

Solid Wall Insulation Study

Using the ISM behaviour change model to understand what needs to change to encourage greater uptake among householders

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1 Executive summary

This study used the Scottish Government's ISM (individual, social and material) behaviour change¹ tool to investigate why, when there are so many solid walled homes in Scotland, comparatively few households install solid wall insulation.² The ISM behaviour change tool examines all aspects that may affect an individual's behaviour to understand what could be changed to encourage a desired behaviour.

The study focused on households who had decided to install solid wall insulation (and in some cases, already had it installed) to investigate their experience in order to draw insights and inform recommendations for how to encourage others to follow suit. Households were recruited to participate in the study, and were asked to answer two questionnaires. To supplement the questionnaires and provide further understanding, some households took part in in-depth interviews, provided material for case studies and kept video diaries. Householders were also invited to join the Green Homes Network.³ While the focus of the study was on householder attitudes, it also included meetings with community groups, installers, Home Energy Scotland advice centres and Historic Scotland.

During the period of the study (October 2013 to March 2014), solid wall insulation was initially dominated by activity through the Home Energy Efficiency Programmes for Scotland – Area Based Schemes (HEEPS-ABS) and the Energy Companies Obligation (ECO). However, changes to ECO in December 2013 stalled many planned installations. To fill this gap and reach its target of 50 householders, the study included a number of households who had recently installed solid wall insulation. This proved a valuable pool of households who were able to provide insights into the lived experience of having solid wall insulation.

Responses from all sources (householders, community groups and other stakeholders) were mapped together onto an ISM framework and this provided a way of understanding and categorising results. The sample comprised 53 households who had already decided to install solid wall insulation, and who were therefore likely to have positive perceptions about its potential and actual benefits. Nonetheless the findings about these households' key motivations, perceptions of barriers and experience of the installation can be used to inform work to increase the uptake of solid wall insulation among targeted groups of households who are not currently considering it.

. Conclusions were as follows:

- Those planning or installing solid wall insulation are positive about its benefits. However, with knowledge of this technology relatively sparse, there is much work to be done in letting people know about solid wall insulation. Positive messages would

¹ <http://www.scotland.gov.uk/Publications/2013/06/8511>

² The Scottish House Condition Survey 2012 – key findings identifies 557,000 houses with uninsulated solid/other walls in Scotland.

³ The Green Homes Network is a network of homes across Scotland who showcase renewable and energy efficiency improvements, see <http://www.energysavingtrust.org.uk/scotland/Generating-energy/Green-Homes-Network>

help spark greater interest and there is an opportunity to set the agenda regarding public perceptions.

- Cost is the biggest barrier to uptake so marketing of financial benefits and schemes of financial support will both continue to be important in promoting solid wall insulation.
- However, warmth is even more important than energy and bill savings for householders and there is an opportunity to promote solid wall insulation based on this benefit. Retirement, when people start spending more time in their homes and warmth becomes more important, is a significant life-stage for promotion of solid wall insulation.
- Counter-intuitively, neither planning consents, building warrants nor disruption during installation are show stoppers.
- Customer experience is an issue. Some households have had very positive experiences while others have been very disappointing. Good communication, quality of workmanship, clear timetables for work need to be in place to make the installation process a positive experience.
- Community groups can reach parts of the public that other stakeholders cannot. Local groups have the capacity to reach further into local communities than regional advice centres; they are very knowledgeable about their communities and are trusted sources when promoting new ideas.
- Home Energy Scotland advice centres are a valuable resource.

2 Introduction

The solid wall insulation study took place between October 2013 and March 2014. Its purpose was to use the Scottish Government's ISM behaviour change model to understand what needs to change to encourage more people to install solid wall insulation in their homes.

The original brief for the study was to recruit 50 households who were installing solid wall insulation and track their progress as they insulated their homes. As well as tracking the 50 households the study would ask some households to keep video diaries and write up case studies. Finally the study would link to community groups involved in promoting solid wall insulation to understand their role within the process of encouraging solid wall insulation.

During the period of the study, the UK Government changed the rules of the Energy Company Obligation (ECO) and this meant that many householders' installations were put on hold while the situation was clarified. To ensure that the study contained opinion from people who had solid wall insulation installed, the study recruited households who had recently installed solid wall insulation and would be able to reflect on their experience.

To guide the study, a steering group was established. The steering group provided advice and guidance as the study progressed. It contained representatives from the Energy Saving Trust, Changeworks and the Scottish Government. It met three times over the period of the study.

This report provides an analysis of the results, framed against the ISM behaviour change model. It then goes on to draw a series of conclusions and make recommendations. While the study has not yielded a silver bullet which on its own can address all the barriers, a number of recommendations are made which, if taken together, would help change the perception of solid wall insulation and aid its penetration into the marketplace.

3 Methodology

The study mapped out all the factors that might affect householders' attitudes to solid wall insulation and then used this process to draw conclusions about solid wall insulation. By understanding what influences a householder, it should be possible to change the factors that influence them, leading to a situation where they are more likely to install solid wall insulation. The study sought to understand the barriers to installing solid wall insulation, and what encourages people so that it is easier to make the decision to install solid wall insulation.

The research process comprised a number of stages outlined below:

- Writing the project plan.
- Creation of a steering group.
- Appointment of an ISM consultant.
- Literature review.
- Development of study tools.
- Recruitment of households.
- Identification of community groups and interviews.
- Initial questionnaire.
- Analysis of results from initial questionnaires, informing content of follow-up questionnaire.
- Follow-up questionnaire.
- In-depth interviews.
- Case studies.
- Video diaries.
- Recruitment of householders to the Green Homes Network.
- Analysis of results.
- Report writing.
- Dissemination.

3.1 The ISM tool



ISM is a practical tool that has been developed for the Scottish Government. It is a way of understanding behaviour by looking at all factors that may affect behaviour in a structured manner. The tool can be used to understand what might need to change to encourage people to change their behaviour.

As an example, the debate in the media on reducing excessive drinking can often take an either/or approach, focusing on a number of alternative factors like pricing, legislation or education. It is common to hear

Figure 1: the ISM framework

discussions where one person may say "...pricing will not work, we need education..." and another person will say the opposite. The ISM approach considers all factors to determine a number of things that might all be changed. This can then provide an environment where people will be inclined to reduce excessive drinking.

The tool categorises behaviour and attitudes into three different contexts: individual, social and material:

- The individual context includes factors that are held by the individual, like their habits, emotions, attitudes and skills.
- The social context represents those factors, beyond the individual, in the social realm that shape and influence an individual's behaviour. These include social norms, opinion leaders, tastes and meanings within social groups (for example, table manners are a social norm that varies between different groups).
- The material context represents factors that are out there in the environment and wider world, yet still influence and constrain individuals' behaviour. They include rules and regulations, technologies and infrastructure.

3.2 Appointment of an ISM consultant

The Energy Saving Trust appointed Changeworks to provide specialist support. Their role was to:

- Conduct a literature review which highlighted the current understanding of householder attitudes to solid wall insulation.
- Develop the tools that would allow the 50 volunteer households to provide information on their attitudes to solid wall insulation, which could then be used within an ISM context.

3.2.1 Literature review

The first stage of the study was to review the current understanding on householders' attitudes to installing solid wall insulation and to categorise this knowledge in terms of the ISM model. The literature review identified the main areas of knowledge and provided the basis from which to develop the initial questionnaire and later study tools. (See appendix).

As well as identifying the main questions the study would need to ask, the literature review highlighted a number of potential areas for investigation such as cost, the need to develop public awareness and changing the way solid wall is promoted. These suggestions were, on the whole, borne out by the study and are covered in the conclusions section.

3.2.2 Development of study tools

Following the literature review, a suite of study tools were developed. The first tool was a quantitative questionnaire that provided the initial data on each household. Following on, and dependent on the results of this initial survey, a further quantitative questionnaire would be issued, along with an in-depth interview template. These three tools of enquiry formed the basis of the study.

3.3 Recruitment of households

The target was to recruit 50 householders who would complete questionnaires and form the basis of a group which would provide case studies and some video diaries.

Recruitment took place through a number of different avenues:

- The Home Energy Scotland advice centres were asked to identify households that were installing solid wall insulation. This was done mainly through the area-based schemes operating within their areas.
- The Energy Saving Trust's CRM⁴ database was interrogated to find households who had been recommended to install solid wall insulation.
- The Energy Saving Trust home renewables team identified households they had spoken with who were interested in solid wall insulation.
- Participants in the recent Orkney solid wall insulation field trial were contacted to see if they would contribute.
- The CRM database was interrogated a second time to find households who had recently installed solid wall insulation.

The aim was to recruit a broad cross section of people from across Scotland who would be at a variety of stages of installing solid wall insulation. Initially the idea was to recruit households who could be followed through the whole process of installation but it soon became apparent that this would be impractical and that instead households were recruited at different stages of installation.

As an incentive to encourage householders to come forward, the study offered a £50 gift voucher to everyone who took part.

3.4 Identification of community groups and interviews

Community groups were identified and contacted through:

- Scottish Communities Climate Action Network.
- Climate Change Fund team at Keep Scotland Beautiful.
- Home Energy Scotland's community liaison officers.
- Capitalising on opportunities as and when they presented themselves.

The study interviewed:

- Kirkmahoe Community Council.
- Fintry Development Trust.
- South Seeds.
- Towards Zero Carbon Bute.
- Transition Linlithgow (written feedback).

The interviews were structured and sought to understand the influence that community groups could have within their communities in encouraging and enabling local people to install solid wall insulation.

⁴ The Energy Saving Trust's customer relationship management database, which holds details of all customer enquiries.

3.4.1 Meetings with other groups and organisations

While the study focused on householders and the influence of community groups, it also met with a number of other stakeholders to provide a more complete understanding of the operating environment. These included advice centres and managers of area-based schemes, installers and Historic Scotland.

3.5 Questionnaires and interviews

Two questionnaires were used to gather quantitative information from respondents about their experience of installing solid wall insulation.

The questionnaires were distributed using Questback, (a web-based utility that allows questionnaires to be developed, tested and distributed and responses collected online). For people who were not on the web, questionnaires were distributed by post and responses entered onto Questback on receipt.

The initial questionnaire gathered some introductory information which then informed the content of the follow-up questionnaire.

3.5.1 Initial questionnaire

The initial questionnaire was sent out to every household that had expressed an interest in the solid wall insulation study. Of the 67 households who expressed an interest in taking part, 53 eventually completed the initial questionnaire.

The questionnaire included questions that covered all 18 factors in the ISM behaviour change model. These factors were covered through a range of questions that allowed the study to understand the influence and importance of different factors.

A complete list of questions is given in the appendix. The questionnaire gathered initial information about the respondents and was used to understand what the follow-up questionnaire and in depth interviews would need to explore in greater detail.

The initial questionnaire included questions on the following aspects of installing solid wall insulation:

- Location
- Demographics
- Finance arrangements
- Insulation types
- Stage of insulation
- Awareness of solid wall insulation
- Influences
- Expectations
- Reasons for installing solid wall insulation
- Disruption and concerns
- Information and awareness
- Costs and benefits
- Perceptions of barriers

- Pre-existing interest in energy efficiency
- Self-perceptions

3.5.2 Follow-up questionnaire

The initial questionnaire ruled out some potential barriers (for example building control and planning consent) but questions remained about other aspects of installing solid wall insulation and the follow-up questionnaire was used to explore these aspects.

