

Natural Environment, Climate & Ecology Strategy

2023-25 Refresh



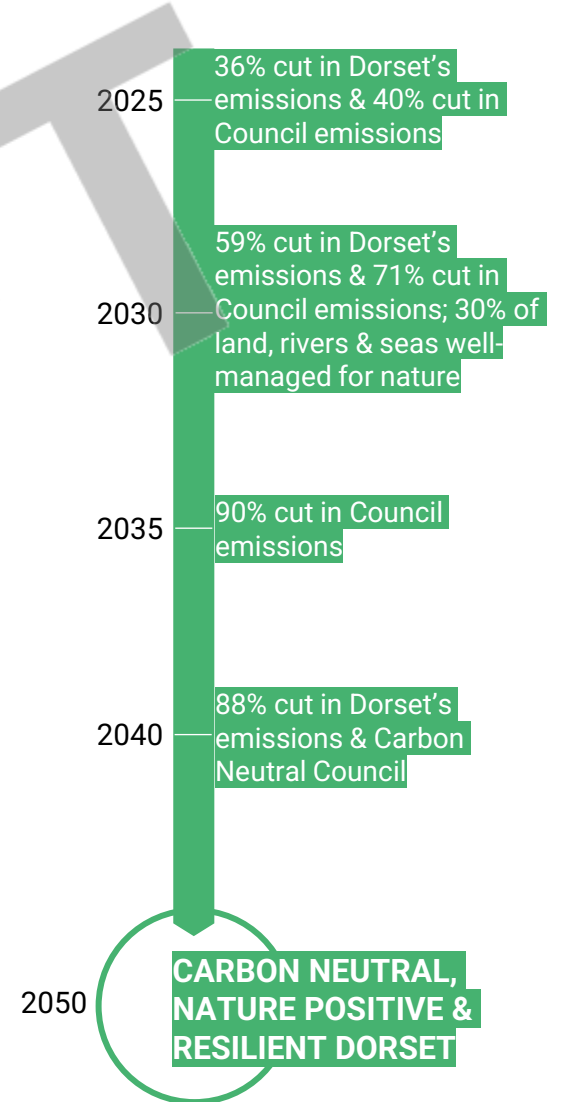
Climate Change | **Carbon Neutral Dorset**
Biodiversity Loss | **Nature Positive Dorset**
Adaptation | **Resilient Dorset**



Foreword

To be inserted

DRAFT



Introduction

Acting to prevent environmental breakdown is an unprecedented opportunity. We can make our food and energy systems more secure, our homes and transport healthier and cheaper to run, and create new skilled jobs and industries. It is 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 2 million years, with emissions in 2022 the second highest on record. Temperatures rose quicker in the last few decades than in any such period in two millennia, with 2022 the UK's hottest year on record. This is causing a huge rise in the severity and likelihood of extreme weather, food insecurity, and growing risks of global cascading impacts. Even if we fail to stay under 1.5°C, as seems likely, every tenth of a degree beyond it really matters.

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 4 of 9 'planetary boundaries'. These boundaries marked the stable Holocene epoch in which civilisation developed.

In particular, biodiversity loss is now thousands of times the normal rate of extinction – with wildlife plummeting almost 70% in 50 years. A million species are now at threat. This doesn't just concern distant reefs and forests: the UK is one of the world's most nature-depleted countries. And this isn't just about cuddly animals – it risks the collapse of ecosystems that provide food, flood protection and store carbon. Species moving to adapt also threatens more pandemics.

Climate change and biodiversity loss are two sides of the same coin. Climate change is set to overtake land use change as the biggest cause of species loss. And the degradation of nature threatens to weaken its ability to remove carbon – turning it into an emitter. The solutions are therefore linked: many climate actions (like stopping deforestation or dietary change) can support biodiversity, and others (like monocultural woodland or bioenergy) threaten biodiversity 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. These three pillars – climate change, biodiversity loss, and adaptation – must all be considered in our operational programme as a Council and our facilitation programme for wider Dorset.

This can all seem overwhelming. It's hard to see the forest for the trees, especially when they're being felled or on fire. Yet it is not only solvable, but an unprecedented opportunity to make us healthier, wealthier, and more secure.

We aren't all equally responsible nor equally at risk, but we all have a role. Whilst COPs may fall short, that emphasises how important local action is. We will lead the way for Dorset to cut our emissions, restore nature, and make us more resilient. And we must do so fairly to ensure that everyone is protected and everyone benefits from green growth.

