



CCF-5859

**ARRAN
ECO SAVVY ENERGY
CHALLENGE 2018/19**

FINAL REPORT



Climate
Challenge
Fund

PART OF THE
Keep Scotland Beautiful
CHARITY



Greener
Scotland
Scottish
Government

Final Project Report

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Organisation Name: Arran Eco Savvy

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Authors: This report was prepared by Project Manager Jude King with key input from Energy Auditor Charlotte Mann & Project Administrator Ruth McLaren and approved by the Eco Savvy Board.

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1.Introduction

It is a fact that most of the UK's carbon emissions come from the way we produce and consume energy; from heating our homes, manufacturing goods, to the way we power our ever-growing inventory of technological devices; one way to help the climate crisis and lower emissions is to become more energy efficient and switch to renewable or low carbon fuels. This has been the essence of the Eco Savvy Energy Challenge delivered through Arran Eco Savvy and funded by the Scottish Government's Climate Challenge Fund.

1.1 Background

Arran Eco Savvy is a community, environmental, and educational charity based on the Isle of Arran - SCO45785. Eco Savvy was founded in 2013 and has been operating for 6 years, obtaining charity status shortly after our first birthday. Membership is free and open to anybody over the age of 16 and who supports the aims of the organisation.

The organisation's aims and objectives are to identify, create and accomplish environmental projects that benefit our community, increase environmental sustainability, support sustainable lifestyles and energy efficiency, and work towards zero waste for the Isle of Arran.

Eco Savvy works to provide learning opportunities and training for vocational skills which are of benefit to all ages and abilities. This helps to increase employment opportunities and allow individuals to move towards low carbon lifestyles.

1.2 Arran and Energy Efficiency

Whilst always having a significant focus on waste, and running the high-profile micro hubs, waste focussed project in 2017/18, we realised it was the time to tackle another serious environmental issue on Arran: energy waste and efficiency.

We ran a series of consultations and a survey which suggested that there was indeed a need and interest for energy efficiency advice and implementation on Arran. This all helped shape and develop the application for the Energy Challenge project, as well as other factors; the distinctiveness of Arran's housing stock having implications for energy efficiency with much of the housing stock deemed old and inefficient.

In fact, currently around 60% of Arran's housing stock is old, with many over 100 years of age. The majority of these houses have thick stone or solid brick walls which are not recognised to have great U-values (thermal transmittance) and furthermore, the vast majority of the homes are either heated by oil or electricity. There is no access to cheap mains gas. Oil is more expensive on Arran due to transport costs but is the favoured fuel for most of the local heating contractors.

Relatively new heating technologies such as heat pumps are gaining in popularity but most of the older houses are unsuitable to take advantage of this technology. Many local properties have the older type of night storage heaters which are outdated and inefficient.

All these factors portray a significant need and opportunity for energy advice which is what the project was designed around. This was to be delivered with environmental focus and outcomes as a priority but filtering down to a multitude of other benefits such as associated financial savings, health, and wellbeing.

Not only were there physical aspects highlighting the need for urgent attention to Arran residents' energy usage, through research, we found there were many behavioural issues towards energy consumption and efficiency, albeit not subjective to Arran. Through consultation with residents, we discovered that over the years it has been common for them to receive misinformation or to have been misled by organisations, installers, or suppliers with an agenda that detracts from the benefit to the customer. We found a history of instances where this led to an abiding groundwork of mistrust, and it was knowingly a challenge when embarking on the project, and a continuous one throughout project delivery.

Preconceived ideas and having the attitude of "knowing it all" also posed a challenge, which we were determined to overcome; as with the energy efficiency market and industry innovating and changing so rapidly there is always value in considering new information, or gentle reminders of behavioural changes we perhaps know, but don't execute as often as we should. Probably a challenge faced in locations across Scotland, there are also those who do not embrace the importance and implementation of energy efficiency measures due to a general apathy towards environmental awareness. This is often founded on the belief that the difference is too small to be worth it.

These challenges and Arran-centric energy waste and efficiency issues emphasised the importance and significance of energy efficiency in the climate change challenge. Recognising this, we have been determined to motivate, assist, and support the island's residents who have a huge amount of influence in cutting Arran's local carbon emissions. We have done this through a wide range of activities which will be described in detail in this report.

our aim was to reduce

**329 tonnes of
CO₂e**

Project Objectives

- The project will save 304tCO₂e through the provision of home energy audits.
- The project will save 25tCO₂e by providing energy advice drop in surgeries and workshops.
- The project will raise the profile of renewable energy on the Isle of Arran.

did we manage?



our aim was to benefit
the isle of arran
community

Community Objectives:

- We will improve Carbon Literacy through our Carbon Literacy Incentive Scheme.

The project will raise climate awareness through a series of events and workshops.

- Unexpected outcome: The project will divert surplus food from landfill by working in partnership with Co-op to set up and pilot a food share scheme

did we manage?



HEADLINE ACHIEVEMENTS

411

tonnes of
CO₂e saved

300

energy audits and
EPCs delivered

657

climate literacy
participants

58

energy efficiency
drop-in
surgeries provided

3

Air Source Heat Pump
installations

12

Solar PV
installations

HEADLINE ACHEIVMENTS

62

environmental pledges
made

111

community events and
engagement delivered

1,398

locals actively
engaged in project
activities

18

volunteers, including
our board, dedicated
to supporting
elements of project
delivery

13

Eco Savvy Food Share
evenings held

1.05

tonnes of food waste
diverted from
landfill

2. Project Dimensions and Activities Breakdown

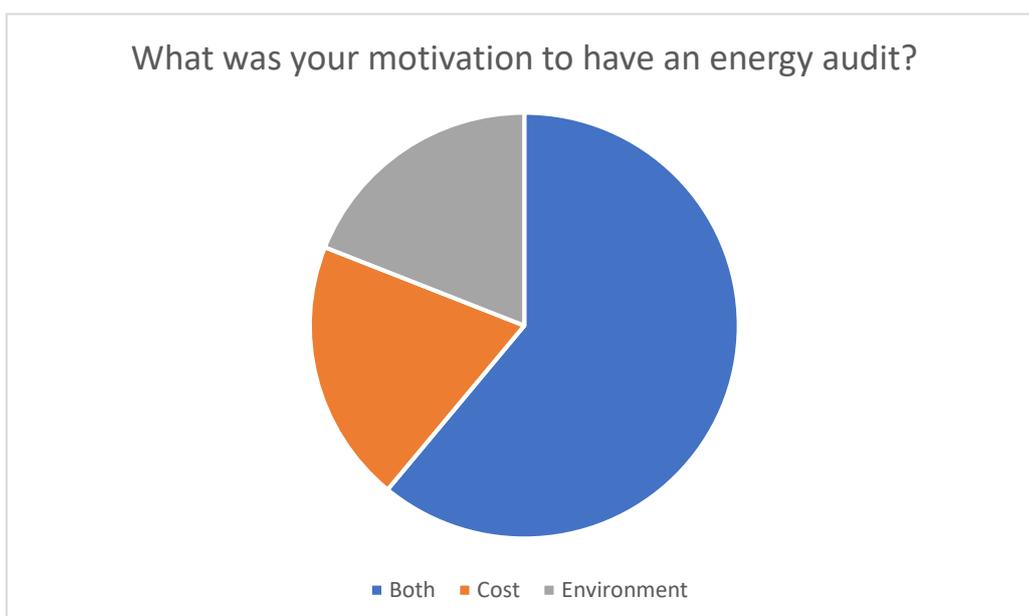
2.1 Energy Audits

Energy audits, as planned at application stage, formed the central theme of the project. One of our auditors was trained through the City and Guilds Energy Awareness course, and the other, the City and Guilds Domestic Energy Assessors (DEA) course. The DEA course allowed us to conduct EPCs and energy audits, covering all aspects of energy efficiency and in all, resulted in the delivery of 300 in total.

The need for audits was apparent before we set out to deliver the project, but reflection of this through demand in audit bookings was another story. Firstly, it was important for us to understand the motivations of people looking to gain energy efficiency advice from an audit. The environmental benefits are our motivation, but we knew that residents' motivation could be purely financial or a combination of both. We therefore ensured our marketing campaigns and approaches were tailored in such a way that highlighted all benefits. When suspicions were likely to be raised about the "free" service and ulterior motive, we made it clear that we were an environmental charity with no agenda other than environmental protection and improvement.

To understand better how to approach and encourage the uptake of audits, early in the project, we invited those who had received an audit to let us know their motivations to engage with our energy audit service. Responses from 105 survey respondents showed that motivations for 61%, were a combination of both environment and financial benefits, followed by 20% being motivated primarily by the cost benefits and 19% motivated solely by environmental benefits. We used this information to shape promotions and engagement as the project progressed.

Graph 1: What was your motivation to have an energy audit?



The audits provided a range of information that was split into low cost - short term, medium cost - intermediate term, and high cost - long term solutions. Audits were tailored from the start with the first question our auditors asking being: “What was your motivation for booking an audit and is there anything in specific you want to discuss?” This ensured an organic conversation flowed rather than a tick box exercise. The residents were then advised on both the environmental and cost benefits of a range of relevant energy efficiency measures from chimney balloons to solar water heating.

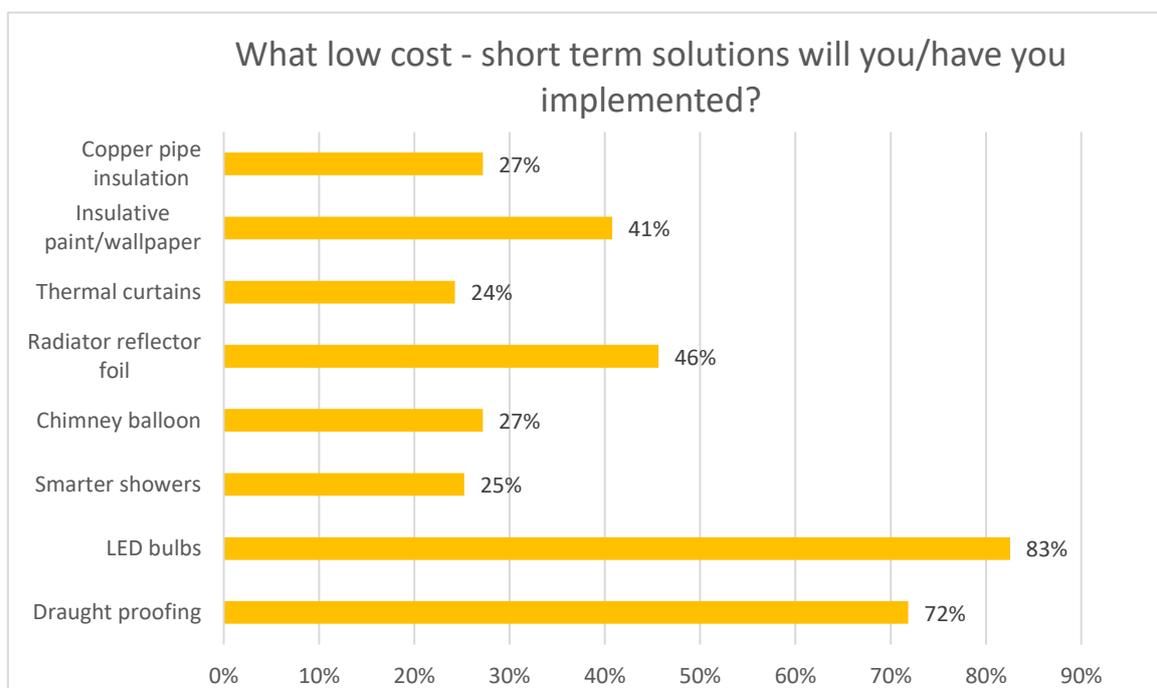
Due to the personalised and detailed energy advice from our auditors, our follow up post audits showed that a high percentage of both physical and behavioural changes were made. The implementation of these is reflected in the 125% delivery of the original project carbon target.

2.2 Energy Challenge Physical Changes

As can be seen in Graph 2, data collected over the course of the project shows 83% of audit participants implemented immediate or low-cost measures ranging from replacing halogen light bulbs with LEDs, to hanging thermal curtains for heat conservation.

The links to websites included in our action plans were particularly useful for the items many people weren’t familiar with, such as the chimney balloon and radiator reflector foil:

Graph 2: What low cost-short term solutions will you/have you implemented

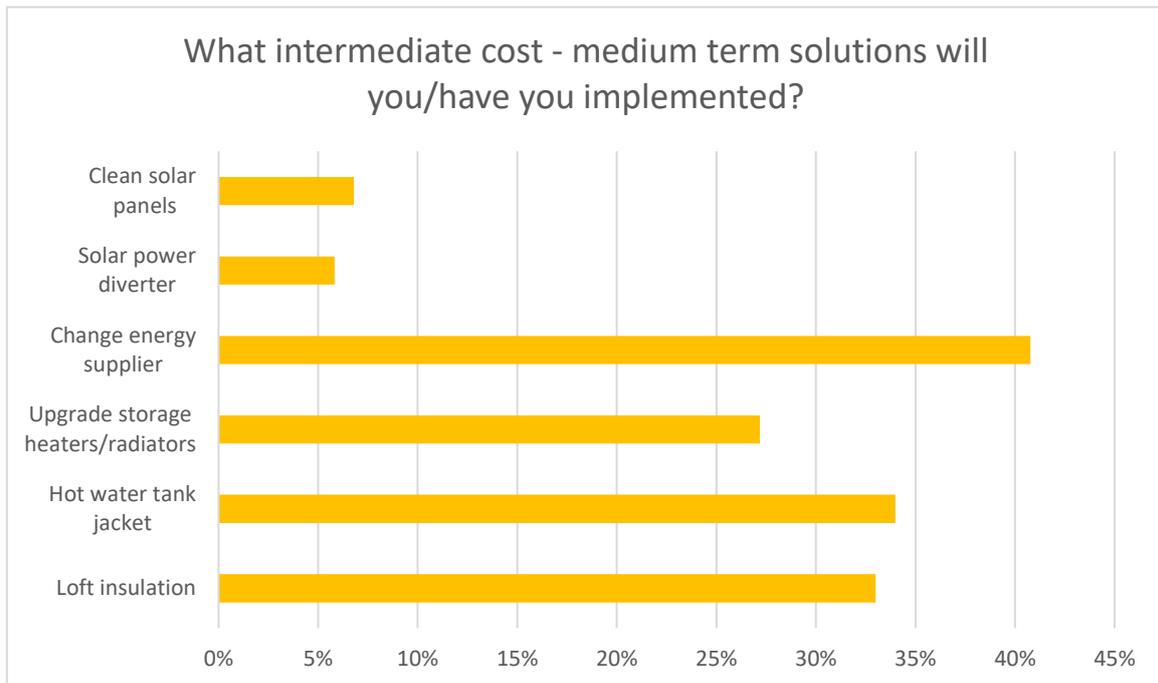


Graph 3 shows that 41% percent of audit participants implemented medium term changes with most changing energy supplier. These people switching their energy supplier will see the difference in their electricity bill savings of around £300 a year. 33% of residents

increasing their loft insulation to the recommended amount of 270mm, which means energy bill savings of up to £200 a year and 990kg of carbon saved per household.

There was also a small percentage of people who already had PV installed prior to the project, that started cleaning their panels or installing a power diverter such as the 'Solar iBoost' for their hot water requirement. Simply cleaning the solar panels can increase their efficiency of up to 25%.

