KENT ENVIRONMENT INDICATORS

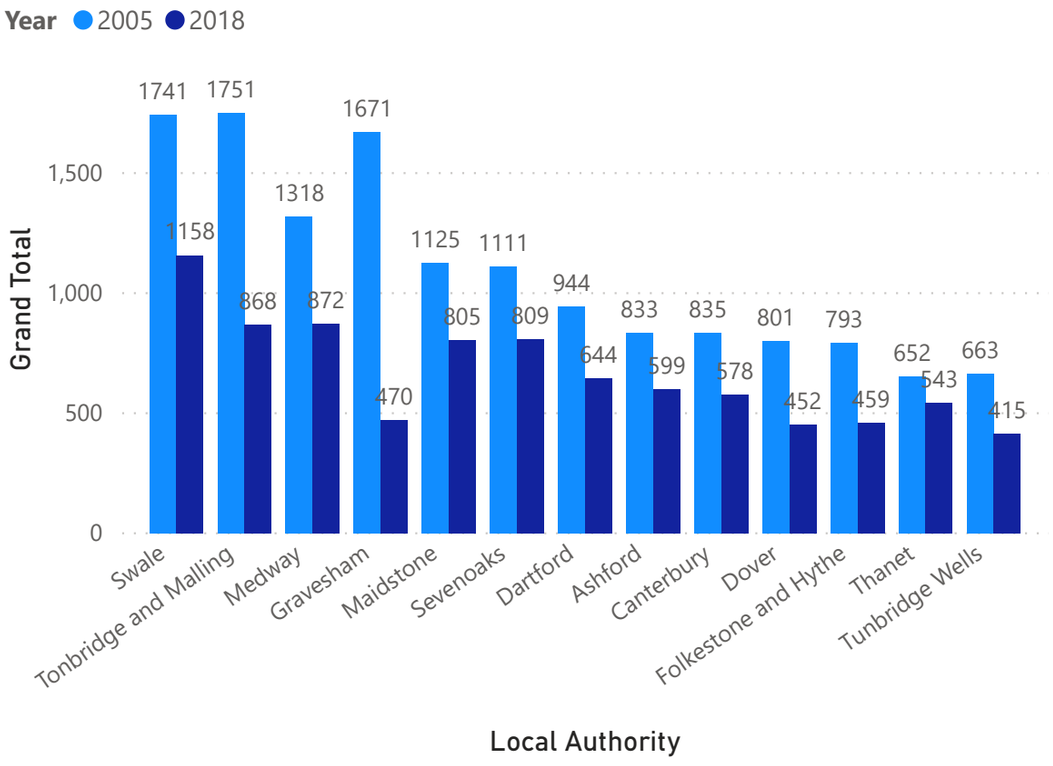
The following indicators are produced to support the Kent Environment Strategy and the Energy and Low Emissions Strategy.

This data is produced and summarised by Kent County Council.

For inquiries, please contact KES@kent.gov.uk

CO2 EMISSIONS

Total carbon dioxide (CO2) emissions



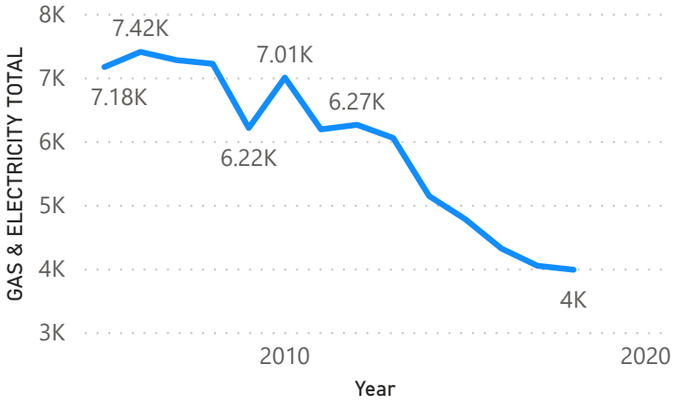
A nationally reliable and consistent evidence base for use in tracking carbon reduction policy. The 'total emissions' target includes emissions from industrial, domestic and transport sectors.

BEIS local authority greenhouse gas emissions data. The data is published annually with a twoyear time lag (ie. data published in 2019 is for the 2017 calendar year).

Our target is to reduce total Kent CO2 emissions to net-zero by 2050.

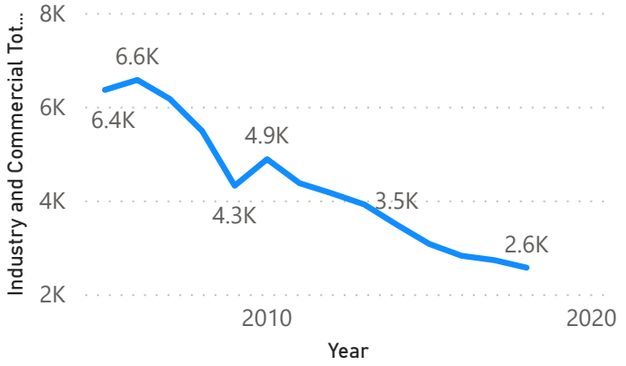
Total CO2 emissions have fallen by 39% in Kent & Medway (2005-2018).

Total CO2 emissions by Gas & Electricity



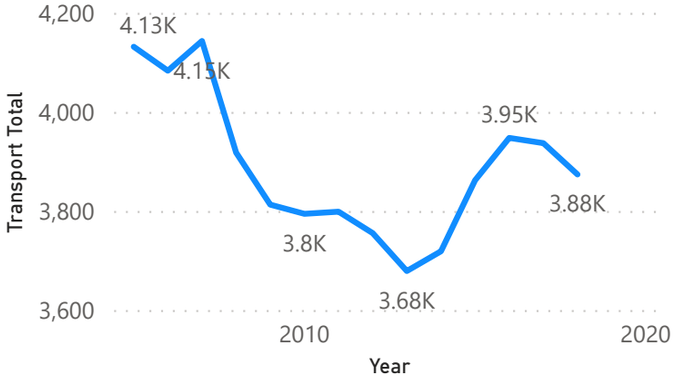
Total CO2 emissions from the Gas & Electricity sector have fallen -2% from 2018 to 2017, and by -44% compared to a 2005 baseline.

Total CO2 emissions from Industry & Commercial



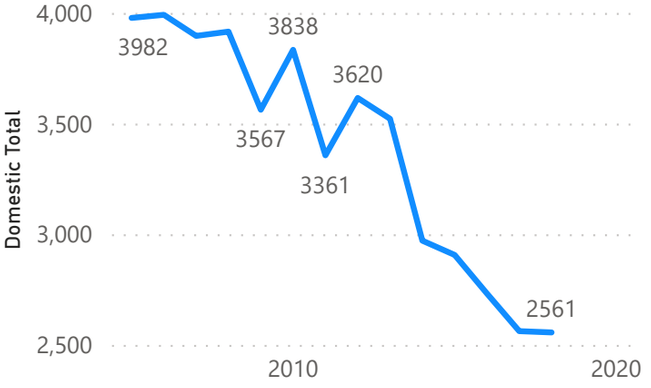
Total CO2 emissions from the Industry & Commercial sector have fallen -6% from 2018 to 2017, and by -59% compared to a 2005 baseline.

Total CO2 emissions from Transport



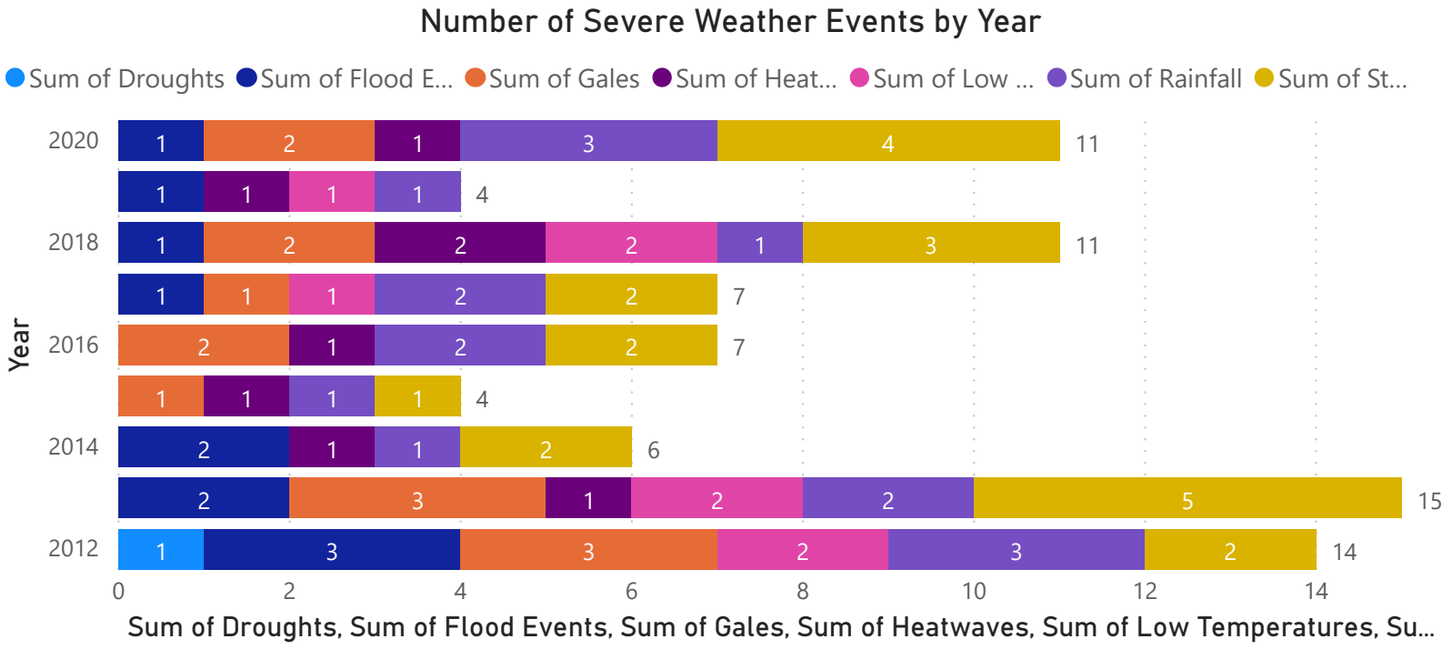
Total CO2 emissions from the Transport sector have fallen -2% from 2018 to 2017, and by -6% compared to a 2005 baseline.

