

Isle of Raasay, Carbon Neutral Island: case study of support offered by Home Energy Scotland

Background

Raasay (Gaelic: Ratharsair) is an island that lies in the Highlands, nestled between the Isle of Skye and mainland Scotland. It has a varied geography, with rolling hills, native forests, and secluded beaches. Only 14 miles long by 3 miles wide, Raasay has a resident population of 179¹.

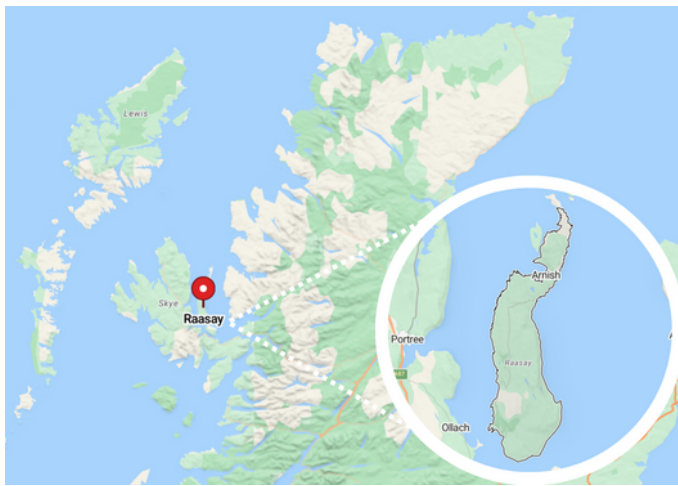


Figure 1: map showing the position of Raasay in the Scottish highlands.

In May 2022 Raasay was selected as one of the six Scottish islands that would be supported by the Carbon Neutral Islands (CNI) project alongside Barra, Cumbrae, Hoy, Islay, and Yell. The CNI project is a Scottish government commitment to support the islands to reach net zero by 2040. The project has put the community front and centre of its delivery. It will not only help the islands reach net zero but also support local economies through investment in projects that have benefits that go beyond cutting emissions alone. A key pillar of the project is the sharing of good practices and learning, so that the six islands - including Raasay - can act as catalysts to help other islands on their decarbonisation journey.

On each island the project is led by a local anchor organisation who are guided by the island community. They receive support from the Scottish Government Islands Team and a range of associated partners such as: [Community Energy Scotland \(CES\)](#), the key delivery partner for the initial phase of the CNI project; [Scottish Communities Climate Action Network \(SCCAN\)](#); [Sniffer](#); and [Aqwatera](#); alongside other external project partners. The local anchor organisation on Raasay is the [Raasay Development Trust \(RDT\)](#). As part of the CNI initiative CES helped RDT to produce [energy and transport carbon audits](#) and a [residents survey](#), which supported the development of a [Community Climate Change Action Plan](#). Two Carbon Neutral Development Officers (CNDOs), Rosie Macinnes and Tom Lusink have been employed by RDT and have played a critical role in engaging with the community and developing projects to bring the action plan to life.

¹ [Carbon Neutral Islands Raasay survey](#).



Figure 2: a picture of Skye taken from Raasay by Sarah Kinghorn, HES HI Home Energy Officer.

Domestic energy challenges

Historically, residents of Raasay have struggled to get retrofit work done on their homes because accredited contractors are reluctant to travel to the island for a single house visit. Yet they desperately need such work - the Raasay residents survey found that 55% of residents are regularly rationing their purchase of heat, 47% of residents live in dwellings that suffer from some kind of damp, and 61% supplement their heating with devices such as portable heaters or hot water bottles in order to keep warm.

The largest source of emissions on the island is energy use, which is dominated by the burning of fossil fuels to provide heat in both residential and non-domestic settings². Stoves and open fires, oil boilers, and storage heaters are the most common heating systems; and due to the poor quality of housing stock it takes a lot of energy to heat houses adequately³. As part of the Community Climate Change Action Plan Raasay residents were consulted on priorities for action. This revealed that insulating and retrofitting houses was the biggest concern going forward.

"The Carbon Neutral Islands project takes a comprehensive approach - aligning with wider Net Zero and decarbonisation efforts - in order to support the 6 islands involved to become carbon neutral by 2040. On Raasay, one of the priorities for the Carbon Neutral Islands project is to overcome the problems faced with retrofitting local housing. Improving housing quality is a priority in Scotland and rural and island communities tend to fall behind when it comes to warm and efficient housing." - Rosie Macinnes, Raasay Carbon Neutral Development Officer.

² Use of electricity accounts for approximately 27% of emissions on Raasay - Raasay Community Climate Change Action Plan p. 10.

