



<https://www.geofftaylorphotography.com>

Zero Carbon Shropshire - A Call to Action

Version 1.2, January 2021

Shropshire Climate Action Partnership

Table of Contents

<i>Introduction</i>	3
<i>What’s the big deal about carbon?</i>	4
Why does it matter that the planet is getting hotter?	4
<i>How does this affect life on Earth?</i>	4
Why does this matter to us?	5
<i>Messages from the future</i>	7
<i>Who are we? Introducing the Shropshire Climate Action Partnership</i>	9
<i>What can we do?</i>	10
<i>About the Zero Carbon Shropshire Plan</i>	10
<i>What now?</i>	13
<i>What is the plan?</i>	14
Stuff we buy, use and throw away	15
How we look after the land and grow food	16
How we generate and use energy	18
Where we live, work, shop and relax	19
How we travel around	20
Taking action	22
What can I do right now?	23
<i>How you can get involved</i>	24

Introduction

Shropshire is rightly proud of its role as the birthplace of the Industrial Revolution. The inventions and spirit of enterprise of Ironbridge became our county's greatest export. But the Industrial Revolution also began the rapid and massive global consumption of fossil fuels, releasing carbon into the atmosphere. We are still using these fuels today, literally adding fuel to the fire. It is the presence of this carbon that is warming the Earth to a dangerous degree, causing the climate to change very quickly relative to natural variation over time. We see the effects of this in changing weather patterns, destructive fires, floods, rising sea levels and loss of biodiversity. Quite simply, we are in a state of climate and ecological emergency.

The good news is that we **can** do something about this. But only if we act now.

“Right now we are facing a man-made disaster of global scale, our greatest threat in thousands of years: climate change. If we don't take action, the collapse of our civilization and the extinction of much of the natural world is on the horizon.” Sir David Attenborough

“We are the first generation to feel the effect of climate change and the last generation who can do something about it.” Barack Obama

What's the big deal about carbon?

Carbon dioxide (CO₂) occurs in the atmosphere naturally. It traps the sun's heat and makes it warm enough for plants and animals to survive. Plants need CO₂ to produce their food and could not exist without it. This means animals and humans couldn't exist without it either, because they need plants for food.

In short, without CO₂ in our atmosphere we wouldn't be here!

The trouble is that lots of things that humans do – such as driving cars, making things in factories and generating electricity from power stations – use fossil fuels. Coal, oil and gas are all carbon deposits formed from animals and plants that died millions of years ago. When we burn them, they give off that carbon in the form of CO₂ – much more CO₂ than occurs naturally. In fact, since humans started building and using machines that burn fossil fuels about 200 years ago, the amount of CO₂ in the atmosphere has gone up by **over 45%**.

On top of that, other gases that trap heat in the atmosphere are also given off by burning fossil fuels, farming animals, using fertilisers, and other things humans do. All this means Earth is getting hotter. This situation is described as 'global heating' and the CO₂ and other gases that cause it as 'greenhouse gases'.

Why does it matter that the planet is getting hotter?

Well, for us in Shropshire, this means we have warmer, longer summers than we used to. You might think this is a good thing, but unfortunately it also makes our weather more destructive and disrupts natural habitats. We get more torrential rain, which can lead to floods like we had at the start of 2020. We get more droughts and water shortages, which means farmers can't grow the food we need to eat and much of our wildlife dies. We also get more stiflingly hot days, which can make people ill and results in more deaths.

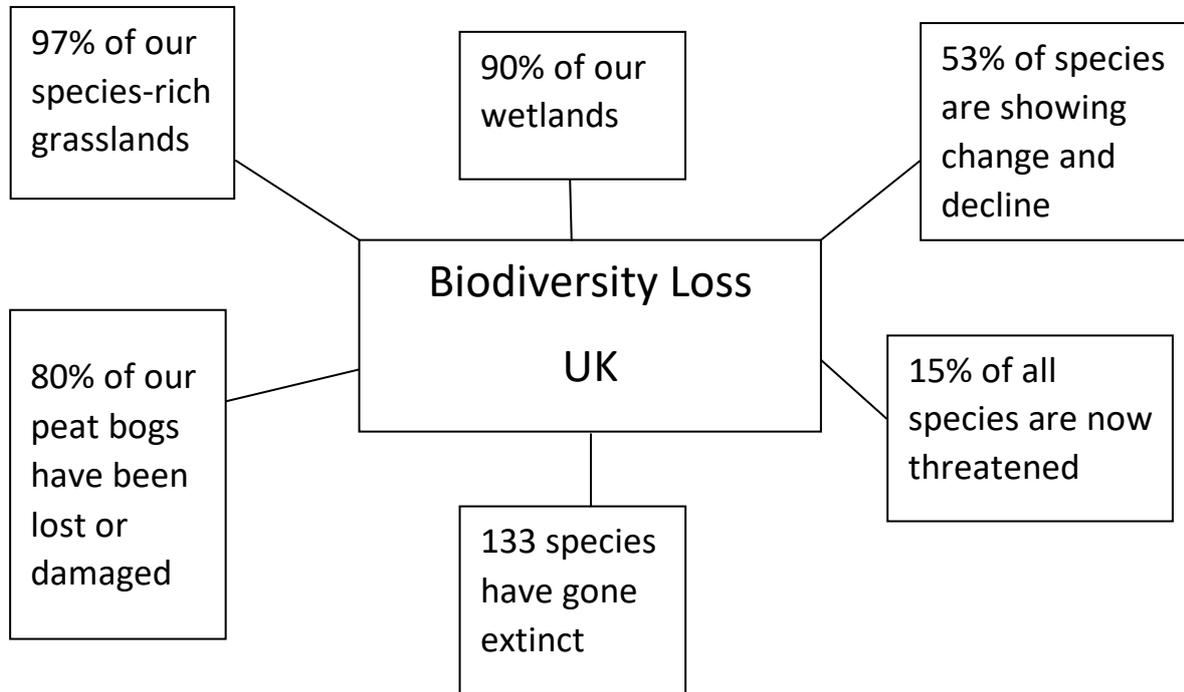
The list goes on, but many people around the world have it far worse than we do. For example, sea ice that formed thousands of years ago is melting due to global heating, making the level of the sea higher and meaning some areas where people and wildlife used to live are now under water. The people who once lived there have been forced to move elsewhere, but all the plants and many of the animals have simply died. To make things worse, ice is good at preventing the Earth getting too hot by reflecting the sun's heat back into space. If it melts, it can no longer do this and the planet gets even hotter.

How does this affect life on Earth?

So, greenhouse gases given off by burning fossil fuels have led to global heating, which is causing serious problems for all life on Earth. 'Biodiversity' refers to the variety of animal and plant life that exists in a given area. Today, biodiversity is in dramatic decline across Shropshire, the UK and the wider world.

“We cannot tackle the climate crisis without similar ambition to meet the nature crisis head on – the two are inseparable. The climate crisis is driving nature's decline; the loss of wildlife and habitats leaves us ill-equipped to reduce our emissions and adapt to change.”

