

# CLEAN GROWTH

The Heart of the South West has pledged to be a pioneer with its bold commitments to clean growth, and an ambition to place the HotSW area on a resilient pathway to net zero by the 2040s or sooner.

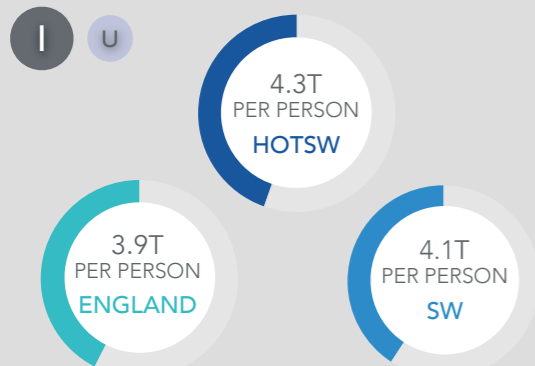
The HotSW area has made a number of positive changes but, in many instances, not enough to catch up with England and not nearly enough to meet wider zero carbon targets.

These indicators suggest that a major shift in pace and scale is required if climate emergency targets and aspirations for clean growth are to be met.

1850

2020

## PER PERSON CO2 EMISSIONS (2021)

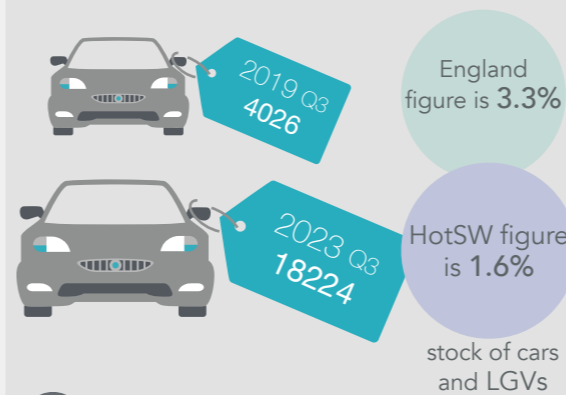


## REDUCTION IN TOTAL CO2 EMISSIONS (2011 - 2021)

Emissions **rebounded** from 2020 to 2021 as lockdown restrictions eased, particularly in transport



## PLUG-IN VEHICLES IN HotSW



## KEY ISSUES

HotSW LEP can play several roles to drive better performance in these underlying indicators. It can invest more, it can target more clearly, it can impose conditions on wider developments and it can use its strategic influence.

### CO2 EMISSIONS

CO2 emissions are not reducing fast enough to reach carbon targets. Agriculture and waste management emissions are increasing.

### OPPORTUNITIES

HotSW is creating more jobs but fewer new companies than England in Environmental Industries. More focused investment needed.

### ENERGY PRODUCTION

Too much electricity in the UK is still generated from fossil fuels. In HotSW, renewable energy production grew c36% between 2016 and 2021.

### TRANSPORT

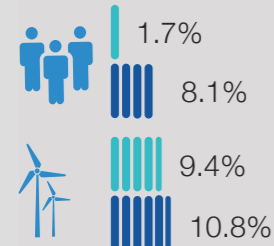
Electric vehicles make up an increasing percentage of those on the road, especially new cars. More EV chargers are needed in rural areas.

### ENERGY CONSUMPTION

Overall, energy consumption in HotSW is increasing faster than England, with the transport sector using the highest proportion.