In particular the follow-up questionnaire was used to explore:

- People's perceptions of value versus cost.
- Customer journeys.
- What level of information people receive.
- The lived experience compared to prior expectations.
- How solid wall insulation is sold to people.
- How solid wall insulation compares to other home improvements and major household purchases.
- How much money people were investing in solid wall insulation.

The follow-up questionnaire also asked householders whether they would be willing to join the Green Homes Network. This network enables others to visit a house and find out, from a householder who had already done it, about a green home improvement.

3.5.3 In-depth interviews

The in-depth interviews provided qualitative information that fleshed out the responses obtained through the online questionnaires. Subjects for in-depth interviews were selected from the households that had completed the questionnaires. They were chosen on the basis of their willingness to articulate their experiences and to ensure that the following aspects were all covered:

- Area-based and individual projects.
- Fee paying and funded projects.
- Ongoing and complete installations.
- Internal and external insulation.
- DIY and professional installations.

The in-depth interviews all followed a structure developed by Changeworks. It allowed a free flowing conversation to take place, yet ensured that this conversation covered:

- Customer journey.
- How and why the householder started to consider solid wall insulation.
- The impacts of insulation and the lived (or anticipated) experience.

3.5.4 Analysis of results

Questback provides quantitative output both as raw data in an excel spreadsheet and as a summarised PowerPoint presentation with charts. This output provided the basis for the analysis and understanding of the quantitative feedback from the questionnaires.

All the information from the different research tools was put together and mapped against the ISM tool. This provided insights into what is stopping more people from installing solid wall insulation.

3.6 Resolving difficulties in realising the project plan

Overall the solid wall insulation study followed the project plan and timescale. However, there were a few barriers; how these were overcome is explained in the following paragraphs.

3.6.1 Recruitment of households

Ideally the sample of 50 households would represent a random selection of households that were in the process of installing solid wall insulation and could be expected to start and finish within the timeframe of the project. There were two main concerns about achieving this target:

- The wintertime can disrupt installations because of poor weather and low temperatures.
- The solid wall installation industry at the time of the study was dominated by work for HEEPS-ABS schemes and ECO. Most of this work was with fuel-poor households which would make it more difficult to achieve a random representative sample across types of household and property.

Recruitment went forward on the pragmatic decision to use a number of sources as this would lead to recruiting a range of householders in different circumstances and different stages of installation.

3.6.2 Policy changes

In December 2013 the Westminster Government announced a policy change on ECO. This has led to a period of uncertainty about ECO and consequently a number of ECO schemes were stalled, pending clarification of what ECO might support. The consequence for many of the respondents to the survey was that installers ceased working on solid wall installation and therefore householders' installations did not go ahead as planned.

3.6.3 Solutions

The study decided, in December 2013 and early January 2014, to recruit households who had already installed solid wall insulation. These households were able to give reflective information on installing solid wall insulation. They were also able to provide a sense of what it was like to live in a home that had had solid wall insulation (invariably positive).

3.7 Dissemination

Dissemination has been through a number of routes which are outlined below. This has ensured that everyone who needs to know about the study has the opportunity to learn about the findings and discuss the results.

- Briefing for Energy Saving Trust's Data Insight team to discuss results in detail.
- Brief details of results disseminated to Home Energy Scotland staff through the in-house Bulletin email.

- Bi-monthly updates at Steering Group meetings.
- Update to study contributors.
- Attendance and participation at Scottish Government ISM events.
- Information on the study included in the Scottish Government's progress report on the ISM tool.⁵

⁵ Low carbon behaviours framework, influencing behaviours – individual, social, material (ISM) tool progress report October 2013, published Scottish Government

4 Results

These results combine and summarise the findings from all the different research tools used and place them into an ISM framework. They include quotes (in italics) from householders which illustrate particular issues and situations.

4.1 Demographics

4.1.1 Income and employment

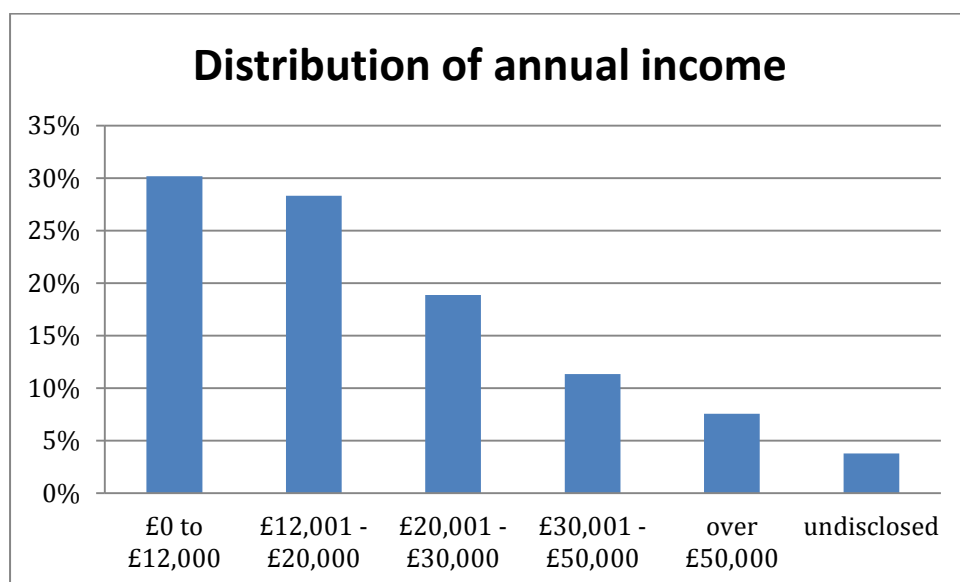


Figure 2: income distribution

- 53 households responded to the initial survey.
- Mean household income of the 53 respondents is slightly lower than the Scottish average, at £20,900 compared with £23,040.⁶ The high proportion of respondents in the study who are retired is likely to have pushed income levels down.
- 7 out of the 53 households who answered had one or more person unemployed.
- Of the 7 households who had one or more person unemployed, 4 households had nobody working and were not retired.
- 26 households had one or more person retired.
- 26 households had one or more person employed.

Within the limitations of the relatively small sample of 53 participants, comparing results with figures from Scottish Neighbourhood Statistics suggests that solid wall insulation may be of particular interest to pensioners as the study has attracted a high proportion of this demographic. This is shown in figure 3 overleaf.

⁶ Scottish Household Survey Web Tables 2009/2010

	Solid Wall Insulation Study data	Scottish Neighbourhood Statistics data	Comment
Employment	13% of households had someone who was unemployed	13% of population are employment deprived	Sample is representative
Income	Average of £20,900 per annum	£23,040 (data from Scottish Household Survey)	Sample has average income lower than the national average
Retirement	49% of households had one or more person retired	19.8% of population are of pensionable age	The study has a high proportion of pensioners compared to Scotland overall

Figure 3: comments on demographic data

4.1.2 External and internal wall insulation

35% of respondents were installing internal solid wall insulation, 45% were installing external wall insulation, 5% were installing both, and the remainder were undecided.

4.1.3 Geography



Figure 4: geographic distribution

Respondents to the survey were drawn from all across Scotland, from Orkney to Dumfries and Galloway. There was a mixture of households from rural locations to big cities, with the greater proportion in small towns or villages.

Overall there is a preponderance of participants in the east of Scotland. Although no firm conclusions can be drawn, this probably reflects the particular success of eastern Home Energy Scotland advice centres in recruiting households into the survey.

There is a concentration of households in the Orkney Isles. These households were recruited later in the study and had already had insulation installed. The fact that they so enthusiastically agreed to assist the study can be seen as testament that they considered solid wall insulation

to be beneficial.

4.2 ISM factors

The following sections provide, in a summarised form, the factors which influenced people's perceptions of solid wall insulation. The results are taken from the questionnaires and in-depth interviews, along with comments from community groups, installers and Historic

Scotland. As well as providing some key statistics, they show the range of comments and opinion and aim to provide a balanced overview of the results.

Note: italics have been used to show direct quotes from householders.

4.2.1 Individual: values, beliefs and attitudes

Comfort

- Comfort is even more important to people than energy savings, and is the highest scoring motivation for installing solid wall insulation. Many people say they want fuel bill savings, but comfort is even more important.
- Retired people may install solid wall insulation to make homes warmer as they are in their homes during the day and have a greater need for warmth. While they were working, earning money and out of the house during the day, this was less of an issue for them.

Relative importance of solid wall insulation

- The respondents all rated solid wall insulation as a major priority for home improvements. This was the case for people who had insulation installed, were going ahead with insulation, and for those where progress had halted because of funding constraints.
- *“Making the best of the house as it stands”.*

4.2.2 Individual: costs and benefits

Cost

- The cost of solid wall insulation was highlighted as a concern for many people.
- Energy savings and reducing fuel bills are very important to people considering solid wall insulation.
- The questionnaires show that householders generally recognise the value of spending money on solid wall insulation where they have the money or are presented with an “if you had £8,000...” scenario. Out of a choice of six options of typical major household expenditure (e.g. replace car, double glazing, solid wall insulation, new kitchen, new bathroom, new driveway), 82% of respondents place installing solid wall insulation as first or second choice.
- In the initial questionnaire 58% of respondents were hoping to finance insulation with help from a grant or government funding.
- By the follow-up questionnaire 48% of households were investing (or had invested) in installing solid wall insulation, either through using savings or taking a loan. The average disclosed amount contributed from savings is £5,495 (10 people); the average from loans is £5,359 (seven people).
- Contributions from loans and savings varied from around 10% to the full amount.
- Some households agree that it is easy to get funding, but many households have had a very different experience, with opinions polarising in the follow-up survey.

- 69% of households say the benefits of solid wall insulation were effectively promoted to them: Home Energy Scotland advice centre staff are noted as having done this well by several respondents.
- 92% of respondents say they are saving money on their bills since installing solid wall insulation.

Benefits

- 66% of households cited “making the house warmer and more comfortable” as their main reason for installing solid wall insulation in their home.
- A number of retired respondents said they wanted somewhere warm as they were spending more time at home now they were retired.

4.2.3 Individual: emotions

The lived experience

- Solid wall insulation transforms many homes making them much more pleasant to live in.
- The benefits are very apparent, nearly everyone acknowledges this.
- Respondents have commented that draughts and condensation reduce as well as the warmth achieved.
- People are prepared for disruption of the home to install solid wall insulation although this is a concern for some households.
- Installing solid wall insulation has made the vast majority of respondents (95%) feel both better about their home and more comfortable in their home.
- *“Money well spent, much happier about how it (the home) is”.*
- *“Couldn’t take all the dampness”.*
- *“Wanted a nice self-sufficient home, to feel independent and comfortable”.*

4.2.4 Individual: agency

Levels of agency (people’s confidence in their ability to carry out an action) vary considerably and this is reflected in their confidence to tackle or install solid wall insulation.

DIY

- DIY is a popular solution for installing internal wall insulation (13% of respondents). It is used by households who have the confidence to undertake work, especially where income is low, but they have identified the need to improve insulation in their homes.

Understanding what solid wall insulation will achieve

- Most people have a fair idea of how much they can save on bills through solid wall insulation.
- 83% of households were either confident or very confident that installing solid wall insulation would be a worthwhile investment in time and money.

Is installing solid wall insulation a complicated process?

- Householders do not agree on whether installation is a complicated process, even after installation is completed. There is a wide variation in experience.

