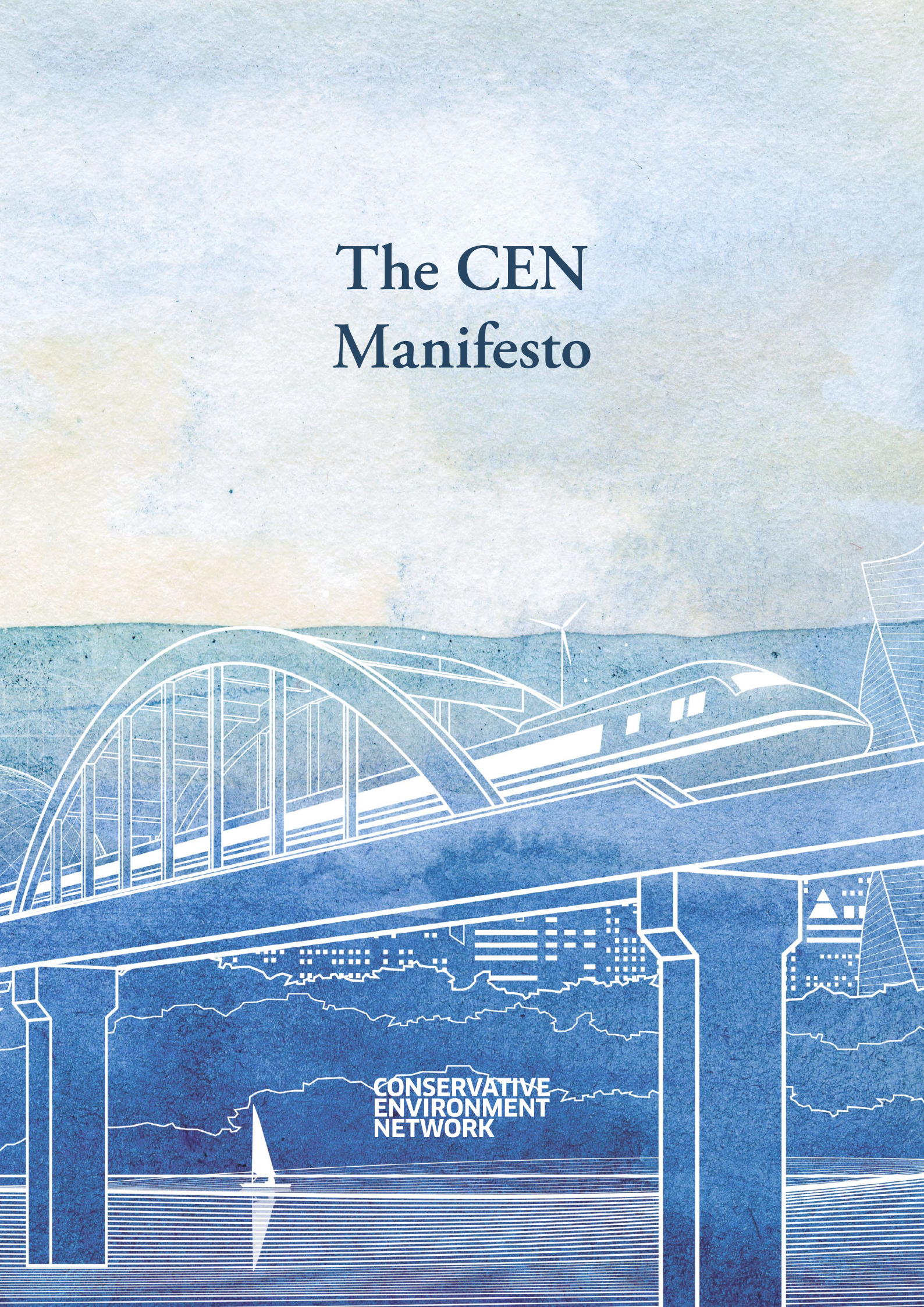
The CEN Manifesto



1848

Public Health Act makes the state the guarantor of health and environmental standards for the first time. New local boards of health, prompted by outbreaks of Cholera and the work of Edwin Chadwick, are given powers to control water, sewage, food safety and rubbish.

1919

Forestry Commission established to replenish woodlands felled for timber during the war. Afforestation efforts stretched to over 900,000 acres.

1948

Anglers' Conservation Association founded to encourage anglers to buy land adjacent to rivers and bring legal actions against those polluting the river. Landmark case 'Pride of Derby' (1952) forced public and private entities to stop polluting the River Derwent.

1956

Clean Air Act passed by Conservative Prime Minister Sir Antony Eden in response to the 'great smog' of 1952, caused by burning coal and other industrial activities, which claimed 4,075 deaths.

1972

Woodland Trust founded by retired farmer concerned by scale of deforestation. Today it owns and maintains public access to over 26,000 hectares of woodland.

1992

UN Rio 'Earth' Summit documents ratified by UK under Conservative government.

1997–2014

Arctic summer sea ice loss rises to 130,000 km² per year - about four times as fast as the sea ice loss from 1979 to 1996.

2008

UK Climate Change Act requires the government to ensure the net UK carbon account for all six Kyoto GGs is 80% lower in 2050 than the 1990 baseline.

2016

Paris Agreement on Climate Change ratified by UK under Conservative government.

1882

World's first coal-fired power station opens at 57 Holborn Viaduct in London. It lights 968 16-candle incandescent street lamps.

1889

Board of Agriculture Act establishes the first Ministry of Agriculture, Fisheries and Food.

1947

Town and Country Planning Act establishes the Green Belt. From 1955, Conservative Minister for Housing, Duncan Sandys MP, encourages LAs to protect land around their towns with clearly defined green belts.

1949

National Parks and Access to Countryside Act creates AONB designations. First national park established in the Lake District in 1954.

1970

Department of the Environment created under Conservative government with first ever Secretary of State for the Environment at Cabinet.

1989

Margaret Thatcher UN speech on environmental breakdown:

"The environmental challenge that confronts the whole world demands an equivalent response from the whole world. Every country will be affected and no one can opt out...Those countries who are industrialised must contribute more to help those who are not...We are not the lords, we are the Lord's creatures, the trustees of this planet, charged today with preserving life itself - preserving life with all its mystery and all its wonder."

2017

Blue Belt launched, a 4 year programme of long term protection and management for over 4 million km² of marine environment across UK Overseas Territories. Due to end 2020.

2018

Ivory Act passed by Conservative Government bans sales of ivory in UK.

2019

No-coal record. UK goes 18 days without using coal to generate electricity for the first time since 1882.

What happens if we continue on current trends?

2100

Global temperature hits 3-4ºC above pre industrial levels:

Sea levels rise by 56cm. Over 72 million people affected by coastal area flooding every year. $11.7 trillion worth of annual flood damage from sea level rise.

13 fewer frost days in Britain every year and likelihood of 'unprecedented' summer heat rising to 67%.

A **completely ice-free Arctic summer.**

Frequency of warm extremes in Africa rises by 930%.

Severe annual drought affects over 200 million people.

Congo river 75% more likely to to flood, and Nile 82% more likely.

Deadly heat waves strike parts of India, Pakistan, and Bangladesh, including the fertile Indus and Ganges river basins that produce much of the region's food supply. The maximum wet-bulb temperatures (a measure of heat and humidity that can indicate the point when the body can no longer cool itself) are likely to exceed what humans can survive without protection.

Average mediterranean summer suffers 97% increase in area burned by **wildfires**.

Ocean acidity up by at least 29% and 41 more days of marine heatwaves every year.

2050

Global temperature hits 1.5ºC above pre industrial levels:

Warm air holds more water, meaning **extremes of drought and flooding become common**, causing displacement and conflict. 132.5 million people are exposed to severe drought and 28 million people face coastal flooding every year.

Sea levels rise 48cm and ocean acidity rises 17%, leading to **decline of 70-90% of all coral reefs**, leaving half a billion people without their main source of protein.

Almost no summer sea ice cover left in the Arctic and 10% chance of a summer with no ice at all with dramatic effects on habitats and species across the northern hemisphere.

Frequency of extreme heat in Africa rises by 332%.

47% likelihood of 'unprecedented' summer heat in Britain.

Total number of severe heat waves in India rises by 500%, and each lasts twice as long.

Water shortages affect 4 million people in Southern Europe and Mediterranean, 79 million people in Southeastern Asia and 48 million people in Eastern Asia.

Average mediterranean summer suffers 41% increase in area burned by **wildfires**.

2019

Net Zero emissions by 2050 target set in law. UK becomes first major economy to legislate for net zero emissions under a Conservative government.

The Conservative Environment Network Manifesto

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THE DECLARATION

AS MEMBERS OF THE CONSERVATIVE ENVIRONMENT NETWORK PARLIAMENTARY CAUCUS,

I. **We recognise the gravity of the global environmental crisis, and our duty to preserve and restore our planet for future generations.**

II. **We agree that by working with nature, rather than against it, we can grow our economy faster and more sustainably - and that the environment provides essential services that underpin economic growth.**

III. **We believe that the best route to net zero emissions is through a prosperous market economy that innovates quickly.**

IV. **We know that transformational change starts with the responsibility of the individual.**

V. **We believe that the UK has a duty to display global leadership on the environmental crisis.**

Peter Aldous MP
Rt Hon Richard Benyon MP
Ben Bradley MP
Steve Brine MP
Maria Caulfield MP
Alex Chalk MP
Simon Clarke MP
Robert Courts MP
Tracey Crouch MP
Philip Dunne MP
Michael Fabricant MP
Vicky Ford MP
Rt Hon Sir Roger Gale MP
Zac Goldsmith MP
Luke Graham MP
Richard Graham MP
James Gray MP
Rt Hon Greg Hands MP
Mark Harper MP
Rt Hon Sir Oliver Heald QC MP
James Heappey MP
Kevin Hollinrake MP
Nigel Huddleston MP
Sir Bernard Jenkin MP
Rt Hon Sir Oliver Letwin MP
Tim Loughton MP
Rachel Maclean MP
Scott Mann MP
Sarah Newton MP
Neil O'Brien MP
Dr Matthew Offord MP
Rt Hon Sir Mike Penning MP
Victoria Prentis MP
Antoinette Sandbach MP
Andew Selous MP
Henry Smith MP
Sir Nicholas Soames MP
Rt Hon Dame Caroline Spelman MP
Derek Thomas MP
David Warburton MP
Helen Whately MP

ABOUT

The Conservative Environment Network (CEN) is an independent forum, MP caucus, and membership organisation for conservatives who support conservation and decarbonisation. As such, we:

1. create a positive agenda for the environment across the conservative movement, finding unity and common purpose, and directing it towards real change;
2. are a platform for different parts of the conservative movement to express and debate views on how to achieve better environmental outcomes;
3. act as network, mobiliser, and convener and do not undertake policy research ourselves;
4. rely on peer-reviewed research to inform any positions we take or topics we discuss; and
5. are independent and transparent about our funding and sponsorship.

This paper serves to provide a space for parts of the conservative movement to express and debate views on how to achieve better environmental outcomes, and was kindly supported by the JMG Foundation.

Team

Sam Richards (Director), Megan Trethewey, Charlotte Baly, Lois Toole

Board and Steering Committee

Ben Goldsmith (Chair), Ben Caldecott, Benet Northcote, Adrian Gahan, Isabella Gornall, Rosa Stewart

Ambassadors

Amy Yiannitsarou, Barnaby Wharton, Naomi Harris, Robert Lingard

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CONTENTS

Foreword

Stewardship of the natural world, responsibility towards future generations, the search for resilience, these are core tenets of conservatism. Yet we're so often told that only the political Left is able and willing to tackle the many and growing environmental crises facing us. Why has this become the received wisdom? And why have conservatives allowed this myth to be perpetuated?

