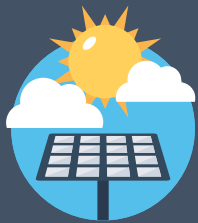


# East Sussex Environment Strategy 2019

**‘At pace & at scale’**



## Why do we need an Environment Strategy?

Climate change and the degradation of the world's natural capital assets are defining issues of our time. The recent reports by the intergovernmental panels on climate change and biodiversity make a clear case for urgent action, as a healthy and productive environment is an essential pre-requisite for sustainable social and economic prosperity.

The purpose of the Strategy is to contribute to addressing urgent global and local environmental challenges and to maximise the available opportunities. The evidence makes it clear that the pace and scale of activity needs to be far greater, and that co-ordinated local action is an essential part of adding to the action already being taken by many private and public sector organisations, community groups and individuals.

The first Environment Strategy for East Sussex was adopted in 2011. It brought together the high level aims, objectives and actions of a wide range of organisations in East Sussex into one shared, long-term strategic environmental plan for the county. Since then there have been significant changes to national, regional and local policy and strategies, including the 25 Year Environment Plan (2018), the Clean Growth Strategy (2018) and the emerging Local Industrial Strategy for the South East Local Economic Partnership (SELEP). Consequently, this updated Environment Strategy for East Sussex seeks to:

- align with these latest national, regional and local strategies;
- set out an updated and robust local evidence base;
- identify locally-specific challenges and opportunities;
- prioritise achievable short term actions for the Environment Board to deliver.

This Strategy has been developed by the Environment East Sussex Board, which is a partnership of private, public and educational

sector organisations. The Board is the strategic body for the environment in East Sussex, with the primary aim of driving improvement in environmental quality, to ensure East Sussex continues to be an attractive place to live, work and invest. The Board is accountable to Team East Sussex (TES), which is the East Sussex board of the wider South East Local Enterprise Partnership (SELEP). The Environment Strategy is one of a suite of Team East Sussex documents detailing priorities for the county and complements the local East Sussex Growth Strategy.

## Vision and Priorities

The shared vision of this strategy, which reflects the government's ambition to leave the environment in a better condition for the next generation, is to:

**'Protect and enhance our natural and built environment for current and future generations and tackle and adapt to climate change.'**

Five priority environmental themes have been identified, which are in line with the Sustainable Development Goals developed by the United Nations in 2015 and the priorities identified in recent national strategies. As the environment is complex and functions as an integrated system, so there is considerable overlap between the five themes, such as climate change and air quality.

Each theme is covered in the accompanying report on the evidence base and includes:

- a summary of the key challenges and opportunities;
- the main legislative and policy drivers;
- examples of programmes and projects already being delivered nationally and locally;
- new actions that the Environment Board will lead on in the short-term (1-2 years).

We have not attempted to list all environmental legislation, strategies and targets or to describe all the environmental work that is taking place nationally and in East Sussex. Instead, we have presented an overview of the drivers for

change, examples of projects being delivered, and identified evidence-based and achievable local priorities. This highlights that everyone has a role to play. It is envisaged that this Strategy will act as a driver for achieving the additional resource required to deliver these new actions.

## Monitoring and reporting

The Environment Board will produce an annual report on progress in implementing the Environment Strategy, for review and challenge by Team East Sussex. A manageable number of performance metrics have been selected for use as indicators, taken from the larger set of national indicators used by government, to specify what success looks like and to help identify trends over time and where more action may be needed (see page 14). The Board will also review the Strategy every five years, to ensure that it remains fit for purpose and is contributing to shifting the local economy towards clean growth.