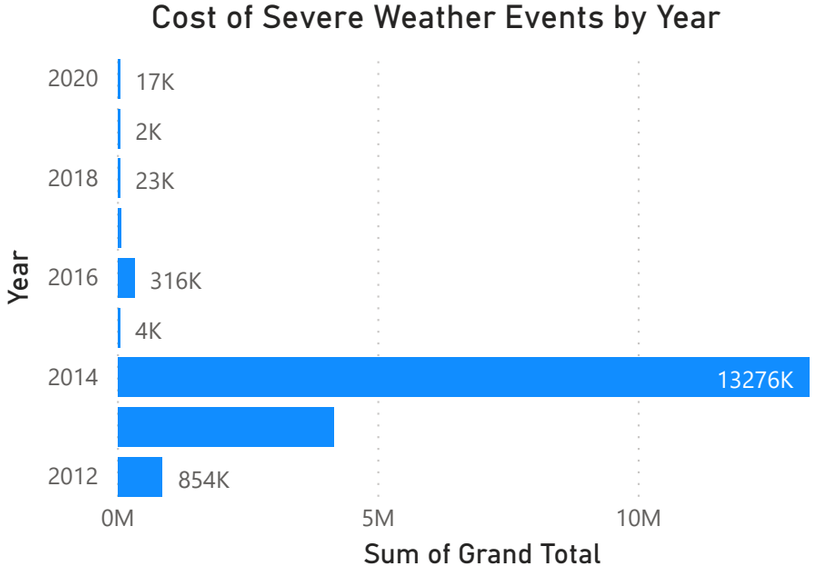
Total CO2 emissions from Domestic



Total CO2 emissions from the Domestic sector have remained level from 2018 to 2017, and fallen by -36% compared to a 2005 baseline.

CLIMATE CHANGE IMPACT





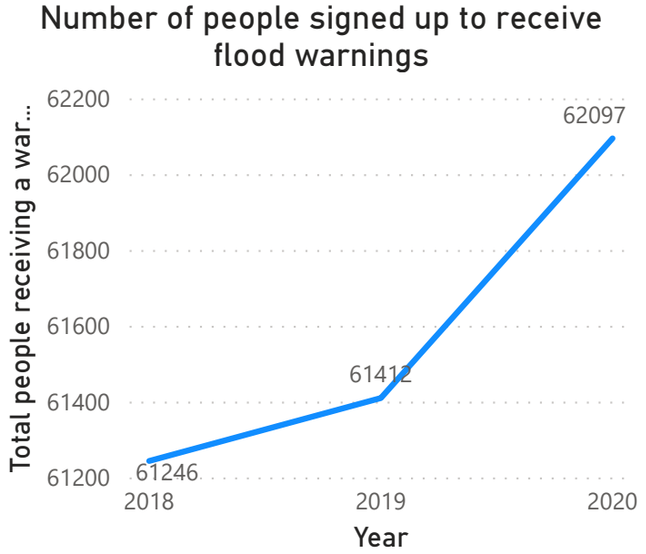
KCC uses a Severe Weather Monitoring System (SWIMS). Reports on the data collected are published annually.

Within our Kent Environment Strategy indicators, we monitor the number and cost of severe weather events, and the number of users registered to use SWIMS.

In 2020, there were 11 severe weather events recorded in Kent, down -21% since 2012.

In 2020, severe weather events in Kent cost £17,000, this is down -98% since records began in 2012.

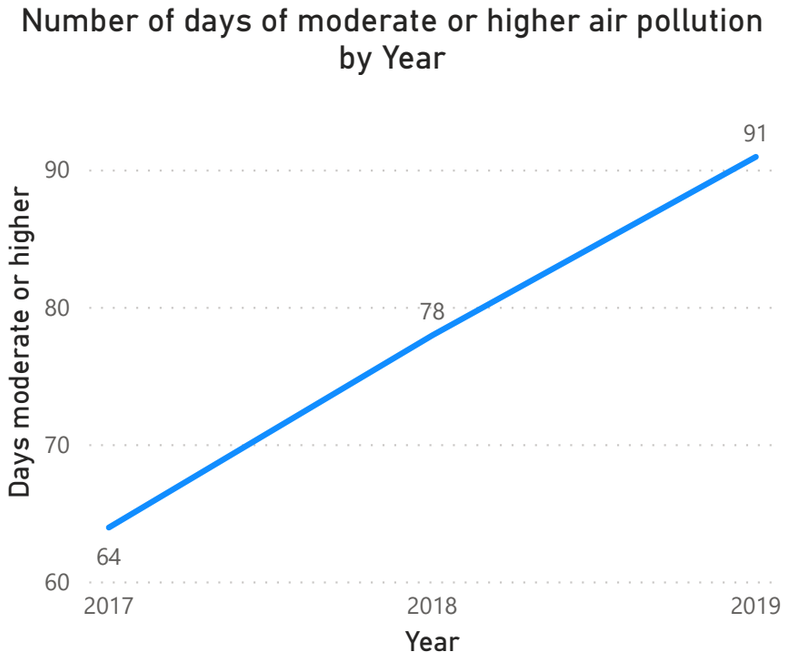
In 2021, there are 122 people active users on SWIMS, which has fallen -13% since 2020, however, we have changed to a new system.



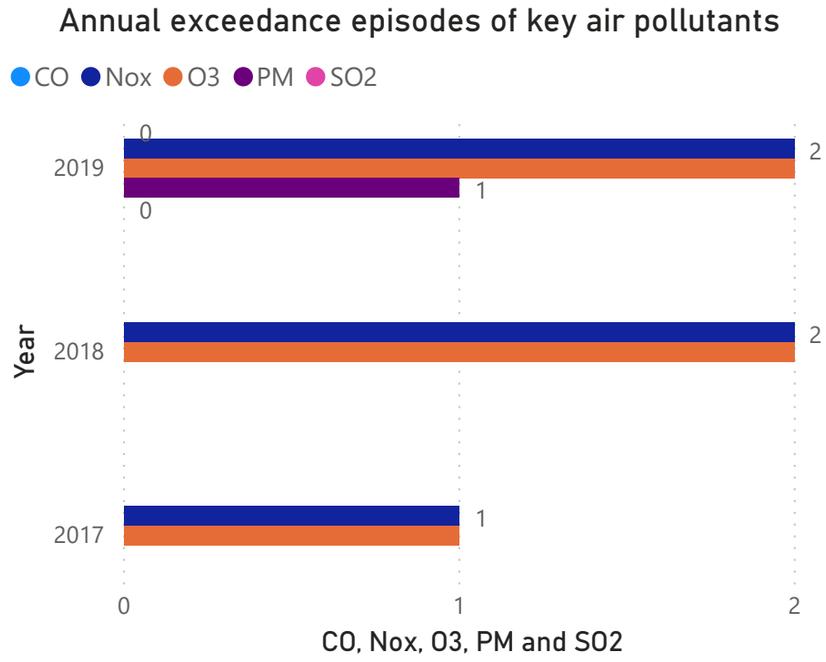
Floodline is a national service that provides homes and businesses with free flood warnings by phone, email or text message. The number of people registered is indicative of personal and community awareness of flood risk. The local Environment Agency office monitors how many people are registered to receive flood warnings and provides annual updates as part of Kent Environment Strategy monitoring and reporting process.

Between July 2019 and June 2020 there has been an overall increase of 685 Flood Warning registrations in Kent. This equates 1,253 new Extended Direct Warning registrations. The number of full registrations has fallen (by 568) due to changes in target areas with Flood Warning System.

AIR QUALITY



In 2019 there were 91 days where at least one pollutant recorded levels of moderate or higher air pollution (25% of the year). In 2018 there were 78 days of moderate of higher air pollution, so this has increased by 15%.