Time and again, from Mao's China, to the Soviet Union, to modern day Venezuela, we have witnessed environmental ruination at the hands of the political Left. In contrast, conservatives have a good and improving track record on the environment. In the same way that conservatism is about working with the grain of human instincts, so too is it about working with the grain of nature. Increasingly we've forgotten this, and many basic activities - farming, building, fishing, managing our watersheds and flood protection - have become battlefields that pitch people against nature.

Margaret Thatcher understood this, making the first calls for concerted action against climate change, in 1989 at the UN General Assembly and in 1990 at the Second World Climate Conference. Famously she said 'it is life itself – human life, the innumerable species of our planet – that we wantonly destroy. It is life itself that we must battle to preserve.' And earlier still, in 1988, she famously told delegates at the Conservative Party Conference that 'It's we Conservatives who are not merely friends of the Earth—we are its guardians and trustees for generations to come. The core of Tory philosophy and the case for protecting the environment are the same. No generation has a freehold on this earth. All we have is a life tenancy—with a full repairing lease.'

Today, the crises facing humanity have worsened beyond measure, and it is more important than ever that conservatives rediscover and champion their inherent affinity for looking after the natural world. This manifesto lays out a series of overarching ideas for doing just that. Below this foreword is a description by Oliver Goldsmith (no relation) of the seasonal arrival of innumerable herring to our shores. We can barely fathom the abundance of life at sea and on land that our ancestors once knew.

We don't need to accept this loss. We can and must have it back. The public is ready. The time is now.

Ben Goldsmith
Chairman
Conservative Environment Network

The fish were "divided into distinct columns of five or six miles in length and three or four broad; while the water before them curls up, as if forced out of its bed…the whole water seems alive, and is seen so black with them to a great distance that the number seems inexhaustible. The herring are followed by massive cod, spurdog, tope and smooth hound, longfin and bluefin tuna, blue, porbeagle, thresher, mako and occasional great white sharks. Moving in behind, within sight of the shore, were pods of fin whales and sperm whales."

Oliver Goldsmith

Description of the arrival of herring as seen
from the British shore in late 18th century

INTRODUCTION

This is an optimistic document. It argues that tackling the existential threat of environmental breakdown offers our divided country a new national project. It argues that this unifying mission can bring economic regeneration and natural restoration to all parts of the country. It argues that individuals can do more than they think, but that the job cannot be left to them alone. It argues that the UK enjoys a unique position on the world stage and is well placed to offer leadership and authority on this task. And finally, it argues that while a romantic attachment to the countryside may be a particularly conservative instinct, the desire to protect our planet for our children's sake is something that unites us all.

It sets out a path to a strong and prosperous United Kingdom in a healthier, more secure world.

The Conservative tradition of environmental stewardship stretches beyond Margaret Thatcher's seminal UN climate change speech to Edmund Burke's idea of intergenerational fairness. Just as we balance the books today to avoid saddling our children with debt, so too we protect our environment to safeguard their natural inheritance.

In recent years, however, our understanding of the scale of the problem has grown dramatically, and with it the urgent need to act. As the moral case has grown stronger - so too has the economic and political case. Renewables are now not only the cheapest form of electricity, but as new polling in this document shows the most popular. New green infrastructure can restore our planet and deliver economic and political regeneration.

Chapter One recognises the scale of the problem, and how our security relies on a stable natural environment. If we fail to act today, we risk fragile states battered by extreme weather, millions migrating from their homes and a world where even wealthy countries struggle to cope. Yet as our understanding of natural breakdown has increased, so too the tools available to tackle the problem have improved. **Chapter Two** sets out how economic growth and environmental protection go hand-in-hand. **Chapter Three** sets out the role that government has to play to ensure that those responsible for pollution pay for it. **Chapter Four** looks at how better incentives can help people to make the right decisions before the government has to step in. Finally, **Chapter Five** looks at the leading role that the UK has played, and can play on the world stage.

Each chapter is made up of an introduction, followed by a few transformative ideas that could steer our country and planet onto a more prosperous path. Each chapter includes both revenue raisers and policies that will require taxpayers' money, but it is not intended to be a budget. There is no new policy research and most of the ideas come from reports in the bibliography - readers are advised to look there for more detail.

Rather this document sets out a vision; it shows that we can choose a path that does not have to lead to national decline and natural devastation. It's now cheaper to build and run a new wind farm than it is to keep an old coal-fired power station open. In five years' time the electric version of your new car will be less expensive to buy than the petrol or diesel model. New technologies make it easier than ever to protect precious species from extinction, and can deliver growth right across the UK.

A new era of clean infrastructure can help us forge a path to a repaired planet and restored nation.

Conservative Environmentalism: a summary

SECURITY - *to leave to our children a world of renewing natural systems and ecological stability.*

UK to forge a path to net zero GHGs by 2050 - *maintaining UK leadership in tackling climate change.*

A new Forestry Act - *rediscover the ambition of 1919, committing to 1.5 billion trees by 2050, with intermediate targets to get us there.*

Peatland restoration - *renew these unique biodiversity hubs and carbon stores.*

A world leading Environment Act - *legally-binding targets to restore our countryside.*

Nature Recovery Network - *a map of connected green spaces to protect and enhance British wildlife.*

A National Resilience Unit - *ensuring investment is 'future proofed' against climate change.*

PROSPERITY - *to use resources efficiently and in pursuit of better living standards for all.*

Subsidy-free onshore wind - *the cheapest source of power competing in CfD auctions.*

Increased ambition on offshore wind - *be the Saudi Arabia of wind power by achieving 75GW by 2050.*

Removing the barriers for solar and batteries - *review fiscal policies.*

Ban fracking - *prevent stranded assets in an unpopular, out of date industry.*

Planning reform - *a Royal Commission to improve biodiversity and deliver the homes*

we need.

Upgrading old homes - *funding to upgrade our leaky housing stock.*

Future proofing new homes - *build homes to a Zero Carbon standard.*

Electric Vehicles - *a 2035 target, and the short term measures to get us there.*

Road pricing - *a data-smart replacement for fuel duty when we shift to electric vehicles.*

Regional rail, bus & cycle networks - *improving public transport for the whole country.*

JUSTICE - *to treat others as we would like to be treated and champion equality before the law.*

Air Quality - *improve air quality and reduce NHS costs on treating related diseases.*

Enhanced Producer Responsibility - *better product and packaging design.*

New pollution taxes - *to reduce our reliance on harmful pollutants.*

Animal welfare - *crack down on any form of cruelty to animals at home, on the farm or abroad.*

RESPONSIBILITY - *to seize the opportunity to do the right thing in our own lives.*

Farming - *replace CAP with a system of rural payments that enhances our countryside and farms.*

Environmental land management - *bring public and private money together in a single market-based scheme for natural capital restoration.*

Green Finance - *ambitious policies to align the financial system with environmental sustainability .*

New Greening Government Commitments - *government leading by example.*

Nudge policies - *smaller measures that transform human behaviour using minimum intervention.*

Household waste collections - *transform domestic recycling.*

DIPLOMACY - *to use domestic achievements to speak authoritatively on the world stage.*

UK Aid - *increase the proportion of UK aid spent on climate change and biodiversity decline.*

Climate COP 26 - *host with visionary ambition.*

Global Deal for Nature - *UK to lead high ambition coalition to secure UN biodiversity treaty equivalent to the Paris Climate Agreement.*

30 by 30 - *maintain our commitment to ocean conservation.*

Commonwealth Alliance for Nature - *using special friendships to achieve great things.*

Climate Security Commission - *to report to COP26 on security implications of climate change.*

Our planet's natural systems are facing irreversible 'tipping points' beyond which they cannot repair. Scientific evidence shows this is being caused by human activity.

SECURITY

From food to shelter, water to energy, our reliance on the natural world is fundamental. The natural systems that provide us with all our basic needs are naturally renewing, almost invisible thanks to their regularity.

But due to human activity these systems are reaching 'tipping points' where their ability to renew is in danger. Oceans, peatlands, and forest are helpless in the face of pollution, deforestation and poorly unconsidered development. Eclipsing traditional concerns about food and energy security, we now face the real prospect of disastrous events like a melted Arctic permafrost and the release of huge stores of frozen greenhouse gases. This could be the turning point at which Earth's climate becomes our enemy, rather than our friend.

The increasing frequency of extreme weather events will disturb communities at home and abroad. Increased desertification in North Africa and the Middle East could create millions of climate refugees destined for 'safe' regions like the UK and Europe.

And history tells us that random forces like extreme weather can be the political petrol that ignites critical security threats. When unpredictable weather begins to threaten resource security, extremists and corrupt authoritarians will reap the rewards from political instability, as they have done for time immemorial. Since 2013 Russia has built seven new military bases along the recently-thawed Northern Sea Route, for example. This new stretch of water will offer a valuable new shipping route between Europe and Asia and a colossal hydrocarbon reserve with the power to upend energy markets.

To avoid more than 1.5°C rise in global warming, and associated weather patterns, the Intergovernmental Panel on Climate Change (IPCC) advises that 2010 global emissions need to fall by 45 per cent by 2030, and reach net zero by 2050. That is why the UK government has set a legally-binding target for net zero GHG emissions by 2050 on the recommendation of the UK Committee on Climate Change (CCC).

In parallel to and being made worse by the climate emergency is the rapid decline of habitats and biodiversity. The WWF Living Planet Index shows a loss of 60% of species population sizes between 1970 and 2014. In short, in the last 50 years the planet has lost biodiversity at a rate only seen during a mass extinction.

We need to take a stand against these devastating losses by creating robust legal targets that respond to the gravity of the climate and environmental crises. And we need to ensure that climate adaptation and resilience are embedded into decision-making in our own government and across the international community.

There is little doubt: the twin impact of climate change and biodiversity collapse will become, if left unchecked, the greatest threat to our security and well-being.

Net Zero 2050 - a Conservative legacy

The UK is the first G7 country to set a legally binding net zero target - now we need to get there.

The UK has a proud record of climate leadership. The Climate Change Act was a global first and established the UK as a climate policy leader. It has set legally-binding, evidence-based and credible targets for the UK and led to new policy frameworks that have allowed for low carbon technologies to be deployed at scale reducing greenhouse gas emissions.

The economic opportunities from this transition are profound and transformative. The falling costs of renewable energy and new technologies like Carbon Capture and Storage are covered in the next chapter ('Prosperity'), but in this chapter we discuss the programme of natural restoration also required to meet the net zero target.

Forestry Act 1919 - one hundred years later

1.5 billion trees planted by 2050, with intermediate targets to get there

In August 1919 a new Forestry Act responded to concern about the decline of British woodland during the First World War. The constant need for timber had driven forests to a new low and highlighted the danger of relying on cheap foreign imports. Some say this legislation, which established the Forestry Commission, triggered the single biggest change in land use in twentieth-century Britain.

Trees reduce flood risk and improve air quality, soil health, water quality and biodiversity, and consume carbon dioxide and release oxygen limiting global warming. The impact of a forest on carbon sequestration builds up over time as the cumulative amount of planting grows and younger trees mature.

The CCC say we need 1.5 billion new trees by 2050 if we want to achieve net zero and reverse biodiversity decline. In turn, by incorporating more timber into a zero carbon construction industry, we can recreate a profitable and sustainable timber industry within the UK - and enjoy the fresh air and beauty only found inside a forest.

Peatland restoration

Preserving one of the most valuable ecosystems on Earth

Peatland is one of the most valuable ecosystems on Earth, and the largest natural terrestrial carbon store. As well as having unique biodiversity, peatlands capture and store carbon over time, naturally removing greenhouse gases (GHGs) from the atmosphere. Carbon is laid down in the form of partially decomposed plant and animal remains whose decay is limited by waterlogged conditions.

