

# Challenge

The political journal of the Green Liberal Democrats  
[challenge@greenlibdems.org.uk](mailto:challenge@greenlibdems.org.uk) | [www.greenlibdems.org.uk](http://www.greenlibdems.org.uk)



Summer / Autumn 2024 [www.greenlibdems.org.uk](http://www.greenlibdems.org.uk)

CHALLENGE

Summer / Autumn 2024 [www.greenlibdems.org.uk](http://www.greenlibdems.org.uk)

CHALLENGE

The political journal of the Green Liberal Democrats

# Challenge




Sir Ed Davey

**We can't afford  
more climate  
failures**  
pages 8–9


**A Fair Deal  
for the  
Environment**  
page 16

**Improved  
Battery Life**  
page 26





MENU



The Green Liberal Democrats was first established as the Liberal Ecology Group in 1977. We now function as an environmental think tank for the Liberal Democrats, by producing resources for campaign action, hosting fringe meetings and host an annual conference.

You can read more about us here.

Support our vision of a greener and more liberal country!

Donate Today!

Stay in touch

Our monthly newsletter will keep you up to date on everything from our latest events to essential environmental news.

Subscribe to our Newsletter!

ARE YOU A CANDIDATE IN A LOCAL ELECTION, OR FOR PARLIAMENT?

Become a GLD Accredited Candidate and receive resources and support.

## CONTENTS

- 3 **From the Editor**
- 4-5 **From the Chair - Politics, Power and the Art of the Possible**  
Keith Melton - Chair, Green Liberal Democrats
- 6-7 **The Green Transition**  
Wera Hobhouse MP - Liberal Democrat Spokesperson for the Climate Emergency
- 8-9 **We can't afford more climate failures**  
Sir Ed Davey
- 10-11 **Beach cleaning in Bergen**
- 12-13 **Grounds for Optimism In Fighting Climate Change?**  
David Watts
- 14-15 **Of Climate and Carrots**  
Dr Rosalind Savage MBE FRGS MP, South Cotswolds
- 16-17 **A Fair Deal For The Environment**
- 18-19 **Population**  
Peter Hirst
- 20-21 **Fake Climate Information On YouTube**
- 22-23 **Green Liberal Democrat MPs**  
Kat Ewing
- 24-25 **News**
- 28-31 **Reviewing the National Planning Policy Framework**  
David Watts

## FROM THE EDITOR

WELCOME TO THE SUMMER 2024 EDITION OF *CHALLENGE*.

**Green Lib Dem Chair Keith Melton called it right on election night. We were at the count in Newark where I was standing against Robert Jenrick. The exit poll was in predicting the Lib Dems would win 61 seats, and Keith confidently declared that we would win at least 70. The eventual score of 72 represents a new record number of seats for the Liberal Democrats.**

Having a record number of MP's gives us a fantastic opportunity to lead the conversation and set the direction on action to tackle climate change. Getting rid of the Conservatives gives us an opportunity to tackle the climate but we will need to ensure that Labour follow through. History shows us that they can talk the talk but rarely do they walk the walk. It will be up to the Liberal Democrats to ensure that the necessary steps are taken to protect the planet.

Not only do we have a record number of MPs but we also have a record number of Green Lib-Dem MPs. Twenty five of our parliamentary team are members of GLD. This is really exciting and we can be confident that they will be promoting steps to protect the environment and holding Labour to account. In this edition of *Challenge* Kat Ewing begins a series profiling the new GLD MPs.

Rishi Sunak's decision to call a general election in July had many consequences, not least for this edition of *Challenge*. We were well into plans for an edition when everything was put on hold to concentrate on the election. It also meant that a number of articles which we were ready to run were no longer relevant.

We have retained an article by Sir Ed Davey because it is worth reminding ourselves of the real damage that the Tories were doing to the planet, but a number of others had to be ditched. I'd like to thank all those people who contributed material which we couldn't then use.

Two articles that we could still use from the original draft of *Challenge* were from Peter Hirst on the challenge that population growth presents to tackling climate change and from Dr Roz Savage on her vision for Britain. Roz subsequently became the new MP for South Cotswolds. Her story is an incredibly inspiring one. I'm hoping that these will be the first of a series of articles from grassroots members of the Green Lib Dems to feature in *Challenge*. The views expressed in these articles are those of the authors. They don't necessarily represent orthodox Lib Dem policy or thinking. I hope that they will encourage people to think about the challenges set out and how we should best respond to them.

Our manifesto in the election had the heading of "A Fair Deal." We have an article setting out what a fair deal means for the environment and how this can underpin the new parliamentary session. Finally, we have a number of articles on developments in fighting climate change, including a big advance in battery development and also the success of a beach cleaning operation in Norway.

As a final note on the election, my attempt to unseat Robert Jenrick wasn't successful, although my joke in my concession speech wishing him the best in his leadership bid seemed to appeal to the media, who played it on numerous news broadcasts over the next few days.

DAVID



## Green Liberal Democrats

### Beach Comb

**Saturday 14 Sept — 09.30 tbc\***

With: Rewilding Britain and Marine Conservation Society. Meet in front of Brighton Centre.

A friendly walk, beach comb and beach clean, including pauses for thoughts from experts.

### Promoting & Ensuring Marine Conservation

**Saturday 14 Sept — 20.15 - 21.30**

**Room 1D - Brighton Centre**

Chair: Andrew George MP

Keynote speaker: Dr Roz Savage MBE MP

Panel: Rewilding Britain, Marine Conservation Society, Sussex IFCA & Blue Marine Foundation

The speakers and the panel Q&A will explore ambitions and recommendations for community led rewilding, fisheries management, tackling pollution and natural capital financing.

### Local Authorities: Championing Sustainable Development

**Sunday 15 Sept — 11.30 - 12.30**

**Room 1D - Brighton Centre**

Chair: Zoe Franklin MP (TBC)

Keynote speaker: Pippa Heylings MP

Panel: Climate Emergency UK, Bloom Procurement, UK100.

Getting local authorities to pull the right levers to accelerate climate and nature action, focusing on the UN Sustainable Development Goals (SDGs), supply chains, planning and climate scorecards.

### Green Liberal Democrats Reception

**Sunday 15 Sept — 19.45 - 21.00**

**Regent Room - The Grand**

Welcome: Green Lib Dem Chair – Keith Melton

Mingle with our GLD MPs, including Sir Ed Davey (tbc), Wera Hobhouse MP & many others!!!

Join us for evening drinks and refreshments, relax and socialise with fellow Green Lib Dem members and colleagues – and, of course, **LOTS of GLD MPs!!**

\* visit us on STAND H1

[www.greenlibdems.org.uk/join](http://www.greenlibdems.org.uk/join) • [info@greenlibdems.org.uk](mailto:info@greenlibdems.org.uk)



# FROM THE CHAIR POLITICS, POWER

## AND THE ART OF THE POSSIBLE

Cllr Keith Melton – Chair, Green Liberal Democrats

### DOESN'T TIME FLY?

I TOOK OVER THE CHAIR OF GLD AT THE BEGINNING OF 2020, JUST AS THE CORONA VIRUS PANDEMIC WAS DEMONSTRATING THAT ZOONOTIC VIRUSES COULD CUT SWATHES THROUGH POPULATIONS ALL AROUND THE WORLD. SO, BY THE END OF THIS DECEMBER I SHALL HAVE COMPLETED 4 FULL YEARS AS CHAIR OF THE GREEN LIBERAL DEMOCRATS.

**T**his means that this will be my last introductory article for Challenge and that I shall be handing over the reins to a new Chair to be elected at our AGM, which will take place in Nottingham in mid-October. This will be in conjunction with our postponed GLD “Summer Conference”, planned for Saturday 19 October at Nottingham University.

There is a rather nice symmetry about this because I was elected as the first Chair of the Green Liberal Democrats at a special conference in Nottingham back in 1988 when our party was formed from the merger between the Liberal Party and the SDP. (*For any relatively new members, I should say I have not been Chair for the whole of that 36 year period – my latest stint as Chair has been a bit of more recent “recycling”.*) The Liberal-SDP Alliance won just 22 seats in the 1987 General Election, and we got 22.6% of the popular vote.

In the General election just past we only got 12.2% of the popular vote, but ended up with 72 MPs - as you will all know by now! Isn't that crazy!

I am pleased to say that I was predicting around 70 seats in the ‘next election’, just after we had won the N. Shropshire by-election. Those of you who keep back copies of Challenge somewhere accessible at home can see that I said in my introduction to the Spring copy of Challenge in 2022 that the by-election win had “*put several tens of seats in play*” for the Liberal Democrats. So, I should certainly have put a few pounds on that number back then – I might have become quite rich on the likely odds I could have been given then! *As it is I didn't – and I haven't!*

### Politics, power...

The electoral system is so badly out of kilter in this country that we have become the largest third party for a hundred

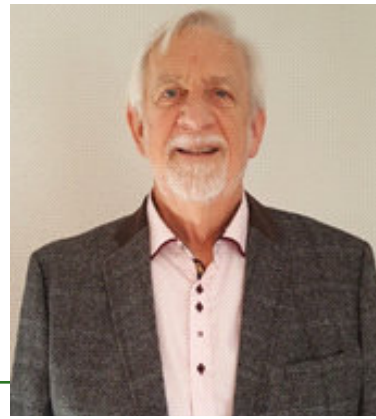
years with that modest percentage of the vote, whereas the Labour Party is now able to form a large-majority Government with a paltry 33.7% of the vote.

### ... and the Art of the Possible

What I wanted to write about here, however, concerns what we can do, now, with 72 MPs, “...the art of the Possible!”: specifically in relation to our Green Lib Dem focus on environmental matters, of course, and with our super contingent of the 25 MPs who are paid-up members of GLD. In other words, we now have more Green Lib Dem MPs than there were Liberal-SDP Alliance MPs back in 1987, as well as having more GLD MPs than represented our whole Party just a few short weeks ago!