Graph 3: What intermediate cost-medium term solutions will you/have you implemented?



34% of survey respondents upgraded their hot water tank insulation.

This thermal image taken by one of our auditors, shows heat escaping from a hot water tank and copper pipes:

The adjacent image shows what the tank looks like once insulation has been added.

We saw uptake on this advice simply by explaining that although it may be nice to have a warm cupboard for sheets, constantly heating your hot water tank up to 70°C is a very expensive way to do it.



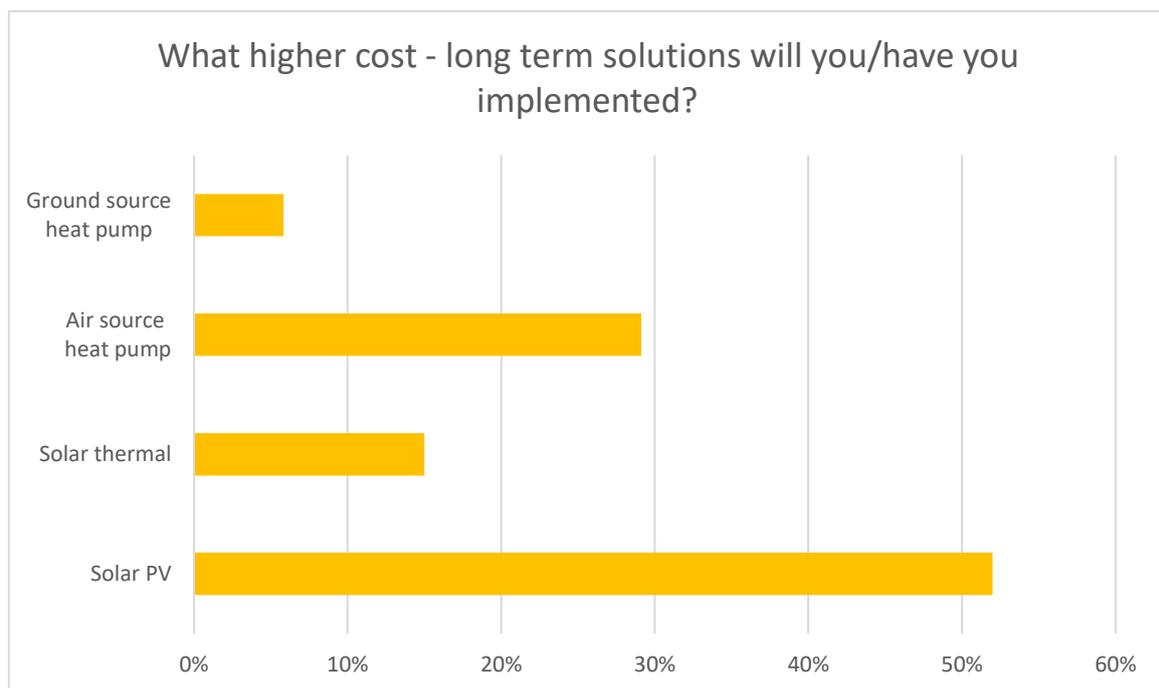
Graph 3 also suggests that 27% of residents replacing their old storage heaters with the new quantum type will now be able to control the temperature of each room. They will still be running them off the night tariff so will enjoy cheaper bills without the expense of a boiler installation.

2.4 Renewables and the Eco Savvy Energy Challenge

The promotion of renewables has been a priority in this project due to the legacy of environmental benefits, and scale of change in the reduction of carbon emissions. As shown in the graph above, **solar PV** and **air source heat pumps** have had the highest level of uptake and interest.

Graph 4 below suggests a high uptake and interest in advice around renewables. With 52% of survey respondents intending to or in the process of installing solar PV, and interest in air source and ground source heat pumps and solar thermal.

Graph 4: What higher cost-long term solutions will you/have you implemented?



Eco Savvy Energy Challenge Solar Key Milestones:

- Over 25 households supported with information as they considered Solar PV projects
- 12 Solar PV installations complete
 - 1.4 tCO₂e annual saving per household
 - 17 tCO₂e project saving
 - 168 tCO₂e lifetime saving
 - Average annual carbon saving of 370 kgCO₂e per kW installed
 - Money savings on electricity bills
- 3 Home Energy Scotland interest free loans approved
- 25yrs of renewable electricity which is not impacted by energy companies price hikes
- 20yrs of Feed in Tariff and/or Export Tariff payments

Sunlight is free, and many Arran households have implemented solar PV to capture this free resource, cut electricity costs and minimise fossil fuel dependence to benefit our environment. The uptake of solar PV has been one of the greatest successes of the project.

What began as a free energy audit, lead onto Energy Performance Certificates, communicating with installers, assisting with application forms, and finally seeing the results and hearing the great feedback from happy Arran residents.

After the initial audit and feedback from residents showing a huge interest in solar PV, our energy auditors made it a priority to help the 25 interested parties reach the next step in their personal solar project. By conducting an up to date EPC to determine if they would reach the required D55 rating for the Feed in Tariff, the households could then decide whether to progress, or to complete the recommended improvements to reach the requirement.

Of the 25 people who had EPCs, 13 decided to not proceed. A main reason for this was that they lived in old houses with inefficient heating and insulation, and to upgrade these before installing solar and before the Feed in Tariff deadline was not time or cost effective. Out of the 12 installs, 2 households went ahead knowing they were not eligible for the Feed in Tariff and that their payback time for the system would be many years. This shows promise for a continuation of Solar PV installs where Arran residents are still interested in solar PV without the possibility of the FiT, and that they are more environmentally driven than financially.

Solar PV Surgery
Social with Eco
Savvy Energy Team

Friday
7th Dec
10-3pm
Ormidale
Pavilion

Speak to us and other residents thinking about getting solar PV

tea, coffee and biscuits

Get support, advice and updates on solar project from the team

Drop in anytime to speak to the energy team about solar for your home including:

- Electronic Solar Suitability Check
- Info on Solar Installers we have spoken to so far, cost, availability, time-frames
- Get assistance for HES Scottish Government's interest free Loan application
- Start planning your Solar install dates
- Discuss & organise your quote

For those already on our list:

As a part of our support for these households, we held a solar social event which encouraged locals to discuss and ask any questions regarding solar PV with the team and each other in an informal way. Wanting to make the process as easy as possible, and being an impartial advice service, Eco Savvy did extensive research on installers who would be willing to come over and complete multiple installs on Arran. This involved looking at the quality of their work, track record, reviews, certificates, and the best deal that they could give to households interested. Using a tool from the Energy Savings Trust and displaying 3 different installer's info packs, this advised attendees on their personal savings and they were then able to make an informed decision on installers.



Throughout the solar PV process there was a lot of learning as we went along. It was particularly useful having a qualified auditor for Energy Performance Certificates as it was realized that for households using the Home Energy Scotland interest free loan and for those who had originally had a lower than D55 rating, a further updated EPC had to be lodged to prove that the panels were now in place and that the household now met the minimum rating.

3 out of 12 households took advantage of the Home Energy Scotland interest free loan to cover the cost of the installation. The energy auditors took time to help the 3 households to fill out the application forms by meeting with them in person. A main problem faced with these applications was the processing of them took a lot longer than expected, with one resident waiting a whole month to have the loan approved before the manual work could begin.

With the Feed in Tariff deadline being a major driver, some people who planned to use the loan either ended up paying outright to avoid missing out or didn't go ahead at all. Another challenge that was faced was the Feed in Tariff applications, as these could only be sent away once the system had been commissioned. Due to many ferry cancellations over winter this was a problem in itself! The application was 26 pages long and required highly technical information to complete so the team assisted where they could and ensured the necessary information was passed on from the installer to the customer.

The team has maintained an ongoing contact with the residents who implemented solar panels, most of whom enjoy keeping us up to date with their latest solar meter readings and how they are finding the panels. Through this regular communication we have managed to get a large 75% sample for the renewable electricity section in the carbon tools. Many of the residents with solar PV installed have now shown an interest in power diverters such as the solar iBoost to use excess energy to heat their hot water. In future we hope to help facilitate the installations of these across the island with a group deal similar to this solar project.

Air Source Heat Pumps

- 3 Air Source Heat pump installations complete
- 1.1 tCO₂e annual saving per household
- 3 tCO₂e project saving
- 34 tCO₂e lifetime saving
- 2 applicants to the Warmworks scheme
- 1 Home Energy Scotland interest free loan approved
- 25yrs of renewable electricity which is not impacted by energy companies price hikes
- RHI payments for 7 years

Arran has an abnormally high air source heat pump per population. This again is mainly due to no cheap mains gas, so there are not many alternatives to all electric homes. Arran also has a very environmentally aware population which plays a role too.

In this project, 3 project participants proceeded with air source heat pump installations, whilst a high percentage considered it, but then could not proceed for reasons such as their houses not being suitable due to high heat loss. As the FiT deadline was the same day as the end of this project, we made solar PV a priority for renewables, but looking ahead we will be promoting air source heat pumps on a broader and larger scale.



Solar PV

CASE STUDY 1

SITUATION

Mr & Mrs McKenzie live in a bungalow run by electric panel heaters on a single tariff.

- What was your motivation to get solar panels and what are you most looking forward to now they are installed?

"Benefit to the environment - Being an all electric household, we are looking forward to lower fuel bills eventually. It is quite exciting to see how much power they are generating each day even in our present winter conditions."



SUPPORT

- How did you find the free service that Eco Savvy provided to help you progress with solar PV and is there anything in particular that was beneficial?

"We were very impressed with Eco Savvy and how they continue to be very helpful with advice on form filling etc. By implementing their recommendations for reducing our CO2 emissions we have improved our EPC rating considerably. The report they produced to improve our home's performance rating was very detailed and interesting and a guide to other areas we could upgrade at a later date"

OUTCOME

- Would you recommend getting solar panels to other residents on Arran? And what would be your advice for anyone considering getting them?

"Yes, certainly but we would suggest everyone took advice from Eco Savvy before going ahead with any options as they are very knowledgeable and only interested in reducing Arran's carbon footprint."





Solar PV

CASE STUDY 2

SITUATION

Ms Ross lives in a 2bed house with an air source heat pump producing her heating & hot water.

- What was your motivation to get solar panels and what are you most looking forward to now they are installed?

"Utilising energy from the sun to provide electricity for our house and to others through the national grid offers great potential to protect natural resources and our climate. It has been my ambition for many years to have solar panels and I am looking forward to seeing whether we can be self sufficient in energy use this summer as a result."



SUPPORT

- How did you find the free service that Eco Savvy provided to help you progress with solar PV and is there anything in particular that was beneficial?

"The support from Eco Savvy was great - helping to find a good contractor and finalise getting the work done and providing the Energy Performance Certificate were particularly helpful. Thank you very much for helping me to achieve my dream."

OUTCOME

- Would you recommend getting solar panels to other residents on Arran? And what would be your advice for anyone considering getting them?

"I would really recommend getting solar panels to people who have the roof facing in the right direction. Help is available from a variety of sources and it doesnt take long to fit them these days."





Solar PV

CASE STUDY 3

SITUATION

Mrs Brown lives in a large all electric bungalow with her husband and 3 children.

- What was your motivation to get solar panels and what are you most looking forward to now they are installed?

"Solar panels use renewable energy which can only be a good thing. Also cutting a bit from the electric bill is a good thing too."



SUPPORT

- How did you find the free service that Eco Savvy provided to help you progress with solar PV and is there anything in particular that was beneficial?

"Eco Savvy were great, making it so easy and straightforward to get things moving. Charlotte in particular practically organised everything for us, I didn't really need to do anything. I've thought about getting them installed for awhile but really didn't know where to start, what installers to use, etc. I also hope to have the Solar iBoost installed to help with hot water."

OUTCOME

- Would you recommend getting solar panels to other residents on Arran? And what would be your advice for anyone considering getting them?

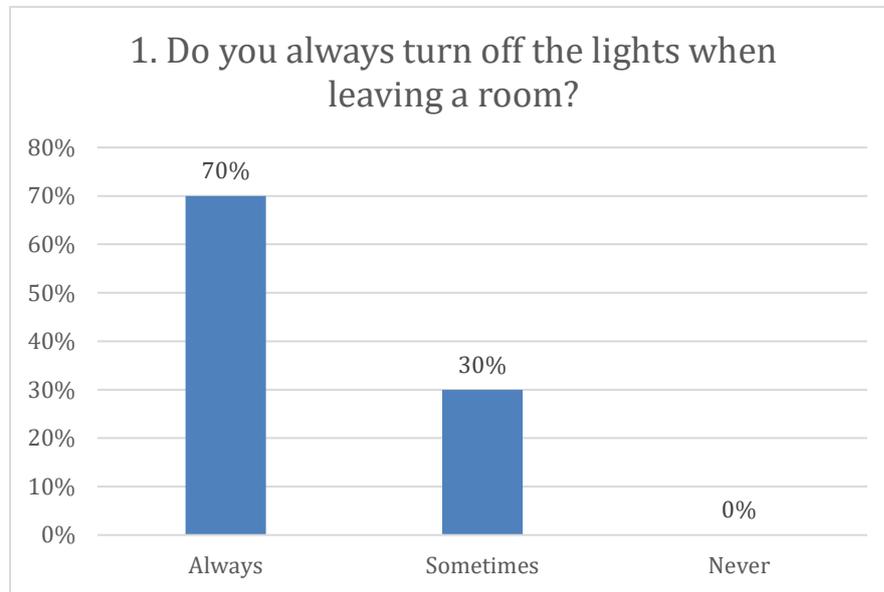
"Yes, I'd recommend getting them done but you'd need to be quick as the cut off for FIT payments is 31st March and all the paperwork needs to be with your electric supplier by that date. Thank you Eco Savvy"



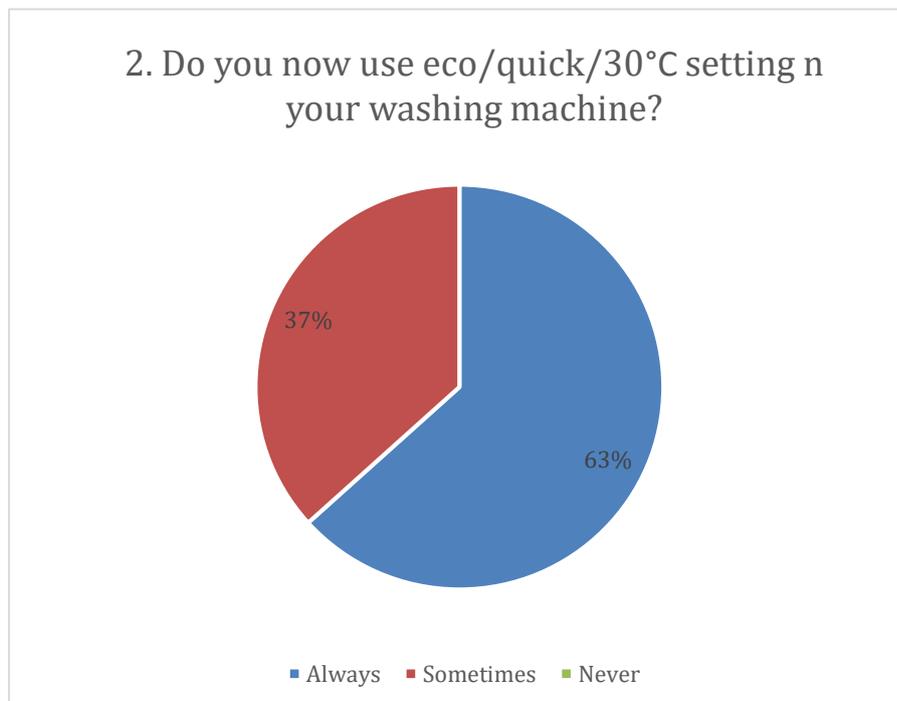
2.5 Energy Challenge Behavioural Changes

Below are ten graphs which show a behavioural change in audit and project participants in their daily actions. The results are based on a sampling size of 30.