This means that when we damage or destroy peatland, we release a huge amount of greenhouse gas emissions into the atmosphere. Globally, peatland stores more carbon than all other vegetation types in the world combined. In turn, damaged peatlands are a major source of greenhouse gas emissions releasing almost 6 per cent of annual global carbon dioxide emissions. We can ‘rewet’ peatland, however, and they will re-sequester carbon dioxide.

Peatland protection and restoration can bring significant emissions reductions.

The UK should act decisively to protect this overwhelmingly valuable ecosystem by setting an end date to peat extraction, peatland burning and the sale of peat products.

Environment Act

An ambitious Environment Act that responds to the gravity of the current environmental crisis by setting binding legal targets for urgent nature recovery in England.

The stark findings of the UN's Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) demand more action to halt and reverse the unprecedented decline of nature, and its likely effects on human prosperity and health. The findings are global but we need look no further than our own gardens to witness human impact on our natural world. We cannot legislate for other countries but we can set an example by using legally binding targets to secure dramatic recovery at home.

The success of the world-leading Climate Change Act, and creation of the CCC provides a useful template for further legislation. The CCC is a well-respected, independent, and expert organisation, providing robust analysis on the UK's decarbonisation progress. It has analytic credibility and publicly available advice, which means that any government rejection of the CCC's analysis would have to be reasoned and justified.

Now we need similarly ambitious targets and scrutiny for the recovery of biodiversity, and for the restoration of the natural capital that secures our own health and wealth. This landmark legislation will set out bold legally binding targets and minimum standards for:

- Clean air
- Restored water catchments
- Thriving wildlife
- Waste and plastic pollution

- Rich green spaces with minimal human intervention
- Supply chain environmental footprints

It is essential that these targets are legally-binding and comprehensive. We need to be sure that they are not limited by the short-term purview of a single parliament, but extend strong obligations for action from government to government, and so that national and local businesses and other organisations can invest their time and money with confidence. We need to be sure that there is a robust legal duty to meet the targets and that they are ambitious enough to finally end the decline of nature and set us on a new path to ecological regeneration.

Nature Recovery Network

New, local maps to restore nature and provide a route for wildlife

The Environment Bill will achieve many of its targets by creating an ecologically-coherent **nature and ecosystem recovery network** to address all environmental decline across England.

A Nature Recovery Network is a joined-up system of places important for wild plants and animals, on land and at sea. It allows plants, animals, seeds, nutrients and water to move from place to place and enables the natural world to adapt to change. Protected wildlife sites separated from one another are not an accurate reflection of nature - an ecosystem of mutually-dependent species and habitats. Today, the UK is a human-dominated landscape. Most original habitats have gone, and natural ecosystems are fragmented. Woods, meadows, ponds and other places with wild plants and animals are smaller, fewer, frequently polluted and cut-off from one another. Most plants and animals are in decline - one in ten face extinction. Nobody disputes this, yet our planning system usually ignores it.

Every Local Authority (LA) in England will be required to publish a local nature recovery map, identifying areas where the greatest benefit for wildlife and people can be achieved. These maps will be:

- evidence-based;
- developed locally;
- landscape-scale;
- set with long-term ambition;
- regularly reviewed; and
- written into statutory documents endorsed by the Defra Secretary of State.

Each map will identify where we can:

- let flowers and wild grasses bloom along road verges;
- connect habitats via green bridges or tunnels;
- install green roofs across city skylines;
- protect and plants street trees; and
- encourage whole communities to garden for wild plants and animals.

These maps will form part of the new market-based structure for mixed public/private investment in environmental services (see 'Public money for public goods' in Responsibility). Developers can rely on the maps to implement the new principle of environmental net gain (see 'Planning reform' in Prosperity). There must be a clear duty on all public authorities to contribute to the delivery of the opportunities identified in the Local Nature Recovery Maps. For example, LAs should be obliged to refer to the maps when they make spending and planning decisions.

This new network will connect great swathes of the countryside. New grass-covered bridges or tunnels [see Box 1) will connect disconnected habitats and allow them to breathe flora and fauna into one another as nature intended.

Box 1 - Focus: Green bridges for man and beast

A public footpath is a legally protected right of way for travelers on foot. The majority of them are hundreds of years old, and are passionately protected public assets.

There are many cases, however, of footpaths ending abruptly at new dual carriageways where they once stretched across unspoilt countryside. In the not too distant past, road improvement schemes were prone to ignore existing rights of way, and truncated them. If this situation is dangerous for humans, imagine how precarious hedgehogs and deer must feel negotiating the roar of traffic.

We need to end this lottery for life by building a network of green bridges (or tunnels) that create a crossing point for people and wildlife. These bridges would not only join up habitats and connect colonies, but also help to build roads and railways into the landscape more seamlessly.

Environment watchdog

Finally, this new Act must also create a new, world-leading, independent environmental watchdog to hold government to account on environmental obligations within the new Environment Act and in environmental law more broadly. In terms of policy area, the watchdog must have remit into all areas affected by environmental law including climate change, housing policy and taxation. This will help to avoid siloed thinking and duplication across multiple government departments.

To maintain its independence from government the new watchdog must:

- report to Parliament;
- have a statutory body of parliamentarians to set its budget, scrutinise its performance and oversee its governance and appointments;
- hold legal powers to challenge the government; and
- be secured by strong and visible commitments to multi-annual budgets.

UK Security and Resilience

A National Resilience Unit

From 2005 to 2015, there were almost twice the number of weather-related disasters around the world than the period 1985-1994. Even if we meet our net zero 2050 target, we are not able to prevent already 'locked-in' changes to the climate from already emitted GHG emissions. We can, however, act to manage their effects and we must create effective strategies to do so. The Government should establish a new National Resilience Unit to coordinate and champion climate resilience across government and ensure investment is 'future proofed' against climate change impacts.

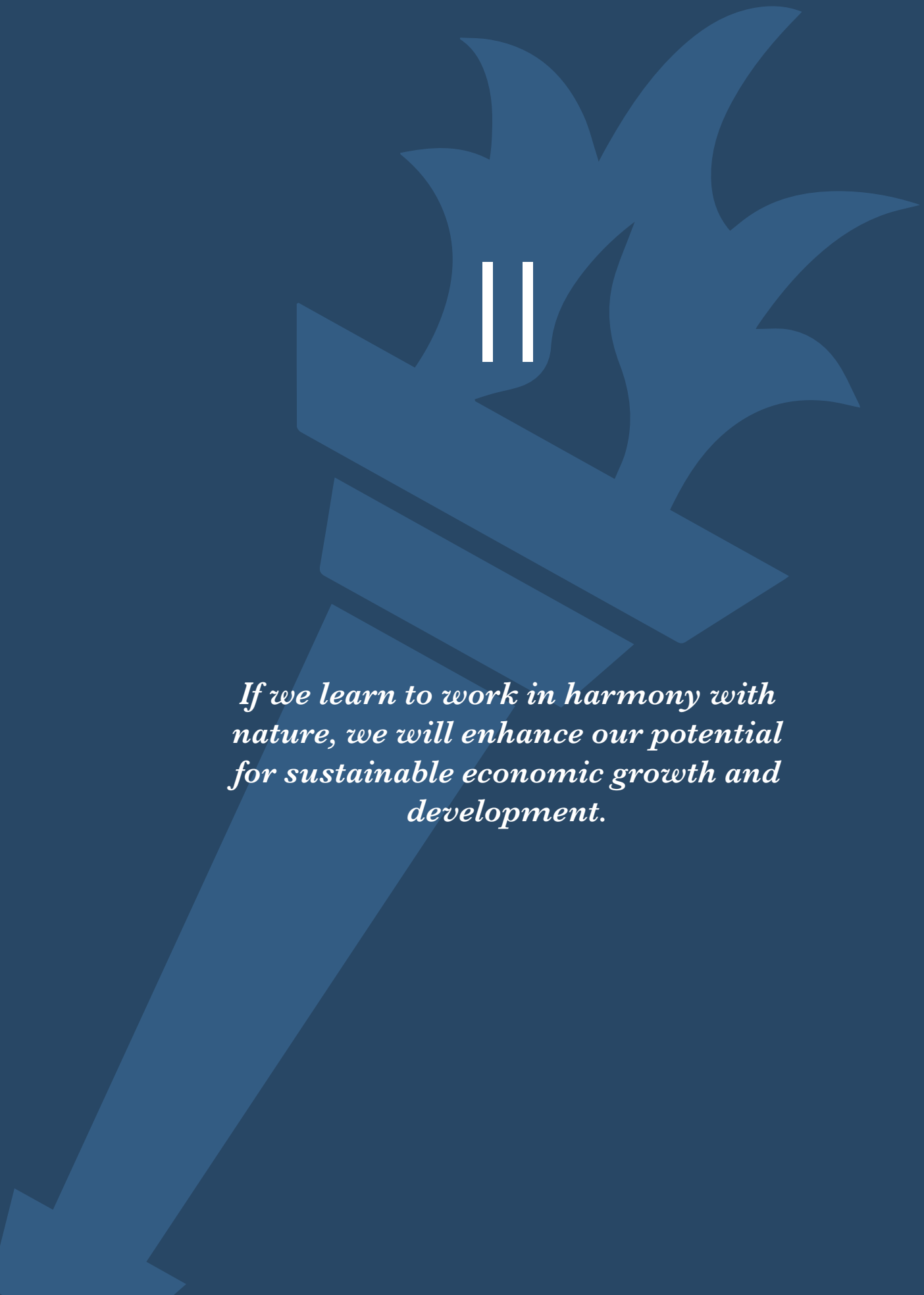
Every £1 spent on protecting communities saves about £9 in property damage and wider community costs. We also need to significantly increase investment in climate adaptation and resilience and this should be reviewed in the context of the next spending review. There is an incredibly strong case to front-load investment into domestic climate resilience in order to reduce future climate damages and these are often win-wins opportunities: improving productivity, supporting climate mitigation, and enhancing habitats all at the same time.

Protection for our seas and oceans

European fisheries are a shadow of former plenty. 64 per cent of stocks in European seas are classed as 'over-fished', meaning fish are caught more quickly than they can naturally reproduce. Shamefully, the UK is currently 94 out of 152 world countries and 10 out of 31 European countries for rates of illegal, unreported and unregulated fishing. This needs to be improved, urgently.

It is entirely possible to halt this decline and restore our waters to their historic opulence. When we leave the EU we will take back control of our waters by leaving the Common Fisheries Policy. The new Fisheries Act can set out new scientifically-set maximum sustainable yields, a ban on all bottom trawling, and a ban on fishing in British MCZs and MPAs.

This new legislation should be combined with additional capacity and capabilities to protect the UK's fishing rights.



If we learn to work in harmony with nature, we will enhance our potential for sustainable economic growth and development.

PROSPERITY

Since 1990 UK emissions have come down 43 per cent - and the economy has grown by two-thirds. In the last three decades the UK has enjoyed the fastest rates of economic growth and decarbonisation in the G20. Government decisions to support new technologies, market mechanisms and carbon pricing have put rockets under the clean energy transition seeing a dramatic fall in the cost of both solar and wind power, and new forays into bioenergy, geothermal and hydropower. Today renewable power generation is not just an environmentally conscious decision, it is – overwhelmingly – a sensible economic one.

Onshore wind turbines are now the cheapest source of electricity generation and 74 per cent of Conservative voters support them, showing increased public support. Wind farms should only ever be built where there is local support, but plotting the lowest cost pathway to net zero will only be possible if we use the cheapest source of power.

