The Marlow Environmental Performance Index

The Marlow Environmental Performance Index (EPI) is an initiative by Marlow Town Council to report on how our town compares with the wider country on key indicators of sustainability. The report is based on robust statistics that can be tracked from year to year.

The aim of the index is to support more informed understanding across the community of the key sustainability challenges facing Marlow, provide an evidence base for selecting improvement targets, and tracking progress towards them.

All the indicators are based on high quality official or corporate statistics that are updated annually, and which have sufficient spatial resolution to detect Marlow's specific performance. This limits what can be included. But many of the most pressing environmental issues are represented, including climate change, resource consumption, waste generation and air pollution.

Because the underlying statistics come from different sources there is variation between them. Some are more up to date than others. Some are based on calendar years, others on financial years. "Marlow" is defined in different ways (the Marlow urban area excluding Marlow Bottom, the SL7 postcode including Marlow Bottom and Little Marlow, and where necessary the old Wycombe District, now known as the Wycombe area. This last is only a rough proxy for Marlow since the town accounts for only 11% of population in the Wycombe area). The wider area against which Marlow's performance is compared also varies (England, Great Britain, the whole of the UK, or just Buckinghamshire), depending on what statistics were available.

The Marlow Environmental Performance Index 2020

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How to interpret the indicator summaries

Each indicator starts with the latest year for which data is being reported.

The arrows show whether Marlow's performance improved or deteriorated in the latest reported year - green for good, red for bad. For some indicators "up" is good and for others "down" is good. An amber horizontal arrow means no change (defined as less than 1% in either direction).

The circles show how Marlow's performance compares with the wider country, coloured green for better or red for worse. In the case of air pollution the comparator is a legal standard rather than the national average.

Indicators for which the Wycombe area is used as a rough proxy for Marlow are identified with an asterisk.

1 - Air Pollution

2019 

The highest recorded level of nitrogen dioxide air pollution in Marlow fell by 4% in 2019. However, this was 9% higher than the maximum allowed by law.

2 - CO2 emissions

2018 

In 2018 domestic and transport emissions of carbon dioxide in Marlow* were equivalent to 3.94 tonnes per person. This was down 2% on the amount in 2017 but nearly one-fifth higher than the average for England.

3 - Electricity use and emissions

2018 

Average household consumption of electricity in Marlow fell by 3% in 2018. It was nearly two-fifths higher than the average for England.

4 - Natural gas use and emissions

2018 

Average household consumption of natural gas in Marlow remained level in 2018. It was nearly two-fifths higher than the average for England.

5 - Drinking water use

2019 

Average water consumption per person in Marlow remained level in 2019, and was nearly one-fifth higher than the average across England & Wales.

6 - Car ownership

2019 

There were 1.6 cars per household in postcode SL7 in 2019, the same as the previous year, and one-third higher than the average across Great Britain.

7 - Carbon dioxide rating of cars

2019 

The average carbon dioxide emissions rating of cars registered in Marlow fell by 2% in 2019 but was 4% higher than for Great Britain as a whole.

8 - Low-emission vehicles

2019 

The share of vehicles registered in Marlow that have ultra-low emissions (less than 75gCO2/km) increased more than three-fold in 2019 to reach a level more than four times higher than the Great Britain average.

9 - Waste generation

2019/20 

The amount of household waste collected per person in Marlow* (including from recycling centres) fell by 3% in 2019/20 and was 9% lower than the amount across Buckinghamshire.

10 - Waste recycling

2019/20 

The share of household waste from Marlow* sent for recycling, composting or reuse fell by 4% in 2019/20 and was 9% lower than the share across Buckinghamshire