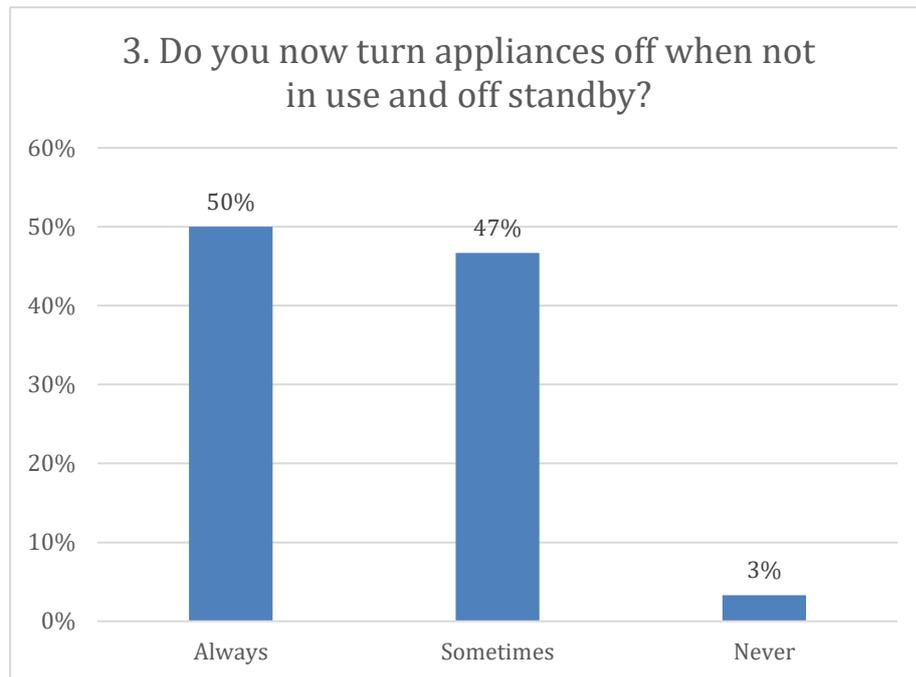
Graph 5: Do you always turn off the lights when leaving the room?



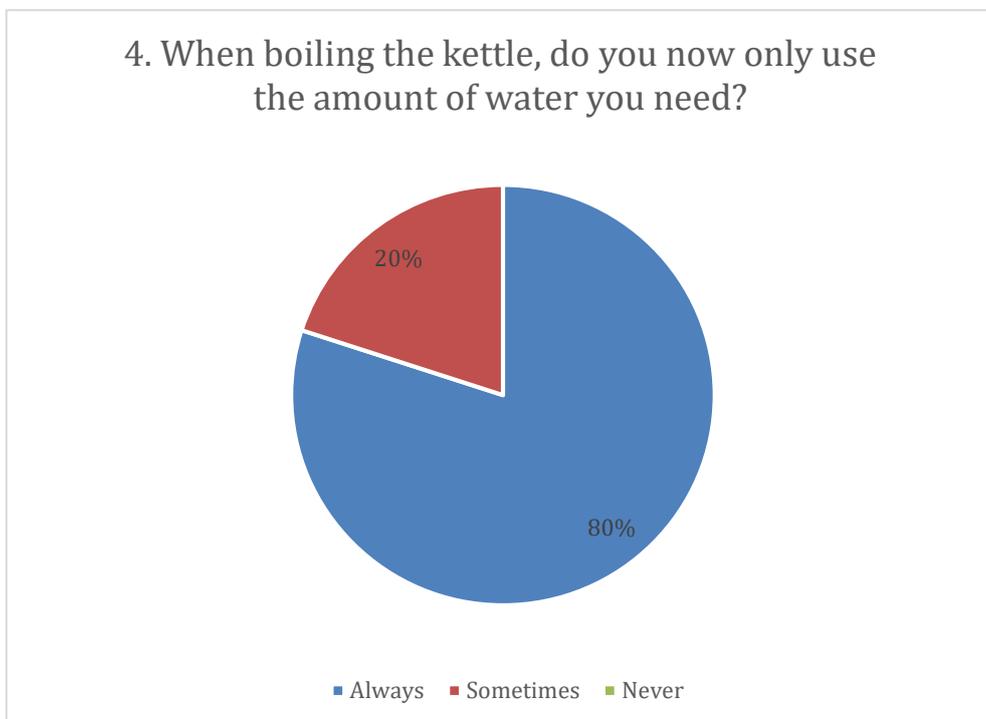
Graph 6: Do you now turn appliances off when not in use and off standby?



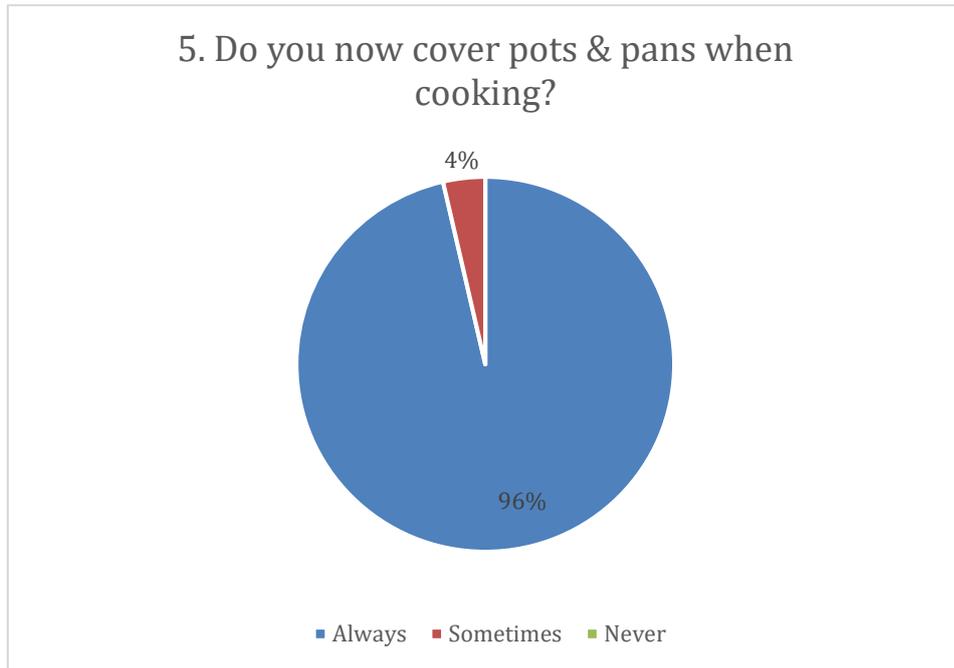
Graph 7: Do you now turn appliances off when not in use and off standby?



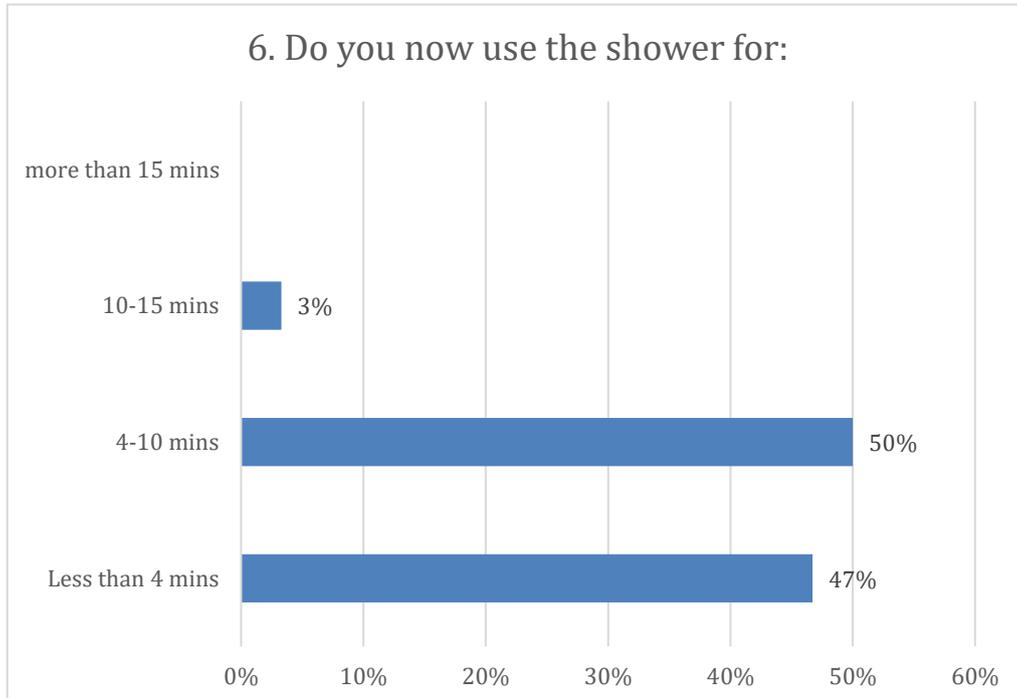
Graph 8: When boiling the kettle, do you now only use the amount of water you need?



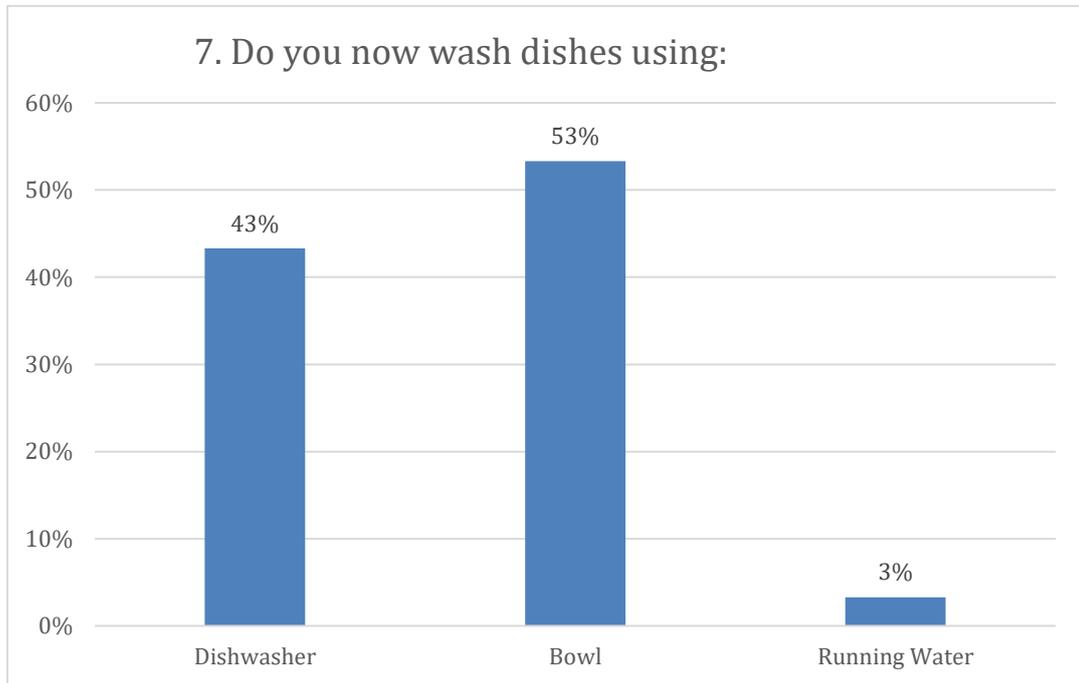
Graph 9: Do you now cover pots and pans when cooking?



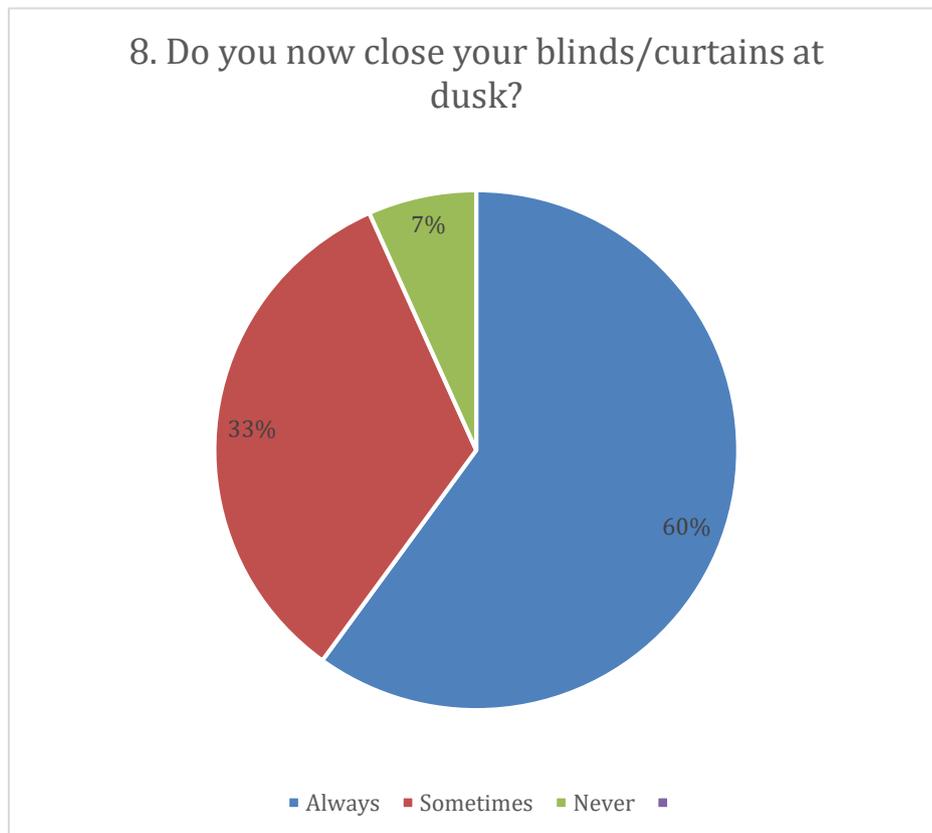
Graph 10: How long do you now use the shower for?



