

Net Zero & Nature Rich Colwall Greener Tuesday 21 May 2024

Herefordshire
Climate & Nature
Partnership Board

www.zerocarbonherefordshire.gov.uk

2023/2024 – Earth's warmest year in recorded history

February '24 global annual mean temperature exceeded 1.5°C for the first time - Copernicus

March '24 warmest on record, 1.68°C above global average

April '24 global annual mean temperature exceeded 1.58°C for 12 consecutive months - Copernicus

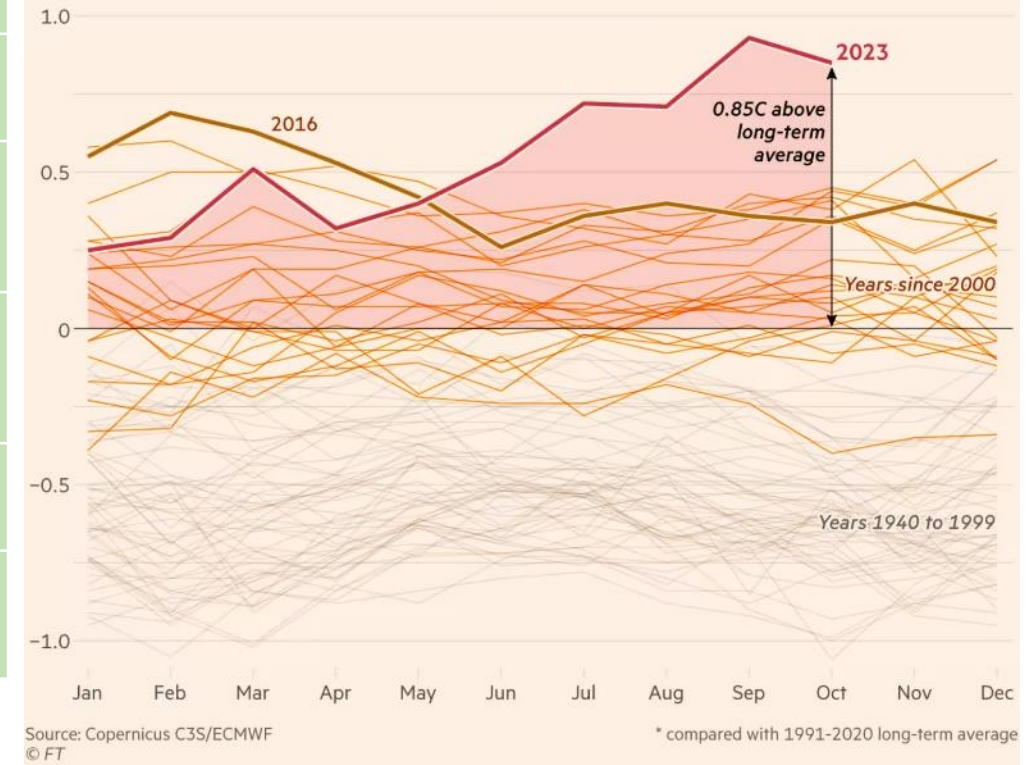
January '24 UK annual mean temperature 2nd highest on record since 1884 (five warmest years 2020, 2022 and 2023) - Met Office

March '24 UK wettest 18 months on record since 1836

April '24 UK predicted arable crop harvest down by 17.5% - Energy & Climate Intelligence Unit

2023 is on target to be the hottest on record

Global surface air temperature anomalies* (°C)

