



Bressay

Community Climate Action Plan

July 2025

Carbon
Neutral
Islands



Community
Energy
Scotland



Scottish Government
Riaghaltas na h-Alba

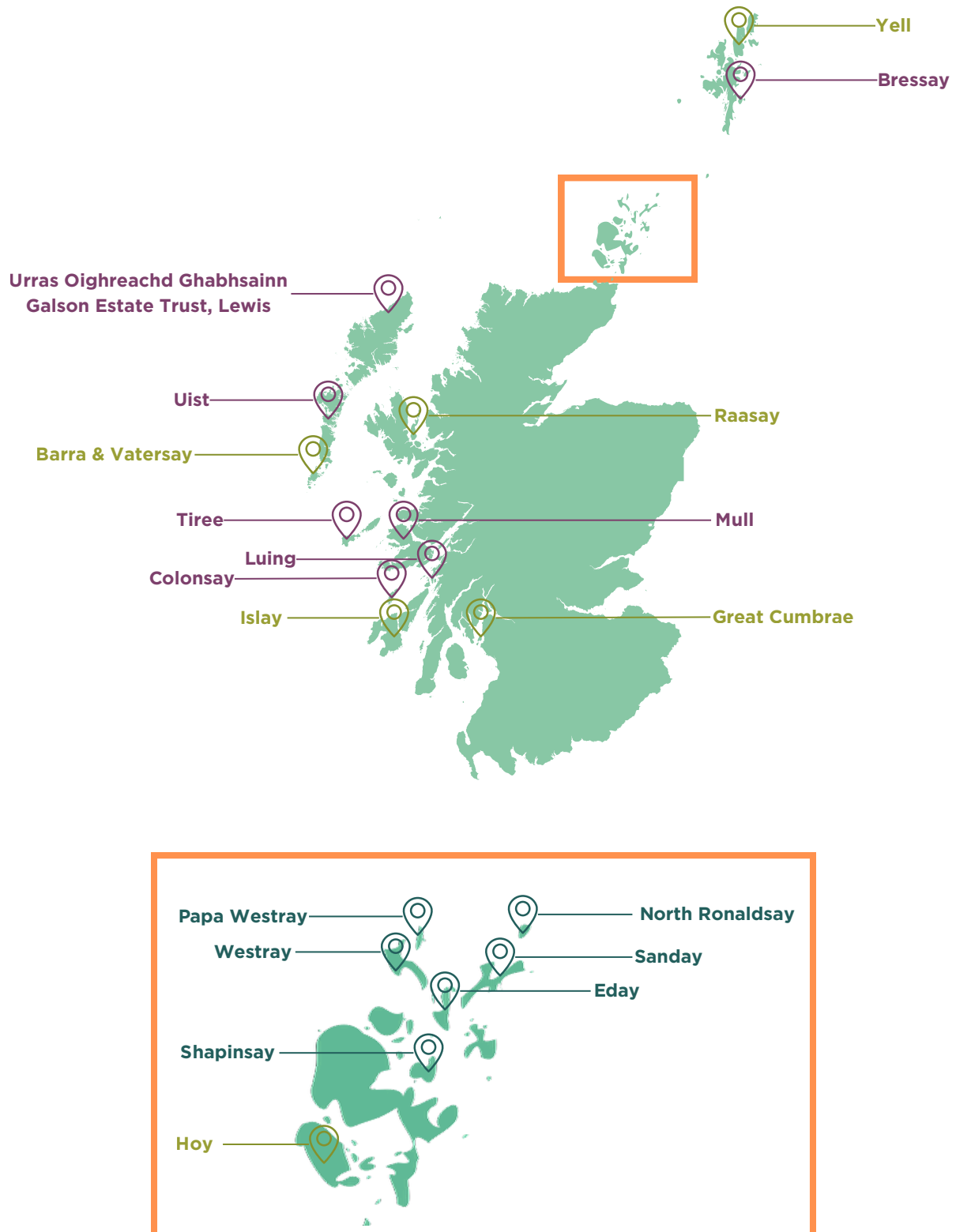
BRESSAY
DEVELOPMENT



THE
ISLANDS
SCOTLAND ACT 2018
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VOAR

The Carbon Neutral Islands



Key

-  Original Six Islands
-  Community of Practice
-  Community of Practice: Orkney Cluster

The Carbon Neutral Islands Project

The Carbon Neutral Islands (CNI) project started in 2022 to support six islands—Barra & Vatersay, Hoy & Walls, Cumbrae, Islay, Raasay, and Yell—become carbon neutral by 2040 using a community-led approach. These islands are seen as examples for others, and the lessons from their work will be shared with all Scottish islands and beyond.