## ENVIRONMENTAL INDUSTRIES

HOTSW ENGLAND

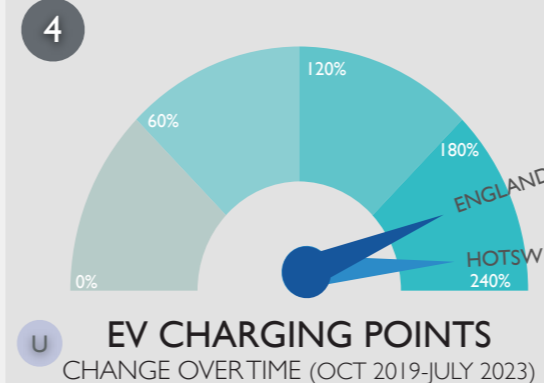


GROWTH IN FULL-TIME JOBS (FTE) 2016-21

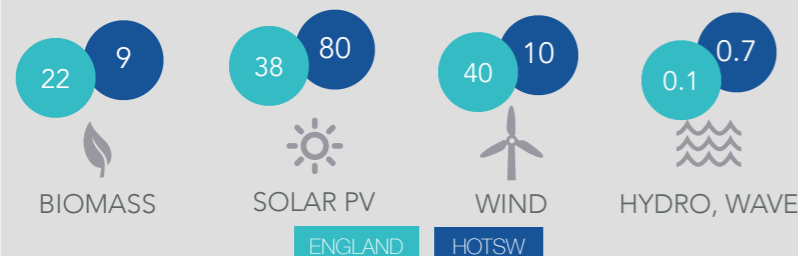
GROWTH IN 'GREEN' COMPANIES 2016-22

2 According to the Great South West prospectus, there is potential to add £10 billion of GVA and 175,000 jobs by 2030 within the energy sector alone - across the GSW area.

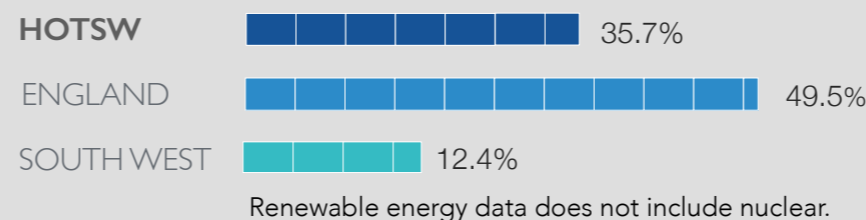
In 2020, within HotSW, there were 8,600 FT and 780 PT employees working in Environmental Industries.



## SHARE OF OVERALL RENEWABLE ENERGY (MW)



## RENEWABLE ENERGY GENERATION INCREASE (MWH) 2016-2021 (%)



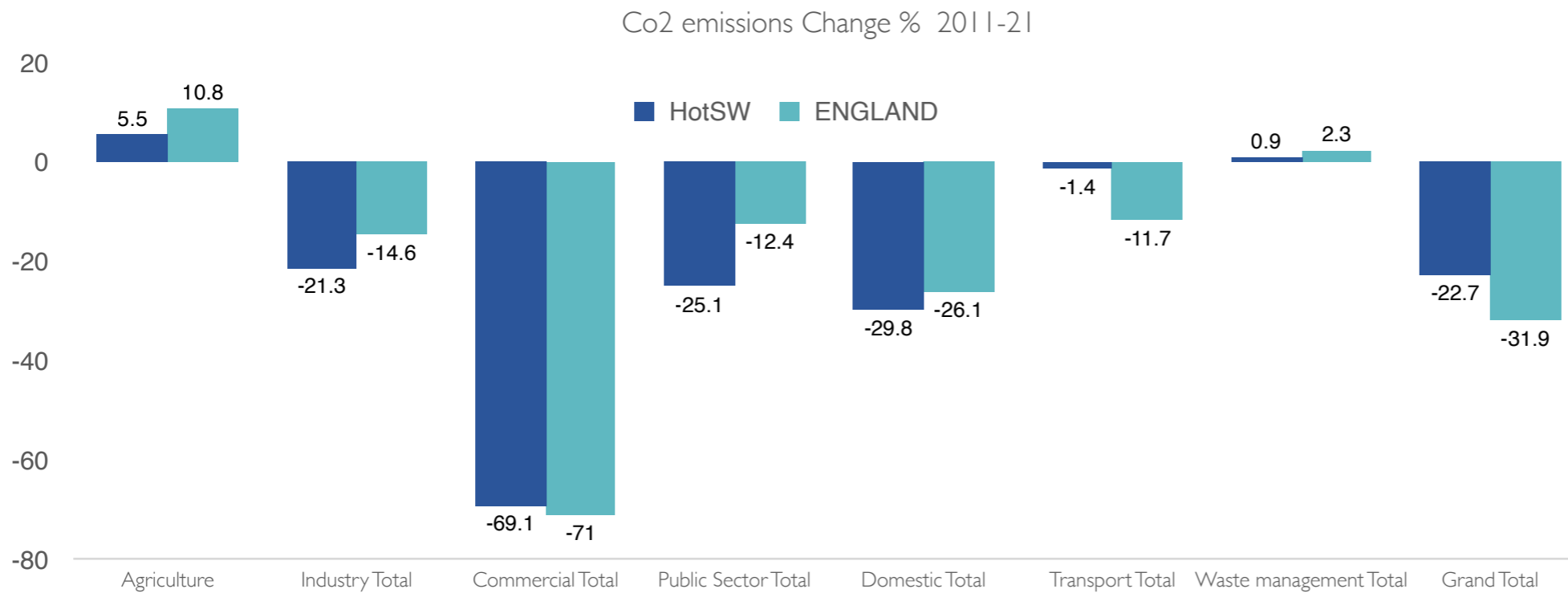
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# CLEAN GROWTH - CO2 emissions

