The Scottish Government

Review of The Climate Challenge Fund

Environment

social research

REVIEW OF THE CLIMATE CHALLENGE FUND

Brook Lyndhurst and Ecometrica

Scottish Government Social Research
2011

This report is available on the Scottish Government Social Research website only www.scotland.gov.uk/socialresearch.

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

Table of Contents

1 EXECUTIVE SUMMARY

1.1 The Scottish Government's Climate Challenge Fund (CCF) was set up to help communities combat climate change by reducing their carbon emissions. Since 2008, the fund has supported hundreds of community projects across Scotland.

1.2 Brook Lyndhurst and Ecometrica were commissioned to carry out a review of the CCF, with the aims of exploring the impacts of projects and identifying the factors which contribute to the projects' success. The review also explored questions around the potential of community projects to deliver behaviour change, emissions reductions and wider sustainability aims; the limits of what they can achieve; and how government can support them to do more.

1.3 The review methodology involved extensive qualitative research with a sample of 21 projects, and a quantitative carbon assessment of eight of these.

Key findings

1.4 CCF projects work in four key areas: energy (efficiency and renewables), food, transport and waste. The reviewed projects had generated extensive uptake of hard energy efficiency measures (e.g. insulation), some less widespread changes in everyday energy behaviours, and several plans for domestic renewable energy installations. Most food growing projects were operating at capacity, while sustainable food purchasing projects had stretched participants within their comfort zones. Travel behaviours proved difficult to influence, but there was evidence that attitudes were changing, with cycling more likely to be considered a viable option. Food growing appeared to be an effective gateway into composting, while both growing and composting had the potential to lead into food waste reduction.

1.5 Impacts on participants' environmental attitudes appeared limited. Projects were mainly working with audiences who were 'moderately interested' in the environment, with much more scope for changing behaviour than attitudes.

1.6 Carbon emission savings were calculated for eight of the projects taking part in the review, and expressed as both 'higher' (optimistic) and 'lower' (conservative) estimates. In total, the eight projects were estimated to have saved at a higher level, 46,694 tonnes of CO_2e (equivalent to 7,140 average households' energy consumption) and at a lower estimate 15,459 tonnes (2364 households).

1.7 The carbon savings achieved through interventions focusing on hard measures appeared more clear-cut, while there was generally much more uncertainty as to the scale of carbon savings from interventions to change habitual behaviours. Some of these habitual behaviours can, however, have more 'engaging power' in terms of inspiring participants to get involved in projects – food purchasing is a good example. There is also a balance to be struck between the resource-intensity of an intervention in reaching a large number of people, compared to the carbon savings per person.

1.8 The CCF projects taking part in the review were also found to have additional sustainability benefits, for example in terms of health and well-being, community cohesion, and benefits to local economies.

1.9 Project participants were generally motivated to change their behaviour by personal reasons related to, for example, finances or well-being. The environmental benefits of behaviour change were often a secondary motivator, or 'feelgood factor'. Barriers to behaviour change tended to be more diverse and specific to the behaviour in question, and included barriers at the personal level as well as external barriers.

1.10 Some of the key characteristics of successful projects were:

- Careful and realistic planning;
- A team with good people skills and knowledge of their subject;
- A good understanding of the target audience, including their motivations and barriers, and how the proposed intervention will work in that context to change behaviour;
- Messages that tapped into participant motivations – this often meant non-environmental messages;
- Interventions that activated motivations and helped participants overcome barriers to change – some notable successes were:
    - "Hand-holding" participants through the process of insulation installation overcame barriers related to fear of hassle and effort;
    - Intensive personal support overcame the barrier of inertia with respect to taking up cycling; and
    - Providing interested participants with information about outlets for local produce enabled them to make more sustainable food choices;
- A learning culture that enabled the organisation to learn from experience (its own and others'), and a willingness to adapt and continuously improve its approach; and
- A good reputation – which generated trust among the target audience.

1.11 Projects' capabilities to monitor and evaluate their impacts were found to be variable. The Scottish Government's Low Carbon Route Maps, evaluation support and training were valued and useful.

1.12 Most projects strongly felt that their community identity was an integral part of their approach. Strong links to the local community seemed to be an essential ingredient in retaining the community's trust. For this reason, many projects felt that their activities were only feasible on the community scale. Projects which felt their activities could work on a larger scale were those working through existing entities such as workplaces or schools (communities in their own right), and effectively delivering a service to them. Essential for scaling up, however, is for the project's lead organisation to relinquish some control, and for the separate communities to take ownership over the project activities.

1.13 Projects were keen to share what they had learned from their experiences and help new projects in this way. Face-to-face sharing was the preferred means of diffusing learning – and visiting other projects was in fact something that many of the reviewed projects had done themselves in the early days.

Potential of community projects to deliver sustainability objectives

1.14 Evidence from the CCF review suggests that community projects are well-placed to deliver pro-environmental behaviour change because of:

- Their ability to tailor and personalise their messages and interventions to appeal to individual participants' motivations and overcome the particular barriers that apply in each case;
- Their position in the community as trusted entities that are seen to have the community's interests at heart; and
- Their ability to engage those who are 'moderately interested' in the environment and open to the idea of change (who make up a fairly sizeable proportion of the population), and spark them into action.

1.15 The community scale also seems to be one at which climate change action is meaningful to people. It seems to be a large enough scale at which the overall impact is significant enough for action to be perceived worthwhile, but small enough for each individual to feel they have a valuable contribution to make, as well as a responsibility to contribute.

1.16 The contribution of community projects to carbon emissions reductions is necessarily limited, when considered in the national context. Community projects, by their nature, engage only a proportion of the population, and although some deliver rapid carbon savings (through, for example, insulation initiatives) the carbon impacts of behaviour change projects in particular are difficult to measure accurately. Carbon impacts are, however, just one part of the equation. Much of the value of community projects lies in their ability to enthuse people about sustainable lifestyles more widely, and to deliver on other aspects of sustainability, such as well-being and community cohesion.

1.17 The potential of community projects to achieve change is also limited by a number of external barriers. Issues that CCF projects had come across included:

- Participants experiencing financial barriers to change (e.g. not being able to afford the cost of insulation);
- Participants experiencing difficulties obtaining planning permission (e.g. for a wind turbine) or projects themselves finding planning conditions onerous (e.g. for allotments); and
- Lack of infrastructure (e.g. for cycling) or other facilities (e.g. local food outlets) making it difficult for participants to change their behaviour.

Implications for the Scottish Government

1.18 The review identified a range of ways in which the Scottish Government could further support community projects in achieving their objectives. The key recommendations include:

- Build on existing practice to provide additional training and guidance in key areas such as monitoring and evaluation, behaviour change, communications and the statutory planning process.
- Build on existing practice to further support sharing of learning and best practice between community projects, for example through networking meetings and potentially peer mentoring. The system of funding in rounds was also found to encourage reflection and learning.
- Provide long-term support to projects with the dual purpose of building community capacity to tackle climate issues and progressively engaging communities in more significant elements of sustainable lifestyles – both processes were found in this review to benefit from an explicit long-term plan and approach.
- Identify crossovers between support for community projects and other policy areas where linking up would have mutual benefits – one such example is the development of new transport infrastructure, where community projects can feed in valuable information about on-the-ground demand, with the potential to have related barriers removed.
- Consider reviewing the CCF's strategic aims in the context of climate change policy, to more explicitly support the unique contributions that community projects make to sustainability goals, such as longer-term sustainable lifestyle changes and community capacity building.

1.19 The following tables provide a summary of the implications and recommendations of the review.

Lessons for influencing behaviours in community climate change projects
In order to have the broadest possible reach, projects should consider what role they will play with respect to the Acceleration, Facilitation, Activation, Consolidation or Conversion of participant behaviours.
Projects need to have a good understanding of their audience, including motivations and barriers, both personal and external. They should be able to articulate where the audience is starting from with respect to the behaviours being promoted and how their project model will achieve behaviour change. Projects may need to conduct audience research or piloting then adapt their approach in the light of early learning.
Tailored and personalised interventions are a key strength of community projects – whereas poorly targeted and unsolicited communications generally struggle to achieve their desired impact. Where passive approaches are to be used (e.g. direct mail) projects should consider carefully why the messages will appeal to and influence recipients.
Building a local profile for the project can enhance the impact of engagement activities but will take time.
Participants are often motivated to adopt new behaviours for non-environmental reasons, but projects should be transparent about their own environmental motivations to secure trust. Whether or not projects lead with environmental messages, it is crucial that project teams are not judgemental about participants' attitudes to environmental issues and climate change.

Lessons for running effective community climate change projects
Projects in the review consistently under-estimated set-up and delivery timetables. Projects should identify risks at the project planning stage and devise contingencies.
A learning culture – to reflect on what does and doesn't work – and an ability to adapt accordingly was a key strength in project delivery. Projects should consider how they will capture lessons as they go and set out occasions for reflection and review as specific tasks in their project timetables.
To maintain interest and involvement, volunteers need to feel they have a stake in the project. Project managers need to consider what motivates volunteers and how volunteers will be allowed the space to shape their own roles.
Monitoring and evaluation can be built into project processes (e.g. recording numbers of energy efficiency measures installed; brief surveys as part of home visits). Projects should aim for a balance between robustness and simplicity.

Removing barriers to pro-environmental behaviour change
Community projects can spot barriers to change and emerging demand for services that might not otherwise be evident. Government should develop ways to encourage and respond to feedback from community groups about barriers to low carbon behaviours and identify ways that communities could be supported by, or work with, government and others to remove barriers.
Specific possibilities for further consideration include: • Identifying and promoting strategic opportunities where community groups could enhance the take-up of low carbon measures by reducing cost, effort and complexity for participants (e.g. bulk buying clubs; home insulation). • Encouraging and helping community groups to identify where they fit in with national energy programmes, to avoid duplication but also to identify opportunities to join up the capacity of large programmes with the unique audience engagement capability of community groups. • Enabling (and perhaps funding at local level) community projects to develop local infrastructure that supports behaviour change (e.g. in transport).
Where a project is reliant on getting planning permission (e.g. for renewable energy or allotments) Scottish Government could: • Assess planning risks of bids and offer advice at the start of a project; • Offer training on planning matters; • If possible, offer individual support from KSB officers to attend meetings with planning authorities.

Monitoring and evaluation
Better methods are needed for capturing the wider social impacts of community climate change projects. This includes both direct social benefits to individuals and indirect benefits, such as changing social norms for non-mainstream behaviours.
Longitudinal research is needed to identify the long-term impacts of behaviour change initiatives, including: whether behaviours are sustained over time; whether participants 'ratchet up' pro-environmental behaviour over time; whether and how projects change social norms in their communities. Scottish Government should consider funding (on its own or with others) a study of the longer term impacts of selected CCF projects.
The Low Carbon Route Maps and evaluation support offered to projects was useful and should be retained in any future rounds of funding. Projects' experience and good practice could be shared through CCF networks, a case study bank, and possibly a peer mentoring scheme.
The qualitative approach taken in this review has provided rich data on why and how behaviours changed. Methods for capturing quantitative data on the degree of behaviour change and feedback from non-participants need to be developed further – though remaining mindful that community projects can easily be undermined by heavy-handed evaluation. A two stream approach to evaluation and learning is therefore indicated: • Guidance on simple but robust methods to all CCF projects that will generate 'good enough' data for fund accountability, building on what the CCF does already. Projects should be encouraged or required at bid stage to identify opportunities within their project activities for capturing behaviour change and energy data; • Select learning case studies to develop 'fit for purpose' quantitative methods and in-depth qualitative insight. These projects would need to be identified at bid stage and supported by research/evaluation experts (and extra funding if possible) to develop evaluation plans that fit with their project activities but also deliver robust data to support learning by Scottish Government.
Specific recommendations apply to measuring carbon emissions: • Encourage projects to estimate lifetime, rather than annual, savings. • Encourage or require projects to use the template of baseline and scenario savings used by Ecometrica and demonstrate at the start of the project how they intend to collect data to fill the template, including opportunities for capturing energy data through project activities. • Encourage projects to prioritise data on actual consumption (e.g. energy consumption or car usage) and fuel type (because it provides a more accurate estimate) but use emission saving factors where this is not possible. • Support projects by providing a portal to approved data sources that will help them calculate emissions reductions; if possible, enable a 'wiki' space for projects to share experience and knowledge of using secondary data in emissions calculation.

Fund design and processes
The Fund managers should use insights from the review about Acceleration, Facilitation, Activation, Consolidation and Conversion to guide projects and monitor their progress.
Applicants should have to explain why they think their interventions will work, preferably backed up by evidence (e.g. audience research, proven case studies or best practice).
Assessment panels should play an active role in highlighting risks of delays and over-runs in project plans and play a supportive role in suggesting contingencies, alternatives, or a change in budget for those selected for funding. Panels need to include or have access to relevant expertise.
The fund managers should consider how they can further encourage and build capability for action learning in funded projects and design better ways to capture key lessons about 'what works' in individual project reports (e.g. "summarise your top 5 lessons for influencing behaviours" or "your top 5 tips for effective communications and engagement" or "what you'd recommend to others about working with volunteers").
The CCF already provides projects with various forms of guidance and support which is valued, including the Low Carbon Route Maps. Further guidance and training in the following areas could be useful: communications (including events), behaviour change theory and practice, project planning, planning applications; monitoring and evaluation.
To maximise the opportunities for scaling up and replication of CCF approaches, Scottish Government needs to continue its active support of the sharing of good practice. Supporting diffusion could include: • Requiring fund applicants to consult with at least one other project; • Developing a case study directory of CCF projects; • Covering travel and subsistence costs for newly funded CCF projects to visit other similar projects, perhaps supported by recommendations from the assessment panel of which one(s) to visit; • Funding 'buddying' or peer mentoring support from experienced projects or external advisors, especially for less experienced projects.
To avoid duplication with national energy or other low carbon programmes, bidders should be required to demonstrate how they would complement, build on, or work in partnership with existing initiatives.
Scottish Government may wish to review its strategic priorities for the CCF, to explicitly include support for the unique functions that community-based approaches can play with respect to sustainability goals. This would avoid an over-concentration on actions that deliver rapid carbon savings but no further behaviour change, while still providing the flexibility to support projects that are pioneering ways to tackle 'difficult' behaviours (such as transport and low carbon diets) or building long term community capability to reduce carbon emissions.
The Scottish Government's willingness to support pilot projects and feasibility studies in earlier rounds of the CCF has been conducive to learning: it has allowed projects to hone their project plans and intervention approaches before applying for larger sums of money in later rounds. This positive and distinctive feature of the CCF should be retained in future or in any similar fund.
Behaviour change and building community capacity takes time, which points to funding some of the more effective projects over several years so that they can build presence, momentum and capability. Projects seeking such funding would need to demonstrate a track record and how they were going to extend either the scope or reach of their work.

2 INTRODUCTION

2.1 SCOPE OF THE CCF REVIEW

2.1.1 The Scottish Government's Climate Challenge Fund (CCF) was set up to help communities combat climate change by reducing their carbon emissions. The CCF made 331 awards to 261 communities located throughout Scotland in seven funding rounds between 2008 and 2011, with further funding announced in March 2011 for 130 projects. The Fund is administered by Keep Scotland Beautiful (KSB) on behalf of the Scottish Government.

2.1.2 In March 2010, the Scottish Government commissioned Brook Lyndhurst and Ecometrica to carry out a review of the Climate Challenge Fund to explore the kinds of impacts projects have had, and to identify key factors contributing to projects' successes. The Scottish Government's aims and objectives for the review are summarised in the box below.

Aims (numbered) and objectives (lettered):

1. To explore the impacts of particular projects on individuals, households and communities including both impacts on emissions and wider impacts.
   - a Explore with participants involved in a selection of projects how these have impacted on their values, attitudes and behaviours in relation to climate change issues, and how 'sticky' (or sustainable) they perceive any changes in their behaviour to be;
   - b Identify any social impacts on the community from the projects selected;
   - c Identify any impacts on the local environment from the projects selected;
   - d Identify any contributions made to the local economy by the projects selected;
   - e Estimate, where feasible, the carbon emission savings made by the projects selected.
2. To examine the critical success factors of particular community-led climate change projects which seek to change individual and community attitudes and behaviours in order to reduce carbon emissions.
   - f Examine what works in harnessing community engagement in environmental issues (considering for example, the hooks and incentives used; methods of engagement; intermediary organisations; and target groups) and outline examples of good practice from the CCF;
   - g Explore what works in changing individual knowledge, attitudes and awareness of carbon-intensive behaviours and outline examples of good practice;
   - h Consider what factors both facilitate and hinder the delivery of sustainable carbon-saving behaviours, and outline examples of good practice;
   - i Explore the relationship between projects' set up and their ability to deliver sustainable behaviour change (including the type of organisation and how established it is, experience and background of its leaders, their skills, and style of leadership);
   - j Consider the relationship between projects' intervention methodologies and approaches, and their ability to deliver sustainable behavioural change;
   - k Outline where there is potential for scaling up and/ or rolling out effective projects; if so, which elements of the project's intervention should be scaled up or rolled out, and how might this be undertaken. What support would be required to make this happen?

2.1.3 The CCF review was not a traditional fund evaluation which counts and tallies all the inputs, outputs and outcomes from a programme. This kind of approach would have been highly challenging, bearing in mind the set up of the fund and the individual projects. The review took a more pragmatic approach, focusing in depth on 21 selected projects, working at a range of scales and with different focuses, in order to illustrate the many ways community initiatives can encourage low carbon behaviours and to provide lessons about the barriers and opportunities for engaging people in low carbon living.

2.1.4 By 'success factors' this report refers to particular aspects that facilitated changes in participants' behaviour, whether that was an element of the project set up and overall approach, or the use of a particular hook, message or incentive.

2.1.5 The review took a largely qualitative approach, using interviews to get an in-depth understanding of the range of motivations, barriers and success factors. In addition, Ecometrica calculated reductions in CO_2 emissions for a sub-set of eight of the projects to illustrate the carbon reduction potential of different approaches. Quantitative data has also been drawn from the projects' own reports to KSB, but wider statistical data has not been collected during the review.

2.2 METHODOLOGY

Selection of the 21 sample projects

2.2.1 The 21 projects included in the review were selected from an original long-list suggested by the Scottish Government and KSB officers, according to a range of criteria. The selection criteria ensured that a range of characteristics was covered – including the amount of funding awarded, urban and rural projects from different areas in Scotland, projects using different types of interventions and a spread across different behaviours in the topic areas of:

- Energy efficiency
- Energy generation
- Food
- Transport
- Waste

The selection included 'multi-strand' projects that are trying to influence behaviours and lifestyles on a broad front, as well as those with a more singular focus – such as transport or food growing.

2.2.2 Projects in the review also varied significantly in size: the amount of CCF funding ranged from around £7,000 to upwards of £650,000 (amounts are shown for each project in Appendix A). The proportion of each project's work funded by the CCF varied from just under one-third to the whole amount.

2.2.3 Part-way through the review, due to difficulties in data collection on some of the projects, a further project was added to complement what was emerging from the review, bringing the total number of projects to 21.

2.2.4 Table 2.1 gives an overview of the projects reviewed to provide context for the research findings. The categorisation in the table has been based on the primary activity of each of the projects. Similarly, the 'Areas Covered' and 'Brief Project Outline' columns only include key strands of project activity, not the entirety of their work[1]. For a fuller picture of the projects covered in the review, please refer to the Project Descriptions in Appendix A.

2.2.5 It is worth noting here that even though the 21 projects all originate with community activists, the nature and level of wider community involvement differs greatly between them. Many provide what is effectively a service to individuals within their communities; some deliver short term behaviour change initiatives to specific target audiences; others bring people together to build long term relationships and continuing joint action (e.g. growing projects); and a few are seeking to get local people fully involved in transformative programmes of collective action on climate change.

Research method

2.2.6 Most of the evidence for the review was collected through qualitative interviewing, supported by quantitative analysis of carbon emissions by Ecometrica, and some documentary evidence from projects' own reports to KSB. (The detailed methodology for calculating carbon emissions is outlined in Appendix B, and more detail on the method for the qualitative primary research is given in Appendix C.)

2.2.7 The first phase of research involved a 2-3 hour visit to each of the shortlisted projects to meet the project managers and interview them in depth about what the project expects to achieve, how it has evolved, how it is set up and delivered, and how its impacts are being evaluated. Project managers were also given diaries to record their ongoing thoughts on successes during the course of the review.

2.2.8 The next stage of research involved a mix of face-to-face and telephone interviews with project participants, to explore their experiences of the projects, and in particular any changes in behaviour as well as what had led them to change. Project managers were asked to provide contact details of 30 participants each (though this target was revised down on smaller projects) who would be willing to be interviewed for the purposes of the review. Project managers were asked to aim for a mix of interviewees across the project's reach, including a small number of non-participants or drop-outs if possible, to investigate barriers to participation. Interviews were also carried out with project volunteers and staff members. Where other interview approaches were more suited to the project activities and focus, some participants were interviewed at project events or (for example, on school-based projects) in focus groups. We had varying degrees of success at gaining access to project

[1] Please note, later tables (Tables 3.2 – 3.5 in section 3) include smaller strands and activities.

participants, and the final total of participants, volunteers and staff members interviewed stands at 477.

2.2.9 The final stage of primary research involved follow-up interviews with project managers, to reflect on project delivery and successes, and to play back and test with them some of the research team's emerging thoughts from interim analysis.

2.2.10 The projects were due to complete their final evaluation reports for KSB just as this report was being prepared. Where these evaluation reports are available, relevant findings from them have been incorporated into this report.

Carbon assessment

2.2.11 In order to explore the carbon impacts of the CCF projects, a detailed quantitative assessment of a sub-group of eight of the projects was undertaken by Ecometrica, with the aim of producing estimates of the emission reductions achieved by each project over the course of the lifetime of the projects' outputs.

Table 2.1: Projects reviewed

Energy projects

CCF #	Name of organisation	Name of project	Areas covered					Brief project outline
			Food	Energy efficiency	Energy generation	Transport	Waste	
CCF 055	Deaf Connections	DEAFinitely Greener						Translate climate change information into British Sign Language and distribute it via DVDs and web. Train deaf mentors/advisors for deaf people. Use community centre to demonstrate energy efficiency.
CCF 182	East Neuk Communities Group	East Neuk and Landward Energy Network						Energy champions engage local residents in efficiency improvements through home energy checks and 'hand-holding' them through implementation
CCF 198	Sustaining Dunbar	Dunbar 2025						Follow the transition model, 'visioning' a sustainable future for Dunbar. Energy audits and advice offered.
CCF 209	Barrhill Community Interest Company	Climate Champions Network						Use intermediaries to promote subsidised insulation to local residents. Engage people in energy efficiency.
CCF 247	Transition Edinburgh South	Switched on to switching off in South Edinburgh						Intermediaries engage local residents in energy efficiency through motivational interviewing.
CCF 304	Fintry Development Trust	Fintry Renewable Energy Supply Company						Visits to households to advise and offer support on energy efficiency or generation.
CCF 415	Raploch Community Partnership	Low Carbon Raploch Project						Survey households in conjunction with the Home Insulation Scheme, with follow up visits, and a community access point.
CCF 466	Millburn Academy	Energy+Action = Change						Carbon education, monitoring and calculations done in science and maths lessons. Includes use of energy monitors at home.

Food projects

CCF #	Name of organisation	Name of project	Areas covered					Brief project outline/description
			Food	Energy efficiency	Energy generation	Transport	Waste	
CCF 016	Transition Town Forres Ltd	Transition Town Forres	✓	✓			✓	Awareness raising through events, information and film showings. Activities centred on community garden and farmers' markets. Carbon footprinting surveys conducted.
CCF 065	Urban Roots Initiative	Toryglen Transitions	✓	✓			✓	Development of community market gardens, woodland conservation, community carbon footprint survey and workshops, schools work.
CCF 126	Falkland Centre for Stewardship	Fife Diet	✓					A membership network providing advice and contacts for sourcing food locally.
CCF 232	Perth and District YMCA	Community Carbon Champions (The Three Cs)	✓	✓				Trainees develop vegetable plots in people's gardens. Also receive training and education around climate change and energy efficiency.
CCF 312	Heal the Earth	Assloss Walled Garden	✓					Develop allotment site for local community. Aiming to improve well-being and strengthen the community.
CCF 367	Care and Repair	Edinburgh Garden Share Scheme	✓					Pair up people who need help looking after their gardens with people who want to grow food.

Transport projects

CCF #	Name of organisation	Name of project	Areas covered					Brief project outline
			Food	Energy efficiency	Energy generation	Transport	Waste	
CCF 066	Greener Leith	Active Leith						Deliver tailored sustainable travel materials to all households in Leith. Guided cycle rides, and free bikes available.
CCF 471	Bike Station	A Better Way to Work						Promote sustainable commuting in companies, through bespoke journey advice, bike repair events, cycle training, cycle challenges, pedometers and bus passes.

Multi-strand projects[2]

CCF #	Name of organisation	Name of project	Areas covered					Brief project outline
			Food	Energy efficiency	Energy generation	Transport	Waste	
CCF 079	Shetland Amenity Trust	Carbon Reduction Shetland						Raise awareness and change attitudes to climate change and carbon reduction, and change behaviour in a range of areas.
CCF 166	Linlithgow Climate Challenge	Sustainable Solutions for Linlithgow						Five work strands to promote behaviour change through e.g. energy audits, events and signposting.
CCF 243	Dumbarton Road Community Environment Trust	Scotstoun and Kingsway Focus						Several work strands including recycling, gardening and composting in schools; food waste collections; bike workshop; events.
CCF 968-977	Crichton Carbon Centre	Carbon Busters						Pupils and teachers audit their school, develop an action plan to reduce carbon emissions, and implement it.
CCF EX6	Keep Scotland Beautiful	Going Carbon Neutral Stirling						'Carbon Cutter Plans' consisting of day to day behaviours delivered through existing community groups in order to achieve meaningful carbon reductions.

[2] Though nearly all of the projects were working on or promoting different strands of behaviours, those we have classified as 'multi-strand' were those working on different areas of behaviour and without a dominant focus in the round of funding reviewed.

2.3 DATA QUALITY AND LIMITATIONS

2.3.1 The qualitative interviews provide a wealth of evidence to analyse and draw upon. In particular, the qualitative nature of the data lends itself well to the exploration of success factors with respect to different behaviour change techniques and target behaviours, including some interesting case studies.

2.3.2 While qualitative data is particularly useful for revealing the how and the why behind observed impacts, it is important to recognise its limitations. In terms of impacts, the data exemplifies the kinds of impacts that projects have had and their apparent prevalence, but is not suited to quantifying or generalising the overall impact of the CCF or the 21 projects considered.

2.3.3 It needs to be noted that the participant interviews were not evenly spread across the projects. The number of interviews per project was a function of project size, participants' willingness to be interviewed, and the efforts of the project manager to recruit participants for interviews. To some extent, the research team was able to compensate for the latter two issues by attempting to gain access to participants through different means, for example by attending project events. When it became clear that interview targets were unlikely to be met in certain cases, the project team agreed with the Scottish Government to expend no further effort in pursuing interviews with participants on three of the projects, and an additional project was added to the review to enhance the range of projects explored.

2.3.4 A further point worth noting is that the participants who have been willing to take part in interviews are likely to be the most interested and active participants in each project. Only in very rare cases were we able to interview non-participants or drop-outs. This means that we have been more likely to hear the success stories and less likely to hear about failures and problems – though we have occasionally come across those, too. The findings of the review should therefore be read in the light of these limitations.

2.3.5 During the follow-up interviews, project managers were asked to return the 'success diaries' given to them in the initial interviews, but although we know that at least some had been making use of them, none arrived in time for the contents to be considered in the context of this report. This reflects the projects' own monitoring and evaluation experiences, which suggest that diaries are largely an ineffective approach to evaluation due to the amount of effort required to complete them or to manage participants to do so (see paragraph 6.3.6).