Nationwide, we have lost:



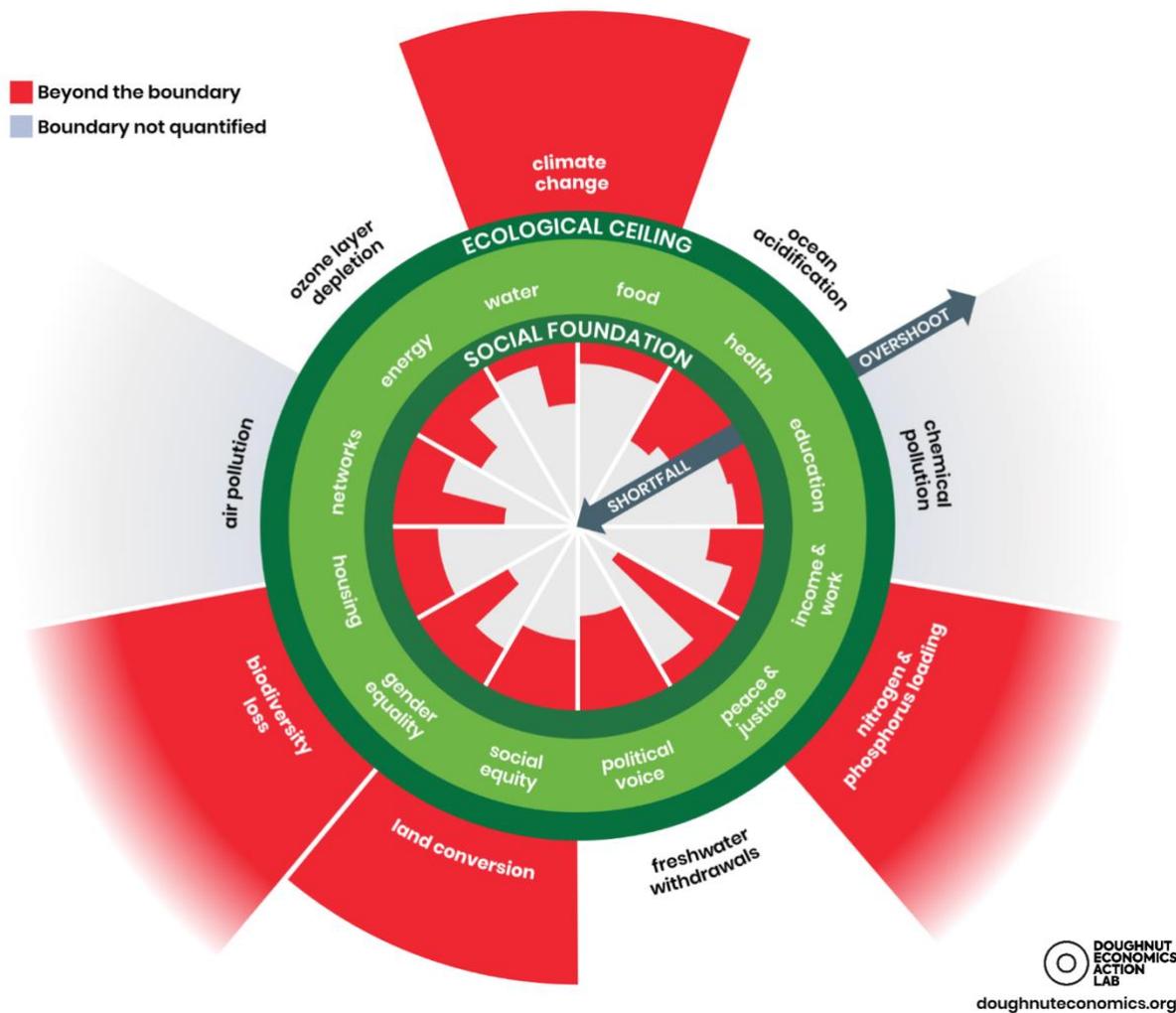
In Shropshire, currently only six of our 127 water bodies are acknowledged to be as clean or 'nature-friendly' as they should be. Woodland cover is below the national average at 9.3% (UK 13%) and we have lost many hedgerows and other important habitats for wildlife. Farmland birds have declined nationally by 55%. Insect life is being lost at the rate of about 2.5% per year, threatening life higher up the food chain, including humans.

Why does this matter to us?

All human life depends on the natural services that feed, water and protect us. These include:

- Purifying our air and water
- Providing us with food
- Removing waste materials (decomposition)
- Cycling nutrients and maintaining soil fertility
- Stabilizing Earth's climate (moderating floods, droughts, winds and temperature)
- Pollinating plants, including many crops
- Controlling pests and diseases
- Providing many medicines and ingredients
- Delivering cultural, health and well-being benefits

These natural services are the product of healthy ecosystems and good levels of biodiversity, so there is a strong connection between climate change, loss of biodiversity and human well-being. Climate change is altering every bit of nature, and the loss of nature – for instance through forest destruction – contributes to climate change. Our decisions and actions for the future have to address both of these crises. The planetary health diagram below illustrates the areas where we are exceeding the planet’s capacity, overshooting ecological limits. All these areas need to be tackled now for Shropshire to achieve a sustainable future.



The Doughnut of social and planetary boundaries (Kate Raworth and Christian Guthier)

Messages from the future

As a generation that will be more affected by these climate and biodiversity changes, we asked our young members to consider what the future might hold. They wrote us two messages looking back from 2030. The first reflects a future if we continue with the current ‘business as usual’ approach, the second reflects a more hopeful outlook, one where we listened and took action in time.



Photo by Markus Spiske

Dear Reader,

The year is 2030, and reality has finally hit. We have lost the battle. Remember when you used to turn the lights off to ‘save the polar bears’? Well, they are no more... at least not where they used to belong. In future, zoos are more like a history book of what life once was. This is evidence of the biggest war mankind has ever lost, the one against itself. Now we are in the middle of the [sixth mass extinction](#) event.

We did not reach our goal of zero carbon by 2030. In fact, carbon emissions are higher in Shropshire thanks to massive [inland migration](#) from flood-hit coastal regions. It was not just Shropshire that failed of course. Globally, nations failed to reach their targets – too little was done too late. Dramatic changes have taken place to compensate for this. A global ‘One Child Policy’ was agreed on as a solution by world governments, although this is causing uproar. Threats of nuclear war from nations competing for water and arable land resources have the world in fear.

We were made blatantly aware of the situation, yet nothing changed. Governments chose power over necessary action, judging that voters would refuse to change their habits.

Now the consequences of our ignorance are upon us. We have depleted the world’s [natural resources](#), and there is an urgent demand for new sources of energy. In this new rush, new rules are being forced through, disregarding communities and the environment. Nuclear power is our leading source of energy, and the side-effects of dependency on it are becoming apparent. When nuclear goes wrong, we know the [historic cost](#). History is repeating itself.

Failure to reach agreed targets has led to a rise in global temperatures. The ice caps have gone, destroying our world’s natural equilibrium. The extra water has disturbed the ocean currents, including the [North Atlantic Drift](#), crucial to the UK’s climate. This has led to freak weather conditions becoming more frequent, causing turmoil across the globe.

To maximise space efficiency, Shropshire is becoming an urbanised metropolis, with quick-build high-rise flats taking over, as these are the only feasible form of accommodation now. Houses are a luxury for the rich and our once beautiful rural Shropshire is no more.

