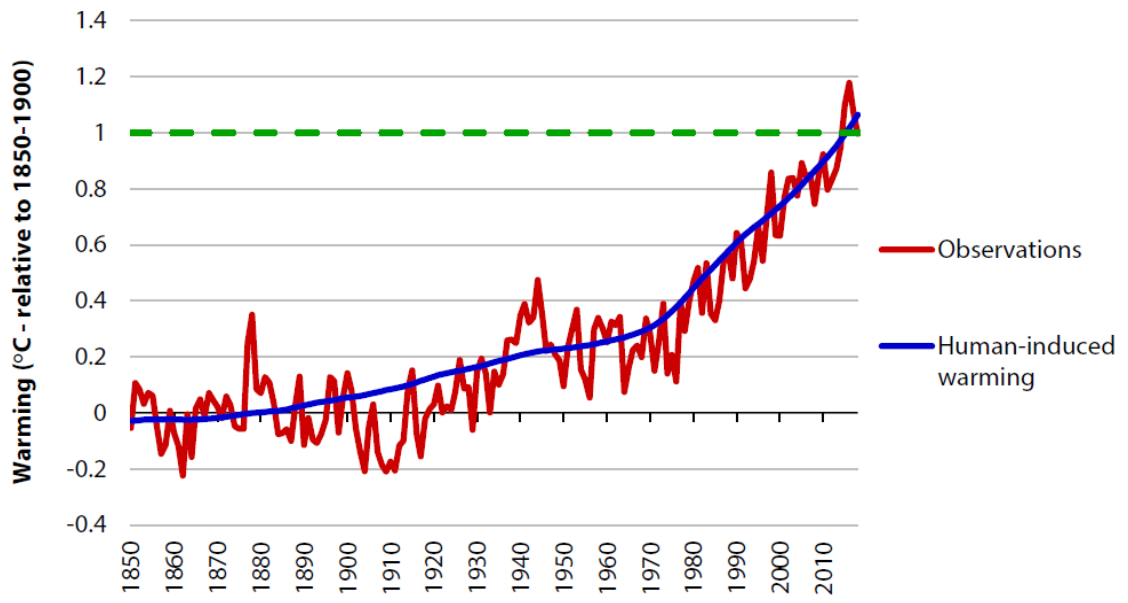
# Observed Climate Change

**Figure 2.1.** Observed and human-induced warming




**Source:** HadCRUT4, NOAA, NASA and Cowtan & Way datasets; IPCC (2018) *Chapter 1 - Framing and Context.*
**Notes:** 'Observations' are the average of the four datasets above as in IPCC-SR1.5 including for the full year of data for 2018.

Temperature risen by 1°C since pre industrial
Man made

**Paris agreement**
*'curb dramatically'* the polluting gases that cause climate change

Current commitments
Est. reduce warming below 4°C (around 3°C)

