ESSAY COLLECTION

Green Albion

Restoring our green and pleasant land

CONSERVATIVE ENVIRONMENT NETWORK

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The Conservative Environment Network (CEN) is an independent forum, Parliamentary caucus, and grassroots organisation for conservatives who support conservation and decarbonisation.

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Edited by James Cullimore and Kitty Thompson

Illustrations: Eleanor Hyland Stanbrook (hello@eleanorhylandstanbrook.com)

Layout and design: Wilf Lytton (wil ytton@gmail.com)

Photos: Victoria Prentis MP, Minister of State for Farming, Fisheries and Food; Siobhan Baillie MP; Robert Largan MP; Michael Fabricant MP; Sally-Ann Hart MP; Andrew Selous MP; Anthony Mangnall MP; Jerome Mayhew MP; Jonathan Djanogly MP; Baroness Jenkin of Kennington; Craig Williams MP; Pauline Latham MP; Ruth Edwards MP; Ben Goldsmith.

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“When all at once I saw a crowd,
A host, of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze.”

William Wordsworth, I WANDERED LONELY AS A CLOUD, 1807

Victoria Prentis is the Minister of State for Farming, Fisheries and Food. She was elected as the MP for North Oxfordshire May 2015. Victoria comes from a farming background in Northamptonshire.

Victoria Prentis MP

Ministerial foreword

The way we farm and steward our land has never been higher up the political agenda. So many of our commitments rely on the careful use of land, from halting nature’s decline by 2030 to reaching net zero emissions by 2050, promoting the world-leading British food sector at home and abroad, and levelling up all corners of the country including rural communities.

70% of our land is farmed, which is why this government has particularly focussed on seizing the opportunity of our exit from the European Union to transform our system of agricultural payments. We are moving away from the top-down, bureaucratic EU approach, to support the biggest changes to farming and land management in 50 years. We want to see pro table farming businesses producing nutritious food, underpinning a growing rural economy, where nature is recovering and people have better access to it.

Our new environmental land management schemes will reward farmers for their role as environmental stewards, for sustainable land use and making space for nature. We know that a healthy environment is vital for our food security, from abundant pollinators to healthy soils and clean water. Innovation will also be crucial, marrying a rediscovery of historic husbandry practices with new technologies, and providing further exciting opportunities for the British agricultural sector to lead the world.

Our landmark Environment Act will lead to a step change in the way that we manage our developed environment, with the introduction of biodiversity net gain to put back more nature than was there before. This will support the growth of a new market to drive more private nance into nature, supporting our goal to leverage at least £500 million a year for nature's recovery by 2027 and more than £1 billion a year by 2030. We want farmers and land managers to be able to derive new income streams, should they choose to, from selling carbon and nature credits, alongside food production.

The UK is home to many globally important species and habitats. About 85% of the world's chalk streams are found in the UK, and 13% of the world's blanket bog.[1] Our ancient woodland and veteran trees, the oldest of which is estimated to be up to 3,000 years old, are irreplicable time capsules.

Protecting what we have, and creating larger and more joined up spaces for nature, will help turn the tide on its decline. The Environment Act also supports this by establishing England's Nature Recovery Network, underpinned by Local Nature Recovery Strategies.

As we head towards 2030 and 2050, there will be choices to make between land uses, which will rely on land sharing to deliver multiple bene ts for people and planet. The UK Food Security report shows we have strong levels of self-su ciency in many sectors, which we will keep under close review every three years. However, around 60% of our agricultural output comes from just 30% of our land. [2] So we must acknowledge that it is entirely possible to maintain and even increase our food security sustainably, whilst working with willing land managers to support land use change in some other areas.

Our landscapes are an integral part of our history and culture. This is our natural heritage and both its protection and restoration is at the heart of our commitment to leave the environment in a better state than we found it.

ENDNOTES

1. Environment Agency, New strategy launched to protect chalk streams, 3 October 2021
2. George Eustice, Keynote speech at the Oxford Farming Conference, 12 January 2022

CHAPTER I

Nature-based solutions

“What would the world be, once bereft
Of wet and of wildness? Let them be left,
O let them be left, wildness and wet;
Long live the weeds and the wilderness yet.”

Gerard Manley Hopkins, INVERSNAID, 1881

Siobhan Baillie MP

Restoring Britain’s great wetlands

Wetlands store carbon, alleviate flooding, provide vital habitats for wildlife, clean our water and offer beautiful spaces for recreation and health. Yet while wetlands offer solutions for so many of the country’s environmental, safety and health challenges, they are often overlooked.

In the UK, we have 175 Ramsar sites – which are wetlands of international importance designated under the Ramsar Convention.

Siobhan Baillie has been MP for Stroud since 2019 and is a member of the CEN Parliamentary Caucus. She is the Chair of the APPG for Wetlands.

This is a record to be proud of and something that is envied by other countries. Unfortunately, despite this lead, we have still lost 90% of our wetland habitats in the last 100 years. Areas like the Somerset Levels have been drained and managed for agriculture and over time, the loss of wildlife in many previously wetland places have had devastating unintended consequences.

The Wildfowl and Wetland Trust (WWT) are in my constituency with their headquarters in Slimbridge. I work closely with WWT as chair of the All Party Parliamentary Group for Wetlands and we are calling for the restoration of 100,000 hectares of wetland habitat as a key part of our parliamentary mission.

Thankfully, the UK is blessed with world leading experts who can deliver this dream if supported to do so. We will however require formal recognition of the carbon sequestered by our wetlands in our greenhouse gas inventory to incentivise their creation and restoration. This will unlock private funding for wetlands to maximise and compliment public investment.

It is not just wetlands enthusiasts who are thinking deeply about these issues. The review into the economics of biodiversity led by Professor Sir Partha Dasgupta and commissioned by HM Treasury was clear that we need to change how we think, act and measure economic success to protect and enhance our prosperity and the natural world.

So, if we should be accounting for nature in economics and decision making, I contend that wetlands could be a leading example for the UK to evidence how incorporating natural capital into Treasury thinking can help to achieve the Government's environmental ambitions generally.

Wetlands are vital carbon sinks. Our peatlands are rightly getting a lot of attention as they contain more carbon than forests in the UK, France and Germany combined. Yet, saltmarsh, a coastal wetland, can absorb carbon at two to four times the rate of tropical rainforests. I have raised this point with Defra ministers in debates as I question why planting new trees is considered the main carbon ticket in town.

Landowners could be paid for the public goods of reverting some low lying agricultural land to saltmarsh and wetlands through the new environmental land management payments.

Increased wetland areas will also improve our resilience to the impacts of climate change. Research suggests that a more capricious climate could cost the UK up to 1.5% of GDP per annum by 2045 without further adaptation measures. [1] The Government's Third Climate Change Risk Assessment, published at the start of this year, ranked the threat from surface and river water flooding as very high (costing £1 billion per annum) and coastal flooding as high (hundreds of millions of damage per annum) by 2050 under 2 and 4 degree warming scenarios.[2]

I believe that tackling climate change does not mean compromising on farming and food security, both issues that I regularly champion in the House of Commons. Nor do more wetlands mean putting towns under water or preventing building homes. It is perfectly possible to allow wetland habitats to recolonise marginal coastal and riparian land, fallowed areas, urban rivers and upland blanket bog to name but a few options. In fact, as outlined, wetlands can benefit the future of farming, improve land management and protect our homes from flooding.

Wetlands can be natural ood defences

Towns and villages around the country are constantly crying out for innovative ood prevention measures to protect them and wetlands can hugely help with this. Saltmarsh in particular is an important defence for low lying coastal areas at risk from rising sea levels and more frequent storm surges caused by climate change. By targeting coastal habitat creation in areas vulnerable to sea level rise we can create a natural ood defence for farms, homes and businesses.

Wetlands help us mitigate inland ooding too by regulating the movement of water through our landscapes. These wetlands span a wide variety of habitats, from ponds and water meadows that store water, to meandering rivers that slow the ow of water through the countryside. I like the concept of 're-wiggling' rivers for public good.

If you add re-wiggling rivers to restoring oodplains, and reintroducing beavers, we can reduce ood peaks and protect communities downstream from ooding. This is all while creating vibrant wetland habitats in the process. As I have mentioned above, landowners and farmers should be paid for this public bene t through environmental land management payments and this can be achieved while simultaneously creating habitat that sequesters carbon as explained above.

Wetlands can improve river health

We have seen impressive campaigns to clean up our rivers recently. Wetlands can improve the health of our rivers and seas by ltering out pollutants like nitrogen, phosphorus, pesticide and sediment from runo and sewage e uent. Currently, only 16% of English water bodies are classi ed as being in good ecological status.

By restoring peatlands and riparian habitats, constructing treatment wetlands like reed beds to lter sewage e uent, and creating sustainable urban drainage systems (SUDS) to reduce runo in urban areas, we can improve the quality of our previous rivers - the arteries of nature. Environment Agency analysis shows that achieving the Government's target for 75% of rivers to achieve 'good status' would generate bene ts of around £22.5bn for costs of £17.5bn.[3]

Wetlands provide important habitats for wildlife

Globally, 40% of species either live or breed in wetlands, and wetlands are home to around a tenth of UK wildlife despite covering just 3 per cent of land area. Sadly, this incredible biodiversity is at risk with over 10% of our freshwater and wetland species threatened with extinction in the UK. Two thirds of species are in decline. Restoring our wetlands will be critical to achieving our legally binding target to halt species decline by 2030. MPs and campaigners fought for this target and we were delighted to see the Government get on board but now we need to demonstrate how this will be achieved.

Wetlands bene t people too

I am a believer in the Natural Health Service. Research from Natural England shows we could save an estimated £2.1 billion in health costs each year if everyone in England had good access to the natural environment. [4] Where people have wetlands locally, they become important spaces for public recreation, from canals, rivers and lakes to attenuation ponds and rain gardens.

