

# **Supply chain analysis of remote rural and island areas**

A report by Changeworks

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## Terms and acronyms used

This report uses the following terms and acronyms:

ASHP	Air Source Heat Pump
CIGA	Cavity Insulation Guarantee Agency
CWI	Cavity wall insulation
ECO	Energy Companies Obligation
EPC	Energy Performance Certificate
ESOS	Energy Savings Opportunity Scheme
EST	Energy Saving Trust
FIT	Feed in tariff
GD	Green Deal
GDA	Green Deal advisors
GDAO	Green Deal assessor organisation
GDAR	Green Deal Advice Report
GD ORB	Green Deal Oversight and Registration Body
GHCB	Green Homes Cashback
GSHP	Ground Source Heat Pump
HEEPS	Home Energy Efficiency Programmes for Scotland
HEEPS: ABS	Home Energy Efficiency Programmes for Scotland: Area Based Schemes
HES	Home Energy Scotland
MCS	Micro-generation Certification Scheme
NIA	National Insulation Association
NES	National Energy Services
PAS2030	Publicly Available Specification 2030
PV	Solar Photovoltaic
RES SME loans	Resource Efficient Scotland small and medium-sized enterprise loans
RHI	Renewable Heat Incentive
RIF	Renewable Installer Finder tool
SELECT	Scotland's Electrical Trade Association
SME	Small and medium-sized enterprises
SNIPEF	Scottish and Northern Ireland Plumbing Employers Federation
SWIGA	Solid Wall Insulation Guarantee Agency

## **Executive summary**

This report presents research commissioned by the Energy Saving Trust (EST) with funding from the Scottish Government and undertaken by Changeworks into the supply chain for assessing and installing energy efficiency or renewables technologies in remote rural and island communities. The project was primarily undertaken to inform the Sustainable Energy Supply Chain programme, administered by the Energy Saving Trust on behalf of the Scottish Government. The key aim of this programme is to develop and support those Scottish businesses (particularly SMEs) which are committed to delivering a high quality, effective and professional service of assessments and energy efficiency/ renewable installations maximise their participation in these markets.

The overall aim of the research was to explore the sustainable energy supply chain in six remote rural and island local authority areas of Scotland (Western Isles, Orkney, Shetland, Highland, Scottish Borders and Aberdeenshire) and to identify the characteristics of these supply chains to assess what the barriers are for businesses in these areas. Recommendations for overcoming these barriers in those areas and beyond were also to be developed.

The project was undertaken in three phases. Seventy quantitative telephone interviews were undertaken with installers and assessors involved in the supply chain in these areas including both certified (MCS and Green Deal) and non-certified businesses. The second phase comprised 11 in-depth telephone interviews and one mini-focus group with businesses and stakeholders to explore issues related to the supply chain in depth. The final phase comprised six qualitative telephone interviews with householders from these areas that had recent experience of installing, or seeking to install, energy efficiency and renewable technologies.

### **Key insights into the supply chain**

A review shows that there is no one single source of data on the size and areas served by the (certified and non-certified) supply chain in these remote rural and island areas of Scotland. A review of businesses that are Green Deal and MCS certified and located in these areas has shown that there are more certified renewables businesses than certified energy efficiency businesses located in these areas and that the number of locally based MCS certified installers is much higher in the mainland local authority areas (Aberdeenshire, Highland and the Borders) when compared to the Islands areas.

A review of the data describing the locations served by businesses as listed on the GD ORB website suggests that this data may be over-representing the number of businesses serving these local authority areas.

### **Installers**

The installers contacted through the research tended to be micro-sized businesses (six employees or less). Those operating in Orkney and Shetland tended to be slightly larger and those operating in Aberdeenshire, the Borders and Highland tended to be younger (less than 10 years). Businesses

operating in the islands (Western Isles, Orkney and Shetland) were a mix of well-established (16+ years) and younger businesses.

Three-quarters of installers surveyed operate in both the domestic and the non-domestic market. Approximately two-thirds of those surveyed delivered renewable heat services, just under half offered renewable electricity services and one half operated in the energy efficiency market.

A significant number of these installers had not taken up MCS or GD/ PAS 2030 certifications for some of the services that they deliver. However, certification for renewables was significantly higher than for energy efficiency, with only one (out of 27) renewable heat and renewable electricity installers having no MCS certification for at least one of the services they deliver, compared to nine out of 17 energy efficiency installers having a GD/PAS 2030 certification. In total, 27 per cent of all services offered by installers were not MCS/GD certified.

### **Assessors**

Assessors also tended to be small businesses but, unlike installers, they are a mix of established and relatively new organisations and are more likely than installers to be exclusively focused on the domestic market (although 45% indicated that they offered non-domestic services). Seventeen of the 44 assessors contacted could not carry out a domestic GD assessment due to a lack of certification, offering other energy performance services (e.g. EPCs).

### **Reasons for non-certification**

Installers and assessors gave similar reasons for not becoming certified. The key barriers and reasons for the lack of certification relate to a perceived lack of return and a limited market for these certified services (specifically this relates to Green Deal-related energy efficiency installs), high perceived costs (in terms of training and maintaining certification) and complex administrative processes.

Allied to these concerns were poor perceptions of the Green Deal as a finance mechanism and concerns that the credibility of the sector was being damaged by the regular changes to, and complexities of, schemes. Particularly damaging were the number of businesses 'cold calling' households to promote Green Deal related schemes.

However, some current Government schemes (e.g. RHI and HES renewables loans) appear to be stimulating MCS certification for renewables installers, and GD certification for advisors, and also supporting these businesses in terms of enabling them to access work related to these schemes. There was also some evidence that the Green Homes Cashback scheme had also stimulated work for, and enabled the development of, some assessment-related businesses.

### **Awareness and use of Government schemes**

Awareness of the Green Deal was universal across respondents to the survey, but delivery of Green Deal services was lower than for other Government-related work (e.g. FIT/RHI and Green Homes

Cashback). Awareness and delivery by businesses of other schemes (e.g. HEEPS and ECO) was significantly lower than with FIT/RHI and lower than the Green Deal. There are some differences across local authority areas, with businesses operating in Shetland indicating that they are more likely to have accessed HEEPS and ECO than those operating in other areas.

Approximately half of the installers surveyed, and a third of the assessors, expect to expand in the next 12 months and for most this will involve some form of certification. Expansion for installers was most likely to relate to renewable heat measures and for assessors the most frequently cited route for expansion was into the non-domestic market.

### **Barriers to engagement particular to remote rural and island businesses**

The key barriers to engagement that have been identified in the research that appear to be particular for remote rural and island businesses are as follows:

- Additional time and cost issues related to accessing remote and island properties to undertake installation and assessment work.
- The significant challenges of adapting to Government scheme changes and undertaking training and certification activities for those remotely located and smaller businesses.

As a result of this, tailored support may be required to engage the smaller businesses that make up the supply chain in these areas. For a small business in particular, these issues are likely to be highly significant as the scope to invest in training and certification is likely to be more limited.

### **Issues for householders**

Householders and businesses contacted as part of the research both highlighted that the current Green Deal customer journey for householders is complex, involves too many agencies, requires too many steps and, as a result, does not make it easy for installations to take place. In addition, the research has highlighted that the current route to finding certified installers and assessors (the Green Deal ORB) is not an effective device to enable householders to find certified businesses in these areas. For those who fail to find a certified supplier in their area, there are no other central or local sources of information on businesses.

## **Recommendations**

Based on the findings in this report, the following recommendations can be made:

### **Recommendations for the Energy Saving Trust Sustainable Energy Supply Chain programme and other supply chain support programmes in Scotland**

1. Identify and promote clear reasons for businesses to become certified with Government schemes. This is particularly important for energy efficiency installers as the business case for becoming certified (based on the findings in this research) is, at present, very limited.

- In light of this, consideration should be given to how HEEPS programmes could be developed or promoted to these smaller remote rural and island businesses.
- Consideration could also be given to aggregating information on the demand for Green Deal Assessments and/or the measures identified by these GDARs to demonstrate the scale of possible demand for measures.

This first recommendation cannot be underestimated in relation to the energy efficiency-related supply chain. Until installers can see a market for Green Deal certified work, the certification process will not be deemed worth the effort and investment. The predominantly smaller installers that supply these areas are unlikely to risk a significant investment in becoming certified for no obvious income opportunity.

Secondary recommendations include:

2. Focus on raising awareness and knowledge of current schemes in these areas.
3. Bring training and topic specific workshops (e.g. procurement) closer to smaller remote rural and island businesses to reduce costs.
4. Develop targeted support and training that is suitable for smaller businesses in these rural areas to help them go through the certification process. Routes to streamline the certification process for smaller businesses in these areas should also be explored.
5. Consider how businesses operating outwith the Green Deal and related programmes could be supported through the supply chain programme (e.g. via networking and linking to other providers, being introduced to new technologies etc). This would foster greater support and engagement with the Government-related supply chain.
6. Communicate the detail of administration and processes required to become certified to the supply chain simply and clearly to overcome concerns and any possible misconceptions.
7. Work with MCS, British Standards Institute (who deliver PAS) and GD ORB to explore routes to reduce paperwork.

### **Recommendations for the Scottish Government / EST**

Where possible, the customer journey to accessing these schemes, and installations in general, need to be improved to stimulate more demand. This could include the following:

8. Maintain the use of Green Homes Cashback to pay for GDARs if measures are installed. This will create a simple starting point for householders on the journey to installation. It is likely to reinvigorate demand for assessments and may lead to further installations.
9. Consider ring-fencing Green Homes Cashback funding for remote rural and island areas to ensure adequate uptake and targeting of resources in these areas.
10. Provide additional funds to cover travel and other specific additional costs for remote rural and island area installations and GDARs.
11. Develop routes to include smaller local businesses in HEEPS-related work. This would provide smaller, local businesses with a reason to become certified.
12. Consider developing localised area-wide schemes or managed networks of local installers and assessors to develop a one-stop shop for householders.

13. Develop local, targeted portals or databases containing all assessors and installers (e.g. a GD ORB 'local' or similar database that can be held, monitored or facilitated by Home Energy Scotland). This would be similar to the current Renewable Installer Finder tool.
  - Consideration should also be given to including non-certified installers interested and able to do work in specific local areas, particularly if they are working towards certification. (The inclusion of non-certified installers would need to be resolved with the high emphasis that the Scottish Government place on certification in relation to supported work.)
  - Any database should contain and be searchable by:
    - Level and status of certification
    - Location(s) of business and areas of operation
    - Services/technologies offered
    - Recent work undertaken with possible inclusion of customer reviews.

### **Recommendations for the Green Deal ORB**

14. It is recommended that the content, structure and outputs of the GD ORB are reviewed to more accurately represent available locally based delivery and to include information on local Green Deal Advisors and not just Assessor Organisations.
  - This could include amending the GD ORB search outputs for these remote rural and island areas to only include businesses that have explicitly stated that they serve these areas (rather than including those that cover all of the UK or Scotland).

### **Recommendations for future research**

To best deliver on some of the recommendations described above some further research may be required. This could include:

15. Extend the current mystery shopping DECC-funded research of Green Deal installers being undertaken in England and Wales by EST (and about to commence in Scotland) to specifically target remote rural and island areas of Scotland. This will provide robust data on locations served and response times to householder requests. Given that this may require significant resource implications for businesses (e.g. planning and/or conducting visits) the ethics of this approach will need to be considered carefully.
16. Further research into exploring how non-GD/MCS certified companies could be supported by the supply chain programme.
17. Research or pilot projects to develop routes for smaller businesses to become involved in HEEPS-related work.
18. Research or pilot projects to develop routes for smaller businesses to become involved in one-stop shop-type area wide networks in these areas.
19. Work on the feasibility of developing local databases of businesses.



## 1. Introduction

Remote rural and island communities in Scotland have a high proportion of hard-to-treat properties (including off-gas and solid wall properties). This has a direct impact on domestic energy bills and therefore fuel poverty levels, which in some rural and remote island areas are extremely high. In areas where the need is potentially greatest, communities face particular challenges when it comes to the assessment and installation of energy efficient measures and renewables. These include additional costs to deliver services to remote areas, a lack of available businesses, along with the prevalence of hard-to-treat property types.

These challenges may have a negative impact on the uptake of UK and Scottish Government financial support programmes and schemes for energy efficiency retrofit and renewables. These include those that are part or fully funded (through ECO, Green Homes Cashback or HEEPS: ABS), capable of generating income (RHI/FITs) or come with supportive finance arrangements (the Green Deal).

The Scottish Government and the Energy Saving Trust recognise this issue and seek to address it in part through the work of the Sustainable Energy Supply Chain programme. EST has been delivering this programme on behalf of the Scottish Government since April 2013. Its key aim is to ensure that those Scottish businesses (particularly SMEs) which are committed to delivering a high quality, effective and professional service of assessments and energy efficiency/ renewables installations for householders and businesses maximise their participation in Government schemes. By participating, these businesses will benefit from the large amount of spend resulting from the variety of UK and Scottish Government financial support schemes available (see appendix 1 for a full list of schemes). The programme works with businesses and wider stakeholders to achieve its aims, and key to this is ensuring that businesses are able to deliver these Government schemes.

For businesses to participate in these support programmes and schemes, they must meet the necessary quality assurance requirements. For installers, this means Green Deal certification, which involves meeting the Publicly Available Specification (PAS) 2030 for the measures they wish to install. It is also possible for renewable installers to be Green Deal certified via the Microgeneration Certification Scheme (MCS). Businesses that wish to become individual Green Deal advisors (GDA) or Green Deal Assessor Organisations (GDAOs) must be certified against the Green Deal Assessor Specification.<sup>1</sup>

This report focuses on research commissioned by EST and undertaken by Changeworks into the supply chain in remote rural and island areas (see appendix 2 for a map of these areas).

### 1.1 Overall aim

The overall aim of this research project was: to explore and identify any gaps in the sustainable energy supply chains in remote rural and island local authority areas of Scotland; to assess what the barriers

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<sup>1</sup> For full details on requirements for businesses see: <http://gdorb.decc.gov.uk/>

are for businesses in these areas; and to make recommendations for overcoming these barriers in those areas and beyond.

## 1.2 Key objectives

EST identified a number of key issues on the supply and demand side for exploration in this project. These are described as follows:

### Supply side objectives

- What are the characteristics of the supply chain in each of the areas covered by the research?
- What gaps are there in the coverage of a) assessors and b) installers in these geographical areas and the measures available?
- Are there any discrepancies between
  - the information available from the Green Deal Oversight and Registration Body (GD ORB) and/or Microgeneration Certification Scheme (MCS) and
  - the evidence of which installers actually operate in these areas?
- What geographical areas have the certified suppliers worked in over the past year? How do they promote their business? Whom do they work with? Do they have any offers for householders?
- Do they have the capacity and/or plans to grow/expand? What are the key factors affecting this and what are the associated barriers?
- Which, and how many, non-certified suppliers could potentially operate in these areas (i.e. those that haven't invested in training and/or certification yet)?
- Why are the non-certified suppliers not getting involved? What are the barriers? Are there area-specific issues we need to consider?
- Are they aware of the various schemes on offer?
- How dependent is the supply chain on these various Government schemes?
- What involvement do suppliers have with their local authorities and do they have any feedback relating to local authority programmes which could help build local supply chains?
- What support could be offered to the supply chain to help them provide a high quality, effective and professional service which would enable them to take advantage of the growing sustainable energy market?

### Demand side

- What are the current demand levels from householders in these areas (measures installed and enquiries to Home Energy Scotland)?
- What sources of information do householders use to find certified suppliers?
- What problems are householders experiencing when trying to find suppliers in their areas?

These issues are described and explored throughout this report and recommendations to overcome the identified challenges are outlined.

## 2. Method and sample

Chapter 2 describes the methods used to conduct this research project.

### 2.1 Overview

The project was undertaken in three key phases:

- Quantitative telephone interviews with the supply chain, comprising 70 interviews with installers and assessors
- Qualitative telephone interviews with the supply chain, comprising 11 in-depth telephone interviews and one mini-focus group
- Qualitative telephone interviews with six householders that had recent experience of trying to access energy efficiency or renewable installers and assessors.

The research focused on six remote and rural local authority areas in Scotland:

- Western Isles (Eilean Siar)
- Orkney Isles
- Shetland Isles
- Highland
- Aberdeenshire
- Scottish Borders

The number of areas was restricted to six to manage the scale of the research. These six local authorities were selected as they represent a broad range of remote rural and island scenarios. Each of the three phases of the project and the sample achieved is described below.

### 2.2 Installer quantitative telephone survey

The telephone survey targeted organisations that offered, *or could offer*, services related to energy efficiency and renewables installation or assessment services. It was necessary to include organisations that did not currently offer specific (GD / MCS certified) services related to Government schemes in order to explore the barriers to uptake for these businesses.

As there was no single sample source available to meet the needs of this research project, Changeworks utilised a wide range of sources to build a dataset to meet the research aims. An overall sample of 490 supply chain organisations was obtained from a variety of sources, comprising the following:

1. Green Deal and MCS certified businesses (i.e. those currently certified to Government schemes) data was provided by EST Scotland. Data sources included:
  - An extract from The Green Deal Oversight and Registration Body (GD ORB) [database](#). This extract comprised all GD certified installers and GDAOs based in Scotland (N.B. this database does not include information on individual Green Deal advisors).
  - Data from the [Renewables Installer Finder Tool](#). This provided data on approximately 50% of the MCS installers operating in Scotland (not all MCS businesses are included in the tool as inclusion in it is voluntary).

- Home Energy Scotland (HES) Renewables Loans Data. This comprised data on MCS certified businesses listed on loan applications held by EST.
2. Ad-hoc lists of local businesses generated by local HES contacts (based on their knowledge and attendance at supply chain events) were also passed on to Changeworks.
3. Non-certified businesses (i.e. those that could undertake related work but were not GD / MCS certified) were sourced from a manual web search of the following business and trade bodies. This data was not exhaustive and was undertaken purely to generate sample for the survey:
- Scottish and Northern Ireland Plumbing Employers Federation ([SNIPPEF](#))
  - Scotland's Electrical Trade Association ([SELECT](#)) (domestic records only)
  - National Insulation Association ([NIA](#))
  - Glass and Glazing Federation [website](#)
  - Royal Institute of Chartered Surveyors ([RICS](#)) (search undertaken for energy assessment / EPCs services).

All these records were combined and duplicates removed. The final sample comprised 490 organisations with contact details. The survey was designed to cover all aims and objectives outlined above and interviews were undertaken in October 2014. The average survey length was approximately 28 minutes.

Seventy interview responses were obtained to the telephone survey. These comprised 34 installer organisations, 44 assessor organisations and included a mix of GD/MCS certified and non-GD/MCS certified installers. Three respondents had not undertaken any energy efficiency or renewables related work in the last 12 months, but were businesses that could do so in the future (e.g. house building firms). Eleven respondents to the survey were both assessors and installers. Minimum quotas were applied to ensure that a spread of responses was received by organisations operating in different local authority areas.

It is important to note that the survey was not a census and as a result cannot *conclusively* identify gaps in the supply chain. This would require a full audit of all businesses operating in, or able to operate in, the target areas, a level of research that was beyond the scope of this project. However, the research gathers detailed insights into the supply chain in these areas to inform future developments and support.

### **2.3 Installer/stakeholder qualitative interviews**

Eleven interviews and one mini-focus group were held in November and December 2014 with stakeholders who had particular knowledge of the supply chain in these rural areas. Seven were held with installers or assessors that had indicated that they would be willing to take part in further research in the quantitative survey. Other respondents were recommended by EST and the project steering group as having particular insights into the supply chain in rural Scotland. This included three stakeholders that had experiences in relation to the delivery of Scottish Government-funded energy efficiency programmes, in particular the Home Energy Efficiency Programme for Scotland (HEEPS). All interviews were undertaken by telephone. An overview of respondents is presented in figure 2.1.

