heart of the south west
local enterprise partnership

CLEAN GROWTH

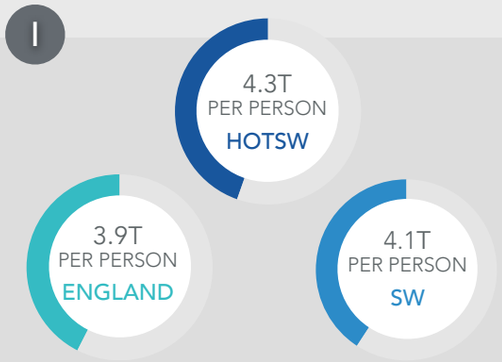
The Heart of the South West has pledged to be a pioneer with its bold commitments to clean growth, and an ambition to place the HotSW area on a resilient pathway to net zero by the 2040s or sooner.

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 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.

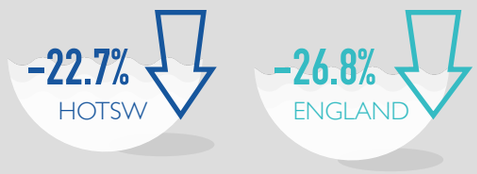
PER PERSON CO2 EMISSIONS (2021)

1

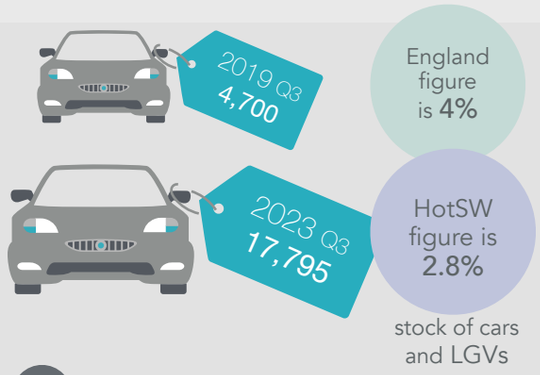


REDUCTION IN TOTAL CO2 EMISSIONS (2011 - 2021)

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



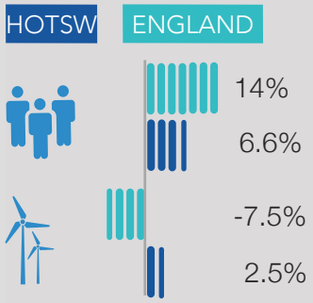
U PLUG-IN VEHICLES IN HotSW



ENVIRONMENTAL INDUSTRIES

2

U



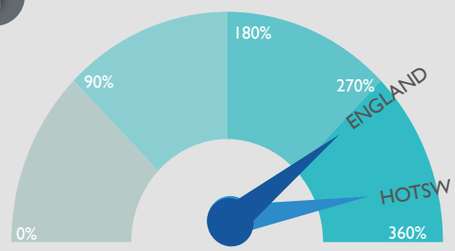
GROWTH IN FULL-TIME JOBS (FTE) 2017-22

GROWTH IN 'GREEN' COMPANIES 2017-23

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 2022, within HotSW, there were **10,450 FT and 845 PT employees** working in Environmental Industries.

4

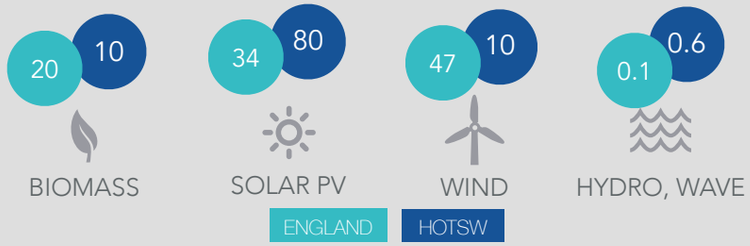


U EV CHARGING POINTS

CHANGE OVER TIME (OCT 2019-JAN 2026)

SHARE OF OVERALL RENEWABLE ENERGY (MW)

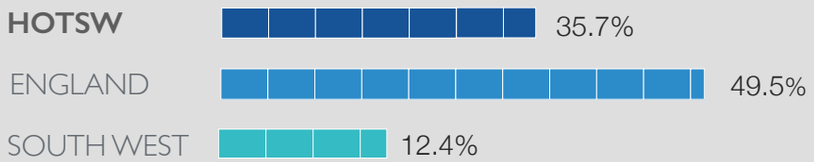
3



RENEWABLE ENERGY GENERATION INCREASE

(MWH) 2016-2021 (%)

U



Renewable energy data does not include nuclear.

