



Bath & North East
Somerset Council

Improving People's Lives

Strategic Evidence Base for Bath and North East Somerset

Climate & Ecological Emergency

Last Published: July 2024

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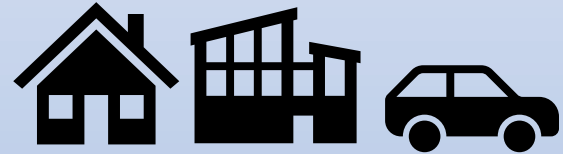
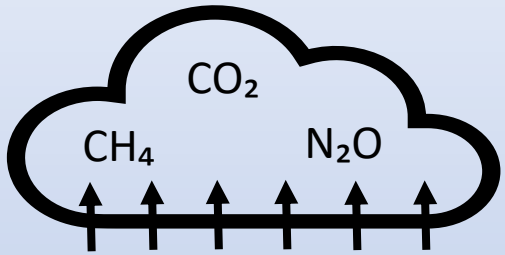
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Climate Emergency Summary



Greenhouse Gas Emissions

- Greenhouse gas emissions (carbon dioxide, methane and nitrous oxide) from the B&NES district decreased by 39% between 2005 and 2021.
- Emissions from a broad range of economic sectors have reduced: Domestic (39% decrease), Transport (22% decrease), Commercial, Industry, and the Public Sector.
- There was a 2.4% decrease in the Council's greenhouse emissions between the financial years 2021-22 and 2022-23.
- However, B&NES District and Council greenhouse gas emissions are currently not decreasing at a fast enough rate to reach net zero by 2030.

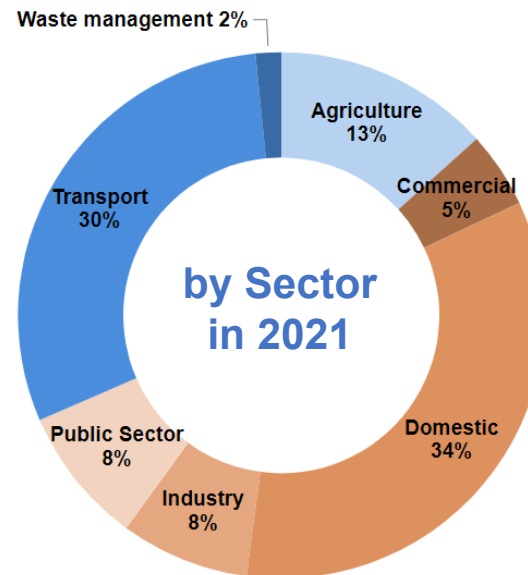
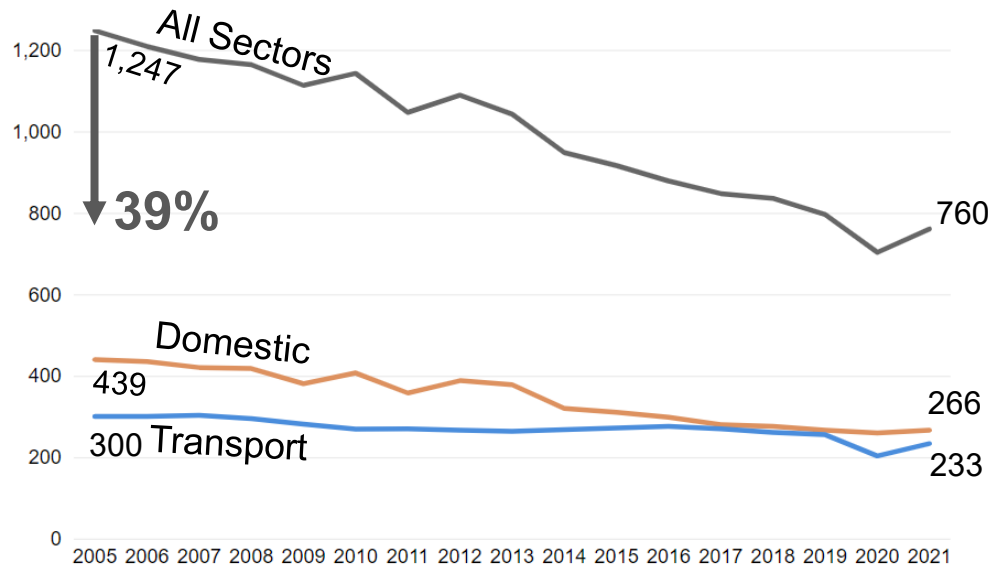


Responding to the Climate Emergency

- Among other improvements, the Council has reduced its electricity use (25% between 2015/16 and 2022/23), improved the energy efficiency of many of its commercial units (EPCs A-C 46% 2022, 56% 2023), reduced its business travel (58% between 2015/16 -2023/24) and increased the proportion of its light commercial fleet vehicles that are electric (16% 2022, 20% 2023).
- The Council is working to increase its installed renewable energy capacity (1.6 MW in 2023).
- Improvements have also been made in B&NES more widely to the energy efficiency of residential properties (EPCs A-C 23% in 2020, increased to 33% in 2024), the uptake of electric vehicles by private individuals (0.3% in 2019, increased to 1.7% 2023), and the district's renewable energy capacity (23MW in 2022, increased to 29MW 2023).

