



Natural Environment, Climate & Ecology Strategy

2023-25 Refresh



Climate Change | Carbon Neutral Dorset
Biodiversity Loss | Nature Positive Dorset
Adaptation | Resilient Dorset

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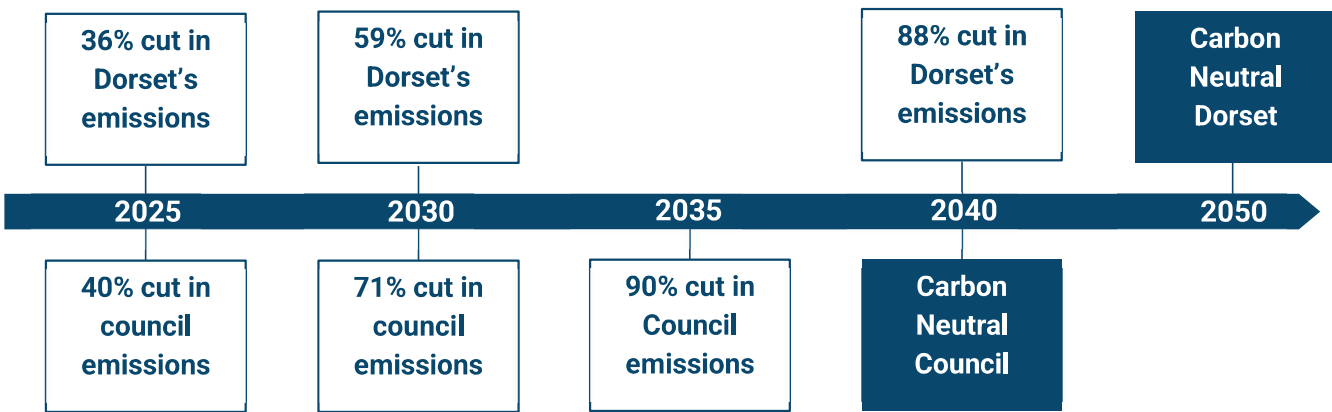
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Foreword

Since our declaration in 2019 and the adoption of our first strategy in 2021, Dorset Council has put tackling climate change and supporting our natural environment as a core priority in our 2022-2023 council plan.

Our strategy set a clear direction with realistic and achievable ambitions for us to become a carbon neutral council by 2040 and a carbon neutral county by 2050, frontloaded by interim targets. Its importance has got ever clearer since following the publication of the IPCC's Sixth Assessment Report.



Since 2021, the council has established an operational programme to cut the emissions we directly control, and a facilitation programme to influence those that we don't. This is supported by a £10m capital programme to fund delivery. As a result, we've seen significant progress, which is now reported on biannually.

The council's emissions have declined by over a quarter since our 2019 baseline year as a result, meaning that we're well on track if this is maintained. But the new availability of more complete data for the county shows that whilst Dorset's emissions fell by over a tenth in the two years to 2020, action for the county needs to go faster to reach our targets.

Our 2021 strategy noted critical and fundamental uncertainty on national policy, but there is now far greater clarity thanks to the emergence of the UK Net Zero Strategy, the Environment Act, the new Environment Improvement Plan, and last year's Climate Change Risk Assessment. There are, as a result, some major national milestones that are now clear. And importantly, many of these are imminent: from heat pumps and boilers to fossil-fuelled vehicles and the decarbonisation of the grid by 2035 – big national changes are rapidly approaching.

Given all this we committed to refresh the strategy. As was noted upon its adoption, it is a living document that will evolve as delivery, technology and policy progresses. The content of our strategy was formed by our cross-party Executive Advisory Panel, and crucially shaped by the generous input of our partners and communities – including through our Call for Ideas, Inquiry Day, schools engagement and consultation. That the content still has considerable relevance after



the national policy context has changed so significantly is a testament to everyone who helped to shape it.

This refresh has therefore repurposed that content rather than rewriting it from scratch. We have updated the narrative on the national policy context and tried to better articulate the ‘three pillars’ of the climate, biodiversity and resilience challenges – and of the interdependencies of decarbonisation, nature recovery and adaptation.

We’ve also tried to make it clearer and more concise: the original was around 140 pages with the action plan, including over 160 actions, much of which could be condensed without losing ambition. Instead, we’ve tried to lay out here a set of simpler ‘missions’ alongside the key levers to achieve them, making it easier to understand, manage and monitor.

But as in 2021, what is clear is that the council cannot deliver alone: we all have a role to play. Financial pressures are ever more pressing during this cost-of-living crisis, and this can be an obstacle for organisations and individuals alike. Whilst there remain simple and affordable things we can all do, there is no avoiding the need for creative and innovative partnerships across our organisations and the private sector in order to deliver.

But the response to COVID-19 showed what can be achieved when we pull together, and we must do that again to achieve a carbon neutral, nature positive, resilient Dorset. Through this strategy we show how we will lead by example and to influence and facilitate delivery well beyond the council.

Councillor Ray Bryan

Cabinet Portfolio Holder

Highways, Travel and Environment



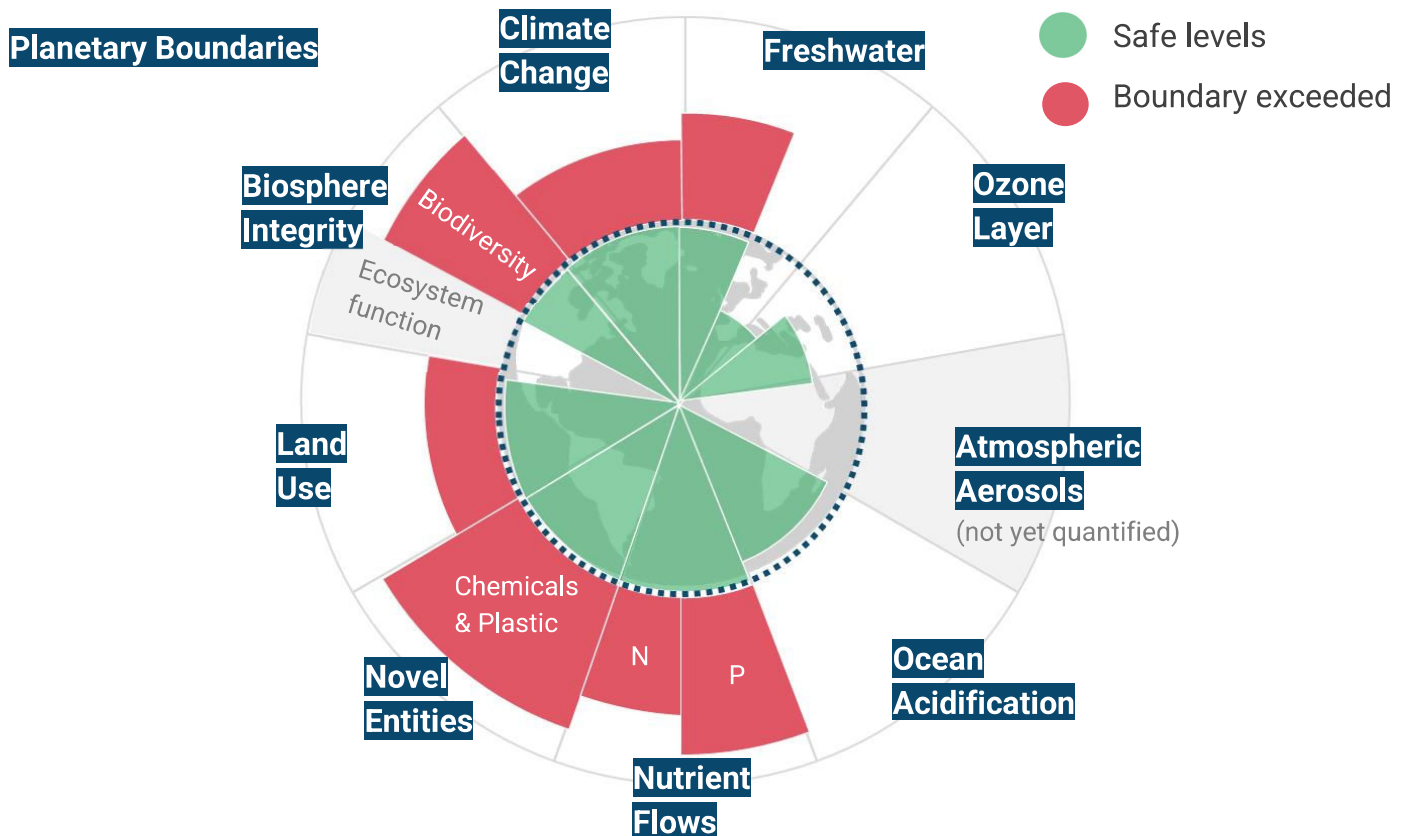
Introduction

Acting to prevent environmental breakdown is an unprecedented opportunity. In part it is about reducing our impact, and being more efficient in how we use energy, materials, land and other key resources. But doing so also gives us a big chance to make our food and energy systems more secure, to make our homes and transport healthier and cheaper to run, and to create new skilled jobs and industries.

It is therefore not a priority to weigh against our socio-economic ambitions, but a lever to achieve them. Cleaner, greener systems for how we power, heat, feed and transport ourselves will enable us to nurture prosperous, stronger, healthier communities. This refreshed strategy reiterates how.

The need is clear: CO₂ is at its highest level in at least two million yearsⁱ, with emissions in 2022 the second highest on record.ⁱⁱ Temperatures rose quicker in the last few decades than in any such period in two millenniaⁱⁱⁱ, with 2022 the UK's hottest year on record.^{iv} This is causing a huge rise in the severity and likelihood of extreme weather, food insecurity, and growing risks of global cascading impacts.^v Even if we fail to stay under 1.5°C, as seems likely, every tenth of a degree beyond it really matters.^{vi}

Unfortunately, climate change is just the tip of a rapidly melting iceberg. A great acceleration in the decline of many of earth's life support systems from around the 1950s means we've crossed six of the nine 'planetary boundaries'.^{vii} These boundaries marked the stable Holocene epoch in which civilisation developed.^{viii}



In particular, biodiversity loss is now thousands of times the normal rate of extinction^{ix}, with wildlife plummeting almost 70 per cent in 50 years.^x A million species are now at threat.^{xi}

This doesn't just concern distant reefs and forests: the UK is now one of the world's most nature-depleted countries.^{xii} And this isn't just about cuddly animals: it risks the collapse of ecosystems that provide us with food, flood protection and store carbon.^{xiii} Species moving to adapt also increases the risk of more pandemics in the future, from greater interactions between humans and wild animals.^{xiv}

Climate change and biodiversity loss are two sides of the same coin.^{xv} Climate change is set to overtake land use change as the biggest cause of species loss.^{xvi} And the degradation of nature threatens to weaken its ability to remove carbon and turn it into an emitter.^{xvii} The solutions are therefore linked: climate action (like stopping deforestation or dietary choices^{xviii}) can support biodiversity, and others (like 'monocultural' woodland^{xix} or bioenergy^{xx}) threaten it if poorly done.

