The Scottish Government
Riaghaltas na h-Alba

Review of the Climate Challenge Fund Appendix C: Case Studies

AGRICULTURE, ENVIRONMENT AND MARINE

social research

Review of the Climate Challenge Fund:

Appendix C: Case Studies

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Scottish Government Social Research

2015

Contents

Overview

This appendix presents the 10 'depth' case studies developed for CCF projects which were contacted as part of this research. The case studies provide an overview of each project based on findings from a series of interviews undertaken with a range of stakeholders involved in each project. Those contacted varied across projects, but included project officers, staff, management bodies, volunteers and recipients of services.

The projects are described by a range of factors including the value of the CCF fund awarded, the nature of activity undertaken (e.g. energy efficiency, transport) and the relevant refresh themes (*broaden, deepen, explore*) to which they are relevant (see paragraph 2.7 in the main report).

Each case study describes the following elements:

- The project details, including the background to the group and project aims.
- How behaviour change was achieved by the project.
- Successes and benefits.
- Carbon saving calculations.
- Challenges and lessons learned.
- Legacy.

The section on behaviour change uses the Scottish Government's Individual, Social, Material (ISM) behaviour change model to classify different project activities into the three contexts – the individual, social and material:

- **Individual context** focuses on peoples values, attitudes and skills together with factors which drive choices and behaviours (i.e. values, beliefs, attitudes, costs and benefits, emotions, agency, skills, habit)
- **Social context** recognises that the way that other people behave and what society considers to be appropriate and desirable behaviour strongly influences how each of us acts (i.e. opinion leaders, institutions, norms, roles and identity, tastes, meanings, networks and relationships)
- **Material context** recognises that the world in which we live works to promote or constrain our behaviours (i.e. rules and regulations, technologies, infrastructure, objects, times and schedules)

A key principle of the ISM approach is that interventions should take account of influences across all three contexts to achieve substantive and long lasting change. The project activities have been described in this way to demonstrate the diverse routes that CCF projects have used to deliver behaviour change. No weighting is given to different project elements and activities in the case studies and none were specifically designed using ISM. Indeed, some activities identified and described in these case studies were not planned at the outset of projects.

For more information on ISM see http://www.gov.scot/Publications/2013/06/8511.

For more information on ‘Shifting Normal’, a guide designed to help community groups tackling climate change, which is based on the ISM tool, see http://www.gov.scot/Publications/2015/07/9571.

Concrete Garden: Growing Together

Project value	High (£130,295 – £450,000)
Duration	Three years
Refresh Elements	Broaden: Scottish Index of Multiple Deprivation bottom 30%
Topic(s)	Food, Waste (Recycling)

Project Details

Background to group

Initiated as part of a larger Glasgow-wide initiative (Sow and Grow Everywhere), the Concrete Garden urban food growing project commenced in June 2010. The actual concrete garden – so called because it consists of planters and other food growing equipment set up upon the concrete foundation slab of a demolished industrial building – is situated and services the community of Possilpark in north Glasgow. Concrete Garden is an inclusive project; anyone regardless of social, cultural or economic background or nationality can become a contributor to the project and participate in workshops, training and food growing activities. The project encourages the advancement of citizenship and community development and the provision of recreational facilities with the object of improving the conditions of life of community members. Moreover, it seeks to advance environmental protection and improvement and education for all people.

Reasons for project and inspiration

Concrete Garden was established with the intention of introducing food growing to a low income neighbourhood. Local food production is recognised as having the potential to make a significant impact on the reduction of carbon dioxide (CO2) emissions and food waste compared with conventional food production methods. Shortly after the launch of the project the demand for growing plots outstripped supply. Thus, following a consultation and data gathering exercise with the local community to determine attitudes and priorities relating to food, food waste and clothing reuse, the Concrete Garden project applied for CCF funding as ‘Concrete Garden: Growing Together’ (CGGT). The project appealed to the *broaden* refresh theme; CGGT is a group whose community features in the bottom 30% of the Scottish Index of Multiple Deprivation.

Aims and approach

The CGGT project aimed to deliver meaningful changes in CO2 emissions produced by the Possilpark community. Moreover, it sought to improve mental wellbeing among contributing community members through informal socialising and the sharing of ideas. The project aims were to be met by measures including: creating additional growing space; developing a range of social horticultural workshops and climate change education opportunities; implementing a local domestic food waste collection scheme to produce compost; and promoting ‘green gym’ activities to improve both physical and mental health. It was intended that a

system to monitor and collect data would show that changes were being delivered through the project. The project was delivered by a project coordinator, project workers and volunteers.

Achieving Behaviour Change

The target audience for the project were members of the Possilpark community (although the attractive nature of the project drew in people from outside the locality to participate). Some of these individuals had challenging personal circumstances.

A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- The focus of project activities was on food, food waste, etc. rather than climate change (fuel and food poverty are more pressing issues in deprived communities), although an interest in climate change arose among some community members as a result of engaging in food growing activity.
- Workshops and training sessions encouraged community members to grow their own food (which can also be done at home) and reduce food costs, and induced a sense of satisfaction / wellbeing.

Social

- The project contributors educate other members of the community (and encourage participation) and help to break down involvement prejudices and barriers; project helps to create community cohesion.
- Holding community events and contributing to the events of other groups serves to establish networks and facilitates the sharing of behaviour change experiences and best practice.

Material

- The project developed and enhanced existing food growing capacity through increase in number of planters, etc., to create an enduring community asset; facilities were enhanced to facilitate domestic food waste composting.
- Clothes swapping (encouraging the reuse of clothes rather than new purchases) proved to be popular, with approximately 650kg of clothes being exchanged over the project duration.

Successes and Benefits

<u>Project development and delivery</u>

During the implementation of the CGGT project, members of the project team acquired experience of project management and administration far removed from that accrued in previous Concrete Garden initiates. Although a steep learning curve, skills developed during the project prepared the team for undertaking similar future projects (e.g. a commissioned service level agreement partnership with the NHS to create a new food growing space on a different site).

Project delivery mainly concentrated on the benefits associated with local food production (e.g. healthy, fresh food) and wellbeing (e.g. social activities). But even ostensibly small project measures to address climate change had impact. Chickens kept onsite produced eggs and manure for composting. The chickens were also found to have had unanticipated therapeutic benefits. One project contributor noted, "*The highpoint for me is the chickens … it's uplifting having animals around – the chickens are great fun*".

Community

In order to gather information on the 'softer' community outcomes of the project (e.g. improving mental wellbeing), an independent consultant was engaged to conduct an 'Appreciative Inquiry' (AI), an approach for the analysis of change. The AI process involves 4 stages (i.e. discovery, dream, design, and destiny – the 4-D cycle) and was applied to the project aspects of people, empowerment, health and wellbeing, learning and participation. Through applying AI, project themes emerged. Establishing new relationships had led to a greater sense of place and companionship among project contributors. Activities had served to increase agency and improve self-esteem and physical fitness, especially among those with health or addiction recovery issues. Practical skills (e.g. organic gardening, cooking) were acquired through participation, leading in some cases to increased opportunities for paid employment and training elsewhere.

Wider benefits

Over the duration of the project the concrete garden site hosted a number of outreach events (e.g. Federations of City Farms and Gardens networking event). Moreover, the project has contributed to events run by other organisations (e.g. an Environment Day held in Maryhill). Such events have allowed Concrete Gardens to promote its message to an audience beyond the locality of Possilpark and, in turn, understand and be influenced by the activities of projects with similar aims.

Carbon Calculations

Carbon calculations focused on savings made as a result of five main project activities, namely food growing, avoiding food miles, reducing food waste, reusing rubber tyres (as planters and barriers/walls) and clothes swapping/reuse. All food grown in the concrete garden was weighed, and average emission factors were applied to determine CO2 emission savings made compared with baseline conditions. Calculations associated with avoiding food miles focused on eggs produced by the ex-battery hens living on the site. The monitoring and evaluation of food waste (brought from the homes of project contributors to the site for composting) was difficult. However a sensible estimate of the food waste avoided during cookery classes run by the project allowed for tangible CO2 emission savings to be determined. Overall, CO2 emissions were reduced by approximately 140 tonnes over the 3 year duration of the project. Lifetime (up to 15 years) reductions were estimated to be approximately 1760 tonnes.

Challenges and Lessons Learned

Project development

An initial lack of experience on the part of project team members in relation to calculating CO2 emission reductions made completing that part of the CCF funding application very difficult. In particular, a conscious decision was made to keep the scope of the project to mostly addressing issues associated with food and food waste. An insufficient knowledge of how to work out CO2 emission reduction estimates in other areas (e.g. active travel) limited ambition to make greater CO2 emission savings. However, experience of performing the calculations on the project has raised the possibility of addressing other climate change related behaviours on future project endeavours.

Delivery

Food yields (and associated CO2 emission savings) were subject to weather conditions during growing seasons, with different fruits and vegetable responding badly (or well) to wet or dry states. A home food waste collection service was initiated by the local authority during the project period. While this served to reduce the CO2 footprint of the Possilpark community, it impacted adversely on the ability of the project to meet composting targets.