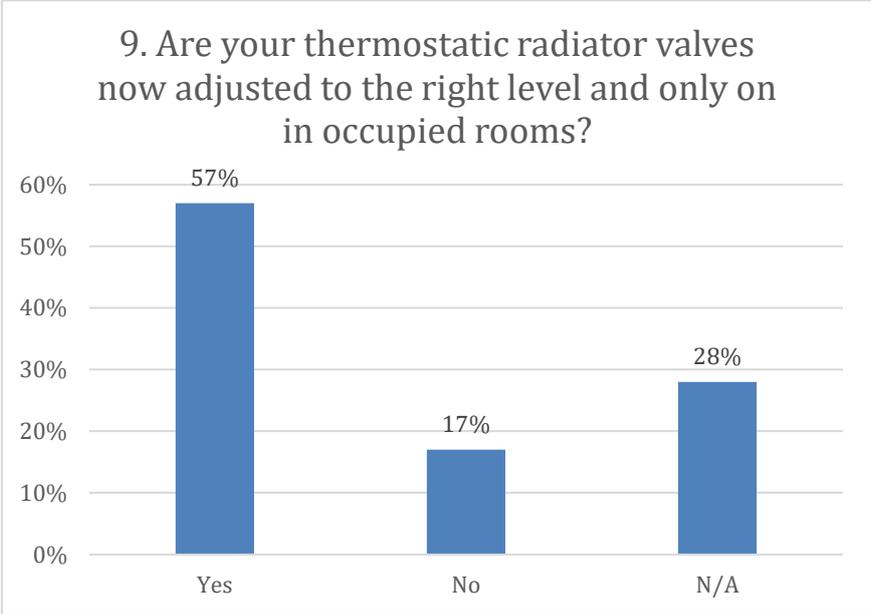
Graph 11: How do you now wash your dishes?



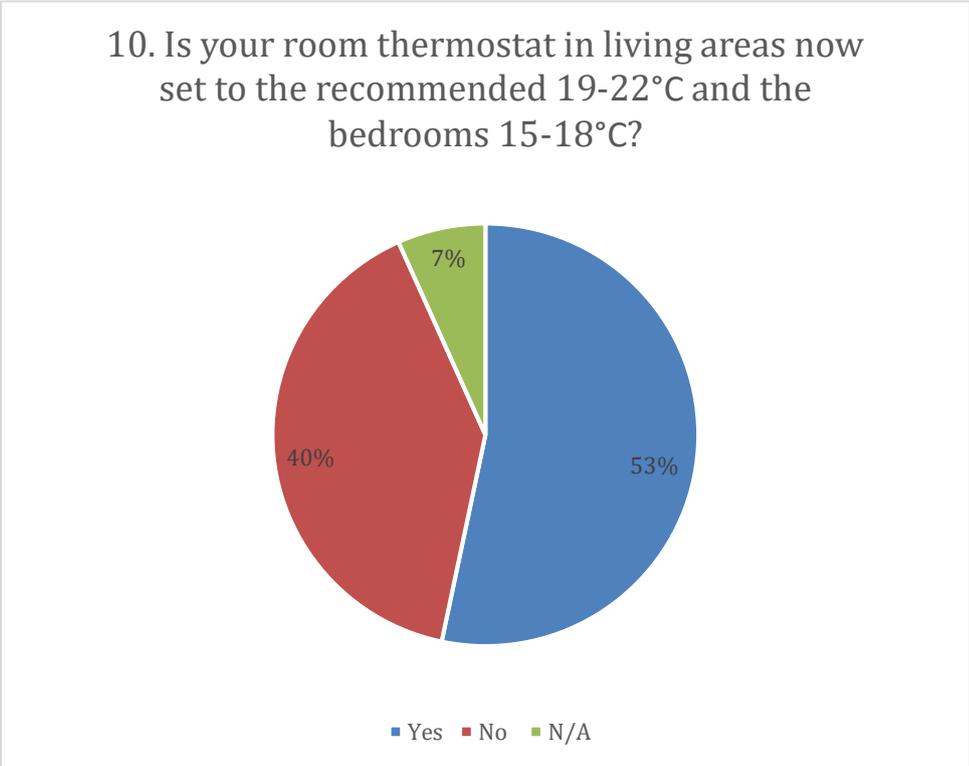
Graph 12: Do you now close your blinds/curtains at dusk?



Graph 13: Are your thermostatic radiator valves now adjusted to the right level and only on in occupied rooms?



Graph 14: Is your room thermostat in living areas now set to the recommended 19-22°C and the bedrooms 15-18°C?



The successful behavioural changes mean project participants will:

1. Save £50 a year by having a single halogen bulb on for 6hrs a day instead of all day.
2. Save between £45 & £80 a year by turning appliances off and off standby.
3. Save £27 a year by washing their clothes at 30°C instead of 60°C.
4. Save £36 a year by filling their kettle with 2 cups worth of water rather than to the top.
5. Have their water boil 30% faster with a lid and have reduced moisture in the air.
6. Save £49 a year by reducing their shower time by 5mins.
7. Save £30 a year by using a bowl rather than running hot water.
8. Have 15% less heat loss from their house by closing their blinds/curtains at dusk.
9. Save £50 a year by using their TRVs correctly.
10. Save £127 a year by turning their thermostat down by just 1°C.

Energy Monitor Loans

We had four energy monitors on loan for 2 weeks to 3-month trials over the entire duration of the project. The majority who trialled the monitor ended up buying one for their own use, and many agreed that they felt empowered with the definitive energy usage display in real time, which also made it easier to tackle areas and times of day where they were using excessive energy.



energy efficiency

CASE STUDY 1

SITUATION

Mr & Mrs Attkins are a couple living in a flat above a shop who had previously been informed that their property wasn't suitable for solar PV. They already had solar PV on a guest house they own that was installed many years ago and saw the benefits, so were keen to have the same on their own home. They got in touch with Eco Savvy initially for a free energy audit and an Energy Performance Certificate to be conducted at the same time from our energy auditors Derek & Charlotte. Mr Attkins wanted to know if solar was a possibility and if his EPC rating would meet the D55 requirement for the Feed in Tariff.



SUPPORT

On arrival at the property the energy auditors could tell that this couple were already very energy efficient in many ways. However the main support was making them aware of their eligibility for the Home Energy Scotland interest free loan and helping them through the application process. Eco Savvy also provided a variety of info packs from reputable solar PV installers.

OUTCOME

Mr & Mrs Attkins are enjoying their free electricity and their Feed in Tariff payments for the next 20yrs. They now have an impressive EPC rating of B85 after following the recommendations for increasing their loft insulation and installing solar PV. Having purchased a Nissan Leaf and installing a charge point, it means their solar panels can also charge their electric car!

QUOTE

"We really are delighted with our new solar installation, arranged for us by Eco Savvy. These new panels seem to make better use of overcast days, so even when it's cloudy, they generate enough to cover our flat's base load. Of course, when the sun shines we get 3kw - enough to run our washing machine and, more importantly, charge up our electric car. Eco Savvy told us about an interest-free loan from Home Energy Scotland, which makes the installation really affordable."



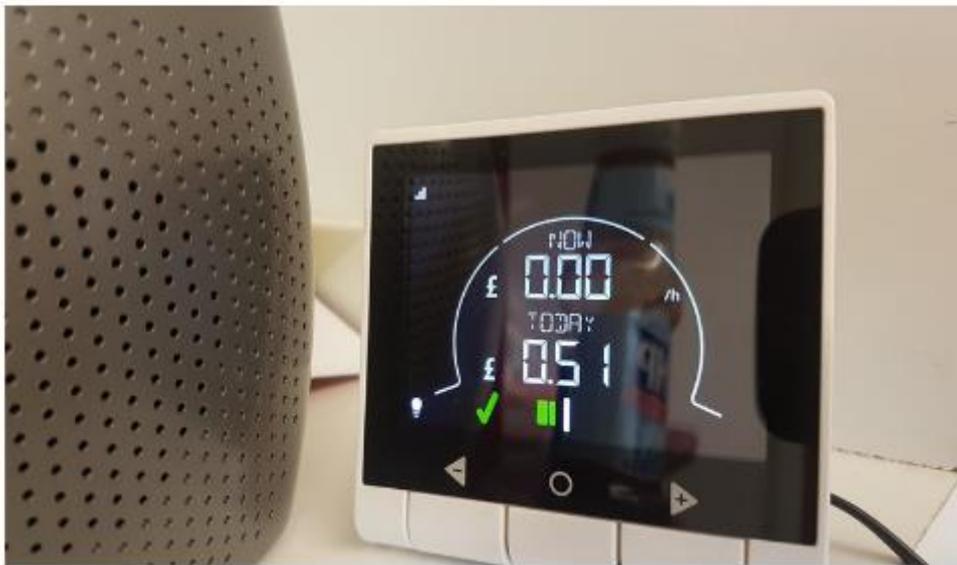


energy efficiency

CASE STUDY 2

SITUATION

Ms McLean is a single pensioner living in Arran Trust social housing who struggles with paying her bills, particularly after the recent electricity price hikes. She was sent a letter from the housing association offering Eco Savvys services and immediately made contact to organise a free energy audit from Derek & Charlotte. Ms McLean wanted to know if there was anything she could do better to save money and energy in her home and if there were any financial benefits available to her that she was missing out on.



SUPPORT

Our energy auditors quickly realised that Ms McLean was in fuel poverty. She was only heating two rooms with storage heaters and was still struggling to afford the electricity bill. She was helped to apply for the Warmer Homes Discount and an energy monitor was installed and lended to her for a trial period so she could see what her biggest users of electricity were.

OUTCOME

Ms McLean was very proactive and as soon as she received her action plan email she used the included website links to purchase the recommended measures. She also contacted the housing associations handyman to come and replace the seals on the outside of her windows. On her loaned energy monitor she watched her savings grow!

QUOTE

"I was so pleased I had a visit from Eco Savvy energy project, the information they gave me was invaluable. I'm now much more aware of the electricity I'm using. Since their visit, I changed all lights to LED, changed my shower head to a Pulse Eco head, bought a smaller kettle, replaced my old fridge and contacted my electricity supplier for Meter Reading Monitor. Their thermal imaging camera found cold spots that I didn't even realise were there like the single glazing within my front door."



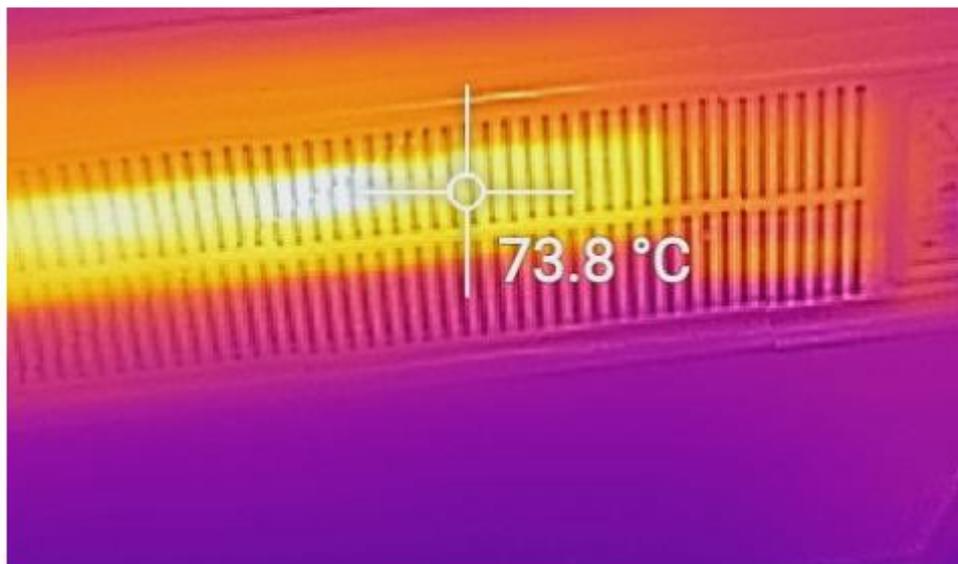


energy efficiency

CASE STUDY 3

SITUATION

Mr Bellhouse is an architect who recently moved to the island. He has moved into a detached bungalow with a plan to renovate it. It currently is all electric with old storage heaters and a poor EPC rating of G10. He came across Eco Savvy in the local newspaper and visited the office to talk things through with our energy auditors at one of our weekly drop in surgeries. This initial contact progressed to a free energy audit to give more accurate and detailed advice based on his home. Mr Bellhouse was keen to get rid of his storage heaters and wanted to know what more efficient options were available to him.



SUPPORT

After looking through Mr Bellhouses electricity bills it was clear they were higher than expected. The infra red camera picked up draughts from a keyhole in the external door and hot temperatures given off by light bulbs. Our energy auditors advised that an air source heat pump would be most suitable for the property and talked him through the HES loan and RHI applications.

OUTCOME

Mr Bellhouse has now switched energy provider to a 100% renewable and more affordable tariff. He has draught proofed the keyhole and replaced all his light bulbs with LEDs. All of this has meant far cheaper electricity bills in the interim before his air source heat pump is installed. His interest free loan has been approved and he will benefit from substantial RHI payments for the next 7yrs!

QUOTE

"When we moved to Arran we wanted to lead a sustainable lifestyle and one of the first things we did was to contact Eco Savvy for advice.

Their free Energy Audit pinpointed a few things straightaway and we have already made some changes; we have installed LED lighting, draught proofing and switched to green electricity at a much cheaper rate. We're also on track to have a new air-source heat pump installed by next winter. Thank you Eco Savvy!"

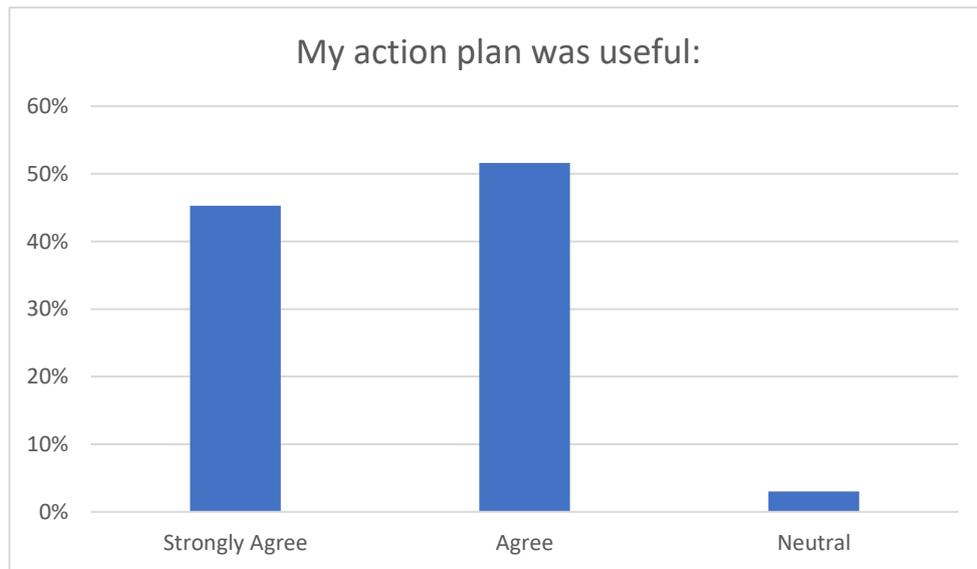


2.6 Action Plans and Follow up

We sent out comprehensive tailored energy action plans and personalised audit summaries post audit to all project participants.

As can be seen from the graph below, 97% of 104 survey respondents found their energy action plan useful.