1°C will lead to climate change

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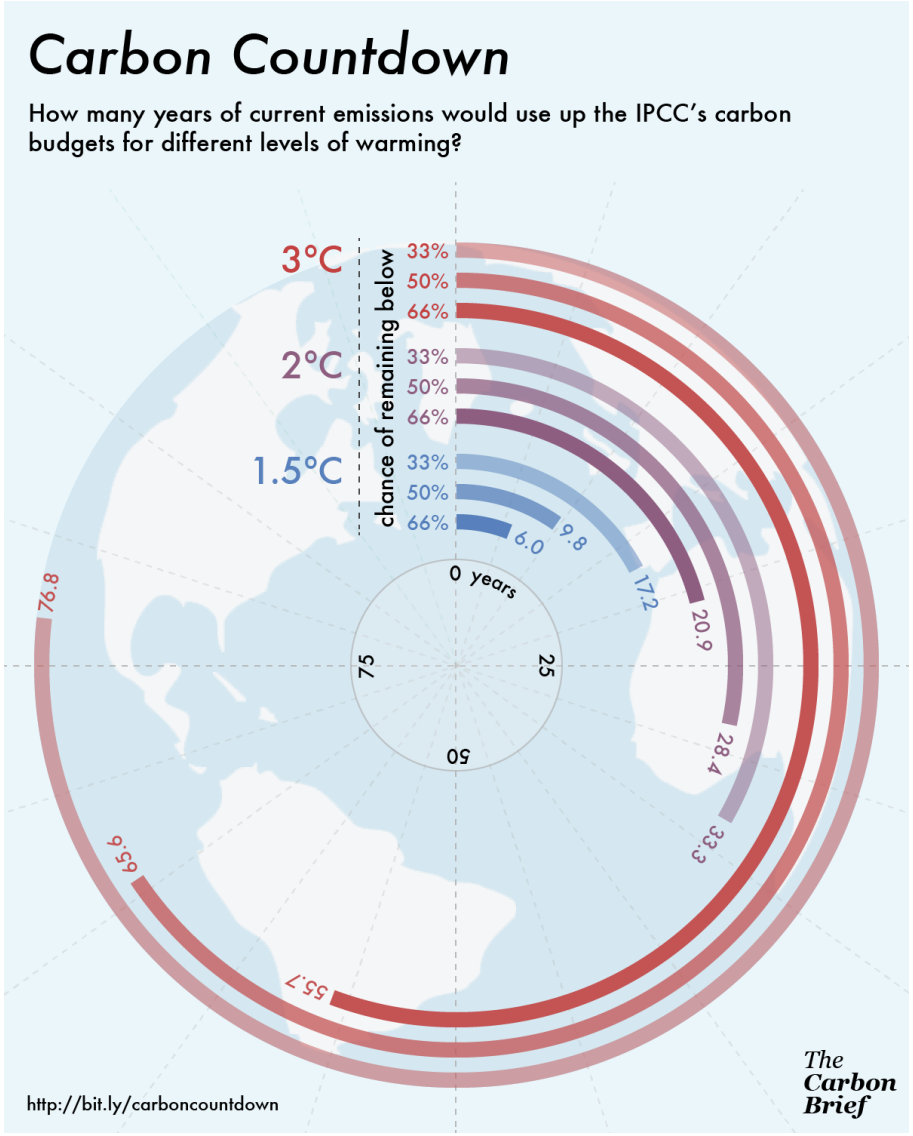


# Time is short….

We (the world) are emitting at **55 GtCO2e/yr.**

To keep the warming below 1.5°C, we can only emit a total of :

420 GtCO2e more (66% chance - IPCC 1.5 degree report, https://www.ipcc.ch/sr15/)

**543 GtCO2e** more (Committee on Climate Change UK Net Zero)

580 GtCO2e more (50% chance - IPCC 1.5 degree report, https://www.ipcc.ch/sr15/)

So we **only have 10 or** so years at the current rate.

And the rate is accelerating.

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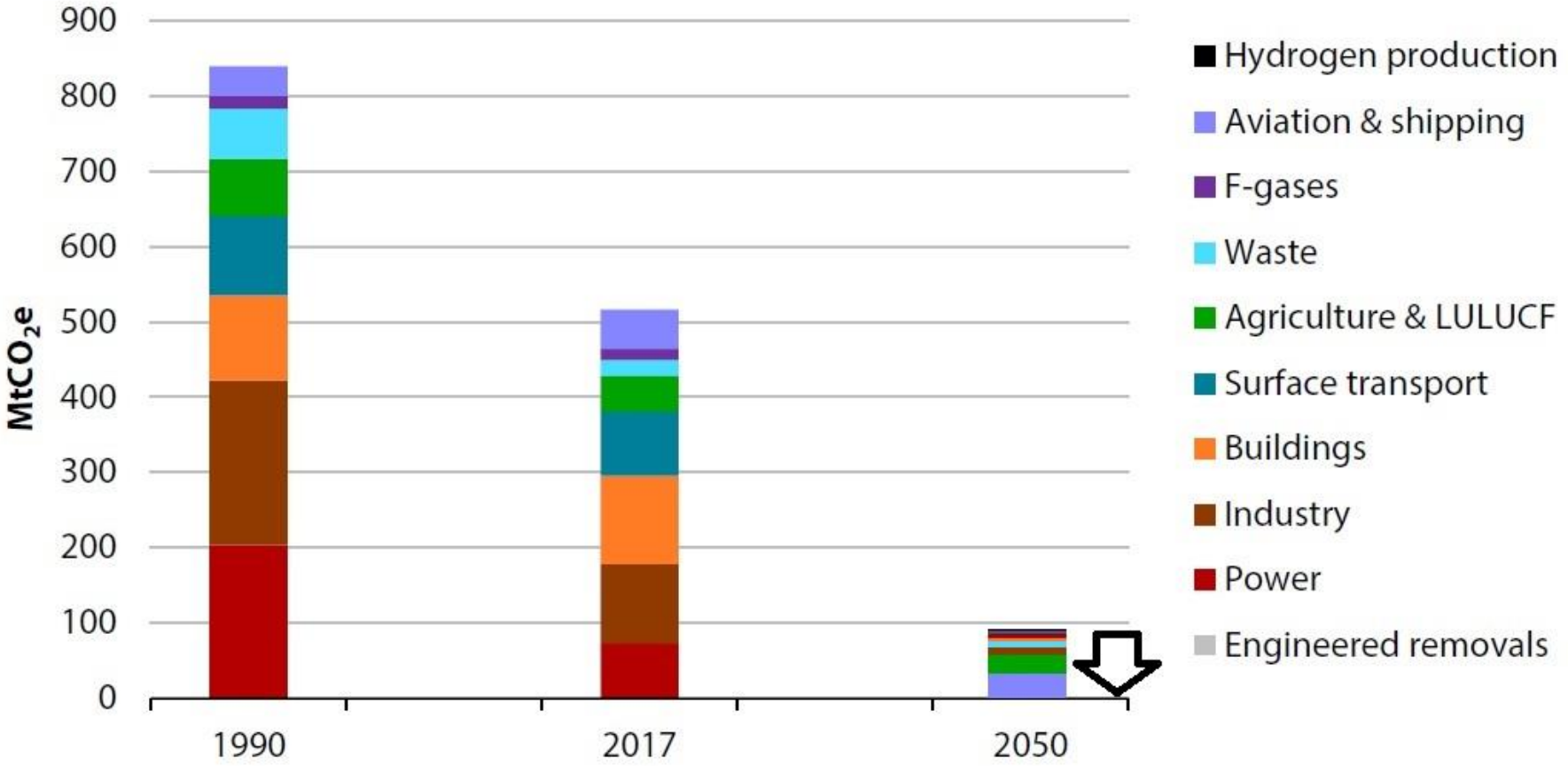
# Scale of emissions reduction – UK net zero