Whilst mitigation is a priority, we must also be pragmatic. Climate change is already happening, and further warming is inevitable, so we must adapt.^{xxi} These three pillars – climate change, biodiversity loss, and adaptation – must **all** be considered in Dorset Council's Operational Programme for tackling our direct impacts, and in our Facilitation Programme for influencing change beyond the council and across Dorset.

This can **all** seem overwhelming. It is hard to see the forest for the trees, especially when they are being felled or on fire. Yet it is not only solvable, but an unprecedented opportunity to make us healthier, wealthier, and more secure. We are not **all** equally responsible nor equally at risk, but we **all** have a role. Dorset Council will lead the way for Dorset to cut its emissions, restore nature, and make us more resilient. And we must do so fairly to ensure that everyone is protected and so that everyone benefits from a more sustainable economy.

Global warming inevitably means more hot air, but Dorset Council can be proud that we are not **all** talk. Since we declared an emergency in 2019, we've made protecting Dorset's natural environment, climate and ecology a council priority, created a corporate director role, and secured millions in grants and investment on top of a £10m capital programme to deliver major projects.

But to stay within the county's carbon budget Dorset **still** needs to cut its emissions by over half by 2030. And boosting biodiversity and adapting the county to climate change must be pursued in tandem.

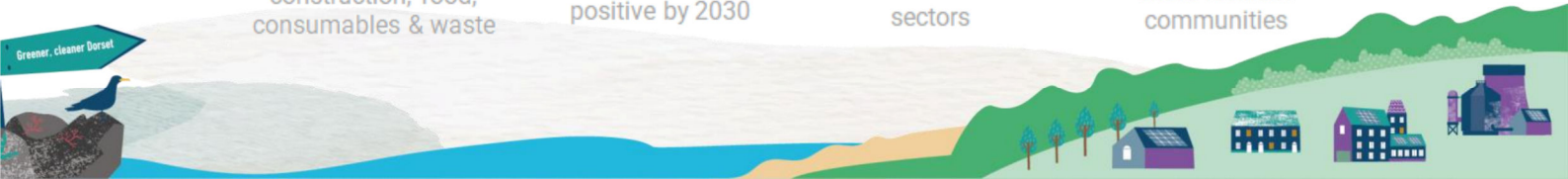
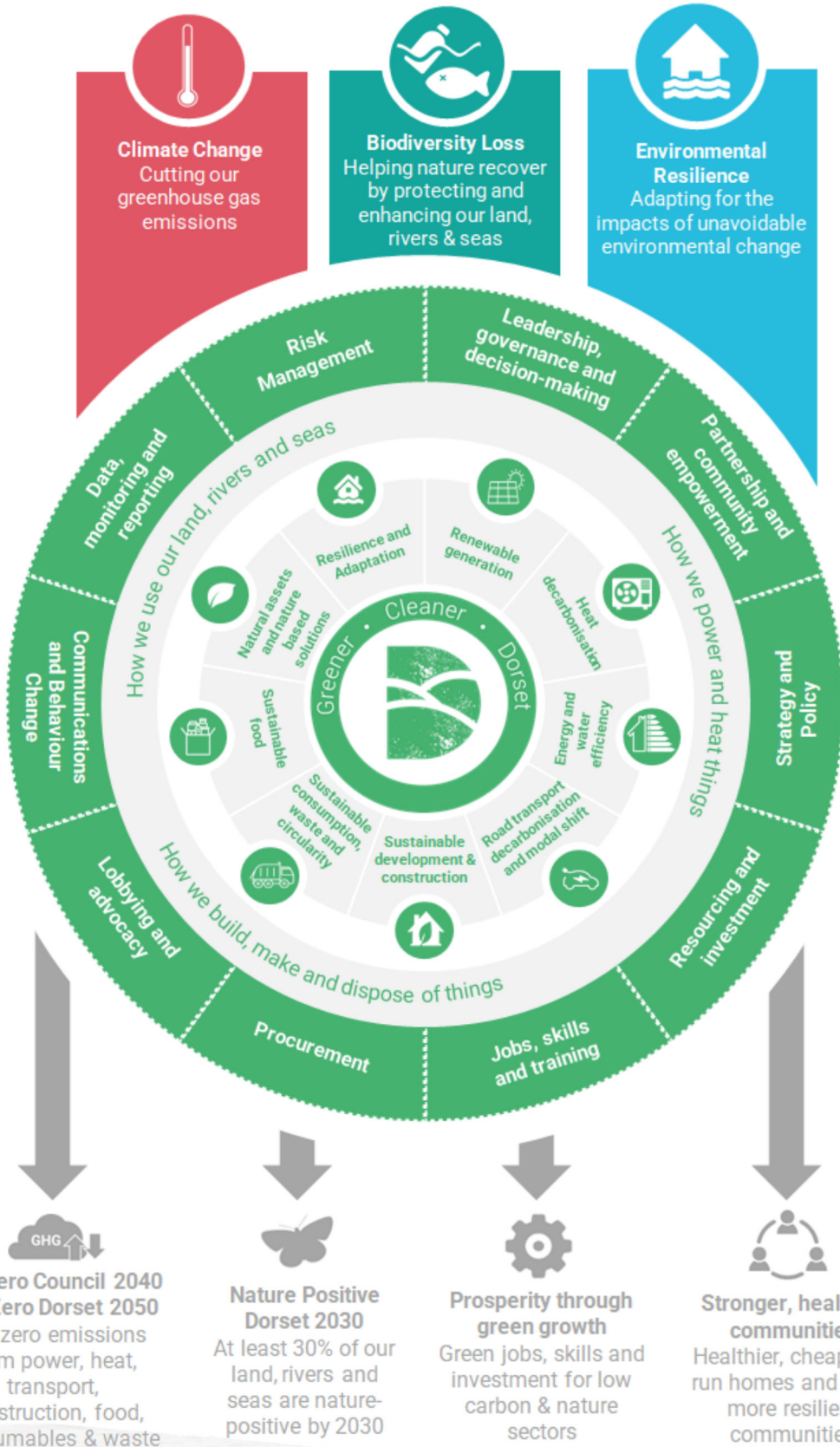
The council cannot possibly achieve this alone. But we have incredible strategic partners, businesses, town and parish councils, community groups and residents who **will all** be critical to helping us achieve a carbon neutral, nature positive, resilient Dorset.

This refreshed strategy restates our path. We've kept the substance of our 2021 strategy but made it snappier, filled some gaps that have been highlighted to us, and reflected major new national policy advances.



Our Strategy: Summary

Our vision is for a **carbon neutral, nature positive and resilient Dorset** achieved through a **clean, green and fair transition** and that generates **prosperous, stronger and healthier communities**.



The Global Challenge

Climate Change

CO₂ is now at its highest level in at least two million years, with global emissions in 2022 the second highest on record. Global temperatures have risen 1.2°C on pre-industrial levels (2°C in Europe, 3°C in the Arctic), and have risen faster in the last 50 years than in any such period in the last 2,000 years. The last decade was likely the hottest in 125,000 years. 2022 was the UK's hottest year on record.

This is causing a huge rise in the severity and likelihood of weather extremes like heatwaves, floods, and wildfires. Sea levels are rising at three times the rate of 1901-1971, and it's heating at a rate not seen for 11,000 years. The Arctic will likely be ice free in 2050.

Further warming is now unavoidable, but how much will depend on what we do now. Crossing 1.5°C will present severe risks, yet we are likely to do so in the early 2030s. Staying (or getting back) under 1.5°C is possible, but it will require rapid and deep emissions cuts. Even if we fail, every tenth of a degree beyond 1.5°C still really matters.



Biodiversity Loss

Biodiversity is rapidly declining, with over a million species at threat globally – ushering in earth's sixth mass extinction. Biodiversity loss is now thousands of times the normal rate of extinction, with wildlife declining 70 per cent in the last 50 years alone. Land-use change (primarily from food) is the biggest driver, but climate change is likely to be the biggest cause in the future.

The UK is one of the most nature-depleted countries in the world. With only around half its biodiversity left (compared to a global average of 75 per cent), the UK is in the bottom 10 per cent for biodiversity. Forty-one per cent of UK species declined in abundance over the last 50 years alone and 15 per cent are now threatened with extinction.

Biodiversity loss and climate change accelerate one another. Nature has absorbed over half our emissions since 1750, but its destruction and degradation is now limiting its ability to store and sequester carbon. Ecosystems are fundamental to our food systems, our health and wellbeing, and the provision of many other key 'ecosystem services'. But biodiversity and habitat loss risk the collapse of these ecosystems, whilst also threatening more pathogenic diseases.



Threats to our resilience

The impacts of climate change are being felt around the globe now and further warming is unavoidable. We must therefore ensure the resilience of people, prosperity and nature alongside cutting our emissions.

Globally, 15 times more people died from floods, drought and storms in vulnerable areas than elsewhere over the last decade, and we are already seeing mass tree loss from drought and wildfires. If we reach 1.7-1.8°C, half of humanity may be exposed to life-threatening heat and humidity. Unintended impacts of climate engineering present yet further risks.

The UK faces significant impacts even under optimistic scenarios, including a further 0.5°C rise to 2050 with warmer, wetter winters and hotter, drier summers. This will see a rise in temperatures extremes, changes to rainfall patterns, and more flooding, erosion and wildfires. Heatwaves will occur every other year by 2050. Summer rainfall could drop by a quarter and winter rainfall may increase by 16 per cent. UK sea levels have now risen 16cm and will continue to rise for centuries.

