

Shetland Partnership: Climate Change Data

Shared Vision: Shetland is a place where everyone is able to thrive; living well in strong, resilient communities; and where people and communities are able to help, plan and deliver solutions to future challenges

Shared Priorities

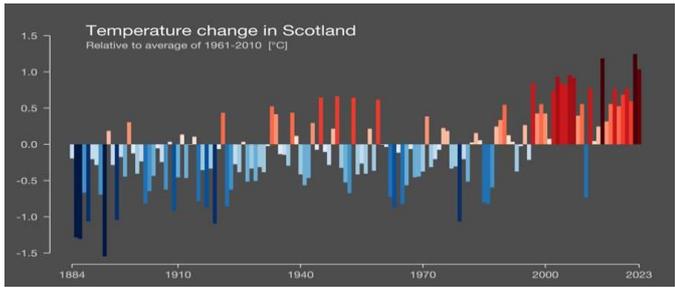
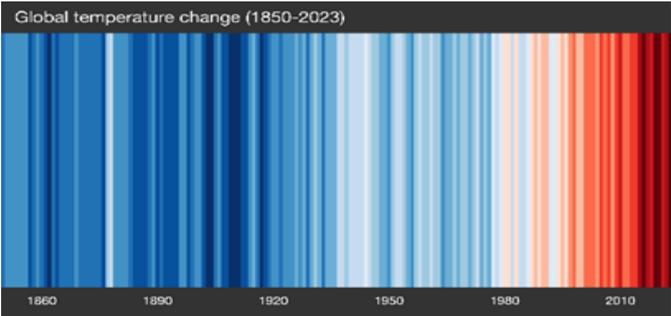
 People participate and influence decisions on services and use of resources

 Shetland is an attractive place to live, study and invest

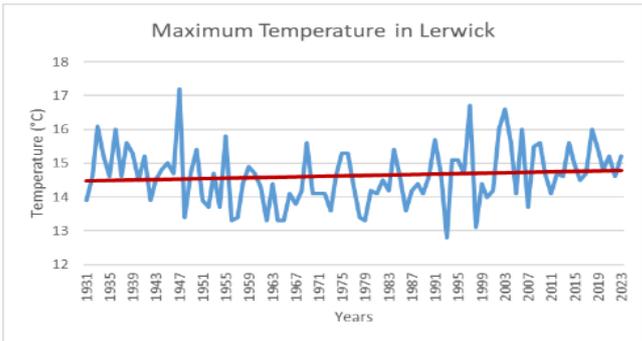
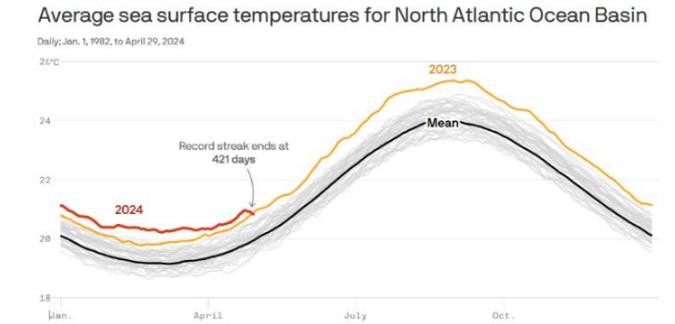
 Individuals and families thrive and reach their full potential

 All households can afford to have a good standard of living

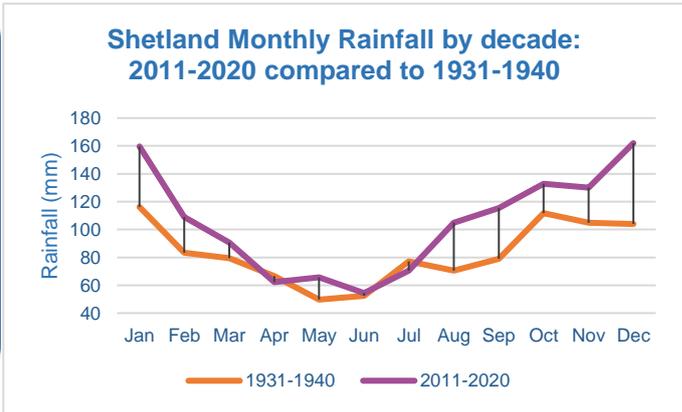
1. Globally, average temperatures have increased by 1.2°C since 1800, and 2023 was the hottest year on record. Climate change - the long term shift in temperature and weather patterns - has begun to intensify flooding, storms, wildfires, heatwaves, and other climate events.