Together our rich resources in onshore and offshore wind could make us the Saudi Arabia of renewable power, and with a smarter network that is decentralised, digitised and flexible, this cheap, renewable power will cut our bills, boost our competitiveness, and reduce our emissions.

In the past few decades, as a result of a clear policy framework, private sector investment has deployed new technologies that employ 400,000 in the UK low-carbon economy. The increasingly smart grid created by private capital and business innovation stands in stark contrast to Labour's proposed programme of renationalisation [see Box 6].

On housing, current planning policy fails to protect British wildlife, which has been declining for decades, without delivering the homes that our young people need. The failure to build enough homes undermines productivity and poses a threat to the future of conservatism - while the quality of UK housing stock needs a dramatic upgrade. We build the wrong types of homes (large, executive, unaffordable) in the wrong way (inefficient, with unsustainable materials) in the wrong places (virgin greenfield, no public transport). A Royal Commission on Planning would help forge a path to a restored British countryside and a new settlement on housing.

And finally, transport. The net zero target can be used to inspire a new era of infrastructure investment. We need ambitious electric vehicle (EV) targets and the roll out of ultra-rapid chargers across the country, including at motorway service stations. We need focused investment to bring connectivity to the great northern cities of Liverpool, Manchester, Leeds, York, Hull smaller British towns where the sense of abandonment is well documented. This could all end with new centres for new technologies bringing jobs to poorer parts of the country - but they need the transport links to reap the rewards. Today we are at a crossroads, ecologically and economically. Setting a net zero emissions target isn't just about reacting to the seriousness of climate change, it's also about embracing the opportunities that await British jobs and industry, and exporting them to economies all around the world.

The message is clear: we can cut emissions, grow our economy, enhance the environment and unite the country behind a new common purpose, all at the same time.

Energy

The transition from dirty coal to clean renewables has been one of the most remarkable British success stories of the past thirty years [see Box 3]. The next thirty years will be characterised by the transition to a smarter, more flexible grid with more renewable power, and storage, interconnectors and a range of grid balancing measures to fill the gaps when the sun doesn't shine and the wind doesn't blow.

Yet by blocking the cheapest source of power from competing for contracts we have decided to cap our potential, denying manufacturers the opportunity to

reduce energy costs and consumers the chance to cut bills. We need to achieve net zero in the most economically beneficial way possible. The changes to energy policy outlined below will help us make the most of the clean energy revolution.

Subsidy-free onshore wind

We need to provide a route to market for onshore wind, and allow it to compete in CfD auctions [see Box 2].

Onshore wind should only ever be built where there is local support - yet the current effective national ban makes tackling climate change more expensive than it needs to be. New onshore would be subsidy-free; coming in below the wholesale cost of electricity. This means, depending on how the contracts are designed, it could reduce energy bills, provide revenue for the exchequer, create a fund for the communities that host new turbines - or some combination of the above. As Box 6 shows, it is also remarkably popular amongst Conservative voters.

Box 2 - Case Study: Contracts for Difference

The Contracts for Difference (CfD) scheme is the government's main mechanism for procuring low-carbon power. CfDs incentivise investment in renewable energy by providing developers of projects with high upfront costs and long lifetimes with direct protection from volatile wholesale prices, and they protect consumers from paying increased support costs when electricity prices are high.

CfDs provide generators with a "strike price", a guaranteed price for the lifetime of the contract. The market mechanism within CfD auctions - at which companies bid for contracts with the lowest price winning out - has, alongside technological innovation, helped to drive down these strike prices. From 2015 to 2017 the strike price at auctions for offshore wind fell from £120/MWh to £57.50/MWh. Industry expects prices to tumble further in the next auction.

Increase offshore wind ambition

Given the continued fall in the costs of renewable power, and ever-growing optimism from industry, the government's commitment to 30GW of offshore wind by 2030 looks increasingly unambitious.

We advocate the adoption of the CCC's recommended target of 75GW by 2050. Given the challenges facing other technologies, increased ambition for offshore wind isn't just a good idea but a necessary one.

Box 3 - Focus: UK Clean Growth statistics

- Since 1990 we have cut emissions by 43 per cent, faster than any other G7 nation.
- Bills are c. £490 lower than they would have been without the energy efficiency improvements since 2004.
- Household energy consumption has fallen by 17 per cent since 1990, despite a rise in the number of home appliances.
- In 2018, half of our electricity came from low-carbon sources, which was over twice the rate of 2010.
- We have outperformed the first and second carbon budgets, by 1 and 14 per cent respectively.
- More than 430,000 people work in low-carbon businesses and the supply chain.

Remove barriers for solar and batteries

Wind power is not the only energy success story of the past thirty years - solar is another source of renewable power that has benefited from private investment and innovation and rivals wind on cost. However, from changes to export tariffs to the proposed VAT hike for solar and batteries, solar faces unnecessary headwinds and the government should review current solar fiscal policy to ensure we're making the most of this vital technology.

Box 4 - Case Study: Carbon Pricing

In setting a strong carbon price, the UK has become a leader in global efforts to tackle climate change. By pricing coal off the grid we have made great strides to meeting our domestic carbon budgets, and now encourage other nations to match our ambition through the Powering Past Coal Alliance. In the future, a strong carbon price will be another tool help to deliver decarbonisation while providing billions of pounds in revenue to HM Treasury.

Some propose a universal carbon tax as a catch-all solution. The challenge is that, unlike for example a Contract for Difference, such a tax is unable to deliver the necessary certainty that firms need to invest in new technologies. No Parliament can bind its successor, and given current political volatility, investors cannot be certain that a carbon price would be kept at its proposed level in perpetuity - indeed successive governments have tinkered with the proposed trajectory of the current carbon price.

A carbon price is there a useful tool to decarbonise the economy, but cannot be relied on to do the job alone.

Box 5 - Case study: State versus private ownership electricity networks in Australia

Australia serves as a useful comparison to the regulatory system for energy networks in Great Britain. Networks in Tasmania, New South Wales (NSW) and Queensland are state-owned, whilst in other states they are privately-owned and operated.

In 2009, Cambridge University research compared the costs of running NSW's state-owned electricity networks in Australia to Britain's privatised system. The study found that:

'Costs and allowed revenues in NSW are higher than in GB and are growing much faster over time…physical differences are unlikely to be significant explanatory factors, but that differences in both regulation and ownership are potentially significant.'[1]

In 2013, the Australian Productivity Commission, the equivalent of the UK's National Audit Office, published the results of an inquiry into the regulatory arrangements for Australia's electricity networks.[2]

The report found that: *'while governments have a legitimate role in owning and operating many services in Australia, the rationale for state-ownership of electricity network businesses no longer holds. This reflects the development of sophisticated incentive regulations that function best when the regulated businesses have strong cost-minimising and profit motives.'*

It found that state-owned corporations often include constraints on running electricity networks, such as a lack of coherence in their dealings with the businesses, employee benefits that are out of kilter with those associated with most businesses and poor governance, including appointment of board members on a non-merit basis.

1. 'Comparing electricity distribution network costs and revenues in New South Wales and Great Britain'. Bruce Mountain & Stephen Littlechild, Cambridge University Electricity Policy Working Group, December 2009.

2. 'Electricity Network Regulatory Frameworks', Australian Government Productivity Commission, April 2013

Ban on fracking

A ban on fracking is overwhelmingly sensible for four main reasons:

One, gas from fracking offers little in the way of economic opportunity, and much more in the way of stranded assets. For a host of reasons including population densities, political dynamics and water distributions, it is extremely unlikely that the UK will be able to exploit our shale reserves in the way the US has.

Two, even if UK shale gas resources could be exploited at scale successfully we would not benefit from the significantly lower gas prices. The amount we pay for gas is largely determined by two things: the international liquefied natural gas spot market price and the European gas price. Consuming UK gas at the cost of production would require significant subsidies.

Three, fracked gas would only help to reduce our emissions if it replaced coal, which has already been almost entirely removed from the national grid. And, in addition, it could lead to unpredictable, 'fugitive emissions' that leak out of pressurised equipment.

Four, we know that security for the energy transition can be found elsewhere from cheap renewables, hydrogen, and nuclear, for example. In short, we know that in roughly ten years' time we should be turning away from gas.

Finally, as a cherry on top, fracking is woefully unpopular. Over twice as many Conservative voters believe that we should generate power from onshore wind than from fracked gas.

If we are serious about our transition to a more secure world we now need to step away from the oil and gas economy on which we have relied on in the past. (See Box 6).

Box 6 - Public opinion: Conservative voters back onshore wind

CEN polling by Survation

Sample size: 20,011
Methodology: People aged 18+ and living in the UK were interviewed online
Fieldwork dates: 29th March – 16th April 2019

- 74 per cent Conservative voters support onshore wind
- 2 to 1 Conservative voters prefer generating power from onshore wind to using gas from fracking
- 8 out of the 10 top onshore wind supporting constituencies are target seats

For a constituency by constituency breakdown visit cen.uk.com/polling

Housing

Housing policy in the UK has failed. Planning policy doesn't protect our precious wildlife, which has been in decline for decades, and we have a chronic lack of supply leading to some of the least affordable housing in the world. This lack of good quality housing is one of the biggest barriers to prosperity, and the future success of conservatism in the UK.

We need to upgrade our existing housing stock, and build new homes at the requisite standard - urgently. New families are unable to buy their first home, and are forced into poor quality properties that are not energy efficient, let alone carbon neutral or climate resilient. Most of these will need to be retrofitted in ten years' time, at great cost.

Planning reform

At the heart of a new system of planning must be a firm commitment to environmental recovery and achieving our 2050 net zero target. Our current ineffectual planning system delivers neither environmental restoration nor the homes we need.

We propose **A Royal Commission on Planning** to end this stagnation - a full and frank independent inquiry into the current state of house-building in the UK and a proposal for a new, coherent regime that works for developers, house-buyers and nature.

This Commission will review how best to help developers to meet the **environmental net gain principle**, informed by the new **Nature Recovery Network** (see 'Environment Act' in *Security*). It will identify ways to unleash entrepreneurial activity in the development industry, and how to use brownfield land and the green belt to best effect (see Boxes 7 & 8). We know the benefits of living close to nature, but many people are routinely deprived of its benefits. Requiring new development to pay attention to the Nature Recovery Network and environmental net gain would bring flora and fauna into every neighbourhood and provide fairer access to nature for all people.

Box 7 - Focus: Greening the Green Belt

The Metropolitan Green Belt around London was first proposed by the Greater London Regional Planning Committee in 1935. It is a ring of countryside that resists urban sprawl by keeping land permanently open, for activities such as agriculture, forestry and outdoor leisure. It is intended to preserve 'openness', rather than greenery *per se*. Further green belts were later authorised by the Town and Country Planning Act 1947, and were encouraged by Duncan Sandys who was Conservative Minister of Housing from 1954-57.

What is the Green Belt?

(1) What are we protecting?

There is genuinely green land, the fields and woods that everyone likes. 26 per cent of London's Green Belt consists of environmentally protected land, parks, and public access land.

There is also damaged or brownfield land, partly made up of abandoned buildings, gravel pits and other unattractive landscapes. One can even find examples of garages and other concrete wastelands enjoying green belt status. These areas are of middling environmental benefit as some species can find their home in abandoned land.

(2) What are we not protecting?

We can't stop development altogether, and so we create 'housebuilding displacement', which means houses go up on the other side of the green belt in the form of satellite towns. This puts distance between people and their places of work, education and leisure, meaning that unnecessary transport infrastructure is built – charting a course straight through the green belt - and families rely on polluting cars to get around.

Meanwhile, inside the green belt, pressure is put on vacant land or rare spots of greenery, which can be developed legally. Each hectare of city park is estimated to be worth £54,000 in benefits per year, compared to £889 per hectare for Green Belt land on the fringes of an urban area.