## The main environmental challenges

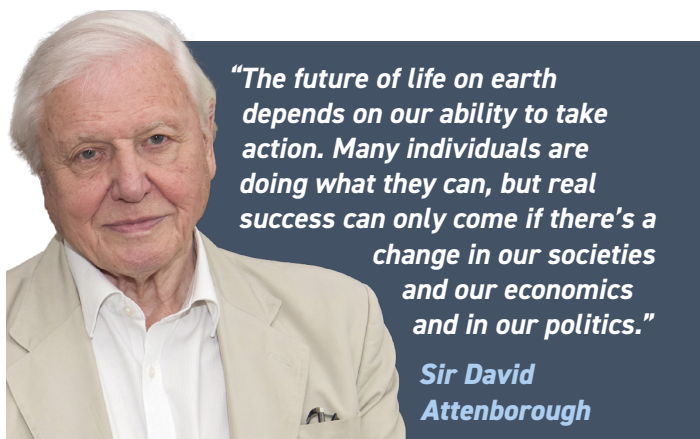
A healthy and productive environment is an essential requirement for sustainable social and economic prosperity: it provides all the raw materials for the resources we use in our daily lives, the soil in which we grow our food, clean air and drinking water, and a range of services such as natural flood attenuation and a contribution to mental well-being. Our environmental assets, and the services and benefits they provide, have a significant value, some of which can be quantified, such as food production, but others cannot and so are missing from decision-making. However, as with financial capital, poorly managed environmental capital will fail to provide the returns that are necessary for sustainable economic prosperity. The erosion of local environmental assets, sometimes irreversibly, undermines economic prosperity and health.

Additional local pressures on environmental assets include a projected increase in the population of East Sussex of about 10% by 2032 and a 14% increase in the number of households, as average household size declines. This will require over 2,000 additional houses to be built per year, alongside investment in transport, utilities, employment workspace, health and social care, education and community infrastructure.

The purpose of this Environment Strategy is to contribute to addressing urgent global and local environmental challenges. The five key challenges and opportunities are set out on the following pages.

## Climate change

- The 2018 report from the United Nations Intergovernmental Panel on Climate Change concluded that without substantial efforts to curb greenhouse gas emissions over the next decade we are likely to face severe, widespread, and irreversible impacts on societies. Human activity has already led to 1°C of global warming from pre-industrial levels, which is resulting in damaging impacts on lives, infrastructure and ecosystems that are apparent today.
- The predicted impacts of climate change in East Sussex include more frequent and intense flooding, drought and episodes of extreme heat, as well as impacts from the effects of climate change overseas, such as on food supply. This will lead to an increase in heat-related deaths, particularly amongst the elderly, damage to essential infrastructure, increased cost of food, disruption to supply chains and service provision, greater coastal erosion and impact on coastal habitats and wetlands.
- Carbon emissions in East Sussex fell by 27% between 2005 and 2016. This excludes emissions that occur outside the boundary of East Sussex as a result of the demand for goods and services that are consumed in East Sussex. This level of reduction is similar to the national rate of reduction, as it has been driven by the same changes, for instance the switch from coal to gas and renewables to generate electricity.
- This Strategy sets out a long term goal for East Sussex to be carbon neutral by 2050, or earlier, in line with the new national statutory target set by Parliament in 2019. Reaching net-zero emissions requires extensive changes across all levels of society within a relatively short timeframe, set against a predicted increase in the demand for energy due to a growing population and economic growth.
- Even if global warming can be limited to 1.5°C, significant additional investment will still need to be made in measures to adapt to the effects of climate change that are already locked in due to past emissions of greenhouse gases. The main effects include increased flooding, droughts and heat waves. For instance, in England around one in six properties and over half of water and sewage treatment works are in areas already at risk of flooding from rivers, the sea or surface water.