2. In 2022 Scotland recorded its hottest temperature at 34.8°C in the Borders, a whole 2 °C above the average. Whilst at the end of April 2024, the North Atlantic Ocean ended a 421 day streak of record high temperatures.



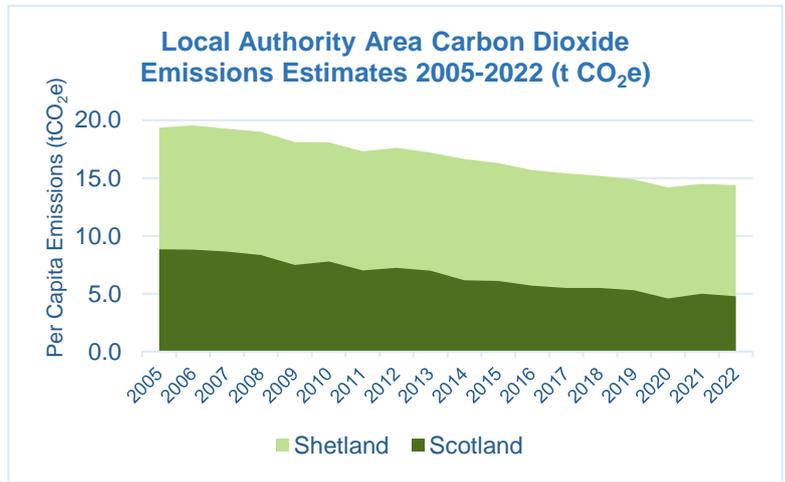
3. Shetland's maximum temperature in 2022 was higher than the average from 1930-2022 in all but 3 months of the year. The average monthly rainfall by decade has increased since 1931 by over 25%, with most of this falling in the winter months. Wind speed followed a similar pattern; when comparing 2022 data against the average for 1930-2022, higher speeds were recorded in 8 out of 12 months.



4.

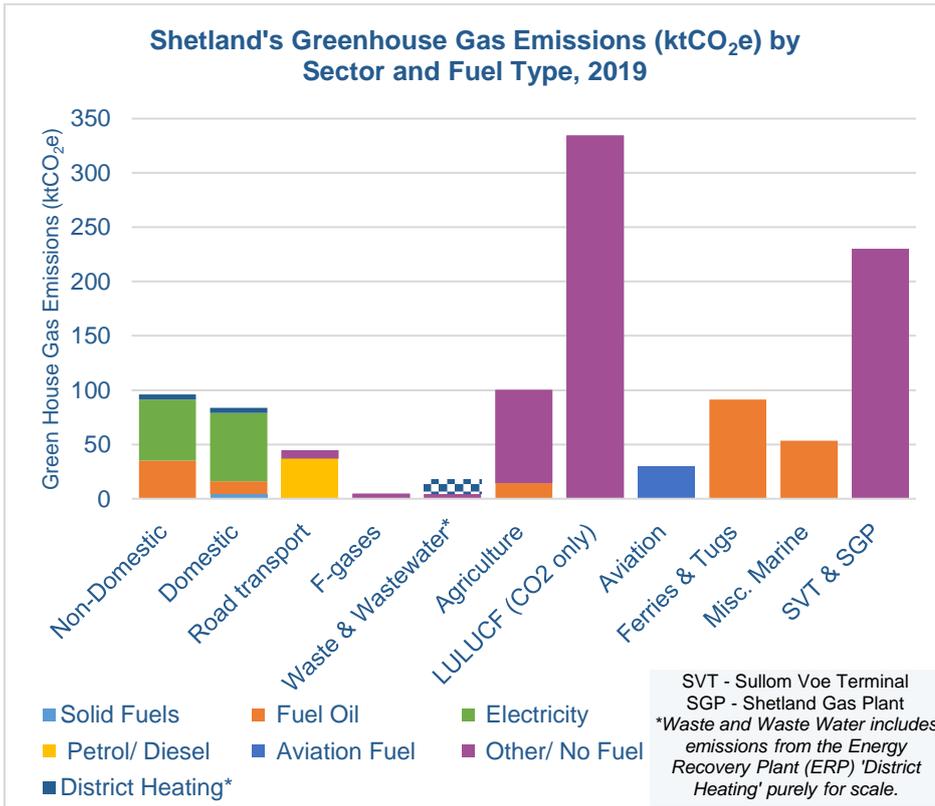
We know that greenhouse gas emissions are responsible for this accelerated climate change. CO₂ emissions per person for Shetland are much higher than per person for Scotland; though they have reduced by 25.4% from 2005 to 2022. For Scotland, the reduction has been much greater (45.7%).