Comments on what they would have liked to know or done differently

- *“Lack of communication with contractor”.*
- *“Not to believe promises from big companies; approach smaller more local companies”.*
- *“I’d like to have a clear idea of what would be involved in the process and if possible a timeline”.*
- *“How easy the whole process was”.*
- *“Be more persistent with contractors and not take their word that they will be onsite to get work done”.*
- 28% of respondents disagreed with the statement that they had been kept well informed about the progress of their installation: when pressed to explain their answer most comments (both good and bad) had been about how contractors communicated with householders.

4.2.5 Individual: skills

Are householders sufficiently well informed?

- Householders are quite polarised on this matter. They consider themselves as either well-informed about the decisions they need to make through the installation process, or poorly informed.
- Householders agree on the need to be sufficiently informed to make decisions during the installation process.
- 51% of people are aware of the energy efficiency rating of their property.
- When asked how much information they received on different aspects of solid wall insulation, householders gave very mixed responses, from “a large amount” to “none”.
- There was a similar spread of opinion about whether sufficient information had been available about different elements of the installation. *“Time needed to find out about solid wall insulation is prohibitive”.*

4.2.6 Individual: habit

The energy efficiency habit

- Most people installing solid wall insulation already had the energy efficiency habit, 64% had installed loft insulation and 50% had installed draught-proofing and/or an efficient heating system.
- One householder commented he had assumed that houses were cold and damp (on Orkney) and you just lived with it.

Changing how a house is used, following solid wall insulation

- 64% of respondents agreed strongly or slightly that installing solid wall insulation has changed how they use rooms in their house. This figure was probably tempered by the fact that many people felt their homes were small so they already used all the rooms
- 91% of respondents changed how they used their heating, including how long their heating was on, following the installation of solid wall insulation.

4.2.7 Social: opinion leaders

- Community groups, especially those that have established a track record, can be a powerful way to engage local communities and bring solid wall insulation into local area. This is evidenced by Kirkmahoe Community Council and Fintry Development Trust who have both been pivotal in bringing solid wall insulation into their communities.

4.2.8 Social: institutions

Installers

- Experience of installers varies widely; sometimes a customer's experience was great, sometimes it was very poor. This is for the actual installation, communicating with customers prior to installation and in agreeing to undertake work. *"I would like to see more supervision", "It was not so uncomfortable or messy as we thought....an excellent squad of men.....nothing was a problem to them", "No supervision, no clerk of works to check work afterwards".*

Home Energy Scotland advice centres

- Home Energy Scotland is a significant and trusted source. Home Energy Scotland advice centres were how most people first found out about solid wall insulation, they most influenced people's choice to explore solid wall insulation and were most important in reassuring that solid wall insulation is a good idea. *"Gave us a lot of information about technology and likely savings ... could not have given more help".*

Other support and advice

- Half of households say they took no further advice, once they have made the decision to install solid wall insulation. This does not appear to correlate with a particular demographic or situation.
- 21% of households strongly agreed that they had been well-supported through their installation, 27% slightly agreed and a further 37% disagreed; the remainder were not sure.
- Support came from a range of institutions, including: installers, Home Energy Scotland, manufacturers, local authorities, Historic Scotland and the internet.

4.2.9 Social: norms

- 54% of people considering solid wall insulation do not know of anyone else who has installed solid wall insulation.

- A few people commented that they knew solid wall insulation would be beneficial because they were aware of someone else who had installed it. One household reported their neighbour was now installing external wall insulation following their installation.

4.2.10 Social: roles and identity

- 58% of those who completed the second survey have expressed an interest in joining the Green Homes Network. This network, run by the Energy Saving Trust, recruits households who have installed energy efficiency or renewable technologies as exemplars who are willing to let those who are considering a similar technology visit their home and will share their experience with them. The relatively high level of willingness to participate amongst households in this study suggests that those installing solid wall insulation feel positive about their decision and happy to explain the benefits to others.

4.2.11 Social: tastes

Priorities and concerns

- Households came out as very strongly cost-conscious and energy saving focused.
- Households were strongly environmentally focused and concerned about the appearance of their home, but to a lesser extent than cost conscious or energy saving.

Households are positive about solid wall insulation

- *“We would advise anybody to get this work done”, “best thing we did”, “disappointed to not have it done”, “happy with work done”.*
- *“Visual not important, what it is like to live in is what matters”.*

4.2.12 Social: meanings

- In order of importance householders expect solid wall insulation to:
 - Make their home warmer.
 - Save on bills.
 - Make their home more comfortable.
 - Reduce their environmental impact.
- And rather less significantly:
 - Add value to their home.
 - Improve the look of their home.
 - Provide a means to refurbish or redecorate the home.
- Householders often consider other household improvements (66%) or other energy efficiency improvements (52%) at the same time as installing solid wall installation.
- Households have been influenced by the energy ratings of their properties to consider solid wall insulation.
- *“Partly a financial investment, but mainly about lifestyle”.*
- *“If you didn’t do it you would be crazy”.*

4.2.13 Social: networks and relationships

- Householders expressed great appreciation for the role of energy advisors who came and visited them at home to provide advice on solid wall insulation, (both Home Energy Scotland and local authority staff).
- While the Home Energy Scotland advice centre network is the top source of advice, many other sources were used: local authorities, installers, Historic Scotland, manufacturers, the internet, friends with relevant professional experience, friends who have installed solid wall insulation and community groups.
- *“Friends and neighbours have been around to look at it, much more scope on Orkney”* (i.e. for more solid wall insulation).

4.2.14 Material: rules and regulations

The market

- The market as currently organised works much better for uniform housing types and not for bespoke work, this is evidenced by the difficulties experienced by people in remote locations in finding installers.
- A targeted approach would work well e.g. those living in homes with expensive to run heating systems or households containing a newly retired person are situations where solid wall insulation is likely to be well- received.
- Householders were installing as a result of a broad mix of local promotions, regional and national promotions and self-initiated interest.

Getting planning consents and building warrants

- Planning is viewed by some as a potential barrier, but householders’ actual experiences of getting planning consent and building warrants are universally positive.
- Where comment had been made about planning permission or building consents, it was that it was more straightforward than expected (note: planning permission is usually a requirement for external wall insulation on listed buildings). *“Planning (consent and building permits) protected us, ensuring high quality materials and workmanship”*.

4.2.15 Material: technologies

- Householders’ understanding of what materials will be used is mixed. Some feel well informed while others not so.
- There is quite good agreement that householders need to understand the technologies being used in the installation.

4.2.16 Material: infrastructures

- Area-based schemes can work against good household experiences (possibly as they are not paying the bill). In one scheme householders were left with lots of snagging issues to chase up themselves.
- Householders are concerned about whether an installer will do a good job.
- It can be very difficult to find an installer prepared to do work in the more remote parts of Scotland.

- Householders who knew the energy efficiency rating of their property had found out from a number of sources, with no particular source being significantly more prominent than another:
 - Home report 21%.
 - Green Deal Assessment report 24%.
 - Solid wall insulation survey 15%.
 - Home Energy Report 21.2%.
 - Other 19%.
- Two households used the Green Deal to support the cost of installation and one household plans to use the Green Deal.

4.2.17 Material: objects

- Information supplied to householders tends to be technical (with lots of emphasis on the pitfalls and hoops that need to be jumped through).
- There was a wide range of experiences in how much information was provided (from all parties) and whether it was considered adequate.
- Moving fences, moving furniture, pipework, cabling and possible damage to property are minor concerns for about half of households.
- *“When planning the kitchen refurbishment, would have liked to know that the installation would alter room sizes, and so too the kitchen design”.*

4.2.18 Material: time and schedules

- The time span from first considering solid wall insulation to installation is long. It can range from a few months to several years.
- Often householders will not know when work is going to take place (this was the situation for 9 households where they were either waiting for an assessment or the work was confirmed and waiting to go ahead).
- Householders say they do not generally know how long work will take.
- Over the two months from December 2013 to January 2014 inclusive, most people who were ‘in process’ felt their installation had not progressed. Much of this was because funding had been withdrawn following changes to ECO in December 2013.
- Householders had a mixed response about whether it took a long time for work to start, or be undertaken.
- The information that people received regarding timescales was usually given when exploring the installation of solid wall insulation, with much less information at other points during the process.

4.3 Green Homes Network

Twenty-six householders expressed an interest in joining the Green Homes Network so they could showcase the benefits of solid wall insulation to others. Details of these homes were passed onto the Green Homes Network to follow up and place onto their systems.

5 Fuel poverty

30% of respondents had household incomes under £12,000. A further 28% had an income between £12,000 and £20,000. While the study did not have access to fuel bill information or data on the thermal efficiency of properties, the income figures alone suggest that many people taking part in the study would be living in fuel poverty.

There are a number of conclusions from the study on how solid wall insulation might be able to address fuel poverty.

5.1 Householders' testimonies

Firstly, there is clear evidence from respondents that insulating walls has made homes



warmer and more habitable, often with lower fuel bills and/or benefit taken in additional warmth. An example of this is the Orkney cottage which (on the inside) had a damp to the touch exterior wall and became dry and warm, with heating reduced from 15 hours a day down to 9 hours a day. Other examples include the two Dorran⁷ bungalows in the study (data from one is provided in this chapter) and the Edinburgh tenement flat where heating costs are down to approximately 50p per square meter each month. The overwhelming message is that householders are finding their homes warmer and more comfortable, usually with a reduction in costs.



Figure 5: Orkney cottage before and after insulation

One benefit that some households have mentioned is that solid wall insulation reduces the draughts in their home, providing increased comfort. This will be the case where walls are requiring maintenance like repointing. The solid wall insulation provides a seal that can eliminate draughts.

5.2 Targeting house types

The results from Orkney respondents demonstrated that older cottages (100 to 200 years old) can be very effectively insulated, transforming the lived experience for their inhabitants.

⁷ Dorran bungalows are made of precast concrete slabs with minimal insulation and were a form of construction popular after the second world war when housing was in great demand

In the two Dorran bungalows that had external wall insulation installed, big differences have been reported in fuel consumption and levels of comfort. Both homes were off the gas grid and expensive to heat (one oil, the other on peak electric panel heaters).

The Energy Saving Trust has, through Home Analytics⁸, the opportunity to identify those houses which are most likely to gain, from solid wall insulation, and whether the gain will be significant. With this information the Energy Saving Trust can target which homes would most benefit from solid wall insulation (or other measures) to improve the thermal properties of homes.

From the experience of this study, it seems reasonable that Dorran bungalows and traditional highland cottages are two house types where big gains may be possible. However, it will be the case that for all homes where poor thermal performance of walls is combined with an expensive to run heating system solid wall insulation will be significantly beneficial. This concurs with research by the Building Research Establishment (BRE) who identified homes with solid walls and off the gas network as having the highest CO₂ emissions.⁹

It is difficult to establish the exact numbers of Dorran and similar pre-cast reinforced concrete houses that have been built in Scotland¹⁰. The BRE estimates 10,433 properties were built for local authorities and the Scottish Special Housing Association. The BRE also say that data on numbers of privately constructed properties, particularly Dorrans, is no longer available but there are significant numbers of Dorrans in the Highlands. Alexander Scott¹¹ (structural engineers based in Perth) quotes a figure of 300,000 non-traditional construction homes were built across the UK after the Second World War. At a 9% pro rata basis¹² by numbers of homes, Scotland would have 27,000 such homes.

5.2.1 Case study - insulating a Dorran bungalow

As part of the study, the Energy Saving Trust monitored one electrically heated bungalow intensively during the period leading up to and just after external wall insulation was applied. The results show that the solid wall insulation immediately helps to reduce electricity consumption and internal temperatures inside the house are better maintained overnight.