Source – Committee on Climate Change May 2019 – Report - Net Zero, the Uk's contribution to stopping global warming

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# Net - Zero Carbon Dorset

## Challenges

### All buildings - Zero carbon

- Energy reduction – improved fabric
- Low Carbon heating - Electrification
- Renewable Energy generation

### Zero carbon travel

- All cars and vans electric by 2035
- All heavy vehicles hydrogen
- Switch modes travel / active travel

### Zero- carbon electricity

- Greater installation of Renewable Energy in Dorset

### Land use emissions

- Changes to low carbon diet
- Carbon sequestration

## Opportunities

- **Fuel Poverty**
- **Healthy lifestyles**
  - Active travel
  - Air quality
  - Healthy Diet
  - Work life balance
- **Low carbon economy**
  - Retained energy expenditure
  - Supply chains
  - Low carbon technology
- **Greater Resilience**
- **Avoid further climate change**

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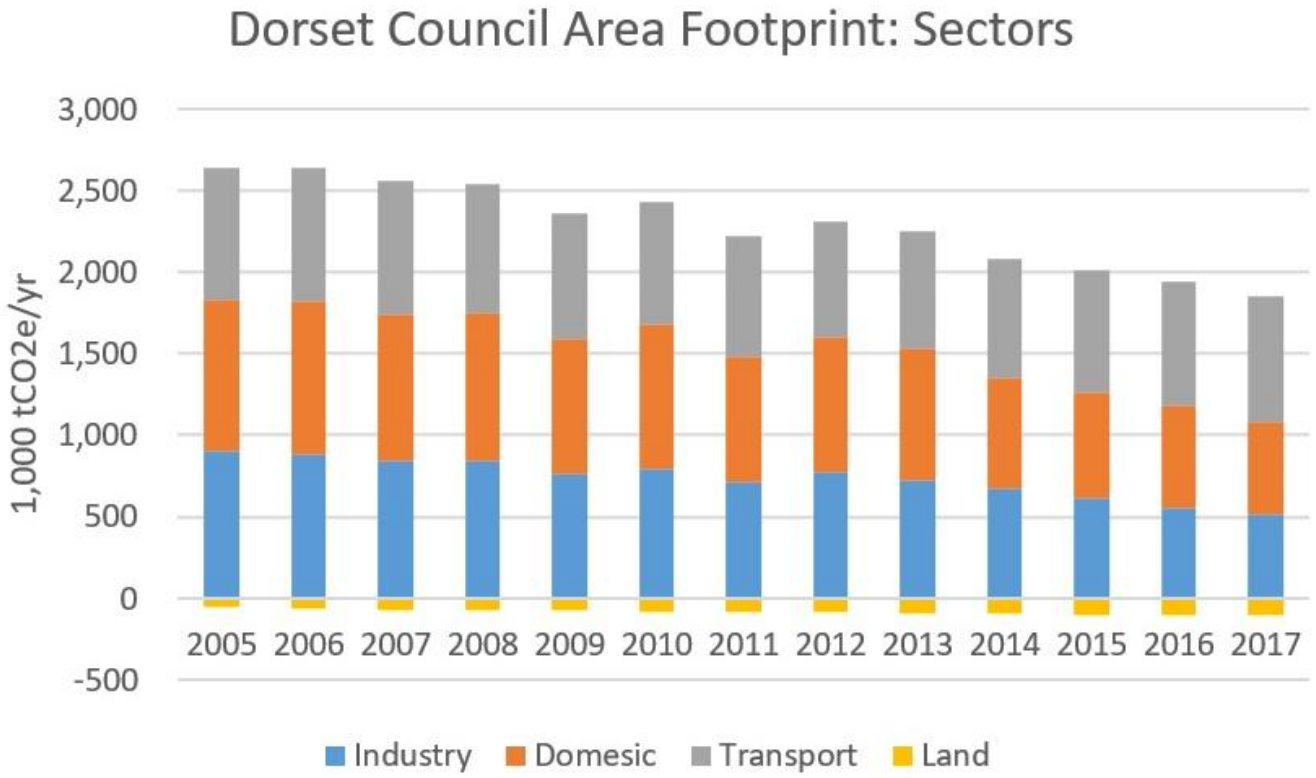