Graph 15: I found my action plan useful



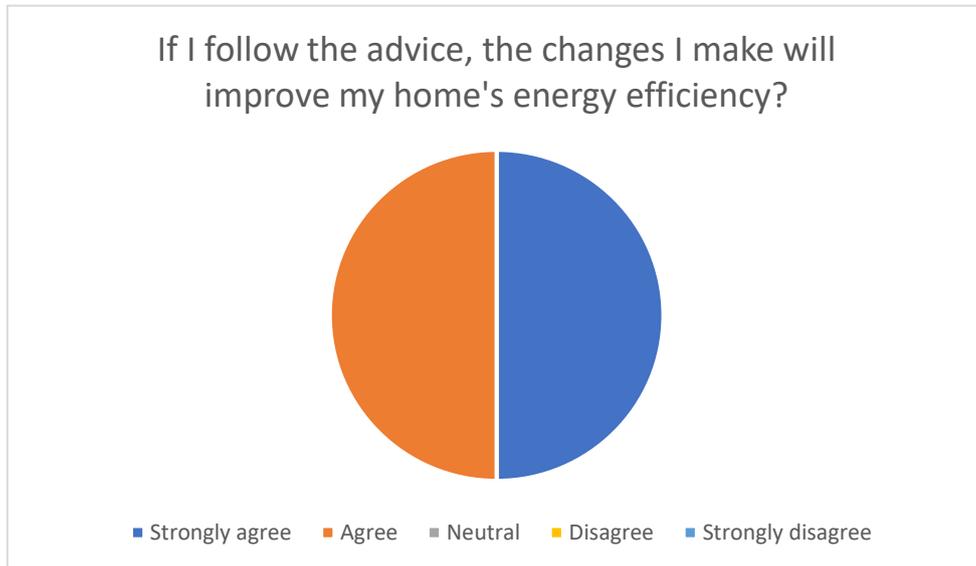
Whereas 86% of survey respondents found the advice extremely or very personalised:

Graph 16: How personalised did you find the advice and action plan?



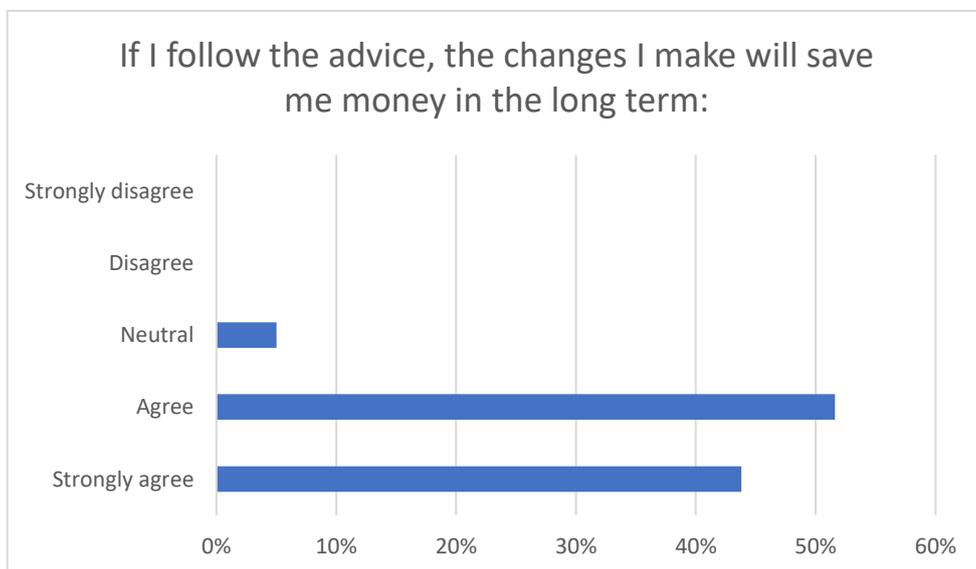
There was also the consensus that if the advice was implemented, energy efficiency improvements would be achieved with 100% of survey respondents agreeing:

Graph 17: If I follow the advice, I will improve the energy efficiency of my home.



The financial benefits, that solely motivated over 20% of audit recipients to get an energy audit were believed to be achievable by 95% of survey respondents.

Graph 18: If I follow the advice, the changes I make will save me money in the long term.



Overall, the tailored action plans and summaries produced by the auditors and emailed to the residents after the audit were deemed very useful to enacting change. See below for some overall audit and action plan feedback from project participants:

Qualitative Survey Responses

ENERGY AUDIT FEEDBACK



Very interesting, good report with excellent internet links provided ~ well worth having taken part!

Thank you for your visit. I have already purchased a hot water cylinder jacket and copper pipe insulation.

I found Derek and Charlotte both very helpful and informative. I thought they were both just great!

Have implemented draught proofing and reflector foil, and we have thermal curtains for the big windows. Big difference noticed in our lounge which we have carpeted which is noticeably warmer and more comfortable.

Thank you very much for the report greatly appreciate your time and work

A much appreciated and very worthwhile service from Eco Savvy. Thank you!

It is much more motivating to have a personal visit and impartial advice rather than just reading up about options. We are really grateful to Ecosavvy to providing this brilliant service.

It was extremely helpful meeting Derek and Charlotte and I've taken their practical suggestions, both verbal and in their written report, to heart. The thermal imaging was also very helpful to see where things could be improved.

In middle of renovating living room. Insulated walls and floor so hopefully it will make a huge difference!

This was a great service - informative and very worthwhile. I have recommended it to many.



ENERGY AUDIT FEEDBACK



A thoroughly worthwhile exercise, conducted very professionally, thank you.

Have removed our final storage heater and associated SSE meter since the audit. And close the blinds every evening at dusk!

Found this really helpful to help me reduce my annual fuel bill

My energy audit was carried out in a very professional manner. I greatly appreciated that they were happy to give advice and recommendations that were above and beyond what I had expected.

Your representative Charlotte is a credit to your organisation.

Thermostat down, immersion heater off. Saving money :)

Excellent audit from Derek and Charlotte. Exceeded my expectations and the action plan means I can go back to implement things I would have likely forgotten about.

Our priority at the moment is double glazing, which we hope to install with the help of an interest free loan from Home Energy Scotland.

Well worth having this report as I can make improvements that are cost effective as well as good for the environment.

Installed solar PV panels which are working well.



2.7 Trust Housing Partnership/Fuel Poverty

In 2017, 24.9% or 613,000 households in Scotland were in fuel poverty. And the number of households in extreme fuel poverty in Scotland was at 7% or 174,000.

With these facts in place, it is no surprise that during the delivery of audits we came across a lot of fuel poverty on Arran. There was for instance a household that could only afford to heat one room of a three-bed house with one old storage heater. In another instance we were surprised to find people who had moved their beds into the living room so only the most used and warmest room in the house needed to be heated as well as due to immobility.

It was shocking for us to come across this level of fuel poverty on Arran, and we realised that we had only touched the surface of it. Just before the cold of winter kicked in, some of the team attended an Energy Action Scotland (EAS) Stay Warm Stay Well workshop where we gathered a huge amount of knowledge of the fuel poverty issue and information that could contribute to advice to those needing it.

In Q3, a representative from the local housing association got in touch with us after one of their tenants sent the housing trust's headquarters their Eco Savvy action plan in the hope of getting permission to get an air source heat pump installed. The project participant was in receipt of a disability allowance and was hoping there would be the possibility of getting a heat pump through the Warmworks Scotland initiative that our auditor had advised on. We assisted them in this exploration which resulted in an opening for dialogue with the housing trust. Unfortunately, the result of this that our project participant was not eligible for the Warmworks scheme due to the social housing arrangement, but Trust Housing expressed an interest in our audits as a result of feedback they had received.

Our greater understanding of fuel poverty issues, gained from the Energy Action Scotland Stay Warm Stay Well workshop, helped us tailor our audit pack for residents of the housing trust. Our meeting with the Programme Manager allowed us to explain the benefits of having an energy audit to Trust Housing tenants and the evidence of positive experiences of Arran residents so far.

The housing trust approved us to approach their 300 tenants around the island and assisted us by sending letters to each tenant in advance of our audits. During three weeks in February and March, we delivered 60 audits and found this to be a particularly worthwhile element of the project with feedback received after and continued engagement with many participants.

The commencement of housing trust audits coincided with the Big Energy Savings Week initiative run by Citizens Advice which meant we could use their additional resources such as thermometers, meter keys, and info booklets on switching supplier to give out to housing trust residents we visited.

2.8 Energy Drop in Surgeries

We held a total of 58 energy drop in surgeries during the project. The engagement of these was never in large numbers but was always quality and usually ended up with audit bookings. These energy drop in surgeries offered an opportunity for residents to come speak to our auditors with specific energy related issues in a casual environment, usually over a cup of coffee and a biscuit!



2.9 Climate Literacy

Climate literacy has been at the forefront of everything we have delivered in the Eco Savvy Energy Challenge. Change starts with education, and climate literacy was the foundation of all climate action whether it be post audit, or post Eco Savvy film event.

We discovered in our last CCF project how powerful the tool of education is to spur climate action, and how we have often most effectively delivered this through film events. It was therefore important for us to hold a few quality film events and we had great engagement for the three that we held during the duration of the project. Examples of this can be seen in the following responses gathered post climate literacy film events:

ECO SAVVY FILM EVENTS FEEDBACK

I am changing our energy provider to one that is 100% renewable to maximise the potential for energy providers to change from fossil fuels.

Encourage family members to use charity shops more for clothes. Get out my sewing machine!

I have already approached my teachers at the high school about setting up some sort of eco nature club: with a similar programme to these events to educate my peers - it would be good if we could do some sort of practical activity & if Eco savvy could provide any help with this

I am going to eat less meat, as well as prep my lunches every day so I do not have vast amounts of packaged food per week.

consume less

WHAT CHANGES HAS THIS FILM EVENT MOTIVATED YOU TO MAKE IN YOUR DAILY LIFE?

I have not bought Nestle products for over 30 years. I encourage others not to buy Nestle. As to the wider problem I think we should help more people to be aware of multi nationals and the devastation they inflict on our planet..

My next car will be electric or hybrid.

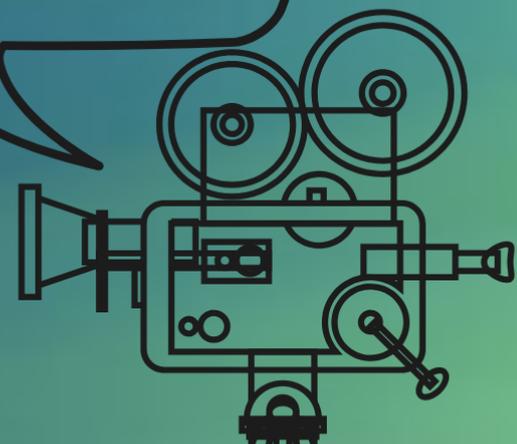
Reduce unnecessary commercial consumer driven purchases, ie: reduce my families "STUFF"

I feel encouraged to repair more devices, wherever possible, rather than replace.

Meat free Monday x5

Reduce the amount I shop, especially for clothes. Change of mindset. I feel passionate about challenging my friends & family about their consumerism too & feel equipped with some of the relevant information from this film event!

Use less plastics, ride a bike, be as vegan as poss



ECO SAVVY FILM EVENTS FEEDBACK

Very sobering & thought provoking film. Positive ending with it being realistic & achievable to choose one thing, & in doing it consistently for a very long time, make a substantial difference.

I am concerned about the unpredictability of devastating & fatal weather patterns & natural disasters, food shortages, water shortages

I really appreciated the simplicity of this film & the striking beauty of Scotland portrayed which made me feel very passionate about protecting it.

I knew these things went on but seeing them all put together like that makes you realize how much of a negative impact consumers like me have

Rights of people everywhere are important

OTHER COMMENTS

Good film that covered a variety of topics, lots to think about.

This relates to something we all have to do (wear clothes!) & was innovative & informative & something we can all do something about.

I feel I am already quite well informed about the global issues but it was useful to hear what is being done on Arran eg the foodshare project with the Co-op

I think every film got there message across & made you go away & think about it to the point you start to question what you are doing from waste to the environment & how we shop. They make you want to change.

Living on Arran is the perfect opportunity to explore wild Scotland & the film has encouraged me to take advantage of this more

Very balanced challenging programme

It was an excellent film that made the links between the economics of consumerism, the impact on the environment and implications for working people in an easy to understand but powerful way.

I feel somewhat powerless to tackle these huge issues.



Pledges

Eco Savvy has always been motivated to inspire environmental pledges that will go towards a leading a lower carbon life. A site called We Are Do Nation (WADN) has been a fantastic way for us to facilitate this aspect, as all pledges are visible making people more accountable and likely to follow through. We also ran exercises after climate awareness events that allowed people to challenge each other to environmental pledges and found this particularly effective as it inspired discussions between individuals on what areas they needed to environmentally improve.

There were 62 environmental pledges made via WADN in total. If everyone who made a pledge through our [We Are Do Nation campaigns](#) follows through, the carbon saving of this would be 6.5 tonnes of carbon, and if these pledges are continued as a lifestyle change, it would save 21.3 tonnes of carbon annually. We have not included these totals in our carbon figures as this has been extracurricular to our project, and not carbon that the Climate Challenge Fund tool incorporates.

Climate Awareness Work with Schools

We continued engagement with our schools with a range of different events and activities.

In January 2019, Eco Savvy hosted the annual green day for all Arran Primary Schools. The event always aims to celebrate green initiatives and environmental action on the island through a range of activities and educational themes. This year's overarching theme was Be Green 2019 and 210 Arran primary children seemed to thoroughly enjoy the day, firstly by quite literally being green (assisted by green tongue painter lollipops).

Activities:

Eco Savvy had **smoothie bikes** that combined active travel, energy, and food waste themes. The fruit used was kindly donated by the Co-op and built into Eco Savvy's partnership with them, recently launched through the food share initiative. Each child had a chance to pedal and enjoy the reward of a delicious smoothie.

Eco Savvy Food Share Logo Competition. Each child received an info pack about food waste and the importance of minimizing this, and information on how to enter artwork into a logo competition.

Competition packs were put together and, with a little help from Munchie the monkey, they explained to the children what the food share was all about and why it is important to stop food going in the bin. The children were asked to design a logo that was simple, bright, colourful, bold, and clearly showed the food share message. The chosen logo would win £150 for their school to spend on an environmental activity or project. Money was donated from the Co-op and Eco Savvy for this. We received almost 100 entries that were deliberated on and a final shortlist of 9 were sent to our judging panel.

Representatives from the Co-op, Visit Arran, and Arran theatre and arts made up our fabulous panel of judges and with the brief in mind they decided on a winning logo - not easy as there were some great entries! The winning logo was designed by Rhea of Shiskine primary school who will now receive their prize money of £150. The schools Eco committee will have the exciting task of coming up with ideas on how to spend it.



Home Energy Scotland and Eco Savvy Energy Team delivered an **Energy Monopoly** activity. This saw the kids split into teams where they were quizzed on energy efficiency questions. They were rewarded with energy savings for correct answers and charged with higher fuel bills and water charges for incorrect answers. Speciality questions involving a picture or renewables, earned them more money. Alan from Home Energy Scotland said: *"It was an absolute pleasure to be involved here, some fun, educational activities to hopefully inspire kids to think about living greener, and more sustainable lives and be aware of the impact our day to day lives can have on the environment."*

This was a great activity for the project to be a part of as it reached a whole new audience with our energy efficiency message, advice and education.

Jim Park lead allotment holder at Arran Community Land Initiative, showcased a **worm farm**. The kids seemed to be very intrigued with this and as well as being entertaining, it raises an appreciation for nature, helping instil the will to protect it. The pupils were able to feed the worms cabbage and vegetable leaves that coincidentally came from the food share, as well as banana skins from their smoothies!



The **Community of Arran Seabed Trust (COAST)** stand involved a **sea of plastic activity**. Creating a sea scene out of plastic waste for a striking artistic message. This activity combined appreciation and education around the marine environment to encourage environmental improvement and protection.

