



# Greener Colglen

A Colintraive and Glendaruel Development Trust Project

## Climate Challenge Fund Final Report For CCF 2765

October 2013 to March 2015

### Colintraive and Glendaruel Development Trust

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## **STARTING POINT**

The following themes and outcomes were outlined in our original project application, along with their predicted outcomes. This section quotes the text from the original application.

**“What will our Community look like in 2050?” This is a considered first step on the journey by Colintrave and Glendaruel Community towards greater resilience in the face of climate change and the increasing centralisation of goods and services.**

**Colintrave and Glendaruel are classified by the Scottish Government’s Neighbourhood Statistics as remote and rural, where the average drive time to a supermarket is 43 minutes. The area is not on the gas grid, and is particularly vulnerable to extreme weather events and changing fuel, energy and food prices. The project community has a total population of around 250 adult residents living full-time in 137 out of 224 houses.**

## **FOOD**

This project aims to establish a food growing group within the community, to include all growers, past, present and future. 2 polytunnels in central points of the two villages will provide focus for activity – growing food, sharing tools, plants and tips and engaging socially. Participants will be able to take advantage of the extended season, trial and research different varieties, and learn how to make the most of local conditions to improve the range of fresh fruit and veg available. A website and blog, food waste workshops and a harvest festival event to celebrate the first growing season will be held.

### **CO<sub>2</sub>e Outcomes.**

The original application stated - 20 households will be targeted to take up growing their own fruit and veg, which will result in an annual saving of 0.465 tonnesCO<sub>2</sub>e

Over a 10 year lifetime with an additional 12 households participating, the savings would be 6.74 tonnes CO<sub>2</sub>e

### **Community Outcomes**

Any reduced food miles would be calculated on an actual basis as the project progresses, and this will have economic and social benefits too.

## **COMPOSTING**

Composting facilities will be adjacent to the polytunnels and will demonstrate good practise with garden waste (which is not uplifted by the Local Authority). Re-usable bags will be supplied to households to fill and leave out for volunteers to collect when passing to drop off at either site. A composting and food waste event and chipper

training will give growers and volunteers the opportunity to learn new skills and a Community wood-chipper will render garden waste that would otherwise have been burnt, fly-tipped or rotted, into compost for the growers.

### **CO<sub>2</sub>e Outcomes.**

A 'Bin Surgery' and compost workshop event and information leaflet to tackle food waste, raise awareness and encourage home composting will reduce emissions - targeting 10 households- by 5% - 3.33 tonnes CO<sub>2</sub>e over a 5 year lifetime.

The project will also reduce emissions - from garden waste from 18 households, by composting 4.493 tonnes over a one-year period - by 0.930 tonnes CO<sub>2</sub>e

Lifetime savings, over 8 years, will result in a reduction of 7.44 tonnes CO<sub>2</sub>e

### **Community Outcomes**

Householders will benefit from this service, and learn new skills. They will change behaviour to bag up garden waste for collection by 4 Community volunteers who will receive chipper training and PPE to deliver the outcomes.

## **WOODFUEL**

Stronafian Community Forest will provide a sustainable source of woodfuel for the Community in 2 or 3 years time. Meanwhile, as Rhododendron Ponticum has been identified as a particular threat locally, harvesting mature plants will help to interrupt the spread for one season, and also provide burning wood, kindling and charcoal, amongst other benefits. Currently 4 out of 10 households, from a snapshot, 'import' woodfuel from other areas and this initial local supply will help to increase choice and localise buying habits. Private and Community spaces will receive a free initial service of cutting back mature specimens. Community members will be trained in techniques to continue the eradication work.

### **CO<sub>2</sub>e Outcomes.**

The local delivery will result in a reduction of 0.67 tonnes of CO<sub>2</sub>e, initially, with a lifetime saving of 3.35 tonnes CO<sub>2</sub>e

### **Community Outcomes**

The project outcome will stockpile 40 tonnes of woodfuel for seasoning. Households who normally 'import' their wood fuel from other areas will change behaviour to purchase local fuel once it is seasoned.

Awareness raising and skills will be learned by Community members in eradication techniques and other woodcrafts, and biodiversity will be improved in Community spaces and private gardens.

## **ENERGY**

At the time of our application, in the UK only 306 households had proceeded with a Green Deal Plan. New support for 5% of householders providing local Green Deal Assessments will improve uptake of the funding available locally. Availability and cost of assessments – due to the remote geography - and understanding of the various schemes are barriers to uptake. Local knowledge is key to identifying eligible properties, and the Assessor will compile a portfolio of dwellings to attract funding with support from Home Energy Scotland to link up with local contractors, minimising travel. Heat mapping will also help to identify where a ‘mini warm zone’ can be created for a cluster of local buildings. This will build on the raised awareness and engagement achieved by the Warmer ColGlen Project.