Greenhouse Gas Emissions 1

B&NES District Greenhouse Gas Emissions (kt CO₂e)



B&NES has committed to providing the leadership to protect people from the adverse impacts of climate change. This will be achieved by cutting area-wide Greenhouse gas emissions and adaptation.

Mitigation of climate change has the potential to **improve overall population health** as a co-benefit. However, the indirect impacts of climate mitigation could also be negative if undertaken in a way which increases social inequalities or which unduly burdens sections of the community which have the least ability to make changes to their lifestyle.

Greenhouse gas emissions (carbon dioxide, methane and nitrous oxide) from the B&NES district have **decreased by 39%** since 2005.

Emissions from a broad range of economic sectors have reduced: Domestic (**39% decrease**), Transport (**22% decrease**), Commercial, Industry, and the Public Sector. However, **these emissions are not decreasing fast enough to reach net zero by 2030.**

Data source for B&NES greenhouse gas emissions (kt CO₂e) graph:

Department for Business, Energy and Industrial Strategy (BEIS),
[UK local authority and regional greenhouse gas emissions national statistics](#)

Time period: 2005-2021 Last updated: June 2023

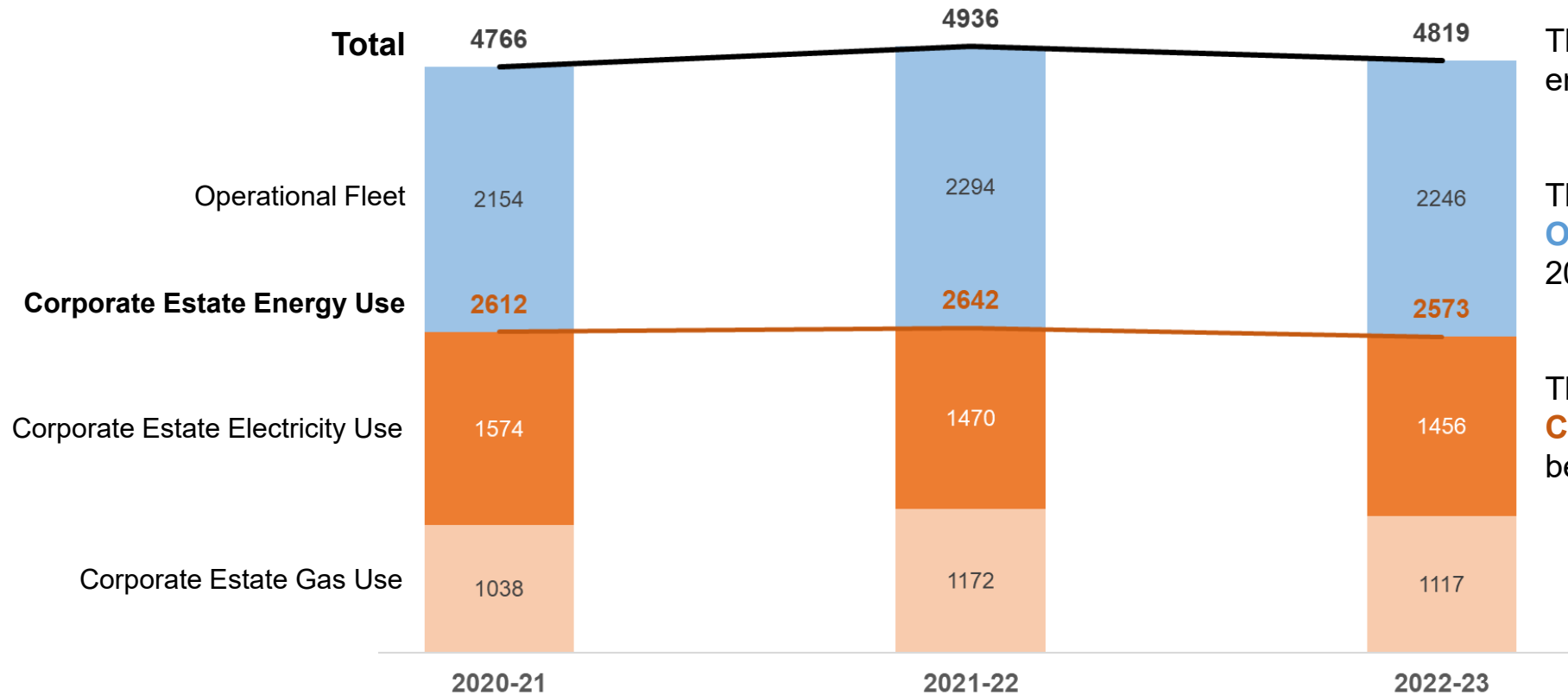
Related Reports and Webpages:

[Council Climate Emergency Homepage](#)

B&NES Council (2024) Climate Ecological Emergencies
Performance Monitor

Greenhouse Gas Emissions 2

Council Greenhouse Gas Emissions (tCO₂e)



There was a **2.4% decrease** in **total** emissions between 2021-22 and 2022-23.