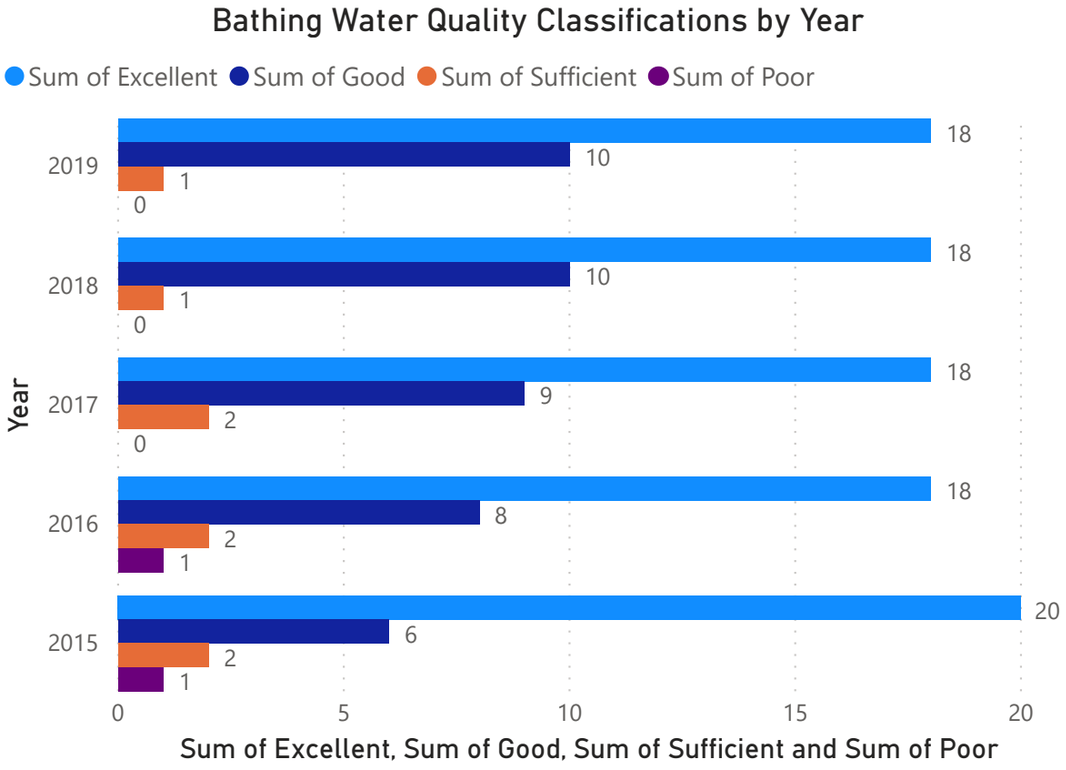
In 2019 there were 5 site failures. 2 site failures were for NOx, 2 site failures for O3 and 1 for PM. In 2018 there were 4 total failures so this has increased slightly.

The Kent and Medway Air Quality Monitoring Network gathers measurements from local monitoring stations and combines with data from the UK national network (ARUN) and the nitrogen dioxide diffusion tube network, to provide a comprehensive overview of air quality within Kent and Medway. The results are reported annually by the Kent and Medway Air Quality Partnership. Those results for Sevenoaks and Dartford are reported on by their district councils.

The air quality pollutants monitored include particulate matter (PM2.5, PM10 and secondary PM), nitrogen oxides (NOx – made up of NO and NO2), ozone (O3), sulphur dioxide (SO2) and carbon monoxide (CO). Local authorities have a legal duty to review and assess air quality on an ongoing basis, against a set of health-based objectives. The targets are set out in the UK Air Quality Strategy.

In order to track long term trends, we are only using annual exceedance levels and the number of days of moderate or worse air pollution (as defined by the UK Daily Air Quality Index) as Kent Environment Strategy indicators. The Kent and Medway Air Quality Partnership monitors and reports against all national Air Quality Strategy objectives. Dartford and Sevenoaks' air quality are reported on separately as part of the London Air Quality Network and through their own district reporting. *Data earlier than 2017 is not comparable*

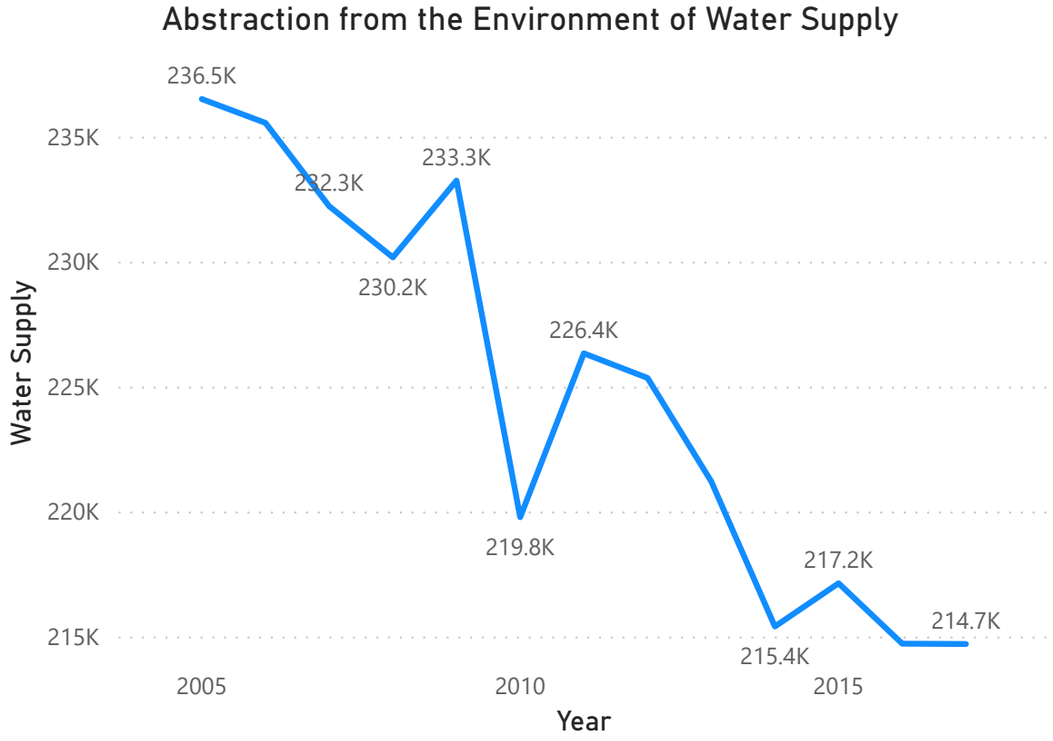
WATER QUALITY & RESOURCES



A national standard for bathing water quality. As well as an environmental indicator, poor water quality can have an economic impact on tourism. The targets are set nationally. The Environment Agency takes up to twenty water samples at each of England's designated bathing waters between May and September each year. A classification for each bathing water is calculated annually based on samples from the previous four years.

100% of bathing waters should be classified as "sufficient" or higher.

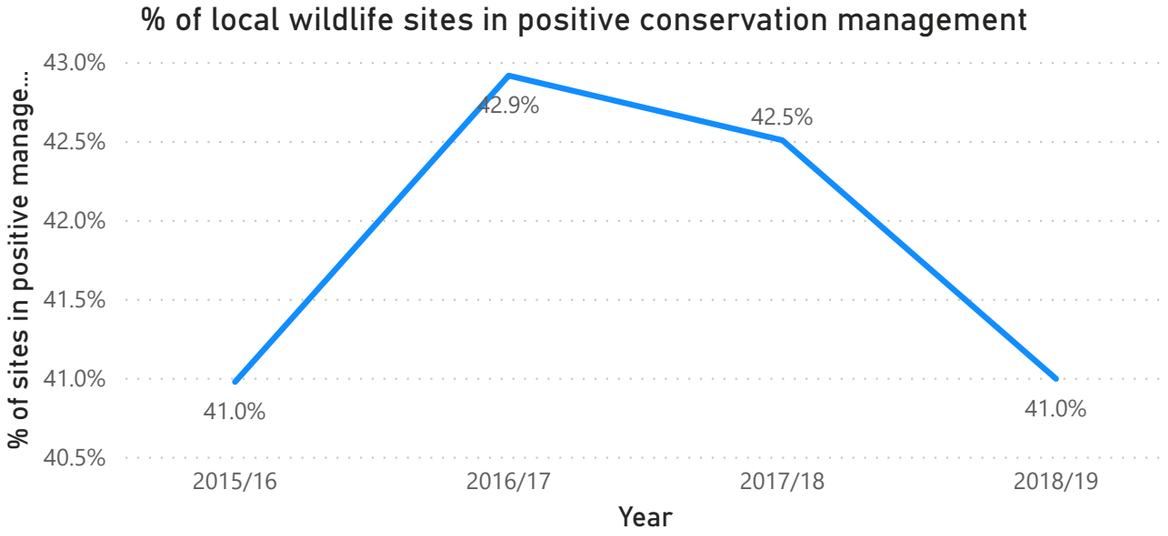
In 2019 100% of bathing waters were classified as "sufficient" or greater. 97% of bathing waters were classified as "good" or "excellent", a 7% increase since 2015. There has been no change since 2018.

