

The planet is warming, linked by scientific evidence to human induced greenhouse gas emissions. A [Climate Change Committee report, 2021](#), shows that the last six years were the six warmest on record globally. The [State of the UK Climate in 2021 report](#) states that recent decades in the UK have been wetter, warmer and sunnier than the 20<sup>th</sup> century. Consequences of climate change include rising sea levels and increased likelihood of severe weather events such as storms, heatwaves, drought and wildfires.

### Why is this important?



There are significant health, social and financial risks and impacts. Deprived groups are more likely to be adversely impacted.

### What is the local context?



Torbay will be increasingly impacted by rising temperatures and rising sea levels. Torbay is working to become carbon neutral by 2030.

### What should we do?

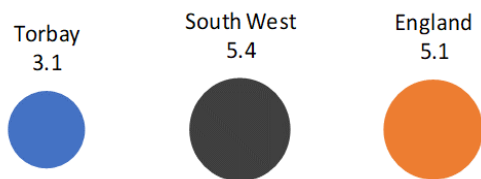


Improve energy efficiency in the home; Cycle and walk where possible. Healthy lifestyles and healthy housing also mitigates

against climate change. [View for more ideas](#)

It is agreed that avoiding global warming of over 1.5°C above pre-industrial levels would prevent the worst effects of climate change but temperatures have already risen by over 1°C. Emission reductions pledges made by world nations as part of their climate goals would still likely lead to increases of above 2°C ([Met Office, Aug 22](#)). The UK has set a target of net zero emissions by 2050.

**Fig 1: Greenhouse gas emissions- tonnes of CO<sub>2</sub>e per capita (per person), 2020**



Source: [Department for Business, Energy and Industrial Strategy \(BEIS\)](#)

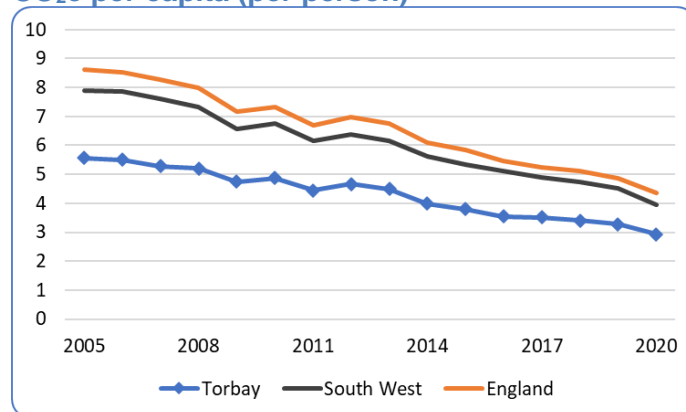
NB. Figures cannot be compared to the UK Greenhouse Gas Inventory due to minor methodological differences and exclusions

The greenhouse gases here are carbon dioxide, methane and nitrous oxide. Torbay's emissions are less than the South West and England in 2020 (Fig 1), all areas have reduced compared to the previous two years. 2020 emissions were impacted by the COVID pandemic restrictions.

Split into sectors in 2020 most of Torbay's emissions come from the domestic sector (energy consumption in and around the home)- 41% and transport- 31% of emissions. Compared to the South West and England, Torbay has a far higher proportion of emissions that are domestic, with the commercial (12%) and public (7%)

sectors also proportionally higher than the South West and England whereas industry (7%), waste management (1%), and agriculture (1%) are lower. In all three areas transport is the same proportion. Land use, land use change and forestry are net emissions at -1% in Torbay.

**Fig 2: Carbon dioxide emissions- tonnes of CO<sub>2</sub>e per capita (per person)**



Source: [BEIS](#)

NB. Figures cannot be compared to the UK Greenhouse Gas Inventory due to minor methodological differences and exclusions

Greenhouse gas emissions have only been measured from 2018–2020 for some emission sources but total CO<sub>2</sub> figures are available from 2005 onwards so are shown above. Fig 2 shows a reducing trend in CO<sub>2</sub> emissions since 2005 with Torbay having lower emissions throughout, reduced to 2.9 tCO<sub>2</sub>e in 2020 (4.3 in England). Torbay CO<sub>2</sub> emissions have decreased by 46% since 2005 (South West and England by 44%).

**Fig 3: Energy Performance Certificates (EPCs) of housing, Torbay, 2022**

Type of dwelling with EPC	% at Band C or above
<b>All dwellings</b>	<b>35.2%</b>
Existing dwellings	29.4%
New dwellings	98.3%
Detached	24.2%
Semi-detached	28.6%
Terraced	33.0%
Flats/maisonettes	46.2%


Source: [Department for Levelling Up, Housing and Communities, Office for National Statistics \(ONS\)](#)


Poor energy efficiency contributes to climate change, fuel poverty and the poor health linked to cold and damp homes. EPCs are required when buildings are constructed, sold or let and measure how energy efficient they are. Ratings range from A (best) to G (worst). In 2022, 35.2%

of EPCs for dwellings in Torbay were in the higher bands of A-C (Fig 3) which is 50 from the bottom out of 331 Local Authority districts.