The Conservatives are still in a state of shock, I believe, and will be concentrating for a considerable while on their internally-focused scrap for the leadership of the Tory Rump, in the face of a threat from the right from the Reform Party. Labour will, no doubt, be trying to demonstrate a safe pair of economic hands, with Rachel Reeves’ mantra of “If you can't afford it, you can't have it!”

So, it leaves our party with a major platform, and something of a political vacuum, to push key policies harder and further than our numbers might lead us to believe we can. We need to take hold of our key policy interests, on Climate Change mitigation and adaptation; on Nature degradation and what we can do about restoring and protecting our natural environment; on Water Quality and Air Quality; on building renewable power and energy and driving the retro-fitting of home insulation, especially for council houses and social housing, where fuel poverty is a real issue.



## Call to ACTION!

**In order to do all of the things I have noted here, we are going to need a lot of help. We need to build a movement where we can generate an “Expertise Collective” to back up our MPs as they sit on parliamentary Committees, getting into the fundamentals of policy formulation.**

We will be circulating a Typeform survey in the near future to investigate all of those specific topic areas where members of GLD have specific subject interests and expertise.

If you have the sort of knowledge and expertise that will help us generate penetrating questions for our MPs to pose to Ministers, please let us know and help to set up new Special Interest Groups (SIGs) that can help change the world!

### You Can't afford NOT to...

There are certainly many areas to tackle. The GOOD news is that there are also many Labour MPs who are probably pushing for similar changes. We need to break through that Rachel Reeves’ mantra. We know that there are many things we need to tackle NOW in terms of Climate action and Nature restoration that cannot wait – *we cannot afford NOT to do these things!*

### Power

I mention “Power” in the title with relevance to the potential changes we must push for, but especially to help mitigate the dangers of Climate Change and delivery of renewable Power. It is, however, important to be clear that I am using the word power, rather than the word “energy”, because the most difficult decarbonising process will be to decarbonise home HEATING, in particular, which is responsible for around 14% of CO2 emissions in the UK every year.

To make most effective sense of this we need to concentrate our efforts to INSULATE homes and, as far as public expenditure goes, it would make most sense to tackle social housing first. This should be seen in terms of INVESTMENT, of course, so is an area where we should be using the governments borrowing capacity to invest.

### The Art of the Possible

By the way, I'm sure we're all aware of the expression that “Politics is the Art of the Possible”. It is one of those aphorisms, that contains a grain or more of truth. And we repeat it to ourselves, and we tell it to others – and, of course, we believe it.

I have always thought of it as an optimistic phrase, but its history is somewhat less than optimistic. The saying is attributed to Otto von Bismark, the German statesman who was largely responsible for the (first) reunification of Germany in the 19<sup>th</sup> Century.

The complete saying, however, is apparently “Politics is the art of the possible, the attainable—the art of the next best.” This somehow seems a little less revolutionary, and a bit more evolutionary. It is, nevertheless, one of those things that politicians have to endure from time to time.

So, this is where it becomes very important to share our ideas and successes (and even, perhaps, the failures!) with colleagues of like mind. We want to accelerate progress towards a carbon neutral world, so we need to learn from those who have tried “X” or “Y” in their areas and see if we can learn or devise a short cut to make “X” happen more quickly or more inexpensively. Or, perhaps, to make “Y” happen, *but without* encountering the delays and problems our colleagues discovered in their areas.

Green Liberal Democrats will, therefore, continue to work at finding and developing the best ways of sharing our expertise. The first opportunity to do this will be our fringe meetings at Lib Dem autumn conference in Brighton. And the next will be our GLD “Summer Conference” – postponed to 19 October.

**PUT THE DATE IN YOUR DIARY!!**

### Finally

And finally, then, since this IS my last Introduction, let me say I have enjoyed being back in the Chair amongst friends, both long-standing and new, and will continue to work for a much better, greener future. I will probably get round to doing a bit more writing again, and look forward to helping our new caucus of GLD MPs make an impact on the national stage through our new SIGs.

One of my political dreams came true this year, too - having canapes and drinks on the Terrace of the House of Commons with Liberal Democrat MPs.

On the day of the King's Speech a few weeks ago there was a Reception for the APPG group on renewable and sustainable energy and Steve Mason and I were there, hosted by Wera Hobhouse MP, Pippa Heylings MP and Zöe Franklin MP – absolutely fabulous!

Thank you all.

**Keith Melton**  
**Chair Green Liberal Democrats**



# THE GREEN TRANSITION



TO PARAPHRASE UN SECRETARY GENERAL ANTÓNIO GUTERRES, THE LAST GOVERNMENT HAS LEFT US WITH A FOOT FIRMLY PRESSED TO THE ACCELERATOR AS WE PROGRESS ALONG THE HIGHWAY TO CLIMATE HELL. IT'S CLEAR THAT WE URGENTLY NEED A FRESH APPROACH TO TACKLE THE CLIMATE CRISIS.

**A**ll of the evidence points to us being in the midst of a climate emergency. Time and again, the record for the hottest day is beaten. Just last week, we saw the world's three hottest days<sup>1</sup> in a row. And each season brings with it another reminder of soaring food insecurity<sup>2</sup> across the globe, or destructive floods, wildfires and droughts. The devastating effects of climate change are playing out in front of our eyes. We cannot keep looking the other way and hoping for the problem to go away.

We are running out of time to implement policies that will mitigate climate catastrophe and achieve net zero. We must rapidly accelerate action while solutions still have a chance to work. With a new government in power, it is my duty as Liberal Democrat spokesperson for Energy and Climate Change, to be the constructive opposition to Labour and ensure the UK makes its mark once again as a global climate leader.

While climate policy was put on the back burner by the Conservatives, we cannot afford for this approach to continue. Their covert delaying tactics, such as Rishi Sunak's U-turn on the ban of petrol and diesel cars<sup>3</sup> last September, were often more damaging than overt climate denial. At a time when urgency is the only viable option, the rowing back on renewables and diluting of green investment pledges, that became the norm under the Conservatives, were deplorably obstructive. In the new Parliament, things must change. There is no alternative but ramping up climate-focused policy so that we can reach the Liberal Democrats' ambition of net zero greenhouse gas emissions by 2045.

For those with their fingers on the pulse, the myriad of benefits that stand before us if we take climate action seriously are incredibly hard to pass up. From significantly boosting the UK's economy and creating hundreds of thousands of well-paid new jobs to slashing energy bills

and building affordable homes that are made to last, it's anyone's guess as to why the former Conservative government turned a blind eye to the growth opportunity of the 21st century<sup>4</sup> and allowed our economy to flatline instead.

One of the principal reasons politicians excuse climate delay is the supposed cost of climate action. But what they fail to understand is that penny pinching today will cost us fortunes tomorrow. Not only do we risk the immeasurable cost to human life, our environmental landscapes and biodiversity, but failing to tackle the climate crisis might mean we miss out on a considerable economic advantage.

The economic surge that awaits us by taking the green transition seriously is unparalleled. Sustainable investment could be worth £1 trillion<sup>5</sup> to UK businesses<sup>6</sup>, creating around half a million new clean jobs<sup>7</sup> by 2030. In fact, across the globe, other countries have realised the growth staring us in the face. The US Inflation Reduction Act<sup>8</sup> and the EU's green industrial plan<sup>9</sup> are set to draw in a combined \$670 billion of green investment. And for those ready to grasp the opportunity held by hundreds of thousands of new jobs, we Liberal Democrats have a plan to provide upskilling and retraining to help people and businesses transition along with a shifting workforce.

Along with strengthening our economy, the green transition can reshape our housing infrastructure for the better. Indeed, it is no secret that Britain is in the midst of a housing crisis. We have record numbers<sup>10</sup> of homelessness, building projects mired by constant delays, and a lack of accessible, affordable housing for those who need them most. In addition to building 150,000 homes for social rent each year, we Liberal Democrats want to see houses built that can withstand the test of time, making them a worthwhile, affordable and sustainable investment.

That's why we pushed for a ten-year emergency upgrade programme to provide free insulation and heat pumps for

low-income households, while ensuring that all new homes are zero-carbon. It is a win-win. Homes will be warmer, cheaper to heat and able to weather the changing climate around us.

With eye-watering energy bills being the greatest barrier to opportunity in my own constituency, Bath, I am on a mission to bring down bills for consumers and what could be better than the cheaper and cleaner alternative provided by renewable energy? Misplaced dependence on overseas oil and gas has put consumers in a tight spot, leaving us grappling with soaring energy bills in the midst of a cost-of-living crisis. The need for the UK to ensure its energy security became impossible to ignore in the wake of Russia's war on Ukraine which caused the last global energy

bill crisis. Unless we invest in renewable energy, we will continue to struggle to secure our energy independence and many hardworking families will be forced to spend yet another winter in cold and inefficient homes, grappling with sky-high energy bills.

With the beginning of a new Parliament signalling a fresh start for the political agenda, I will continue to push the government, in my role as Energy and Climate Change spokesperson, to make tackling the climate crisis a top priority. From seizing the economic potential of net zero and spreading wealth to every corner of the UK to slashing household bills, the green transition offers opportunities we simply cannot afford to miss. ■

<sup>1</sup> <https://press.un.org/en/2024/sgsm22319.doc.htm>

<sup>2</sup> <https://www.independent.co.uk/climate-change/news/climate-crisis-global-temperatures-hunger-wmo-report-2023-b2514336.html>

<sup>3</sup> <https://www.theguardian.com/environment/2023/sep/20/rishi-sunak-confirms-rollback-of-key-green-targets>

<sup>4</sup> <https://assets.publishing.service.gov.uk/media/63c0299ee90e0771c128965b/mission-zero-independent-review.pdf>

<sup>5</sup> <https://www.lse.ac.uk/granthaminstitute/news/net-zero-the-1-trillion-plus-opportunity-to-create-social-value-in-the-uk>

<sup>6</sup> <https://www.mckinsey.com/capabilities/sustainability/our-insights/opportunities-for-uk-businesses-in-the-net-zero-transition>

<sup>7</sup> <https://www.gov.uk/government/news/major-acceleration-of-homegrown-power-in-britains-plan-for-greater-energy-independence>

<sup>8</sup> <https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf>

<sup>9</sup> [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/green-deal-industrial-plan\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/green-deal-industrial-plan_en)

<sup>10</sup> <https://www.theguardian.com/society/article/2024/jul/23/homelessness-england-highest-level-on-record-national-audit-office-report>





# WE CAN'T AFFORD MORE CLIMATE FAILURES

By Sir Ed Davey

PRIOR TO THE GENERAL ELECTION SIR ED DAVY PENNED THE FOLLOWING ARTICLE, SETTING OUT THE DANGER OF THE CONSERVATIVES AND THE DAMAGE THAT THEY WERE DOING TO THE ENVIRONMENT. EVEN THOUGH THEY ARE NOW OUT OF POWER WE ARE RUNNING THE ARTICLE REGARDLESS, TO ACT AS A REMINDER OF THE DAMAGE THAT THEY HAVE DONE.