HotSW has higher emissions per head than England. The latest data (covering 2021 so therefore still reflecting the distorted impact of the pandemic period) shows that emissions have fallen over the last decade, although more slowly than nationally. The most significant falls in emissions have occurred in the commercial (-69%) and domestic sectors (-30%). The 2021 data shows that - as would be expected - transport emissions rose significantly since 2020 as during that year much of the country was in lockdown. However, emissions from agriculture have actually risen over the last decade. Across the UK emissions associated with agricultural activity have increased by c10%. It is important to note that 2020 estimates have been revised, and has changed the picture in some sectors (most notably within agriculture)



The data illustrates that the pace and scale of reductions in emissions needs to be much greater if targets for net zero are to be met, and catastrophic climate change is to be averted.

[UK Government CO2 emissions data](#)

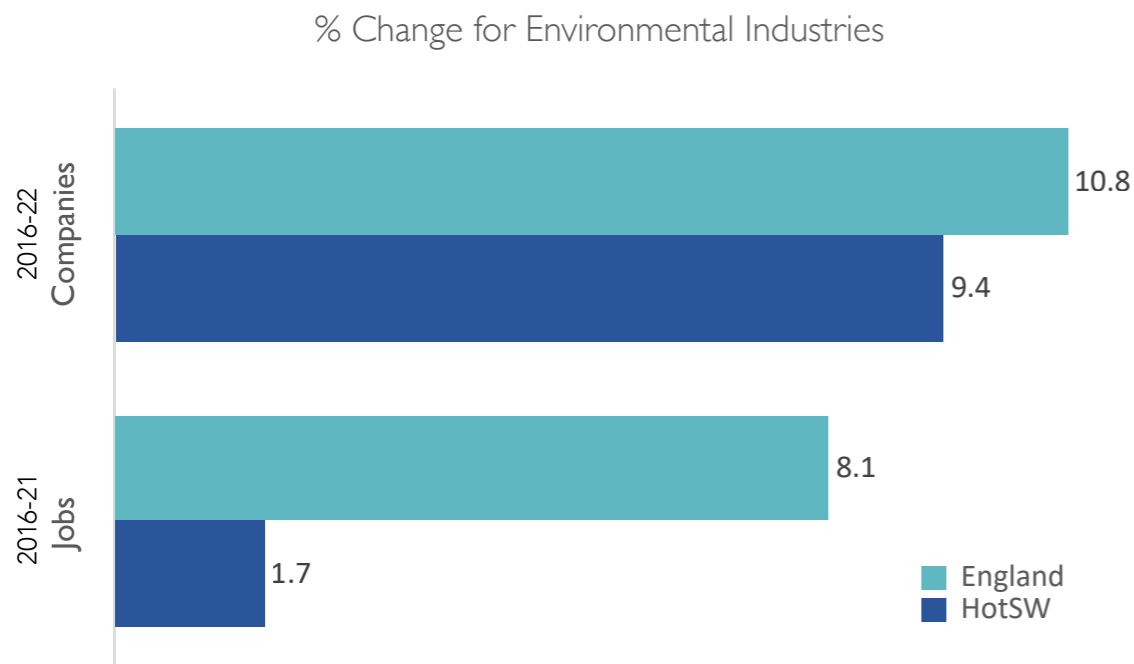
[Carbon tracker site](#)

# CLEAN GROWTH - environment

## Environmental industries

HotSW has seen growth in FT and PT employees and the number of companies operating within the Environmental Industries sector (using its own relatively wide definition). **There were 10,650 FT employees in 2021 and 1,125 PT employees.**

*It is worth noting that the data has changed from that shown in previous dashboard - largely due to some large job increases in 2015-16 'dropping out' of the period of analysis*



[NOMIS environmental industry - jobs \(to query page\)](#)

[NOMIS environmental industry - companies \(to query page\)](#)

## Waste

While the HotSW has a higher recycling rate than England (43.5% to 42.3%) and Devon has the highest recycling rate at 55%, HotSW generates more waste per household than England (436 kg per person compared to 406kg per person). Somerset generates an even higher figure of 461kg per person.