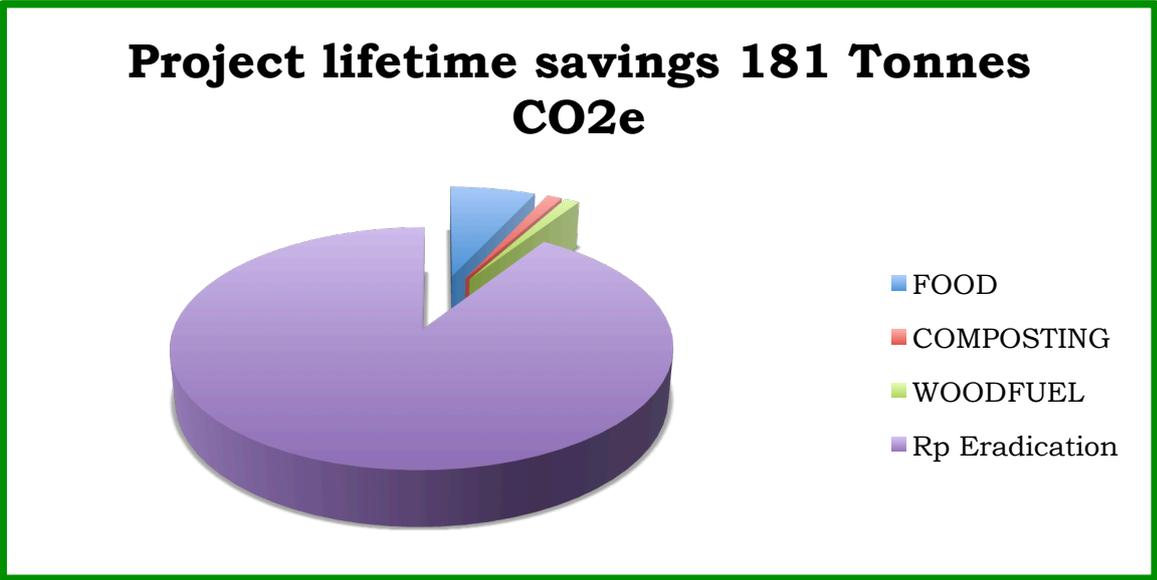
**CO<sub>2</sub>e Outcomes.**

This project outcome aims to reduce heating oil use by 20% in 7 homes, and electricity use by 10%, leading to a total reduction of 16.32 tonnes of CO<sub>2</sub>e in the first year, and a lifetime saving of 326.4 tonnes CO<sub>2</sub>e over 20 years.

**Community Outcomes**

By carrying out Green Deal assessments and EPCs for 7 (initially) households to take up Green Homes Cash back and Renewable Heat Premium Payment schemes. This will enable them to participate in a programme of measures such as solid wall insulation, replacement windows and boiler replacements.

Increased understanding of opportunities to adopt renewable district heating, which may be eligible for funding through the schemes



*Fig 1: Executive Summary outcome chart*

## **EXECUTIVE SUMMARY and Headline achievements.**

- **Please also see Appendix B - Photographs**

Greener ColGlen has met most of its objectives and has engaged more people than ever before in Glendaruel and Colintraive. 2 community growing sites have been delivered, complete with composting facilities, outdoor growing areas, tools and storage and these have provided vital new focus for community activity.

We have started to increase road safety by clearing Rhododendron from sight lines, improved community spaces by landscaping and drainage, and improved bio-diversity by removing invasive species.

6 people have been directly employed by the project, 18 people have received training, qualifications or learned one or more new skills, enabling some to benefit from paid employment in a new area. 40 people have formed and joined a new community group – The Colglen Growers. Over 30 people have given voluntary time to the project, and we have re-used and recycled local materials and employed local contractors whose knowledge, experience and flexibility greatly benefitted the project. We have created new social networks, made friends and links with other community groups, and formed partnerships with other organisations.

Over 200 people have attended our informative and educational events or taken part in the project in some way.

We have grown over 189Kg of vegetables, composted over 100 Kg of food waste, dealt with over 1.2 tonnes of garden waste, and through the production of 25 tonnes of wood fuel, we have eradicated over 1 hectare of Rhododendron ponticum using low carbon methods, whilst also investigating biomass district heating and the Green Deal.

Over the course of the project we have saved 161 tonnes CO<sub>2</sub>e, and over the lifetimes of the different elements we could save a further 181 tonnes CO<sub>2</sub>e.

Project Development Officer *“We’ve definitely had a lot of fun over the last 17 months, and this has been mostly due to the amazing community spirit and the cooperation and support of the ColGlen Community; the farms, friends, neighbours, contractors, suppliers, land owners, village halls, ColGlen Shinty Club, Community Council, Argyll and Bute Council, volunteers, ColGlen Growers and Project Staff. Thank you All”*

Local Councillor Bruce Marshall stated, *“Colintraive and Glendaruel Development Trust are leading the way in Cowal in setting an example of what can be done in a comparatively small rural community.”*

From a Volunteer – *“I believe the community is better prepared for the future in that we have received high quality training in relevant areas, job opportunities have been created and that you have opened people's eyes to new possibilities. Oh yes, and I've developed a passion I didn't even know I had - it's just great eating what you've grown!”*

## OUTPUTS – Project activities

CATEGORY	ACTIVITY	No. OF OUTPUTS or PEOPLE
<b>Advice / Information Centres</b>	• Project Office drop-in point	1
	• Community growing sites	2
<b>Training, skills and qualifications per person</b>	• Emergency First Aid at Work	11
	• NPTC manual-fed woodchipper	6
	• NPTC PA1 & 6aw	5
	• Lever & Mulch training	6
	• NPTC Chainsaw	1
	• Green Deal Advice Diploma	1
	• CCF Collecting info to report on Outcomes	1
	• CCF Final Report workshop	1
	• CWA Procurement workshop	1
<b>Events held</b>	• Project launch and sign-up event	14
	• Interactive play about recycling and waste	24
	• Local food event with cookery demo	50
	• Polytunnel opening event with growing and composting workshops	70
	• Harvest lunch event	25
	• Rhododendron awareness and eradication demo event	35
	• Apple tree talk	8
	• Energy efficiency drop-in event	4
	• Spring celebration and polytunnel handover event	20
	• 12 volunteer work parties attendance	10
	• 13 meetings of the Growing Group attendance	9
	<b>CCF employees</b>	• Full-time Development Officer
• Part-time Admin and Comms Officer		1
• Part-time Project Support		1
• Short term, 'summer job' contracts		3
<b>Project Contributors / Beneficiaries</b>	• The ColGlen Growers	40
	• People receiving 1 or more formal qualification	18
	• Households receiving mock EPCs and Green Deal Advice Reports	6
	• Households receiving free, impartial energy advice	10
	• 7 households and 1 village hall used the	8

	<ul style="list-style-type: none"> <li>composting facility for food waste</li> <li>● Households engaged in composting garden waste</li> </ul>	19
<b>Project Volunteers</b>	<ul style="list-style-type: none"> <li>● Growers</li> <li>● Rhodi-control operatives</li> <li>● Composting volunteers / shredders</li> <li>● CGDT Board members on focus groups and providing support</li> </ul>	30 6 6 5
<b>Publications</b>	<ul style="list-style-type: none"> <li>● Printed newsletter booklet</li> <li>● Quarterly newsletters</li> <li>● Food waste and sustainable cookery and produce information sheet</li> <li>● Growers seasonal newsletters / info sheets</li> <li>● Biomass district heat feasibility</li> <li>● Green Deal advice reports</li> </ul>	1 5 1 4 1 6
<b>Partnerships and Networking</b>	<ul style="list-style-type: none"> <li>● Resource Efficient Scotland</li> <li>● Changeworks</li> <li>● Community Woodlands Association</li> <li>● Argyll &amp; Bute Council</li> <li>● Argyll and the Isles Coast &amp; Countryside Trust</li> <li>● Scottish Natural Heritage</li> <li>● ColGlen Shinty Club</li> <li>● Kyles Allotment Group</li> <li>● Argyll Small Woods Coop</li> <li>● Scottish Communities Climate Action Network</li> <li>● The Fife Diet</li> <li>● Forestry Commission Scotland</li> </ul>	

