Blueprint for a resilient economy

green alliance...

“

It will be the duty of every responsible government to see that our economies are revived and rebuilt in a way that will stand the test of time. That means investing in industries and infrastructure that can turn the tide on climate change.”

Prime Minister Boris Johnson[1]

Prosperity, health and renewal

“The health of our environment underpins the health of our people and the economy.”

Following the crisis of the coronavirus pandemic, the UK must look to the future. The country is at a crossroads. The choices made now will determine the trajectory for decades to come.

At this time of great economic jeopardy, the government will need to be bold and ambitious in leading us out of this crisis. A successful future economy must be more balanced, with high quality employment and prosperity assured for all communities across the country. Out of a time of crisis and tragedy, we can create a better normal.

The health of our environment underpins the health of our people and the economy. If it is ignored, the UK will continue to be exposed to devastating shocks, from future pandemics to climate change and ecological collapse. The government has the chance now to lead a recovery that protects, restores and renews.

We can achieve this by supporting the resource efficient and low carbon industries of tomorrow. Investing in these industries and creating markets for them to thrive will strengthen the economy and put the UK at the forefront of the global low carbon transition.

Alongside this, a more resilient economy requires investment in the natural systems that allow economic activity to thrive. This will, for instance, help to mitigate the impacts of climate change, avoid flooding and drought, and ensure healthy soils and crop pollination into the future. Investing in natural systems is vital for the economy, as the interim report of the recent Dasgupta Review, commissioned by the Treasury, has shown.[2]

The UK can demonstrate international leadership through its forthcoming presidencies of the UN COP26 climate conference, the UN Convention on Biological Diversity Conference and the G7 in 2021, and by asserting its diplomatic weight in other global fora, like the G20, the International Monetary Fund and the World Bank. In the build up to the UN climate conference, to be hosted by the UK in November 2021, we must be ambitious and decisive in bringing about the economic transformation needed to protect the world from future health, climate and ecological crises.

This transformation must start at home. Here we present the five essential building blocks that will help to bring long term prosperity, health and security to the people of the UK.

“Covid-19 is the most urgent threat facing humanity today, but we cannot forget that climate change is the biggest threat facing humanity over the long term. Soon, economies will restart. This is a chance for nations to recover better, to include the most vulnerable in those plans, and a chance to shape the 21st-century economy in ways that are clean, green, healthy, just, safe and more resilient.”

Patricia Espinosa, executive secretary, United Nations Framework Convention on Climate Change[3]

1. Invest in net zero infrastructure

A low carbon economy improves quality of life and futureproofs against climate shocks.