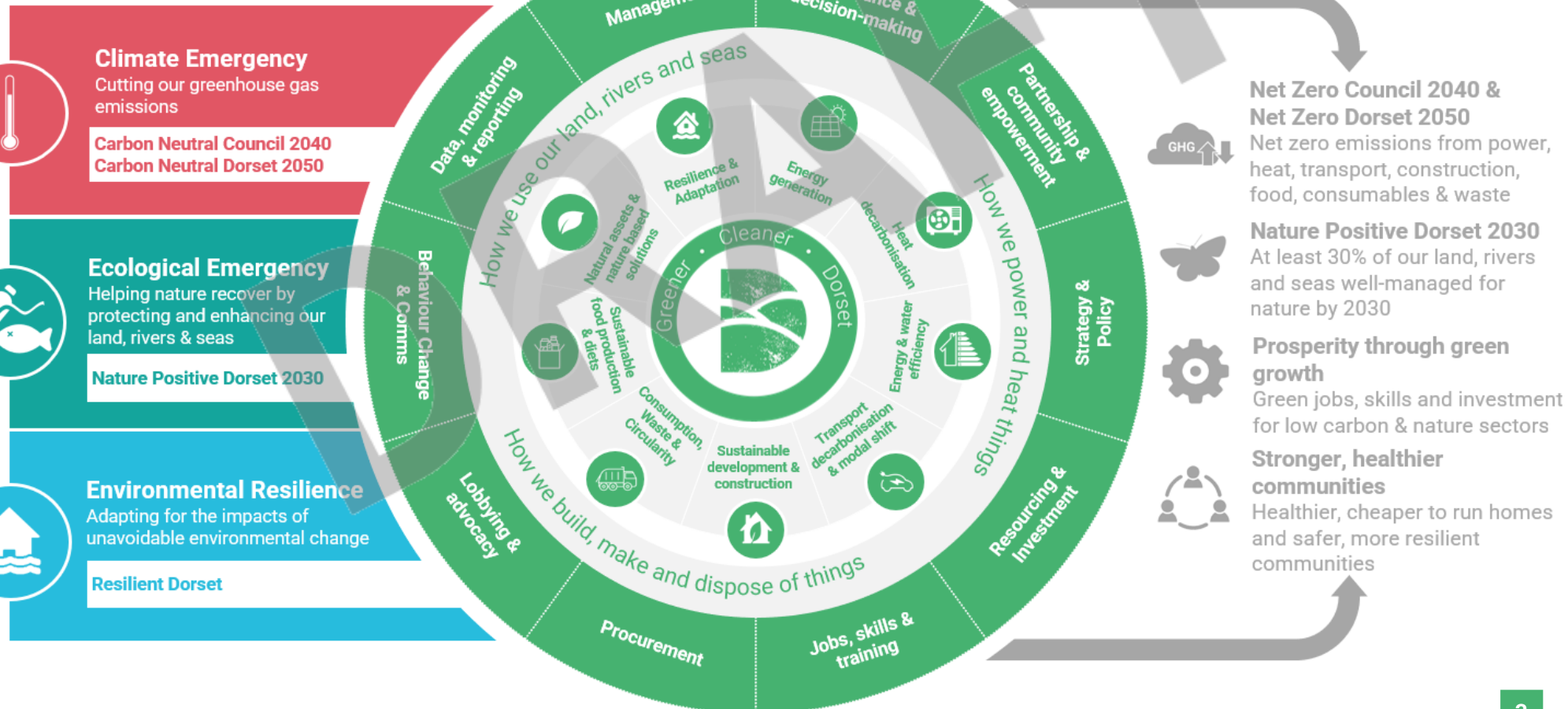
Global warming inevitably means more hot air, but we can be proud that we are not all talk. Since we declared an emergency in 2019 we've established it as a corporate priority, created a corporate director role, and secured £100m in grants and investment on top of our £10m programme to deliver major projects.

But to stay in budget we still need to cut Dorset's emissions by over half by 2030. We can't do that alone, but we have incredible strategic partners, businesses, community groups like DCAN, and residents to help us deliver. 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.

3 Challenges, 9 Missions, 10 Levers...



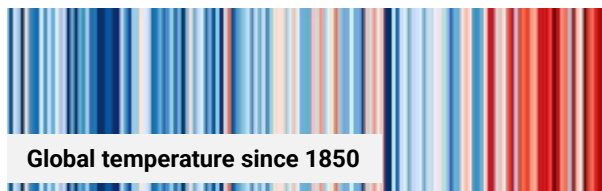
The Global Challenge

Climate Change

CO₂ is now at its highest level in at least 2 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) – rising 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 3 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 it 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. The rate of extinction is now thousands of times the normal rate, with wildlife declining 70% 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 itself 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%), the UK is in the bottom 10% for biodiversity. 41% of UK species declined in abundance over the last 50 years alone and 15% 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. Biodiversity and habitat loss also risks the collapse of ecosystems which provide our food and other key ecosystem services, whilst also threatening more pathogenic diseases.



Threats to our resilience

Impacts are happening 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 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%. UK sea levels have now risen 16cm, and will continue to rise for centuries.



Dorset's Decarbonisation Trajectory

We must achieve a Carbon Neutral Dorset by 2050 and a Carbon Neutral Council by 2040. Our carbon budget requires that we only emit $\leq 21\text{MtCO}_2\text{e}$ from 2017 on.

Our earlier reporting showed that Dorset's emissions reduced 18% (to $1.4\text{MtCO}_2\text{e/yr}$) since 2017, which would have kept us on track. That included cuts in industrial (-30%), transport (-23%) and commercial (-23%) emissions; though it may in part reflect the impacts of the pandemic. However, that earlier reporting lacked data for agriculture and waste emissions.

Including agriculture and waste ($900\text{ktCO}_2\text{e}$, around 30% our total) shows that **our actual total emissions ($2.27\text{MtCO}_2\text{e/yr}$) are off track, so our rate of reduction must be faster: we need to cut them by >50% by 2030, from a higher level than previously calculated.** This factors in those emissions removed by nature ($\sim 72\text{ktCO}_2\text{e}$).

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

Making Dorset Council net zero by 2040 requires cutting our emissions from $33,5\text{ktCO}_2\text{e}$ in 2019, with an interim target of 40% cuts by 2025. Our emissions are 1.5% of Dorset's carbon footprint.

The Council's own emissions reduced 26% (to $24,326\text{tCO}_2\text{e}$) since 2019, so we are well on track and well below target level for 2021 ($27,807\text{tCO}_2\text{e}$). This has been in large part due to the significant cut in business and commuting travel from remote working – through there was a slight uptick in travel last year. Our emissions are anticipated to continue to decline and we're in an excellent position to achieve our 2025 and 2040 targets if emission cuts and renewable generation for our own energy demand are achieved.