Box 8 - Report: State of Brownfield by Campaign for Rural England (CPRE)

The annual *State of Brownfield* report shows that there is enough suitable brownfield land available in England for more than 1 million

homes across over 18,000 sites and over 26,000 hectares.

Building on brownfield land has many combined benefits including:

- removing local eyesores;
- breathing new life into areas crying out for regeneration;
- limiting the amount of countryside lost to development; and
- building homes where people want to live, with infrastructure, amenities and services nearby.

CPRE wants to introduce a genuine 'brownfield first' policy, which ensures that suitable previously developed or under-used land is prioritised for redevelopment over green spaces and countryside.

Critically, many areas across England with high housing need also have a large amount of brownfield land ready for redevelopment. London, Manchester, Birmingham, Leeds and Sheffield have enough brownfield land for almost half a million new homes collectively.

Environmental Net Gain

New planning frameworks must implement the principle of environmental net gain across all new housing and development, including major infrastructure projects. This principle would require developers to assess the full lifecycle environmental costs of the development, from natural capital contained in the land they want to build on and its current condition, to the resources used in construction and the expected consumption when the building is in use.

Developers must be required to achieve environmental net gain in the whole lifecycle of the project because the environmental impact of a development is not limited to the footprint of the development itself. There is a big difference between a development that minimises water-use and run-off, compared to one that increases abstraction and multiplies flood risk downstream; or one built using sustainably sourced local timber compared to imported concrete. Some of these standards

could be included in building regulations directly (see below: 'Zero-Carbon Homes'), but an overall principle of environmental net gain gives innovative developers the freedom to find even better quality.

Different habitats and conditions can be ranked on their environmental importance, and developers would be required to demonstrate how they plan to offset their damage and leave the natural environment in a better state than they found it - with reference to local nature recovery maps. They could do this by creating nature corridors, planting new forests or joining up footpaths, for example. In the cases where improvements cannot be met on site or in the local area, the developers must pay a levy to complete environmental improvement elsewhere.

Upgrade old homes to cut energy waste

The UK continues to waste an obscene amount of energy - meaning lower productivity and, as things stand, potentially missed carbon budgets.

The government has rightly committed to keeping energy costs down by pledging to bring all homes up to a higher efficiency standard (EPC Band C) by 2035, but all industry experts agree there is a funding gap. There are of course numerous programmes that could help to upgrade our housing stock - from green mortgages (see Box 9) to "Help-to-Improve" loans, to retrofit vouchers in place of winter fuel payments for wealthier pensioners, to a reboot of the Green Deal with more appealing rates of interests.

Alongside these initiatives, the solution will likely require an injection of taxpayers' cash to achieve the necessary upgrades. These upgrades would deliver real savings for bill-payers - energy bills would currently be £500/year higher without the energy efficiency policies enacted to date. Properly insulated homes reduce excess winter mortality, particularly amongst the elderly, and reduce strain on the NHS. They will also boost productivity - by reducing the amount of energy we waste as a country.

Energy efficient homes

The final piece of the puzzle is ensuring that the new homes we build are of a sufficient standard which is compatible with our aim to reach net zero emissions by 2050. The government's current ambition is to build an additional 300,000 per year – we must ensure that these new homes are built to a standard which doesn't require them to be retrofitted or their heating system changed at a later date.

Transport

Improving the UK's creaking transport infrastructure of all communities, large and small, is crucial to boosting productivity and cutting emissions. The UK of the future will see low carbon industrial clusters connected by low carbon transport links. Transport is also now the number one sector of GHG emissions in the UK, and dirty diesels contribute to the poor air quality in our cities. A total modernisation of our transport network is an economic, environmental, and public health priority.

Electric Vehicles

A 2035 EV Target

We now know that it is necessary to bring forward the phase out date for sale of new petrol and diesel cars to 2035 in order to hit our climate targets. Given the lifecycle of a traditional car, the CCC are clear that ensuring that all cars and vans are electric by 2050 - needed for net zero - will require all new vehicle sales to be electric by 2035. This is achievable. By 2025 new EVs will be the same upfront cost as the equivalent ICE model. If we get the infrastructure right, by this point there should be no reason for consumers not to buy an EV.

Short term policies

Yet in order to make that long term target a reality, we need the short term policies to get us there. We therefore propose a suite of short term policies that should be introduced to accelerate the electrification of road transport. These include:

- Government-backed interest free loans for EV purchase.
- Creating incentives for the installation of ultra-rapid EV chargers at key strategic points, such as along the motorway network.
- A new tax on sales of non-EV after 2030.
- Introducing the right to request an EV chargepoint.
- Meanwhile, a shift to 10% ethanol in standard petrol could deliver both emissions reductions and UK jobs.

Road pricing

As we shift to electric vehicles, the amount of revenue the exchequer takes from fuel duty will shrink. We need, therefore, to change how we pay for roads.

Road pricing is based on the principle that those making use of public roads should pay a sum of money accordant to the costs they generate when doing so. Ideally, the total sum should include the social costs of air pollution and greenhouse gases that transport produce as well as the cost of maintaining the road infrastructure. Sophisticated schemes also use live data to factor in congestion, and charge people more to drive during peak times on busy roads. Existing schemes (like Singapore) show that this can be done.

By working with the power of market price signals, road pricing incentivises individuals to use cleaner kinds of transport. Crucially, it is also much fairer, in that individuals pay only for the pollution they cause. This fits with the core conservative environmental principle of polluter pays - (see Chapter Three, *Justice*). To ease its introduction this new system could be phased in first with hauliers, and then rolled out to all other vehicles.

Regional rail networks & bus, tram and cycling

services

The lack of decent transport outside London is a handbrake on UK growth. Local transport networks in towns and cities are woefully undeveloped compared to similar sized places in other countries. To take just one example: Leeds is the largest city in the EU with no mass transport system. Its twin city, Lille, has two metro lines, two tram lines, and international high-speed rail connections.

Fixing this disparity is critical to UK growth, to easing the pressure on housing demand in London, and to national decarbonisation. To meet net zero, we need to switch more freight from road to rail, and commuters and travelers to low carbon transport.

These are a few strategic transport investments that the government should prioritise and that would boost prosperity, productivity and cut emissions:

- The modernisation of the rail network across the Pennines to cut journey times between the great Northern cities.
- The electrification of the rest of the Midland Main Line.
- A new supertram network for Leeds.

And as the government engages in transformative infrastructure projects it is important that it doesn't ignore local efforts to encourage active transport such as a revamped cycle to work scheme.

III

The aim of good regulation is not to limit the free expression of markets, but to ask business to act in a fair and sustainable way. To act without regard to others is neither just nor fair, and it's definitely not sustainable.

JUSTICE

Economic success brings people out of poverty by raising employment, reducing inequality and increasing tax revenue for social services. The previous chapter explained how economic growth and environmental protection are natural bedfellows; that public goods like environmental protection can only be funded by a healthy economy - by providing investment in a low carbon grid, for example.

The question is what to do about these externalities, particularly pollution. The father of market economics, Adam Smith, argued that social harmony and justice emerge naturally because natural, human self-interest requires us to find ways to live and work with each other in harmony. And, a second powerful human instinct, sympathy, means that when we see other people in distress, or full of joy, we share a version of their feelings. This natural sympathy teaches us what is and is not acceptable to other people precipitating a sense of, and need for, justice.

That is why the 'polluter pays' principle is so attractive. If enacted properly it can trigger behavioural changes on a dramatic scale, not only incentivizing investment in clean growth projects but generating revenue for nature conservation. We can extend carbon pricing to a full range of pollution charges for artificial fertilisers, pesticides, herbicides and all carbon-intensive fuels.

Of course, the polluter pays principle mustn't become a licence to pay to pollute as much as you can afford; it should be used as an incentive to reduce pollution. By strengthening the presence of this legal principle we could ensure that our response to climate change is fair and just, locally and internationally. One of the worst aspects of environmental degradation is that some of the most developed nations that have done the most damage to our world (like the UK) are likely to suffer the least if we fail to mitigate the harm. And in the UK it is deprived inner

city communities that suffer most from pollution, noise, overcrowding and a lack of green spaces.

We are not the first generation to witness environmental degradation or social injustice at the hands of unconstrained business. Exploitative child labour emerged as one of the worst evils of industrialisation, and was dealt with via the Factory Act 1833 and the Mines Act 1842. The Public Health Act 1875 reacted to the terrible state of inner city slum housing and required all new residences to include running water and an internal drainage system. The Clean Air Act 1956 was passed in response to London's Great Smog in 1952 and introduced 'smoke control areas' in towns and cities, and relocated power stations away from cities. It was one of the first times that the state legislated about what was acceptable behaviour within a private household.

In light of what we know about the state of our planet it is clear that our regulatory regime is, once again, behind the times. Today the systematic degradation of our environment is causing social injustice, and threatens the health of all species as well as future generations.

A just world demands the protection and conservation of all assets – natural, institutional and social – valuable to those that came before, those living today, and those yet to be born. As any country rambler will tell you: enjoy your freedom but close the gate behind you.

Polluter pays

The polluter pays principle says that those who produce pollution should pay the cost of managing it to prevent damage to human health or the environment. It has been part of mainstream conversations about environmental policy since the Rio Declaration 1992 and is owed far more prevalence than it currently enjoys. If we take into account all costs involved in production, costs will go up and demand will come down. More efficient products will benefit and our economy will be more efficient - and fair.

Of course, the polluter pays principle mustn't become a licence to pay to pollute as much as you can afford; it should be used as an incentive to reduce pollution.As

we leave the EU we have the opportunity not just to embed this into the UK policy framework but to enhance its status to a core guiding principle of government.

To make the polluter pay effectively, it is necessary to know about harmful activities wherever they take place. At the moment, many of the processes and materials that go into the manufacture of the things we consume are completely opaque; the carbon, water or land use 'embedded' in a product is invisible. As consumers become more aware of the polluter pays principle, brands may wish to compete by using new technologies like blockchain to offer full disclosure on the carbon content and other natural capital effects of their products. This will make the hidden environmental impacts of our choices more apparent to consumers and investors.

Air quality

Globally, the dirty air from vehicle exhausts, factories and power plants causes more deaths than smoking.

In Britain, air pollution is responsible for 64,000 deaths every year and our average life expectancy is 1.5 years less because of poor air quality.

There is no question that the NHS spends a huge amount treating conditions linked to poor air quality, including cancer, asthma, chronic obstructive pulmonary disease, strokes, heart disease, diabetes, obesity and dementia. In total, air pollution in the UK causes six million sick days a year and is estimated to have a total social cost of £22.6 billion per year. The diversity in suffering across deprived and wealthy areas of the country also make this a question of fundamental social justice. In 2016, 44 out of 51 UK cities exceeded their recommended limit for particulate matter in WHO's air pollution database. In terms of public opinion, 75 per cent of British people believe the government has a moral obligation to act.

The swap to electric vehicles (discussed in *'Prosperity'*) and new agricultural policy based on public goods like air quality (see *'Responsibility'*) will play an important role. We also need, however, to address pollution caused by domestic wood and coal burning, cleaning solvents and industrial processes including energy generation.

Policies could include:

- The creation of a new strict liability offence of causing or permitting pollution in breach of emissions regulations, with financial penalties calculated using a percentage of annual turnover (with consultation on whether the powers of prosecution to be held by the new environmental watchdog, the Environment Agency or the Crown Prosecution Service.)
- Higher emissions standards and taxes for non-road vehicles, construction equipment and on-site diesel generators. (There are clean alternatives to diesel generators available.)
- On-the-spot fixed penalty notices for cars with idling engines (including cabs at taxi ranks).
- New LA powers to close or divert roads when air pollution levels are high.
- New Clean Air Zones near schools and high streets (excluding buses).
- Escalating sales tax on all new internal combustion engine vehicles.
- A new full statutory duty to preserve urban green spaces. The health benefits of access to green space is well known and bears directly on air quality and respiratory disease, mental health and obesity (through increased physical activity).
- All public fleet vehicles to be zero emission by the end of 2020s (including buses, government cars, emergency vehicles and rubbish trucks).