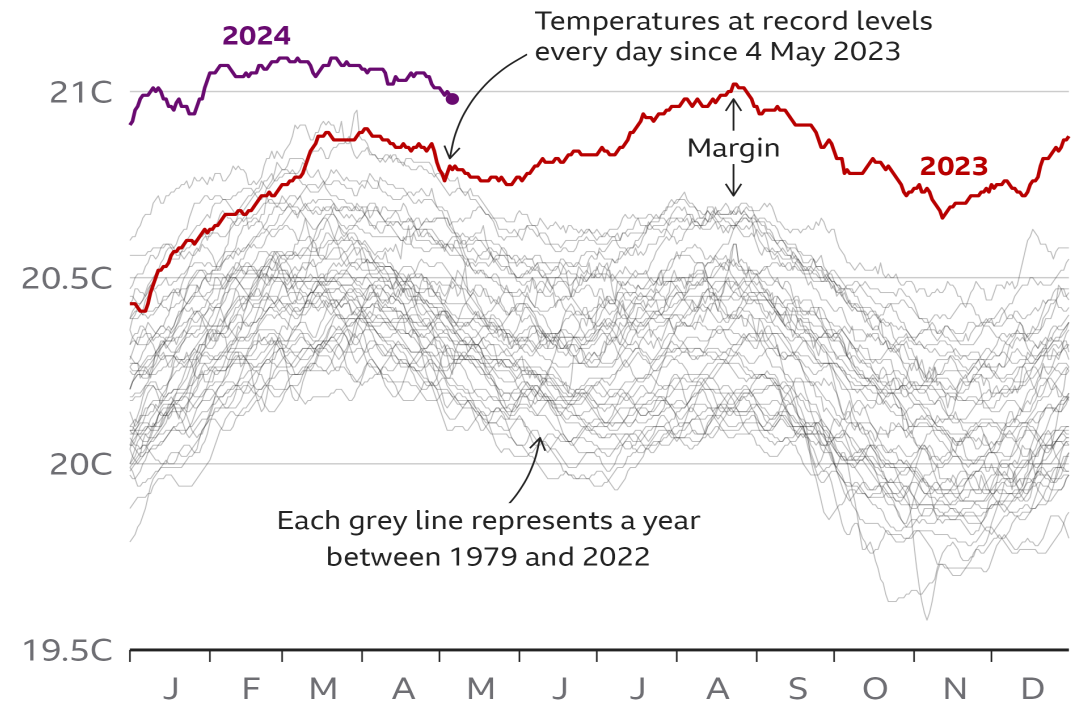


2023/2024 Global oceans suffer record-breaking heat

- Ocean temperatures broke records every day since May '23 - Copernicus
- Huge impact on marine life – e.g. mass coral bleaching
- Sea surface temperatures reached new global average high of 21.09°C during February and March '24
- Climate change is happening too quickly for evolution to catch up!

A year of record-breaking ocean temperatures

Daily average sea surface temperature, 1979-2024



Temperatures measured between latitudes 60° North and 60° South

Source: ERA5, C3S/ECMWF

BBC

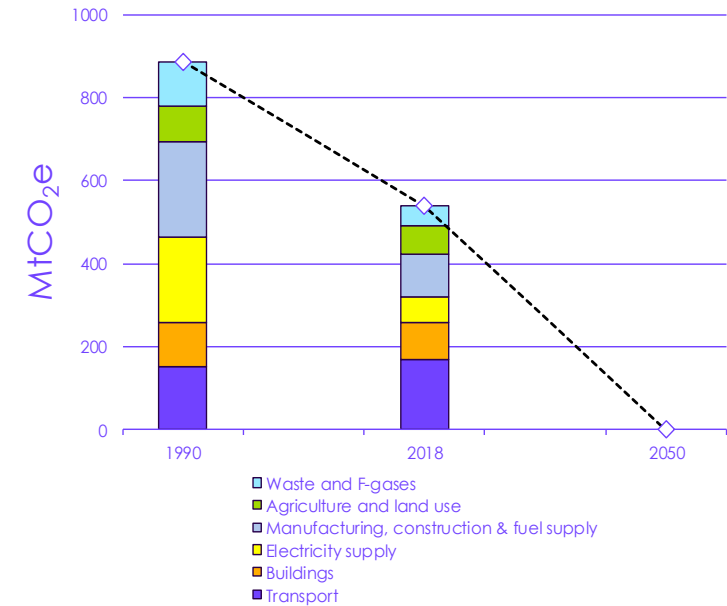
UK Sixth Carbon Budget 2033-2037

UK Sixth Carbon Budget requires four key steps:

- **Take up low-carbon solutions** - more people and businesses choose to adopt low-carbon solutions
- **Expand low-carbon energy supplies** - UK electricity is zero carbon by 2035 (55% from renewables in 2023: Carbon Brief)
- **Reduce demand for carbon-intensive activities** – e.g. reduce consumption of meat and dairy products by 20% by 2030
- **Transform farming and land use** - increase woodland cover to 15% of UK land by 2035 and 18% by 2050
- **May '24 Government acted unlawfully due to lack of detail and feasibility in Carbon Budget Delivery Plan for 2037 ***

* <https://www.theguardian.com/environment/article/2024/may/03/britain-climate-action-plan-unlawful->

Figure 2.2 To meet Net Zero, emissions must fall in all sectors and at a faster rate than the last thirty years