Diagram 1:
Dorset County
Emissions
2018-2022

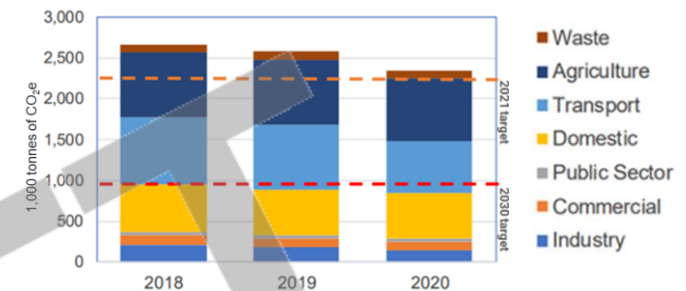


Diagram 2:
Dorset County
Emissions
Trajectory



Diagram 3:
Dorset Council
Emissions
2019-2022

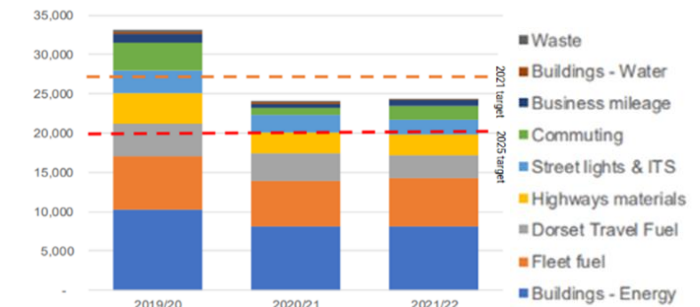
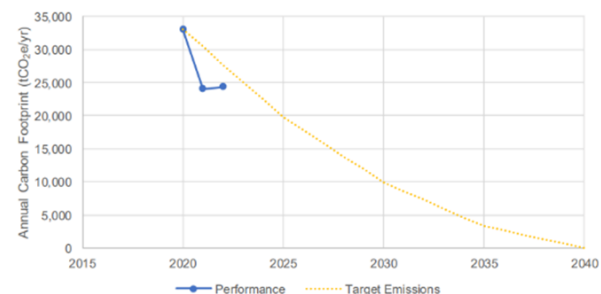


Diagram 4:
Dorset Council
Emissions
Trajectory



Dorset's Nature Recovery Trajectory

We want at least 30% of our land, rivers and seas to be well-managed for nature 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 our Jurassic Coast – our natural assets are protected by many designations and worth up to £2.5bn a year to our economy. But this doesn't mean it's in good condition. Protecting, restoring and enhancing it is vital for biodiversity, carbon, flood resilience, food, and more.

There was major loss and degradation of nature in Dorset over the last century. 2,930 terrestrial & freshwater species and 157 marine species are now of conservation concern locally. **Whilst a fifth of land in our Council area is in our ecological network, only a third of that is known to be in good condition. Only 12% of land is in a protected designation. It is also at risk of further loss, fragmentation and degradation from key pressures – including climate change.**

Our protected sites are slowly recovering in wider Dorset. 44% of SSSIs are favourable and 42% recovering. There was net growth of 109Ha in our SNCIs from 2005-2019; but, that includes 84Ha lost. 681Ha of green infrastructure was created or restored by 2021, though some is compensatory for losses. Major progress has been made on nutrient and heathland mitigation – including heathland restoration, rewilding, wetland creation, farmer-led approaches, and partnership projects. Progress is being made on light pollution, an objective of our streetlighting policy, with Dorset ranked the 13th darkest county and Cranborne Chase AONB made a Dark-Sky Reserve. At sea we welcomed a further 6 new designations in 2019, with 25% now in a Marine Conservation Zone and 31% of our inshore area protected from mobile fishing gear.

But we need to up the pace in boosting nature's extent and condition to meet our 2030 goal. New nature recovery, biodiversity net gain and agri-environment policies present a strong opportunity to do so.

Diagram 5:
Land Cover Change
1930-2015
(Bournemouth University 2019)

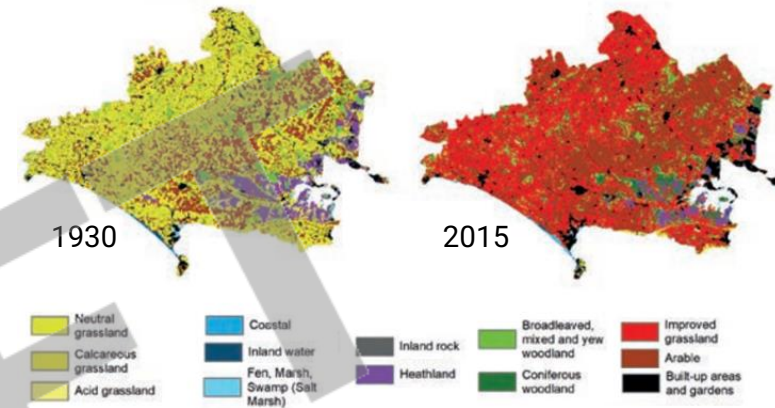
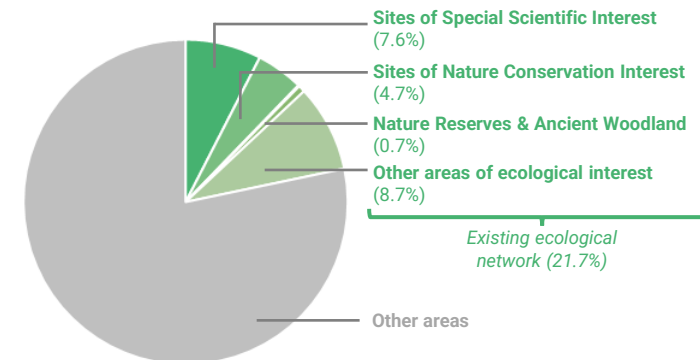