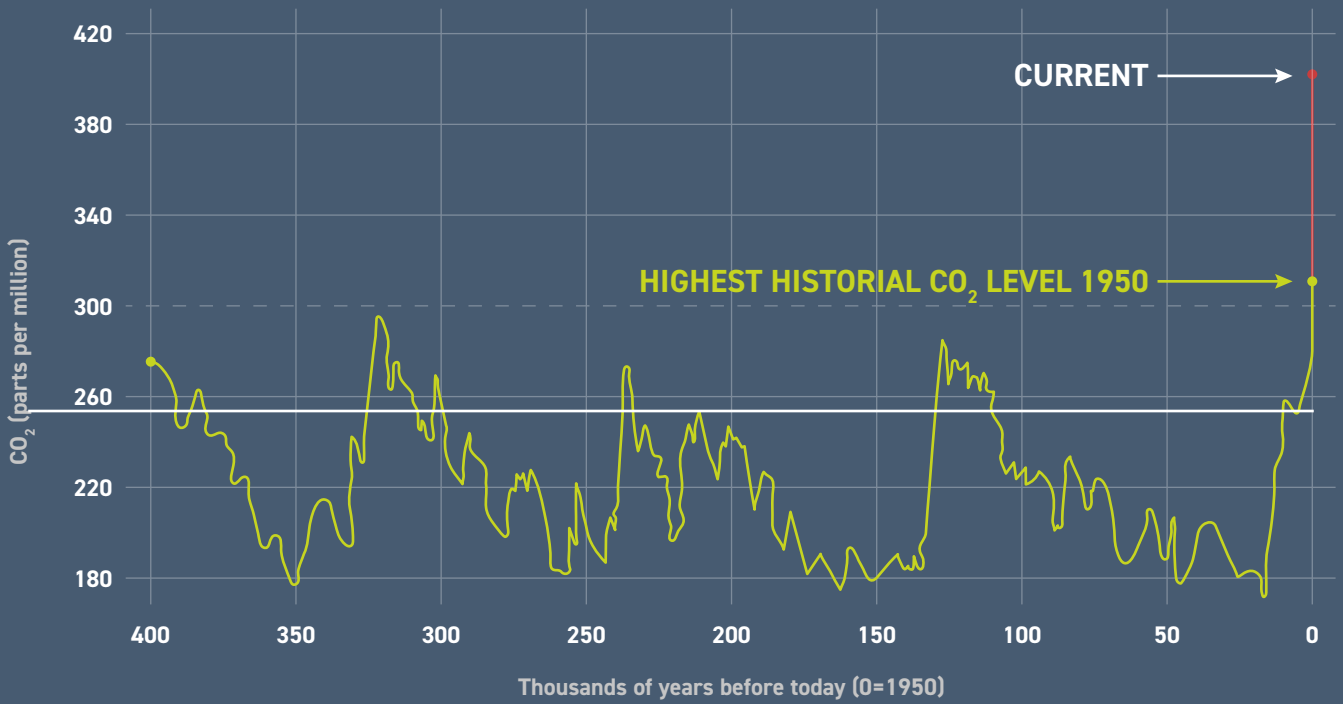


Figure 1: Changes in atmospheric carbon dioxide levels over the last 400,000 years

## Natural capital

- This is the stock of renewable and non-renewable resources (e.g. plants, animals, air, water, soil, minerals) that yield a flow of benefits to people, including food, fuel, clean air, clean water, climate regulation, pollination of crops by insects and flood defence. This multitude of services and benefits all have a value, some of which can be quantified, such as the value of timber or food produced from farmland, and others cannot and so are missing from decision-making and economic valuation. Consequently, natural capital is often degraded or lost because it's free, yet it regulates numerous life-supporting processes and is the foundation on which our economy, society and prosperity are built. For example, more than two billion people rely on wood fuel to meet their primary energy needs and about four billion people rely mainly on natural medicines for their health care.
- The 2019 Intergovernmental Platform on Biodiversity and Ecosystem Services concluded that:
  1. The diversity within species, between species and of ecosystems is declining faster than at any time in human history, with the UK estimated to have lost significantly more nature over the long term than the global average. In Sussex we currently have over 470 species that are globally threatened or in rapid decline.
  2. About 60% of the world's major ecosystem goods and services are being used unsustainably, where the natural assets are being used faster than they can regenerate.
- The main causes are the intensification of the use of land and sea resources, pollution, invasive species, and climate change. The consequences include risks to food security, reduced productivity and impacts on quality of life. For example, over-fishing saw the collapse of cod stocks in the fisheries off Newfoundland and in the North Sea in the 1980s and 1990s, which led to controls on fishing that had a major social and economic impact on fishing communities.

