Introduction

The Challenge & Opportunity Of Climate Change

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Our planet's climate is changing and warming is accelerating. Globally, 2010-2019 was the warmest decade since records began in 1850 and each decade since 1980 has been warmer than the preceding one.

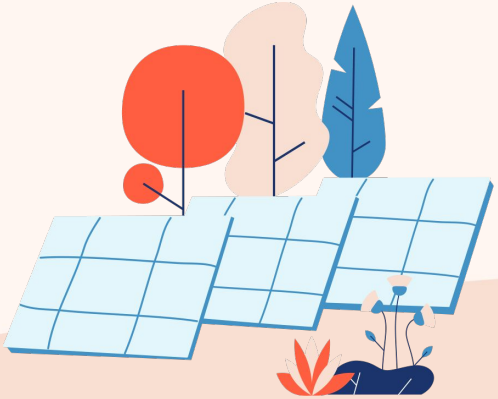
It is unequivocal that emissions of greenhouse gases (GHG) by humans have warmed the atmosphere. The greenhouse effect occurs when GHGs in the atmosphere, like carbon dioxide and methane, trap some of the sun's heat. However, since the industrial revolution, human activities, such as the burning of fossil fuels for heat, electricity and transportation, have been changing the balance of the greenhouse effect. The increased levels of GHGs means more heat is being trapped, causing warming at an unprecedented rate.

If we continue emitting GHG emissions as if it's "business as usual", by the end of the 21st century Devon's average summer temperature could increase by over 5ºC and average winter temperature by more than 3ºC in comparison to the 1961-1990 average. Compared to the same period, average rainfall in winter could increase by 28% whereas summer rainfall could decrease by 44%. Relative sea level is very likely to rise by more than 43cm but less than 90cm.

The effects of these changes will significantly disrupt our current quality of life. The 2022 heatwave gives a glimpse of the effects that are likely to be experienced. This will be felt most acutely by disadvantaged and less affluent groups who have fewer resources to adapt.

However, addressing the climate and ecological emergency is also an opportunity to **create a fairer, healthier, more resilient and more prosperous society.** Some of the benefits include:

- Improving public health and reducing pressures on the NHS
- Creating new jobs and skills
- Improving national energy security and increasing economic prosperity
- Reducing fuel poverty
- Reversing the decline of biodiversity
- Reducing flood risk, improving water and air quality and creating accessible greenspace



The Devon Climate Emergency

In May 2019, a partnership formed to respond to the climate and ecological emergency in Devon (including Torbay and Plymouth). Its members represent public bodies, private sector interests, environmental organisations and academic institutions.

The Devon Climate Emergency (DCE) partners convened a Net-Zero Task Force of specialists to steer the creation the Devon Carbon Plan. Through this Plan, **DCE partners have agreed to work to reduce Devon's emissions to net-zero by 2050 at the latest, with an interim target of a 50% reduction by 2030 compared to 2010 levels.**

'Net-zero' emissions means that any remaining emissions of GHGs will be balanced by removals from the atmosphere.

Devon-based organisations are encouraged to join the partners in endorsing the Devon Climate Declaration and reduce their direct emissions to net-zero by 2030.

Devon’s Greenhouse Gas Emissions

Devon’s greenhouse gas emissions totalled 7.6 million tonnes of carbon dioxide equivalent (CO_2e) in 2019. This measure reflects the effect of a basket of six GHGs on climate change, converted into equivalent units of carbon dioxide to make their reporting more comparable. The most substantial emitters are Buildings (39%), On Road Transportation (30%) and Agriculture, Forestry and Other Land Use (17%) – see Figure 1. In total, across these sectors, in 2019, 72% of Devon’s greenhouse gas (GHG) emissions related to energy use.