Global sea levels since 1880 ^{xxiv}

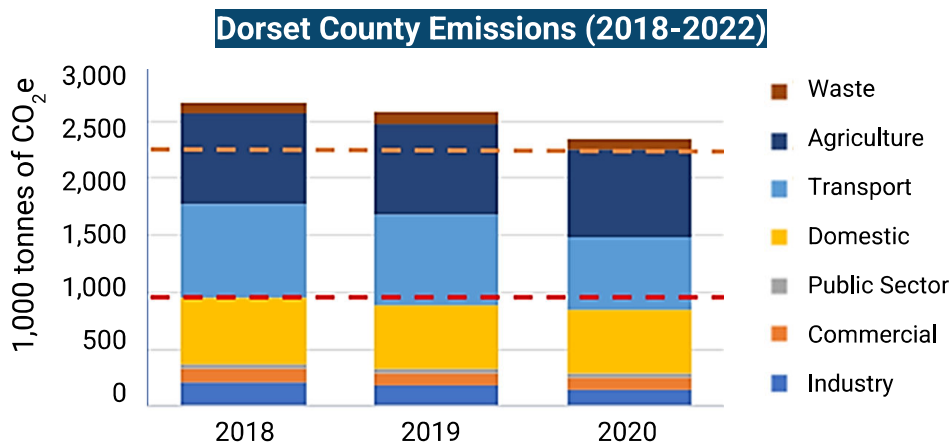


Dorset's Decarbonisation Trajectory

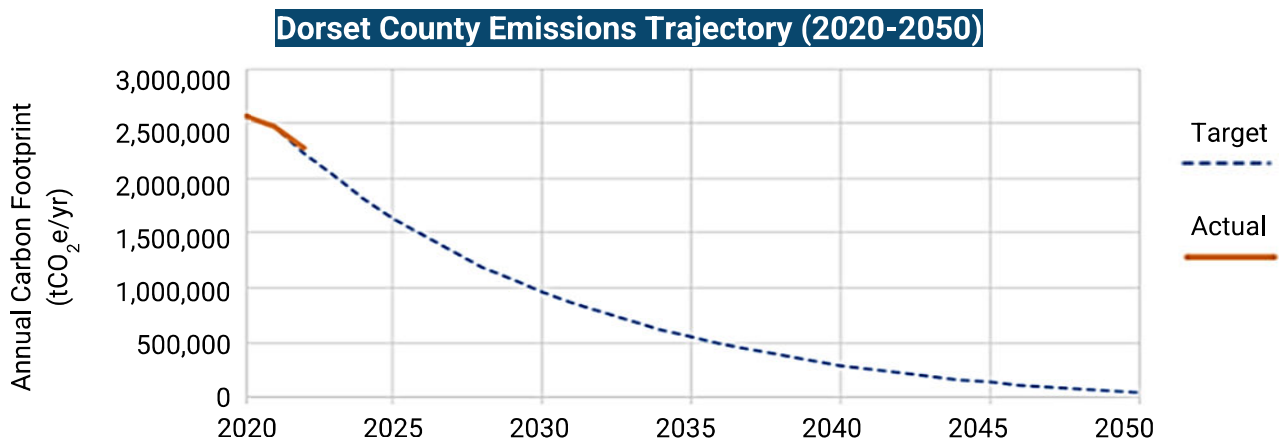
We must achieve a carbon neutral Dorset by 2050 and a carbon neutral council by 2040. To do this Dorset's carbon budget requires that the county emit no more than 21 million tonnes (Mt) of carbon dioxide equivalent (CO₂e) from 2017 onwards.

The council's earlier reporting showed that Dorset's emissions have reduced by 18 per cent since 2017 to 1.4 MtCO₂e a year, which would have kept us on track to meet this target. This included cuts in industrial (-30%), transport (-23%) and commercial (-23%) emissions, though this may in part reflect the impacts of the pandemic. However, that earlier reporting lacked data for agriculture and waste emissions.^{xxv}

Including agriculture and waste, which is around a third of Dorset's total emissions (900 kilotonnes (kt) of CO₂e), shows that Dorset's actual total emissions (2.27 MtCO₂e a year) are slightly off track, so the rate of reduction must be faster. Emissions will need to be cut by more than 50 per cent by 2030, from a higher level than previously calculated. This factors in those emissions that are already removed by nature on land (e.g., by trees), which is around 72 ktCO₂e a year.



The largest sources of emissions in Dorset are agriculture (33%), transport (27%) and domestic energy (24%). These are broadly in line with national averages, except agriculture which is three times higher in rural Dorset (from sources like livestock, soils and machinery).

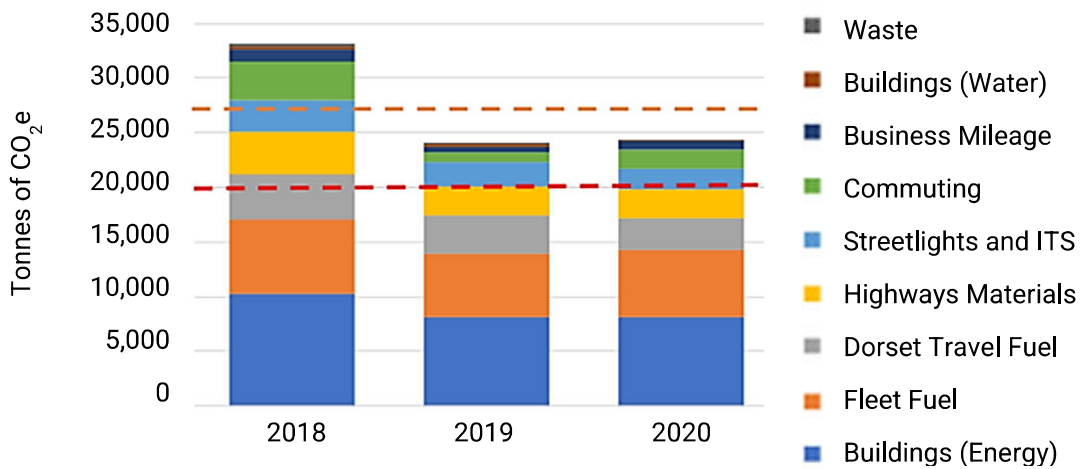


Emissions from Dorset Council account for 1.5 per cent of Dorset’s carbon footprint. To make Dorset Council net-zero by 2040 requires cutting emissions from 33.5 ktCO₂e (as calculated in 2019), with an interim target of 40 per cent cuts by 2025.

The council’s own emissions have already reduced by 26 per cent (to 24,326 tCO₂e) since 2019, so it is well on track and well below target level for 2021 (27,807 tCO₂e).

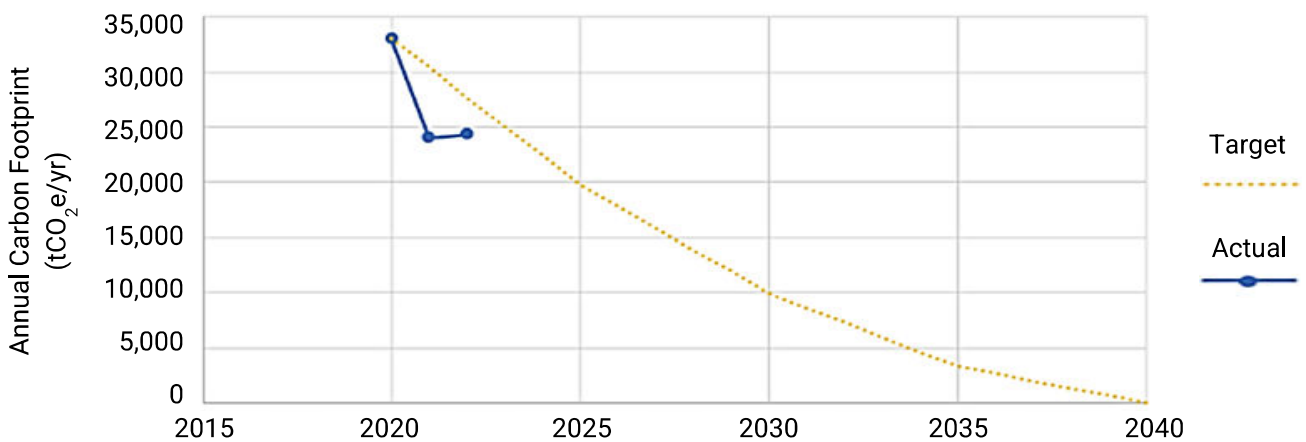
This is in large part due to the significant cut in business and commuting travel from remote working – though it will take effort to ensure that it is sustained, and there was a slight uptick in travel last year.

Dorset Council Emissions (2019 – 2022)



The council’s emissions are anticipated to continue to decline, and the council is in an excellent position to achieve our 2025 and 2040 targets if emission cuts and renewable generation for our own energy demand are achieved.

Dorset Council Emissions Trajectory (2020-2040)

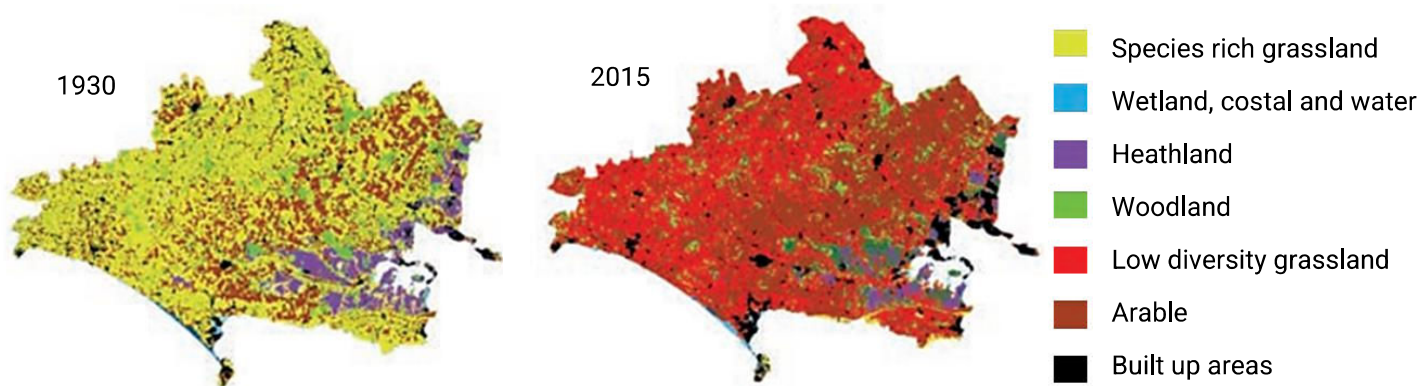


Dorset's Nature Recovery Trajectory

To help halt biodiversity loss, at least 30 per cent of Dorset's land, rivers and seas need to be nature-positive by 2030.

Dorset is recognised for its rich biodiversity and natural beauty. From chalk grasslands to ancient woodland, extensive heathland, and the coast and cliff habitats of the Jurassic Coast – the county's natural assets are protected by many designations and worth up to £2.5billion a year to our economy. But just because it's in a designation doesn't mean that it's in good condition. Protecting, restoring and enhancing it is vital for biodiversity, carbon, flood resilience, food, and more.^{xxvi}

Land Cover Change (1930-2015)^{xxvii}



Over the last century, there has been a major loss and degradation in our natural assets. There are now 2,930 terrestrial and freshwater species and 157 marine species that are of conservation concern locally.

A fifth of land in our council area is in our 'ecological network', which connects up our habitats and wildlife sites. But only a third of it is known to be in good condition, and it is also at risk of further loss, fragmentation and degradation from human activity – including as a result of climate change.

Protected Terrestrial Site Condition, Dorset County (2014 – 2020)

	2014	2015	2016	2017	2018	2019	2020
Sites of Special Scientific Interest							
Favourable	39%	39%	39%	40%	40%	40%	44%
Unfavourable recovering	48%	49%	49%	48%	47%	47%	42%
Unfavourable no change or declining/destroyed	13%	12%	11%	12%	8%	13%	14%
Sites of Nature Conservation Interest							
Good maintained/improving	43%	41%	42%	41%	45%	45%	45%
Fair maintained/improving	14%	16%	19%	21%	32%	32%	32%
Poor or declining	15%	16%	16%	16%	2%	2%	2%
Unknown	28%	26%	23%	22%	21%	21%	21%



Overall the picture is mixed. Only 12% of land is in a protected designation across Dorset county, but these are slowly recovering. Forty-four per cent of Sites of Specific Scientific Interest (SSSIs) are in favourable condition and 42 per cent are recovering.