Photo © Shutterstock

**V**ital though they are, climate change conferences rarely deliver. Regrettably, Dubai's COP28 was another disappointing summit. Despite hype that the agreement saw "the beginning of the end for fossil fuels", the actual text was undermined with loopholes and flawed by the absence of timescales.

This sad reality was only confirmed by the most independent of judges – the markets. The share prices of the oil and gas majors didn't move.

And as emissions continue to rise and as the world continues to heat up, we just can't afford such failures.

If the world is going to take action and make the agreements that are so desperately needed, then the next two years will be critical – and three things need to happen.

First, we need to see nations deliver on their existing promises fast – including the UK, where, like too many other countries, we are not on course to meet our own "nationally determined" target.

Second, we need a huge international political effort between now and Brazil's COP30 in 2025, to remove the remaining barriers to a dramatic shift in global direction.

Third, we need politics and technology to deliver the combination of leadership and confidence that made the Paris Climate Agreement of 2015 possible – the last COP that really did move the dial.

So how can the UK help make the difference in each of these three tests? And how can we Liberal Democrats work to make sure the UK steps up?

Domestically, we need to expose the climate hypocrisy of the Conservatives – and make sure the next Parliament votes for a radical step change in the UK's own climate action.

I'm sure I'm not alone in getting fed up of the Conservatives taking credit for the successes of the Liberal Democrats in Government, when we nearly quadrupled the UK's renewable electricity, made the UK the world leader in offshore wind and embedded the policies that have seen the UK's emissions fall and coal power decline to near zero. Given they fought us every step of the way, the Conservatives' hypocrisy is breathtaking – especially as they now use our success as an excuse for their inaction today.



Photo © Ed Davey / Lib Dems



Photo © Shutterstock

Liberal Democrat climate policies like accelerating renewable power rapidly and increasing energy efficiency investments dramatically are essential if the UK is to deliver on our climate promises to future generations, cut energy bills and make the UK more energy independent. In contrast, at the next election, the Conservatives' willingness to speed up oil and gas extraction, enable a new coalmine to open and oppose solar and wind investments will enable us to make this case – we are the party of the future, they are the party of the past.

The second set of necessary actions need the UK to embrace an internationalist approach that's totally alien to the current Government. From working closely with European allies to reaching out to geopolitical adversaries, the UK must rediscover past active climate diplomacy that saw us influence capitals from Warsaw to Washington, and Beijing to Abuja. When I had the privilege of leading the UK delegation to 3 COPs and shaping both the British and European preparations for the critical COP21, the unreported work of my team of brilliant officials and the Foreign Office's outstanding diplomats was in my view essential to the successes achieved in Paris in 2015.

The climate diplomacy needed at this moment differs from that in one crucial aspect – the extremely challenging and urgent task of convincing middle and low income countries with fossil fuel resources that if they give up the future oil and gas revenues they currently hope will speed up their development, they can still enjoy a path to prosperity. We have to convince the political leaderships from Nigeria to Uganda, from Cameroon to Colombia that climate action can be in their national interest and that further fossil fuel extraction will be against their national interest.

Liberal internationalists must take on board Anatol Lieven's important insights in "Climate change and the nation state", that wishful thinking that political elites around the world will somehow embrace altruistic global action because we ask them to, is dangerously naïve. A better response must see western democracies putting their own house in order and offering the generous support for development the UK used to do. Without such realism, future COPs are bound to fail again. To date, only the

Liberal Democrats are offering any credible policies to make a renewal of Britain's global climate leadership possible for the run-up to Brazil's COP30.

The final requirement for success in the battle to stop global warming – the right combination of political leadership and technological confidence – is sadly not in the gift of any UK Government or Parliament, though an appreciation of its significance might still shape constructive actions.

Paris COP21 was partly successful because President Obama's diplomacy and the EU's unexpectedly strong climate ambition helped encourage China and India to move further than anyone had predicted. Combined with breakthroughs on the economics of solar power which gave countries confidence the transition would be more affordable, there was a happy moment where the politics and economics aligned.

Since then the politics have deteriorated significantly. The threat of a second Trump Presidency and the relative success of authoritarian regimes have further undermined the ability of western liberal democracies credibly to persuade, incentivise and cajole the rest of the world into action.

The march of technology remains the brightest hope. Policies that invest in the additional technologies we will need from clean flight to nature-based solutions, that share the know-how and support the deployment of game-changers like solar power and that switch the investments from dirty energy to clean may yet overcome the multiple barriers of vested interests of nations and corporates.

Ultimately, to make those policies happen however, we need politicians who genuinely care – ready to put in the graft and capable of taking the political initiative.

No-one can possibly still believe the UK's Conservatives are up to this. I am completely convinced the Liberal Democrats are. ■

*Ed Davey is the Leader of the Liberal Democrats. He was Secretary of State for Energy and Climate Change, 2012-2015, and led the UK delegation to three UN Climate Change Conferences.*



# BEACH CLEANING

## IN BERGEN

RESIDENTS OF THE NORWEGIAN TOWN OF BERGEN HAVE MET TOGETHER TO CARRY OUT A BEACH CLEAN EACH YEAR FOR THE PAST SIX YEARS. EVIDENCE FROM THERE HAS SUGGESTED THAT ACTIVITIES LIKE THIS DO MAKE A SIGNIFICANT DIFFERENCE.

Carrying out cleans on the beach, rivers or lakes are great for our general well-being. The act of doing something positive for the environment, whilst being part of a community and being outdoors is fantastic for individual and group mental health. There is both anecdotal and scientific evidence for the difference that this can make to the mental health and wellbeing of individuals. It's one of the main reasons thousands of people across the globe get together and work hard for their local blue space.

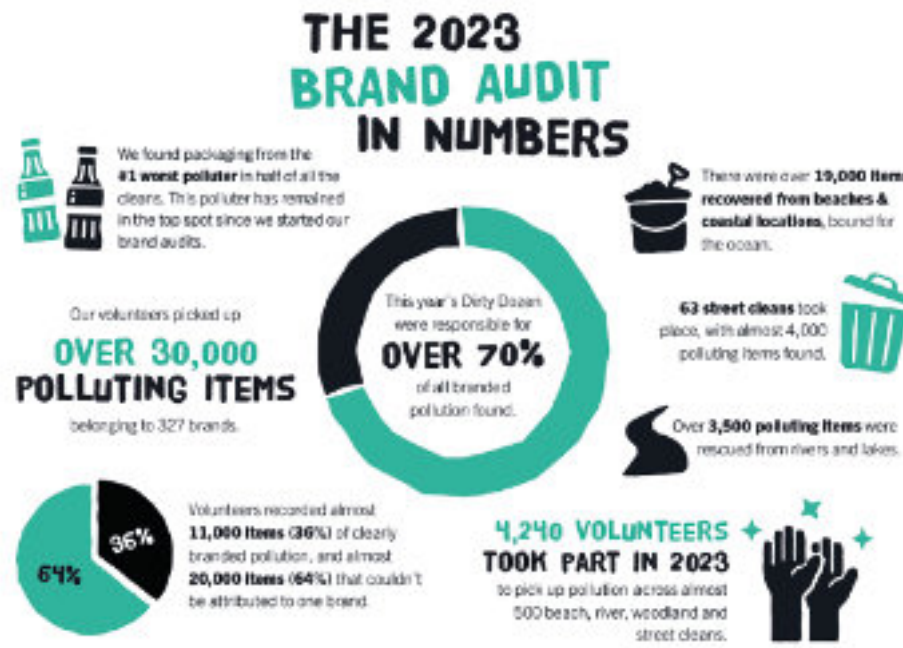
As well as helping individuals, beach and river cleans can also provide important information about the sources of plastic pollution. Surfers Against Sewage carry out an annual brand audit looking at whose waste makes up the pollution. This provides really useful data for campaigners calling for an end to waste plastics.

Six years ago a dead whale with a stomach full of plastic washed up close to the Norwegian coastal town of Bergen. Since then local residents have carried out a series of beach cleans during which they have picked up over 9,000 tonnes of plastic, removing it from the environment for good. The coast around Bergen is made up of islands and fjords, and on one of these islands, scientists from Norwegian research group Norce surveyed the plastic levels before and after cleaning.

They found one significant piece of evidence. Following a year of regular cleaning and picking up of large pieces of plastic debris, there was a decrease of microplastics by an

incredible 99.5%. They theorised that by removing the larger items like bottles and bags, there was no longer a supply of plastic that was either breaking down mechanically due to wave action or degrading in warm shallow coastal water due to sunlight. Therefore, with no larger plastic items

lake or any open spaces, activists are helping by reducing the amount of plastic that can degrade into its most harmful form. When plastic breaks down to these tiny and microscopic particles, it becomes incredibly hard to remove. The lesson here is very clear. On a global scale, beach and river



available, there was a huge reduction in microplastics, which are most damaging to the marine ecosystem. Whilst this is just a small piece of scientific evidence, it is more than significant.