2.4 REPORT STRUCTURE

2.4.1 Each section of the report draws together the main themes that were evident in the qualitative data, supported by examples from specific projects and quotes from participants or project managers. In keeping with conventions for reporting qualitative data, indications of the weight of response are given in terms such as "many" or "a few", rather than as numbers or percentages. The

exception is the section on carbon emissions where quantitative estimates are provided.

2.4.2 Examples are provided throughout the report from individual projects to illustrate the points made. In the spirit of the review – the purpose of which was to identify success factors and to learn from projects' experiences – we have opted to name projects where these examples demonstrate success, but to anonymise them as far as possible where the examples could reflect negatively on them (bearing in mind that this is not always possible, as some projects' characteristics make them highly recognisable).

2.4.3 Chapters 3-7 present the research findings from the review as follows:

- Impacts on attitudes, behaviours, carbon emissions and other aspects of sustainability
- Motivations, barriers and success factors – for changing specific behaviours
- Cross-cutting success factors
- Monitoring and evaluation
- Thoughts on the future of CCF projects

2.4.4 In Chapter 8 we give a slightly more interpretative view of the role of CCF communities in responding to climate change. Chapter 9 provides a concluding discussion on what the review has revealed about the CCF, the general lessons for community-led climate change projects, and the implications of the review for the CCF or other policy programmes.

2.4.5 Each chapter of the report (with the exception of the conclusions) begins with a summary of key points.

3 IMPACTS OF CCF PROJECTS

3.1 OVERVIEW

- Drawing mainly on qualitative interviews, this chapter describes the impacts of CCF activities on participants' attitudes and behaviours, and any additional sustainability impacts.
- CCF projects have delivered a diverse array of outputs at varying scales. In the 21 projects reviewed, more than a thousand homes have had energy checks, several hundred have been insulated, around 100 homes are installing renewable energy or heating, many thousands have received advice on cycling and travel, many new food growing spaces have been developed and more people are eating locally produced food.
- There has been some, though relatively limited, impact on participants' attitudes: notably reinforcing existing positive environmental attitudes and making action, including specific behaviours, more 'front of mind'.
- Many of the reported impacts are additional to what would have happened otherwise. CCF projects have accelerated changes that might have been made eventually, activated changes that participants had not thought of, and facilitated changes that participants were already open to making.
- Energy projects have had widespread impact on the uptake of energy efficiency measures, and somewhat smaller successes on everyday energy behaviours. A notable success was a bulk-buying offer for solar thermal units in Linlithgow.
- Growing projects have been enthusiastically received and most are running at capacity.
- Sustainable food purchasing projects have generally been able to stretch participants within certain limits, but very significant changes in dietary choice (such as eating less meat or giving up 'exotic' produce) are rarer.
- There was less evidence of widespread change in travel behaviours and some projects reported these as being among the most difficult to change.
- Some success was evident in changing perceptions of cycling and engaging with existing, lapsed and new cyclists in workplaces.
- There was little evidence of positive behavioural spillover or negative rebound effects occurring (at least within the timescale of the review).
- The notable exception was food growing as a gateway to composting; and a small number of examples where growing or composting had led to anti-food waste behaviours. Catalysing spillover only worked where participants could see an intuitive connection between different behaviours.
- The carbon assessment (covering eight projects) suggests that there is more uncertainty about the scale of emissions savings that can be achieved through interventions targeting behaviour change compared to those targeting hard measures (e.g. insulation). Some of this uncertainty could be reduced by improved data collection.
- Wider impacts included new social connections and friendships within communities; benefits to personal well-being or employability; and local economic benefits from use of local suppliers and services. Social benefits were especially apparent in food projects.

3.2 INTRODUCTION

3.2.1 This section describes the kinds of impacts that CCF projects have had, drawing mainly on the participant interviews, with some supporting evidence from the project manager, staff and volunteer interviews, as well as projects' own monitoring and evaluation reports and carbon emissions data.

3.2.2 The narrative focuses on reported changes in participants' attitudes and behaviours, reductions in emissions achieved by the projects, and any additional sustainability impacts. The first section also includes a table of 'key achievements' as reported by the projects to KSB (but not independently verified). How these changes were brought about – in other words the effectiveness of different behaviour change approaches – is covered in Chapters 4 and 5.

3.2.3 While we cannot say from this evidence that a certain number of participants have made a particular change, we can comment on how common or uncommon different impacts appear to be relative to each other – in other words, the success of CCF projects in influencing particular behaviours. We also examine:

- Whether impacts can be attributed to the projects – that is, whether they are additional to what would have happened in the absence of the projects; and
- For behaviours that are habitual (e.g. home energy use) rather than one-off (e.g. installing insulation) whether the new habits are:
    - Consistent – carried out at every opportunity rather than sometimes or occasionally; and
    - 'Sticky' – continued in the long term rather than stopped quickly.

3.3 KEY ACHIEVEMENTS

3.3.1 The following table summarises key achievements reported by projects to the CCF programme managers[3]. It is designed to give a flavour of the range and scale of outputs that CCF projects have delivered and is not intended to be an exhaustive account.

3.3.2 Some points worth noting about the figures presented below are that the projects are of varying scales – some set out to target a much larger audience than others, and this is reflected in their outputs – and that different outputs will have different impacts on members of the target audience, both in terms of behaviour change and in terms of carbon emission reductions. The remainder of this section focuses on the impacts of these outputs.

[3] Note that four project reports were not available at the time of this review.

Table 3.1: Selection of project achievements

CCF reference	Name of project	Selected headline achievements
CCF 066	Active Leith	• 30,700 households received two mail-outs (information included personalised travel advice, a travel map, and pledge cards) • Over 1,000 people engaged through events including 'Car Free Day' • 11 volunteers received cycle leader training • 380 local people took part in a second phase of consultation regarding a Future Travel Action Plan
CCF 079	Carbon Reduction Shetland	• 23 shops now use a 'Bag Back Box' to support reuse of plastic bags • 241 households have been loaned energy monitors • 170 households completed EST forms and received a Home Energy report • 2149 people have attended 13 public events
CCF 126	Fife Diet	• Over 1000 individuals signed up to the network, pledging to eat more local food • 77 people have worked on or been involved in the community garden in Falkland • Fife Diet have given 41 talks and spoken to over 3000 people in the past year
CCF 166	Sustainable Solutions for Linlithgow	• Over 390 in-house energy audits have been completed • 83 pledges to install insulation, and 140 pledging to have a loft top-up • 56 solar thermal systems installed or commissioned • Sustainable travel maps for 3 regions of Linlithgow produced and distributed to 4,000 households
CCF 182	East Neuk and Landward Energy Network	• Trained 8 local people to gain a City & Guilds qualification in Energy Awareness • Around 550 people visited 12 drop-in energy advice sessions, generating 150 requests for home visits • Local householders have received energy saving advice as well as free and discounted insulation and more efficient heating systems.
CCF 198	Dunbar 2025	• 1500 people have been involved in or consulted about the project to feed in to the 'Local Resilience Action Plan' • The Energy Audit Team completed full audits and provided follow up assistance to over 400 households, many resulting in installations of energy efficiency measures such as heating systems and insulation • Several practical projects underway • Worked with East Lothian Council on the East Lothian Environment Strategy
CCF 209	Climate Champions Network	• 441 households were visited by a surveyor, with 395 receiving energy advice • 36 properties received cavity wall insulation, and 154 properties received loft insulation • Wood pellet boiler installation to heat a community hall underway • 395 households took part in a community consultation survey about climate change and energy
CCF 232	The Three Cs Project (Community Carbon Champions)	• 72 gardens around Perth and Kinross created and/or tended by the 3Cs • 25 young people engaged in the project and recipients of certified SCARF training on energy and climate change • Educational DVD created and widely distributed in the local area

CCF 247	Switched on to switching off	• Around 40 people trained in motivational interviewing and home energy advice • Home visits and motivational interviewing achieved with 70 households in one target area • 2 referrals to installers, 8 participants pledged to install loft insulation, and 4 pledged to get double glazing
CCF 968-977	Carbon Busters	• Project has worked with year groups in 8 schools (6 primary and 2 secondary schools) • 2 Teacher awareness training sessions run at each school, and additional training provided for key staff • Action plans (for Buildings, Energy, Food, Transport, Waste, and Water) developed and implemented in schools
CCF 304	Fintry Renewable Energy Supply Company (FRESCo)	• 20 installations of renewables (2 Solar PV, 14 ASHP/GSHP, and a few biomass installations), and wood-chip biomass boiler purchased for the community sports club • Energy advisor has visited 54 households
CCF 312	Assloss Walled Garden	• 80 raised beds, a polytunnel, 58 fruit trees, a beehive, and various larger plots for food production now exist on a formerly derelict site • 80 people use the garden, including 22 school pupils
CCF 367	Edinburgh Garden Share Scheme	• 37 gardens/garden owners were matched, involving a total of 47 volunteer gardeners • 5 successful social gatherings for volunteers and garden owners held • 18 volunteers attended horticultural training
CCF 415	Low Carbon Raploch	• 492 households had energy surveys and were given advice • 251 households were referred to the CERT or the Home Insulation Scheme for insulation • 50 properties referred to the council for draught proofing work • 185 PowerDown and 211 ShowerSave devices distributed
CCF 466	Energy+Action = Change	• S1 and S2 pupils at Millburn have taken part in the project along with P7 pupils from 6 primary schools (around 500 pupils in total) • Energy monitors distributed to primary and S1 pupils, and socket energy meters loaned to S2 pupils
CCF 471	A Better Way to Work	• Signed up 168 companies to the project (approximately 41,000 employees) • At least 5,655 attended workplace 'travel surgeries', and 236 'DrBike' sessions were booked over 14 months, with an average of 12 bikes checked or serviced per session • 201 bikes loaned to participants, and over 200 people received cycle training • Over 7,000 'travel choices' maps distributed • Over 4,500 participants took part in the cycle and transport challenges
CCF EX6	Going Carbon Neutral Stirling	• 179 groups doing Carbon Cutter Plans – 10,660 participants in total • Currently working with more than 35 businesses (covering a range of sizes) in Stirling
Source: Some headline achievements selected from the final evaluation reports produced for KSB by the CCF projects taking part in the review. (NB The projects used a range of different evaluation methods, and the figures presented here have not been independently verified for this review.)		

3.4 CHANGES IN PARTICIPANTS' ATTITUDES TO CLIMATE CHANGE AND ENVIRONMENTAL ISSUES

3.4.1 The degree to which projects have considered it important to try to change participants' attitudes to climate change and environmental issues varies. Some projects have avoided overtly environmental messages, suspecting that participants may be put off by mentioning the environment. This has made these projects less likely to be able to influence attitudes. At the other extreme, some projects have sought directly to change environmental attitudes by putting across a strong environmental ethos, hoping for significant shifts in attitudes despite the risk of putting participants off. The majority of projects, however, sit somewhere in the middle ground of this spectrum: using some environmental messages alongside other, non-environmental ones.

3.4.2 This approach has led most CCF projects to achieve small shifts in participant attitudes towards climate change and environmental issues more generally, making these issues more 'front of mind'. Participants commonly comment that they feel 'a little bit more aware' as a result of their involvement in the project, or that the project has 'reinforced' or 'confirmed' their views. The project managers echoed this, generally confident that the projects had influenced attitudes by raising awareness of climate change issues – though they are conscious of the relatively limited impact and careful not to overstate it.

> *"I suppose I'm more convinced that it is important."*
>
> Participant – Transition Town Forres

3.4.3 We did also come across participants whose environmental attitudes were entirely unaffected by the projects, though they were very much a minority across the 20 projects. Some had not been exposed to, and some had perhaps simply not noticed, any environmental messages from the projects (e.g. in growing projects such as the Edinburgh Garden Share Scheme where the social benefits may be more obvious). There was also a small proportion who already held very strong pro-environmental attitudes, with little scope for change.

3.4.4 The evidence also suggests that strong environmental messages are off-putting to many participants, and projects using them tend only to attract the 'already converted', with whom there is little room to effect attitude change. Some project managers were emphatic that recognising and starting where participants are with respect to their views on energy or climate change is essential for effective engagement (see Chapter 4 for further discussion on effective engagement approaches).

3.4.5 Comments about projects 'reinforcing' and 'confirming' participants' existing views were relatively frequent, suggesting that projects may have been more successful at engaging people who are already relatively interested in climate change or environmental issues, and less successful at engaging those who are less interested to begin with.

3.4.6 What the CCF projects generally seem to have been able to do is to turn latent – and often quite passive – interest into action. As well as making climate change a more 'front of mind' issue, CCF projects have succeeded in raising participant awareness of specific actions they can take to reduce carbon emissions, or at least reminded them of the things they could be doing.

> *"It made me a bit more aware, but didn't change my attitude as such. You know you should be doing it, but the project made me make more of a conscious effort."*
>
> Participant – Switched On to Switching Off

3.4.7 While CCF projects largely appear not to have radically changed participant attitudes to climate change or the environment, projects working in educational environments do appear to have had more success in doing so. These projects have improved participants' understanding of climate change and environmental issues, and there is also some evidence that attitudes have been influenced, particularly among the younger children. This may be because participants are in a situation where they are expecting to learn something new, making them more receptive to environmental messages. For example, a Three Cs staff member felt that the participating young people's awareness of climate change had increased, and the script they wrote for their DVD 'The Carbon Footprint' indeed demonstrates a good understanding of a range of emissions sources and ways of reducing emissions.

3.5 CHANGES IN PARTICIPANTS' BEHAVIOURS

Energy

3.5.1 Projects working on energy behaviours have targeted home energy consumption, insulation and other energy efficiency measures, and domestic renewable energy. Although some of these are one-off measures, they are here considered behaviour changes as they involve the adoption of a pro-environmental measure by working through a process of change. Table 3.2 below identifies which projects targeted which energy behaviours in some form.

Table 3.2: Projects working on energy behaviours

CCF reference	Name of project	Energy behaviours promoted			
		Energy consumption	Domestic renewable energy	Insulation	Other energy efficiency measures
CCF 016	Transition Town Forres[4]	■			
CCF 055	DEAFinitely Greener	■			■
CCF 079	Carbon Reduction Shetland	■	■	■	■
CCF 166	Sustainable Solutions for Linlithgow	■	■	■	■
CCF 198	Dunbar 2025	■	■	■	■
CCF 182	East Neuk and Landward Energy Network (ENLEN)	■		■	■
CCF 209	Climate Champions Network	■	■	■	
CCF 232	Community Carbon Champions	■			
CCF 243	Scostoun and Kingsway Focus	■			
CCF 247	Switched On to Switching Off	■		■	■
CCF 968-977	Carbon Busters	■			■
CCF 304	Fintry Renewable Energy Supply Company (FRESCo)	■	■	■	■
CCF 415	Low Carbon Raploch	■		■	
CCF 466	Energy+Action = Change	■			
CCF EX6	Going Carbon Neutral Stirling	■		■	■

Home energy consumption

3.5.2 Impacts in this area included participants cutting down their home energy consumption in a range of ways by adopting a number of new behaviours or intensifying existing behaviours, such as turning lights and appliances off, not over-filling the kettle, air-drying laundry and turning down the thermostat. A majority of the participants involved in projects targeting home energy behaviours reported they were doing something new as a result of their involvement, but they only tended to make a small number of changes each. Many felt that they were already fairly energy-efficient – suggesting that there was relatively limited scope for uptake of new behaviours.

3.5.3 The behaviour changes made by the participants in the area of home energy consumption are often directly attributable to the projects' activities. A number of projects working on this topic used energy monitors, and in these cases participants commonly attributed their behaviour changes to having gained a better understanding of how much energy different appliances use, which enabled them to identify potential changes to make – something that would not have happened in the absence of the project (and the energy monitor)[5].

> *"I'm a fanatical switcher offer, but it [the energy monitor] has shown my hubby that it's worthwhile. He listened for once because I have a gadget that backs me up!"*
>
> Participant – Carbon Reduction Shetland

[4] Transition Town Forres have volunteers working on community renewable energy, though renewables are not being made accessible to householders in the same way as in other projects.
[5] See also from paragraph 4.3.5 for further discussion of energy monitors.

3.5.4 The new behaviours are not necessarily consistently carried out all of the time. The evidence suggests that participants were susceptible to at times "cutting corners" or forgetting.

3.5.5 On the other hand, while new behaviours were not necessarily consistent, most participants seemed confident that they would continue with these behaviours in the long term. The "stickiness" of these new behaviours is often explained by the formation of new habits which seem to be seen as 'common sense' – though some of those who had used energy monitors felt that they might need something like an energy monitor to remind them to continue with the new behaviours. For example, one participant in Switched On to Switching Off felt that it would be useful to have an energy monitor permanently because "it keeps you on your toes".

Insulation

3.5.6 Home insulation is an area where CCF projects appear to have been particularly successful. Many participants had installed insulation as a result of their involvement in a project. Loft and cavity wall insulation were most frequently mentioned, with other relatively common changes including installation of secondary glazing or draught excluders. Rarer changes included new carpets or blinds, and filling in holes in skirting boards.

3.5.7 Many of the participants, across different insulation projects, told us they would not have installed insulation without the assistance of the projects – for example, a participant in the East Neuk and Landward Energy Network said he "might have wondered what's out there" but would have been unlikely to do anything concrete. For others, the project enabled or encouraged them to install insulation measures sooner than they would have done in its absence. However, there were also a smaller proportion of participants who said they would have installed insulation regardless of their involvement in the project.

> *"I knew [the insulation] was to be done anyway to be honest, but [the energy audit] was a bit of a kick up the ass".*
>
> Participant – Dunbar 2025

Other energy efficiency measures

3.5.8 Energy efficiency measures other than insulation were similarly common, in particular energy-saving light bulbs, radiator panels, new boilers and efficient kettles. Other, rarer changes included purchase of other efficient appliances, changes to heating systems (e.g. new boilers), and new radiators or thermostats. One project (Deaf Connections) had changed their own building's heating system and boiler, as well as lowering the ceiling in one of the rooms to improve efficiency.

3.5.9 As with insulation, many of the participants who had made changes attributed these to their involvement in the projects, though a smaller proportion claimed they would have made the changes anyway.

> *"It badly needed updating, but we would probably have just struggled on with [the old G-grade boiler]. But I think initially it was the survey from BeGreen – that's what prompted us personally to do something about it."*
>
> Participant – Dunbar 2025

3.5.10 One area where changes are easily attributable to the projects is energy-saving light bulbs. Some of the projects have given away free energy-saving light bulbs or signposted participants to unusual types of energy-saving bulbs (e.g. spotlights). Participants told us they had previously been put off by the cost of energy-saving light bulbs or suspicions over their quality, or been unaware of the range of types of energy-saving bulbs available – and due to these barriers, behaviour change would not have occurred in the absence of project intervention. For example, the project manager of Carbon Reduction Shetland felt that the free light bulbs provided by the project had helped to overcome participants' suspicions of them being of poor quality – particularly among older participants.

Domestic energy generation

3.5.11 While a small number of participants had installed a small-scale renewable energy or heat generation system, in general this was an area where changes were slow to materialise and those willing to take action were still in the planning stages. Many of the installations that had been completed were air or ground source heat pumps (the FRESCo evaluation reports that 14 have been installed) and many of the plans were for solar thermal (again according to the project's evaluation report, 56 had been installed or commissioned as part of Sustainable Solutions for Linlithgow's bulk-buy offer[6]).

3.5.12 In those cases where participants had already installed energy generation systems, they tended to attribute this to the project. Those that maintained they would have implemented changes anyway suggested that the project had accelerated the process for them.

Food

3.5.13 The aims of projects with a key focus on food fall into two broad categories: getting their participants to grow food and changing their participants' food purchasing behaviours – as shown in table 3.3. Some projects addressed both.

[6] This entails participants signing up to purchase solar thermal panels together, and through joint purchasing power they are able to obtain a discount.

Table 3.3: Projects working on food behaviours

CCF reference	Name of project	Food behaviours promoted	
		Growing	Purchasing
CCF 065	Urban Roots		
CCF 232	The Three Cs		
CCF 243	Scotstoun and Kingsway Focus		
CCF 312	Assloss Walled Garden		
CCF 126	Fife Diet		
CCF 198	Dunbar 2025		
CCF 016	Transition Town Forres		
CCF 166	Sustainable Solutions for Linlithgow		
CCF 968-977	Carbon Busters		
CCF 367	Edinburgh Garden Share Scheme		
CCF EX6	Going Carbon Neutral Stirling		

Food growing

3.5.14 A number of the CCF projects taking part in the review have successfully opened up new food growing opportunities for participants by creating new growing spaces, either in community or private gardens. For example, the Three Cs evaluation report states that the project worked with 72 households to create vegetable gardens. In food growing projects, participant numbers were often limited by the capacity of the projects to provide growing space. Most food growing projects appeared to be operating at their full capacity, with one exception[7].

3.5.15 The impacts of the food growing projects were largely additional to what would have taken place in the absence of the projects. Many participants strongly felt they would have struggled to find a growing space (at least so soon) without help from the project. Two projects – Toryglen Transitions and the Three Cs – had successfully recruited participants with no prior interest or involvement in food growing.

3.5.16 Food growing is a seasonal activity, so whether or not the behaviour change can be described as 'consistent' cannot be determined within the timescale of this review.

3.5.17 Compared to the other behaviours promoted by the CCF projects, changes in food behaviours (this also applies to purchasing behaviours – see below) appeared particularly 'sticky'. Most of the participants who had started growing food maintained that they would continue to do so – including many of those with no prior interest in the activity. Participants' explanations as to why centred on the sense of satisfaction they got from growing.

> *"I'll do that forever now. Yes. Totally. There's nothing like the satisfaction of it. It's brilliant. ... The sense of achievement you get from just growing."*
>
> Participant – Dunbar 2025

[7] In this case, due to lack of access to non-participants, we were unable to establish the reasons why – though there are some potential explanations as noted in paragraph 4.4.11.

Food purchasing

3.5.18 Impacts of food purchasing projects included changes to habits such as buying more local, seasonal and organic produce. The majority of participants in these projects had made some small changes in these areas, though a few had significantly changed their behaviour – for example, one Fife Diet participant who had previously bought about 95% of her food in a particular supermarket had not been to that supermarket at all in the two months before the interview, and had taken up chicken-keeping. A smaller proportion of participants had also started buying and eating less meat, although this appears to be one of the rarest changes. A small minority felt they were already doing a great deal and had made no changes at all.

> *"We increased the size of our vegetable box delivery, and became more focused on making meals from it."*
>
> Participant – Fife Diet

3.5.19 The Fife Diet is the key source of evidence on whether changes in food purchasing behaviours are additional, consistent and 'sticky'. Although many Fife Diet participants felt they would have made changes anyway, they also felt the project had speeded up change by helping them consciously focus on food choices, making it easier for them, or just providing the initial spark. There was also a smaller proportion who felt that nearly all of the changes they had made were down to the project.

> *"It focuses your mind and makes concrete something that was rather nebulous."*
>
> Participant – Fife Diet

3.5.20 When it comes to consistency of behaviour, food purchasing behaviours appear to be an unusual case in that participants seem to each have their own definitions of what constitutes 'consistent'. Participants appear to find their own 'comfort level' as to how much effort they are willing to put into making sustainable food choices, and their behaviour is then consistent at that comfort level. One external factor that may influence the consistency of food purchasing behaviours, however, is seasonality: some of the participants noted that seasonal variation in the availability of different foods made sustainable food choices more difficult in winter.

3.5.21 As noted above, changes in food behaviours appeared particularly 'sticky'. Those who had changed their food purchasing habits were adamant that they would be highly unlikely to revert back to their old behaviours. They often felt the new behaviours constituted a significant lifestyle change, which, by virtue of being more than a 'bolt-on behaviour change' were permanent.

> *"We will never go back, absolutely not. It would be odd...You're a lot more connected with it....I'd be really depressed if we had to go back to Tesco."*
>
> Participant – Fife Diet

Transport

3.5.22 A Better Way to Work and Active Leith focused directly on transport behaviours. A number of other projects also included a transport strand or some element of transport work[8]. Cycling was a key focus of the transport activities of many of the projects but some also included walking, switching to public transport, lift sharing and eco-driving.

Table 3.4: Projects working on sustainable transport behaviours

CCF reference	Name of project	Transport behaviours promoted			
		Walking	Cycling	Public transport	Eco-driving / car-share / car clubs
CCF 066	Active Leith	■	■	■	■
CCF 471	A Better Way to Work	■	■	■	■
CCF 079	Carbon Reduction Shetland				■
CCF 166	Sustainable Solutions for Linlithgow	■	■	■	
CCF 243	Scotstoun and Kingsway Focus	■	■		
CCF 968-977	Carbon Busters	■	■		
CCF EX6	Going Carbon Neutral Stirling	■	■		

3.5.23 Changes in transport behaviours were less common than changes in many of the other behaviours targeted by the projects reviewed. For example, Active Leith's evaluation report states that their independent evaluation found that 4% of the project's target audience had changed their travel behaviour as a result of the project intervention. Some project managers commented that transport was one of the most difficult areas for getting people to adopt new behaviours.

3.5.24 The most common change reported in transport behaviours – reflecting the focus of projects – was in cycling, both in terms of existing cyclists doing it more often and lapsed cyclists re-starting. There were also a sizeable number of cyclists who already cycled so much they would struggle to do more (these participants had often signed up to the project in order to show their support for it, rather than to benefit from it themselves). The occasional participant also told us that they had started walking more as a result of the project.

> *"[Borrowing a bike from the project] was a test for me, to see if I was going to get back into cycling, before getting a new bike. After I got the bike I started going on the guided cycle rides. I've been on about four or five of them."*
>
> Participant – Active Leith

3.5.25 Other transport behaviours targeted by the projects included public transport use, driving less or more efficiently, car-sharing and shopping locally. Some

[8] Sustaining Dunbar is also running a transport project, but this is not part of Dunbar 2025 and therefore not within the scope of the Review).

projects would also touch on flying less when talking to participants. From the participant interviews, there is limited evidence on behaviour change in these areas. That is not to say that the projects were less successful at changing these other behaviours – the nature of the qualitative evaluation means that we may simply not have come across participants who had made changes in these areas.

3.5.26 A number of participants reported changes in attitudes in that that they were now considering cycling when they would not have done so before. This effect seems in fact to have been more widespread than any behaviour change effects of the transport projects. For some participants, this change in attitudes may be the first step towards them adopting new behaviours.

> *"I genuinely see cycling as another mode of transport...I don't think of cyclists as nerdy any more".*
>
> Participant – Active Leith

3.5.27 Where participants have made changes in their travel behaviours, and particularly where they have taken up cycling, this impact often seems to be directly attributable to the project. Many participants could identify specific ways in which the projects had supported or enabled them to change – for example, through the provision of cycle maps or bike repairs. Others were very aware that the project had been the trigger for behaviour change by breaking the cycle of 'putting it off'.

> *"[The project] created a reason for [starting to cycle] this week instead of 'next week'".*
>
> Participant – A Better Way to Work

3.5.28 In terms of the consistency and stickiness of cycling behaviour, the evidence is limited. There were comments from participants, volunteers and project staff on the likelihood that weather is a significant factor influencing people's travel choices, and suggested that cycling behaviour may therefore be seasonal – though there is also some evidence to the contrary: the project manager of the Scotstoun and Kingsway Focus project told us in the follow-up interview that many children were still cycling to school in the winter.

Waste

3.5.29 None of the 20 projects included in the review have solely targeted waste behaviours, but a number of projects have included waste behaviours either as one of several work strands or as an add-on activity to the project's main activity. As a result, the waste-related impacts were rarely the focus of our interviews, and the following commentary is based on a small number of interviews.