WWT's research showed that just 10 minute exposure to urban wetlands may be enough to produce improvements in mood and these results are especially pronounced in people that self-report elevated stress.

Historically, urban building revolved around wetland areas so WWT believes that restoring these and creating new urban wetlands will boost mental wellbeing and reduce the risks of mental ill health.

We need action in ve areas to restore Britain's great wetlands

The increasingly spirited debate about how the UK can meet its environmental targets and what that means to individual families is really welcome in my view. We need practical solutions that are understood by all, involve as many people as possible and create new jobs along the way. A range of environmental and nancial experts have come together to inform government and local government policy. We are seeking the following actions to make already popular wetlands achieve bene ts for the whole country too:

Firstly, the carbon removals and emissions from our coastal habitats like saltmarsh need to be included in our greenhouse gas inventory, as we do for woodland and peatland.

This will ensure we are properly measuring our impact on the climate and encourage the protection and restoration of saltmarsh to reach net zero by 2050. A report commissioned by the Natural Capital Committee identi ed scope for creating 22,000 ha of saltmarsh in England (a 54% increase on current extent) as a potential natural capital investment,[5] with a bene t-cost ratio of between two and three to one.[6]

Secondly, unlocking more investment, particularly from the private sector, will be crucial for success. The new Local Nature Recovery scheme will pay for the creation and maintenance of wetland habitats and one of the two objectives for the ten Landscape Recovery pilots launched this year will be restoring England's streams and rivers. However, this will not be enough to meet our environmental goals if it does not leverage private nance too.

The Government has an ambitious new target to raise at least £500 million in private nance to support nature's recovery every year by 2027 in England, rising to more than £1 billion by 2030. Yet, we currently have an established carbon o setting market for woodland and peatland, but not for saltmarsh. What's more, the Treasury should include natural capital within the mandate of the UK Infrastructure Bank (UKIB) by setting a third objective for the bank to contribute toward our target to halt species decline by 2030. This would support the other two objectives - namely regional economic growth and net zero - and ensure nature is not left o the balance sheet.

Thirdly, we need to establish a saltmarsh carbon code. The Government's Natural Environment Investment Readiness Fund is supporting the UK Centre for Ecology and Hydrology project to develop a carbon code for saltmarsh to plug the gap.

The code is being developed by a consortium that includes WWT, UKCEH, RSPB, the University of St Andrews, Bangor University, SRUC, IUCN National Committee UK, Finance Earth and Jacobs. I am calling for the Government to support this work so that it achieves parity with the woodland and peatland codes to maximise investment opportunities. The Government could also commission the development of credits for other bene ts delivered by saltmarsh creation such as for biodiversity and natural ood management.

Forthly, the planning and construction sectors could also provide a source of private funding for wetland creation. Bright Blue's analysis of the impacts of ooding found that urban drainage was a national resilience issue and that we have a problem with surface water ooding in the UK. [7]

To incentivise the creation of ponds and water features in new developments, Schedule 3 of the Water and Flood Management Plan should be implemented to mandate sustainable urban drainage systems in all new housing developments. The Government should also end the automatic right for developers to connect surface water drainage to the sewer system by the end of 2023, as recommended by the Environmental Audit Committee and supported by Water UK. [8] This would have the added advantage of reducing pressure on the combined sewerage network from surface water drainage which is a major cause of pollution incidents from storm over ows.

Finally, we should harness the bene ts of wetlands as part of recognising the signi cant strain on mental health services. A YouGov poll found that 65% of people found being near water improved their mental wellbeing. [9] WWT has developed a blue prescribing programme in conjunction with the Mental Health Foundation in which participants take part in a six week, nature-based course to help improve their mental wellbeing as piloted at Slimbridge. Prescribing time in the natural environment is increasingly being recognised as an e ective remedy for mental health challenges and should be routinely o ered by GPs.

The Government has funded seven demonstration sites for nature-based mental health courses, and I support the Wildlife Trusts call for this to be rolled out across the country by 2023.

Furthermore, green social prescribing should be supported by the creation of the national Nature Recovery Network (NRN) to ensure nature is accessible for all. To do this, we need to make sure the Integrated Care System leaders are feeding into the NRN and the development of Local Nature Recovery Strategies.

Natural England is key to the work with local authorities. The new O ce for Health Improvement and Disparities should also make improving access to nature a priority across national and local governments to reduce pressure on the NHS.

In conclusion, according to the CCC, we need to achieve 50 million tonnes of nature-based carbon removals per year by 2050. To achieve this we will need to deploy our greatest carbon sinks - wetlands. At the moment though, we are not even properly recording their contribution let alone investing in it. That is why we established the All Party Parliamentary Group for Wetlands: to campaign for greater understanding and action.

This work includes everything from ponds, lakes, rivers, oodplains, estuaries, reedbeds, wet woodlands and grasslands, fens and saltmarsh. We are naturally a wet, boggy island teeming with wildlife, and we should take action to start drawing on these natural gifts if we want to restore our rich inheritance.

ENDNOTES

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4. Natural England, An estimate of the value and cost e ectiveness of the expanded Walking the Way to Health Initiative scheme 2009 (TIN055), July 2009
5. Economics for the Environment Consultancy, The Economic Case for Investment in Natural Capital in England, January 2015
6. Natural Capital Committee, The State of Natural Capital, January 2015
7. Helen Jackson, In Deep Water? Mapping the impacts of ooding in the UK since 2007, Bright Blue, January 2022
8. Environmental Audit Committee, Water quality in rivers, January 2022
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“Keep your eyes on the stars, keep your feet on the ground.”

Theodore Roosevelt, 1906

Robert Largan has been MP for High Peak since 2019 and is a member of the CEN Parliamentary caucus. He is the Chair of the APPG for the Peak District and is a member of the Transport Committee.

Robert Largan MP

Protecting our peatlands

The key to tackling climate change lies in the ground beneath our feet. Wet, healthy peat soils absorb and trap carbon dioxide – the most common greenhouse gas. Worldwide, peatland contains more than 550 gigatons of carbon – more than is stored in all the world’s forests put together. [1]

The UK is uniquely positioned to bene t from this natural asset, with around 12 percent of our land being covered in peatland.[2]

The protection and restoration of our peatlands, therefore, represents a natural, great British solution to a shared global problem.

It is worth noting that healthy peatlands provide a range of other bene ts. For example, peatland plays a key role in preventing ooding and purifying drinking water.

Blanket bogs are also an important habitat for some of our most cherished species, including hen harriers, swallowtail butter ies, and short-eared owls. Tragically, however, our peatland habitats have become increasingly rare, threatening the plants and animals that depend on them.

This is an issue I care deeply about. Living in the Peak District, I am surrounded by the wild beauty of some of this country's largest upland peat moors. In my very rst question in the House of Commons, I made the case for more work to restore our peatlands and asked the Government to enhance existing environmental protections.

For these reasons, below are four recommendations to rapidly ramp up our work to protect our peatlands for future generations.

First, we should prohibit the use of disposable barbecues on open moorland and give local authorities the power to prohibit their sale.

Our moors are particularly susceptible to wild re. Every year, from spring to summer, communities across the country live in fear of wild res that are entirely avoidable. Last year alone, at least two wild res were caused by disposable barbecues in High Peak, destroying hectares of farmland and environmentally signi cant peatland.

We all remember the disaster at Saddleworth Moor in 2018. Here, re ghters battled for three weeks against a re that stretched over seven square miles.

Alongside the crude nancial cost lies an environmental one. This is damage that will take hundreds, if not thousands of years to repair.

In Parliament, I have worked to develop the Disposable Barbecues Bill. The Bill would prohibit the use of disposable barbecues on open moorland and give local authorities the power to prohibit their sale.

The aim of the Bill is to build on work that a range of organisations have already undertaken. The New Forest and Peak District National Park Authorities, for example, have already banned the use of disposable barbecues within their boundaries and called for local retailers to stop their sale. Within High Peak, I have already had considerable success in convincing retailers to remove them from sale and the Co-operative Group has removed displays of disposable barbecues in 130 of its stores that border national parks.

To prevent wild res, to protect farmers' livelihoods and to build up our existing defences against climate change, the Disposable Barbecues Bill o ers a small but signi cant way forward.

Second, we should improve the management of lowland peat.

Much of this conversation has been focused on upland peat, but 86 percent of England's peatland emissions emanate from lowland peat. Included in the target above, therefore, must be a clear commitment to the rewetting and sustainable management of lowland peat.

Unlike upland peat, much of lowland peat is concentrated in the east of the country, on some of our most productive arable land. As a result, the full restoration of all these sites may not be desirable – to protect British farmers and avoid compromising our food security.

But we cannot go on with business as usual. If we continue to drain and deplete lowland peat, our productive peat soils will be lost forever. The Government should form a strategy, therefore, that is both sensitive to the short-term needs of lowland farmers and the longer-term environmental bene ts of lowland peat restoration.

The rst (and easiest) part of this plan should be to identify and restore those areas of lowland peat that are not being used for food production.

Second, we need to further research wet farming or paludiculture. The Great Fen project in Cambridgeshire is a great example of this in action. The project is trialling wet farming with a range of crops, both edible and non-edible.

Third, we should review the water table in lowland areas, which may be lower than is necessary for productive agricultural use and the capacity to store ood water. In areas where the full rewetting of peatland is not possible, as an alternative, it may be possible to raise the water table, either permanently or during the winter, to reduce peat emissions while conventional arable farming continues as usual. The independent Climate Change Committee (CCC) estimates that this could halve emissions per hectare on lowland agricultural peat. [3]

Through an ambitious, pragmatic, locally driven lowland strategy we can transform our arable wetlands into productive, pro table carbon sinks.

Third, we should ban the sale of domestic and imported peat.