North Ayrshire Council had an activity around recycling and putting plastic in the correct bin! They also shared and updated their **Plastics Recycling Guide**, now available in the **Eco Savvy shop**.

The **Eco Savvy Shop** stand showcased our eco products and ethos. It was great to draw the link from recycling plastic with NAC, to eliminating plastic with eco products i.e. bamboo toothbrushes, refillable coffee cups and water bottles! Shop Manager Val said: *"it was just amazing to hear how knowledgeable some of the kids already were about single use plastics and recycling."*

There was also a **photo booth activity** with the theme of **Be Green 2019** enabled by props, and the photos being processed and donated to each school to create some legacy for the day!

Whilst it was vital that this is a fun filled day for



the Arran pupils, it was even more important for us to make all activities environmentally educational and for awareness around climate change issues to be brought home. We think this was certainly achieved throughout the day. We hope the 210 children attending left with motivation to increase environmental conscientiousness for the benefit of their futures, and challenge those around them to do so too! We really appreciated the support of all the environmental initiatives involved in the day, and to our volunteers who all contributed to making the day a great success.

[Click here](#) to see a short film that captures and provides some more insight into the day:

Arran High School Workshops

The project also saw Eco Savvy deliver climate awareness environmental workshops at Arran High School.

In the workshops, the students were given insight into the Eco Savvy shop and eco products by shop manager Val, as well as insight into the Eco Savvy Energy Challenge by project manager Jude. Eco Savvy energy auditors delivered an energy monopoly game which saw the pupils challenged by a range of energy efficiency questions of varying difficulties to win monopoly money for their teams. The knowledge of the pupils around energy efficiency was impressive!



The pupils were also given information on environmental issues, specifically concerning the fashion industry, and were asked to discuss in groups what could be done on Arran in particular; to combat some of these environmental challenges and present their ideas back to the class. We were incredibly impressed with the innovative ideas and solutions that arose from these conversations.

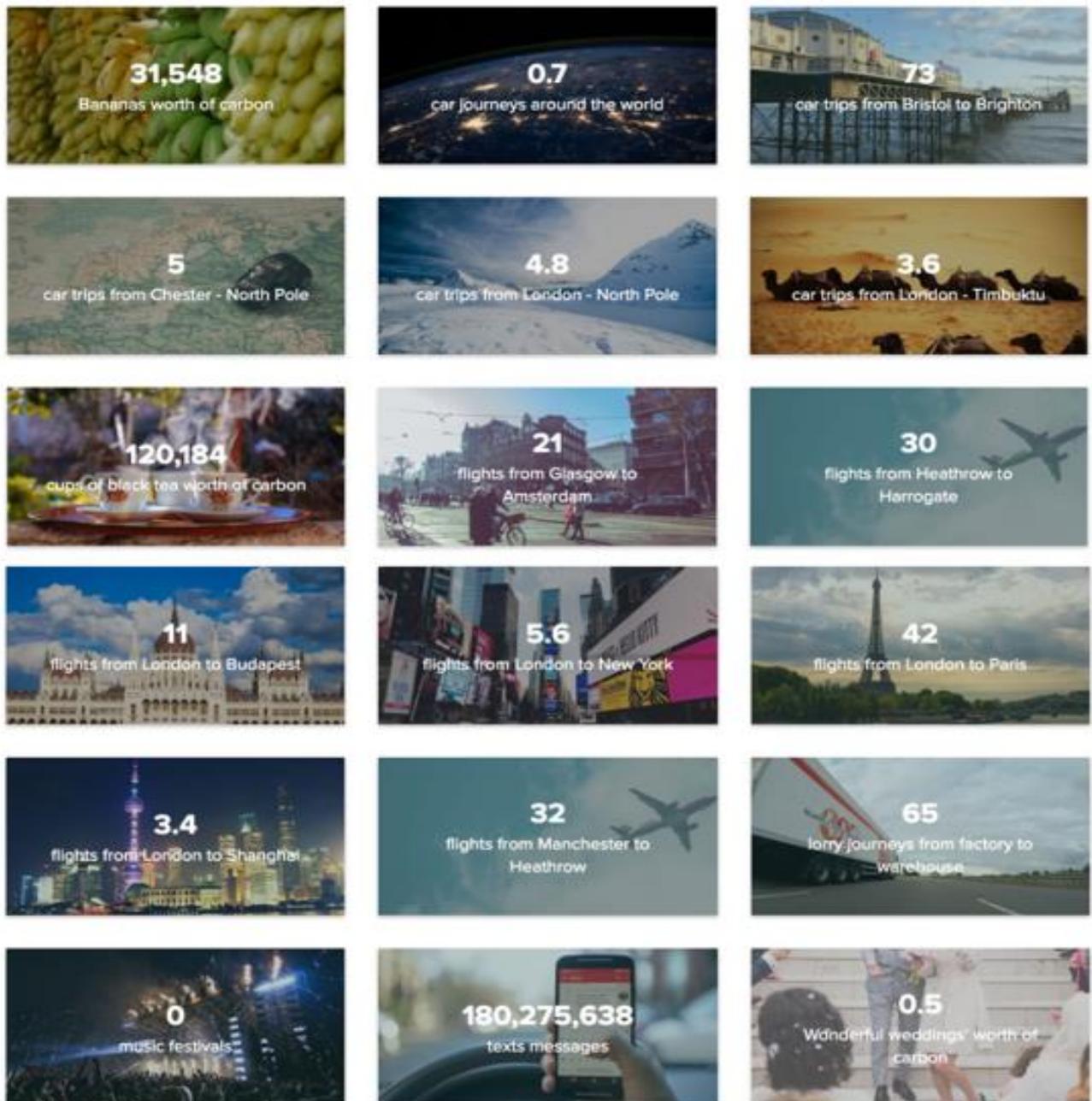


Pupils were also given the chance to work out their own carbon footprints which led to the students challenging each other to reduce their carbon footprints through different means like cutting out packaging, composting food waste, walking for specific journeys instead of going by car, and even challenging friends and family to make their own pledges!

The students made 45 pledges in all, and if all 45 keep to their pledge they can be very proud as their carbon savings will be the equivalent to:

Carbon stats

These show equivalents to the total carbon saving achieved.



[Click here](#) to see the Arran High School Climate Campaign.

Schools strike for the Climate

We have been really engaged and inspired by the acceleration in school climate strikes and protests receiving worldwide attention in recent months. We recently attended the Climate Strike in Glasgow with some young people from Arran High School and captured some of the day on film. [Click here](#) to watch this film.

2.10 eBike Loans

Through this project, we were able to offer an eBike trial scheme with our key delivery partner Home Energy Scotland. We loaned an eBike for one month offering an average of 3-day trials, an opportunity that 10 people took advantage of. This eBike experience for Eco Savvy enhanced the active travel dimension of the charity, helping to shape a more focussed project to make active travel the new travel and transport norm on Arran.

[Click here](#) to read a little more about this trial from the Energy Saving Trust.

2.11 Final Project Event

Our final major project activity and event was: This was a very special event to celebrate the achievements and end of the project, and to acknowledge and reward all those that supported us and made strides towards improved energy efficiency and local carbon reduction.



There were six award categories and 46 shortlisted, with 6 winners. Guests of honour, representatives from Arran school's new Eco Committee, were invited to deliver the awards presentation and the 6 primary school children executed this brilliantly. Quinton Black, deputy head, who has been dedicated to pulling the committee together, told how the newly launched group will be enhancing and bringing together what all the schools are already doing in terms of reducing waste, raising awareness, and working with local organisations with eco credentials.

The Eco Savvy Energy Awards categories and winners were:

Energy Usage Data Champion - person who has consistently communicated with Eco Savvy to provide empirical evidence such as meter readings for their reporting to the Scottish Government:

- Winner: Richard Trewby

Solar Energy Champion - for the household most engaged with Eco Savvy's solar PV project:

- Winner: Jim & Toni McKenzie

Immediate Solutions Champion - for the household committed to implementing the quick fix energy saving ideas as suggested through Eco Savvy's home energy audits.

- Winner: Peter Early

Renewables Champion - for the household that has done the most work towards large scale or multiple renewable measures such as air source heat pumps.

- Winner: Stan Cline

Proactive Energy Champion – for people who implemented energy efficiency measures prior to an audit but still wanted to improve their household.

- Winner: Elaine Duncan (solar thermal, solar PV & air source heat pump)

Energy Advocate - for the person most engaged with spreading word about home energy efficiency measures

- Winner: Chris Atkins (electric car, solar PV, Be Green 2019 film)

The theme of vegan and vegetarian food was chosen for the event to demonstrate a lower carbon diet and how delicious it can be. This included the launch of [Arran Dairies'](#) first vegan ice cream. At development stage, feedback from the many vegans attending the event was welcomed and will be taken on board to develop the prototype further.

Finally, Eco Savvy took the opportunity at this event to make the exciting announcement that the Scottish Government's Climate Challenge Fund will be supporting Eco Savvy for another 2 years to deliver Eco Savvy's Sustainable Island Life Project. This multi-faceted project will again significantly cut local carbon emissions, continuing focus on energy efficiency but additionally, sustainable food and travel.

Through the Sustainable Island Life Project, Eco Savvy will continue to offer free support to help residents on the Isle of Arran to reduce their energy use and carbon emissions through home energy advice visits and other energy related initiatives, so event attendees were encouraged to continue dialogues with the team.

The Eco Savvy Energy Awards was a worthwhile event providing an entertaining night which enabled a look back at the Energy Challenge and all it has achieved. We thanked the hard-working individuals all over the island who have been part of this incredibly positive and successful movement to make Arran a greener and more sustainable island. [Click here](#) to see a short video for some more insight.

Overall, we are delighted with the range of education, activities, and climate action that this project enabled. Communicating this to those that were not directly involved with the project was also very important. We did this through many different channels and platforms, sharing daily articles with environmental messages and information, as well as newsletters updating membership on activities and upcoming events to be involved in.

2.12 Press Releases and Local News Coverage

The Arran Voice, with a readership of over 500 kindly featured us regularly in a few of their newsletters:

- [The Arran Voice: News from Eco Savvy](#)
- [The Arran Voice: The Eco Savvy Energy Challenge Awards](#)
- [The Arran Voice: Eco Savvy and Circular Economy](#)
- [The Arran Voice: Arran, the Solar Island](#)

LOCAL PRESS RELEASES & NEWS STORIES



Shiskine primary pupil designs winning logo

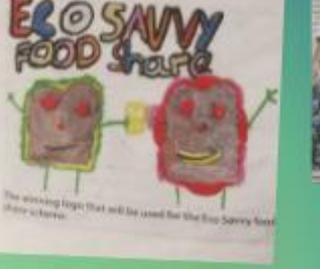
Shiskine primary pupil has been selected as the winner of a drawing competition for Eco Savvy which is looking for a logo to represent its popular food share scheme.

With contributions from both Eco Savvy and Green, the two partners in the initiative, they were a prize of £100 for the school to spend on an environmental activity of their choice.

The Eco Savvy Group had been chosen to represent the school in the competition. The winning logo was designed by a 10-year-old pupil named Shiskine. The logo features a recycling symbol with a green leaf and a red apple, with the words 'Eco Savvy Food Share' written below.

Shiskine, who is a member of the school's Eco Committee, was inspired to create the logo after seeing a recycling symbol in a magazine. She thought it would be a good idea to combine the recycling symbol with a green leaf and a red apple to represent the school's food share scheme.

The school's head teacher, Mrs. Shiskine, said she was very pleased with the winning logo and that she was sure it would be a great representation of the school's commitment to the environment.



The winning logo that will be used for the Eco Savvy food share scheme.

The Eco Savvy food share scheme is a popular initiative in Arran, where local businesses and individuals donate surplus food to a central hub. This food is then distributed to local charities and community groups. The scheme has been successful in reducing food waste and supporting the local community.

Get on your bike and help Arran go green

Arran has been selected as one of the 'Greenest' in Scotland for the second year running. The award is given to the most environmentally friendly council in Scotland. Arran has achieved this by implementing a range of green initiatives, including a recycling scheme, a composting scheme, and a tree-planting scheme.

The council has also been successful in reducing its carbon footprint by switching to renewable energy sources and by improving its energy efficiency. The council has also been successful in reducing its waste by implementing a recycling scheme and a composting scheme.



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Arran kids are very keen to be green

Arran's children are very keen to be green and have been participating in a range of environmental activities. These include planting trees, recycling, and composting. The children have also been successful in reducing their carbon footprint by switching to renewable energy sources and by improving their energy efficiency.

The children have also been successful in reducing their waste by implementing a recycling scheme and a composting scheme. The children have also been successful in reducing their carbon footprint by switching to renewable energy sources and by improving their energy efficiency.



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Elderly learn about energy efficiency

A group of elderly people have been learning about energy efficiency and how to reduce their energy bills. The group was led by a local expert who provided information on a range of energy-saving measures, including insulation, double glazing, and energy-efficient appliances.

The group was also provided with information on how to access local energy-saving grants and how to apply for them. The group was very interested in the information and was able to take away a range of energy-saving tips and tricks.



The group of elderly people learning about energy efficiency.

Eco Savvy forges ahead at open day

The Eco Savvy food share scheme has been successful in raising awareness of the importance of reducing food waste and supporting the local community. The scheme has been successful in reducing food waste and supporting the local community by donating surplus food to local charities and community groups.

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ARRAN INDEX 2019
YOUR LOCAL TELEPHONE DIRECTORY

WE ARE WORKING ON THE NEW 2020 ARRAN INDEX IF YOU WOULD LIKE TO PLACE AN ADVERT IN THE NEW EDITION PLEASE CONTACT US ON 01794 342424 OR EMAIL: ADVERTS@ARRANINDEX.CO.UK

ARRAN INDEX TO CHECK A BUSINESS OR RESIDENTIAL LISTING CALL US ON 01794 342424

As Howard Wood heads to the States we salute... Arran's climate change champions

Howard Wood, a local climate change champion, has been successful in raising awareness of the importance of reducing carbon emissions and supporting the local community. Howard has been successful in raising awareness of the importance of reducing carbon emissions and supporting the local community by donating surplus food to local charities and community groups.

Howard has also been successful in raising awareness of the importance of reducing carbon emissions and supporting the local community. Howard has been successful in reducing carbon emissions and supporting the local community by donating surplus food to local charities and community groups.

Your cash back in your pocket

Reduce your energy bill and get paid by the government for doing so

SMART Energy Services

Howard has also been successful in raising awareness of the importance of reducing carbon emissions and supporting the local community. Howard has been successful in reducing carbon emissions and supporting the local community by donating surplus food to local charities and community groups.

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Eco Savvy hands out energy saving AWARDS

The Eco Savvy food share scheme has been successful in raising awareness of the importance of reducing food waste and supporting the local community. The scheme has been successful in reducing food waste and supporting the local community by donating surplus food to local charities and community groups.

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CONTACTUS
email us at: edwin@leamabanner.co.uk
telephone 01770 302142

How Arran is continuing to fight climate change

Arran is continuing to fight climate change by implementing a range of green initiatives, including a recycling scheme, a composting scheme, and a tree-planting scheme. The council has also been successful in reducing its carbon footprint by switching to renewable energy sources and by improving its energy efficiency.