Table 3.5: Projects including waste behaviours

CCF reference	Name of project	Waste behaviours promoted		
		Composting	Recycling	Waste prevention
CCF 016	Transition Town Forres	■		
CCF 065	Toryglen Transitions	■		
CCF 079	Carbon Reduction Shetland	■	■	■
CCF 126	Fife Diet	■		■
CCF 166	Sustainable Solutions for Linlithgow	■	■	■
CCF 232	Community Carbon Champions		■	
CCF 243	Scotstoun and Kingsway Focus	■	■	■
CCF 968-977	Carbon Busters		■	■
CCF 312	Assloss Walled Garden	■		
CCF 367	Edinburgh Garden Share Scheme	■		

3.5.30 Among this relatively small sample, many of those involved in waste activities had made changes, including starting to compost, starting to recycle or recycling more, as well as making a range of changes that led to waste reduction.

3.5.31 The evidence on attribution, and on the consistency and stickiness of the behaviour changes, is relatively limited. Where there is evidence, it suggests that changes resulted directly from involvement in the project and that new behaviours have become permanent habits. In food growing projects especially, composting seemed to be a natural extension once participants had started gardening[9].

3.5.32 Some organisations had also addressed their own waste impacts. The project manager of the Three Cs project told us they had set up a new recycling system at the YMCA (the parent organisation) which the Three Cs participants monitored on a regular basis. Some schools were also monitoring and reducing their waste (see the discussion of spillover below).

3.6 SPILLOVER AND REBOUND EFFECTS

3.6.1 This section considers the extent to which the evidence demonstrates that the CCF projects have had unintentional positive (spillover) or negative (rebound) knock-on effects on participants' behaviour.

- **Spillover effects**, if they occur, have the potential to multiply the effects of a behaviour change initiative, adding value to that initiative. Most commonly, this could be thought of as the adoption of one new behaviour leading on to another, and another, and so on.

[9] This is in keeping with wider research on home composting which shows that an interest in gardening is one of the main motivations for starting to compost (for example, Defra (2010) WR1204 Waste Prevention Evidence Review; Tucker & Spiers (2001) Understanding Home Composting, University of Paisley).

- **Rebound effects**, on the other hand, could counteract the effects of a behaviour change initiative. This sometimes happens, for example, where individuals spend the money they save from energy efficiency on more heating or other activities that *increase* their carbon emissions.

3.6.2 Assessing whether or not spillover and rebound effects are occurring is fraught with difficulties, especially when using qualitative methods because we are reliant on respondents being able to identify and recall these effects accurately. In order to avoid leading participants, we phrased this question as "Have there been any knock-on effects from the changes [made as a result of taking part in the project]?" It was clear from individual responses that the question was not always understood in the way intended and participants sometimes had to be prompted directly with examples of specific spillover or rebound behaviours. The following commentary should be read in that light.

Spillover effects

3.6.3 For the purposes of this review, spillover was defined as a participant changing a behaviour that was targeted by the project, and then, independently of the project's influence, changing another behaviour that was not targeted or even mentioned to them by the project.

3.6.4 There is very little evidence of behavioural spillover taking place, although we did come across a very small number of cases. These came from food and composting projects, where a small number of participants had become more reluctant to waste food, after having the experience of growing something or after seeing how much food waste they were creating. In one case, a Fife Diet participant had extended this way of thinking and started questioning consumerism more generally.

> *"Making the link between growing food in your garden and the stuff that you potentially throw out at the end of the day is quite interesting. If I'm growing stuff here I definitely don't want to be throwing it out ... Might make me even more pedantic about throwing out food."*
>
> Participant – Edinburgh Garden Share Scheme

3.6.5 Even where projects were deliberately trying to catalyse spillover, this only seemed to succeed when participants saw a direct connection between the different behaviours promoted, and very rarely worked when the promoted behaviours were, in their eyes, unconnected. For example, a participant in Sustainable Solutions for Linlithgow who initially got involved in the project to get advice on replacing his boiler became interested in the project's solar thermal bulk buy offer, but had no interest in the other topics promoted by the project, such as food growing and composting.

3.6.6 The project manager of Sustainable Solutions for Linlithgow had identified a more successful means of encouraging spillover behaviours, by applying the idea to an entire household rather than an individual: in the project's experience, one person in a household may be particularly interested in one of the topics promoted by the project, but not in others, while another member

of the same household may find that topic boring, but other project topics interesting. Talking to one household member about a particular topic brings the project staff in contact with other household members, and by talking to them about other project activities they can recruit new participants.

Rebound effects

3.6.7 A rebound effect is defined here as a change in behaviour that has a negative environmental impact that follows a pro-environmental behaviour change, and undermines the positive effects of the initial behaviour change. In theory, for example, a project participant who changes their energy behaviours and saves money through reduced energy bills could then spend that money on an environmentally damaging activity such as a flight.

3.6.8 There are severe limitations in being able to identify rebound effects without directly measuring household carbon emissions over a period of time. The interviews identified only a small number of cases where rebound effects were seen to be occurring – for example, a participant in one project who had saved money on their energy bill as a result of insulation put those savings towards their daughter's gap year travel (it is worth noting, however, that this trip was going to take place regardless of the savings on the participant's energy bill.) Some of the project staff and volunteers – including at the East Neuk and Landward Energy Network and Switched On to Switching Off – made the point that, with rising energy prices, energy efficiency improvements made by participants were likely to simply compensate for growing energy bills, rather than save them money, reducing the risk of rebound effects.

3.6.9 Techniques that projects use to reduce the risk of rebound effects include explaining the environmental benefits of behaviour change to participants and encouraging them to put any money saved on energy bills towards products that further support pro-environmental behaviour change – though the review was unable to identify any evidence as to the effectiveness of otherwise of these techniques.

3.7 WHAT ROLE DID PROJECTS PLAY IN CHANGING BEHAVIOURS?

3.7.1 The ways in which projects have influenced behaviour can be divided into five categories: acceleration; activation; facilitation; consolidation; and conversion. These headings reflect the fact that participants engaged by the projects started with differing perspectives on the behaviours that were being encouraged. Projects were generally more effective at the first three of these.

Acceleration

3.7.2 Participants often told us that projects had galvanised them into changes that they had intended to make, but had so far not got around to, often for reasons

to do with inertia – which is a key obstacle to changing behaviour[10]. The capacity of projects to overcome this – for example through making the change process easier or simpler for participants – makes them powerful agents of change. Examples of behaviours and actions that projects successfully encouraged in this way included take-up of insulation and cycling.

Activation

3.7.3 Many of the behavioural changes effected by projects involved participants who were amenable to those changes, but who had never given them a great deal of thought. Through their interventions (and in many cases, by highlighting the potential benefits of these changes), projects disrupted ingrained habits and 'activated' this latent potential for change. Examples of the adoption of new behaviours or pro-environmental measures included home energy saving behaviours and the installation of insulation.

Facilitation

3.7.4 Another area in which projects seem to have been particularly effective was in providing participants who wanted to act with the means to effect change. Facilitation helped overcome feelings that change was too confusing, too difficult or too much hassle, as well as removing barriers to do with lack of how-to knowledge and lack of opportunities. This tended to be through one of four routes:

- **Providing information** about *how* participants could make changes, such as cycle maps or signposting to local food suppliers;
- **Reducing costs**, whether individually (through accessing insulation grants for example), or collectively, through joint purchasing schemes (e.g. for domestic renewable energy systems);
- **Facilities provision,** particularly common in food growing projects, where participants were given access to garden space; and
- **Technical support and hand-holding**, whether through lengthy and complex insulation grant applications, repairing bikes to make them roadworthy or cycling lessons.

Consolidation

3.7.5 Many projects attracted a smaller proportion of participants who were already engaged in the behaviours promoted. In these cases, involvement in the project often reinforced (and sometimes stretched) participants' existing behaviours and confirmed to them that these behaviours were "a good idea". It is possible (and there was some evidence) that community projects can provide encouragement and support to early adopters of non-mainstream behaviours who begin to make the behaviour visible and acceptable.

[10] See discussion of the power of 'defaults' in the Institute for Government's *Mindspace.* *http://www.instituteforgovernment.org.uk/content/133/mindspace-influencing-behaviour-through-public-policy*

Conversion

3.7.6 Infrequently, projects managed to persuade participants of the desirability of changes that they initially saw no merit in. Examples of successful persuasion by projects included some of the participants who joined food growing projects without any previous interest in the activity, and a much smaller number of cases of people who began to consider cycling where they had previously held less positive attitudes towards it.

Why these roles matter

3.7.7 Acceleration, activation and facilitation are significant contributions that community projects can make to behaviour change initiatives. Community groups may be uniquely placed to perform these roles (for reasons discussed in Chapters 5 and 8). While it could be argued that activating and facilitating change that might not otherwise happen are the most significant roles, acceleration is also important given the urgency of climate change mitigation: if projects are able to tip the already willing over a threshold of inertia, this may help to speed up the social norming of pro-environmental behaviours.

3.8 CARBON EMISSION REDUCTIONS

3.8.1 Ecometrica conducted a detailed quantitative carbon assessment of eight of the 21 projects taking part in the review, in order to estimate the emissions savings, in tonnes of CO_2e[11], achieved by each of these eight projects over the lifetime of their outputs. This section provides a brief summary of the assessment, with full details provided in Appendix B.

3.8.2 The method used for the quantitative assessment was the World Business Council for Sustainable Development and the World Resources Institute GHG Protocol for Project Accounting[12]. This is recognised as international best practice for quantifying the carbon savings from climate change mitigation projects, and is consistent with Clean Development Mechanism (CDM) methodologies, and ISO 14064-2 (the ISO specification for project level quantification[13]). It is also consistent with the Low Carbon Route Maps which provide guidance to CCF projects on quantifying emission reductions.

3.8.3 The key steps of the method are to:

a) identify a baseline or business-as-usual scenario (what would have happened in the absence of the CCF project);
b) identify the project scenario (what happened or will happen as a result of the CCF project's activities); and

[11] CO_2e, or carbon dioxide equivalent, is a unit for expressing, for a given mixture and quantity of greenhouse gases, the amount of carbon dioxide that would have the same radiative forcing impact over a given period of time. CO_2e is useful for expressing the amount of different greenhouse gases emitted or saved in a single figure.
[12] The WBCSD/WRI GHG Protocol for Project Accounting is available at http://www.ghgprotocol.org/standards/project-protocol
[13] Further details on ISO 14064-2 are available at www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=38382

c) calculate the difference in emissions between the two scenarios. The difference between the two is the carbon saving created by the project, as illustrated in Figure 1.

Figure 1. Methodology for quantifying emissions savings

Baseline Emissions	-	Project Scenario Emissions	=	Emissions Saved by Project

3.8.4 Emissions savings were calculated for the expected lifetime of those project interventions which have been implemented or pledged to date. For example, the Climate Champions Network installed a biomass boiler in a community hall, and the savings from this biomass boiler are calculated over 15 to 20 years as this is how a long biomass boiler is expected to last for. It is important to look at the full lifetime of an intervention in order to understand the full emissions savings that are achieved.

3.8.5 An effort was made to quantify all emissions which were changed by the projects (i.e. wherever project scenario emissions were different from baseline emissions). This included emissions from the project's own operations or activities, such as the energy consumption and travel by the project's office/staff, and the embodied emissions of the materials used by the projects.

3.8.6 Another important feature of the carbon assessment was to derive "higher" and "lower" estimates for the carbon savings from each project. In many cases alternative values and assumptions could be applied in the calculations – for example, alternative assumptions regarding baseline energy consumption, or alternative values for the likely savings achieved by a particular intervention. Developing "higher" and "lower" estimates based on these alternative values and assumptions enables us to show the range of possible results that could reasonably be derived from the data available.

3.8.7 There are a number of advantages to calculating a range of possible results between higher and lower estimates:

- Providing a single point estimate for the savings achieved by a project may give a false impression of precision and accuracy, whereas a significantly different estimate might have been obtained if different data and assumptions had been used. Providing a range of estimates is a transparent way of showing that different results are possible, depending on the input values and assumptions used.
- The range (magnitude of the difference) between the higher and lower estimates can be useful for indicating the relative uncertainties associated with the emissions savings achieved by different projects. For example, if the effects of an intervention are well understood and accurate data are available, the difference between the higher and the lower estimates may be relatively small. On the other hand, where the effects of an intervention are variable or unknown, or data availability is limited, the gap between the higher and lower estimates is likely to be bigger.

3.8.8 It is important to note that the higher and lower estimates are based on the data and reasonable assumptions available, but are not necessarily the bounds within which the projects' carbon savings lie. It is possible (though unlikely) that the true savings achieved by the projects are larger or smaller than the higher and lower estimates.

3.8.9 Further information on the methodology, including information on the emission factors, intervention lifetimes, rebound and degradation factors used is provided in Appendix B.

Results and interpretation

3.8.10 Table 3.6 summarises the results of the assessment for the eight projects. It describes the topics covered by the projects – energy efficiency, energy generation, transport, food or multi-strand – and presents the emissions savings achieved in terms of a higher and lower estimate. It also offers an equivalent measure for comparison purposes in the two columns on the right. The higher and lower figures here show the number of average Scottish households, taking annual energy use emissions into account, that these savings are equivalent to. In other words, Climate Champions Network's higher total lifetime savings of 7,396 tonnes of CO_2e is equivalent to removing the home energy emissions of 1,131 average Scottish households.

Table 3.6: Summary of results of the carbon assessment

Project	Topic	Total Lifetime Savings (tonnes of CO_2e)		Equivalent to x households' annual domestic energy use[14]	
		Higher estimate	Lower estimate	Higher estimate	Lower estimate
Climate Champions Network	Energy efficiency; Energy generation	7,396	4,500	1,131	688
East Neuk and Landward Energy Network	Energy efficiency; Energy generation	8,079	5,106	1,235	781
Switched On to Switching Off	Energy efficiency	464	348	71	53
A Better Way to Work	Transport	5,408	205	827	31
Active Leith	Transport	2,743	66	419	10
Fife Diet	Food	3,791	285	580	44
Sustainable Solutions for Linlithgow	Multi-strand	7,413	2,197	1,134	336
Going Carbon Neutral Stirling	Multi-strand	11,400	2,752	1,743	421

3.8.11 When considering the above table, it should be borne in mind that the projects set out with different aims and objectives, received differing amounts of funding, and used different approaches to change participants' behaviour. In addition, the total emissions savings are accrued over different timescales, as project interventions have different lifetimes.

3.8.12 The table shows that the ranges between higher and lower estimates are narrower for certain project types than for others. The difference between the higher and lower estimates is relatively small for the three energy efficiency projects, where the majority of savings are from 'hard measures' such as installing insulation. This is because better methodologies are available for estimating the emissions savings from hard measures, the impacts of which are relatively well understood, leading to less uncertainty about the range of possible savings achieved. In contrast, where projects have focused on behavioural change, uncertainties around whether behaviour change took place, and the extent and stickiness of any changes that have been made can create large differences between the higher and lower estimates. For example, looking at the higher estimates, Going Carbon Neutral Stirling may

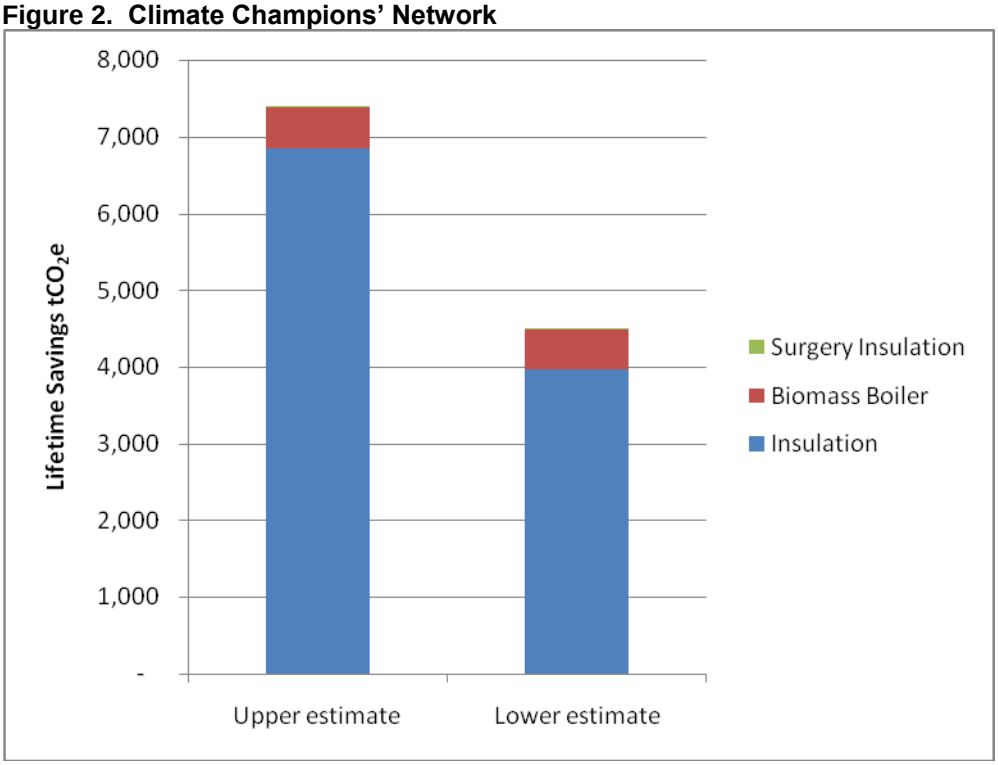
[14] These 'household annual energy emissions equivalents' are approximate figures, based on Scottish per capita emissions from domestic energy use of ~3tCO_2e/yr and average Scottish household size of 2.18 people, in 2008 (AEA 2010 and Scottish Government 2010).

have saved the most emissions of all 8 projects (11,400 tonnes of CO_2e); the project's lower estimate, however, suggests it may have achieved smaller savings (2,752 tonnes of CO_2e) than both the Climate Champions Network and East Neuk and Landward Energy Network.

3.8.13 One example of a project focused on hard measures is the Climate Champions' Network, which covered seven villages in Dumfries and Galloway and South Ayrshire. The project sought to recruit a champion from each of the communities, who would then engage others in the community. The key focus of the project has been to encourage home insulation (with capital measures funded through the local community benefit fund), with the additional aims of changing home energy behaviours, investigating the feasibility of improving community buildings and changing attitudes towards climate change.

3.8.14 Figure 2 shows the higher and lower estimates for the lifetime emissions savings from the Climate Champions' Network's activities as between 4,500 and 7,396 tonnes of CO_2e – equivalent to the emissions from the annual energy use of between 688 and 1,131 households[15]. The majority of the savings are due to the installation of loft and cavity wall insulation in 244 households, with estimated lifetime savings of between 17.7 and 30 tonnes of CO_2e per household.

Figure 2. Climate Champions' Network



3.8.15 The project also arranged the installation of a biomass boiler in a community hall, and insulation was installed in a surgery. These two interventions are

[15] See footnote 14, above.

estimated to create lifetime savings of between 517 and 532 tonnes of CO_2e and of 19 tonnes CO_2e[16], respectively.

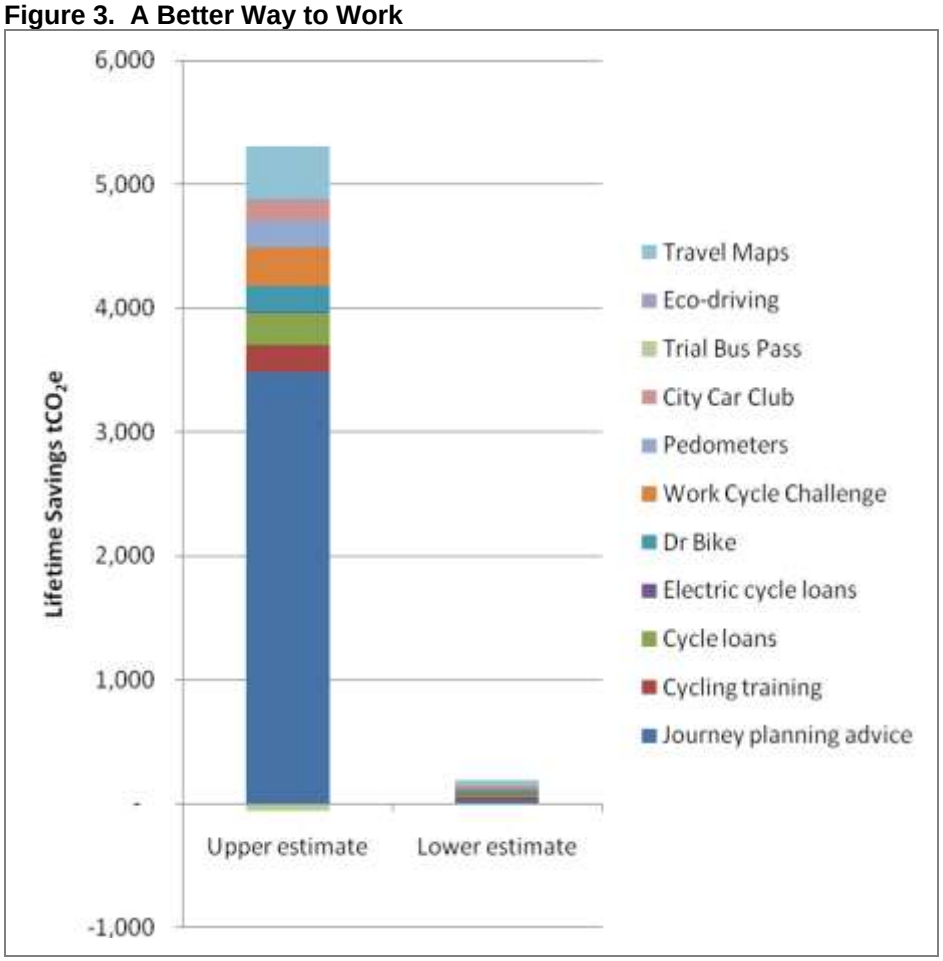
3.8.16 The difference between the higher and lower estimates is largely due to different figures available for the lifetime of insulation[17] and the assumption of a rebound effect and degradation of the insulation material in the lower estimate.

3.8.17 In contrast to the relatively small difference between the higher and lower estimates for projects that focus on hard measures, the difference for transport behaviour change interventions appears large. One example is the A Better Way to Work project, run by The Bike Station – an Edinburgh based social enterprise, charity and company limited by guarantee. The project had a strong behavioural focus, aiming to change the transport behaviours of 12,500 staff working in 250 small and medium sized companies in Edinburgh.

3.8.18 Figure 3 shows the estimated lifetime emissions savings from A Better Way to Work's activities. The total lifetime savings are estimated to be between 205 and 5,408 tonnes of CO_2e – equivalent to the emissions from the annual energy use of between 31 and 827 households. The majority of the savings in the higher estimate are from journey planning advice. However, there is considerable uncertainty associated with this estimate: given a different set of assumptions and data the estimated emissions savings are considerably lower.

[16] Higher and lower estimates were not made for the surgery insulation as data were limited and the total savings from this intervention were a small proportion of the total savings achieved by the project.
[17] 30 years (Carbon Trust (2010) and 40 years (CERT 2011).

Figure 3. A Better Way to Work



3.8.19 There are a number of reasons for the high level of uncertainty associated with the emissions savings achieved by A Better Way to Work. One is that the length of time that transport behaviour change lasts for – in other words, its 'stickiness' – is unknown and so a range of possible "lifetimes" was assumed in the calculations , with 1 year used in the lower estimate and 5 years used in the higher estimate. There were also a number of other issues such as the need to estimate the distance of journeys which were switched from one mode of transport to another, and uncertainty about the number of people who received journey planning advice. A fuller discussion of these issues is presented in Appendix B.

3.8.20 As shown in Table 3.6, the differences between the higher and lower carbon savings estimates for the food and multi-strand projects are also larger than those for 'hard measure' focused projects. Again, this stems in part from uncertainties around the lifetimes of behaviour changes. These and other contributing factors are discussed in more detail in Appendix B.

3.8.21 It is worth noting that some of the uncertainties associated with the savings achieved by A Better Way to Work, and indeed by many of the assessed projects, could be addressed by projects themselves, for example through improved initial (baseline) data collection and surveying. However, there are likely to be some uncertainties, such as those associated with the 'stickiness'

of behaviour change, which would require longitudinal research, and would be beyond what a project could reasonably undertake itself.

3.8.22 In terms of implications for projects, it is also worth noting is that certain project interventions, such as A Better Way to Work's cycle loans, are able to create significant emissions savings per participant. However, these sorts of intervention are resource intensive and have a lower number of participants than more passive interventions, such as the provision of free travel maps, which are estimated to result in low savings per person but can reach a much larger number of people. Further reflections on the implications of the carbon assessment work for the ongoing CCF are provided in Chapter 9.

3.9 ADDITIONAL IMPACTS

3.9.1 Besides influencing participants' environmental attitudes and behaviours, the CCF projects have also had a range of other sustainability impacts in the areas of well-being, community, local economy and the local environment.

Well-being

3.9.2 The evidence from the interviews shows that, in some cases, the CCF projects have increased participants' well-being in a range of ways. A small proportion of participants seemed to perceive these well-being impacts as the key benefit of the project to themselves – mentioning them unprompted when asked about project impacts. For many, however, any well-being impacts were an additional benefit.

3.9.3 Improved physical health and fitness levels were commonly noted by participants with respect to projects involving outdoor activity and changes to eating habits – in other words food growing as well as cycling projects.

3.9.4 On some projects, a notable number of participants commented on improved mental health – for example, reduced anxiety or depression. These commonly occurred in two types of projects: those involving outdoor activity such as gardening, and those working with and providing assistance to elderly people. For example, one of the participants in the East Neuk and Landward Energy Network was palpably relieved to have had her boiler replaced with help from the project, as her old boiler had repeatedly broken down – she described how she had not known from one day to the next whether she would have heating in the house.

3.9.5 A further specific well-being impact identified through the interviews was improved confidence. This tended to apply to projects working with young and/or disadvantaged target audiences. For example, the project manager of the Three Cs described a participant who would "hardly make eye contact" in his early days on the project, but had since gone on to get a job.

Community

3.9.6 The discussion here focuses on specific instances of community benefit. A wider consideration of the role of community projects in influencing individuals and building community action is given in Chapters 8 and 9.

3.9.7 In a number of projects (though not all) there was an evident strengthened sense of community and belonging among participants. Often, this was exhibited simply through participants feeling like a part of the community or being aware of a community spirit – something that participants could identify with no or minimal prompting. One of the projects where this effect was the strongest was the Fife Diet.

> *"It makes me feel like there are like-minded people out there … I feel like I belong to a group of people who understand".*
>
> *Participant – Fife Diet.*

3.9.8 Specific benefits to individuals were meeting new people and making new friends. These new friendships, however, were more rarely created than a more diffuse sense of 'community spirit'. Where projects were bringing together diverse groups of people, some participants also reported an improved understanding between different types of people – for example, between different age groups (e.g. in the Edinburgh Garden Share scheme which matches older people who own gardens with volunteers who visit them to do the gardening, and the Three Cs project were young people create vegetable gardens for local residents).

> *"The people that came were really nice and it was nice to talk to them and find out what they were doing. One in particular – I'm going to be meeting her for coffee."*
>
> Participant - Edinburgh Garden Share Scheme.

3.9.9 Community cohesion benefits seemed particularly evident in food growing projects where bringing people together was a core part of the projects' approaches. It was less evident in some of the more service focused projects, although some projects combined the provision of services with facilitating the development of connections between individuals, which are designed to sustain future action (e.g. A Better Way to Work).

3.9.10 Many of the project managers hope that the connections made will increase community capacity and resilience, and be of benefit in the future.

3.9.11 Across the 21 projects taking part in the review, participants had developed various new skills through their involvement in the projects that could potentially contribute to community capacity and resilience in future. These skills included, for example, bicycle repairs, fruit preserving, food growing, chicken care, reuse and recycling (for example, making felt from fleece), and composting.