There was a **2.1% decrease** in **Operational Fleet** emissions between 2021-22 and 2022-23.

There was a **2.6% decrease** in **Corporate Estate Energy Use** emissions between 2021-22 and 2022-23.

Definitions

Council Greenhouse Gas Emissions - emissions from energy consumption by the Council's Corporate Estate and fuel consumption by its Operational Fleet.

Corporate Estate – includes, Council offices, depots, Council run Care Homes, car parks and EV charging points, street lighting, and some pedestrian crossings.

Operational Fleet – Council's fleet of diesel and petrol vehicles (Vans,HGV,PCVs and Cars) that carry out Council operational work

Greenhouse Gas Emissions – include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).

Data Source - B&NES Council (2024) Climate Ecological Emergencies Performance Monitor

Related Webpage - [Council Climate Emergency Homepage](#)

Responding to the Climate Emergency 1

Council Climate Emergency Priorities...

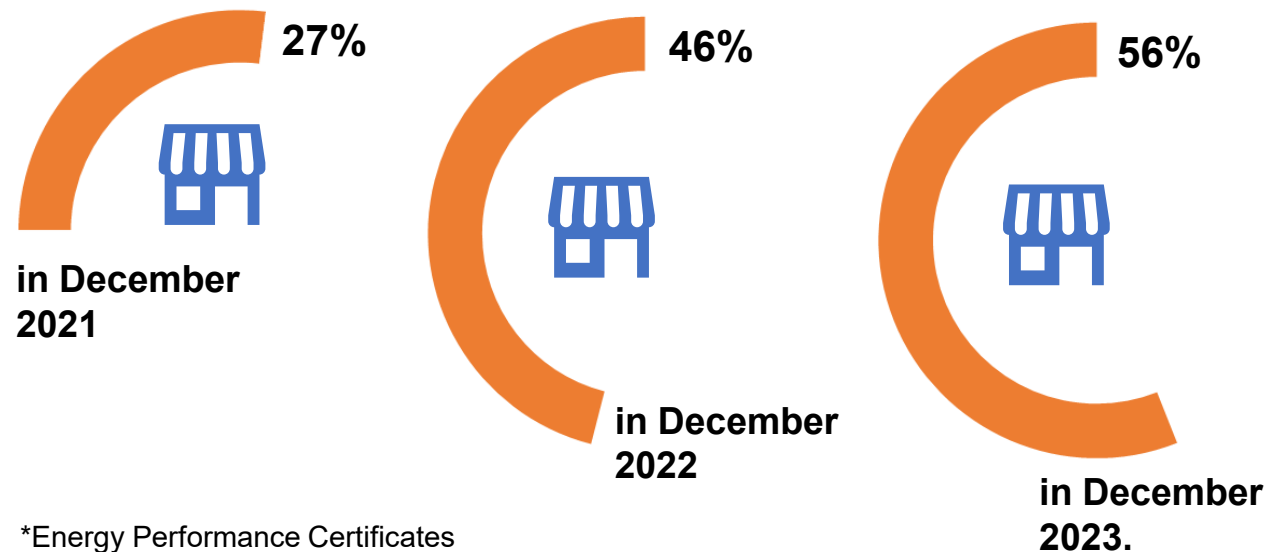
Buildings - Making buildings more environmentally friendly....



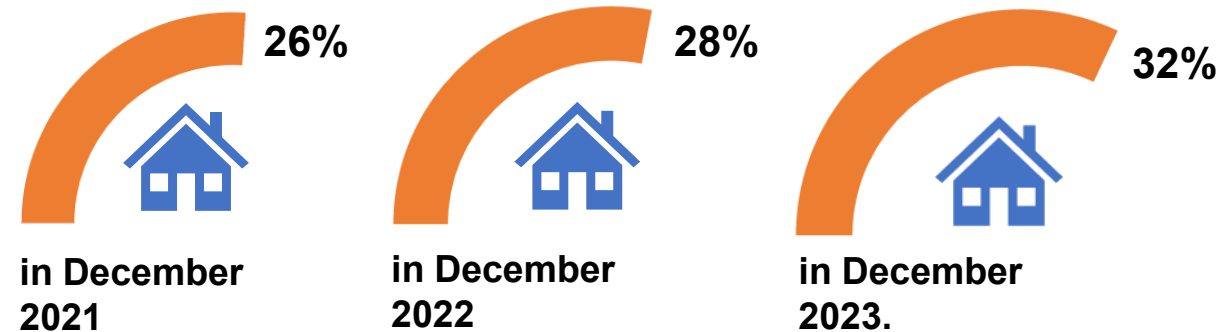
There was a **25% decrease** in **electricity use** by the **Council's Corporate Estate**

between **2015/16** and **2022/23**.