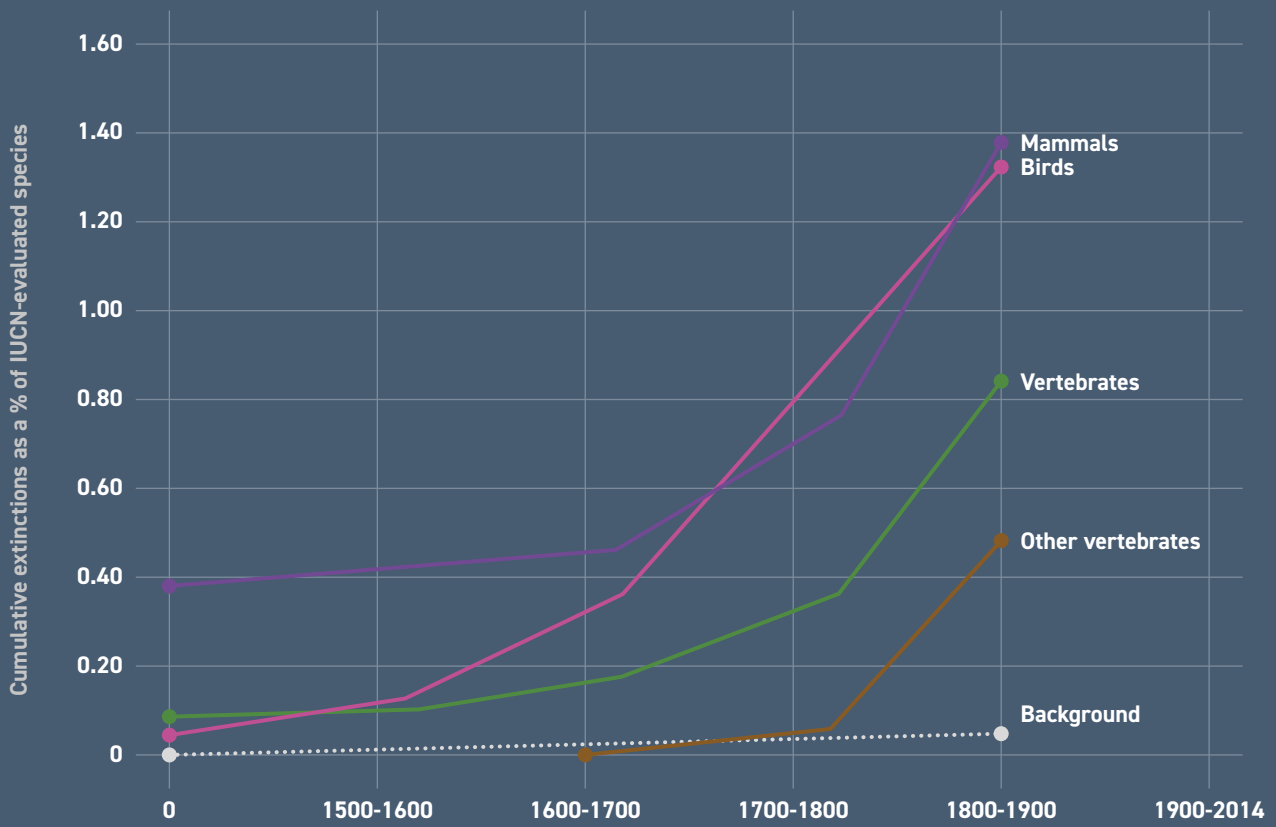