Local economy

3.9.12 The most direct economic impact of the CCF projects has been to create jobs and employ staff for the duration of the project. The scale of this impact is relatively small, as many of the projects have small teams, often with part-time staff.

3.9.13 A number of the projects are supporting their local economy, either as a knock-on impact through the activities they encourage their participants to undertake (for example, buying local food) or by using local suppliers themselves (for example, printers or locally based professional services). For example, the end-of-project report of Sustainable Solutions for Linlithgow states that three new employees had started with the installers and manufacturers of the solar thermal panels offered as part of their bulk buy scheme, as a result of the popularity of that scheme.

3.9.14 Many projects have increased the employability of their staff, volunteers or participants, through skills development in a range of areas. This has been achieved through formal training opportunities – some of which lead to certification – and more informal means such as skill-share events or learning from others during the project activities. We came across a number of cases where project volunteers and participants had in fact gone on to find employment, helped at least in part by the skills gained through their involvement in the project.

> *"It kind of helped me out… It gives us a job… Could get five or six good references, so it's good for that [employability] like."*
>
> Participant – The Three Cs

Local environmental quality

3.9.15 Some of the projects had improved the appearance of the local environment through their activities – such as converting previously unused land into growing spaces (e.g. Toryglen Transitions) or bringing more greenery into urban areas through activities such as tree-planting (e.g. Carbon Busters). There was also a perception in some projects that vandalism and littering in the local area had reduced as a result of their activities.

4 MOTIVATIONS, BARRIERS AND SUCCESS FACTORS

4.1 OVERVIEW

- Drawing on the rich qualitative data gathered through interviews, this section describes the motivations and barriers experienced by participants in adopting new behaviours and the 'success factors' that enabled projects to overcome barriers.
- Environmental reasons were rarely the primary motivation for participants to make changes or get involved in projects, though they often played a supporting role.
- Participants were more commonly motivated by personal benefit, whether that was saving money, enjoying themselves, or improving their well-being.
- Actions to reduce **energy use** were driven largely by cost saving or by a desire for affordable warmth. Barriers included inertia or a lack of knowledge; confusion about the many offers, products and grants available; a fear of hassle, disruption or being 'ripped off'; and the physical constraints of certain properties.
- Projects played a key role in 'hand-holding' people through the process of identifying and making changes, reducing the perception of hassle and introducing householders to suppliers and installers they felt they could trust.
- Energy visits and audits provided a 'foot in the door' to helping people with energy efficiency measures; energy monitors were effective at changing everyday energy behaviours, although there was little evidence on how long these impacts last.
- Engagement in **food growing** projects was motivated by anticipated enjoyment and well-being, as well as being a quicker alternative to allotment waiting lists, which some participants were on. The main barrier was the time commitment needed, which some participants misjudged. Some disliked the idea of growing food in a shared space (such as a shared garden) due to not having full control.
- Project managers commented on the need for good management of expectations and relationships between participants. Giving participants ownership and responsibility appeared to be important in community gardens.
- An existing interest in food or in supporting the local economy was a common characteristic of participants in **food purchasing** projects. The main barrier was how far participants were prepared to alter their diet. Projects reported that it was important to enable – and not to dictate or judge – where enabling included signposting, reminding and helping to improve supply.
- Promoting 'fitness' appeared to be a better hook than 'health' in **cycling** projects, as well as enjoyment. Fear of traffic and lack of cycling infrastructure (on the road and at destinations, especially at work) were key barriers. Success factors centred around personal support, such as cycle training, bike repairs, and peer leadership.
- **School-based projects** led to behaviour change among pupils and in schools more widely, but there was little evidence of knock-on impacts in the home – including on parents' behaviour. Key success factors were getting leadership from the head teacher, being realistic about administration burdens and a proper understanding of educational processes.
- Environmental messages seem to be essential in **multi-strand projects** to link otherwise apparently disparate behaviours together. Risks include spreading resources too thinly between strands, and participants feeling overwhelmed by too much choice – potentially then choosing to do nothing. However, pursuing the 'path of least resistance' may open gateways to future actions with larger carbon impacts where the project can continue to work with the same participants over time.

4.2 INTRODUCTION

4.2.1 The following sections set out, for each topic that the projects worked on – energy, food, transport and waste – participants' motivations for getting involved in projects and changing their behaviour, the barriers to changing behaviour, and the factors which contributed to projects' success in each area.

4.2.2 The evidence on motivations and barriers is drawn mainly from the participant interviews, with additional insights from project teams. The analysis of success factors draws together perspectives from participants, projects teams (including volunteers) and partners. As noted in the introductory chapter, the participants interviewed for the review are likely to have been the most engaged and motivated participants. The evidence is therefore stronger on motivations than on barriers or de-motivating factors.

4.2.3 The qualitative interviews explored the reasons why participants made (or did not make) changes. Many participants also told us how important they felt motivations or barriers were compared to each other. Motivations and barriers are summarised for each behaviour in Table 4.1 below, followed by a detailed discussion for each behaviour from section 4.3 onwards. The order in which motivations and barriers are presented in Table 4.1 reflects the research team's interpretation of those that were the most important, based on how commonly they were mentioned and the weight attached to them by participants who mentioned specific factors – though note that there was a great deal of variation between participants on different projects and in different situations.

Table 4.1: Motivations and barriers

Topic	Behaviour	Motivations	Barriers
Energy efficiency	Home energy use	Cost saving Environment	Inertia and habits Lack of knowledge Inconvenience
	Insulation and other hard measures	Cost saving Environment Comfort	Cost (real or perceived) Limitations of house type/tenure Confusion or lack of knowledge Effort and hassle
	Energy efficient light bulbs	Cost saving Environment	Suspicion/perception of quality
Energy generation		Cost saving Environment	Cost Planning permission Lack of access to FiTs
Food	Food growing	Existing interest Enjoyment Well-being Environment Food quality Cost saving Community/social benefits Skills and experience	Time requirement Weather Lack of control (shared space)
	Sustainable food purchasing	Existing interest Environment Local economy Food quality Health Connection to local community Cost saving	Availability/preferences Family pressure Time and effort (“laziness”) Habits and forgetting Cost Allergies and intolerances Complexity of decisions
Transport	Cycling	Fitness (and health) Enjoyment Saving time Cost saving Environment	Fear of traffic Lack of infrastructure Inertia Lack of skills Broken bicycles Weather
Waste	Range of waste behaviours	Dislike of waste in principle	Lack of infrastructure Effort

4.2.4 For the purposes of this report, success factors are defined as elements of project interventions that are particularly effective in prompting participants to change to lower carbon behaviours (though a specific success factor does not translate into a specific amount of carbon saved). This discussion considers how these elements of project interventions have connected with participants' motivations and helped to overcome barriers in order to achieve change.

4.2.5 This section ends with a look at the success factors relevant to two particular types of projects: multi-strand and school-based projects. These are worth considering in some depth, because multi-strand projects have their own specific benefits and challenges, and there is a great deal of interest among CCF projects in working with schools.

4.3 ENERGY

Home energy use

Motivations

4.3.1 The most commonly cited motivations for changing home energy use behaviours (and in fact any energy behaviours) were financial – the desire to save money on energy bills. Although these motivations were already in place before participants became involved in the projects, they were not resulting in action, due to a number of barriers, until the projects overcame these barriers and activated the motivations.

4.3.2 Environmental motivations were also relatively common, though generally not the primary motivator, for making changes in home energy use – as well as other energy behaviours: for many participants, the environmental benefits of taking action were a secondary motivation or an additional 'feelgood factor'.

Barriers

4.3.3 Projects' experiences suggest that a common barrier to changing participants' home energy use behaviours was inertia: while participants were aware of ways of reducing their energy use, habits were restricting the extent to which energy-saving behaviours were carried out. In some cases, though less commonly, simply not knowing how to reduce home energy use was a barrier to change.

4.3.4 Most participants who had changed their home energy behaviours had not experienced any barriers when actually making the changes. Occasionally, the difficulty of breaking old habits, not knowing how some appliances might react to being switched off and inconvenience (such as having to reach switches in awkward places) were mentioned. Most participants who experienced these barriers were determined to overcome them.

Success factors

4.3.5 A common element in projects that had successfully changed participants' home energy use was that many of them had made use of energy monitors – key examples include Switched On to Switching Off, as well as Carbon Reduction Shetland, whose evaluation report states that of the households that returned a feedback form (number not given) after borrowing an energy monitor from the project, 94% claimed they would reduce their energy use as a result. The qualitative interviews suggest that the key reason why energy monitors trigger behaviour changes is that they show participants where they can save energy and how much they can save, empowering them to make changes. Energy monitors make energy consumption visible immediately on an item by item basis, giving participants concrete proof that a particular change will save them a certain amount of energy, as well as a certain amount of money – appealing to the financial motivations.

4.3.6 Energy monitors were often seen by participants as fun gadgets to play and experiment with – many participants treated the monitor like a challenge, trying to get the readings as low as possible. In this way, energy monitors draw attention to habitual behaviours and effectively break established habits and disrupt the inertia that goes with them.

> *"I used it a lot to start off with, going around switching things on and off, seeing how much we used that hour. I remember finding the shower used more than I thought."*
>
> Participant – Carbon Reduction Shetland

4.3.7 Evidence from elsewhere suggests that people's interest in energy monitors may not be sustained over a long period of time[18]. Some of the participants we interviewed, however, were keen to have an energy monitor permanently (one participant in Carbon Reduction Shetland had gone to the extent of buying a monitor after returning the loan monitor to the project). It would be interesting to return to these participants in future and find out whether their interest in the monitor had worn off and whether the new behaviours inspired by the monitor had stuck[19].

4.3.8 Simply giving advice about energy-saving behaviours around the home as part of a wider energy audit appeared to be less effective at changing participants' home energy consumption behaviours. Where projects took this approach, participants tended to maintain they were already carrying out many if not all of the recommended behaviours, and were inclined to dismiss the advice. In rare cases, participants did make changes on the basis of energy-saving advice, however. These tended to be very specific behaviours that participants had not thought of before – not the standard recommendations such as turning the lights off and not overfilling the kettle.

4.3.9 Where projects simply provide verbal advice on home energy behaviours, it is vital that this advice is highly tailored to the participant and goes beyond the obvious energy-saving behaviours that the participant is less likely to have given thought to. For example, Going Carbon Neutral Stirling had purposely included some unusual energy-saving behaviours in their Carbon Cutter Plans in order to grab participants' attention, such as cleaning the coils at the back of the refrigerator.

4.3.10 Energy monitors were used by children in the Energy + Action = Change project, and the project manager suggested that plug-in monitors were likely to be more effective than mains meters, because they allowed children to explore the energy use of items in their own room. This made the issue more personal and focused it on items that were their own responsibility, rather than considering the energy use of the entire household.

[18] E.g. van Dam, S., Bakker, C., van Hal, J. (2010) Home energy monitors: impact over the medium-term, Building Research & Information 38(5), pp458–469.

[19] There is scope for doing this, as the participants have been asked for permission to be re-contacted once for research purposes.

4.3.11 If using energy monitors, the monitors need to be accompanied by clear instructions that allow the participant to easily set up and use the monitor. Some participants had experienced difficulties in this area where they did not receive sufficient support from the project. Assisting participants in setting up monitors – as FRESCo did – or re-contacting participants to check that they have managed to set up the monitor – as Carbon Reduction Shetland did – can be helpful.

Insulation and other energy efficiency measures

Motivations

4.3.12 In the case of home insulation and other energy efficiency measures[20], as with other energy behaviours, financial motivations were the most common. In addition to a desire to save money on energy bills, access to free, subsidised or discounted insulation could also motivate people. Environmental motivations were again a secondary consideration.

4.3.13 Another relatively common motivation was improved comfort. This is perhaps more of a motivation in less well-off communities than in better-off areas where people are more easily able to afford the cost of high heating bills – though it was also mentioned to us by some of the middle-class participants living in old and draughty houses. While this motivator existed prior to the involvement of the projects, it was overridden by barriers, until intervention from the project.

4.3.14 The extent to which participants who are motivated by comfort make actual energy savings is unclear, as the efficiency improvements could simply make them more comfortable while using the same amount of energy, rather than enabling them to use less energy. The project staff who encountered this motivation – for example, the champions at East Neuk and Landward Energy Network – tended to believe that the efficiency improvements were significant enough to enable participants to reduce their energy use.

Barriers

4.3.15 In the case of home insulation and other energy efficiency measures the cost of improvements was one of the most common barriers. Participants were often keen on the idea of making improvements, but would balance their cost against the potential savings on energy bills. However, the costs and savings were often either perceived or unknown – leading to inertia in decision-making. In addition, some participants also lacked knowledge about the availability of financial assistance.

4.3.16 Some participants were living in properties that were difficult to insulate, for example, due to solid walls, shared lofts in tenements, or restrictions (such as in conservation areas or on listed buildings). In these cases, improvements were either difficult to implement, not possible or – following on from the

[20] This includes all one-off energy efficiency behaviour changes, from boiler replacement through draught excluders and double glazing to eco-kettles and energy-saving light bulbs.

discussion on cost above – prohibitively expensive. This barrier tended to apply to clusters of houses, such as conservation areas, tenement streets or villages with particular house types, though a number of projects had come across a lone hard-to-treat property.

4.3.17 Some participants felt that installing insulation or other hard measures would be too confusing, or too much effort or hassle. Projects were often able to clarify the process for participants (see below), but resistance to the demotivating 'hassle factor' was harder to overcome where it existed[21]. In some cases, the barrier was simply never having thought about making improvements (project managers and staff were more likely to draw attention to this than were participants).

4.3.18 Perhaps rather obviously, participants who were renting their home were less able and willing than home-owners to make the financial investment needed for efficiency improvements. Even where the project was able to offer improvements that required no investment by the participant – such as the insulation offered by the Climate Champions Network – some renters assumed that these were not applicable to their property.

> *"We rent, so a lot of things they were talking about weren't possible for us."*
>
> Participant – Switched On to Switching Off

4.3.19 Many of the participants in Switched On to Switching Off were living in tenement flats with particular characteristics which the participants wanted to preserve – such as window shutters. This could create a barrier to improvements – in the case of shutters, a barrier to implementing double glazing. This barrier is likely to be found in some communities and not others, as unusual house types tend to come in clusters – such as the street that Switched On to Switching Off was working on.

4.3.20 In a very small number of cases – particularly among older people as well as among those less well-off – participants appeared reluctant to accept free assistance, even if they were struggling with inefficient heating systems or lack of insulation, for fear of compromising their dignity. Staff on the East Neuk and Landward Energy Network and Low Carbon Raploch reported having encountered such attitudes. This could create a barrier to the participants approaching a project in the first place, as well as to accepting assistance from the project.

Success factors

4.3.21 Energy audits have been particularly effective at getting participants to install insulation and other hard measures, where the auditor "hand-holds" the participant through the installation process, making it easy for them. This

[21] Loft clearance as an issue very rarely emerged unprompted. Part-way through the participant interviews, the topic guide was adapted to include a question about loft clearance specifically, but this was highlighted as an area of interest by the Scottish Government. Loft clearance does appear to be a barrier to insulation for some participants, but the fact that it is rarely brought up unprompted suggests that it is not top-of-mind.

approach overcomes many of the barriers around confusion, hassle and lack of knowledge, by clarifying the process for the participant and taking much of the effort away. A notable example of this approach being used to good effect is the East Neuk and Landward Energy Network.

4.3.22 A key element of "hand-holding" involves assisting participants in accessing grants and subsidies. Where projects have been able to signpost participants to financial assistance, this has helped to overcome the cost barrier. An alternative approach was taken by the Climate Champions Network, which was able to leverage other funding in addition to CCF, and use this to provide free insulation to all participants. In addition, the hassle of applying for assistance can also be removed by projects if they are able and willing to put in the time to help participants with applications.

4.3.23 Participants who were able to get financial assistance for improvements appeared to be most likely to implement them. Although the cost of improvements was identified as a barrier, it was by no means insurmountable for all participants. Projects had tended not to specifically target people eligible for financial assistance, but directed their activities at everyone. Given that the cost barrier is not universal, this seems to be a worthwhile approach.

4.3.24 Energy audits also allow projects to provide participants with personalised advice tailored to their circumstances. The importance of tailoring was highlighted by the FRESCo project manager, who found that providing highly personalised cost-saving calculations helped participants make informed decisions and overcome the key barrier of inertia, which was caused by being unsure as to which measures were financially worth their while. In addition, where participants live in hard-to-treat homes, it can also be helpful if projects are able to give tailored advice specifically for a particular type of building – for example, Switched On to Switching Off's advice on efficiency measures was specifically tailored for the tenement flats the project participants lived in.

4.3.25 A point raised by both participants and project representatives was the need to be able to offer a range of insulation types. Some participants had been disappointed when a project was unable to cater for their hard-to-insulate home or if they were unable to get a particular type of insulation in preference over the standard option. The extent to which this is within the control of the projects obviously depends on how the insulation measures are being funded.

4.3.26 Where projects signposted participants to contractors following an energy audit, this generally had the effect of reassuring participants that the contractors were trustworthy and reasonably priced. Participants who needed support in navigating through insulation options also tended to appreciate recommendations for contractors, and as they had developed trust in the community project they saw it as a reliable source of information. This happened, for example, with the East Neuk and Landward Energy Network and Sustainable Solutions for Linlithgow (see also relevant discussion in section 5.7 on high profile and trust). In this situation, it is important that the project is confident in the quality of the contractors' work as this can affect the reputation of the project. By asking for feedback from participants, projects can monitor the quality of contractors' work – one of the projects taking part in

the review had in fact stopped recommending a particular contractor after receiving negative feedback about their work.

4.3.27 While some projects had successfully built themselves a local reputation and the participants were aware of the project and its activities, in some cases participants were unclear as to who had carried out their insulation or other improvements. This confusion is likely to be due to the large number of insulation initiatives, including government and commercial ones, that are running concurrently, as well as the number of stakeholders involved in insulation work, from auditors to advice organisations, grant and subsidy providers, and contractors.

4.3.28 There are no examples of this confusion causing projects to fail to achieve their behaviour change aims – the only effect is that some participants remain in the dark as to who is responsible for the improvements. This may potentially have knock-on implications in future. If the confusion means that participants remain unaware of the project's environmental aims or community nature, participants may be less susceptible to other project messages as well as any future project activities. It also restricts the potential for word of mouth to spread about the project, if participants cannot signpost others to the project.

4.3.29 One potential way of avoiding this confusion (as well as energy audit fatigue) can be for projects to work together with other initiatives that are ongoing in the local area. Some projects have done this, and the outcomes for the partner organisation have generally been positive, for example from being associated with a trusted local organisation (see section 5.7 on the importance of profile for further discussion). The projects themselves appear to have been less likely to benefit, other than by avoiding duplication that could potentially irritate participants. Community projects tend to be more interested than national schemes in engaging with participants, and working alongside a national scheme, to their timescales, may limit opportunities for in-depth engagement with participants. And, in the end, participants may still remain confused as to who was responsible for any improvements carried out.

4.3.30 Some of the project managers – including those of Sustainable Solutions for Linlithgow and East Neuk and Landward Energy Network – suggested that autumn and winter may be the best times to run insulation activities. The cold weather and high energy bills draw people's attention to the need to keep warm without spending too much money on heating.

Energy-saving light bulbs

Barriers

4.3.31 Energy-saving light bulbs illustrate an interesting point about perceptual barriers, so they are worth considering in a little more detail. Although the phasing out of incandescent light bulbs has already started, some of the projects were also including the use of energy saving light bulbs as one of their target behaviours – particularly Carbon Reduction Shetland, which was using them in conjunction with energy monitors so participants could

experiment with them to see how a small behaviour change can have an impact on their energy use.

4.3.32 A common barrier to using energy-saving light bulbs was a suspicion over their quality. This illustrates how perceptions can act as barriers to change. In some cases, participants had actually tried energy-saving light bulbs and disliked them for reasons of perceived quality.

Success factors

4.3.33 Giving out free energy-saving light bulbs and signposting participants to specific types of energy-saving bulbs were the two key factors that had encouraged participants to make changes in this area. Both of these examples illustrate the importance of 'showing' rather than 'telling' as a means of overcoming perceptual barriers.

4.3.34 Free light bulbs allowed participants to try out the bulbs, and this was often successful in overcoming participants' suspicions that energy-saving bulbs would not be as bright as conventional bulbs.

4.3.35 Where participants were already keen to use energy-saving light bulbs but had some non-standard light fittings (such as spotlights) with conventional bulbs, signposting to non-standard energy-saving bulbs enabled them to switch the bulbs in these fittings. Signposting was also effective where participants had tried energy-saving bulbs and did not like them, if the project was able to suggest an alternative type of energy-saving bulb.

Domestic renewable energy

Motivations

4.3.36 For domestic renewable energy, as for other energy behaviours, financial motivations were again the most common, and environmental motivations secondary.

Barriers

4.3.37 The cost of installation was the main barrier experienced by participants. Some were also having – or anticipating – problems getting planning permission, particularly in conservation areas. In Shetland, not being able to connect their energy generation system to the grid, and consequently not being able to benefit from FiTs had put some participants off the idea.

Success factors

4.3.38 As noted in Chapter 3 on impacts, participants had rarely implemented changes in this area, though a sizeable number had plans to do so. The most successful approach in terms of numbers of people planning to make changes was the bulk-buy scheme set up by Sustainable Solutions for Linlithgow, to which 79 participants had signed up at the time of our follow-up interview with the project manager. The bulk-buy scheme has enabled participants to sign

up to buy solar thermal panels at a discount, and the discount would be obtained through the buying power of a large group of people.

4.3.39 The attraction of the bulk-buy scheme is likely to be in that it reduces the cost of renewables (where cost was reported to be a barrier). There may also be a sense of social norms at play, if participants begin to feel that this is 'the done thing' in their local area. By highlighting the large number of residents that have signed up, projects can begin to create a sense of such a norm.

4.3.40 Promoting renewable energy after engaging participants in installation of home energy efficiency measures appeared to be an effective approach (see also section 3.6 for relevant discussion on spillover effects). The experiences of Sustainable Solutions for Linlithgow and FRESCo suggest that once participants had implemented (or even just decided to implement) measures such as insulation, they were more open to the idea of renewable energy, as it seemed a natural fit with what they were already doing. On its own, the idea of renewable energy installations may have been too daunting for them.

4.3.41 As with insulation, "hand-holding" and personalised information about the costs and cost savings can also help participants install renewables.

4.4 FOOD

Food growing

Motivations

4.4.1 Food growing projects tended to attract a large proportion of people with an existing interest in gardening or growing, who were motivated by this desire to grow food. Despite this, these projects have had impacts above and beyond what these 'already interested' participants would have done in the absence of the projects: the projects enabled people to grow food through the provision of growing space, where they would otherwise have had none (as noted in Chapter 3 on impacts).

4.4.2 For those with an existing interest in food growing, finding enjoyment in growing appeared to be a key reason for their interest. Many also talked about the positive effects on their well-being, in terms of gardening being a therapeutic activity. Some were motivated by the environmental benefits of food-growing, and some also mentioned being able to get good quality fresh food at a lower cost as a motivator.

> *"I just get so much pleasure and joy out of growing something."*
> Participant – Edinburgh Garden Share Scheme

4.4.3 The opportunity to help others in the community also emerged as a key motivator for participation in the Edinburgh Garden Share Scheme (as well as in the Three Cs project to some extent), on both sides: gardeners wanted to help garden owners who were struggling to look after their gardens, and garden owners felt that they were able to benefit someone who wanted to grow food but did not have the space to do so. For garden owners, another

key motivation was often that they struggled to look after their gardens and needed help in doing so.

> *"I also liked the 'adopt a granny' aspect of it, the idea of befriending an old person. It's been on my to-do list for a long time."*
>
> Participant – Edinburgh Garden Share Scheme

4.4.4 Among participants in community garden projects, notably in Assloss Walled Garden, the social aspects of the project – the opportunities to meet people and be part of something – were an important motivator for some.

4.4.5 Alongside attracting many of the 'already interested', food growing projects were – compared to other topics – among the most successful at recruiting a proportion of participants with no prior interest in the environment or the project topic. Toryglen Transitions and the Three Cs are notable examples. For these participants, key motivations for taking part were simply having something to do (and many of them enjoyed being outdoors), well-being benefits, and being able to gain work experience, skills and references – or getting paid, in some cases. For some previously uninterested participants, the project had then sparked an interest in food-growing.

Barriers

4.4.6 As many of the participants in food growing projects were keen to grow food, only a limited number of the interviewed participants had experienced barriers. The only barrier that tended to get in their way was to do with the time required for food growing, when other life events were taking place and their priorities were shifting. In addition, for some participants, poor weather could at least temporarily stop them from gardening.

4.4.7 With respect to garden share schemes specifically, evidence from the Edinburgh Garden Share Scheme and the Three Cs suggests that one reason for non-participation among potential gardeners is lack of full ownership over the growing space. For garden owners, the concept of letting a stranger into their garden can be a barrier to participation, and elderly garden owners' relatives can also be concerned about this. It is difficult to say how widespread this barrier might be, due to lack of access to non-participants, but Edinburgh Garden Share Scheme seemed to be successfully reassuring their participants through their careful vetting (including a disclosure check) and matching process.

Success factors

4.4.8 The key success factor in the CCF food growing projects has been to find innovative ways of providing growing space to people who were already keen to grow their own food – such as the Edinburgh Garden Share Scheme or the community gardens set up on under-used land by Toryglen Transitions. Food growing projects appear to have either happened to come along at the right time, or been set up specifically in response to a demand for this type of activity.

4.4.9 Another key element in successful food growing projects – due to the nature of these projects – has been the building of good relationships between all those involved. The CCF food growing projects have been either garden share schemes or community gardens, and both types involve continuous interaction[22] between participants. In these situations, good relationships are vital to sustained involvement of participants – for example, the project manager of the Edinburgh Garden Share Scheme felt that, though labour-intensive, a careful matching process to pair up gardeners and garden owners who were likely to get on with each other was key to success. Good communications, making volunteers feel valued and making the local community feel involved (in community gardens) emerged as some of the key elements of good relationships. Given that good relationships are important in community garden and garden share projects, expectation management (of all parties) is an important factor in keeping participants happy.

4.4.10 The evidence suggests that giving participants freedom and responsibility over their patch is important in maintaining interest and continued involvement in community gardens. As already noted with respect to garden shares, a lack of a sense of control can be off-putting for participants, and top-down instructions from a community garden project can have a parallel de-motivating effect. For example, one community garden had lost at least one participant due to a conflict between the project's desire to minimise its environmental impacts and how the participant wanted to set up their patch in the garden.

4.4.11 Participant drop-out is a risk for community gardens, and projects taking part in the review had experienced this to differing degrees. The evidence on reasons for dropping out is extremely limited, due to difficulties in contacting these participants (though the lack of a sense of control referred to above may be one reason). One example of an active strategy to address drop-out comes from Toryglen Transitions, which would contact participants if they failed to come to the garden two weeks running. The practice of quickly chasing up missing participants could perhaps be trialled elsewhere to further test its effectiveness in preventing drop-out.

4.4.12 With garden share schemes, it is important to take into account the layout of the local area and where gardeners and garden owners are likely to come from. It may be that most gardens are in the outskirts or are in rural areas, while gardeners might live in urban areas. As pointed out by the project manager of the Edinburgh Garden Share Scheme, the distances between the two need to be manageable, and within the context of Edinburgh this has worked well.

4.4.13 As with insulation projects (see 4.3.30), the timing of participant recruitment can be crucial on food growing projects – ideally participants need to be ready to start at the beginning of the growing season, while participants recruited in late spring or summer may be left with limited opportunities to get involved.

[22] As noted in section 2 on impacts, it is these interactions which are largely responsible for many of the positive community impacts of projects.