**Fig 2 : Table of Project Outputs**

# FOOD

## Project Activities

The main activities involved the construction of the 2 polytunnels. It was worthwhile persisting on getting agreement on two sites central to both villages, near other local amenities, the village hall area in Colintrave, and near the school and church in Glendaruel. This was very important in getting community involvement. Once the locations were agreed and secured and Planning was approved, we moved on to the construction phase. Ground preparation started in January for one site, and March for the other.

All the goods, services and materials were researched and procured to maximise the use of local or recycled materials and local contractors. Various barriers made the delivery challenging within the timeframe; the 13-14 financial year cut off, we lost a valuable staff member in June, and July was spent re-evaluating and recruiting. Along with weather and other delays, this meant that instead of beginning to grow in March or April, it was August before the first seeds and plants could go in.

However, we turned the situation into an opportunity to create 3 new 4-week summer jobs and 1 part-time support post. Completing the polytunnel preparation in time for the opening event and workshops, the new Team worked really hard to make up for lost time.

Other activities involved community engagement, formation and governance of the ColGlen Growers with a total of 13 meetings held, 2 organised trips to Kyles Allotments for inspiration, and organising events and workshops.

Around 70 people attended the opening event and workshops in August, with The Fife Diet - in spite of the rain. The Growers held a Harvest Lunch in October - 25 people came and shared recipes and delicious home-grown-and-home-cooked food.

Local generosity saw loans of equipment, donations of topsoil, leaf-mould, manure, sheep's wool, plant pots, seedlings, baking, tools, and a whole host of other things appearing at the polytunnel sites.

As the winter progressed, a few deep puddles appeared around the polytunnels, and the Growers had time to take stock and make some decisions about developing the outdoor areas. Some re-profiling of underspend in other budgets enabled additional drainage work and materials to be secured to increase the growing space, accessibility and improve the facilities at both sites. The final square meterage of growing space provided by the project has increased from the initial 153.6m<sup>2</sup> to more than 257m<sup>2</sup> with the additional outdoor beds. (The original estimate was 5m<sup>2</sup> per grower - now 8m<sup>2</sup>.)

A lot of work took place behind the scenes to ensure compliance with Health & Safety and Employment Law, developing risk assessments and policies, ensuring employees and volunteers were equipped, protected and supported.

A final event was held to celebrate the end of the project and hand over the polytunnels to the ColGlen Growers, 20 people came to mark the occasion - once again in spite of even more rain!

## OUTCOMES

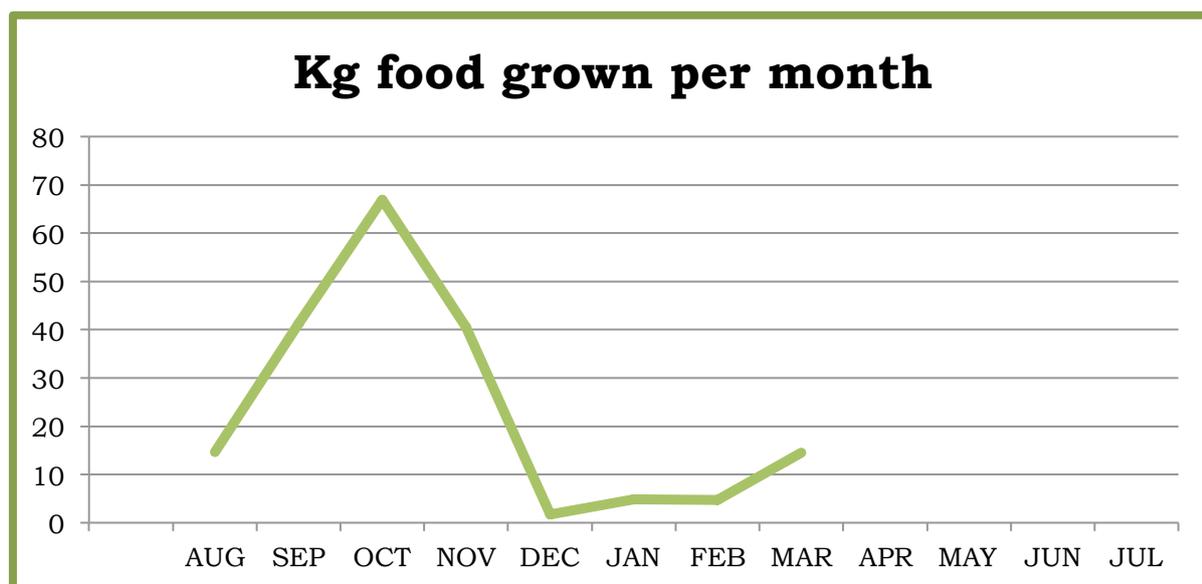
**CO<sub>2</sub>e - Outcome met.** The Project launch resulted in 27 households signing up for the Growing Group. In August the polytunnels were ready and by that time the membership had swollen to 32 full members using 25 of the beds.

The Growers had already been growing a profusion of vegetables for transplanting, so that the tunnels immediately bore fruit in time for the opening event and workshops. Throughout the next 8 months (August to March) the food harvested at the polytunnels was weighed and recorded. At least one keen grower reported that for the first time they had kept vegetables growing all winter and significantly reduced the amount they had to buy.

**All in all resulting in a total recorded harvest of at least 189Kg, which has led to a saving of 0.268 tCO<sub>2</sub>e**

One or two members gave up their beds due to lack of time or moving away, and others joined so that the final membership at March 2015 had stabilised at 40 - 35 Full members and 5 Associates, with 25 beds being taken, and the remainder being communally planted.