Each afternoon the house was heated to 20-21 °C, but the graphs (overleaf) show that once the property was fully insulated the morning temperature inside was 16.7 °C whereas it had previously been around or below 14 °C.

⁸ Home Analytics is a database which can predict what house types are located where, and what energy efficiency measures they have.

⁹ https://www.bre.co.uk/filelibrary/pdf/rpts/HTT_part_II_Final.pdf

¹⁰ BRE, Investigation of Defective PRC Housing Condition in Scotland 2011 - 2012 [Part 2A] - Numbers and Locations pub. October 2013

¹¹ <http://www.alexanderscott.co.uk/ASSETS/DorranBungalows.html>

¹² <https://www.gov.uk/government/statistical-data-sets/live-tables-on-dwelling-stock-including-vacants>

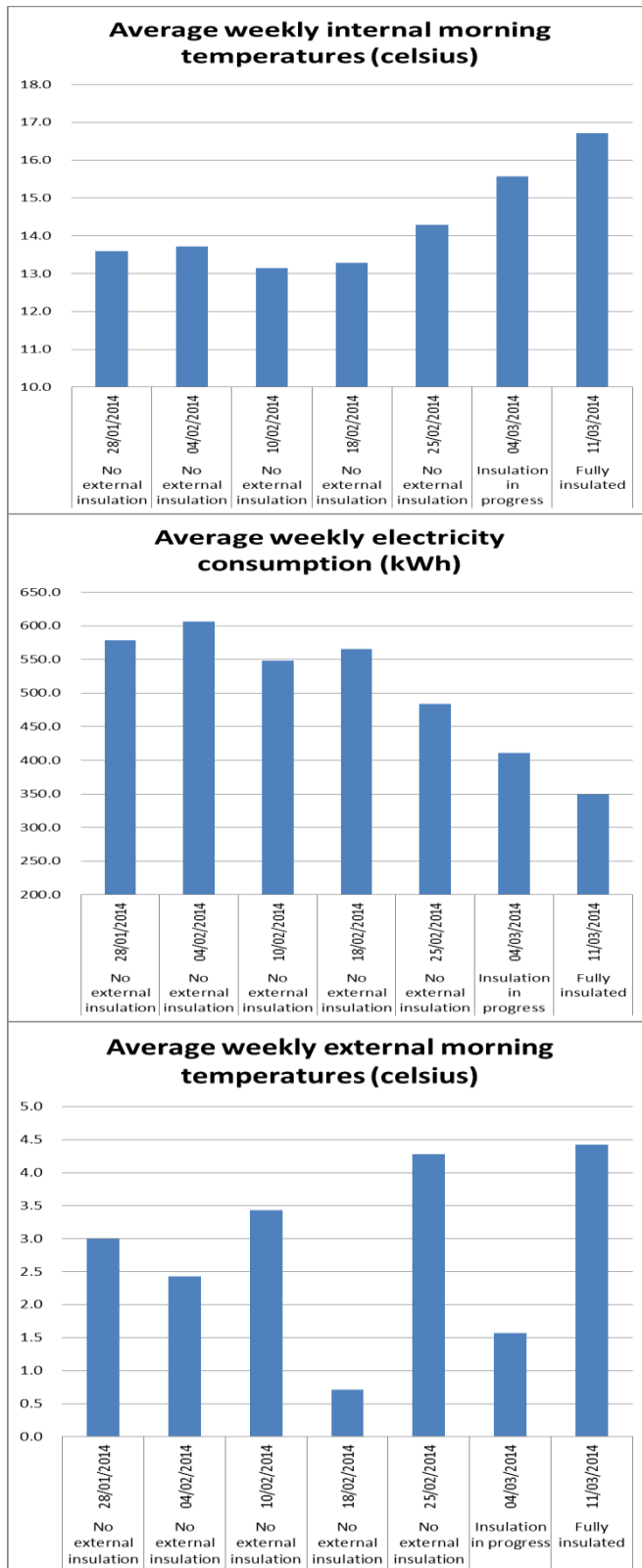


Figure 6: temperature and electricity consumption for Dorran bungalow

At the same time as internal temperatures are higher in the morning, external temperatures vary, showing that once insulation is in place, the weather outside has less effect on internal comfort. The other benefit is that electricity consumption drops by around a third from over 600 kWh a week to under 400 kWh, representing a substantial saving going forward. (In fact the householder reported that consumption was down to 304 kWh for the second week the property was fully insulated, despite having three grandchildren staying).

In the period before the insulation goes in, we can see that electricity consumption is (generally) inversely related to external temperature. That is to say that when it is colder outside, more electricity is used. In addition, internal morning temperatures tended to be lower when it was colder outside. It should also be noted that in the week of 25 February 2014 electricity consumption appears to start reducing (ahead of insulation being installed). However that week external morning temperatures were high, so some reduction in consumption is to be expected.

These figures are only a snapshot of comfort and consumption over a limited period of time. However, they demonstrate clearly that when external solid wall insulation is installed, comfort is increased and

electricity consumption decreases at the same time. Additionally, given that one member of this household had

suffered a heart attack and stroke previously, it is particularly important to guard against cold-related illnesses by ensuring the home remains warm at a reasonable cost.

Some approximate calculations can be made to estimate payback in this case.

Estimates of financial savings	Calculation	Rationale
Average weekly kWh consumption before insulation	400 kWh per week	Using up to 600 kWh per week during winter, so average over year will be lower, estimate at two-thirds
Average weekly kWh consumption after insulation	300 kWh per week	Using 300 kWh per week in March, estimate this is typical over the year
Average weekly saving (kWh)	100 kWh per week	
Average weekly saving (£)	£12.43	1 kWh costs £0.12453 (Scottish Gas price for electricity as of 20/03/14)
Cost of solid wall insulation	£7,638.75	
Estimated payback	614 weeks = 11.8 years	

Figure 7: payback estimations

These figures imply that external solid wall insulation can have reasonable payback periods given the right circumstances.¹³ In this situation the right circumstances were:

- The installation of external wall insulation was relatively cheap as the property was a bungalow with good access and no requirement for scaffolding.
- The bungalow is heated by on-peak electricity which is expensive.
- Solid wall insulation substantially improved the thermal performance of the walls.

5.3 Mitigating against future fuel poverty

5.3.1 Retirement and old age

People who are retired are likely to stay at home and need more warmth. Without warmth, they will become more and more susceptible to cold related illnesses, such as strokes, respiratory diseases, cardio-vascular disease, trips and slips as they grow older. This is all well-documented and evidenced in the literature.¹⁴ By investing in improving the ability of a home to remain warm, those living there will have better health outcomes and be more likely to stay in their homes as they grow older.

This is not only a health argument, but also a financial argument for using solid wall insulation as a way to improve homes. The cost of installing exterior wall insulation on a

¹³ As a comparison, EST average savings figures for solid wall insulation in an electrically heated bungalow are £6.35 per week (based on a typical two-bedroom electrically heated bungalow, with economy 7 storage heaters, an electric immersion heater and average standard electricity tariff of 13.52p/kWh and an off peak economy 7 tariff of 6.68p/kWh; correct as of January 2014 and valid for 2014).

¹⁴ The Health Impacts of Cold Homes and Fuel Poverty – Marmot Review Team, pub. Friends of the Earth and Marmot Review Team, May 2011

bungalow would be £7,000 to £12,000 which is roughly equivalent to the cost of staying in a care home for three to five months. If people are able to stay at home, their care costs are generally much lower. It makes sense to invest in the home if it will help people stay at home.

5.3.2 Consequences of taking benefits as comfort

It is evident that householders will take the benefit of solid wall insulation in comfort as well as in fuel savings. Previous research by the Centre for Sustainable Energy¹⁵ has shown that the range of benefit may vary right across the spectrum from taking the benefit entirely through comfort to taking the benefit entirely through financial savings. This has consequences for any fuel poverty programme that might use the Green Deal or similar mechanisms involving a golden rule. Householders could be driven deeper into debt if they were taking the benefit mainly in comfort, but required to pay for the cost of the solid wall insulation.

To guard against this scenario, it will be important to undertake a full assessment of each household's circumstances and assess the likely patterns of heating and costs once insulation is installed. This will allow for a more realistic assessment of whether a household would benefit from a measure and how the golden rule needs to be set in their house. Dynamic Engine (the Energy Saving Trust's model for assessing energy efficiency measures) could help with this assessment.

5.4 How have low income households accessed solid wall insulation in the study?

Low income households are far more reliant on local schemes promoting and supporting

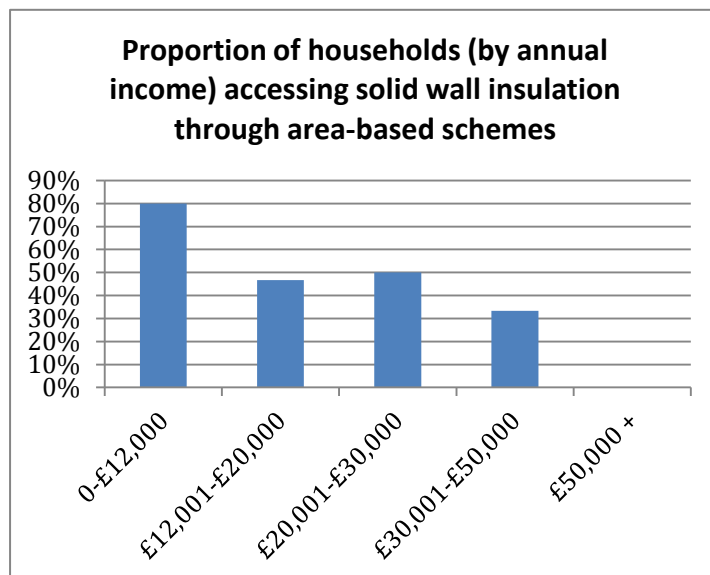


Figure 8: area based scheme income profile

solid wall insulation in their area. For households with an annual income under £12,000, 80% were accessing solid wall insulation through an area-based scheme supported through HEEPS-ABS and/or ECO.

With limited access to savings and, perhaps, a reluctance to use loans or Green Deal mechanisms, it would appear unlikely that fuel poor households will have much chance of using solid wall insulation to address fuel poverty unless financial mechanisms and schemes, like ECO and HEEPS-

ABS, are in place to support the fuel poor..

¹⁵http://www.cse.org.uk/downloads/file/evaluation_of_solid_wall_insulation_in_fuel_poor_households_in_private_sector_2012.pdf

A few low income households have installed internal wall insulation on a DIY basis. It seems likely this will continue unless alternatives are available, in which case it may be best to encourage higher standards of DIY rather than allowing it to continue unsupported.

5.6 Rural and remote properties offer significant problems but also opportunities

The study included respondents in more rural locations who tried to organise work themselves and found difficulties getting installers who are prepared to carry out insulation work. However, in Orkney, the local authority managed and provided oversight of the local solid wall insulation scheme. A number of successful installations took place in this situation which were well received by the householders.

This suggests that the involvement of a co-ordinating body like the local authority can facilitate installations in rural areas. Local authorities can provide support to identify homes which may best benefit and help householders through the process of accessing finance, getting the correct permissions, and choosing installers.

5.7 Lack of perceived clarity on how to treat solid walls in traditional homes may hold back social landlords

In discussion with South Seeds community group in south Glasgow, it became apparent there was a large amount of tenemental housing which belonged to the local housing association. There were opportunities to improve this housing stock using solid wall insulation but these were not pursued because the housing association was reluctant to install solid wall insulation without greater clarity on appropriate techniques for insulation in traditional buildings. They were particularly concerned with the issue of interstitial dampness.