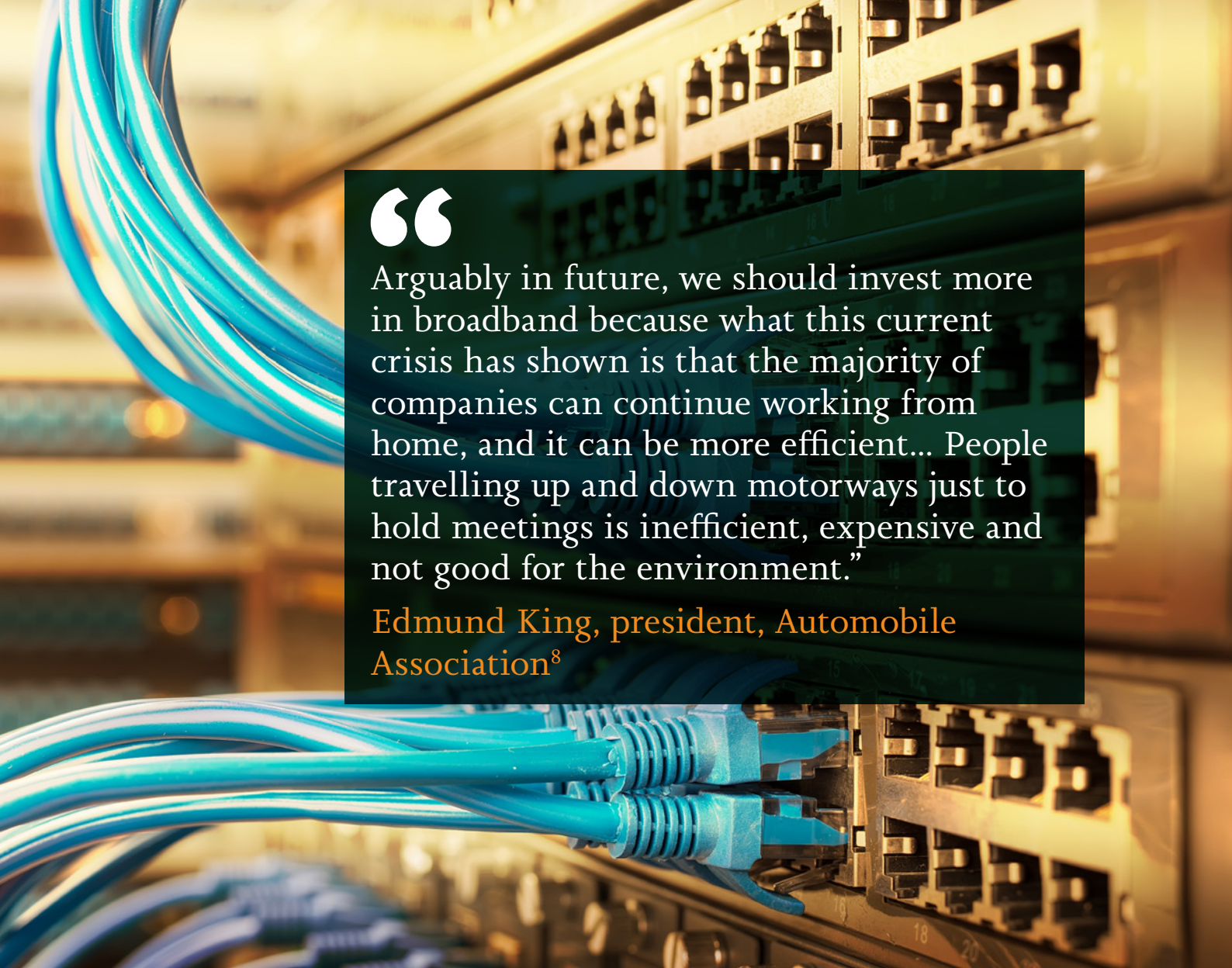
> Funds that were previously earmarked for expanding the road network would now be better directed at ensuring reliable, fast broadband."

Infrastructure shapes our lives. Net zero aligned infrastructure, like energy efficiency, safe cycle routes and better broadband connectivity, provides much higher and faster economic and social benefits than higher carbon alternatives, helping to get people back to work in the short term, and building low carbon capacity for the long term.[4] The government has underinvested in the low carbon infrastructure needed to meet its net zero goal. Our assessment shows there is still a £14.1 billion gap in annual investment in low carbon transport, buildings, natural capital and industry infrastructure.[5]

UK infrastructure priorities could also look very different beyond the Covid-19 health crisis. Rapid normalisation of video conferencing has demonstrated a new way to work, with more working from home and much less travel. Funds that were previously earmarked for expanding the road network would now be better directed at ensuring reliable, fast broadband, particularly for rural communities.