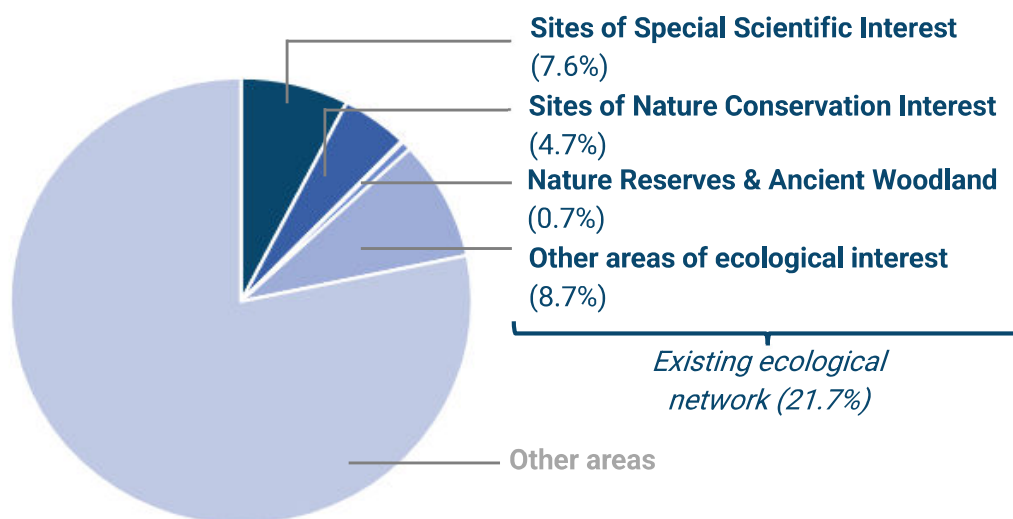
Whilst there was *net* growth of 109 hectares in the size Dorset's Sites of Nature Conservation Interest (SNCIs) from 2005-2019, 84 hectares were lost. Six hundred and eighty-one hectares of green infrastructure were created or restored by 2021, though some of that was created to compensate for that which was lost.

Major progress has been made on nutrient and heathland mitigation. This includes wetland creation, farmer-led approaches, rewilding and partnership projects. Progress is also clearly being made on minimising light pollution, a specific objective of the council's streetlighting policy, with Dorset now ranked the 13th darkest county and Cranborne Chase AONB designated a Dark-Sky Reserve.

At sea Dorset also welcomed a further six new designations in 2019, so that 25 per cent is now in a Marine Conservation Zone and 31 per cent of the county's inshore area is protected from mobile fishing gear.

Although Dorset is moving in the right direction, we need to up the pace if at least 30% of its land, rivers and seas are to be nature-positive by 2030. Doing so will not only be good for biodiversity, will also support us capture and store carbon, tackle flooding and pollution, and support our health and wellbeing. Everyone has a role to play – and new policy on things like biodiversity net gain and agri-environment funding present a big opportunity.

Dorset Council Land Area Profile



Key Achievements in Dorset so Far



Energy, Heat and Energy Efficiency

- The £16m **Low Carbon Dorset** programme has provided free advice and £6.2m in grant funding to local organisations for renewables, energy efficiency and innovation projects worth more than £17m.
- Dorset Council's £19m **Public Sector Decarbonisation Programme** has retrofitted over 200 public buildings and schools with measures like heating controls, lighting upgrades, solar panels, and heat pumps.
- Both programmes have trailblazed conservation-sensitive deployment at key heritage sites like Durlston Castle and Sherborne Abbey.
- **Dorset Community Energy** has pioneered community-based models locally, raising community investment and commencing local energy trading.
- The **Healthy Homes Dorset** programme is facilitating insulation installation for local homes – as well as making referrals for boiler upgrades, LEDs, radiator reflectors, and draught-proofing measures. We're also using grant funding to improve Dorset's least insulated rentals.
- Dorset Council has improved the efficiency of the **streetlighting** service. Over a third of Dorset's lights are now LED and, along with other measures, this has helped to halve its overall energy consumption since 2008.
- Three further **solar farms** were given approval in 2022, and Alaska Wind Farm LLP has acquired refurbished **wind turbines** for installation near Wareham. Canford Renewable Energy's **Green Hydrogen** project is also now underway.
- A **decarbonisation strategy for Dorset Council's pension fund** was established, with fossil fuel investment already cut by 70 per cent to 1.2 per cent of total assets.



Transport

- Dorset Council has helped shift to remote working, supported by IT capability, which has cut employee commuter journeys and emissions.
- Phase 1 of the council's **public EV charger rollout** is complete, with Phase 2 underway. We now have over 140 public charging points in Dorset, up from 63 in 2019. We're also a **Local Electric Vehicle Infrastructure pilot**, securing £2.7m for rural chargers.



- We have begun Dorset Council's **Fleet Replacement Programme** (following trials and a review with the Energy Saving Trust) and we've started providing incentives and producing a Travel Plan for our employees.
- Dorset Council won £80m with BCP to create a **Sustainable Transport Network in South East Dorset**, making it easier for people to walk, cycle, scoot or take the bus.
- The Beryl **bikeshare scheme** was commissioned for Southeast Dorset and we maintained training programmes through Bikeability.
- An **Enhanced Partnership with bus operators** was established to boost public transport, and the council assessed the feasibility of two Park & Ride hubs.
- **Gigabyte coverage has expanded** by a fifth, and the council is promoting digital alternatives to cut travel with Dorset Business Travel Network and **Digital Dorset**.
- Strategic progress by our **Western Gateway Sub-national Transport Body** has included developing the South West Rural Mobility Strategy and the South West Freight Strategy.



Waste & Materials

- Dorset Council's **recycling and composting rate is 58.9%**, putting us in the top three unitary councils in England.
- **Waste sent to landfill has been cut to just 2%**, and most of our residual waste is now sent to the New Earth Mechanical Biological Treatment plant in Poole where organic and recyclable materials are extracted and leftover material is turned into fuel.
- **All food waste collected is treated in-county using anaerobic digestion** which produces biogas used to generate electricity, and biofertilizer sold as a soil improver for plants and crops.
- We've launched **education and awareness projects and campaigns** to inspire behaviour change, such as on reusable nappies, composting, Litter Free Dorset campaigns, 'Right Stuff Right Bin', 'Love Food Hate Waste', 'Slim Your Bin', recycling hangers, food waste stickering, Litter Free Coast & Sea and more.
- Dorset Council has been listed in the **top 3 councils in a national Recycling Carbon Index**, which measures carbon emissions avoided through local authority recycling schemes.
- Half of asphalt Dorset Council uses has been shifted to **Low Energy Asphalt**, expanded materials recovery for surfacing and cut primary materials by a third, and installed a new all-electric hotbox (to keep asphalt hot whilst stored) at Charminster Depot – the first of its kind in the UK.





Natural Assets

- **Dorset Peat Partnership** has been formed, securing a £150,000 grant to develop plans for restoring Dorset's important wet heath and mire habitats.
- Dorset Council's **Biodiversity Appraisal Protocol** means that we conserve and enhance nature where there are planning developments, and the **Dorset Biodiversity Compensation Framework** secures compensation which ensures that development is compliant with national planning policy. Funding is spent on wildlife projects all over Dorset.
- **Verge & amenity space management** improvements are being delivered through Dorset Council's cut and collect approach – collecting clippings to enable wildflowers to establish and thrive – and improving an additional 350,000m² for biodiversity as a result.
- The UK's first 'super' **National Nature Reserve** was created at Purbeck Heath in 2020, and a 13-acre site has been acquired near Blandford for a new reserve.
- Dorset Local Nature Partnership's **Ecological Network Maps** have been updated, showing where there are opportunities to link and increase biodiversity.
- **Major nature recovery projects** have been delivered, such as the Dorset Wild Rivers project, Purbeck Heaths Wilder Grazing Unit, the River Asker project, and the introduction of beavers into enclosed settings – enabling river, woodland, heathland, wetland and climate adaptation works.
- A marine project to protect the seagrass beds at Studland by installing **eco-moorings** is underway.
- Multiple projects have demonstrated **nature-based activities for health and wellbeing**, including the Natural Choices and Stepping into Nature projects, whilst the Healthy Places Programme and Dorset Local Access Forum have invested in improving access to greenspace in recognition of the value of the environment as a determinant of health.
- Developer contributions have been used to sustain **quality greenspace** in places like Wimborne, Ferndown, Verwood, Stoborough.
- Successful **behaviour change campaigns** were launched on things like BBQ wildfire risks, #Loveyourharbour and #Loveyourverge.





Food

- Dorset Area of Outstanding Natural Beauty is delivering a £1.3m **Farming in Protected Landscapes** programme, enabling 40 projects to implement sustainable measures like woodland creation, regenerative farming, soil health and flood mitigation measures.
- Multiple local initiatives continue to support Dorset **buy local and cut food miles**, such as Dorset Farmers Market, Dorset Food & Drink and Local Food Links Ltd.
- Dorset Council has commenced **surveying on our council farms** to identify opportunities for nature and climate and have already seen positive outcomes from existing work like owl box installation.
- Major action on enabling **farmer-led approaches for nutrient reduction** have been established, such as the Poole Harbour Nutrient Management Scheme. This has followed Poole Harbour Catchment Partnership's precedent of bringing sectors together to improve water quality in the catchment, and EnTrade's pilot auction-based financing scheme for farmer-delivered water quality interventions.



Resilience

- Over 40 **natural flood management** structures have been installed.
- A series of **flood investigations and flood alleviation interventions** have been undertaken over the last decade, the most notable being a £750,000 scheme installing resilience measures for 94 homes.
- **Flood alleviation schemes in Bridport and Portesham** have been completed.
- Our **Building Resilience in Communities** project is underway in Weymouth, to engage communities in flood risk management and boost resilience.
- £2.5m funding has been secured to stabilise, protect and repair **Lyme Regis Cobb** from coastal erosion and flooding.
- **Beavers have been reintroduced** into enclosed settings, which will help to create multiple channels in river and wetland habitats that will slow the flow and reduce downstream flooding.
- The Weymouth Harbour & Esplanade Flood and Coastal Risk Management Strategy has been approved.



Latest National Policy

Climate Change

The **Climate Change Act** commits the UK to net zero territorial emissions by 2050 and requires policies to meet interim five-year carbon budgets. Since Dorset Council's 2021 strategy was adopted, the UK government has developed the national policy framework considerably.

The most recent carbon budget of June 2021 set a further statutory target for cutting emissions by 78 per cent by 2035. The government's new **Net Zero Strategy** sets out a pathway for the next three budgets to 2037 (for a 78 per cent cut), to be delivered without global carbon offsets. It sits alongside strategies on transport, energy, hydrogen, transport, food and industrial decarbonization – key points of which are highlighted in the sections below.

The Net Zero Strategy gives national clarity on what needs delivering this decade via sector-specific measures and cross-cutting policies (like innovation, jobs and skills, and public empowerment), whilst identifying alternative scenarios beyond 2037 depending on how options develop. All sectors contribute. Known technologies and solutions are prioritised, the electrification of the grid is central (with hydrogen supplementary where electrification is more difficult), and nature plays an important role through tree planting and peatland restoration.

