retrofit measures to installers, and installers refer homeowners to the one-stop-shop to get advice on incorporating energy efficiency measures into other planned home improvement works. A one-stop-shop should also consider providing training for installers and becoming involved in training of the next generation of installers at local colleges.

Aftercare

Recommendation 10: A one-stop-shop would need to put procedures in place to provide guidance to homeowners at handover to ensure understanding about use and maintenance, and potentially to scrutinise post-work performance. This would allow a one-stop-shop to help to enhance knowledge and understanding of how retrofit works and affects buildings. Monitoring projects could be developed with local colleges and universities to support this work, or homeowners could play a role in monitoring themselves through discussing their experiences on an online forum or using free kits, such as that provided by iMeasure.

Recommendation 11: A diverse funding stream should be sought in order to reduce the risks of relying on a particular funding source. In the short run, funding may need to be secured from an external source, while in the longer term the one-stop-shop should aim to build up a strong reputation in order to charge for services such as project

management, assessments, training and venue hire. A potentially more reliable funding stream could be set up in the form of a revolving fund across the West Midlands based on section 106 contributions, following the successful model of the Milton Keynes Carbon Offset Fund. Revenue may also be earned from lead fees for installer referrals.

7. Conclusion

A one-stop-shop in the West Midlands has the potential to promote an increased uptake of retrofit measures through offering a clearer, more structured and convenient customer journey for homeowners, whilst also helping to address knowledge and skills barriers in the supply chain. This in turn may bring a range of benefits for the region in terms of lower energy bills, increased property values and improved health, comfort and wellbeing for its residents, as well as a more skilled, better coordinated and more competitive supply chain which is ready to maximise retrofit market opportunities.

However, the ability of a one-stop-shop to deliver on this potential depends on the services it delivers and how it delivers them. The most appropriate approach will depend on the specific priorities and objectives of the one-stop-shop and the areas and types of households and properties targeted. Establishing the priorities and objectives for the one-stop-shop is therefore a fundamental next step which will set the direction of the one-stop-shop. By establishing a clear vision, it will then be possible to identify the services required and the skills and knowledge needed to deliver them. In turn, relevant stakeholders can be identified to allow the one-stop-shop to start out with the collaborative approach it should aim to deliver.

Regardless of the priorities chosen, support provided along every stage of the customer journey, offering face-to-face advice and involving local installers, will offer the greatest potential to ensure the customer journey is completed and retrofit measures are installed.

REFERENCES

- APHO and Department of Health. (2010). *West Midlands Health Profile 2010*. Available at: <http://www.apho.org.uk/resource/view.aspx?RID=95368>
- Arup. (2011). *New Barracks Estate Retrofit: Social Return on Investment*. Available at: <http://www.procure-plus.com/documents/public/Sustainability/Salix-SROI-report240111.pdf>
- Berry, S., Sharp, A., Hamilton, J., and Killip, G. (2014): Inspiring low-energy retrofits: the influence of 'open homes' events. *Building research & Information*, DOI: 10.1080/09613218.2014.894747
- BRE. (2008a). *Energy Analysis Focus Report: A study of Hard to Treat Homes using the English House Condition Survey: Part I: Dwelling and Household Characteristics of Hard to Treat Homes*.
- BRE. (2008b). *Energy Analysis Focus Report: A study of Hard to Treat Homes using the English House Condition Survey: Part II: Investigating improvement scenarios for Hard to Treat Homes*.
- BRE. (2010). *Quantifying the cost of poor housing*.
- Build Up Skills UK. (2012). *Analysis of the national status quo*. Available at: <http://www.buildupskillsuk.org/94/BUSUKFinalReportMay2012.pdf.pdf>
- Carbon Co-op. (2014). *Whole House Retrofit Services*. Available at: <http://carbon.coop/content/whole-house-retrofit-services>
- CoRE. (2014). *Retrofit Coordinator: Creating leaders for low energy retrofit projects*. Available at: http://www.core-skills.com/i/content/core_new_brochure.pdf
- DCLG. (2012a). *Live tables on house building*. Available at: <https://www.gov.uk/government/statistical-data-sets/live-tables-on-house-building>
- DCLG. (2012b). *English housing survey 2010: homes report*. Available at: <https://www.gov.uk/government/statistics/english-housing-survey-homes-report-2010>
- DCLG. (2014). *English Housing Survey*. Available at: <https://www.gov.uk/government/statistics/english-housing-survey-2012-profile-of-english-housing-report>
- DECC. (2014a). *National Energy Efficiency Database*.
- DECC. (2014b). *Fuel Poverty Detailed Tables, 2012*. Available at: <https://www.gov.uk/government/statistics/fuel-poverty-detailed-tables-2012>
- DECC. (2014c). *Energy Saving Advice Service (ESAS) calls and Green Deal webpage views*. Available at: <https://www.gov.uk/government/statistics/energy-savings-advice-service-esas-calls-and-green-deal-webpage-views>