The % of **EPCs*** rated **A -C** for **Council owned commercial units** with an EPC **increased** from...



The % of **EPCs*** rated **A - C** for **residential properties** in B&NES with an EPC **increased** from...



In FY 2023/24 there were **587**  domestic solar photovoltaic installations.

A **decrease** compared to the **796** installed in FY 2022/23.

In FY 2023/24 there were **132**  domestic heat pumps installations.

An **increase** compared to the **76** installed in FY 2022/23.

Sources and Related Reports:

[B&NES Council \(2023\) Our priorities, Addressing the Climate Emergency](#)

[B&NES Carbon Emissions from Households and Citizens](#)

[B&NES Council \(2023\) Climate Ecological Emergencies Performance Monitor](#)

Responding to the Climate Emergency 2

Council Climate Emergency Priorities...

Renewable Energy - Increasing local renewable energy generation...

The **Council's Corporate Estate** installed renewable energy capacity (MW) **increased** from...



0.7 MW

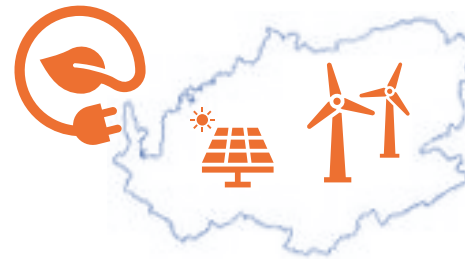
in December 2022,

to...

1.6 MW

in December 2023.

The **installed renewable energy capacity (MW) in Bath and North East Somerset** **increased** from...



29 MW

in December 2022,

to...

31.5 MW

in December 2023.

Definitions

Corporate Estate – includes, Council offices, depots, Council run Care Homes, car parks and EV charging points, street lighting, and some pedestrian crossings

Installed Renewable Energy Capacity – the peak capacity at which renewable energy systems could operate for a sustained period.

Sources and Related Reports:

[B&NES Council \(2023\) Our priorities, Addressing the Climate Emergency](#)

[B&NES Carbon Emissions from Households and Citizens](#)

B&NES Council (2023) Climate Ecological Emergencies Performance Monitor


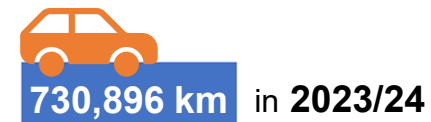
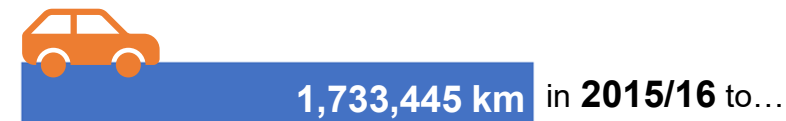
Responding to the Climate Emergency 3

Council Climate Emergency Priorities...

Transport - Enabling more sustainable transport and travel choices....

The Council has made an effort to **decrease** staff business travel (grey fleet and pool cars)

It has **decreased** from....



The % of pool car travel done by electric vehicle pool cars **increased** from **14%** in 2022/23 to **22%** in 2023/24.

There has also been a focus on **increasing** the proportion of **Council light commercial* operational fleet vehicles** that are **electric (EV)** ...



*LGV = under 3.5 tonnes

Similarly, the data suggests that there has been a gradual **uptake** of **electric vehicles (EVs)** by **B&NES residents**...



In **December 2023**...

1.7% of vehicles registered to a B&NES address by private individuals were electric...

compared to **0.3%** in **December 2019**.

Definitions

Pool Cars – the cars owned by the council for employee use for Council business.

Registered Vehicles – with the DVLA to a B&NES address by private individuals, not by companies.

Private Individuals - are the keepers of the vehicle, the person responsible for registering and taxing the vehicle. The keeper is not necessarily the owner or the driver.

B&NES Address - The keeper's address does not have to be where the vehicle is physically kept.