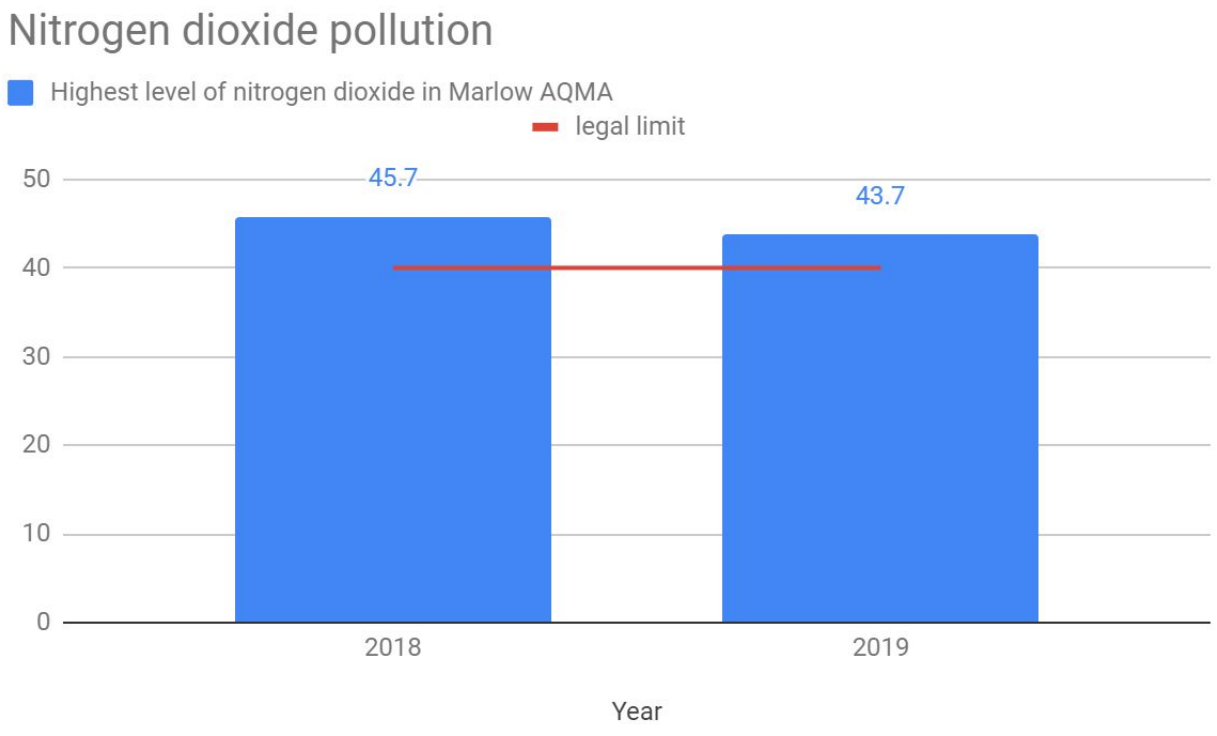
Indicator 1
Air Pollution

Poor air quality can harm health and the environment in many ways. Several roads in Marlow town centre have been designated an official Air Quality Management Area (AQMA) due to high levels of nitrogen dioxide (NO2), a pollutant that puts human health at risk, and that is caused mainly by traffic emissions.

In 2019 the highest annual average level of NO2 recorded in Marlow AQMA fell by 4.4% to 43.7 micrograms per cubic metre. This continues a multi-year downward trend in NO2 pollution in Marlow, but peak levels in 2019 were still 9.3% higher than the legal limit of 40 micrograms per cubic metre.

Marlow Town Council has released its own Clean Air Plan (https://www.marlow-tc.gov.uk/clean-air-plan/) aimed at supplementing the work of Buckinghamshire Council, with the objective of eliminating illegal levels of NO2 pollution by 2025.

These data were sourced from annual air quality status reports published by Buckinghamshire Council (https://www.wycombe.gov.uk/pages/Environment/Air-pollution/Air-quality-management.aspx).