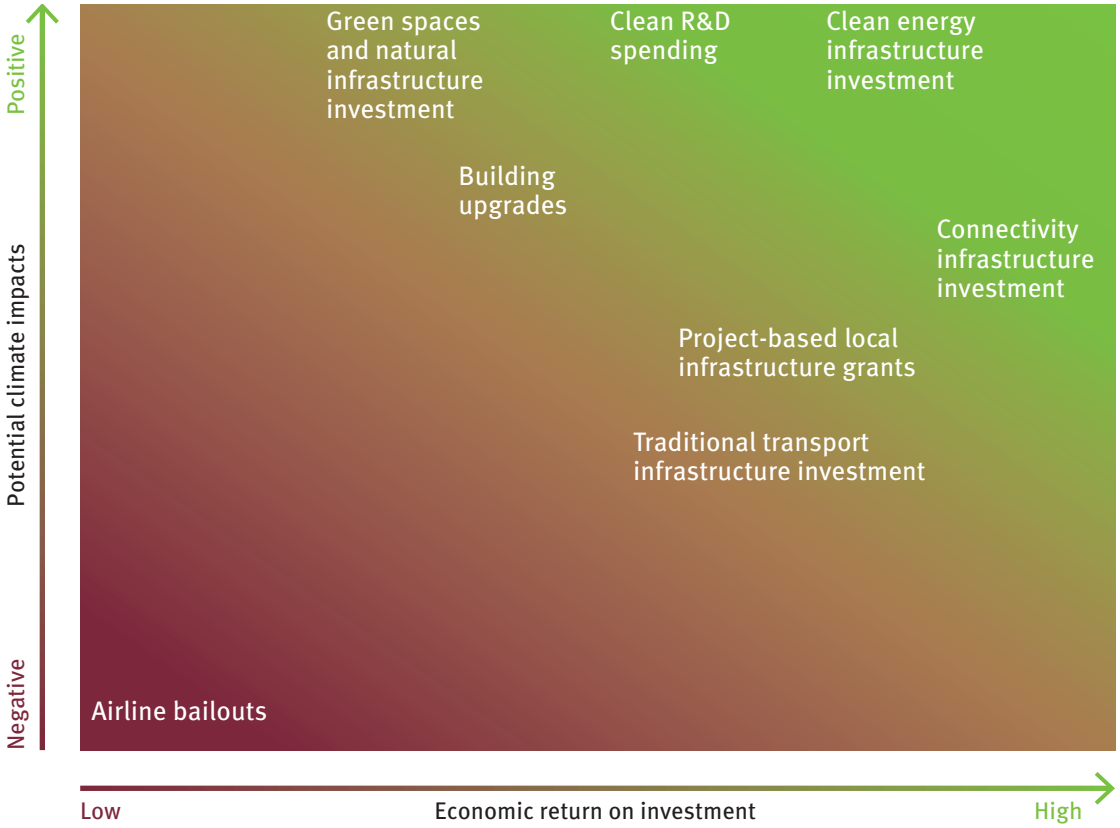
Upgrading housing for a low carbon future is not only crucial for climate action but will be a strong stimulus for the construction sector. And everyone in the UK should have homes that are comfortable, low cost to run and secure against future weather events like heatwaves, prolonged cold weather and flooding. Between 2013-14 and 2017-18 there were 11,458 excess winter deaths a year on average related to cold housing in the UK.[6] It is estimated that tackling this would save the NHS £1.3 billion each year in England alone.[7]

Full briefing



> “Arguably in future, we should invest more in broadband because what this current crisis has shown is that the majority of companies can continue working from home, and it can be more efficient... People travelling up and down motorways just to hold meetings is inefficient, expensive and not good for the environment.”
>
> Edmund King, president, Automobile Association[8]

Different economic policies and their impact on climate change and the economy[9]



2. Restore nature

Protection and restoration of wildlife and green infrastructure will help to keep people healthy and the economy thriving.

“Our food and farming system should work to protect the natural assets on which it depends.”

Destruction of nature causes the emergence of new pathogens like Covid-19, so avoiding this is vital for the future prosperity of society and the economy.

Access to nature and high quality green spaces was important to people during the lockdown for physical and mental wellbeing.[10] They also play an important role in helping to reduce the impact of extreme weather events like heatwaves. The cooling effects of tree shade and water saved the UK £248 million by maintaining productivity and reducing air conditioning costs on hot days in 2017.[11] Access to high quality green spaces should be prioritised, especially for more deprived communities.[12]

In the countryside, 41 per cent of UK species have become less abundant since rigorous recording began in the 1970s, and 15 per cent are at risk of disappearing all together.[13] Modern farming has put pressure on nature but, with 70 per cent of UK land currently used for agriculture, the work of farmers will be essential in protecting and improving the environment.[14]

Without decisive action, the ongoing loss of healthy soils and beneficial insects will make food production in the UK ever more challenging. Investing in nature-based solutions is one of the most cost effective ways to avoid the high economic costs of environmental degradation.[15] Our food and farming system should work to protect the natural assets on which it depends. It is estimated that new investment in nature recovery could create 10,000 new jobs in the short term.[16] And paying farmers to improve soil health, restore habitats, sequester carbon and reduce flood risk will be crucial over the long term.