Discussions with Historic Scotland at a later date suggested that these issues can be resolved with current technology. However, the insulation standards required by ECO and other funding schemes do not appear to be flexible enough to allow for appropriate insulation techniques for these building types and this may affect what funding is available to treat traditional buildings.

6 Case studies and video diaries

Households participating in the study were asked whether they would be willing to be case studies and if they would keep a video diary of their home having solid wall insulation installed.

The case studies and video diaries, along with additional photographs, are kept as a resource by the Energy Saving Trust

6.1 Case studies

Seven households agreed to be case studies. They feature:

- Internal wall insulation in an Edinburgh New Town flat.
- A DIY internal installation at an East Lothian cottage.
- External wall insulation for a Dorran style bungalow in the Hebrides.
- External wall insulation and getting planning for a Dorran style bungalow in the Scottish Borders.
- External wall insulation and photo-voltaic panels in Cumbernauld, using Green Deal.
- External wall insulation and community heating for an Aberdeen multi-storey flat.
- Insulating a 200 year old cottage in the Orkney Isles with external wall insulation.

The emphasis of all the case studies is to highlight that solid wall insulation is viable with a wide range of architectures, that it is not as daunting as it might initially seem, and that there are significant benefits to be gained from installing solid wall insulation.

6.2 Video diaries

Householders were asked to record their experience of installing solid wall insulation. Of the six households who volunteered, two households completed video diaries. For the remainder of potential diarists, their timescales for insulation proved not to fit with the study's requirements, changes to ECO being one factor that affected timescales. One completed diary was about DIY internal wall insulation and the other was external wall insulation done professionally.

Both diaries were professionally edited and this has provided two useful accounts of installing solid wall insulation.

While guidance was provided to householders on making a video diary, the results and styles were very different. In the internal DIY installation, the diarist concentrated on providing a step by step guide to installing internal wall insulation, rather than reflecting on their own experience. The external insulation diarist gave a very clear account of the installation with useful comments on the process, but camera angles and occasional wind noise gave the diary a raw edge.

In retrospect, while the technology is available to nearly anyone who wishes to create a video, and guidance was provided, some basic training in creating a storyline and how to use a range of shots to provide an engaging narrative would have enhanced the end products and possibly encouraged more people to create video diaries.

7 Conclusions and recommendations

There are a number of actions that could be taken to increase the uptake of solid wall insulation. None of these represent a 'silver bullet' on their own, but taken together, would shift the environment in which householders make decisions, allowing greater numbers of people to install solid wall insulation.

The main points that have come out of the study and recommendations on how to address these points are covered in the following paragraphs.

7.1 Those who are planning or installing solid wall insulation are positive about its benefits

Respondents, who were at different stages of planning or installing solid wall insulation, had clear expectations that solid wall insulation would be worthwhile. They also indicated they would prioritise solid wall insulation over other major household expenses if they had the money to invest. It is also demonstrated by the enthusiasm of people who have had solid wall insulation installed. Awareness of solid wall insulation remains a key barrier to uptake; the Energy Saving Trust identified that 45% of consumers are not aware of it as an option.¹⁶

7.1.1 Recommendation: promotion

The case for installing solid wall insulation needs to continue to be articulated to the public. This needs to be done across a range of opportunities that will allow the public to understand the benefits and hear from people who have installed solid wall insulation (e.g. through the Green Homes Network, information from Home Energy Scotland or encouraging and supporting local community groups to promote solid wall insulation).

7.2 Cost is the biggest barrier to uptake

The cost of solid wall insulation is a major barrier to greater uptake of solid wall insulation and has limited how many people install. The presence of ECO, HEEPS-ABS and Green Deal allowed households to install solid wall insulation that would otherwise have not considered it affordable. However, recent changes to ECO have put into question some installations, which are now on hold.

48% of households reported they were using savings or loans to help pay for installations, however often this was bolstered by a grant or subsidy. One householder commented that the financial benefits aren't as obvious as the benefits of warmth, but when the grant was raised to £18,000 and he had to pay the remaining £2,000 it became a viable proposition.

7.2.1 Recommendation: cost

Householders continue to need subsidies to make installation viable. When asked what would prevent them from completing their installation, cost or lack of grant was the most often cited issue (11 out of 24 replies). There is a need to make the case for continuing subsidies to funders such as government. There is also a need to ensure that householders

¹⁶ At home with energy: a selection of insights into domestic energy use in Scotland. Pub. Energy Saving Trust 2010

understand likely savings and factor these into positive decisions on investing their own funding in solid wall insulation

7.3 Customer experience is an issue

Householders' experiences of installers are extremely varied. Some households have had very positive experiences while others have been very disappointing. These differences are not always that a particular firm is better than another at customer service. In one instance, separate squads of workmen on different jobs from the same company were getting very different comments from the householders in the survey. Households in one street were very positive about the installation work, while at the other location householders considered that the work was being done to poorer standards.

Where householders have praised installers, it appears to be because they provided clear information on what they were doing and did the work in a neat and tidy manner. Good communication on and off site is what householders valued from installers. Local firms also tend to come in for more praise, rather than larger companies that may not have a stake in the local community.

The themes that have consistently cropped up, where households have complained are:

7.3.1 Installers appear uninterested in one-off and/or remote locations

Householders in remote locations or wanting a one-off service find it difficult to get installers to commit to work.

“Being a one-off in the Scottish Borders, trying to get an installer to do one house is proving very difficult regardless of the need.” Or “Immediate difficulties? Finding a builder who was qualified and experienced in this type of work”

While rurality does come with difficulties of transportation and access to services, it would seem that ECO has worked against one-off installations. Installers have noted that ECO is very bureaucratic; smaller companies are therefore less likely to become involved and could not offer the subsidies that larger companies could. To compound the situation, with larger companies chasing the bigger contracts offered through area-based schemes, one-off jobs will be unattractive. *“One of the companies which agreed to do so (i.e. install solid wall insulation) at no cost to us (circa £7K cost) phoned three days later to say, sorry, have 251 houses in Fife so doing them on ECO funding and dropping you!!”*

Local builders or local plastering and rendering companies generally filled the gaps where bigger companies were reluctant to take on jobs (or would have proved too expensive) in remote locations. This has implications for any considerations about how the building sector might be encouraged to provide more installations in remote or rural areas.

7.3.2 Communication before installation takes place is poor

Some householders were very unclear about when work was due to start, or what would happen next. They might be waiting for a survey or have had a survey and be waiting to hear what happens after a survey. One householder cited the example of being told her internal wall insulation would go ahead, but had no idea when or what preparation would be required

of her prior to installing internal wall insulation. *“We’ve not heard anything since we were measured up and checked for finance”.*

7.3.3 Communication on-site is poor

On-site communication varied tremendously; in part this may be a reflection of the personalities involved. However, complaints are that workmen would come and go with no prior warning and the householders do not know what is happening or why.

7.3.4 Households want clear timelines

Many people are unclear about what is happening and when. This is a regular complaint *“No progress whatsoever, no communication whatsoever”* or *“funding has been given, we are just waiting for an install date now....”*

7.3.5 Snagging issues and tidying up are not addressed

A number of households have observed that finishing up and completing the job does not happen as it should. *“The insulation and roughcasting was completed in mid-December (6 weeks ago). There is still an outstanding snagging list of minor completion items including final clean-up”.*

7.3.6 Workmanship may be a concern

There have been few complaints about workmanship as such, but installing solid wall insulation is a specialist job working to BBA¹⁷ approved materials and systems. It requires high standards of workmanship and attention to detail to ensure that insulation is applied in a way that ensures it works effectively and does not lead to problems later.

Changeworks employed a Quality Assurance Inspector to inspect work as it was taking place on the HEEPS-ABS schemes they were involved with and this appears to ensure that any defects can be spotted and rectified early and that workers are aware that their work is being scrutinised and behave accordingly.

7.3.7 Signing off work is not done properly

Some householders have expressed concern with how work is signed off. In one situation the homeowner, who was paying for external wall insulation through Green Deal and savings, was away when the work was completed. The householder’s sister who lived nearby was asked to sign off the work while it was dark outside.

It turned out when the homeowner returned that: guttering was poorly fitted leading to water draining down external walls, the drain pipe had been fractured where it entered the ground and on removing scaffolding the external render had been damaged so it no longer formed a weather-tight skin over the insulation at the damage point. (Note: in fairness to the contractor these points were eventually rectified.)

7.3.8 Recommendation: improving the installer experience

The Energy Saving Trust has a tool, the Renewables Installer Finder Tool, which allows householders to provide reviews of the installers that they use for renewable technologies. This could be expanded to include solid wall insulation to allow householders considering

¹⁷ The British Board of Agreement provide construction product approvals

this measure to see which installers have given good service and will, over time, encourage higher standards of work

Where possible customers should be given support for effective sign off of works. At present the customer sign off processes in place are inadequate and/or not always being implemented properly. Householders have asked for a way to provide feedback. *“I would also like to have been asked to complete a customer satisfaction survey for submission to both the installer and funding agency to ensure a better future service was provided.”*

The use of independent Clerks of Works or similar should be encouraged. Changeworks used a quality assurance inspector who checked installations on an ongoing basis to ensure that work was being done to standard. Being on site several times each week allowed the inspector to check on aspects like:

- Materials: being stored appropriately and not left outside uncovered overnight.
- Health and Safety: that the scaffolding and general working conditions were kept in a safe manner.
- Workmanship: where poor workmanship had taken place, it was identified and rectified.

There is clearly a need to work with the industry to improve customer care standards and develop training. The obvious conduit for this would be the National Insulation Association.

7.4 Community groups can reach parts of the public other groups can't reach

Kirkmahoe and Fintry demonstrate that local community groups have the capacity to reach into local communities to an extent that regional advice centres will not reach. They are very knowledgeable about their communities and, having built up a reputation for delivering benefit in their local community, are trusted sources when promoting new ideas.

In the case of Kirkmahoe, they were able to bring in an advisor from the South East Home Energy Scotland advice centre for an event in the village hall. This event showcased the benefits of solid wall insulation and the area-based scheme that could provide solid wall insulation for local homes. This attracted considerable interest and led to installations through the area-based scheme.

Fintry Development Trust had made their reputation through generating community benefit from a local wind farm; they have used revenues from the wind farm to address energy use in the community. Thanks to their strong track record, they attracted funding for a Scottish Government pilot¹⁸ to install solid wall insulation and monitor energy use in local homes.

During the study it became apparent that the situation for rural community groups was very different than that for urban groups. It was difficult to find urban groups with an interest in solid wall insulation. The reasons for this difference are not clear, but may be affected by the

¹⁸ Culcreuch Estate External Wall Insulation Project Report, prepared by Matthew Black, FDT 2012

fact that rural communities tend to be more closely knit, more stable and better geographically defined.

There may be opportunities for community groups to promote mechanisms like the Green Deal to help householders find ways to pay for solid wall insulation. However, community attitudes to the Green Deal and other funding streams, while out of the scope of this study, may be mixed for a number of reasons such as:

- Volunteer fatigue.
- Lack of resources.
- Reputational risk.
- Aversion to perceived complexity.
- Other priorities.
- Need for a clearly defined role.

In order to counter these hurdles, any offering that community groups might promote should have clear community benefits and be straightforward to promote.

7.4.1 Recommendation: community groups

Continue to make and develop contact with local community groups, through community liaison officers and outreach workers based in the Home Energy Scotland advice centres. Encourage community groups to consider solid wall insulation as a potential offering for local people and ensure these offerings have local relevance.