The council has also been successful in reducing its waste by implementing a recycling scheme and a composting scheme. The council has also been successful in reducing its carbon footprint by switching to renewable energy sources and by improving its energy efficiency.

GLOBAL CLIMATE

Arran Active

Arran Active is a local initiative that promotes active travel and outdoor activities. The initiative has been successful in raising awareness of the importance of active travel and outdoor activities and in supporting the local community.

The initiative has also been successful in raising awareness of the importance of active travel and outdoor activities and in supporting the local community. The initiative has been successful in reducing carbon emissions and supporting the local community by donating surplus food to local charities and community groups.

Arran Active
End of Season offers
Our Prices £38

3. Project Outcomes Delivery

Outcome 1

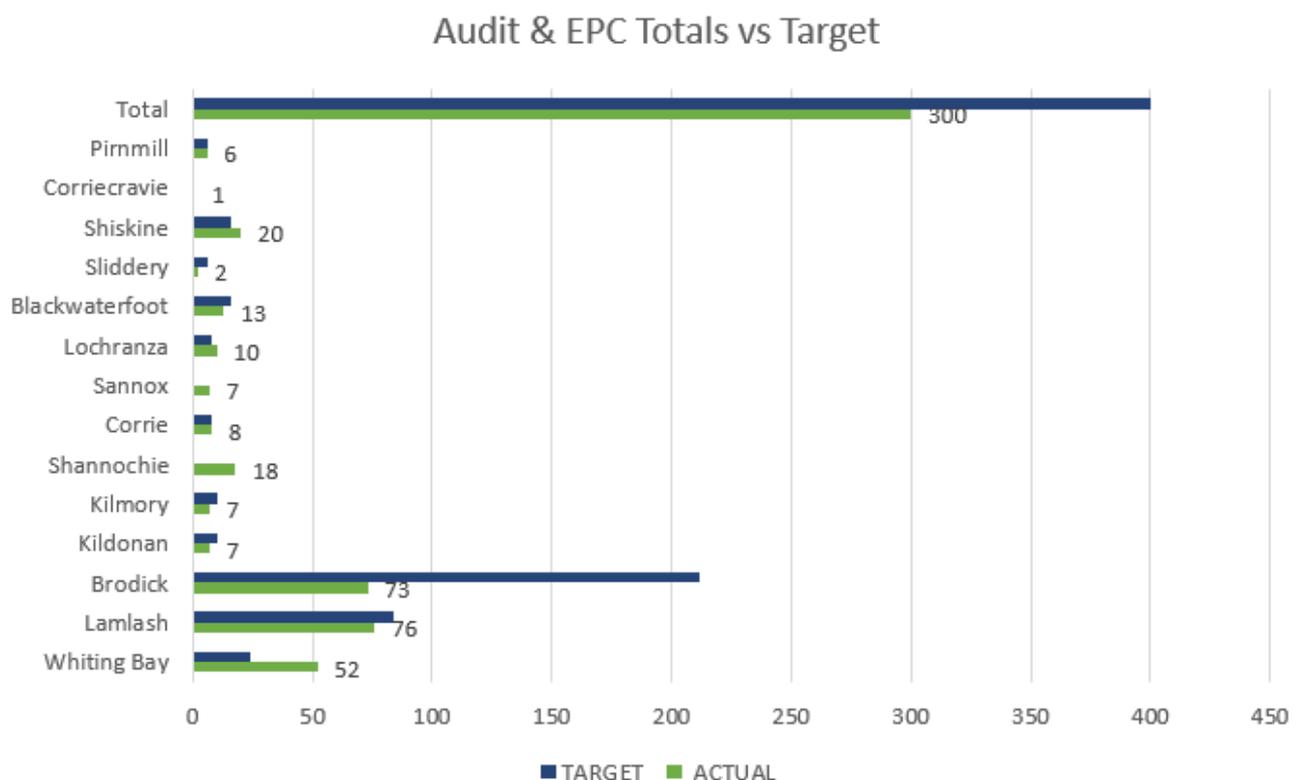
The Project will save 304tCO₂e through the provision of home energy audits. Arran Eco Savvy will target 400 households across the whole of Arran to achieve improvement in energy efficiency after assessing consumption.

(Outcome met)

We have achieved savings of 390.5tCO₂e through the provision of home energy audits, 125% of the carbon target in this outcome. It is clear from this outcome that we were aiming to conduct a total of 400 audits in the 10 months of operation, but as portrayed on the graph below, we only managed 75% of this target.

At project application stage, we underestimated the amount of time that it would take to gain momentum around the project and our free audit service offering. Uptake was slow and inconsistent for the first months, where we did not achieve anywhere near our target of two audits per day. Things started to pick up during the colder months, and our partnership with our local housing association also supported the delivery of 300 audits in the 10-month time frame of operation.

Graph 19: Audit and EPC Totals



As you can see in Graph 19, we didn't meet our initial target of 400 audits. though we did not meet the initial audit target, the carbon target has been exceeded and there is a higher carbon saving per household than originally anticipated. We think this is due to higher uptake of advice and increase in quality and expertise in audits, but also due to an unusually warm winter.

We used meter readings collected pre, during and post audit, ideally starting from 2016/17 when possible to have the most accurate view of usage for the baseline, and the post audit meter reading to gauge the savings. We conducted the data collection via email in the first instance, and if that hadn't been supplied, historic as well as current meter readings were collected as part of the audit. Our follow ups are done by phone initially, and in failing that we follow up with an email to collect the 4th meter reading needed for the carbon reporter. We have used the estimated meter readings in some cases.

Oil Usage

We have six samplings of oil usage data. A lot of people simply get their tanks topped up so don't have a definitive measure of the litres used per month/annual usage so unfortunately, we do not have a greater sampling to offer for overall representation.

One of these users took up advice to get a more efficient hot water tank and oil tank, and subsequently 901 litres of heating oil lasted over 6 months as opposed to the usual 3 months, doubling efficiency. For years, this project participant never saw a difference of more than 10 litres heating oil usage per month, so this is a significant saving.

We realise that this is a unique example so haven't used this as a sampling representative of the heating oil users in all our audits.

Renewables

As described in detail earlier in the report, uptake on solar PV and renewables advice has been an exciting element of the project, due to a continued annual carbon saving for up to 25 years after the project end.

Solar PV:

The Carbon reporter estimates the carbon saving of 17tCO₂e from the 12 installs of solar PV in the project, with a lifetime saving of 168tCO₂e.

Air Source Heat Pumps:

There is a limitation in the carbon reporter which does not allow a quantification for air source heat pump installation. We used solar thermal as the most representative renewable heat source. This suggests we have saved 3tCO₂e through the implementation of air source heat pumps in three households and a lifetime saving of 34tCO₂e.

*For an alternative and accurate carbon calculation, we have used the Sutherland tables as well as Energy Saving Trust figures for air source heat pump data which brings it to a carbon

saving of around 5 tCO₂e per install and a 15tCO₂e project saving. Two were old storage heaters to heat pumps, and the 3rd was from an old oil boiler to a heat pump:

Old Storage Heater to heat pump = 4.6 -5.7 t

New storage heater to heat pump= 3.2 -3.8 t

Old oil boiler to heat pump=5.2-6.1 t

New oil boiler to heat pump= 2.3-2.7 t

*This calculation is not included in the carbon total however we thought it would be useful to mention.

As previously mentioned, we have always also had four energy monitors on loan since July. We have taken these to coffee mornings and workshops, often being able to hook it up to the venue to demonstrate and explain the monitor in real-time. To people's surprise, simply flicking the kettle on could see a dramatic surge which, if overfilled and overused, could bring energy consumption over the daily budget factored into the monitor. This demonstration usually resulted in instant requests for the monitor loan and audit bookings.

The first section of the report adds detail to support results in delivery of this outcome and carbon total.

Outcome 2

The project will save 25 tCO₂e by providing energy advice drop in surgeries and workshops. The surgeries will be designed to benefit the households undertaking the audits and the workshops will cover broader topics including general carbon literacy.
(Outcome partially delivered)

There is little evidence of carbon saving to report for this outcome due to the impracticality of collecting meter readings pre and post workshop. Most locals dropping in came for a quick chat on a casual basis, to speak to our auditors about specific energy questions. It is likely however that workshop participants did contribute to our carbon saving although not quantifiable in this outcome, as often a drop-in session with one of our auditors converted to a home visit.

58 of the weekly surgeries were held on a weekly basis throughout the project.

In addition to this, we've held the wider reaching talks and workshops outlined in the Climate Literacy section with more people attending and increased likelihood of uptake on advice to result in carbon saving benefits.

Outcome 3

To provide energy advice and initial audits to Arran Economic Group to save emissions from new affordable homes being developed in Brodick.
(Outcome not delivered)

The project manager met frequently with the Development Director of Arran Economic Group to deliver this outcome. Unfortunately, the housing developments proposed in 2016/17 have yet to go ahead.

We have been assured that we will be the point of contact for energy advice when the time comes, so we look forward to still delivering this outcome outwith the original project timeline.

Outcome 4

We will improve Carbon Literacy through our Carbon Literacy Incentive Scheme. This will be specifically targeted towards visitors to the Arran Eco Savvy shop and hubs.
(Outcome met)

This outcome has been delivered through the Carbon Literacy Incentive Scheme mainly delivered through the Eco Savvy Whiting Bay hub, but at other hub locations through events and gatherings across the year. Many of these activities have been described in the previous sections of the report. However at the start of the project, we went to many events with the intention of getting word out about our audits as the leading priority for our energy project, but quickly found that leading with climate literacy and the incentive scheme offered an more approachable alternative which often led to an audit booking.

Throughout the summer months, the energy project team was in our Whiting Bay community Hub where we introduced the Carbon Literacy Incentive Scheme, whereby any visitor to the shop, would be able to undertake a carbon literacy quiz in exchange for an item, or one of our eco-friendly product tombola ticket.

Many of the events that resulted in climate literacy education have been covered in previous reports sections, but the following events contributed to this outcome of improving carbon literacy. Many through the incorporation of the carbon literacy scheme, namely the Eco Days in Whiting Bay Eco Savvy Hub, and The Highland Games and Farmers Show.

Outcome 5

We will improve social opportunities amongst the young people on Arran, with increased engagement with Arran Youth Foundation and Arran High School. This will be achieved through work experience and volunteering opportunities.
(Outcome partially delivered)

We had a continuous opening for work experience and volunteering opportunities for young people. During the project we hosted a visit from the Ayrshire Chamber of Commerce and were approved as an organisation who could provide work experience opportunities. From there, we had a concentrated marketing campaign to try and attract Arran High School pupils to engage with the opportunity: [click here to see this marketing campaign](#). We had several different teachers from the high school agree to promote the this, but unfortunately did not receive interest in the work experience element of this outcome.

Following on from this unsuccessful attempt to attract interest, we increased engagement with the high school and young people in the last quarter of the project, running the series of workshops. As a result, we have high school volunteers lined up to support us with the eBike dimension of future projects and an indication of higher engagement and interest. We achieved this outcome by providing avenues of opportunity for young people on Arran, but

unfortunately the uptake was not as anticipated, and we will look to encouraging and facilitating this to a higher degree in future.

Unexpected Outcome:

Divert surplus food from landfill by working in partnership with Co-op to set up and pilot a food share scheme.

As we were putting together the sustainable food aspect of our 2019/20/21 funding application we explored the possibility of being able to become a food share partner with the Co-op. This required the need to get a food share premises approved, and partnership agreement set up. We received a call from the Co-op at the end of October, asking when we would be taking the leftover food, where we again explained that the aim was to launch this project in April 2019. We were informed that as we had already applied to be a food share partner, we would have to start within the first 5 weeks, or the partnership would be cancelled. We then decided to go for it and treat it as a pilot project to get a preliminary understanding of the volumes and types of food, community engagement levels, and volunteer support available.

We started by collecting with a volunteer of Brodick Food Bank, but within two weeks of collecting, it was clear that the Food Bank was struggling with the volume of food being received. Therefore, it wasn't realistic to redistribute the food within their network considering the short lifespan of it.

We did not expect the high volumes of food we were receiving. In December we were getting an average of over 60kgs per collection with the value of food varying from £50 to £1000 worth. Although not fully set up we felt it our duty to be saving some of this food from landfill and from there on decided that it would be best to create the "Eco Savvy Food Share" evenings.

Instead of targeting a certain group of people such as food bank users, which can have complications and stigma attached, we were conscious to instead present it as a food waste project. This food share would be open to any Arran resident, regardless of circumstance. We also put efforts towards making it clear that if people do not support the food through the collection and usage of food, it would end up in the bin. This took away the perceptions of "someone else may need this more than me."

Since we have launched these food share evenings, the engagement has been phenomenal, and we can't really go anywhere without the food share being mentioned and support for the initiative offered.

Online engagement has been fantastic and continues to grow; we've found that when we posted pictures of the food people realised the reality of how much there is, how exceptional



that it is all going for free, and how important it was to collect to prevent food waste. Recently the food shares are so well attended that the food is usually all gone before we manage to put pictures on Facebook. It is important to note that we don't have commercial bins, so sending to landfill isn't an option. If we can't get rid of some of the food within its expiry dates, we have had someone come to collect for composting, chickens, etc.

We have expanded the initial Brodick food share initiative to offer an evening in Whiting Bay and Lamblash which has been hugely successful too. Kilmory Eco Savvy Hub volunteers are also holding a successful food share evening in Kilmory on a weekly basis.

We have been careful to not take on too much as volunteers due to the risks involved with food distribution, disposal etc. However, as we have been successful in our funding bid to continue and expand this, we are excited to build on the significant environmental and social benefits of this project, based on the success of the pilot project so far.



“

The overwhelming outcome is that everyone - whether they come to the foodshare or just in conversation - is very keen to reduce waste. Food waste & packaging are the two biggest frustrations for people.

The Eco Savvy & Food Bank foodshare has certainly increased awareness of the issues for me personally, the people attending the food share & the island as a whole.



GREGOR

ECO SAVVY FOOD SHARE VOLUNTEER

”

4. Learning and Reflection

Before April 2018, Eco Savvy was not known as an energy efficiency advice service, having previous predominant focus on waste stream projects and other environmental issues. Therefore, there were challenges in being recognised as the go-to for expert energy efficiency advice, which took a few months to build and start delivering at the pace that the project required to meet outcomes.

The first three months of the project were most difficult; a flurry of challenges, trialling and learning. Segueing into energy from a waste focussed project demanded a lot more

technical expertise so in the first months, concentrated efforts were put into designing action plans, audit formatting and renewables promotion. There was much trialling and testing to figuring out what worked in gaining interest and momentum for our project. Previously delivering a Climate Challenge Fund project and having the experience of working to tight time scales and project delivery deadlines, helped us work at the pace needed and this project would have been more challenging without that.

The barriers, both physical and behavioural have been described, and the importance of being constantly aware of these to have a solution to them was essential to the successful progression of the project.

Collaboration with different organisations again was valuable for a higher level of engagement and project outcome delivery. For example the success of the primary school event “Be Green 2019” would not have been possible without the collective approach and collaboration with the likes of [COAST](#), [Home Energy Scotland](#), [Arran Community Land Initiative](#) and more.

Working together with our local housing association allowed us to tackle fuel poverty and specific energy related issues in a very concentrated and direct way. With the value of this emphasised, it has been a lesson for us to set these partnerships and collaborations earlier in the project, so time-related issues are not such a determining factor in the level of delivery.