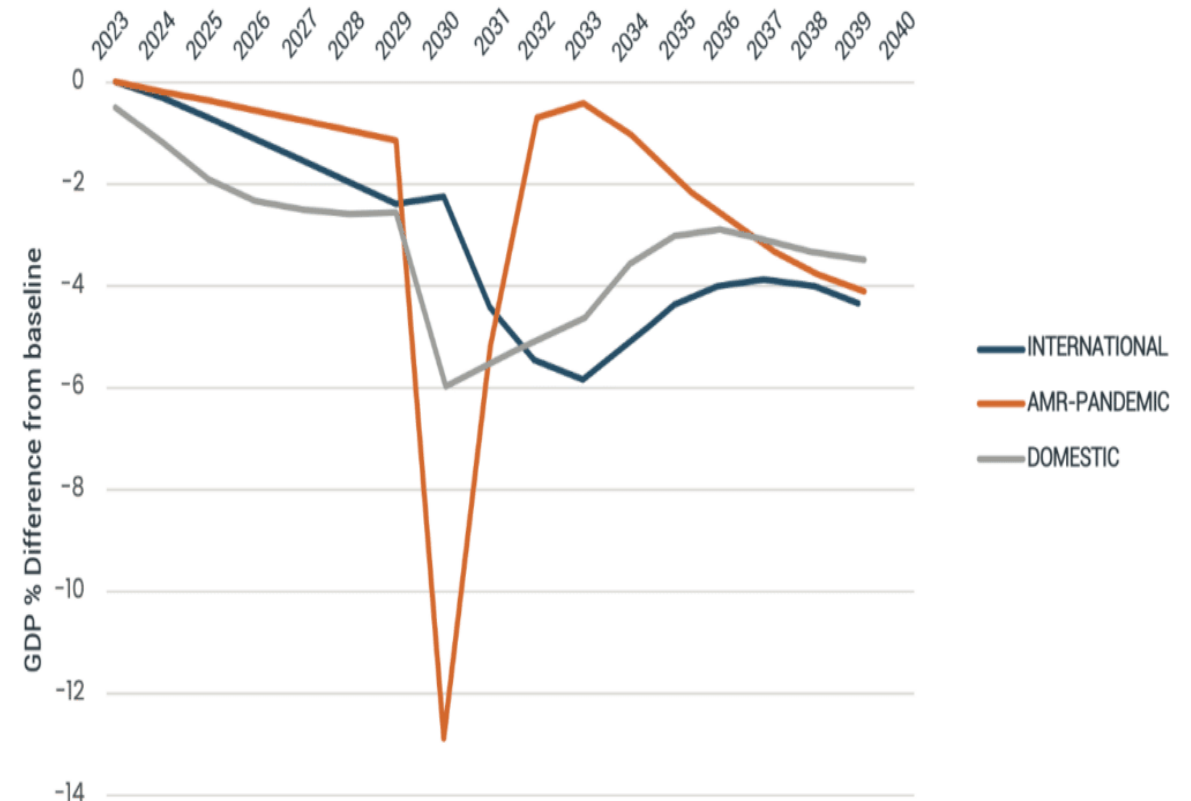


Source: BEIS (2020) Provisional UK greenhouse gas emissions national statistics 2019; CCC analysis.
Notes: Net Zero emissions in 2050 will require any residual emissions to be offset by the UK land use sink and greenhouse gas removals.

UK and international nature-related risks

Green Finance Institute, April 2024

- Nature-related risks are as detrimental to the economy as those from climate risks
- 75% of the UK has a high level of ecosystem degradation, with risks to financial services and the wider economy as a result
- 50% of UK's nature-related financial risks originate overseas
- Potential 12% loss of GDP by 2030s
- Some sectors face higher levels of nature-related financial risk e.g. agriculture, manufacturing, and utilities
- Banks could see reductions in the value of their UK portfolios of up to 4-5%



UK breeding farmland birds 1970-2022

Source: UK Biodiversity Indicators 2022

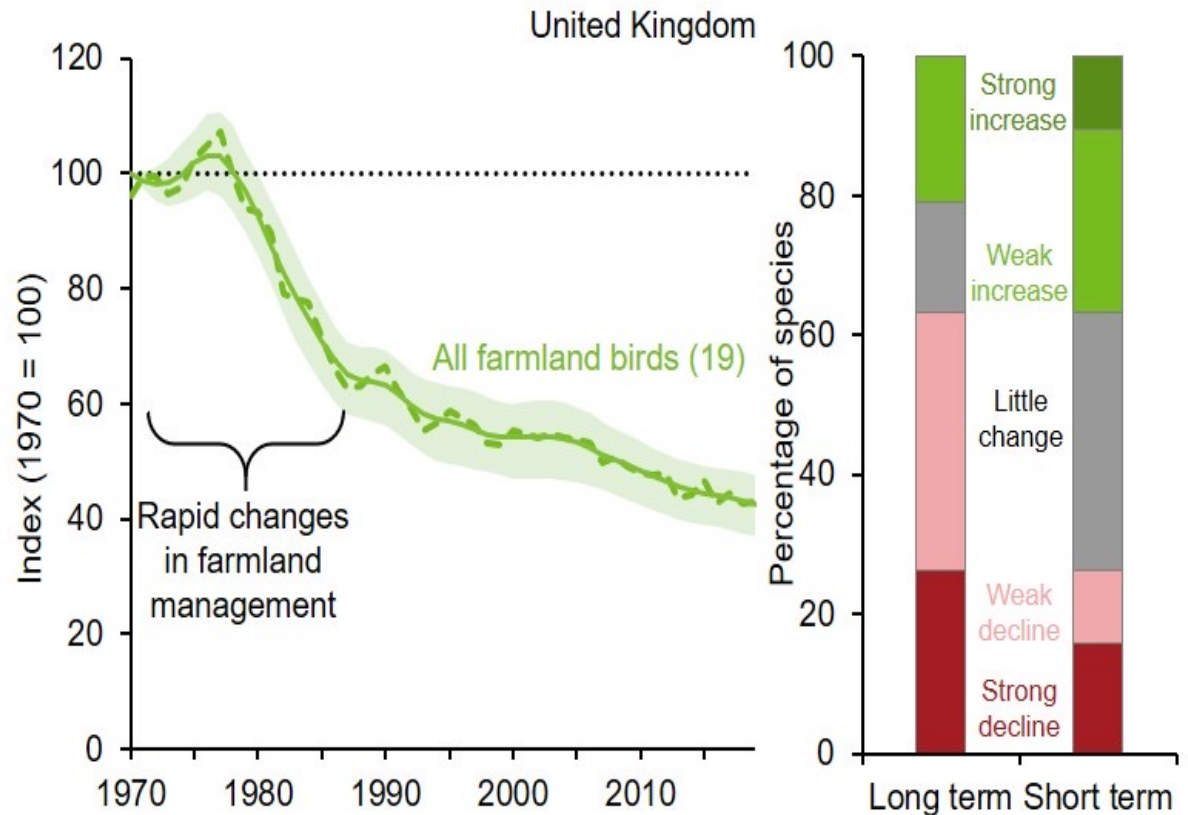
Farmland bird index 60% of its 1970 value and decreased short-term by 8% between 2017-2022