In 2024, the Scottish Government provided funding for 15 more islands to join communities of practice, led by CES, to engage with their residents, complete carbon audits, and create climate action plans. The project supports broader efforts to achieve net zero emissions and contributes to Scotland's legal goal of reaching net zero by 2045.

What is carbon neutral?

A carbon neutral island is an island where the greenhouse gas emissions are in balance with what the 'sinks' can absorb. Sinks can be natural resources that absorb CO₂ (like trees or soils) or technological solutions that do the same thing (carbon capture and storage). If an island's sinks—such as its forests—remove more CO₂ than the emissions produced by activities on the island, then it becomes carbon-negative.

Decarbonisation means reducing or stopping carbon emissions. For example, by walking or cycling instead of driving.

Decarbonisation is a big part of tackling climate change globally, but it also brings local benefits. Community climate actions can lower costs for households and businesses, improve health and living conditions, create new job and training opportunities and help create more resilient communities.

What we're working on

Bressay engaged in the community of practice, represented by Voar Energy on behalf of Bressay Development Limited. The outputs for Bressay's involvement in this project are:

- Community Climate Action Plan
- Community Survey
- Community Engagement
- Initial stakeholder engagement in community projects



Abbreviations

- BDL - Bressay Development Limited
- CNI - Carbon Neutral Islands
- CES - Community Energy Scotland
- CO₂ - Carbon Dioxide
- CCAP - Community Climate Action Plan
- EV - Electric Vehicle
- Kg - Kilogram
- kWh - Kilowatt-Hour



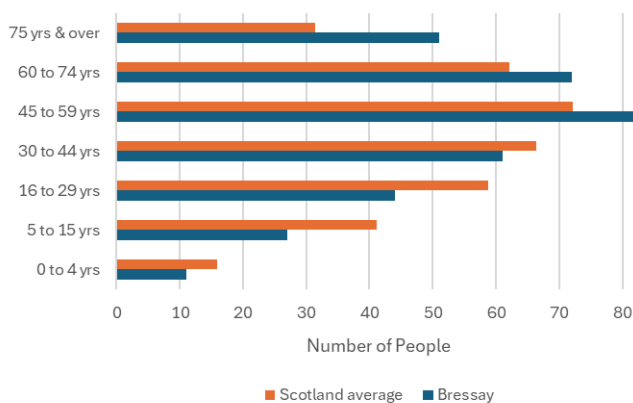
Our island context

Bressay

Bressay covers 2800 hectares and lies on the east side of Shetland. At 60.15 degrees North it shares a latitude with the southern tip of Greenland and St Petersburg. The climate is temperate due to the Gulf Stream.

The interior of the island is largely peatland with heather covering and the edges of the island consist of improved rough grazing and grassy fields. Bressay's population rely on the neighbouring nearby town of Lerwick on Mainland Shetland for much of its amenities including schools, healthcare and recreation.

Population and age



Main Industries

- ☐ Ferry
- ☐ Agriculture
- ☐ Fish Factory
- ☐ Hospitality/Tourism
- ☐ Community Services (Shop, Post, Gritter)