**Figure 2.1 Overview of qualitative supply side respondents**

No.	Key measures offered	GD / MCS Status	Location
1	<ul style="list-style-type: none"> <li>Plumber, oil / gas boilers</li> <li>Biomass boilers</li> </ul>	MCS Installer	Aberdeenshire
2	<ul style="list-style-type: none"> <li>Air source heat pumps</li> <li>Ground source heat pumps</li> <li>Biomass boilers</li> </ul>	MCS Installer	Highland
3	<ul style="list-style-type: none"> <li>Plumber</li> <li>Air source heat pumps</li> <li>Biomass boilers</li> </ul>	MCS Installer	Aberdeenshire
4	<ul style="list-style-type: none"> <li>Plumbing, heat, ventilation</li> <li>Green Deal Assessments</li> </ul>	GD / PAS2030 Installer GD Advisor	Shetland
5	<ul style="list-style-type: none"> <li>Green Deal Assessments</li> <li>Energy advice services</li> </ul>	GD Assessor Organisation	Highland
6	<ul style="list-style-type: none"> <li>Energy Performance Certificates (EPC) - desk based only</li> </ul>	Not GD certified	Highland
7	<ul style="list-style-type: none"> <li>Green Deal Assessments</li> <li>Energy Performance Certificates (EPC)</li> </ul>	GD Advisor	Aberdeenshire
<b>Non-supplier respondents</b>			
8	Industry body representative		Central belt
9	Home Energy Efficiency Programme for Scotland (HEEPS) delivery-related		Borders
10	Home Energy Efficiency Programme for Scotland (HEEPS) delivery-related		Highland
11	Home Energy Efficiency Programme for Scotland (HEEPS) delivery-related		Aberdeenshire
12	Home Energy Scotland (HES) Outreach officers (x4)		Highlands & Islands

## 2.4 Householder qualitative interviews

Six in-depth interviews were held with householders residing in the target local authority areas that had experienced some problems with the supply chain in relation to a recent energy efficiency or renewables installation (or planned installation). These respondents were sourced from ESTs Home Energy Scotland database of clients. The focus of these interviews was to gather data on the customer experience of the supply chain in these rural areas. An overview of these respondents is presented in figure 2.2.

**Figure 2.2 Overview of qualitative householder respondents**

No.	Measure(s) interested in	Stage reached	Location
1	Air source heat pump	Installed, applying for Renewable Heat Incentive	Aberdeenshire
2	Loft Insulation Gas Boiler	Both installed	Borders
3	Loft Insulation top-up	Green Deal Assessment only	Aberdeenshire
4	Internal Wall Insulation	Green Deal Assessment only	Orkney
5	Gas boiler Underfloor insulation	Boiler installed Insulation not yet installed	Aberdeenshire
6	Air source heat pump	Installed, applying for Renewable Heat Incentive	Shetland

### 3. Supply chain overview

This chapter presents an overview of the supply chain in the target rural areas. This review is based on the current available data on businesses and relates it to the data obtained from the survey of 70 businesses.

#### 3.1 Available data on the supply chain

This section presents a brief review of the data available to the research team on the GD/MCS certified installers and assessors located in and serving the remote rural and island local authority areas that are the focus of this research.

##### Location of GD / MCS certified businesses

EST supplied Changeworks with extracts from two key datasets to enable the distribution of businesses to be explored. The postcode information in the Green Deal Oversight and Registration Body (GD ORB) database was used to identify the location of all Green Deal (PAS2030) certified energy efficiency installers and Green Deal Assessor Organisations (GDAOs). The postcode information in the Microgeneration Certification Scheme (MCS) database was used to identify the location of MCS certified installers. This data was then used to calculate the number of businesses located in each local authority area and is summarised in fig 3.1.

**Figure 3.1: GD/MCS certified businesses located in target local authority areas**

	Households	No. MCS / GD certified businesses <i>located</i> in these areas		
		Renewables Installers	Energy Efficiency Installers	Green Deal Assessor Organisations
Aberdeenshire	104,714	17	3	1
Western Isles	12,567	5	3	1
Highland	102,091	24	8	4
Orkney	9,725	6	3	0
Scottish Borders	52,498	19	9	1
Shetland	9,950	5	3	1
<b>Total</b> (across 6 areas)	291,545	76	29	6
Scotland (all)	2,372,777	334	306	61

Sources: EST (via Green Deal ORB, and MCS database) Data extracted in January 2015; 2001 Census.

Figure 3.1 shows that there are significantly more MCS certified renewables installers (76) than GD certified energy efficiency installers (29) located in the areas that are the subject of this study. There are only a few installers in the island local authorities, highlighting that access to locally based GD and MCS certified services in these locations is limited to a few businesses, although these have a higher number of suppliers per household than the mainland local authorities.

The figure also shows that the number of GD certified energy efficiency installers in Aberdeenshire is similar to the island areas (three businesses are located in Aberdeenshire) and that numbers in the Scottish Borders and Highland are slightly higher (eight and nine respectively). Given the significantly larger numbers of households in these areas, the number of local businesses is proportionally lower when compared to the islands, and the number of suppliers per household in Aberdeenshire and Highland is lower than across Scotland in general. However, there are significantly more MCS certified businesses in these areas (e.g. there are 24 MCS certified businesses located in Highland), demonstrating greater access to local certified renewables businesses, albeit over a larger geographical area. Figure 3.1 also shows that in Scotland as a whole, the number of MCS and GD certified installers based in the country are similar (306 and 334 respectively). This suggests that access to local GD certified energy efficiency businesses in the remote rural and island areas that are the subject of this study is relatively poorer than in the rest of Scotland.

It is important to note that the GD ORB dataset on assessors includes Green Deal Assessor Organisations (GDAO) only, and not the individual advisors that carry out assessments (many of whom work independently and lodge their assessments with a particular GDAO). As a result, there are likely to be advisors located in these local authority areas that are not identified due to their 'linked' GDAO being based in another area.

As this data is based on GD/MCS certified businesses only, it does not include any details on other non-GD/MCS certified businesses delivering related services that are located in these areas (there is no available source of this data<sup>2</sup>). The data therefore presents only a partial picture of the energy efficiency and renewables supply chain located in these areas.

### **Areas served by GD/ MCS certified businesses**

The data presented in figure 3.1 is restricted to the *location* of businesses and it is to be expected that businesses from other locations will deliver services to these areas. The GD ORB and the EST Renewable Installer Finder (RIF) Tool<sup>3</sup> provide data on locations that GD/MCS certified businesses serve. The GD ORB information in theory provides accurate information on the areas served by businesses. However, a business included in the GD ORB dataset may indicate that it serves the whole of the UK and not just particular areas (e.g. it may be based in southern England and indicate that it covers the whole of the UK, when in reality coverage may be more restricted). EST has anecdotal evidence that, as a result of this, significantly fewer businesses are delivering to some areas of Scotland than the GD ORB data would suggest. Therefore the GD ORB data may not represent actual service delivery by businesses<sup>4</sup>. The RIF tool only includes businesses that have chosen to state the areas in which they operate on the RIF tool. As a result, other MCS certified installers are not included.

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<sup>2</sup> The data of non-GD / MCS suppliers obtained to generate the sample for the survey (as described in 2.2) was not exhaustive and therefore was not analysed in this way

<sup>3</sup> <http://www.energysavingtrust.org.uk/scotland/tools-and-calculators/renewables-installer-finder-scotland>

<sup>4</sup> The EST in Wales have undertaken a project on behalf of DECC to review the areas in which business actually operate. This was undertaken via telephoning and emailing businesses and was complete in September 2014. A

The available data from these sources is presented in figure 3.2. Please note that given these concerns this data can only be viewed as indicative at best.

**Figure 3.2: GD/MCS certified businesses delivering services to target local authority areas**

	Households	No. MCS / GD certified businesses <i>delivering services to these areas</i>		
		Renewables Installers	Energy Efficiency Installers	GD Assessor Organisations
Aberdeenshire	104,714	40	295	34
Western Isles	12,567	14	257	23
Highland	102,091	41	295	36
Orkney	9,725	11	263	30
Scottish Borders	52,498	57	304	35
Shetland	9,950	8	260	27

Sources: EST (via Green Deal ORB, RIF tool) Data extracted in January 2015; 2011 Census.

Figure 3.2 above shows that there are significant numbers of energy efficiency installers (250+) on the GD ORB database indicating that they will operate in each these six areas. These numbers seem highly unlikely to represent actual delivery in each area. For example, it seems unlikely that the 9,725 properties in Orkney would be actively served by 263 suppliers of GD certified energy efficiency services, and this reflects the anecdotal evidence discussed above that not all businesses serve the areas that they indicate. Concerns in relation to this were also identified by respondents to this research, in particular those responding to the qualitative interviews. A number indicated that the GD ORB does not provide effective information on which businesses are operating in their immediate area, listing too many businesses, many of whom are based far from their locations. One assessor commented that *“Even I am not clear from the ORB who is actually installing in our area.”*

The data presented in fig. 3.2 relating to renewables installers seems more likely to represent actual delivery in each area, as numbers are slightly larger than the number of businesses located in each area (figure 3.1). However, as the RIF tool is not comprehensive, it is unlikely to fully represent the current numbers of businesses delivering to these locations.

### 3.2 Location of delivery (survey respondents)

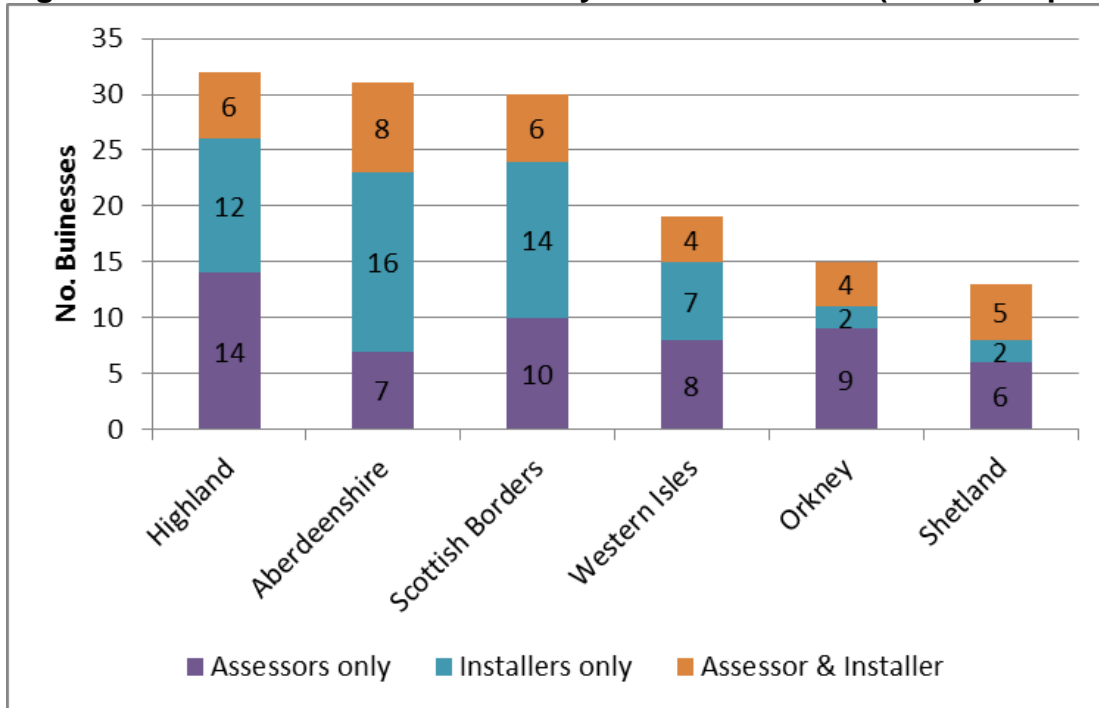
In order to provide information on the provision of services across these areas, the 70 survey respondents were asked to indicate the areas in which they had delivered any renewables or energy efficiency service in the last 12 months (including work undertaken out with Government schemes and any form of energy assessment or energy performance service). This data is presented in figure 3.3.

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further phase of mystery shopping to review the level of service delivery by GD ORB businesses has been taking place in England and Wales.



**Figure 3.3: Locations of active delivery in last 12 months (survey respondents)**



Base = 67. Source: Q9. In which of the following locations have you actively delivered EPC, Green Deal Assessments or energy efficiency or renewable installation services in the LAST 12 MONTHS (either via Government schemes such as the Green Deal or direct to clients out with Government schemes)

N.B. Assessors includes businesses that undertake any type of energy assessment activity.

Figure 3.3 shows that (based on the businesses that responded to the survey) the larger mainland local authority areas had the highest number of businesses operating within them, which concurs with the available data described in figure 3.1 above. The figure also shows that there are many businesses that undertake both installation and some form of assessment or energy performance activity.

The GD/MCS certified status of the installers that participated in the survey is described in figure 3.4 below. This shows that almost all renewable heat or renewable electricity installers in the survey are GD/MCS certified, but that many respondents offering energy efficiency services across the six local authority areas are not GD certified.

**Figure 3.4: Certification of installers contacted in the survey**

Locations Served	Energy efficiency installers		Renewable heat / electricity installers		Non-GD/ MCS Certified*
	Total	GD (PAS2030) certified	Total	MCS certified	
Aberdeenshire	12	6	19	17	3
Western Isles	6	4	8	6	2
Highland	9	6	15	13	1
Orkney	4	4	4	2	1
Scottish Borders	10	6	17	15	2
Shetland	5	5	5	3	1
<b>Total**</b>	<b>17</b>	<b>9</b>	<b>27</b>	<b>26</b>	<b>3</b>

Source: Q14 Are you accredited or certified to the following standards to install the following products?

\*Many installers were not certified for one or some of the technologies they install. Only those with no GD/ MCS certification at all are included in this column. \*\* Total number of installers is greater than the 34 interviewed as some installers offer both renewable and energy efficiency services.

The GD certified status of the assessor businesses that participated in the survey is described in figure 3.5 below. This shows coverage by both individual advisors and GDAOs across all six local authority areas. It also shows that just under half of those who offered assessment services are GD certified.

**Figure 3.5: Certification of assessor-related businesses contacted in the survey**

Locations Served	All Assessors	Individual GD advisor	Green Deal Assessor Organisation (domestic)	Non-GD Certified (e.g. EPC assessor)
Aberdeenshire	15	5	9	6
Western Isles	12	3	5	6
Highland	20	7	11	9
Orkney	13	3	7	6
Scottish Borders	16	4	7	9
Shetland	11	3	7	3
<b>Total</b>	<b>44</b>	<b>13</b>	<b>21</b>	<b>21</b>

Source: Q15 Are you or do you have the following [certifications]?

### **Summary: Supply Chain Overview**

The review of the available data on GD/MCS certified businesses shows the following:

- There are few GD and MCS businesses based on the three island local authorities (Orkney, Shetland and the Western Isles).
- The number of MCS certified renewables installers is much greater in the mainland local authority areas (Aberdeenshire, Highland and the Borders), but the number of GD certified energy efficiency installers based in these three mainland areas is much lower, and at a similar numbers to those based the islands.
- The number of MCS and GD certified installers located in Scotland as a whole are similar, suggesting access to local GD certified energy efficiency businesses (compared to MCS certified installers) in the remote rural and island areas that are the subject of this study is poorer than in the rest of Scotland.
- The review of the locations served by businesses listed on the GD ORB suggests that this data is likely to be over-reporting the number of businesses serving these local authority areas. In addition, the GD ORB does not present data on the location of GD Advisors and as a result it does not represent the reality in terms of where advisors are located.

When reviewing the installer and assessment services delivered to these six local authority areas in the last 12 months, the following features were identified:

- Fewer providers have delivered services in the island areas.
- The larger mainland local authority areas had the highest number of businesses operating within them.
- Almost all renewable heat or renewable electricity installers are MCS certified, but that many businesses offering energy efficiency services across the six local authority areas are not GD certified.

## 4. Installers

This chapter presents results from the survey and the qualitative telephone interviews relating to energy efficiency and renewables installers operating in the target local authority areas. Thirty-four installers responded to the survey and four installers were contacted as part of the qualitative interviews. Specifically it explores the following three themes:

- Overview of business characteristics and services delivered
- Green Deal and MCS certification
- Business growth, expansion and marketing

### 4.1 Overview of business characteristics and services delivered

As shown in figure 4.1, the installers responding to the survey tended to be small businesses, with half having six or fewer employees and a further quarter having between seven and 25 employees. Installers operating in Orkney and Shetland tended to be slightly larger, with most having between 7 and 50 employees. The one very large installer in the sample (i.e. a business with more than 250 staff) indicated that it has undertaken work across all the target local authorities.

**Figure 4.1 Business size (installers only)**

No. of Staff	Total		Type of organisation		Location of work						
	Total	%	Installer	Installer and Assessor	Western Isles	Orkney	Shetland	Highland	Aberdeenshire	Borders	Other Scotland
1 - 6	17	50	15	2	4	1	1	10	13	11	4
7 - 25	9	26	5	4	3	2	2	4	6	5	7
26 - 50	5	15	1	4	2	2	3	3	3	2	0
51 - 250	2	6	1	1	1	0	0	0	1	1	1
251+	1	3	1	0	1	1	1	1	1	1	1
<b>Total</b>	<b>34</b>	<b>100</b>	<b>23</b>	<b>11</b>	<b>11</b>	<b>6</b>	<b>7</b>	<b>18</b>	<b>24</b>	<b>20</b>	<b>13</b>

Source: Q2. Could you please indicate the number of staff directly employed by your company?

Figure 4.2 presents the number of years that businesses participating in the survey have been in operation. It shows that, overall, two thirds of installers indicated that they have been operating for a decade or less. Businesses operating in Aberdeenshire, Borders and Highland tended to be younger (less than 10 years), but those operating in the Islands (Western Isles, Orkney and Shetland) were a mix of well-established business (16+ years) and recently established businesses.

**Figure 4.2 Duration of operation**

No. of years in operation	Total		Company size		Type of organisation		Location of work						
	Total	%	1-6 employees	7+ employees	Installer	Installer and Assessor	Western Isles	Orkney	Shetland	Highland	Aberdeenshire	Borders	Other Scotland
0-5	12	35	6	6	8	4	4	2	2	7	12	8	5
6-10	11	32	8	3	9	2	2	1	1	7	8	8	4
11-15	4	12	2	2	2	2	1	0	0	1	2	2	2
16-30	5	15	1	4	2	3	3	2	3	2	1	1	0
31+	2	6	0	2	2	0	1	1	1	1	1	1	2
<b>Total</b>	<b>34</b>	<b>100</b>	<b>17</b>	<b>17</b>	<b>23</b>	<b>11</b>	<b>11</b>	<b>6</b>	<b>7</b>	<b>18</b>	<b>24</b>	<b>20</b>	<b>13</b>

Source: Q3. How many years has your company been operating?

Figure 4.3 explores the client types served by businesses participating in the survey. This shows that although almost all installers indicated that they provide services to domestic clients (94%), most also offer services to non-domestic clients (74%). This is similar across the target areas.

**Figure 4.3 Nature of market operated in: domestic or non-domestic**

Type of market	Total		Company size		Type of organisation		Location of work						
	Total	%	1-6 employees	7+ employees	Installer	Installer and Assessor	Western Isles	Orkney	Shetland	Highland	Aberdeenshire	Borders	Other Scotland
Domestic	32	94	17	15	22	10	11	6	7	16	22	18	12
Non- domestic	25	74	12	13	19	6	8	5	5	15	18	16	9
<b>Total</b>	<b>34</b>		<b>17</b>	<b>17</b>	<b>23</b>	<b>11</b>	<b>11</b>	<b>6</b>	<b>7</b>	<b>18</b>	<b>24</b>	<b>20</b>	<b>13</b>

Source: Q4. Do you operate in the domestic or non-domestic market or both?

When asked about the types of clients that installers had delivered work to in the last 12 months, only 9% of installers indicated that they had not delivered any work in private households. Two thirds of

installers indicated that they had not delivered any work to Housing Association or local authority clients in the last 12 months. This highlights a focus on the domestic market by the majority of installers in the sample.

### **Services delivered**

Installer respondents to the survey were asked to indicate the type of energy efficiency or renewables services they offered to clients. Two-thirds of installers surveyed (23) offered renewable heat measures, with just under half offering renewable electricity measures (16) and exactly half offering energy efficiency measures (17). Ten installers (just under a third) indicated that they offered both energy efficiency and (at least one type of) renewable measure.

Only six out of the 34 installers (including three that also offered assessment services) indicated that they carry out other non-energy efficiency and renewables work; in all cases this was related to other building works.

## **4.2 Green Deal and MCS certification**

### **Installer certifications**

It is evident that a significant number of installers were not Green Deal or MCS certified for services that they deliver. Of the 17 businesses that offer energy efficiency services, only nine were GD/PAS:2030 certified. Two businesses had CIGA certification (of which one also had PAS:2030 certification for this measure) and two had SWIGA certifications (of which one also had PAS:2030 certification for this measure). Three installers had no (GD, CIGA or SWIGA) certification, but still offered energy efficiency measures such as oil boilers, cavity wall insulation and underfloor insulation.

Of the 27 renewable heat and renewable electricity installers contacted in the survey, 26 were MCS certified for at least one measure. However, many of these respondents indicated that they were not certified for all measures they installed. This included businesses offering biomass boilers, ground and air source heat pumps, solar hot water and solar PV. In some, but not all, cases this applied to businesses that indicate they focus on non-domestic clients. This could explain the lack of certification, as MCS is not required for non-domestic installations.

Further details on the number of certified installers and the measures offered are documented in figure 4.4.