³ Ibid. p.12.

How Home Energy Scotland helped

Home Energy Scotland Highlands and Islands (HES HI) were invited to support the Raasay CNI project as we are well placed to provide data on the housing stock on Raasay- we are able to provide detailed modelling of individual homes, including different options for improving their energy efficiency. This data was used to compliment the results of the community consultation and the residents survey; and provided evidence for the need for substantial retrofit work on Raasay to reduce emissions from energy use, reduce the cost of heating dwellings, and to increase comfort and warmth in peoples' homes.



Figure 3: from left to right - Julia Munro, Toni Magee and Sarah Kinghorn on the ferry on their way to Raasay.

Once the RDT and the CNDOS on Raasay knew that retrofit was something that the community wanted to see they started to explore what different options and funding streams were available. It was clear to them from early on that they needed to take an "all at once" approach, so Rosie Macinnes (Raasay CNDOS) got in touch with Toni Magee (HES HI Home Energy Specialist) and they put together a plan to get as many houses as possible signed up for a home energy visit so that HES HI could come into the community and do them all at once.

On 16th October 2023 Toni Magee, Julia Munro (HES HI Home Energy Specialists) and Sarah Kinghorn (HES HI Home Energy Officer) travelled across to Raasay. Prior to their visit, Rosie Macinnes reached out to households, getting over 40 pre-booked for Home Energy Improvement Reports. This allowed the HES HI team to hit the ground running and over three days they provided a range of activities for islanders, from drop-in sessions to home visits. Colleagues on the mainland were able to generate Home Reports for households that had an EPC report but for those without, Toni, Julia and Sarah were able to go to their houses and gather the information they needed to produce the reports.