Full briefing

“Building back from the Covid-19 pandemic marks a major turning point in the UK’s agricultural sector. The right decisions must be taken now on domestic agricultural policy and trade negotiations to achieve a carbon neutral and prosperous food and farming system by 2040.”

Minette Batters, president, NFU[17]

Photo by Quentin Menini on Unsplash

The potential impact of protecting vital ecosystem services on UK GDP in 2050[18]

3. Stop wasting valuable resources

Using inputs more efficiently makes businesses stronger and increases profit.

> Improving resource efficiency could add £10 billion a year in profits to the bottom line of UK manufacturing firms."

Improving resource efficiency could add £10 billion a year in profits to the bottom line of UK manufacturing firms.[19] This sector comprises up to a fifth of the economy in UK regions with high unemployment and low productivity, such as the North and the Midlands. The Department for Business, Energy and Industrial Strategy estimates that stimulating private investment in the energy efficiency of commercial buildings and industry would see annual profits of UK businesses rise by £6 billion in 2030.[20]

Better product design and reusing high quality recovered materials, product parts and products, instead of using new resources, would increase the resilience of UK businesses to the volatile international market in resources. This is particularly important in industries where the UK aspires to be a global leader. UK low carbon industries rely heavily on imports of cobalt and rare earth materials to make electric vehicle batteries and wind turbines.

Design that ensures longer lived products also benefits consumers. Eighty one per cent of people want businesses to offer repair, maintenance and disposal services for the products they make.[21]

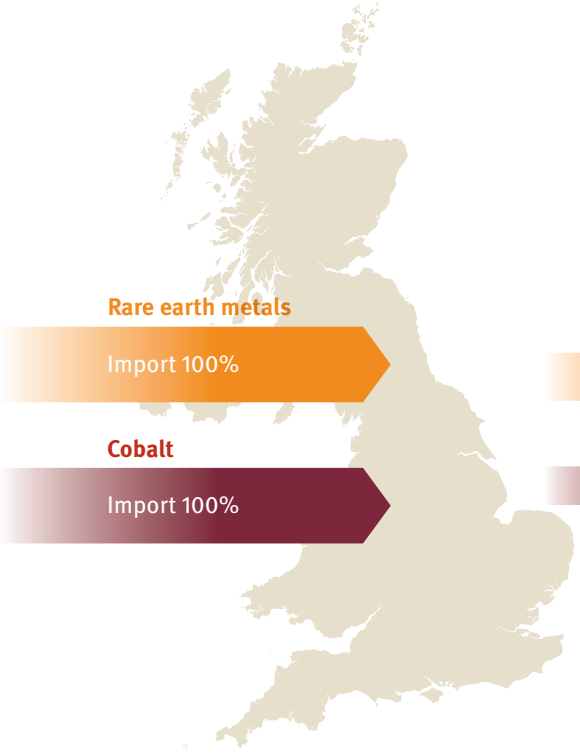
Shifting to a circular economy, underpinned by the expansion of industries like recycling, repair and remanufacturing across the UK, could create over 102,000 net jobs, or half a million gross jobs, many of them outside London and the South East.[22]

Full briefing

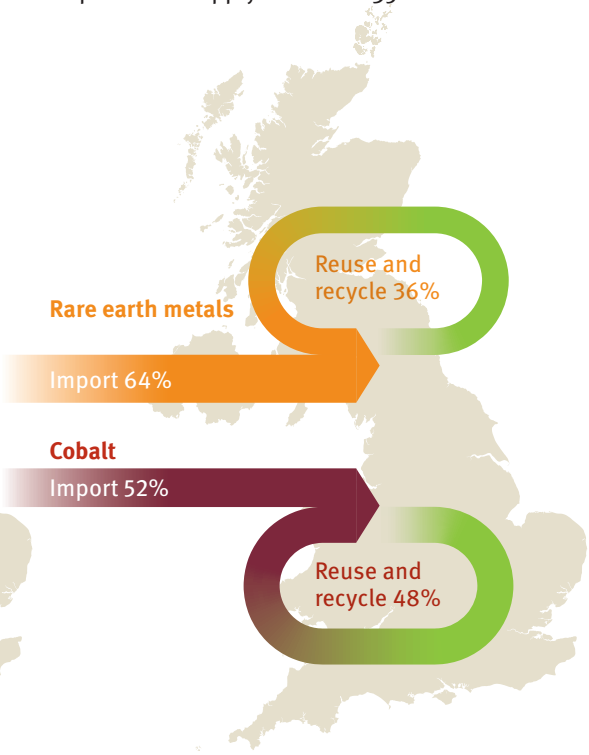
> “Designing products and services for a circular economy can also bring savings to a company. The first impression people always have is that it adds costs, but that’s not true. We find that it drives breakthrough thinking and can generate superior margins.”
>
> Frans Van Houten, CEO, Phillips Electric[23]