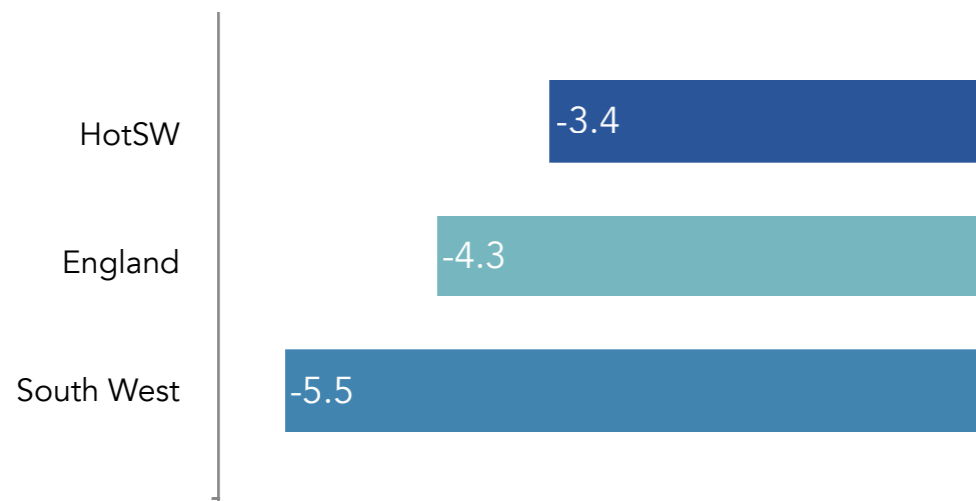
2021	Collected Household Waste per person (kg)	% of household waste sent for reuse, recycling or composting (Ex NII92)
England	406	42.3
Plymouth	407.2	30.6
Torbay	428.4	35.5
Devon	447.2	55.3
Somerset	461.1	52.4
<b>HOTSW</b>	<b>436</b>	<b>43.5</b>

[Annual waste collection tables - at local authority level](#)

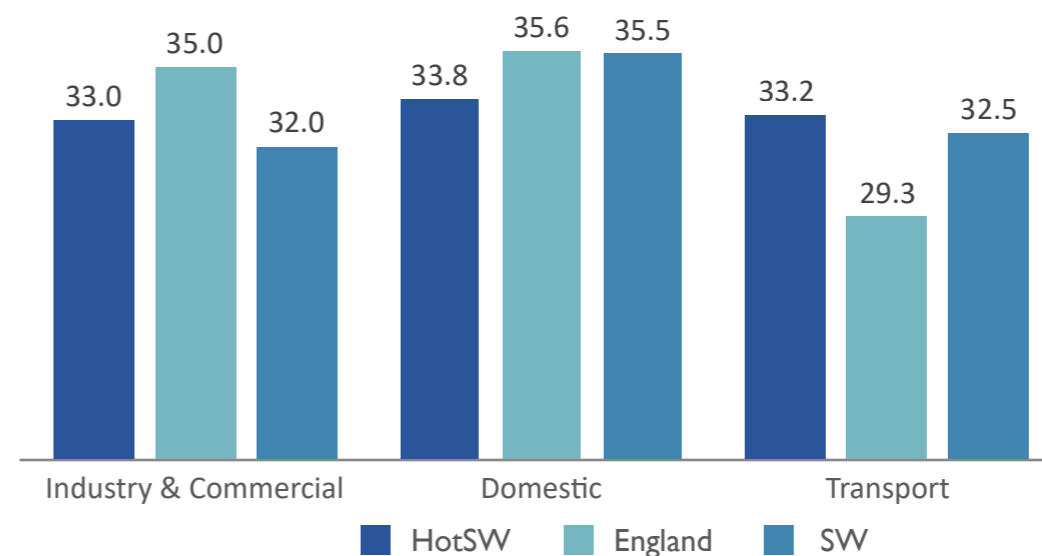
# CLEAN GROWTH - energy consumption

Energy consumption within HotSW decreased by 3.4% between 2015 and 2020. A lower decrease than England (5.5%) and the South West (4.3%). In 2020 the share of energy consumption is higher for the transport sector than England – reflecting greater rurality and dependency on personal transport. Again it is important to stress that the latest released figures encapsulate the lockdown periods in 2020. Therefore these figures may not reflect the medium-term trend