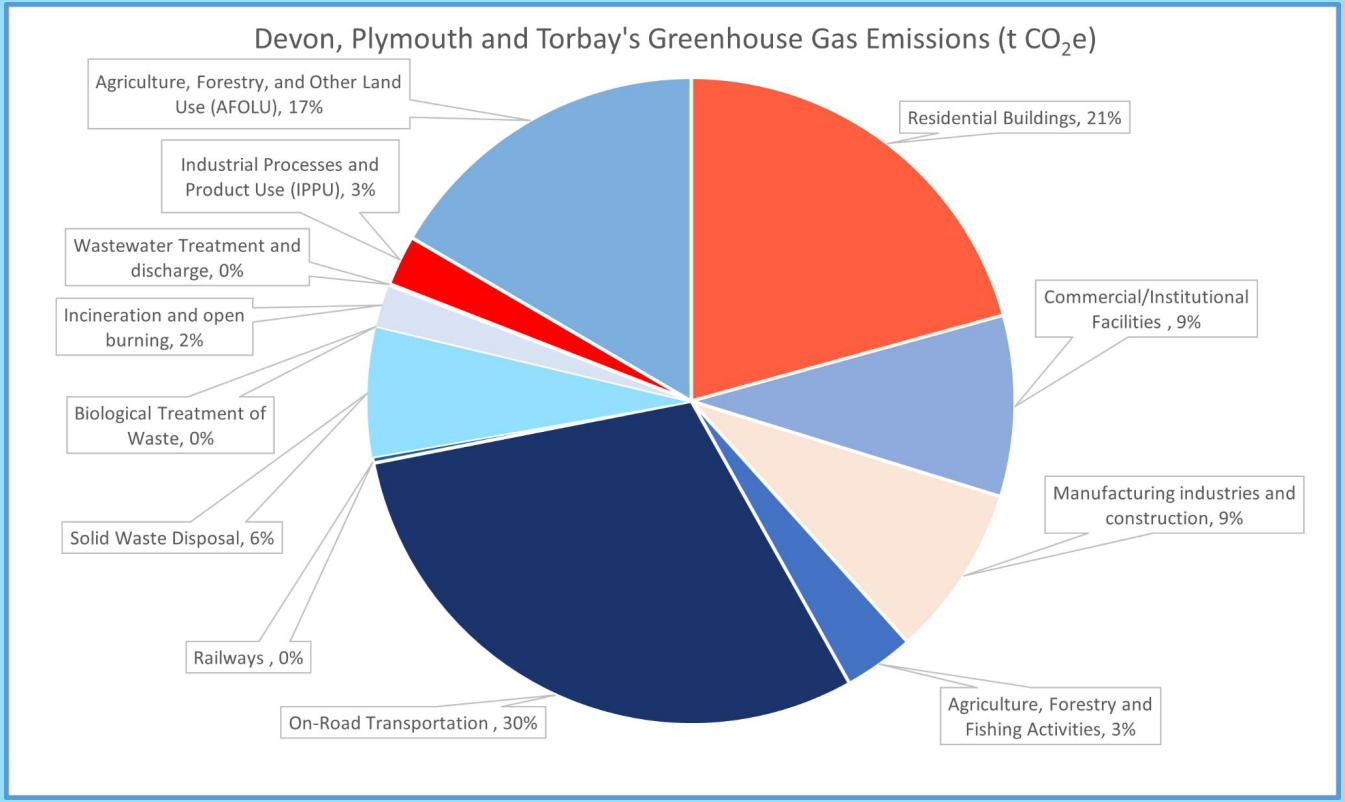


Figure 1 - Devon, Plymouth and Torbay's 2019 Greenhouse Gas Emissions by Sector

The Plan's Approach

Each themed section of this Plan (Economy & Resources; Energy Supply; Built Environment; Transport; Food, Land & Sea):

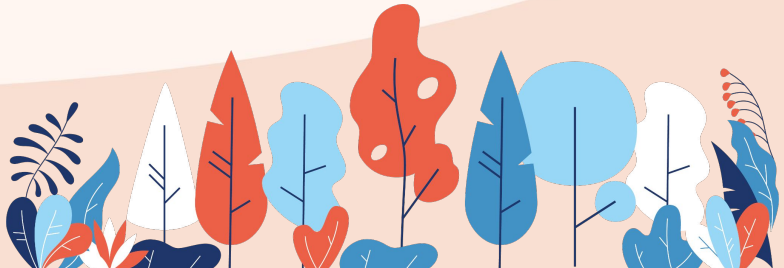
Describes what needs to happen in Devon to achieve net-zero – irrespective of current legislation or financial barriers

Introduces a set of goals which need to be realised to overcome barriers to achieving net-zero

Proposes strategic-level actions to achieve the goals, identified by specialists, the public and the members of the Devon Climate Assembly

Some of the Plan's actions will directly reduce emissions whereas others are steps to make future emissions reductions possible. Within this Quick Read, the strategic actions are interpreted for different audiences so that everyone can get involved – individuals, community groups, organisations and local policy makers.

Each action in this Plan **helps deliver these objectives.**

- Fossil fuels phased out as an energy source
- Minimise energy consumption
- Engaged communities acting for resilience and a net-zero carbon Devon
- Carbon captured and stored from the burning of fuels
- Minimise fugitive greenhouse gas emissions
- Resilient local economies with access to green finance
- A circular use of resources
- Maximise carbon storage in marine and terrestrial environments

Indicators to monitor progress towards achieving these are proposed at Section 12 of this Plan.