The government's key commitments for this decade include scaling up heat pumps, fully decarbonising electricity by 2035, and ending the sale of new fossil-fuelled cars and vans by 2030.

The strategy states that this is achievable, affordable, and essential for long-term prosperity – anticipating annual investment of £50-60 billion by 2030. The accompanying Treasury analysis notes that climate mitigation is essential to prosperity and can boost the economy, with inaction far more costly.

The strategy's targets are consistent with the demands of the Paris Agreement, and the pathways broadly align to those of the Climate Change Committee (CCC) – Government's independent expert advisor – who described the strategy as a 'credible package'. However, they did also note the need for an agriculture and land decarbonisation strategy and highlighted the lack of emphasis on consumer behavior change (such as on diets and transport choices).

Subsequent policies and legislation have realised further progress. For example, the current **Energy Security Bill** builds on the **Energy Security Strategy** to help reform the energy system. It includes powers to regulate CO₂ transport and storage networks, smart appliances and load controllers, and heat networks (including for fair pricing). It also establishes a market mechanism that obliges heating appliance manufacturers to scale up heat pumps from 2024 (the Low Carbon Heat Scheme), supports deployment of storage (by clarifying its role as a subset of generation), and enables heat network zoning.



Biodiversity Loss

November 2021 also saw **The Environment Act** become law, setting a new framework for environmental protection – the major legislative implementation of its ambition to leave the environment in a better state than we found it. The Act covers issues such as biodiversity, water treatment and quality, water resource management, clean air and waste, and requires policy to consider environmental principles like the polluter pays principle. It also provides the basis for new statutory targets and establishes a new Office for Environmental Protection as an independent watchdog to enforce compliance.

On waste, for example, the Act strengthens producer responsibility for the end of life costs, introduces a deposit return scheme for drinks containers, and enables charges for some single-use plastics. It also creates requirements for how waste should be collected and separated (including weekly household waste collections), strengthens powers for waste crime, and enables product standards and labelling for resource efficiency.

On nature, it strengthens public body duties to conserve and enhance biodiversity; mandates that developers ensure a measurable net gain in biodiversity and secure it for at least 30 years; requires the preparation of Local Nature Recovery Strategies; and requires local consultation on tree felling.

Government has also recently refreshed its **25 Year Environment Plan** – its plan to halt the decline in biodiversity and to protect 30% of land and sea through the Nature Recovery Network and enhanced marine protections. Amongst other things, it committed to launch a Species Survival Fund; to increase, restore and extend 70 areas for wildlife; to transform management of 70% of the countryside through nature-friendly farming; and to publish a new Green Finance Strategy.

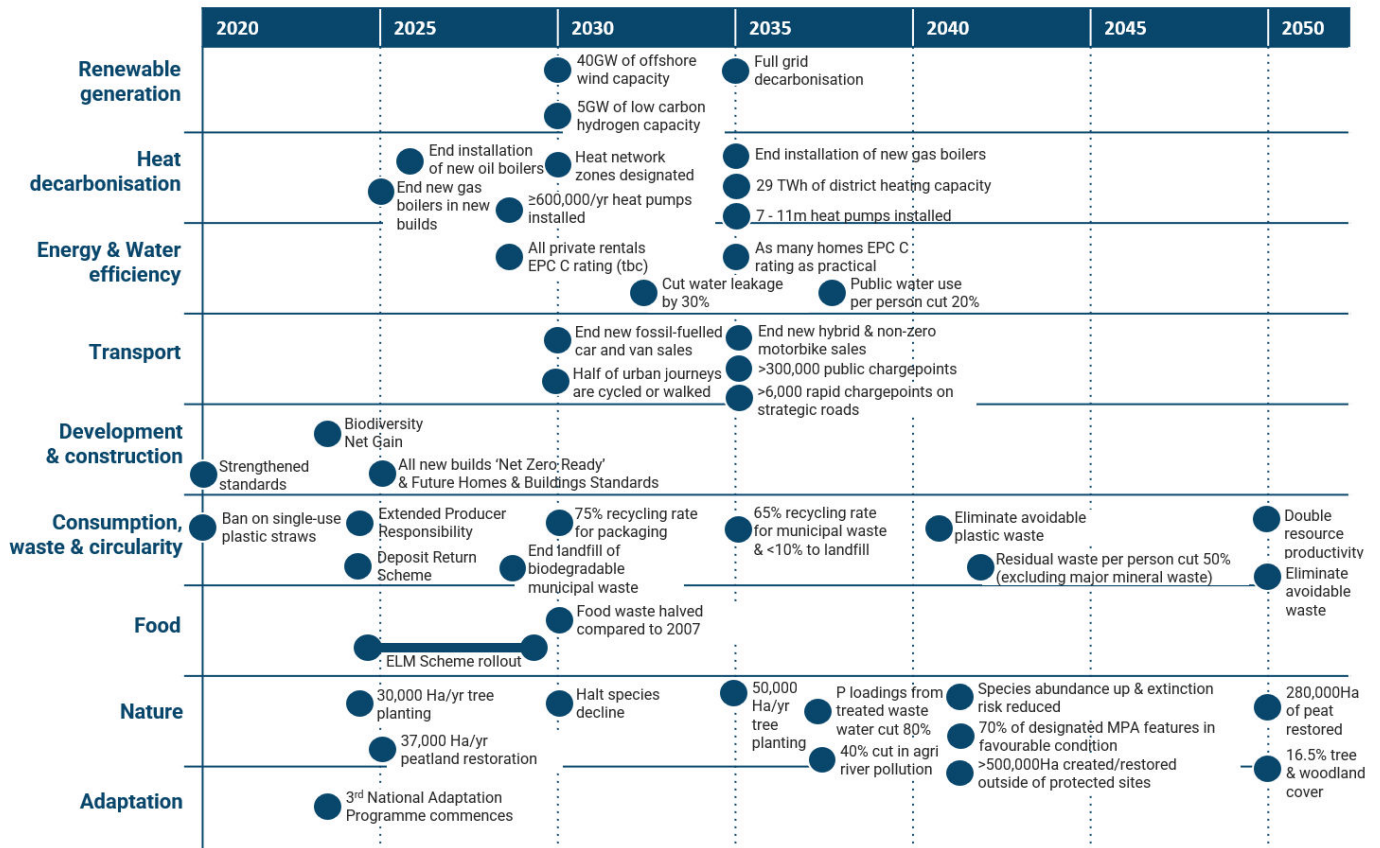
Resilience

The government publishes its **Climate Change Risk Assessment** every five years. The latest identifies 61 risks, including eight urgent ones: natural habitats, soil health, natural carbon stores, agriculture, supply chains, the power system, heat impacts on health and productivity, and overseas impacts. Eight risks could see annual damage over £1 billion each in a 2°C scenario, and £10m for another 36.

The government recognises that adaptation so far hasn't been sufficient and commits to boost it in the third National Adaptation Programme due in 2023. Its fourth assessment will also provide better spatial information to support local action.



The following image shows **key milestones and targets** set out in national policy.



Our Approach: **Making It Happen**

The council and Dorset must deliver at pace and scale for climate, nature and resilience – and ensure the transition is delivered fairly so that all are protected and benefit.

We need to think long-term and across systems – leading by example through the council's **Operational Programme** for things we directly control, whilst enabling and influencing others through our **Facilitation Programme**. These will continue to be reported on biannually to the council's Scrutiny Committee.

Importantly, delivery cannot be achieved by the council alone, so we need to empower and influence others locally and nationally using the skills and resources of wider stakeholders. Our partners and communities will be key to delivery. We will facilitate and enable work alongside key system partners like regulators and utilities companies, Dorset's town and parish councils, community groups, and through key strategic partnerships (like our Public Sector Decarbonisation Group, Local Enterprise Partnership, Local Nature Partnership, Dorset Coast Forum, Catchment Partnerships, and Urban Heath Partnership).

To find out how to take action, check out **what you can do** on the council's webpages.

The following cross-cutting levers outline the components of the council's approach, each of which are relevant to delivering every mission below:

Leadership, Governance and Decision-making

We will enable leadership that sets a clear mandate and a positive example, strengthen governance and delivery structures for the council's operational and facilitation programmes, and provide decision-making tools to mainstream it in all key projects, programmes, and strategies.

Strategy and Policy

We will align key corporate and place-based strategies and policies (such as our new Local Plan, Local Transport Plan, asset management approach, pensions scheme, and others) and ensure that policy is being used to maximal effect through further guidance where necessary. We will also engage to influence key external policies and strategies (e.g., Water Resource Management Plans).

Partnerships and Community Empowerment

We will engage and facilitate public, private and voluntary sector partners, local councils, community groups, and households. This will include working with key system partners, enabling effective strategic partnerships, and enabling local place-based partnerships and initiatives.



Resourcing and Investment

We will enable revenue and capital resource for delivery, monitoring and evidence – including core resourcing, seeking external grant funding, revenue generation opportunities, catalysing private finance, enabling crowdfunding, and encouraging the uptake of funding opportunities by key stakeholders (like ELMs).

Green and Blue Jobs and Skills

We will support the Green and Blue Economy, extending beyond renewables to nature-based and resilience-related roles, and critically including our rural economy given the central importance of our agri-fisheries businesses. We will encourage investment in local green businesses and jobs by embedding it in Dorset's economic strategies and projects. We will also work with skills providers to embed it in education and training programmes; and help to address critical practical capability for areas like the deployment of zero carbon measures, nature-positive land management, and secondary services like advice or monitoring.

Procurement

We will explore opportunities to optimise procurement and commissioning so that contracts, purchasing and leasing help to cut carbon, maximise energy and water efficiency, cut waste and materials use, avoid pollution, maximise opportunities for nature recovery, and enable a climate resilient supply chain.

Lobbying and Advocacy

We will lobby Government, regulators, and other key stakeholders on the key barriers to delivery, through engagement, consultation and forum input – including for resourcing, strengthening of national targets, aligning wider policy, devolution and stronger incentives, regulations and designations.

Communications and Behavior Change

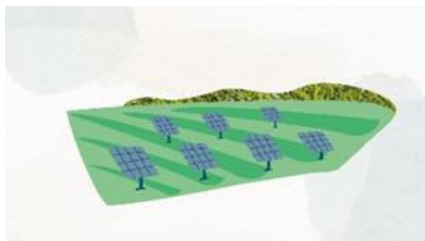
We will inspire, encourage and guide personal and professional behaviors and practices, directly or indirectly through champions and peers. We will also grow understanding of the issues and opportunities, and enable informed choices (e.g., on energy and water use, land management, and food).

Data, Monitoring and Reporting

We will acquire, improve, and share robust data on energy and emissions (including potentially Scope 3), waste and materials management, natural assets, and climate vulnerability; and we will enable key research to fill strategic gaps on our baseline, scenario modelling, pressures or opportunities (including mapping).