Diagram 6:
Protected terrestrial site condition, wider Dorset
2014-2020

	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%

Diagram 7:
Dorset Council land area profile



Key Achievements in Dorset so far

Energy, Heat, and Energy Efficiency

- Our **Low Carbon Dorset programme** has given free technical advice and £6.2m in grants for renewables, energy efficiency and innovation projects worth more than £17m
- Our £19m **Public Sector Decarbonisation Programme** has retrofitted public buildings and schools at 200 sites with measures like heating controls, lighting upgrades, solar & heat pumps.
- Each of these also trailblazed **conservation-sensitive deployment** at key heritage sites like Durlston Castle and Sherborne Abbey.
- **Dorset Community Energy** has pioneered community-led models locally, raising community investment & commencing local energy trading.
- Our **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. We're also using grant funding to improve our least insulated rentals.
- We've improved the **streetlight efficiency**; over a third are now LED, and with other measures this has helped to halve its energy consumption since 2008
- Three further **solar farms** were given approval in 2022, and Alaska Wind Farm LLP have acquired refurbished **wind turbines** for installation near Wareham. Canford Renewable Energy's **Green Hydrogen** project is also now underway.
- A decarbonisation strategy for our pension fund was established, with fossil fuel investment already cut by 70% to 1.2% of total assets.

Transport

- Phase 1 of our **public EV charger rollout** is complete, with Phase 2 underway. On completion we'll have over 80 chargers.
- We're a **Local Electric Vehicle Infrastructure pilot**, securing £2.7m for rural chargers.
- Our **Fleet Replacement Programme** has begun (following trials and a review with the Energy Saving Trust) and started providing employee incentives.
- We won £80m with BCP Council to create a **Sustainable Transport Network** in wider Dorset, including active travel infrastructure – like the project underway in Ferndown.
- We commissioned a Beryl **bikeshare scheme** for Southeast Dorset and maintained **training programmes** through Bikeability.
- An **Enhanced Partnership with bus operators** was established to boost public transport, and assessed the feasibility of two **Park & Ride Hubs**.
- **Gigabyte coverage** has expanded by a fifth, and we are promoting digital alternatives to cut travel with Dorset Business Travel Network and Digital Dorset.
- Strategic progress by our Sub-national Transport Body, including developing the **SW Rural Mobility Strategy** and the **South West Freight Strategy**.

Waste & Materials

- We've achieved a **60% recycling rate**, making us the 8th best performing Council and 3rd best unitary.
- We've **cut waste sent to landfill** by 70% over the decade and are now treating all household **food waste** in-County using anaerobic digestion.
- We've introduced a **washable nappies** starter pack and **home compost bin subsidy**.
- Half of asphalt we use has been shifted to **Low Energy Asphalt**, and we've expanded materials recovery for surfacing and cut primary materials by a third.
- We've launched **behaviour change campaigns** such as 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.

Key Achievements in Dorset so far

Food

- Dorset AONB is delivering a £1.3m **Farming in Protected Landscapes' programme**, enabling 40 projects to implement sustainable measures like such as 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.
- We've commenced **surveying on our County 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 mitigation** are established, such as the Poole Harbour Catchment Initiative and Nutrient Management Scheme, and the establishment of Wessex Water's EnTrade scheme (piloted in Poole Harbour) which enables auction-based financing of farmer-delivered water quality interventions.

Resilience

- Over 40 **natural flood management** structures have been installed
- **Major flood alleviation measures** have been implemented, including a £750k scheme installing resilience measures for 94 homes.
- **Portesham Flood Alleviation Scheme** has been completed, with over 40 natural flood management measures installed in two catchments.
- 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 & repair **Lyme Regis Cobb** from coastal erosion and flooding.

Natural Assets

- Our **Biodiversity Appraisal Protocol** means that we protect nature where there is planned development.
- **Verge & amenity space management** improvements are being delivered through cut & collect, improving an additional 350,000m² for biodiversity.
- 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's **Ecological Network Maps** have been updated, showing opportunities to link and increase biodiversity.
- **Major nature recovery projects** have been delivered in projects like The Dorset Wild Rivers project, Purbeck Heaths Wilder Grazing Unit, River Asker project, and beavers have been introduced – 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.
- **Nature-based activities for health and wellbeing**, including the Great Health Living Landscape and the 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 campaigns** were launched on things like BBQ wildfire risks and #Loveyourverge.

Latest National Policy

The Climate Change Act commits to Net Zero territorial emissions by 2050, and requires policies to meet interim 5-year carbon budgets. Since our 2021 strategy was adopted, national Government has developed the national policy framework considerably.

The most recent budget of June 2021 set a further statutory target for cutting emissions by 78% by 2035. **Government's new Net Zero Strategy sets out a pathway for the next three budgets to 2037 (for a 78% cut)**, delivered without global carbon offsets. It sits alongside strategies on transport, energy, hydrogen, food and industrial decarbonisation (Appendix 1), key points of which are highlighted in sections below.

It gives clarity on what needs delivering this decade via sector-specific measures and cross-cutting policies (like innovation, jobs & skills, public empowerment), whilst identifying alternative scenarios beyond 2037 depending on how options develop. All sectors contribute, with known tech and solutions prioritised, electrification key (with hydrogen supplementary where it is more difficult), and transformation of land through tree planting and peatland restoration. Key commitments for this decade include scaling up heat pumps, fully decarbonising electricity by 2035, 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 £50-60bn by 2030. The Treasury's review of it 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 independent Climate Change Committee (CCC). They described the strategy as a 'credible package' – but they also noted the urgent need for an agriculture and land decarbonisation strategy, and highlight the lack of emphasis on consumer behaviour change (such as on diets and transport choices).

Subsequent policies and legislation have realised further progress.