Another dilemma in these trying times is the struggle to produce enough food – scarcity is leading to price rises, poverty and inequality. Forests are being cut down for farming to compensate for the land lost, causing yet more atmospheric CO₂. [Monoculture](#) environments are swamped in fertilisers and pesticides to ensure maximum yield, crushing biodiversity. This, juxtaposed with climate changes, has caused [pollinator](#) populations to plummet.

Other unprecedented events are becoming an issue. Mosquitoes in Shropshire you ask? [Malaria](#) is now a common problem as mosquitoes have migrated north with the rising temperatures. Acid rainfall is another new dilemma – we must wear hats outside – and erosion is destroying historic buildings. [Weil’s disease](#) is more prevalent. Frequent flash flooding is contaminating our water supplies as the old infrastructure is incapable of managing the waste and run-off from so many new buildings.

This is a plea from the future. Please change! What is to come is worse than you anticipate.

Carney Burvill, The Young SCAP Team

Dear Reader,

You may recall that back in 2019, climate emergencies were declared by both Shropshire Council and Telford & Wrekin Council. This letter is to let you know how some important changes – driven by the young people of Shropshire – have helped to mitigate the effects of climate change.

Diet

The proportion of people who have switched to a more plant-based diet in a bid to cut their carbon emissions has been tremendous. There has been a surge in new vegan, vegetarian and plant-based cafes and restaurants that have environmental stability in mind. Furthermore, community allotments and orchards have become the norm. As a result of this change in diet, the countryside is changing. Animals are still reared, but roam more freely in a restored, re-wilded environment under trees grown for crops and sustainable wood, acting as natural woodland managers. As nature recovers, healthy, organic foods, grown locally, are becoming the norm.



Photo by Jennie Shillabeer-Dodd

Transport

On the whole, there has been less travelling, due to an increasing number of people working online. In addition, the considerable uptake of well-planned public transport has been observed with a drop in the number of private vehicles being used, thus decreasing carbon emissions. Many people travel by electric bikes, which have increased in range and are adapted to carry goods, as the local shop and local suppliers make a return to the heart of communities.

Housing and green spaces

As a consequence of fewer homes being built on green land, we have been able to protect our green spaces and wildlife havens. There has been a transition to use more sustainable materials and renewable energy. This has led to higher overall biodiversity of flora and fauna across the county, which is a good indicator of environmental health. The countryside is a great place to be, and is available to all.

Outdoor education

We have made it an official priority for all schools in Shropshire and Telford & Wrekin to provide at least one hour of outdoor activity every day. Numerous forest schools have been set up alongside a greater collaboration with environmental conservation organisations. As a result, young people have influenced older generations, raising more awareness about environmental issues in their families. These changes have created new jobs in eco-education and eco-tourism, as people find adventure through nature on their doorstep.

Community support

Various environmental campaigns have been set up with the backing of local communities. A greater percentage of people in the area have engaged with nature, resulting in positive lifestyle changes. All this is supported and encouraged by local councils, who recognise the public benefits.

Well-being

After the trauma of Coronavirus in 2020, we all recognised the importance of physical and emotional well-being. The changes to diet, transport, housing and reconnecting with nature have caused real improvements in overall health. The NHS has seen reductions in GP and hospital numbers, food poverty has been reduced, and mental health helplines are finally becoming quieter, as people reconnect with nature and each other.

Finally, we would like to say a big thank you to everyone who has supported us through the past decade to reach the ultimate goal of net zero carbon emissions. We hope that many more encouraging results are to come that benefit our planet for both wildlife and people!

Haley Plumb, The Young SCAP Team

Who are we? Introducing the Shropshire Climate Action Partnership

We are Shropshire residents, communities and businesses, who share a vision for a sustainable, prosperous county. Together we make up the Shropshire Climate Action Partnership (SCAP), a not-for-profit organisation formally launched in August 2020.

Right now, we have more than a hundred volunteers from all walks of life. We involve business enterprises, large landowners, charities, councils and community organisations. Together, we have been working to make and implement a plan suitable for Shropshire’s rapid decarbonisation; the large-scale restoration of biodiversity and the natural environment; and the development of sustainable, resilient and inclusive communities and the enterprises required for a sustainable future.

In addition to 100+ volunteers SCAP is overseen by a Steering Group comprising representatives from the following organisations:

CREST University Centre Shrewsbury	Shrewsbury Food Hub
Environment Agency	Shropshire and Telford Community Energy
Green Shropshire Xchange	Shropshire Association of Local Councils
Harper Adams University	Shropshire Chamber of Commerce
Marches Energy Agency	Shropshire Council
Marches Local Enterprise Partnership	Shropshire Hills AONB
National Farmers Union	Shropshire Wildlife Trust
Severn Trent Water	South Shropshire Climate Action
Shrewsbury and Telford Hospital NHS Trust	Wrekin Housing Group
Shrewsbury Business Improvement District	

What can we do?

Our task is very simple: rapidly reduce greenhouse gas emissions, remove carbon from the atmosphere and restore nature so that Shropshire is net zero carbon by 2030.

To do that we need a plan for Shropshire that sets out the steps towards net zero carbon and which, at the same time, seeks to support nature by restoring biodiversity and ensuring healthy ecosystems.

“Emission cuts must be matched with action to fix our broken ecosystems, so they can help stabilise our climate.” Craig Bennett, The Wildlife Trusts

About the Zero Carbon Shropshire Plan

Our plan is a statement of where we are today, where we must get to, and how we can get there. Shropshire is not the first county to go down the road towards developing a healthier carbon economy, and the plan draws on the ideas and experience of others. The actions we need to take are affordable, we have the know-how, and the outcome will be good for our health, wealth and happiness.

We all have a part to play, by looking at our lives and seeing what we can change to help the planet and ourselves. As active citizens of Shropshire – as householders, employers and employees, students, voters and consumers – we have the power to make a difference.

If you live, work or study in Shropshire we invite you to join us and also ask that you share the facts with your friends and family, and extend an invitation for them to join us too. For more information, see <https://zerocarbonshropshire.org>

“We now have the opportunity to create the perfect home for ourselves, and restore the rich, healthy and wonderful world that we inherited.”

Sir David Attenborough



Photo by Norman Kuring, NASA

“Earth. It’s the only home we’ve got.” Edgar Mitchell

Why do we need to be net zero carbon in Shropshire by 2030 when the target for the world as a whole is 2050?