This is not unusual for remote rural, and particularly island areas.



5.

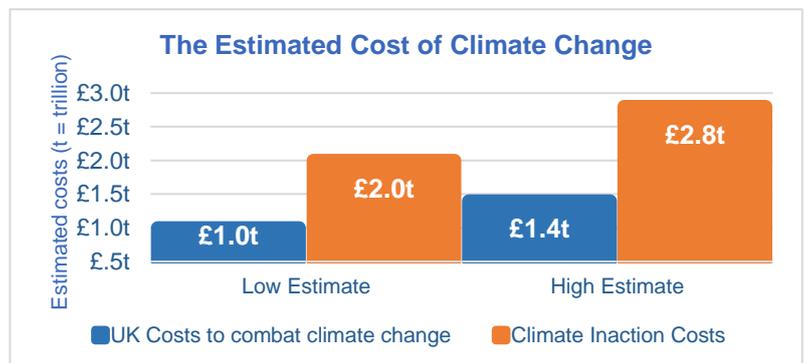
Shetland's landscape disproportionately impacts its emissions (Land Use, Land-Use Change and Forestry). The difference in CO₂ emissions between Shetland and Scotland is due to several aspects, particularly the emissions associated with degraded peatlands; there are roughly 79,000 hectares across the isles. On average, one hectare of degraded peatland can emit up to 23.4 tonnes CO₂e per year; this is equivalent to emissions from running 17 petrol cars.



6.

Estimates for the cost of combatting Climate Change in the UK range from £1-£1.4 trillion. The possible cost of inaction is double this.

As an example, the estimated cost of restoring all actively eroding peatland in Shetland is roughly £109 mn; this will only increase as degradation continues.



848 responses from all across Shetland

51% are clear what Net Zero means

68% feel we urgently need to do all we can to address climate change



7.

From the 2021 Shetland Climate Conversation Survey Net Zero means. 68% of respondents feel urgent action is needed on climate change.

Data Sources: Ed Hawkins, National Centre for Atmospheric Science, UoR (Berkeley Earth & ERA5-Land, NOAA, UK Met Office, MeteoSwiss, DWD, SMHI, UoR & ZAMG); NOAA OIST v2.1 via Cli,mate Reanalyzer, University of Maien, U.S.A., Simran Parani, Axios 2024; Met Office, 2024, Historic Station Data: Lerwick Dataset; NimbleFins, 2024, Average CO₂ Emissions per Car in the UK; Ricardo Energy and Environment, 2022, Shetland Net Zero Route Map, ED15590, Issue Number 5; J Rising et al, 2022, LSE, Grantham Research Institute on Climate Change and the Environment; Ricardo Energy and Environment, 2022, Assessment of Shetland Islands Council Land Carbon Sequestration, ED15590, Issue Number 1; Assessment of Shetland Islands Council Land Carbon Sequestration. SVT & SGP is Sullom Voe Terminal and Shetland Gas Plant. Cost of peatland restoration is a calculation based on a midpoint costing estimate per ha of £4,500, multiplied by ha of eroding peatland. Cost knowledge is anecdotal, shared by Peatland ACTION officers.