Legacy / Looking Forward

The project has created a legacy of physical assets. In addition to food growing spaces/capacity, it has in partnership with architecture students from the Glasgow School of Art committed to develop a sustainable building – The Bothy – on the project site. This development has given community members insight into the architectural / construction process and will provide a base for ongoing Concrete Garden activities.

Moreover, Concrete Garden will use the experience developed on the CGGT project to deliver mentoring support and community-based learning in small-scale urban food production, and project development to groups wishing to develop their own growing spaces.

Website:	**http://www.concretegarden.org.uk/**

Eco Drama's Magic Van Tour

Project value	High (£130,295 – £450,000)
Duration	Three years
Refresh Elements	Deepen: Mature group, previously funded by CCF
Topic(s)	Energy Efficiency, Transport, Food, Waste

Project Details

Background to group

Established in 2007, Eco Drama is a theatre company which engages, entertains and inspires people of all ages to value and care for the natural world. It consists of one full-time and two part-time staff members, and utilises the skills and services of a range of freelancers. The organisation delivers innovative theatrical productions and creative learning workshops to schools, festivals, theatres and community venues across Scotland, touring in a vehicle run on renewable biodiesel. Eco Drama also creates resource packs and continuous professional development teacher training, linked to Education Scotland's 'Curriculum for Excellence' (CFE), to ensure a legacy of learning and practical action. (In 2015, following completion of the project, Eco Drama changed its name to Whirlybird Theatre Company, with Eco Drama remaining the title of their schools touring programme.)

Reasons for project and inspiration

The Magic Van Tour project was an innovative response to nursery, primary and secondary schools in Glasgow who wanted to engage with the Sustainable Development component of the CFE through creative learning experiences. Using their experience as theatre-makers and learning practitioners to inspire practical action by engaging both 'hearts and minds', Eco Drama set out to explore imaginative ways to design and deliver activities that seek to instil connections with nature among target audiences. The project appealed to the *deepen* refresh theme; Eco Drama is a mature community group previously funded by CCF. It also received additional funding from the Big Lottery Fund, a £10k top-up grant to support 'The Worm' theatre show; and from Forth Environmental Link, to enhance the orchard planting event to take place in Townhead, Glasgow.

Aims and approach

The main aim of the project was to raise awareness among children and others (including teachers, parents and community groups) of environmental issues and, specifically among schoolchildren, of practical actions to reduce carbon dioxide (CO2) emissions. Project community outcomes concerned: improving understanding of food production and associated impacts (e.g. food miles); seasonality and local distinctiveness among schoolchildren; inspiring food growing through orchard planting; and, encouraging biodiversity and increased community engagement. Project CO2 outcomes concerned: encouraging more participation by schoolchildren in activities relating to efficient material use (three Rs – Reduce, Reuse and Recycle) and energy consumption at both school and home; reducing

‘school run’ car use and increasing the adoption of alternative active travel options; and cutting food waste in schools.

Achieving Behaviour Change

The target audience for the project were children and others (including teachers, parents and community groups). These were a good fit for Eco Drama to engage with and influence given the type of services that the organisation had historically delivered. Interestingly, the Inspiring Learning Framework, as devised by the Museums, Libraries and Archives Council, was used to classify and facilitate the assessment of qualitative data relating to project outcomes.

Events undertaken to realise behaviour change included:

- The Forgotten Orchard – a theatrical production highlighting the importance of local and seasonal food: in this case, apples.
- Orchard training / planting – undertaken at schools and with local community members on waste ground at Townhead Village Hall, Glasgow.
- The Worm – a musical production focusing on composting food waste.
- The Worm Inspectors – an assembly performance and interactive session, allowing children to understand the relationship between food waste and worms in the production of compost.
- Other theatrical productions and workshops – concerning (non-food) waste (‘Recycling Heroes’), energy and transport (‘Eco Gadgets’), climate change and sustainability (‘The Isle of Egg’) and all of the above plus fossil fuels (‘The Oil of Life’).

A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- Workshops, training and events designed to explain the impacts of action/inaction. These encouraged enduring behaviour change relating to climate change (i.e. reduced material and energy use, active travel, waste reduction and local food production) among the target audience.
- Theatre productions that empowered children to take responsibility for their actions and to work collectively as agents of change.

Social

- Sought to enable schools / teachers to inspire young people to undertake positive steps to realise long-term/enduring environmental behaviour change.
- Collaborative work with schools (through an initial survey to establish project objectives), freelance actors (e.g. on ‘The Forgotten Orchard’ and ‘The Worm’ theatrical productions) and others (e.g. Andrew Lear – The Appletreeman – on orchard training and planting) to deliver project outcomes.
- Encouraged children to influence choices made by parents in relation to transport, waste and energy use.

Material

- Orchards and biodiverse green spaces created and composters provided to schools to reduce food waste being sent to landfill. Both of these are an enduring project legacy.

Successes and Benefits

Project delivery and development

Eco Drama conducted a community consultation process speaking directly to teachers and asking them what support on sustainability / environmental education they were seeking. The response was for help meeting the requirements of the Eco Schools programme in relation to the environment in general and food (including growing and waste) in particular. This project, built on the content and successes of a previous CCF project, was shaped to address this feedback.

Community and wider benefits

Eco Drama held a community orchard planting event over two days at Townhead Village Hall, Glasgow. With expert guidance from event partner Andrew Lear – the Appletreeman – over 70 volunteers aged from three to 70 participated and helped to plant 30 Scottish heritage fruit trees. The event also included other community activities (e.g. apple press and cake stall, face painting, sing-along and live music) and culminated in a performance of 'The Forgotten Orchard'. Participants fed back that this was a fun, educational event for children and, through emphasising the importance of the environment, it contributed to community cohesion and spirit.

Carbon Calculations

Eco Drama developed a bespoke online tool – the Carbon Calculator – for estimating CO2 emission reductions resulting from behaviour change. These estimates were based on answers provided by schoolchildren to surveys issued three months before and after the visit took place. The Carbon Calculator utilised Defra Business Conversion Factors and data from Keep Scotland Beautiful's Low Carbon Route Maps. Survey questions sought to understand behaviours relating to transport (active travel to school more than once a week), energy (not putting home video games consoles on standby after use) and recycling (of paper/card, metals, glass, plastic and packaging). Once behaviour change data was inputted online, schoolchildren were able to view a visual graph of before and after behaviours and appreciate the impacts of their behaviours. Data collected throughout the project (with a response rate of 31%) confirmed that CO2 emissions were reduced through project activities by approximately 1,065 tonnes.

Challenges and Lessons Learned

Project development

Core staff recruitment / retention (from previous projects, where continuity funding could not be guaranteed), role definition and task distribution, and ensuring that sufficient time is allocated to plan and implement the project were identified by the project team as key areas of learning and reflection.

Delivery

Although the Carbon Calculator was designed to produce a paper-free and interesting way for both teachers and schoolchildren to engage with the topic of low carbon behaviour change, it was underutilised. Some teachers were not aware of its existence, despite having been contacted about it. Others claimed to have no access at work to the internet. It was agreed that a review of communication techniques and IT provision at target audience schools would help to alleviate barriers to tool uptake going forward.

Reporting and impact

Mostly, gathering primary data (e.g. from energy monitors, by measuring 'school run' distances) was found to be very difficult due to the age range of pupils targeted and the project scale (i.e. number of schools engaged with). This made reporting non-qualitative project impacts challenging. However, school food waste monitoring was easier as this activity took place onsite.

Legacy / Looking Forward

It was established that, through speaking to schoolchildren, education through theatre and drama provided memorable 'heart and mind' experiences and increased the potential for enduring behaviour change. Similarly, active engagement in project workshops (supported by classroom activity packs and take-home materials, including seeds for home food growing) encouraged schoolchildren to have ongoing agency in environmental issues.

Orchards planted throughout the project at Townhead Village Hall and at 35 primary schools throughout Glasgow, will continue to flourish in future years, providing heritage fruit for communities to eat and sell. Furthermore, Eco Drama will continue touring with the programme of productions/events in future years, reaching new audiences throughout Scotland.

Website:	**http://www.ecodrama.co.uk/green-touring/**

Leith Community Climate Change Project – Himalayan Centre

Project value	High (£130,295 – £450,000)
Duration	Two years
Refresh Elements	Broaden
Topic(s)	Energy Efficiency, Community Building Refurbishment

Project Details

Background to group

Established in 2012, the Himalayan Centre Ltd is a social enterprise and registered charity. The organisation formed out of an idea from the Nepalese community and Nepal Scotland Association to develop a sustainable building for the Leith community. The organisation currently consists of a board, a General Manager and a full-time Project Co-ordinator and 13 volunteers.

Reasons for project and inspiration

The Nepal Scotland Association had previously delivered two CCF-funded projects. The group wanted to continue their work within the community and decided to develop a sustainable building, the Himalayan Centre, as a base to run arts, cultural and environmental projects. The new project, which combined building energy efficiency with behaviour change interventions, appealed to the b*roaden* refresh theme, diversifying the recipient base and target audience that was being supported through CCF.