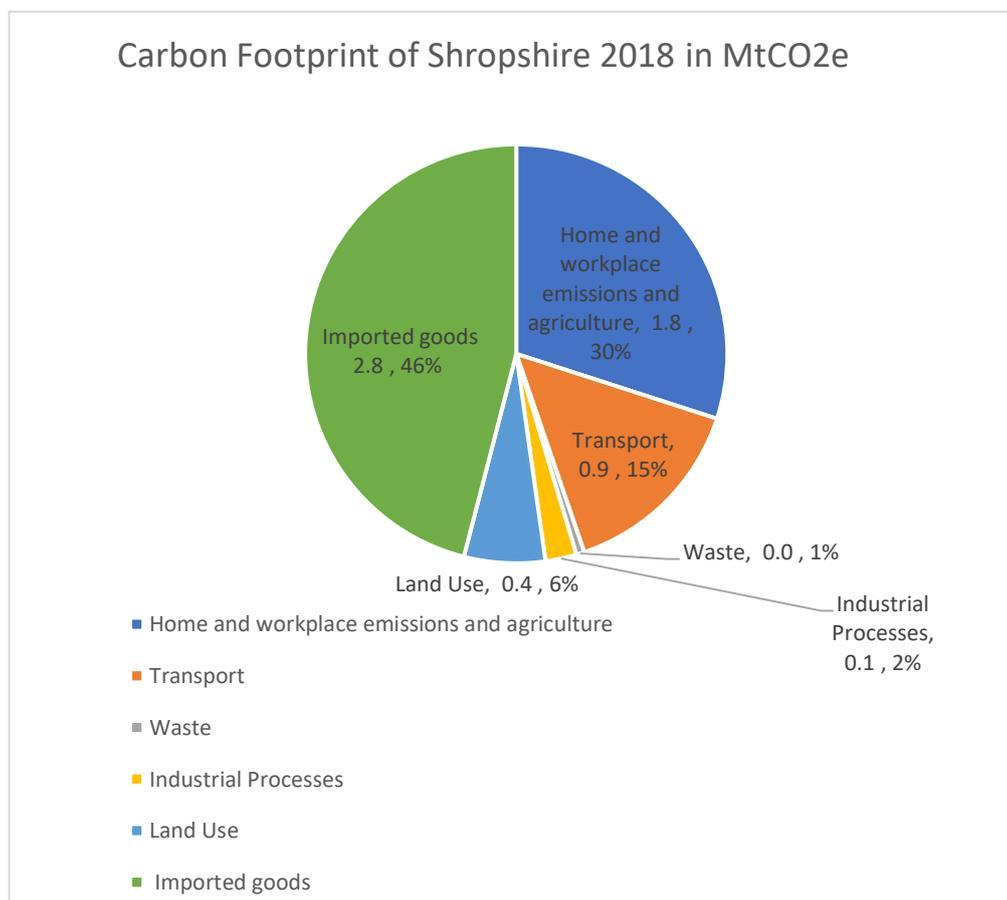
Different countries have vastly different carbon footprints and will have different roles to play in making the world net zero carbon. In our wealthy, technology-rich countries we have the resources to develop the solutions needed. We are able to take actions that many poorer nations can only aspire to. The UK and North America cause more than twice the damage per head than the rest of the world. As the major polluters, it is necessary for us to take the most significant action.

A huge proportion of the emissions from countries such as China and Vietnam result from the manufacture and supply of consumer goods. Almost half of Shropshire's carbon footprint comes from the overseas production of goods and their transport to the UK.

We need to substantially reduce our consumption, especially of imported goods. We particularly need to avoid goods that are produced unsustainably, or are designed not to last. We need to drive global sustainability standards so that we achieve net zero in our supply chain too.

“I have absolutely no reason to doubt the warnings of scientists that we have no more than a decade to avoid the horror story of what is referred to as 'runaway climate change'... whatever we can do to avoid that horror story, each in our own way, then we must do it.”

Jonathan Porritt



Why have a more ambitious target than the UK Government?

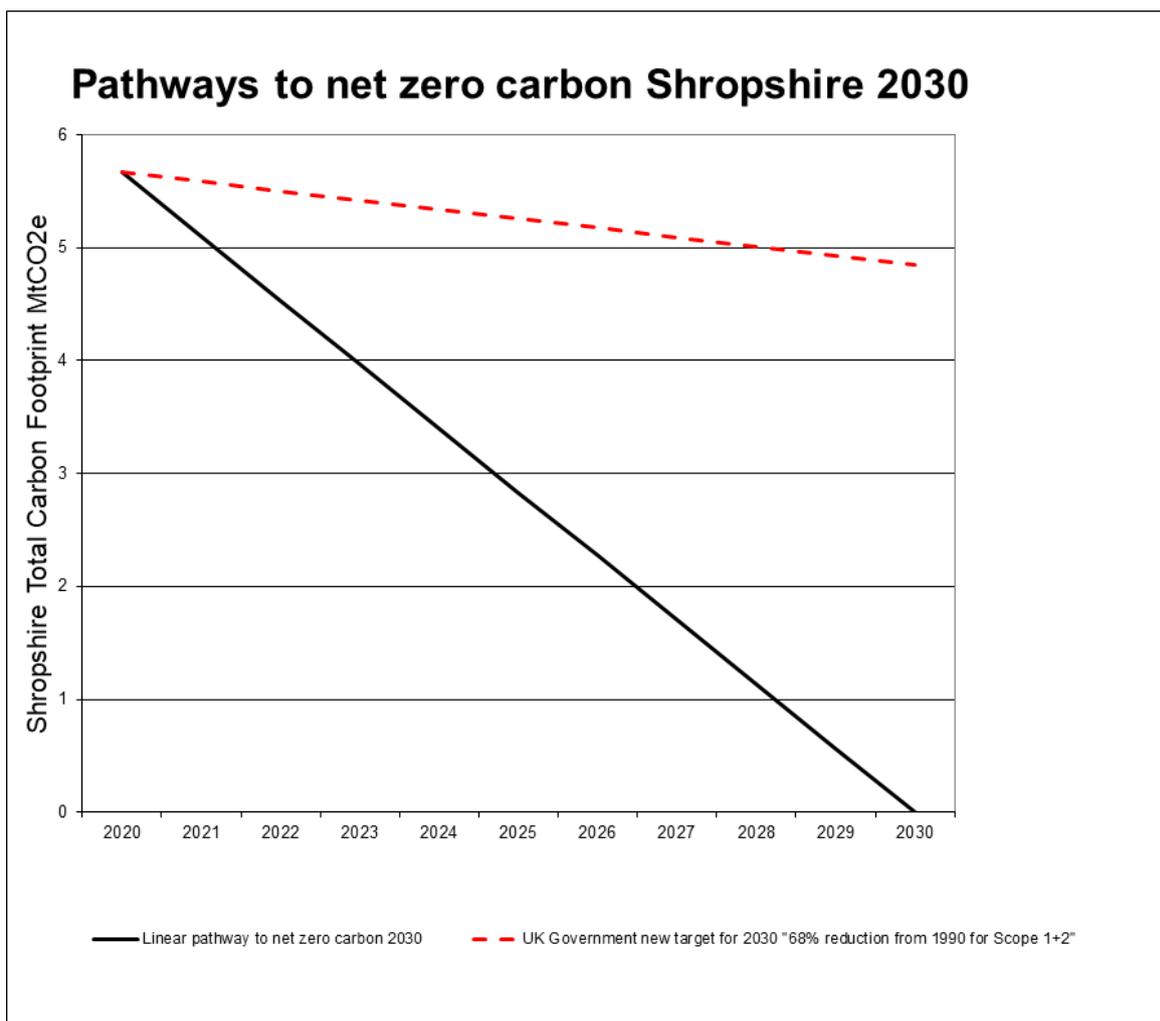
In December 2020, the UK Government announced ‘an ambitious new target’ of at least a 68% reduction in greenhouse gas emissions by 2030, relative to 1990 levels. Unfortunately, this does not reflect the full picture. In practice, this target only represents a 14% reduction from 2018 to 2030, because:

- 1 The UK has already seen a 43% reduction in ‘domestic’ or ‘terrestrial’ emissions (i.e. emissions from most activities taking place within the UK’s borders) over the period 1990 to 2018. Therefore the UK would only need a *further* 25% reduction in domestic emissions from 2018 to 2030, in order to achieve the overall 68% target.
- 2 However, all of these targets exclude imports i.e. the carbon footprint that the UK has outsourced to overseas production (approximately 46% of our national footprint); as well as excluding all emissions from air travel, air freight, shipping, biomass, peat and peatland extractions.
- 3 Taking all of the above into account, the UK Government’s new target only represents about a 14% reduction in the UK’s **overall carbon footprint** from 2018 to 2030 (using 1990 figures as a baseline).