**Taken over 10 years, with the increase in growing space, this will lead to lifetime savings of 11.95 tCO<sub>2</sub>e**

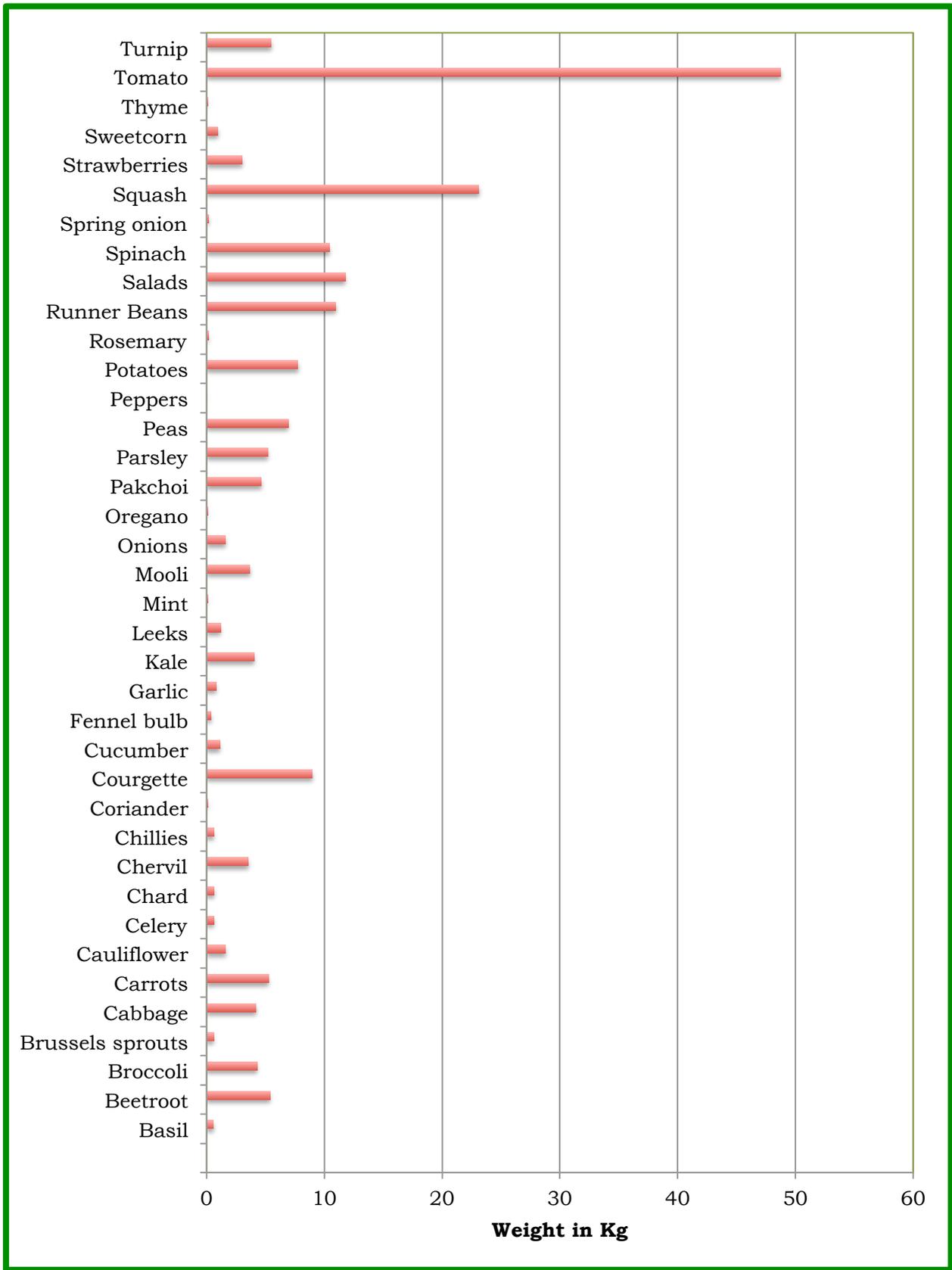


**Fig 3 : Weight of food grown per month**

**Community – Outcome exceeded.** A small amount of additional travel was recorded and these emissions have been offset from the total (see Carbon calculations appendix). However a few Growers report having cycled or walked extra as a result of the project, and most seemed to include visits to their plots by car ‘on the way past’ to other things.

Growers reported eating more healthily, learning from others about growing techniques and new varieties, about being more aware of food and where it comes from when buying, they report learning new skills, composting, new recipes and wormeries.

Overwhelmingly the Growers all felt that Community cohesion was improved, all enjoying the social side of sharing and supporting each other, gaining confidence and working together.



**Fig 4 : Weight of vegetables grown by type**

# **COMPOSTING**

## **Project Activities**

### **FOOD WASTE**

In April, an interactive play, "The Bin Men" took place with a bin surgery and talk on local recycling and what happens to food waste. 24 people attended and feedback was positive. Participants responded that they found out new recycling ideas, and would try and reuse items more often. There is no evidence to report on whether the rate of local recycling increased or whether it was as a result of the project, although this is likely.

A food waste and sustainable cookery demo was held in June, in collaboration with another Community event - The Big Lunch. 50 people attended to taste local stovies and 'Scottish risotto' made with oat groats instead of rice. The newly erected polytunnel was used for the event and it was a very successful day - in spite of the rain. We sampled local produce with donations from local producers as diverse as local lamb to vegan cheese, from salads to bread, salmon to pickles and eggs to venison.

In all, 7 households and Colintrave Village Hall and project office recorded food waste composting as a result of the project. The village hall has changed behaviour in all the user groups by providing a kitchen waste bin and signage, so the project has been leading by example.

### **GARDEN WASTE**

Developing the composting facilities hinged on the polytunnel construction progress - we couldn't build the bays before the fences, nor the fences before the polytunnels. A design was drawn up for the fencing contractor, and once the polytunnels were complete, the compost bays were incorporated into the surrounding fences.