% Change in Energy Consumption (2015 - 2020)



Energy Consumption 2020 by Consuming sector (% of total)



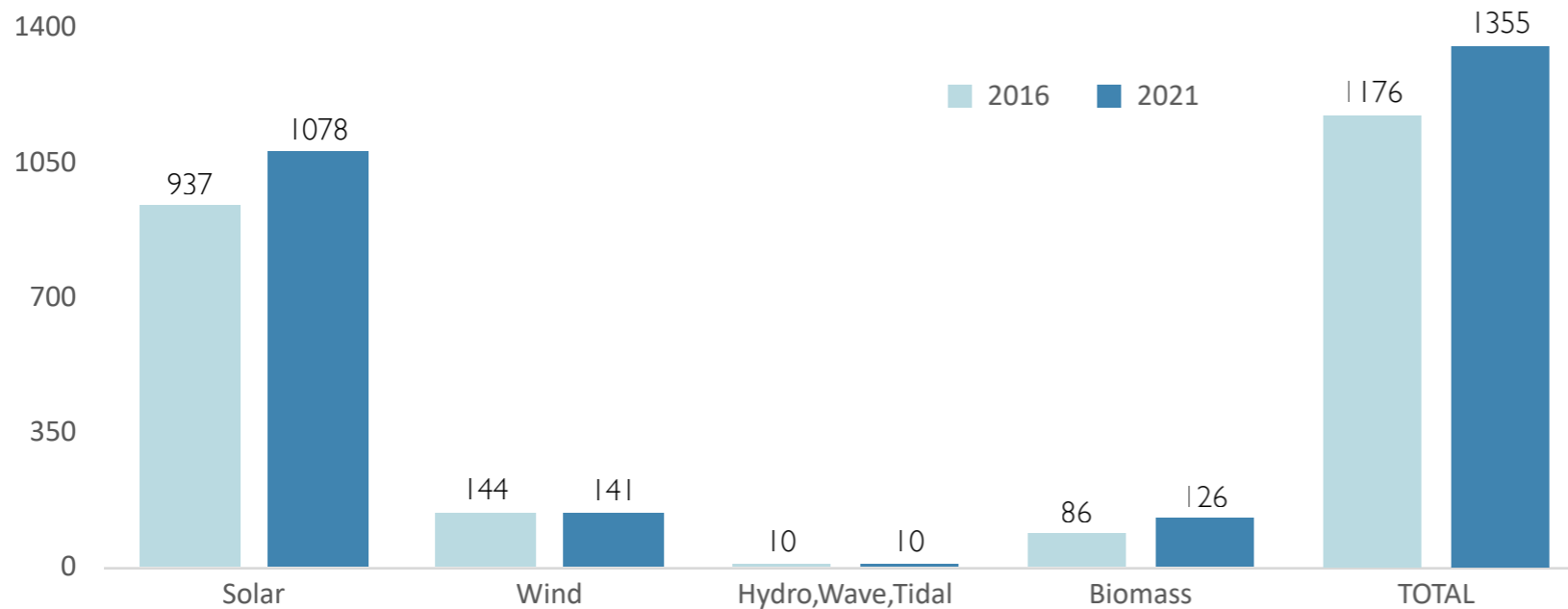
[Energy consumption by sector](#)

# CLEAN GROWTH - renewable energy

Total renewable energy capacity within HotSW has grown from 1080 Mw in 2016 to 1355 Mw in 2021 - a 15.2% increase compared to 39.6% increase for England.

There has been clear growth in the installed capacity for solar. Onshore wind capacity has fallen slightly. Renewable capacity is dominated by photovoltaics (solar) at 80% of the total. Biomass however lags some way behind the share of the total compared to England despite the opportunities that exist in terms of food waste, agricultural and forestry by-products etc. The adoption of biomass has been affected by the significant reduction in deployment (non-domestic) due to changes in the Renewable Heat Incentive (RHI) tariffs.

2016-21 Change in the share of Renewable Energy Installed Capacity in HotSW (Mw)



The UK government classifies Nuclear as a 'clean' energy. However, Nuclear energy is not included within the renewable energy data and it is only measured at the national level.

[Regional renewable statistics](#)

# CLEAN GROWTH - plug-in vehicles

HotSW has seen a significant growth in the number of plug-in vehicles. Since 2018, the number of plug-in vehicles has increased by a factor of 5.1x - slightly lower than for England (6x).