**Figure 4.4 Installer certifications**

Measure	Certification				Non-certified	Total Measures
	GD/PAS 2030	CIGA	SWIGA	MCS		
External wall insulation	3	-	2	-	1	5
Internal wall insulation	1	-	2	-	-	2
Cavity wall insulation	3	2	-	-	3	7
Flat roof insulation	-	-	-	-	2	2
Floor insulation	3	-	-	-	2	5
Loft insulation (incl. top) up)	5	-	-	-	1	6
Room-in-roof insulation	1	-	-	-	1	2
Draught proofing	1	-	-	-	1	2
Insulated doors	-	-	-	-	1	1
Other insulation/draught	1	-	-	-	-	1
Condensing gas boiler	4	-	-	-	2	6
Condensing oil boiler	4	-	-	-	3	7
Condensing LPG boiler	3	-	-	-	2	5
Cylinder thermostat	5	-	-	-	1	6
Hot water tank insulation	6	-	-	-	1	7
Heating controls	7	-	-	-	2	9
Replacement warm air unit	-	-	-	-	1	1
Waste water heat recovery	-	-	-	-	1	1
Fan assisted storage heaters	2	-	-	-	-	2
Lighting	-	-	-	-	1	1
Ventilation/heat recovery	-	-	-	-	1	1
Biomass (wood fuel) boilers	-	-	-	14	4	18
Ground source heat pumps	-	-	-	10	4	14
Air source heat pumps	-	-	-	13	4	17
Solar water heating	-	-	-	15	2	17
Solar PV	-	-	-	15	1	16
Wind turbines	-	-	-	2	2	4
Micro-hydro	-	-	-	2	1	2
Micro CHP	-	-	-	3	1	3

N.B. Total Measures offered can be greater than number of certifications due to businesses holding multiple certifications for particular measures.

Source: Q13. Which energy efficiency or renewable technologies/products does your organisation offer to clients?

Q14. Are you accredited or certified to the following standards to install the following products?

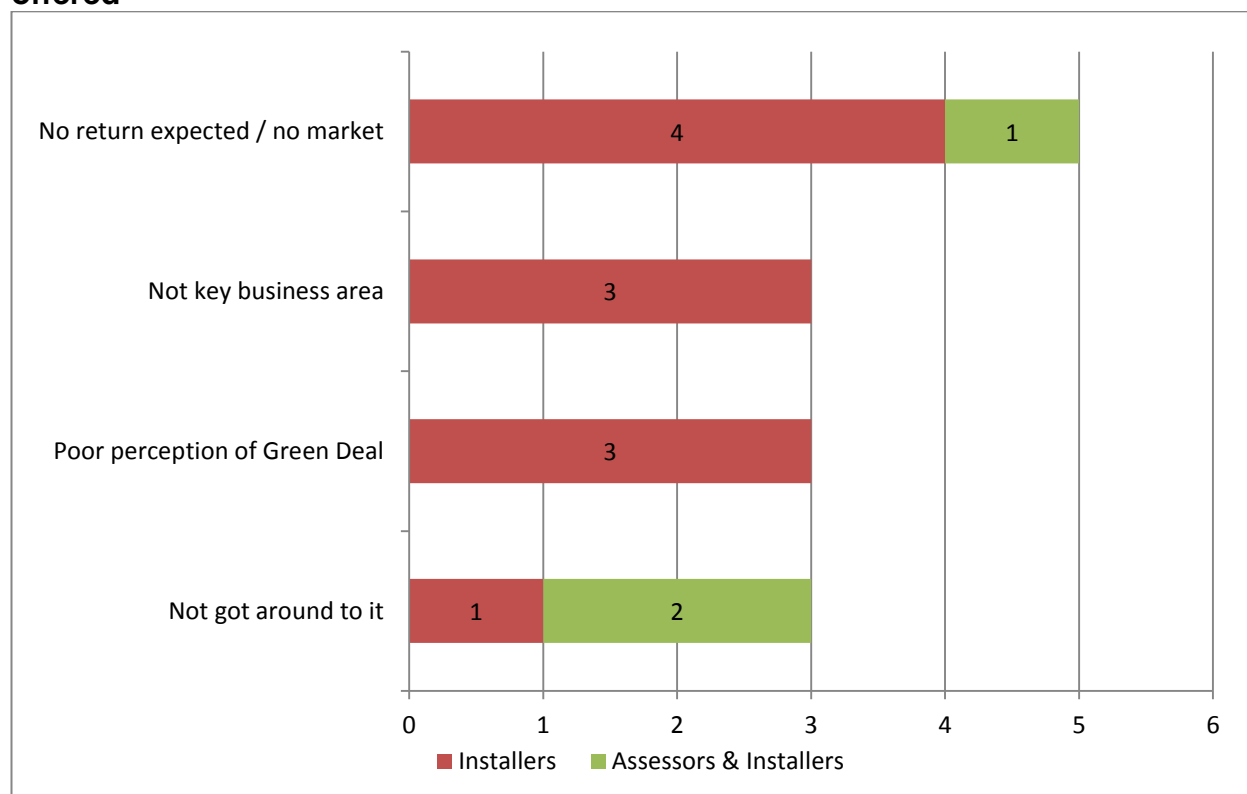
Figure 4.4 shows that across the 34 installers, 170 different energy efficiency and renewables services were offered. Of these, 46 services (27 per cent of all services offered by businesses in the survey) were not certified to the relevant Green Deal-related domestic standard.

It also shows that there were some energy efficiency services that were provided by businesses in the sample, but that were not available by GD certified installers. This includes lighting, ventilation and heat recovery, waste water heat recovery, replacement warm air units, insulated doors and flat roof insulation. In addition to this, the survey identified no businesses offering the following Green Deal-eligible measures: double, triple or secondary glazing; chillers and, solar blinds.

### Reasons for non-certification

Installers were asked to indicate their reasons for non-certification for the measures they install. As demonstrated in figure 4.5, the main reason for installers' lack of GD or MCS certification for one or all of the measures that they are offering is that there was no expectation of return (on the investment in certification), it was not their primary business area, or that they had poor perceptions of the Green Deal.

**Figure 4.5 Installers' reasons for not being Green Deal or MCS certified for services offered**



Base: Installers=9, Assessors & Installers=2. Source: Q17. Why is your organisation not Green Deal Approved or MCS certified for some of the products/ services you offer?

Respondents to the qualitative interviews gave similar reasons for a lack of GD or MCS certification. In particular, installers expressed some concerns about the benefit of being certified. One felt that it was "too expensive to get and stay [certified]". Others did not view becoming Green Deal certified as an attractive business decision as there was felt to be no assurance of demand after going through what was perceived as an expensive and involved training and certification process.



One installer, who had become certified soon after the Green Deal launch, viewed the Green Deal initially as a good business opportunity, but one that had now not yielded any work. Others expressed concerns that the market is not present, or visible enough, to warrant the investment in certification. One (wider stakeholder) respondent indicated that: *“2 out of 6 contractors [in our area] have a Green Deal certification – the others aren’t interested at the moment, they are just keeping a watching brief on it.”*

Other comments from installers to the survey highlighted concerns about the small size and lack of success of the Green Deal market:

*“We don’t feel the market is big enough, a lot of Green Deal companies are going out of business; it’s due to the sheer complexity of the scheme.”*

It was clear from some of the qualitative interviews that the current renewables-related schemes were more attractive to businesses than the Green Deal. Two respondents delivered both renewables and energy efficiency services and were MCS certified but *had not* chosen to become certified for the Green Deal. These installers felt that obtaining the Green Deal certification, unlike the MCS certification, was not worth the business investment.

Other respondents commented on the poor perceptions of the Green Deal that had arisen as a result of the newer businesses coming into the market and using ‘cold calling’ and hard-sell approaches with householders:

*“We didn’t require it at that time and were not looking to continue on Green Deal due to the fact that it has been very badly managed and the work is not sustainable. Their rules are being flaunted and poorly managed, for instance [by] cold callers.”*

There was also some negative feedback about the MCS certification from two installers of renewables technologies (despite the fact that they were MCS certified). One respondent did not feel MCS was thorough enough to ensure quality and indicated that they felt it could be undertaken by engineers without adequate experience and qualifications for related technologies (such as plumbing), resulting in poor installations. The respondent summed it up as: *“horrific ... highway robbery ... it’s not about quality, just ticking boxes and carbon.”* However, another respondent commented that the level of detail and administration required was important to ensure that it could be completed only by competent installers.

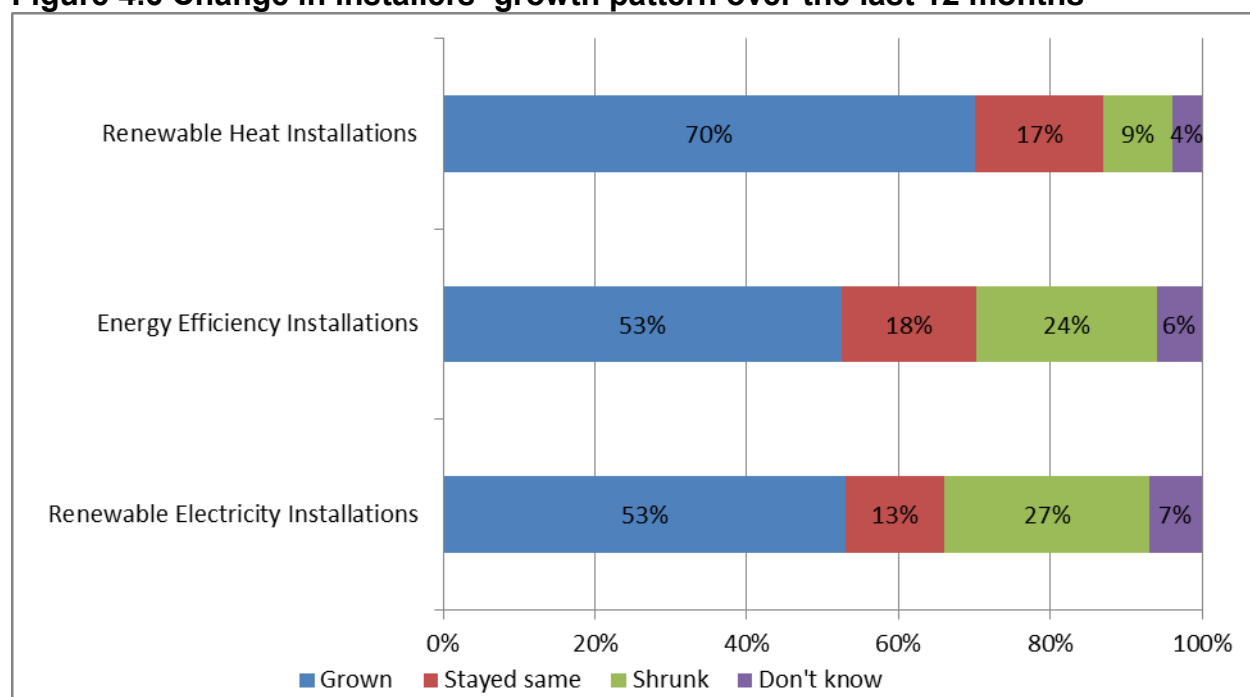
### **4.3 Business growth, expansion and marketing**

Installers were asked to indicate if their businesses had grown over the last year and how they expected business to change in the next year. Figure 4.6 shows installers’ perception of business growth over the last 12 months. This shows a general trend towards growth across different services, in particular in relation to the renewable heat installation sector (with more than 70% of businesses indicating growth). This could be attributed to the introduction of the RHI and increasing business arising as a result of this. The respondents to the qualitative interviews echoed this, with many commenting on the buoyancy of

the renewables market as a result of the RHI and Home Energy Scotland renewables loans, with one installer commenting that “*The RHI and renewables loans are attracting customers*”

Figure 4.6 also shows that more than half of the installers in the survey indicated that energy efficiency and renewable electricity installations have grown. Over a quarter of those who undertook renewable electricity installations indicated a decline in business. This is markedly higher than those indicating a decline in renewable heat-related business and could be linked to the falling FIT rates.

**Figure 4.6 Change in installers’ growth pattern over the last 12 months**

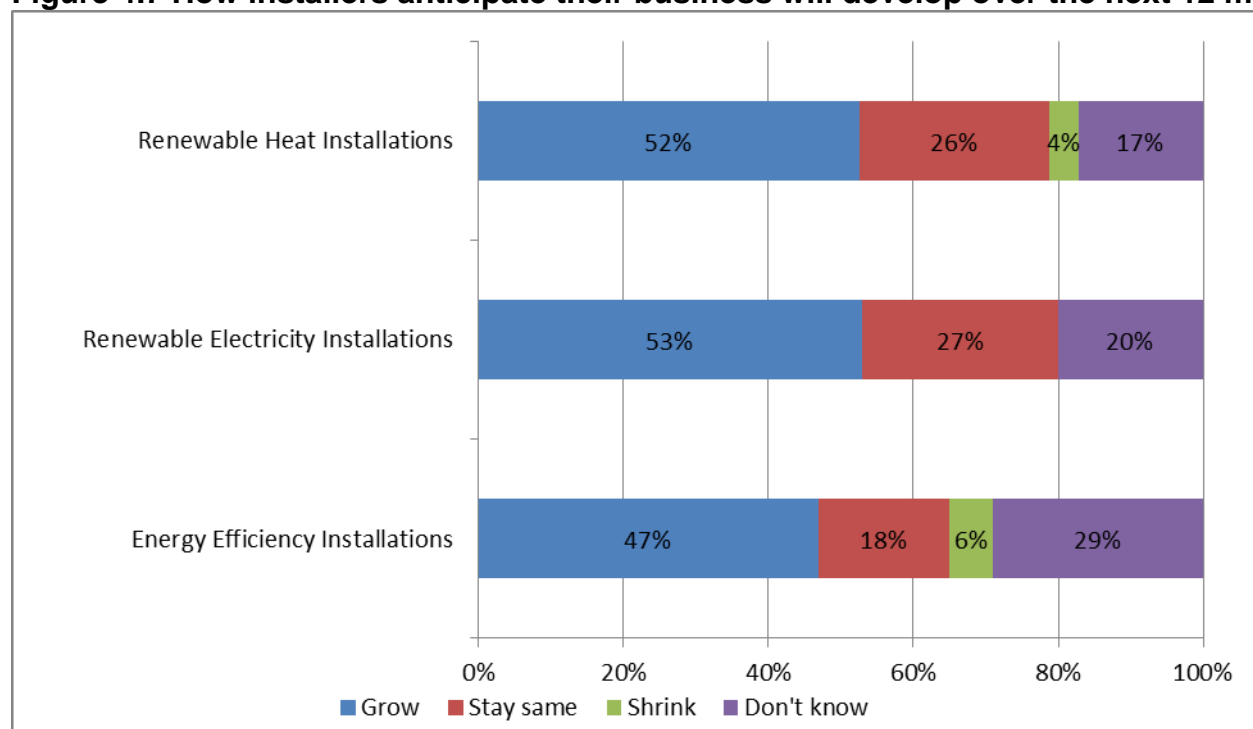


Base = 34. Source: Q7. Over the last 12 months, have the following aspects of your business grown, shrunk, or stayed the same.

Figure 4.7 shows installers’ assessments growth over the next 12 months. Compared to growth over the last 12 months, scores are similar, with approximately three-quarters of installers anticipating growth or that business will stay the same across the three services. Responses were slightly less positive for energy efficiency installers and uncertainty is highest in the energy efficiency sector (where 29 per cent were uncertain of whether their business would grow or shrink). This may be due to concerns expressed by respondents about the Green Deal (relative to RHI and FITs).

Two installers in the qualitative interviews commented that they had undertaken none or very few Green Deal-related contracts and as a result of this (and other anecdotal evidence from others in the supply chain) had a perception that it was likely to be discontinued in the near future. One commented that the “*word on the street is it’s doomed.*” Despite such concerns, these respondents were not markedly concerned about their future business opportunities.

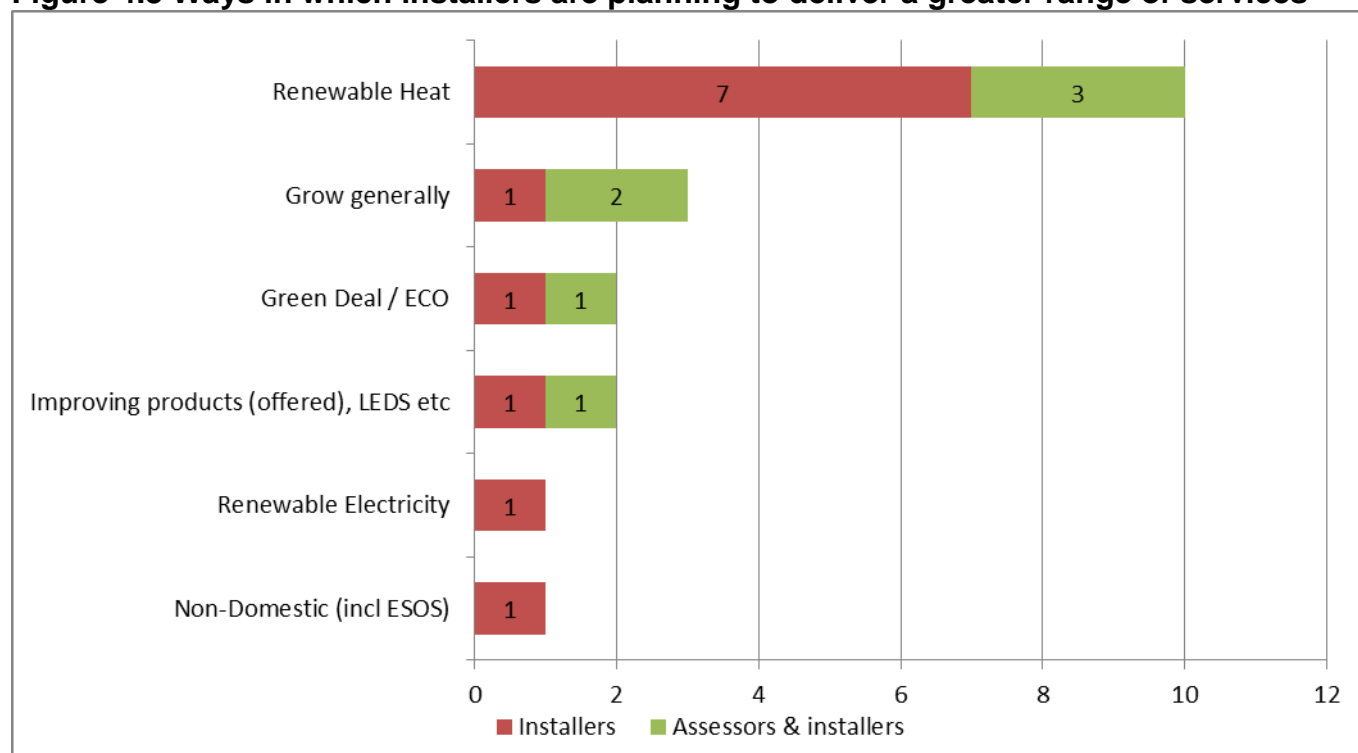
**Figure 4.7 How installers anticipate their business will develop over the next 12 months**



Base = 34. Source: Q8. Over the next 12 months, do you expect the following aspects of your business to grow, shrink, or stay the same?

Installers were also asked in the survey to indicate if they had plans to expand the services that they offer over the next 12 months. Just under half (16) indicated that they did have plans to expand and these were asked to state the areas in which they expected this to take place. These are described in figure 4.8. This shows that by far the most frequently mentioned area of expansion was in renewable heat installations. This is likely to be linked to the availability of RHI funding.

**Figure 4.8 Ways in which installers are planning to deliver a greater range of services**



Base: Installers = 9, Assessors & Installers = 7. Source: Q27. Do you have any plans to deliver a greater range of the energy efficiency or renewable services/measures in the next 12 months (e.g. starting to undertake energy assessment, installing different types of insulation, micro-generation etc.)?

The installers that indicated they wished to expand their services were also asked if this would involve them becoming certified to provide this service. Of the 16 that had plans to expand, 11 indicated that this expansion would include them becoming certified to provide this service.

### Geographical coverage and ferry travel

All installers in the survey were also asked if they had plans to expand their services geographically. Six installers (24%) indicated that this was the case. None of these were currently delivering services to the Islands (Western Isles, Orkney and Shetland).