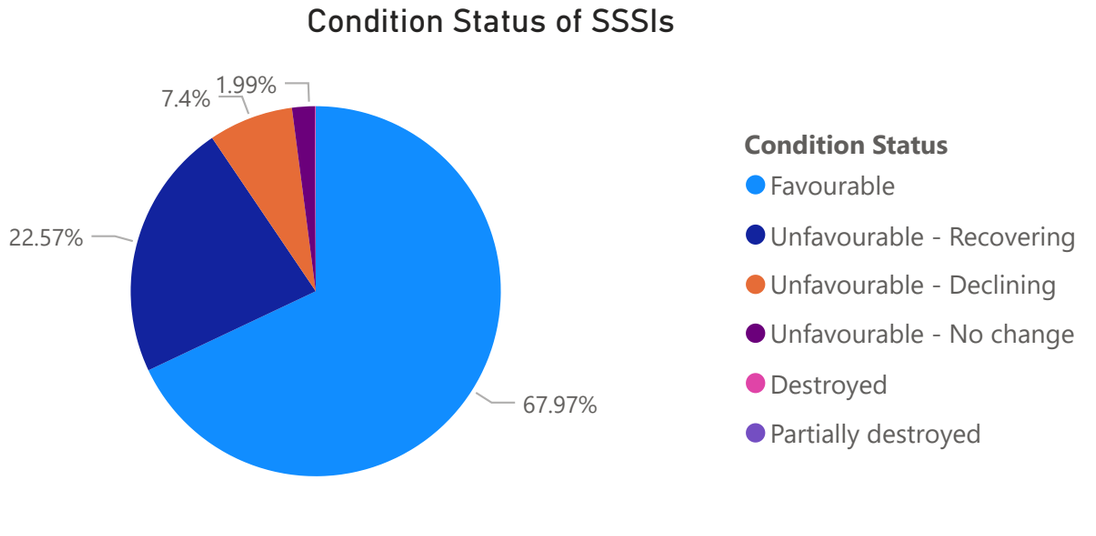


Water for domestic, individual and commercial use is often abstracted from groundwater and rivers. Abstraction data can indicate water consumption and wastage. The Environment Agency publishes National abstraction data annually, with a two-year time lag. A Kent level subset of this data (Darent and Cray, Medway, North Kent and Swale, Stour and Rother catchments) is provided on request by the local Environment Agency office.

Abstraction for water supply has declined by 9% from 236,546 to 214,740 ML (2005-2017).

NATURAL ENVIRONMENT





% Of Local Wildlife Sites in Positive Conservation Management

The Kent Wildlife Trust conducts an annual review of Local Wildlife Sites on behalf of the Kent Nature Partnership. All local authorities must submit this indicator data to the Secretary of State annually. DEFRA

Our target: Over 50% of local wildlife sites will be in positive management by 2045

In 2018/19, 41% of Kent's Local Wildlife Sites are in positive management, a -1.5% decrease since 2017/18.

% of SSSIs in Favourable Recovery

Natural England (NE) has an Annual Programme of Integrated Site Assessment (ISAs). SSSIs are the most important areas of natural heritage (in the country) and each site is designated as a representative example of the habitat(s). Monitoring & reporting on site condition is part of NE's statutory responsibility. Natural England produces a SSSI Condition Summary at a county level that can be viewed on their website. The data is updated continually, as condition surveys are completed.

Our target: 75% of Kent's freshwater SSSIs are in favourable conditions by 2045

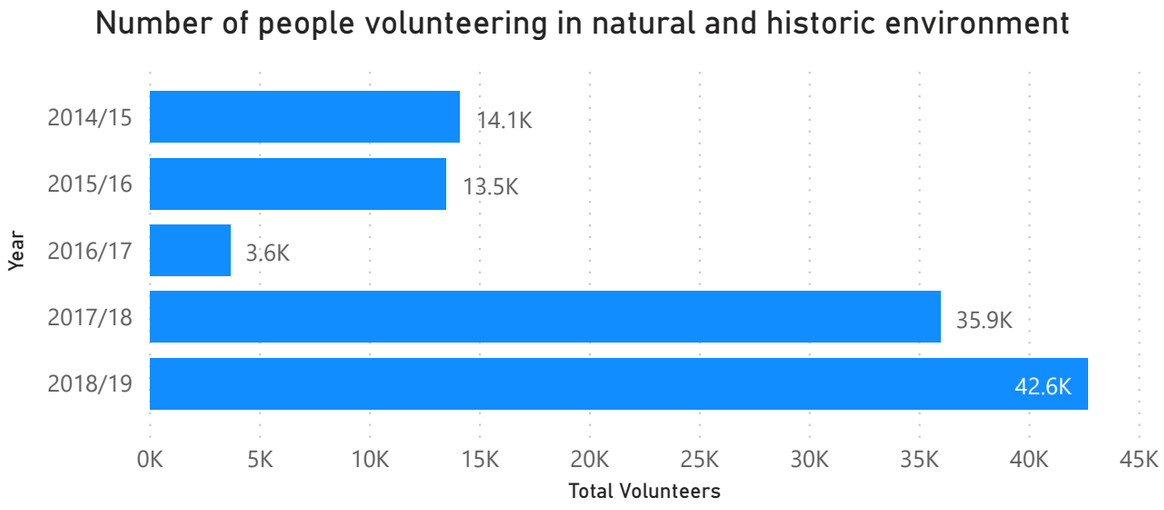
90.55% of Kent's SSSIs are in favourable or recovering conditions (July 2020), in line with 2019 & 2018.

Extent of high-value semi natural habitat

20.8% of terrestrial habitat is designated as high-value semi natural habitat.
33.57% of marine habitat is designated as high-value semi natural habitat.

The Kent Nature Partnership produced the baseline data to inform the Kent Biodiversity Strategy.
High-value semi natural habitat includes all Kent Biodiversity Strategy Priority habitats, all ancient woodland, SSSIs, LWS, Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Higher Level Environmental/Countryside Stewardship schemes with maintain/manage/restore options and all Marine Conservation Zones. *This data is not updated regularly so is provided as a baseline indicator.*

NATURAL ENVIRONMENT



This data has been collected from different organisations; Kent Wildlife Trust, Bat Conservation Trust, RSPB, National Trust, Kent Country Parks and Kent Country Management Partnerships. 2017/2018 is our baseline year of data reporting, and this indicator will continue to be development and analysed.

In 2018/2019 42,640 people have volunteered within Kent's natural and historic environment. An increase of 19% vs the previous year.
We cannot yet update this data for 2019/20 due to disruptions caused by the Coronavirus pandemic.

Public use of natural and historic environment

Understanding the public's use of the natural environment gives an indication of its social value and the public's willingness to pay. KCC carries out a public perception survey every 2 years, posing the question *"How often would you say you use the natural and historic environment, for example a local park, gardens or wider countryside, for leisure or recreation?"*

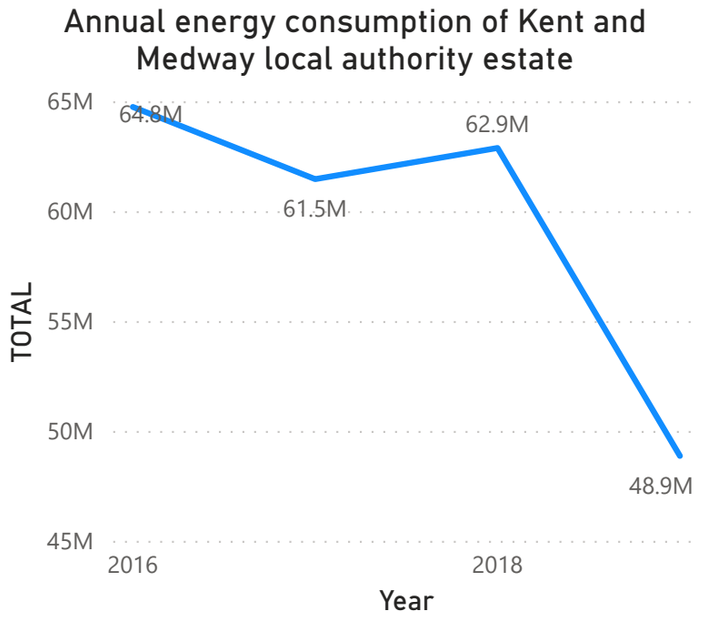
In 2020, 82% of residents claimed to use the natural environment more than once a month, up from 80% in 2018.

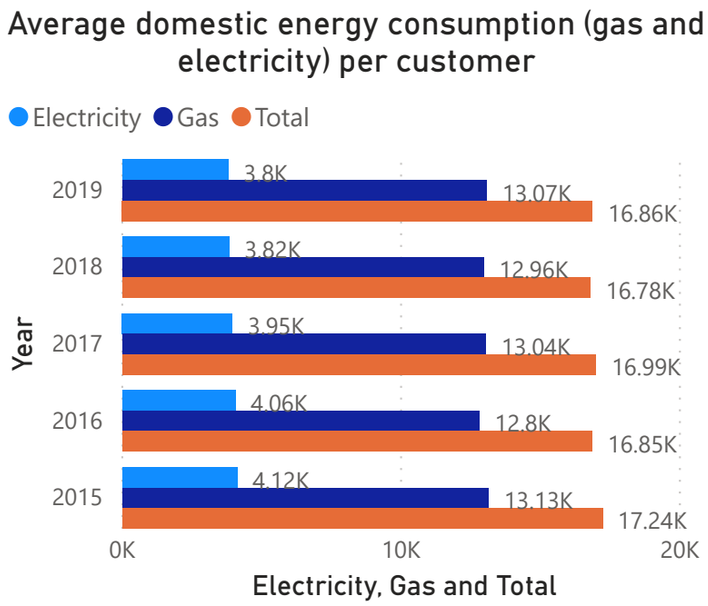
The cost of Ash Dieback on KCC Highway estates to KCC