The Government recently published a consultation on plans to ban the sale of peat for amateur use by 2024. Whilst this is a welcome step in the right to protect our precious peatland, it is important to note that this comes after the failure of the Coalition Government's plan to voluntarily phase out the sale of peat by 2020 and makes no mention of the use of peat by the professional horticultural sector. We can and must go further.

First, the Government must set a date to ban the sale of peat to professional growers, alongside amateurs. To give industry the time to adapt, whilst aligning government policy with the CCC's sixth carbon budget advice, the Government should bring forward the ban on peat sales in the horticultural sector to 2025 at the latest.

Second, we import two-thirds of the peat sold in the UK.[4] It is vital that any ban on the sale of professional horticultural peat in this country must extend to imported products to avoid us simply offshoring the problem.

Taken together, these measures would end the degradation of one of our most precious natural resources.

Finally, we should encourage private sector investment in peatland restoration.

As a conservative, I believe in the principle of sound money. It is irresponsible for us to offload the debts of today onto future generations. If we are to succeed in creating a long-term strategy to protect and enhance our peatlands, therefore, it must be financially sustainable. This means creating attractive investment opportunities for the private sector.

The landmark Environment Act provides a framework through which this could be achieved. Under the terms of the Act, all new building developments in England are required to enhance biodiversity. One option is to purchase ‘biodiversity credits’. In practice, this means that developers will pay towards o site projects to o set the impact of their proposed building project.

A voluntary version of this programme, speci c to peatland, is already in operation through the Peatland Carbon Code. The code enables land managers to sell credits generated by restoring peatland to private buyers seeking to o set their emissions. The England Peat Action Plan committed to expanding the sale of carbon credits to include more peatland types like lowland peat in 2022.

I believe the Government can go further than this. We know that restoring peatland is not only an e ective way to cut carbon emissions, but to improve biodiversity, prevent ooding, and improve water quality. As such, the Government could fund a trusted standards authority, like the British Standards Institute, to support the development and administration of credits for these other environmental bene ts, with Natural England or the Environment Agency acting as the accreditor and market regulator.

Under this new system, credits for water, biodiversity, ood management, and carbon should be stackable so that each can be marketed for di erent buyers, and they should be blended with public payments through the Environmental Land Management schemes. For example, while an airline may want to buy carbon credits, a water company may want to purchase water quality improvements to reduce their treatment costs.

This would generate multiple revenue streams for farmers and landowners, increasing the scale of feasible restoration projects.

To conclude, climate change is the greatest threat facing our planet. The United Nations' Intergovernmental Panel on Climate Change has warned that immediate action is required to reduce emissions to net zero by 2050 and limit global warming to 1.5 degrees centigrade.

The protection and restoration of our peatlands provides a natural solution to this problem – and it is one which the UK is uniquely positioned to bene t from. Restoring our peatlands will also bring a range of other bene ts: improving biodiversity, helping to prevent oods, and improve water quality.

Through the four recommendations I have set out above, I hope to have shown the value of peatland to our ght against climate change. The Government has shown strong leadership on this issue, but we must go further to protect our peatlands, build up our existing defences against climate change and secure farmers' livelihoods.

ENDNOTES

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“Yet still the unresting castles thresh
In fullgrown thickness every May.
Last year is dead, they seem to say,
Begin afresh, afresh, afresh.”

Philip Larkin, THE TREES, 1967

Michael Fabricant has been MP for Lich eld since 1992, and is a member of the CEN Parliamentary Caucus. He is a member of the APPG for Woods and Trees and the APPG for Waterways.

Michael Fabricant MP

Expanding our woodlands

Philip Larkin’s celebrated poem on England’s deciduous trees neatly captures what makes woodlands our most treasured habitat - they are a cultural as much as an environmental and economic asset. The visual change of the seasons re ects patterns of human life and emotion. As a result, their seedlings are scattered throughout folklore, music, art and literature.

This cultural resonance alone would make our woodlands worthy of protection and restoration,

but the ONS estimates that in 2017 our woodlands delivered bene ts to society and the economy worth £3.3 billion in the UK and £1.6 billion in England, and this does not include food and tourism. [1] In the face of climate change and biodiversity decline, their value is set to rise further. We must both better protect what we have and create new woodland, and this essay seeks to outline measures that could do this in a way that delivers good outcomes for wildlife, climate and people in England.

To meet our legally-binding commitments to halt nature's decline this decade and reach carbon neutrality by 2050, the Government is committed to trebling tree planting rates to 10,000 hectares per annum in England by 2025 and expanding tree cover to 12% of England by 2050.

A brief glance into history reveals the scale of the challenge ahead of us. Primordial Britons felled trees for fuel and timber, and from the Bronze Age for agriculture, so that by around the time of the Norman Conquest woodland covered around 15% of England.[2] The burgeoning navy then chopped away at this further, until tree coverage had contracted to just 5.1% after the First World War. [3]The Forestry Commission was established in 1919 to replenish our timber stock, and a century of planting has restored England's tree cover to 10%, but this has not always delivered good outcomes for the environment or local communities. By 2050, we need to extend tree cover to at least a further 2% of England - reaching the highest coverage for centuries - in a way that meets the twin challenges of climate change and biodiversity loss and maximises other bene ts such as for public health and wellbeing, water and air quality, and ood mitigation. We managed to plant just 2,180 hectares of new woodland in England in 2019-20 - so there's a long way to go[4].

This herculean e ort must also be carried out in conjunction with better management and protection of what we already have. While the asset value of our woodlands is vast - around £175 billion - this is at risk from a range of pressures. Only 7% of native woodland is in good ecological condition and around half of woodland Sites of Special Scienti c Interest are in an unfavourable condition. [5] Our ancient woodlands are particularly under threat from disease, development, including HS2, and overgrazing.

To put our woodlands into recovery, we will need to tackle these concurrent threats. The biggest gap in current policy is, in my view, protection from disease. We need to massively scale up our domestic tree nurseries. The main diseases a icting Britain's trees, such as Dutch elm disease and ash dieback, are imports. As our dependence on foreign growers has increased since 1990, so has the incidence of disease introductions. The EU's single market has been a super spreader.

Post-Brexit, we can restrict imports and grow more trees domestically. The devastation wrought by ash dieback, which could kill 99% of Britain's ash trees, is expected to cost us £15 billion.[6] There are a further 47 known tree pests and diseases that could arrive in Britain and cost us an additional £1 billion or more each to manage. [7]

Far cheaper, then, to invest in domestic nurseries that adhere to established assurance schemes. In its excellent England Trees Action Plan, the Government committed to provide funding for UK nurseries and seed suppliers, establish a Nursery Noti cation Scheme so that supply can keep abreast with demand, and tighten procurement rules for tree planting funded by taxpayer money so that saplings are sourced by growers which adhere to the Plant Health Management Standard.

But I'd like to see the Government go even further. All publicly funded woodland creation should be required to use domestic saplings and seeds which meet plant health standards. What's more, ministers should reform the Nursery Noti cation Scheme, so that the Government buys the trees it has forecasted, even if planting does not proceed as planned. By shouldering the nancial risk, the Government will unlock signi cant private investment in nursery capacity and seed production.

As well as protecting our existing woods and trees, we rapidly need to scale up planting and regeneration. The Government must be commended for setting an ambitious near-term target and providing the funding to meet it. But all eyes are on the two nature-focused environmental land management schemes from 2024, which will become the main vehicles for meeting the Government's long-term tree target. This target, which the Government is due to consult on, must re ect England's contribution to the Climate Change Committee's (CCC) balanced net zero pathway for the UK, and be backed up by su cient funding. [8]

Of course, public funding alone will not be enough to meet our targets. There is already a voluntary market for carbon credits generated through woodland creation in the UK, and the Government has committed to enabling woodland creation to provide biodiversity credits too. But carbon and biodiversity are only two of the bene ts provided by woodlands - there are also private bene ciaries from the improvements to water quality and the alleviation of ooding. The Government should commission standards for nutrient pollution and ooding which water companies, developers and insurers could invest in. This would be a particularly e ective way of leveraging private capital for more riparian planting which was a key part of the Government's tree action plan.

The Government could also extend the UK Emissions Trading System (ETS) to the land use and forestry sectors to increase demand for carbon credits generated by woodland creation. The centre-right think tank Onward proposed this extension in their report into carbon-intensive industries.[9]

However, it will need to be well regulated and designed to avoid greenwashing and perversely discouraging industry from decarbonising. It will also need to ensure the markets incentivise delivery for both climate and nature. I urge the Government to ensure that native tree planting is prioritised in the forthcoming call for evidence on extending the ETS to include carbon removals.

Along with funding, we need to make sure the delivery landscape is t for purpose. The Forestry Commission's legal remit has not been updated for a century since it was established to increase domestic timber supplies. The needs of society have evolved since then and its statutory duties should re ect this. So, I urge the Government to add a duty to tackle the nature and climate crises to the Forestry Commission's remit to ensure our national forests deliver good outcomes for the environment as well as a plentiful supply of timber.

As I said earlier, we must ensure new woodland maximises bene ts for biodiversity as well as carbon - one-quarter of UK species of conservation concern rely on native trees as a habitat or as a food source.[10] One way to ensure we maximise the bene ts of new woodland is to incentivise natural regeneration where appropriate, as research by Kew Gardens has found.[11] Natural regeneration leads to more diverse, complex woodland habitats that are more biodiverse and resilient to disease and climate change. It can also sequester 40 times more carbon than plantations - and it's cheaper and doesn't require unsightly, wasteful plastic casings![12]

This approach to natural regeneration could be most e ectively applied to the recovery of Britain's lost temperate rainforests, of which only isolated fragments remain. Recognisable by the lichens that festoon their gnarled, ancient oaks, it is thought that as much as 20% of Britain has a climate wet and warm enough for the creation of temperate rainforest.[13] I am delighted that the Government's forthcoming Big Nature Impact Fund will be open to farmers and landowners seeking to restore these lonesome survivors. The Government could ensure that rainforest projects are also eligible to participate in the Local Nature Recovery and Landscape Recovery schemes from 2024, and one of the 10 Landscape Recovery pilot projects could be focused on rainforest restoration to generate national excitement about the return of these globally important habitats to Britain.