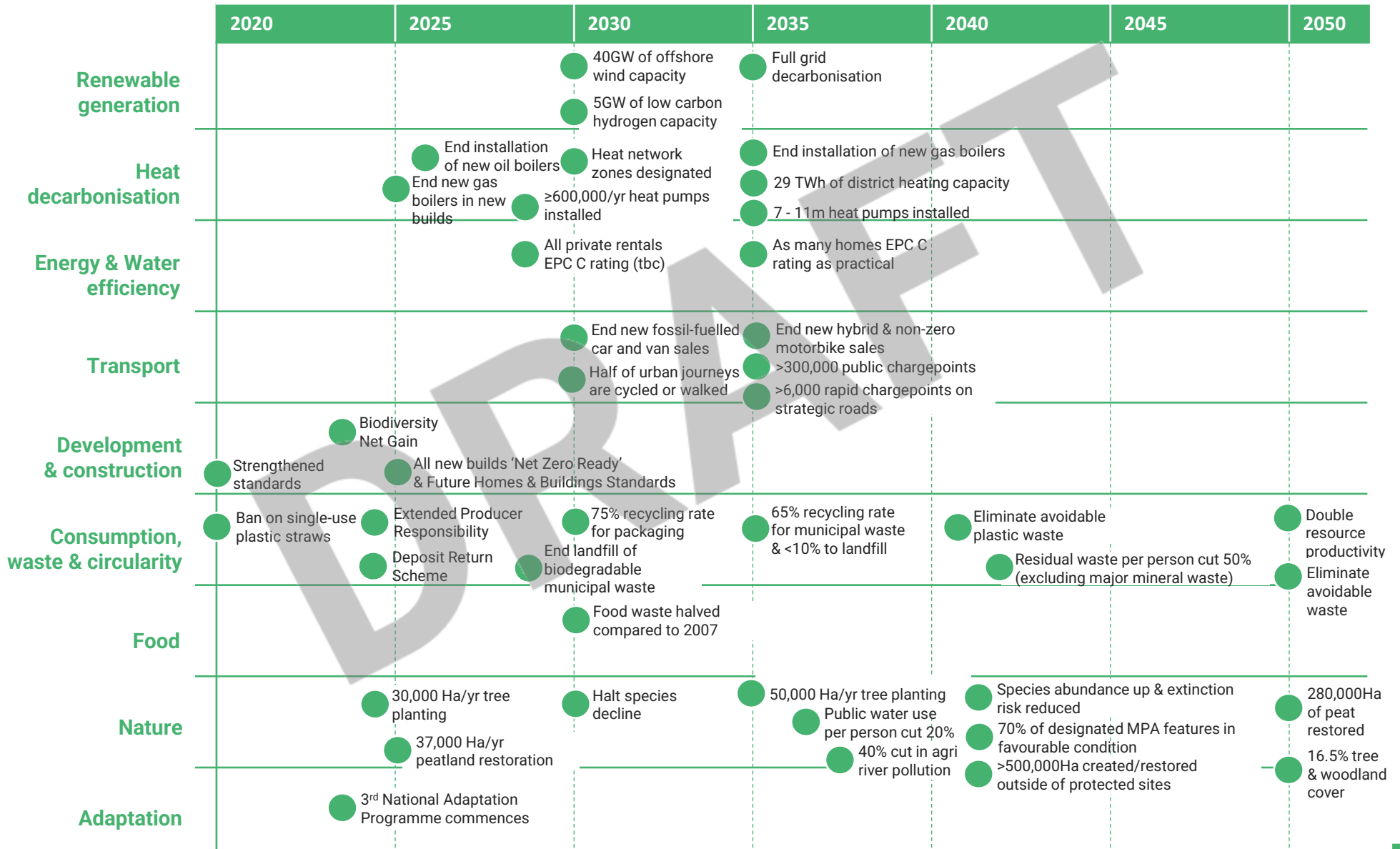
For example, the current Energy Security Bill builds on the Energy Security Strategy to help reform the energy system. It includes powers to regulate CO2 transport & storage networks, smart appliances and load controllers, and heat networks (including for fair pricing). It also establishes a market mechanism 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.

November 2021 also saw The Environment Act become law, setting a new framework for environmental protection – the major legislative implementation of its 25 Year Environment Plan ambition to leave the environment in a better state than we found it. **It covers issues such as biodiversity, water quality, clean air and waste** and obliges policy to have regard to 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. Alongside

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.

The following page shows key milestones set out in national policy.

Key National Milestones & Targets





Mission 1:

RENEWABLE GENERATION

All energy for how we power, heat and transport ourselves will need to come from electricity or hydrogen generated by renewable or low carbon sources. This can unlock cleaner, cheaper and more secure British energy than imported fossil fuels –and generate jobs and investment (nationally up to £270bn and 120,000 jobs).

Government wants more on and offshore renewables and solar, to fully decarbonise power by 2035 (including 40GW 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.

We've made good progress on solar locally but need faster growth in our generation and storage capacity, grid upgrades and smarter, flexible demand management. Electricity demand could grow 40-60% due to heat and transport electrification, so to be locally self-sufficient we'll need to grow our 491MW of capacity eightfold – including 4GW of solar (~19,000 acres) or 2GW of wind (~700 turbines), or some combination of the two. The Council alone needs 60MW of solar or 30MW of wind. Our decarbonisation routemap identifies opportunities, but grid constraints impair many projects, with connections often scuppered by high costs and delays from the triggering of reinforcements. Our operators' strategic investment plans will help, and we've provided evidence to inform these – but more remains to be done.

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

Objective: Boost deployment of renewable generation and flexibility measures on our estate and in wider Dorset.