Producer responsibility & plastic taxes

Box 9 - Focus: What is 'extended producer responsibility'?

Extended producer responsibility (EPR) is a type of product stewardship that goes beyond simple taxation. It says that manufacturers should be responsible for the total environmental cost of a product throughout its life cycle, including its end of life. It would shift the cost of recycling from LAs to the private sector and manufacturers. Ultimately, this means that a product's market price will rise, which will incentivise producers to change their processes to regain their commercial advantage. The UK has had a form of

packaging tax since 1997, but the legislation needs to be updated urgently to meet modern needs.

- Expand the existing Extended Producer Responsibility scheme (see Box 9) to cover more products including commonplace items such as mattresses, tyres, coffee cups, flooring, clothing and nappies.
- Producers to fund the management of packaging at the end of its life, including recycling and disposal. This means that producers are disincentivised from using hard-to-recycle materials.
- Set requirements of recycled content that all plastic packaging must have, with this number to rise every few years. As recycled materials become more valuable, this will end the bad economics that offer more profit per ton of waste sent to incineration than profit per ton of waste sent for recycling.
- Ban non-recyclable packaging materials as soon as alternative, viable replacements are identified.
- Tax fertilisers, pesticides and herbicides at point of production. These products are all easily identified and charged. Artificial fertilisers would become much more expensive, with a price that reflects the carbon produced in making them (which is a very energy intensive process), and the damage done to waterways, flora, fauna and soils. Farmers would be encouraged to change their operating plans to work with nature rather than against it, using crop rotation, mixed-farming and soil husbandry to improve productivity.

Waste crime

- Work with farmers and landowners to find spots for free, council-sponsored skips at convenient locations.
- New tech-smart Waste Crime Agency to: (1) track and detect cases of fly-tipping, (2) bring perpetrators to court with evidence like traced bar-codes and drone footage; and (3) secure robust penalties for offenders.
- More robust sentencing for those caught fly-tipping.
- Allow citizens to report fly-tipping online with photographic and video evidence.

Animal welfare

Farm animals

British farmers are passionate about the land and livestock their businesses rely on. Big and small, organic and conventional - farmers know more about animal care, hygiene and welfare than almost anyone.

There are, however, a few 'factory farms' that use huge amounts of grain-based feed, water and energy to boost their productivity. This demand for grain feed drives deforestation in other countries and the rise of chemical-soaked monocultures - which is the single biggest killer of nature. The overall result is microbial resistance, pollution, deforestation and biodiversity loss - costs that are all borne by present and future taxpayers.

The present food pricing system doesn't do enough to reward the farmers who are doing the right thing. Just like other parts of the economy, it disregards environmental costs thereby promoting unhealthy diets and inefficient, damaging ways of producing food.

As a minimum we need to:

- Develop transparent and consistent private-sector led food labelling with the Nature Friendly Farming Network. Consumers need a clear label that they can trust, and that goes beyond the basic requirements of the Red

Tractor label.
- Use public procurement food budgets to support nature-friendly farmers, and to support farmers who want to drive investment in the right kind of high-welfare food production.
- Commit to never lower our own animal health and welfare standards in pursuit of trade deals, and to use free trade agreements to agree common environmental and animal welfare standards where possible.
- With 60 per cent of the UK landscape being grass we need to shift incentives to encourage farmers towards grass-fed livestock, and away from imported grain and soya.
- Continue to crack down on the routine use of antibiotics in farm animals by:
  - banning the use of colistin in farm animals.
  - ambitious species-specific reduction targets aiming at 50 per cent by 2020 and 80 per cent by 2025.
- Encourage increased consumption of non-animal products, including through diverging from proposed EU legislation banning the use of meat-related wording for vegetable-based food products. E.g. Allow terms like 'Veggie Burger', 'Soya Milk', 'Quorn Sausages'.

Ban the export of live animals for slaughter

In 2012, 45 sheep died on a vehicle going through Ramsgate on their way to slaughter in Europe. The case was taken to court, but the High Court ruled that EU Single Market rules and regulations meant that the port could not ban live animal exports.

When we leave the EU we can end this cruel practice once and for all.

Longer sentences for cruelty to animals

We support the passing of the draft Animal Welfare (Sentencing and Recognition of Sentience) Bill, which was put out for consultation in December 2017, as soon as possible. The Bill raises the maximum sentence from 6 months to 5 years sending a clear message that cruelty to animals will not be tolerated.

IV

How can we make it easier for individuals, families, businesses and local government to do the right thing?

RESPONSIBILITY

In the last chapter we saw how, occasionally, the government needs to step in when private capital harms public health. Here we address a deeply conservative principle: assuming each individual has the freedom to make their own choices and take responsibility for their decisions. How can the government make it as easy as possible for us to do the right thing for the environment?

Hard-working families, businesses and local authorities don't have the time or money to halt their lives to act on depersonalised crises facing 'humanity' or 'the planet'. Daily choices are often based on price and convenience and sympathy is usually limited to the people and places that feature in our own lives. As conservatives, we know that people care most about what they know, whether that is the local park or rubbish piled up on the High Street.

All this comes back to a love of home. And we need to connect the environmental movement to a sense of home to make meaningful progress. History is full of examples of local groups of people taking the initiative when they see a problem or an opportunity to inspire positive change in their community. The Royal Society for the Protection of Birds (RSPB) was founded in 1889 by a group of women who wanted to stop the trade in birds' feathers for fashionable hats, and the Woodland Trust was founded as recently as 1972 by a retired farmer in Devon who was alarmed by the demolition of British forests in pursuit of growth. Today, the RSPB has over a million members and 18,000 volunteers, and the Woodland Trust protects over 1,000 sites and 26,000 hectares, all open to the public.

The fact that human behaviour lies behind so many environmental problems makes this point fundamental. Take food - it is our most basic commodity, but its production has the biggest impact on nature. It's the biggest driver of deforestation,

soil erosion, species extinction and water extraction, so it makes no sense that we waste a third of it. To reduce our impact on nature, we have to start taking steps at home like reducing our food waste, eating more seasonally and eating less poor-quality meat.

There is good evidence to show that businesses and individuals want to do more to help the environment but don't know where to start. Potential EV-buyers are let down by delays from car manufacturers, and everyone is fed up with labyrinthine local recycling systems that make us question where our washed-up milk cartons are really headed. The Common Agriculture Policy (CAP) puts a tiny portion of farming subsidies towards environmental protection but the vast bulk of the €3 billion in annual subsidies is handed to farmers based on how much land they farm - regardless of how they manage it. This 'basic farm payment' incentivises farmers to cut down hedgerows and flower meadows to show they farm more land, rather than rewarding them for managing their land in a sustainable way. In addition, it means that the largest and richest landowners receive nearly half of total payments while the bottom fifth receive only 2 per cent. We need to end these perverse incentives and encourage a return to more nature-friendly farming sector with simple principles like 'public money for public goods' - such as environmental stewardship.

We do not, however, always have to look for large chunks of public money or new regulations. Light touch incentives and obstacles have enormous power to change behaviour, and that is why the government should work to develop 'nudge' policies that transform our lives through light touch intervention. We need to change our incentives so that they work with nature, and improve our quality of life.

Faith in individual responsibility and a small state are inherently Conservative ideas, with huge relevance for nature. Edmund Burke pointed out that we are 'temporary possessors' and have a moral obligation not to squander our natural inheritance, lest we 'leave to those who come after…a ruin instead of a habitation.'

The death of nature may be a global problem but there are lots of things we can do to help. To successfully defend ourselves against big security threats like climate change, we must take responsibility for local environmental problems. If we can find simple ways to combine the two, we will be on the home straight.

Public money for public goods

If we are to achieve transformational change on the scale we need to, we must involve every business, family and individual in the country. Government incentives, taxes and subsidies must act coherently to bring about the restoration of nature and a net zero emission standard.

The principle of 'public money for public goods' has the potential to transform great swathes of government policy including our agricultural industry, land management and water and air quality. (See Box 10)

New Greening Government Commitments

Government leading by example

The Greening Government Commitment was a welcome sign of leadership by example from the largest purchaser of goods and services in the country. They include targets on greenhouse gas emissions, water usage and landfill and apply to government buildings, transport, purchasing and operations.

There is scope, however, to be more ambitious in how we spend taxpayers' money. We could, for example:

- extend greening commitments to all public authorities, not just government departments;
- find more radical ways to reduce emissions beyond simply reducing the size of the government estate, which is a one-off solution that cannot be repeated or replicated by growing businesses;
- review targets to align with the CCC advice on achieving net zero carbon accounts by 2050; and
- add a new future-proofing requirement for all new infrastructure investments so that they are:
  (1) carbon neutral; and
  (2) resilient to a two degree rise in temperature.
- introducing the net gain principle for the Government estate; and
- ensure Government procurement is aligned with net zero and the SDGs.

Box 10 - What is a public good?

There are two types of good: private and public. A private good is 'excludable' (enjoyment is preserved for those who have paid for it, or the owner) and 'rivalrous' (if you enjoy it, no one else can e.g. food). A public good is non-excludable (non-payers can enjoy at no cost) and non-rivalrous (enjoyment by one person does not preclude enjoyment by another).

Examples: policing, materials available online, clean air, clean water, beaches and marine habitats, flood defences, healthy soils, biodiversity.

Not examples: food, internet access, post-graduate training, healthcare

Why do public goods need public money?

The private sector usually do not supply public goods because they cannot do so for a profit. Most often this is because public goods are 'non-excludable', which means it is difficult to charge people for their benefit. There is, therefore, a market failure for that good.

Public goods and nature

'Natural capital' is the sum of our ecosystems, species, freshwater, soils, minerals, air and seas. These assets provide us with food, clean air and water, wildlife, energy, wood, recreation and protection from hazards.

If you look at the list of public goods examples and compare them to the list of assets classed as 'natural capital' you can see almost exact overlap. But the relationship doesn't end there.

The reason why the concept of public goods is so important to nature is because no natural asset operates in isolation. Nature is a global ecosystem of interrelated species, intimately linked by their physical environment. Everything depends on everything else, and it operates as a single system that is non-excludable, non-rivalrous and of paramount public importance.

Farming

Over 70 per cent of British land is managed by farmers. Our agricultural businesses are the lifeblood of our rural communities; producing the high-quality food for which Britain is famous and creating open green spaces for everyone to enjoy. If we can improve the way we support them, the scope for transformational environmental change is profound. If we get it wrong, however, we do substantial harm to great stores of all kinds of natural capital from rivers and forests to soil, air and wildlife. And for the last 45 years under the Common Agricultural Policy (CAP), we sadly have been getting it very wrong.

Nature-friendly farming is not only better for the environment, but is also a more productive and sustainable way to farm. Many farmers already play a unique and powerful role by helping wildlife and nature to flourish on their farms, thereby ensuring that their land and soils will be productive for the next generation. At the same time agricultural technologies like vertical farming will help deliver net zero - a target the NFU say that British farmers can meet by 2040. As other parts of the world become less fertile, British food production will become ever more important. We must support farmers in their work so that British farmers can continue to produce good food and serve as stewards of the countryside.

As things stand the bulk of support for farmers comes in the 'basic farm payment', which pays farmers for owning or managing land that is farmed and is simply awarded per acre. In addition to driving up the value of farm land artificially, this incentivises farmers to put every single inch of land into production causing riverbank erosion, the demolition of hedgerows and field boundaries and poor soil health.