Key issues

- ☐ Housing availability
- ☐ Access to services
- ☐ Community resilience



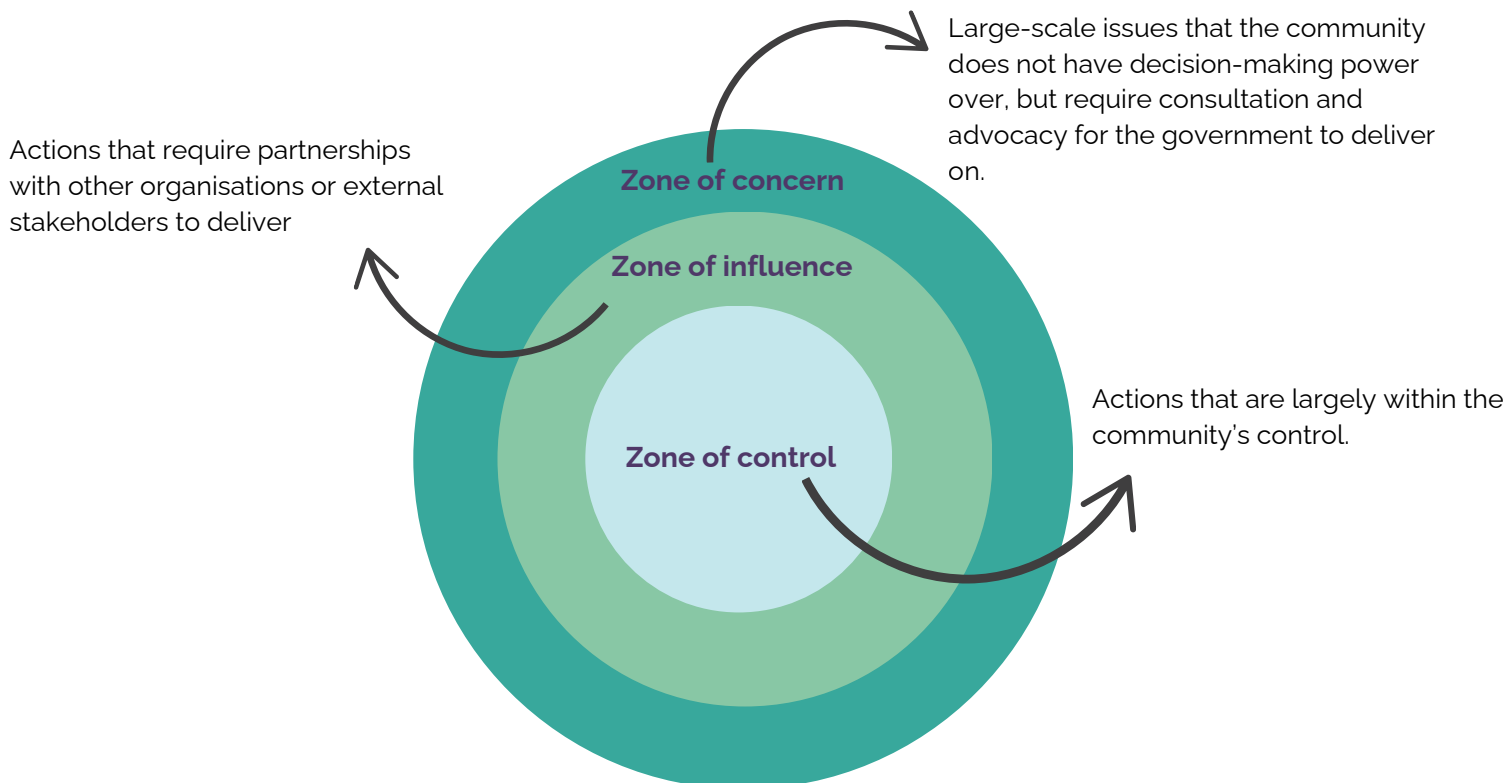
Community vision

To secure and sustain a vibrant future for Bressay, with an active, connected, thriving and resilient community.

The Zones of Control

This action plan prioritises actions within the community's direct control while recognising areas we can influence or are concerned about. When we can separate and understand what level of influence we can have on an issue, it allows resources and energy to be more efficiently allocated.

For example, promoting cycling and walking instead of car use is within our control. Building new walking and cycling paths falls under our influence, while electrifying ferries is a national issue beyond the community's direct control but is still important to work towards and be involved in.



Climate change and Bressay

Bressay is vulnerable to climate change and nature loss. Climate change is making winters wetter and summers drier, but more variable. Stretches of Bressay's coastline already suffer from coastal erosion and the low lying areas are susceptible to flooding from high tides. The increasingly wetter conditions have impacted agriculture with fewer continuous dry days for harvesting crops in late summer and increasingly waterlogged parks in winter. In recent years, flooding at Gunhaa has been severe enough to prevent foot and bike travel. The electricity network is susceptible to storm conditions and its repair can be hampered by ferry outages due to high winds and tides.