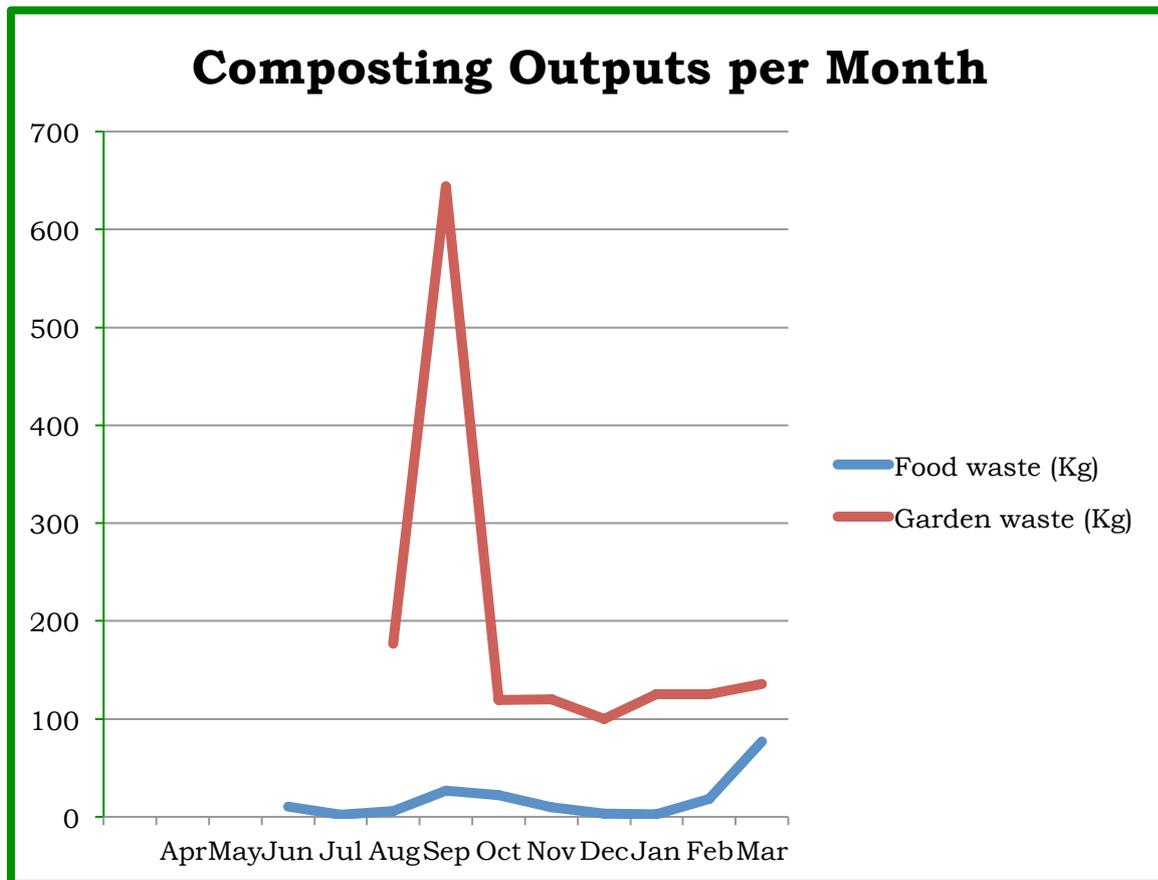
In readiness for the activities to come, an Emergency First Aid at Work course was held and 11 people achieved the qualification.

In the meantime, after much research including demonstrations, a petrol-driven machine was purchased to deal with the garden waste. Research showed that a 'shredder' rather than a chipper would render twigs and branches into the perfect material for composting - cutting along the grain. Training was organised and 6 volunteers were trained on our new shredder, successfully achieving the qualification. Shredding takes place usually as part of a wider volunteer work party, either at the polytunnel or in the Community Garden, or sometimes as part of the Rhododendron Control Project.

Again a lot of work was carried out behind the scenes to comply with H&S and the insurance policy. Risk assessments were developed in line with the machine manual and AFAG HSE publications. All PPE was provided to volunteers.

The project was launched and garden waste bags distributed. A vermiculture and composting workshop was well attended at the opening event.

Bad weather and reduced garden waste over winter slowed down outputs, but garden waste is increasing again in March.



**Fig 5 : Composting Outputs per month**

**OUTCOMES**

**Food waste**

**CO2e Outcome partially delivered.** The 12 Kitchen Canny kits given out did not produce any results. Unfortunately, people reported that although interesting, they felt it was not applicable to them - and we had perhaps targeted the wrong people. In this rural setting people tend to be more canny already, due to the travelling distance from shops, maximising resources by storing, preserving and planning ahead. Many reported they were already reducing food waste and composting, and there are other beneficiaries of food waste such as garden birds, hens, dogs and other livestock for whom a certain amount of food waste appears to be built in.

At least 7 households have participated, (although some food waste has appeared in the compost bins without being recorded) and others via Colintrave Village Hall. Participants have weighed and recorded their composted food waste - where they have changed behaviour as a result of the project.

**This has resulted in project savings of 0.424 tCO2e and will lead to a lifetime saving over 5 years of 2.12 tCO2e**

**Garden waste**

**CO2e - Outcome partially delivered.** In spite of the delay setting up the infrastructure, after the training, garden waste began to be collected and shredded.

Once the bays were built, this was then mixed together and weighed before filling up the bins. The collection service was not used - all the garden waste contributors brought their own waste along. People also found other uses for the brash, such as for kindling or pea-sticks.

**Over 1266 Kg of garden waste has been composted at mostly one site – where the shredder has been kept – and this probably amounts to around a third of a full year’s output - leading to a saving of 0.267 tCO<sub>2</sub>e. Over the next 8 years, with equal output at both sites, we should save around 5.076 tCO<sub>2</sub>e.**

#### **Community – outcome exceeded.**

As the village hall has changed behaviour to compost kitchen waste, then the project has also been engaging all the hall’s user groups and raising awareness of how easy it is not to send the waste to landfill. 7 households have also contributed to this outcome.

19 individual households recorded depositing garden waste at the polytunnels. Others left waste that was shredded and weighed by the shredders. This reflects some behaviour change has been successful in the first year.