To unlock this investment in our temperate rainforests and ensure their protection, Natural England must expedite the establishment of an o cial habitat classi cation for temperate rainforests and designate all remaining fragments Sites of Special Scienti c Interest (SSSIs).

Finally, we should encourage more farmers to adopt agroforestry to increase tree cover across the farmed landscape without compromising food production. The CCC has said that trees should be integrated onto 10% of farmland to reach net zero by 2050, with an interim target of 5% by 2035.[14] This is good news for farmers - shelter belts can protect crops and livestock from the elements and extend the grazing season, while the fruit, nuts and timber can provide an additional income source for farmers. The Government has made funding available for agroforestry projects under the England Woodland Creation O er and will provide long-term support for agroforestry through the Environmental Land Management schemes.

But to drive uptake and ensure funding matches ambition, the Government should ensure trees on farms can contribute toward our overall tree planting target. One way of doing this would be to calculate the average number of trees planted per hectare in agroforestry systems - this data is readily available from existing agroforestry projects.

Our woods and trees are of national importance - to our heritage, our economy and our health. I am relieved the Government is taking action to ensure that future generations can enjoy greater woodland cover, and I hope they will act further to tackle disease, unlock private funding for woodland creation, ensure woodland biodiversity is prioritised, and integrate more trees onto farms. As well as helping to attain net zero, it will greatly enhance the beauty of our countryside.

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“The mind, that ocean where each kind
Does straight its own resemblance nd,
Yet it creates, transcending these,
Far other worlds, and other seas”

Andrew Marvell, THE GARDEN, 1681

Sally-Ann Hart MP

Bolstering our blue carbon habitats

Natural habitats on land and in oceans can store vast quantities of carbon. Nature herself provides us with a plethora of solutions to combat climate change. We are incredibly lucky to live in the United Kingdom, with our wealth of land and sea. Land-based solutions to protect our environment and mitigate against the e ects of climate change are well known and can help safeguard our food security.

Sally-Ann Hart has been MP for Hastings and Rye since 2019, and is a CEN champion for nature-based solutions and Marine Conservation Society blue carbon champion. She is an O cer of the APPG for Fisheries.

However, as an island nation, we can and must also unleash the power of our oceans to sequester carbon and reduce carbon emissions. To do this, the Government should unlock more private and public funding for coastal habitat restoration, integrate blue carbon into our greenhouse gas inventory, and ban bottom trawling from our protected areas.

Nature recovery is increasingly acknowledged as fundamental in ghting climate change, but we need to unleash the full potential of nature, as she can do much more. G20 nance ministers, for example, have recognised that nature-based solutions are the most cost-e ective and sustainable investment to protect and restore the planet – to store and capture carbon – but it is also recognised that nature-based solutions receive a very small percentage, around 2.5%, of public climate mitigation funding.

In order to restrict the global rise in temperature to less than 2 degrees Celsius (and preferably to 1.5 degrees) we need to reduce emissions of CO2 (and other greenhouse gas emissions) as well as capture emitted carbon by storing it.

Oceans and coastal areas provide an abundance of opportunities for capturing and storing carbon, helping to regulate our climate - and support our economy. The ocean's vegetated habitats, for example, which cover less than half a percent of the seabed, are responsible for more than 50%, and potentially up to 70%, of all carbon storage in ocean sediments. Seagrasses and saltmarshes along our coasts "capture and hold" carbon, acting as a blue carbon sink. These coastal systems, though much smaller in size than the planet's forests, sequester this carbon at a much faster rate and can continue to do so for millions of years.

Seagrass meadows provide one of the most productive ecosystems in the world; an area the size of a football pitch can support over 50,000 fish and over 700,000 invertebrates, which is good news for our marine habitats and fishing communities around the UK. One acre of seagrass can sequester 740 pounds of carbon per year, or 83g carbon per square metre, which is the same amount emitted by a car travelling 3,860 miles.[1]

According to estimates from the Office for National Statistics, the UK's saltmarshes and subtidal muds and sands alone captured at least 10.5 million tonnes of carbon dioxide equivalent in 2018 —and the real amount could be as much as six times higher.[2] This carbon sequestration, according to the ONS, is of significant economic as well as environmental value — valued at more than what is earned from exploiting our oceans for oil and natural gas.

Blue carbon sinks cover only a fraction of the seabed but are more efficient than land-based carbon sinks. Unfortunately, blue carbon sinks are some of the fastest disappearing ecosystems. It is thought that the UK has lost 85% of its saltmarsh, 95% of its native oyster reefs, and up to 92% of our 'wonder plant' seagrass over the last 100 years[3]. The ocean has so far absorbed one third of all human-created emissions but is projected to warm by 1-4 degrees by 2100 - further degrading these carbon-rich habitats. Restoring them, with the same vigour that we will be restoring, maintaining and protecting forests and peatlands, would help not only with carbon emissions, but improve water quality and protect against flooding, provide jobs and support coastal communities' livelihoods and protect food security. Oceans and blue carbon must be included in the Government's climate change initiatives.

Fully restored, our coastal ecosystems could capture emissions equivalent to one third of the UK's 2018 emissions. The planting of trees and restoration of peatland is supported by nancial mechanisms - the UK currently has an established carbon o setting market for woodland and peatland, but not for saltmarsh. The Government's Natural Environment Investment Readiness Fund is supporting the UK Centre for Ecology and Hydrology project to develop a carbon code for saltmarsh to plug this gap, and at the Autumn Budget and Spending Review the Chancellor announced an ambitious new target to raise at least £500 million in private nance to support nature's recovery every year by 2027 in England, rising to more than £1 billion by 2030. This will be supported by a range of measures, including £30 million public investment in a Big Nature Impact Fund, as well as £140 million to assess the extent and condition of the country's natural habitats - this funding should be used to establish and leverage private investment in coastal restoration projects.

To accelerate the development of a carbon code for saltmarsh, and other blue carbon habitats like seagrass meadows, we need the right institutional set up to oversee these new markets. The government could fund a national body such as the British Standards Institute to support the development of a code for saltmarsh carbon, and then house and administer the code once it is up and running, with Natural England or the Environment Agency acting as the regulator.

Furthermore, whilst emissions from terrestrial carbon sinks are included in our greenhouse gas inventory, emissions from our coastal and marine habitats are not. This hides a signi cant source of emissions and neglects a signi cant carbon store - which if properly protected and restored could help the UK achieve its net zero target.

A group of MPs from the Conservative Environment Network wrote to Lord Deben, Chair of the Climate Change Committee (CCC), in May 2021 requesting that the CCC report to Parliament on the feasibility of integrating blue carbon into the UK's greenhouse gas inventory. It is vital that carbon emissions and removals from our coastal and marine habitats, such as salt marshes and seagrass beds, are properly accounted for as we plot our path to net zero emissions by 2050. This will enable the UK to accurately measure its impact on the global climate and create further incentives for the Government to better protect, restore and maintain these habitats. In responding to this letter, Lord Deben acknowledged that there is currently insu cient evidence to determine the potential contribution of coastal and marine habitat restoration to our carbon reduction targets, but he committed to reviewing emerging evidence and developing new advice for the Government on the inclusion of coastal and marine habitats in the UK's greenhouse inventory.

UK waters are in an overall pretty poor condition; in 2019, UK seas failed to meet government standards on good environmental health against 11 out of 15 indicators, including those relating to birds, sh, and seabed habitats.[4] Healthy oceans are also needed for our economy as ocean-based economies create jobs – as well as giving a sense of place and history.

Today, the UK shing industry has an estimated value of £989 million and supports around 12,000 full- and part-time shermen. [5] According to WWF's recent report, rebuilding sh stocks to their maximum sustainable yield could allow the UK to land an extra 442,000 tonnes of sh every year, worth £440 million, and support an additional 6,600 jobs.[6] Restoring and maintaining blue carbon habitats could also create green jobs in coastal areas and could also save an estimated £6.2 billion in spending on arti cial ood defences by 2050.[7]

Investing in habitat restoration, for example, can create jobs directly in conservation, and indirectly in nature-based tourism, helping to level up our coastal communities.

Saltmarsh and seagrass act as a bu er against erosion and storm surges - protecting homes and businesses. The Local Nature Recovery scheme will fund the creation and restoration of coastal habitats like saltmarsh and sand dunes, but this will not be rolled out until 2024. So to fund this in the meantime and create a pipeline of projects, the government could extend the remit and increase the budget of the current Nature for Climate Fund to include saltmarsh. The government should also ensure that some of the £200 million of new investment for nature-based ood defences by 2025 will be spent on coastal habitats, and future funding settlements should dedicate more funding for natural ood defences.

The UK Government has already made huge strides in policymaking to protect and enhance our environment. Under this Conservative Government, the UK has become a leading global ocean champion with an extensive network of Marine Protected Areas (MPAs) covering over a third of our waters, which we can now better protect post-Brexit. The Government is also leading the international initiative, the Global Ocean Alliance, to protect 30% of the world's oceans for nature - so far only 7% of the oceans globally are currently protected. In addition, the UK is the ocean co-chair of the High Ambition Coalition for Nature and People which is campaigning for the protection of 30% of land and seas by 2030 ('30x30'). The G7 recently signed up to the global 30x30 initiative and committed to delivering this target nationally - a victory for UK diplomacy as hosts of the G7.

But the UK could go further and lead the way in restoring our beautiful blue planet by banning bottom trawling from our MPAs. The UK has 372 MPAs, covering 38% of the country's waters. However, less than 1% of UK seas are fully protected from environmentally damaging shing practises.[8] Lord Benyon's Review, which is being taken forward by the Government, will establish Highly Protected Marine Areas (HPMAs) which are fully protected, with no-catch zones that will "give wildlife breathing space to recover" and provide full protection to carbon-rich seabed habitats.