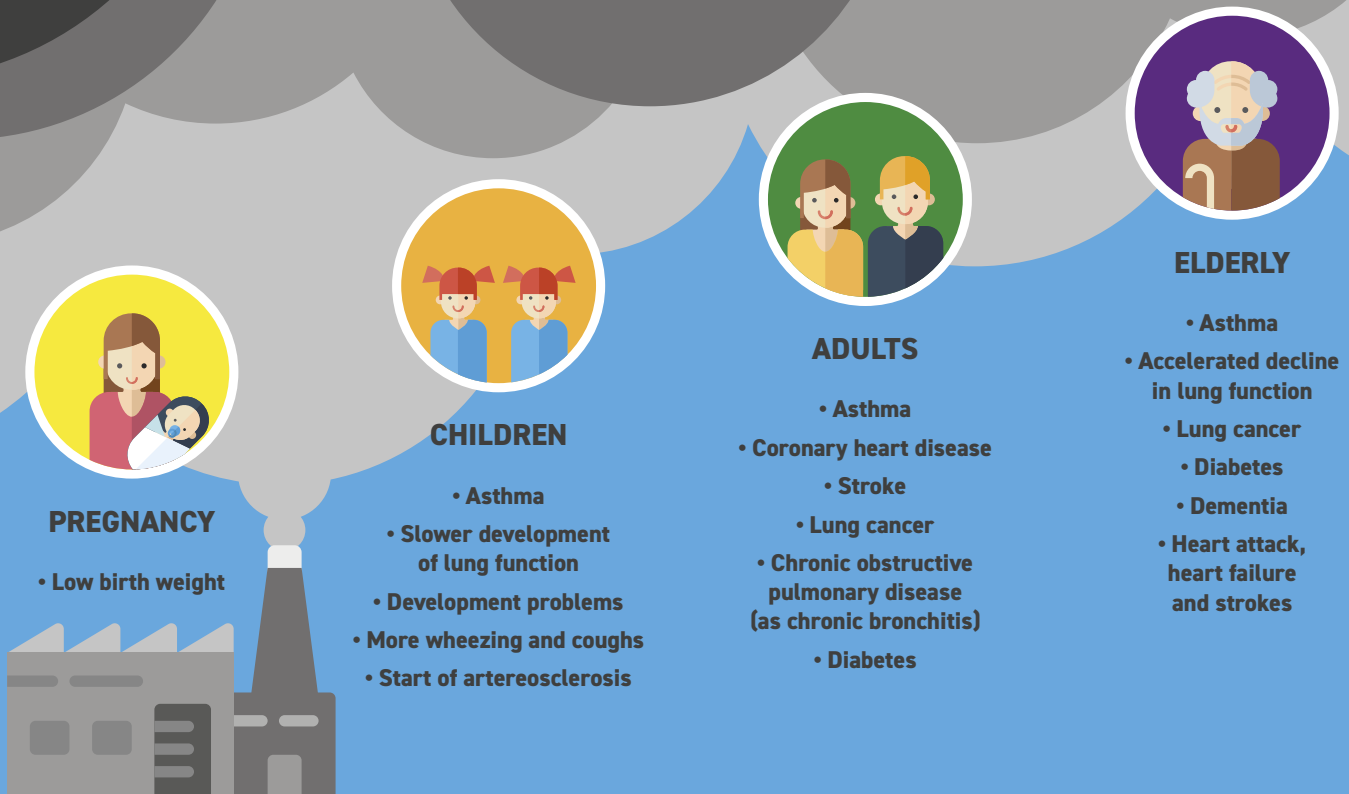