This shows that by cleaning an area, whether it is by the coast, a river, a

cleans may seem like just scratching the surface, but every local clean carried out, every large plastic item removed, reduces the possibility of millions of smaller items entering the ecosystem, and so every clean does make a difference.



### What is a Brand Audit?

The Surfers Against Sewage (SAS) brand audit is a citizen science initiative that relies on volunteers collecting, recording and reporting the pollution they have uncovered during their Million Mile Clean throughout the year. This data enables them to identify and call out the UK's biggest plastic polluting brands.

The data provides concrete evidence to enable activists and campaigners to hold polluters accountable, demand resolutions for the plastic pollution crisis and drive corporate behaviour change. The Surfers Against Sewage annual report each year identifies the Dirty Dozen, highlighting repeat offenders and calling out delays or lack of consideration by these polluters who need to take responsibility for managing their plastic waste. ■

BY FAR THE WORST OFFENDERS ARE COCA-COLA, MCDONALD'S AND PEPSICO. PACKAGING FROM COKE WAS FOUND IN 50% OF ALL AUDITS AND PACKAGING FROM THESE THREE ORGANISATIONS AMOUNTED MORE THAN HALF OF THE POLLUTION PRODUCED BY THE TOP 12 OFFENDERS.



# GROUND S FOR OPTIMISM IN FIGHTING CLIMATE CHANGE?

David Watts

MY OVERWHELMING IMPRESSION AT THE END OF COP 28 WAS ONE OF COMPLETE DISAPPOINTMENT. MORE AND MORE THESE MEETINGS SEEM TO BE DOMINATED BY THE PETROCHEMICAL INDUSTRY, WITH AN AGENDA TO ENSURE THAT THEY KEEP A DOMINANT POSITION IN THE MARKETPLACE.

**T**he comments by the host of COP28, Sultan al-Jaber, about whether it's necessary to phase out fossil fuels to limit global warming are a case in point. Just before the meeting started it emerged that he had claimed that there is "no science" behind calls to phase out fossil fuel consumption. Jaber is also the head of the Abu Dhabi National Oil Company.

Given the criticism that his comments attracted Jaber tried to roll back his comments and said that dramatically reducing fossil fuel use was "inevitable" if the world is to keep within 1.5C of pre-industrial levels.

How quickly emissions can be cut – and how – is the key question that the UN climate summit was set up to answer. However ever since the first Cop in 1992, global emissions have increased each year. 2023 was the record year for carbon emissions. However in its preview of the COP 28 summit the Independent claimed that there are some grounds for optimism. Their conclusion was that "even if we currently remain well off-track from our long-term climate goals, there are signs that the emissions picture could finally be shifting."

The Independent reported that in October, the International Energy Agency (IEA) had projected in its annual World Energy Outlook that demand for oil, coal, and gas should peak before 2030. Peak fossil fuel demand is a crucial milestone in our journey to net zero, because, despite what Jaber had suggested, CO2 released by burning fossil fuels represents around two-thirds of current greenhouse gas emissions.

Following this in November, a report from climate science institute Climate Analytics proclaimed that 2023 will be the year that the world reaches peak emissions, "so long as the adoption of clean technologies like solar panels, wind turbines, and electric vehicles continues to accelerate at the current rate." Climate Analytics said that the IEA has a history of being "conservative" when it comes to policy

projections. Climate Analytics said that they anticipate coal demand to peak in 2023, gas in 2024 and oil to peak in 2025.

"Reaching peak global greenhouse gas emissions ... will be a crucial inflection point for the world", the authors said. "Instead of speeding in the wrong direction, we could finally say we're making the turn towards our collective climate goals."

The Independent spoke to Joeri Rogelj, a world-leading climate scientist based at Imperial College London, who is a lead author of both the UNEP Emissions Gap Report, and an author of the Climate Analytics report. He told them that that he believed there is plenty of grounds for optimism around global emissions.

"Peak emissions in 2023 is what we expect if things continue on the path they are on right now: with ever more clean technology adopted each year," he told the Independent. "The signs coming from the Cop28 are all positive to that end, with a lot of progress being made on reducing methane emissions [the second most significant greenhouse gas after CO2], as well as the pledge to triple renewables by 2030, which has been signed by more than 100 countries."

Rogelj went on to say: "The data here make me optimistic because it shows we can have a global economy that continues to perform well, and eradicate poverty, while also producing increasingly less emissions. This is a crucial message because it is often used as an explanation or excuse to not reduce emissions."

The Independent in their survey went on to look at other data that was produced in advance of COP28 and how that also added to optimism. They said that data from the IEA shows that global investment in clean energy is predicted hit \$1.8 trillion in 2023, 40 per cent higher than the it had been in 2020. Much of this is being driven by two factors: booming EV sales and booming renewables.

The IEA data said that 18 per cent of car sales in the first half of 2023 were electric vehicles (EVs), with EVs now making up 24 per cent of the car market in the EU, and 31 per cent of the market in China. Meanwhile, wind and solar power reached a record 12 per cent of global electricity in 2022, according to the think tank Ember, with 107 economies now past "peak" fossil fuel electricity.

The Independent went on to report that Ember believes electricity sector emissions may now have peaked and pointed out that we know for a fact that they did so in Europe more than a decade ago.

The good news is that declining CO2 emissions will have an immediate, tangible impact on climate change. This is because the way that CO2 operates means that there is not a large amount of additional warming expected from carbon levels already recorded in the atmosphere.

"Once we reach net zero, our best understanding is that global warming related to CO2 will stop where it is: It won't get any better, but it won't get any worse either," said Rogelj. "If we keep emissions within the 1.5C carbon budget – which is the stated aim here at Cop28 – then the warming will stay at 1.5C; it won't get any worse."

Having identified these grounds for optimism the Independent went on to sound a warning, pointing out that none of these positive signs mean that the job of decarbonising is anywhere near completion.

Even in the "continued acceleration" trajectory that the authors of the Climate Analytics report say we are currently on, the 10 per cent fall in emissions by 2030 relative to 2019 remains well off the 43 per cent cut that the Intergovernmental Panel on Climate Change (IPCC) says we must achieve to keep the Paris Agreement goal within reach. The authors add that global clean energy investments need to be ramped up two-and-a-half fold, with the greatest increases happening in emerging economies.

One of the warnings that their survey identified was that progress to date on emissions is also largely focused on easier-to-abate areas like electricity generation. Headline emissions reduction figures can often hide the fact that little progress is being made in areas considered "hard to abate".

One area of particular concern is transport. The EU may have reduced emissions by 32 per cent since 1990, according to European Commission data, but this masks the fact that emissions have actually increased in the transport sector, driven by the aviation and shipping sectors, which have no simple decarbonisation pathway. Indeed, data shows that emissions from European aviation have doubled over the period.

"Emissions make good headlines, but really what matters is what happens underneath," said Rogelj. "And if you look at countries that have peaked, you can see there is a pattern where energy sector emissions have peaked, which is driven by the roll-out of renewables that are now much cheaper than fossil power. But progress is much slower in sectors like transport and in industry."

Even if peak emissions are met this year, there is also nothing to guarantee that it will be followed by a rapid decline, which is what the world requires to meet the ambitions of the Paris Agreement.

The Independent looked at how declines have occurred in the past. They said that historically when technologies have peaked and declined they have followed what is known as a "hockey stick curve", which follows the pattern of levelling off, before a rapid decline.

The Independent said that peak demand for gas lighting in the UK came in 1907; for UK steam power in 1910; and for UK coal heating in around 1960. These systems followed that hockey stick curve, with a plateau for a number of years, followed by a rapid decline. This last period is associated with collapsing profits, stranded assets and companies going bust. The cost of investment rises for industries that have peaked, starving them of the ability to invest, and accelerating their decline.

Despite this historic trend the IEA has warned in its latest outlook that oil and gas demand looks likely to remain constant for some time after its peak, limiting the ability of emissions to follow a trend of rapid decline. This is because increases in consumption in developing countries will offset decreases recorded in developed countries.

For Armond Cohen, executive director of the global non-profit Clean Air Task Force, this failure to account for demand in developing countries is often a major oversight in models looking at peak emissions.

Speaking to The Independent in Dubai, Cohen suggested that models showing a rapid decline in emissions following a peak typically "assume that there won't be much demand for fossil fuels in the developing world, even 30 years from now".

"Data shows us that demand for fossil fuels in developing and industrialising economies continues to grow rapidly. But the problem with so many models is that they assume continued suppressed demand in these parts of the world, which is hard to envisage if you expect these countries to continue to develop," he said.

"I hope that I am wrong: I hope that the more optimistic studies we are seeing on emissions are proved correct. I would also agree with others when they say that progress in renewables and renewables and electric vehicles is very promising.

"But my main message is to not be complacent: even if there is some marginal improvement in the data, the energy transition is complicated and expensive, and it will require us to continually throw everything we have at it if it is to work out."

All of this shows that there are grounds for optimism, but we need to be careful that the petrochemical industry do not launch a significant fightback. Their behaviour in the past and their current efforts to hijack COP meetings show that we need to remain on our guard. ■



# OF CLIMATE AND CARROTS

Dr Rosalind Savage MBE FRGS MP, South Cotswolds

“NO TASK FACING MANKIND IS MORALLY MORE CHALLENGING OR PRACTICALLY MORE DIFFICULT THAN THAT OF ALTERING OUR LIFESTYLE IN ORDER TO PROTECT OUR PLANET AND GIVE FUTURE GENERATIONS THE OPPORTUNITY TO MAKE THE MOST OF THEIR LIVES.”

Paddy Ashdown, *Making Change Our Ally* (1994)

**P**addy dared to name it, but “altering our lifestyle” seems to have departed the mainstream conversation about the environmental crisis – certainly as far as the current government is concerned. Rishi Sunak appears to be in denial of environmental reality, saying that our response to the climate crisis must be implemented in a “proportionate and pragmatic” way.