The Government is currently consulting on ve pilot HPMA sites, of which at least one will be selected primarily to protect blue carbon. The Government has also consulted on imposing restrictions on bottom trawling in four o shore English MPAs, halting damaging shing practises, including the 12,331 square kilometre Dogger Bank MPA in the North Sea, which is roughly equivalent to the size of south Wales. This could be extended to all 40 o shore English MPAs too.

It is time to invest in blue carbon so that we can unlock the potential of our coastlines to reach our 2050 goal for net zero emissions, protect against ooding and erosion and reverse loss of wildlife whilst simultaneously helping to provide our coastal communities with jobs and investment where it is most needed.

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“Speak to the earth and it will teach you”

BOOK OF JOB 12.8

Andrew Selous MP

Enhancing nature in our protected landscapes

‘Speak to the earth and it will teach you’ comes the message from the Bible. Every Christian and every Conservative shares a common duty: to conserve and care for our natural environment and protect it for future generations. Unfortunately, we have not managed this well enough over the past few decades, and in that time our natural landscapes have been degraded. Even those areas which should be most protected - the Sites of Special Scienti c Interest (SSSIs) - have been in decline.

Andrew Selous has been MP for South West Bedfordshire since 2001, and is a member of the CEN Parliamentary Caucus. He was appointed the Second Church Estates Commissioner in 2020.

However, this could now change thanks to the Government's commitment to protect 30% of land for nature by 2030. This target, a core component of the UK-spearheaded UN Leaders' Pledge for Nature, is crucial for delivering our legally binding target to halt the decline of nature by 2030 in the Environment Act. To deliver on these ambitions, we must rstly improve the condition of our sites protected for nature, such as SSSIs. Secondly, we must improve the state of nature in our protected landscapes, such as our National Parks and Areas of Outstanding Natural Beauty (AONBs), which are currently not managed for nature. And thirdly, we must bring new areas under protection for nature's recovery.

Currently, 26% of land in Britain is protected, but only 8% of land is speci cally designated for nature's protection. These protected habitats have not always been well managed or su ciently monitored, allowing even nature under the strictest protection to decline over time, with some estimating that as little as 4.9% of UK land area is e ectively managed for nature conservation. [1] But even if all of our designations, from National Parks to SSSIs, were e ectively managed to a high standard for nature, other land still needs to be designated to reach the '30 by 30' target.

One way of doing this would be to introduce a new designation for nature's recovery - an idea known as the 'wildbelt'. This could take the form of upgrading existing protected areas such as the green belt, which at the moment delivers poor outcomes for biodiversity, [2] or designating areas of private and semi-public land exclusively for nature restoration. New designations could be made strategically, to better link biodiversity hotspots to one another, providing corridors for wildlife.

As the Second Church Estates Commissioner, I am determined to help bridge the gap between current protections and our 30% goal. The UK's departure from the EU, and subsequent replacement of the much maligned Common Agricultural Policy (CAP) with our new environmental land management (ELM) schemes, has provided the Government with a unique opportunity to change how we manage land across the country. The land that the Church of England owns is a shining example of this, and much has already been done to shift toward more sustainable land management. Last year, the National Trust convened the Church alongside some of the nation's largest landowners to agree a new nature compact to create or restore habitats.[3]

This sustainable land management is particularly important considering the Church is most fortunate to be blessed with 5,350 acres of peat.[4] Peat is a tremendous carbon sink. In the UK it locks in over twenty times the amount of carbon than all the UK forest biomass combined.[5] Unsustainable management of peat driven by agriculture and drainage releases this into the atmosphere, contributing to climate change. Our peatlands have become a net source of emissions when they should be a carbon sink, so we are committed to working with our farmers to protect our precious peatlands.

I am particularly passionate about the health of our soils - the essential building block for nature. Healthy soils mean more invertebrates, which encourages the return of farmland birds and small mammals. It also reduces runo into our rivers, improving our aquatic environment. The Church Commissioners aim to work closely with tenant farmers to move towards regenerative farming, which seeks to combine traditional practises with new technology to improve soil health.

This could take a number of forms, whether that is reducing grazing pressures or intensive tilling, protecting soils with cover crops like herbal leys, and using fewer synthetic inputs. The new Sustainable Farming Initiative will provide payments for farmers to adopt these sustainable practises. In future, I hope the scheme will support best practice not only in soils but in hedgerow creation and agroforestry too.

Farmland is of course not the only type of land the Church owns. Churchyards exist as pockets of green oasis up and down this country, providing space for re ection and respite from the busy outside world. There are nearly 10,000 of these churchyards, which make up the space of a small national park.[6] With such a large combined landmass, simple options like choosing to create a wild ower meadow rather than a neatly mown lawn could generate substantial bene ts for biodiversity. Some of these areas could be designated as wildbelt and contribute to our 30% target. After all, delivering this ‘30 by 30’ target will rely on using these oft forgotten spaces.

The Environment Act requires the creation of Local Nature Recovery Strategies. These are the building blocks for the national Nature Recovery Network, mapping out strategic areas where nature can bounce back. There are now plans for fty of these Local Nature Recovery Strategies across the whole of England. These will put the power to protect nature into the hands of the local communities who understand their wildlife best and who will be able to develop localised plans to protect biodiverse habitats and areas where nature can recover.

Yet, while new pockets of land and habitat are vital for achieving the '30 by 30' target, the bulk of investment and focus should be on improving the state of nature within existing designations.

Back in 2019, the Government commissioned an independent review of our National Parks and Areas of Outstanding Natural Beauty (AONBs). While these are treasured landscapes which form part of our natural and cultural heritage - think William Wordsworth and Beatrix Potter in the Lake District, for example - these designations have not delivered good outcomes for nature since their creation after the Second World War. In fact, studies have found that the condition of SSSIs is on average worse inside England's National Parks and AONBs than outside of them.[7]

I welcome the Government's response to the protected landscapes review, particularly its proposal to give these landscape designations a renewed mission to recover nature.[8] I hope that this will include the strengthening of management plans to be in line with the targets set under the Environment Act, and a requirement on public bodies to support their delivery. I would also like to see the establishment of designated wilder areas covering at least 10% of our national parks, as Rewilding Britain has called for.

Much of the blame for the current state of our national landscapes lies with the CAP, which for decades has incentivised the intensi cation of farming in Britain. The new Environmental Land Management Schemes will support farmers to recover nature in our National Parks and AONBs through the restoration and e ective management of our soils, peatlands and woodlands.

RSPB Haweswater in the Lake District National Park provides a blueprint for wilder farming in our more remote, less productive landscapes. The reservoir at Haweswater provides drinking water for over two million people but has been su ering from agricultural runo as a result of overgrazing and the drainage of peat. This has damaged the water quality and increased risks of both drought and ooding for people living downstream of the reservoir.

From 2012, the RSPB took on the tenancies of two farms near to the reservoir and worked to reduce grazing pressures and restore peat and woodland. This has reduced the risks of ooding and drought and has made the water cleaner and healthier for residents, all while remaining a functioning farm with extensively grazed livestock. Haweswater is also home to fragments of precious temperate rainforest, and there is the potential to restore this globally signi cant habitat in other national parks such as Dartmoor too. In recognition of their success, the International Union for the Conservation of Nature recently recognised RSPB Haweswater as one of only ve sites in the UK to meet its global standard for nature-based solutions.

Imagine if in 2030, 30% of land is truly protected for nature. No matter your postcode, you are close to green space bursting with wildlife and biodiversity. Whether that is in little urban pockets such as the nearest churchyard, or in our revived national parks where beautiful, scrub-rich, wood pasture landscapes stretch on as far as the eye can see, with the sky alive with birdsong and bats ickering past at dusk. We have harnessed nature to protect ourselves from disastrous oods, our water and air is cleaner, and our soils are more productive. That is the future that I envisage.

Nature has a remarkable ability to bounce back. Given the right protection, we can restore Britain's rich natural heritage.

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“And out again I curve and ow
To join the brimming river,
For men may come and men may go,
But I go on forever.”

Lord Tennyson, THE BROOK, 1886

Craig Williams MP

Rescuing Britain’s rivers

It is common for people to forget the huge importance that our rivers play in environmental policy. After all, people think of trees, wild meadows, recycling, but rarely are rivers considered. That is, of course, unless people are thinking about pollution. But rivers are about far more than just that: both rural and urban areas rely on rivers for drinking water, industry and agriculture. Maintaining high water quality is therefore key to our prosperity.

Craig Williams has been MP for Montgomeryshire since 2019, and is a member of the CEN Parliamentary Caucus.

Our ever owing, ever changing rivers are hard to manage at the best of times. However, the bene ts of getting river management right cannot be understated. We need to install modern drainage systems, working with the custodians of the land, our farmers - who understand how best to manage rivers. A serious national conversation regarding dredging needs to be had as a part of this too.

A clear, UK-wide regulatory drive to improve our rivers is sorely needed. Being a Welsh MP on the border, the River Severn starts in my constituency, and continues to ow in England. Devolution of river management has meant that the catchment is split by a political boundary where a clear, uni ed strategy would provide greater bene ts.

This sentiment was re ected by the House of Commons Environmental Audit Committee, who recently published a report on water quality in rivers. [1] They recommended a UK wide survey of emerging pollutants and microplastic pollution of river environments, including an assessment of their potential impact on aquatic ecology in conjunction with the Devolved Authorities. As water management is largely devolved, it is vital now more than ever that all governments of the United Kingdom act quickly to understand the challenges faced by rivers and develop comprehensive plans to protect them.