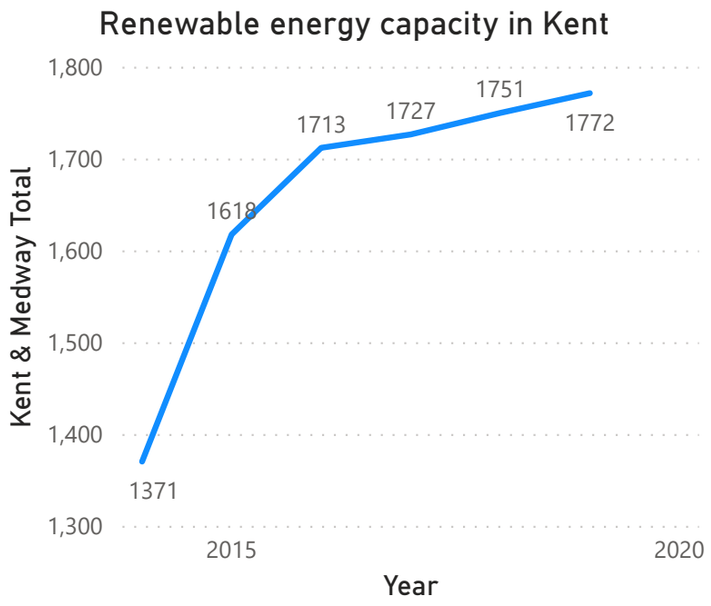
The prevailing extent and intensity of dieback across ash populations in the county will inevitably mean that a significant increase in health and safety tree works will be required in coming years with a resultant impact upon all relevant budgets. The cost to KCC Highways, Transportation & Waste (HTW) for the felling & pruning of Ash Dieback infected Ash on KCC Highway estate is increasing and with a worsening prognosis, as evidenced by annual survey data, this suggests that the costs to KCC of the response to ash dieback is now likely to increase steeply year on year.

The cost to KCC HTW has increased by 803% between 2014/15 and 2019/20. In 2019/20 the total cost was £51,417.

ENERGY







Although influenced by weather conditions and changes to estate size, council's energy consumption (gas and electricity) within their own buildings/estate can provide an indicator of how the public sector is responding to the energy challenge. LASER provide the data on request.

Since a 2013 baseline, energy consumption has fallen by -28% for the estate. In 2019, consumption fell by -22% vs 2018.

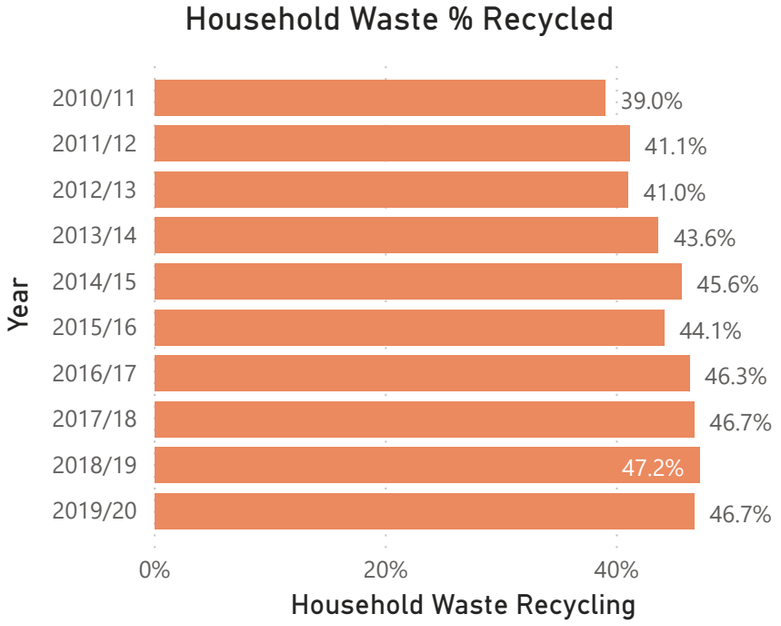
Average domestic energy consumption per customer indicates the impact energy efficiency grants, offers and technologies are having on resident's behaviour and energy consumption. BEIS Sub-National Electricity and Gas Consumption Statistics – by Local Authority area. The data is updated annually.

Overall, average domestic energy consumption has fallen 2.2% since 2015, down from 17,244 kWh in 2015, to 16,862 kWh in 2019. Electricity consumption has fallen by 7.8%, and gas consumption has fallen by 0.5%

The capacity of solar, wind, biomass and Combined Heat and Power (CHP) in Kent. Increasing renewable energy production will reduce emissions and improve future energy security. Analysis is taken from BEIS data at local authority level

A 1.4% increase in the total capacity of active renewable technologies providing electricity. Up from 1,751 MW in 2018 to 1,772 in 2019. Total generation has increased by 2% between 2018 and 2019.

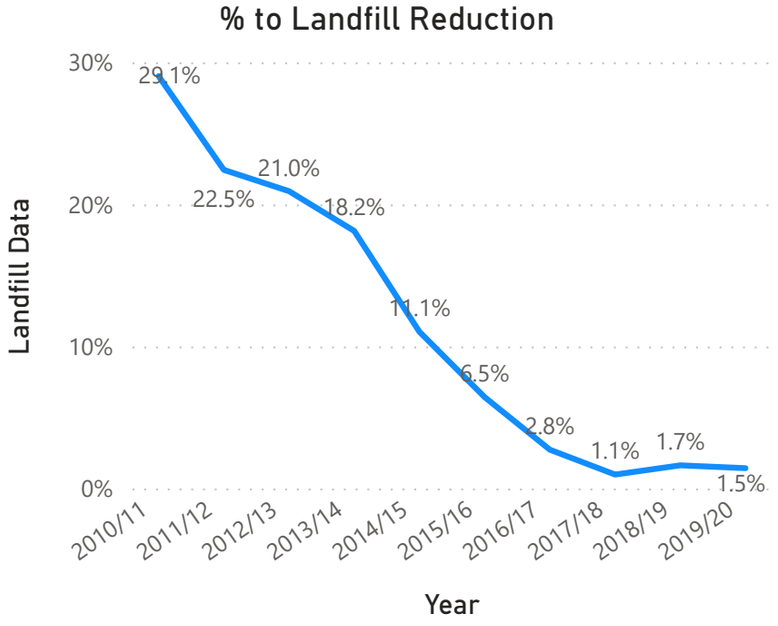
WASTE



Recycling is a major means of reducing the environmental impacts of mining, processing and transportation of virgin materials. It also helps to reduce waste to landfill. DEFRA Local Authority Collected Waste Statistics – Percentage of household waste sent for reuse, recycling or composting (Ex NI192)

Our Target: Recycle/compost at least 50% of Kent's household waste by 2020/21

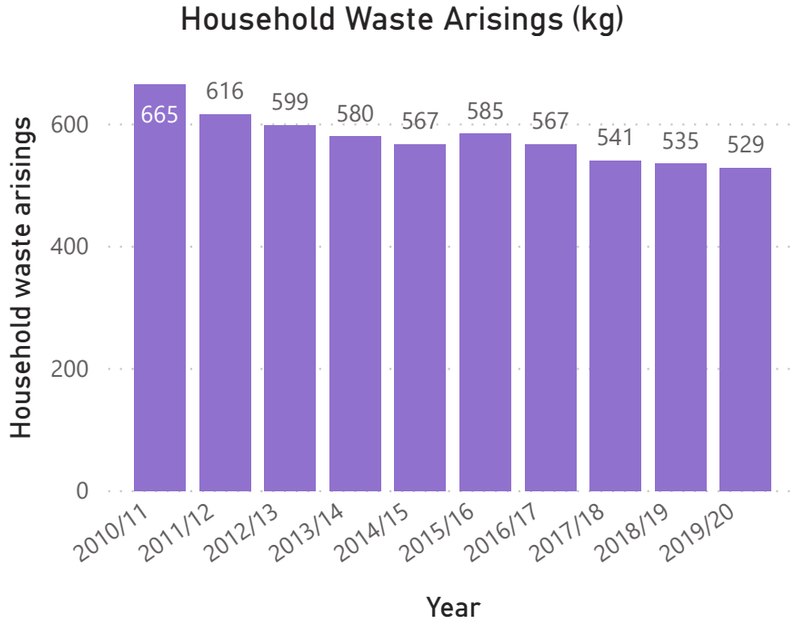
46.7% of Kent's household waste tonnage was recycled/composted in 2019/20. A 0.5% decrease since 2018/19.



Reduction of use of landfill is a major means of cutting methane emissions. Methane is 21 times more harmful than carbon dioxide in terms of atmospheric thermal effects.
DEFRA Local Authority Collected Waste Statistics – Percentage of municipal waste sent to landfill (Ex NI193)

Our Target: Send no more than 2% of Kent's municipal waste to landfill by 2020/21

1.5% of Kent's municipal waste tonnage went to landfill in 2019/20. A 0.2% decrease since 2018/19.