4.4.14 Where new community gardens and allotments require planning permission, this has implications for the set-up phase in terms of timescales and expertise needed. One of the projects had struggled with this, as they felt a planning condition presented an unacceptable financial risk to the project. This situation was eventually resolved, with external advice and support – which can be valuable to projects that lack the necessary expertise internally.

Food purchasing

4.4.15 Much of the evidence on food purchasing behaviours comes from the Fife Diet, with some input from the experiences of Transition Town Forres.

Motivations

4.4.16 Food purchasing projects also tended to attract participants with an existing interest in food generally and, often – because of these projects' focus – some degree of interest in local food specifically. Among Fife Diet participants in particular, this existing interest was associated with one or more of: environmental concern, a desire to support the local economy, or a feeling that local food was of higher quality. For a smaller proportion of participants, a feeling that local food was healthier was a key motivation. Healthy and good quality food seemed to appeal particularly to participants with children. A minority were also motivated by saving money.

> *"All towns should have a farmers' market; it makes economic sense and helps local people"*
>
> Participant – Transition Town Forres

4.4.17 Participants often associated changes in their food purchasing behaviours with an opportunity to strengthen connections to their local area and community, and this was an important motivator in many cases. For a small proportion of participants, it was mostly about wanting to show their support to the project.

Barriers

4.4.18 With regard to making more sustainable food purchasing choices, the barrier most commonly highlighted by participants was lack of availability of sustainable options when it came to certain foods – for example, not being able to source certain foods locally.

4.4.19 Some participants put a different interpretation on this and talked about how they liked certain foods and were not willing to give all of them up, despite knowing that they were unsustainable choices – rather than blaming the lack of availability of sustainable alternatives.

4.4.20 These two explanations illustrate two different ways in which participants perceived their choice sets. Most tended to see their choice set as a given, and felt that within that choice set sustainable alternatives should be available. A smaller proportion recognised that they could, if they wanted to, limit their choice set, but were willing to do so to differing extents. In addition

to issues around availability and preferences, in small number of cases allergies or special diets placed restrictions on how much participants were able to change.

4.4.21 Participants were also susceptible to pressure (perceived or real) from other family members whose preferences guided their purchasing choices. There appears to be a tension between trying to make sustainable food choices and being seen as a 'good provider' by the family.

> *"My family wouldn't take kindly to sudden changes."*
> Participant – Fife Diet

4.4.22 Some commented on the amount of time required for seeking out and choosing more sustainable options – though again others interpreted this differently and labelled it "laziness". A small number of participants mentioned ingrained habits as a barrier to change, and admitted that they sometimes forgot to think through the purchasing choices they were making.

4.4.23 Some participants found the number of considerations around sustainable purchasing decisions so complex that it became difficult to know whether or not they were making the 'right' or 'best' decision. Some had resolved this by creating 'rules of thumb' for themselves, while others remained confused by the uncertainties and apparent contradictions.

4.4.24 Some participants felt that the more sustainable food choices were also the more expensive ones. A small number also highlighted the need to travel further distances to buy otherwise more sustainable food.

Success factors

4.4.25 As many of the participants in sustainable food purchasing projects had an existing interest in sustainable food, key success factors tended to fall into the category of 'enabling factors' that helped participants change their food purchasing behaviours. The enabling factors included providing information about local outlets, providing seasonal recipes, reminding participants to keep up their buying behaviours (the Fife Diet), and establishing farmers' markets that bought locally produced food into the community (Transition Town Forres).

4.4.26 Projects promoting purchases of sustainable food are among those that can easily run the risk of attracting the 'already converted'. Project managers have generally aimed to address this by ensuring that their projects have the broadest possible appeal – through using a range of messages and allowing participants leeway in what they do. Allowing participants to stay within their comfort zone when making changes appeared to be an effective strategy in avoiding alienating participants – for example, the project manager of Transition Town Forres commented how participants felt comfortable in the "unthreatening" environment of a farmers' market.

> *"If the pledge was policed militantly, then it would cease to be you being interested in the Fife Diet and it would be the Fife Diet being interested in you, which wouldn't be good."*
>
> Participant – Fife Diet

4.4.27 Fife Diet in particular succeeded in creating a feeling of community and connection that tied in with participants' sense that they could strengthen their connections to the local area and community through food. This sense of community helped to keep participants engaged, as well as pushing them to do more. It appeared to create a sense of momentum and collective action, as well as a sense of having an informal support network in the project. While participants largely continued to consider sustainable food purchasing behaviours out of the ordinary, there was some sense that social norms around these behaviours were beginning to shift.

4.4.28 The experiences of the Fife Diet have also shown that local food appears to be a concept which opens doors to wider sustainable eating. Participants were intrigued and captivated by the concept and drawn into the project by it.

4.4.29 An important point made by participants in both the Fife Diet and Transition Town Forres is the need for viable alternatives to be available to maximise the projects' chances of success.

4.5 TRANSPORT

Cycling

Motivations

4.5.1 Transport projects' activities tended to centre on cycling. They were rather susceptible to attracting a large proportion of existing cyclists, who were motivated by their interest in cycling, often combined with a desire to demonstrate support for the project – evident among participants in both A Better Way to Work and Active Leith. However, there was also a reasonable proportion of participants who were either lapsed cyclists or new to cycling, and an interest in cycling was also a common motivator among those: they were curious about cycling or considering taking it up.

4.5.2 The most common motivations for wanting to take up cycling centred around health and fitness. While project managers and staff seemed more likely to talk about 'health' as a motivator, participants tended to phrase this in terms of 'fitness'. This was particularly the case when talking about their most important personal motivations. Participants did also talk about 'health' as a motivator, but this term was more commonly used when talking about additional benefits rather than key motivators. The implication for transport

projects is that cycling may be more effectively promoted by appealing to motivations related to 'fitness' rather than 'health'[23].

4.5.3 Another relatively common motivation was enjoyment of cycling. This factor was often highlighted by the existing cyclists, but it also seemed to motivate the new and aspiring cyclists, some of whom saw cycling as a potential social activity – something to do with family or friends in their leisure time.

4.5.4 Other, though relatively rare, motivations were saving time or money by cycling. In a small number of cases, participants (both new and existing cyclists) were motivated by environmental considerations, but again this was rare.

Barriers

4.5.5 As noted in Chapter 3, travel behaviours are some of the hardest to influence, and a number of strong barriers were identified by the participants as well as by project staff. The two key ones were fear of traffic and lack of cycling infrastructure. Although projects were tackling barriers around fear of traffic (see below), lack of infrastructure is a barrier that they have virtually no control over, though some have attempted to lobby their local councils over this.

> *"[Cycling on roads is] dancing with death and that's not my idea of fun."*
>
> Participant – A Better Way to Work

4.5.6 Some participants also talked about the effort or hassle involved with cycling. One participant in A Better Way to Work suggested that having facilities such as bike parking and showers at work may go some way towards overcoming this barrier. Although this is something that is not straightforward for projects to address, they can encourage participants to lobby their workplaces to provide these facilities – as A Better Way to Work have indeed done through supporting the formation of workplace cycle action groups.

> *"It would be inconvenient to get togged up for cycling and then change into a business suit."*
>
> Participant – A Better Way to Work

4.5.7 An important barrier that seems to have been experienced by a number of participants in A Better Way to Work before their involvement in the project was inertia: they were open to the idea of cycling, but had simply 'not got around to it yet'. Other, rarer barriers included not knowing how to cycle or having a broken bike that needed repairing.

4.5.8 Some participants anticipated that towards the winter, bad weather and lack of daylight could create barriers to cycling, and they were not sure if they

[23] Interestingly, Active Leith's evaluation report notes that although the project tried to get health professionals to refer people to the project (making the link between active travel behaviours and health benefits), the project only received a "handful" of referrals through this route.

would keep up their behaviour. While these issues in themselves are outside of the projects' control, they may be able to do something to tackle fair-weather cyclists' perceptions of what constitutes fair weather. However, due to the timing of our interviews in the summer, it was not a front-of-mind issue for project managers and staff.

Success factors

4.5.9 Successful interventions to encourage cycling involved active engagement through personal contact, and the provision of tailored advice and close support to participants in changing their behaviour – something that community projects are well-placed to deliver. Some of the transport projects' successes included triggering behaviour change among participants who had for some time held an intention to start cycling but had kept putting it off until active intervention by the projects.

4.5.10 In contrast, passive engagement methods that put the onus on participants were less likely to succeed – for example, one project that set up a travel advice and support service that participants could contact by text message reported that only 39 participants signed up to the service and only three of those requested support. As transport behaviours are subject to a range of strong barriers, they are some of the most difficult to change. Personalised, intensive interventions are needed to overcome these barriers, and passive interventions are rarely enough to motivate people to action.

4.5.11 Visible activity around cycling and peer support – for example, as provided by the workplace champions in A Better Way to Work – can begin to shift the social norms within a community and make cycling more mainstream and aspirational.

4.5.12 Another key element in successful transport behaviour interventions was the provision of free trial bikes. These were used by both A Better Way to Work and Active Leith (which gave away reconditioned bikes on a permanent basis), as well as Scotstoun and Kingsway Focus to some extent. Loan bikes gave participant an opportunity to try cycling, without the need to make a financial investment into a bike. Participants could test different types of bikes and find out whether or not they enjoyed cycling before making the decision to invest in a bike – in one case, the experience had prompted a participant in A Better Way to Work who had not cycled for 30 years to consider re-starting.

> *"It was a test for me, to see if I was going to get back into cycling, before getting a new bike."*
>
> Participant – Active Leith

4.5.13 The provision of bike repairs and maintenance was also a successful means of overcoming the barrier of inertia, where participants had a bike in poor condition or not roadworthy at all, and were putting off repairs. The 'Dr Bike' sessions run by A Better Way to Work encouraged participants to get these bikes serviced and start cycling. This intervention effectively removed the reason to continue putting off making a change. Another approach has been

to teach participants repair and maintenance skills so that they could do their own – a key element in the work of Scotstoun and Kingsway Focus.

4.5.14 Cycle training was effective in enabling participants who did not know how to cycle to learn, overcoming the barriers related to lack of skills. There is some limited evidence that suggests participants who were afraid of cycling in traffic were less likely to take up these lessons. Targeting those with a fear of traffic and encouraging them to take part in the training could yield further impacts from these projects.

4.5.15 A further success factor was the provision of cycle maps and guided rides. These assisted participants in identifying routes, broadening their opportunities for cycling.

> *"I'm not particularly confident cycling on the roads, but the cycle routes definitely helped me."*
>
> Participant – A Better Way to Work

4.5.16 A Better Way to Work started their workplace activities with a cycle challenge. The competitive element and prizes inspired existing cyclists (as well as a small number of new cyclists) to join in. The effect of this was to create buzz and momentum around the project – the challenge became a topic of conversation and got people in the workplace talking about cycling, in advance of other project activities aimed more specifically at engaging non-cyclists.

4.5.17 A Better Way to Work targeted commuting behaviours specifically. This has potential to achieve significant impacts, if employees change their regular travel behaviours and replace a car journey with another mode of transport. School-based projects could have a similar effect by encouraging pupils to cycle to school. Other projects have targeted short journeys such as travel to the shops. An increase in leisure cycling may not, on the other hand, replace car travel, and may not therefore make a productive focus for a transport project. Active Leith's evaluation report suggests that promoting cycling as "a means to an end, rather than an end in itself" is also more appealing to participants.

4.5.18 The location in which a cycling project is run can influence the extent to which the project can succeed in changing behaviour. Whether the transport infrastructure allows for cycling, whether the existing journeys made by members of the target audience are short enough to cycle, and the extent to which the target audience's current travel behaviours are sustainable or otherwise should all be considered. For example:

- One of the projects promoted sustainable travel behaviours in an area with low car ownership, which limited its scope to achieve behaviour change.
- The transport work of Sustainable Solutions for Linlithgow focused particularly on short journeys made within the town, where cycling was a realistic option.

4.5.19 The risk of attracting participants who are already engaged in a particular behaviour is perhaps higher on transport projects than on projects focusing on other topics – these projects tended to attract significant numbers of existing cyclists. At the same time, cycling is a topic that seems to be very susceptible to hostility, and project staff and volunteers were sensitive to this hostility. Although projects had not encountered any significant difficulties, it is important for new transport projects to be aware of the potentially negative responses that their activities might elicit. There was some evidence that staff and volunteers may feel reluctant to be vocal about the project simply because of the prospect of hostility from the public.

Other transport behaviours

4.5.20 As noted in Chapter 3 on impacts, there is limited evidence on how effective the projects were at changing participants' other travel behaviours besides cycling, and consequently the evidence on success factors is also limited. However, there are three points that are worth making, about bus travel, pedometers, and promoting more efficient driving behaviours.

4.5.21 Where participants were given free trial bus passes, it became clear that careful targeting is needed in order to ensure that these passes reach people who are switching to the bus from a less sustainable mode of transport – many of the interviewees who had received a free pass were in fact already travelling by bus. Giving bus passes to people in the car park as they arrive at work, for example, might be an effective approach.

4.5.22 We met very few participants who had actually used a pedometer, but participants who recalled picking them up at events generally found them interesting, and one of the champions from A Better Way to Work suggested that people were using them and trying to walk more as a result. We could conjecture that the effect may be similar to that of an energy monitor (see from paragraph 4.3.5), which is also a fun gadget which responds immediately to action with a visible and measurable effect. There was some evidence, however, to suggest that participants would pick up pedometers simply because they were free, and perhaps a loans system (similar to that used by projects for energy monitors) might encourage them to be used more.

4.5.23 We also met very few participants who had been engaged in project activities promoting behaviours such as eco-driving, car sharing, and car club membership. However, the evidence suggests that by promoting these behaviours projects were able to reach a broader audience than they would do if they were simply promoting cycling. Given the difficulty of changing transport behaviours, this would appear to be an efficient use of project resources.

4.6 WASTE

4.6.1 The main waste activities promoted were composting, recycling and waste prevention. The evidence on motivations, barriers and success factors for these behaviours is very limited. None of the projects included in the review focused solely on waste, but waste activities were either one strand among

many or an add-on activity to the project's main activities. The evidence comes only from those participants who had been involved in the waste strands of multi-strand projects, and any mentions of waste by participants whose interviews focused on another behaviour.

Motivations

4.6.2 The most important motivation among those participants who were involved in waste activities generally appeared to be a dislike of waste in principle, or at least a vaguely anti-waste attitude, which the project activities appealed to. Such attitudes were evident to some extent across a range of projects, but the project manager of Scotstoun and Kingsway Focus in particular highlighted the strong antipathy towards waste among the project's target audience. Some participants were specifically environmentally motivated in their anti-waste attitudes. In the context of such attitudes, the waste behaviours promoted by the projects seemed 'common sense' to participants and they were happy to get involved.

Barriers

4.6.3 The limited evidence suggests that barriers to recycling include two key issues: lack of infrastructure and the effort required for recycling – noted in particular by participants in Carbon Reduction Shetland. Although these barriers were perceived as an inconvenience, they generally did not prevent participants from recycling – some seemed to derive satisfaction from overcoming them. There is not enough evidence to draw robust conclusions about barriers to composting or waste prevention behaviours.

> *"The hardest bit is that everything is away from you here. Cans have to go to the supermarket, plastic has to go to work, have to make an effort to do it. I think the fact that you have to make an effort possibly makes it even more special – more kudos to you, gives you a bigger sense of wellbeing because you have to make the effort. You hear about these people who have all the recycling bins and are hacked off because the council isn't collecting them, and I think it's positive if you make the effort because you choose to, you think it's important."*
>
> Participant – Carbon Reduction Shetland

4.6.4 One project (Sustainable Solutions for Linlithgow) also flagged that waste activities were often not exciting enough for volunteers to get enthusiastic about, and this could cause delays in delivery of project activities. The project manager emphasised the importance of making sure that the volunteers also get something out of the activity they deliver (see also paragraph 5.3.20 on motivating volunteers).

Success factors

4.6.5 The evidence on waste is too limited to comment on the success factors in encouraging recycling, but there are some interesting observations that can be made about composting and waste prevention.

4.6.6 Promoting composting as an add-on behaviour in food growing projects appears to be an effective way of encouraging uptake of composting behaviours, as food growing has an almost catalytic effect on composting. The experiences of Transition Town Forres and the Edinburgh Garden Share Scheme suggested that once participants were engaged in food growing, they perceived composting as a natural extension of their behaviour, because it 'fits' with what they were already doing (see also section 3.6 on behavioural spillover). Signposting participants to low-cost compost bins is also helpful.

4.6.7 In terms of waste prevention, the participants' comments suggested that activities which make waste visible – such as food waste monitoring and composting – are successful at encouraging participants to reduce the amount of waste they generate. This was evidenced in Sustainable Solutions for Linlithgow and in Carbon Busters, where one school's kitchen staff had identified pasta as a large waste stream through food waste monitoring activities, and consequently reduced portion sizes in order to reduce waste.

4.7 MULTI-STRAND BEHAVIOUR CHANGE APPROACHES

4.7.1 A number of the CCF projects have targeted several behaviours at once, or one after another. This approach has both benefits and drawbacks, which are discussed below. The multi-strand projects included in the review are outlined in Table 4.2 below.

Table 4.2: Projects working on multiple strands of behaviours

CCF reference	Name of project	Behaviours promoted				
		Energy efficiency	Energy generation	Food	Transport	Waste
CCF 016	Transition Town Forres	■		■		
CCF 065	Toryglen Transitions	■		■		
CCF 079	Carbon Reduction Shetland	■	■		■	■
CCF 166	Sustainable Solutions for Linlithgow	■	■	■	■	■
CCF 198	Dunbar 2025	■	■	■		
CCF 243	Scotstoun and Kingsway Focus	■			■	■
CCF 968-977	Carbon Busters	■			■	■
CCF EX6	Going Carbon Neutral Stirling	■		■	■	■

4.7.2 Some of the multi-strand projects have promoted a mix of behaviours as a 'package', aiming to change participants' behaviour in a number of areas. This approach seems to be successful when used to target a range of **small scale behaviours** with an **environmental message**: the participants we met who had made a range of changes had often changed a number of small behaviours, rather than making significant lifestyle changes, and their motivations tended to be environmental.

4.7.3 With more significant behaviour changes, multi-strand projects have generally only succeeded in changing one behaviour per participant, and that change has rarely been environmentally motivated. It seems that participants feel uncomfortable making more than one significant lifestyle change at once.

However, even where multi-strand projects fail to engender multiple behaviour changes in an individual participant, they can make use of their connections with existing participants to reach new audiences for other strands, as noted in section 3.6 on spillover.

4.7.4 Some of the projects used a different approach to promoting multiple behaviour changes: starting with one behaviour change (or a set of small changes), and then following it up with another. Due to the timescales of the review, evidence on the effectiveness of this approach is limited, but the series of Carbon Cutter plans used by Going Carbon Neutral Stirling are one example of where it seems to have worked well.

4.7.5 The experiences of the CCF projects suggest that, if staggering project activities in this way, following the path of least resistance may be a good approach – even if the initial activities do not result in significant carbon savings, they may provide a gateway in to wider behaviour change with larger carbon reduction potential.

Messaging in multi-strand projects

4.7.6 Incorporating an environmental message seems to be essential in multi-strand projects, because the message is what links together the targeted behaviours in a coherent bundle that makes sense to the participants and helps them understand why the organisation wants participants to change their behaviour. Without this, participants may become at best confused and at worst suspicious of the project's agenda, as they not see the connection between the promoted behaviours.

4.7.7 It is still important to use a mix of messages, as participants tend to be attracted to the specific work strands – particularly those involving larger behaviour changes – for very specific reasons which are often not environmental.

> *"I'll always point out why we're doing it: 'we are a carbon reduction organisation', but will sell it on the motivations they've come to me for."*
>
> Project manager – Carbon Reduction Shetland

Risks of the multi-strand approach

4.7.8 On the negative side, the multi-strand approach can run the risk of spreading resources too thinly between different project activities. The project manager of Scotstoun and Kingsway Focus noted that although different work strands can reinforce each other, it is easy to neglect those that appear to be less successful and focus on those that deliver the most immediately visible benefits. Volunteers in particular tend to put most work into the activities they are most interested in – so it may be useful to involve volunteers in choosing a selection of work strands early on, to avoid allocating resources to activities that there is no interest in delivering. Alternatively, staggering the project activities can also help to ensure that there are sufficient staff or volunteer resources are available at all stages.

4.7.9 Another potential complication (not necessarily confined to multi-strand projects) is giving participants too much choice about what to do. This can overwhelm participants and lead to inertia, and at times the project team may need to be prepared to provide participants with extra guidance. For example, Going Carbon Neutral Stirling started out allowing participants to choose actions for their Carbon Cutter Plans, but participants found this daunting and the project started to offer pre-prepared plans instead.

4.8 SCHOOL PROJECTS

4.8.1 School-based projects are worth considering in some detail, because there was a great deal of interest among many of the CCF projects in extending their work into schools, and a number of participants also suggested that this could be a good idea. Working with schools can be attractive for a number of reasons: they provide a captive audience at an age where attitudes and behaviours are relatively easy to influence, and, in theory, the impacts of a school-based project may trickle through to the home and have an impact on the behaviour of other family members.

4.8.2 Two of the 21 projects taking part in the review were entirely school-based, while a number of other projects ran some of their activities in schools. Table 4.3 below illustrates the extent of the 21 projects' schools work.

Table 4.3: Projects working in schools

CCF reference	Name of project	Relationship with schools		
		Based in schools	Significant schools work	Some schools work
CCF 016	Transition Town Forres			
CCF 065	Toryglen Transitions			
CCF 079	Carbon Reduction Shetland			
CCF 166	Sustainable Solutions for Linlithgow			
CCF 182	East Neuk and Landward Energy Network			
CCF 198	Dunbar 2025			
CCF 243	Scotstoun and Kingsway Focus			
CCF 968-977	Carbon Busters			
CCF 312	Assloss Walled Garden			
CCF 466	Energy + Action = Change			
CCF EX6	Going Carbon Neutral Stirling			

Can school projects influence home behaviour?

4.8.3 Whether or not school projects can have knock-on impacts on the behaviour of other family members is a contentious point, on which the wider evidence is mixed. The evidence from this review suggests that such impacts tend to be limited. For example, Going Carbon Neutral Stirling concluded (based on some research speaking to parents of the children in schools they had worked with) that the effort required was not worth their while. The project decided to stop working with schools as a result.

4.8.4 Our focus groups with the children taking part in Energy + Action = Change suggested that older children seemed particularly unlikely to tell their parents about CCF project activities they have been involved in. The project manager had also found that trying to send letters home to parents was not an effective means of engaging them, as the letters tended to get lost.

4.8.5 The project manager of Scotstoun and Kingsway Focus suggested that working with schools as one strand among many could maximise these knock-on effects, as the different work strands carry the same message and thereby reinforce each other.

4.8.6 The only direct evidence we encountered of parent involvement in project activities was a parent in Energy + Action = Change who had helped their child with what they believed to be homework. It seems a reasonable conjecture that helping with homework could motivate more parents to get involved.

4.8.7 Even where projects have no impacts beyond schools, working with schools can still be worthwhile. The CCF projects that have worked with schools have resulted in a range of positive outcomes, from community-building to making school buildings more efficient and changing behaviour within schools. In addition, the project manager of Scotstoun and Kingsway Focus pointed out that it will not be long before some of the children they work with grow up into adults, and instilling good habits into them at this stage can have potential long-term impacts.

4.8.8 A number of the children we met in different schools had made a range of changes to their behaviour, from switching things off through spending less time watching TV to reducing water use.

Motivations for behaviour change in school projects

4.8.9 Children – particularly younger ones – tended to be more motivated by environmental concerns than the adult participants in other projects, and conversely some of the motivations described above for specific behaviours (such as cost saving for reducing energy consumption) were less applicable to them. An interesting point to note about travel behaviours in particular is that independence seemed to be a factor in motivating children to cycle, though this observation is based on limited evidence.

Success factors for school projects

4.8.10 The schools projects have focused on behaviour changes that it is possible for children to make on their own with no input from their parents. The evidence from the interviews suggests that children are more easily enthused when they feel a sense of empowerment. For example, Energy + Action = Change switched to using plug socket monitors, which allowed the participating children to investigate the energy use of items they were personally responsible for, as mains monitors covered the energy use of household members whose behaviour the children could not influence.

4.8.11 In virtually all the schools projects, the children's favourite activities were the practical ones. The Carbon Busters project manager commented that hands-on activities tend to be what children most remember, and they therefore made practical activities a key element in the project. Practical activities can also have the additional benefit of allowing the less academically-minded children to show off their talents or at least putting them on an equal footing with their peers.

4.8.12 Schools projects involving activities run by outsiders coming into the schools were well-received, particularly where that outsider had the right skills and personality to engage the children. A new face in the school can provide a break from the usual and help enthuse the children.

4.8.13 Having the project run by an outsider does, however, potentially run the risk that the school is less likely to take ownership of the project, because the project is seen as external to the school. On the other hand, it takes a great deal of commitment run a project, and in schools with less interest in the environment, an externally-led project may therefore be more effective. For both approaches, getting the teachers – and particularly the head teacher – on board with the project is crucial for success, as demonstrated by the experiences of Carbon Busters.

4.8.14 A number of teachers as well as the project managers of schools projects commented on the importance of project staff having good teaching skills – after all, the schools projects take place in school environments.

4.8.15 Some of the teachers participating in one school-based project had found the project did not meet their expectations, and failed to help them add to their existing environmental activities. In contrast, Scotstoun and Kingsway Focus had built strong relationships with local schools over time by working with them on choosing environmental activities to implement. These examples illustrate that good communications and being clear about expectations on both sides are vital.

> *"If you want to work with schools, you've really got to go there and give a lot of time to people, spend the time with them and listen to what they want to do and see how you can help them, and build it around what they want to do."*
>
> Project manager – Scotstoun and Kingsway Focus

4.8.16 It is also important for projects to bear in mind the time limitations that schools have. The experience of the CCF projects suggests that secondary schools in particular can find it difficult to find the time for extra activities. It makes it much easier for the school to incorporate a project into its timetable if the project is a reflection of something that they cover as part of the curriculum anyway – for example in the way that Energy + Action = Change tied in with the teaching of energy, or the way that Carbon Busters made links across different parts of the curriculum. It can make teachers more likely to sign up to the project if it fulfils part of the curriculum. Having the administrative side of the project dealt with by project staff rather than by teachers also makes participation easier.

4.8.17 Working with primary and secondary schools will also require different approaches in general that are tailored to the age group in question – the project manager of Energy + Action = Change noted that rebellious teenagers are unlikely to be motivated by the same messages as primary school children. Primary schools also offer the advantage of having one teacher responsible for each class, making it easier for cross-curricular project work.

> *"I think it's having a discussion that makes a difference to teenagers.... [You can't say:] Do this, it's a good thing. It's just like saying 'go and eat your greens' – it isn't sufficient for them."*
>
> Project manager – Energy + Action = Change

4.8.18 In addition, the Carbon Busters project manager suggested that, ideally, schools projects should have continuity and involve the whole school, in order to maximise their impacts.