Also, as the UK Government 2050 target of ‘net zero carbon’ is only seeking reductions on domestic emissions, it cannot achieve net zero carbon UK. If the emissions shown above continue at the current scale, it would only get about halfway there.

Our true situation is that, over recent decades, the UK has outsourced almost half of its emissions overseas. Pristine forests of the world are cut down and factories in Asia use energy from the burning of fossil fuels to deliver the goods and produce we order. We are therefore responsible for some of the emissions of those countries in proportion to our purchases.

Furthermore, 2050 has no basis in science and there is a global consensus amongst the world’s scientists and the UN that even reaching net zero carbon by 2030 might be too late to avoid catastrophic climate change. It is clear we have just a decade to become sustainable and to restore nature and the climate on a huge scale. Reference to 2050 is a distraction we cannot afford. The following graph shows the ambition we have set for Shropshire in comparison with the current Government 2050 goal.



What now?

Many changes are already taking place in the county, with some peatlands, heathlands and wetlands being restored, reduced car use, and trees being planted. But these are only very small beginnings.

We need to urgently stop using fossil fuels, reduce meat consumption, and restore nature. Across Shropshire we need to reduce fossil fuel use by at least 10% during 2021. Each one of us can achieve such a change quite easily, but achieving it across the whole county will be hugely challenging and we will need to work together across all sectors of Shropshire life.

“[We should] change from viewing nature as something that’s optional or ‘nice to have’ to the single greatest ally we have in restoring balance to our world.” World Wildlife Fund

For our own health and well-being, we can begin to reconnect with nature more, to acknowledge our dependence on it for our survival, as well as appreciating its awesome beauty and complexity. We cannot live without the natural world, but who would want to anyway? Natural solutions are available to help solve the climate crisis. Wetland and peatland restorations, for instance, help clean our water, capture carbon and provide homes for wildlife. We can plant more trees, to not only provide us with timber and store carbon, but also increase biodiversity and give us beautiful places to visit and enjoy.

We can all make a difference. This process can even start in small green spaces like our own backyards. Leaving a wild corner or a log pile in a garden provides homes for many insects and small creatures, which in turn become food for small mammals and birds. Did you know that we have lost over 90% of our hedgehogs since the 1970s? Leaving a leaf pile along a fence in the autumn could give a hedgehog a home, while deciding never to use chemicals in your garden will help save the lives of numerous creatures, including hedgehogs and thrushes, and allow soil organisms to recover.

What is the plan?

The plan addresses the areas that make the greatest contribution to CO₂ emissions and biodiversity loss in Shropshire:

- Stuff we buy, use and throw away
- How we look after the land and grow food
- How we generate and use energy
- Where we live, work, shop and relax
- How we travel around

Stuff we buy, use and throw away

The process of getting raw materials out of the ground, manufacturing products and transporting them, forms the single biggest contribution to carbon emissions for the typical Shropshire resident. In 2019, our average [carbon footprint](#) was [12.6 tonnes](#) of CO₂ – about twice the global average. If everyone on Earth had the same lifestyle as the average person in Shropshire, we would need 2.5 planets.

What do we need to do?

- Make sure materials are kept in circulation for as long as possible.
- Choose products made from renewable or recycled resources, avoiding those designed for single use.
- Support local businesses and ones whose values are environmental and ethical.
- “Buy less, choose well” (Vivienne Westwood)

From this.....



To this....



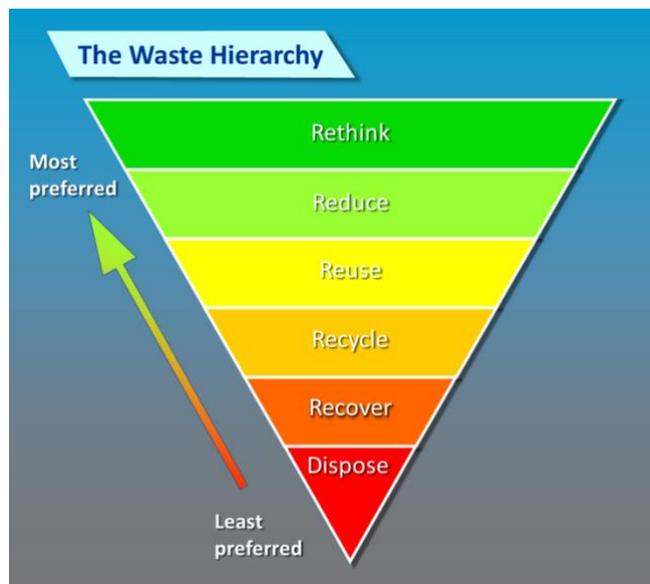
Source: Supply Chain Sustainability School

How do we do it?

Work out your own carbon footprint at <https://zerocarbonshropshire.org/calculate-your-carbon-footprint/> and use it to see where you can easily make changes.

- Minimise what you buy and aim for things that will have a long life and can be repaired.
- Buy local and seek out products that use circular economy principles.
- Reduce your food waste.
- Support local groups or entrepreneurs who:
 - Set up repair shops.
 - Sell plastic-free goods.
 - Arrange local surplus food shares from retailers, gardens and allotments.
 - Run ‘libraries of things’, e.g. for tools and appliances, toys and equipment.

If you can't find a group in your local area, why not set one up?



Source: Andrew Howe

What would this mean for us?