DECC. (2014d). *Domestic Green Deal and Energy Company Obligation in Great Britain, Monthly report*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/365408/monthly_statistical_release_green_deal_and_eco_in_gb_21_oct.pdf

Department of Health. (2009). *Annual Report of the Chief Medical Officer*. Available at: http://www.sthc.co.uk/Documents/CMO_Report_2009.pdf

EEPB. (2014). *Breaking Barriers: An industry review of the barriers to Whole House Energy Efficiency Retrofit and the creation of an industry action plan: Summary Report*. Available at: http://www.nef.org.uk/themes/site_themes/agile_records/images/uploads/BreakingBarriers_SummaryReport.pdf

Energy Saving Trust. (2004). *Hard to Treat Homes Guide*.

Green Building Council. (2009). *Understanding consumer attitudes to sustainable community infrastructure*. Icaro Consulting and Ipsos MORI.

GWLL. (2014). *EcoHouse*. Available at: <http://www.gwll.org.uk/ecohouse>

Federation of Small Businesses. (2013). *Local Procurement, making the most of small businesses, one year on 2013*. Available at: <http://www.fsb.org.uk/News.aspx?loc=pressroom&rec=8116>

Fawcett, T., Killip, G., and Janda, K. (2014). *Innovative Practices In Low Carbon Retrofit: Time, Scale And Business Models*. Available at: http://behaveconference.com/wp-content/uploads/2014/08/F_Tina_Fawcett_University_of_Oxford.pdf

Haavik, T. et al. (2011). *New business models for holistic renovation solutions of single family houses*. Available at: <http://www.one-stop-shop.org/sites/default/files/New-business-models-for-holistic-renovation.pdf>

Hills, J. (2012). *Getting the measure of fuel poverty*. Final Report of the Fuel Poverty Review.

Institute for Sustainability. (2011). *Building opportunities for business: surveying and assessing dwellings for low carbon retrofit*. Available at: http://retrofitguides.instituteforsustainability.org.uk/wp-content/uploads/1837_webVersion_Guides2.pdf

J.P. Morgan. (2011). *Adviser Charging: Putting a price on financial advice*. Available at: <http://am.jpmorgan.co.uk/adviser/documents/jpm-adviser-charging-report.pdf>

Mahapatra et al. (2012). *Summary Report on one-stop-shop service for sustainable renovation of single family house*. Available at: http://successfamilies.vtt.fi/SF_D33_20121029_Final.pdf

Mlecnik, E., Kondratenko, I and Haavik, T. (2012). *Business model development for customer-oriented housing renovation*. Available at: <http://www.one-stop-shop.org/sites/default/files/Business-model-development-for-customer-oriented-housing-renovation.pdf>

ONS. (2011a). *2011 Census Data*.

ONS. (2011b). *Tenure by religion of Household Reference Person (HRP)*. Available at: <https://www.nomisweb.co.uk/census/2011/dc4204ew>

ONS. (2011c). *Portrait of the West Midlands*. Available at: <http://www.ons.gov.uk/ons/rel/regional-trends/regional-trends/regional-trends--july-2011-edition/portrait-of-the-west-midlands.pdf>

ONS. (2012). *2011 Census: KS209EW Religion, local authorities in England and Wales*. Available at: <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-286262>

ONS. (2013a). *Housing Expenditure*. Available at: http://www.ons.gov.uk/ons/dcp171776_335332.pdf

ONS. (2013b). *Excess Winter Mortality in England and Wales*. Available at: <http://www.ons.gov.uk/ons/rel/subnational-health2/excess-winter-mortality-inengland-and-wales/2012-13--provisional--and-2011-12--final-/index.html>