90% of investors would reconsider or rule out investment where supply chain risks are not addressed.[24]

Business as usual: 100% imports of critical raw materials in 2035



The potential to reuse and recycle critical raw materials, reducing dependence on imports and supply risks in 2035 [25]



4. Ensure clean air and healthy places

Good walking and cycling infrastructure makes streets safer for short journeys. Travelling longer distances using public transport and electric vehicles reduces air pollution.

“Adequate charging infrastructure for electric vehicles should be a top priority.”

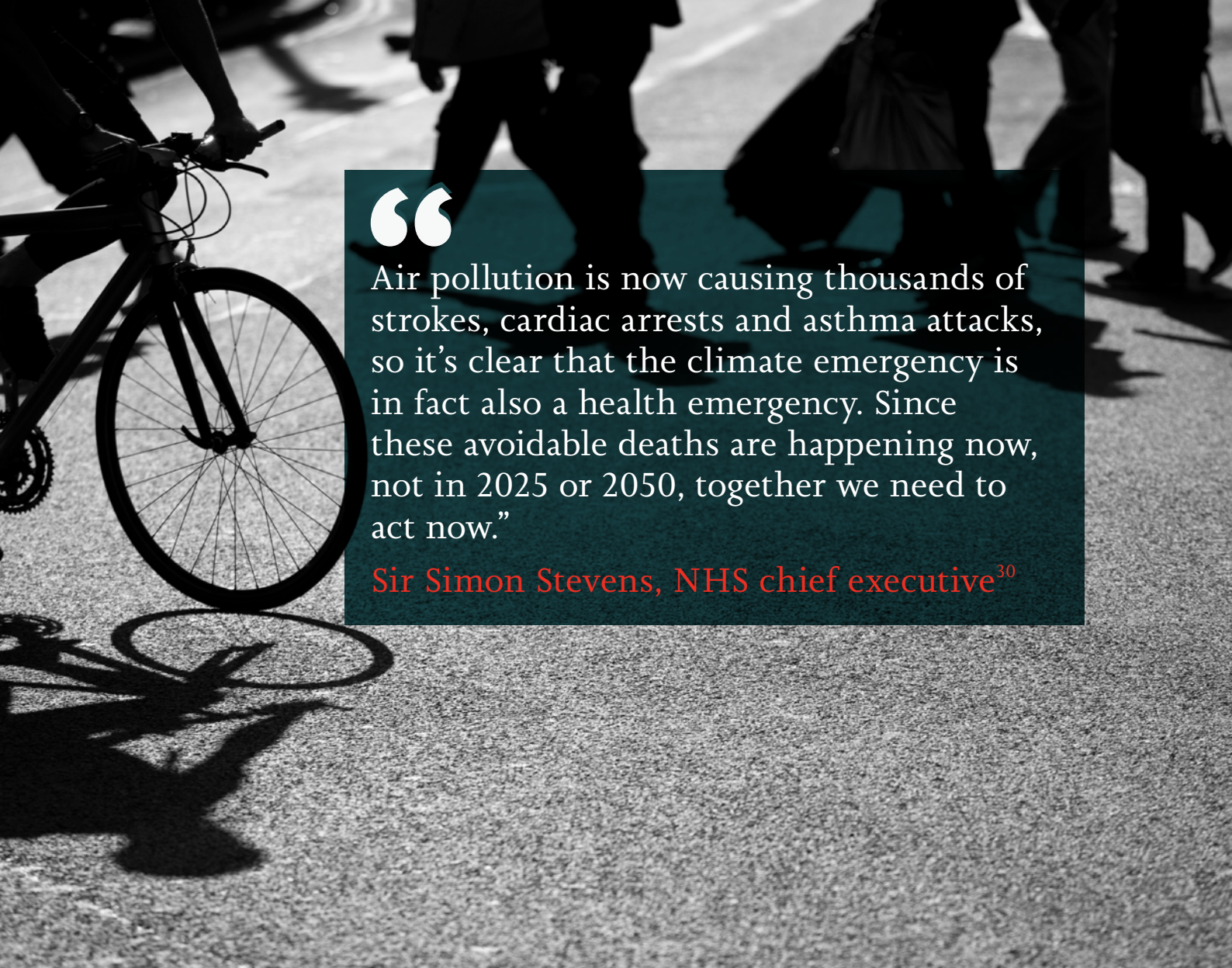
During the pandemic, the air was up to 80 per cent cleaner in our towns and cities.[26] Increasing walking and cycling improves people’s physical and mental health and, together with public transport and electric vehicles, reduces air pollution, significantly cutting health service costs. A quarter of the health costs of air pollution in the UK are due to cars and vans.[27]