When asked in the survey, just under half (47%) of installers had completed work which required ferry travel in the last 12 months. Only one installer that had undertaken work on the islands had not undertaken work requiring ferry travel. Of those who had not carried out work requiring ferry travel (18), only seven indicated that they would not do this in future, although for three this was contingent on funding. These findings suggest that ferry travel is not a barrier for most businesses, but one comment made by a survey respondent (who would not consider work requiring ferry travel) highlighted the issues of additional funding and time required to deliver this work:

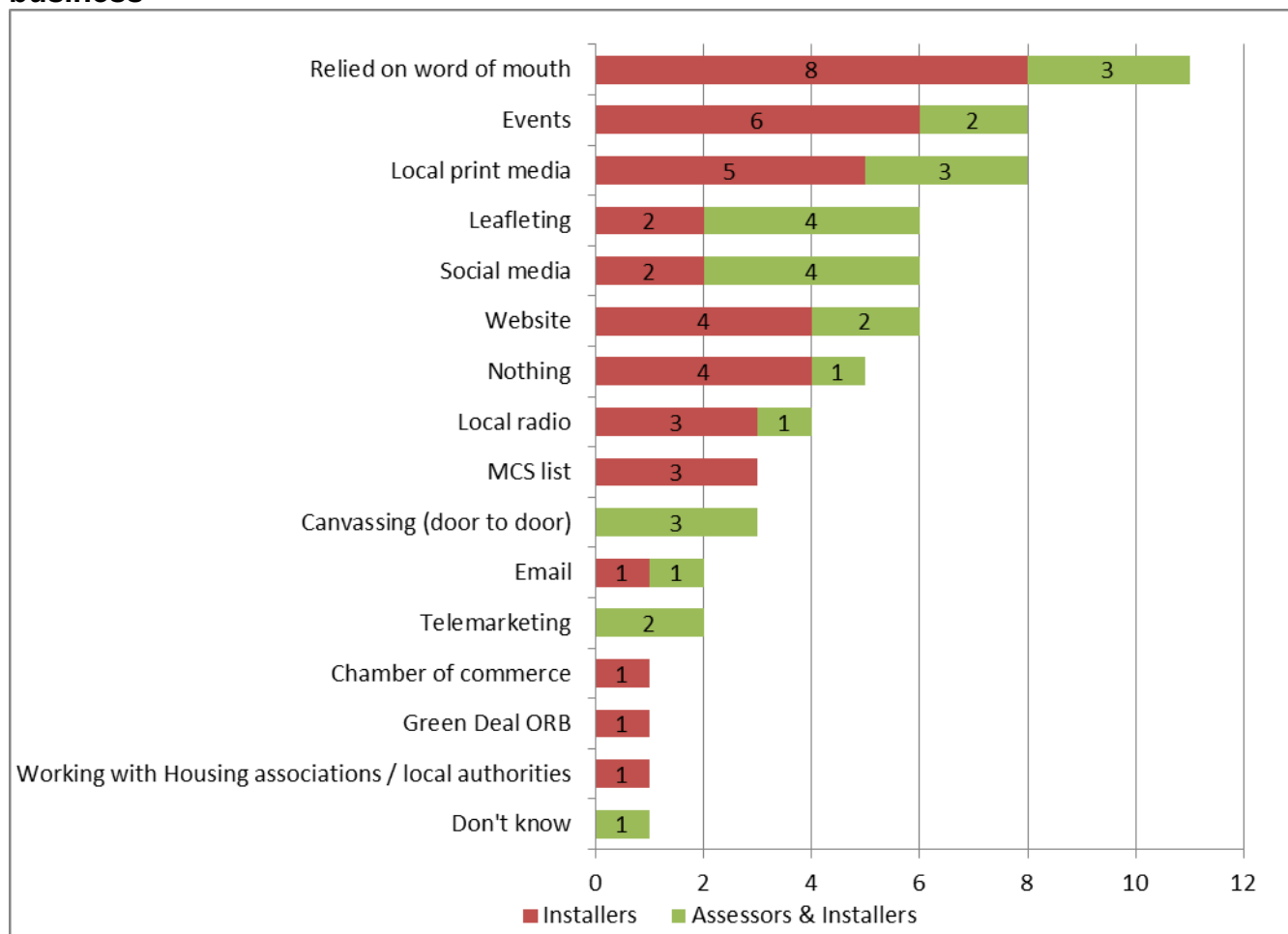
*“The travel costs are the main prohibitors, ferry travel is expensive and in order to do just one enquiry it’s not worth your while. There should be schemes whereby the costs are offset, or*

whereby there is a partnership of households and or suppliers working together to make it worthwhile.”

### Marketing activities

Installers were asked to indicate the nature of the activities they use to attract new business. As demonstrated in figure 4.9, the most frequently used method of marketing by installers is ‘word of mouth’, followed by local print media and events. Only one installer mentioned that they have used the GD ORB to attract business (NB: the question did not prompt respondents with answers).

**Figure 4.9 Marketing activities carried out by installers to attract new (domestic) business**



Base: Installers = 23, Assessors & Installers = 11. Source: Q22. What activities have you done to attract new (domestic) business in the last 12 months?

### Support received and training

Installers were asked a series of questions in relation to support and training that they had accessed to develop their businesses. A large majority of installers (85%) indicated they had not received any support from their local authority in the last 12 months. Of those that had, three had received funding for

training, two received networking opportunities and one had received training for tender development. When asked, just under half of the installers (15) had heard of Skills Development Scotland's Flexible training or the Low Carbon Skills fund. Of these, six had taken up training opportunities.

#### 4.4 Summary: installers

The installer businesses contacted as part of the survey tended to be small, with half having six or fewer employees. Key additional characteristics of the installers surveyed are as follows:

- Installers that indicated they operated in Orkney and Shetland tended to be slightly larger, with most having between seven and 50 employees.
- Installers operating in Aberdeenshire, Borders and Highland tended to be younger (less than 10 years).
- Installers operating in the Islands (Western Isles, Orkney and Shetland) are a mix of well-established business (16+ years) and younger businesses.

Almost all installers indicated that they operate in the domestic market (with three quarters operating in the non-domestic market). In terms of services offered:

- Approximately two-thirds of those surveyed delivered renewable heat services.
- Just under half offered renewable electricity services.
- One half of those surveyed operated in the energy efficiency market.

It is evident that a significant number of these installers had not taken up MCS or GD/ PAS:2030 certifications for some of the services that they deliver. However, certification for renewables was significantly higher than for energy efficiency. Specifically:

- Only one (out of 27) renewable heat and renewable electricity installers had no MCS certification, compared to nine out of 17 energy efficiency installers having a GD/ PAS:2030 certification.
- In total, 27 per cent of all services offered by installers were not MCS/GD certified.
- No certified businesses were contacted in the survey for the following measures: lighting, ventilation and heat recovery, waste water heat recovery, replacement warm air units, insulated doors, flat roof insulation, double, triple or secondary glazing, chillers and solar blinds.

The key reasons for this lack of certification are the complexity and cost of becoming certified and low expectations of work from the market. Installers (in particular those installing energy efficiency measures) indicated that they are not becoming certified because they do not feel the Green Deal market is there for them, with some doubting that it will last as a scheme. However, the existence of the RHI in particular makes becoming MCS certified a worthwhile investment for installers operating in that market, although some respondents had concerns about the complexity of the MCS certification process. The research has highlighted examples of installers being MCS certified, but not choosing to become GD certified due to the perceived lack of Green Deal market. Only half of the installers surveyed had heard of the subsidised training opportunities available.

Despite these concerns, general perceptions of the market and business growth are positive amongst those surveyed, with roughly half expecting their business to grow in the next 12 months. Many of those businesses anticipating growth were anticipating that it would come from the renewable heat-related market and 11 out of the 16 businesses expecting to expand felt that this would involve becoming certified to deliver these services.

## 5. Assessors

This chapter presents results from the survey and the qualitative telephone interviews relating to assessor-related businesses operating in the target local authority areas (this includes GD certified advisors, GDAOs and other businesses offering energy assessment services such as EPCs). Forty-four assessor-related businesses (hereafter referred to as assessors) responded to the survey and three were contacted as part of the qualitative interviews. Specifically it explores the following three themes:

- Overview of business characteristics and services delivered
- Green Deal certification
- Business growth, expansion and marketing

### 5.1 Overview of business characteristics

As shown in figure 5.1, assessors responding to the survey tended to be smaller businesses, with half (22) having six or fewer employees.

**Figure 5.1 Business size (assessors only)**

No. of Staff	Total		Type of organisation		Location of work						
	Total	%	Assessor	Installer and Assessor	Western Isles	Orkney	Shetland	Highland	Aberdeenshire	Borders	Other Scotland
1 - 6	22	50	20	2	6	7	3	12	6	7	6
7 - 25	8	18	4	4	3	3	2	2	4	4	4
26 - 50	8	18	4	4	2	3	4	4	2	2	0
51 - 250	5	11	4	1	1	0	1	2	3	3	2
251+	1	2	1	0	0	0	1	0	0	0	0
<b>Total</b>	<b>44</b>		<b>33</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>20</b>	<b>15</b>	<b>16</b>	<b>12</b>

Source: Q2. Could you please indicate the number of staff directly employed by your company?

Figure 5.2 presents the number of years that businesses participating in the survey have been in operation. It shows that, unlike the installers (who tend to be young organisations as described in figure 4.2), the assessors responding to the survey were a mix of longer-established and relatively new organisations. The larger assessor organisations tended to be older.



**Figure 5.2 Duration of operation (assessors only)**

No. of years in operation	Total		Company size		Type of organisation		Location of work						
	Total	%	1-6 employees	7+ employees	Assessor	Installer and Assessor	Western Isles	Orkney	Shetland	Highland	Aberdeenshire	Borders	Other Scotland
0-5	13	30	10	3	9	4	3	3	3	8	6	6	5
6-10	9	20	7	2	7	2	4	3	1	5	4	4	3
11-15	2	5	1	1	0	2	0	0	0	0	1	1	2
16-30	9	20	3	6	6	3	4	6	4	3	2	2	0
31+	11	25	1	10	11	0	1	1	3	4	2	3	2
<b>Total</b>	<b>44</b>		<b>22</b>	<b>22</b>	<b>33</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>20</b>	<b>15</b>	<b>16</b>	<b>12</b>

Source: Q3. How many years has your company been operating?

Figure 4.3 explores the client types served by assessors participating in the survey. This shows that assessors tended to be focused on the domestic market, with only 45% offering services to non-domestic clients.

**Figure 5.3 Nature of market operated in: domestic or non-domestic**

Type of market	Total		Company size		Type of organisation		Location of work						
	Total	%	1-6 employees	7+ employees	Assessor	Assessor and Installer	Western Isles	Orkney	Shetland	Highland	Aberdeenshire	Borders	Other Scotland
Domestic	43	98	22	21	33	10	12	13	11	19	14	15	12
Non- domestic	20	45	6	14	14	6	8	6	7	9	8	8	4
<b>Total</b>	<b>44</b>	<b>100</b>	<b>22</b>	<b>22</b>	<b>33</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>20</b>	<b>15</b>	<b>16</b>	<b>12</b>

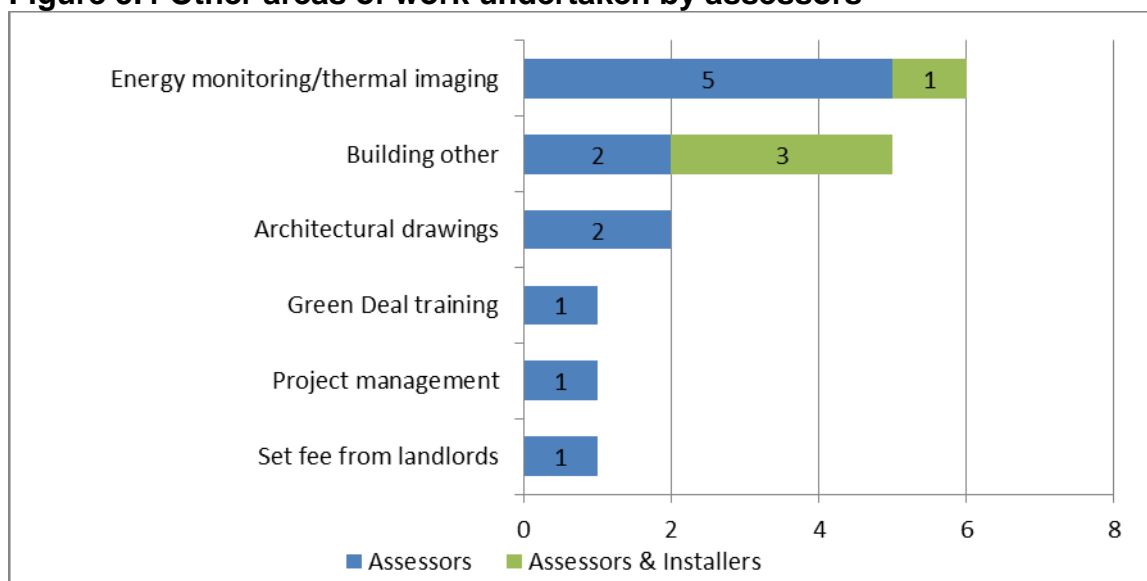
Source: Q4. Do you operate in the domestic or non-domestic market or both?

When asked about the types of clients that assessors had delivered work to in the last 12 months, only 18% indicated that they had not carried out work for private households. Two fifths of assessors had delivered work to Housing Associations and three fifths to local authority clients in the last 12 months.

**Services delivered**

Assessor respondents were asked to indicate the volume of their business that was related to EPC or Green Deal assessment services. Just over one third of assessors conducted most of their business in EPC or Green Deal assessments; whereas another third indicated that EPC or Green Deal assessments made up less than 15 per cent of their business (all assessors undertook some level of Green Deal or EPC assessment work). Fifteen assessors (out of the 44 contacted) indicated that they were carrying out business in other areas, these included: energy monitoring and thermal imaging, other building work, architectural drawings, project management and training. These are described in figure 5.4 below.

**Figure 5.4 Other areas of work undertaken by assessors**



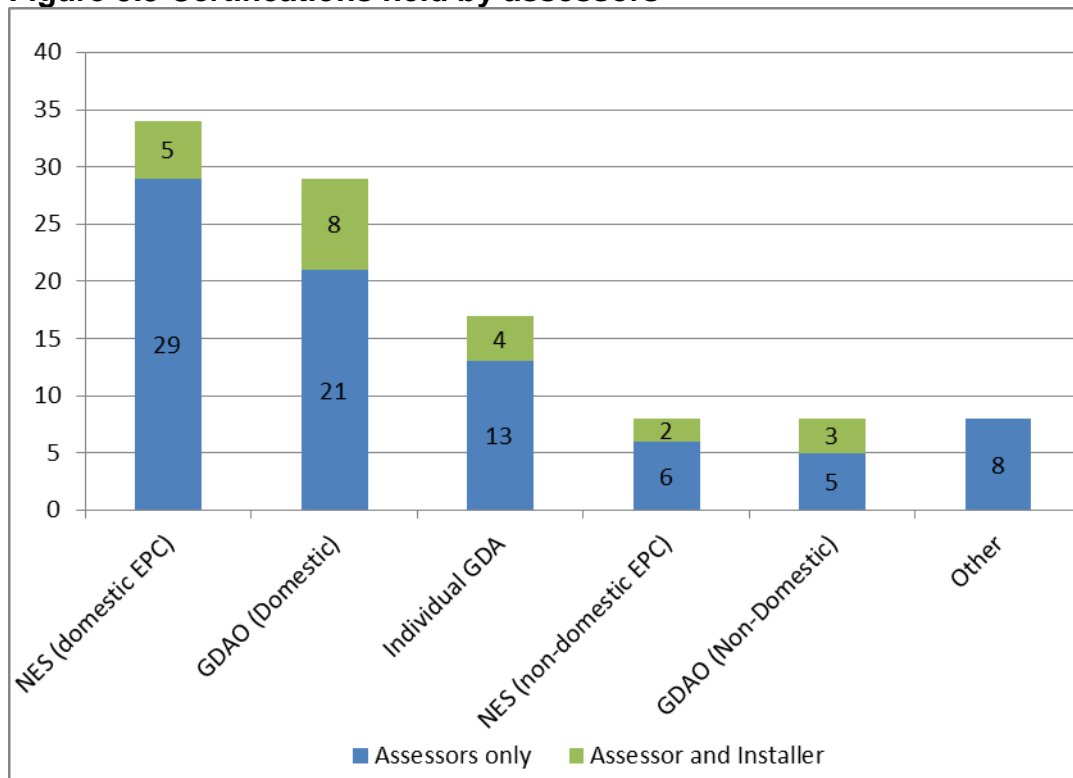
Base = 15. Source: Q6. Approximately what proportion of your business is conducted in each of the following areas?

The qualitative interviews with assessors included businesses both very focused on Green Deal-related work and others with a very different business focus. One assessor had developed their business model to focus almost exclusively on Green Deal assessment activity. One other undertook GDARs as an additional, but not core element of their work (focusing mainly on work related to renewables installations in their area), whilst a third respondent had chosen not to move into GDAR work, believing that the costs associated with travel were too great to make it a profitable business decision.

## 5.2 Green Deal certification

All businesses offering assessment services were asked to indicate if they were certified to a range of different standards. These results are presented in Figure 5.5 and show that two thirds of assessors (21) had an NES certification for domestic EPCs (figure 5.5). Just under half were certified GDAOs and 17 were individual Green Deal advisors. Seventeen assessors contacted could not carry out a domestic GD assessment (i.e. they were not a GD domestic advisor or GDAO and only undertook other related services, e.g. EPC assessments). One assessor indicated that they were a Green Deal advisor, but not linked to a GDAO. This highlights potential capacity within the supply chain for further businesses serving these areas to become certified to deliver Green Deal assessments.

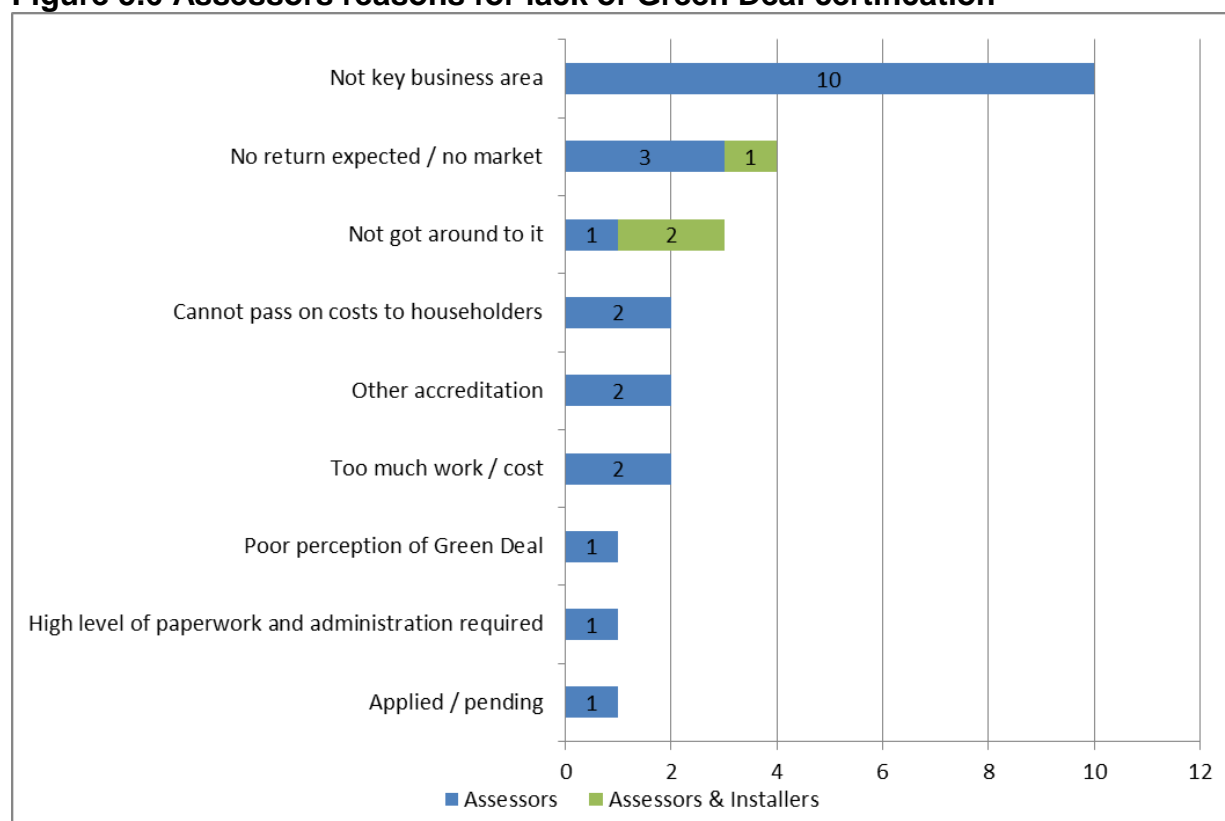
**Figure 5.5 Certifications held by assessors**



Base=44. Source: Q15. Are you or do you have the following:

All those who were not GD certified were asked to state the reasons for their lack for certification. These responses are presented in figure 5.6 and show that the main reason for assessors' lack of certification is that the Green Deal is not part of their key business area (potentially reflecting the other areas of work undertaken in fig 5.4) or there is no expectation of return from the investment in becoming certified.