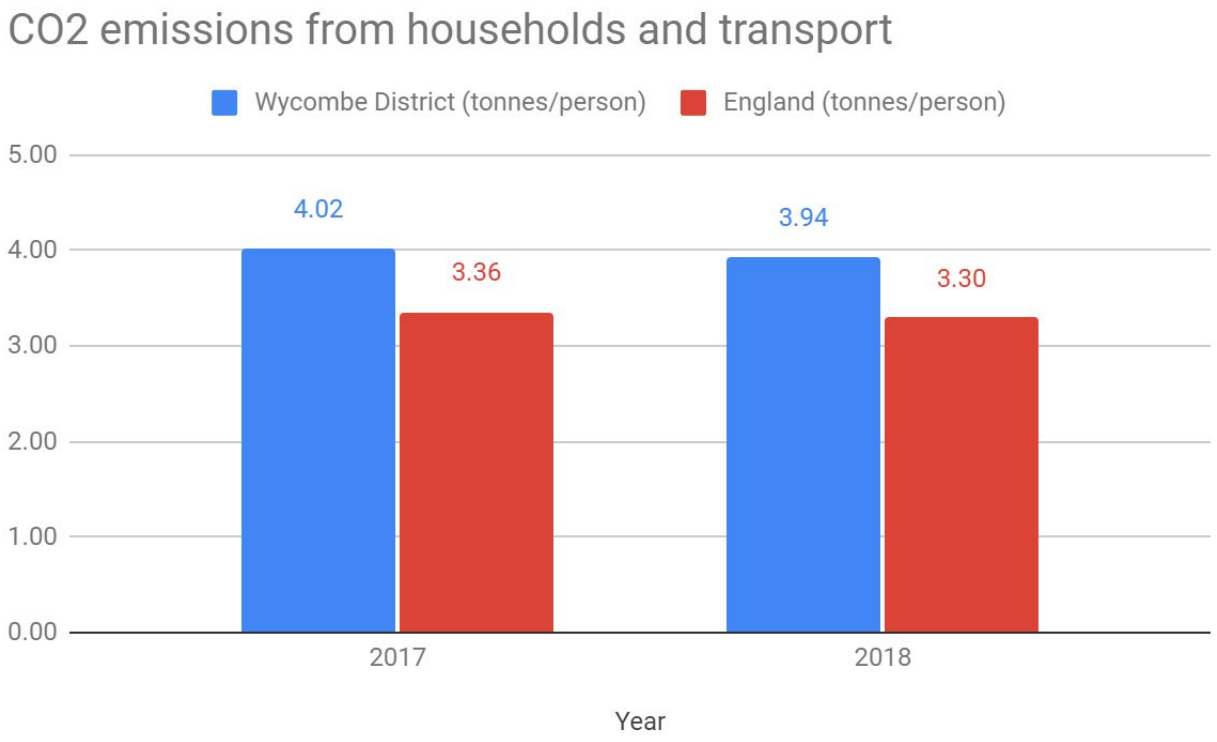
Indicator 2
CO2 emissions

Carbon dioxide is the principal driver of global warming. Radical reductions will be needed to achieve the Government's goal of net-zero carbon emissions by 2050. Official statistics on end-user emissions of CO2 in every local authority area in the UK enable us to report status and trends for the Wycombe area.

The official dataset includes industrial emissions plus emissions and absorption through land-use change. However, heavy industry is not evenly distributed across the country and the amount of carbon absorption through land-use is marginal, so just emissions from household energy and transport are included here.

In 2018 domestic and transport emissions of CO2 in the Wycombe area were equivalent to 3.94 tonnes per person. This was down 2% on the amount in 2017 but nearly one-fifth higher (19%) than the average for England.

These data were sourced from UK local authority and regional carbon dioxide emissions national statistics: 2005 to 2018 here:
https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-to-2018



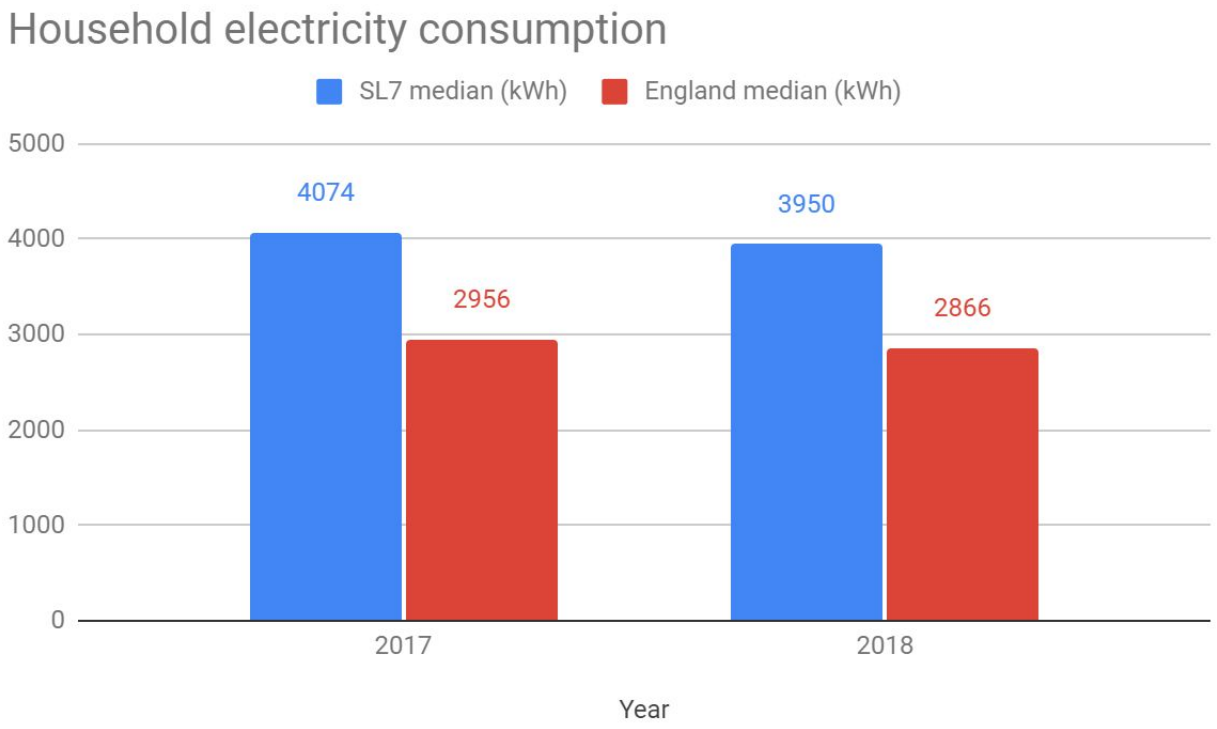
Indicator 3
Electricity use and emissions

Electricity in the UK supplied via the national grid comes from a variety of sources. The greenhouse gas emissions intensity of the UK grid is falling year on year as the amount of renewable electricity generation increases. However, it is still substantial, plus even low carbon generation has environmental impacts. So the absolute amount of electricity consumed is still an important environmental indicator. On the other hand, electrification is seen by experts as a key strategy for decarbonisation so it is likely that electricity use will rise in future years across the country, including in Marlow.