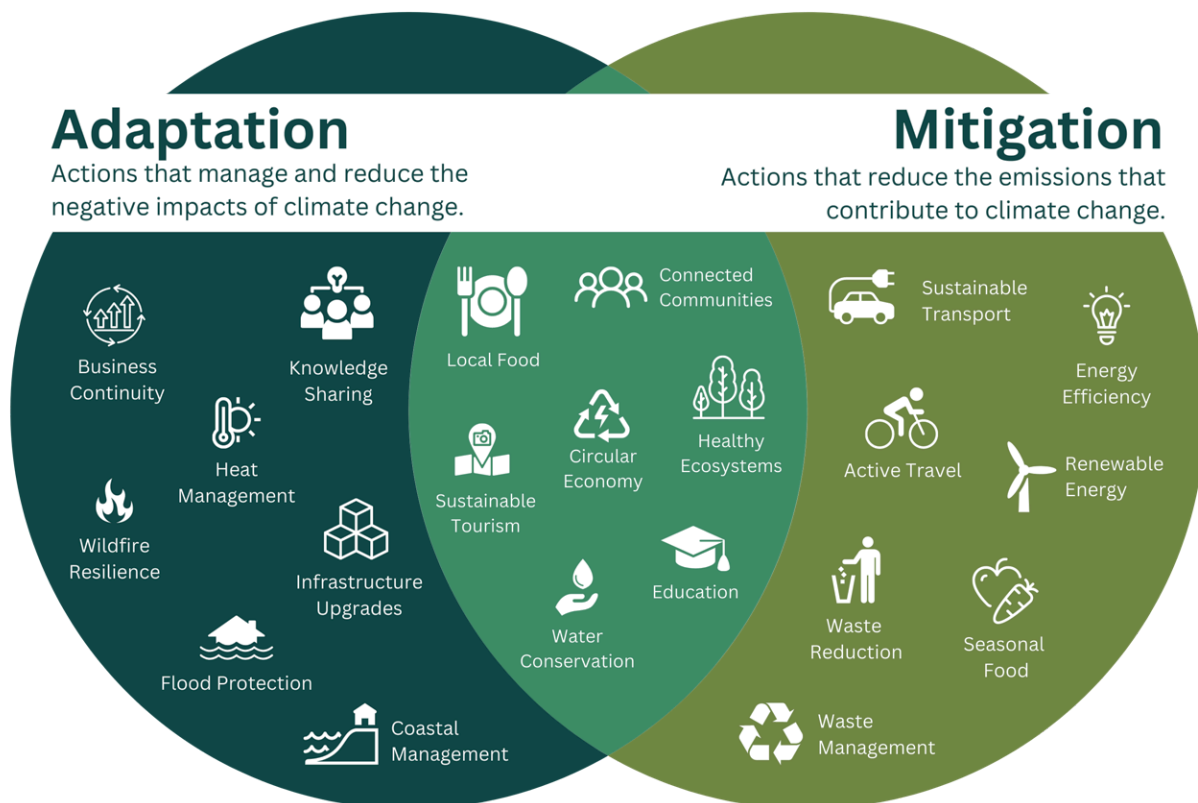
This plan includes action in two key areas:

Adaptation – Actions to manage and reduce the negative effects of climate change.

Mitigation – Actions to reduce the emissions that cause climate change.

The diagram below shows how adaptation and mitigation often work together. Both are essential for reducing risks from changing weather and building stronger, more resilient communities.

Scotland has declared a climate emergency and taken stronger action through the 2019 Climate Change Act, aiming for net zero greenhouse gas emissions by 2045. This law also ensures Scotland prepares for the impacts of climate change already happening, like rising sea levels and more extreme weather.



How was the data gathered?

- Household survey
- Energy and transport carbon audit
- Engagement session

Household Survey

A 60 question household survey was circulated via facebook, posters and email. This aimed to gathering data and views. The views have been summarised and turned into actions and the data has fed into the carbon audit figures.

Additional canvassing of industrial / commercial / yielded most of the energy figures for those although we did not get all of the energy use figures so some are estimated.

47 household survey responses were returned with a very high number of those recommending projects they would like to see.



Bressay Household Energy Survey

Bressay Development Ltd (BDL) are working with Community Energy Scotland and Voar to develop a **Community Climate Action Plan for Bressay**. This includes an **Energy Audit** for Bressay and aims to capture the Bressay community's **priorities in combatting and adapting to climate change**.

This survey aims to gather data and community views. I am hopeful that the aggregated data will be useful to the community beyond what we are currently looking at – particularly to give a better understanding of Bressay household energy use, heating methods and housing stock conditions.

I would appreciate it if you could take the time to complete the survey. Completing the survey online is preferable but there are hard copies in Speldiburn and the Mail Shop if you don't have internet access. If anyone needs assistance to complete the survey contact me (details below) or Jo and Aimee at BDL (01595820706 / info@bressay.org).

None of the questions are mandatory. If you do not wish to answer a particular question or if you feel it is not relevant to you, just leave it. I would still appreciate your responses to the other questions.

All information provided will be anonymised. We ask for your address at the end of this survey to ensure we reach as many islanders as possible

We will be running a further community engagement session at Speldiburn in March to look at what projects and activities the Bressay community sees as its main priorities.

Please only complete one survey per household.

The survey closes on 18th March 2025.

Best Regards,

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This project is part of the Scottish Government's Carbon Neutral Islands project. More details can be found on the Community Energy Scotland website <https://communityenergyscotland.org.uk/projects/carbon-neutral-islands/>

Carbon audit

A carbon audit is a process that measures the amount of greenhouse gas emissions that are produced by an island.

Voar Energy conducted a carbon audit for Bressay to establish our baseline emissions and help to identify priority areas for decarbonisation and track progress toward carbon neutrality.

These audits, made possible by the cooperation of local residents and businesses, measure emissions and sinks for the key sectors of Energy and Transport. following the globally recognised methodology (2021 Protocol for Community-Scale Greenhouse Gas Inventories, aligned with the 2019 IPCC guidelines).