In response to social distancing, cities around the world have converted roads to temporary cycle and walking pathways, which has had high public support: 81 per cent of UK city residents support creating more room for pedestrians and bikes.[28] And 74 per cent of people in the UK want fewer motor vehicles in urban areas for public health reasons.[29]

Promised investment in walking and cycling is a great start by the government. Now there must be strong incentives to encourage people out of their cars over short distances, including sufficient resources to help local authorities follow new government guidance to allocate more road space to bikes and pedestrians.

Over longer distances, changes to investment, regulations and taxes should help to increase the use of low carbon vehicles and encourage more people onto public transport, once public confidence returns. Adequate charging infrastructure for electric vehicles should be a top priority to ensure cleaner road transport and to protect everyone in the UK over the long term from the health effects of poor air quality.

Full briefing



“Air pollution is now causing thousands of strokes, cardiac arrests and asthma attacks, so it’s clear that the climate emergency is in fact also a health emergency. Since these avoidable deaths are happening now, not in 2025 or 2050, together we need to act now.”

Sir Simon Stevens, NHS chief executive[30]

Getting people out of their cars is good for health and for the health service

A shift of just 1.7% of car km to active travel is estimated to provide health benefits worth over £2.5 billion per year in 2030[31]

Commuters who walk or cycle reduce the risk of death from heart disease or stroke by 30% compared to using a car[32]

5. Make the recovery fair

Scaling up green industries can provide long term, high quality employment across all regions of the UK.

“There could be as many as 690,000 new roles in the low carbon and renewable sector by 2030.”

The UK is likely to be entering its worst recession for 300 years with public debt in 2020 alone set to reach £300 billion.[33] It is more important than ever that new economic opportunities are sought, especially for more deprived areas.

Productivity and earnings are a third higher in London than the national average, while Wales, the North and East Midlands lag behind. Creating long term, secure jobs in forward looking industries fit for the future will reduce this imbalance.

An ambitious home energy efficiency programme could create as many as 150,000 full time roles by 2030 all over the country.[34] Overall, an economy wide analysis estimates there could be as many as 690,000 new roles in the low carbon and renewable sector by 2030, split across low carbon electricity, low carbon heat, energy efficiency and electric vehicles.[35]