Mission 1: Renewable Generation



All energy used for power, heat and transport will need to come from electricity or hydrogen generated by renewable or low carbon sources like solar, wind, geothermal, hydropower, tidal or sustainable biomass. This will unlock cleaner, cheaper, and more secure British energy than imported fossil fuels and will generate jobs and investment (nationally up to £270billion and 120,000 jobs).

The UK government wants more on- and off-shore renewables and solar, and to fully decarbonise power by 2035. This includes 40 gigawatts (GW) of offshore wind by 2030 and 5GW of hydrogen capacity by 2030 for difficult to electrify sectors. It is also transforming how the grid is planned and governed.

Dorset has made good progress on solar locally but needs faster growth in renewable generation and storage capacity, grid upgrades, and smarter, flexible demand management. Electricity demand is expected to grow by 40-60 per cent due to heat and transport electrification, so if it were to be locally self-sufficient Dorset would need to increase its 491 megawatts (MW) of capacity eightfold. That would likely include 4GW of solar (around 19,000 acres) or 2GW of wind (around 700 turbines), or some combination of the two. The council alone needs 60MW of solar or 30MW of wind to meet our own energy demands.

Dorset's [decarbonisation route map](#) identifies opportunities, but planning and grid constraints are a barrier, with connections often impeded by high costs and delays when they trigger reinforcements. Dorset's network operators' strategic investment plans will help, and the council has provided evidence to inform these, but more remains to be done.

Dorset is an untapped resource of solar, wind and tidal energy. It needs to deliver at scale, manage grid and national planning constraints, and take every opportunity for small- and large-scale deployment.

Objective: Boost deployment of renewable generation and flexibility measures on the council estate and in wider Dorset

- 1.** Expand renewables on the council estate: Identify and implement opportunities to expand small- and large-scale renewables and flexibility measures like storage on our estate (including our employment land and premises) to meet or exceed our energy demand.
- 2.** Enable wider deployment through planning: Encourage deployment of renewables and storage, and their integration in new developments through planning policy, toolkits, and guidance. This will include identifying suitable sites in the new Local Plan, and having regard for landscape, the historic environment, amenity, ecology, and productive farmland impacts and other constraints.
- 3.** Continue Low Carbon Dorset: Seek resource to continue the Low Carbon Dorset programme to promote and bolster advice and deployment by businesses, public and third sector organisations and social housing providers; and support community-led action through projects.
- 4.** Influence strategic energy planning for a locally efficient and responsive grid: Work with local stakeholders on influencing and enabling strategic grid planning. This should rapidly accommodate new supply and demand, and tackle anticipated congestion through infrastructure, speedier and cheaper connections, and smart and flexible solutions. This can be achieved through means like Local Area Energy Planning and lobbying on barriers for onshore and offshore renewable deployment.



Mission 2: Heat Decarbonisation



Heating makes up a quarter of UK emissions and half of gas use. To eliminate these emissions, buildings will need low carbon heating sources like heat pumps or hydrogen. This can unlock cleaner, cheaper, more secure heating than fossil fuels – giving us warmer, healthier and cheaper to heat buildings. It will also help to tackle fuel poverty and generate jobs and investment (nationally up to £200 billion and 175,000 jobs).

The UK government wants to end new gas boiler sales from 2035 and to see installations of at least 600,000 heat pumps a year by 2028. It also has an ambition that 18 per cent of heat will come from heat networks, and for a 75 per cent cut in public sector building emissions by 2037. The Boiler Upgrade Scheme will give homeowner grants, whilst the Home Upgrade Grant will continue for low-income off-grid homes. Plans are underway to shift levies from electricity to gas bills over the next decade to encourage uptake. In addition, the Social Housing and Public Sector Decarbonisation schemes are being extended. However, commentators have expressed concern that the funding allocated so far is insufficient to meet these national targets.

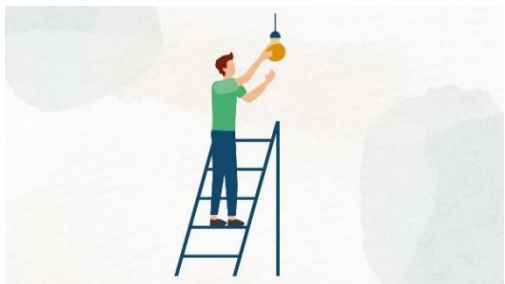
Heat pumps are expected to be as cheap as gas boilers by 2030 and be three times more efficient. Government will determine heat network zones by 2025, and it will also decide on the role of hydrogen in 2026 – with hydrogen more likely to feature in areas with appropriate storage facilities (like gas import facilities and salt caverns). In Dorset, 82 per cent of domestic heating systems are currently oil or gas powered. To eliminate Dorset's emissions, these heating systems will need to be retrofitted in Dorset's existing buildings, and all new builds will need to be fitted with low carbon heating from the outset to avoid having to later retrofit them.

Objective: **Decarbonise heating in residential, community, public, commercial and industrial buildings.**

- 1. Decarbonise heating on the council estate:** Identify and implement further opportunities on our estate (including employment land & premises) for heat decarbonisation through the asset review process and maximise the opportunities of future phases of Public Sector Decarbonisation Scheme grant funding.
- 2. Identify opportunities in wider Dorset:** Scope sites for large scale installation and heat network opportunities, including through heat mapping, and seek opportunities to support, pilot and test deployment (such as for registered social housing providers, local communities, reuse of industrial by-product heat, or innovative conservation-friendly approaches for historic buildings).
- 3. Continue our retrofit advice and support offer:** Seek resource to continue the Low Carbon Dorset programme to bolster advice on deployment by businesses, public sector, third sector, and social housing organisations. Also, secure resource to assist residents (owner-occupiers and landlords) to retrofit existing dwellings through our Healthy Homes Dorset Scheme, including signposting to advice for those who are 'able to pay' and with consideration of off-gas buildings.
- 4. Enable deployment for new builds through planning:** Advance deployment in new builds through planning policy, toolkits, and guidance –including through the new Local Plan and by identifying opportunities in allocation and masterplanning, such as for heat planning and heating networks.



Mission 3: Energy & Water Efficiency



The UK has some of the least energy efficient housing in Europe, with two-thirds of homes having an EPC rating of D or less. Achieving net zero buildings starts with improving this through a 'fabric first' approach that improves wall and loft insulation. Cutting water consumption per person will also be needed to ensure supply security, especially as summers get hotter and drier. Dorset's buildings will need to be substantially more energy and water efficient to limit expected growth in energy and water demand.

Boosting thermal performance will enable 38 per cent of emission cuts nationally for heating buildings (with another 17 per cent coming from heat pumps and 19 per cent from public buildings). It will make them warmer, and healthier, whilst greater energy and water efficiency will make them cheaper to run. Until the current energy crisis, utility bills had barely rose for a decade despite rising prices thanks to efficiency improvements.

The UK government aims to make as many homes as possible achieve an Energy Performance Certificate (EPC) rating C by 2035, and to improve the slow progress of the last decade. It has expanded funding for the Home Upgrade Grant, and the Public Sector and Social Housing Decarbonisation Funds. It has also proposed a target for mortgage lenders to increase the energy efficiency of their portfolio. But commentators have questioned whether the scale of these measures is enough, and the CCC has recommended an EPC C target date of 2028.

Only around a third of Dorset's properties are rated EPC C or better. A huge retrofit effort will be needed to increase the thermal and water efficiency of existing building stock in the county, high standards for new builds will be essential – and the use of smarter & more efficient appliances will need to be expanded. This will be particularly challenging for Dorset given its high proportion of older, detached, and hard-to-treat buildings.

Objective: Retrofit to boost energy & water efficiency, cutting demand and wastage on the council estate and wider Dorset's current building stock.

- 1.** Identify and implement opportunities on the council estate for retrofit, including expanded centralised utility and energy management, energy smart appliances, improved operational controls on energy-using equipment, water efficient technology (like flow regulators), water demand reduction measures (like rainwater harvesting and greywater systems), and leak elimination. Also align our asset management and procurement approaches to support greater efficiencies.
- 2.** Further improve the energy efficiency of streetlighting, bollards and signals through technology and management.
- 3.** Promote, deliver and enforce energy and water efficiency retrofitting and behaviors to cut wastage and demand, especially for schools, housing (including private rentals and social housing), businesses and hard to treat properties (including innovative and sensitive measures for conservation areas and listed buildings). Also progress enforcement of the Minimum Energy Efficiency Standard towards meeting EPC rating C at a minimum; and seek further resource to assist residents through the Healthy Homes Dorset Scheme as well as encouraging those who are 'able to pay'.
- 4.** Enable energy and water efficient new builds that follow the energy hierarchy and achieve high energy and water efficiency standards, through the new Local Plan and the Sustainability Checklist.



Mission 4: Road Transport Decarbonisation & Modal Shift



Transport makes up a quarter of UK emissions, half of which are from cars. This has hardly changed in recent decades as fuel efficiencies and electric vehicle uptake was outweighed by growth in miles driven and a growth in larger vehicles. To cut emissions, all vehicles will need to be electric or hydrogen powered, chargepoints must be accessible and affordable, and there will need to be a shift in travel choices. This could also help to boost health from cleaner air and active travel, improve rural connectivity, and generate jobs and investment (nationally up to £220billion and 74,000 jobs).

The government aims to end the sale of new fossil-fuelled cars and vans by 2030, hybrids and non-zero motorbikes by 2035, and non-zero HGVs by 2040 – with similar targets for buses and coaches. And it has outlined ambitions to make EV charging cheaper and easier, with plans for over 300,000 public chargepoints by 2030. The grant scheme for EVs and infrastructure has now been expanded. And it has recognised that a ‘modal shift’ is needed, through better public transport and active travel, and by shifting freight from roads. The government plans to invest in 4,000 zero emission buses, bus lanes, and a bigger capacity net zero rail network by 2050. It also plans to invest in active travel so that half of urban journeys are cycled, walked or wheeled by 2030, and review national roadbuilding policy.

In rural areas like Dorset, cars are the default mode of travel. Dorset has some of the highest levels of car ownership nationally and only around one per cent of journeys are made on public transport. EVs could account for up to a third of all cars and vans by 2030. The council must continue existing programmes enabling EV infrastructure, and continue efforts to enable modal shift by boosting active travel and public transport improvements, improving road safety. We must also continue to green the council’s own fleet, and cut the council’s business miles (which are currently around 5.3 million).

Objective: Accelerate electric vehicle and charging infrastructure deployment and shift how Dorset travels to prioritise active and public modes through an integrated and affordable local transport system.