- 1 Expand renewables on our estate:** Identify and implement opportunities to expand small- and large-scale renewables and flexibility measures like storage on our estate (including 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 – including identifying suitable sites in the new Local Plan, and having regard for landscape, the historic environment, amenity, ecology, or 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, owner-occupiers, landlords, 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 to rapidly accommodate new supply and demand, tackling anticipated congestion through infrastructure, speedier & cheaper connections, and smart & flexible solutions – such as through Local Area Energy Planning and lobbying on barriers for onshore and offshore renewable deployment.



Heating makes up a quarter of UK emissions and half our gas use, so buildings need low carbon 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 help tackle fuel poverty and generate jobs and investment (nationally up to £200bn and 175,000 jobs).

Government wants no new gas boiler sales from 2035 and heat pump installations of at least 600,000 a year by 2028 (a tenfold increase). It also wants 18% of heat to come from heat networks, and a 75% cut in public sector building emissions by 2037. Its Boiler Upgrade Scheme will give homeowner grants, whilst the Home Upgrade Grant will continue for low-income off-grid homes. It will also shift levies from electricity to gas bills over the decade to nudge uptake. The Social Housing and Public Sector Decarbonisation schemes are being extended. However, commentators have noted that the funding is insufficient to meet its targets.

Heat pumps are expected to be as cheap as gas boilers by 2030 and they're three times more efficient, so will significantly cut total household energy use. Government will determine heat network zones by 2025. It will also decide on the role of hydrogen in 2026, informed by a Hydrogen Village trial – with it more likely to play a role in areas with appropriate storage facilities (like gas import facilities and salt caverns). In Dorset, 82% of domestic heating systems currently are oil or gas powered. We need to retrofit heating systems in our current buildings and ensure that new builds install low carbon heating from the outset to avoid having to later retrofit them.

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

- 1 Decarbonise heating on our 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 pilot and test deployment (such as on our estate, in social housing, reuse of industrial by-product heat, or innovative conservation-friendly approaches for historic buildings).
- 3 Continue our retrofit advice & 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 the Healthy Homes Dorset Scheme, including signposting to advice for those who are 'able to pay'; and with emphasis on off-gas buildings.
- 4 Enable deployment for new builds through planning:** Encourage deployment in new builds through planning policy, toolkits, and guidance – including through the new Local Plan and identifying opportunities in allocation and masterplanning.



Mission 3:

ENERGY & WATER EFFICIENCY

The UK has some of the least energy efficient housing in Europe, with two-thirds with 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 our summers get hotter and drier. All of our buildings need to be substantially more energy and water efficient to limit expected growth in energy and water demand.

Boosting thermal performance will enable 38% of emission cuts nationally for heating buildings (with another 17% from heat pumps and 19% from public buildings). It will make them warmer, healthier and cheaper to run. Until the current energy crisis, bills hadn't risen for a decade despite rising prices, thanks to efficiency improvements.

Government aims to ensure as many homes as possible achieve EPC rating C by 2035, improving the slow progress of the last decade. It has expanded funding for the Home Upgrade Grant, Public Sector and Social Housing Decarbonisation Fund. It has also proposed a target for mortgage lenders to increase the energy efficiency of their portfolio. But commentators have noted concern about the small scale of these measures.

Only around a third of Dorset's properties are rated EPC C or better. We will need a huge retrofit effort to increase the thermal and water efficiency of our existing building stock, ensure high standards for new builds, and expand use of smarter & more efficient appliances. This will be a challenge given our high proportion of older, detached, and hard-to-treat buildings.

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

- 1 Identify and implement opportunities on our estate** for retrofit, including expanded centralised utility and energy management, energy smart appliances, improved operational controls on energy-using equipment, water efficient tech (like flow regulators), water demand reduction measures (like rainwater harvesting & greywater systems), and leak elimination. 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 measures and behaviours** 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), progress enforcement of MEES towards meeting EPC 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 the energy efficient design of new builds** that follow the energy hierarchy and achieve high standards, through the new Local Plan and our Sustainability Checklist.



ROAD TRANSPORT DECARBONISATION & MODAL SHIFT

Transport is a quarter of UK emissions, half of which are from cars. They hardly changed in recent decades as fuel efficiencies and EV growth were outweighed by growth in miles driven and SUVs. We need to switch all vehicles to electric or hydrogen, accelerate chargepoint deployment, and shift how people choose to travel. This will also help boost health from cleaner air and active travel, improve rural connectivity, and generate jobs and investment (nationally up to £220bn and 74,000 jobs).

Government's aim is 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 for buses and coaches. It also wants EV charging to be cheaper and easier, with >300,000 public chargepoints by 2030. It has expanded the grant scheme for vehicles & infrastructure, prioritising on-street residential charging. It emphasises that 'modal shift' is needed too through better public transport and active travel, and by shifting freight from roads. It will invest in 4,000 zero emission buses, bus lanes, and a bigger capacity net zero rail network by 2050. It will also invest in walking & cycling so that half of urban journeys are cycled or walked by 2030, and review national roadbuilding policy.

Cars are the default mode of travel, especially in rural areas. Dorset has some of the highest levels of car ownership nationally and only around 1% of journeys are made on public transport. We must continue our existing programmes enabling EV infrastructure, continue efforts to enable modal shift by boosting active travel and public transport improvements, and continue to green the Council's own fleet and cut our ~5.3m business miles.

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

- 1 Accelerate electric 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. We will identify how to extend affordable, accessible, convenient and smart charging for residents, businesses and visitors (including on our estate), without pavement disruption. We will make further use of grant funds and invest in the staged replacement of our fleet.
- 2 Enable modal shift and cut the need to travel for personal, commuting, business and logistics journeys** through increasing vehicle occupancy, investing in active travel and public transport, multi-modal services and infrastructure (like small-scale park & ride with EV and MaaS), comms & training, social prescribing, improving high speed digital infrastructure and promoting digital options, usership and sharing schemes, a well-maintained rights of way network and lobbying for rail improvements.
- 3 Embed infrastructure provision and modal shift 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).