11 volunteers received Emergency First Aid at work training and 6 instead of 4 volunteers achieved their NPTC Woodchipper qualification.

In addition the shredding has engaged different people in community work parties and it has enhanced the community garden by shredding all the arisings of volunteer gardeners into compostable mulch, thereby increasing the outputs. The community garden compost bins have also been maintained for the first time in a few years and the project has benefitted a wider audience than planned.

## **WOODFUEL - Rhododendron Project**

### **Project Activities**

A focus group of staff and CGDT Board members was set up to look at ways to take the project forward. It was important to achieve ‘buy-in’ from landowners and the Local Authority so that permission could be given to carry out work. Raising awareness of the general public into the risks to native biodiversity from this plant with the ‘pretty purple flowers’ had to take place to achieve this.

Meetings were held with Forestry Commission, landowners and Argyll & Bute Council (A&BC). An invite to another Rhododendron Project event at Glen Creran Estate in May inspired the shape of the project. So a similar event was planned.

The ‘From Invader to Woodfuel’ demonstration event took place in October to launch the project. A series of talks from experts in the field was followed by lunch and a site visit to local farmland, to trial the 3 different eradication techniques. Councillor Bruce Marshall, who chaired the event stated, *“The Rhododendron Ponticum eradication information sharing day in Colintrave was extremely interesting and I believe appreciated by all attendees, this followed on from a similar event at Appin in May which was run by Argyll & Isles Coast & Countryside Trust(ACT). Rp is a far greater threat to our environment than any other invasive species of plant and every man’s hand should be against it. I was particularly impressed with Sara Maclean’s presentation about what ‘Greener ColGlen’ is all about and hope that other communities may follow their example.”* 2 contractors demonstrated ‘lever and mulch’, stem injection and cut and chip. A charcoal-making demonstration also took place using Rhododendron wood.

Over the following 2 days, volunteers who had previously achieved their PA1 and PA6 in pesticide application - enabling them to carry out stem injection - were trained in the Lever and Mulch technique. This involves only the use of hand tools to remove the plant roots from the soil. The dead stems are then left as a mulch to inhibit further growth, improve biodiversity and die off. The woodfuel is extracted later once it has seasoned. A part-funded place on a NPTC Chainsaw course came up and 1 volunteer achieved the qualification. This gives the woodfuel project greater capacity for dealing with the processing of wood fuel.

Again, a lot of desk-based work was carried out on risk assessments, method statements and volunteer policy and procedure. PPE and tools were provided to all volunteers.

Now, at the end of the funded project, we have been employing a contractor to carry out this work on roadside and volunteers continue to work on high-profile sites in the Community. We have begun to scratch the surface of the ponticum invasion, and the time spent beforehand, raising awareness and obtaining buy-in, although lengthy, has been time well spent.

We have formed new alliances and partnerships with A&BC, Bute Estate, other communities, and quite a few national and government bodies, who are all keenly watching our work to see if we can duplicate our community model elsewhere, and we continue to pursue funding to build on this progress.

A presentation, "From Invader to Wood Fuel" was given at the Community Woodlands Association 'A Wood of our Own' event.

## **OUTCOMES**

### **CO<sub>2</sub>e – Outcome exceeded with an unexpected outcome.**

The Invader to Woodfuel Demo event in October represented the launch of the project. Altogether around a hectare of rhododendron ponticum was cleared from farm and estate land using the different methods, all of which avoided the standard 'cut and burn' technique.

The woodfuel yield was not as high as hoped, and difficult to measure as it has been stockpiled in numerous sites, however between the event and subsequent work at road-sides we estimate around 25 t has been set aside for local use, **leading to a saving of 0.41 tCO<sub>2</sub>e associated with the local delivery.**

### **Over the 5 year lifetime of a modest repetition each year, clearing around 1 hectare / year, that saving would be 2.05 tCO<sub>2</sub>e**

It should be noted that the 'cut and burn' technique would not be applied to every site, but larger areas - farms, forests and estates would all normally use the technique. The unexpected outcome, we learned, was the avoidance of emissions from the burning element of 'cut and burn' and, **taking into account fuel-use from the woodchipper, we avoided around 159.83t CO<sub>2</sub>e.**

Due to the plans for future development of this community model, it will be difficult to accurately predict what the lifetime savings might be. For the purposes of this report, we will assume as a minimum, a modest repetition of this year's activity – a clearance of 1 hectare per year for 5 years, but with a ratio of 4:1 in favour of clearance that does not avoid the cut and burn technique, but does include firewood production at a rate of 25t per hectare, **leading to a saving of 159.83 tCO<sub>2</sub>e again.**

### **Community – outcome exceeded with an unexpected outcome.**

5 volunteers obtained their NPTC Pesticide application, '1' and '6aw'. This enables them to safely stem inject plants that lend themselves to it – usually bigger and more awkward plants. However the most useful technique, learned by 6 volunteers was the Lever and Mulch method. The volunteers have been attending community workdays and working on ponticum in a variety of sites, where they pass on their skills. The unexpected outcome has been the buy-in and support from local contractors who have been willing to experiment with all the techniques, not cutting and burning, and who have offered some employment to our volunteers. It is hoped that this is the kind of model that we can take forward to attract other funding to continue what we have started.

## **ENERGY**

### **Project Activities**

In order to carry out local Green Deal Assessments, training was provided. The on-line course was very lengthy and time-consuming, and was finally successfully completed in September. During this time, 6 properties were surveyed and draft Energy Performance Certificates were produced. Following on from this, Occupancy Assessments took place and householders provided fuel bills where possible in order to calculate potential payback from a Green Deal loan for measures.

Alongside this, a cluster of 7 properties was studied to see whether a mini biomass district heating installation would be feasible and financially attractive. The study was carried out by Changeworks and commissioned by the project, using data collected in some of the EPC and Occupancy Assessments. The conclusion being that the capital costs would be too high.

A drop-in event was attended by 3 householders.

Meanwhile - a throwback to the previous **Warmer ColGlen Project** - Colintrave Hall has been networking and supporting other communities wishing to improve their local facilities, and a presentation was given at A&BC's Ceilidhs to Conferences – Managing Community Buildings training day. Advice and support has been given to other energy efficiency Projects involved with Scottish Communities Climate Action Network.