A high percentage of Arran’s demographic are retired. We provided audits for many in the over 65 age category which is currently 32% of Arran’s population, predicted to rise to 49% according to Arran Locality Partnership report (ALP, 2018). We found that although so many of the elderly wanted to embrace the physical changes such as LEDs and draught proofing, their health and mobility prohibited them from doing so. On an island where tradesmen are difficult to source, especially for such small jobs, this was a frequent challenge. We overcame this by offering to pop back to help implement an energy monitor for example, when it had been ordered, or LEDs but there would be further opportunity for this.

As mentioned in the renewables round up earlier in the report, it is highly likely that there would have been more installs had the weather been better as many were postponed and set back due to ferry cancellations.

5. Finance and Administration

For the finance and administration, it was invaluable to have the experience of running a Climate Challenge Fund project prior, as we knew what to expect when it came to finance and administration and could prepare for this.

Knowing that this element of the project would always be challenging, at application stage we ensured to apply for the enablement of a Project Administrator role. This has added such great value to all elements of the project operation and delivery, but particularly this area!

With a few setbacks with our recruitment at the start of the project, there was an underspend to recover. This allowed for some reprofiling for increased events and

engagement activity, as well as enabled the role of our temporary Climate Awareness Officer.

Special mention needs to be given to our fantastic treasurer Hilary, who joined us in August 2018. With a stellar background in finance and accounting, Hilary has helped the finance and administration of the project enormously. Hilary revolutionised our processes by introducing [FreeAgent](#) which allowed the project manager to have constant view of this incomings and outgoings of the account and transfer this into claims or communicate with the admin team at the CCF to ensure claims were paid in time to avoid deficit.

We also would like to thank the Climate Challenge Admin team as they were easy to work with and the support offered to clarify finance and administration dimensions were excellent.

6. Sustainable Legacy

Sustainable legacy for the project has been founded through the hundreds of physical energy efficiency changes discussed and evidenced through survey excerpts above and in the carbon reporter.

Significantly, sustainable legacy for the project can be found in the renewables that have been implemented by project participants; a total of 15 air source heat pumps and solar installations which have the lifespan of up to 25 years.

Behavioural changes outlined in report will also contribute to legacy and Eco Savvy as a charity will continue the support of the community to sustain low carbon behaviour changes which were covered in the focus of the project.

Volunteer training for the food share has also been delivered in the project as well as training to conduct climate discussions which will contribute to the project's sustainable legacy.

Film event feedback showcased in the report implies a legacy for this project with most survey respondents aiming to make a specific environmental change for life.

We have also introduced some volunteer training to conduct climate discussions which will contribute to the project's sustainable legacy.

8. Activities Grid

CCF5859 Activities Grid	
How many training courses did your project deliver?	<p>Total: 1 (Carbon Conversations Course, June 2018)</p>
How many events did your project hold? Includes drop in surgeries.	<p>Total: 111</p> <p>Energy Advice drop in surgeries - 58 (weekly) Eco Savvy AGM & Social - Sunday 26th August Arran Community Transport Gathering co-hosted with Arran Locality Partnership - 18th September Racing Extinction Film Night - Sunday 28th October Eco Savvy Solar Social - Friday 7th December Corrie Short Film Sunday Social - Sunday 20th January Be Green 2019 - Tuesday 29th January Arran High School Environmental Workshops - Monday 25th & Wednesday 27th February Eco Social events x 4 in Eco Savvy Whiting Bay Shop - every Tuesday in March Felicity's Environmental Pub Quiz - Wednesday 20th March Whiting Bay Short Film Afternoon - Sunday 24th March Brodick Golf Club Environmental Pub Quiz - Tuesday 26th March Eco Savvy Energy Challenge Awards Night - Thursday 28th March Food Share evenings: Brodick Hub x17 Kilmory Hub x 4 Whiting Bay Hub x13 Lamlash with COAST x 5</p>
How many events held by other organisations did you participate in?	<p>Total: 14</p> <p>Big Arran Lunch - Sunday 3rd June Lamlash Heather Queen - Saturday 14th July Eco Music Event for National Chamber Music Day - Saturday 15th September Lamlash Church Hall Coffee Morning - Wed 18 July WB sand sculptures - Friday 27th July Arran Farmers' Show - Wed 1st August Arran Highland Games - Sat 4th August Brodick Coffee Morning - Wednesday 15th August Shiskine Coffee Morning - Thursday 6th September Corrie Village Coffee Morning - Friday 30th November Corrie Christmas Craft Fayre - Saturday 8th December</p>

	<p>Scottish Government Travelling Cabinet - Monday 27th August</p> <p>Elderly Forum presentation - Wednesday 16th January</p> <p>Arran Baptist Church Lunch presentation - Thursday 24th January</p>
How many staff, volunteers or community members have achieved qualifications through the project?	<p>Total: 2</p> <p>(1x City & Guilds Energy Awareness Certificate 1x Domestic Energy Assessors Course)</p>
How many people were directly employed by your project? Tell us the full-time equivalent number of employees.	<p>Total: 3.5</p> <p>1x full time Project Manger 2x full time Energy Auditors 1x part time Project Administrator 1x part time Climate Awareness Officer, 3 months</p>
How many people are actively involved in your project? Attending events, participating in workshops.	<p>Total: 1398</p> <p>300 audits & EPC 1098 climate literacy & events</p>
How many people volunteer their time and energy to keep the project going- don't forget the members of your management committee of board.	<p>Total: 18</p> <p>Board: 5 Volunteers including: 12</p>

EVENTS + ENGAGEMENTS TIMELINE

JUNE/JULY

Big Arran Lunch
Lamlash Heather Queen
Lamlash Church Hall Coffee Morning
Whiting Bay Sand Sculptures



AUGUST

Arran Farmers' Show
Arran Highland Games
Brodick Coffee Morning
Eco Savvy AGM & Social
Scottish Government Travelling Cabinet

SEPT/OCT

Shiskine Coffee Morning
Eco Music Event
Arran Community Transport Gathering
Racing Extinction Film Night



NOV/DEC

Corrie Village Coffee Morning
Eco Savvy Solar Social
Corrie Christmas Craft Fayre
Food Share scheme commencement

JAN/FEB

Elderly Forum presentation
Corrie Short Film Sunday Social
Arran Baptist Church Lunch presentation
Be Green 2019
Arran High School Workshops



MARCH

Eco Social events x 4
Felicity's Eco Pub Quiz
Whiting Bay Short Film Afternoon
Brodick Golf Club Eco Pub Quiz
Energy Challenge Awards Night

Meet the Eco Savvy Board



Esther is the Eco Savvy Chair & founder Trustee. After a career in the media industry working as a director, researcher and presenter living in her home town of Glasgow and traveling extensively, she moved to Arran 13 years ago with her young family. Esther has worked part-time for the local Arran Art Gallery for the last 11 years and is involved in the vibrant community of arts on Arran. Esther has been involved with many community groups, as chairs, secretary and treasurer. Esther has been on the trustee board of Eco since 2013 and was one of the original group who felt Arran needed a green voice creating Arran Eco Savvy. She has volunteered as a shop volunteer, being part of the team who opened the shop in 2014, helping to secure charitable status in 2015. Esther continues to work closely on all Eco's projects and development of new potential opportunities.

Helen is our newest trustee.

Helen received a good grounding in public service and administration in the Civil Service before working in the voluntary sector placing people for work experience, planning community care services, providing an information service and developing community projects with older people in rural areas.

She has a Masters and 19 years of experience in Public Health, working at local and regional level to develop sustainable Public Health services that address the social, economic and environmental factors that influence our lifestyles and health. Improving insulation, installing renewable energy systems such as solar and air source, cycling and walking instead of driving, sourcing and growing food locally and organically, recycling, composting, and constructing environmentally friendly buildings can all contribute to our health and wellbeing as well as helping to reduce our carbon emissions and impact on Climate Change. Helen moved to Arran in 2017 and is an allotment holder on the Arran Community Land Initiative, and a volunteer on a regular basis in the Eco Savvy Hub in Whiting Bay.



Meet the Eco Savvy Board



Hilary is our treasurer. Hilary moved to Arran in 2017 after spending family holidays here for over 30 years. A chartered accountant; trained with Price Waterhouse Coopers and when newly qualified, worked in audit in Rome, then in London as financial controller of a hospital for women and children and after that as a manager with Grant Thornton. Has run her own practice which has mainly featured the provision of an outsourced finance function for new technology companies for the past twenty years.

Hilary says "I can't deny I had been hoping to escape from accountancy, moving towards retiring, but when Eco Savvy needed a treasurer, it would have been very hard to hide away and not help when my skills are needed! Volunteering as a trustee seemed a natural progression as the way I can make a difference having been passionate about the environment and having supported environmental causes for most of my life. The sad thing though is that it's so easy to feel helpless about how little we can do individually to change the world. Coming to Arran, I'm so inspired by the knowledge that here we can all make a positive difference and having seen all the fantastic work that Eco Savvy is doing on Arran - through the brilliant shop with all the dedicated shop volunteers, through the wonderful team working on the Climate Change Fund projects such as the energy audits, through workshops and education - I'm delighted to be able to play my part and contribute to making Arran a more sustainable island."

Meet the Eco Savvy Board



Sue is a founder Trustee of Eco Savvy. Trained as a counsellor and psychotherapist, Sue practised professionally in universities and the NHS for 30 years. She was involved with volunteer training in every workplace. She managed her small 70 acre Welsh farm as a conservation project, with support from volunteers. Co-founder of the first Transition Town in Wales, Transition Towy, she helped start its permaculture group. 3 years ago Sue joined eXXpedition Transatlantic 2014, sailing the Atlantic as a volunteer on a research mission to track plastics in the ocean. She then developed the idea of a Round Britain plastics research voyage, implementing it as Joint Mission Leader (still voluntary) in 2017 over one month of sailing with a total of 22 volunteer crew.

Beverley is the Eco Savvy board secretary who lives part time on Arran. Beverly is Managing Director of Bluewind Consulting Ltd (SC440580). With 30 years experience as planning and environmental consultant and as Project Director / Project Manager / Team Leader. Core skills: Project and Programme Management, Budget Management, Procurement, Contract Law, planning applications and environmental consents for renewable energy projects, Conflict Resolution, Community Consultation, Communications.



Meet the Eco Savvy Energy Challenge Team

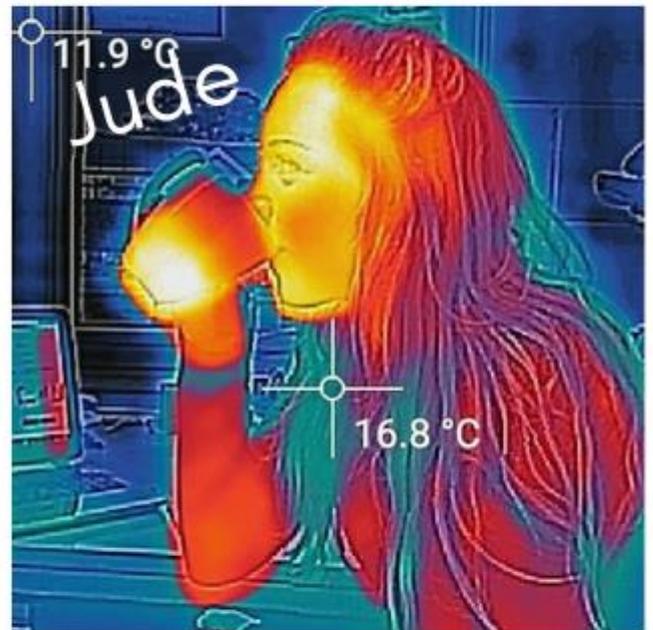


"I'm Ruth and I am the Project Administrator at Eco Savvy so you might be hearing from me if you are interested in getting an energy audit in your home

Having recently fled the mean city streets to pursue the dream of living nearer nature and the outdoors I am so excited to be part of an organisation seeking to make a positive contribution to the future of Arran and its community.

I love working in the not-for-profit sector have previously worked for the charities Myeloma UK, the Childhood Eye Cancer Trust, the mental health charity Mind and volunteered at a foodbank. My interests include skiing, travel, hillwalking, reading and Star Wars."

"Hi I am Jude, Eco Savvy's Project Manager. I came to the island two years ago where I was immediately immersed in Eco Savvy's Micro Hubs Project! I studied in Edinburgh and after graduating was accepted onto a graduate scheme in renewable energy. This gave me exposure to an industry and cause I knew I wanted to be a part of and I'm delighted to be able to continue work in similar areas through Arran Eco Savvy's exciting projects. Challenging but also rewarding, I am thrilled to have been a part of The Eco Savvy Energy Challenge which has managed to educate so many on lower carbon behaviours, resulting in a significant CO2e saving and environmental improvement in the local community."



"Hi, I'm Charlotte, Eco Savvy's energy auditor. I have been visiting Arran since I was a child and planned to just move over for a summer season, but I fell in love with the island and have now been living here for almost 2yrs. I am originally from a small village outside Glasgow and studied geology and petroleum geology at Aberdeen University. During this time the oil industry in Aberdeen crashed and I realized my interest lay in protecting the environment rather than exploiting it. After graduation I went straight on to study for a MSc in energy & environmental management. I have a strong interest in the aims of Eco Savvy and the Arran community, so am incredibly grateful and excited to be a part of it."

Meet the Eco Savvy Energy Challenge Team

"I am an ex-coal mining engineer born in Ayrshire and have been involved in renewable energy for the past 15 years.

I believe it is paramount that we all take any measures we can to minimise and eventually eradicate our dependence on the use of fossil fuels to create a cleaner more sustainable future and reverse global warming. Oil/gas will run out sooner than we think and it is essential we make changes to the way we heat our homes and how they are constructed in future. Eco Savvy will carry out a free energy audit on your home which will allow you to make an informed decision on improvements you could make to your home to reduce your heating costs. You can then budget for these changes and possibly invest in a replacement heating system if viable."



"I am delighted to be part of the Eco Savvy Team for the last few months of their Energy Auditing Project. During the last project, Reuse and Reduce, I was a Hub Manager based in Lochranza and really enjoyed working with the community to help reduce Arrans carbon footprint. My new role as Climate Awareness Officer will enable me to continue to work with the residents of Arran in helping them understand more about climate change and its implications relating to the island. This is something I am becoming more and more passionate about."

7. Conclusion

In conclusion, this report should illustrate how the Eco Savvy Energy Challenge has managed to navigate through and overcome many challenges and obstacles to achieve a lot in a short space of time; from 300 audits and EPCs to delivering 111 workshops, surgeries and events. As a result of the learning and engagement of this, we are only more inspired to continue with projects that bring such positive benefits to Arran and contribute to our ongoing quest to make Arran a greener and more sustainable island.

Most thanks is owed to the Arran community and residents that have embraced the project and enabled success in the delivery of project aims, to the Arran young people for their accelerating support, to our volunteers and board of trustees who give so much of their time to making this all possible through Arran Eco Savvy.

Special thanks to our development officer Alan Brown, who has been a fantastic support throughout and adds great value in comprehensive feedback on progress reports, and on an ongoing basis with any questions and queries.

Thanks to the team who were immersed in this project have all been so passionate and driven to make a difference within Arran's community and in the climate change challenge.



Arran
Eco
Savvy

Arran Eco Savvy Community and
the islanders of Arran say



thank you

to the Climate Change Fund
& The Scottish Government
for making this grant available.