Woodland bird index was 37% below its 1970 value and decreased short-term by 15% between 2017-2022

Water and wetland bird index was 13% lower than in 1975

Breeding populations of insect-eating birds declined by 40% in last decade

UK last in European farmland bird index



HCNP Board - who we are and what we do

Climate and Ecological Emergency declared in March '19

Herefordshire Climate and Nature Partnership Board created in November '21

Vision 'a thriving net zero carbon nature-rich Herefordshire by 2030'

Partnership open to all who share this Vision and commit to action to help achieve it

Action Plan identifies priority actions for buildings, energy, farming and land-use, food, transport, and waste sectors to achieve the Vision

Resources climate reserve and communications funds plus climate and nature grants scheme

Projects can be proposed by any Partnership member, funding can be sought from public, private or voluntary sources



Ways of working - HCNP relationships

Committed to:

- Organise targeted events and workshops
- Report progress in engaging stakeholders in Vision and Action Plan
- Report progress of projects and activities to deliver Action Plan
- Review and update Action Plan



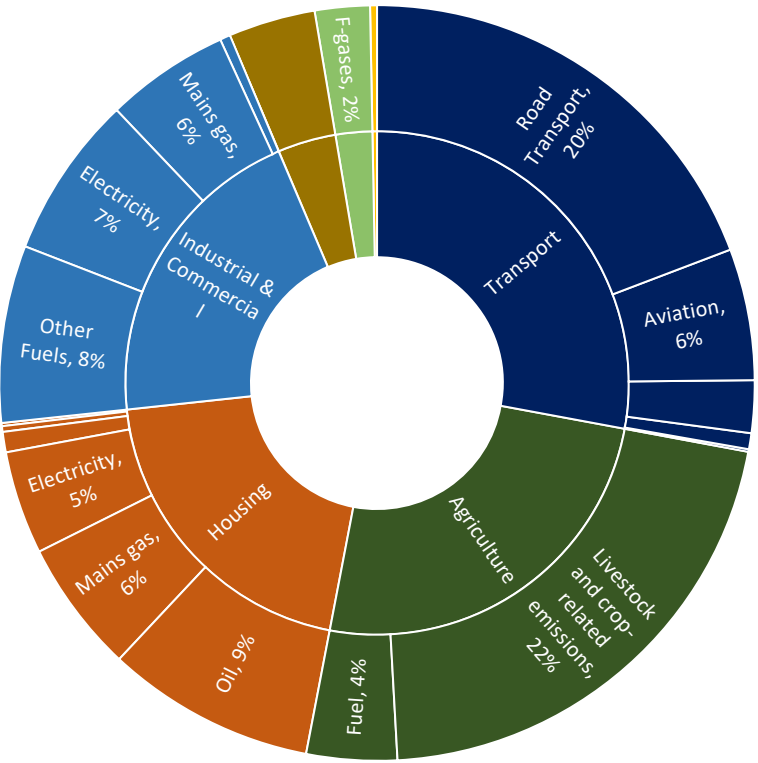
Herefordshire – emissions overview



Herefordshire Data (excluding Methane from agriculture)



Herefordshire Data (including Methane from agriculture)