7.5 Home Energy Scotland advice centres are a valuable resource

The Home Energy Scotland advice centres are seen as respected and trusted sources of advice. This is important in the context of solid wall insulation as there are many organisations who, depending on their involvement at any point in time, are offering advice of varying degrees of depth. This can be confusing for the customer and might lead to them receiving poor quality advice.

As the graph below shows, the advice centres are the organisations that most influenced the householders in this study and the most common source from which they first heard about solid wall insulation.

Nearly all the householders in this study were recruited through previous contact with the advice centres. This makes it a selective sample, but even where households are installing solid wall insulation as a one-off, not connected to any particular programme or promotion, 33% (5 out of 15) of that group cited the advice centres as the source of advice that most influenced them to consider solid wall insulation and other influences were less prominent.

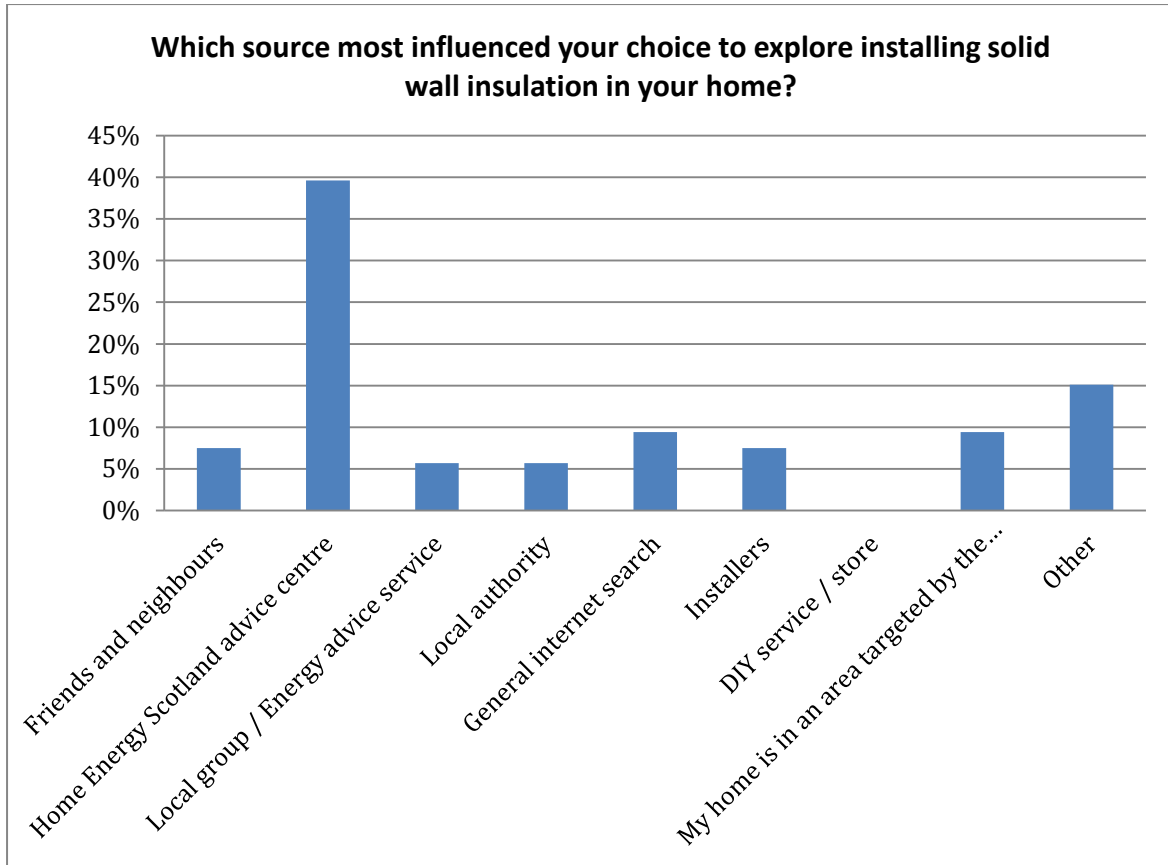


Figure 9: influencing sources

The benefit of the HES advice centres is that they can provide consistent advice and information across Scotland which has been rigorously checked. Given that householders have expressed a range of views on whether the advice and information they have received from a variety of sources was adequate, it would be a sensible move to review the advice the advice centres provide and to further promote the advice centres as a place for impartial, accurate, clear and detailed advice.

7.6 Warmth is even more important than energy savings for householders

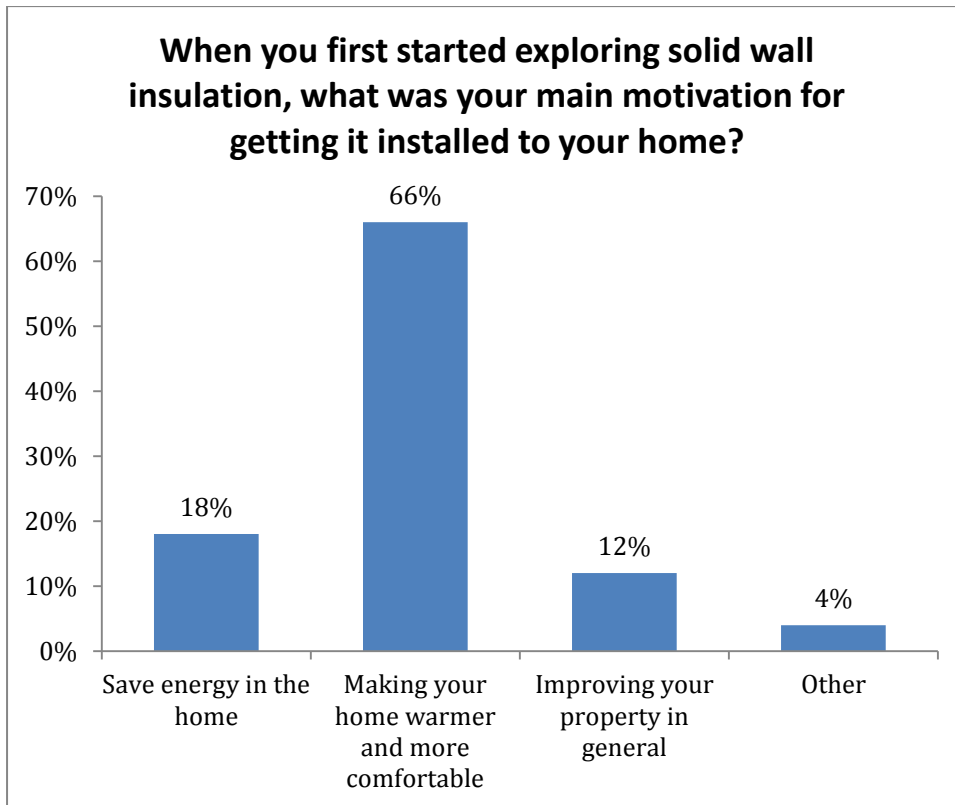


Figure 10: motivations

The most important thing for householders is warmth and comfort; this is shown in figure 10 above which displays data from the follow-up survey.

Other questions in the study showed similar results. A question was asked in the initial survey: “For you, what is the main reason you are exploring installing solid wall insulation in your home?” and 58% identified “make your home warmer”, while 34% identified “save on your energy bills” (and no other reasons scored above 2%). The results varied depending on how the question was framed or when it was asked, but the ranking remains the same: energy savings are important, but comfort is more important. This has been a consistent theme in the study, borne out by comments from householders and in responses to questionnaires. This has implications for the way that solid wall insulation is marketed and the messages that are used when talking to the public.

7.6.1 Recommendation: market the warmth aspect of solid wall insulation

The benefits of warmth and comfort must be emphasised in the promotion of solid wall insulation. This should be considered in all marketing about solid wall insulation as a primary benefit.

At present the emphasis on solid wall insulation is more towards the financial benefits and the technical aspects of installing solid wall insulation. This is exemplified on the Energy

Saving Trust's website (see <http://www.energysavingtrust.org.uk/scotland/Insulation/Solid-wall-insulation>) which discusses solid wall insulation in terms of:

- How much could you save?
- Internal or external insulation?
- Keeping the costs down.
- Regulations.

Given that what people say they want is warmth, this also needs to be covered and as a result of this study appropriate new content is being developed.

7.7 For many, solid wall insulation transforms their homes

Results from in-depth interviews and comments like *'best thing we did'* and *"we would advise anybody to have this work done"* testify to the positive improvements that solid wall insulation can make to a home. For some people the experience has been totally transformational. This was particularly the case in all three in-depth interviews with households from Orkney, where each household noted that the house could now be heated to an acceptable temperature and that cold and dampness were no longer continuing problems.

In one household the occupant now had a warm and dry bedroom, rather than the damp bedroom she had previously endured. In another the external walls of the house were no longer damp to the touch inside the living room. In the last home, the occupier cared for a man with learning difficulties who no longer got up in the middle of the night to wander around a house that was only just warmer than the outside.

These experiences point to the ability of solid wall insulation to transform homes and suggest that a targeted approach could identify many properties that would benefit similarly.

7.8 Neither planning consents, building warrants nor disruption are show-stoppers

In area-based schemes it is usual for the installer to organise building consents. They are able to get economies of scale and have the experience in knowing how to prepare and submit drawings.

With one-off installations, householders may need to become more involved in the process of planning or obtaining building warrants. It might be envisaged that this would be an obstacle; however, this experience has been very positive for householders in this study. One householder who had been concerned about planning commented on how straightforward and positive his experience had been. Another householder, who used an architect to make the necessary drawings pointed out that *"planning protected us, ensuring quality materials and workmanship"*.

Similarly, while many householders had concerns about the possible mess, it was not such a major concern for people that would stop installation going ahead.

7.8.1 Recommendation: planning and building consents

Messages from the Energy Saving Trust about planning, building consent and disruption should be reassuring as well as realistic. Householders should be reassured that while planning consent and building control are necessary (in many circumstances); it is a straightforward and potentially beneficial process, especially when given professional support.

7.9 Retirement presents opportunities for solid wall insulation

People who have recently retired are a target audience. Several people commented during in-depth interviews that they had decided, once retired, that they needed to have a home that was warm. They had previously been at work and did not need warmth during the day but now they do. Some people who retire receive a lump sum as part of their pension which may provide an opportunity to make their home warmer. Announcements by the Chancellor of the Exchequer in the Budget (March 2014) will allow people much more discretion over how they use their pension savings. This opens up the possibility that people will consider investing in energy efficiency on retirement where the opportunity is presented to them in a responsible manner.

People will age through their retirement and their need for warmth will increase, and as they become more sedentary they will become more susceptible to cold-related illnesses. Countering this will require a more intensive heating regime, making solid wall insulation more cost-effective. At some point they may move out of their homes because of ill health and move into a care home, when their living costs are likely to escalate significantly. For those elderly people living in certain types of properties, solid wall insulation potentially has a role to play in helping people stay in their homes and avoid or delay the trauma, cost and disruption of moving into a care home.

7.9.1 Recommendation: on retirement and old age

Target the benefits of solid wall insulation to retired and newly retired householders. Highlight that solid wall insulation and energy efficiency will make their homes warmer now that they are at home more often.

Encourage householders to consider solid wall insulation as something that may help them retain good health into old age and investigate opportunities to tap into pension funds as a means to invest in energy efficiency.

7.10 The Energy Saving Trust has the ability to identify and target those homes that would most benefit from solid wall insulation

Home Analytics provides the Energy Saving Trust with the opportunity to identify those homes that would be most likely to be suitable for solid wall insulation. Dynamic Engine can model energy consumption in a home to understand how much benefit is likely to come from solid wall insulation and any other measures.