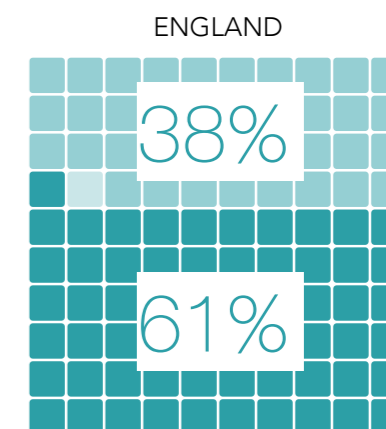
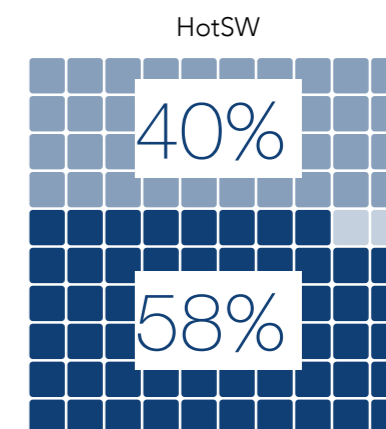
The urban areas of Plymouth and Torbay have both seen higher growth rates than England. There were 15,366 registered plug-in vehicles across HotSW in Q3 of 2022, 8,593 (55%) were in Devon. However, on a per head basis ownership remains significantly lower than the national average (across the HotSW ownership is 55% of the national rate on a per head basis) and lower again in the more urban areas.

Plug in Vehicles are defined as cars and light good vehicles which are identified as battery electric, plug-in hybrid electric, or range-extended electric.

	2019 Q1	2020 Q1	2021 Q1	2022 Q1	2023 Q1	Change	Change %	per 100k pop (2022)
England	160,264	212,416	329,094	577,399	888,879	728,615	455	1574
HOTSW	3,027	3,541	6,081	10,502	15,366	12,339	408	860
Plymouth	174	218	333	669	1,044	870	500	394
Torbay	133	197	334	558	875	742	558	628
Devon	1,803	1,803	3,464	5,969	8,395	6,592	366	1034
Somerset	917	1,323	1,950	3,306	5,052	4,135	451	884

Plug-in vehicle data (Table VEH0142)

SHARE OF PLUG-IN VEHICLES BY TYPE  
Q1 2023



- Battery electric
- Plug-in hybrid
- Range extended

# CLEAN GROWTH - charging points

HotSW has now seen a higher increase in both total and rapid charging points than the England average. Somerset remains the location with quickest growth in rapid chargers within HotSW. On a per capita basis the availability of all chargers is marginally lower than the national average, although the gap is closing.

The latest data encouragingly shows that the pace of rapid charge installations has been higher than average, and on a per capita basis now exceeds national averages. In particular, the number of rapid chargers on a per head basis in Devon is much higher than national averages.

All chargers	Oct 19	Jul 20	Jul 21	Jul 22	Jul 23	Change (from 2019)	Change %	per 100k pop
ENGLAND	12549	15,395	20,563	27,502	37,717	25,168	201	67
HotSW	310	428	531	735	1,031	721	233	58
Plymouth	41	67	74	112	157	81162	283	59
Torbay	9	23	25	26	30	21	233	22
Devon	174	222	279	380	539	365	210	66
Somerset	86	116	153	217	305	219	255	53

Rapid chargers	Oct 19	Jul 20	Jul 21	Jul 22	Jul 23	Change	Change %	per 100k pop
ENGLAND	2,008	2,615	3,732	4,965	6,974	4,966	247	12
HotSW	59	79	106	145	231	172	292	13
Plymouth	4	7	9	8	11	7	175	4
Torbay	2	3	5	7	8	6	300	6
Devon	40	48	63	87	150	110	275	18
Somerset	13	21	29	43	62	49	377	11

**Total devices'** represent publicly available charging devices at all speeds, including: slow, fast, rapid and ultra-rapid devices.