5 CROSS-CUTTING SUCCESS FACTORS

5.1 OVERVIEW

- The review identified a number of cross-cutting factors which influence the success of projects, regardless of the specific topic they are focusing on.
- Good initial planning was crucial to success, including:
    - Learning from other established projects or pilot testing
    - Realistic resource planning (timescales and volunteer recruitment)
    - Clear aims that articulate who the project wants to target, what it wants to achieve, and why the proposed engagement method will work with that audience
- A learning culture and adaptability were identified as key strengths in project delivery. The CCF's approach of funding in rounds created natural breaks for reflection and learning.
- Common weaknesses were a mis-match between ambition and resources, and under-estimating set-up time. Some projects would also have benefited from practical guidance on behaviour change approaches and techniques.
- The staff in successful projects combined a mix of specific knowledge, enthusiasm and people skills to build rapport with participants.
- The recruitment and use of volunteers was effective where volunteers had some say over what they were doing, and where projects recognised they needed to offer enjoyment and fulfilment in return for volunteers' free time.
- Projects mainly engaged participants at the greener end and the middle of the spectrum, making fewer inroads among those uninterested in the environment. However, there was significant scope for behaviour change among those with a moderate interest in the environment, as well as among some of the very interested.
- Face-to-face engagement methods were generally more effective than passive methods, such as direct mailing, although passive methods could also work if used judiciously and with a good understanding of participants' motivations.
- Some projects maximised their reach by working through other groups, workplaces or 'communities of interest'. Key to success was engaging and maintaining relationships with an appropriate 'gatekeeper', creating genuine involvement beyond the gatekeeper, and getting high-level support from within the partner organisation.
- Effective projects led with (often non-environmental) messages which they thought would appeal to their audience – but they were also open about their own environmental/climate change motivations, which was useful in establishing their credibility.
- Being trusted by the local community made participant engagement easier for projects. A high and positive profile, a clear community focus and word-of-mouth (which was most evident in tight-knit communities) helped to create trust.

5.2 INTRODUCTION

5.2.1 The review identified a number of cross-cutting (i.e. applying to all topics covered in Chapter 4) factors that lead to the successful delivery of activities to influence participants' behaviours in a way that reduces carbon emissions.

5.2.2 This chapter covers success factors that relate to:

- how projects are set up and the attributes of project teams;
- working with an audience that has scope for behaviour change;
- specific approaches in project delivery – looking at what works in initial participant recruitment and in particular types of project activities;
- messaging to appeal to motivations; and
- building up a high profile and trust in the local community.

5.2.3 The success factors presented here are not set out in any order of importance, as their relative importance varies between different project types and activities. Rather, they are presented in what would seem to be a logical order for the average project to consider these different issues.

5.3 PROJECT FUNCTION

Project start-up and development

New projects versus projects in existing host organisations

5.3.1 The projects included in this review were a mixture of brand new projects that had grown out of grassroots activity in communities and projects set up by existing, sometimes long-established, organisations. There was no evidence to suggest that either type of project was more or less effective at changing behaviours, but brand new organisations needed longer set-up times, whereas projects with access to the parent organisation's resources and processes were able to 'hit the ground running'.

> *"It's much easier for an existing organisation to run through a programme like this as it has the infrastructure in place."*
>
> Project manager – A Better Way to Work (run through The Bike Station social enterprise)

5.3.2 However, the value of a new project is often in meeting a need which no existing organisation is suited to tackle. One of the solutions that new projects have used to make the set-up process easier for themselves has been to outsource much of the project administration – for example, the project manager of the East Neuk and Landward Energy Network felt this had saved a great deal of time and effort.

5.3.3 In contrast, environmental projects led by existing organisations with no explicit environmental remit may be open to the risk that the organisation's

central aims (e.g. training and employability) are prioritised over the environmental aims of the project. There is evidence from other funds for this outcome[24], but no obvious cases were seen among the 21 CCF projects included in the review. Involvement can in fact have positive knock-on effects on environmental behaviours within the parent organisation – for example, the Three Cs improved pro-environmental behaviour among YMCA staff by introducing an environmental performance grading system in the YMCA building.

Feasibility studies and piloting

5.3.4 Some of the projects, notably FRESCo, Sustainable Solutions for Linlithgow and the Edinburgh Garden Share Scheme, had tested out their ideas through feasibility studies or pilots before starting the project proper. These have been useful exercises, variously demonstrating that the idea behind the project works, identifying tweaks that are needed, or spotting issues that mean fundamental changes are required before the project can work. For example, the FRESCo project was originally going to be an energy supply company, but the feasibility study suggested that this would be difficult to set up in the context of the energy supply system, so the ideas were adjusted and resulted in a business plan to run a pilot project.

5.3.5 While many of the projects that did not include a feasibility study or a pilot were also successful, they were generally those that were able to adapt their approach during delivery. The importance of piloting is highlighted by the experiences of one particular project which put a great deal of effort and resources into delivering a passive intervention at a large scale, which turned out to be less than successful at engaging participants in behaviour change. Piloting and testing the intervention materials with members of the target audience in advance could potentially have identified improvements to be made to the materials or even the intervention approach.

Learning culture in organisations

5.3.6 An organisational learning culture was a common feature of successful projects. This involved project teams being willing to learn, from the experiences of other projects, from CCF training opportunities and external sources, and from experience. Equally important was to then apply this learning to project activities and adapt them in line with new insights. Opportunities for reflection and learning are important throughout the delivery stage, as they can help projects improve their approach, and should be encouraged.

5.3.7 The CCF projects taking part in the review were generally keen to network and learn from the experiences of others, particularly in the early stages. A number of the projects had visited other CCF projects when they first started, in order to take advice from them. However, it was easy for this activity to drop off as projects became busy with the delivery stages.

[24] For example, as noted in the review of Defra's Environmental Action Fund 2005-8: http://archive.defra.gov.uk/corporate/funding/eaf.htm

5.3.8 Some of the projects were set up and run according to a tried and tested model – the Transition Town model was a popular one. Some were also making use of existing materials and tools – sometimes adapting them to their own purposes – or using specialist organisations as advice sources. Project managers generally felt that being able to draw on the experiences of other projects in these ways was beneficial to them.

5.3.9 Although projects had access to training on behaviour change, few seemed to be actively thinking about how behaviour change theory would apply to their activities as they carried them out. Sustainable Solutions for Linlithgow was a notable exception, and the project manager had clearly given consideration to this question. While many projects seemed to have an almost instinctive understanding participants' motivations, barriers and the best means of influencing their behaviour, there were also those who may have benefited from some initial audience research as well as a better understanding of behaviour change theory and techniques: on occasion, project staff appeared to have a sense of the kinds of changes they wanted to achieve, but not of how to get there.

5.3.10 Many project managers had made use of the training and networking opportunities provided by the CCF, and feedback on these events was generally positive. Rather obviously, projects particularly appreciated training events that had direct relevance to their activities – but given the range of projects within the CCF, it may be impossible to provide the variety of training events that would be needed to cover the whole spectrum of projects. Other training events that project managers had found particularly useful were those on topics that applied across the board – such as training on monitoring and evaluation. (See also section 7.5 for more on sharing learning.)

How funding in rounds contributes to learning

5.3.11 Some of the projects taking part in the review had received CCF funding in previous rounds and were running follow-on projects, and many were applying for funding in the following round at the time of our follow-up interviews with project managers.

5.3.12 Among projects that had benefited from previous rounds of funding, there was evidence that they were learning from their experiences and making improvements to their delivery models – Carbon Busters is a key example, and FRESCo and Sustainable Solutions for Linlithgow had used the opportunity to carry out initial feasibility and planning work which then informed their projects in later rounds. The rounds system creates natural break-points for projects to reflect and learn, and the process of filling in new application forms encourages them to consider improvements.

Project team skills

5.3.13 Project staff teams were predominantly small, most in the range of 1-3 staff members, supported in many projects by volunteers.

5.3.14 Project staff members can enthuse participants about behaviour change. The participants we interviewed were overwhelmingly positive about the 21 projects' staff and volunteers. Pulling together some of the most important qualities listed by participants across the projects suggests that the ideal project staff member or volunteer would be:

- Enthusiastic;
- Knowledgeable;
- A good communicator;
- Friendly;
- Helpful;
- Committed;
- Not pushy or judgemental; and
- One who 'walks the talk'.

5.3.15 For project managers, gathering participant feedback can be a useful means of identifying whether the project team has the right characteristics and skills, and this has in fact been utilised by some of the projects – notably the East Neuk and Landward Energy Network which ran a 'customer satisfaction survey' to assess how the team was performing.

5.3.16 There is a careful balancing act between not being considered too pushy or judgemental and being seen to be walking the talk. Participants did not want to feel like the project staff and volunteers were pushing their own environmental ideals – or any other ideals, for that matter – onto them, but they also wanted to feel staff and volunteers were willing to take the same actions themselves, whether it was saving energy, cycling or eating local food.

> *"It's very personal, we're eating our project, we're living our project. It's quite intrusive, it's quite personal – I don't know what that means for skills, but we need to have integrity, we couldn't pop down to McDonalds. We're embodying the project and that's challenging because there's a certain amount of feeling under scrutiny."*
>
> Project manager – Fife Diet

Planning and resourcing

5.3.17 A common theme across many of the projects was that they had not planned in enough staff or time to do everything they wanted to do. In particular, the initial stages of setting up a brand new project, including staff recruitment, often required more time than projects expected, and the same was true of activities that were not a key part of project delivery – such as administration and evaluation (see also Chapter 6 on monitoring and evaluation). To some extent this may simply be the nature of community projects – they are so keen that they will always push the boundaries of their resources. However, there was also a suggestion from some projects that they had felt they should not ask for 'too much' funding in their applications so they budgeted for the minimum necessary staff time.

5.3.18 In some cases, projects encountered difficulties as a result of external factors impacting on their timescales. Issues such as those to do with planning permission or deadlines for spending funding from other sources could significantly impact on project plans. Where frugal planning or external factors led projects to fall behind on their original timetable, the project managers appreciated the flexibility of KSB and the CCF to allow them to revise their timetables and budgets.

Making effective use of volunteers

5.3.19 Some projects were heavily dependent on being able to recruit volunteers to deliver their activities. Bottom-up' projects which have been more community-led, or at least community-steered, appear to have been more successful at recruiting volunteers, simply because the volunteers get to have a say in what they do for the project – this has worked particularly well on multi-strand projects, such as Sustainable Solutions for Linlithgow, Dunbar 2025 and Transition Town Forres, where there is more scope for volunteers to choose the activities they want to be involved in. Where projects have developed their delivery plans top-down and defined volunteer roles, there appears to have been less interest among the local community in volunteering. In one or two cases, lack of interest in volunteering among the local community almost jeopardised the project.

5.3.20 It is important for project managers to be aware of what motivates volunteers, as their roles need to be interesting enough for them to be willing to carry them out during their free time. On some projects, volunteers found the tasks assigned to them unexciting – in one case, a volunteer felt like he was being asked to do the project's "dirty work". The review evidence suggests that volunteer motivations tend to be more altruistic than participant motivations (see sections 4.3-4.6 for further discussion of these) – they are often interested in helping the environment, the community, or the particular cause of the project. Many are also keen to meet new people, to learn new skills and gain experience (for example in preparation for employment). Giving volunteers tasks that they consider both interesting and worthwhile is important – and this becomes easier if volunteers have an input into project activities and can suggest activities that they actually want to run.

5.3.21 It may be worthwhile project managers developing contingency plans if they are unsure of their ability to recruit enough volunteers. Some of the projects found themselves having to replace voluntary roles with paid ones. In contrast, Switched On to Switching Off thought laterally and identified an alternative source of volunteers (university students) who were likely to be interested in the incentive the project was able to offer (learning a new skill through volunteering).

5.4 AUDIENCE

5.4.1 The CCF projects appear to have mainly worked with participants who are 'moderately interested' in the environment. The results of the most recent

Scottish Environmental Attitudes and Behaviours Survey[25] suggest that these 'moderately interested' make up a fairly large proportion of the population and have potentially significant scope for changing their behaviour. The CCF projects' experiences showed that there is indeed a great deal more that they can do.

5.4.2 Most of the 21 CCF projects taking part in the review had not set out to target people with a particular level of interest in the environment, but instead described themselves as 'open to all'. Nevertheless, projects tended to appeal to the more environmentally-minded end and the middle of the spectrum, reaching very few of those uninterested in environmental issues. Many projects have ensured relatively broad appeal, beyond those with a strong environmental interest, by incorporating non-environmental messages in their communications.

5.4.3 A number of the project managers had considered whether it was worthwhile trying to influence environmental attitudes among the uninterested. There was no consensus on this question, but it is worth noting that none of the projects were actively seeking to do this. This may be because they had their hands full with the very or moderately interested, and did not need to seek out additional, less interested participants.

> *"There's a percentage of people who are just not motivated by [the environment], and it would drain our energies talking to them. We're happy to talk to them, but we won't proactively go out and convince them."*
>
> Project manager – Sustainable Solutions for Linlithgow

5.4.4 Where projects had come across people with little or no interest in the environment and an almost confrontational attitude about it, their techniques for dealing with this included ignoring the attempted confrontation and steering the discussion in a different direction. Projects appeared to feel that engaging in an argument and trying to change attitudes would have minimal benefit – in the case of Sustainable Solutions for Linlithgow, to the extent that the project team had a policy of not responding to anti-climate letters in the local paper. Instead, projects generally felt that trying to drive behaviour change from a different angle would be more beneficial.

> *"I don't think I've changed anyone's attitude about climate change where there have been people who definitely don't believe in it. If*

[25] Ipsos MORI for the Scottish Government (2009) Scottish Environmental Attitudes and Behaviours Survey 2008. This survey classified 14% of the population as 'deep greens', most likely to be engaged with issues around climate change and most proactive in adopting new behaviours, 14% as 'light greens', interested in adopting new behaviours but more passive, and 30% as 'shallow greens', who may not be convinced of the need to take more than minimal action. While the 'deep greens' were more likely than average to carry out a number of pro-environmental behaviours (including many promoted by the CCF projects), these behaviours were by no means universal among this group, and the 'light greens' and 'shallow greens' were often no more likely than average to carry out these behaviours.

people say they don't believe in it I'll push the activity in another way."

Project manager – Carbon Reduction Shetland

5.4.5 Attracting a larger proportion of those with an existing interest in environmental issues can have its benefits, even if there is little scope for behaviour change. First, if they are committed enough they may go on to form the core group of project staff and volunteers. Second, initial activity among those with an existing interest in the behaviours the project promotes can also help to normalise those behaviours by increasing their visibility.

"Our experience is that people into cycling already can encourage other people to cycle. Getting pestered by an enthusiastic person helps a lot."

Project manager – A Better Way to Work

5.5 ENGAGEMENT PROCESSES

5.5.1 This section considers the factors that have been key to initial participant recruitment in the early stages of projects, and the factors that have made particular engagement approaches – door-stepping and cold-calling, events, working through groups, written materials and advice shops – work effectively. By ensuring that they are implementing these approaches effectively, projects can maximise their chances of engaging participants, which is the first step on the way to behaviour change.

Initial participant recruitment

5.5.2 Projects have used a range of methods to make initial contact with their participants, from doorstepping through events to cold-calling. Some have used more passive methods such as advertising, leafleting, the local media and the web, and some have made use of their pre-existing contacts.

5.5.3 In general, recruitment methods involving personal contact were more successful than passive methods. Passive methods only seem to grab participants' attention if they appeal to an existing interest that is strong enough to prompt them to make contact with the project. For example, the Edinburgh Garden Share Scheme used passive methods such as leaflets to good effect – the project team was aware of a demand for food growing spaces in Edinburgh, and both active and passive methods worked in recruiting participants to the project.

5.5.4 Some of the projects have accessed their audiences through 'gatekeepers' in organisations, where the model works by cascading engagement through existing groups or organisations. These include projects working with businesses, schools and community groups – A Better Way to Work, Carbon Busters and Energy + Action = Change, and Going Carbon Neutral Stirling, respectively. In each case, the project needs to make initial contact with one person in order to get access to a larger, often captive audience. It is important in these instances to motivate the 'gatekeeper' to provide the

project with access to the group with a message that appeals to them. Finding the right 'gatekeeper' who is able to provide access to a group is key.

Engagement approaches

Doorstepping and cold-calling

5.5.5 Doorstepping and cold-calling over the phone tend to be disliked by project volunteers and staff. This is not surprising, given the projects' experiences with potential participants who are suspicious or simply uninterested – this can leave staff and volunteers feeling at best disheartened and at worst unwilling to continue.

> *"You don't even get a courteous response [in some parts of town]. You can see them watching the telly and they won't even come to the door. There's a kind of cold chill in some areas and I couldn't put my finger on why that is. And yet there's some areas and streets where people are a lot more chatty, even if they say no they'll at least come to the door and talk to you."*
>
> Project manager – Sustainable Solutions for Linlithgow

5.5.6 Doorsteppers have generally been better received where the project is well-known locally, either for some of their other activities – such as Toryglen Transitions – or as a trusted organisation – such as Low Carbon Raploch for its association with the Raploch Community Partnership[26]. Also, participants seemed more receptive to doorsteppers where the project was being run by people living very locally – in the case of Switched On to Switching Off, literally living on the same street – and the residents knew at least some of the people doing the doorstepping or their project colleagues. The projects' experiences have also shown that leafleting can be used to 'warm people up' before doorstepping.

5.5.7 With doorstepping, there are logistics for the project manager to consider – the size and housing density of the target area, and how this compares to the project's resources to cover its target area.

5.5.8 All of the projects making cold-call telephone calls were targeting either businesses or community groups. They found it important to give a quick, short explanation of the call's purpose, because they tended to go through to people used to fielding sales calls, who would try to end the call quickly. As already noted, it is also important to make contact with the right person who has the authority to sign up to the project. In addition, Going Carbon Neutral Stirling also found that, when cold-calling community groups, people seemed more willing to talk to the project if asked for by their name and *position within the group*, rather than by name only – they seemed more willing to speak to the project as a representative of a community group than as an individual.

[26] This was similarly evident in NESTA's Big Green Challenge where Shropshire based Household Energy Service used local volunteer surveyors to contact households to carry out energy surveys.

Events

5.5.9 Events focusing on overtly 'green' topics – such as environmental film showings – tend to attract only those with a strong existing interest in environmental issues. For example, a number of the organisations running CCF projects were formed when one of these environmental film evenings brought together a group of like-minded people – this is, for example, how Linlithgow Climate Challenge and Transition Town Forres formed. These types of events could therefore provide good opportunities for identifying members of the community that have sufficient interest in the environment to form the project's core group of staff and volunteers, but should not be expected to reach a broad base of potential participants.

5.5.10 Events with wider appeal beyond an environmental angle have been successful at engaging a broader base of participants. These include events such as harvest festivals and energy generation showcases that seem to have a 'gimmicky' appeal to participants.

5.5.11 Some projects seemed to view events as outcomes in their own right, and given the time and resources required to organise an event it is not surprising that projects see them as major achievements. However, some of the project managers were more acutely aware of the apparently minimal impacts of events on behaviour change. The value of events is in fact likely to lie elsewhere, and a number of projects have successfully used events to raise the project's profile, recruit new participants and spark their interest in project activities, build community, and "remind" existing participants that the project is still ongoing. Being clear about the purpose of events and how they sit in the contact of other project elements can help maximise the contribution that events make to projects' wider aims.

Working with groups

5.5.12 Some of the CCF projects have worked with established groups that can be considered 'communities' in themselves – schools (see section 4.8 for more on school-based projects), businesses and community groups. The CCF projects have found working with certain types of groups more effective than with others. For example:

- Going Carbon Neutral Stirling found that groups with regular meetings were easier to engage in longer-term behaviour change, as the regularity allowed for repeat contact. Groups of 15-20 people maximum, with a regular meeting pattern and relatively sedentary and social activities worked best.
- They also found that some groups are too transient to work with effectively (e.g. mother and toddler groups) and the nature of the social activity in some is not conducive to discussions (working with sports clubs was difficult, for example, as participants were reluctant to pause for a discussion between a sporting match and showering and changing).

- A Better Way to Work found that there was more scope for behaviour change among employees of out-of-town than city centre businesses, because the employees of these businesses were more likely to drive.

5.5.13 It is also important for projects to be aware that when they reach participants via a 'gatekeeper' to a group, the participants may be less than enthusiastic about working with the project. They did not choose to get involved in the project – rather, the 'gatekeeper' made that choice for them – so the project may need to work harder to engage these less interested participants. The extent to which the 'gatekeeper' is representative of the rest of the group determines whether the project needs to change its approach and messaging once moving from recruiting the 'gatekeeper' to engaging with the wider audience.

5.5.14 Neither the gatekeeper nor the group leader may necessarily be the right person within the group to then lead the project activities. Going Carbon Neutral Stirling found that identifying a person within the group who has a good relationship with the rest of the group and engaging them in a lead role was most effective. Matching that lead person with a project team member who was able to provide the right level of support, depending on how proactive the group was, was another key success factor.

5.5.15 In addition, when working with groups, buy-in from the right people is also essential. This often means those at the top – for example, A Better Way to Work found that if the CEO of a company cycled to work, this made cycling more aspirational among employees, and the Carbon Busters project manager commented that having an engaged head teacher increased the project's chances of success in a school.

Written materials

5.5.16 While passive, written materials tend to be less successful at the initial recruitment of participants (with the exception of the most interested), they can, if used judiciously, work well as an element of the project either alongside personal engagement or once participants have committed to taking part in the project.

5.5.17 Some projects have published regular newsletters to keep their participants up to date with the project or to encourage behaviour change. Newsletters seem to work well where project activities are varied and there are often new activities or events to inform participants about – as is the case with Sustainable Solutions for Linlithgow, for example – or where the targeted behaviour is habitual and participants may need reminders about it – as with the Fife Diet. Some topics may lend themselves better to newsletters in that participants find them more engaging to read about – the Fife Diet newsletter was well-received by participants, some of whom had made behaviour changes based on its content, but another project's energy efficiency newsletter appeared to have had more limited effects on behaviour.

5.5.18 Newsletters can also be useful in building a sense of community among project participants, particularly where the project is working with a community

of interest within a wide geographical area where participants do not meet frequently – as has been the case with the Fife Diet and the Edinburgh Garden Share Scheme.

5.5.19 Some project managers commented on the importance of professional-looking project materials, and participants tended to either echo or otherwise respond positively to these. Some of the smallest projects' materials had a less professional appearance, but because the participants were aware of the project's nature and scale they did not expect to see professional materials.

5.5.20 A final point to make about written materials is that, bearing in mind participants are reading project materials in their spare time, they need to be accessible and not too heavy reading.

Advice shops

5.5.21 Some of the projects have set up advice shops in unused local premises. These have been particularly popular among projects providing a service, such as energy efficiency advice: they essentially provide a base for the project where participants can access that service. Successful advice shops have been publicised to make local residents aware of their services; located at visible or at least easily accessible sites; and had proactive staff. For example, the staff at Sustainable Solutions for Linlithgow's advice shop would stand outside and talk to passers-by, while the staff at another project's advice shop stayed inside, despite hearing local residents wonder what the shop was about as they walked past.

5.5.22 Running advice shops can be time-consuming. Where volunteers are available, they can take some of the burden off project staff – this approach has been used by, for example, Sustainable Solutions for Linlithgow. The project manager noted that it has been vital to have confident volunteers who are aware of the extent and limitations of their knowledge and skills. Advice shops can be a valuable use of resources if projects need a public 'face' and a point of contact with participants. On the other hand, if projects do not feel that it is a good use of their resources (or if they do not have the resources) to set up an advice shop, alternatives seen among the CCF projects include Carbon Reduction Shetland's scheduling one-to-one appointments with participants and Transition Town Forres' Open Days.

5.6 MESSAGING AND HOOKS

5.6.1 The 21 projects taking part in the review had mainly used messages focusing on the personal benefits of behaviour change, steering away from strong environmental messages which they suspected could be off-putting to participants. The evidence does indeed suggest that this gives projects broader appeal beyond the greenest segments of society and allows them to reach and engage a larger number of people.

> *"[We have] a very person-centred approach. We're not going to force anything down anyone's necks. We let them come to their own decisions in their own time, and just have a very gentle way*

of putting across an environmental message rather than saying 'you must all think like this'. But we consistently say 'this is what we think, you can make up your own mind'. It needs to look like it's not just an environmental project, it needs to be so much more than that."

Project manager – Toryglen Transitions

5.6.2 The experiences of Sustainable Solutions for Linlithgow illustrate that simply the connotations of the organisation's name (Linlithgow Climate Challenge) were enough to do make participants feel the project was 'not for them' – and the organisation has since been renamed Transition Linlithgow.

"When [project staff/volunteers] go door-knocking, they almost feel guilty about saying where they're from, because they can see people's faces change when they say they're from the Climate Challenge – and it's only by putting your foot in the door and holding it open and saying 'we're here to help you with your energy bills' and they go 'oh, ok, you're that group'."

Project manager – Sustainable Solutions for Linlithgow

5.6.3 Most projects did, however, incorporate some environmental messaging and flag the environmental benefits of behaviour change with participants. Project managers – particularly those working on multi-strand projects such as Carbon Reduction Shetland and Going Carbon Neutral Stirling – felt it was important to highlight the project's environmental aims, so that participants understood why the project was supporting them to change and did not feel suspicious.

"[I]f you're not calling a spade a spade, the public will work it out and you will lose their trust."

Project manager – Going Carbon Neutral Stirling

5.6.4 We could also speculate that the use of environmental messages might go some way towards reducing the risk of rebound effects[27] occurring. Although there is no evidence either way from the review, this may be an interesting area for further research in future.

5.7 PROFILE AND TRUST

5.7.1 A number of the CCF projects had successfully built themselves a high and positive profile in the local area they were working in, as a locally recognised authority either on a specific topic or on environmental issues more broadly, and as an entity with the community's interests at heart. Having a high and positive local profile creates trust among participants – participants feel the project has integrity and is 'on their side' – which makes it easier for projects to continue engaging both new and existing participants.

[27] For the purposes of this review, rebound effects were defined as non-environmental behaviours that participants took up after taking up a pro-environmental behaviour, the effects of which fully or in part counteracted the environmental benefits of the original behaviour. See section 2.6 for further discussion on rebound effects.

> *"People get in touch with me for anything environmental, they'll assume it's Carbon Reduction Shetland. … With the Home Insulation Scheme people have phoned me up to check if it's ok beforehand. 'Is it too good to be true'?"*
>
> Project manager – Carbon Reduction Shetland

5.7.2 In contrast, if projects are associated entities that the local community distrusts, this can taint people's perception of the project, making it more difficult for the project to engage participants. One example from the CCF was a project that received additional funding through a local wind farm, which the local residents felt strong antipathy towards. This association coloured the residents' perceptions of the project and it was not perceived to be 'on the side of the community' – one of the participants even stated that part of the purpose of the project was to "compensate" the community for the wind farm.

Means of building profile

5.7.3 Projects that had successfully built themselves a high local profile had mostly achieved this through two key factors: visibility and word of mouth (which was also important in building trust). One example of a highly visible project is Toryglen Transitions, which builds community gardens in public places. Some of the projects had also successfully increased their visibility locally by seeking out media coverage.

> *"You talk about anything [to the media] really – first of all it was 'I'm here, I've been appointed, here's my photo, don't I look great in front of a map of East Neuk', and then it was 'the energy champions have been appointed, here they are, here's them sitting down at Anstruther harbour'... just every time anything happens, if somebody sneezes, we just write a quick thing and send it off."*
>
> Project manager – East Neuk and Landward Energy Network

5.7.4 Word of mouth is worth considering in a little more detail, as it, in particular, is key to building trust as well as profile. Word of mouth appears most likely to take off in relatively small and close-knit geographical communities – for example, it seemed to be happening in many of the communities that the East Neuk and Landward Energy Network was working in. In addition, different topics may be considered more or less conversation-worthy by participants – for example, talking about sustainable food purchasing was considered 'odd' by many of the participants in one project.

5.7.5 Word of mouth is, however, notoriously difficult to harness, and can be particularly slow to spread when a project is first starting out. Some projects had found ways of encouraging participants to spread the word about them – either by simply asking them to, as the East Neuk and Landward Energy Network champions were doing, or by providing incentives, as the Fife Diet had done in the form of a free recipe book for anyone signing up a friend as part of a membership recruitment drive.