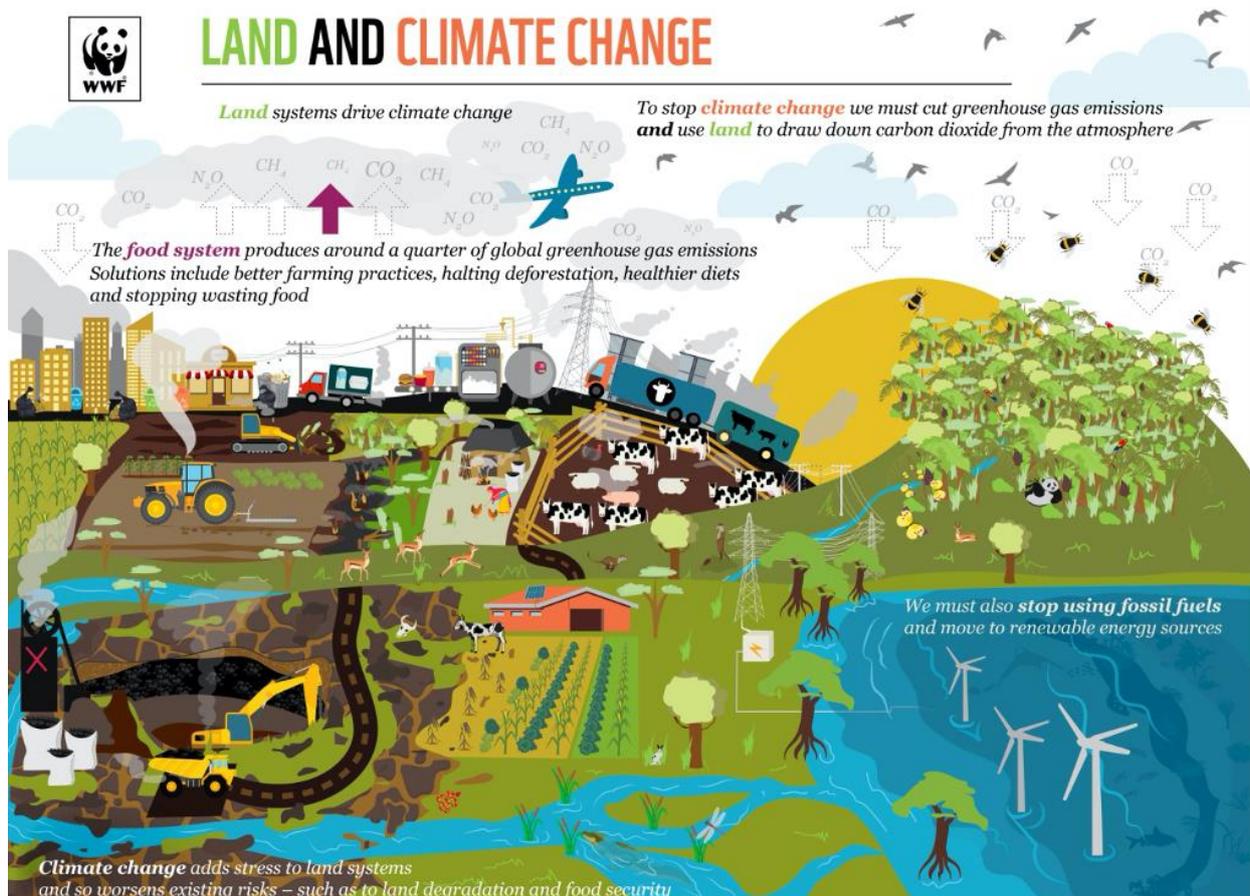
With restored air quality, recovered biodiversity and a sustainable, thriving economy, we would have healthier, happier lives.

How we look after the land and grow food

Our agricultural policies have supported rising food production but brought other problems – like greenhouse gas emissions, loss of soil fertility and loss of biodiversity. This is not sustainable. Over half our wildlife species are showing change and decline, and natural habitats have become too fragmented to support wildlife effectively.

What do we need to do?

- Make space for nature at the heart of our farming and planning systems, bringing nature into the places where most people live their daily lives.
- Change and implement policy to reward farmers for moving to zero carbon, carbon capture and nature-friendly methods.
- Change our shopping and eating habits to stop waste.
- Use natural processes to solve problems – for instance, tree planting or beaver introductions to solve flooding.
- Create nature recovery networks in our gardens, road verges and parks.
- Restore hedgerows and verges to create wildlife corridors, providing flowers for pollinators, habitat for insects and nesting sites for birds.



Source: World Wide Fund for Nature, Land and Climate Change

How do we do it?

- Ask our elected representatives to: back policies and funding for zero carbon and nature-friendly farming; change planning policy to ensure zero carbon, people and nature-friendly building.
- As consumers, be selective and demand greener provenance of farm produce. Shop locally for seasonal foods.
- Support farmers in undertaking carbon and nature surveys of their farms.
- Substantially reduce our reliance on chemical fertilisers and pesticides.
- Co-ordinate the actions of landowners to achieve a mutually beneficial approach to the reparation and maintenance of river catchment systems.
- Develop skills and transfer knowledge on farming practices that reduce carbon and improve biodiversity. Document and share examples of best practice, facilitating peer exchange.
- Enable wider community engagement in production through land share schemes, community owned farms/gardens, permaculture, allotments, etc. Identify opportunities and build partnerships to support local initiatives.
- Get involved, join an organisation involved in conservation.
- Use the green space we have in our communities for tree and wildflower planting.
- Make our gardens nature-friendly, chemical and peat free. Have a wild corner, make a log pile, a pond, a bee-friendly border, make compost.
- Change to more sustainable and healthy diets. Eat more plant-based meals.
- Pressure companies to label food so consumers can better understand its carbon footprint.

What would this mean for us?

Nature would recover on our farms, along our road verges and hedges, and in our gardens. Our air and water would be cleaner, and more trees and healthier peat bogs would mean reduced flooding and more CO₂ being locked up, away from the air. We would feel the benefits of being closer to the natural world, in our well-being.

There is wider community engagement in food production and more consumption of locally sourced produce. People have a greater connection to the food they eat and the land it was grown on. There are less diet related diseases and wellbeing has improved.

How we generate and use energy

Over the next couple of years, we need to make a rapid transition from natural gas, oil and other fossil fuels to renewable energy sources, including electricity (from wind, solar or hydro-sources), methane from anaerobic digestion, ‘green’ hydrogen, carbon-neutral synthetic fuels or biomass.

What do we need to do?

- Focus on renewable electricity as the main source of power.
- Increase electricity generation using renewable sources by at least 60% from 2020 levels by 2030.
- Use this to support domestic electric vehicle charging and air and ground-source heat pumps.
- Replace heavy goods vehicles (HGVs) with hydrogen-powered vehicles (generate this hydrogen from renewables, not from methane reprocessing), electric vehicles and rail freight.
- Create storage systems of all sorts to store surplus electricity.
- Improve electricity distribution infrastructure, with an emphasis on local generation/storage and markets. SCAP will work with Distribution Network Operators (DNOs) to support investment cases.
- Investigate practicable financial/investment models for heat distribution and other forms of energy storage.
- Create a market to ‘export’ surplus electricity to consumers outside Shropshire.
- Continue work on modelling renewable ‘technology mixes’ and investment cases, together with greater public engagement and education about the need for deploying such technologies.

How do we do it?

- Support DNOs in making grid investment cases.
- Encourage installation of domestic solar panels to generate electricity.
- Create a number of large-scale solar and wind farms in Shropshire to support:
 - Production of HGV hydrogen fuel for distribution by tanker or local use
 - Exporting of surplus electricity to the grid where a connection is possible
 - Exporting of hydrogen into a national gas grid system when this is realised.

These installations also offer opportunities for nature (e.g. habitats for wildflowers, insects, etc).

- All deliveries in towns by small electric vehicles or cargo bikes.
- Car owners rewarded for using their vehicle batteries as part of the county’s energy management.

What would this mean for us?

With the investment in renewable energy and removal of fossil fuels from our energy supplies, Shropshire will become a leader in sustainable energy and the heart of a growing profitable export industry.

Enabling removal of vehicle fumes and gas and oil heating of our buildings will bring improved air quality and a life-enhancing and healthy Shropshire environment. The growth of our local energy economy will offer significant commercial opportunities in renewables for landowners and investors and a high-tech energy economy for Shropshire, with associated high value employment.