### **OUTCOMES**

**CO<sub>2</sub>e – outcome not delivered.** The Green Deal Advice Diploma was achieved, and enabled 6 draft reports and draft EPCs to be carried out. The Draft Green Deal Advice Reports have not led to any uptake of the Green Deal locally, at least not within the project timeframe. It seems people remain unconvinced by the Green Deal generally, indeed this is borne out by the national figures which to date report only 10,000 households having taken a Green Deal finance package, and most of these are via ECO, not the Green Deal as such. No households report installing measures as a result of this project. Another reason for lack of engagement may be the recent success of the **Warmer ColGlen** project having already addressed the issues.

### **Community – outcome met**

The Biomass District Heating Study was published and was an interesting exercise. The prohibitive capital costs of installing such a scheme would be a barrier to take up, even with funding, although some interesting calculations are made into

individual biomass boiler installations. Household report they are still considering what the best way forward would be, and 2 other enquiries about insulation and / or biomass have been referred to Resource Efficient Scotland to take forward.

## **LEARNING and REFLECTION**

**Infrastructure.** February 2014 saw torrential rain and the looming financial year-end. The Glendaruel site preparation was delayed due to sinkholes appearing on site. Scottish Water were contacted and we collaborated on the remedial work required. Our local contractors were indispensable and worked flexibly and cooperatively to put in extra drainage and source local material to make up a firm base for the polytunnel.

All the capital spending budget had been put into the 13-14 financial year, as we felt 6 months would be plenty of time to carry out that work. The 6 months turned into 5 months straight away (see Finance and Admin section), it had taken a while to carry out options appraisals on the siting of the polytunnel, and now the unforeseen flooding on site. Project staff liaised with all parties to ensure all materials required were purchased before the end of the financial year, as we learnt that unspent funds could not be carried over.

The final frustration was the delay caused by the contractor to erect the polytunnel, who kept us waiting - ready to go - for 9 weeks!

**Rhododendron ponticum.** Our Rhododendron Project also had a very long lead-in time. Project Staff had a lot to do to manage the other aspects of the project, and it took a while before time was found to really focus on this. Part of the preparation work for this involved engaging with landowners, the local authority and other stakeholders, to achieve 'buy-in'. Big landowners and the local authority do not work or respond quickly! Eventually we managed to get supportive responses and permission and so it was the end of the project before we really started doing work on the ground.

Rhododendron control has been ongoing in the UK since the 1930s, and current perceptions of Rhododendron ponticum eradication favour the cut and burn technique. Within a short space of time, land can be cut and visibly cleared, using machines and minimum personnel. But eradication can only be achieved if control operations are carried out diligently, coordinated at a population level and maintained over a period of many years.

Using the lever and mulch technique employs more people than cut and burn, uses no machinery, emits no carbon and has a success rate of 89% in the first treatment. It is slower, it is messy, leaving visible brash, which serves as a mulch to smother new seedlings and shelter birds and invertebrates, and produces a good quality woodfuel. Initial costs are comparable, and the follow-up treatment a year later is very cheap for lever and mulch, usually just hand-pulling of seedlings, in contrast to expensive spraying of regrowth from cut and burn, as many roots are still growing below ground.

On reflection a project dealing with large-scale buy-in of a ponticum eradication project should be planned to run from 3 to 5 years, and need full-time staff focus. In future we would find a fund to fit this better, however we are very grateful to the Climate Challenge Fund for supporting this innovation, we have learnt a lot and made a good start to what might end up being a very big project indeed.

**Energy Efficiency.** The aim to increase uptake of the Green Deal in ColGlen has not been realised, this could be due to Warmer ColGlen having already dealt with home energy, lack of capacity to focus on this part of the project, the lengthy qualification process, or simply the fact that for most households, taking up a Green Deal loan is a big decision which requires time to make and we are just not quite ready within the timeframe of the project.

**Finance.** The finance and activities were particularly 'front heavy' and this was due in part to the fact that we wanted the project to start saving carbon as soon as possible. However the legacy of carbon savings – once achieved – will not be diminished by the slow start to the project. Due to the amount of lead-in time required to set up the different aspects of the project, the time line for beginning to save carbon slipped by around 3 months. Although this was not entirely predictable, it would have been better to spread the activities and budgets out more across the 17 months of the project at the time of application. Part of the frustration was due to factors outwith our control and the delays meant that there was a danger of losing momentum in the project at times. Recruiting 2 full-time staff may have helped this from the outset; certainly it would have allowed more simultaneous momentum of all the project strands. In future we would consider increased staffing levels. All in all we have learned that sustainable carbon saving takes a while to set up!

## **LEGACY – quotes from Participants**

**From a Grower** - *I have never really thought about having a bed in a polytunnel or attempting to grow my own produce but the enthusiasm from the group and the project officer was contagious. The group has delivered so much in terms of a community asset, improving all our lives and broadening our knowledge as well as producing food and meeting climate aims.'*

**From a Volunteer** – *“I believe the community is better prepared for the future in that we have received high quality training in relevant areas, job opportunities have been created and that you have opened people's eyes to new possibilities.*

*On a personal level I've learned a great deal about food growing, reducing food waste, composting and formed relationships with others both in this community and wider area with similar interests.*

*Before the project the most I had grown was potatoes, strawberries and a wee bash at tomatoes (not very successfully). Last year was great, I grew tomatoes (successfully), peas, spinach, garlic, broccoli, salads, cucumber, spring onions, various herbs and potatoes, some at home and some in the polytunnel.*

*In addition to all the above I'm having a go at sweet peppers and aubergine this year, so do I feel I've benefited from the project, oh yes I've developed a passion I didn't even know I had, it's just great eating what you've grown.*

*Thank you for leading us along this path, it's been great and the legacy is there for all to see and make the most of in the future.”*

**From a Contractor who also volunteered for the Project** – *“As a local contractor I was involved in this project in different ways - building the raised beds in the poly tunnels from timber we milled from local trees and then the eradication of *Rhododendron ponticum*. Due to the training provided by the project I was able to learn new techniques and give employment to others and hope to continue this in the future. I would like to*

*thank Greener ColGlen for supporting local businesses and creating a very successful legacy for our community."*

**From CGDT's Chair** - *"As chair of CGDT I have been delighted with the Greener ColGlen project, not only because of the carbon savings, the new facilities and the exemplary conduct of our staff in delivering the outcomes, but because the community has engaged with the project wholeheartedly, growing vegetables, composting, learning about low carbon methods of removing *Rhododendron ponticum* as well as new ways to save energy through the green deal. This engagement has filtered into our other projects and informed the Development Trust's agenda as expressed in a redrafting of our community plan which is ongoing."*

## **FINANCE and ADMINISTRATION**

In terms of project legacy, apart from the infrastructure for a more resilient community, setting up the ColGlen Growers increased our capacity and understanding of governance, finance and administration, and the group are now established to continue to learn and grow, with community members taking on office-bearing roles.