Figure 2: The cumulative percentage global loss of species since 1500



## Air pollution affects people throughout their lifetime

### Air quality

- Air quality in the UK has improved significantly since the first Clean Air Act of 1956, mainly due to the reduction in coal-fired power stations and an increase in cleaner transport. However, about 36,000 deaths per year in the UK are still attributable to outdoor air pollution, which makes it the 4th greatest threat to public health after cancer, heart disease and obesity (National Clean Air Strategy, 2019). The economic cost of air pollution is estimated at up to £20 billion per year, due to the healthcare costs, premature illness and days lost from work. In East Sussex, poor air quality is estimated to contribute to at least 5% of deaths per year.
- Being exposed to poor outdoor air quality is not a lifestyle choice, as is smoking or drinking. Those most affected are children,

pregnant women, those with existing cardiovascular and/or respiratory disease, the elderly and those who spend more time in polluted locations, for instance people who live and work near busy roads.

- Different pollutants have different impacts on health and the environment. The three main pollutants in East Sussex are particulate matter (PM), nitrogen dioxide (NO<sub>2</sub>), and ozone (O<sub>3</sub>). The main man-made sources are the combustion of fuels by vehicles, industry and, increasingly, from domestic wood burners, with the largest local contribution from vehicles. Some air pollutants have no safe levels of exposure. Consequently, any improvement in air quality generally brings public health benefits to everyone and in all locations where there is exposure, not just identified hotspots of poor air quality.



## Water

Water is essential to life: for drinking, sanitation, economic prosperity, the natural environment and recreation. We assume that it's an infinitely renewable resource, yet freshwater makes up only 2.5% of all Earth's water and much of this is either polluted or abstracted more quickly than it is being replenished.

- The UN's latest report on global water resources (2019) highlights that:
  - a quarter of humanity already lives where water is severely scarce.
  - 340,000 children under five die every year from preventable diarrhoeal diseases caused by water contaminated with faeces.
  - water is a growing cause of conflict within and between states.
- In the UK, regulation has helped to drive a significant improvement in water quality over the last 30 years, with 99% compliance with statutory drinking water quality standards and 98% compliance with bathing water standards. However, In East Sussex the quality of waterbodies has deteriorated in recent years. For instance, the quality of some ground waters, which provide about 70% of drinking water, has decreased due to rising nitrate levels, mostly due to historic farming practices.
- East Sussex is also recognised by government as an area of serious water stress, as demand sometimes exceeds supply. This will be exacerbated by population & housing growth, which will drive greater demand for water, and by climate change, which will increase the frequency and duration of droughts. Consequently, the National Infrastructure Commission has concluded that, without further action to reduce demand, there is a 25% chance over the next 30 years that large numbers of households in East Sussex will have their water supply cut off for an extended period because of severe drought.
- Other key issues include over-abstraction of water, with about a third of groundwater bodies in England seeing abstraction levels that are unsustainable, and leakage rates throughout the treatment and distribution process of about a third of the water taken from the natural environment (Environment Agency, 2018).

## Resource efficiency

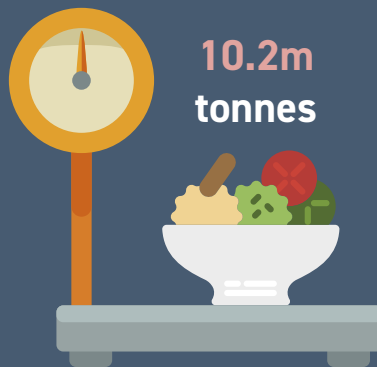
The current scale of resource use in developed countries is not sustainable. If the total global population consumed resources at this same rate then, on the basis of known global reserves of materials, we would need 1.7 Earths to provide the resources we use and absorb the waste we generate (Global Footprinting Network, 2019). For example, over a third of global fish stocks are being fished at a biologically unsustainable rate, which impacts on food security and the long-term prosperity of some coastal communities.

- Yet, global demand for resources continues to increase, driven by population growth and improving standards of living. Many resources we depend on are finite, such as fossil fuels, and the way in which we use resources is often inefficient. This reduces productivity and generates waste, which can cause significant pollution, clean-up costs and

health impacts. For instance, in the UK about 10 million tonnes of food and drink, most of which is usable, are wasted every year, worth around £20 billion and generating about x tonnes of greenhouse gases.