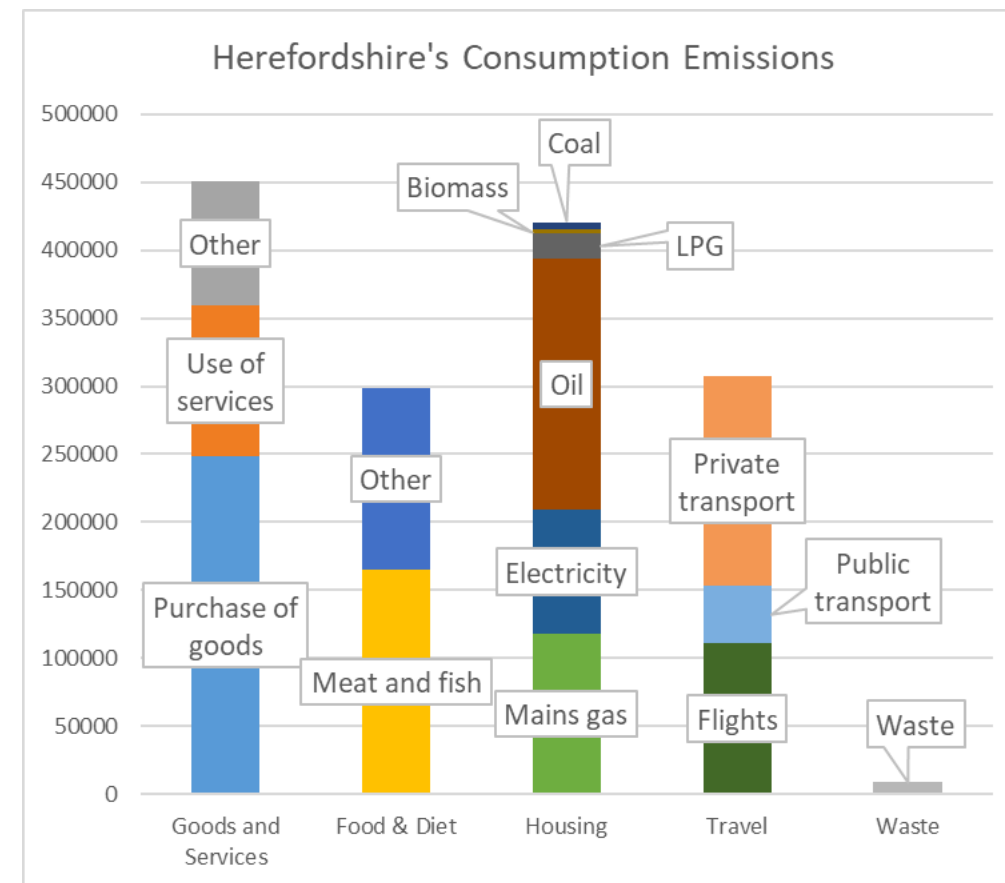


Herefordshire – consumption emissions

Average household consumption emissions are 17.8t CO₂e per year

Compared to UK average of 13.1t CO₂e per year, primarily due to rural nature of the county

Behaviour change will be required to tackle emissions from these sectors



Progress on nature recovery

- Defra Species Abundance Indicators (November '23) – **priority species in England declined by 68%**
- **OEP Progress Report** (January '24) – *“Government remains largely off track to meet its environmental ambitions”*
- **Local Nature Recovery Strategy** (March '23) – statutory guidance published, Herefordshire Council leading process as ‘Responsible Authority’ and Steering Group formed
- **Farm Herefordshire Survey** (November '23) – found:
 - **87%** are willing to make changes to reduce phosphate*
 - **72%** are delivering environmental stewardship schemes*
- **Wyescapes LR2** (November '23) – 36 farmers supported over 20 years to recover nature, reduce phosphate and sequester carbon across 4500 ha of riverside land

** of survey respondents = 251 (13%) of 1,885 farms (24% of farmed land in county)*



Wyescapes LR2 – Success!

Across 4500 ha of riverside land, within a core project area of 7,694 ha, 36 farmers and land managers will be supported over 20 years to:

Reduce management intensity, revert arable and create new wetlands, floodplain meadow and woodland

Restore SSSI/SAC to at least favourable recovering condition by 2035 and favourable condition by 2045

Recover priority habitats to increase extent and distribution to at least 30% of core project area by 2045, reconnecting the river channel with its floodplain