Aims and approach

The project aims were to establish a low carbon, sustainable centre for arts and culture and reduce the carbon footprint of local people in their daily lives.

The Himalayan Centre is being converted from an old, local authority owned, grade B-listed swimming pool. The CCF award for the building complemented funding from a range of other organisations that focused on different aspects of the refurbishment. The CCF funding was used to install measures to improve the energy efficiency of the building fabric and provide training to encourage the sustainable use of the building by staff and users.

The behaviour change project, exclusively funded by CCF, had three main approaches; household advice visits (target: 120), monthly creative workshops (with a carbon emissions reduction / climate change focus) and Carbon Conversations (six sessions run as a drop-in which included site visits).

Achieving Behaviour Change

In the second year a Community Engagement Officer focused on a community climate initiative to reduce the carbon footprint of local people in their daily lives. The target audience was householders within the EH6 postcode area with a number of activities adopted to encourage them to reduce their carbon footprint.

A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- Energy efficiency and food waste advice during home visits from Community Champions.
- Creative workshops to raise awareness of the impacts of climate change and provide methods for individuals to reduce their carbon footprint.
- Adoption of a values-based approach to help community members understand what the group wanted to achieve while establishing trusted relationships. The group hoped that encouraging others to foster these values would provide a pathway to behaviour change.
- Encouraged participants to establish a five year plan and pledge to changes they wanted to make.
- Trained and coordinated a team of Community Champions to help deliver the activities.

Social

- Climate change films were screened in bars across the Leith area to raise awareness and prompt discussion.
- Several Carbon Conversation sessions held where groups met to discuss climate change related issues and learnt how to reduce their carbon footprint.

Material

- Connections with another community group 'Leith Community Crops and Pots' allowed the Himalayan Centre to start a small food growing project which they now attend each week. This gives a visible and consistent space for community members to visit the group. The relationship strengthened the case for tackling climate change in Leith and resulted in shared events.
- Creative workshops to make draught excluders and screen printing to create exciting reusable bags.

Successes and Benefits

<u>Project development and delivery</u>

The group initially used their CCF outcomes as the main message behind the project but later realised that this was difficult to communicate to volunteers and subsequently the participants. To make communication easier and to give the group stronger direction they established a values-based approach which the group felt was an innovative and effective aspect of the project.

Originally volunteers used a home visit assessment process borrowed from another organisation to conduct the home visits. The form used was very long and didn't reflect the group's values. The group redesigned this to shorten the time taken to perform visits, make it easier for volunteers to understand and communicate what the project was trying to achieve, and deliver a high standard of energy efficiency advice.

Community

Investing in the volunteers meant that they were more passionate and enthusiastic about the project. Volunteers received training on a range of topics and went on site visits which increased their skills and knowledge and also established stronger working relationships.

> *"The training was brilliant; it encouraged me to stay on as a volunteer."*

Project participants were prompted to attend the Carbon Conversation sessions out of interest in the range of topics covered and to give the opportunity to share experiences with new people. Attending the sessions encouraged them to start recycling, walk more, grow their own food or buy locally grown food. It also prompted them to inspire others to attend future sessions and change their behaviours at home. One beneficiary went on to receive further advice through the project in the form of waste reduction and energy efficiency home visits.

Workshops and recommendations through word of mouth proved the most effective methods of gaining referrals for home visits.

Wider Benefits

Beneficiaries of this project felt encouraged to volunteer for other environmental related projects within the area.

The project prompted the volunteers to explore other voluntary opportunities and encourage others to take part in reducing carbon emissions and improving the local environment. They set up Edinburgh Carbon Ninjas, an online community who perform tasks such as community gardening and signposting of members to other environment related events.

Carbon Calculations

Carbon savings were collected by asking participants to weigh food waste and provide meter readings. Householders were also surveyed on 20 habits to establish whether any changes had been made since their involvement in the project. Some of the householders saw this as a test whereas others were happy to learn more from the measurement process *"It* [weighing food waste] *was something that was easy and I was interested in"*. From this data the lifetime carbon emission savings achieved by the project were calculated to be 62.07 tonnes. The carbon calculations were completed by an external consultant. A project worker expressed that they were interested to learn more about the carbon emission savings attributed to each of the behaviours as a result of this process.

Challenges and Lessons Learned

Project development

The group found that it was difficult for volunteers to conduct home visits as they were required to collect a lot of feedback and data for monitoring and evaluation. Towards the end of the project some flexibility with the budget enabled the group to employ an energy auditor. Having someone focused solely on the delivery of home visits led to an increase in referrals and resulted in more consistent reporting.

Delivery

The building is yet to be completed due to delays in the building process. This had a knock on effect with the behaviour change project as it was challenging to encourage people to engage with a new organisation without an identifiable base. This also meant that the group didn't have their own space to run the workshops and Carbon Conversations. The group worked to overcome this by using their growing space regularly as a base for the community to visit them, run workshops at community group facilities and use a temporary office space to host Carbon Conversations.

Establishing relationships with minority groups and building a level of trust with them was a challenge; as a result many were not interested in receiving a home visit. However it was later discovered that running workshops and using this as an opportunity to give more detailed explanations about the visits led to an increase in interest and referrals.

Legacy / Looking Forward

The Himalayan Centre is now an established group within the community and relationships built with other community groups ensures a strong base for future projects. Once completed, the centre will provide a hub for the community of Leith and a space for a range of activities.

Volunteers have learnt new skills and are passionate about the Himalayan Centre and the work that they did through the last project, to the extent that they want to continue to work with them and support the community.

Website:	**http://www.himalayancentre.org/**

Overcoming Barriers – Fyne Futures

Project value	High (£130,295 – £450,000)
Duration	Three years
Refresh Elements	Deepen: Mature group, previously funded by CCF
Topic(s)	Energy Efficiency, Transport

Project Details

Background to group

Fyne Futures is the sustainability arm of the housing association Fyne Homes. Fyne Futures is a registered charity and social enterprise which creates jobs and training opportunities for the local community and work to improve recycling and the Green Economy of Bute. Fyne Futures formed Towards Zero Carbon Bute as part of a previous CCF project which they worked on with Caledonian University from 2009 to 2011. At the time of the project the group consisted of a voluntary steering group and two project officers assisted by five volunteers.

Reasons for project and inspiration

The group's previous CCF project 'Towards Zero Carbon Bute' calculated the carbon footprint for the island and piloted a number of active travel and energy efficiency retrofit approaches to reduce it. Barriers to active travel were identified and included a lack of resources to identify existing cycling and walking routes and a shortage of safe routes and trip end facilities. Retrofit barriers largely concerned the high percentage of 'hard to treat' properties (pre 1919 stone) and the affordability of measures (27% of the population were income-deprived). 'Overcoming barriers' appealed to the *deepen* refresh theme and was exclusively funded by CCF to help people overcome these challenges.

Aims and approach

The main aim was to reduce obstacles to encourage the community to begin using forms of active transport and make behavioural and physical changes in their home; improving energy efficiency and reducing carbon emissions. Their main approach was to raise awareness by creating links between Bute's carbon footprint and the actions taken by individuals, and provide information, guidance and suitable infrastructure to facilitate change.

Achieving Behaviour Change

The target audience for energy efficiency was broad, reaching out to all householders on the island. The active travel aspect of the project was more specific; concentrating on those who commute less than 2km and currently do so by car. This focus was decided as community feedback suggested this to be a reasonable distance to expect people to cycle or walk.

From previous projects the group had found that it was easier to encourage children to cycle than it was adults. Thus the group wanted to use a diverse range

of activities to ensure that they were able to engage with members across the whole community. This activity was both strategically planned and opportunistic.

A summary of group activities based on the ISM contexts is as follows:

Individual

- Dr Bike repair and maintenance workshops through the local bike shop.
- A monitoring tool, originally designed to calculate carbon emission savings, was used to give participants positive feedback on their active travel progress.
- Home visits delivered tailored advice on energy saving behaviours, measures and signposts to organisations for grants and further support.
- Workshops demonstrated low cost, sustainable ways to draught proof.
- Newsletters were frequently sent out to every home on the island, and a regular slot on local radio advertised the project's various activities.

Social

- Organised group bike rides for a range of abilities which ended with a social at a café. This built confidence and allowed shared experiences.
- Competitions in schools encouraged children to cycle or walk to school.

Material

- Bike shed installed at the Rothesay ferry port to provide a sheltered place for islanders commuting to the ferry to store bikes.
- Signs installed across the island to highlight safe cycle routes. These detailed the journey time (not distance) to the next village or attraction.
- A map of the island displaying the cycling and walking routes was produced and distributed. This also detailed the journey time in minutes. A copy of this map is given free to locals and tourists who hire bikes.
- Free bike hire vouchers were distributed for those who did not own a bicycle.
- Pedometers distributed to encourage people to walk and energy monitors to encourage people to reduce their consumption.
- One project worker trained as a Green Deal Assessor to make assessments and subsequent grant funding more accessible.