In addition to this, farms are exempt from business rates and inheritance tax; exempt from any air or water pollution charges and carbon taxes; able to use subsidised red diesel with an 80% tax rebate; given special privileges in planning law; and protected from foreign competition through food tariffs (even if produced at the same standard).

While some of these positions are necessary and sensible, others are not fair. The current system is not solving the structural problems in British agriculture, including the fact that the average age of the British farmer is 60.

We need to consider what we are subsidising and why. We have the opportunity to leave the CAP and to choose how to spend our agricultural subsidies in a way that is good for food production and for nature. We could:

- divert the £3 billion in subsidies towards public goods, like:
  - peatland restoration;
  - hedgerow planting;
  - soil health;
  - clean rivers;
  - well connected and maintained public footpaths;
  - increasing wildlife and bird numbers;
  - capital investment funds to pay for new equipment and better buildings that deliver environmental benefits
  - carbon and ammonia capture and storage;
  - public car parks near footpaths, allotments, farm shops, education centres and outdoor leisure infrastructure.
- in the context of the upcoming spending review, develop plans to introduce fiscal policies on artificial fertilisers, pesticides, herbicides and insecticides (see 'Polluter pays' in 'Justice'), to improve soil health, clean up British rivers and help to restore pollinator populations;
- gradually reduce the complete rebate on business rates;
- offer a new tax break for natural capital allowances, where farmers can set the capital amount spent on environmental enhancement against their taxable income.

As a result, we would see:

- money being given to environmentally aware farmers who are already doing the right things despite a hostile market, and creating better air, water, and soil quality, stronger natural flood defences, greater biodiversity, a more sustainable farming industry, increased carbon sequestration, enhanced natural beauty and landscapes, improved access to nature and tourism, and better physical and mental health;
- money taken away from the few irresponsible farmers who do more harm than good;
- lower land prices and to encourage more young farmers entering the industry; and
- fewer chemical inputs (healthier soil and cleaner water).

Farmers' management of over 70 per cent of all UK land gives them a crucially important role to play in our future as the original and forever 'friends of the Earth'. It is the government's duty to help them to do the right thing for the long term health of their businesses, and for us all.

Private money for public goods

Implementing the twin principles of public money for public goods and polluter pays would cause radical transformations across nature and climate change mitigation in the UK if applied to our agricultural industry. But we needn't stop there. With a new market-based scheme for agricultural payments, 'suppliers' could bid together or individually to provide environmental services in specific catchments to 'investors' via online marketplaces. This would rely on the Nature Recovery Maps drawn up by each LA (see *Environment Bill* in 'Prosperity') and would provide landscape scale recovery for nature and to mitigate the effects of change.

Suppliers would include farmers, land owners, and land managers. Investors could include the general public (via central, devolved, and local government), private interests with an interest (such as water companies and insurers) and civic groups (such as conservation NGOs, civil society groups, land trusts, philanthropists, local communities, or crowd funders). In addition, large private companies hit by large pollution taxes (from new 'polluter pays' charges) could invest in 'twinned' environmental services, earning 'carbon credits' or 'nature credits' to offset their tax bill (with the rules carefully set by the Natural Capital Committee and CCC).

The environmental services open to investment must offer a variety of options with varied outcomes, including: reduced fertiliser and pesticide use; crop rotation; woodland creation and management; creation of field strips next to arable land; maintenance of features like hedges, stone walls or ponds; planting rare or indigenous crops; creating footpaths through fields; creating attenuation ponds in the uplands; building woody debris dams; restoration of peatlands and naturalised river pathways; planting of vegetation as a buffer by the side of waterways; construction of dykes or ditches; and the reintroduction of native species, such as the beaver or lynx.

A market-based approach, set at the landscape scale via LA nature recovery maps, could be tailored to local conditions and local priorities. Not only will the open competition improve value for money, but it can also improve the quality of the environmental services on offer and introduce new non-public sources of funding into rural activity. This would make possible the long term aspiration to reduce public funding in agricultural subsidies and to increase private funding for environmental services (see Box 11).

Box 11 - Case Study: EnTrade

EnTrade is an online platform that uses reverse auctions - similar to CfD auctions - to fund cover crop programmes on farmland. Water companies, for example, can pay farmers to manage their land in ways that prevent water pollution. Once the auction has closed, bids are listed by EnTrade according to their cost per unit reduction (for example by £/kg of nitrogen), with the lowest priced bidders being successful.

Wessex Water trialled the concept and ran their first auction in June 2016, advertising a 20-tonne target for nitrogen reduction on the platform. Following this successful trial, two further auctions were run in February 2017, followed by another two in January and June 2018. By using EnTrade, Wessex Water has achieved:

- 557 bids
- from 63 farmers
- for 153 tonnes of nitrogen savings
- across 2,993 hectares of land.

Civic Engagement

Household waste collections

Recently, domestic recycling rates have stalled at about 44 per cent. Across the UK there are about 300 different systems of collection for household recycling and in some Local Authorities (LAs) recycling rates are falling. Many do not collect the full range of materials that can be recycled, and most do not collect food waste separately. Families and individuals are increasingly confused about what can and cannot be recycled just as public concern about plastic pollution has peaked.

- Consistent collections. Every LA and Council will be required to:
    - » collect waste from all households at least once per week
    - » collect the same, separate streams of waste:
        - dry recycling (standardised materials and rules)
        - food waste
        - non-recycling
        - garden waste
- Create a new voluntary standardised and simple labelling system for recyclable packaging and non-recyclable packaging that is clear at time of purchase to enable better consumer choice.
- National campaign to drive public awareness and to encourage uptake.
- Set a gold standard certification and labelling system for practical definitions of 'recyclable', 'biodegradable' and 'compostable'. Current definitions are misleading for consumers and not fit for purpose.

A few other ideas to make it easier for individuals and businesses to do the right thing could include:

- specifically nature-focused programmes on the National Citizens Service;
- extended deposit return scheme that goes beyond plastic bottles;
- an updated, more generous and flexible cycle-to-work scheme;
- more central government funding for cycle infrastructure such as 3-second early traffic lights; and
- a requirement for businesses or commercial landlords of a certain size to provide cycling infrastructure at workplaces, including racks, lockers and showers.

Nudge theory

Nudge policies are non-enforceable, light touch and low-cost measures to encourage us to behave in particular ways. The incentives are non-intrusive and do not limit individuals' freedom of choice. The strong relationship between environmental decline and human behaviour means that there is enormous scope for better use of behavioural economics to reduce human impact on nature.

A few examples of nature-friendly nudge policies are below. These could be adopted by Government or by businesses looking for ways to be more nature-friendly.

- Add 'often good until' dates on food to counter our culture of binning food that is still fresh enough to eat.
- Place meat and vegetarian equivalent products next to each other in grocery shops and supermarkets to encourage meat eaters to choose the vegetarian option.
- Create central displays of seasonal fruit and vegetables to encourage shoppers to buy seasonal products.
- Make the more sustainable choice the default option e.g. double sided printing on all default printer settings.
- Give energy and water use feedback to households letting them know how their consumption compares to neighbours and households of a similar size.
- Integrate a lottery into a plastic bottle deposit return scheme.
- Improve compliance with 'no-idling' traffic signs by adding a photo of the recipient in their car (captured by on-road cameras) to the letter sent to drivers setting out their penalty.
- Use attractive slogans and special, easy-access counters for the most sustainable food options in school, hospital and prison canteens.

Investment

'Sustainable finance' is the alignment of financial products, services, practices, standards, and norms with global environmental sustainability and the management of environment-related risks that can strand assets.

As the fifth largest economy in the world, the UK has the capital, talent and

institutional expertise to lead the way on innovative fiscal policy and corporate responsibility. As we saw in Prosperity, there are significant profits to be made in new data-driven, climate-smart and emissions-reducing infrastructure and technology, including but not limited to transport, energy and housing. But to take the lead we need to harness our financial system with new frameworks and incentives that put British industries and investment funds ahead one of the most significant economic changing points in human history.

If we fail to pioneer these new policies, we may find ourselves beholden to new standards and criteria that are not beneficial to the environment, or to the UK.

We need to think about how to create the incentives and opportunities that attract private capital investment in clean tech innovation and climate-resilient infrastructure across our society.

Policies could include:

- Work with the City of London to ensure London is a green finance centre, helping to secure the transition to global environmental sustainability through innovative financial products and services.
- Ensure the Companies Act, Listing Rules, Corporate Governance Code, and Stewardship Code work together to promote informed active ownership, particularly from retail investors in active as well as passive funds, and lead to better environmental outcomes.
- Support green mortgages for household energy vefficiency retrofits, as well as sustainability improvement loans to help UK companies make investments needed to align with Paris and to become more efficient and competitive.
- Make green finance a core theme of our UNFCCC COP26 Presidency and ensure there is a green finance track in the CDB COP15.
- Make the Task Force on Climate-related Financial Disclosures (TCFD) recommendations mandatory by 2022 and require financial institutions to disclose to what extent their portfolios are Paris and SDG aligned.
- Establish a new Task Force on Nature-related Financial Disclosures (TNFD) to ensure nature and biodiversity are properly measured and managed in financial institution decision-making globally.
- UK Export Finance and CDC should be Paris and SDG aligned.
- Use funds repatriated from the EIB after Brexit to ensure that financing

mechanisms and facilities are available to support cost-effective investment in decarbonisation and conservation domestically.
- Support the creation and use of world-leading geospatial datasets and tools that will help financial institutions integrate environmental factors into their decision-making.
- Create a 'brown' taxonomy of investments that undermine the objectives of the Paris Agreement and consider how to disincentivise investments in these areas over time.
- Announce a consultation on potential incentives for holders and issuers of green securities and loans that support the BEIS Clean Growth Strategy and DEFRA's 25 Year Environment Plan. This could include a targeted increase to the Individual Savings Account (ISA) allowance, as well as changes to Stamp Duty Reserve Tax (SDRT) and Capital Gains Tax (CGT).

V

The UK has a unique responsibility and opportunity to show leadership on the global environmental crisis.

DIPLOMACY

Previous chapters have set out what we can do at home. We know, however, that halting and reversing the destruction of nature will have to be a global effort. The UK has the power to lead in two ways. First, by demonstrating that commitment at home. And second, by using our considerable international influence to encourage other countries to follow our lead.

The UK is already a climate leader, but we need to do more to retain that leadership role. Our international credibility in the climate arena is built on a strong record of tackling emissions and fulfilling obligations. This leadership matters: over the last two decades, the British government has placed a low-carbon economy at the heart of industry, and the progress is astounding. We are on track to meet our commitment to phase out coal-fired power by 2025 and there is now considerable international interest in our ground-breaking Climate Change Act and coalitions like the Powering Past Coal Alliance.

The world's poorest countries will be the worst affected by climate impacts and the least equipped to cope with instability. We can do serious work with our UK aid, supporting local projects all over the world that provide sustainable employment. And we would have even more money for these projects if we stopped spending billions on schemes that contributed to carbon emissions including offshore oil and gas extraction in Ghana, Colombia and Brazil.

2020 will be a pivotal year for global leadership on the environment. First, the UN Paris Agreement will come into force, and newly revised national commitments will be agreed at the 26th Conference of Parties (COP 26), which the UK hopes to host with the vocal support of British business. Second, a new High Seas Treaty that protects the expanses of ocean lying beyond national control will be agreed.