**'Rapid devices'** are those whose fastest connector is rated at 43kW and above.

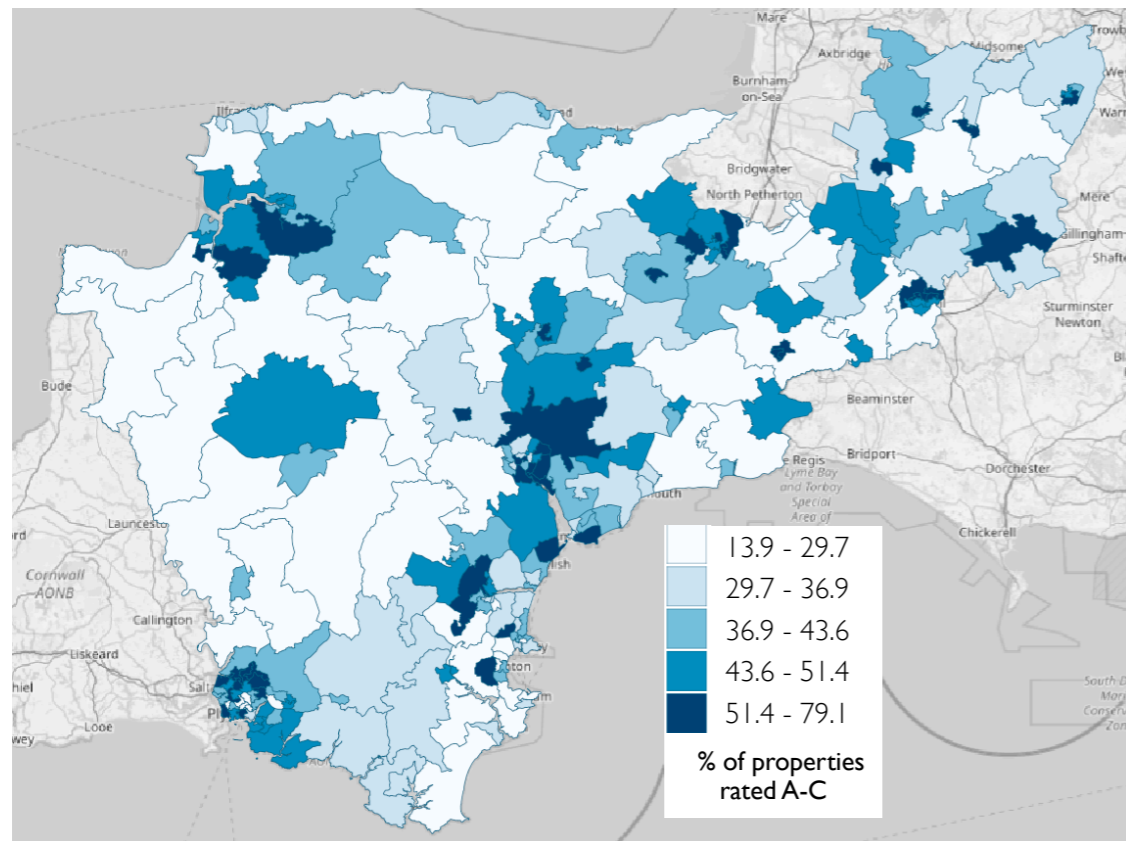
[UK Government charging point data](#)



# CLEAN GROWTH - small area maps

The energy efficiency score shows the energy efficiency of a building at the time of its EPC assessment. The higher the score, the more energy efficient a building is. An energy efficiency rating band from A to G is used to represent this score, where A is very energy efficient and G is very energy inefficient. This data shows the % of properties where energy efficiency is good or above.

Percentage of dwellings with an EPC rating of A - C (2022)