Successes and Benefits

<u>Project development and delivery</u>

Project workers received guidance from the voluntary steering group. This included the owner of the local bike shop who was able to provide direction and feedback throughout the cycle route map and signage design process. Both these measures have since received positive feedback from customers at the cycle shop.

A number of householders and businesses installed energy efficiency or renewable measures as a result of the information and guidance received through the project. This ranged from draught excluders to solar PV panels.

Community

Participants appreciated having someone local that they could contact for advice who was able to understand the uniqueness and challenges of island life. Carbon savings were detailed in the local newspaper at the end of the project and many commented that this had given them a sense of community achievement.

Wider benefits

A participant of the active travel project felt that their health had benefited as a result of the increased activity, explaining that they had been meaning to walk to work for some time but the project gave them ‘another push’ to start.

The cycle route map and signage has encouraged visitors to explore more of the island as the times make the distances easier to comprehend. The bike shop owner explained “[Previously] *visitors would just go out and come back an hour later because they didn’t know how long it would take them to do that distance so they just didn’t do any further”*.

CCF agreed to allow the group to invest some remaining budget in improving the energy efficiency of their offices. Infrared heating panels, energy efficient lighting, thermal blinds, solid wall and floor insulation were installed and the offices are now used regularly as a demonstration area for the public.

Carbon Calculations

The group found that the data collections and calculations relating to active travel were easier than the energy efficiency aspects. It was more straightforward to determine the savings from someone not using their car when compared to a variety of potential savings through energy efficiency measures and behaviour change. For the travel calculations participants were asked to complete a miles log when they substituted a car journey with walking or cycling. This was entered into a monitoring spreadsheet, which automatically calculated the savings figures.

Energy efficiency savings were calculated by asking participants to submit fuel bills for the periods before and after the home visit. The group had previously been performing calculations based on surveys designed to capture behaviour change and measures installed. However this data was more challenging to collect and they found that it over-estimated savings compared to the actual figures taken from fuel bills. From the data collected the lifetime carbon emission savings achieved by the project were calculated to be 321.33 tonnes.

Challenges and Lessons Learned

Project development

The group had wanted to pedestrianize the main shopping area for a day to encourage people to walk or cycle to town. However this plan was unable to proceed as it was met by opposition from local businesses.

Delivery

The process of instigating the cycle signage took longer than they had previously expected as detailing the time in minutes did not sit with existing signage policy; something on which they worked with the Council to overcome.

Parents were concerned about the safety of children cycling to school. The group had hoped to train staff at the bike shop as Bikeability trainers so that they could cascade their knowledge onto parents at the school. This would have allowed them to teach both children and adults how to ride a bike safely, bringing further business and encouraging more people to cycle. Unfortunately they were unable to find a course held close enough for them to attend.

The group also tried to support an installer on the island through the PAS 2030 process to enable them to install measures through the Green Deal. The installer needed to complete an install to achieve the qualification, but there was no funding available at the time thus preventing this happening.

Legacy / Looking Forward

The signage and bike shelter will help members of the community and tourists for years to come. The cycle lane feasibility study and plans developed during the project were not taken forward as a successful funding source was not found, but another local sustainability group are now using these plans to pursue further funding. The active travel monitoring spreadsheet that the group designed has been shared and is being utilised by other CCF groups with active travel projects.

A volunteer who was trained to carry out energy audits had been unemployed for some time, but this training gave them the confidence to complete a successful job application. The project worker who received training to enable the group to offer Green Deal Assessments now works for a local housing association; helping them to improve their housing stock in line with the Scottish Housing Quality Standard and Energy Efficiency Standard for Social Housing.

Fyne Futures have continued to grow as a social enterprise, delivering a range of environmental sustainable services and goods which they are using to provide jobs and training opportunities for the local community.

Website:	**http://www.fynefutures.org.uk/**

R U Up 4 It? – RoWAN (Ross-shire Waste Action Network)

Project value	High (£130,295 – £450,000)
Duration	Three years
Refresh Elements	Deepen: Mature groups, previously funded by CCF
Topic(s)	Food, Waste

Project Details

Background to the group

RoWAN (Ross-shire Waste Action Network) is a local, grass-roots organisation working towards zero waste. They work on a number of waste reduction projects with audiences including householders, schools and businesses. Established in 2000, the organisation comprises five board members and, currently, 1.5 staff plus a contract worker. Two project workers ran the R U Up 4 It project and worked to raise awareness of the waste issue and promote sustainable waste management.

Reasons for the project and inspiration

'R U Up 4 It?' was a Junior CCF (JCCF) food waste reduction project borne from a previous CCF project 'Eat It', which worked with schools to reduce waste. It met the *deepen* refresh theme, building on the success of 'Eat It' and expanding to cover more schools and households in Ross-shire. This was a standalone project exclusively funded by CCF. However it ran alongside other initiatives funded by other organisations.

Aims and approach

The main purpose of 'R U Up 4 It?' was to increase the community's awareness of climate change, reduce food waste and encourage them to compost and grow more. The proposed outcomes were to reduce community lifetime carbon emissions by reducing waste going to landfill, growing more food at home, increasing teenage community members' involvement in volunteering activities by 5% over the life of the project and reducing the annual food bill of the average household involved in the project by £130 over the life of the project.

Achieving Behaviour Change

The project's target audiences included school children and staff, uniformed groups such as Brownies and Scout groups, teenagers and householders. Teenagers and householders were the most challenging of the groups to engage with. The most successful route for engaging with householders was through the schools, which were on the whole easy to work with, particularly if there were teachers who were passionate about the environment. However there were instances where some schools experienced staffing problems and as a result their focus was elsewhere. This made delivery of the project in these schools very challenging.

The main approach to engaging householders was to promote the message that growing your own food and introducing waste saving tips could reduce food bills. The topic of climate change was introduced at a later stage. With schools and uniformed groups, climate change took a higher priority because they were more receptive to the subject.

A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- Encouraged and supported the schools to carry out waste audits to identify areas for improvement and to measure the impacts of the changes made.
- Ran workshops and competitions to reduce the amount of packaging in children's packed lunches.
- Food miles activity - children placed different types of food on a giant world map to show where the food had come from. This raised awareness and prompted the children to check the origin of food used in cookery classes.
- Environmental badges and awards (for uniformed groups).
- Workshops for householders on composting, growing and cooking.
- Registered with Young Scot to encourage teenager involvement, giving out Young Scot vouchers to reward teenagers who took part.

Social

- Encouraged children to taste the food that they had grown as a group.
- Children were excited about the project and encouraged their parents to grow and compost at home.
- Scout groups grew vegetables and distributed them to elderly members of the community.
- Held an ideas sharing event for teachers and children.

Material

- Provided poly tunnels, and Ridan and Green Johanna composters to the schools.
- Introduced the practice of sustainable waste management and food growing into schools daily routines.

Successes and Benefits

<u>Project development and delivery</u>

The project workers initially undertook a number of visits and discussions with the schools to establish how they would like to be supported; this included discussion with the children. This had a positive impact on how the children and teachers were involved once the project began. Teachers praised the level of communication and support offered by the project workers.

Schools that were serving food in non-recyclable polystyrene packaging discontinued this approach when supported by the project to rethink their current

practices. One teacher felt that the project had changed habits and challenged many peoples' existing perceptions that composting was smelly and difficult.

"Some children are growing at home where they weren't growing before."

Community

An event for sharing ideas was held with teachers and children from the schools who had been involved in the project. Teachers found the opportunity to make a connection with another school valuable and an exchange visit to another school's garden was planned for the future. In addition, the project worked with Brownies and Scout groups to help them achieve environmental badges and awards. As part of this, the groups used a growing space to produce food for elderly members of the community.

Wider benefits

Children were encouraged to taste the food that they had grown. Trying and tasting as a group changed some children's perceptions of food that they previously would not eat. One school with a Ridan composter had a number of other schools and local businesses visit their composter as an example of best practice. Close working with Highland Council catering team has resulted in their staff taking on board some of the food waste activities.

Carbon Calculations

Data to calculate carbon savings came from a number of sources. Produce grown was weighed, food waste diaries were completed by householders and surveys and school food waste audits undertaken. From this data the lifetime carbon emission savings achieved by the project were calculated to be 301.10 tonnes. Some of the carbon emission reduction targets were not met due to the challenges of collecting data from householders; in particular the shift during this project to requiring primary data for reporting made it difficult to re-engage with those who were involved at an earlier stage. Also, the Council started a food waste collection service with some of the schools, meaning that this aspect of carbon emissions reduction could no longer be attributed to the project.

The group felt that the guidance made the calculations involved in the process relatively straightforward; it was collecting the data from participants which was more challenging. Data to calculate carbon emissions savings was collected from participants face-to-face. This worked considerably better than via other mediums, especially when aided by incentives including vouchers for school equipment and money off for household composting equipment.

Challenges and Lessons Learned

Project development

There were difficulties with changes in staff at schools and engaging young people which meant that the steering group could not be formed. To overcome this, the

project workers worked closely with the head teachers, parents and community groups, and used focus groups to give the project direction.