Noteable omissions from the carbon audit were land based emissions (e.g. agriculture, peatland) and blue carbon (marine based carbon emissions e.g. from seaweed)

Key Findings

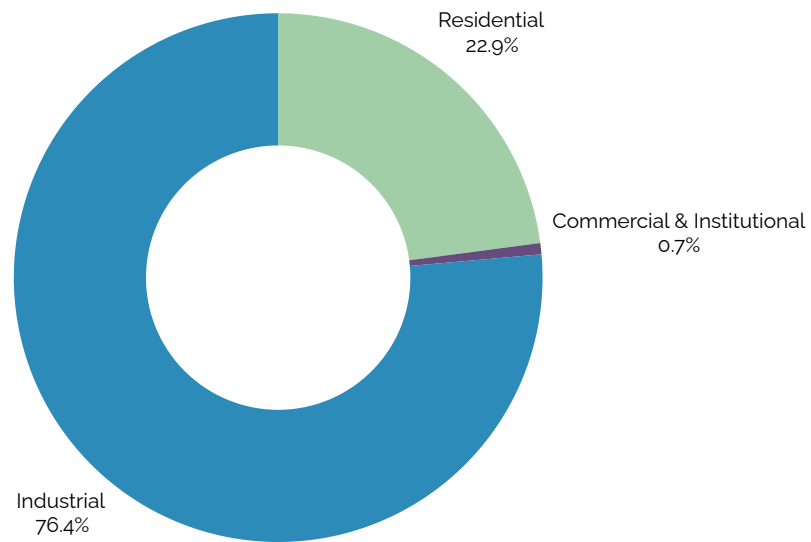
The graphs on the following page show emissions from Energy and Transport, providing an overview of current emission levels on Bressay. While the analysis includes estimates and uncertainties, it highlights the scale and patterns of emissions in each sector. The carbon audits serve as a tool to guide discussions and decision-making as the community plans its path forward.

Energy

The main residential emissions are from electricity and heating oil.

Commercial and institutional energy emissions are primarily from electricity.

Industrial emissions are from electricity and bio-oils. These are used in a circular manner and are created from the same waste products they are used to process so an argument could be made for these offsetting emissions from the waste itself.

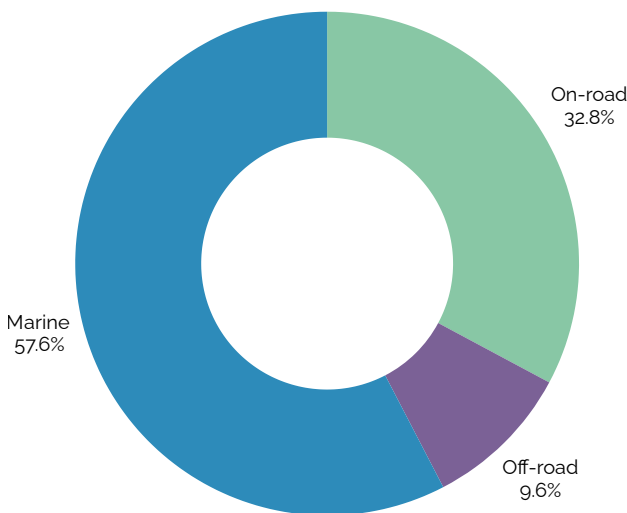


Transport

The main transportation CO₂ emissions are from marine emissions from the ferry MV Leirna.

While exact emissions from road vehicles are difficult to quantify, these results are seen as accurate in terms of order of magnitude, as they combine extrapolated survey data with local knowledge. For example, on road transport might seem low but most residents live within two miles of the ferry, shop, pub and café, so journey times are relatively short.

Off road emissions are estimated as there is insufficient data available.



Community input



- The initial roll out of the CCAP project was done during an update session for the *Bressay Community Energy Project Feasibility Study* which was being undertaken at the same time and which has stimulated discussion in the community around energy generation and usage, as well as community resilience. This initial roll out explained the aims and themes of the CCAP and provided an opportunity for discussion and Q&A from the public.
- Additional engagement was held during Wednesday social afternoons at the Speldiburn community hub which has allowed residents to discuss actions, get assistance with completion of the questionnaire and come along to ask specific questions.
- A household survey was distributed and received 47 responses with almost all of the respondents giving their views on what actions they would like to see included in the CCAP.
- On completion of the survey the community views and recommended actions were summarised into a number of possible action points.
- These action points were presented and discussed at an engagement evening held at Speldiburn and attended by 26 people. The sessions included smaller discussion groups to discuss and prioritise the actions. The session material was sent to some Bressay residents who were unable to attend on the night to allow them to take part and allow them to vote on priorities.