RENECO. (2011). *Why to renovate your building? The ESCO-model: A new way of financing renovations*. Available at: http://www.renesco.lv/images/stories/Brosuras/2011-09-10_renesco_esco_model%20en_euros_fin_m.pdf

SHAP. (2012). *Green Deal & Eco Supply Chain & Skills Development*. Available at: <http://www.shap.uk.com/wp-content/uploads/2012/11/SUPPLY-CHAIN-AND-SKILLS-5-NOVEMBER-2012.pdf>

Sustainable Development Commission. (2006). *Stock take: delivering improvements in existing housing*. Available at: <http://www.sd-commission.org.uk/publications/downloads/SDC%20Stock%20Take%20Report.pdf>

Sustainable Energy Academy. (2010). *Old Home SuperHome visitor feedback analysis*. Milton Keynes: Sustainable Energy Academy.

UKERC. (2013). *Understanding Homeowners' Renovation Decisions: Findings of the VERD Project*. Available at: http://tyndall.ac.uk/sites/default/files/verd_summary_report_oct13.pdf

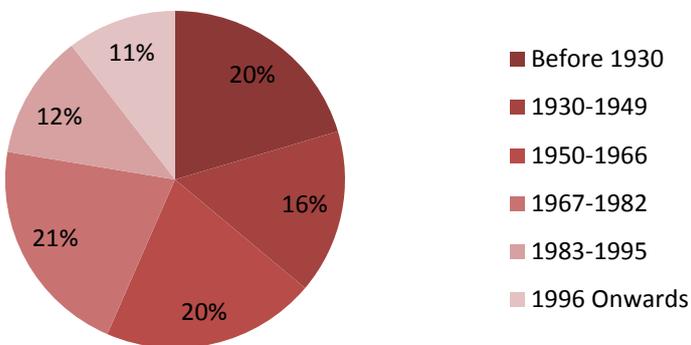
APPENDIX: HOUSING SECTOR SUMMARY DIAGRAMS

Dwelling numbers

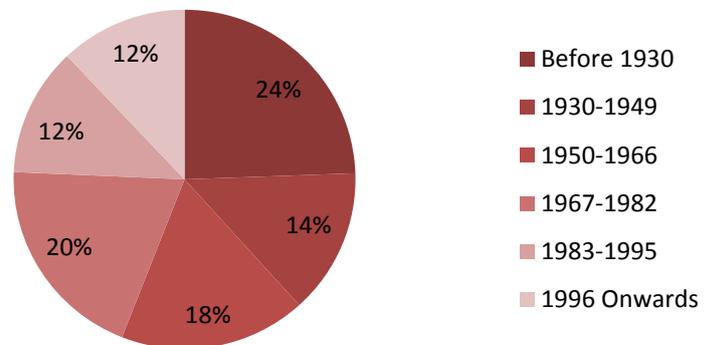
	NEED (DECC, 2014a)	EHS (DCLG, 2014)	Census (ONS, 2011a)
National	23,692,844	22,334,698	23,366,044
West Midlands	2,313,313	2,360,842	2,294,909

Property age (DECC, 2014a)

West Midlands

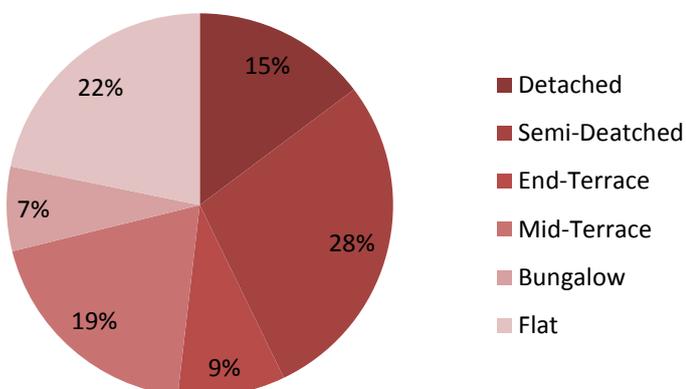


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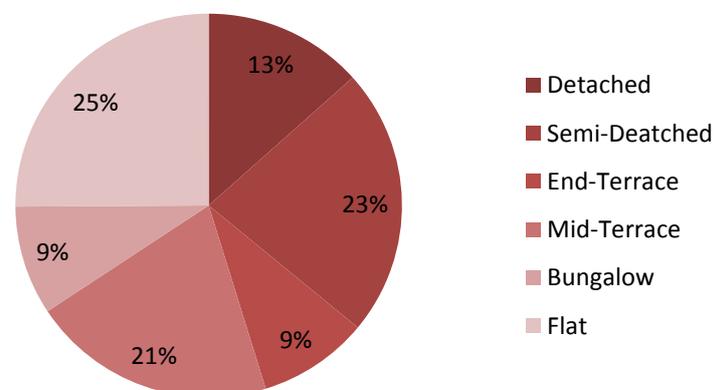