5.7.6 While word of mouth is key to building trust as well as profile, it also has its risks if the project does not live up to participants' expectations and they spread negative publicity. In one case, for example (referred to above in 5.7.2), opinion leaders in the community refused to get involved in a project because of its association with a local wind farm, and this made other members of the community reluctant to get involved. In general, projects tend to be very aware of the power of word of mouth.

> *"If your organisation is mentioned in a good way, it goes round quickly, if it's mentioned in a bad way, it goes round even more quickly."*
>
> Champion – East Neuk and Landward Energy Network

6 MONITORING AND EVALUATION

6.1 OVERVIEW

- Project mangers generally had a good understanding of the purpose of monitoring and evaluation but practice was variable.
- Evaluation was often not planned into work programmes (which is a common weakness in community sector programmes, not only in the CCF).
- Perhaps understandably, and especially where projects have few resources, project teams' enthusiasm for getting people engaged may be prioritised ahead of evaluation.
- Some projects had attempted highly over-specified evaluations which they regretted; other projects appeared to have done little evaluation, which some are now trying to address. Most projects had done some monitoring and evaluation.
- The most effective evaluation approaches balanced **robustness** and **simplicity**, including:
    - Simple recording systems for the number of energy efficiency measures adopted as a result of the project (which could then be used as the basis for indicative estimates of CO_2 reduction).
    - Read-outs from energy monitors given out to participants
    - Area-based energy consumption data (though it was difficult to obtain)
    - Participant surveys – with projects emphasising a need for short questionnaires
    - Recruiting a volunteer sub-sample who are willing to take part in more intensive monitoring (accepting that this is unlikely to be a representative sample)
- Projects frequently commented on the risk that evaluation deters participant engagement and eats up project resources, and that evaluation demands on participants need to be minimal.
- In this respect, some projects had experienced problems with carbon footprints (which need longer surveys to provide enough data) and participant diaries (which need voluntary and sustained interest from participants).
- A few projects had used external evaluators, with mixed results. A key lesson was that projects need to work closely with the evaluator to ensure the results will be useful to the project and not over-specified.
- The CCF Low Carbon Route Maps were a clear success (although a few projects seemed not to know about them). They provided projects with a simple approach that enabled them to produce 'good enough' data for their own, and the funders', purposes.
- Evaluation support offered through the CCF team was also valued by those who used it.
- Our own observation is that there is still a gap in robust methods for measuring the carbon impact of behavioural change (as opposed to estimating from installed measures).

6.2 INTRODUCTION

6.2.1 The CCF adopted a relatively light-touch approach to monitoring and evaluation, asking for short quarterly reports and an end of funding evaluation report. Evaluation support was made available to projects – notably the CCF Low Carbon Route Maps (which set out a rough-and-ready approach to calculating carbon emission reductions achieved) and access to training and one-to-one evaluation advice.

6.2.2 Features of successful monitoring and evaluation approaches were:

- Allocation of time and resources for evaluation in project plans;
- Evaluation approaches that required minimal participant input;
- Balance between robust data and ease of data collection – the Low Carbon Route Maps struck a good balance; and
- Preparation of a clear evaluation plan at the start – evaluation support was extremely useful to projects in this respect.

6.3 DISCUSSION

Resourcing for monitoring and evaluation

6.3.1 The managers of the 21 projects taking part in the review demonstrated a good understanding of the purposes of evaluation, including the need to demonstrate impacts and account to the funder, and a desire to use evaluation as a learning tool to help improve the effectiveness of their delivery models. However, the quality of evaluation activities in practice was variable.

6.3.2 It was relatively rare for project managers to have specifically allocated time and funds for monitoring and evaluation. As already noted, (section 5.3.17), community projects are naturally inclined to work at full capacity, limiting the time and attention available for areas that are not immediately crucial to project delivery – such as evaluation. This may be further exacerbated by project staff finding delivery more interesting than evaluative activities.

6.3.3 If monitoring and evaluation activities are not properly planned into the project, there is a risk that only ad hoc data is gathered, resulting in a poor quality evaluation. Alternatively, attempting to gather robust data without sufficient resources can detract from project delivery.

Approaches to monitoring and evaluation

6.3.4 The projects' approaches to monitoring and evaluation were very varied. At one extreme, some had developed detailed plans for evaluating virtually every aspect of the project and were using specialist analytical techniques, while at the other extreme some had "not given it much thought yet". Most fell into the middle ground, having developed a plan for monitoring and evaluation and carrying out some data collection. Some had struck a better balance than

others between robustness of data, ease of data collection from the project's perspective, and unobtrusiveness from the participants' perspective.

6.3.5 Successful evaluation approaches on energy projects included:

- Counting the number of installations of different types of insulation, other hard measures and renewable energy, and using standard conversion factors to calculate carbon savings (e.g. East Neuk and Landward Energy Network); and
- Downloading data from energy monitors – although seasonality of energy use is a confounding factor, short-term data can demonstrate reductions in energy use (e.g. Carbon Reduction Shetland).

6.3.6 A less successful approach was to ask participants to keep a record of their energy behaviours, for example through diaries – there was little evidence of participants remembering to do this.

6.3.7 Using actual energy consumption data can provide an accurate picture of project impacts, but can be very difficult to come by. One project that had successfully used this approach was Sustainable Solutions for Linlithgow, which had had managed to obtain year-on-year energy consumption data for the whole town. However, there was a significant time lag in this becoming available. Other projects that had tried to gain access to such data at the household level had had little success in doing so.

6.3.8 Successful evaluation approaches on transport projects included:

- Recording miles cycled during a cycle challenge (A Better Way to Work); and
- Short behaviour surveys (Active Leith) – long questionnaires are more likely to suffer from low completion rates.

6.3.9 Despite placing the onus on participants to record data, the cycle challenge yielded reasonably robust data. Reasons for this are likely to include the incentive of a prize for the challenge winner, as well as the fact that cycling is a behaviour that cyclists tend to be proud of – so they may be more willing to put some effort into keeping a record of their behaviour (in comparison to, for example, the average householder when it comes to everyday energy behaviours).

6.3.10 In addition, travel behaviour monitoring needs to be carried out at intervals during the year in order to identify impacts of seasonality.

6.3.11 Successful evaluation approaches on food projects included:

- Recording participant numbers, plot numbers and plot sizes on growing projects (compatible with the Low Carbon Route Maps); and
- Recruiting a group of research volunteers from among participants to complete detailed food purchasing behaviour surveys (Fife Diet).

6.3.12 A potential issue with the research volunteer approach is that they are likely to be the keenest members, they may make the largest changes (creating bias in the data), but for the same reason they are also likely to be most willing to complete surveys. Provided the limitations of the data obtained are acknowledged, as the Fife Diet have done, this seems a reasonably balanced evaluation approach.

6.3.13 The use of diaries on food growing projects appeared to be less successful, as none of the interviewees reported actively using them. Similarly to cycling, food growing is a behaviour that participants tend to be proud of, and there may be scope for gathering more detailed data through diaries – perhaps recruiting the keenest growers (similarly to the Fife Diet's research volunteer approach) to keep a diary could help to increase their use.

6.3.14 Successful evaluation approaches of waste activities included:

- Recording food waste volumes (e.g. from kitchen caddies) – notably done by Carbon Busters; and
- Counting numbers of plastic bags passing through reuse points (done by Carbon Reduction Shetland during the pilot scheme).

6.3.15 Some of the projects running a range of activities were carrying out carbon footprint (or similar) surveys which aimed to give an overview of participants' environmental impacts in a range of areas. These kinds of surveys tend to be relatively long, and participants who have an interested in the environment are more likely than others to be willing to take part. In the case of Toryglen Transitions, however, where the project had built up a rapport with the local community (see also section 5.7 on building up a high profile), the survey seemed to successfully reach beyond the 'already interested'.

6.3.16 A final point that applies to all projects regardless of their subject area is that it is important, if requesting input from participant into monitoring and evaluation activities, to explain to participants why they are being asked for this information. In a small number of cases, this had been unclear to participants, who had become confused at best and suspicious at worst.

Balancing evaluation needs

6.3.17 It can be difficult to strike a balance between too much and too little evaluation, and neither extreme results in positive outcomes – an overly intensive evaluation is at best a poor use of a project's resources and at worst off-putting to participants, while too lax an evaluation fails to provide any robust evidence of a project's impact.

6.3.18 Many of the project managers we spoke to recognised the trade-offs, and only some – key examples including the Edinburgh Garden Share Scheme, East Neuk and Landward Energy Network and Sustainable Solutions for Linlithgow – had found a happy medium that they were comfortable with. Others at the further extremes (too little or too much evaluation) seemed to be at risk of veering too far towards the other extreme in future as a result of their initial experiences.

6.3.19 One possible approach is for projects to work with external evaluators. While this may be a more costly approach than in-house evaluation, in theory it could produce better quality data by virtue of being professionally done (as well as freeing up time for project delivery). In practice, however, some of the projects that had used external evaluators were disappointed with the outcomes – one, for example, felt that the evaluator's long questionnaires had put people off taking part in the project, and another found the evaluator's data was not detailed enough for the project's purposes. Projects need to work closely with their evaluators to ensure that the evaluation meets their needs – as, for example, the Fife Diet did with their carbon consultant.

6.3.20 The Low Carbon Route Maps were well received by most of those projects that were aware of them, though there was one comment about the food Route Map being too simplistic. In general, though, the Route Maps would appear to help strike a balance between obtaining robust data and not detracting from project delivery. They also appealed to those who struggled with evaluation and seemed to want to be told how to do it. Not all project managers were aware of the Route Maps, however, and increasing their awareness of these could be beneficial.

6.3.21 All project managers that had received evaluation support via the CCF, either in the form of attending workshops or receiving personalised one-to-one assistance, were appreciative of this support. Evaluation support seems most beneficial in the early stages of projects, when it can feed into evaluation plans. One-to-one support is particularly helpful in that it allows projects to resolve questions that are highly specific to their activities and delivery approach.

7 POTENTIAL FOR SCALING AND DIFFUSION OF CCF PROJECT APPROACHES

7.1 OVERVIEW

- Almost all of the projects in the review plan to continue or expand, either in scale or scope. Nearly all plan to do this with grant funding.
- A few have begun to develop income generating activities but they are in a minority and none is currently headed towards complete self-financing.
- Projects most likely to be thinking of scaling up were those providing a service and working with or through other groups, organisations or businesses.
- Some are concerned they would lose their sense of community and stretch resources too thinly if they scaled-up, or would lose an affiliation with a local identity if they expanded beyond the immediate geographical area.
- Projects that had successfully run at a moderately large scale had managed to retain the collective sense of community by ensuring that members of new communities were properly involved and empowered – and that the main project could 'let go' to some extent.
- Projects were keen for others to learn about their ideas and approaches but so far there were only limited cases where projects were actively promoting the diffusion of learning.
- Key observations from projects about shared learning, diffusion and replication were:
    - Some had found it useful to visit similar projects in Scotland before setting up their own project;
    - A few were adapting 'branded' models tried elsewhere (notably 'Transition');
    - Projects liked the networking events organised by the CCF, with a preference for topic specific rather than general meetings; and
    - Sharing through meeting and talking is generally preferred to written materials.

7.2 INTRODUCTION

7.2.1 This chapter considers some of the possible future pathways for CCF-funded projects. The projects have built up momentum and developed successful delivery models, and the extent to which their activities can be sustained and diffused are key factors in determining the scope and scale of the legacy of the CCF as a whole.

7.2.2 The majority of the 21 projects taking part in the review had plans to expand their activities, either in scale (for example, covering additional sub-communities) or scope (for example, adding new activities). Whether this is a natural progression for community projects, or whether it was prompted by the CCF funding criteria (one of which is to do something additional to previous activity) is unclear. The projects' experiences on the long-term nature of behaviour change, and the difficulty of influencing values and lifestyles,

suggest that projects feel there is still much more work to be done. Only a very small number of projects were not planning to continue at all, while a minority also seemed to be content continuing their existing activities with no significant changes.

7.3 POTENTIAL FOR SELF-FUNDING

7.3.1 A strong legacy for the community – in terms of impacts achieved and momentum built during the course of the projects being maintained into the future – is one of the key criteria against which CCF funding applications are assessed. Although the CCF has not supported revenue-raising activities, the question of longer-term financial sustainability is one that community projects have a stake in, given the likelihood of grant funding being in more limited supply in future. Being able to supplement grant funding with other income could be one potential route to creating a lasting presence in the community.

7.3.2 Relatively few of the 21 projects taking part in the review had firm plans in place to become financially self-sustaining, at least in the short to medium term. Most were applying for more funding, either from the CCF or from other sources. Many felt that their activities would not be sustainable without funding support, but that these activities had value and were worth continuing and funding.

7.3.3 There were a small number of examples where projects were thinking about ways of becoming more self-funding or fully fledged social enterprises. Sustainable Solutions for Linlithgow, for example, had set up a community interest company to allow income from renewable energy to be fed back into the core organisation. The project manager of FRESCo raised the issue of seed funding needed for income-generating projects: CCF could only help them as far as a feasibility study, but beyond that a different funding mechanism would be needed.

7.3.4 Becoming self-financing was generally seen as something that would require time, though there were a small number of exceptions, notably Assloss Walled Garden, which aimed to become self-funding within the year. In addition, Energy + Action = Change and the Three Cs had established activities which could be run by the lead organisations in future years without further funding.

7.4 POTENTIAL FOR SCALING UP

7.4.1 The projects with the widest reach had actively engaged at most a few thousand individuals within their communities. By scaling up their activities – either by expanding their reach or intensifying their activities in a particular area – community projects have the potential to influence larger numbers of people, resulting in more widespread behaviour change and larger carbon savings. There was limited evidence of this happening organically (at least within the timescales of the review), and project managers identified the need for more staff and additional funding as requirements for scaling up.

7.4.2 As part of the follow-up interviews, we asked project managers whether they felt their projects could be scaled up, but project manager views were divided. Those who were against the idea felt that the local nature of the project made for a more personal approach and created trust among participants, thus enabling the project to engage participants in more depth.

> *"If you spread out too widely, your real time engaging with people is going to be much reduced, and it will be much more of a token effort if you're engaging with people if you don't want to get to know them – and I think that is the great value of working in a reasonably local capacity, that you can actually engage them in a more meaningful and deep way."*
>
> Project manager – Scotstoun and Kingsway Focus

7.4.3 Project managers most strongly against the idea of scaling up were those with a strong connection to a particular geographical locality. They felt that this sense of place made these projects more meaningful to participants. The Fife Diet project manager put this into words by suggesting that the local scale of the project appealed to participants' sense of identity – a sense which would be weaker with respect to a larger-scale project.

7.4.4 Projects which were most enthusiastic about the idea of scaling up were those that were effectively delivering a service to their participants (with the exception of those service-delivery projects that felt they were already covering a large geographical area) – A Better Way to Work, Carbon Busters, Energy + Action = Change and Going Carbon Neutral Stirling. These projects' delivery models also involve working with existing groups, such as workplaces or schools – in a sense, communities in themselves – effectively replicating the project in several communities. The projects work with a representative of each community – such as a champion (A Better Way to Work) or an "activator" (Going Carbon Neutral Stirling) – who engages other community members. Carbon Busters is keen to move towards this model and provide teacher training to enable teachers to deliver projects in school communities in place of project staff. Involving members of the community in project delivery gives the community ownership over the project, ensuring that the community focus is not lost, even where the project itself is working on a larger scale. For this to work, the lead organisation must be willing to relinquish a degree of control and let the community make the project its own.

7.5 POTENTIAL FOR REPLICATION

7.5.1 By replicating what other projects have done – not necessarily by copying their set-up and delivery precisely, but by applying what they have learned through their experiences – new projects can improve their chances of success (a learning culture was identified as a success factor in this review – see from paragraph 5.3.6). Some of the projects taking part in the review were already being replicated elsewhere, while some were themselves replica projects. For example, the Fife Diet had inspired the Cornish Diet, while CCF projects following the Transition Town model were effectively replicating elements of what had already been done in other Transition Towns.

7.5.2 As part of the follow-up interviews, we asked project managers whether they felt their projects offered scope for replication. Virtually all project managers felt that they had learned much that would be useful to new projects, but many highlighted the need to tweak the approach to suit different communities – emphasising the need to learn from rather than copy other projects. This suggests that peer support between projects using similar approaches could potentially be useful[28].

> *"I wouldn't want to do big things, I want to do lots of little things, but have frameworks in place that allow those local groups to not have to reinvent the wheel, so they can go very quickly, they can twin, they can partner, they can connect with other groups [and learn from them] because there's no common answer."*
>
> Project manager – Sustainable Solutions for Linlithgow

7.5.3 While many of the useful lessons from CCF projects have been drawn together in this report, our interviews with the project managers suggested that using reports to diffuse learning is likely to be ineffective. Project managers preferred more direct means of learning from others, and first-hand sharing of experiences emerged as the most popular: visiting and getting advice from other projects had been a key means of learning in the early stages of the 21 projects we spoke to (see also paragraph 5.3.7), and in the follow-up interviews it was clear that these projects were also keen to share their experiences with new projects.

7.5.4 Project managers appreciated the opportunities provided through CCF for them to network with, meet and learn from other CCF projects. They generally felt that meetings focused on a specific topic were the most productive in terms of learning (so they could choose to attend meetings on the most relevant topics they wished to learn about), while events 'showcasing' a range of projects were considered a less efficient use of their time, as they stood to learn less from the specifics of any one project. The project managers also commented on the inspiration to be drawn from events located in the communities where other projects can see their work first hand.

[28] Examples from other programmes and initiatives around the UK include peer review between projects funded in Defra's Greener Living Fund (current), peer mentoring and involvement of projects in writing 'diffusion packs' following NESTA's Big Green Challenge (2010), and innovative proposals for peer mentoring and networking in Welsh Assembly Government's sustainable living programme (in development).

8 ROLE OF COMMUNITIES

8.1 OVERVIEW

- Drawing from the evidence from the 21 projects reviewed, this chapter provides a more interpretative view on the role that communities might play within the wider context of climate change policy.
- Projects have so far had limited impact on values and lifestyles, but many see this as a long-term goal.
- Some project activities may provide more scope than others to engage participants in thinking about about sustainable living more broadly. The projects' experiences suggest that food behaviours may be one such 'gateway'.
- Community projects can play a key role in supporting early adopters of sustainable behaviours that are outside current social norms. In the longer term, these early adopters may set an example for others to follow.
- It may be easier to influence social norms in small, local and tightly defined communities where there is a shared identity and strong social bonds.
- Most of the participants involved preferred a passive rather than active role in the projects.
- Some projects aimed to build community capacity and willingness to take action on climate change, and increase the depth of participant involvement. This approach has the potential to deliver a broad range of sustainability impacts if continued in the long term.
- While projects have not currently achieved what might be termed 'mass mobilisation' of their communities on climate action, a small number of spin-off projects had been formed, suggesting that there is potential for more bottom-up community action.
- The local scale appears to be a meaningful one at which to take action on climate change: at one large enough to make its impact seem worthwhile and small enough to create a sense of individual responsibility.

8.2 INTRODUCTION

8.2.1 Drawing from the evidence from the 21 projects reviewed, this chapter provides a more interpretative view on the roles that communities can play within the wider context of climate change policy, highlighting the unique contributions that community-based approaches can make to sustainability goals, specifically:

- Changing individuals' values and lifestyles in the longer term;
- Beginning to change social norms; and
- Mobilising communities and building their capacity to address climate change.

8.3 VALUE AND LIFESTYLE CHANGES

8.3.1 While the CCF projects' successes to date have largely centred on changing behaviours (with more limited success on attitudes), many have longer-term plans which aim for deeper changes in values and lifestyles – to the point that some, such as Transition Town Forres, hope they will eventually "work themselves out of a job". However, most feel that participants are not ready for such significant changes yet. They recognise that changing values and lifestyles is a long-term process, and are reluctant to push participants too far outside their comfort zones too fast.

> *"People don't hug trees. They don't go out there and get their hands dirty and understand the soil and do the whole permaculture thing. They live in sheltered homes and drive metal cars, and very few of them are actually connecting with nature. That's a massive void....There's a massive need for re-education, because we've lost connection with seasons and biodiversity. There's a whole spectrum of things that our members would love to engage people on, but it's just too deep and too complicated at this stage."*
>
> Project manager – Sustainable Solutions for Linlithgow

8.3.2 There are a very small number of examples where projects' influence appears to have gone beyond behaviour change and changed participants' values. Although the number of cases is too small to generalise from, the examples that stand out are all from food projects – for example, one of the Fife Diet participants described how her increased involvement in local food had led her to question consumerism more widely. It may be that certain types of project activities have more engaging power in terms of inspiring participants to think about sustainable lifestyles more broadly, and the CCF projects' experiences suggest that food may be one of such 'gateway' behaviours.

8.4 CHANGING SOCIAL NORMS

8.4.1 Some of the behaviours targeted by CCF projects were considered by participants to be further from the mainstream than others. Projects working on behaviours furthest from the norm – sustainable travel, renewable energy and sustainable food purchasing choices – were often supporting the 'early adopters' of these behaviours, giving them reassurance that they were not alone. This effect was evident among, for example, participants in the Fife Diet and A Better Way to Work.

8.4.2 In the longer term, this support may begin to create a change in social norms around pro-environmental behaviours. This effect was already beginning to be evident where the actions taken by participants were highly visible – for example, installations of renewables by Sustainable Solutions for Linlithgow and FRESCo – and where projects were working within tightly bounded

communities such as schools (Carbon Busters, Energy + Action = Change) or workplaces (A Better Way to Work).[29]

8.5 MOBILISING COMMUNITIES

8.5.1 Evidence from the review suggests that mobilising communities to take action on climate change is a process that takes time, and the 21 projects were in the early stages of this process. So far, the most that any one project had achieved was to engage up to a few thousand individuals within its community.

8.5.2 The majority of participants we interviewed seemed content with relatively shallow engagement with the projects: they were happy to take part in project activities, but were disinclined to influence project delivery, to the extent that few had even given feedback to projects.

8.5.3 Many of the projects (or elements of projects) that had achieved significant behaviour change impacts within the timescale of the review took a top-down approach, effectively providing a service to their communities. The more community-led initiatives that were building capacity and willingness to take action from the bottom up were slower to gain momentum. While it takes time to engage and enthuse members of the community in this way, these projects may, because of their nature and focus, have the potential to deliver a broader range of sustainability impacts in the long term. One example of a project that had taken this approach was Dunbar 2025, which had run a community consultation exercise to gain early community buy-in and support for their plans, as well as to lay the foundations for a longer-term relationship between the community and the project.

8.5.4 In a small number of cases projects had already created enough enthusiasm and momentum in their communities for small spin-off projects to form. Examples include the bread club and pig club set up by Fife Diet participants, the 'Stepin Stones' project aided by Going Carbon Neutral Stirling, and an allotment group formed by residents who met at an event organised by the East Neuk and Landward Energy Network.

8.5.5 The local scale of community projects also comes into play with respect to mobilising communities on climate change action. There was a sense that the local scale was a meaningful one at which to take action on climate change – participants generally perceived the community projects' carbon reduction goals in a positive light, and arguments about the scale of an individual's impact in the wider context were noticeably absent in the interviews. The community scale seems to be small enough to make individual action feel worthwhile, as it can make a significant contribution in the context of the whole. At the same time, the community scale is large enough to make the

[29] As noted in the Scottish Government's International Review of Behaviour Change Initiatives (2011), the strongly bounded social environments of schools and workplaces are particularly conducive to norm creation.
http://www.scotland.gov.uk/Publications/2011/02/01104638/0

impact of collective action significant. Although participants were rarely motivated by environmental concerns, they seemed at the same time to perceive collective local action on climate change as a positive thing.

9 CONCLUSIONS

9.1 INTRODUCTION

9.1.1 This report has set out the key findings of a qualitative review of 21 projects supported by the Scottish Government's Climate Challenge Fund. This chapter brings together the main conclusions from the review and sets out the implications and resulting recommendations for the Scottish Government.

9.1.2 It should be stressed that – as for the report as a whole – the findings reflect the experiences of the 21 projects selected for review and cannot be considered representative of the Fund as a whole. They do, however, provide an indication of the sorts of achievements that are likely to have occurred across the Fund more widely and an illustration of how community initiatives can encourage low carbon behaviours, the barriers projects face, and the factors that influence success.

9.1.3 The conclusions are organised around the following headings:

- Outcomes of the CCF
- Implications for projects
- Implications for fund managers
- Implications for policy-makers

9.2 OUTCOMES FROM THE CCF

9.2.1 The CCF projects worked in four key areas: energy (efficiency and renewables), food, transport and waste. They delivered a diverse array of outputs at varying scales. In the 21 projects selected for the review, more than a thousand homes have had energy checks, several hundred have been insulated, around 100 homes are installing renewable energy or heating, many thousands have received advice on cycling and travel, many new food growing spaces have been developed and more people are eating locally produced food.

9.2.2 The review identified five different ways in which projects had influenced behaviour – reflecting the fact that participants started with differing perspectives on the behaviours that were being encouraged. Projects were generally more effective at the first three of these:

- Accelerating: projects overcame inertia among participants;
- Activating: projects opened up new possibilities that people might not have otherwise considered;
- Facilitating: projects supported participants in working through change processes and barriers which they may have found daunting without projects' help;
- Consolidating: projects reinforced existing pro-environmental behaviours among participants; and

- Converting: projects rarely succeeded in convincing those to change who saw no merit in it.

9.2.3 The review found only very limited evidence of behavioural spillover effects (in the sense that one behaviour leads automatically to the next and then another and so on). Participants tended not to perceive pro-environmental behaviours as 'linked' (in the way that project managers or policy makers see them as linked)[30], and moving from one to another was rarely a natural progression for them. Where projects were deliberately trying to encourage spillover, it only seemed to succeed where participants saw an intuitive link between the behaviours (from food growing to composting, for example). The short timescale of this review, however, may mean that it was too early to detect spill-over effects. A longer term study would be required to substantiate whether or not participants ratchet-up low carbon behaviours over time and which types of engagement approach (if any) lead to behavioural spill-over.

9.2.4 Impacts on participants' environmental attitudes appeared limited. Projects were mainly working with audiences who were 'moderately interested' in the environment, with much more scope for changing behaviour than attitudes.

9.2.5 Lifetime carbon emissions savings were estimated for eight of the projects included in the review, and expressed in terms of 'higher' (optimistic) and 'lower' (conservative) estimates. The lower estimates of the lifetime savings from the eight projects totalled just under 15,500 tonnes CO_2e (equivalent to the annual energy consumption of 2,360 homes), while the higher estimates totalled just under 46,700 tonnes CO_2e (equivalent to the annual energy consumption of 7,140 homes). There was more certainty in the carbon savings achieved through interventions focusing on 'hard' measures (such as insulation) than from interventions to change habitual behaviours. Some of these habitual behaviours can, however, have more 'engaging power' in terms of inspiring participants to get involved in projects.

9.2.6 The CCF projects taking part in the review were also found to have additional sustainability benefits, for example in terms of health and well-being, community cohesion, benefits to local economies and improvements to local environments.

9.2.7 Some of the projects had longer-term plans to build community capacity and willingness to take action on climate change, and more generally to encourage their communities to embrace environmental values and sustainable lifestyles. Community projects may also play a role in beginning to make non-mainstream behaviours more visible, in supporting 'early adopters' of behaviours, and potentially contributing to changing social norms in the long term.

[30] Research into spillover with respect to environmental behaviours, which combined an examination of social psychological theories with pilot fieldwork, showed that perceptual similarity was a key condition for spillover to occur; and that participants tend not to define groups of similar behaviours under the headings that policy makers or practitioners use - Brook Lyndhurst (forthcoming) Catalyst Behaviours, for Defra.

9.3 IMPLICATIONS FOR COMMUNITY CLIMATE AND BEHAVIOUR CHANGE PROJECTS

9.3.1 A number of factors influenced the degree of success of the projects in engaging people to change their behaviours. Some were highly specific to the behaviours being targeted, while others were cross-cutting.