Average household electricity consumption in postcode SL7 fell by 3% in 2018 to 3950 kWh. It has been roughly stable since 2013. Average consumption in SL7 was nearly two-fifths (38%) higher than the average for England. Average consumption is expressed as the median rather than the mean to avoid skewing by a few large consumers.

In 2018 the average SL7 household's carbon dioxide emissions associated with electricity consumption were 0.96 tonnes down 11% on the previous year, due to the ongoing decarbonisation of the national grid mentioned above.

These data were sourced from UK government sub-national electricity data published by the Department for Business, Energy and Industrial Strategy here:
https://www.gov.uk/government/collections/sub-national-electricity-consumption-data
The conversion from electricity consumed to associated carbon dioxide emissions was made using conversion factors supplied by the UK Climate Change Committee.



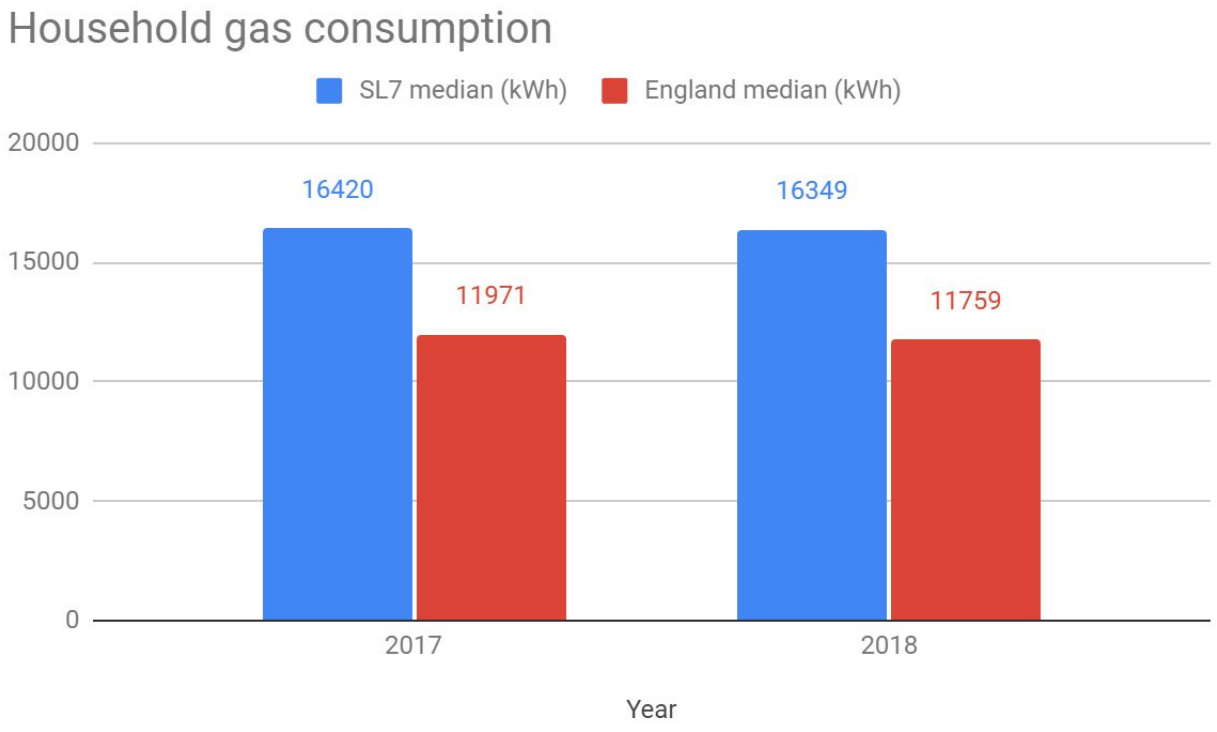
Indicator 4
Natural gas use and emissions

Natural gas is widely used by households for heating and cooking, like all fossil fuels producing climate altering carbon dioxide on combustion. Transitioning away from gas to alternatives like renewable hydrogen or electric heat pumps and stoves will be an important part of the UK's efforts to reach net zero carbon emissions.

Average household gas consumption in SL7 barely changed in 2018 (down by 0.4%). At 16,349 kWh it was nearly two-fifths above the England average (39% higher) and the gap between the SL7 and England averages widened. Average consumption is expressed as the median than the mean to more accurately reflect the average household.

In SL7, average household emissions of carbon dioxide from natural gas use were 3 tonnes in 2018, compared with 2.2 tonnes for England.