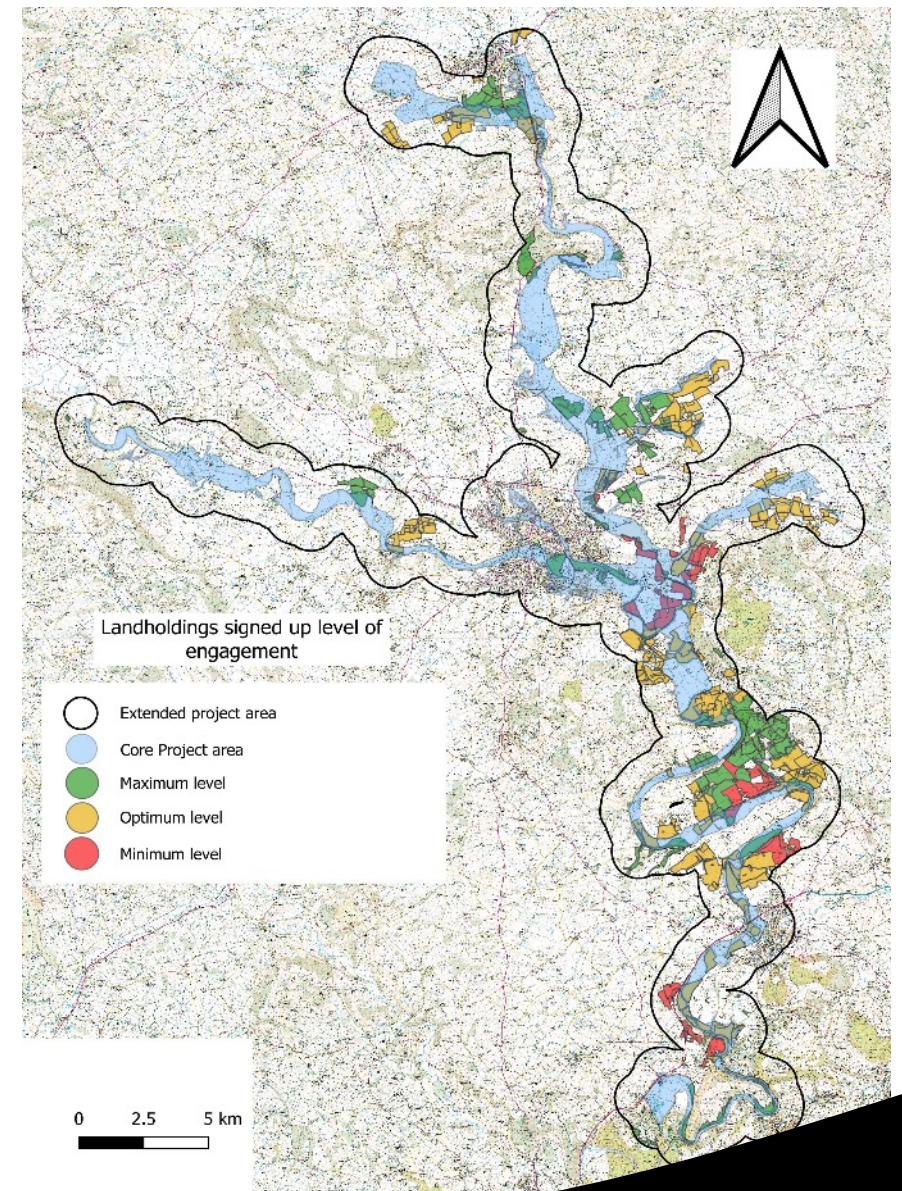
Deliver a potential minimum 289,766 Biodiversity Net Gain Units

Recover species - e.g. key species features of the SSSI/SAC plus lowland breeding waders (e.g. curlew, lapwing, snipe, redshank) and black poplar

Deliver a minimum potential net zero carbon reduction of 3,981 T CO₂e, with an aspiration for 42,371 T CO₂e sequestered

Reduce nutrient inputs and draw down P loading to at least agronomic minimum or below Olsen P1 by 2035

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Delivering 30 by 30 & EIP23 in England

<https://www.gov.uk/government/publications/delivering-30by30-on-land-in-england>

Apex target to halt decline in species abundance by 2030, and increase abundance by at least 10% to exceed current levels by 2042

Restore 75% of our SSSIs to favourable condition by 2042

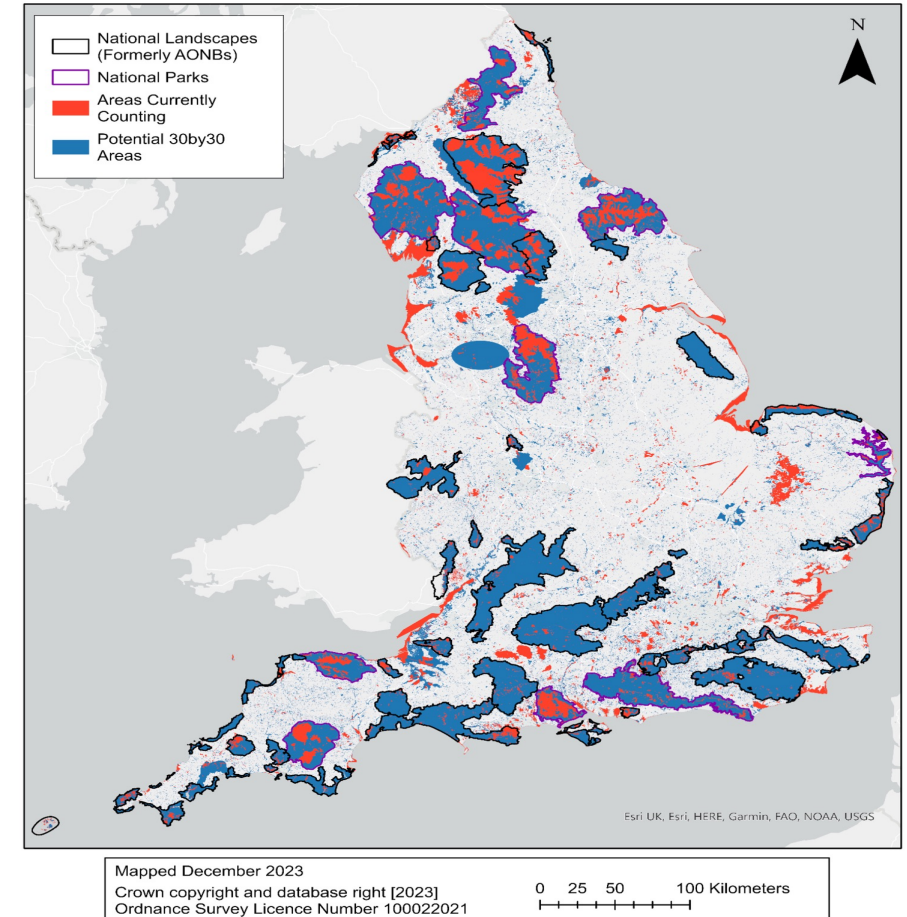
Establish 34 new Landscape Recovery projects covering >200,000 ha