Sources and Related Reports:

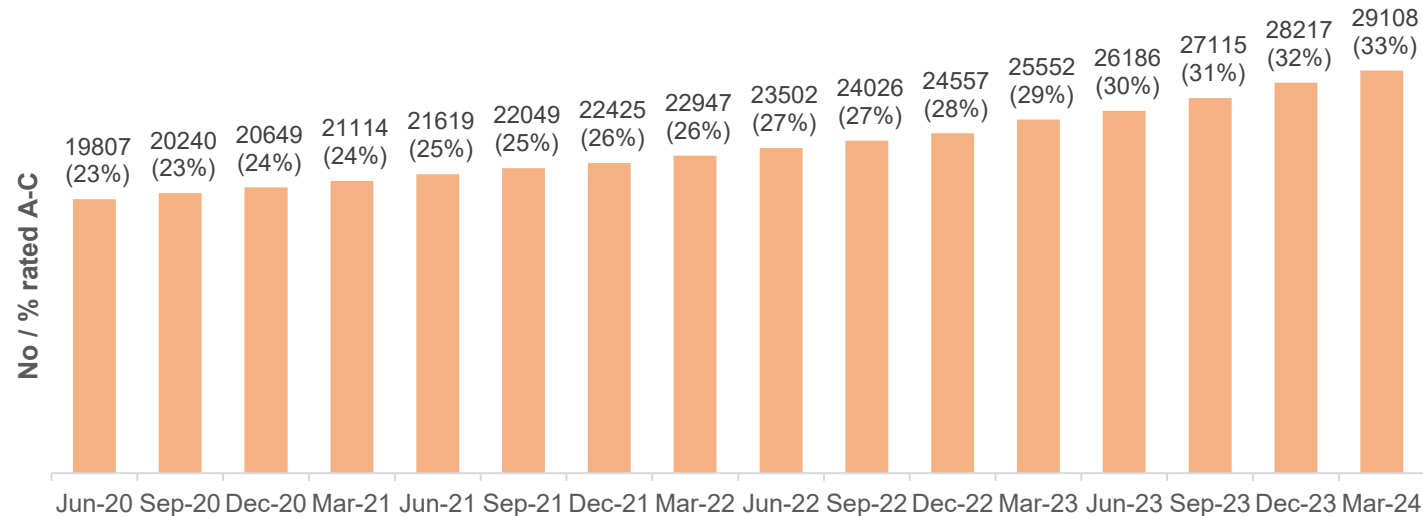
[B&NES Council \(2023\) Our priorities, Addressing the Climate Emergency](#)

[B&NES Carbon Emissions from Households and Citizens](#)

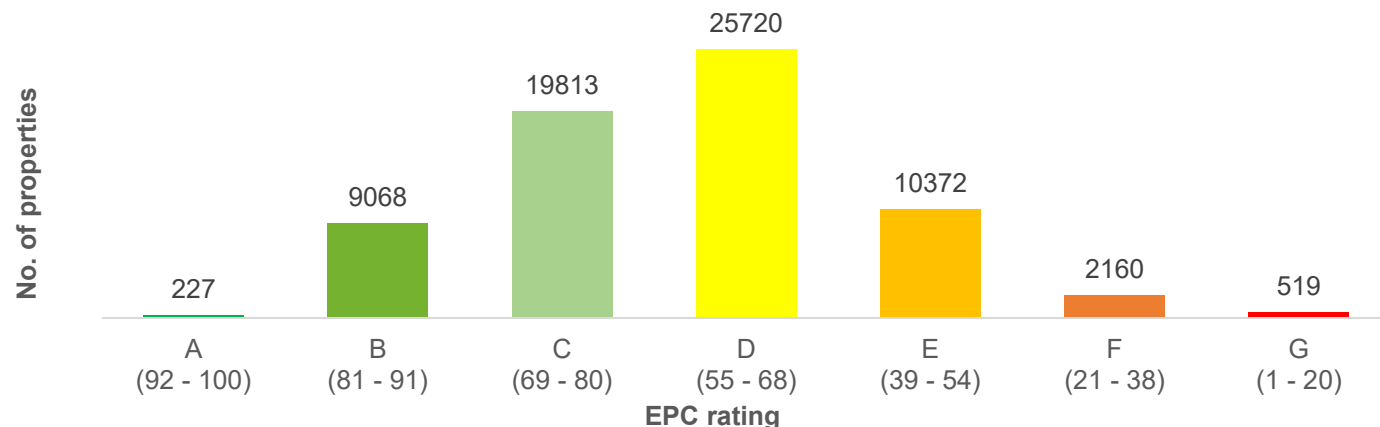
B&NES Council (2024) Climate Ecological Emergencies Performance Monitor

Housing Conditions – Energy efficiency

Residential properties in Bath and North East Somerset with an Energy Performance Certificate rating of A-C



Residential properties in Bath & North East Somerset EPC rating A-G (March 2024)