Property type (DECC, 2014a)

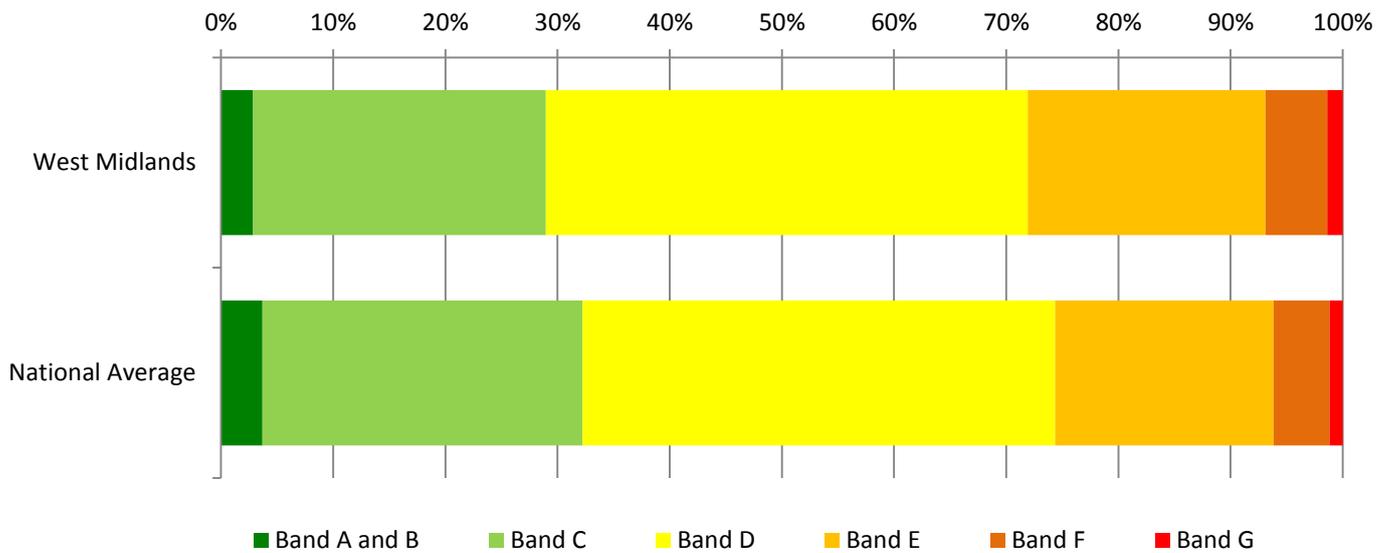
West Midlands



Great Britain



EPC rating (DECC, 2014a)

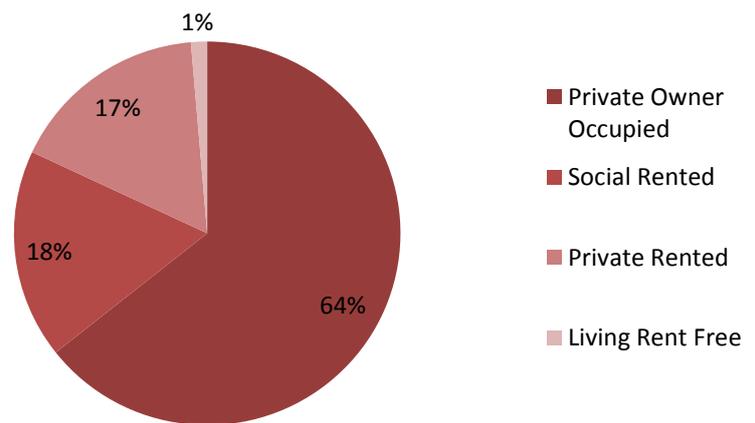


Tenure (ONS, 2011a)