Restore or create >500,000 ha of wildlife-rich habitat outside protected sites by 2042, and interim target to restore or create **140,000 ha** by 2028

Environmental Land Management (ELM) schemes fund farmers and land managers to deliver land management changes for nature recovery

Is enough public money committed to incentivise land management changes and provide just transition for farmers?

An indicative map showing areas currently counting and with potential to count towards 30by30 on land in England




Delivering 30 by 30 & EIP23 in Herefordshire

- Halt decline in species abundance by 2030 and increase abundance by at least 10% to exceed current levels by 2042 – **no wriggle room**
- Protect and manage 62,500 ha for nature by 2030 (30% of 218,000 ha county area), including 12,000 ha protected sites and 500 ha HWT reserves – **negotiable in LNRS**
- 100% of Herefordshire's SSSIs to have an up-to-date condition assessment by January 2028, and 75% of SSSIs to have management actions in place to achieve favourable condition by 2042 (<50% of SSSIs now in favourable condition) – **no wriggle room**
- Restore/create 11,900 ha of wildlife-rich habitats outside SSSIs by 2042 (i.e. 1/48 'fair share' of EIP23 long-term target) – **negotiable in LNRS**
- Restore/create at least 3,000 ha of wildlife-rich habitats by 2028 (i.e. 1/48 'fair share' of EIP23 interim target). Could be met by Wyescapes LR2 project alone - **achievable?**

<https://www.legislation.gov.uk/ukxi/2023/91/contents/made>

Priority Actions - Farming and Land-use sub group

Sector Priority Actions	Progress Indicators
<p>Farming & land use – carbon, nutrient, nature:</p> <ul style="list-style-type: none">• Farm carbon audits• Nutrient (Phosphate) reduction• Nature Recovery Network (HC/Local Nature Recovery Strategy)	<p>Farms with carbon audits and reducing CO2e emissions</p> <p>Farms using nutrient management tool(s)</p> <p>Species abundance compared to 2022 baseline</p> <p>Area protected and managed for nature by 2030</p> <p>% protected areas in favorable condition</p> <p>Area of priority habitat restored or created</p> <p>Wild Bird Index – proxy for health of wider environment</p>



- Farm carbon guide produced
- 40 farm carbon audits undertaken– follow up in 2026
- Farmer workshops planned
- Identify funding to roll out Farm Carbon Audits across 80% of Herefordshire Farms by 2030

UK Food Security Report 2021 – Land Use

71% of UK land is used for agriculture (80% in Herefordshire)

85% of farmland is used to rear animals, but meat, dairy and eggs only provide 32% of UK's calories

15% of farmland used to grow plant crops for human consumption provides 68% of UK's calories

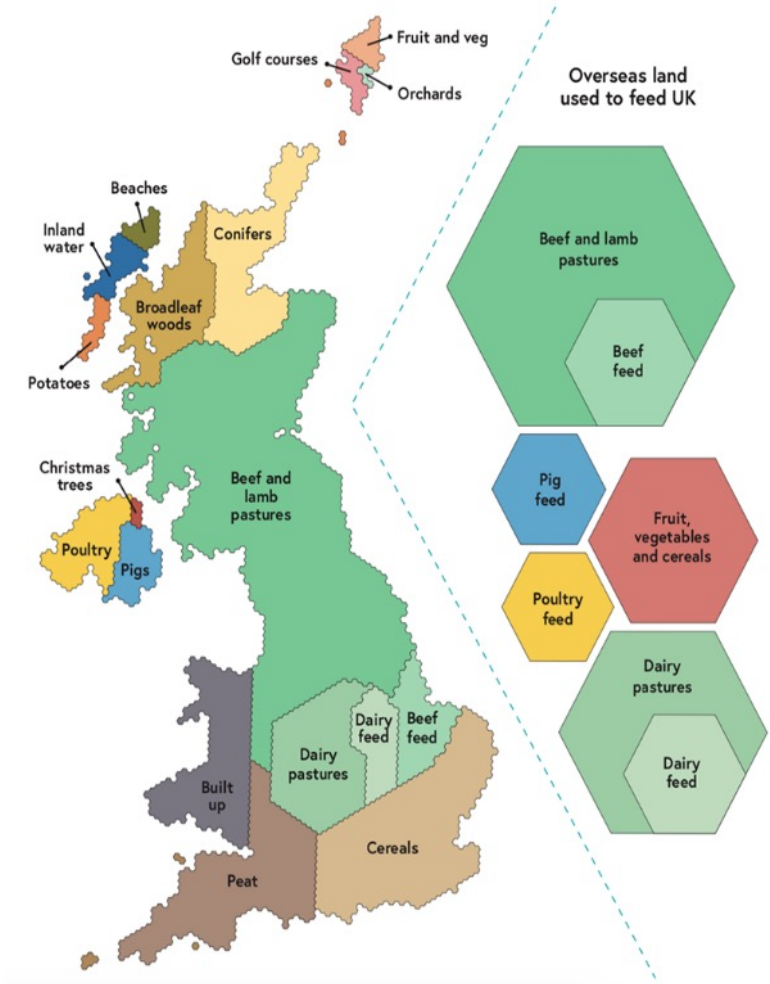
15% self-sufficiency for fruit and 55% for vegetables