The use of renewable energy sources contributes to reducing greenhouse gas emissions. At the end of 2021 Torbay's main renewable installation type was photovoltaics (solar) which is the case for the UK as a whole. Torbay had 2,204 photovoltaic installations and 2 onshore wind installations at this point ([BEIS](#)).

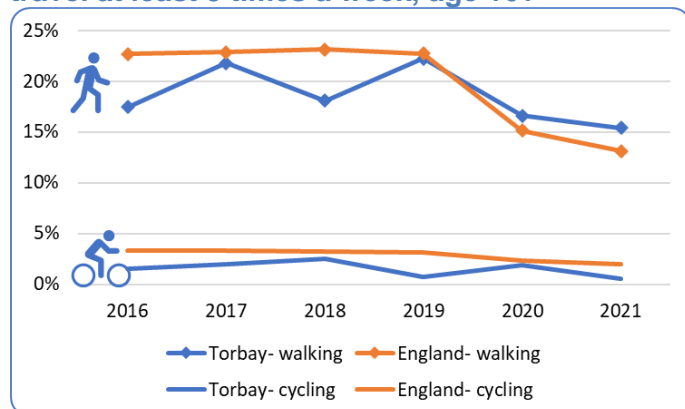
Using public transport rather than a motor vehicle where possible reduces emissions:

 The annual average daily flow of motor vehicles is the number estimated to pass a given point. In Torbay, numbers stayed relatively level in the last few years with a steep drop in 2020 before rising in 2021 but to a figure still much below previous levels, ([Department for Transport \(DfT\)](#)).

 The average number of bus journeys per person has been quite level in Torbay in the last few years but dropped steeply to 19.7 in 2020-21 ([DfT](#)).

- Torbay is lower than England for both motor vehicle and bus usage figures. From 2020 figures reduced during COVID restrictions.

**Fig 4: Residents cycling and walking for travel at least 3 times a week, age 16+**



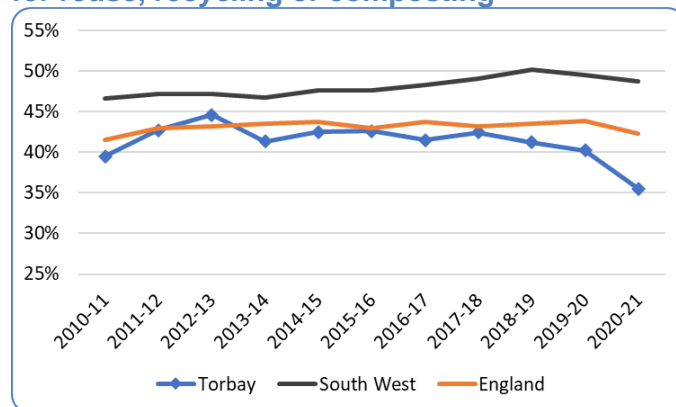
Source: [DfT, Active Lives Survey- Sport England](#)

Walking and cycling are good for physical and mental health and the climate. Fig 4 shows that the percentage of Torbay residents walking for travel fluctuated but decreased to 15.4% in 2021, higher than England (13.1%). For cycling Torbay is lower at 0.6% of residents in 2021 compared to 2.0% in England. Figures will have been impacted from 2020 during COVID restrictions.

Torbay waste reuse/ recycling/ composting rates have been reducing in the last few years (Fig 5) and are lower than the South West and England figures at 36% in 2020-21 compared to 49% (South West) and 42% (England). Torbay


household waste collected is on a reducing trend at 428kg per person in 2020-21 while the South West and England increased in 2020-21 to 439kg and 421kg respectively. The disruption caused by the COVID pandemic may have impacted these figures.

**Fig 5: Percentage of household waste sent for reuse, recycling or composting**




Source: [Defra](#)

Trees absorb CO<sub>2</sub> and remove air pollution so mitigate against climate change and ill health:

 Woodland covers an estimated 9.13% of Torbay, 2019, and 10% of England, 2021. ([Forest Research, ONS](#)).

This uses the National Forest Inventory which covers woodland of 0.5 hectares and above.

 [Torbay's Urban Forest study](#) in 2021 used the i-Tree Eco model to survey trees in Torbay (of over 7.5cm stem diameter at breast height and over 3m tall). It estimated 18.2% of Torbay as tree canopy cover compared to 11.8% in a previous survey in 2010 despite a reduction in the estimated number of trees.

Any increase in frequency and severity of storms increases risk of surface water and river flooding, with coastal flooding more likely because of rising sea levels. [UK climate projections](#) are available. Torbay Council produces [flood risk assessments](#) to manage local flood risk.

## References and further information:

- [Climate Change Committee- Independent Assessment of UK Climate Risk, 2021](#)
- [International Journal of Climatology 2022, Kendon, M. et al- State of the UK Climate 2021](#)
- [Met Office- Torbay Climate Pack, 2022](#)
- [Office for Health Improvement and Disparities- Climate and Health: Applying All Our Health, 2022](#)
- [Torbay Council- strategy documents and information](#)
- [United Nations- Climate Change](#)
- [Vaughan-Johncey C. Treeconomics et al- Torbay's Urban Forest, 2022](#)

(Data references/ links are throughout the document)