- There are no data on the flow of materials through the East Sussex economy. However, what we do know is that approximately 1.75 million tonnes of solid waste is generated each year in East Sussex and Brighton and Hove, most of which is recycled, composted or incinerated with energy recovery. For households, this equates to an average of about 1 tonne per year. Over the last few years re-use and recycling rates have remained fairly static, in line with national rates, which means that we are still some way off the statutory re-use and recycling targets for 2020. Consequently, there is a clear need to drive greater waste prevention and increase the re-use and recycling rates of key materials.

**TOTAL FOOD WASTE  
IN THE UK 2015 =**



**10.2m  
tonnes**



**EQUIVALENT  
TO 156KG  
PER PERSON**

**BY SECTOR THIS BREAKS DOWN AS:**



**HOUSEHOLDS  
7.1m tonnes  
(£15bn)**



**MANUFACTURING  
1.85m tonnes  
(£1.4bn)**



**HOSPITALITY & FOOD SERVICES  
1.0m tonnes  
(£2.9bn)**



**RETAIL  
0.25m tonnes  
(£0.8bn)**

## The key opportunities

Investing in a healthier and more productive environment and clean growth can address many of the challenges outlined above and deliver a number of economic and social benefits, including:

1. Clean growth across all our key sectors of the local economy:
  - The Low Carbon and Environmental Goods and Services sector (LCEGS) is one which includes a range of businesses working to decarbonise the energy sector, improve resource efficiency and preserve and enhance the natural environment. This sector is recognized in the East Sussex Growth Strategy (2014) and the South East Local Enterprise Partnership's Economic Strategy Statement (2019) as a key growth sector. The sector has grown consistently at around 5% per year over the last 10

years, compared with annual UK GDP of 1.5-3.1% (Grantham Institute, 2019).

- The extensive environmental designations in East Sussex provide a competitive advantage for the visitor economy, which makes up nearly 1 in 5 businesses and a quarter of all jobs in East Sussex. Enhancing local natural capital to help grow the visitor economy, as well as improving mental and physical health by providing access to quality outdoor spaces, will help to optimize the value of natural assets in East Sussex and deliver across multiple outcomes.



### Case study:

Resource efficient modular housing, designed and built by an East Sussex business, being installed in Peacehaven.



**Case study:**

**Java and Jazz pizzeria in Forest Row doubled its oven capacity and cut energy costs with a new energy efficient oven, cutting running costs and saving 8 tonnes of CO2**

**2. Improved productivity and resilience:**

- Adapting to climate change will ensure the economy is more resilient to impacts that are likely to be unavoidable due to past emissions of greenhouse gases that are already locked in.
- Improving resource efficiency contributes to increasing productivity and competitiveness by delivering more with less and deploying new technologies, reducing operating costs and exposure to future risks of energy security and scarcity of materials.
- Measures that reduce local air pollution and carbon emissions, for instance active travel such as walking and cycling, also help to alleviate congestion and extend the capacity of our existing transport infrastructure over a longer timeframe.
- New legislation and policy, such as the ban of the sale of petrol and diesel cars and vans from 2040, is helping to drive innovation, for instance the growing use of artificial intelligence. Such changes help to increase productivity.

- There is a growing body of evidence that the unique and extensive natural environment of East Sussex helps to attract and retain skilled workers and increases the area’s appeal to business start-ups and inward investors.
- 3. Improved health outcomes and reduced health costs:**
- Reducing the impact of environmental pollution on health, notably air pollution, will reduce mortality and morbidity rates. For instance, reducing PM exposure by 10ug/m3 would potentially extend lifespan in the UK by five times more than eliminating casualties on the roads (PHE, 2017).
  - Spending time in the natural environment improves mental health and wellbeing, by reducing stress, anxiety and depression, and encourages physical activity which measurably reduces the risk of type 2 diabetes (by 40%), heart disease (by 35%) and hip fractures (by 68%).