Discussing community resilience



Engagement session presentation

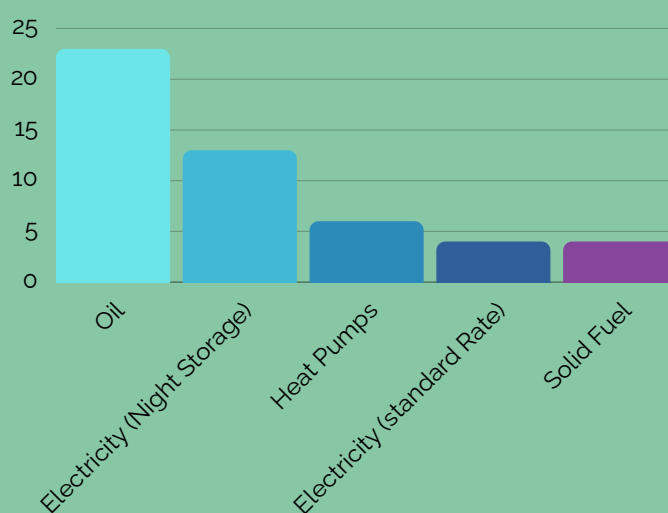
Energy

- Bressay is connected to the Shetland Electricity Grid via subsea cable across Bressay Sound.
- Most winters, we have seen some disruptions to the electricity supply due to weather related grid failures. Most failures have been fixed very quickly (within two hours), with a lack of ferries (due to weather or night time) being responsible for any longer outages.
- Most domestic heating systems use oil or electricity. Although some solid fuel fires are still in use, they are generally used only occasionally or as a backup.
- The largest user of energy on the Island is the Fish Factory at Heogan. The oil used at the factory is bio-oil from self processed waste.
- Bressay has a small number of domestic wind turbines which offset household electricity and feed excess into the grid. There is also a small number of domestic solar installations and a larger solar array at Speldiburn community hub.
- There has been a concerted effort from BDL to direct residents towards available support for heating improvements and insulation. This has led to a number of residents installing solar panels, heat pumps and additional insulation through government led schemes.

Information from household survey













- Average household surveyed used:
 - 6,428kWh electricity
 - 1,031 litres of heating oil
 - 250kg solid fuel
 - 14 kg gas
- 63% of households use electricity for their main cooker with 28% using gas and 9% using solid fuel or oil stoves
- 30 out of 47 respondents have a backup heat source in case of a power cut e.g. solid fuel fire, gas heater or generator to run oil heating

Household heating in Bressay



Energy actions

Top two priority actions in green.

Activity	CO2 saving	Co-benefits	Cost
1. Community energy generation to provide income at a community level			
2. Community wide program of insulation, heating and domestic renewable upgrades. Full surveys carried out on all (or as many as possible) of Bressay's households and put together a programme of upgrades and funding support to cover those not eligible for existing support packages.			
3. Education and advice - build on the work being done by BDL to help educate and support residents with energy including: <ul style="list-style-type: none"> • Help with heating controls • Information on the best tariffs available • Help to switch providers • Help to understand what grants are available • Details of people willing to share their experience of switching to renewable systems 			
4. Create an "energy" group to support residents with their energy, progress energy generation in Bressay, ensure Bressay can make the most of any energy opportunities arising and speak up for Bressay's energy needs at a regional and national level			



Estimated carbon saving potential



Improves ecology



Builds resilience



Encourages economic sustainability



Enhances health & wellbeing



Estimated cost to implement action

Transport



















- Bressay residents are reliant on the roll-on roll-off ferry MV Leirna for access to and from the island. The cost of travelling by ferry is a concern to residents as there is a heavy reliance on the ferry to access jobs, healthcare, leisure and recreation, schools, entertainment and supermarkets.
- Most households own at least one vehicle. There are a number of people who walk or cycle for transportation rather than just for pleasure but there are only a few short stretches of dedicated footpaths.
- Children are taken to school (or part way there) by minibuses. A weekly shopper bus takes residents to the Lerwick supermarkets and back. There is a scheduled community taxi run three times per week which follows the main roads and takes people to the ferry in the morning and home again in the afternoon.
- There is ongoing discussion both locally and regionally around the possibility of a fixed link between Bressay and Lerwick. This was noted as a topic in four survey responses. It has not been included here as an action in this CCAP as it is not in the communities zone of control and also because it is a very sensitive topic with many in favour and against. A working group has been formed to explore this issue - the Bressay Tunnel Action Group.
- The consultation highlighted that many residents already car share on an informal basis through both necessity and opportunity.
- Bressay hosts the UK's most northerly Parkrun which encourages people to walk and run on Bressay with essentially all visitors on Saturday morning visiting the island on foot.

Information from household survey (from 47 survey responses):

- 45% of respondents walk as a means of transportation
- 15% of respondents cycle as a means of transportation
- 19% of respondents use public transport on Bressay (shopper bus or community taxi runs)
- 85% of households have at least one car
- 9% of households own a boat
- 1.4 cars per household
- 3375 miles per car (includes mainland miles)

Transport actions

Top two priority actions in green.