What, pray tell, is the “proportionate” response to the biggest threat ever to face humanity?

And what could be more “pragmatic” than preserving the ecosystems upon which life on earth depends?

I believe our Prime Minister underestimates the intelligence of the public, and our capacity and willingness to do what is right for the planet. Many of us understand that avoiding planetary meltdown might just require the developed world to stop trashing the one and only liveable biosphere available to us. Many of us realise we may need to change our behaviour for the sake of our descendants.

And here I find myself caught between an existential rock and a political hard place. As a good Liberal, I believe in personal freedom of choice, but I also believe that a responsible government should make it easy for citizens to do the right thing.

Before I go any further, I should introduce myself. After an environmental awakening 20 years ago, I rowed solo across the Atlantic, Pacific, and Indian Oceans, using my voyages to raise awareness of the ecological crisis.

520 days and nights on the open ocean gave me plenty of time to contemplate what we need to do to get on track for a sustainable future. And also gave me a keen appreciation of the raw power of nature. Ashore, we may think we have Mother Nature nicely under control. In the middle of an ocean in a storm, it is very clear who’s boss. And it’s not us.

I’ve recently done a doctorate on systems change, and published the book based on my research last year, as *The Ocean in a Drop: Navigating from Crisis to Consciousness*. So the relationship between humans and our planet is something to which I have given a great deal of thought.

Back to the main thread - here’s how I resolve this conflict between personal freedom and environmental responsibility in a way that might actually help humanity survive – even thrive. Three ideas:

## Carrot rather than stick

We should incentivise the right thing, rather than penalise the wrong thing. While it’s cheaper to fly from London to Edinburgh rather than take the train, we will fly. While it’s cheaper to buy industrially produced, imported, plastic-wrapped ultra-processed food than organic, local food, we will prefer the supermarket over small-is-beautiful farmers’ markets.

If you like laissez-faire economics, you might not like subsidies. But we are already subsidising. Our taxes pay for healthcare for people suffering from obesity, diabetes, and asthma. Big food and privatised companies are externalising their true costs. Would we rather subsidise health, or sickness?

## Prioritise prosperity, rather than profit

Labour and the Conservatives are still prioritising growth, growth, growth. But increasing GDP has always correlated with increased use of energy and material resources.

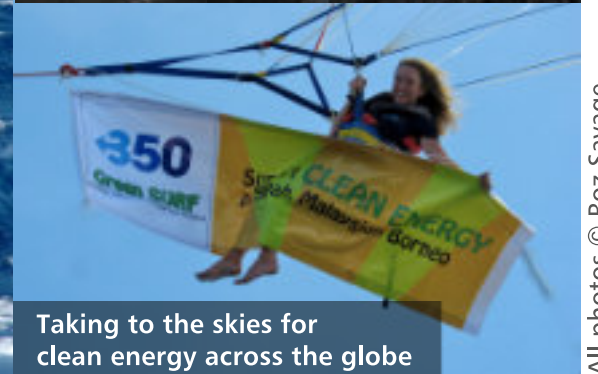
Meanwhile, privatising just about everything has led to a universal focus on profit, which in turn motivates industry to exploit and pollute nature as much as it can without being prosecuted – and some industries even see paying fines as an accepted cost of doing business.



Rowing solo across the Atlantic



Campaigning for London Super Sewer 2012



Taking to the skies for clean energy across the globe

All photos © Roz Savage

Economic growth is used as a proxy for “you will have a job so you will be able to pay your bills and feed your kids”. But the Lib Dem commitment to UBI bypasses this. UBI allows us to decouple economic growth from the ability to live a life of dignity and meaning.

## A different kind of good life

In *The Myth Gap*, Alex Evans calls for “a larger us, a longer now, a different kind of good life” – essentially, the greatest good to the greatest number over the longest period of time.

Paddy referred to the need to give “future generations the opportunity to make the most of their lives.” Right now, we are robbing the unborn of the chance to thrive. Short term gain for the few, long term pain for the many.

Personally, I wouldn’t mind so much that we are trashing the planet if only it was making us happier. But it’s not. Depression, addiction and suicide are at epidemic levels in the developed world.

Beyond a certain level, a rise in income does not correlate to a rise in happiness – but it does correlate to a rise in consumption. While we’re being incessantly advertised to, it’s hard to remember that buying more stuff will not, as advertised, make us happier, sexier, or more popular. We’d do better to focus on the things that really do make us happy – like fulfilling jobs, healthy relationships, and spending time in nature. If we counterbalance GDP with a wellbeing index like Bhutan’s Gross National Happiness, we will be solving for both happier people and a healthier planet.

The six core Liberal values support a responsible environmental agenda. Liberty to live well, now and for future generations. Equality of rich and poor when it comes to access to good food and clean air. Democracy

untainted by powerful lobbies and vested interests. Communities coming together to look after their place. Internationalism, recognising that the Global South pays the price for our Global North lifestyles.

And above all, Environmentalism. Paddy again:

*“If we are to succeed in meeting the environmental challenge and creating a sustainable economy then environmental policy must no longer be considered as a bolt-on after other policies have been settled – it must become integral to all we do.”*

When we adopt the mindset that humanity is a subset of nature, and subject to its laws - laws that we ignore at our peril – everything changes. We shift from “greed and growth are good” to prioritising true wellbeing of people and planet, now and for the future. ■



Campaigning for a plastic bag free Olympics - HoC



# A FAIR DEAL FOR THE ENVIRONMENT

AS WE GEARED UP FOR THE GENERAL ELECTION, THE LIBERAL DEMOCRATS SHARED OUR POLICIES THROUGH A SERIES OF EMAILS, FOCUSING ON THE FAIR DEAL WE'RE CHAMPIONING IN KEY AREAS.

**T**he pre-manifesto was an early version of the party's manifesto for the General Election, setting out our core values and vision. Full details on these policies, and how they will be implemented, were outlined in the full manifesto for the 2024 General Election.

These proposals were those that resulted in 72 Lib Dem MPs being elected, and so we thought that it was worth preserving them in print.

Here's a snapshot of our plans for the environment and climate change:

## Why we need a Fair Deal for the Environment

We're incredibly proud of our country's natural beauty. From rivers to lakes, beaches to forests, our precious environment must be protected for future generations.

But the natural environment is suffering. The UK is failing to meet 17 of its 20 biodiversity targets.

The Conservatives' neglect is evident in the sewage crisis, marked by a million sewage discharges into rivers, lakes and coastal areas in the last three years, lasting over 7.5 million hours. Meanwhile, water company executives awarded themselves £51 million in 2020 and 2021, including £30 million in bonuses and benefits.

This is a rotten deal - urgent action is needed to end nature's decline.

### Protecting Nature

We're fighting for a Fair Deal that will deliver protections and end the sewage crisis for good.

#### We will:

- ✔ Set meaningful and binding targets to stop the decline of our natural environment and double nature by 2050: doubling the size of the Protected Area Network, the area of vital wildlife habitats and species abundance.
- ✔ Strengthen the Office for Environmental Protection and increase funding for the Environment Agency and Natural England.
- ✔ End sewage discharges by transforming water companies into public benefit companies, ban bonuses for water bosses until discharges and leaks end, and replace Ofwat with a tough new regulator with new powers to prevent sewage dumps.

### Tackling the climate crisis

Protecting the environment goes hand-in-hand with tackling the biggest threat to human existence - climate change.

We must limit temperature rises to 1.5°C to prevent catastrophic land loss and stop parts of our planet from becoming inhabitable. Millions already suffer from increased wildfires, floods, heatwaves, droughts and sea level rises.

The Conservative Government's net zero strategy is failing - they've supported greater oil and gas production, approved a new coal mine, and failed to boost home insulation effectively.

We must get back on track and address the climate crisis as an urgent priority.

#### We will:

- ✔ Cut greenhouse gas emissions to net zero by 2045.
- ✔ Invest in renewable power to generate 80% of the UK's electricity from renewables by 2030.

- ✔ Provide free retrofits for low-income homes and tax incentives for other households to reduce energy consumption, emissions, fuel bills and reliance on gas.
- ✔ Create a Net Zero Delivery Authority, strengthen local authorities to cut emissions and promote community energy and ensure all new homes have solar panels.
- ✔ Plant at least 60 million trees a year and increase the use of sustainable wood in construction.
- ✔ Ensure net zero commitments are central to any international trade agreement.

By doing so, we can save our environment, save lives, and transform our economy, creating tens of thousands of jobs.

**That's the fair deal for the environment and climate that we were fighting for at the General Election, and that we're still fighting for now. ■**



# POPULATION

Peter Hirst

HOW GLOBAL POPULATION FITS INTO SOLVING OUR CLIMATE, WASTE AND NATURE CRISIS IS A TAXING QUESTION. THIS IS PROBABLY ONE REASON WHY IT IS RARELY PART OF THE NARRATIVE IN DISCUSSING THIS ISSUE. I HOPE THIS ARTICLE WILL HELP TO SHOW WHY IT IS SUCH AN IMPORTANT PART OF THE JIGSAW.

**P**eople often have varied and strongly held views on the importance of global population as a driver of climate change. While not meaning to demean in any way these beliefs, I don't think they should stand in the way of discussing it as a driver of it and our other challenges such as biodiversity and waste.

One complicating factor in discussing its relevance is that different societies and different parts of those societies have different effects on the planet concerning the three subjects. To get round this while not introducing too much complexity in what is designed to be an introduction to what is a complex issue, I will generalise and hope the reader will be able to generate their own implications depending on your position and views.

If everyone had the same carbon emissions, then a simple arithmetic equation would suffice. Half the population would have half the carbon emissions, produce half the waste and have half the effect on biodiversity. Though this is simplistic to a ludicrous degree, we can agree on some basic assumptions. People in the most developed countries have a far greater effect on these parameters than those living in the least developed ones. We are also discussing trends rather than quantitative measurements.