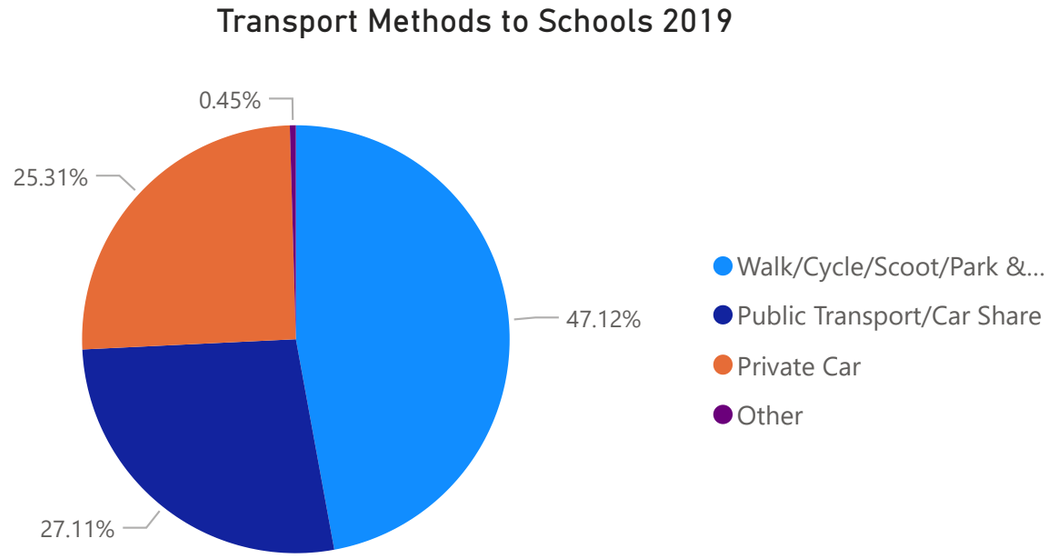


The state of the economy tends to have a major bearing on the tonnage of items discarded by households, increase in tonnage can have significant environmental, financial and social consequences which require concerted efforts internationally, nationally, and locally to combat.
DEFRA Local Authority Collected Waste Statistics – Residual household waste per household (kg/household) (Ex NI191)

Our Target: Reduce Kent's residual household waste per household by 10% by 2020/21.

In 2019/20, average residual household waste was 529kg. This is a decrease of 1% since 2018/19.

TRANSPORT - JOURNEYS



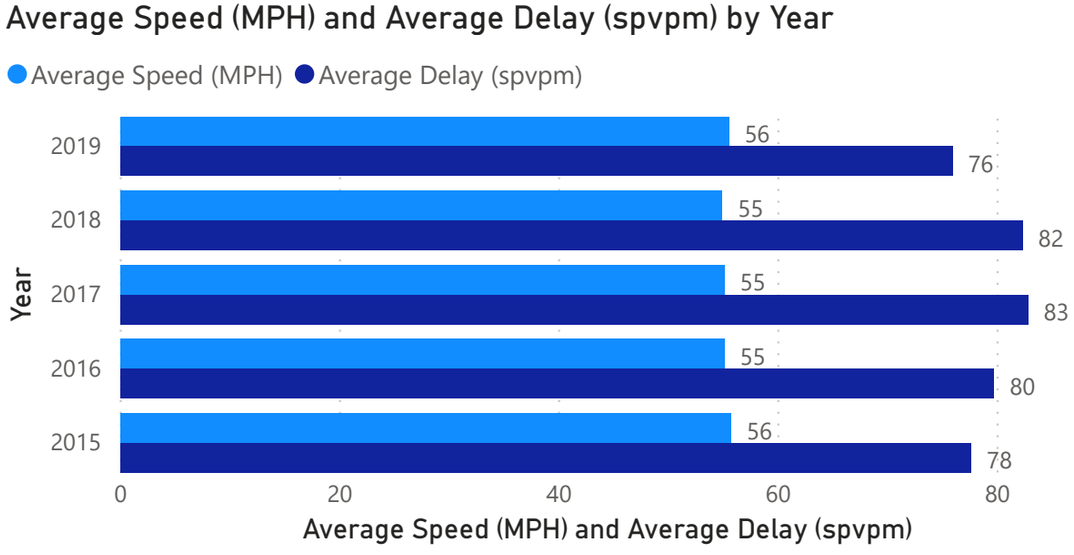
Active travel to Schools & Work is a key indicator and target within the KCC Active Travel Strategy. Journeys made through physical activity (eg. walking, cycling, scooting or parking and walking part the way) can bring many benefits for personal health and wellbeing, as well as wider economic and environmental benefits. KCC data collected through school travel plans by the Transport Innovations Team.

Our Targets: 2 in 3 primary children (66%) will travel actively to school by 2021. 1 in 3 secondary children (33%) will travel actively to school by 2021

60.5% of primary school children travelled actively to school in 2019, an increase of 9% compared to the baseline (2013).
33.7% of secondary school children travelled actively to school in 2019, an increase of 7.2% compared to the baseline (2013).

Our Target: In 2021, 40% of people that work within 5km of their home will actively travel to work in Kent. *data updated every 10 years*

In 2011, 32% of people that work within 5km of their home actively travel to work in Kent.

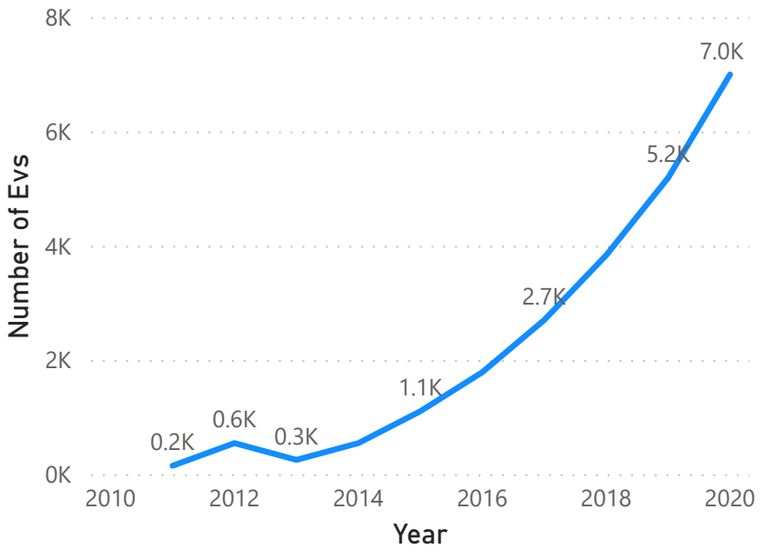


Journey delays on local A-roads. Since 2014, the government has produced statistics on the average delays on locally managed A-roads, when compared to free flowing traffic. The statistic is measured in second per vehicle per mile (spvpm). An increase in congestion is bad for efficiency as it means people are taking longer to get to their destinations. Congestion also increases carbon emissions and can impact air quality. Department for Transport data – GGN0501 Average delay on local A-roads, annual averages, by local authority.

Delays in journey times between 2015 and 2019 have decreased from 33.3 to 32.8 seconds per vehicle per mile (spvpm) for Kent, and 44.3 to 43.1 spvpm for Medway.

TRANSPORT - VEHICLES

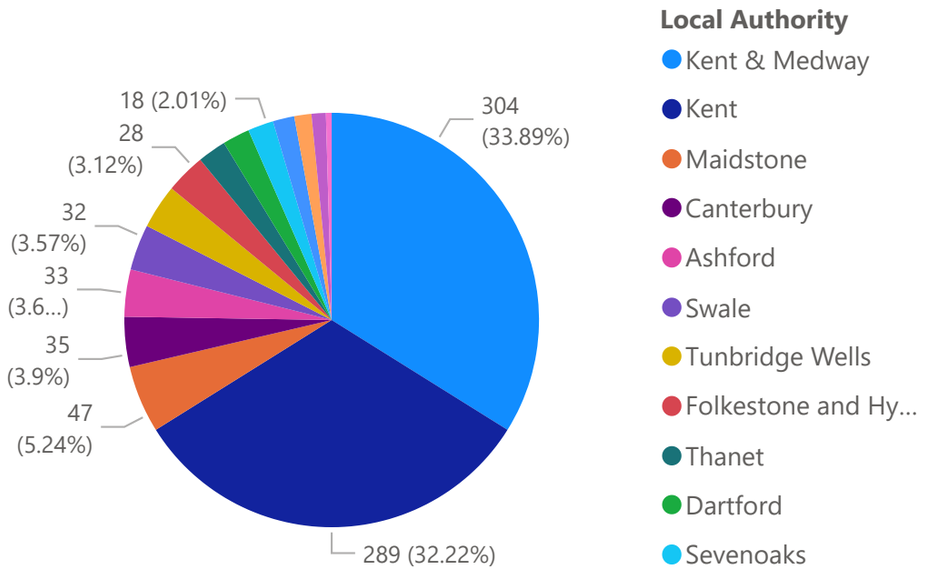
Electric Vehicle Registrations



Uptake of electric vehicles should indicate the effectiveness of infrastructure improvements and government policy. Department for Transport vehicle licensing statistics - VEH0132 Licensed ultra-low emission vehicles by local authority area.

There are 7,015 electric vehicle registrations in Kent and Medway as of Q3 2020, up 45% since Q3 2019.