The scale of many environmental challenges requires co-ordinated international, national regional and local action. Action includes regulation, fiscal incentives, investment and behavioural change. Local interventions are most effective if underpinned by consistent national policies and long-term investment. This Strategy is one contribution among many that are required to address the key environmental challenges and unlock significant opportunities. It is also envisaged that the Board will undertake co-ordinated lobbying to seek national action to help address the challenges highlighted.

Many organisations and individuals are already taking action. But the evidence above makes it clear that the pace and scale of change needs to be far greater to manage the challenges and to capitalise on the opportunities.



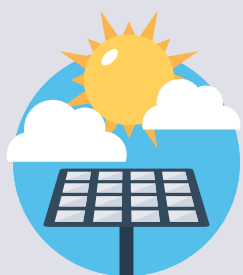
***“Business stands squarely behind the ambition for the UK to have a net-zero emissions economy by 2050.”***

**Carolyn Fairbairn,  
CBI Director-General**

## Our aims and actions

Theme	Long term aim	Actions	Indicators	Progress
<b>Climate change</b>	<p>Become carbon neutral by 2050, or earlier.</p> <p>Be adapted to the effects of climate change that are unavoidable.</p>	<p>Evidence-based road map to net zero emissions for East Sussex by 2050.</p> <p>Develop and support a pipeline of projects that deliver against the priority themes and project models set out in the tri-LEP Energy Strategy of 2019.</p>	<p>CO2e emissions from East Sussex.</p> <p>Number of properties and businesses at risk of flooding.</p> <p>Reduction in CO2e emissions achieved.</p>	
<b>Natural capital</b>		<p>Support the Sussex Local Nature Partnership to develop and deliver a pipeline of projects that improve Natural Capital.</p>	<p>Condition of protected sites.</p>	
<b>Air quality</b>	<p>Meet the air quality standards recommended by the World Health Organisation.</p>	<p>Develop and implement an EV strategy for East Sussex.</p>	<p>Concentrations of particulate matter and nitrogen dioxide.</p>	
<b>Water</b>	<p>No longer be classified as a water stressed area.</p> <p>All water bodies to meet the quality objectives of the Water Framework Directive.</p>		<p>Per capita water usage.</p> <p>Waters achieving sustainable abstraction criteria.</p> <p>Condition of bathing waters.</p>	
<b>Resource efficiency</b>	<p>Become zero waste.</p>		<p>Amount of waste produced.</p> <p>Disposal methods for waste.</p>	

## What can you do?



### Climate change

Join or support your local community energy group.  
Go to [www.communityenergysouth.org/engage](http://www.communityenergysouth.org/engage)



### Natural Capital

Volunteer for the Sussex Wildlife Trust  
([sussexwildlifetrust.org.uk/get-involved/volunteer](http://sussexwildlifetrust.org.uk/get-involved/volunteer))  
or the South Downs National Park  
([www.southdowns.gov.uk/care-for/volunteering-2](http://www.southdowns.gov.uk/care-for/volunteering-2))



### Air quality

Get support with journey planning for walking, cycling or using public transport. Go to: [www.eastsussex.gov.uk/roadsandtransport/localtransportplan/funding/active-access-for-growth/active-access-for-growth](http://www.eastsussex.gov.uk/roadsandtransport/localtransportplan/funding/active-access-for-growth/active-access-for-growth)



### Water

Get free advice and water-saving visits from your water company.  
Go to: [www.southernwater.co.uk/help-advice/how-to-save-water](http://www.southernwater.co.uk/help-advice/how-to-save-water)  
or <https://wholesale.southeastwater.co.uk/help-advice/save-water-in-your-business>



### Resource efficiency

Buy a garden compost bin or wormery for your food waste.  
Go to: [getcomposting.com/profile/login](http://getcomposting.com/profile/login)