18,000 houses will be built in Dorset this decade, alongside other buildings & infrastructure. Good design will prevent environmental damage and protect owners from retrofit costs. They should aim to be net zero, nature positive and resilient in location, orientation, design and construction - cutting energy use, enabling sustainable travel, boosting the value of our natural assets, and limiting vulnerability to climate change.

National policy is clear that they are material planning considerations. Government's road map for 'net zero ready' homes by 2025 (i.e. those with potential for zero operational emissions once the grid decarbonises) will require 75-80% less emissions through future standards due in 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 construction and operation of developments drives waste up the waste hierarchy.

Whilst those won't suffice for net zero (particularly on embodied carbon), we are able to set stronger local policy in some areas. The new Local Plan will be vital, but as statutory processes mean that its adoption won't be until 2026 we've produced guidance on how existing policy already allows much to be done in the interim. We already require applicants to supply a sustainability statement and checklist, and we have adopted Dorset 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 & enhances nature and ensures climate resilience.

- 1 Encourage net zero new builds:** Establish policy, guidance & toolkits to encourage net zero new builds that follow the energy hierarchy, achieve high standards, and are sited to minimise the need to travel and enable sustainable travel. This should consider renewables, heat pumps & heat networks, energy & water efficiency. Trial tools for embodied carbon & whole life costing, and work towards development that we directly influence being net zero.
- 2 Promote sustainable materials use & waste management:** Promote sustainable construction (using the BREEAM tool) and waste management to drive waste up the waste hierarchy. For infrastructure too, cut natural resource use, waste, pollution, and primary aggregate use in favour of reused or recycled materials. Also prioritise reuse, remodelling, maintenance and improvement of existing assets.
- 3 Protect and enhance our ecological network:** Apply the mitigation hierarchy in siting and design to avoid biodiversity or pollution impacts as a priority. Measures should enhance our ecological 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).



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

Waste makes up around 4% of UK emissions, much of which comes from construction, demolition and excavation. Around 10m tonnes of food and drink are also wasted annually. Government wants 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 wants to eliminate food waste to landfill and ensure all plastic packaging is recyclable, reusable or compostable.

Wider Dorset generates 1.6m tonnes of waste annually, and this is projected to grow. Locally we've grown recycling rates to 60%, curbed waste growth, and cut waste to landfill by 70% - whilst ensuring all our household food waste goes for anaerobic digestion. But there's still a big challenge ahead – and we've limited influence on commercial & industrial waste.

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

- 1 Become a low waste Council by 2040** by understanding and tackling our waste through campaigns & procurement approaches that enable waste reduction, reuse & recycling by our employees, tenants & concessions. 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** 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. We will aim to influence positive behaviour through campaigns (like 'Right Stuff, Right Bin' and 'Slim your Bin') and seek to influence business waste. We will also optimise routes and facilities for proximity – to cut vehicle emissions and safeguard & 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.



Land and farming emits more globally than transport, with livestock emitting three times that of aviation. Land use change (mostly for food and feed) is the main cause of species loss, and agriculture uses 70% of freshwater. Locally agriculture is Dorset's biggest emitter (33%) and uses 75% of land. We therefore need to produce more food with fewer emissions and less land, supported by a shift in consumption and huge cuts in food waste.

Our agri-fisheries businesses are at the core of Dorset's heritage, economy and community, giving us food and stewarding our environment. Though intensive methods and pollution harm habitats, soils and seabeds, with the right incentives and advice they can deliver huge change – from healthier soils to limiting artificial fertilisers. Food will remain their main purpose, and we can support by buying local, sustainable produce. Yet this may be the hardest mission. Policy uncertainty on ELMS, business resilience challenges from inflation, and the lack of a national decarbonisation strategy for agriculture and land all make change hard. Further, what we eat is 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 things like harvest dates or crop varieties, and may continue to elicit global food and input disruption that will impact choice and prices.

Thankfully the new subsidy regime for farming will give public money for public goods like climate, nature and flood resilience. It could create a radical shift, supporting sustainable practices (like agroforestry and low carbon farming), opening up new revenue sources, growing productivity, and enabling more efficient land use.

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

- 1 Transition our County Farms estate to low-emission and nature-positive food production**, like agroecological, regenerative, and 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 management practices, 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 run-off 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, including on Council land 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. Promote the consumption of local, sustainable, Green Kitchen Standard/Food for Life foodstuffs by households, businesses and our own catering services and contracts; and support means to cut food waste and boost surplus redistribution.



NATURAL ASSETS & NATURE BASED SOLUTIONS

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

Government's statutory target is to halt species decline by 2030. It wants to restore 75% of protected sites to favourable condition, create and restore 500,000Ha of wildlife-rich habitat, boost woodland cover to 12%, and restore 280,000Ha 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. Its Nature Recovery Green Paper further proposes plans to ensure protection of 30% 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 for developers to ensure a 10% net gain in biodiversity in their proposals from November 2023.

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

Objective: Protect and restore our land, rivers & seas by making nature bigger, better and more joined-up for biodiversity, carbon, flood resilience and wider benefits.