- 1.** Enable modal shift and cut the need to travel for personal, commuting, business and logistics journeys. This will be achieved by boosting vehicle occupancy; investing in safe active travel and public transport, multi-modal services (like small scale park & ride with EV and Mobility as a Service); comms and training; social prescribing; better high-speed digital infrastructure and promoting digital options; usership and sharing schemes; a well-maintained rights of way network; and lobbying for rail improvements.
- 2.** Accelerate zero carbon vehicle and charging infrastructure deployment for personal, public, private and logistics travel, particularly rapid charging on strategic roads and developing an appropriate balance of on- and off-street charging options. The council will identify how to extend affordable, accessible, convenient and smart charging for residents, businesses and visitors (including on the council estate), without pavement disruption. And we will make further use of grant funds and invest in the staged replacement of the council fleet, whilst also considering fleet size and alternative fuel options.
- 3.** Embed modal shift and infrastructure provision in policy and strategy, including aligning the new Local Transport Plan, the Local Plan (for sustainable travel options, colocation of dwellings and services, and charging infrastructure), parking policy, and procurement (for transport purchases & leasing).



Mission 5: Sustainable Development & Construction



18,000 houses will be built in Dorset this decade, alongside other buildings and infrastructure. Good design will prevent environmental damage and protect owners from retrofit costs. All new builds should aim to be net zero, nature positive and resilient in location, orientation, design and construction. This will enable efficient energy, water and materials use, sustainable travel, boost the value of Dorset's natural assets, and limit vulnerability to climate change.

National policy is clear that climate, nature, and resilience are material planning considerations. The government's road map for 'net zero ready' homes (i.e., those with potential for zero operational emissions once the grid decarbonises) will require 75-80 per cent less emissions through future standards due from 2025 (with cuts of a third already required). The Environment Act imposes duties on nature recovery and biodiversity net gain coming into force in 2023. National policy also requires that the construction and operation of developments drives waste up the waste hierarchy.

Whilst those won't suffice for net zero (particularly on embodied carbon), it will allow for stronger local policy to be set in some areas. The new Local Plan will be vital. The council has produced guidance on how existing policy already allows much to be done in the interim period until the new Local Plan's adoption. Applicants are already required to supply a sustainability statement and a checklist is being introduced to guide applicants and encourage best practice. The council adopted our Biodiversity Appraisal Protocol alongside strengthened policy protections for things like heathland and nutrient mitigation. Significant new building projects led by the council (including the Building Better Lives programme) will provide an ideal opportunity for us to lead the way.

Objective: Develop to high standards that cuts operational and embodied carbon, energy, water, and materials use, protects and enhances nature, and ensures climate resilience.

- 1. Encourage net zero new builds:** Establish policy, guidance and toolkits to encourage net zero new builds that follow the energy hierarchy, achieve high standards (like Passivhaus), and are sited to minimise the need to travel and enable sustainable travel options. This should consider renewables, heat pumps and heat networks, energy and water efficiency, sustainable drainage, public and active transport options, and chargepoints. Also trial tools for embodied carbon and whole life costing, and, where the council has direct influence, work towards net-zero development.
- 2. Promote sustainable materials use and waste management:** Promote sustainable construction (using the BREEAM tool) and waste management to drive waste up the waste hierarchy. For infrastructure, cut natural resource use, waste, pollution, and primary aggregate use in favour of reused or recycled materials. And prioritise reuse, remodelling, maintenance and improvement of existing assets.
- 3. Protect and enhance Dorset's ecological network in development and along our highways:** Apply the mitigation hierarchy in siting and design to avoid biodiversity or pollution impacts as a priority. Measures should expand and enhance our network to support a range of ecosystem services in line with our Local Nature Recovery Strategy, Biodiversity Appraisal Protocol, Biodiversity Net Gain and planning policy.
- 4. Minimise climate risks:** Site and design to minimise (and where possible, reduce) exposure to risks like flooding and coastal erosion, with residual risks mitigated through incorporated proposals (including nature-based solutions).



Mission 6: Sustainable Consumption, Waste and Circularity



Waste is a source of emissions, such as through landfill methane, waste transport and water treatment. Litter, landfills (e.g., through leachate), materials extraction, fly tipping and other waste crime also threaten nature. To cut the impacts waste has, Dorset must work towards creating a more sustainable circular economy – cutting the waste that we produce, keeping resources in use as long as possible, and recovering and reusing materials.

Waste makes up around four per cent of UK emissions, much of which comes from construction, demolition, and excavation. Around 10 million tonnes of food and drink are also wasted annually.

The government has outlined ambitions to move to a circular economy, double resource efficiency, and eliminate avoidable waste through better production, consumption and waste management. It is extending producer responsibility to make producers pay the full costs of disposal for packaging, introducing a deposit return scheme for single-use drinks containers, introducing charges or bans for single-use plastics, improving product labelling and design standards, and supporting reuse and remanufacture. It also aims to eliminate food waste to landfill and to ensure all plastic packaging is recyclable, reusable or compostable.

Dorset county generates 1.6 million tonnes of waste annually, and this is projected to grow. In the Dorset Council area, we have grown recycling rates to 60 per cent, curbed waste growth, and cut waste to landfill by 70 per cent - whilst ensuring all of Dorset's household food waste goes for anaerobic digestion. But there's still a big challenge ahead – and as a council we have limited influence on commercial and industrial waste.

Objective: Enable more sustainable production, consumption and waste treatment – to cut waste and materials use, maximise reuse and recycling, and minimise disposal.

- 1.** Become a circular, low waste council by 2040 by understanding and tackling our waste through campaigns and procurement approaches that enable waste reduction, reuse and recycling by our employees, tenants, concessions, and suppliers. This includes cutting food waste and single-life products, and further implementing our single-use plastic policy.
- 2.** Manage Dorset's waste at the highest feasible level of the waste hierarchy and circularity through facilities, campaigns, schemes, and partnerships that enable us to cut waste (including food and plastic) and waste crime (including littering, pollution and fly tipping), and which encourage re-use, recycling, composting and recovery. The council will aim to influence positive behaviours through campaigns (e.g., 'Slim your Bin' and 'Right Stuff, Right Bin'), seek to influence business waste, and work with partners like town and parish councils. The council will also optimise routes and facilities for proximity, to cut vehicle emissions and safeguard and enhance nature.
- 3.** Transition towards a circular Dorset by encouraging businesses to apply sustainable design to products and packaging to improve their product lifespans and the resource efficiency of their operations and value chains, by supporting residents to reduce, reuse and recycle; and by nurturing reuse, repair and remanufacture.



Mission 7: Sustainable Food



Globally, land and farming emit more greenhouse gases than transport, with livestock three times that of aviation. Land use change (mostly for food and feed) is now the main cause of species loss, and agriculture uses 70 per cent of freshwater. Locally, agriculture makes up a third of our emissions and three quarters of land use. To cut our impact whilst staying fed, Dorset must support our local producers to produce more food with fewer

emissions and less impact on nature – supported through what we buy and by cutting the food we waste.

Dorset’s agri-fisheries businesses are at the core of our rural heritage, economy and community. Though some methods and pollution can harm habitats, soils and seabeds, with the right support Dorset’s producers can deliver impactful change – like healthier soils or cutting nutrient pollution by limiting artificial fertilisers. Food will remain their main purpose, but they will be at the forefront of Dorset’s net zero transition – and we can all support by buying local, sustainable produce.

Yet this may be the hardest mission. Uncertainty in changes to agri-environment funding, inflation, and the absence of a national climate strategy for agriculture and land makes change harder. What we eat is also a deeply personal choice, and the cost-of-living crisis further limits options. Producers and consumers also need to adapt to a changing climate that will shift harvests and varieties and may further disrupt supplies and prices.

Supporting Dorset’s rural economy is therefore key. The new agri-environment funding regime for farming will give public money for public goods like climate, nature, and flood resilience. Alongside other source of green finance, consumer support and emerging technologies, it could enable wider adoption of sustainable practices like agroforestry and low carbon farming, open up new revenue streams, grow productivity, and enable more efficient land use.

Objective: Support the shift to locally secure, low-emission, nature-positive food production and diets.

1. Transition the council farms estate to low-emission and nature-positive food production, like agroecological, regenerative, water efficient, and catchment management practices; and identify opportunities for habitat creation or restoration where appropriate.
2. Facilitate low-emission and nature-positive agri-fisheries practices in Dorset by promoting positive land and water management practices and technologies, grant opportunities and clustering through trusted champions and peers, helping to foster whole-farm advisory capacity, and supporting business resilience (such as via payments for ecosystem services like soil carbon or nutrient mitigation). Also encourage a shift to ecosystem-based fisheries management and sustainable aquaculture through trusted organisations that empower industry to secure sustainable fish populations and extensive seafloor habitats.
3. Identify and implement opportunities to support more community growing such as through allotments and orchards, by identifying opportunities on council land, working with town and parish councils, and by embedding it in the refreshed Local Plan.
4. Support sustainable diets and the cutting of food waste, shifting demand from carbon-intensive foods to local, low-carbon, nature-positive produce. Support local, sustainable, Green Kitchen Standard/Food for Life foodstuffs, and support means to cut food waste and boost surplus redistribution (such as through the council’s existing work with food pantries).



Mission 8: Natural assets & Nature-based Solutions



Protecting and restoring our land, coast, freshwater and sea habitats is vital for biodiversity, carbon, flood resilience, food, and our health and wellbeing. Dorset needs to strengthen and extend its ecological network and make it resilient to cumulative pressures like sewage outflow and run-off pollution; air, light and noise pollution; disturbance and persecution; pests; abstraction; flooding and climate change.

The government's statutory target is to halt species decline by 2030. It wants to restore 75 per cent of protected sites to a favorable condition, create and restore 500,000 hectares of wildlife-rich habitat, boost woodland cover to 12 per cent, and restore 280,000 hectares of peat by 2050. It also wants to reverse marine biodiversity loss and boost the management of protected marine sites. It will set new legally binding targets in 2023. And its Nature Recovery Green Paper proposes plans to ensure protection of 30 per cent of land and seas by 2030, including designation, regulatory and public body reform.

The Environment Act also introduces a duty on local areas to create Local Nature Recovery Strategies. It also strengthens duties on public bodies to enhance nature, strengthens woodland and tree felling protections, and a new duty to ensure a minimum 10 per cent net gain in biodiversity within new development proposals from November 2023.

From wilder landscapes with green and blue corridors to better managed Marine Protected Areas, achieving this will require working with strategic and place-based partnerships for integrated land, catchment and marine management that ensure its effective long-term management.

Objective: Protect and restore Dorset's land, rivers, freshwater and sea habitats by making nature bigger, better and more joined-up for biodiversity, carbon, flood resilience, and wider benefits.

- 1.** Take action on own estate by working with our council farm tenants to ensure good land and watercourse management, extending cut and collect verge management, and reviewing chemical use and storage. We will identify opportunities to deliver on our estate through holistic evaluation of its optimal use (including for revenue generation from Biodiversity Net Gain, carbon, flood or nutrient mitigation credits).
- 2.** Create and embed a Local Nature Recovery Strategy by working with Dorset's communities to determine evidence-based priorities and maps, in support of the right habitat in the right place and multiple ecosystem services. We will align use of existing policy like the council's Biodiversity Protocol and integrate it further into new policy. We will develop an integrated approach to Biodiversity Net Gain, natural carbon sequestration and storage, compensation, Green Infrastructure, water quality and natural flood management.
- 3.** Enable wider delivery and mainstream nature-based solutions, including through enabling and supporting partnership, landscape-scale and whole-catchment approaches and working to influence key stakeholders like water companies. Together we will promote best practice, seek resource for site management and enforcement, guide on greenspace and garden management, encourage greenspace champions in local councils, and explore green finance opportunities like for commercial sequestration. We will promote the health benefits of nature and ensure well maintained rights of way and public greenspace.