These data are sourced from the Department of Business, Energy and Industrial Strategy (BEIS) sub-national gas consumption data collection at:
https://www.gov.uk/government/collections/sub-national-gas-consumption-data
The conversion from gas consumed to tonnes of CO2 emitted was made using UK Government greenhouse gas conversion factors here:
https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020



Indicator 5
Drinking water use

Provision of high quality drinking water is associated with many environmental impacts, from lowering of water tables, construction of reservoirs, and maintaining and powering a massive distribution system. All drinking water consumed eventually has to be treated at sewage treatment works, which continue to cause pollution incidents across the country.

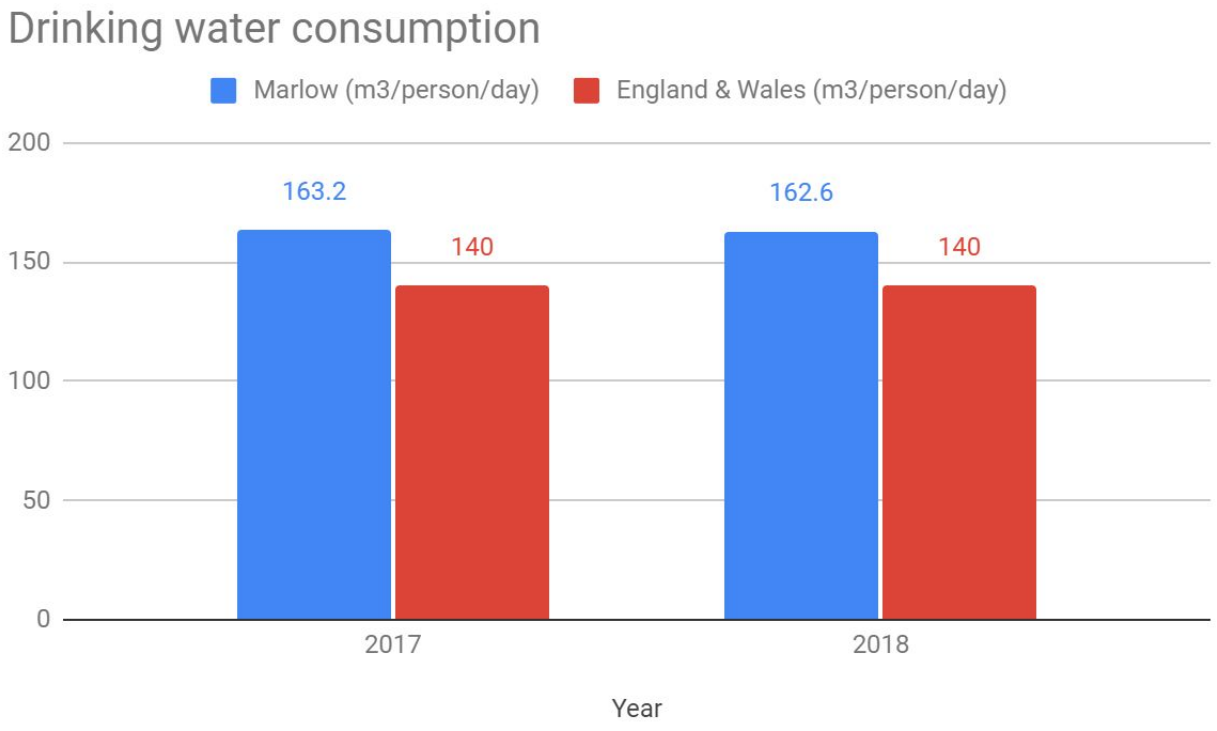
Average drinking water consumption in Marlow in the year to 1 April 2019 was 163 litres per person per day, down by an insignificant 0.4% on the previous year. Average consumption in Marlow was about 16% higher than the average for England & Wales.

Domestic water consumption is strongly influenced by weather so single year changes don't necessarily reflect underlying change. However, per-person consumption in Marlow has been roughly stable for five years, so there is no sign of any trend towards more efficient usage.

Daily consumption per person in Marlow the year to April 2019 was significantly lower in households with water meters (145 litres/person/day) than in households without (190 litres/person/day).

The data for water consumption in Marlow were supplied by Thames Water via a freedom of information request. The figure for average daily consumption across England & Wales is drawn from a consultancy report published by the water industry regulator Ofwat here: https://www.ofwat.gov.uk/wp-content/uploads/2018/05/The-long-term-potential-for-deep-reductions-in-household-water-demand-report-by-Artesia-Consulting.pdf

Marlow is defined as just the built up area of Marlow, so excluding Marlow Bottom.