West Midlands

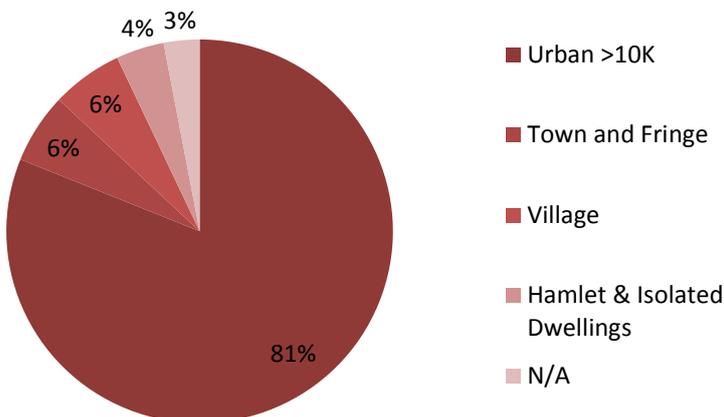


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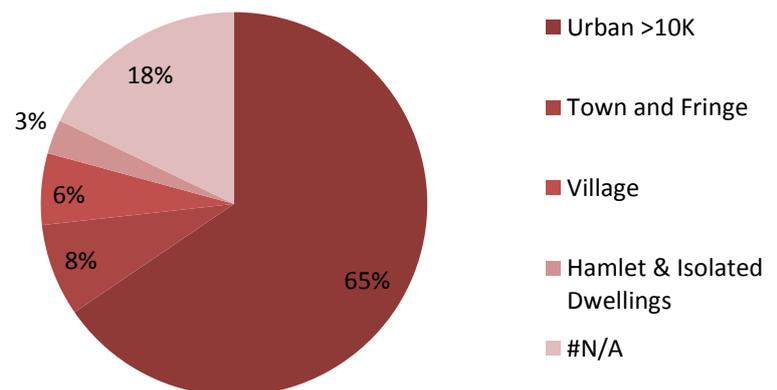


Rurality (ONS, 2011a)

West Midlands

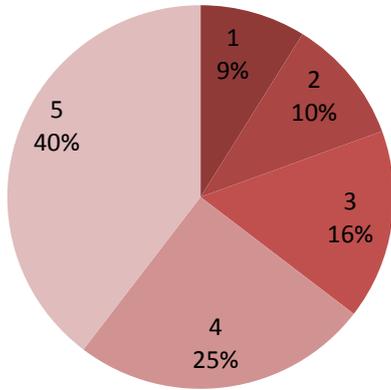


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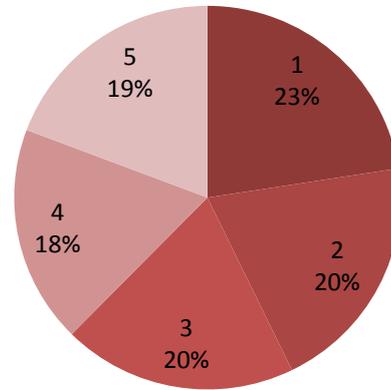


Fuel poverty (DECC, 2014a)

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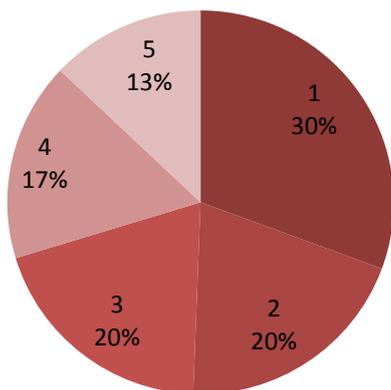


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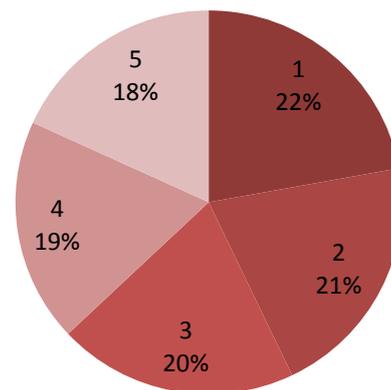


Index of Multiple Deprivation (DECC, 2014a)

West Midlands



Great Britain



Household expenditure on repairs, maintenance and improvements (ONS, 2013b)