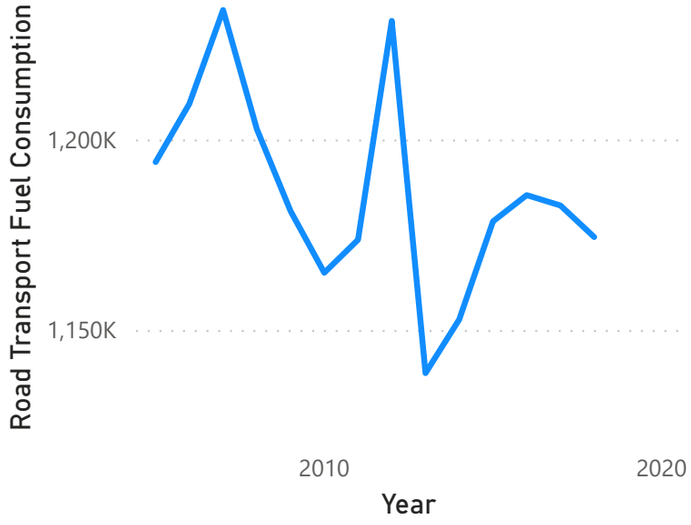
EV Charging Devices by Local Authority in 2020



The number of charging devices for electric vehicles should indicate the effectiveness of infrastructure improvements and government policy. This should, but likely will not, reflect the number of electric vehicles in each local authority – tracking this change into the future will be crucial for monitoring the supply and demand. Charging devices that are not open to the public, such as domestic or private chargers are excluded from the data. Department for Transport and Zap-Map have collaborated to create a map showing the number of public electric vehicle charging devices in the UK. The number of charge points is updated regularly, and the charge point network is dynamic, updating every 5 minutes.

In Kent and Medway there are 289 public charging devices, 69 of these are rapid charging devices – as of April 2020.

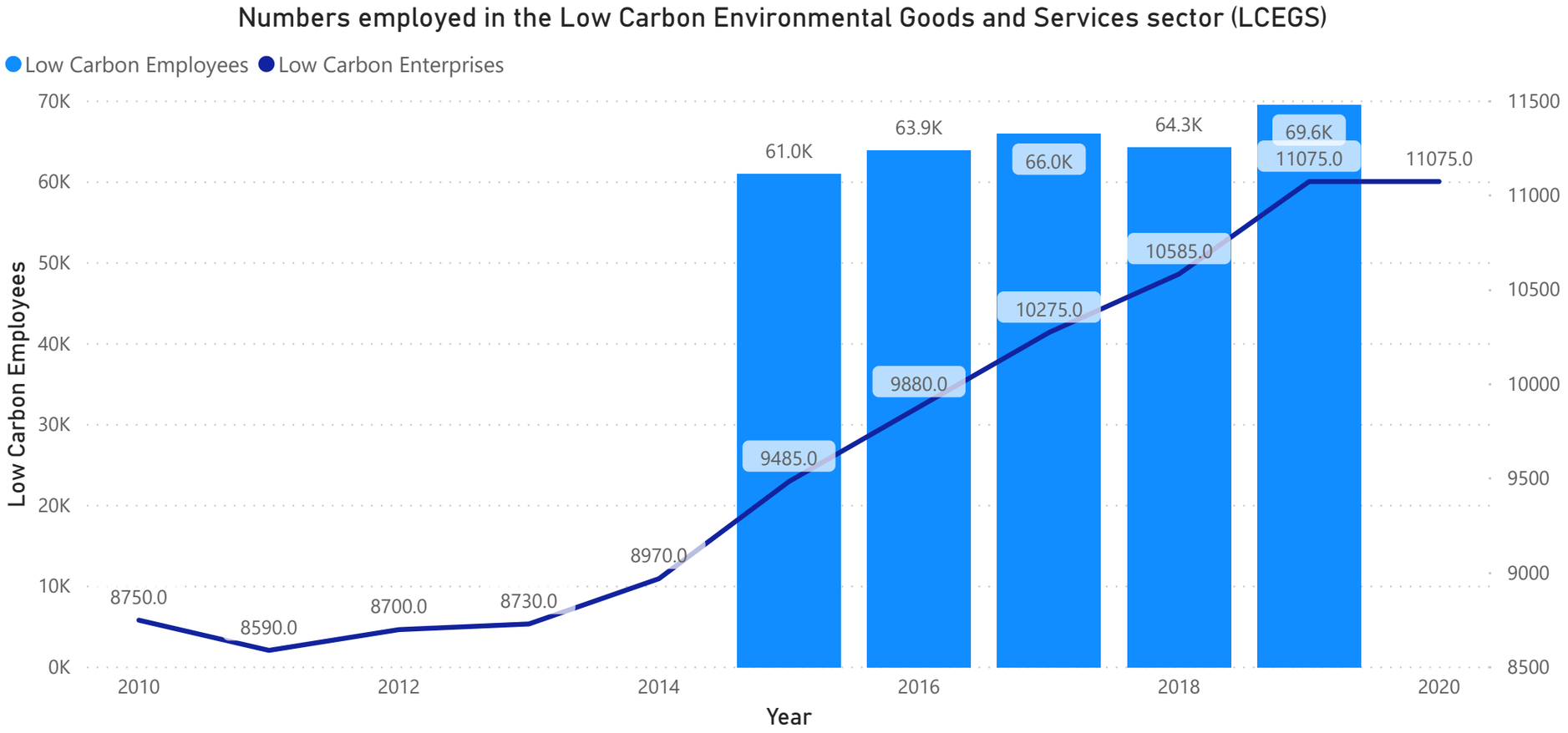
Road Transport Fuel Consumption by Year



A national dataset that estimates the fuel consumed by different types of vehicles on different road types. The data uses estimates based on where fuel was consumed rather than where the fuel was purchased in order to make the dataset more comparable with other datasets.
BEIS produces the Sub-national road transport fuel consumption statistics annually with a 2 year time lag (ie. data published in 2018 is for the 2016 calendar year). Consumption is given in tonnes of oil equivalent (by energy content) as opposed to tonnes of petrol and diesel fuel (by weight).

There has been fall of 0.7% between 2017 and 2018 in the total tons of oil equivalent being used as transport fuel consumption – from 1,182,943 tons of oil equivalent to 1,174,655 tons of oil equivalent.

BUSINESS & ECONOMY



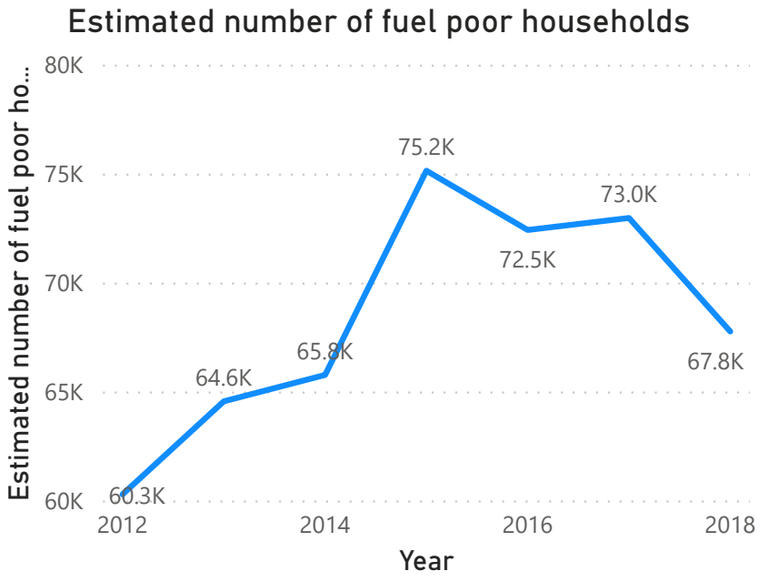
The LCEGS sector is growing and contributes to the Kent economy. It forms part of the UK and wider EU aspirations to move toward a low carbon energy future. Application of grouped UK Standard Industry Code (2007) to annual employment figures sourced from the ONS Business Register Employment Survey (BRES) data. The number of low carbon industry enterprises is sourced from the UK Business Counts.

Our Target: Increase the number of jobs in the LCEGS sector by 10% by 2020, from a 2012 baseline of 52,000.

There were 61,000 people employed in Kent LCEGS sector jobs in 2015. As of 2019 this has increased to 69,600.

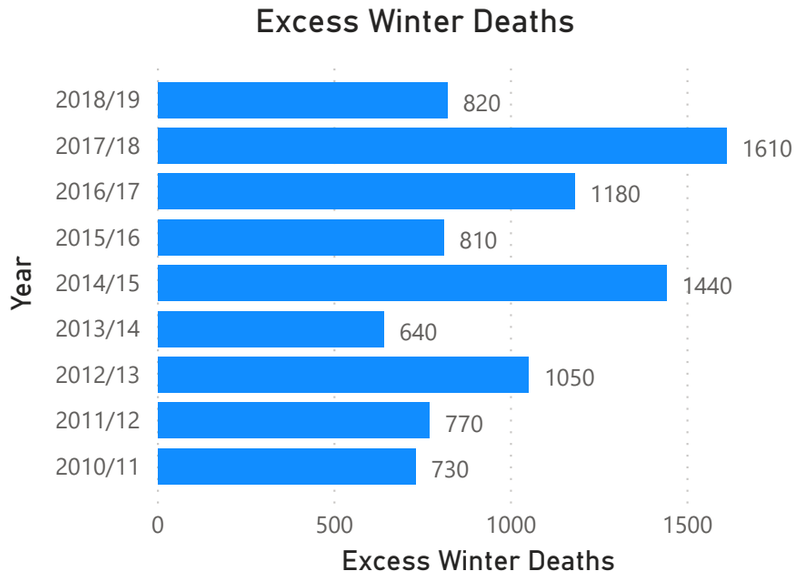
The number of low carbon industry enterprises in Kent and Medway has also increased from 8,750 in 2010, to 11,075 in 2020.