I hope we can also agree that there are too many of us on the planet. Even if we succeed in tackling climate change, we could easily end up with seas too laden with waste to be very useful to us and too little available land for the various species of both plant and animal that we share this planet with. Taking account of these factors, some people put a sustainable population as between 3 and 4 billion.

Population should not be seen in isolation. If we can reduce our population then the other measures needed to solve these issues will become easier. For instance, we might not need to take as many risks inherent in nuclear technology or some of the other measures suggested to get us out of this mess of our own creation. I'm not suggesting that reducing our global population will be easy. It is, however, without major risk and provides an easy and cheap measure to help with the other actions being taken to save us from climate change. I emphasise I am not suggesting that reducing population is the only or even the major way of doing this. Rather that including it along with the other measures will make the task easier and more likely to succeed.

Some people suggest it would take too long to implement any measures to reduce our population significantly. The age at which individuals become capable of having children varies. If we assume 16 as a reasonable lower limit, then the effect of fertility on population can be estimated using this measure. We could easily see significant changes within a decade. At the other end of the scale couples are conceiving into their forties. The right to reproduce is fundamental. So theoretically a higher proportion of people over a wider age range could come into the reproductive age span. Also, life expectancy is increasing, making it even more important to control the birth rate to even sustain our present populations.

I am of course simplifying a complex issue. In many parts of Africa, the population is still increasing and to slow this increase is our primary objective. In the developed world increasing longevity is a major issue. Health measures will improve and some say that we could live until 150 as average as long as we want to and have the resources to achieve it. As technology advances more people will live for longer and there is no reason to assume their impact on the planet will decrease.

Assuming that we want to do something to reduce population, what are our options? Education and empowering people to make informed decisions around conception are two possible answers. Organisations such as Population Matters have already done a great deal in these areas. Education can help to overcome cultural, religious and other barriers to increasing the age girls start their reproductive journey, lengthen the space between children and limit the number of children they have. More easily available contraception along with

specific education according to their wishes give couples more autonomy over their families.

Evidence suggest that female empowerment is especially beneficial in limiting family size. The gender ratio in determining when and how often couples have children varies across cultures. Generally, giving girls and young women more autonomy over the use of contraception reduces population growth in those societies where this is occurring. Making every baby a wanted and planned birth provides the ideal scenario for optimal population though this might seem some way off.

As societies develop, especially their health care systems, the mortality rate for young people falls and with it the need for large families. These often provided an insurance against disease and natural disasters while providing care for parent and grandparents. An adequate social benefit system also helps. So naturally birth rates tend to decrease as societies develop. The question is whether this occurs at a fast enough rate when climate change at least seems to be accelerating.

One factor possibly inhibiting countries and organisations tackling this topic seriously is that the risks in creating the necessary policies outweigh the advantages. For instance, if it creates tensions between them this might interfere with other measures that require collaboration to tackle challenges like climate change. There is no easy solution to this dilemma. The risk demands patience, diplomacy and a cautious approach to implementing the above measures.


I don't think migration generally is having a significant effect on this discussion though this might change as climate change accelerates. Its main effect seems to be young people from lesser developed countries migrating to better developed countries to partly compensate for the lower birth rates in these to fill job vacancies and to improve their life chances. There is also the effect of Artificial Intelligence (AI) on this need to factor in.

There are many projections of global population and the UN provides high, lower and expected curves. None of them provide, however, for an optimal population that allows for a good quality of life for all, adequate space for all the species inhabiting this earth with us and provision for clean air, water and land.

The Liberal Democrats should tackle this thorny issue by being the first major political party in the UK to create a coherent policy on population while respecting varied opinions on the vexed subjects of reproduction, fertility and longevity along with free speech and action within the law. I hope this short article will help to achieve this. ■







# FAKE CLIMATE INFORMATION ON YOUTUBE

WHILE TECH LEADERS RAVED ABOUT ITS CAPABILITIES, THE LATEST WORLD ECONOMIC FORUM GLOBAL RISKS REPORT WARNED THAT AI-POWERED MISINFORMATION IS THE NO.1 IMMEDIATE RISK TO THE WORLD, THREATENING TO ERODE DEMOCRACY AND FURTHER POLARIZE SOCIETY.

**W**hen it comes to the climate crisis, misinformation has been swirling for decades. And even before the full power of AI is unleashed, the threat is already mutating across social media, according to new findings.

Researchers looked at thousands of hours of YouTube content from the past six years and found that “old” climate crisis denial – which claims that global heating is not happening and burning fossil fuels is not the cause – is giving way to a new type of misleading content intended to muddy the waters.

The report, released this week by the non-profit research group Centre for Countering Digital Hate (CCDH), found that this “New Denial” falls into a few broad groups: that the impacts of global heating are beneficial or harmless; that climate solutions won’t work; and that climate science and the climate movement can’t be trusted.

CCDH found that videos containing “New Denial” doubled since 2018 on YouTube. In total, there were more than 34,000 climate crisis denial claims on the 96 channels analysed, amounting to more than 325 million views. The shift has been rapid and stark: as old climate denial narratives declined across YouTube, “New Denial” has surged. The latter now accounts for 70 per cent of climate misinformation on YouTube, while “Old Denial” has dropped to 30 per cent.

Imran Ahmed, CCDH’s chief executive, explained that social media platforms are helping content creators figure out

what works and what doesn’t by providing rich data on how to get viewers, and rewarding them with money.

Mr Ahmed said that CCDH’s findings were somewhat optimistic because they showed that scientists and activists have been successful in conveying the facts of climate change to people, and what impact it is having on their lives. But he warned that the new research has uncovered a serious, rising threat.

“People have the right to post [this content] but do you reward them with money and give them a megaphone?” Mr Ahmed said.

“We are not blaming Google [YouTube’s parent company] for not recognising this, but we want them to make small changes to their policies. Don’t reward this content and profit from it.”

In a statement to The Independent, a YouTube spokesperson said: “Our climate change policy prohibits ads from running on content that contradicts well-established scientific consensus around the existence and causes of climate change. Debate or discussions of climate change topics, including around public policy or research, is allowed.

“However, when content crosses the line to climate change denial, we stop showing ads on those videos. We also display information panels under relevant videos to provide additional information on climate change and context from third parties.” ■

**“PEOPLE HAVE THE RIGHT  
TO POST... BUT DO YOU  
REWARD THEM WITH  
MONEY AND GIVE THEM  
A MEGAPHONE?”**



# GREEN LIBERAL DEMOCRAT MPS

THE GENERAL ELECTION SAW A RECORD NUMBER OF LIB DEM MP'S AND ALSO A RECORD NUMBER OF GREEN LIB DEM MEMBERS BEING ELECTED TO PARLIAMENT. THIS MEANS THAT WE AS AN ORGANISATION HAVE A HUGE OPPORTUNITY TO KEEP THE ENVIRONMENT FRONT AND CENTRE IN PARLIAMENTARY DEBATES. OVER THE NEXT FEW EDITIONS OF CHALLENGE WE WILL BE PROFILING ALL OF THE GLD MPS AND HERE KAT EWING INTRODUCES THE FIRST FIVE.

## Charlotte Cane MP - (Ely and East Cambridgeshire)

Charlotte Cane is the new MP for Ely and East Cambridgeshire. Charlotte won her seat on East Cambridgeshire District Council in 2015 and has retained it since - an almost 10-year commitment to East Cambridgeshire, she has proven her local champion status. She is currently the Deputy Leader of the Liberal Democrat Group where her and her colleagues have been fighting to save vital bus routes and campaigning for 20mph zones in the town centres.

Charlotte has been dedicated to social justice and humanitarian campaigning since her childhood, advocating against the Apartheid regime and for environmental issues.

One of Charlotte's major focuses has been on the issue of water pollution in the Ely & East Cambridgeshire constituency. She loves her constituency and is dedicated to protecting and restoring local rivers, fen and chalk grasslands.

One of Charlotte's great green achievements is helping with the installation of Reach Solar Farm, a community energy project which generates the electricity equivalent to half of the village. It has given grants to good local causes including the primary school.

Charlotte has also gained a seat on the new Climate APPG and is ready to help guide and challenge the government to a greener future.



## Victoria Collins MP – Harpenden and Berkhamsted

Victoria Collins is the new MP for Harpenden and Berkhamsted and she has wasted no time in making it clear that nature and climate are at the top of her priorities in Parliament. Her maiden speech had a focus on sewage and pollution in waterways in her constituency, which is home to rare chalk streams which are of ecological importance and are in decline due to abhorrent disregard by water companies.

She is very proud of her background and being the daughter of an immigrant mother from Malaysia. She has gone on to lead a flourishing career, beginning with her education which includes a degree in Economic Policy with Energy and Environment. Some of her roles include working in the European Parliament, founding a sustainability and ESG consultancy business, and an urban food growing business amongst many other years of experience.

Victoria will make it her mission to join her constituents in campaigning to protect her environment and tackling the climate crisis and is going to make a huge impact to the green issues in parliament.



## Zöe Franklin MP – (Guildford)

Zöe acknowledges climate change as the biggest threat to our existence and is committed to using her new role in parliament to direct our government in the direction of a greener future.

One of her first achievements has been taking a seat on the new Climate APPG to work cross-party and navigate the new administration to doing just that.

One of her main priorities for the country and Guildford is stricter regulation on housing. New houses must be built, but it is also imperative to her that new builds are future proof, fit for environmental needs and serve the community by being well built and employ energy efficient infrastructure to bring down costs and limit climate impact.

Her nature commitments include tackling the disgraceful sewage crisis and water pollution caused by our water companies and protecting waterways. She has already made it clear she opposes fracking plans in the Surrey Hills which would compromise healthy rivers.

We can't wait to see what Zöe Franklin gets up to as the new Liberal Democrat MP for Guildford.



## Pippa Heylings MP - South Cambridgeshire

Pippa is a key member of the Green Liberal Democrats team, and a newly appointed Vice-Chair of the Climate All Party Parliamentary Group.