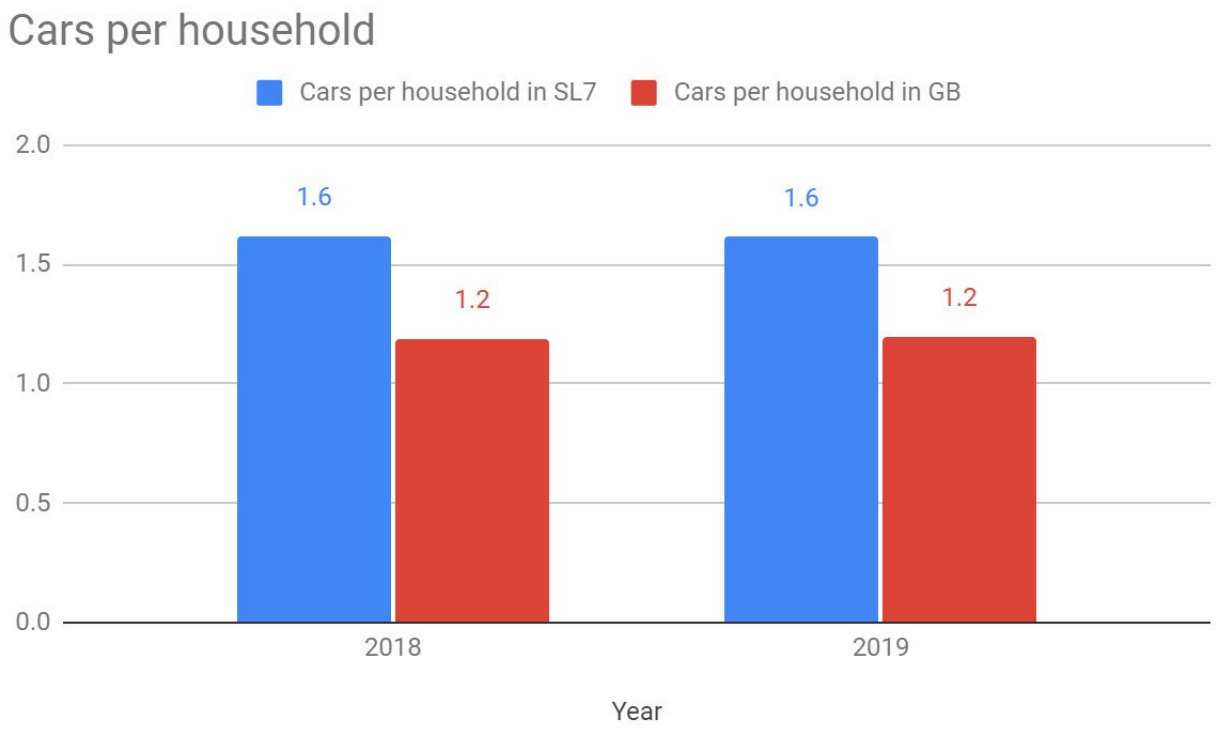


Indicator 6
Car ownership

Vehicles have significant environmental impacts across their life-cycle, not just when they are driven. The number of cars per household is a measure of this wider impact. In order to reach net zero greenhouse gas emissions it is highly likely that the total number of cars (including those that emit little or no greenhouse gases when they are driven) will have to come down.

At the end of 2019 the average number of cars per household in postcode SL7 was 1.6. This was virtually the same as the previous year, and one-third higher than the Great Britain average of 1.2 per household.

These data were sourced from the Department for Transport (for number of cars) and the Office for National Statistics (for number of households).