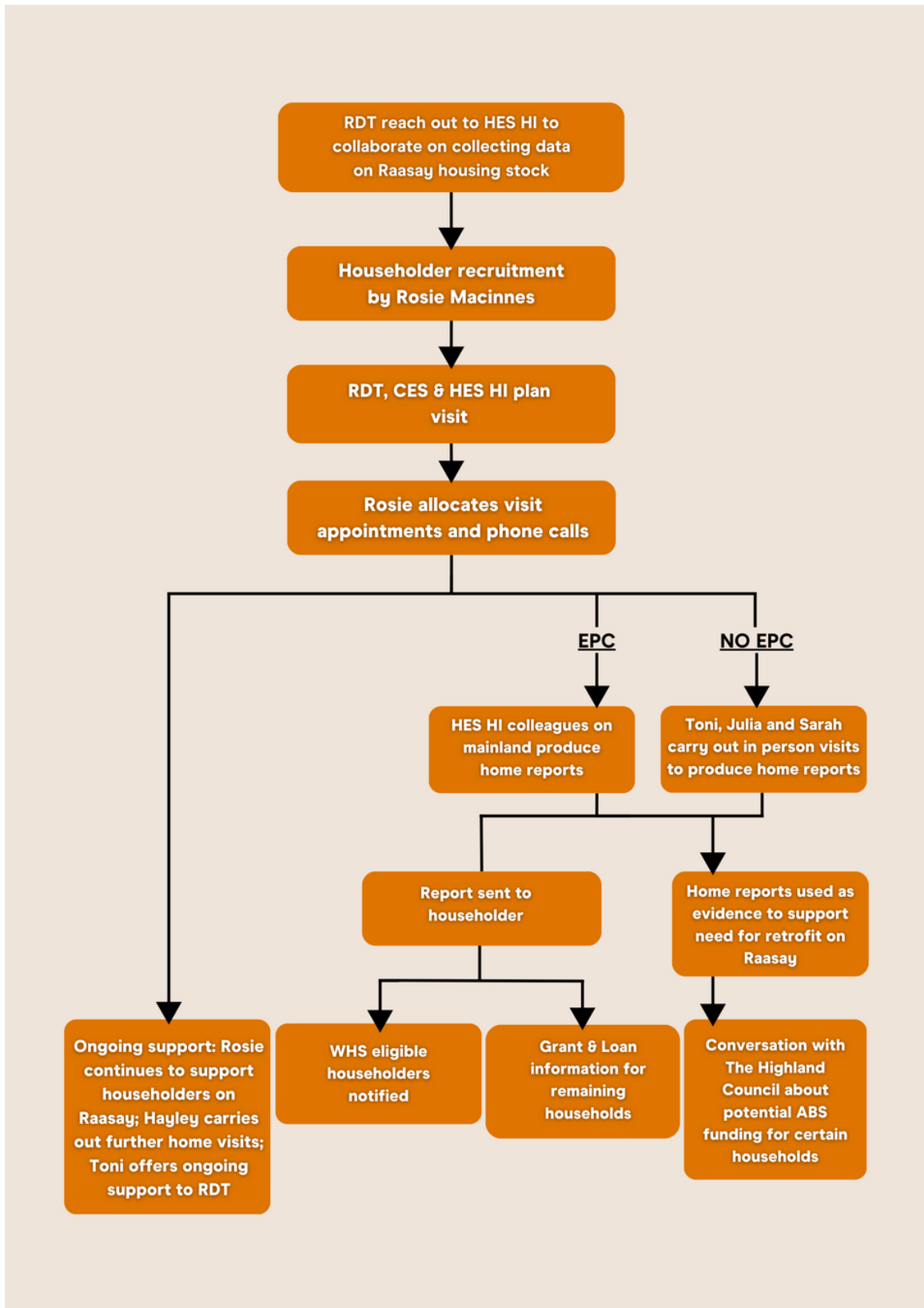


Figure 4: diagram outlining ongoing work on Raasay to support retrofit activity on the island.

Initial impact

HES HI's work on Raasay resulted in 42 Home Energy Improvement Reports - there are around 90 permanent households on Raasay so this represents a significant proportion of the full-time population. HES HI were also able to identify over 20 properties as being suitable for a referral to The Highland Council Area Based Scheme (ABS), and over 12 as suitable for a Warmer Homes Scotland (WHS) referral.

Of the 42 properties that have received Home Reports, 21 are for properties that have had no previous contact with HES. These contacts represent households who may never have contacted the advice line (callers are typically self-referrals) or responded to conventional marketing activity.

	Annual carbon savings	Annual energy savings	Annual monetary savings
If the least intensive measure from each report was implemented	62 tonnes	0.38 MWh	£30,000
If the most intensive measure from each report was implemented	130 tonnes	0.67 MWh	£55,000
If all measures from each report were implemented	230 tonnes	1.2 MWh	£106,000

Table 1: showing annual carbon, energy and monetary savings that would result across all households that reports were generated for, from implementing the measures recommended in the HES HI Home Energy Improvement Reports.

If the recommendations from the Home Energy Reports were implemented it would represent carbon, energy and monetary savings as detailed in Table 1. These potential savings demonstrate the effectiveness of the hyper-localised approach delivered through the partnership between HES HI and the RDT.

"We worked with Home Energy Scotland's Highland branch to proactively approach residents and to encourage them to sign up for a home survey. 47% of households that live in Raasay full time, as well as a few others, signed up ... and HES HI carried out 45 reports through a mixture of online work and a mass site visit. We are now working with Highland Council and Scottish Government to build on what has been done so far in order to create a project that will allow the homes on Raasay to be retrofitted collectively to avoid the normal supply chain, accommodation and contractor problems. The project will use a mixture of funding streams and will allow social housing as well as those with second homes on the island to be involved."

- Rosie Macinnes, Raasay Carbon Neutral Development Officer.

Next steps

Importantly, the results of the Home Energy Reports have provided the basis for discussions between the RDT and The Highland Council, who have agreed that they will take the project forward as a special funding bid and will deliver an ABS on Raasay. Highland Council contractors will carry out mass retrofit, meaning that social housing will be included, and enabling anyone who doesn't qualify for a grant to self-fund their own retrofit measures.

Learning and conclusions from HES HI's visit to Raasay

As a result of the visit we anticipate continued interest in HES services in the Highlands and Islands. In fact, our Home Energy Officer on Skye, Hayley Finnin, is already making follow up visits to Raasay and generating Home Energy Reports for households that missed the previous visit.

HES HI's involvement on Raasay is a small part of a much wider project. Due to work carried out previously by CES and RDT, retrofit was identified as a priority for residents of Raasay; the engagement of the CNDOs meant that there was someone on the island with the time and resources to move the project forward; and the local connections of the RDT and Rosie Macinnes enabled HES HI to take a hyper-localised approach, utilising pre-existing networks and locality to reach as many people as possible in just three days. All this resulted in HES HI having contact with 40% of all households on Raasay in a single trip.

With this case study we want to emphasize the repeatability of this project for other similarly remote and rural places. We also want to emphasize the key roles of project partner CES and community organisation RDT in ensuring success. Without their local knowledge and embedded trust from the community, along with their practical and pragmatic approach, this project would not have been possible.

To discuss this project or enquire about carrying out a similar project in your local area please contact: energyadvisors@hi.homeenergyscotland.org