**Figure 5.6 Assessors reasons for lack of Green Deal certification**

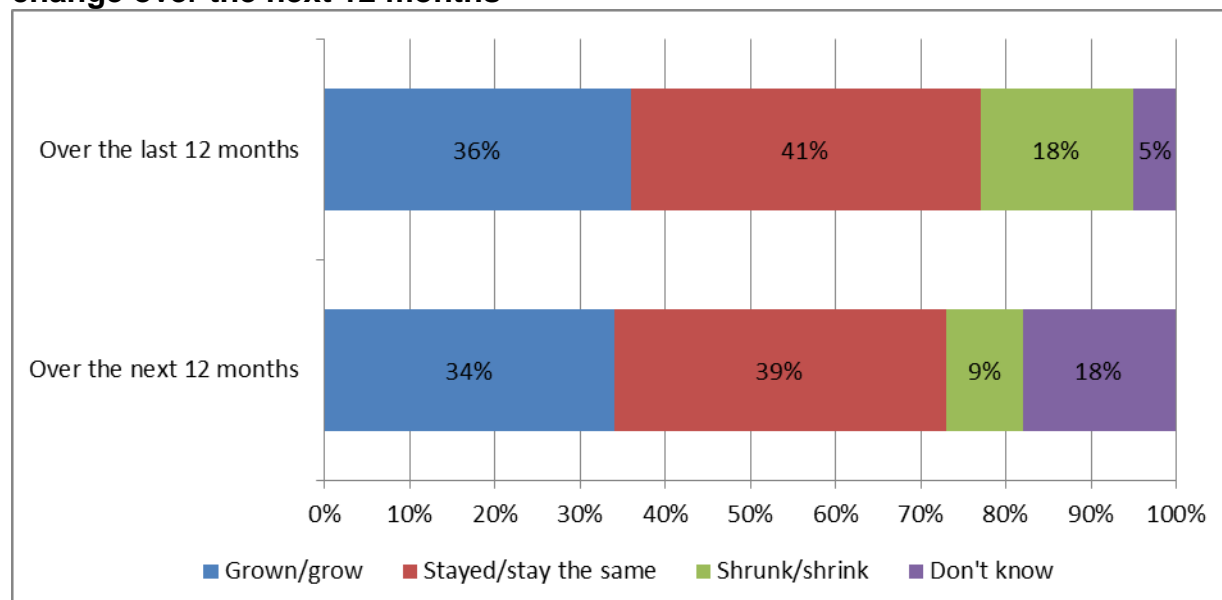


Base: Assessors=18, Assessors & Installers=2. Source: Q17. Why is your organisation not Green Deal Approved or MCS certified for some of the products/ services you offer?

### 5.3 Business growth, expansion and marketing

Assessors were asked to indicate if their business had grown over the last year and how they expected business to change in the next year. Figure 5.7 shows this data and that for roughly three-quarters of assessors, their EPC and Green Deal business has grown or stayed the same (and is expected to grow or remain the same over the next twelve months). For one-fifth of assessors business had shrunk in the last twelve months.

**Figure 5.7 Change in assessors' growth pattern over the last 12 months and anticipated change over the next 12 months**



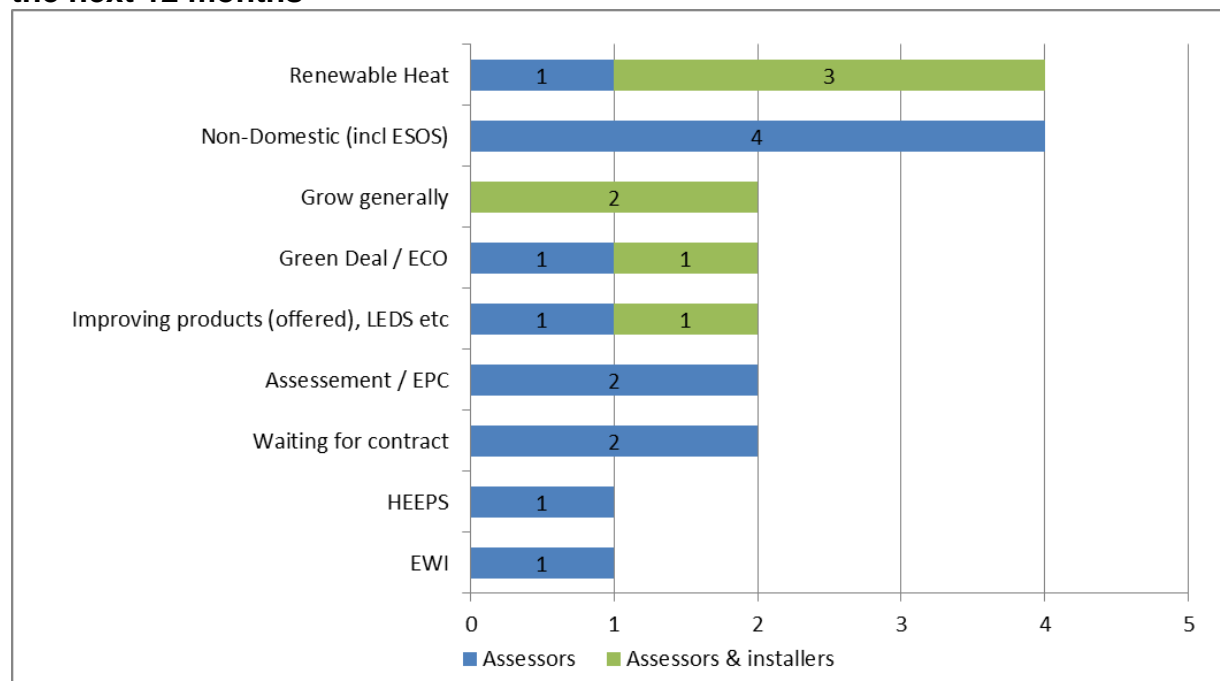
Base = 44. Source: Q7. Over the last 12 months, have the following aspects of your business grown, shrunk, or stayed the same. Q8. Over the next 12 months, do you expect the following aspects of your business to grow, shrink, or stay the same?

One assessor interviewed as part of the qualitative interviews, who was very focused on GD assessment work, commented that they had seen a very marked reduction in their workload as a result of the closure of the Green Homes Cashback scheme (that had been subsidising GDARs) in 2014. This had had such an impact that since the GHCB closure the organisation has had to reduce the hours of its staff. One other (non-supplier) respondent indicated that they were aware of “one MCS installer that had trained up a GD assessor but had to let him go as they weren't getting enough assessments through.” These comments highlight concerns about the potential size of the Green Deal related market for assessors and are similar to concerns expressed by installers in 4.3.

### Expansion in services

Assessors were asked in the survey to indicate if they had plans to expand the services that they offer over the next 12 months, of which just under half (48%) indicated that they had plans to expand. The areas of expansion are described in figure 5.8 and show that, of those wanting to expand, the most frequently mentioned area for expansions was into renewable heat installations (although three of the four who mentioned this were also installers, so this may not relate to the expansion of assessment services). Four assessors also mentioned expansion into the non-domestic sector and two specifically mentioned expanding into Green Deal and ECO work.

**Figure 5.8 Ways in which assessors are planning to deliver a greater range of services in the next 12 months**



Base: Assessors = 13, Assessors & Installers = 7. Source: Q27. Do you have any plans to deliver a greater range of the energy efficiency or renewable services/measures in the next 12 months (e.g. starting to undertake energy assessment, installing different types of insulation, micro-generation etc.)?

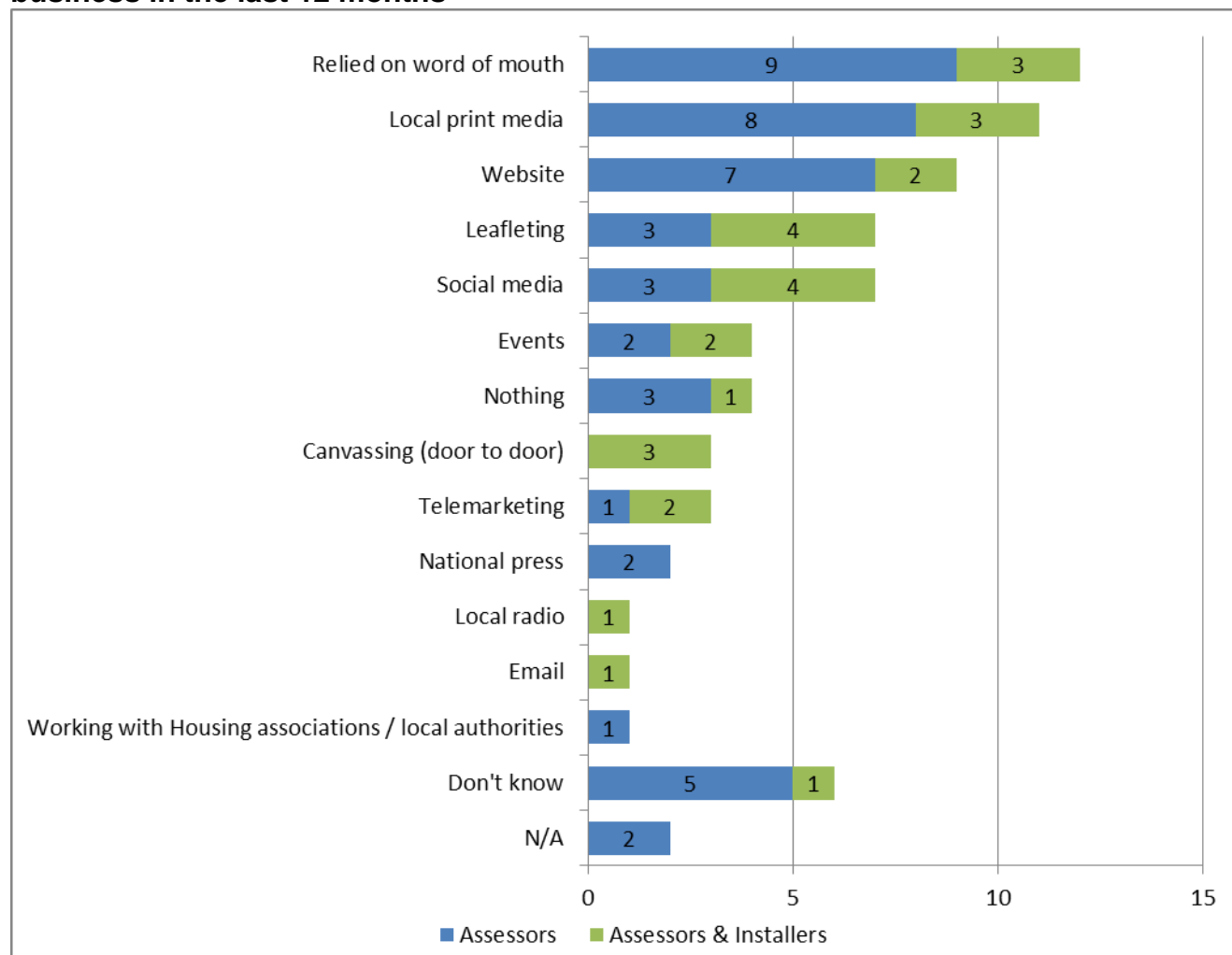
Those that indicated that they had plans to expand were also asked if this would involve them becoming certified to provide this service. Of the 20 assessors wanting to expand into another sector, 12 indicated that this expansion would include them becoming certified to provide this service.

All assessors were also asked if they had plans to expand the services that they delivered geographically. Most (75%) assessors did not have any plans to expand the geographical areas in which they operate. When asked in the survey, just over half (52%) of assessors indicated that they had completed work which required ferry travel in the last 12 months. Of the 21 who had not carried out work requiring ferry travel, 13 indicated that they would definitely undertake work requiring ferry travel, although for seven this was subject to additional staff, funding or if the work was large enough. Only five indicated that they would definitely not do this in the future.

**Marketing activities**

Assessors were asked in the survey to indicate the nature of the activities they used to attract new business. As demonstrated in figure 5.9, the most frequently used method of marketing by assessors was ‘word of mouth’, followed by local print media and websites.

**Figure 5.9 Marketing activities carried out by assessors to attract new (domestic) business in the last 12 months**



Base: Assessors = 33, Assessors & Installers = 11. Source: Q22. What activities have you done to attract new (domestic) business in the last 12 months?

### Support received and training

Assessors were asked a series of questions in relation to support and training that they had accessed to develop their businesses. Most assessors (73%) had not received any support from their local authority in the last 12 months. Of those that had, seven had received funding for training, with five receiving networking opportunities. When asked, 26 assessors had heard of Skills Development Scotland's Flexible training or Low Carbon Skills, of whom 10 had taken up training.

### **Summary: assessors**

Assessors contacted as part of the survey tended to be small businesses, with half of those surveyed having six or fewer employees. Key additional characteristics of the assessors surveyed are as follows:

- Unlike installers, assessors are a mix of established and relatively new organisations and are more likely to be focused on the domestic market, with only 45% offering non-domestic services. The larger assessor organisations tend to be older.
- Assessors were not all focused on EPC and Green Deal assessment work, with just over one third of assessors conducting most of their business in this area and another third indicating that EPC or Green Deal assessments make up less than 15 per cent of their business.
- 17 of the 44 assessors contacted could not carry out a domestic GD assessment (i.e. they were not a GD domestic advisor or GDAO).

Similar to the installers, the key reason for assessors' lack of being GD certified is that it is not part of their key business area as some business focus on other types of energy assessment services or that there is no expectation of return from the Green Deal market.

Approximately a third of assessors expect to grow in the next year, a slightly lower proportion than installers. Key insights in relation to business development for assessors include:

- There is some evidence that the suspension of the Green Homes Cashback had affected businesses reliant on EPCs and Green Deal Assessments.
- Moving into non-domestic services was the most frequently cited area of expansion for assessors. Half of those expanding their services expected that this would involve them becoming certified. Expansion into renewable heat installation services was also mentioned, but three of the four who mentioned this were also installers, so this may not relate to the expansion of assessment services.
- Just over half of the assessors had completed work requiring ferry travel and, of those that had not, most were willing to undertake such work.

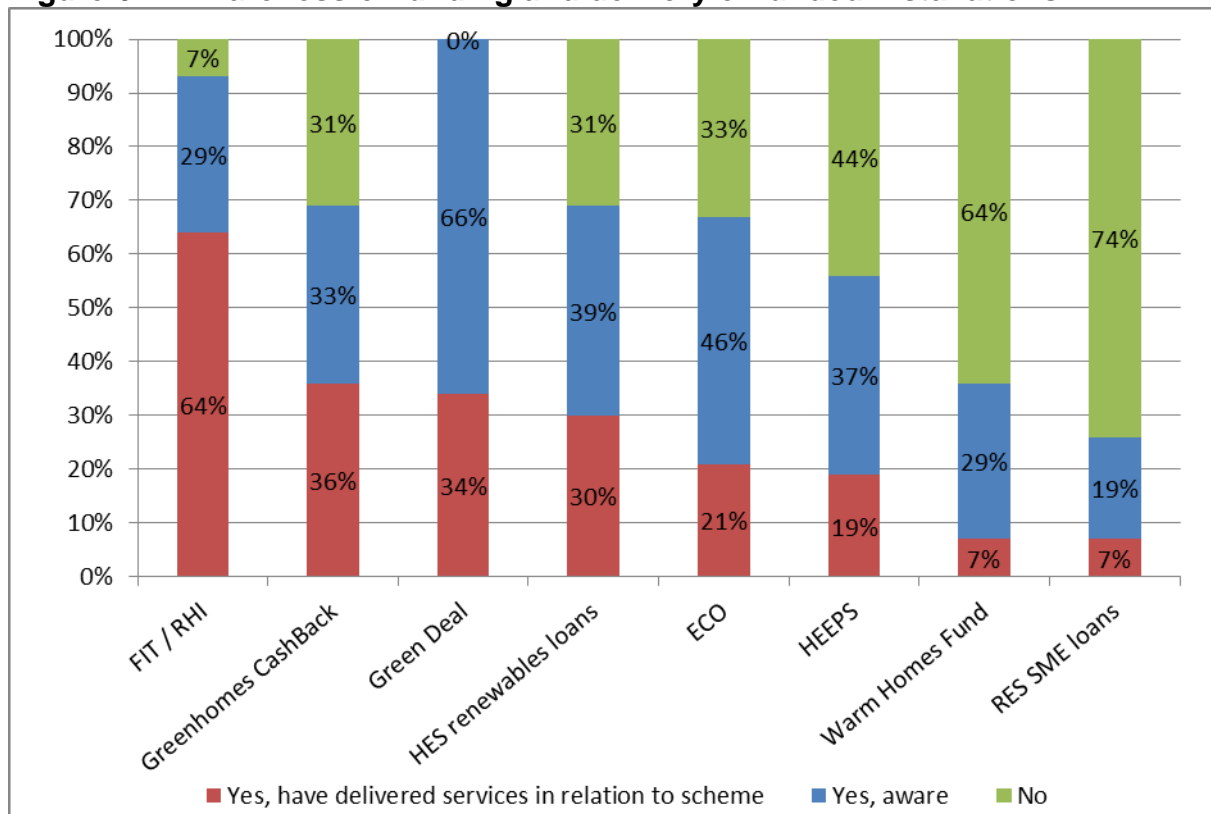


## 6. Awareness and use of current funding schemes

This chapter presents findings from the survey and the qualitative telephone interviews relating to businesses' awareness and use of current Government funding schemes. These schemes are a key focus of the Sustainable Energy Supply Chain programme and as a result, exploring businesses' awareness of these is of significant importance. Responses from both assessors and installers are included in this chapter.

Businesses that participated in the survey were asked if they were aware of, and whether they had delivered work through, the various government funding schemes currently available. This data is presented in figure 6.1 and shows that there was a universal awareness across installers and assessors of the Green Deal, although only one third of respondents had delivered work through the scheme. Further analysis highlighted that organisations who were both assessors and installers were more likely to be delivering under the Green Deal and related strands of funding (Green Homes Cash Back [GHCB], ECO and HEEPS).

**Figure 6.1: Awareness of funding and delivery of funded installations**



Base = 70. Source: Q23. Are you aware of the following energy efficiency / renewables schemes?

Figure 6.1 also shows that there was high awareness and delivery of FIT- and RHI-related work, with only 7% of respondents not being aware of these schemes. The majority of installers surveyed were delivering under renewables-related schemes (74% of installers delivered FITs and RHI related work).

Of the 22 respondents who were unaware of GHCB, 21 operated in the domestic market (10 assessors; 11 installers) and of the 23 businesses that had not heard of ECO, all operated in the domestic market. All these businesses were therefore unaware of schemes relevant to their clients. Thirty-one businesses were unaware of the HEEPS scheme. The schemes that respondents were least aware of were the Resource Efficient Scotland SME loans and the Warm Homes Fund.