- The [Net Zero Strategy: Build Back Greener](#) states all homes should meet an Energy Performance rating of at least a **B and C by 2035**.
- The percentage of residential properties in Bath & North East Somerset (B&NES) with an Energy Performance rating of A-C has **increased by 10 percentage points** from **23%** in June 2020 to **33%** in March 2024.
- In March 2024, the **highest** proportion of homes in B&NES rated A-G had an EPC rating of D (**38%**), **25,720** homes. The comparable EPC rating and % for England is D (38%) March 2023.
- [The age of a property affects the energy performance of a building](#). B&NES has a **high proportion of older properties** i.e. built pre-1919, making the target more challenging to meet.
- The [Council's action plan for achieving Net Zero by 2030](#) includes having **more energy efficient buildings**. This can be achieved by retrofitting homes (all tenures) with a range of energy saving measures.
- Energy saving measures include solid wall insulations, super-glazing installations, loft insulations, draught-proofing measures, and switching homes to modern electric heating from gas and gas cookers to electric.

Definition: The **Energy Performance Certificate (EPC)** rating is a measure of the overall efficiency of a home, bands range from A to G, with A being the most energy efficient and G is the least efficient.

Data note: Includes new homes and any development needing to be being **zero carbon or net positive carbon from March 2019**.

Source: IEPC ratings – Energy Performance of Buildings Data, Residential Properties – Uniform in-house system.
[Energy efficiency of housing in England and Wales 2023](#)

Ecological Emergency

Nature Recovery
Targets

B&NES Nature
Recovery Targets

State of Nature in
B&NES

State of Species
in B&NES

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Nature Recovery Targets

Over the past couple of centuries our use of land and resources has placed unsustainable pressure on nature, threatening the stability of ecosystems both globally and locally.

Nature has been collapsing at an alarming rate. Globally, we have lost 60% of wild vertebrates, 83% of freshwater populations¹ and up to 76% of insects since 1970². And in the West of England region, numbers of once common birds like swifts and cuckoos have plummeted in the past 25 years alone.

The West of England Nature Partnership (WENP), which bring together key partners (including B&NES Council) across the West of England to deliver more for nature, has published a set of Ambitions for Nature Recovery as part of its Strategy. The ambitions were provided to give a steer to the delivery of the West of England Nature Recovery Network (NRN).

We are using these ambitions, alongside the Nature Recovery Network, to help inform our work to restore nature and address the Ecological Emergency.

The WENP Nature Recovery Ambitions adjusted for B&NES can be found on the next page.

WENP Nature Recovery Ambitions for the region ³

By 2030 we want to: By 2050 we want to:



Increase the abundance of wildlife from 2020 levels by 30%



Double the abundance of wildlife from 2020 levels



Increase our semi-natural broadleaved woodland cover by 2500ha (from 8,000 to 10,500 ha)



Double our semi-natural broadleaved woodland cover (from 6% to 12%, or 8,000 to 16,000 ha)



In addition to woodland, create 2000 hectares of wildlife-rich habitat outside the protected site network



In addition to woodland, create 6000 hectares of wildlife-rich habitat outside the protected site network



Close at least 40% of the NRN connectivity gaps through the creation of new habitat



Close all the NRN connectivity gaps through the creation of new habitat



Ensure all water catchments are in at least moderate ecological status, with half in good ecological status



Ensure all water catchments are in good ecological status



Ensure 70% of designated sites are in favourable condition



Ensure all designated sites are in favourable condition

Data sources:

¹ World Wide Fund for Nature (WWF), (2022) Living Planet Report, <https://www.wwf.org.uk/our-reports/living-planet-report-2022>




² Hallmann CA, Sorg M, Jongejans E, Siepel H, Hoffland N, Schwan H, et al. (2017), More than 75 percent decline over 27 years in total flying insect biomass in protected areas, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0185809>

³ West of England Nature Partnership (WENP), (2021) WENP Strategy 2021 – 2030, <https://wenp.org.uk/wp-content/uploads/2021/12/WENP-Strategy-Final-Version.pdf>

B&NES Nature Recovery Targets

WENP Nature Recovery Ambitions adjusted for B&NES

B&NES covers 26% of the West of England area

Current situation:	By 2030 we want to:	By 2050 we want to:
 Requires further investigation	 increase the abundance of priority species from 2020 levels by 30%	 Double the abundance of priority species from 2020 levels
 Tree Canopy cover of 5,440 ha (woodland cover of 2,892 ha) ¹	 increase our semi-natural broadleaved tree and woodland cover by 650 ha	 increase our semi-natural broadleaved tree and woodland cover by 2,080 ha
 2,556 ha of Priority Habitats ²	 In addition to woodland, create 520 ha of wildlife-rich habitat outside of the protected site network	 In addition to woodland, create 1,560 ha of wildlife-rich habitat outside of the protected site network
 19 'gaps' (or connectivity opportunities) in the Ecological Network within B&NES ³	 Close at least 40% of the NRN connectivity gaps through the creation of new habitat	 Close all the NRN connectivity gaps through the creation of new habitat
 2 water bodies in good status; 12 in moderate status; 4 in poor status ⁴	 Ensure all water catchments are in at least moderate ecological status, with half in good ecological status	 Ensure all water catchments are in good ecological status
 54% of SSSI-sites in favourable condition ⁵	 Ensure 70% of designated sites are in favourable condition	 Ensure all designated sites are in favourable condition