It is also not enough to simply introduce large-scale capital projects. Rivers are served by countless tributaries. Focusing on the wider catchment area, with targeted small-scale nature-based projects, will yield a far greater return in terms of value for money and successful delivery. Take Tewksbury, for example, where the Severn meets one of its largest tributaries – the River Avon. By having a clear tributary strategy, ooding can be signi cantly reduced by controlling runo and ground absorption across the catchment area.

This is where riparian tree planting comes in. Increasing vegetation along rivers yields proven results, increasing water absorption but also providing huge bene ts to local wildlife through increasing habitats. This also reduces the impact on agricultural workers, as lands directly adjacent to rivers are rarely used due to the aforementioned ooding risk to crops and livestock. Steps have already been taken here by the Department for Environment, Food and Rural A airs (Defra) through the Woodlands for Water scheme in England's Tree Action Plan to encourage riparian tree planting. This should be emulated across the nations of the United Kingdom, perhaps creating a joined up nature recovery network along Britain's waterways.

We are also seeing a signi cant amount of investment from the UK Government. The Levelling Up White Paper and nancial commitments by the Chancellor have shown that the UK is ready and willing to invest in projects up and down the nation. [2] There is a real opportunity for the UK Shared Prosperity Fund to be used to support nature recovery projects, including nature-based solutions to water pollution and ooding across the UK.

Ofwat needs clear powers to tackle water pollution, and they need to have clear guidance from government to unlock investment from water companies. Defra's Strategic Policy Statement for Ofwat in relation to England, which sets priorities for the regulator ahead of the next price review in 2024, instructs Ofwat that water companies must tackle nutrient pollution, increase the use of nature-based and catchment solutions, prioritise improvements to protected sites and recognise the importance of priority habitats such as chalk streams.

This strong guidance from Defra is essential to meeting the targets in the Environment Act. I was pleased that the Commons approved a strict target to halt the decline in the abundance of species in England by 2030, but the Government could make it clearer, through strategic guidance and other directions to Ofwat, that natural capital needs to be taken into account in all economic decision making, and priced at a level that preserves and enhances it.

Ofwat has also been instructed to incentivise water companies to 'signi cantly reduce the frequency and volume of sewage discharges from storm over ows'. [3] This guidance needs to also come from the Devolved Authorities. A clear strategy that works with governments from across the United Kingdom will prove far more successful than other governments and local authorities pursuing their own river management strategy that may come into con ict with one another.

There was much discussion and public concern about water quality amendments to the Environment Bill. It is right that both Ministers and the Environment Agency should set challenging and clear improvement targets and timetables for a progressive reduction in harm from storm over ows which was introduced in the Environment Act. Accurate sewage management plans, drawn up by the water companies to ensure drainage and waste water infrastructure can keep abreast with population and climate change pressures, are clearly a right step in reducing sewage over ow into our rivers. We must wait to see how this is achieved and hold companies to account that are not taking serious, direct action on reducing sewage pollution.

When talking about river management and quality, it is often forgotten that our rivers are used by countless numbers of people for leisure. One need only take a short walk by their nearby river to see people shing or kayaking or any other number of activities.

They are a key part of people living healthy lives. An interesting aspect of the EAC report on water quality was the call for a designation of at least one widely used stretch of river for bathing and other leisure activities.[4] Whilst I am interested to see how this will be implemented in practice, it recognises the clear importance that our waterways have in the daily lives of people right across the country and could help to drive coordinated, catchment-based action to improve water quality.

In conclusion, there are clear challenges to river management and successive governments have struggled to decide how best to manage rivers e ectively. This comes from uncertainty about what the end result should be: to tackle ooding or pollution? By working with a local and targeted method, both can be achieved. Strengthening the powers that Ofwat can employ to improve water quality and reduce pollution is key, and this can be achieved with a multi-pronged approach, through all layers of government, along with regulators and those who work the land around rivers, to properly protect and restore the arteries of nature which sustain our beautiful, British landscapes.

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CHAPTER II

Food and farming

“To be a successful farmer one must
rst know the nature of the soil”

Xenophon, OECONOMICUS, 400 B.C.

Anthony Mangnall has been MP for Totnes since 2019, and is a CEN champion for sustainable agriculture. He is a member of the International Trade Committee.

Anthony Mangnall MP

Regenerating our green and pleasant land

It is frustrating that after decades of Country le being aired that it only took one season of Jeremy Clarkson’s Farm to make the British public aware of the enormous di culties faced in agriculture. However, it has served a great purpose in making us all more conscious of where our food comes from, how it’s produced and the e ort required.

The last scene of season one of Clarkson’s Farm shows him hunched over a spreadsheet looking at his minuscule pro t from his year of hard labour.

This nal scene is all too real for farmers across the country. The endless hours of work through the weeks and months of any given year can all too often end with no pro t at all.

For close to forty years our farmers have relied on subsidies in the form of the EU's Common Agricultural Policy's (CAP) Basic Payment Scheme (BPS). This subsidy paid farmers based on the size of their landholding. Now outside of the EU, the UK has taken its fate into its own hands and must design a new subsidy scheme that will help meet the demands of the 21st century while also ensuring food security and a future for our farmers.

The Government's environmental land management scheme (ELM) promises to be a fairer, more tailored subsidy initiative that will help English farmers produce food, improve biodiversity, address and reduce air and water pollution, protect our landscapes and adapt our agricultural ways in response to climate change, food security and consumer demand. ELM is undeniably ambitious and simply put it seeks to provide "public money for public good".

As a result of this change, coupled with the pandemic and climate change, English agriculture is at a seminal point, perhaps the most signi cant in 70 years. We now have the chance to rethink and reform our agricultural way of life in a manner that is harmonious to producing healthy, high standard food, reaching our climate goals, enhancing biodiversity and tackling rural issues.

Our landscape has been severely impacted by our previous methods. A combination of climate change and decades of intensive farming has led to more frequent ood events, topsoil loss from erosion, pesticide and antibiotic resistance and plateauing yields despite higher inputs.

All of which is making farmers' jobs increasingly more challenging, including nancially, while also incurring lasting damage to our shared environment.

The manner and approach in which we farm is already changing. Some have maintained the practice of hyper-intensive farming - that 'dig for Britain' mentality in which the land is worked and squeezed from every angle for every nutrient, to produce food for a growing population using chemicals, intensi cation and where high yields are a priority at all costs.

Others have changed tack and adopted an organic farming model. Standards are raised, chemicals reduced and products produced that are of high quality, infallible welfare standards and of course a price to go with it.

Then there are those who have recognised the damage in icted upon our land through intensi cation and have chosen to return the land to a more balanced and natural state. The rewilding brigade, whose e orts have been so neatly captured through the work of Isabella Tree and Charlie Burrell at Knepp, shows the rapid speed at which land can be returned to its natural, healthy, abundant state.

While each of these methods has its positives and negatives, it is telling that there has been such a move within the agricultural community to consider its best approach to safeguard our countryside while also producing food.

But these well discussed and practised approaches are overshadowing the move towards regenerative agriculture.

In recent years many farmers have come to re-think their entire operations from the ground up. By placing renewed emphasis on the few inches of the earth's surface, topsoil.

It is this topsoil that in a healthy system holds nutrients, biodiversity and biological matter and allows all life on earth to thrive. We owe our existence to these few vital inches. Yet for too long we have been treating it, well, like dirt.

Regenerative agriculture is producing food while restoring the land and it consists of the following ve principles.

First, that the soil should not be disturbed. The ground beneath our feet is a universe of bacteria, fungal hyphae, wormholes, protozoa, arthropods and microscopic air pockets. This world of activity is weakened by every plough blade and dose of fertiliser, which weakens the balance of biodiversity, decreases the ability of the soil to sequester carbon dioxide and reduces its productive ability.

Second, that soil surface should be covered. Cover crops lock nutrition into the soil and further assists carbon dioxide sequestration. It provides greater water retention and avoids topsoil runo , which so adversely impacts our waterways and coastlines.

Third, keep living roots in the soil. The living environment that is earth, soil and mud needs deep roots far beneath the crust to help feed the multitude of living creatures both seen and unseen. The deeper the roots the healthier the crop and the better the pasture.

Fourth, grow a diversity of crops. Diversity matters. Nature does not produce monocultures and neither should we. For too long we have produced single type crops over massive landscapes with little regard for the consequences this has on the soil or the resilience and nutritional value of the crop. Creating diverse crops not only helps biodiversity and wildlife but restores a degree of natural order to the farming world.

Fifth, bring grazing animals back to the land. By allowing land to lay fallow and using livestock to graze it a circular existence is nurtured in which healthier pasture is created. This in turn is eaten by the livestock and fertilised naturally.

While it is safe to say that these ve principles are well known within the regenerative community, they are not so widely recognised within the wider farming and agricultural community.

If adopted on a broad scale, regenerative agriculture moves farmers away from an agrochemical model and provides them with a solution that helps to improve biodiversity, carbon sequestration, and food production while also reducing costs and creating a symbiotic model that is sustainable, e ective, necessary and very much in demand.

But to incentivise more farmers to adopt regenerative farming we need to make it not just the greener choice, but the more pro table too. Firstly, the Government's new Sustainable Farming Incentive (SFI) should pay farmers for actions which further improve soil health above and beyond those currently required in regulations. Farmers should be encouraged to quickly move to deliver the more ambitious actions within the SFI soil standard. This will ensure soil health across the farmed landscape improves as the Government aims, and will secure value for money for taxpayers.

The new farm support system must go hand in hand with knowledge building and sharing, such as through webinars and conferences on regenerative farming. What's more, the Government could require agricultural college and university courses to include soil health and regenerative practices, and provide opportunities for those in farming to train, retrain or upskill in agri-carbon solutions through the Lifetime Skills Guarantee.

Secondly, the Government can help to monetise the carbon sequestered by regenerative farming to diversify farmers' income and increase pro ts. The Environment Agency is supporting the development of a UK Farm and Soil Code through the Natural Environment Readiness Fund, to establish market standards for soil carbon o setting. The project is using a nascent technology developed by Agricarbon to measure the carbon sequestered on 40 dairy farms. Establishing protocols for the measurement, reporting and veri cation of farm soil carbon is essential to prevent the emergence of a fragmented and opaque market that could be open to abuse.