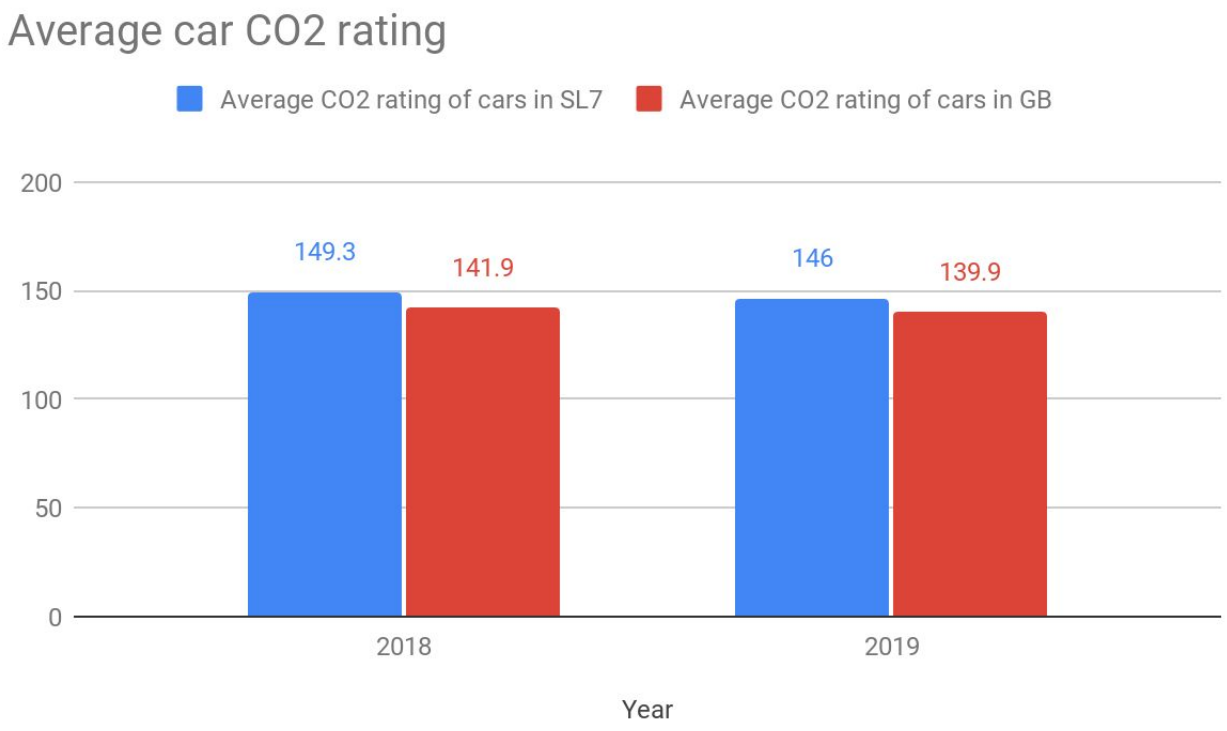


Indicator 7
Carbon dioxide rating of cars

Emissions of carbon dioxide from car exhausts are an important contributor to global warming. The average amount of emissions per mile driven varies widely by vehicle age and model - newer and smaller cars tend to have lower emissions. The average emissions rating of cars needs to fall to nearly zero if the UK is to stop contributing to climate change.

At the end of 2019 the average CO2 rating of cars in postcode SL7 was 146.0 grams of carbon dioxide per kilometre. This was 2.2% lower than at the end of 2018 but 4.4% higher than the Great British average.

These data are sourced from the Department for Transport.

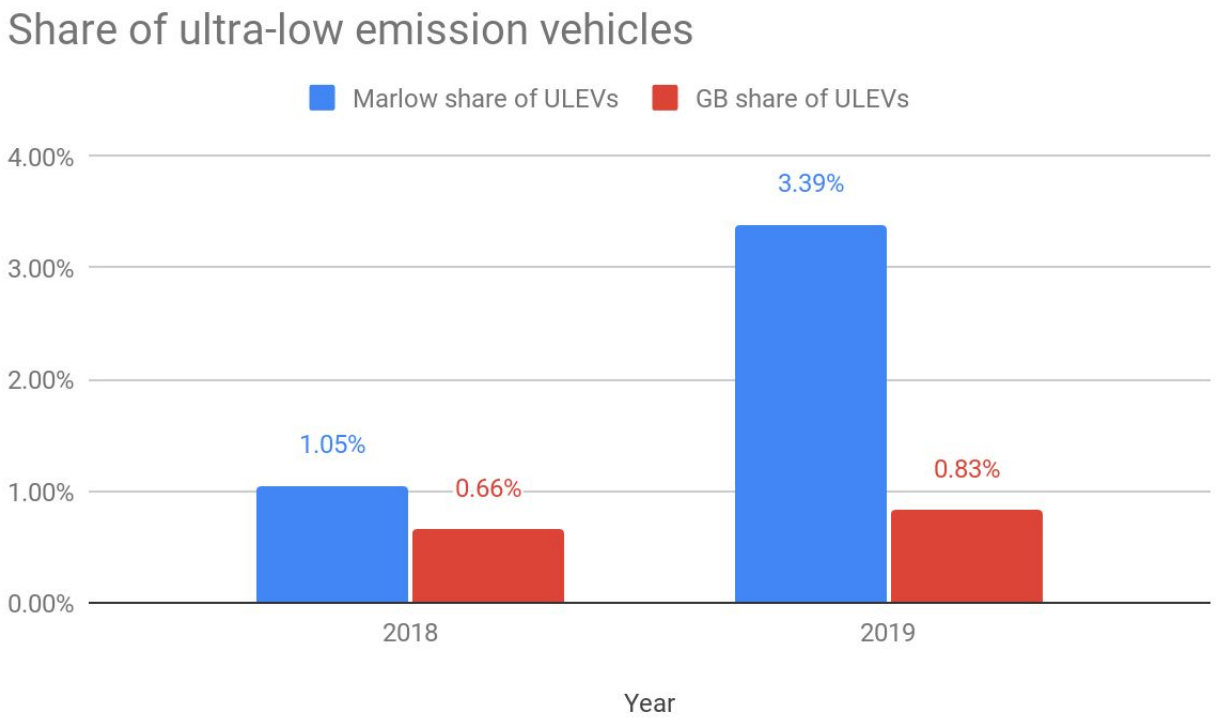


Indicator 8
Low emission vehicles

The government classifies vehicles that emit less than 75 grams of carbon dioxide per kilometre as ultra-low emission vehicles (ULEVs). This standard can be met with several technologies, but notably includes plug-in electric cars, which have zero tailpipe emissions of pollutants and climate altering carbon dioxide.