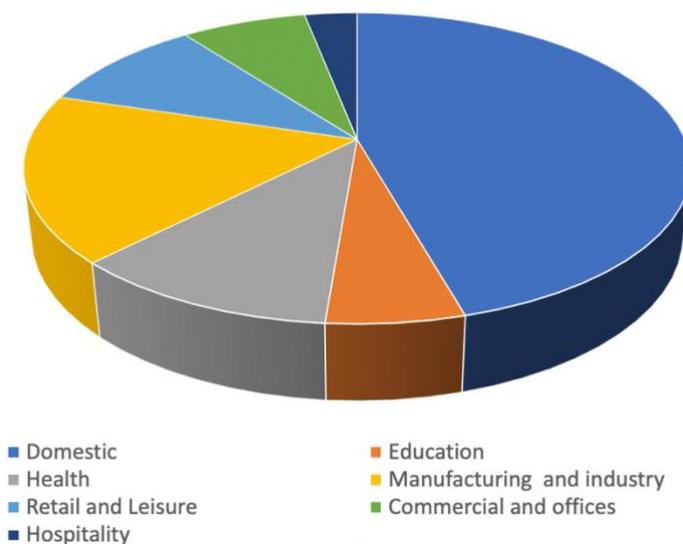
Where we live, work, shop and relax

More than a million tonnes of CO₂ are emitted by Shropshire buildings every year. Our own homes cause half of these emissions – mostly from heating with gas. To reach our zero carbon target we must make all of our buildings much more energy efficient and heat them with low carbon electricity. This will also improve comfort in our homes, benefiting our health and our pockets!

What do we need to do?

- Eliminate the use of fossil fuels in heating buildings and in construction.
- Significantly reduce the demand for heating.
- Retrofit and refurbish existing buildings.
- Install more and more efficient insulation.
- Replace boilers with heat pumps.
- Use ‘smart controls’ to make heating systems more efficient.
- Build to the highest environmental standards.
- Share heat between buildings using heat networks.

Breakdown of Shropshire building's carbon emissions
tCO₂e/year



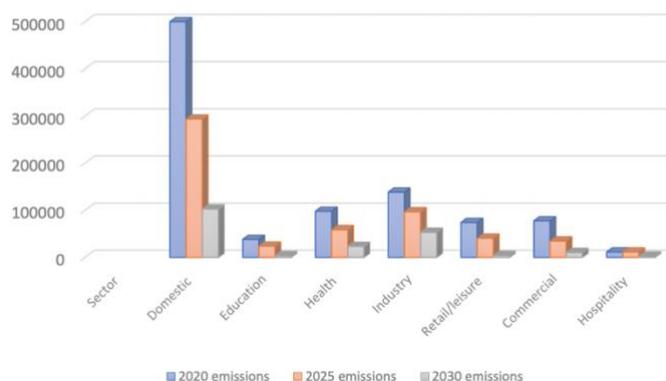
How do we do it?

- Enforce high environmental standards.
- Educate and inform – raise awareness of the improvements that are needed.
- Demand better of our politicians, our council, our planners and our builders.
- Establish equitable ways of funding the changes that every household and workplace must make.
- Create thousands of ‘green’ jobs across the county and develop skills training to support this.

The SCAP Buildings Working Group has developed an outline plan for decarbonising Shropshire buildings and new builds.

The projected reductions in each of the main property sectors is shown here for the best case scenario (very significant investment required and a major programme of retrofitting to improve Shropshire buildings).

Fossil fuel emissions from Shropshire buildings
Best case scenario with current policies (tCO₂e/year)



What would this mean for us?

We can look forward to a brighter, warmer, healthier future!

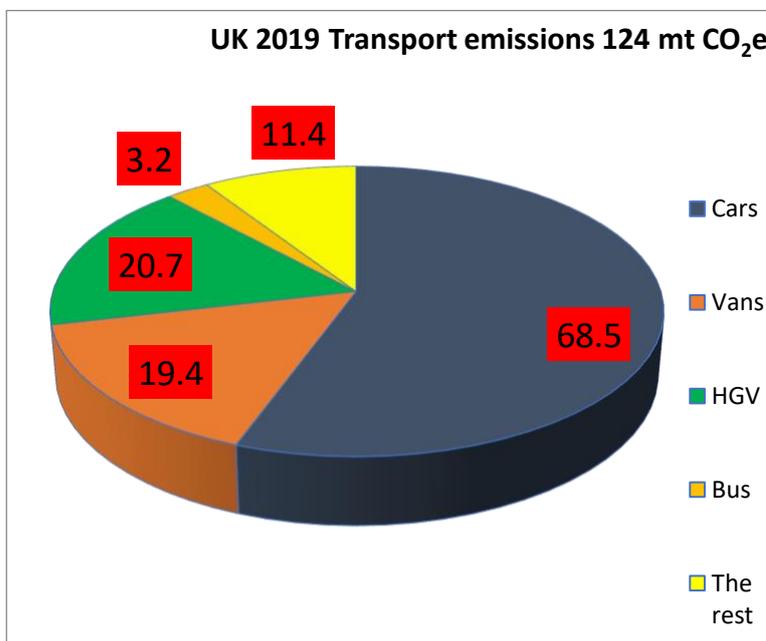
How we travel around

Transport is the largest single source of UK greenhouse gas (GHG) emissions and represents about 38% of our emissions in Shropshire. The majority of emissions are from cars and light vehicles, with flying and goods vehicles also significant sources.

What do we need to do?

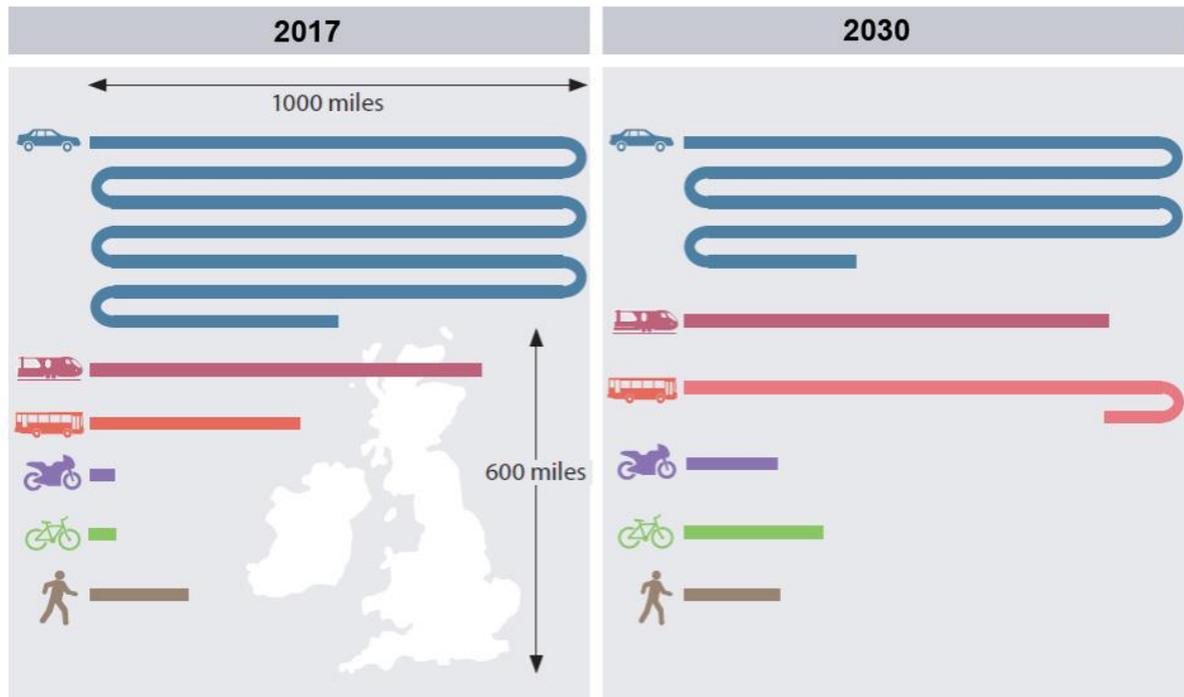
Change quickly – don't put this off – time is short:

- Reduce travel overall.
- Produce less GHGs when we need to travel or move goods.
- Walk more.
- Cycle much more.
- Use the bus and train.
- Use the car much less.
- Buy fewer cars.
- Fly less, fly shorter, fly economy.



How do we do it?

- Build only where good infrastructure minimises carbon emissions.
- Transfer up to 30% HGV freight to the railway.
- Use green hydrogen or electricity for all buses and HGVs.
- Make it easy to travel on foot, cycle, bus and train with convenient connections.
- Build safe inclusive cycle routes, and offer incentives for e-bikes.
- Travel less – work from home – shop local.
- If you have to have a car, change to an electric vehicle, run on renewable power. Do not buy diesel or petrol cars.
- Walk – in low traffic, slow traffic neighbourhoods.
- Share a car – save money through car clubs and car share schemes.
- Manage your carbon budget – travel less, reduce/ration flying.



'Average distance travelled per person per year by various modes of transport in 2017 and zero carbon Shropshire 2030'

Adapted from a graphic courtesy of Centre for Alternative Technology

What would this mean for us?

Our county would be far cleaner and quieter, our air would be better, and we would all be fitter. What's more our planet would be more sustainable.

In the end this is what it comes down to – we must halt car, van and HGV emissions

Taking action

A sense of scale

In order for Shropshire (which currently gets about 80% of its energy from fossil fuels) to stop using almost all fossil fuels by 2030, we need to be realistic about the scale of changes needed and set our scale of ambition appropriately.

In our plan we have set out to give a sense of the scale of the actions needed. This does not mean that we have accurately defined the details at this stage. Instead, we have given an indication of the order of magnitude of the changes required.

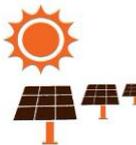
The Zero Carbon Shropshire Plan in numbers

In order to keep on track for our target of net zero carbon Shropshire 2030, we suggest the following actions will be required every year, starting right away:

Shropshire Climate Action Partnership

Our Ambition for Shropshire

Each year starting right away
Shropshire will need to achieve the following:

-  **20,000 homes** insulated to high standards suitable for switchover and switch from gas or oil heating to using heat pumps
-  **Investment of £200M** in Shropshire renewables
-  **500 acres of solar farms** (or wind farm equivalent) installed and powering the grid and private wire demand
-  **2,000** electric car charge points for community car share and car club vehicles
-  **8,000 acres of Shropshire marginal land re-wilded or planted with woodland**
-  **10% reduction of car use** by shifting to active travel public transport and reduced commuting
-  **Recovery, renewal and protection of 10% of Shropshire peatlands and wetlands**
-  **10% reduction in waste collection volumes** by reducing short life purchases and single use packaging and promoting re-use of materials
-  **10% of highways budgets** dedicated to shifting from car to prioritise active travel
-  **500 miles of new hedgerow**

For Shropshire Climate Action Partnership by Niki Holmes: Arts Emphasis © 2020

In general, if we achieve less in one area then this will need to be balanced by more work in another. The biggest threat to this plan is an insufficient scale of response and actions being taken too slowly. The consequences of this would be either the very much more costly investment in carbon capture later to recover the situation, or even worse, higher levels of CO₂ in the atmosphere and a worsening climate crisis.

What can I do right now?

Just as with managing personal finances, when managing your carbon footprint, it is important to have a budget to work to. We suggest you use the carbon calculator on our website to measure your footprint and plan reductions. See:

<https://zerocarbonshropshire.org/calculate-your-carbon-footprint/>

We also advocate setting a personal goal. For many of us an achievable goal would be to set an initial CO₂ budget of 5 tonnes of CO₂ per year for 2021, with further reductions in future years. This would be a hugely significant step in the right direction.

To illustrate the main areas of footprint and what can be done to reduce them, the following table represents a typical UK person and shows some of the changes that can be made rapidly, and with positive financial consequences.

Footprint	Today	Reduce to	The big wins
Food	3.5	1	On average, going from meat every day to once a week, and buying local.
Domestic transport	1	0.3	Stop using petrol/diesel cars. Reduce commuter travel. Cycle and walk short journeys. Get bulky shopping delivered. Sell your car and share or use a car club or rental.
Heating	2.5	1	Increase insulation and ditch oil/gas boiler for a heat pump.
Electricity	2	0	Change to a green tariff and invest in renewables (make sure the electricity company promises to use your money to build new sources of green energy). Replace all lighting with LEDs and purchase energy-efficient appliances.
'Stuff'	2	1	Halve the amount you purchase by being selective. Reduce, reuse and repair, and join a library of things.
Flights overseas	1	0.2	A maximum of one flight every five years instead of every year.
Emissions from peat	0.6	0.3	Stop buying peat products. Join the campaign to restore half our peat bogs in a decade.
Net carbon footprint	12.6	3.8	Further actions by Government and local authorities will be required to close the gap. In the meantime, plant some trees.

How you can get involved

Shropshire Climate Action Partnership is a true partnership which welcomes all who live or work in Shropshire to join us as Supporters. You can sign up at <https://zerocarbonshropshire.org/sign-up/> and get involved with our working groups too if you have time and would like to join a growing band of highly motivated people across Shropshire who are helping us to tackle the climate and ecological emergency.

We also welcome community groups, charities, neighbourhood associations, housing associations, town and parish councils – and indeed any organisation with an interest in Shropshire – to become an organisation member of SCAP. We are also particularly interested to welcome new business members who would like to show their commitment to Shropshire achieving net zero carbon by 2030 and also benefit from the networking and learning available through SCAP and our wider links with the Shropshire Chamber of Commerce and other local business organisations.

The sign-up page for new organisational Members is:

<https://zerocarbonshropshire.org/member-sign-up/>

You can sign up as an individual Supporter here:

<https://zerocarbonshropshire.org/sign-up/>

You can also contact us via our website:

<https://zerocarbonshropshire.org/contact-us/> or at admin@ZeroCarbonShropshire.org

and by post:

Shropshire Climate Action Partnership

Suite 9, Old Bank Buildings

Bellstone

Shrewsbury SY1 1HU

Finally, this Call to Action and the full Zero Carbon Shropshire Plan are available to download from our website:

<https://zerocarbonshropshire.org/zcsplan/>