Activity	CO2 saving	Co-benefits	Cost
1. Pavement / verge improvements. Highlight the main areas where walkers and cyclists require improved infrastructure to stay safe on Bressay roads and engage with the council to improve these.			
2. Community minibus. Investigate an option for a community minibus. Possible engagement with Community Energy Scotland on their projects in Shetland trying to fit public transport (and community minibuses) into a rural or island setting.			
3. Bus service changes. Review of the service provision for Bressay to liaise with the SIC to see what changes or additions could be made to timetables to better serve the community.			
4. Car pooling/sharing. This is a relatively simple action and could be as simple as putting drivers and passengers in touch with each other.			
5. Electric bikes. There could be a project to increase uptake of Electric bikes including: bulk purchase and education. .			
6. Community cars and bikes for hire. Explore the possibility of starting a car / EV bike share scheme or direct hiring. Bike hire could include trailer hire.			



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Food



















- Bressay is a crofting island. Historically the population lived on crofts growing their own food and rearing animals at or just above a subsistence level. There are a number of very active farmers and crofters on the island supplying locally produced food to the rest of Shetland including Tatties, Neeps, Eggs, Lamb, Beef and Pork.
- There is a very active group of people engaged in horticultural activities and at least 19 polycrubs and many conservatories and greenhouses used for growing.
- There is an annual spring plant sale and late summer gardening show where edible produce is shown. The local cafe uses local produce where possible. The local shop is very encouraging of local growing and provides an outlet for producers. There are a number of honesty boxes on Bressay - predominantly selling eggs.
- There are some allotments in the north end of the island but at around 2.5 miles from the main centre of population these are outwith reasonable walking distance.
- The island has a large number of formerly used growing spaces: plantiecrubs (small walled gardens, typically around 5m x 5m which were used as nurseries for cabbage plants) and yards (larger walled enclosures used to grow vegetables). These largely fell out of favour as Bressay residents moved away from their subsistence existence. More recently used ones are still very fertile following many years of cultivation and application of byre muckings (cow manure and peat bedding) and seaweed. Many of the walls have not been kept up and they tend to be concentrated far from population centres now and either belong to a croft or have been re-absorbed into common grazings.
- The survey highlighted that there is a demand for growing spaces around Fullaburn and The Glebe with shared polycrub and community allotments both mentioned multiple times.
- The survey highlighted the desire for more local produce but there was no clear consensus on how this would best be achieved. During the engagement session most people felt that continued support for the work already being done by the local shop would be the best approach.

Information from household survey (from 47 survey responses):

- 28 households grow some of their own food. A further 5 households would like to grow but lack sufficient growing space
- 34 households compost their kitchen waste
- 12 households keep animals for food

Food actions

Top two priority actions in green.

Activity	CO2 saving	Co-benefits	Cost
1. Encourage more locally available, locally grown food.			
2. Community allotments close to those who need them. Possibly council owned land at Fullaburn.			
3. Community polycrub(s) for shared use. Possibly sited on the unused council owned land at Fullaburn.			
4. Education / skill share: this could include: <ul style="list-style-type: none"> • matching experienced growers with novices, • lectures on relevant topics • training courses 			
5. Community composting. Possibly communal compost location or encouraging and providing support for more people to compost at home.			
6. Unused plantiecrubs could be offered by crofters to those who want a fertile growing space			



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Estimated cost to implement action

Land Use & Agriculture

- Bressay's population is largely located in the central west side of the island with sparsely clustered houses and townships elsewhere on the Island. The centre and far south east of the island is rough sheep grazing consisting mainly of peatland and heather hills. Much of the peatland no longer appears "active" and in places there is significant degradation, Peripheral areas of the island are primarily "in-bye" ground which is improved grazing and arable land. Improved grazing land is largely well used for sheep, cattle and hay/silage.
- Land is largely managed for agricultural purposes by local crofters and farmers, there are no shooting estates on Bressay.
- Some crofts are very lightly used, or unused.
- There have been some woodlands planted using native species of tree but with a few exceptions, these are not yet well established.
- There have been local efforts to improve enjoyment of the outdoors including a community garden "Ella's Park" and benches located around the island as rest or viewing points.
- Some crofters and farmers actively participate in environmental management schemes such as Agri-Environment Climate Scheme (AECS).
- Changes to the Basic Payment Scheme (agricultural subsidies) include a number of environmental management requirements which may have an impact on land management on Bressay.
- There have been some efforts to reduce agricultural activity to encourage biodiversity such as Gorie.

Land use and agriculture actions

Top two priority actions in green.