These findings suggest significant gaps in the knowledge of the supply chain in relation to these Government schemes. This was echoed by the installers that were contacted in the qualitative interviews, all of whom were not aware of HEEPS schemes when asked (although one talked about 'local council' work which may have been a HEEPS project). Respondents to the qualitative interviews typically had negative perceptions of the Green Deal and many were critical of the mechanism. The perception for many was that the Green Deal was not a sensible route for householders to take out a loan on improvements due to the (expensive) financing model and the perceived complexity of the process. They felt that as a result the mechanism was not going to work for householders or for their businesses. A typical comment from an installer was: *"Why would you get one – it's more expensive than a bank loan?"*

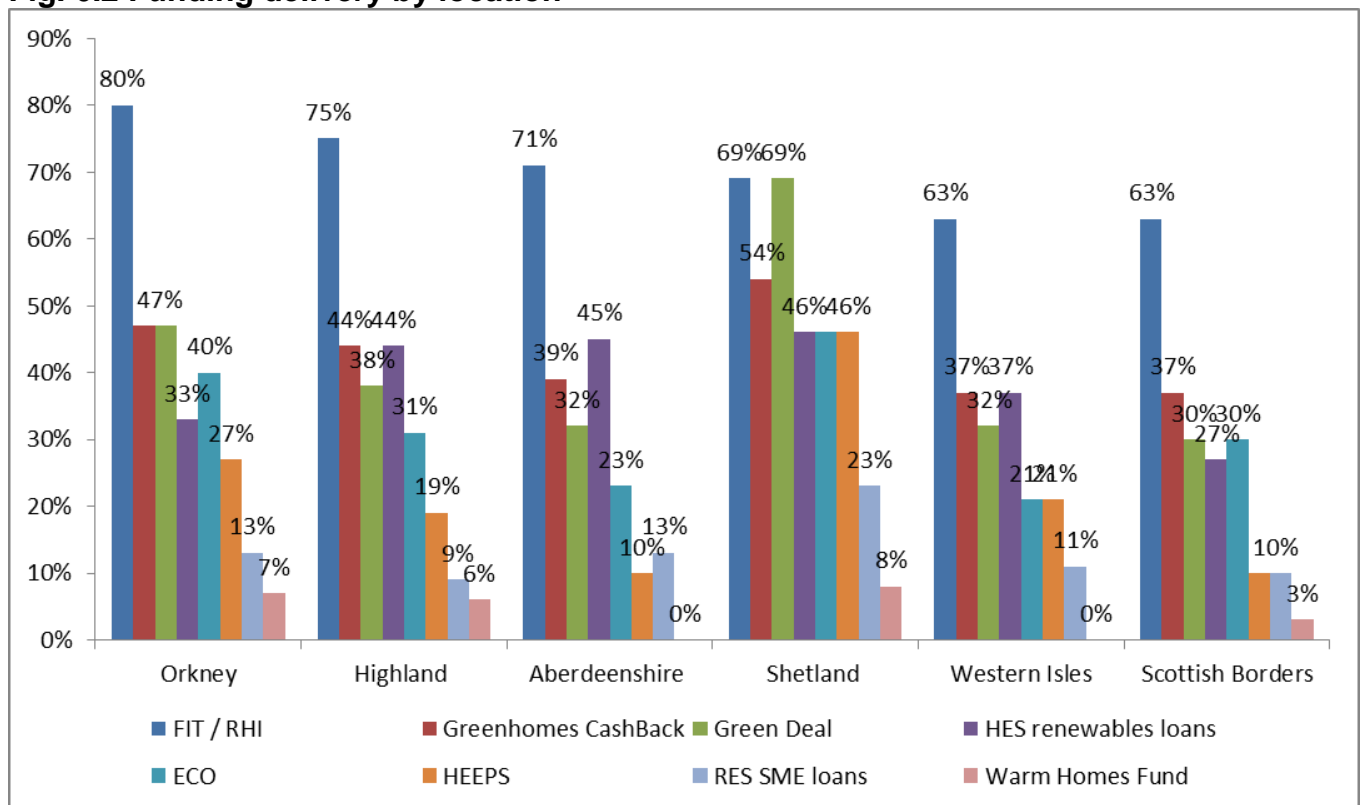
The high awareness and use of renewables-related schemes was highlighted by installers interviewed in the qualitative research. Respondents mentioned that both the RHI and the EST renewables loans were supporting the development of their business and suggested that these schemes were working to support the market in renewables. Two of these respondents also delivered energy efficiency services related to boilers and plumbing but *had not* chosen to become certified for these technologies, feeling that it was not worth the business investment.

Wider stakeholders consulted in the interviews highlighted that many HEEPS schemes are delivered by larger (non-local) installers that bring in a workforce from elsewhere. Respondents indicated that, although there was evidence of larger businesses sub-contracting the supply of related services (typically non-energy efficiency-related such as scaffolding, electrical or supply of temporary buildings or toilets), there was limited evidence of stimulation of the local energy efficiency and renewables supply chain.

The data on funding delivery was examined by the locations that businesses serve to explore if delivery of different schemes varied across the local authority areas that are the subject of this study. This data is presented in figure 6.2 below, and shows the following trends:

- Businesses operating in Orkney and Highland had the highest levels of delivery through the FIT and RHI schemes.
- Businesses operating in Western Isles and the Scottish Borders (with the exception of ECO) have the lowest level of delivery of all Government schemes, although differences are small.
- Businesses operating in Shetland have markedly higher levels of delivery in relation to the Green Deal, GHCB, HEEPS and ECO (this may be linked to installers operating in this area tending to be larger than in others – see 4.1)

**Fig. 6.2 Funding delivery by location**



Base = 70. Source: Q23. Are you aware of the following energy efficiency / renewables schemes?

### **Summary: awareness and use of current funding schemes**

Research determining the extent to which businesses are aware of, and engage with, schemes identified in the survey has demonstrated the following:

- Awareness of the Green Deal is universal across respondents, but only one third of businesses had delivered services in relation to the scheme.
- Engagement with FIT/RHI is much higher, with two-thirds of all respondents having delivered as part of this scheme.
- Awareness and use of other schemes is significantly lower than both FIT/RHI and the Green Deal:
  - More than two-fifths of businesses were not aware of HEEPS and just under one-third had not heard of ECO.
  - This low awareness may be related to the fact that respondents to the qualitative interviews indicated that larger, non-local, businesses tend to deliver the larger Government schemes (such as HEEPS and ECO) in these areas, only sub-contracting the supply of related services (such as scaffolding, electrical or supply of temporary buildings or toilets).
- There are clear differences across local authority areas, with businesses operating in Shetland more likely to have delivered HEEPS and ECO work than those operating on other areas.
- RHI and Home Energy Scotland renewables loans were cited as schemes that worked well together to support the market.

## 7. Future development and funding

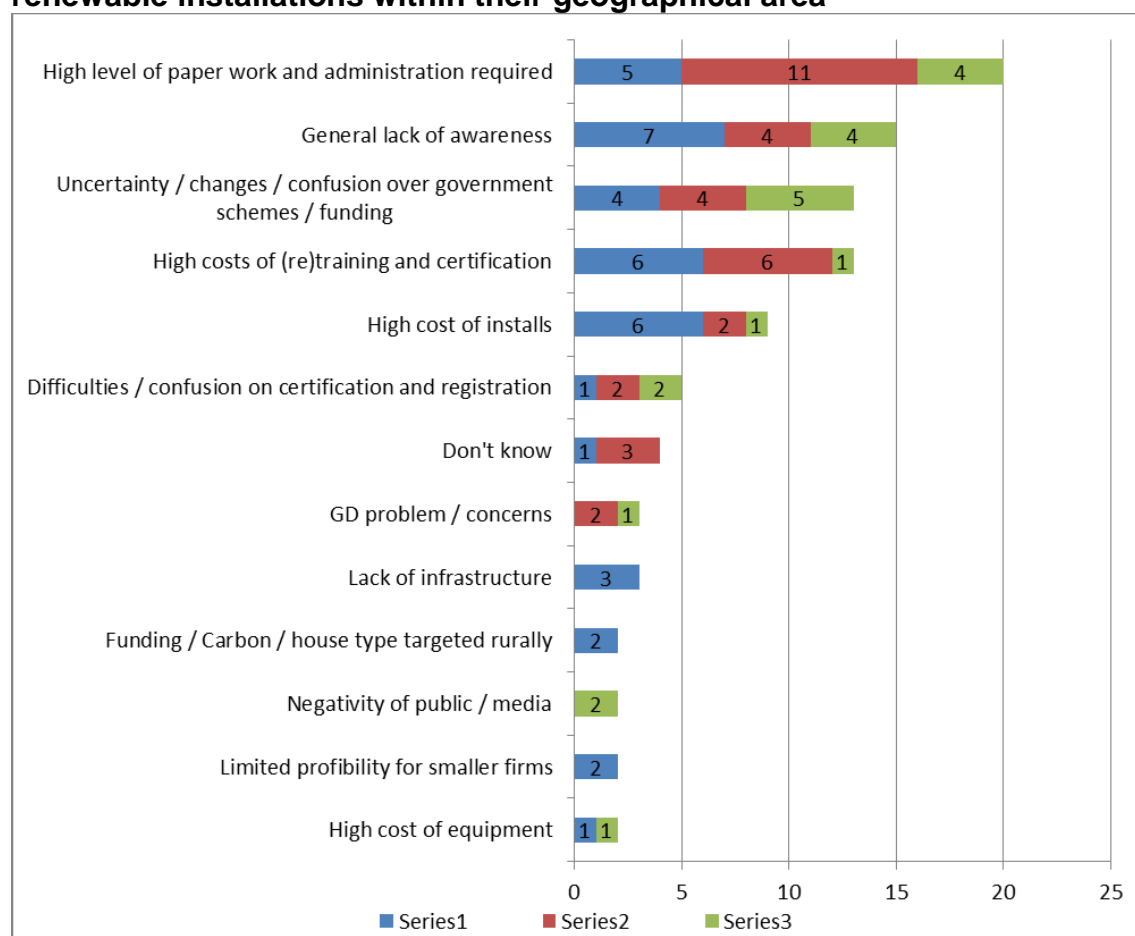
This chapter presents the findings from installers, assessors and wider stakeholders on the ways to develop the supply chain in the future. The chapter first discusses current perceived barriers to involvement and then explores suggestions from respondents on ways to improve the supply chain.

### Barriers preventing greater involvement in the sector

Assessors and installers that participated in the survey were all asked to describe the key barriers to any business becoming involved in the supply chain for energy efficiency or renewables measures in their areas (i.e. not simply barriers to becoming certified). These results are presented in figure 7.1.

The most common barrier cited by organisations was the high level of paperwork and administration required; this was mentioned by 20 organisations, 11 of whom were installers (figure 7.1). One installer described the administrative requirements as “... *considerable resources and time to jump through the hoops*”. An assessor also described the challenges that paperwork brought to their organisation: “*The procurement process is disabling for small to medium enterprises.*”

**Figure 7.1 Key barriers to all businesses getting involved in energy efficiency or renewable installations within their geographical area**



Base: Assessors = 33, Installers = 23, Assessors & Installers = 11. Source: Q30. What do you think are the key barriers to businesses getting involved in energy efficiency /renewables in general in your geographical areas?

Some of the reasons described in figure 7.1 are similar to those given for a lack of certification in chapters 4 and 5 (e.g. concerns about the Green Deal). However, the barriers to entering the market overall described in figure 7.1 focus much more on paperwork and administration, whereas the reasons for a lack of certification for those already delivering services were more focused on the lack of an available market for certified services. This could be taken to suggest that if businesses can see a sufficient market for certified services, they will go through the challenges of certification process. In addition, figure 7.1 also shows that many businesses felt that a general lack of awareness of schemes was a barrier to involvement (echoing the findings in chapter 6). Uncertainty over schemes and the high costs of training and certification were also commonly cited.

It is interesting that the most frequently cited barriers relate to Government schemes, certification and training, highlighting the key role of Government schemes in stimulating the supply chain (this question asked not about schemes per se, but about getting involved in general in energy efficiency and renewables). However, the changes, uncertainty and confusion of funding schemes were cited as barriers. Businesses operate best in stable or predictable environments where they can plan delivery and investment and this level of uncertainty will act as a barrier to engagement in the sector.

Although not cited frequently in the survey, a key concern for many of the qualitative respondents' (both businesses and other stakeholders) was the perceived damage to the sector and erosion of trust in schemes resulting from the rise in 'Green Deal'-related cold calling and pressures on householders to take up offers being promoted by some businesses. Typical comments included: *"It's just about idiots phoning up and trying to sell you something."* (installer) and *"It's a foot in the door for sales people."* (assessor).

Some respondents in the qualitative interviews also highlighted the tension between householders having their own local, trusted, long-used businesses for their homes (e.g. local builders or plumbers) and the need for them to access a Green Deal certified supplier to go through a Government scheme. As one non-supplier respondent indicated *"if you know what you want done and you have used a local plumber, you would just go to them to get it done [rather than seek out a Green Deal installer]"*.

As shown in chart 7.1 above, there were very few comments in the survey that related to factors influenced by the rural nature of the settings within which the businesses operate. Many of these comments could apply to any business operating in this sector anywhere across Scotland. But, as most of these businesses are small, the challenges of adapting to scheme changes and undertaking training and certification activities are potentially larger.

Indeed qualitative respondents (all from small businesses) mentioned that changes to the systems of Government schemes (both the Green Deal and other Government funding) meant that it was difficult to 'make sense' of them, both from the supplier and householder perspective. One organisation (in the survey) described how these changes had made them concerned about impacts on businesses:

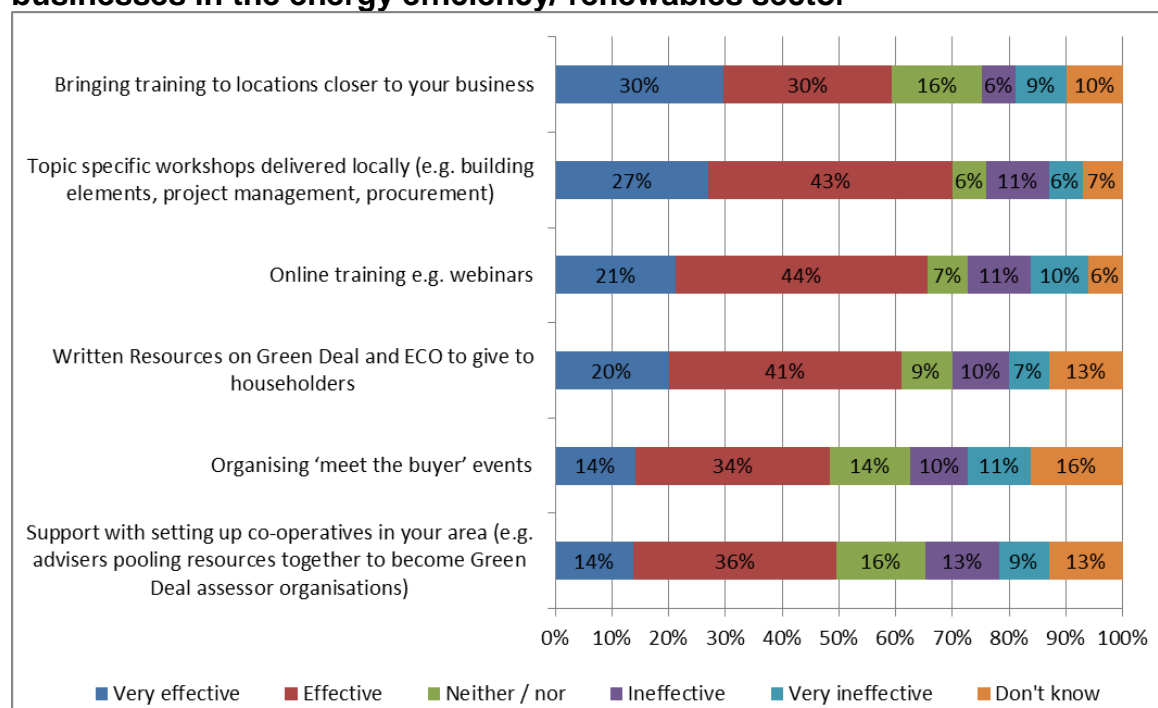
*“The [Green Homes Cashback] scheme was shut down without any prior warning and many companies invested in training and staff for the scheme and it was halted abruptly.” (survey respondent)*

The issue of ferry travel and travel to very remote locations (requiring overnight stays, extensive travel and additional costs to transfer materials) was also discussed by respondents. Respondents both to the survey and to the qualitative interviews highlighted that this did incur additional costs over and above more ‘local’ work and that financial support is required to make this financially viable. There was evidence from some respondents that these additional costs are a very real issue for some households, with one qualitative respondent indicating that *“there are no Green Deal Assessors in the [south of the Western Isles] and to get to Barra it would cost two days to get there and back; it would cost them around £700 for a GDAR”* (non-supplier).

### Solutions to encourage involvement

Respondents to the survey were asked to rate how effective they felt a range of non-financial support suggestions would be at encouraging businesses to become more involved in the energy efficiency and renewable sectors. These are presented in Figure 7.2 below.

**Figure 7.2 Effectiveness of suggestions to encourage a greater involvement of businesses in the energy efficiency/ renewables sector**



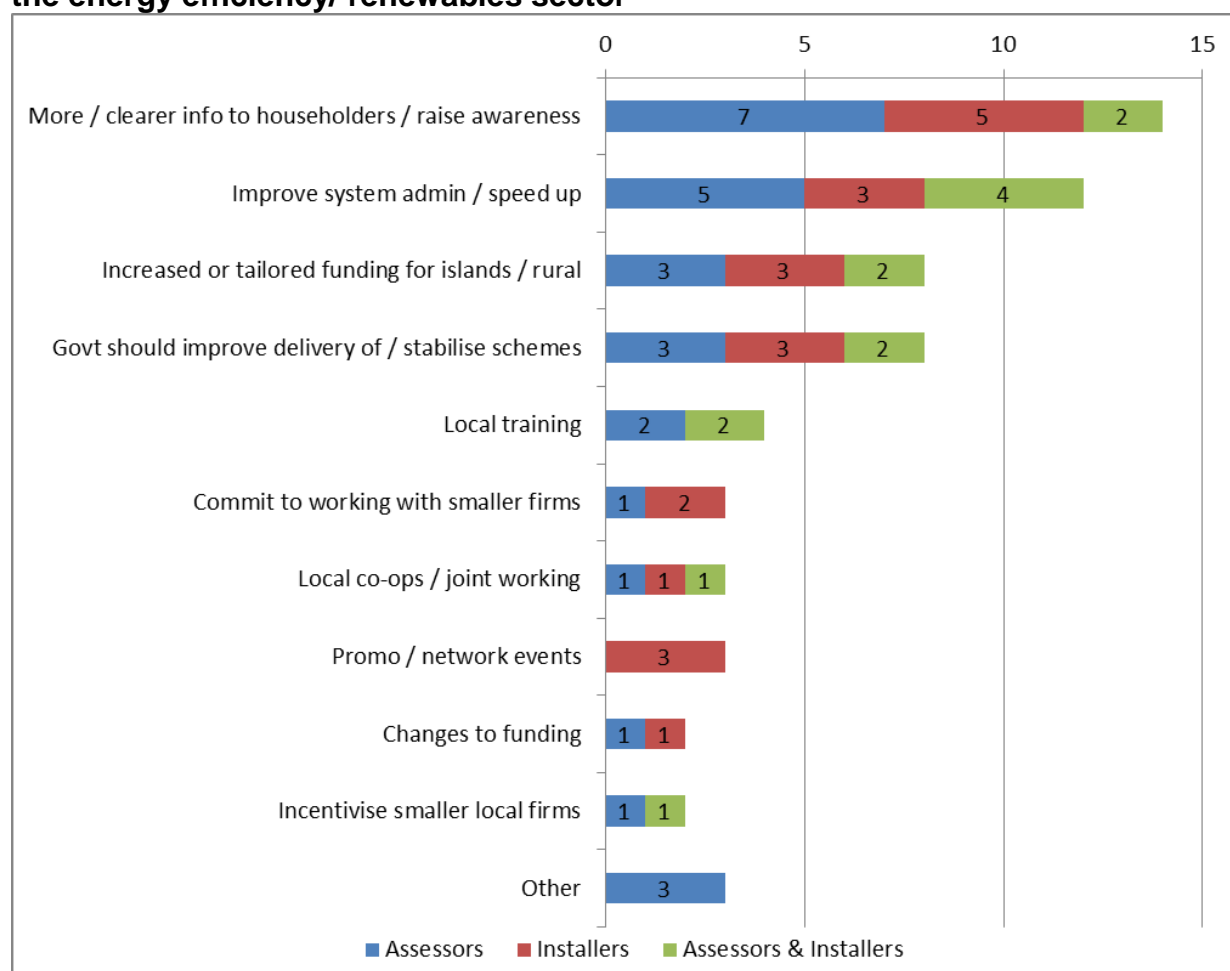
Base = 70. Source: Q32. How effective would you say the following would be in encouraging your businesses to be more involved in the supply of energy efficiency and renewables in remote rural areas in Scotland?

Figure 7.2 shows that all suggestions were deemed to be ‘effective’ or ‘very effective’ by approximately half or more respondents. The suggestion which achieved the highest number of organisations describing it as ‘very effective’ was ‘bringing training to locations closer to your business’. However, the

solution deemed to be effective or very effective by most respondents was ‘topic specific workshops delivered locally (e.g. building elements, project management, procurement)’. Following closely to this was ‘online training, e.g. webinars’, which was deemed effective by almost two thirds of businesses. Overall, in comparison to the installers, assessors had a slightly more positive reaction towards all suggestions.

Respondents to both the survey and to the qualitative interviews were asked to make suggestions on how to improve involvement in the sector. The responses from the survey are presented in figure 7.3 and show that the most common suggestion made related to the provision of more, and clearer, information to householders to raise a greater level of awareness. This was the most commonly raised subject of both assessors and installers and could relate to businesses seeking a larger market for their work (i.e. if more informed householders seek measures, more work will be generated for businesses). The second most commonly proposed suggestion related to improving or speeding up the administration system. Again, these issues do not suggest anything that is particular to remote rural and island areas. However, eight respondents did comment that increased funding for remote areas was required.