Delivery

Encouraging young people to get involved in the project was a challenge. One pupil explained that *"messing around with food waste just isn't cool".*

Engaging with householders was also a challenge and advertising the workshops in the paper and through posters proved unsuccessful. Social media such as Facebook proved to have a higher success rate, clearly advertising the dates and times of workshops so people did not need to get in touch for more information. At a later stage project workers began holding advice stalls at parents' evenings which also proved successful.

Legacy and Looking Forward

The project has left a number of material, cultural and capacity-based legacies. The use of composters and food growing has become part of day-to-day activities for many of the schools.

School eco groups were started and they continue to meet regularly to discuss environmental topics and raise awareness by for example running competitions. One school has started developing a raised bed growing space using funding which they applied for from an alternative source. In addition, a teacher who was involved in the project (but is now at a school in a different area) has applied for funding to install a composter at their new school.

RoWAN are currently working on a smaller project called 'Tunnel Vision'. The project teaches pupils in one school about growing their own food and helps support them to continue to use the poly tunnels installed through 'R U Up 4 It?'.

Website:	**http://www.rowan.org.uk/**

Wardie Climate Champions

Project value	Low (£0 – £65,689)
Duration	One year
Refresh Elements	Broaden – New groups to CCF
Topic(s)	Energy Efficiency, Transport, Food, Waste

Project Details

Background to group

Wardie Climate Champions (WCC) is a community group formed by members of the congregation of Wardie Parish Church (WPC), Edinburgh – a Church of Scotland religious community. Its board membership consists of around 60 elders plus 30 co-opted members, who serve a term of three years; the board has three committees – Property, Finance and Business. The physical assets of WPC consist of the main church building and a number of ancillary halls. WPC is Edinburgh's first eco-congregation. It is also a Fair Trade church and won the Lord Provost Fair Trade Community Award in 2011.

Reasons for project and inspiration

The WCC project was conceived following concerns raised by the church's property committee about the rising cost of energy associated with operating the church building and its halls. An energy audit was undertaken by the Energy Saving Trust (EST), the results of which indicated that energy efficiency measures could be installed that would significantly reduce energy costs and CO2 emissions. EST suggested the group apply to the CCF for funding to enable these measures. As part of the CCF funding application WCC also committed to undertaking a climate change education programme, focusing on CO2 emission reduction activities.

Aims and approach

The main aims of the project are summarised as follows.

- Reduce CO2 emissions resulting from use of the church's hall through a planned programme of energy efficiency improvements.
- Lower transport-related CO2 emissions by reducing car use and encouraging active travel to and from the church.
- Reduce (by 10%) CO2 emissions arising from 20 local households through encouraging energy consumption behaviour change.
- Encourage the production of locally-grown fruit and vegetables in local community and church gardens.

The requirements of CCF funding meant that the church, as a centre of religious worship, could not be the subject of energy efficiency measures. Therefore a boiler upgrade was paid for by the church (although zone valves and room thermostats associated with the heating system were funded through CCF).

Achieving Behaviour Change

The target audience for the project were the wider Wardie community (i.e. congregation members and local residents using the halls for other activities). Active engagement with lay members of the local community (a larger group than the church congregational alone) was found initially to be a daunting but necessary consideration by the project team.

A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- Workshops, training and events to explain the impacts of action/inaction encouraged enduring behaviour change relating to climate change (i.e. reduced material and energy use, active travel, waste reduction and local food production) among target audience.
- Domestic energy monitors used to demonstrate the direct link between householder energy behaviour and cost / CO2 emissions, again encouraging behaviour change.
- Providing emission reduction and waste reduction enabling information (e.g. bus timetables, cycle route maps, educational events) via notice boards, community newsletters, the church website, etc.
- Introducing environment-themed content into church services.

Social

- Holding ‘Carbon Conversations’ groups, in association with University of Edinburgh’s Department of Social Responsibility and Sustainability, and engaging with other community groups.
- Organising EST ‘FuelGood’ eco-driving lessons and a monthly walking group.
- Group / social activities (e.g. Walk to Wardie, an event involving 600+ people) challenged established behaviours and broke down barriers.
- Organising two garden open days, to encourage community members to grow their own food.
- Holding an energy fair in partnership with other groups with an interest in reducing CO2 emissions.

Material

- Upgrading building fabric and controls for energy efficiency, to enable energy efficient behaviours (e.g. zonal heating control).
- Energy monitors issued to help reduce domestic energy use; cycle racks installed to encourage active travel.
- Establishing more productive and enduring gardening spaces.

Successes and Benefits

Project delivery

Energy efficiency measures undertaken included installation of thermal insulation in attic spaces, the refurbishment of wooden doors and windows with double or secondary glazing, and the replacement of single-glazed aluminium windows with double-glazed timber windows. These measures yielded tangible reductions in energy costs and CO2 emissions. Similarly, enduring CO2 emission reductions were achieved through changing travel behaviour (e.g. car sharing to church services, 'Walk to Wardie' campaign).

Community

Encouraging the local growing of fruit and vegetables was a particular success. This was enabled by a community visit to the Edible Garden Project at the Royal Botanic Gardens, Edinburgh, and 'open gardens' events held within the local community. There was great enthusiasm for the latter event (which was attended by approximately 100 community members) with plans in place to repeat the event in the coming year. Some 11 local gardens (with both experienced and novice gardeners) contributed towards this aspect of the project, with one established garden yielding an astonishing 300kg of produce in one year. Gardening also proved to be a social event that increased community cohesion.

Wider benefits

Effective working relationships were formed between members of the project committee, with existing skills being complemented and new skills being developed. Moreover, yielding more comfortable and amenable spaces through energy efficient refurbishment yielded greater use of the halls by other community groups. This resulted in a small increase in rental revenue and provided ongoing opportunities for the church to continue to raise awareness about climate change and CO2 emission reduction activities. The realisation of greater community cohesion was also noted.

Carbon Calculations

Data that allowed CO2 emission reductions to be determined were collected for each of the main activity types undertaken in the project. Energy consumption savings resulting from the installation of energy efficiency measures were estimated from meter readings compared to a baseline. CO2 emissions associated with changes in travel behaviour were estimated from surveys, domestic energy reductions from returned energy monitor readings, and food miles saved from weighing locally produced fruit and vegetables. The CO2 emission reduction calculations were performed by an engineer who was a member of the church congregation (the project team struggled to make sense of this process). In total, it was estimated that a lifetime reduction of 526 tonnes of CO2 was achieved.

Challenges and Lessons Learned

Project development

The historic / listed status of some of the church buildings subject to the energy efficiency measures proved to be an initial stumbling block for the project team, who had no experience of making a listed building planning permission application. Exploring and understanding this process took a considerable time. Fortunately, an architect based in the local community was able to make the application on behalf the group. Advice offered by the project team to other community groups contemplating a similar refurbishment was to engage with the planning application process as soon as possible.

Delivery

The monitoring of domestic energy consumption/savings in a number of local households did not go as well as anticipated. Due to the time of year when the monitoring was conducted (i.e. autumn – the start of the heating season) it was found to be difficult to encourage any significant reductions in energy use. Furthermore, the reporting mechanism (including getting householders to record and forward monitor readings consistently) was problematic, although there was some success in distributing information on consumption across participants to enable them to compare their use. In addition, the use of energy monitors in the home did raise awareness and encourage householders to consider energy reduction behaviours, such as switching off electrical appliances when not in use. The project team indicated that had it had more time to prepare for this element of the project then it would have been more successful.

Legacy / Looking Forward

As a result of the project WPC signed Scotland's Climate Change Pledge for Communities, which "*links grass-roots, community activities into the bigger picture - contributing towards Scotland's ambitious targets to cut greenhouse gases and developing our collective resilience for the future*". Furthermore, the project team developed an ongoing sustainability strategy for the church, substantially based on this pledge.

Website:	**http://www.wardie.org.uk/wardie-climate-champions**

WSHA Energy Advice Project

Project value	Low (£0 – £65,689)
Duration	18 months (truncated to 15 months)
Refresh Elements	Broaden: Scottish Index of Multiple Deprivation bottom 30%
Topic(s)	Energy Efficiency

Project Details

Background to group

Whiteinch and Scotstoun Housing Association (WSHA), a Glasgow-based social housing provider, was formally constituted in 1977. It declared its first Housing Action Areas in 1978. WSHA now offers just over 1300 properties for rent and, through a subsidiary company, delivers factoring services to approximately 600 domestic and commercial properties. The central mission of WSHA is to provide and maintain the highest quality rented housing and environment, with specific aims to:

- provide responsive, quality services which reflect the identified needs and demand of the Whiteinch and Scotstoun communities.
- contribute to and participate in the social, economic, cultural and environmental regeneration of the area.