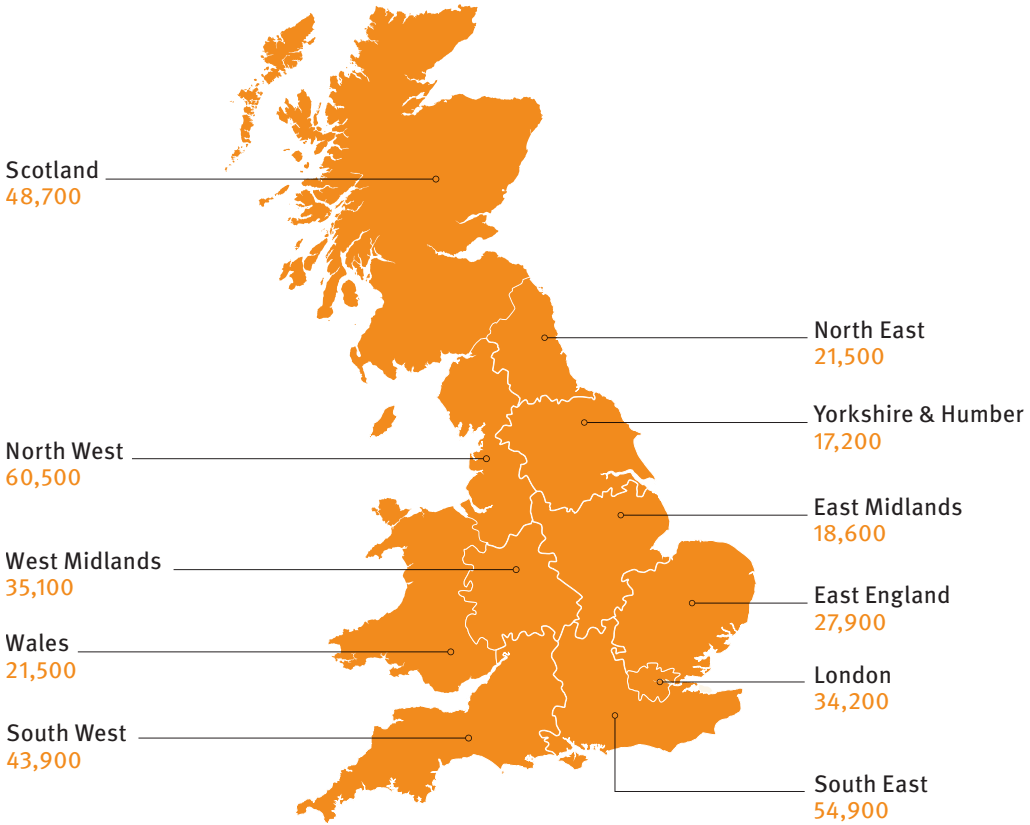
Locking in jobs by unconditionally propping up the dirty industries of the past could mean significant job losses over time. For instance, 28,000 jobs could go in the coal, oil and gas industry in the North of England by 2030 as the UK moves to low carbon power.[36]

Similarly, with regard to waste treatment strategy, incineration results in barely any jobs, compared to those that could be created in recycling and reuse which can also be spread across the country. For every 1,000 tonnes of material there are two jobs in recycling, as opposed to just 0.1 in waste treatment and disposal.[37]

Full briefing

> “There has never been a more important time to invest in skills. Gaps will hold back any economic recovery. We need to be training people in the jobs that will form the green industrial revolution, this will be essential for this brave new world we will emerge into.”
>
> Steve Rotheram, metro mayor, Liverpool City Region[38]

Employment potential in the energy sector to get the UK to net zero by 2050 is particularly high in the north of England[39]



Endnotes

[1] Speech by Prime Minister Boris Johnson, April 2020, to the 11th Annual Petersburg Climate Dialogue

[2] HM Treasury, 2020, *Interim report – The Dasgupta review: independent review on the economics of biodiversity*

[3] Speech by Patricia Espinosa, UN Climate Change executive secretary, 2 April 2020, to the UN Climate Change Conference UK2021,

[4] Oxford Smith School of Enterprise and the Environment, 2020, *A net-zero emissions economic recovery from COVID-19*

[5] Greenpeace, et al, 2019, *Government Investment for a greener and fairer economy*

[6] NEA and E3G, press release, 15 February 2019, '17,000 people in the UK died last winter due to cold housing'

[7] Energy Efficiency Infrastructure Group, www.theeeig.co.uk/facts/

[8] BBC News, 3 April 2020, 'Coronavirus will transform UK work and travel, says AA'

[9] Adapted from: C Hepburn, B O'Callaghan, N Stern,J Stiglitz and D Zenghelis, 2020, 'Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?', Smith School Working Paper 20-02, figure 1: 'Preliminary survey results from G20 finance and central bank officials'. Economic policy areas detail: 'Connectivity infrastructure investment', eg clean transport and communications infrastructure, such as electric vehicle charging networks and 5G networks; 'Project-based local infrastructure grants', eg funding for schools, hospitals, social housing and local councils to improve local asset bases; 'Clean energy infrastructure investment', eg clean electricity, heat generation and storage, upgraded transmission and hydrogen infrastructure; 'Traditional transport infrastructure investment', eg, road upgrades, airports and ports.