At the end of 2019 the share of ULEVs among all cars registered in postcode SL7 was 3.4%, more than three times the level the year before and more than four times the Great Britain average.

These data are sourced from the Department for Transport with an adjustment for activity by SL7-based specialist electric vehicle leasing company Drive Electric, without which the numbers for SL7 would be exaggerated.



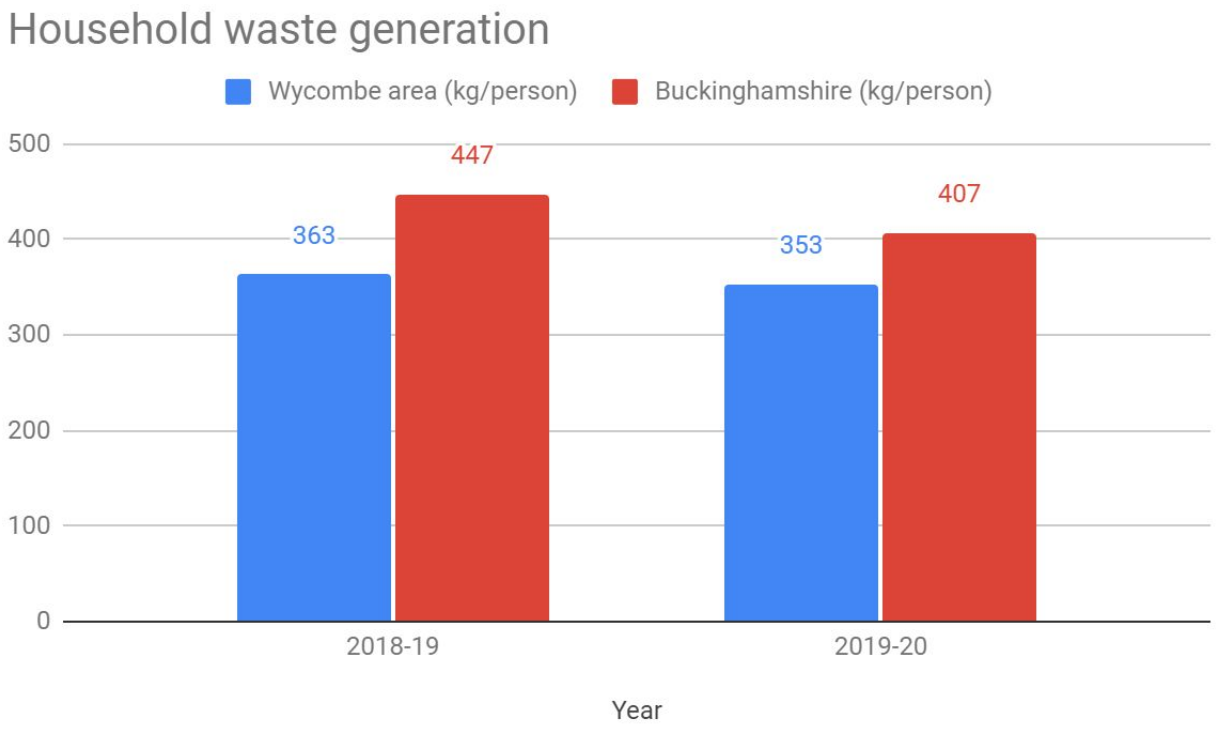
Indicator 9
Waste generation

The amount of household waste produced is an indicator of how consumptive an area or country is. The more “stuff” purchased and thrown away the higher the amount of waste that will be generated. In addition, all waste that is produced has its own environmental impacts, including emissions from transport, landfilling or combustion.

In financial year 2019/20 the amount of household waste generated per person in the Wycombe area was 353kg, down 3% on the amount in 2018/19 and well below the equivalent across Buckinghamshire.

The amount of household waste generated per person in Wycombe area has been consistently lower than that for Buckinghamshire and also the whole of England in recent years.

These data have been provided by Buckinghamshire Council. Figures for 2019/20 are provisional.



Indicator 10
Waste recycling

One of the UK Government's main environmental policies is to transition from a throwaway society to a more circular economy. The rate of household waste recycling is one way of measuring the degree of circularity (though it does not capture private reuse or products lasting longer).

In 2019/20 the share of household waste in Wycombe area sent for recycling, reuse or composting fell by 4% to 49.3%. This is the first time since 2013/14 that the Wycombe area's recycling rate has fallen below the national target of 50% recycling by 2020 and is well below the old Buckinghamshire County Council's target level of 57% by 2016/17.

The household waste recycling rate across Buckinghamshire also fell in 2019/20, but was still 54.9%, above the national target for 2020. Nevertheless recycling in Wycombe has remained well above the average across England, which has hovered around 45% up to 2018/19.

These data have been provided by Buckinghamshire Council. Figures for 2019/20 are provisional.