**Figure 7.3: Additional suggestions to encourage a greater involvement of businesses in the energy efficiency/ renewables sector**



Base: Assessors = 33, Installers = 23, Assessors & Installers = 11. Source: Q33. Do you have any other suggestions on how the energy efficiency and/or renewables supply chain could be improved in rural Scotland?



Respondents to the qualitative interviews concurred with these findings. In particular, many highlighted that there were too many steps and too many stakeholders involved in the process for householders going through Government schemes (e.g. Home Energy Scotland, assessors, Green Deal providers, installers etc.). This was summed up by the following respondents:

*“You need one opportunity, from one provider, one phone call.”* (non-supplier)

*“As long as the red tape exists people aren’t going to use it.”* (non-supplier)

There was also a perception by these respondents that because of these multiple steps, the whole process of obtaining an installation takes too long and is not responsive enough to the needs of householders that may need to make a quick decision about the measure they install:

*“When your boiler goes you need to get a new one, not wait for assessments, or funding.”* (non-supplier)

Many qualitative respondents (both supplier and non-supplier) also commented that the Green Deal ORB website was complicated and not user-friendly:

*“It is not set up well from an installer perspective or from a householder perspective.”* (non-supplier)

*“Everyone finds the GD ORB confusing.”* (assessor)

These echo concerns identified in chapter 3 in relation to the content in the GD ORB database. In addition, there were also a number of comments related to the need for local, targeted information on GD advisors to be available (not just their affiliated GDAO, which could be located elsewhere) on the ORB website:

*“It’s not that there aren’t any [advisors] around, it’s that the search tools to find them are [not good].”* (non-supplier)

Others commented that (from the householder perspective) the GD ORB search tool needs to be complemented/enhanced with better information on which local businesses are or have been delivering services. This is an issue for all households, but one that may be more acute for remote rural and island areas. If the access to local businesses is limited or non-existent (as it is in remote rural and island areas) householders may need accurate information on which businesses are able to effectively serve their remote location. This challenge was highlighted in the interviews, with one (non-supplier) respondent indicating that they were aware of cases where assessors or installers had repeatedly said that they were going to visit households but had cancelled appointments at the last minute. The perception of this respondent was that the businesses were waiting for other business in the area before travelling. Access to a locally based supplier would not have resulted in this problem.

### **Successes identified**

The qualitative research also highlighted successful elements of the current supply chain that could be built upon and inspire future developments. As highlighted previously, the impact of the RHI, renewables loans and to a lesser extent FIT was clear in terms of stimulating work and encouraging certification for both assessors and installers. Similarly, an assessor highlighted the role of the Green Deal Assessments as very important in terms of informing householders and educating them on the types of improvements that could be made to their home, commenting that “*Every property should have a [Green Deal assessment] to empower people.*”

Some assessor respondents commented that demand for assessments was also significantly stimulated by the introduction of the Green Homes Cashback scheme (which covered the cost of the assessment). One respondent highlighted that the free assessment enabled by the GHCB meant that householders had a clear (and free) start to the process of making their homes more efficient. There was some limited evidence that the GHCB also encouraged installs (for relevant vouchers).

Other stakeholders highlighted the success of area based schemes in stimulating the uptake of installations in rural areas. Although (as discussed in chapter 6) none of the installers interviewed had heard of the HEEPS schemes, the impressions from non-businesses (i.e. HEEPS representatives) who were involved with HEEPS delivery were largely positive. In general it was felt that these enable focused and (relatively) more affordable installs to be undertaken in target areas (due to the focusing of work in one location). There was evidence from two respondents that the presence and high visibility of the area based schemes meant that other householders in the area were motivated to take part in the scheme or enquire about getting similar improvements to their home (even if outside the eligible area).

Area based schemes were, however, not felt to be a solution for all, especially households in remote rural and island areas where housing is dispersed and larger projects would be difficult, if not impossible, to organise. That said, one (non-supplier) respondent indicated that these types of scheme may offer an opportunity for households and communities across larger areas in remote locations to come together to offer more attractive opportunities for larger businesses. Crucially, in terms of the supply chain and as discussed in chapter 6, these schemes do not currently appear to be generating awareness, interest or work for the smaller local businesses.

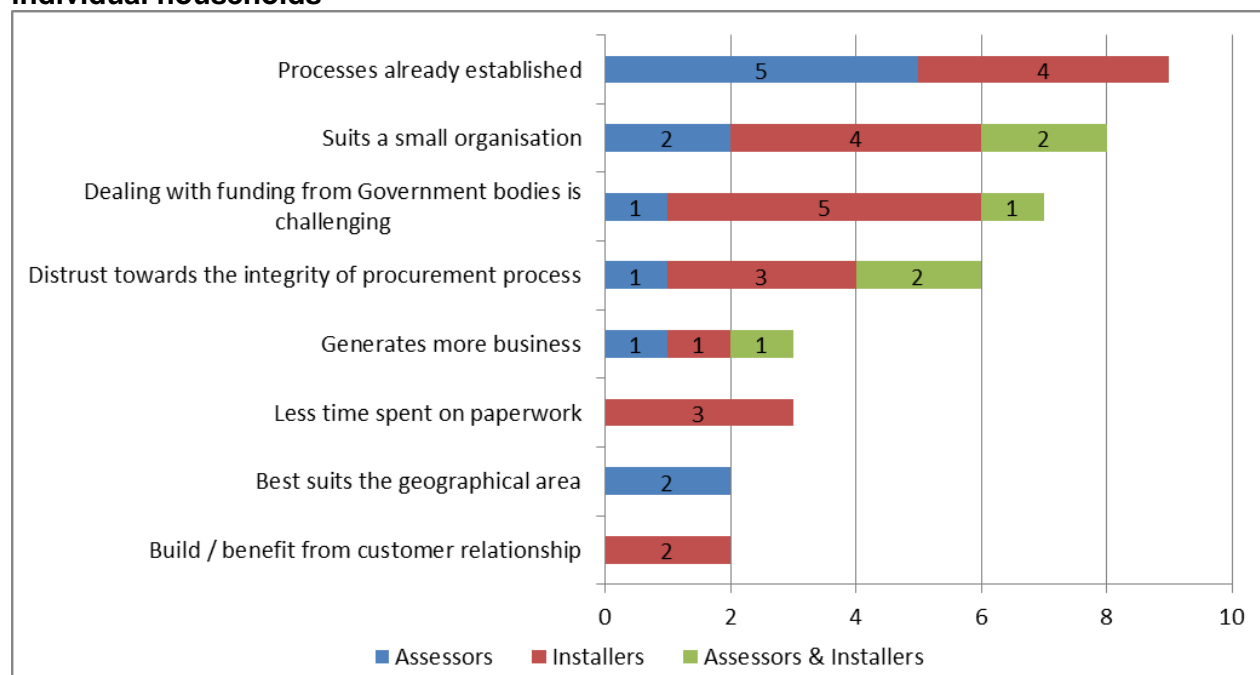
### **Funding delivery mechanisms**

Businesses that participated in the survey were asked a series of questions in relation to the mechanism of funding for Government schemes. Just over half indicated that they would prefer Government funding to be provided directly to individual households as opposed to through a local authority or other Government body. Just under a fifth of businesses had no preference. More installers than assessors favoured the delivery of funding through individual householders, with two thirds preferring this approach, compared to two-fifths of assessors.

Respondents to the survey were also asked to state their reasons for their preferred funding method and these are presented in figure 7.4. The most frequently cited reasons for preferring the allocation of funding to individual householders were that: their business processes were already set up to deal with

the householder directly; that this type of process suits a small organisation; and a reluctance to work directly with Government bodies.

**Figure 7.4 Reasoning behind businesses' preference towards providing funding directly to individual households**



Base: Assessors = 13, Installers = 14, Assessors and Installers = 7. NB: only comments made by more than one respondent are included in this chart. Source: Q25. Why did you say that?

Those with a preference towards local authority funding schemes (24% of all respondents) said that this was because there was greater security in terms of receipt of payment and scale of demand.

### Energy Saving Trust facilitated networking opportunities

During the survey, businesses were asked if they would like to be put in touch with other assessors/installers operating in their local authority area to explore ways that they could work together. Half (35) of businesses said they would and half (35) said they would not like to take part in this. This issue was also explored in the qualitative interviews, with some respondents keen to work with other businesses, but others concerned that joint working and sharing their knowledge and contacts with rivals would be a threat to their business.

### **Summary: Future development and funding**

The key barriers to businesses becoming involved in energy efficiency and renewable installations identified in the research typically related to engagement and participation with Government schemes. In particular these included:

- High levels of paperwork and administration required.
- A perception of householders' general lack of awareness of funding schemes available.
- Uncertainty and confusion in relation to Government schemes.
- The level and cost of administration involved in becoming certified.
- Perceptions of limited guarantees or little evidence of return after becoming certified.

Allied to these concerns were poor perceptions of the Green Deal as a mechanism and concerns that the credibility of the sector was being damaged by householder perceptions of this scheme. Regular changes to, and complexities of, other schemes were also cited.

Key barriers that appear to be particular for remote rural and island businesses are as follows:

- Additional time and cost issues related to accessing remote and island properties to undertake installation and assessment.
- As businesses in these remote areas tend to be smaller and more dispersed, the challenges of adapting to scheme changes and undertaking training and certification activities are potentially larger than for bigger businesses located in less remote areas.
- Awareness of Government schemes (with the exception of the Green Deal and RHI/FIT), and in particular HEEPS, by businesses is low.
- Difficulties for householders in finding local suppliers, or suppliers able to deliver services in remote rural and island areas.

Based on a range of options, the non-financial support activities felt to be the most effective to encourage involvement in the supply chain in these areas were:

- Bringing training to locations closer to businesses.
- Topic specific workshops delivered locally (e.g. building elements, project management, procurement).
- Online training.

These suggestions reinforce the identified barriers of reducing costs for certification and increasing knowledge in the sector. Other suggestions from respondents on ways to encourage business involvement related to:

- Streamlining the installation process for householders, including reducing the number of steps or stakeholders involved and using schemes such as the GHCB to fund assessments and provide a clear 'start point' for householders.
- Improving tools such as the GD ORB to make businesses more accessible and visible and in particular showing which businesses actively serve particular areas.

The HEEPS and ECO programmes were viewed positively by wider stakeholders but it was acknowledged that smaller, local businesses were not supplying services as part of this programme (as demonstrated by the low awareness of the schemes). Ways to improve engagement with these smaller, local businesses in relation to HEEPS and ECO is required.

## 8. Householder interviews

This chapter presents the findings of qualitative interviews with six householders residing in the target rural areas. These interviews explored their experiences of the supply chain for energy efficiency and renewables.

All respondents had been recruited from the Home Energy Scotland (HES) client database as householders that had experienced some problem or query in relation to the supply chain. These interviews do not therefore represent the experiences of all householders undertaking installations, but serve to highlight the challenges, difficulties and success of those going through this process in remote and rural areas. A list of respondents is described in chapter 2 (figure 2.2).

### Initial interest and choosing an appropriate measure

There were a range of reasons given by householders to explain why they explored the installation of energy efficiency or renewables measures; these were typically one or a combination of the following:

- General interest in renewables or energy efficiency
- Worked, or knew someone, in the sector
- Moving from a modern house to an older one
- A desire to make their home warmer
- Replacing a very old or broken boiler with a more efficient or renewable technology
- Reduce fuel bills

However, in almost all cases the main influence behind respondents' consideration of installing energy efficiency or renewables measures was a result of their interactions with others, be this:

- A suggestion from a relative
- Neighbours installing the same measure
- An approach by an installer
- A suggestion from an engineer

Some respondents were also strongly influenced by their interactions with others later in the process. At the assessment stage, recommendations from GDAs or from reviews of their GDARs prompted some to revise which measures they were going to install; one respondent did not take the process further until he spoke to a friend (who works for HES) who made him aware that there was funding available.

### Discovering and understanding the process

Some respondents were aware of the funding available to them (e.g. Green Deal, RHI, Green Homes Cashback) and the processes involved before they started. These people either worked in the industry, had a friend who did, or knew someone who had recently been through the process, such as their neighbour.

Others were unaware of what the process involved and had contacted HES as a starting point; one respondent said that they were referred to HES after seeking advice through their fuel supplier. The cross-over from previous funding schemes to the Green Deal proved confusing for one respondent and implied that this may have delayed starting the process:

*“Is there a Government led thing, or is there a council led thing, or is there indeed a thing at all? ... As far as I gather ... they do send people up into the north, but at that time they were changing from one system to a Council based system ... but my original group of friends who were having it done, as far as they knew ... through a Government agency, a Scottish Government agency.”*  
(Aberdeenshire householder)

### **Finding an assessor**

Respondents who were in contact with an installer from the outset found arranging a Green Deal Assessment relatively straightforward, as their installer either had an ‘in house’ GDA, or were able to sub-contract the assessment to another organisation.

Those who were not put in contact with a GDA via their installer found their GDA using the Green Deal ORB; one respondent managed to find his assessor quite quickly using this facility:

*“I got my voucher and then it was really easy to find a company to then come out and do the assessment ... they were in doing [the assessment] the second day we moved into the house.”*  
(Borders householder)

However, some found the GD ORB difficult to use (see discussion on the GD ORB website below) and had to go back to HES for help to find their assessor. Three respondents simply couldn’t find a GDA based in their area and had to find someone who was willing to travel to them. This was a particular issue for three respondents based in Aberdeenshire; something which made this part of their journey very time consuming:

*“There were and still are a limited number of people who are accredited for doing Green Deal Reports” ... It took me about two months [from when I started looking for an assessor to getting the assessment done].”* (Aberdeenshire householder)

A further barrier faced by respondents in finding their assessor was the additional costs being charged to cover assessors’ travel. One respondent based in Aberdeenshire had to pay £60 on top of the cost of a standard assessment (£100) to cover their GDA’s travel from Glasgow:

*“Now I’ve heard this said before. Aberdeen is the oil capital of Europe - to say that we are remote is a bit cheeky!”* (Aberdeenshire householder)

Another respondent based in Shetland, who had their GDA arranged by their installer, also had to pay extra for their assessor who travelled from Orkney. However, this respondent did not seem to mind paying extra, and was just pleased that they were able to carry out the GDA quickly as their boiler was broken:

*“We had to pay more ... but I was kind of needing to do it sooner rather than later, so I think that it was maybe an extra £50.”* (Shetland householder)

The assessments themselves were well received by the respondents and had a bearing on what measures they decided to install. The identification and recommendation of additional measures by assessors led two respondents to pursue the installation of additional measures that they had not previously considered:

*“[The report] mentioned underfloor insulation; I hadn’t thought about this before.”* (Aberdeenshire householder)

One respondent found the assessment very helpful. However, once she received the report she didn’t understand it and did not take the additional measures recommended to installation stage. She also felt that there was a lack of follow-up support at this point:

*“... [The advisor] left me paperwork and everything ... I was sitting looking at it myself and getting perhaps a little bogged down, although I’m not a stupid person, but I was not clicking on as to why there was sometimes you could get money off it appeared and the next column showed a different amount of money ... that was a little bit confusing.”* (Aberdeenshire householder)

This respondent went on to explain that her confusion was exaggerated by cold calls that she received from installers quoting prices much higher than the report suggested the measures would cost:

*“I have, over the last month, had a call or two from people who were trying to ‘pick me up again’... it always came down to a fair bit of money ... more expensive than the assessor had led me to believe ... but it was enough to put me off.”* (Aberdeenshire householder)

Others also felt confused by the report and one respondent commented on the assessment itself saying that he felt the process was invasive and made him feel self-conscious. However, this did not prevent them from continuing to the installation stage.

### **Finding an installer**

Respondents’ primary factor in choosing an installer was that they were local, would do a good job at a reasonable price and that the company would have the capacity and certification to install multiple measures. Most respondents did not want to use a large national company, preferring to support the local economy and believing that a local firm could be more trusted to deliver a good service. Therefore, they felt they would be more likely to be able to carry out the installation in their area:

*“There were several firms locally that could do it, and again I would always choose a local company over somebody who was not local, for the same reasons ... local knowledge is especially important...I picked a firm which I knew to have a good reputation.”* (Shetland householder)

As a result, the main barrier to carrying out installations was householders being unable to find a GD certified installer who covered their area, a factor further compounded by the time limits of GHCB vouchers and the challenges of using the Green Deal ORB website (see section below). Two people



were unable to find a Green Deal certified installer and so the installation of the measure had not gone ahead at the time of the interviews.

Another respondent could not find a local GD certified installer for their gas central heating system (having used a GD certified installer for insulation) and so arranged for a local non-Green Deal certified, gas safe engineer, to install the system, forgoing their GHCB funding:

*“I just couldn’t find anyone who would do that, so ultimately I took the decision that I was going to use someone local to do the gas, so yeah I forfeited £500 and ended up just getting the loft insulation [through Green Deal].”* (Borders householder)

Two respondents explained that they tried to find an installer able to carry out installations using GD funding by phoning around local installers. In both cases respondents were unsuccessful; one found an installer who thought they were Green Deal certified and later found that they weren’t. This respondent described the situation as feeling *“like we had hit a brick wall.”* (Aberdeenshire householder).

The second respondent to take this approach was met by a number of negative reactions from installers about the Green Deal (e.g. abuse by cold-callers, level of admin required to become certified for the perceived income etc).

A different barrier faced by one respondent was their installer’s lack of understanding of funding terms and conditions. The installer approached the respondent to use their property as a show case of their work; they carried out a number of assessments, before telling the respondent that they were not eligible for the funding. This respondent was unable to proceed with the installation as she could not afford to do so without the funding:

*“I think it wasn’t eligible because of the property type and ... they were a new company starting up and perhaps they didn’t quite know what was happening, and they really did promise me it for free ... it made me feel annoyed, upset, quite angry and quite bitter.”* (Orkney householder)

Those who had more success in finding their installer were typically in contact with them at an early stage, establishing links via the following routes:

- Word of mouth
- Knew someone who worked for a local installer
- Approached by the installer to be used as a case study.

One respondent based in Shetland implied that there was an abundance of local installers to choose; he just had to find one who he thought would do a good job.

### **The Green Deal ORB website**

There were a number of comments about the use of the Green Deal ORB website for finding installers and assessors. Many could not find assessors on it and only two were able to find their installer using the GD ORB. Most found using the GD ORB difficult or unhelpful. Their main concerns were:

- The database/website not being user friendly
- A lack of clarity as to which areas are covered;
  - Many entries had English telephone area codes or 0800 numbers, leading respondents to assume they were large non-local companies who wouldn't cover their area
- Installers stating that they covered an area on the ORB but then (after enquiring) indicating that they could not deliver a service to their area

Respondents wanted to find a local supplier, but felt that the GD ORB was not able to provide the information they required:

*"... that's when it all just fell down, because you start searching on the GD ORB, when I started calling them they were like 'oh no we don't cover Peebles' so I was like 'well that's annoying because I had put quite clearly in my search for Peebles'. Then it got to the point when I couldn't find any companies, or there was maybe one that would do both, but ... they wouldn't get back to me at all."* (Borders householder)

*"I certainly remember sitting at my computer for many an hour looking at these numbers and thinking to myself ... that one's in the south of England, this one's in Yorkshire ... you wouldn't know by looking at it that there was anybody frankly in our area ... and I never actually found anybody."* (Aberdeenshire householder)

Other respondents had concerns that companies on the database were just developed to take advantage of the scheme (and by implication not to deliver a good service to householders):

*"I have to say that from my experience of just the customer service and even the names of some of these companies; they're set up to make money; they're all called Green Deal or whatever ..."* (Borders householder)

## **Certifications**

Related to the concerns expressed in relation to the Green Deal, many householder respondents did not hold certifications in high regard, favouring recommendations from others over and above industry certifications:

*"If I'm perfectly honest in terms of looking for the Green Deal [certification], that to me doesn't mean that they are of a certain standard, all it just means that they want to be part of that scheme so they have jumped through whatever hoops they need to jump through."* (Borders householder)

*"... do I think that certifications are actually valuable or helpful, not at all, I think that you get companies that are good at doing paperwork but are useless engineers."* (Shetland householder)

One respondent developed distrust towards certifications after bad experiences with their installer. This respondent initially saw MCS as an installers' "badge of reliability" (Aberdeenshire householder) but went on to say:

*“With the experience that I have had I will no longer trust MCS certification, so in other instances I will be asking for a list of clients that they have installed and I will be checking those references ... I just don’t think that [MCS] is a certification system that is fit for purpose.”* (Aberdeenshire householder)

However, many respondents said that they did not check for other basic certifications that they would normally do, such as ‘Gas Safe’, assuming that because they were Green Deal certified they would automatically have the other appropriate certification.