Taken together these two tools provide the Energy Saving Trust with the opportunity to identify those homes that are most likely to be suitable for solid wall insulation and then go on to demonstrate the benefit to each householder. This would allow those houses which are going to get the most benefit from solid wall insulation (and hence the quickest paybacks) to

be prioritised. Being able to show the householder the likely benefits and consequences for their heating regimes would be a highly persuasive tool to encourage more householders to invest in solid wall insulation.

7.10.1 Recommendation: Home Analytics and Dynamic Engine

Use these tools to prioritise homes that would most benefit from solid wall insulation and inform a discussion with identified householders on the likely benefits that it would deliver.

7.11 The Energy Saving Trust can tell people what information is available, and from where

Householders have provided very varied comments on what information they have received, from whom and whether it was adequate. However, as observed above, the Home Energy Scotland advice centres are the top source for information, with high levels of influence among the public. This variation suggests that while a “one size fits all” approach is not necessarily suitable, but it would be helpful to have a single portal from which all the necessary information could be accessed, to the breadth and depth each individual required.

Householders have different requirements in terms of what information they need to install solid wall insulation. A householder who is installing internal solid wall insulation themselves may look for very detailed information such as the appropriate methods and techniques to avoid interstitial dampness in a traditionally constructed building. Alternatively, some householders’ requirements may be far simpler, limited to wanting to know the date when their installation will take place, being provided with an overview of what will happen, and any instructions or details specific to their home.

7.11.1 Recommendation: information

Ensure everyone has access to clear information and advice to whatever level of detail they need. The Energy Saving Trust will review the advice given out across all their media and check that it is providing both consistency and that there are suitable links to other sources of expertise such as Historic Scotland, local authority planning and building control departments.

7.12 A more coordinated approach would improve the customer journey

A quick Google search on ‘solid wall insulation’ will reveal many organisation and companies that wish to promote solid wall insulation. It is not always clear what is the best or most appropriate advice. This confusion of advice and information can continue throughout the customer journey from the point of considering solid wall insulation right the way through to installation and dealing with post-installation snagging issues.

In this study the Home Energy Scotland advice centres have come out as the most trusted source of information and advice and continued promotion of the impartial free service that they provide will help those considering solid wall insulation navigate this complex landscape. There is also the potential for Home Energy Scotland advice centres to take on a more central role in taking their customers through the process of installing solid wall insulation. This would be particularly beneficial at the points where the installer becomes involved, such as arranging surveys, agreeing dates for work to commence and providing answers to queries on timescales.

However it should also be noted that this would require the advice centres to develop their skills in managing installers. This may require additional staff that are comfortable and effective within the insulation business environment.

7.12.1 Recommendation: the customer journey

Continue to promote the Home Energy Scotland advice centre network as a source of clear, trusted and free advice on solid wall insulation. Consider if the network could take on the role of co-ordinating the customer journey for those customers who would find this useful.

7.13 Solid wall insulation provides an important opportunity to help people experiencing fuel poverty

Solid wall insulation can have a transformational effect on homes. In this study Dorran bungalows and traditional stone-build cottages in particular have been substantially improved by installing external wall insulation. Many of the homes that were transformed were off the gas network and thus paying far more for fuel than those with gas central heating. This enhances the financial benefit of installing solid wall insulation.

The opportunities to address fuel poverty are discussed in section 5 of this report. However it should be noted that the testimony and personal experience of householders has clearly shown the benefits of solid wall insulation and there is every reason to believe that these benefits extend to those who are demonstrably living in fuel poverty.

7.14 There are opportunities to develop skills within the building sector

Historic Scotland have developed a training SVQ (level 3) in insulation. This is aimed at insulating traditionally constructed buildings. It provides an opportunity to up-skill installers and may also be a very useful source of information for householders who are considering a DIY installation. Note: while DIY has historically been discouraged, it does nevertheless happen and it may be preferable to encourage high standards among DIY rather than not support it at all.

In addition, one of the regular complaints that householders voice is that they are not told by installers what is happening, either when work is in progress or in the lead up to installation. This is a matter of developing customer service skills among the installer workforce and having set protocols for ensuring good communication with households.

7.14.1 Recommendation: skills

Work with Historic Scotland to develop training opportunities for installers and consider whether this could be available to individuals contemplating DIY, in discussion with Historic Scotland.

Work with installers and the National Insulation Association to develop communication skills for installers and protocol so that householders will always be informed on what is happening, when it will happen and whom to contact to discuss any issues.

8 Discussion

The study has yielded insight into the barriers that are discouraging uptake of solid wall insulation as well as the motivators for encouraging uptake. We now have a clearer understanding of what can be done to create a more positive environment and a sense of how this might be implemented. The next steps will be to decide what to implement and how that can be achieved.

The research used the Scottish Government's ISM behaviour change tool to understand what needs to change in order to encourage and enable more households to install solid wall insulation. The tool has proved an effective way to frame an analysis and to keep that analysis focused on understanding the different underlying factors that can affect householders' decisions.

The results have provided a source of evidence on where changes can be made. The sample comprised 53 households who had already expressed an interest in solid wall insulation, or who had already installed it, and were therefore more likely to have positive perceptions about its potential and actual benefits. Nonetheless the findings about these households' key motivations, perceptions of barriers and experience of the installation can be used to inform work to increase the uptake of solid wall insulation among targeted groups of households who are not currently considering it.

The report draws 14 conclusions about the uptake of solid wall insulation and makes a number of recommendations for consideration to address these conclusions. Some of the difficulties with installing solid wall insulation are difficult for the Energy Saving Trust to directly address (e.g. rules governing ECO), so the recommendations and conclusions have focused on those opportunities which are more likely to be within the Energy Saving Trust's gift.

The main barrier is cost, so making sure suitable mechanisms are in place to help people pay for solid wall insulation will always be an important consideration, as will marketing solid wall insulation. Marketing will require careful presentation of the benefits to people, providing clear and positive messages. After all, while most people will be prepared to take a punt on a low energy light bulb, they are going to be far more cautious about investing large sums of their money in solid wall insulation. Many people may initially see it as an extra expense rather than a way to benefit.

The study involved people who were already planning or installing solid wall insulation, but with previous research¹⁹ suggesting 45% of consumers are unaware of solid wall insulation, there is much work to be done in letting people know about it. Positive messages about solid wall insulation will help spark greater interest, and with such a large proportion of people being unaware of solid wall insulation, there is an opportunity to set the agenda regarding the public's perceptions.

¹⁹ At home with energy: a selection of insights into domestic energy use in Scotland. Pub. Energy Saving Trust 2010

Many of the other barriers that have been identified relate to perceptions, experiences or how solid wall insulation is presented to the public. It is here that the Energy Saving Trust has the opportunity to shift attitudes and help reinforce new attitudes. The study has found that, once they know about solid wall insulation, people are interested in it and consider it a priority among items of major household expenditure. It found that householders are receptive to installing solid wall insulation when they retire. It has also shown that people are looking for warmth rather than cost savings, but both are very important. These suggest there are specific opportunities to engage people over solid wall insulation.

Two broad areas emerge where improvements are needed and these may provide opportunities for the Home Energy Scotland advice centres. The study found that the householder's experience of installers varies tremendously. The study has also found that the depth and breadth of information that householders need is not always made available. The HES advice centres are highly valued by householders and this provides an opportunity for HES to provide leadership in promoting solid wall insulation to the public and guide the customer journey.

Finally, solid wall insulation provides an opportunity to lift families out of fuel poverty, and improve their sense of well-being through transforming houses into warm and comfortable homes that are cheaper to heat. This has particular relevance for the retired and elderly who tend to have greater requirements for heat. With limited access to savings and, perhaps, a reluctance to use loans or Green Deal mechanisms, it would appear unlikely that fuel poor households will have much chance of using solid wall insulation to address fuel poverty unless financial mechanisms and schemes, like ECO and HEEPS-ABS, are in place to support the fuel poor.

Overall the study has identified a number of ways to make solid wall insulation a more attractive and accessible proposition for the public and suggests that Home Energy Scotland is very well-placed to lead this process.

Appendix 1: Initial and final questionnaires used in the study

1.1 Initial questionnaire

Thank you for agreeing to do this survey. The questionnaire will take about 10 minutes to complete. Questions with an asterisk besides them are mandatory, the remainder are optional. Before you start please read the following data protection statement.

Over the period October 2013 to March 2014, Energy Saving Trust is gathering information from a number of households on their experiences of installing solid wall insulation. We are gathering this information through questionnaires, conversations case studies and video diaries.

Energy Saving Trust is gathering this information so that it can get a better understanding about how to encourage more people to install solid wall insulation. The study is funded by the Scottish Government and Energy Saving Trust will therefore share the findings with the Scottish Government.

The data we gather will be collated to provide summary information that highlights what can be put in place to encourage more people to install solid wall insulation. We will not pass on your personal information to third parties or publish information that identifies individuals except in the following circumstance.

We may wish to provide case studies or video diaries showing a particular household's experience. Where this is the case, we will ask your specific permission, at the time, to feature you in the case study or video diary.

Question 1:* What is your name?

Question 2: *What is your postcode?

Question 3: * What type of Solid Wall Insulation are you considering installing or have already installed? Please circle the answer that applies to you.

Internal Wall Insulation

External Wall Insulation

Both

Not sure yet

Question 4: * Are you aware of any other households that have or are about to install solid wall insulation? Please circle the answer that applies to you.

Yes No

Question 5: * What stage are you at with your installation of solid wall insulation? Please circle the answer that applies to you.

Exploring or planning how to do it

Waiting for survey / assessment

The work is confirmed and waiting to start

Installation is underway

Installation is complete

Question 6: * When did or do you expect installation of solid wall insulation to begin?

Question 7: * How will you be financing the installation? (circle all that apply)

Savings Loan Grant / Government funding

Green Deal Re-mortgage Not sure

Other.....

If you are using a grant or government funding, please write the name of it below.

Question 8: Approximately what do you expect the total cost of installation to be? (if not sure please leave blank)

Question 9: * From whom did you first find out about Solid Wall Insulation? Please circle the answer that applies to you.

Friends and neighbours

Home Energy Scotland advice centre

Local group / Energy advice service

Local authority

Question 13: * To what extent do you think that the addition of solid wall insulation to your home will: Please tick as applicable

	To a great extent	To some extent	To a little extent	To no extent	Not thought about it
Make your home warmer					
Make your home feel more comfortable					
Add value to your home					
Enhance the look of your home					
Refurbish, redecorate your home					
Reduce your impact on environment					
Save on your energy bills					

 Question 14: * For you, what is the main reason you are exploring installing solid wall insulation in your home? (circle only one answer)

Make your home warmer

Make your home feel more comfortable

Add value to your home

Enhance the look of your home

Refurbish, redecorate your home

Reduce your impact on environment

Save on your energy bills

Other.....

Question 15: * Thinking about other people, what do you think the main reason is for others to install solid wall insulation? (circle one only)

Make their home warmer

Make their home feel more comfortable

Add value to their home

Enhance the look of their home

Refurbishing and redecorating their home

Reducing impact on environment

Saving on your energy bills

Other.....

 Question 16: How much do you think the installation of solid wall insulation will save on your energy bills per year?