Our original application set out the timeframes and spending forecast, and these became our official 'budget'. The project aimed to start in October, after the funding award, but due to delayed award announcements and press embargo we were not able to get the staff in place before the beginning of November. This meant the staff had a challenge to catch up with project timelines right from day 1.

As outlined in the Learning and Reflection section, this had a knock-on effect to the 13-14 financial year-end, resulting in an underspend of almost £11,000 for that year. But we managed to make all the important purchases once we realised this would be an issue, and this ensured the delivery of infrastructure at the polytunnel sites.

Taken over the whole project, we had underestimated the costs of preparing the ground and kitting out the polytunnels, but re-profiling of other budgets ensured we could cover the costs.

We received £2000 tax relief on Employers National Insurance Contributions, which is a great benefit for third sector organisations, but ultimately that figure was returned to our budget by the Scottish Government, due to us already being a Government-funded project.

Mid-way through the project we needed to re-recruit a post and although the recruitment process took 3-4 weeks, we realised we could evaluate and re-invent the staffing needs of the project and rather than a direct replacement, we employed an additional 3 staff over the summer holidays to help with polytunnel development, as well as employing a new project support post.

It was time-consuming for the Project Development Officer, with the support of the CGDT Board, to develop the new job descriptions, deal with recruitment, contracts, insurance and then to line-manage and supervise site staff, creating work lists, method statements and risk assessments, staff were inducted and briefed on H&S (manual-handling, use of hand tools etc.). However it was a creative use of the project budget, resulting in additional employment, and gave a boost to the polytunnel development. As time went by, various extra spending was required to

develop the polytunnel sites and further re-profiles took place to cover the costs. Across the 2 financial years, we had a total underspend of £17,194.54.

<b>Budget Headings</b>	<b>Original</b>	<b>Final</b>
Recruitment	1000.00	600.40
Project Development Officer Salary	37,800.00	40,485.00
Project Admin and Comms salary	19,008.00	7121.98
Project Support Officer salary		6,616.50
Site Development Worker		1,360.00
Site Assistant		819.00
Employers NICs	11,929.68	2,609.18
Travel and expenses	2,700.00	2,504.29
Training	4,000.00	1,725.50
Green Deal training and protocols	3,000.00	1,884.00
Insurance	3,000.00	1,407.39
PC and IT support	1,500.00	834.02
Website for Growing Group	1,450.00	297.56
Marketing, Publicity and Events	2,250.00	2,492.25
Office costs	5,760.00	4,958.96
Warm zone modelling and assessments	8000.00	1,968.00
Ponticum clearance, processing, stacking	14,000.00	13,303.92
Towable chipper, fuel, servicing	10,850.00	10,572.38
Prior Notification, licenses etc.	500.00	270.55
Land rental	3000.00	350.00
Polytunnels, raised beds, water etc.	26,000.00	29,858.45
Ground preparation and drainage	5,000.00	12,647.49
Compost area materials and construction	6,000.00	4,911.12
Compost collection bags	400.00	195.00
Topsoil	3,060.00	3,173.60
PPE and tools	2,150.00	2,196.60
<b>TOTALS</b>	<b>172,357.68</b>	<b>155,163.14</b>

**Fig 6: Total grant awarded and final spend table**

## **SUPPORTING INFORMATION**

**Appendix A – CCF2765 Final Report carbon calculations** – containing all the research, methodology and project and lifetime calculations and data sources.

**Appendix B – CCF2765 Photographs**

## **SPECIAL THANKS**

The Greener ColGlen Project is a credit to the community and special thanks are due to

**Project Staff** – Sara Maclean, Nikki Brown, Liz Gorman, Stuart Greenway, Patrick McKenzie, Andrew MacVicar

**CGDT Staff** – Eamon King, Margaret Shields and Rhona Sutherland

**The ColGlen Growers – one and all**

**Project Volunteers – the Shredders, Rhodi Team and the many others...**

**Contractors** – Steven McKellar of Ardacheranmor Agri Services, James Edgar Operations, David Munro of Heather Country Services, Andy McNaughton of McNaughtons Fencing and Dyking, Bert and Anne Mitchell of Cowal Sand and Gravel, Myles Macrae of Highland Poly tunnels, Ross Petro Forestry Services, Alison Sykora of the Real Food Consultancy

**Organisations** – Colintrave and Glendaruel Community Council, Julie Young of Argyll and the Isles Coast and Countryside Trust, Elaine Jamieson of Forestry Commission Scotland, Neil Donaldson and Gordon Gray-Stephens of Argyll Small Woods Cooperative, Donald Kennedy of the Lever and Mulch Partnership, Scottish Water, ColGlen Shinty Club, The Fife Diet, Kyles Allotment Group, Jessica and Gordon from Wood Watch Heritage Bute, Fyne Futures

**Landowners** – Bute Estate, Kilmodan Acre Trust, Lorne Sinclair, Donny MacPhail and Argyll and Bute Council

**Donators of equipment / materials / assistance** – Martin McFarlane, Alex Grant and Andy McIntyre, Robin Macdonald, A&BC Community Payback team, Sandra and Douglas Wilson, Mary Greig, Alex McNaughton, Alan Poland, John Allan

Greener ColGlen Final Report compiled and completed by Sara Maclean (Project Development Officer) and CGDT Board 14<sup>th</sup> April 2015