### **Home Energy Scotland support**

On the whole, respondents thought that the advice that they received from Home Energy Scotland throughout their journey was helpful. Some contacted them initially as a starting point and later for reassurance and guidance during the process.

Others acknowledged that there were limitations in the support that HES could offer<sup>5</sup> them (HES are unable to recommend specific businesses to remain impartial). After struggling to find local installers on the GD ORB, one householder said:

*“Home Energy Scotland were very helpful indeed, and told me what I should be doing, etc., etc., as far as I can recall, but they could not give me the name of installers, or firms who actually did the work, they were not able to give me that, and that was really my problem ... ”* (Aberdeenshire householder)

Another felt that they did not seem to understand the difficulties (in finding businesses) from the perspective of the householder: *“Home Energy Scotland were very helpful but they think that it is easier than it is”*.

### **Recommendations for changes and improvements**

Respondents were asked to consider if there were any improvements that could be made to the process to support them to install measures. Many mentioned more access to, and/or availability of, local businesses (that could operate within the current supported schemes) and better systems of identifying these businesses:

*“I would like to see, whatever the benefit is for companies to be in the Green Deal, much more local choice and also be much more clear of what areas they covered.”* (Borders householder)

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<sup>5</sup> In cases where a householder is looking for a Green Deal participant (e.g. assessor), local knowledge of available participants are provided by HES *where known*. In all cases (including when no local knowledge exists), HES would always signpost householders to the GD ORB.

Others also mentioned that the complexities and changes to supported schemes, and the large numbers of stakeholders and stages involved (e.g. HES, assessors, installers, GD ORB etc.) meant that the system needed to be streamlined to make it simple and straightforward for householders to utilise:

*“It would certainly make my life a lot easier if I had a one stop shop ... identifying reliable contractors is a very, very big help.”* (Aberdeenshire householder)

*“More joined up thinking is needed ... need to act like they are all part of the same team.”* (Aberdeenshire householder)

### **Summary; Householder interviews**

The section has provided valuable insights to the householder experience that complements the feedback from the installers and assessors in the previous chapters. Key insights into the customer journey are as follows:

- The customer journey is clearly not straightforward for householders, with too many agencies involved and too many steps to go through.
- Householders found it difficult to access GD/MCS certified installers and assessors. Respondents would prefer to use local businesses, both on the basis of trust and to support the local economy.
  - Many found this difficult and ended up using local, non-certified businesses to complete their installations.
- The Green Deal ORB is perceived as complex and not delivering information on local providers.
- Those who made contact with an installer from the outset had a smoother journey as their assessment was either arranged for them, carried out by the company internally, or they were signposted to another organisation. This highlights the need for a 'one-stop shop' approach to make things easier for householders.
- Respondents felt that the advice that they received from Home Energy Scotland throughout their journey was helpful.

The Green Deal assessment reports were viewed positively by respondents, with some highlighting that it provided additional information on how they could improve their home. However, there was some feedback that the information contained in them was complex or confusing. Some experienced additional costs to enable an assessor to travel to their location.

The changes to funding systems was identified as confusing and there was some negative feedback about receiving cold calls from Green Deal-related organisations and a perception that these organisations were focused less on customer service and more on 'making money'. Related to this was a perception that the certifications were not marks of quality, but just routes to access funding.

## 9. Conclusion and recommendations

### 9.1 Summary and conclusions

This report has presented a review of the energy efficiency and renewables supply chain operating in six remote rural and island areas of Scotland (Western Isles (Eilean Siar); Orkney Isles, Shetland Isles, Highland, Aberdeenshire and the Scottish Borders).

#### Overview of the supply chain

The research has highlighted the following characteristics of the supply chain in these rural areas:

- Businesses based and operating in these areas tend to be micro-sized businesses (i.e. fewer than seven employees).
- The number of GD/MCS certified businesses based in these areas is low, although relative to the island areas, the availability of local MCS certified installers is much higher in the mainland local authority areas (Aberdeenshire, Highland and the Borders).
- Almost all renewable heat or renewable electricity installers contacted in the research are MCS certified (although not for all measures they offer).
- Conversely, many businesses delivering energy efficiency services and energy assessment-related services are not GD certified. This includes some who are MCS certified.
- The research findings cannot be definitive on which measures are, and are not, available to be installed by GD/MCS certified installers in each area. However, the research did not identify certified suppliers for some energy efficiency technologies (including measures such as lighting, ventilation and heat recovery, insulated doors, flat roof insulation, double, triple or secondary glazing and solar blind) suggesting that there may be gaps in provision in these remote areas.

It is also not possible from the research to state how many non-certified businesses operate in these areas, but it does suggest that there is potential for more businesses serving these areas to become certified, particularly in relation to energy efficiency measures.

#### Key barriers to certification for Government schemes

The key reasons for the lack of certification for businesses, and barriers to engagement in the supply chain in general, are:

- High levels of administration and paperwork associated with Government schemes and certification.
- A perceived lack of return, and a limited market for, these certified services (specifically this relates to Green Deal-related energy efficiency installations).
- High perceived costs in terms of training and maintaining certification.
- Concerns about the longevity and suitability of the Green Deal as a mechanism for householders to improve their homes and a lack of demand from householders.
- Low awareness of other Government schemes requiring certification, such as HEEPS and ECO.
- Prevalence of large, non-local businesses undertaking the large scale (HEEPS and ECO) Government funded work.

- Low awareness of Resource Efficient Scotland SME loans as a route to support certification and training.

There is evidence that some current Government schemes (e.g. RHI and HES renewables loans) appear to be stimulating MCS certification for renewables installers and GD certification for advisors. This in turn is supporting these businesses to access work related to these schemes. There was also some evidence that the Green Homes Cashback scheme had also stimulated work for, and enabled the development of, some assessment-related businesses.

### **Barriers to engagement particular to remote rural and island businesses**

The key barriers to engagement that appear to be particular to remote rural and island businesses are as follows:

- Time and costs incurred for installers and assessors visiting remote rural and island properties.
- The significant challenges, particularly for the micro-sized businesses, of adapting to Government scheme changes and undertaking training and certification activities.

As a result of this, tailored support may be required to engage the micro-sized businesses that make up the supply chain in these areas. For a micro business in particular, these issues are likely to be highly significant as the scope to invest in training and certification is likely to be more limited.

### **Problems with the GD ORB website and search tool**

Based on a review of the outputs from the GD ORB and feedback from respondents, this research suggests that the GD ORB may be over-representing the number of businesses actively serving these remote rural and island local authority areas. It has been impossible to assess the extent to which the information from the GD ORB is accurate but this research suggests that it is not providing the detailed, locally focused information that would be useful in helping householders choose certified businesses in these remote areas. In addition for those who fail to find a certified supplier in their area, there are no other central or local sources of information on businesses.

Many participants involved in the research would like to see a simpler, more straightforward route to accessing funding and support, which includes easy and clearer access to local businesses. This is a function that the GD ORB does not appear to be facilitating at present.

## 9.2 Recommendations

Based on the findings in this report, the following recommendations can be made:

### **Recommendations for the Energy Saving Trust Sustainable Energy Supply Chain programme and other supply chain support programmes in Scotland**

1. Identify and promote clear reasons for businesses to become certified with Government schemes. This is particularly important for energy efficiency installers as the business case for becoming certified (based on the findings in this research) is, at present, very limited.
  - In light of this, consideration should be given to how HEEPS programmes could be developed or promoted to these smaller remote rural and island businesses
  - Consideration could also be given to aggregating information on the demand for Green Deal Assessments and/or the measures identified by these GDARs to demonstrate the scale of possible demand for measures.

This first recommendation cannot be underestimated in relation to the energy efficiency-related supply chain. Until installers can see a market for Green Deal certified work, the certification process will not be deemed worth the effort and investment. The predominantly smaller installers that supply these areas are unlikely to risk a significant investment in becoming certified for no obvious income opportunity.

Secondary recommendations include:

2. Focus on raising awareness and knowledge of current schemes in these areas.
3. Bring training and topic specific workshops (e.g. procurement) closer to smaller remote rural and island businesses to reduce costs.
4. Develop targeted support and training that is suitable for smaller businesses in these rural areas to help them go through the certification process. Routes to streamline the certification process for smaller businesses in these areas should also be explored.
5. Consider how businesses operating outwith the Green Deal and related programmes could be supported through the supply chain programme (e.g. via networking and linking to other providers, being introduced to new technologies etc). This would foster greater support and engagement with the Government-related supply chain.
6. Communicate the detail of administration and processes required to become certified to the supply chain simply and clearly to overcome concerns and any possible misconceptions.
7. Work with MCS, British Standards Institute (who deliver PAS) and GD ORB to explore routes to reduce paperwork.

### **Recommendations for the Scottish Government / EST**

Where possible the customer journey to accessing these schemes, and installations in general, need to be improved to stimulate more demand. This could include the following:

8. Maintain the use of Green Homes Cashback to pay for GDARs if measures are installed. This will create a simple start point for householders on the journey to installation. It is likely to reinvigorate demand for assessments and may lead to further installations.
9. Consider ring-fencing Green Homes Cashback funding for remote rural and island areas to ensure adequate uptake and targeting of resources in these areas.



10. Provide additional funds to cover travel and other specific additional costs for remote rural and island area installations and GDARs.
11. Develop routes to include smaller local businesses in HEEPS-related work. This would provide smaller, local businesses with a reason to become certified.
12. Consider developing localised area-wide schemes or managed networks of local installers and assessors to develop a one-stop shop for householders.
13. Develop local, targeted portals or databases containing all assessors and installers (e.g. a GD ORB 'local' or similar database that can be held, monitored or facilitated by Home Energy Scotland). This would be similar to the current Renewable Installer Finder tool.
  - Consideration should also be given to including non-certified installers interested and able to do work in specific local areas, particularly if they are working towards certification. (The inclusion of non-certified installers would need to be resolved with the high emphasis that the Scottish Government place on certification in relation to supported work).
  - Any database should contain and be searchable by:
    - Level and status of certification
    - Location(s) of business and areas of operation
    - Services/technologies offered
    - Recent work undertaken with possible inclusion of customer reviews.

### **Recommendations for the Green Deal ORB**

14. It is recommended that the content, structure and outputs of the GD ORB are reviewed to more accurately represent available locally-based delivery and to include information on local Green Deal Advisors and not just Assessor Organisations.
  - This could include amending the GD ORB search outputs for these remote rural and island areas to only include businesses that have explicitly stated that they serve these areas (rather than including those that cover all of the UK or Scotland).

### **Recommendations for future research**

In order to best deliver on some of the recommendations described above some further research may be required. This could include:

15. Extend the current mystery shopping DECC-funded research of Green Deal installers being undertaken in England and Wales by EST (and about to commence in Scotland) to specifically target remote rural and island areas of Scotland. This will provide robust data on locations served and response times to householder requests. Given that this may require significant resource implications for businesses (e.g. planning and/ or conducting visits) the ethics of this approach will need to be considered carefully.
16. Further research into exploring how non GD/MCS certified companies could be supported by the supply chain programme.
17. Research or pilot projects to develop routes for smaller businesses to become involved in HEEPS-related work.
18. Research or pilot projects to develop routes for smaller businesses to become involved in one-stop shop-type area wide networks in these areas.
19. Work on the feasibility of developing local databases of businesses.

## Appendix 1: UK and Scottish Government financial support schemes

### Green Deal

The Green Deal is designed to help householders, businesses and other organisations make energy saving improvements by installing energy efficiency measures and renewables systems. The Green Deal also offers a new way to finance these improvements. The process involves a Green Deal advisor carrying out a Green Deal assessment on the property and providing the householder with a Green Deal advice report which lists recommendations.

The householder can then approach a Green Deal installer(s) to carry out the work using their own finance. Alternatively they can get the work done through a Green Deal provider. The Green Deal provider can also offer an upfront payment to cover installation costs, which is then repaid through savings on the householder's energy bill (Green Deal finance). Green Deal certified companies are all listed on the Green Deal Oversight and Registration Body website ([gdorb.decc.gov.uk](http://gdorb.decc.gov.uk)).

### Energy Company Obligation (ECO)

ECO is an obligation on nine of the biggest energy suppliers to support the installation of energy efficiency measures by domestic energy users. It replaces two previous schemes (CERT and CESP). The obligation is split into three types of target: the Carbon Emissions Reduction Obligation (CERO), which, after the proposed changes to ECO, will focus on supporting a range of insulation measures and connection to district heating; the Home Heating Cost Reduction Obligation (HHCRO) focusing on helping low income and vulnerable households heat their homes and the Carbon Saving Communities Obligation (CSCO) focusing on the delivery of insulation measures and connection to district heating in some of the UK's most deprived areas. All three targets support insulation and district heating measures, with heating and renewable installation measures potentially being available through the HHCRO target. Funding support depends on the savings that arise from the measures, which are calculated through an energy assessment. ECO funding can be used to supplement the Green Deal. ECO funding is usually accessed for householders by organisations contracted to the obligated energy suppliers, or from Green Deal providers, who access funding through a bi-weekly auction for ECO savings.

### Renewable Heat Incentive (RHI)

The Renewable Heat Incentive (RHI) is a UK Government scheme set up to encourage uptake of renewable heat technologies among householders, communities and businesses through the provision of financial incentives. From heat pumps and biomass boilers to solar thermal systems, householders who install renewable heat-generating measures in their homes will be supported by RHI government payments. Depending on the technology installed, they will receive a set tariff rate for each unit of renewable heat produced. In some cases these payments could be more than £1,000 per year. For householders to benefit from the scheme, they will need to use installers certified under the Microgeneration Certification Scheme (MCS) and use products listed on Ofgem's Product Eligibility List. In addition, they also need to carry out a Green Deal assessment as part of their eligibility criteria. The RHI is also available for commercial properties. In the case of households and commercial properties, applicants need to apply to Ofgem.

### **Feed-in Tariff (FIT)**

The Feed-in Tariff is a UK Government scheme that enables householders, communities and businesses to generate income by producing renewable electricity. Eligible technologies include solar PV, wind turbines, hydro and micro-combined heat and power (micro-CHP) systems. Payments are based on tariffs which are dependent on the technology type and size along with eligibility date. To be eligible, householders must use installers and products certified under the Microgeneration Certification Scheme (MCS). Householders also need to have an Energy Performance Certificate (EPC) band D or higher to qualify for the higher rate of FIT for solar PV. Householders apply for the Feed-in Tariff through their energy company.

### **Home Energy Scotland renewables loan scheme**

Interest-free loans up to £10,000 from the Scottish Government are available for owner occupiers in Scotland who want to install a domestic renewables system or who wish to connect to a district heating scheme powered from a renewable energy source. You will also need to have a Green Deal assessment carried out on your property and provide a copy of the Green Deal report with your claim. For more information, visit [energysavingtrust.org.uk/scotland/homerenewablesloan](http://energysavingtrust.org.uk/scotland/homerenewablesloan)

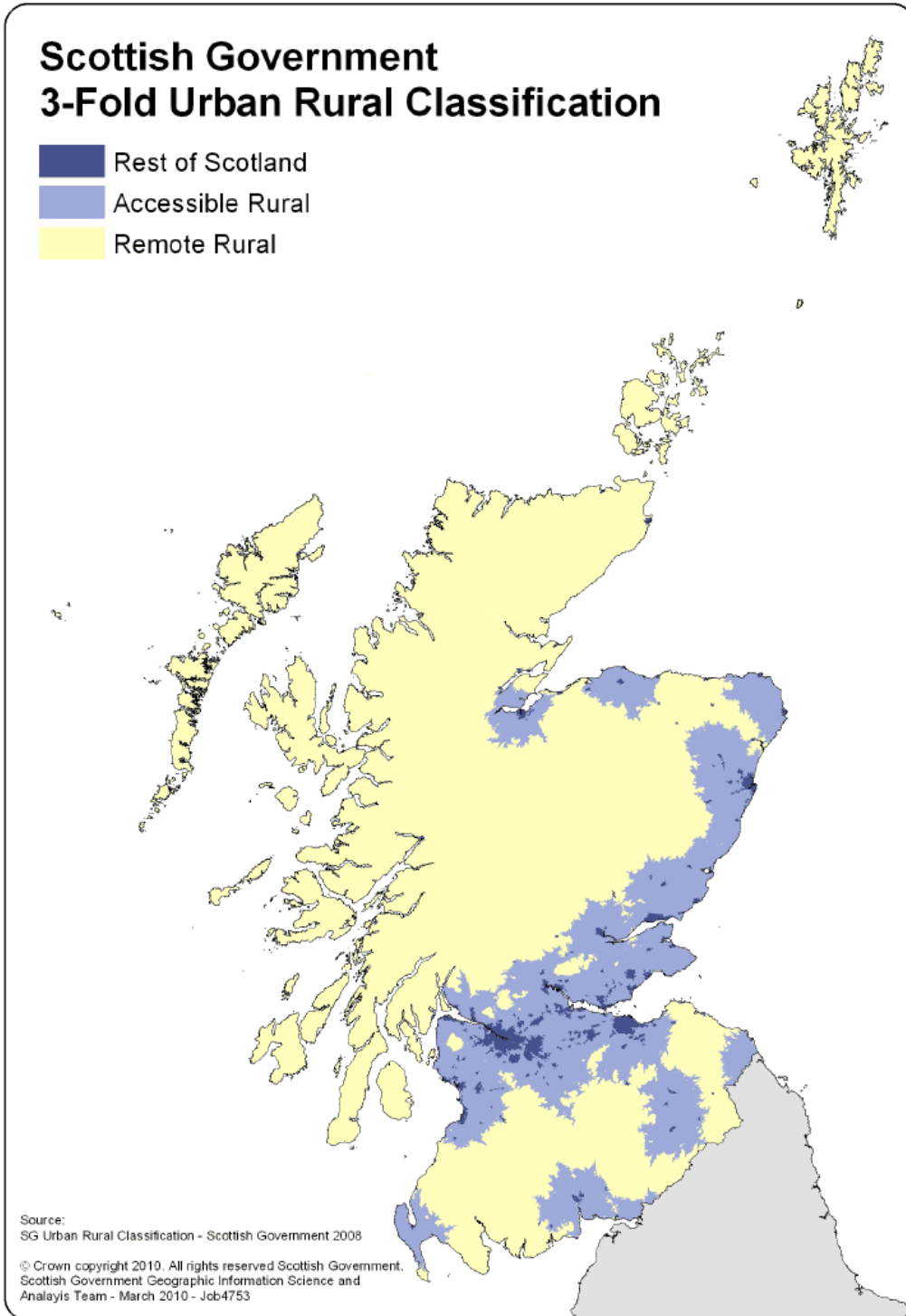
### **The Green Homes Cashback scheme**

The Green Homes Cashback scheme has been extended and will be open to owner occupiers, private landlords and private and social tenants. Customers can now apply for 75% of the install cost of solid wall insulation up to a maximum of £6,000; up to £1,200 for a range of other recommended energy efficiency measures including condensing boilers (up to £500) and insulation (up to £400). Other measures are available up to £300. Householders will need to have a Green Deal advice report carried out and can claim up to £100 towards the cost of the report (householders in rural remote areas may be able to claim more) as long as at least one measure is installed. For more information visit, [energysavingtrust.org.uk/scotland/Take-action/Find-a-grant](http://energysavingtrust.org.uk/scotland/Take-action/Find-a-grant)

### **The HEEPS:ABS Programme**

Announced in March 2013 by the Scottish Government, the HEEPS:ABS is a local authority led energy efficiency programme which commenced in June 2013 and had a budget of 60 million GBP in the 2014/15 financial year. The funding is expected to lever in around 120m GBP of investment from major energy suppliers through ECO to assist delivery of the projects. The investment will be primarily targeted at fuel poor households in the private sector.

## Appendix 2: Scottish Government 3-fold rural classification map



## **Appendix 3: Energy efficiency and renewables measures**

### **Energy efficiency measures**

- solid wall insulation (external and internal)
- cavity wall insulation
- flat roof insulation
- floor insulation
- loft insulation (including top-up)
- room-in-roof insulation
- condensing gas boiler
- condensing oil boiler
- condensing LPG boiler
- cylinder thermostat
- double/Triple glazing
- draught proofing
- fan assisted electric storage heating
- flue gas heat recovery system
- heating controls (programmer, room thermostat and thermostatic radiator valves)\*
- hot water tank insulation
- insulated doors
- replacement warm air unit
- secondary glazing
- waste water heat recovery (heat recovered from the drain of a shower)

### **Renewable heat measures**

- biomass (wood fuel) boilers and stoves
- ground source heat pumps
- air source heat pumps
- solar water heating

### **Renewable electricity measures**

- solar photovoltaics
- wind turbines
- micro-hydro
- micro combined heat and power (CHP)

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