Mission 9: Resilience & Adaptation



Mitigation is not enough. Climate change is happening now, so Dorset must manage growing risks to ensure that people, prosperity and nature are resilient to the growing incidence of things like extreme weather or the spread of pests and disease. Even under low warming scenarios the UK faces major and costly impacts. Acting now will be cheaper than dealing with the consequences later (with every £1 invested yielding £2-10 of benefits).

Small shifts in average climate can trigger big changes, and any opportunities don't outweigh the risks. Nationally, heatwaves are now twice as likely and will occur every other year on average by 2050. Summer rainfall could drop by a quarter and winter rainfall may increase 16 per cent. Sea levels have already risen 16cm and this will continue. Extreme weather will cause more local flooding, coastal erosion, landslips and wildfires on Dorset's heaths and woodland. Impacts can also threaten mitigation if renewables or nature-based based solutions aren't resilient. Global impacts may be felt locally too, like climate refugees or supply chain disruption.

The government publishes a risk assessment every five years. The latest identifies 61 risks, including eight urgent ones: natural habitats, soil health, natural carbon stores, agriculture, supply chains, the power system, heat impacts on health and productivity, and overseas impacts. Eight risks could see annual damage over £1billion each in a 2°C scenario, and £10m for another 36. The government recognises that adaptation so far hasn't been sufficient and commits to boost it in the third National Adaptation Programme due in 2023. Its fourth assessment will also provide better spatial information to support local action.

Objective: Understand, embed, raise awareness, and manage climate change impacts from sea levels, coastal erosion, extreme weather, ecosystems, and linked global impacts.

- 1.** Assess our vulnerability and develop an adaptation strategy for 2°C and 4°C, for our operations and wider Dorset: Building on the council's 2010 risk assessment, consider cost, safety and supply impacts on areas like health, economy, built and natural assets, surface and groundwater, transport, infrastructure, utilities, food and heritage. It may consider risk interdependencies, tipping points and inequalities in vulnerability; and it may recommend relocation or protection through engineered or nature-based solutions, and behavioral, policy, or monitoring measures.
- 2.** Mainstream adaptation in council decision-making, wider policy and business continuity arrangements: Ensure the risks inform council activity by embedding them in our integrated risk management approach, embed in planning and other relevant policy, and enable project appraisal methods that limit exposure of investment and assets to avoid lock-in, stranded assets and maladaptation.
- 3.** Develop a partnership approach for collaborative, integrated, strategic adaptation measures for wider Dorset: Enable the climate resilience of people, prosperity and nature by linking with relevant structures and partners (like Dorset's Local Resilience Forum and Risk Management Authorities, as well as town and parish councils, the Local Nature Partnership, Dorset Coast Forum, Local Enterprise Partnership and Catchment Partnerships), aligning with existing flood and shoreline management approaches, exploiting any emerging grant opportunities, and supporting wider awareness and empowerment of Dorset's local communities to manage the risks.



Next Steps: **Priorities for 2023-25**

The council has established a £10m operational programme of capital funding, which should enable a further five to six per cent cut in the council's emissions over the next five years. It will fund measures like switching a further 9,000 streetlights to LEDs, further retrofit of council buildings, purchasing EVs and expanding charging infrastructure. It will also complement major grant income for delivery across wider Dorset, such as through the Shared Prosperity Fund.

Our priorities for 2023-25 are to:

- Embed climate, nature and resilience corporately by rolling out council decision-making tools, employee training, and embedding in procurement.
- Embed climate, nature and resilience further in Dorset's place strategies, especially the new Local Plan and Local Transport Plan.
- Explore opportunities for collaborative public sector projects through Dorset's new public sector group.
- Deliver an extended Low Carbon Dorset programme.
- Deliver an extended Healthy Homes Dorset programme.
- Continue to work with partners and landlords to raise energy efficiency standards in the rented sector.
- Complete the council's current Public Sector Decarbonisation Scheme programme and progress analysis and plans to support further works.
- Work with partners and developers to bring forward large-scale renewables and nature recovery.
- Engage on grid constraints to influence strategic network planning.
- Deliver Phase 2 of our EV charger programme and our Local Electric Vehicle Infrastructure pilot.
- Purchase or lease further EVs to support our fleet transition, improve monitoring and further incentivise employee behaviors.
- Work with partners to develop, expand and deliver funded programmes to support modal shift.
- Deliver further materials and energy efficiencies for highways through surfacing and lighting technology.
- Further extend Dorset's waste reduction, reuse and recycling efforts.
- Work with partners and local communities to develop a Local Nature Recovery Strategy for Dorset.
- Expand cut & collect and the electrification of green space management.
- Work with our tenants to assess and implement Council Farms opportunities.
- Define the council's approach to Biodiversity Net Gain and carbon sequestration and integrate it with our wider natural asset management, nutrient and species mitigation approach.
- Explore means to boost the uptake of emerging agri-environment schemes.
- Development of relevant strategies that contribute to resilience or adaptation, including delivery of the business case for the Weymouth Flood and Coastal Risk Management Scheme.
- Kickstart the council's adaptation work with a refreshed risk assessment and define our approach for a Dorset Adaptation Programme.



References

- ⁱ “In 2019, atmospheric CO₂ concentrations were higher than at any time in at least 2 million years (high confidence)”, A2.1 (p8), in the IPCC’s *Climate Change 2021: The Physical Science Basis*, Summary for Policymakers.
- ⁱⁱ Total emissions from fossil fuel and land rose 0.8% in 2022, just below their 2019 high (and being flat since 2015). Global fossil fuel and cement emissions hit a record high in 2022 (mostly driven by an increase in oil emissions, with coal and gas also reaching record levels). See *2022 Global Carbon Budget report, Earth System Science Data*, 14, 4811–4900, 2022.
- ⁱⁱⁱ “Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years (high confidence). Temperatures during the most recent decade (2011–2020) exceed those of the most recent multi-century warm period, around 6500 years ago.”, A2.2 (p8), in IPCC’s *Climate Change 2021: The Physical Science Basis*, Summary for Policymakers.
- ^{iv} The Met Office has confirmed that 2022 was the UK’s hottest year on record (to 1884), with an average temperature of over 10°C recorded for the first time – and that human induced climate change made the record-breaking temperature around 160 times more likely. 2022 also saw record local temperatures over 40°C for the first time (in Lincolnshire in July).
- ^v IPCC’s *Climate Change 2022: Impacts, Adaptation and Vulnerability*, Summary for Policymakers.
- ^{vi} The 2022 Global Carbon Budget report finds the remaining carbon budget keeping warming below 1.5C will be gone in nine years, if emissions remain at current levels.
- ^{vii} The boundaries pertain to “the risks humanity faces in the transition of the planet from the Holocene to the Anthropocene.” These needs updating to 6 of 9. See the initial publication on planetary boundaries and subsequent impacts at <https://www.stockholmresilience.org/research/planetary-boundaries.html>
- ^{viii} “The relatively stable environment of the Holocene, the current interglacial period that began about 10 000 years ago, allowed agriculture and complex societies, including the present, to develop and flourish”, 2009. *Planetary boundaries: exploring the safe operating space for humanity*. Ecology and Society 14(2): 32.
- ^{ix} It is estimated to be between 1,000 and 10,000 times higher than the background extinction rate (the rate that is expected would occur without us). IPBES (2019): *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*.
- ^x The relative abundance of monitored populations of mammals, birds, amphibians, reptiles and fish dropped an average 69% between 1970 and 2018 (range: -63% to -75%). WWF (2022) *Living Planet Report 2022*.
- ^{xi} IPBES (2019), *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*
- ^{xii} As measured by the Biodiversity Intactness Index, allowing tracking of the state of biodiversity across regions, countries, and habitats. The UK has half of its natural biodiversity remaining, putting it bottom of the G7 and in the bottom 10% globally. See: <https://www.nhm.ac.uk/discover/news/2020/september/uk-has-led-the-world-in-destroying-the-natural-environment.html>
- ^{xiii} See, for instance: IPBES (2016) *Assessment Report on Pollinators, Pollination and Food Production*; IPBES (2022) *Summary for policymakers of the thematic assessment of the sustainable use of wild species*; and FAO (2019). *The State of the World’s Biodiversity for Food and Agriculture*.



^{xiv} Wildlife is the source of 70% of new pathogens, so encroachment on habitats boosts the risk of transmission to people, and (via trade and travel) thereby of global pandemics. See, for instance: *Global trends in emerging infectious diseases*. Nature 451, 990–993 (2008); IPBES (2020) *Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services*; and Gibb, R. et al. *Zoonotic host diversity increases in human-dominated ecosystems*, Nature 584, 398–402 (2020).

^{xv} See for instance: 2021. *Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change*, IPBES secretariat.

^{xvi} See for instance: Newbold, Tim 2018 *Future effects of climate and land-use change on terrestrial vertebrate community diversity under different scenarios* Proc. R. Soc. B.285

^{xvii} See for instance: Leifeld, J., Menichetti, L. *The underappreciated potential of peatlands in global climate change mitigation strategies*. Nat Commun 9, 1071 (2018).

^{xviii} 2021, T G Benton et al, *Food system impacts on biodiversity loss*, Chatham House

^{xix} Corsa Lok Ching Liu et al. *Mixed-species versus monocultures in plantation forestry: Development, benefits, ecosystem services and perspectives for the future*, Global Ecology and Conservation, Volume 15,2018

^{xx} Núñez-Regueiro MM et al. *Effects of bioenergy on biodiversity arising from land-use change and crop type*. Conserv Biol. 2021 Feb;35(1):77-87.

^{xxi} See Climate Change Committee, 2021, *Independent Assessment of UK Climate Risk*.

^{xxii} Ed Hawkins, <https://showyourstripes.info>.

^{xxiii} Miles Richardson, <https://biodiversitystripes.info> using data derived from the Living Planet Index database 2022.

^{xxiv} Richard Selwyn Jones, using data from Church, J.A. and White, N.J., 2011 *Sea-Level Rise from the Late 19th to the Early 21st Century*. Surveys in Geophysics volume 32, 585–602

^{xxv} Data in this section is taken from our Autumn 2022 Progress Report, available in full at <https://moderngov.dorsetcouncil.gov.uk/documents/s31424/Appendix%20A%20-%20CEES%20Progress%20report%20-%20Autumn%202022.pdf>

^{xxvi} Data in this section is taken from Dorset Local Nature Partnership's report *Natural Value 2022: The State of Dorset's Environment*, available at <https://dorsetlnp.org.uk/wp-content/uploads/2022/03/DLNP-NVR-2022.pdf>

^{xxviii} Newton, A.C. et al. 2019, *Trends in natural capital, ecosystem services and economic development in Dorset*, Bournemouth University.