Reasons for project and inspiration

The WSHA Energy Advice Project grew out of a rising demand for advice on fuel poverty and energy efficiency from WSHA tenants. WSHA had been making referrals to G-Heat (Glasgow Home Energy Advice Team) through WSHA's Tenancy Sustainment Officer. However, a year-on-year increase in the number of these referrals highlighted that WSHA would have to tackle the issues that were being raised by its tenants directly. Identifying this gap in WSHA services led it to create the Energy Advice Project.

Aims and approach

The primary aim of the project was to provide an energy advice service on a one-to-one basis through home and drop-in/office visits with WSHA tenants so that they could obtain knowledge to lower their energy use (by a target of 10%) and avoid fuel poverty through behaviour change. The service was delivered by both volunteers and housing association staff. Initially the project involved eight volunteers, but only four remained at project end. In part this was to be achieved through loaning electricity monitors to tenants. A particular focus was given to those tenants who lived in properties with electrical storage heating (generally acknowledged as being expensive to operate), as well as tenants considered by WSHA to be especially vulnerable (e.g. the elderly, young families, those with health and addiction issues). Also, events were to be held to raise the profile of the project beyond the WSHA tenant community.

Achieving Behaviour Change

A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- Knowledge was provided to tenants to reduce energy consumption and associated costs and combat fuel poverty; tenants were primarily motivated by reducing expenditure on energy rather than addressing climate change.
- Tenants were encouraged to take control of their energy provision arrangement but lacked agency; often Energy Advisors were required to act on their behalf with energy companies.
- Although tenants may make changes to their energy consumption behaviour in the short-term, ongoing engagement was required in order for these changes to persist.
- Tenants often did not know how to efficiently operate their heating systems.
- Volunteers were empowered; some went on to engage in other activities with WSHA beyond the scope of the project.

Social

- Tenants were influenced by volunteers drawn from the local community; raising awareness of the project within and beyond this community was achieved through events, articles in newsletters, etc. (which lead to referrals).
- Climate change remained an abstract concept to many tenants.
- A perception arose amongst the project team that energy providers were not effectively dealing with queries from community members, indeed that the companies stood to gain from keeping customers on high tariffs.

Material

- Heating system controls were difficult to use for some tenants, with storage heaters proving particularly challenging.
- Energy monitors were used to collect domestic energy consumption data and helped to inform the tenants about how their energy consumption behaviours influenced fuel bill costs.

Successes and Benefits

<u>Project delivery</u>

Based on ‘soft’ information (i.e. not energy or income information) provided by clients or determined by project Energy Advisers, 30 tenant households were deemed to be in fuel poverty. Addressing fuel poverty required sensitivity to the circumstances of each household. However reduced expenditure on energy was achieved through a range of actions including:

- Providing energy reduction tips, heating system advice and energy monitors.
- Changing payment methods to direct debit (where appropriate).
- Changing tariff with existing energy supplier or switching energy supplier.

- Applying for financial support (e.g. British Gas grants, Warm Homes Discount).

The average saving on energy costs for households in fuel poverty who received support and made appropriate changes was £150 per annum. Tenants were also provided with practical help and support to manage existing fuel debts. Overall, this help was deemed to be delivered more effectively than referring tenants to an outside agency because of WSHA's ability to provide additional welfare support.

Community

Through one-to-one advice, outreach activities providing information, training workshops and hands-on volunteering, skills and services were delivered to WSHA tenants to allow them to make positive choices concerning their energy needs. Advice, which was tailored to each tenant, covered topics including:

- Heating system operation and control setting.
- Meter reading and changes associated with prepayment meters.
- Understanding energy bills and statements.
- Electrical appliance energy consumption and associated costs.
- Contacting utilities companies with confidence.

These measures contributed to reduced energy costs and CO2 emissions among WSHA tenants. Feedback from tenants on the advice given was positive. One tenant reported, "*I did not have a clue how to use these storage heaters before but it's much clearer now*".

Wider benefits

It was found that specific home visits would lead to further home visits to family members and/or neighbours keen to take advantage of the same advice and services being offered by the project. These additional home visits also served to create a greater sense of cohesion within the community. Moreover, some volunteers on the project sought to become involved in other WSHA activities/initiatives. For example, one volunteer became involved in a community upcycling group.

Carbon Calculations

Carbon calculations were found to be relatively straightforward – "*just pop the data into the spreadsheet*". However, collecting energy consumption data from tenants on a short-term project was extremely challenging. Determining the impact of engagements required availability of the previous year's billing information and access to a bill/meter at the end of the next year. Also, as energy use is seasonal, analysing partial data could lead to a false impression of actual tenant household energy use, while tenants on prepaid meters are unlikely to have any of the requisite data. It was estimated that the lifetime (over 5 years) CO2 emission savings resulting from the project were approximately 350 tonnes.

Challenges and Lessons Learned

Project development

Some WSHA tenants had difficult or challenging personal circumstances; only 7% of tenants engaged with were considered not to be vulnerable. Typically they were in dispute with energy suppliers or in fuel debt and required many engagements, including multiple visits and verbal and written advocacy, which could not be accurately predicted in advance. This was a key resource consideration and influenced the planning of a future CCF-funded energy advice project.

Delivery

Contacting energy suppliers on behalf of tenants (who frequently lacked the knowledge, confidence or ability to deal with these companies) was also resource intensive. Data protection law required that tenants give permission for their account details to be discussed, which caused delays and confusion. Excessive waiting time to be put through to call centres resulted in multiple contact attempts and a lack of continuity when dealing with energy company representatives. Call centre staff quality was also variable. This raised the need for energy suppliers to provide dedicated teams to deal with third party enquiries.

It was found to be more effective to recruit and train volunteers from within the community than from other areas. Those volunteers that remained at the end of the project came from the Whiteinch or Scotstoun areas and had a vested interest in the project being a success.

Legacy / Looking Forward

WSHA received additional funding from CCF for a new energy advice project that commenced in April 2015, allowing it to continue to provide energy advice services to the local community for a further year. Volunteers showed a great deal of enthusiasm for the project and were keen to learn and assist where possible. They continue to engage with issues relating to energy efficiency in the local community.

Website:	**http://www.wsha.org.uk/more-housing**

LEAP – Make a Difference Project

Project value	High (£130,295 - £450,000)
Duration	Three years
Refresh Elements	Broaden – Older people
Topic(s)	Energy Efficiency

Project Details

Background to group

Lightburn Elderly Association Project (LEAP) is a charitable organisation based in Cambuslang, South Lanarkshire that aims to support older people (aged 50+) to remain active and independent in their own homes. In 2010, LEAP received the distinguished Queen's Award for Voluntary Service and, in 2014, the Quality in Befriending Award. LEAP had previously been granted CCF project funding – from April 2009 for three years and from April 2011 for a year. Both of these projects provided advice to elderly householders in relation to reducing energy costs / staying affordably warm, and decreasing associated CO2 emissions in the Rutherglen, Cambuslang and East Kilbride areas.

Reasons for project and inspiration

Following the successful implementation of the two previous CCF projects, LEAP sought to expand its services into new geographical areas of South Lanarkshire. It successfully applied for CCF3 project funding in order to apply the skills and experience gained on these projects to deliver a similar project in Hamilton, Blantyre and Larkhall. These are largely urban neighbourhoods and contain localities that are included in the bottom 15% of disadvantaged communities in Scotland, according to the Scottish Index of Multiple Deprivation. This project appealed to the *broaden* refresh theme; LEAP is a community group that works with deprived / hard-to-reach people, specifically older people. The project was solely funded by CCF; funding was not sought from other sources.

Aims and approach

The main aim of the project was to provide advice to elderly householders in relation to reducing energy costs, staying affordably warm and decreasing associated CO2 emissions. Specific project outcomes, to be implemented through a combination of staff and volunteers, were as follows.

- Raise awareness of actions taken within the home that contribute to climate change, and empower communities to make changes to reduce their CO2 emissions.
- Work with households to provide energy savings solutions and devices.
- Provide guidance on grants available for loft and cavity wall insulation.
- Deliver 20 presentations about energy efficiency solutions per area per year.

- Provide a ‘tariff support’ advocacy service to householders who were dealing with utilities companies.
- Recruit and train 2-4 home energy efficiency trainees and 22 local volunteers.
- Work with local residents to reduce their CO2 emissions by encouraging low carbon travel options and the purchase of locally produced food (although this outcome was not addressed strategically).

These outcomes were set to reduce community CO2 emissions by 3000 tonnes through offering advice and changing behaviours within 900 homes throughout the three targeted communities.

Achieving Behaviour Change

The target audience for the project was elderly members of the Hamilton, Blantyre and Larkhall communities. They were deemed to be suitable parties to engage with as LEAP had had success with this type of group on earlier CCF projects relating to energy efficiency.

A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- Project activities required to be sensitive to tenant priorities – reducing energy costs and not addressing climate change was the primary motivator for community members.
- Anecdotally, cost savings were held in some cases to potentially result in greater energy use (and CO2 emissions) as energy became more affordable through project activities.
- Energy advice given had to be sensitive to the lifestyles/preferences of householders (e.g. hours spent indoors, age and comfort requirements.)