Third, the 15th COP of the Convention on Biological Diversity (CBD) will aim to create a new deal for nature and people, and become the 'Paris Agreement' for nature. So far, CBD has been the 'lesser cousin' to climate agreements with catastrophic results for biodiversity and species loss. With global goals for nature being missed almost everywhere, the need for political leadership and funding commitments could not be more urgent. Conservation scientists propose a 2020-2050 'blueprint for biodiversity': a vision for the future through the CBD. Finally, the sustainable development goals (SDGs) will be reviewed, with new targets set up for 2030. Together, Paris Agreement, High Seas Treaty, CBD and new SDG targets will make up the 'Agenda 2030'.

Almost as exciting, perhaps, is the UK government's call to protect 30 per cent of the world's oceans by 2030. This was a landmark decision for international conservation and for the world's oceans, which are in crisis. Marine life is under threat from acidification, pollution and overfishing, which are stripping the marine life that enables oceans to absorb half the world's carbon dioxide and produce at least half of our oxygen.

One of the most often used arguments against environmental responsibility at home in the UK is the complaint that anything we do won't make a difference because the 'real' problems are abroad. We are not precluded from responsibility because other countries are worse polluters. First, our record is one of the worst polluters in history. Second, every tonne of carbon and every endangered species matters, wherever it comes from. Third, environmental renewal would offer real benefits to all British citizens including better air quality, massive clean growth opportunities, better diets and improved health. And fourth, we have the international influence required to lead change, and are therefore irresponsible for ignoring that power.

The risks that we talked about in chapter one demand attention from all communities and nations around the world. We believe that the UK can rise to the challenge of leadership, just as we have done before.

UK Overseas Aid

The UK is the third largest international donor and one of the only major western economies to meet the UN target to donate 0.7% of GNP to overseas aid, contributing a total of £13. billion to the international aid budget in 2017. In 2017, 38% of the UK aid budget went to multilateral organisations such as the UN, while the remainder went directly to developing countries. Africa was the largest recipient of bilateral aid, with increases in East African countries, such as Somalia, affected by drought.

UK aid money saves millions of lives worldwide, and offers evidence of our international goodwill and leadership. It also helps to preserve stability, mitigating or even preventing disasters like war and mass migration.

We believe that a greater proportion of the UK aid budget should be spent on projects and programmes that, directly or indirectly, tackle biodiversity loss and climate change.

We can increase our efforts to:

- share expertise on renewable energy to help developing countries to leapfrog the coal phase;
- finance new clean energy and low carbon projects;
- share knowledge on flood defence engineering and other weather risks;
- continue to work in partnership with universities to provide state-of-the-art weather and climate risk information to communities around the world;
- invest in enterprise projects that are climate resilient or projects that build climate resilience; and
- contribute to the creation of nature protection zones across the world.

UN Leadership

Commission on Climate Security

The UK is hosting the 26th Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). This provides the UK with a unique opportunity to lead and influence conversations on how to manage the effects of environmental decline and build a better world for our children.

Climate change has implications for UK national security and the security of countries and regions around the world.

The UK is uniquely placed to lead a new Global Commission on Climate Security, reporting at COP26 in 2020, as a permanent member of the UN Security Council, a founder member of NATO, a leading military power, and as the third largest aid donor. This new Commission would examine the security implications of climate change and build consensus, particularly in the security and defence communities internationally, about what steps can and should be taken. The National Security Council should establish the Commission and convene a major conference on the topic prior to COP26 together with our allies and partners around the world.

Paris Climate Agreement

Host the UN climate change conference in 2020, showing ambitious climate resilience and innovative and profitable progress in clean growth (COP 26).

Build on the success of the Powering Past Coal Alliance and UK's coal phase-out, by leading international efforts to help developing countries leapfrog coal and support investments in renewable energy.

Convention on Global Biological Diversity

Support a new 'Global Deal for Nature and People' (as proposed by WWF) as a companion to the Paris Climate Agreement to promote increased habitat

protection and restoration, national and ecoregion scale conservation strategies, and the empowerment of indigenous peoples to protect their sovereign lands.

The next Conservative Government should commit to securing this ambitious global deal to protect nature at the Convention on Biological Diversity (CBD) meeting in Kunming, China in October 2020.

The United Kingdom should push for a legally binding CBD treaty to end the extinction crisis by protecting 30% of the planet by 2030, including 30% of the ocean and 30% of the land.
A Conservative Government should assemble a high ambition coalition of countries to lead the international effort to secure 30x30 as a part of the UN CBD treaty in 2020.

A new High Seas Treaty and ocean conservation

A Conservative Government should lead by example by highly protecting 30% of UK domestic waters, plus at least four million square kilometres of ocean in our Overseas Territories as a part of the existing Blue Belt commitment.

We also call on the next Conservative government to endorse the Blue Belt Charter to protect the UK Overseas Territories, already signed by more than 100 Conservative MPs.

The high seas are the open ocean far from coastlines and they threatened by deep-sea mining, over-fishing and the patenting of marine genetic resources. Oceans are vital because they capture around 90 per cent of the extra heat and about 26 per cent of the excess carbon dioxide created by human activity.

A Conservative Government must lead in the process already underway at the United Nations to secure an ambitious new treaty to protect nature in international waters, which we see as an essential mechanism if the international community is to protect 30% of the ocean by 2030.

Over the next two years, government representatives hope to agree a binding treaty to protect the high seas against over-exploitation. We believe the UK should

adopt an ambitious agenda at this negotiation, pushing for a global, legally binding instrument to protect high seas biodiversity under the UN Convention on the Law of the Seas (UNCLOS) by the end of 2020.

Commonwealth Alliance for Nature

The Commonwealth spans six continents and a third of the world's population. As a collection of nations with close ties of friendship and an abundance of natural resources including the longest coastline in the world, it offers a unique opportunity for countries with shared cultural values to bring together global expertise, experience and common interest in halting environmental degradation.

The Commonwealth Clean Oceans Alliance and the Queens Commonwealth Canopy have already shown what momentous progress through this alliance. Both the Commonwealth Canopy and Blue Charter involve all 53 countries of the Commonwealth including 75 per cent of the Pacific Islands and individual countries have offered to lead on specific issues like mangrove restoration, coral reef regeneration and ocean plastic.

Now we must create fantastic projects like them for all the precious habitats and wildlife found across Commonwealth, from the deserts and deltas of Botswana to the tropical mountains of Fiji. By using a world famous banner to champion their value, a new Commonwealth Alliance for Nature would be a unique network of conservation projects that bring funding, expertise and credibility to individual projects, no matter how small.

- Use UK Overseas Territories to establish ecological connectivity across the oceans. We can, for example, create an 'Atlantic Blue Belt' that links Exclusive Economic Zone Marine Protected Areas across the high seas.
- Build on the success of the Powering Past Coal Alliance and UK's coal phase-out by sharing expertise with fellow Commonwealth nations and helping them (and others) to leapfrog coal by supporting investments in renewable energy.
- Develop an ecologically coherent network of large scale marine protected areas on the high seas as part of the 30 per cent by 2030 goal.

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Conservative Environment Network Polling (CEN, 2019), [online] www.cen.uk.com/polling

Books

Dieter Helm, Green and Prosperous Land: A Blueprint for Rescuing the British Countryside (HarperCollins, 2019)

Roger Scruton, Green Philosophy: How to Think Seriously About the Planet (Atlantic, 2012)

Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations (Cannan ed., in 2 volumes, 1776)

1848

Public Health Act makes the state the guarantor of health and environmental standards for the first time. New local boards of health, prompted by outbreaks of Cholera and the work of Edwin Chadwick, are given powers to control water, sewage, food safety and rubbish.

1882

World's first coal-fired power station opens at 57 Holborn Viaduct in London. It lights 968 16-candle incandescent street lamps.

1889

Board of Agriculture Act establishes the first Ministry of Agriculture, Fisheries and Food.

1919

Forestry Commission established to replenish woodlands felled for timber during the war. Afforestation efforts stretched to over 900,000 acres.

1947

Town and Country Planning Act establishes the Green Belt. From 1955, Conservative Minister for Housing, Duncan Sandys MP, encourages LAs to protect land around their towns with clearly defined green belts.

1948

Anglers' Conservation Association founded to encourage anglers to buy land adjacent to rivers and bring legal actions against those polluting the river. Landmark case 'Pride of Derby' (1952) forced public and private entities to stop polluting the River Derwent.

1949

National Parks and Access to Countryside Act creates AONB designations. First national park established in the Lake District in 1954.

1956

Clean Air Act passed by Conservative Prime Minister Sir Antony Eden in response to the 'great smog' of 1952, caused by burning coal and other industrial activities, which claimed 4,075 deaths.

1970

Department of the Environment created under Conservative government with first ever Secretary of State for the Environment at Cabinet.

1972

Woodland Trust founded by retired farmer concerned by scale of deforestation. Today it owns and maintains public access to over 26,000 hectares of woodland.

1989

Margaret Thatcher UN speech on environmental breakdown:

"The environmental challenge that confronts the whole world demands an equivalent response from the whole world. Every country will be affected and no one can opt out...Those countries who are industrialised must contribute more to help those who are not...We are not the lords, we are the Lord's creatures, the trustees of this planet, charged today with preserving life itself - preserving life with all its mystery and all its wonder."

1992

UN Rio 'Earth' Summit documents ratified by UK under Conservative government.

1997–2014

Arctic summer sea ice loss rises to 130,000 km² per year - about four times as fast as the sea ice loss from 1979 to 1996.

2008

UK Climate Change Act requires the government to ensure the net UK carbon account for all six Kyoto GGs is 80% lower in 2050 than the 1990 baseline.

2016

Paris Agreement on Climate Change ratified by UK under Conservative government.

2017

Blue Belt launched, a 4 year programme of long term protection and management for over 4 million km² of marine environment across UK Overseas Territories. Due to end 2020.

What happens if we embrace the Manifesto?

2051

UK hosts 'The Great Exhibition of Nature' to celebrate man's growing prosperity alongside the restoration of nature. The date marks the 200th anniversary of the original 'Great Exhibition of the Works of Industry of All Nations' organised in 1851 and inspires a series of 'World Fairs' to celebrate the restoration of nature around the world.

2050

UK achieves Net Zero GHG emissions.

2045

Scotland achieves Net Zero GHG emissions.

2035

Last internal combustion engine vehicles are sold in the UK and the public fleet is made up entirely of EVs.

2030

Forestry Act means 50,000 hectares of forest planted in the UK every year.

2025

Last coal-fired power station in the UK closes its doors for the last time.

2022

Planning Act 2022 sets out new, codified regime including recommendations from the Royal Commission on greenbelt and brownfield land.

2021

Royal Commission on Planning and the Green Belt publishes its findings.

2020

Major new infrastructure projects begin, including a new generation of northern electric rail networks and a network of EV charging points across Britain.

UK hosts COP 2020 showcasing results from:

- first large scale decarbonised heating trial using heat pumps and hydrogen;
- first major carbon capture (usage) and storage scheme in UK;
- the new green shipping incubator at National Oceanography Centre (NOC) Southampton, with plans for the world's first 100% renewable powered, fuel autonomous, modern cargo ship.

2020 - 2025

Forestry Act means that 20,000 hectares of forest are being planted or cultivated in the UK every year.

2019

Landmark legislation is passed by Conservative government when UK leaves the EU:

Agriculture Act redirecting all public subsidies towards public goods and setting minimum environmental standards for all farmland in UK.

Fisheries Act taking back control of waters and establishing maximum sustainable yields.

Environment Act with legally-binding environmental targets and a new nature recovery network.

2018

Ivory Act passed by Conservative Government bans sales of ivory in UK.

2019

No-coal record. UK goes 18 days without using coal to generate electricity for the first time since 1882.

2019

Net Zero emissions by 2050 target set in law. UK becomes first major economy to legislate for net zero emissions under a Conservative government.