[10] Natural England, June 2020, 'People and nature survey: how are we connecting with nature during the coronavirus pandemic?'

[11] Office for National Statistics (ONS), 2019, 'UK natural capital accounts: 2019'

[12] Heritage Fund, 2020, op cit

[13] National Biodiversity Network, *State of nature report 2019*

[14] Department for Environment, Food and Rural Affairs (Defra), 'Agriculture in the United Kingdom 2018'

[15] HM Treasury, 2020, op cit

[16] Letter to the Chancellor Rishi Sunak from Wildlife and Countryside Link, 21 June,2020, www.wcl.org.uk/assets/uploads/img/files/Letter_presenting_compendium_2.pdf

[17] Message to Green Alliance, June 2020

[18] Adapted from: WWF, 2020, *Global futures: summary report*, p 15, 'Potential impacts of future changes in ecosystem services by 2050'; in the report a 'global conservation' scenario is one in which the world adopts a more sustainable development pathway and safeguards areas important for biodiversity and ecosystem

services. The model only considers six of the many ecosystem services provided by nature, for which there is enough evidence to quantify. It is expected that including all ecosystem services would further strengthen the economic case for action. Figures converted from US dollars (2011) to GBP (2011), based on the average conversion rate for that year.

[19] Institute for Manufacturing, 2013, *The next manufacturing revolution: non-labour resource productivity and its potential for UK manufacturing*

[20] BEIS, July 2018, 'Helping businesses to improve the way they use energy: a call for evidence'

[21] Green Alliance, 2018, *By popular demand*

[22] Green Alliance and WRAP, 2015, *Employment and the circular economy: job creation in a more resource efficient Britain*

[23] McKinsey Quarterly, 1 February 2014, 'Toward a circular economy: Philips CEO Frans van Houten'

[24] Carbon Disclosure Project (CDP), 2016, *CDP climate change report,* United Kingdom edition, p 34

[25] Adapted from: Green Alliance, 2018, *Completing the circle,* pages 19 and 21

[26] University of Manchester, 2020, 'Traffic pollution drops in lockdown – but other risks to air quality increase, reveal Manchester researchers'

[27] UKERC, 2020, *Clean Air Day – the cost of air pollution from UK cars and vans*

[28] Transport and the Environment, 2020, *No going back: European public opinion on air pollution in the Covid-19 era*

[29] DfT, January 2020, *National travel attitudes study: wave 2*

[30] *The Guardian,* 21 October 2019, 'Scores more heart attacks and strokes on high pollution days, figures show'

[31] Ricardo-AEA, 2013, *Review of the impacts of carbon budget measures on human health and the environment,* report for the Committee on Climate Change

[32] University of Cambridge, MRC Epidemiology Unit, 22 May 2018, 'Walking and cycling rather than driving may reduce your risk of dying from cardiovascular disease by almost a third'

[33] Office for Budget Responsibility, 2020, *Coronavirus analysis*

[34] Energy Efficiency Infrastructure Group, 2020, *Energy efficiency's offer for a net zero compatible stimulus and recovery*

[35] Local Government Association, 2020, *Local green jobs – accelerating a sustainable economic recovery*

[36] Institute for Public Policy Research, 2019, *A just transition: realising the opportunities of decarbonisation in the north of England*

[37] Tellus Institute with Sound Resource Management, 2011, *More jobs, less pollution: growing the recycling economy in the US*

[38] Steve Rotheram speech, 5 May 2020, at press conference for the launch of the Build Back Better Campaign

[39] Adapted from: National Grid, 2020, *Building the net zero energy workforce,* p 13

Blueprint for a resilient economy

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CUTTING CARBON NOW

Correction
Following publication the following change was made to the graph on page eight: the label on the x axis was corrected from 'Economic impact' to 'Economic rate of return'.

Green Alliance
Green Alliance is an independent think tank and charity focused on ambitious leadership for the environment. Since 1979, we have been working with the most influential leaders in business, NGOs and politics to accelerate political action and create transformative policy for a green and prosperous UK.

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