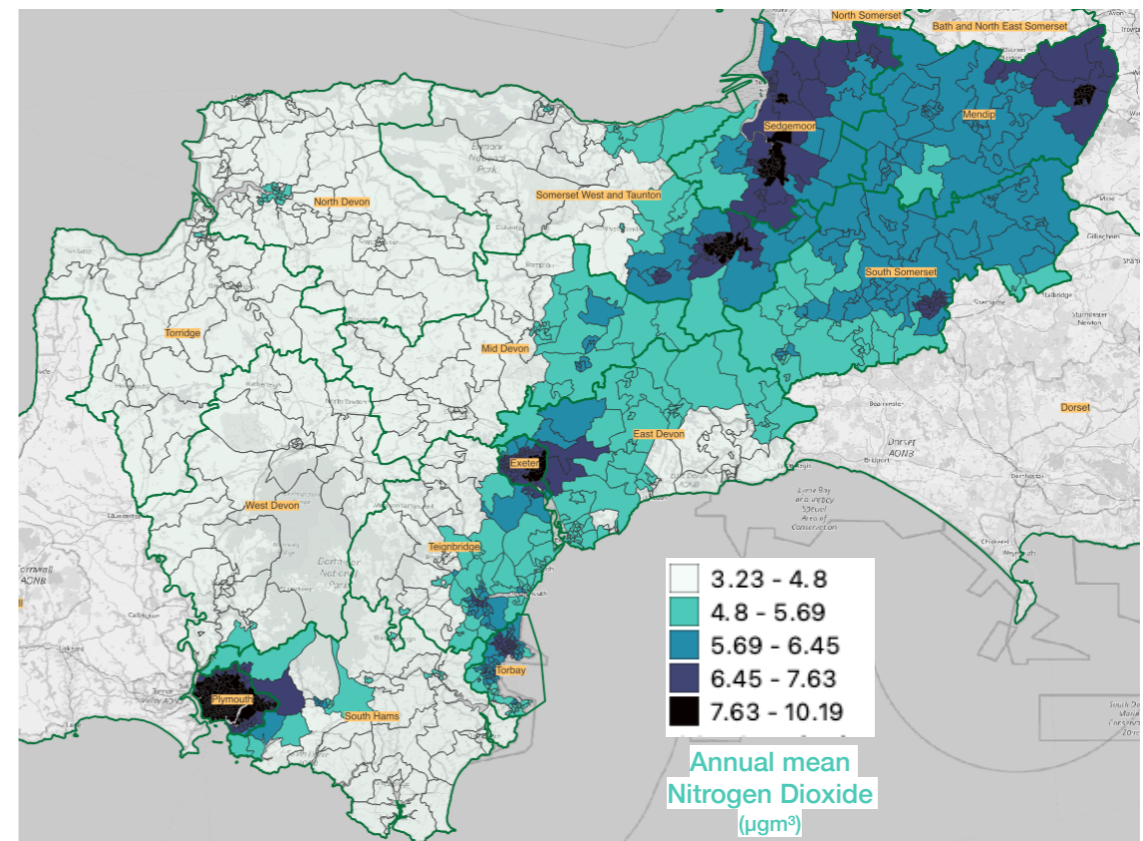


Constructed in QGIS by Understanding Data using ONS, OS and AHAH data under respective licences.

We have shared these maps to illustrate clear spatial differences across HotSW and will look to build on this in future editions.

The measures of air quality were calculated using 2016 modelled estimates extracted from data provided by DEFRA, which are created as an extrapolation from a combination of 1500 monitoring sites and drawing upon the location of industry, houses and the road network.

Nitrogen Dioxide (NO<sub>2</sub>) emissions from Access to Healthy Assets and Hazards (AHAH)



# CLEAN GROWTH - data notes

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## Slide 3

Co2 emissions data – HOTSW area is aggregated from Local Authority data

## Slide 4

Environmental Industries – HOTSW area data is published under the LEP geography for UK Business Counts and BRES

Waste - HOTSW area data is derived from Local Authority data

## Slide 5

Energy Consumption data is aggregated from Local Authority data

## Slide 6

Renewable Energy Capacity is aggregated from Local Authority data

## Slide 7

Plug In Vehicle Data is aggregated from Local Authority data

## Slide 8

Rapid Charging point data is aggregated from Local Authority data

## Slide 9

Environmental map data from OS and AHAH

Each slide gives a direct link to where the latest data we have sourced is found, however over time these links may show later data than has been used in this report. For the two Nomis links (for jobs and companies which use the HotSW defined Environmental Industries category) the link is to a holding query page that would require some familiarity with how Nomis works, as geographic area, date, type of employment and individual sector will all need to be selected before accessing the data.

These links act as confirmation of the data source.

All data used is publicly available under the terms of the Open Government Licence and UK Government Licensing Framework.

The approach taken in these dashboards is to use consistent sources of data to track changes over time. In some instances, different but more up-to-date data/forecasts may be available - although they will not necessarily be updated on a regular basis, or cover quite the same thing. Therefore, using a consistent data source is the approach chosen. As sometimes shown, changing the period covered by the data can change the story behind the data. This relates to inter-year variability in some datasets. Consequently, interpreting long-term data trends is often important.

This dashboard reflects data releases up to and including 15th Sept 2023.

Unless otherwise stated, data has been sourced, collated, analysed and visualised by Ash Futures Ltd.

This dashboard had been  
produced by Ash Futures on  
behalf of HotSW LEP