This is a promising initiative, and is something that I have been calling for along with colleagues in the CEN Caucus. But the Government must go further to establish a reliable route to market for farm soil carbon. Firstly, Ministers should make clear to farmers that they support the development of a common code and urgently clarify how the Government will ensure the new SFI payments for healthy soils can be blended with private nancing for soil carbon to avoid crowding out the private sector and forcing farmers to choose between schemes. Secondly, the Government needs to decide which arms-length body will take ownership of, and eventually administer, the farm soil carbon code, and who will regulate the market.

The crossroads at which UK agriculture stands means that tough decisions will have to be taken over the coming months and years. However, regenerative agriculture, marrying old techniques with new technology, provides a solution that sees farmers continue to play their vital role as stewards of our landscape whilst still being able to create top-class produce. England's green and pleasant lands are feted across the world. But only by embracing new techniques like regenerative agriculture can we hope to preserve it for the future.

“New technology is the
true friend of full employment;
the indispensable ally of progress;
and the surest guarantee of prosperity.”

Margaret Thatcher, 1979

Jerome Mayhew MP

Leading the fourth agricultural revolution

I represent a largely rural part of Norfolk, famed for the quality of its farmland and the e ciency of its farmers. This is the part of the country where the Barley Barons ll the breadbasket of England. Farmers are rational business people, and quite right too. Yes, they want to be responsible custodians of the countryside, but they also follow the money. Over the last 43 years, the UK farming sector has worked under the directions of the EU’s Common Agricultural Policy and the results are there for all to see.

Jerome Mayhew has been MP for Broadland since 2019, and is a CEN champion for sustainable agriculture. He is a member of the Environmental Audit Committee.

I was born in 1970, so my lifetime has coincided with the development and implementation of the European Union's agricultural and environmental policies. The consequences have been devastating to food security, wildlife and the natural environment.

The British countryside gives an impression of timelessness, a balance of man working with nature to produce a beautiful natural environment that produces the food we eat. The truth is very di erent. Whilst politicians and farmers can argue about the myriad environmental schemes and grants that have poured out of Brussels and Westminster, they are only as useful as the results that they have generated.

Farming is currently responsible for 10% of the UK's greenhouse gas emissions, with one of the biggest culprits being the energy-intensive production of arti cial fertiliser. [1] Plans to support biodiversity have also failed. Analysis by the Natural History Museum has exposed the hard truth that the UK, with only 53% of its biodiversity remaining, is one of the most nature-depleted countries in the world. [2] Our modern farming practices have led to 63% of breeding farmland birds demonstrating a weak or strong decline since 1970[3], leading to an absolute decline in number of 56% by 2017, largely because of agricultural changes.[4]

You would hope that the trade-o for all this environmental degradation would be a huge increase in agricultural productivity. It is undoubtedly the case that yields have increased substantially with the increasing reliance on arti cial fertilisers to provide fertility in preference to long-term husbandry of soil structure and quality. But this, too, has come at a huge cost.

Agricultural runo of fertiliser and other chemical inputs has been identi ed as one of the key contributory causes of poor water quality, as has the poor management of soil structure that has often gone hand in hand with an over-reliance on external inputs for fertility and yield. [5]

All pretty depressing stu . But you would at least assume that all this focus on yields at the expense of long-term agricultural and natural health would at least have paid o with a huge increase in our food security. I am sorry to say that this has not happened either. Food security has declined over the last 30 years. Self-su ciency levels in fruit and vegetables have steadily fallen since the mid-1980s, when we produced 78% of our food needs. Today, that gure sits at 64%.

Added to the policy mistakes of the EU are the increasing risks to agriculture from climate change, which along with soil degradation, poor water quality and biodiversity loss, presents the gravest medium to long term threat to domestic food production, according to the Government's food security review. [6] In addition to temperature variations and an increase in extreme weather events, it is forecast by the Environment Agency (EA) that access to fresh water will reduce by around 15% by 2050 as demand increases by 3.4 billion litres per day.[7] Already, water scarcity is causing increased con ict between user groups in Norfolk, the driest part of the UK. Farmers in my constituency of Broadland are having water abstraction licences, on which they rely to grow our food, cancelled by the EA, which is concerned over the impact on the wider environment. Increased housing development will only make demand concerns more acute.

Enough!

The brilliant news is that all of the above is capable of change and the Government now has the tools to do it. Whatever your views on Brexit overall, the freedom to replace the CAP in England (farming is a devolved competence) with environmental land management schemes (ELM) is undoubtedly a huge Brexit dividend. Moving from the Basic Payment Scheme, where landowners were essentially paid for owning farmland, to "public money for public goods", starts the transition away from area-based subsidies towards environmental recovery. Split into the Sustainable Farming Incentive, Local Nature Recovery and Landscape Recovery the schemes move from individual land holdings to small collectives and then to large-scale schemes. Whilst much of the detail for Local Nature Recovery and Landscape Recovery is still to be worked through, the potential for recovery here is enormous.

The Government has ringfenced the £2.4 billion spent on farming under CAP for every year of this Parliament under ELM. This should not hide the very signi cant changes that will be required from farmers for them to thrive under the new regime. Very large landowners will get less, and that is the intention. Farmers keen to encourage the sharing of their land with nature whilst maintaining production will get more. Much attention has been given to rewilding projects, where farmland has been taken out of production for good and turned over to nature. Whilst this 'sparing' approach will have a place under Landscape Recovery, much greater emphasis has been placed on a 'land sharing' approach.[8]

If we are to have any hope of achieving net zero by 2050, then the agricultural sector is going to have to wean itself o its overwhelming reliance on high-carbon arti cial fertiliser. Regenerative farming techniques recognise the importance of soil structure as a crucial supply of in- eld fertility.

A movement that used to be reserved for alternative true believers is becoming increasingly mainstream. Commercial farmers are adopting key aspects of reduced soil disturbance, maintenance of soil coverage and mycorrhizal root interaction via cover crops to reduce soil loss, increase water retention to be less water stressed and more e ective in ash ood reduction, whilst increasing carbon content in the topsoil.

Whilst traditional mixed farming may not return, cover crop grazing is starting to be reintroduced in eastern arable farms by specialist grazers coming onto the land. In this way, a single farm can help to support two or more “farmer” businesses. Combine this with the high accuracy of in- eld measurement of growing conditions that GPS based robotics can already provide and you have a near-term future of hugely reduced, accurately applied fertiliser, pesticides and fungicides, encouraging a return of biodiversity in eld and not just around the edges.

And it is this increase in carbon content in the topsoil that could provide farmers with a wholly new income stream whilst helping all of us achieve our net zero ambitions. A wholly bene cial by-product of regenerative farming techniques, the sequestration of carbon in farmed topsoil could dwarf even peatland restoration projects, given the land under cultivation in the UK runs to over 9 million hectares. An increase in topsoil carbon content of just 0.1% equates to 9 tonnes of sequestered carbon per hectare. You can do the sums.

With the ability to sequester carbon as part of the farming process, farmers have the opportunity to generate a new market wholly independent of government subsidies. Sequestration needs to be of a quality that is auditable and for a period that amounts to permanence.

Technologies that claim to be able to measure topsoil carbon accurately are already entering the market to improve on the mix of measurement backed by satellite imagery used in the already functioning Australian carbon sequestration market. As for permanence, a 30-year undertaking would take us beyond 2050, by which time our approach to carbon emissions is likely to be unrecognisable. Whilst some commentators argue for a qualifying sequestration of 1,000 years, let's not make the best be the enemy of the good. With the current UK Emissions Trading Scheme indicating a carbon price of around £56 per tonne and rising, there is much work to be done to develop this area.

Underpinning all of the above is the need for a price for carbon. If the climate scientists are to be believed, and I think that they are, then we know that carbon emissions have a signi cant economic cost, and yet when we buy something that has caused those costs, we don't pay for them. Economists call this an "externality". Because the market gives no cost to carbon, there is no market incentive to buy lower carbon alternatives, or an incentive to develop them. Governments have a choice: they can either try and regulate carbon emissions out of our farming processes, backing winners and risking the sti ing of innovative technological solutions; or they can provide a price for carbon and unleash the power of the free market to help solve the problem.

As a Conservative, I believe that the role of government is primarily to set the conditions for the market to work e ciently, and then to get out of the way. History has taught us again and again that the collective knowledge of all of us as we buy and sell far outweighs the wisdom of the gentleman from Whitehall.

However, we need to recognise that, whilst we are an island, we are not an island economy, so to unilaterally introduce a price for carbon that is su cient to a ect consumer behaviour would risk destroying domestic production in favour of cheaper, high carbon imports, often called “carbon leakage”. In an ideal world there would be an international agreement to apply this approach, and we should not give up on this. But whilst we wait for global agreement, we should implement a carbon border adjustment mechanism (CBAM) to apply the same price to carbon in imports as for home grown products. This would deal with the risk of carbon leakage and have the additional bene t of incentivising exporting countries to reduce their own carbon emissions in order to avoid the adjustment tari . The EU published a draft CBAM Bill in July 2021. The USA has also expressed interest in a form of CBAM. The UK needs to get involved.

Whilst the future for farming is more uncertain now than it has been for the last 40 years, the opportunities to farm better, and more productively, are also at their greatest. On-farm technology is exploding, arable farming practices are being revolutionised and nature has a chance of recovery. The terrible destruction of the natural environment and the degradation of our farming assets are nally being addressed with government support priming the pump. But much more important than subsidy is the need to set the economic environment for low carbon, biodiversity-encouraging production in a world where carbon has a price.

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“We shall escape the absurdity of growing a whole chicken in order to eat the breast or wing, by growing these parts separately under a suitable medium.”