- 2.5 $MtCO_2e$ down to 1.6 $MtCO_2e$ – 36 % reduction
- **Significant** contribution from Nation Electricity decarbonisation
- Land negative contribution overall for Dorset.

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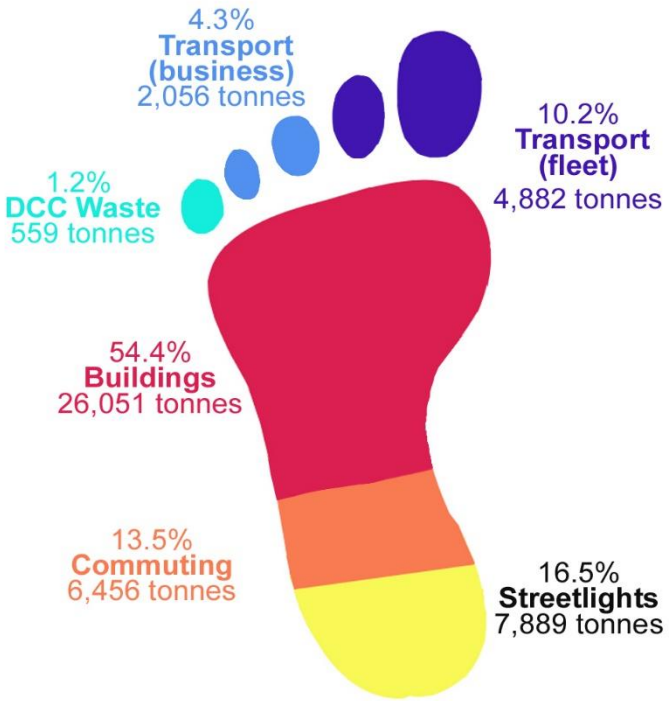
**Source** – BEIS June 2019 – Carbon emissions by Local Authority area
https://data.gov.uk/dataset/723c243d-2f1a-4d27-8b61-cdb93e5b10ff/emissions-of-carbon-dioxide-for-local-authority-areas
**Note:** Data is two years behind.

# Sources of emissions – ***Historic Data***




Costs (approx. - £million/yr)

| | |
|---|---|
| • Buildings | £ 6.7 |
| • Street lighting | £ 1.55 |
| • Fleet fuel | £ 2.4 |
| • Business travel | £ 2.7 |
| • Office Waste | £ 0.27 |
| **Approx. Total** | **£ 13.6 m/yr** |

**Former Dorset County Council** – 47,890 $tCO_2e$/yr
**Approximately 86** % Dorset Footprint

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# Dorset Council Role

*'**Clear leadership** in needed right across **Government**, with delivery in partnership with business and communities . It must be vital to the **whole of government** and to every level of government in UK'* . Committee on Climate change – May 2019

# Action Areas

Leadership & Influence

Natural environment

Buildings & Assets

Transport

Waste & Energy

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