Activity	CO2 saving	Co-benefits	Cost
1. Biodiversity project: to encourage biodiversity and wildlife habitats in gardens/unused land, diversity enhancing land use like growing crops to support birds, insects & less spraying of herbicides / draining of wet lands.			
2. Bringing underused crofts back into better use and/or maximising their use by group usage / collective growing while the croft remains under the tenant/owners administration.			
3. Peatland Restoration: Some notable areas of peatland appear degraded so there may be an opportunity to restore these working hand-in-hand with landowners and users.			
4. Increasing accessibility and enjoyment of our island's environment through upkeep of prepheral access tracks, paths, stiles and gates.			
5. Further extend woodland community projects and schemes			
6. Encourage sharing of Knowledge and Equipment			



Estimated carbon saving potential



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Enhances health & wellbeing



Estimated cost to implement action

Land use and agriculture actions

(Continued)

Activity	CO2 saving	Co-benefits	Cost
7. Building land: reasonably priced building land for young people to buy			
8. Supporting use of seaweed as a fertiliser			
9. More community green spaces			



Estimated carbon saving potential



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Estimated cost to implement action

Community resilience

- Community resilience includes anything that supports residents' safety and needs during a disruption in regular life (for example a severe storm). The most likely source of disruption to regular life on Bressay is a prolonged power cut, ferry outage or extreme weather event.
- As part of the consultation Bressay households were asked to consider if they have the means to be self reliant for a couple of days without power or communications and what support they would need during a period of disruption.
- This topic received the highest number of comments and suggestions
- There is some degree of resilience on the island already due to the isolated, rural and agricultural nature of the community. There are a large number of solid fuel stoves which are only used as backup, many residents have portable gas heating, gas cooking and other traditional backups such as candles, blankets and camping stoves.
- There are nonetheless a large number of households with minimal or no backup who would need support.
- The survey clearly highlighted a demand to have a community building with an off-grid energy source which could be opened to the public if required. Exactly what this would look like and what support it would be able to offer residents would need to come through the resilience plan.
- Although there is no official resilience plan for Bressay, there have been efforts to improve resilience on the island including: installation of a defibrillator and recent first aid training.
- One topic which was discussed at length was the lack of an on-island community nurse which leaves Bressay with no medical support during a ferry outage or extreme weather event. It also leaves residents without someone to champion their healthcare needs. Lobbying for a community based nurse was done by Bressay Community Council and Bressay Development Limited however it is apparent that the NHS do not intend to provide community nursing in Bressay at this time. Twice a month, an NHS healthcare support worker comes across for pre-booked monitoring appointments, ran from a clinic room at Speliburn. As it has already been explored this has not been added as an action to the CCAP.



Estimated
carbon
saving
potential



Improves
ecology



Builds
resilience



Encourages
economic
sustainability





















Enhances
health &
wellbeing



Estimated cost
to implement
action

Community resilience actions

Top two priority actions in green.

Activity	CO2 saving	Co-benefits	Cost
1. Resilience plan: create a Bressay resilience plan to determine what scenarios we need to be able to cope with and what additional steps we need to take as a community.			
2. Resilience hub: one of the islands hubs (Speldiburn or the hall) equipped to operate during a prolonged power outage. This could include a generator, renewable generation, battery storage, gas supplies, provisions			
3. Renewable energy and energy storage for community buildings e.g. Speldiburn, hall, (shop), heritage centre, galley shed			
4. Trained First Aiders			
5. More defibrillator sites on the island			
6. Fuel pumps for diesel, red diesel and petrol			



Estimated carbon saving potential



Improves ecology



Builds resilience



Encourages economic sustainability



Enhances health & wellbeing



Estimated cost to implement action

Next Steps

What: This Action Plan is a tool for the whole community to use in order to ensure the long-term sustainability of Bressay, its people, and its ecosystems. This is a living document and new priorities that emerge in the future can be added as needed.

Who: The CCAP is intended to benefit the whole community and specific actions will require buy in and effort from a range of different actors. These will include:

- Individuals within the Bressay community
- Community organisations including Bressay Development Limited, Bressay Community Council, Hall Committee
- Land owners and managers
- Private businesses
- Shetland Islands Council
- Peatland Trust
- Home Energy Scotland / Warmer Homes Scotland
- Scottish (and wider) Government
- Other networks of interested parties and
- Communities

How: Many of the actions are already clearly defined and some are being investigated already including: Community Energy Generation (Voar led feasibility study); Community Resilience Plan (ongoing work from Bressay Community Council), Peatland Restoration (engagement between the Bressay Grazings Committee and Peatland Action). Some of these projects need to be led from the ground up by individuals who are keen to see them happen and would benefit from them, e.g. community polycrubs and allotments. The process for choosing which actions to progress will likely be driven by resources (i.e. people and funding availability).

Contact

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