As a councillor, she is Chair of the Climate Change and Environment Advisory Committee on South Cambridgeshire District Council, currently representing the Histon & Impington ward. She is also a member of the Lib Dem Natural Environment Policy Working Group which seeks to review Lib Dem working policy at the national and international level.

Pippa has a distinguished career in environmental policy formulation, seeking practical solutions to global problems and acting as a catalyst in their implementation. She has dedicated her entire career to climate and nature action, having been director of a large NGO and setting up her own company which works with scientists, the UN and government organisations to ensure that local voices are heard, and policy decisions are evidence-based, sustainable and practical.

Amongst other achievements, Pippa made the South Cambridgeshire DC one of the first district Councils to make a zero-carbon pledge. Pippa has made such an impact that she has made her way onto the ENDS Power List 2024 for the Top 50 Green Champion Politicians.



## Edward Morello MP - (West Dorset)

Edward Morello is the new MP for West Dorset, winning the seat for the first time against the Conservatives since its 1885 creation. Before his new post, Edward worked in the renewable energy sector with his work revolving around helping businesses to become Carbon Neutral, and a large proportion working to get more solar power on rooftops and increasing the affordability of green energy.

Additionally, early on in his career he worked in carbon finance for environmental and social impact projects in East Africa, predominantly in clean cooking and solar lamps for rural and peri-rural communities as well as being a firm internationalist who has worked in geopolitical and security risk.

Amongst his top priorities, he lists the environment, food security and protecting rivers and beaches, all issues deeply linked with protecting the climate and ecosystems. He enjoys taking part in The Great Dorset Beach Clean and wants to protect the rural heartland from water pollution. Furthermore, he is prioritising the NHS and as a rural MP he is committed to improving and instating the vital services they have lost which increase rural isolation as well as pledging for the Lib Dem Fair Deal for Farmers and fisheries who have been hit by the successive Tory rule.









# IMPROVED BATTERY LIFE - ACHIEVING THE HOLY GRAIL

David Watts

I'M ON MY SECOND ELECTRIC CAR, AND I WON'T BE GOING BACK TO AN INTERNAL COMBUSTION ENGINE EVER AGAIN. THE SMOOTHNESS OF THE ACCELERATION OF ELECTRIC CARS IS SUPERB, AND THE MUCH LOWER RUNNING COSTS ARE VERY WELCOME. HOWEVER THEY ARE NOT YET THE COMPLETE SOLUTION TO CARBON-FREE TRAVEL.

**O**ne thing that I have noticed much more in my new car than in my previous one is how much the external temperature affects the miles per kilowatt hour rating that I get (the EV equivalent to miles per gallon in ICE cars). Sub-zero temperatures aren't great for EV battery life - neither, of course, are they for petrol-powered cars which more frequently break down in freezing conditions. In fact, new research from a Norwegian breakdown service revealed that electric cars fail less in extreme cold than fossil fuel-powered vehicles. During extreme cold conditions at the start of the year, breakdown firm Viking responded to 34,000 assistance requests in Norway. Only 13 per cent of these were for electric vehicles, despite the country having a world-leading EV share of more than 24 per cent.

Nevertheless, concerns about the range and longevity of EV lithium-ion batteries remain a sticking point for sales. An American study last year found that along with the cost, the barrier for many people in buying an EV was concern about the lack of charging stations and battery life. The findings signal a spanner in the works of US climate plans. More than a quarter of the country's greenhouse gas emissions come from transportation and to that end, the Biden administration is aiming for at least half of new vehicle sales to be electric by 2030. EVs currently make up about 9 per cent of new US vehicle sales, according to industry tracker EV Hub.

Electric cars can experience reduced range and difficulties charging in freezing conditions, with studies suggesting range loss can vary from 10 per cent to 36 per cent. Batteries also need to be a minimum temperature to accept a charge at fast-charging stations, which require the electrons within the batteries to be warm enough to move around.

Here in the UK the government in 2022 scrapped the subsidy that they offer the purchasers of new electric cars and announced that they would use that money to improve charging facilities instead. Previously the grants had been targeted to generate the sales market for EV cars. Anyone travelling with an EV in the UK will be able to attest that the infrastructure is improving, but nothing like as quickly as we would want. Queueing to use a charger is still a common experience at many service stations.

However a recent breakthrough by a team of scientists at Harvard University could help overcome these hurdles. Researchers from the School of Engineering and Applied Sciences (SEAS) reported earlier this year that they have developed a new "solid-state" battery that can be charged in the time that it takes to fill up a tank of petrol - and repeated at least 6,000 times.

At the moment, EVs, laptops and other electronics that need energy storage typically use lithium-ion batteries in a flat, compact "pouch cell" design. But the power of lithium-ion batteries, as demonstrated, can only take larger machines so far. There has also been evidence of these

types of batteries catching fire. Last June, four people died after a lithium-ion battery caught fire in an e-bike store in New York and spread to apartments above. In December, a fire broke out on a cargo ship carrying nearly 2,000 tons of lithium-ion batteries off the coast of Alaska.

The race to develop solid-state batteries has ramped up in the past few years as the technology is widely considered essential to spurring a worldwide switch from ICE cars to electric. Companies including Volkswagen and Toyota have been working on their own solid-state batteries, aiming to get them into vehicles by the end of the decade.

Dr Xin Li, associate professor of materials science at Harvard University, described solid-state batteries as "the holy grail" to the Independent Newspaper. While they look similar to lithium-ion models on the outside, solid-state batteries replace the liquid, organic electrolyte with a material like a high-tech ceramic.

"This conducts better than liquid, and it's non-flammable so it's safer," Dr Xin Li told The Independent. The Harvard team's postage stamp-sized battery retained 80 per cent capacity after 6,000 cycles, and showed good performance at low temperatures.

It outperforms other solid-state batteries on the market today, the scientists said, after they discovered a new way to make it with a lithium metal anode, which has ten times the capacity of the typical, commercial graphite anodes. With their new multilayer, multi-material design, the

Harvard scientists were able to overcome the major challenge of "dendrites": root-like structures which grow from the surface of the anode into the electrolyte, and can pierce the barrier separating the opposing cathode, leading the battery to short, or worse, catch fire.

The long battery lifetime - equivalent to 30 years - could dramatically reduce the cost of an EV car in the future. "If the consumer spends less money to buy an EV that will really drive global electrification," Dr Li said.

The academic began working on solid-state batteries in earnest when he started at Harvard in 2015 after stints at MIT, Cal Tech and Penn State universities in the United States and Nanjing University in China. "I had several dozen projects in parallel but after a couple of years, I realized the potential of solid-state battery, and I focused more on it," he said.

In 2021, he and Harvard colleagues created a company, Adden Energy, to license and scale up the technology. A US car company has already tested their solid-state battery and found it to have the same positive results as in their internal testing, Dr Li said.

"A few other car companies are in the pipeline to test our batteries," he added.

**If the initial optimism is realised then the switch to electric cars is likely to accelerate significantly. The sooner this happens the better. ■**



Photo © Shutterstock



# REVIEWING THE NATIONAL PLANNING POLICY FRAMEWORK

By David Watts

## THE FIRST INDICATIONS OF HOW LABOUR INTEND TO TACKLE CLIMATE CHANGE HAVE COME IN THE FORM OF A CONSULTATION ON CHANGES TO THE NATIONAL PLANNING POLICY FRAMEWORK, (NPPF) AND TO BE FRANK IT’S NOT A GOOD START.

**T**he government chose to launch the consultation in August, during most peoples summer holidays, with a deadline of late September for responses. In reality this gives very little time for consideration of the 106 policy changes that they have proposed, some of which make radical changes to the existing system.

Although planning is often blamed for the low levels of house building in the UK the reality is very different. The reluctance of developers to build what the market needs, rather than what will make them the most money, and their willingness to landbank are much more significant problems.

The new proposed changes to the NPPF could place huge amounts of green belt land at risk of being built on, and this seems to be a direction that Labour are willing to go. No doubt they will resort to a tactic that we see in councils up and down the country, accusing anyone who does not agree with them of all sorts of vile things, but it will be important for the new Lib Dem team in parliament to try and prevent some of the dire consequences that could arise from these proposals.

The rest of this article will be a whistlestop tour of the proposed changes. Space prevents us from having a detailed discussion on all of them but I will try and flag up the most important ones as we go along.

### Chapter 2: Policy Objectives

- get Britain building again, to build new homes, create jobs, and deliver new and improved infrastructure;
- take a brownfield first approach and then release low quality grey belt land, while preserving the Green Belt; (In reality these proposals will place huge swathes of green belt land at risk of development)

- boost affordable housing, to deliver the biggest increase in social and affordable housebuilding in a generation;
- bring home ownership into reach, especially for young first-time buyers;
- extract more public value from development, including through infrastructure, amenity, and transport benefits and, where necessary, through use of strengthened compulsory purchase powers;
- ensure communities continue to shape housebuilding in their areas, demanding universal local plan coverage from all local planning authorities, while making full use of intervention powers to build the houses the government say are needed if this is not achieved;
- promote a more strategic approach to planning, by strengthening cross-boundary collaboration, ahead of legislation to introduce mandatory mechanisms for strategic planning;
- support the development needed for a modern economy, to prepare the way for a modern industrial strategy; and
- Unlock new sources of clean energy, which they claim will supporting their mission to deliver clean energy by 203

### Chapter 3: Planning for the homes we need

- Local authorities will be required to allocate enough land to meet their housing need as per the new ‘standard method’. For my local authority the new standard method would mean a housing requirement of 658 dwellings per year compared to the current requirement of 384 per year. In reality this is completely unachievable. Local authorities will be required to demonstrate that all steps have been taken to meet this housing need

including reviewing Green Belt boundaries, optimising density and sharing need with neighbouring authorities.