<https://www.gov.uk/government/publications/uk-food-security-index-2024/uk-food-security-index-2024>

30% reduction in meat consumption would allow UK to produce the same calories from 30% less land

18%-22% of UK farmland will have to shift to other land uses by 2050 to meet current policy targets for net-zero and biodiversity *

* Royal Society Land Use Study (2023) and RSPB reported in <https://ig.ft.com/uk-land-use/>



Priority Actions - Food sub group (overlapping with Herefordshire Food Alliance)



- Build demand (shift behaviour) and meet demand (support businesses) for food produced locally in ways that support net zero and nature recovery
- Procurement - support sustainability targets of Wye Valley NHS Trust, large school academy trusts, Church aided / maintained schools
- Getting food that supports net zero / nature recovery on the map
- Catalyse action on food waste collection and composting
- Finding links with land, energy, transport and collaborating for more impact



Priority actions - how can we measure progress?

Sector Priority Actions	Progress Indicators
Buildings: <ul style="list-style-type: none">• Take part in Future Ready Homes 2• AECB approach to pragmatic retrofit• Hold annual home energy/retrofit fair to raise awareness• Support retrofit skills training	% new buildings zero carbon by 2030
Energy: <ul style="list-style-type: none">• Ensure reinforced electricity grid for generation and demand• Increase public acceptance of local generation from renewables• Create Local Area Energy Plan (LAEP) with local support	% planned increase in energy generation % planned increase in grid capacity % electricity generated from local renewable sources % of energy produced by sources < 50g CO2e/kWh
Transport: <ul style="list-style-type: none">• Bus Improvement Plan• Enable and encourage active travel and public transport use• Delivery of EV infrastructure	Support existing services at risk – one and two hourly core networks Interchanges to enable and encourage active travel and public transport use Segregated cycle lanes and pedestrian crossings Deliver 100 EV charge points on Council owned land by end 2024/2025
Waste: <ul style="list-style-type: none">• Expand food waste collection• Expand garden waste collection• Expand recycling collection service	Reduced residual waste (kg/household) Increased recycling rates

Successes - what have we achieved?

Progress:

- Agreed top 3 priority actions for six sectors
- Initiated work on targets and progress indicators
- Secured funding for associated projects
- Working and engaging with key stakeholders

Projects:

- Business energy audits – **42 completed**
- Farm carbon audits – **40 completed and and follow up audits due in 2026**
 - **Further Farm Carbon Audits available being delivered 2024**
 - **Ambition to deliver audit to every farm in Herefordshire**
 - **Farm carbon event held and well attended**
- Renewable energy opportunity mapping – **Reported end 2023**
 - **Mapping soon to be publicly available**



Successes - what have we achieved?

Contributing to county-wide strategy development:

- Adaptation Strategy – **Published early 2024**
- Council's Core Strategy/Local Plan – **Subject to consultation**
- Nature recovery network opportunity mapping – **Contract underway**

Initiatives:

- Helped develop Greener Footprints communications and engagement initiative and new zero-carbon website
- 30 for 2030 business initiative
- Climate and Nature grant scheme
 - **Conversion of underused land to community garden**
 - **Improvements to habitats including pond creation at Eaton Barn**
 - **Enhanced habitat management and identification training at Eywas Harold Common**



What can we all do?

Keep a carbon diary of total spending and assess environmental impacts

Buy and consume less, upcycle and recycle more

Eat meat and fish no more than three days a week

Compost green waste from home and garden

Generate and export electricity from solar PV and battery storage

Use only electricity from renewable sources at home

Use only public transport and EV to travel in Europe – EV sales must grow 27% every year (International Energy Agency)

Spend more time in nature – it's good for you

It's election year - vote for the party most likely to act on policies for nature and net zero