- 1 Create and embed a Local Nature Recovery Strategy** of evidence-based priorities and maps to support multiple ecosystem services and the right habitat in the right place. We'll align use of existing policy like our Biodiversity Protocol, and integrate it further into new policy. We'll develop an integrated approach to Biodiversity Net Gain, carbon, compensation, Green Infrastructure, water quality and natural flood management.
- 2 Take action on own estate** by working with our county farms tenants to ensure good land and watercourse management, extending cut & collect verge management, and reviewing chemical use and storage. We'll 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).
- 3 Enable wider delivery and mainstream nature-based solutions,** including through partnership, landscape-scale and whole-catchment approaches. We'll promote best practice; seek resource for site management and enforcement; guide communities on greenspace & garden management; and explore commercial sequestration opportunities. We'll promote the health benefits of nature and ensure well maintained rights of way and public greenspace. We'll also encourage more sustainable ecosystem-based fisheries management and sustainable aquaculture through trusted organisations that empower industry to sustain populations and seafloor habitats.



Mitigation is not enough. Climate change is happening now, so we must manage growing risks to ensure a resilient Dorset where people, prosperity and nature are protected. Even under low warming scenarios the UK faces major and costly impacts without action. 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. Whilst there are opportunities, they don't offset the risks. 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%. Sea levels have already risen 16cm and will continue. Extreme weather will cause more local flooding, coastal erosion, landslips and wildfires on our heaths and woodland. Impacts can also threaten mitigation efforts if renewables or nature-based based solutions aren't resilient. And global impacts may be felt locally too, such as through climate refugees, or supply chain disruption.

Government publishes a risk assessment every 5 years. The latest identifies 61 risks, including 8 urgent ones: natural habitats, soil health, natural carbon stores, agriculture, supply chains, the power system, heat impacts on health & productivity, and overseas impacts. 8 risks could see annual damage over £1bn each in a 2°C scenario, and £10m for another 36. 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 4th assessment will also provide better spatial information to support local action.

Objective: Understand, embed, raise awareness, and manage climate change impacts on 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 our 2010 risk assessment, consider the cost, safety and supply impacts on factors like health, economy, built and natural assets, transport, infrastructure, water, food and heritage. It may consider risk interdependencies, tipping points and inequalities in vulnerability; and it may recommend relocation or protection through engineered defences and structures, nature-based solutions, behavioural, policy, or monitoring measures.
- 2 Mainstream adaptation in our decision-making, wider policy and business continuity arrangements:** Ensure the risks inform our 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,** linking with relevant structures and partners (like our Local Resilience Forum, Dorset Coast Forum, and Flood Risk Management Authorities), aligning with local flood and shoreline management approaches, exploiting any emerging grant opportunities, and supporting wider awareness and empowerment of local communities to manage the risks.



We must deliver at pace and scale for climate, nature and adaptation – and ensure the transition is delivered fairly so that everyone is protected and benefits. Delivery cannot be achieved by the Council alone, so we need to enable and influence others locally and nationally,

using the skills and resources of wider stakeholders. We need to think long-term and across systems – setting an example through our **Operational Programme for things we directly control, whilst enabling and influencing others through our Facilitation Programme.**

Leadership, governance & decision-making: Enable leadership that sets a clear mandate and a positive example; governance & delivery structures for our operational and facilitation programmes; and decision-making tools to mainstream it in all key projects, programmes and strategies.

Partnerships & community empowerment: Engage and facilitate public, private and voluntary sector partners, local councils and community groups, and households. This will include working with key system partners; enabling effective strategic partnerships; and enabling local place-based partnerships and initiatives.

Strategy & policy: Align key corporate and place-based strategies & policies (such as our new Local Plan, Local Transport Plan, asset management approach, pensions scheme, and others) and ensure policy is being used to maximal effect through guidance where necessary.

Resourcing & Investment: Enable revenue and capital resource for delivery, monitoring & 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 Economy: Encourage investment in local green businesses, jobs and skills by embedding it in our economic strategies & projects, and working with skills providers. Address critical practical capability, like for the deployment of zero carbon measures, nature-positive land management, and advice or monitoring services.

Procurement: Explore opportunities to optimise procurement and commissioning so that contracts, purchasing and leasing help to cut carbon, maximise energy & water efficiency, cut waste and materials use, and maximise opportunities for nature recovery.

Lobbying & advocacy: 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 & Behaviour Change: Inspire, encourage and guide personal and professional behaviours & practices – directly or indirectly through champions and peers. Grow understanding of the issues and opportunities, and enable informed choices (e.g. on energy & water use, land management, and food waste).

Data, monitoring & reporting: Acquire, improve and share robust data on energy and emissions (including potentially Scope 3), waste and materials management, natural assets, and climate vulnerability – and enable key research to fill strategic gaps on our baseline, pressures or opportunities (including mapping).

Risk management: Assess the vulnerability of the Council and wider Dorset to environmental risks, mainstream them in our risk management approach, and ensure appropriate mitigations and business continuity arrangements are in place.

Next Steps: Priority delivery for 2023-25

We've established a £10m operational programme of capital funding, which should enable a further 5-6% cut in the Council's emissions over the next 5 years. It will fund measures like switching a further 9,000 streetlights to LEDs, further retrofit of our 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 corporately by rolling out our decision-making tool, employee training, and embedding in procurement.

Embed further in our place strategies, especially the new Local Plan and Local Transport Plan.

Explore opportunities for collaborative public sector projects through our 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 our current PSDS programme and progress analysis and plans to support further works.

Work with partners and developers to bring forward large-scale renewables.

Engage on grid constraints to influence strategic network planning.

Deliver Phase 2 of our EV charger programme and our LEVI pilot.

Purchase or lease further EVs to support our fleet transition, improve monitoring and further incentivise employee behaviour.

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 our waste reduction, reuse and recycling efforts.

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 County Farms opportunities.

Define our approach to Biodiversity Net Gain & carbon sequestration, and integrate it with our wider natural asset management approach.

Explore means to boost the uptake of emerging agri-environment schemes.

Kickstart our adaptation work with a refreshed risk assessment and define our approach for a Dorset Adaptation Programme.