HEALTH & HOUSING



Fuel Poverty is described as the percentage of households in an area that experience fuel poverty based on the "Low income, high cost" methodology. Fuel poverty is driven by low income, poor energy efficiency of the home and high energy prices. Those living in fuel poverty often live at low temperatures, and this has been shown to be linked with a range of negative health outcomes. Reducing fuel poverty can help increase the energy efficiency of homes and improve the health of residents. BEIS Sub-regional fuel poverty data. The data is published annually with a two-year time lag (ie. data published in 2018 is for the 2016 calendar year).

In 2018, 67,801 (8.9%) Kent and Medway households are estimated to be in fuel poverty. This is a 0.7% fall since 2017, although a 0.3% increase on 2012 percentage.



Excess Winter Deaths (EWD) are defined by the Office for National Statistics as the difference between the number of deaths during winter months (December–March) and the average number of deaths during the preceding four months (August–November) and the following four months (April-July). The Excess Winter Mortality (EWM) index is calculated so that comparisons can be made between sexes, ages and regions. Large fluctuations in EWD are common due to variables such as cold weather snaps and winter viruses. Cold, draughty and damp homes can influence EWD. Data is sourced from Office for National Statistics.

In 2018/19, there were 820 Winter Deaths (EWD) in Kent, with an averaged Excess Winter Mortality Index (EWM) of 15.3%

Land Use Change – Green Belt land and Flood risk

Land use change statistics are a useful dataset that provides insight into the nature of change, the areas of land affected and the location of change. This national dataset focuses on changes to a developed use, including residential development. Statistics on changes within the Green Belt and changes within areas of high flood risk are also presented. With increasing pressure to build more housing whilst maintaining biodiversity and habitats monitoring these changes is important.

Ministry of Housing, Communities and Local Government data – Live tables on land use change statistics (2017-2018 residential address change)

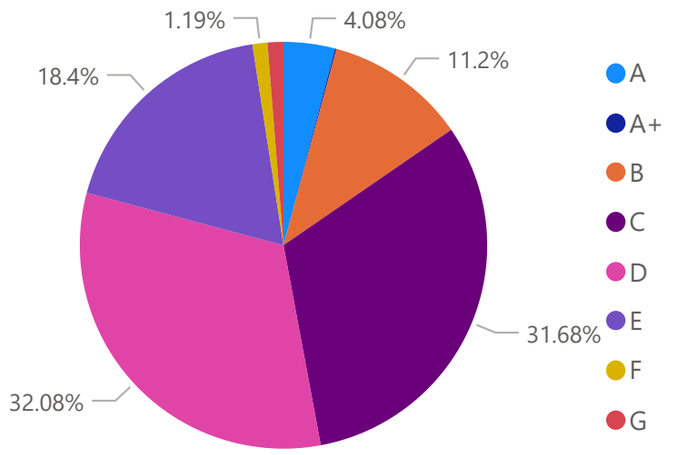
Green Belt and Brownfield

In Kent and Medway 25% of land is within the Green Belt. Between 2015-2018, 6% of new residential addresses have been created in the Green Belt. 54% of new Kent and Medway residential addresses have been built on previously developed land (between 2015-2018).

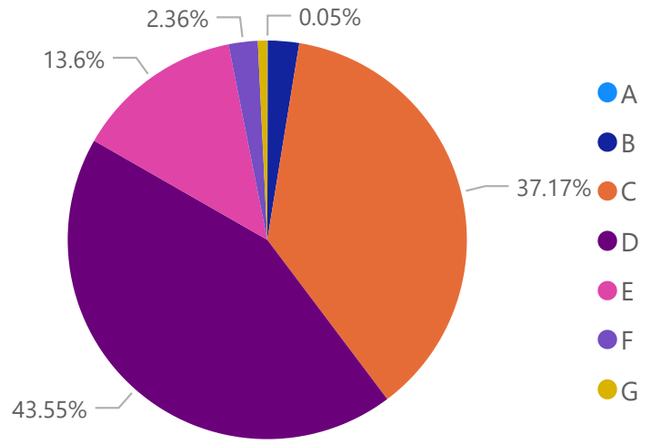
Flood Zone 3 In Kent and Medway 15% of land is within the National Flood Zone 3. Between 2015-2018, 12% of new residential addresses have been created in the National Flood Zone 3.

HEALTH & HOUSING

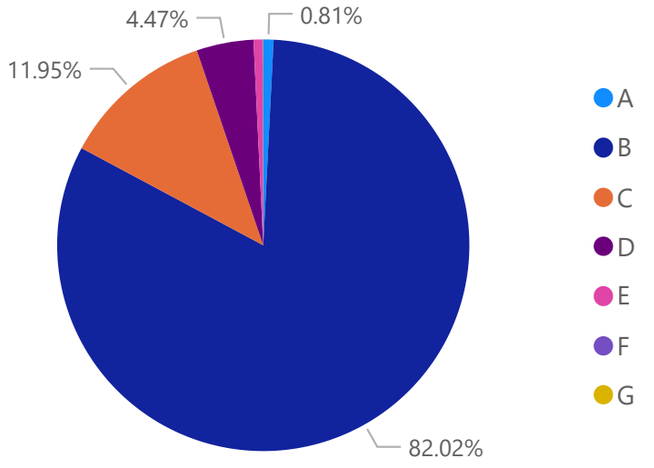
EPC Ratings for Non Domestic Lodgements 2019



EPC Ratings for Existing Domestic Lodgements 2019



EPC Ratings for New Domestic Lodgements 2019



An Energy Performance Certificate (EPC) is required for properties when constructed, sold or let. It provides details on the energy performance of the property and what can be done to improve it. Although only a small percentage of Kent's housing stock has an EPC, it is still an effective way of monitoring the environmental impact of domestic buildings, particularly new buildings.

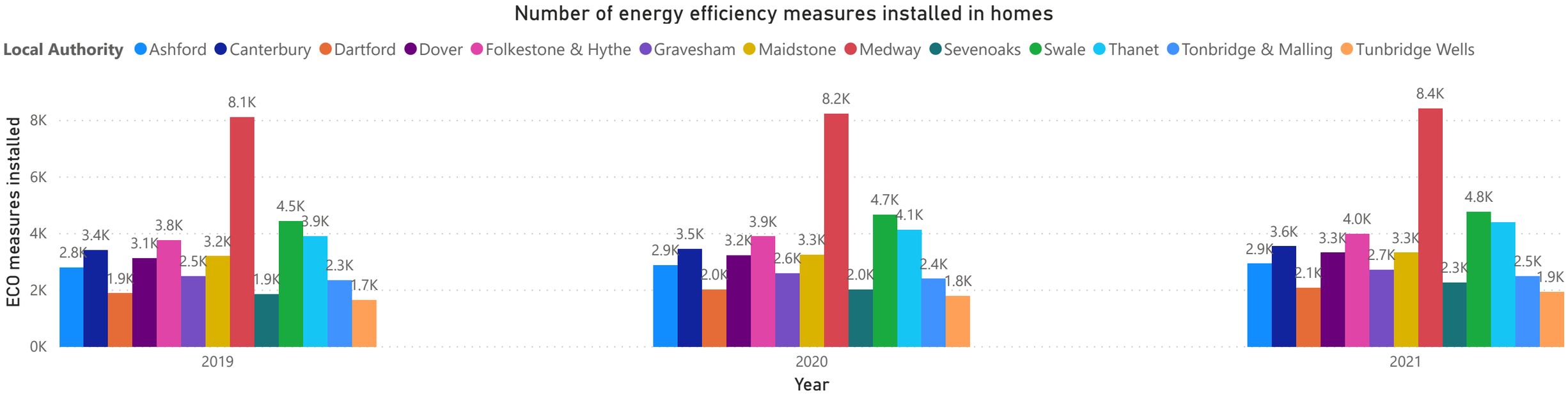
Homes rated A or B are the most energy efficient homes and have the smallest environmental impact.
Ministry of Housing, Communities and Local Government data - Live Tables on Energy Performance of Building Certificates – A, NB1, EB1.

In 2019, 83% of new builds in Kent & Medway had an EPC rating of A or B, an increase of 3% since 2015.

In 2019, 16% of all domestic EPC lodgements in Kent and Medway were rated A or B for energy efficiency, increased +4% since 2015.

In 2019, 15% of non-domestic lodgements in Kent and Medway were rated A+, A or B for energy efficiency, an increase of 4% since 2015.

HEALTH & HOUSING



Number of energy efficiency measures (eco measures) installed in homes is documented to monitor progress in Kent local authority areas. The data is collected by The Office for National Statistics. Data is updated monthly, however the updates captured above are in the month of March annually.

In 2021 there was a count of 46,224 ECO measures installed in homes in Kent & Medway. This is a 4% rise since 2020, and a 7% rise since 2019.

Social prescribing projects in Kent

In the DEFRA 25-year environment plan, a new indicator surrounding social prescribing was mentioned. As part of the KES we have looked to create our own Kent-level version to report on. This is new indicator and will continue to develop. Once the government releases it's methodology we may look to review and update our own monitoring of this indicator.

This information has been provided by the Kent Countryside Partnerships and Kent Wildlife Trust and does not include projects that may be run by health organisations themselves.

There have been 8 different projects during the 2018-19 period, with over 95 people taking part.