- The 35% urban uplift, which applied to the 20 largest urban areas (nearly all of which were Labour run) has been removed. There is now greater emphasis on ‘urban centres’ working together across the wider region and a strengthening of the duty to cooperate. This means that there needs to be engagement on sharing any unmet need and any other relevant strategic issues between authorities.
- There is an expectation that local plans should promote an uplift in density in urban areas.
- Rather than district-wide design coding, there should be a focus on localised design codes, masterplans and guides for areas of most change and most potential.
- All previous versions of the NPPF have included a presumption in favour of sustainable development where relevant policies are out of date which includes not having a five-year housing land supply. This presumption is reinforced. The consultation clarifies that relevant policies are those for the supply of land. It also acknowledges that ‘the presumption’ is likely to apply to more local authorities in the short term due to the significant increase in housing targets.
- The NPPF currently states that where a local planning authority has an up-to-date plan which meets certain criteria, it is exempt from having to continually demonstrate a 5-year housing land supply. It is proposed that all local authorities, regardless of local plan status, will be required to continually demonstrate 5 years of specific, deliverable sites for housing, regardless of the plan status. All local authorities will also have to add a 5% buffer to their 5-year housing land supply, or 20% if there is significant past under delivery.
- The Government are proposing to take steps to enable universal coverage of strategic planning, which includes supported elected Mayors in overseeing the development and agreement of Spatial Development Strategies for their areas.

### Chapter 4: A new Standard Method for assessing housing needs

- The current standard method (first introduced in 2018) identifies the minimum number of homes that a local planning authority should plan for in its area. It comprises a baseline of household projections (produced by the Office for National Statistics) which are then adjusted to take account of affordability and in some cases the figure is then capped.
- The new standard method would use a baseline set at a percentage of existing housing stock levels (0.8% to match the average growth of housing stock nationally) and would then apply an affordability multiplier to increase this baseline in proportion to price pressures. This is based on a workplace-based median house price to median earnings ratio but increases the significance of affordability compared to the current standard method. No caps or uplifts would be applied.

- The consultation acknowledges that the majority of local authorities will see a significant increase in their housing target (for my local area the increase is 71%). It also states that the changes increases targets by more than 20% across Mayoral Combined Authorities which ‘better aligns with the ambition of our local leaders’.

### Chapter 5: Brownfield, Grey Belt and the Green Belt

- The draft says LPAs should undertake a Green Belt review where they are unable to meet housing, commercial or other needs without altering Green Belt boundaries.
- The draft introduces the concept of ‘grey belt’ land within the Green Belt. This isn’t very well defined but clearly represents a decrease in protection that this land will enjoy.
- The government proposes that, in making this assessment, land which makes a limited contribution to Green Belt purposes will not strongly fulfil any Green Belt purpose.
- The government proposes a sequential test to guide Green Belt releases. This would seem to be in the order of previously developed land, then other ‘grey belt’, then ‘higher performing’ Green Belt.
- Where an LPA cannot demonstrate a five-year housing land supply, or delivery in the LPA is less than 75 per cent against the Housing Delivery Test, or where there is unmet commercial or other need, development on the Green Belt will not be considered inappropriate. Given that the proposals also include a massive uplift in housing numbers all local authorities will struggle and as a result all green belt will be at risk.
- ‘Golden rules’ would be applied to major development on land released from the Green Belt, to ensure it benefits both communities and nature. The best description of this that I have seen is that it is a silly term, but it seems to include the provision of at least 50% ‘affordable’ housing, ‘subject to viability’. I think this may be intended to apply both to applications in the Green Belt and to sites removed from the Green Belt.

- Any development released from the Green Belt must bring benefits, via not only mandatory biodiversity net gain, but also through new rules that will secure improved access to good quality greenspace.
- The government is seeking views on setting indicative benchmark land values for land released from or developed in the Green Belt to inform LPA policy development.
- Development proposed on previously-developed land in the Green Belt, and limited infilling in the Green Belt, would be classed as ‘not inappropriate development’.

### Chapter 6: Delivering affordable well designed homes and places

- LPAs to specify expectations in respect of Social Rent delivery.



- Proposal to remove 10% minimum as affordable housing on major sites and remove the 25% minimum through developer contributions to be First Homes.
- Both aim to ensure local needs are met.
- New policy proposed to promote developments that have a mix of tenures and types, whilst recognising that in some circumstances developments with higher affordable housing delivery may be appropriate.
- Inclusion of ‘looked after children’ as a group to be included when assessing housing need for different groups in the community.
- Strengthen support for community led development.
- Making small site allocation mandatory – so that SME housebuilders are able to bring forward developments.
- Minor changes to wording in respect of design.
- Expansion on types of design to support ‘upwards extensions’ on residential buildings. Upward extension seems to be about building further stories on buildings. In reality this is unlikely to benefit anyone other than a few landlords.

## Chapter 7: Building infrastructure to grow the economy

- The government proposes to make clear that “significant weight” should be placed on the importance of facilitating new, expanded or upgraded public service infrastructure when considering proposals for development.
- The government will not be implementing the Infrastructure Levy as introduced in the Levelling-Up and Regeneration Act 2023.
- The government says that it is taking what it calls a ‘vision-led’ approach to transport planning, focusing on the outcomes desired.
- The government is seeking views on how national planning policy could better support local authorities in promoting healthy communities and in tackling childhood obesity.
- Councils should identify appropriate sites for commercial development “which meet the needs of a modern economy”.
- Planning policies and decisions should make provision for new, expanded or upgraded facilities and infrastructure to support the growth of knowledge and data-driven, creative or high technology industries.
- The government is proposing that onshore wind is re-integrated into the NSIP regime.
- The government is also proposing amendments to direct decision-makers to give “significant weight” to the benefits associated with renewable and low carbon energy generation, and proposals contributing to meeting a net zero future.

## Chapter 8: Delivering community needs

- LPAs to specify expectations in respect of Social Rent delivery
- Proposal to remove 10% minimum as affordable housing on major sites and remove the 25% minimum through developer contributions to be First Homes
- Both aim to ensure local needs are met.
- New policy proposed to promote developments that have a mix of tenures and types, whilst recognising that in some circumstances developments with higher affordable housing delivery may be appropriate
- Inclusion of ‘looked after children’ as a group to be included when assessing housing need for different groups in the community
- Strengthen support for community led development
- Making small site allocation mandatory – so that SME housebuilders are able to bring forward developments
- Minor changes to wording in respect of design
- Expansion on types of design to support ‘upwards extensions’ on residential buildings.

## Chapter 9: Supporting green energy and the environment

- Encourage / remove barriers for onshore wind developments, and include in NSIP regime
- Strengthen wording in the NPPF so as to attach more weight to renewable and low-carbon energy generation
- With advances in technology, propose changes to what can be considered as NSIP and what could be considered by the LPA
- Removal of footnote in respect of weight given to availability of best and most versatile agricultural land
- Improve current thresholds for water resources development in the NSIP regime – adding in development which would provide water during droughts; water infrastructure by third parties; water recycling; infrastructure which transfers treated drinking water

## Chapter 10: Changes to local plan intervention criteria

- Where local authorities fail to produce up-to-date local plans, the Government has the power to take action. The consultation proposes two options related to changing the intervention criteria:
- Removing the existing policy criteria which sets out when intervention can take place so “Ministers would approach any future decisions on intervention with substance, rigour, and an open mind, and in the context of relevant legal tests” or

- Revising the policy criteria which would set out the Secretary of State could issue plan-making directions or remove plan making powers. Decisions on intervention would have regard to local development needs, sub regional, regional and national development needs and plan progress.

## Chapter 11: Changes to application fees and cost recovery for LPAs related to NSIPs

- Householder application fees potentially more than doubled from £258 to £528.
- Other fees may be increased and fees charged where there are currently none.
- Fees may potentially fund wider planning services, including plan-making.
- LPAs may be allowed to set their own fees or vary national fees to cover costs.
- LPAs may charge fees to Nationally Significant Infrastructure Project applicants.

## Chapter 12: The future of planning policy and plan making

- Local Plans that have reached Regulation 19 publication stage no more than one month after the revised NPPF has been published, can proceed under the current version of the NPPF. This is provided the housing requirement figure is within 200 of the local housing need (using the new standard method). For Broxtowe, this would mean a housing requirement of at least 458 dwellings per year. It is uncertain when the revised NPPF will be published.
- All plans at earlier stages of preparation should be prepared against the revised version of the NPPF and using the new standard method approach.
- It is the Government’s intention to implement the new plan-making system as set out in the Levelling- up and Regeneration Act from summer or autumn 2025. They state that all current system plans that are not subject to the transitional arrangements will need to be submitted for examination under the existing planning system no later than December 2026. However, it is unclear when plans which are at Regulation 19 stage would need to be submitted.
- The Government are exploring the creation of a more accessible and interactive, web-based set of national policies (both in the form of National Development Management Policies and national policies for plan-making)."

The net impact of all these proposed changes will be to reduce the role of local authorities and also to reduce the protection for the green belt. John Prescott once famously declared that the green belt was a Labour idea and they were going to build on it. It seems that Keir Starmer and his team are taking this literally. ■

## Challenge

is the political journal of the Green Liberal Democrats, the green campaign group of the Liberal Democrats.

The views expressed in this journal do not necessarily reflect the opinions of the organisation.

Copyright on all articles and artwork remains with the author and artist in each case.

Copyright on all photographs belongs with the photographer in each case.

Front cover: Image © hrui / Shutterstock

ISSN No 0954-2884

### Editor

David Watts

### Designer

Jason Billin / BDS21

### Printing

Bishops Printers, Walton Road, Farlington, Portsmouth, Hampshire PO6 1TR

Challenge is printed using vegetable based inks on FSC certified stock.

New articles, ideas and images are welcome, for this magazine, for our GLD website, and for sharing on Social Media.

challenge@greenlibdems.org.uk

facebook.com/greenlibdems

Members only facebook group: facebook.com/groups/gldmem

Twitter: #greenlibdems

instagram.com/greenlibdems

Printed February 2023

### Editorial Address

Challenge Magazine  
6 Edingale Court  
Bramcote  
Nottingham  
NG9 3LY