Data sources: 1 Calculated using the Forest Research's Urban Canopy Cover Tool - Forest Research (2022) UK Urban Canopy Cover, <https://www.forestresearch.gov.uk/research/i-tree-eco/uk-urban-canopy-cover/>

2 Calculated from Bristol Environmental Record Centre (BRERC) data – Bristol Environmental Record Centre (BRERC) (2021), Priority habitat mapping for the West of England, <https://www.brerc.org.uk/index.htm>

3 West of England Nature Partnership (2022) Nature Recovery Network, <https://wenp.org.uk/nature-recovery-network/>

4 A number of these sub-catchments are only partly in B&NES - Environment Agency (2023), WFD Classification Status Cycle 2 Ecological Status, <https://experience.arcgis.com/experience/73ed24b6d30441648f24f043e75ebd2/page/Classification/>

5 Natural England (2022), Designated Sites View, Condition of SSSI Units in County AVON, <https://designatedsites.naturalengland.org.uk/SearchCounty.aspx>

State of Nature in B&NES

One of the actions in the Council's Ecological Emergency Action Plan is to create a 'State of Nature' report for B&NES, setting out the current state of the natural environment across the region and thereby providing a baseline from which we can measure progress.

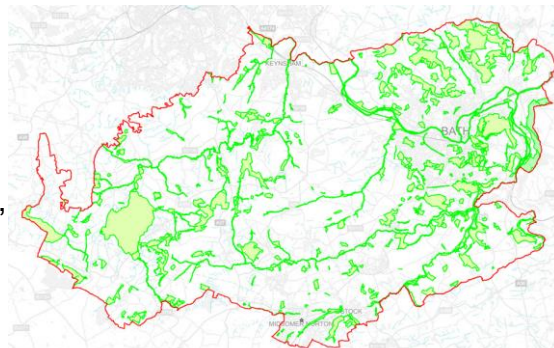
In the meantime, some of the key figures that we do know about our natural environment are set out on the next 2 pages.

Protected Areas



14.3% of B&NES covered by **Sites of Nature Conservation Interest** (**5,020** hectares) ¹

- **26 SSSIs**, totalling **1,120** hectares
- **14 SSSIs** in **favourable condition**, totalling **851** hectares
- **1 biological SSSI** in **unfavourable, declining condition** ²



Sites of Nature Conservation Interest (SNIs) in B&NES ²

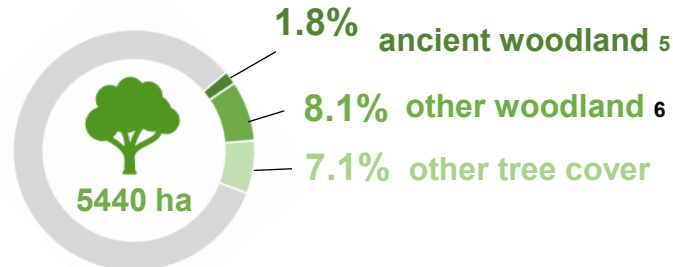
Water Health



2 **Water bodies out of 18** in B&NES are in a 'good' ecological status ³

Trees and Woodland

17% of B&NES is covered by **tree canopy**: ⁴



Green Space



1,982 hectares of **accessible green space** in B&NES ⁷

The equivalent of over **4 Chew Valley Lakes**



There are **24 allotment sites** with **1,209 plots** in B&NES ⁸

This equates to **162 people per plot**, with an **average wait time of 2.4 years** ⁸

Data sources: ¹ Bristol Environmental Record Centre (BRERC) (2022) Sites of Nature Conservation Interest

² Natural England (2022), Designated Sites View, Condition of SSSI Units in County AVON, <https://designatedsites.naturalengland.org.uk/SearchCounty.aspx>

³ Environment Agency (2023), River Basin Management Plan Maps, <https://experience.arcgis.com/experience/73ed24b6d30441648f24f043e75ebd2/page/Classification/>

⁴ Calculated using the Forest Research's Urban Canopy Cover Tool - Forest Research (2022) UK Urban Canopy Cover, <https://www.forestresearch.gov.uk/research/i-tree-eco/uk-urban-canopy-cover/>