Social

- Utilities companies and ‘door-steppers’ were not trusted by older people; project participants had to work patiently to establish trust with some tenants.
- Older people were not used to the idea of regularly changing energy supplier in order to get the best deal; explaining this was a particular project focus.
- Energy consumption behavioural norms were challenged through education at informative community events.
- Lack of an established presence in the new areas and staffing issues were barriers to project implementation.
- Effective relationships were established with other local community organisations, agencies (through referrals) and local authorities, to provide shared knowledge and tenant benefits.
- ‘Word of mouth’ within local communities was an important means of information dissemination; this fact was used to streamline / make more effective project communication.

Material

- ‘Hard’ energy efficiency measures (e.g. loft and cavity wall insulation, new heating systems) were promoted through energy efficiency assessments (although funding for these measures was curtailed by the withdrawal of existing external funding streams).
- Energy efficiency behaviours were encouraged by remote control electrical sockets.

Successes and Benefits

Delivery

Energy consumption and climate change advice was delivered to 516 of an anticipated 900 homes and community members. For each household, energy surveys were conducted, heating systems were set in accordance with occupant needs and home energy solutions were suggested. Subsequent monitoring and evaluation of households determined much of the energy efficiency advice given (e.g. not overfilling kettles, not putting electrical devices on standby when not in use, reducing washing machine water temperatures) was still being followed. Persisting with this behaviour yielded tangible reductions in energy consumption costs for elderly community members.

Community

It was estimated that householders who took advantage of the energy fuel bill tariff checking service offered saved, in total, £31,778 over the life of the project. This equates to an average of £175 per year per household. Furthermore, 65 advocacy cases – ranging from changing to a simple pre-payment meter to multi-agency liaisons in relation to an expensive-to-run heating system – were supported.

Wider benefits

Project volunteers and trainees were trained on how to assess homes for energy efficiency and to read energy meters. Upskilling was recognised as enhancing employability. Furthermore, two members of staff were awarded formal qualifications: one received a City and Guilds Domestic Energy Assessor qualification; the other was recognised as a Green Deal Assessor; and both worked towards a SCQF 9 Certificate in Leadership.

Carbon Calculations

The baseline CO2 calculations for the CCF3 project were based on those of the previous CCF projects, together with estimates of how many homes could be reached and the energy efficiency of known measures. However, changes to the CCF-approved method for calculating CO2 reductions from domestic energy, to make it more robust and realistic, and the introduction of the ‘Green Deal’ (resulting in a reduction in alternative grant schemes to implement energy efficiency measures) made the targets more difficult to meet. A slower than expected

engagement rate in the new areas also contributed to a gap between the CO2 reduction baseline target and what was realistically achievable.

Challenges and Lessons Learned

Project development

The failure to develop and implement a strategic monitoring and evaluation approach to measuring CO2 emission savings was a barrier to achieving project outcomes and left the final project manager with the task of gathering two years' worth of historical energy consumption data. The end result was that CO2 savings that could be verified were significantly less than estimated in the application.

Delivery

Issues with the management of the project in the initial stages tempered the effectiveness of project activities and led to a high turnover of staff (especially those in the role of Volunteer Recruitment Officer – four in turn were employed) and volunteers. Significantly, in order to increase the likelihood of meeting its stated outcomes, the project changed from being volunteer-led to employing full-time staff in its later stages to fulfil the same roles. Although issues with the quality of staff can be difficult to anticipate, the project team concluded that it was important to have more robust delivery mechanisms in place so that personnel changes would not have such an adverse impact on project activities.

Legacy / Looking Forward

The project's principal legacy was the reduction in energy consumption and associated fuel bills amongst a significant number of the members of the target area communities. A further long-term benefit was developing groups of local people who were highly-trained in energy efficiency assessment. The project team noted that if they were to attempt this type of project again it would not do so via a volunteering model, an accepted CCF requirement. Rather, although volunteers would still be used, there would be a greater focus on employing staff to deliver project aims.

Website:	**http://www.leap-project.co.uk/**

Bike Revolution (Outfit Moray)

Project value	**High (£130,295 - £450,000)**
Duration	**2 years**
Refresh Elements	**Broaden, Explore: New to CCF; revenue-raising**
Topic(s)	**Waste reduction, Transport**

Project Details

Background to group

Outfit Moray was set up in 2003 and focuses on delivering accessible, outdoor education and adventure activities for young people. A company limited by guarantee and a registered charity, it originally developed from the Elgin Youth café and is based in Lossiemouth, Moray.

Reasons for project and inspiration

In April 2012, Outfit Moray secured funding from Moray LEADER, Highlands and Islands Enterprise and Cycling Scotland to set up a pilot project focusing on meeting a need for second hand bicycles and for cycle servicing and support. This need was identified via requests from local people who had been made aware of the organisation through the sale of Outfit Moray's ex-hire bicycles. This project enabled a bike refurbishment and sale process to be set up and also resulted in the support of cycling in the area via activities such as bike health checks.

Aims and approach

Outfit Moray sought to extend and expand their cycling-based project and was signposted to CCF by an outdoor education network. Although saving carbon was not the key initial driver for the project, Outfit Moray had a general interest in saving carbon and the CCF was seen as suitable for the purpose of funding the growth of the pilot into the Bike Revolution project. Bike Revolution appealed to the *broaden* refresh theme (a group new to the CCF) and the explore theme (as it sought to raise revenue).

The project was developed to reduce CO2 emissions and promote healthier lifestyles by discouraging car use and promoting the use of cycling for commuting, health and leisure reasons. Prior to the CCF application, encouraging cycling and behaviour change was not a particular focus, rather the project focused on reducing waste to landfill and reuse. The CCF funding gave structure to the project and *"gave us a massive focus on carbon and on behaviour change"*, (rather than just on bicycles, recreation, education).

Bike Revolution employed two full-time mechanics to work on bicycle refurbishment and a marketing co-ordinator 4 days per week to lead on the promotion of the project. A van was purchased with the funding to assist with the collection of materials and attendance at workshops. In addition the workshop space was

developed and more tools purchased to enable more staff (and volunteer mechanics) to work concurrently.

A key aim of the CCF funding was to help the project (but not the whole of Outfit Moray) move away from grant funding and to become self-sustaining. In addition the project sought to increase volunteering opportunities and to increase employability in the area.

Achieving Behaviour Change

The target audience for the project was broad, reaching out to all potential cyclists in the community. A summary of the project activities, measures and behaviour change findings arranged in terms of ISM contexts is as follows.

Individual

- Cycling advice packs issued when recycled bikes purchased to encourage cycling, promote benefit and routes and complemented by verbal advice from staff.
- Training sessions and courses on bike maintenance.
- Drop in repair sessions and bike building skills sessions at schools.
- Trained cycling leaders.
- Delivered basic bike skills courses for adults.
- Prizes offered to cyclists for miles travelled / commuted and monthly prize draw for those completing travel diaries and logging miles cycled online.
- Prizes included free servicing.

Social

- Presentations at a wide range of community events.
- Bike Doctor events and schools visits.
- Delivery of own events including bike sales and pop-up shops.
- Family rides, including with local businesses and in partnership with local events and festivals.
- Development of local women's cycling group (supported by CTC Scotland).
- Promoted active travel via staff (e.g. attending training events on a 'cargo bike' instead of using vans, cycling to meetings).
- Local 'Strava Club' (social media cycling site) set up to log miles cycled by recipients of services.
- Facebook group set up to promote activities and to some extent advice. Twitter account set up, although little used.
- Advertised classes, meetings and shared stories to promote cycling.

Material

- Refurbished and resold second-hand bicycles.
- Bike servicing services.
- Extensive use of recycled materials in workshop to promote reuse; e.g. building benches, sheds, cycle hangers from reused materials, including packing crates, old cycle parts.

Successes and Benefits

The group felt that they had learnt extensively on how to promote and engage with the local community and the project gave them the confidence to try different things, see what was popular and deliver on what worked (in terms of types of events, engagements and working with partners such as schools and businesses).

Some of the practical elements of the project in particular were identified as successes, including bike maintenance and refurbishment classes, bike building training for schools and training for younger people. The sale of bikes was another key success (395 bikes were refurbished over the course of the project and 344 bikes were serviced and/or repaired). The group identified many repeat customers who brought back bikes for rebuilding that their children had grown out of and left with a new one, thus promoting a recycling and reuse culture. In addition, there was anecdotal evidence of significant health benefits for some who had started to cycle. They were variously described as 'looking different', and saying that cycling had changed their life or lifestyle in a significant way.

Project delivery

The CCF funding requirement to manage progress and spending and to feedback regularly to the funder was described as giving rigour to the project creating a different, more 'business-like mind-set' in Outfit Moray as a whole. This helped it move Bike Revolution towards being self-sustaining.

The project also identified a number of successful partnerships including Moray Council and Police Scotland. They respectively held bikes for refurbishment at their recycling centres and in lost property. Other partners included local schools and businesses for the delivery of training and maintenance sessions, and the local sustainable travel officer who worked closely with the project to coordinate activities.