Topic-specific success factors

Energy projects

9.3.2 Lending out energy monitors for participants to use drew their attention to established habits and highlighted where they could do more to save energy. Personal support from projects was useful in ensuring participants knew how to work the monitors, and being required to return the monitor at the end of the loan provided added impetus to use them. Verbal advice on changing home energy behaviours tended to be less effective, unless it was highly tailored or highlighted unusual energy-saving behaviours – thereby grabbing participants' attention.

9.3.3 The provision of energy audits by projects was a useful tool in helping participants to identify more significant home energy efficiency improvements that they could make. Face-to-face recruitment of participants and having a reputation as a trusted local organisation enhanced the take-up of audits. The information provided through these audits needs to be tailored to the property and household, and specialist knowledge of local housing types and appropriate solutions was therefore valuable for projects.

9.3.4 "Hand-holding" participants through the process of identifying home energy efficiency improvements – including assistance in applying for grants or subsidies if applicable, and in identifying a contractor – helped to overcome barriers related to fear of hassle and effort.

9.3.5 Community projects tended to be more trusted than energy efficiency improvement schemes delivered on a larger scale, and there may be opportunities for projects to work with such schemes to combine their strengths.

9.3.6 Promoting domestic renewable energy as a follow-on from home energy efficiency improvements appeared to make the idea less daunting than it would have been on its own.

9.3.7 A community bulk-buy scheme for solar thermal panels was used effectively to reduce cost barriers for participating households. This scheme may have the additional benefit of beginning to change social norms, simply by increasing the number of people in the community who have experience of it and by making it more visible.

9.3.8 Energy behaviour changes were usually financially motivated, and messages focused on cost savings were generally the most effective in promoting changes in this area.

Food projects

9.3.9 Food growing projects that had identified an existing demand for growing opportunities were able to change behaviour simply through the provision of growing space. Some innovative models were developed for this, including a "garden share" scheme which provided social as well as environmental benefits.

9.3.10 Careful pairing up of participants, diplomatically managed by the project, was key to the success of garden shares.

9.3.11 In community gardens, good relationship management was key to successful running of the project. Giving participants a degree of ownership and responsibility, avoiding a top-down approach, helped to keep them engaged.

9.3.12 Enjoyment and well-being were key motivators for taking part in food growing projects. For those without a prior interest in growing, the opportunity to learn skills and increase their employability was important.

9.3.13 Projects targeting sustainable food purchasing behaviours found that 'local food' provided a wider gateway into sustainable food than other possible hooks, such as 'organic' or 'sustainable'. The concept of local food often appealed to participants' existing desire to support the local economy, as well as their sense of place. Signposting these interested participants to opportunities to source local food was effective at changing their behaviour.

9.3.14 Encouraging participants to explore sustainable food purchasing choices within their comfort zones, and without being judgemental, led them to make changes in consumption habits without feeling like they were being asked to do 'too much'.

9.3.15 Motivations for changing food behaviours were varied: as well as encompassing the local economy, they covered environmental issues, food quality and taste, and healthy eating.

Transport projects

9.3.16 The most successful interventions to encourage cycling were those providing intensive personal support to help participants change their behaviour – peer champions in the workplace, for example, could be instrumental in encouraging participants to commute by bicycle.

9.3.17 Trial bicycles allowed participants to try cycling without the need to make an upfront financial investment.

9.3.18 Free bicycle repairs provided in easily accessible locations (such as workplaces) encouraged some participants to re-start cycling, by removing the effort involved in getting their old bicycles repaired, which can be a cause of inertia.

9.3.19 Cycle training helped some participants to acquire the skills needed for cycling.

9.3.20 Given that transport behaviours appear to be some of the most difficult to influence, transport behaviour change projects will most likely need to offer a package of options to participants (including promoting a range of transport modes) if they are to overcome the multiple barriers to change; and the most effective means of delivering these are likely to involve face-to-face engagement.

9.3.21 Geographical factors – distance and travel time, for example - will affect the willingness of participants to adopt new travel behaviours. In designing their interventions, projects will need to consider the target audience's current travel behaviours and perceptions, as well as practical local constraints, to determine which travel modes are feasible and how much scope there is for change.

9.3.22 The evidence suggests that motivations to do with fitness – more so than health – are likely to be the most important for participants, and messaging should be tailored accordingly.

Waste projects

9.3.23 Making waste visible, for example by encouraging participants to measure their waste, can be effective in promoting waste reduction behaviours.

9.3.24 Composting was, for many participants, the 'next natural step' from food growing, and was also found in a small number of cases to have triggered food waste reduction behaviours.

9.3.25 Waste behaviour changes were often motivated by a dislike of waste or a sense that these behaviours were 'common sense'.

Multi-strand projects

9.3.26 Although multi-strand projects sometimes led to a large number of small behaviour changes for environmental reasons, participants were more likely to engage in a single behaviour strand – where the success factors, effective messages and motivations were much as outlined above.

9.3.27 Including an environmental message in a multi-strand project was vital in providing participants with a conceptual link between the different activities – important to participants' understanding of project aims and therefore building trust.

School-based projects

9.3.28 Schoolchildren enjoyed hands-on activities and were most likely to make those behaviour changes that they were empowered to do, as opposed to those requiring action by other members of the household (e.g. parents).

9.3.29 Projects need to give careful consideration to balancing the time and resource commitments that schools are being asked to make with the benefits to the schools themselves from taking part in the project.

9.3.30 Teaching skills, and an understanding of educational processes more generally, are important for project staff delivering school-based activities.

9.3.31 There was no evidence of spontaneous spill-over effects from school-based activities to the behaviour of other family members, though there is scope for exploring whether such effects could be encouraged through homework that requires input from the rest of the household.

9.3.32 School-based projects need buy-in from the head teacher, and ideally from the whole school, to succeed.

Cross-cutting success factors

9.3.33 The most successful projects combined effective behaviour change techniques with organisational competence. The following are key factors for community behaviour change projects to take into consideration.

Project planning

9.3.34 As in other evaluations of community-based initiatives[31], this review found that projects tended to underestimate the time it would take to set up their activities and to recruit participants and volunteers. This caused delays and jeopardised project objectives in some cases. Effective project planning and identification of contingencies alleviated these risks.

Organisational learning culture

9.3.35 The most successful projects were those that were open to scrutinising their own approaches, learning from experience (their own as well as other projects') and adapting and improving their messages and interventions. The CCF's approach to funding projects in rounds has been conducive to learning, by creating natural breaks in projects for reflection and improvement. Projects could usefully build points for reflection and self-critique into their project plans.

People and skills

9.3.36 Some of the key characteristics of effective project teams included good knowledge of the project topic, good people skills (including communications and friendly manner), and 'walking the talk' while not being judgemental if participants were not engaged in pro-environmental behaviours.

9.3.37 Volunteers were more motivated when they were given the opportunity to shape the direction of the project as well as specific project activities, and when they themselves got something out of volunteering (e.g. a new skill). In contrast, if roles were prescribed top-down, volunteers tended to find them less inspiring.

[31] See, for example, Cox, J; Wilkins, C; Ledsom, A; Drayson, R; Kivinen, E (2009). *Environmental Action Fund (EAF): A Review of Sustainable Consumption and Production Projects (SCP2.2). A report to the Department for Environment, Food and Rural Affairs.* Brook Lyndhurst. Defra, London.

Understanding the audience and the intervention

9.3.38 One of the key strengths of community behaviour change projects is their ability to tailor and personalise messages and interventions to appeal to participants' motivations and help them overcome the particular barriers that apply in each case. A good understanding of the target audience is a crucial starting point, including who to target and what their current behaviours motivations and barriers are.

9.3.39 Projects need to be able to articulate how their suggested intervention will appeal to the motivations and overcome barriers among their target audience. Experiences of the projects taking part in the review suggested that messages and interventions appealing to personal rather than environmental motivations were most effective. At the same time, being open about the project's own environmental goals was helpful in building trust.

9.3.40 Being alive to the potential roles they can play in accelerating, activating and facilitating change (see paragraph 9.2.2) can help projects improve the effectiveness of interventions. Projects should also give consideration to how they might reach beyond those with some existing interest in their activities and begin to play more of a 'conversion' function.

Effective use of engagement channels and interventions

9.3.41 Active engagement methods (usually involving face-to-face contact) were generally the most effective. In particular, they enabled projects to deliver individual tailoring of project messages and interventions.

9.3.42 Passive communications (e.g. direct mail) are less suited to being tailored and were generally less effective in the projects reviewed, particularly if they were unsolicited by participants. Passive communications can play a role in supporting other engagement activities but do not seem to be especially effective on their own. Passive methods tended to succeed where they appealed to a previously identified interest among the target audience (e.g. Edinburgh Garden Share Scheme's recruitment leaflets) or were used to communicate with participants who had signed up to receive these communications (e.g. the Fife Diet newsletters).

9.3.43 The carbon assessment highlighted that some interventions can result in relatively large emissions savings per participant, but due to intensity of delivery can only reach a relatively small number of participants (e.g. personal engagement), while other interventions may achieve smaller savings per participant, but can reach a larger number of people (e.g. passive communications). Project managers need to consider how to best strike a balance between potential reach and emissions savings when choosing different types of interventions.

Building a high profile locally

9.3.44 Where projects had built themselves a local reputation and profile, they tended to find it easier to engage new participants, because they already had

a positive impression of the project. Building up a profile does, however, take time. There was also some evidence to suggest that links with other local entities that the community felt antipathy towards could taint the project's profile by association.

9.4 IMPLICATIONS FOR FUND MANAGERS

9.4.1 There are a number of suggestions that can be made on the basis of the review about what fund managers can do to further enhance the effectiveness of funded projects and of the fund as a whole. Key recommendations are set out below.

Provide further training in key areas to support project delivery

9.4.2 Project managers valued the training opportunities available to them but the review identified aspects in which some projects' performance could still be improved. There may be scope for providing additional training in the following areas that were identified as particularly crucial to successful project delivery::

- Communications – including the effective use of different communication channels and messaging;
- Behaviour change theory and practice – including means of gaining insight into participant motivations and barriers and designing effective interventions in that context;
- Project planning – including resourcing, timescales and motivating volunteers;
- The statutory planning process (see below); and
- Monitoring and evaluation – including how to incorporate lessons from action learning into revised project plans (also see below for more detail).

9.4.3 Network meetings could be used for projects to learn about and share evaluation techniques. The Scottish Government may also wish to consider ways to support peer mentoring.

Support projects in tackling external barriers to change

9.4.4 The review identified a range of barriers to change, some of which projects were able to tackle more successfully than others. In some areas, additional support at the fund management level may be beneficial in helping projects overcome external barriers.

9.4.5 Specifically, fund managers may wish to consider more systematically areas in which community groups can contribute to change by helping to reduce costs for participants – such as bulk buying of domestic renewable systems, insulation or local food – and support projects in developing such interventions.

9.4.6 Fund managers may also wish to revisit the support offered to projects in terms of planning applications, as these were in some cases found to cause

delays (to the implementation of changes by participants or to the set-up of project activities). It could be possible, for example, to:

- Review bids that have planning implications in order to ensure that projects have planned for this (including contingencies in terms of time and resources as well as alternative activities) and are supported with the necessary expertise;
- Develop a training package for projects on submitting planning applications;
- Provide one-to-one support for projects that need it by KSB officers attending pre-planning discussions with local authorities; and
- It might also be beneficial if a planning expert were to sit on the assessment panel in order to identify any potential pitfalls and to make recommendations about the best approach to securing planning consent.

Encourage projects to extend their reach and functions

9.4.7 Projects were most successful at engaging people with a strong or moderate interest in the environment, and accelerating, activating and facilitating change among them. There may be scope for projects to actively try and extend their reach further and play more of a 'conversion' function. This could be as simple as encouragement for participants to 'refer a friend', or relate to the channels used to recruit participants (direct contact, for example, rather than using passive techniques that may only attract those with some existing interest). It may be that an assessment panel on any future fund could play an active role in identifying such opportunities.

Continue to encourage the diffusion of learning

9.4.8 An organisational learning culture was identified as a key success factor in this review. Project managers were keen for others to learn from their experiences – and indeed they themselves had networked with other CCF projects when starting out. A number of steps could be taken by the fund managers to further encourage projects to learn lessons from similar activities previously undertaken elsewhere. Specifically, it could be possible to:

- Make consultation with at least one existing project a condition of funding;
- Develop a directory of projects funded by the CCF, providing details of location, interventions employed, behaviours targeted, organisational aspects etc.[32];
- Cover travel and subsistence costs to allow successful bidders to visit existing projects and to learn from them;
- The assessment panel could play an expert role in recommending projects that might be able to offer useful lessons to bidders; and

[32] NESTA's work on actively supporting the diffusion of community approaches is a useful example and resource – see Local United: http://www.nef.org.uk/communities/local-united.html

- Where the assessment panel identified a project that was particularly complex, or where the project team was relatively inexperienced, providing funds for 'buddying' support might be worth considering – either from an existing project or an expert third party (NESTA's use of UnLtd to provide support to finalists in the Big Green Challenge might be a useful model here).

Promote strategic links with national programmes and avoid duplication

9.4.9 Many of the Climate Challenge Fund projects are operating in the same area as a national initiative (Eco-Schools and EST Scotland's Home Insulation Scheme (HIS) for example). Duplication of roles has the potential to confuse local participants and makes service delivery less efficient, while there are opportunities for mutual benefit from collaborating. In the case of future funding programmes, it may be worth the fund managers:

- Conducting a mapping exercise prior to the launch of a fund to identify programmes that could overlap with the work carried out by community projects;
- Identifying opportunities for collaborative working between national or regional providers and local community groups; and
- Requiring potential bidders to demonstrate how they would complement, build on, or work in partnership with existing initiatives, rather than replicating them.

Review project selection criteria

9.4.10 This review has identified a number of factors which are particularly crucial to projects' success (discussed in Chapters 4 and 5, and summarised in section 9.3 above). While it may not be possible to be prescriptive about all of these, there are some that could be incorporated into the criteria when evaluating projects' bids for grant funding, including:

- Projects' knowledge and understanding of their target audience, particularly motivations and barriers, and why the proposed intervention is expected to work in that context;
- Projects' plans for learning from experience (their own and others') and adapting their approach accordingly.

9.4.11 Assessment panels could play an active role in highlighting risks of delays and over-runs in project plans and play a supportive role in suggesting contingencies, alternatives, or a change in budget for those selected for funding.

9.4.12 A number of issues are also highlighted in section 9.5 below which may implicate changes to the selection criteria. These include:

- The possible inclusion of criteria covering a range of sustainability goals in addition to carbon emissions reduction; and
- The possible development of criteria for supporting projects on longer timescales.

Refine monitoring and evaluation requirements and processes

Projects' evaluation activities and reporting

9.4.13 Projects were generally appreciative of the Scottish Government's 'light touch' approach to evaluation requirements, but it does need to be acknowledged that in many cases this has made it difficult to develop a quantitative assessment of impact.

9.4.14 The most effective project evaluations blended robustness with simplicity, and were built into project planning and delivery from the outset. The Low Carbon Route Maps and evaluation support (including training) offered to projects were useful in achieving this balance, and should be retained in any future rounds of funding. There are a number of further simple steps that projects could build into their activities which will help them to collect data on behaviour change; examples are provided in chapter 6. The fund managers may also wish to take a more active role in ensuring that projects are paying enough attention to monitoring early on in their projects.

9.4.15 In addition, small changes to the project reporting template could enhance the wider knowledge base on effective approaches to behaviour change in climate change initiatives. Projects generally need to report more directly on specific lessons learned, including what worked in terms of behaviour change approaches and messages, and organisational aspects that underpinned effective delivery and engagement.

Carbon monitoring

9.4.16 Specific issues are relevant to carbon monitoring, including: having to make assumptions about the rate of fulfilment of behaviour pledges; lack of research evidence on the durability of behaviour changes (e.g. for everyday actions around the home); uncertainty about the emissions from different food choices (such as organic versus non-organic); and a lack of reliable data from project participant surveys.

9.4.17 Based on the experience of developing a consistent methodology and approach for assessing emission reductions, of working with the data collected by projects, and experience of sourcing the secondary data and emissions factors necessary for quantifying project savings, Ecometrica suggest the following areas for action:

- **Lifetime savings.** Projects should be encouraged to estimate the lifetime savings of their activities, so that decisions about project priorities are not skewed by short-term savings.
- **Durability of behaviour change.** Assumptions about the 'stickiness' of behaviour change are a significant source of uncertainty in the lifetime carbon reduction estimates because of gaps in the existing literature. Scottish Government should consider supporting research in this area.
- **Guidance and templates for measuring project savings.** It may be helpful for both projects and the CCF administrators/funders to have a more prescriptive structure for measuring projects' savings, based on

the template used in the review Projects could be asked to identify at the outset the basis for their baseline and project scenarios, and how they will collect necessary data. Feedback and advice could be given by their KSB development officer so that gaps in the proposed approach can be addressed early.

- **Hierarchy of data quality.** Ideally projects should collect primary data - and they may be able to capture some data opportunistically while engaging with participants - but a more pragmatic mix of primary and secondary data is likely to be more typical. If good secondary data is available and primary data is time-consuming to collect, the project can make an informed decision about how much primary data it needs to collect.
- **Emission saving factors.** It is preferable to collect data about the baseline level of energy consumption and the fuel type used rather than use an emission savings factor (and its implicit assumptions about energy and energy use – for example, where insulation is installed). This applies to transport and food emission savings factors as well as energy emission savings factors. However, there is often a trade-off between data collection and project implementation, and in some cases emission saving factors may be the only practical option.
- **Portal for factors and secondary data.** A common 'approved' set of emission factors and secondary information could be provided via a common portal, to save time for project managers and encourage consistent approaches. Figures would be needed on values for emission factors, saving factors (e.g. % energy or fuel savings for different measures, or energy yield figures for different types of renewables), rebound factors, and the expected lifetimes for different interventions and technologies. Providing a 'wiki' space for projects to share data and factors they have identified may also help to develop common practice (though demand for such a space would need to be assessed).

Fund evaluation and learning

9.4.18 Programmes with the scale and diversity of the Climate Challenge Fund are inherently difficult to evaluate because of the variety of approaches covered by the projects and the unique circumstances within which they operate. The qualitative approach taken in the review has provided rich insights on why and how behaviours changed but there are gaps in evidence on the quantitative impacts of projects and feedback from non-participants in projects' target audiences**.** In any future funding, Scottish Government needs to build on the qualitative approach taken in this review and explore methodologies for capturing quantitative data through the projects' own evaluations which can then be used to generate learning about the programme overall. Options to consider are:

- Provide a research or evaluation expert to support the fund assessment panel and to identify opportunities and barriers for data capture;

- Select evaluation case study projects at award stage and work with them to develop evaluation plans that fit with their project delivery model but also deliver robust data to support learning by Scottish Government;
- Provide further funding to selected case study projects to trial quantitative methods for capturing behaviour change impacts;
- Encourage projects to carry out their own research with non-participants in the area in which they operate. Projects may see this as a waste of time but it could help them to spot aspects of their approach that they need to change, as well as providing data to support learning for the fund overall, particularly about de-motivators or barriers beyond projects' control;
- As noted above, Scottish Government should also consider supporting longitudinal research into the durability of behaviours and long term impacts as this is a significant evidence gap.

9.5 IMPLICATIONS FOR POLICY

9.5.1 This section consists of two parts: the first outlines the unique characteristics of community projects – their strengths and limitations – and what these mean for how they fit into wider climate change policy, and the second sets out policy-level considerations for the future of the CCF which emerged from the review.

Key strengths of community-based approaches

Ability to overcome behavioural inertia and prompt action

9.5.2 Community projects appear to be particularly effective at engaging people who are already thinking of acting or who are amenable to the idea when introduced to the possibilities, and at accelerating, activating and facilitating behaviour change among them. Their effectiveness is largely due to their personal and tailored engagement approaches. This matches the evidence from other evaluations of community led climate change or sustainable living projects, such as Defra's Environmental Action Fund in England[33], or NESTA's Big Green Challenge[34].

Ability to tailor approaches to participants

9.5.3 The ability of community projects to tailor their messages to appeal to the particular motivations of individual participants, as well as tailoring their interventions in line with participants' circumstances and barriers, is one of their key strengths over other means of promoting behaviour change. Being part of and interacting with the communities they work with on a day-to-day basis allows community projects to really get to know their participants – including their motivations and barriers. Community projects are also able to

[33] Ibid http://randd.defra.gov.uk/Document.aspx?Document=EV02004_7823_FRP.pdf
[34] Brook Lyndhurst (2010) The Big Green Challenge Final Evaluation Report, NESTA, London. http://www.nesta.org.uk/library/documents/BGC-Evaluation-Exec-Summary-FINAL.pdf

spend the necessary time with each participant, working out the right solutions for them.

Being trusted by the local community

9.5.4 Projects were often seen by participants as trusted sources of information – to the point that in some cases participants were checking the credentials of national programmes with their local community project. The strong sense of trust seemed to stem from participants considering the local community project, more than any other entity, to have the community's interests at heart. Being closely supported by a trusted local organisation helped give participants the confidence to make changes.

Working on a meaningful scale

9.5.5 The community scale seems to be one at which climate change action is meaningful to people. It seems to be a large enough scale at which the overall impact is significant enough for action to be perceived worthwhile, but small enough for each individual to feel they have a valuable contribution to make, as well as a responsibility to contribute.

Changing social norms

9.5.6 By increasing the visibility of pro-environmental behaviours, supporting the 'early adopters' of these behaviours and making them more mainstream, community projects can make a contribution towards changing wider social norms by starting to change them within their communities.

Changing lifestyles and building community capacity for sustainability

9.5.7 Community projects have the potential to engage people in sustainable lifestyles, and build community capacity and willingness for climate action. These are processes that take time, and some of the projects taking part in the review were laying the groundwork for this type of in-depth engagement with their communities – for example by consulting with the community and getting people on board with the project's broad aims.

Preparing the ground for future behaviour change

9.5.8 By bringing the need for action on climate change into people's consciousness and making them more amenable to it, we could speculate that community projects are also preparing the ground for difficult choices that might have to be made by Government in the future – for example, where regulation or taxation may be required to accelerate the adoption of low carbon behaviours (e.g. transport perhaps). Though this is an inherently political point, and might not be supported by the community sector, community projects could play an important role in preparing people for such changes by promoting the notion that environmental responsibility – and carbon emission reduction in particular – is an urgent and pressing issue.

Key limitations of community-based approaches

Community projects work on small scales

9.5.9 From the evidence in this review, it seems possible that community projects can actively engage a few thousand individuals within their communities at most, and within that only a proportion will change their behaviour. This may not appear very promising but the carbon savings from the projects were not insignificant and, crucially, it is unlikely they would have occurred without projects' interventions.

9.5.10 There did appear to be scope for scaling up projects that were delivered through existing entities, such as workplaces or schools (which effectively formed their own communities), where the projects themselves essentially acted as service providers and facilitators of engagement in these communities – handing over ownership of the project to the community. This may be better categorised as replication than scaling up, however. There was no evidence of this happening spontaneously – though it should be noted that many projects were still relatively young, and projects felt that they would need more resources (staff in particular) in order to expand.

9.5.11 Many projects felt that working on a larger scale would be less effective as it would dilute the community identity that was crucial to their activities, and in general there was more enthusiasm among projects for replication: diffusing learning and assisting new projects in getting set up. This suggests that a large number of small projects – in line with the CCF's existing approach – may be more effective than a small number of large projects.

There are external barriers to pro-environmental behaviour change

9.5.12 The review identified a range of barriers to behaviour change. While projects were able to help participants overcome many of these – particularly personal barriers – there were some, often external, barriers which were beyond the control of the participants and projects. These included lack of infrastructure (for example, for cycling or recycling), lack of access to sustainable food and lack of food growing spaces.

Suggestions for consideration in policy

Strategic focus and aims of the fund: carbon or beyond?

9.5.13 The carbon assessment suggested that there is a much greater degree of certainty over the level of emissions savings to be achieved through physical measures than behavioural measures, and it could be tempting to conclude that community projects should focus their efforts on energy efficiency measures, notably insulation. There are a number of counter-arguments to this, however.

9.5.14 Firstly, while hard energy efficiency measures deliver quick and relatively certain carbon emission savings, these measures will not alone be enough to achieve the scale of emissions cuts required in the context of national targets

or of sustainability more broadly. Changes will also be required in more difficult areas, such as transport behaviour change and more sustainable diets. Longer-term interventions that build community capacity and willingness to act may be needed in these areas where 'quick wins' are less likely.

9.5.15 Second, some of the CCF projects set out with the aims of community engagement, capacity-building and longer-term sustainable lifestyle changes, and were unlikely to achieve significant carbon savings early on. Some interventions are particularly effective at 'drawing participants in' to these types of projects and engaging them in broader lifestyle changes – food projects appeared to be a good example. In contrast, those that achieve significant carbon savings quickly will not necessarily lead on to further behaviour change. Over-emphasis on carbon emission reductions in evaluating the outcomes of community projects would run the risk of missing opportunities to engage people on sustainable living more broadly.

9.5.16 The question is really one of the Scottish Government's strategic priorities: if it is solely concerned with carbon emissions reductions, there is a case for limiting support for projects that focus on behaviours which have relatively minor carbon impacts in the short term. If, on the other hand, the aim is also to strengthen communities, build longer term capacity for action and encourage sustainable lifestyles that encompass health and wellbeing, the balance may well shift.

9.5.17 It may be worth the Scottish Government giving some consideration to the CCF's strategic aims in the context of wider climate change policy. Community projects have unique capabilities to contribute to delivering sustainability (as outlined above) and the CCF could more explicitly support these unique functions, by re-phrasing its strategic aims to cover carbon savings, sustainable lifestyles and capacity building for climate action. This would help both policy and projects reduce the risk of over-prioritising quick carbon savings at the expense of other sustainability outcomes. The criteria used to select projects to fund would also need to be reflective of all of these different outcomes that community projects can deliver, to ensure that the fund as a whole delivers against all of its aims.

Long-term support

9.5.18 Community projects have the potential to help deliver against a range of sustainability goals, including building community capacity and willingness for climate action, influencing lifestyles and values, and changing social norms. All of these changes take time, and this needs to be recognised in the way that funds are designed and run – both at the policy level, in terms of long-term support, and at the fund management level.

Removing barriers to change

9.5.19 There may be more that the Scottish Government can do to work with community projects in removing some of the external barriers to behavioural change. Specifically, the Scottish Government could consider:

- Setting aside funding to allow community projects to contribute to the development of local infrastructure that would normally fall under the remit of local or central government, and which would facilitate carbon reduction behaviours. The nature of such a package would require further consideration[35].
- Using community projects as the 'eyes and ears' of government by encouraging them to identify barriers that fall outside their control, and to work with government or others to identify possible solutions. In order for such a feedback mechanism to be effective, it would need to be transparent, active (in that projects could expect a response to concerns raised rather than simply firing them into a void) and result in visible action where significant barriers were highlighted.

[35] By way of example, it might be possible to run an annual competition that would accept bids led by community projects, but requiring explicit support from local authorities, to develop schemes that would not otherwise fall within a council's regular budgetary priorities, such as additional cycle lanes. NESTA's Neighbourhood Challenge provides a useful case study. It is testing how small challenge prizes can inspire community groups to improve their neighbourhoods. http://www.nesta.org.uk/areas_of_work/public_services_lab/neighbourhood_challenge

ISSN 0950 2254
ISBN 978 1 78045 265 4
web only publication

www.scotland.gov.uk/socialresearch

APS Group Scotland
DPPAS11792 (06/11)

GSR
GOVERNMENT SOCIAL RESEARCH
Social Science in Government

ISBN 978-1-78045-265-4
9 781780 452654