Winston Churchill 1931

Jonathan Djanogly has been MP for Huntingdon since 2001. He is Chair of the APPG for Corporate Responsibility.

Jonathan Djanogly MP

Raising the steaks on cellular agriculture

Globally, demand for protein is rising steeply as the Asian middle class grows and standards of living increase. The Food and Agriculture Organization estimates that global meat consumption is likely to double by 2050.[1] Conventional agriculture will struggle to meet this demand sustainably. Farmland is in many parts of the world producing as much food as possible, sometimes in environmentally damaging ways,

while elsewhere demand for new farmland to expand production of certain commodities, such as soya and beef, is driving deforestation and the loss of some of the planet's remaining pristine habitats.

In the UK, we are seeking to maintain and enhance our food security, growing more of our own food in a way that advances rather than undermines our important environmental goals. We are also striving to be a science superpower, using the world-class expertise in our universities and research institutes to develop and commercialise new technologies that can solve pressing global challenges.

Given this context, there is a signi cant opportunity for the Government to position the UK as a global leader in cellular meat. Cellular meat is the production of meat by painlessly harvesting muscle cells from an animal and then nurturing those cells in a growing medium so that they multiply and create muscle tissue. This muscle tissue is biologically the same as the meat people normally eat, however it is not grown on a live animal.

Cellular meat o ers a number of environmental bene ts compared to meat from livestock. It uses a much smaller land footprint (around 95% compared to conventional meat), [2] reducing pressure on wild habitats and natural carbon sinks overseas caused by the conversion of forests into farmland. It doesn't use synthetic fertilisers or pesticides which can have negative impacts on pollinators and other wildlife. There is no slurry or manure from cultured meat either, which is a signi cant contributor to ammonia emissions in the atmosphere and the pollution of rivers. It would help mitigate climate change too. When produced with renewable energy, cultivated meat could cut the climate impact of meat by 92%. [3]

Cultured meat also avoids the rearing and slaughtering of live animals, which would eliminate any animal cruelty from traditional agricultural systems. Many, including me, are comfortable with the idea of killing animals for meat, however Britain's growing numbers of vegetarians and vegans clearly are not. Cultured meat could be an important source of nutritious protein for these groups, as well as for people who enjoy eating meat but want to cut down in order to reduce their carbon footprint. It would also avoid the use of antibiotics on livestock, which is contributing to antimicrobial resistance. The bene ts of this extraordinary technology are not limited to animal protein either - one UK company is developing cultivated palm oil, which will help to reduce pressure on tropical rainforests.

I understand some in the farming community will worry about this new industry, as a source of further competition at a time when new free trade deals are exposing them to highly e cient agricultural producers in Australia and New Zealand. However, cultured meat doesn't need to come at the expense of traditional livestock farming, especially the relatively low-emission and extensive livestock production that we have in the UK. In fact, given the booming demand for meat globally, the UK should strive to be a leader in both and to export its high-quality, sustainable meat products around the world.

The truth is that the UK risks squandering a powerful set of comparative advantages if we don't support R&D of this new technology and remove the main regulatory barriers. Globally, the value of the cultured meat market has been estimated to be worth between £10.3 billion and £96.6 billion by 2030, which implies a signi cant increase in the next few years given its current value is around $4.9 million globally. [4]

A number of national governments, such as Canada, Israel, and Singapore, are starting to invest in cultured meat. An assessment by the Good Food Institute found that cultured meat can be cost-competitive with some conventional meats by 2030.[5]

With a regulatory system that can be changed quickly to support innovation due to Brexit, combined with our world-leading science base and our existing businesses focused on plant-based proteins, the UK could capture a sizeable portion of this economic activity and create good-paying jobs in the process. Oxford Economics estimates that the UK cultivated meat market has the potential to add over £2 billion to UK GDP by 2030, with up to £523 million generated in taxation, and between 9,200 and 16,500 jobs supported across the UK.[6] The UK is already the largest market for alternative proteins in Europe and a recent study found that 80% of the British and American public would be likely to try cultivated meat.[7] Our window of opportunity is narrow, however, and so I would like to propose in this essay a number of policies to get the UK on the front foot.

There is signi cant private sector capital waiting to invest in this sector, so one of the best things that ministers could do is send a clear signal to the market that Britain wants to be a leader in cultured meat and is a great place for international companies to invest. It could reference its support for the sector in its upcoming food strategy white paper, for instance, as well as identifying it as a priority for the science strategy and for UKRI. The Government could also appoint a food technology champion, similar to the food waste champion, to convene clean meat companies and rally investors.

Outside the EU, the UK has the opportunity to reform cumbersome regulation holding back investment and innovation in cellular meat. Our current system of regulation, inherited from the EU 'novel foods regulation', takes 18 months between the company seeking authorisation and being given permission to start selling the product. It wasn't designed speci cally for cultured meat and its distinct circumstances. Strong food safety regulation in this area is very important, as it will help build consumer con dence in this new product, however it mustn't be allowed to hold back innovation.

The Government should consult on a new regulatory approvals process, to establish a clear, trusted, and e cient route to market for innovative cultured meat products. The current cumbersome process that the Food Standards Agency has in place creates lengthy delays and uncertainty between a company developing a product and being able to sell it on the market. The option should be provided for producers to consult with regulators ahead of the formal approval process, in order to tackle problems early on and avoid unnecessary delays.

Given the Government's target for increasing R&D spending to 2.8% of GDP, there is also an opportunity to channel a portion of that additional funding to this critical new industry. As recommended by Henry Dimbleby in his independent review of the National Food Strategy, this should include support for a new food innovation cluster, which can use agglomerate e ects to create a thriving ecosystem of researchers and entrepreneurs.

Open-access R&D funding can support long-term innovation projects, complementing the private sector innovation that is already taking o . Innovate UK should make available grants to support rst-of-their-kind cultured meat projects, to help the industry become established and get the rst cultured meat products to market.

And the new UK Infrastructure Bank should consider o ering concessionary nance, such as loan guarantees, to early cultured meat businesses. The industry to date has relied on venture capital, however for the next stage of its development will need access to patient sources of capital so that it can invest in scaling up production facilities.

Finally, one of the biggest cost pressures on cultured meat producers will be energy, and electricity in particular. To make this cost cheaper, the Government should remove regulatory barriers in the planning and energy systems for cultured meat companies to install on-site solar panels. Similarly, they should push ahead with their proposals in the Heat and Building Strategy to move some of the environmental and social levies o electricity bills and on to gas bills and general taxation.

Other tax incentives should be considered, such as green super-deduction as called for recently by the Centre for Policy Studies, which would enable cultured meat producers to claim a rebate on green machinery they buy on their Corporation Tax bill. They could also be given an exemption to business rates, to help level the playing eld with conventional agriculture.

As the world grapples with how to simultaneously tackle climate change and nature loss, while producing nutritious and a ordable food and delivering sustainable economic development, there is little doubt that cultured meat will attract interest from investors, governments, and consumers. Not everyone will choose to purchase these products, and nature-friendly livestock farming will continue to provide nutritious British food and support a thriving countryside.

But the Government should not stand in the way of new technologies - cultured meat o ers the opportunity to expand consumer choice, further UK leadership in biosciences, and create thousands of well paying British jobs.

To ensure the UK doesn't miss out, we need to send a positive market signal to investors, remove cumbersome regulatory barriers and encourage new food technology clusters through R&D support, cheaper clean electricity, and tax incentives for green capital investment. I hope the Government will embrace this opportunity.

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‘they should not think it amongst their rights
to cut off the entail, or commit waste on the inheritance,
by destroying at their pleasure
the whole original fabric of their society;
hazarding to leave to those who come after them,
a ruin instead of an habitation’

Edmund Burke, REFLECTIONS ON THE REVOLUTION IN FRANCE, 1790

Baroness Jenkin of Kennington

Making more space for nature with less waste

If food waste was a country, it would be the world’s third largest greenhouse gas emitter, following behind China and the United States. In the most comprehensive picture of global food waste to date, a headline-grabbing 931 million tonnes, or one sixth, of all food available to eat, was revealed to be thrown away every year around the world.[1] The problem is bigger and more pervasive than we previously thought. Why was food waste not given a seat at the table at COP26?

Baroness Jenkin of Kennington was created a life peer in 2011 and is a member of the CEN Parliamentary Caucus. She is a Trustee of Waste & Resources Action Programme (WRAP), Cool Earth and Feeding Britain.

In fact, while delegates were served sustainable, locally-sourced food, even they appeared to be unaware of the problem they were contributing to as a horri c mountain of food waste was generated in Glasgow. Despite being vigorously discussed on the fringes of the conference, food waste was missing in the conversations that mattered.

Closer to home, the UK Government has committed to many ambitious targets for restoring nature. Whether it be the target to protect 30% of land by 2030 or the pioneering Environmental Land Management schemes which will incentivise farmers to restore nature alongside food production, making space for nature is at the heart of the Government's agenda.

However, the UK is regularly cited as the most wasteful country in Europe for food. We use an area of land the size of Wales to produce all the food and drink that is subsequently wasted. The problem is not just a waste of the food itself, but also of wasting the land required to grow it. This land could be better used to restore nature and sequester carbon to achieve our environmental goals.

The problems of food waste do not stop there. It is also a grotesque waste of money: £470 per UK family each year, to be exact.[2] It is a major source of greenhouse gas emissions too - wasted harvests account for between 6% and 7% of the UK's greenhouse gas emissions.[3] Food waste globally is responsible for between 8% to 10% of emissions.[4] To reach our target for net zero by 2050, we need to reduce, redistribute and recycle food waste - prioritised in that order.

The UK has already made some progress in reducing waste. The Waste and Resources Action Programme (WRAP) launched the Courtauld Commitment 2030, a voluntary agreement that enables collaborative action across the entire UK food chain to deliver farm-