Community and Wider Benefits

Other community and wider benefits identified included the training of local volunteers and staff in bike maintenance, and other skills and outdoor leadership courses for young people. Both of these were described as giving recipients self-confidence, teamwork and organisational skills to support employability.

Carbon Calculations

Outfit Moray had not undertaken any carbon calculations before the project and indicated that working out how to do it was not easy: *"it was something completely different and new"*.

Collecting data on material recycled and reused was relatively straightforward, but the groups found that calculating savings was a challenge in terms of identifying the correct factors to use, with initial ones obtained not proving fit for purpose.

Consultation with KSB Development Officers helped to clarify this. Calculating changes arising from behaviour change and modal shift was much more difficult and the group found it very challenging to prove changes due to the limited level of statistics available to make calculations. Collecting data from customers after they purchased a bike did generate some data, but this was very difficult, even with incentives for diaries or the use of online software. Overall it was estimated that CO2 emission savings resulting from the bike refurbishment, metal recycled, and car miles reduced were approximately 20.3 tonnes of CO2.

Challenges and Lessons Learned

The key lesson learned for the group related to the collection of data and in identifying target audiences for modal shift. On reflection the group would have liked to have worked more closely with schools and businesses and targeted the school run and commute to make it easier to stay engaged with clients and collect data. The group would also have built-in competitions earlier, incentivised organisations rather than individuals to feedback data, and would have set up the modal shift outcomes and how to measure them earlier in the process. One staff member highlighted that lots of focus went on getting the project up and running, so at the outset the evaluation took a back step and that this was an opportunity missed.

The group also learned much about how to engage and target their offering. This included, for example: realising that bike sales at Christmas were not an effective use of resources (as people tended to want to buy new at that time of year); that stand-alone pop-up shops and bike maintenance sessions do not work well and that these are best placed at events or locations where people cycle to; and that the use of gimmicks to catch attention at events and make cycling interesting (e.g. a smoothie bike, or novelty bikes) can work well in motivating engagement.

Legacy / Looking Forward

Bike Revolution has left a strong legacy of trained staff, an established service and has been able to generate enough income both to become self-sustaining and to generate a surplus to support the charitable work of Outfit Moray.

Website:	**http://bike-revolution.co.uk/**

Caithness Carbon Challenge

Project value	**Medium (£65,689 - £130,295)**
Duration	**3.5 years**
Refresh Elements	**Broaden: New to CCF**
Topic(s)	**Energy**

Project Details

Background to group

The steering group for the Caithness Carbon Challenge project was set up specifically for this CCF project and was made up of board members of a local housing association plus key members of the community, including representatives of other local community groups and a representative of a local business.

Reasons for project and inspiration

The project sought to encourage the community in the area to reduce their carbon footprint through more effective management of energy in their homes. The steering group established that there was a high level of fuel poverty being experienced in the area and identified a need for further support in relation to energy advice. This need was identified through previous local projects to tackle this problem and also via consultation with individuals, organisations and community groups throughout the county.

Pentland Energy Advice, an independent local energy advice group developed out of the Pentland Housing Association, supported the development of the proposal and were used to manage the delivery of the energy advice project. Pentland Housing Association were on the steering group of Caithness Carbon Challenge.

Aims and approach

The project delivered expert, in-home energy advice to people that could not afford warmth and electricity. The day-to-day delivery of the project was overseen by a manager at Pentland Energy Advice with significant experience of running this type of service. The advice was provided by two fully trained part-time members of staff that were recruited and trained specifically for this project.

The specific focus of the project was on encouraging behaviour change, initially for a period of two months with each client, to help support them to reduce their energy and specifically electricity costs. Each client received an in-home visit at the start and end of engagement, along with interim follow up emails or telephone calls to check progress and offer additional support.

The project also included some wider engagement with the community via the provision of energy-related advice and information sessions to school pupils (via school visits).

The project did not receive any co-funding, but partnerships were used or built with the local housing association, social work, Citizen's Advice Bureaux and Highland Council housing to generate referrals for advice.

Achieving Behaviour Change

This project focused on encouraging householders to change behaviour in the home through offering specific tailored advice for individuals and households. Although fuel poverty alleviation was a key driver for the project, it did not look at a particular group of people and sought to be all inclusive.

Householders were loaned digital energy monitors and a diary to record energy consumption. This was supported by general energy advice and education. Householders were also encouraged to read their electricity meter as part of the on-going support. The advisers also helped householders to access energy efficiency grants and initiatives that could help them to make energy saving measures in their home.

A summary of project activities based on the ISM contexts is as follows

Individual

- Bespoke in-home tailored energy advice, demonstrating changes that could be made.
- A focus on cost savings more than carbon, although climate change was always mentioned when home visits were made and advice and messages were tailored to each client.
- Paperwork, brochures, leaflets, literature, left with the householder during the visit.
- Additional direct contact (email, phone call) to 'check in' and offer advice.

Social

- Use of local agency with experience of offering advice and good reputation.
- Enthusiasm and knowledge of advisors was identified as a key driver to change.
- Recipients of advice asked to recommend friends.
- Community group talks (e.g. to tenants, 'mums' groups, food banks).
- Tailored presentations for school students.
- Special 'power rangers' material developed for schools to encourage children to take part (17 visits undertaken with schools). Brochures and posters were left and passed on to pupils, potentially reaching 1,000 households.

Material

- Energy monitors issued to participants to demonstrate and record savings.
- Powerdown switches issued (for schools only).
- Incentives ('Kindle' tablet readers) offered to encourage people to engage and take part.
- Use of local Facebook groups to promote and recruit visits, and to offer tips to their advice community.

Successes and Benefits

Project delivery

The biggest success for the project was perceived by project staff as seeing householders increase their knowledge about how much energy they were using, what appliances typically used and how best they could reduce their usage on a long term basis. In particular the use of energy monitors was perceived as hugely successful in engaging households, to the extent that the original approach of loaning them out was changed as recipients wanted to keep them.

In addition to this, the use of social media (in this case Facebook) to promote the service was seen as a hugely successful innovation in the way advice services were promoted. The use of Facebook led to a significant increase in clients and has also been used to disseminate information or 'top tips' on an on-going basis. The work with primary schools was also much more successful than originally anticipated.

Community and Wider benefits

As a result of feedback that the group have received both directly and informally, they believe that there is now a much greater knowledge in the community of climate change and of energy costs and savings. There were also employability benefits of the fund, as the project trained local staff who were able to gain employment as advisors after the project had finished.

Carbon Calculations

The aim of the project was to record the effect of advice via monitoring and recording the kWh usage both before and after receiving advice. The calculations of carbon savings arising from this was a relatively straightforward process due to the use of energy monitors and the protocols that they put in place to collect energy data (direct from suppliers via phone if possible). This was collected on the first visit to the recipient's home and when the advice 'journey' was concluded. This meant that before and after savings could be accurately calculated. The group did however find it difficult to attribute savings to wider activities such as the school based work and the community group visits (although some clients were recruited directly from the latter). In total CO2 reductions of 1462 tonnes were calculated.

Challenges and Lessons Learned

The project learnt a range of lessons throughout the three and a half years of its duration. In particular the group strongly felt the need to ensure that householders kept their energy monitors to ensure behaviours did not revert back to normal.

The group also identified that there are different motivations for change and that although some are worried about climate change, the majority of their audience were focused on the cost they were spending on fuel. As a result engaging or leading on climate change was less effective in many cases.

The group also identified that engaging with people on home energy during the warmer months is more difficult. As a result incentives were introduced to motivate people to request energy advice visits, in particular a raffle to win a free Kindle, which helped to some extent to recruit households to the project.

The group also reflected that there may have been scope to further analyse the information on who was being referred to them. This could have been used to gain more understanding of who was most interested in the offering and assisted with targeting.

Legacy / Looking Forward

The key legacy from the perspective of the project was in the savings and the long term behavioural changes made in the community. However the group acknowledged that 'bad behaviour' can return easily without on-going support. They would have liked to have carried on the project if they could have obtained further funding, both to reinforce current activity and to reach households that they felt they were yet to support.

The project has also left a legacy in terms of helping to set up a further CCF project (focusing on advice and draught insulation) which has been developed with financial support from the local housing association (although this project focuses on housing association tenants only).

In addition, a key legacy has been the energy consumption data collected (from project participants) that has been used to generate more realistic assessment of household energy use in this remote area (when compared to UK estimates). The revised data have been used in the subsequent successful application to the CCF.

The project also feels that the project has raised the profile of the local organisation running the project, both across the community and with schools and wider agencies.

social research

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This document is also available from our website at www.gov.scot.
ISBN: 978-1-78544-804-1

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

Produced for
the Scottish Government
by APS Group Scotland
PPDAS59522 (11/15)
Published by
the Scottish Government,
November 2015

GSR
GOVERNMENT SOCIAL RESEARCH
Social Science in Government

Social Research series
ISSN 2045 6964
ISBN 978-1-78544-804-1

Web and Print Publication
www.gov.scot/socialresearch

PPDAS59522 (11/15)