 Question 17: * How much disruption to your home do you think the installation of solid wall insulation causes? Please circle one answer

A large amount Some

A little None

Not thought about it

 Question 18: * To what extent are (or were) the following a concern to you when you thought about installing solid wall insulation? Please tick as appropriate

	To a great extent	To some extent	To a little extent	To no extent	Not thought about it
Disruption during install					
Cost of installation					
Uncertainty about bill savings arising					
Uncertainty about impact on appearance of your					
Damage to your property					

Question 19: If you have indicated that anything is or was a concern to a great or to some extent, please describe this here:

Question 20: * To what extent are you (or were you at outset) aware of the details of the installation process, in terms of the following (please tick as appropriate)

	To a great extent	To some extent	To a little extent	To no extent	Not thought about it
How long it will take					
What materials will be used					
What decisions, if any, you may have to make in relation to the install process					

Question 21: If you have indicated that anything is or was a concern to a great or to some extent, please describe what you were concerned about here:

Question 22: * Have you sought any advice or information in relation to the installation of solid wall insulation since you first decided to seriously look at installing the insulation? Please circle as appropriate.

Yes No

Question 23: If you answered Yes, could you please briefly describe the nature of the advice you have sought and who from

Question 24: * To what extent do you feel that you: Please tick as appropriate.

	To a great extent	To some extent	To a little extent	To no extent	Not thought about it
Need to have technical knowledge relating to your installation?					
Have the knowledge to be able to make decisions during the installation process (e.g. discussing details, minor changes with contractors)?					
Have knowledge of the different					

technologies that can be used for Solid Wall Insulation (e.g. different types of insulating materials that could be used, different installation methods etc.)?					
---	--	--	--	--	--

Question 25: * How confident are you that the installation of solid wall insulation will be worth the investment in time and money? Please circle one answer.

Very confident Confident Unconfident

Very Unconfident Not thought about it

Question 26: Could you please explain your answer

Question 27: * For some homeowners, the following items can be barriers to installing solid wall insulation (either internal or external). How concerned are you about these?

	Very concerned	Concerned	Un-concerned	Very un-concerned	Not thought about it	Does not apply to me
Moving sheds, conservatories, fences etc.						
Moving satellite dishes, hanging baskets, utilities meters						
Damage and mess to gardens or rooms						
Pipework, gas flues, cables						
Internal electrics and other cabling						
Moving furniture , pictures etc. in rooms						

Question 28: Please describe any concerns you have here:

Question 29: If there are immediate difficulties you have in relation to the installation, please describe these here:

 Question 30: If you are still planning your installation, what is or are the key things that could prevent you from completing your proposed installation of solid wall insulation? (write in)

Question 31: If you have completed you installation, or are ready to install, please describe the key factors in ensuring that the install goes ahead?

 Question 32: * Which of the following energy efficiency measures have made to your home? Please tick as applicable.

	Already in place when I moved in	I have installed it	Not Installed	Don't know
Loft insulation				
Draft-proofing				
Fitting of efficient boiler / heating system				
Solar panels (electric or hot water)				

Question 33: If you have previously installed an energy efficiency measure (e.g. loft insulation), could you describe the extent to which the following factors influenced your decision to install (leave blank if not applicable):

	To a great extent	To some extent	To a little extent	To no extent	Not thought about it

Making your home warmer					
Making your home more comfortable					
Adding value to your home					
Enhancing the look of your home					
Refurbishing or redecorating your home					
Reducing your impact on environment					
Saving on your energy bills					

 Question 34: * To what extent do you agree that you are: Please tick as applicable

	Agree Strongly	Agree slightly	Disagree slightly	Disagree Strongly	Not sure
Environmentally focused					
Cost conscious					
Energy saving focused					
Concerned about the appearance (of your property)					

Question 35: * Would you be willing to take part in a video diary to record your experiences of installation? Please circle as applicable

Yes No Possibly

Question 36: * Would you be willing to take part in a telephone call with a researcher to share your experiences of installation? Please circle as applicable

Yes No Possibly

Question 37: * How many adults (18yrs+) live in your home

Question 38: * How many of the adults in your home are employed:

Question 39: * How many of the adults in your home are retired:

Question 40: * How many of the adults in your home are in full time education:

Question 41: * How many of the adults in your home are unemployed:

Question 42: * How many of the adults in your home are unwaged:

Question 43: * How many children (0-17yrs) live in your home

Question 44: What is your approximate total household annual income (including benefits)
Please circle one answer.

£0 to £12,000

£12,001 to £20,000

£20,001 to £30,000

£30,001 to £50,000

£50,000 or more

Many thanks. You have completed the first survey. Please return it in the stamped and addressed envelope.

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1.2 Follow up questionnaire

Thank you for agreeing to do this survey. The questionnaire will take about 10 minutes to complete. Questions with an asterisk besides them are mandatory, the remainder are optional. Before you start please read the following data protection statement.

Over the period October 2013 to March 2014, Energy Saving Trust is gathering information from a number of households on their experiences of installing solid wall insulation. We are gathering this information through questionnaires, conversations, case studies and video diaries.

Energy Saving Trust is gathering this information so that it can get a better understanding about how to encourage more people to install solid wall insulation. The study is funded by the Scottish Government and Energy Saving Trust will therefore share the findings with the Scottish Government.

The data we gather will be collated to provide summary information that highlights what can be put in place to encourage more people to install solid wall insulation. We will not pass on your personal information to third parties or publish information that identifies individuals except in the following circumstance.

We may wish to provide case studies or video diaries showing a particular household's experience. Where this is the case, we will ask your specific permission, at the time, to feature you in the case study or video diary.

Question 1: Please write your name.

Question 1a: What is your postcode?

Question 2: Please tick the box that best describes your solid wall installation?

Part of a promotion / programme installing insulation to properties in your area	
Part of a promotion / programme installing insulation to individual properties	
An installation not connected to any particular programme / promotion	
A DIY installation	

Question 3: Has your installation progressed since November 2013?

Yes, but is still work in progress	
Yes, it is now completed	
No	
It was completed by November 2013	

Question 4: If you answered yes to question 3, please say what has changed. If you said no, has there been anything that has held up progress?

Question 5: Do you think that you will (or did you if completed) contribute any funds to pay for the installation?

Yes, savings	
Yes, as a loan	
Not sure	
No	

Question 5a: If yes, how much do you expect to contribute, or had to contribute?

Savings	
Loan	

Question 6: Are you aware of the energy efficiency rating of your property?

Yes	
No	

Question 7: How did you find out about the energy efficiency rating?

Home report (when buying house)	
Green Deal Assessment report	
Rental report / agreement	
Solid Wall Insulation survey report	
Home Energy Report	
Other (please write in)	

Question 8: When you first started exploring solid wall insulation, what was your main motivation for getting it installed to your home?

Save energy in the home	
Making your home warmer and more comfortable	
Improving your property in general	
Other (please write in)	

Question 9: Were you thinking about any other home improvements at the same time?

Yes	
No	

Question 9a: If yes, please state these here

Question 10: Were you thinking about any other energy efficiency improvements at the same time?

Yes	
No	

Question 10a: If yes, please state these here

--

Question 11: When you were first exploring installing solid wall insulation, to what extent do you agree that the installation would:

	Agree strongly	Agree slightly	Disagree slightly	Disagree strongly	Not sure
Be a complicated process					
Take a long time to start the work					
Take a long time for the works to be undertaken					
Be easy to get funding					

Question 12: Thinking about how you feel now, to what extent do you agree that the installation:

	Agree strongly	Agree slightly	Disagree slightly	Disagree strongly	Not sure
Is a complicated process					
Takes a long time to start the work					
Takes a long time for the works to be undertaken					
Is easy to get funding					

Question 13: Of the following benefits, how important were these to you at the time you were **first thinking** about installing?

	Very important	Important	Unimportant	Very unimportant	Don't know
Possible energy savings					
Comfort changes to your home					
Increase in home value					
Other (write in)					

Question 14: How important are these to you **now**?

	Very important	Important	Unimportant	Very unimportant	Don't know
Possible energy savings					
Comfort changes to your home					
Increase in home value					
Other (write in)					

Question 15: How much information have you received / obtained on the following elements of Solid Wall Insulation?

	A large amount	Some	A little	None	Not thought about it
Possible energy savings					
Comfort changes to your home					
Installation process					
Funding sources					
Length of time the whole process would take (planning, install)					
Sources of support and advice					

Question 16: Now you have reached your current stage in installation, to what extent do you agree that you have been able to access sufficient information on the following elements of Solid Wall Insulation?

	Agree strongly	Agree slightly	Disagree slightly	Disagree strongly	Not sure
Possible energy savings					
Comfort changes to your home					
Installation process					
Funding sources					
Length of time the whole process would take (planning, install)					
Sources of support and advice					

Question 17: To what extent do you agree that you have been well supported through your installation?

Agree strongly	
Agree slightly	
Disagree slightly	
Disagree strongly	
Not sure	

Question 18: Please list your main sources of support or advice.

Question 19: Please describe the most useful or helpful items of information or advice you have received.

Question 20: Where / from whom did this come from?

Question 21: How did you access this information?

In person / on the phone	
Online	
Written documents (leaflets etc.)	
Other (write in)	

Question 22: At what point in the install did you receive this information?

When exploring or planning how to do it	
When waiting for survey / assessment	
When the work was confirmed and waiting to start	
When the installation was underway	
When the installation was complete	
Throughout the process	

Question 23: A solid wall installation typically costs around £8,000 per property. If you were to have this money to spend on your next home, what would be your top three priorities from the following list (assume that all of the items on this list are required)

Install solid wall insulation	
Renew driveway and repair garden	
Fit new kitchen	
Fit new bathroom	
Replace / upgrade car	
Replace single glazed windows with double glazing	

Question 24: Is there anything that you would change about your approach to installing solid wall insulation if you were to go through this again?

Question 25: What, if anything, would you have liked to have known at the outset that you know now? Why would you have wanted it?

Question 26: Thinking about what you would you have liked to have known at the outset that you know now, why would you have wanted it?

Question 27: Is / are there any organisation(s) that you would like to have had more information from?

Yes	
No	
Don't know	

Question 27a: If yes, please describe:

The organisation or type of organisation (e.g. planners, builders/installers, advice providers)	The information you wanted (e.g. technical details, timings)

Question 28: To what extent do you agree that you have been kept informed about the progress of your installation?

Agree strongly	Agree slightly	Disagree slightly	Disagree strongly	Not sure

Please explain your answer to question 28 below.

Question 29: Do you feel that the benefits of solid wall insulation were effectively promoted to you when you first started to explore installing it?

Yes	
No	

Question 29a: Why do you say that?

Question 30: When you were first planning to install solid wall insulation, to what extent do you agree that you expected it to:

	Agree strongly	Agree slightly	Disagree slightly	Disagree strongly	Not sure
Make you feel better about your home					
Make you feel more comfortable in your home					

Save you money on bills					
Change how you use you house or rooms					
Change how you control your heating / the length of time you have heating on					
Lead you to consider making more improvements to your home					

For those that have completed installation only

Question 31: To what extent do you agree the installation of insulation has:

	Agree strongly	Agree slightly	Disagree slightly	Disagree strongly	Not sure
Make you feel better about your home					
Make you feel more comfortable in your home					
Save you money on bills					
Change how you use you house or rooms					
Change how you control your heating / the length of time you have heating on					
Lead you to consider making more improvements to your home					

Question 32: Do you have other comments or insights that you want to share on your installation?

If you have completed your installation

Question 33: Would you be willing to join the Green Homes Network , so others can learn about the benefits of solid wall insulation?

Yes	
No	

Many thanks. You have completed the second survey. Please return it in the stamped and addressed envelope.

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