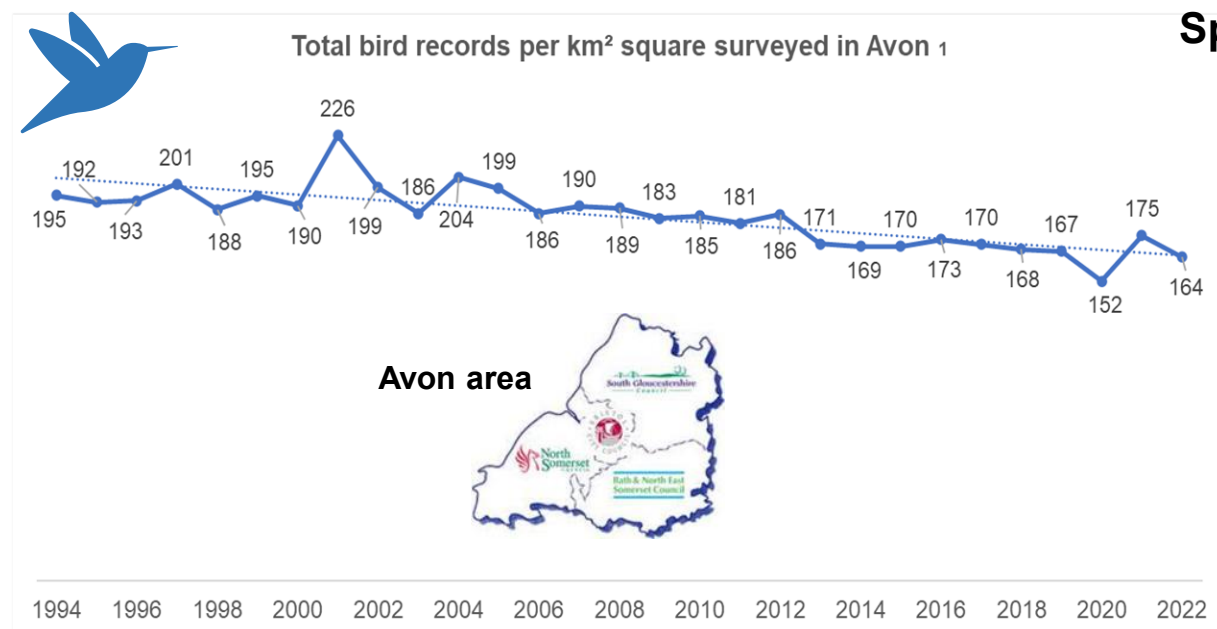
⁵ Calculated from the Ancient Woodland Inventory - Natural England (2022) Ancient Woodland (England), <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland-england/about>

⁶ Calculated from the National Forest Inventory 2020 - Forestry Commission (2022) National Forest Inventory England 2020, <https://www.forestresearch.gov.uk/tools-and-resources/national-forest-inventory/>

⁷ Calculated based on figures from B&NES Green Space Strategy 2015-2019 with the area of Chew Valley Lake subtracted from the figure quoted - B&NES Council (2015), Bath & North East Somerset Green Space Strategy 2015-2019

⁸ Bath and North East Somerset Council (2022) Find an allotment, <https://beta.bathnes.gov.uk/find-allotment>

State of Species in B&NES



91% estimated decrease in the **swift count**

and



98% estimated decrease in the **cuckoo count**

across the West of England.* 2

Species



15 of the 18

UK species of bats can be found in B&NES 3

Two **key bat species** found in B&NES and SW England are the:



13-34g



4-9g

Greater and Lesser Horseshoe bats 4

In **2018** there were thought to be **7,280 - 14,600 Greater Horseshoe Bats** in **SW England**. An **increase** compared to **1999** figures.

In **2018** there were thought to be **13,900 - 27,700 Lesser Horseshoe Bats** (mostly found) in **SW England**. An **increase** compared to **1999** figures. 5

Data sources:

1 British Trust for Ornithology (2022) Breeding Bird Survey, Totals of individuals counted in Avon (1994-2022), https://app.bto.org/bbs-results/results/county_lists/bbscountydens-GBAV.html

2 British Trust for Ornithology (2022) Breeding Bird Survey, Totals of individuals counted in Avon (1994-2022), https://app.bto.org/bbs-results/results/county_lists/bbscountydens-GBAV.html

* There were no cuckoos recorded in 2022. Taking a smoothed average of the past 3 years versus '95, the decline is now 98%, but they are on the cusp of going regionally extinct.

3 BRERC Species Data Portal (2022) BRERC Interactive Maps, <https://brerc.org.uk/imaps/map-index.htm>

4 The Vincent Wildlife Trust (2014) Horseshoe Bats, <https://www.vwt.org.uk/wp-content/uploads/2015/04/horseshoe-bat-leaflet.pdf>

5 Bat Conservation Trust (2021) National Bat Monitoring Programme, Annual Report 2021, <https://cdn.bats.org.uk/uploads/pdf/Our%20Work/NBMP/National-Bat-Monitoring-Programme-Annual-Report-2021.pdf?v=1655151480>