KEY ISSUES

Private, public and voluntary partners within HotSW need to drive better performance in these underlying indicators - investing more, targeting more clearly, regulating developments and planning for the long term..

CO2 EMISSIONS

1

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

OPPORTUNITIES

2

latest data suggests that number of companies in Environmental Industries in HotSW has fallen. Jobs have grown more slowly than England. Continued support required.

ENERGY PRODUCTION

3

Too much electricity in the UK is still generated from fossil fuels. Latest data shows that installed renewable capacity has slowed across HotSW

TRANSPORT

4

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

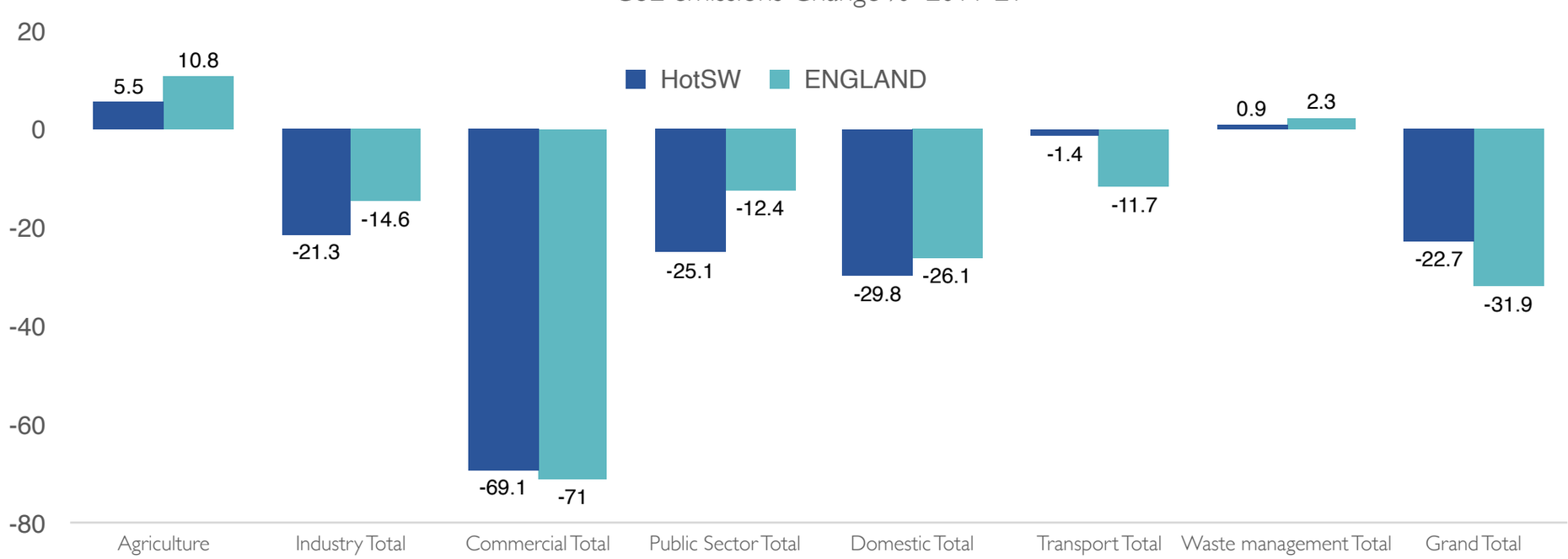
Overall energy consumption in HotSW is falling more slowly than England, with decarbonising transport remaining a key priority.

CLEAN GROWTH – contents

CLEAN GROWTH - CO2 emissions

PAGE UPDATED

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

Back to dashboard

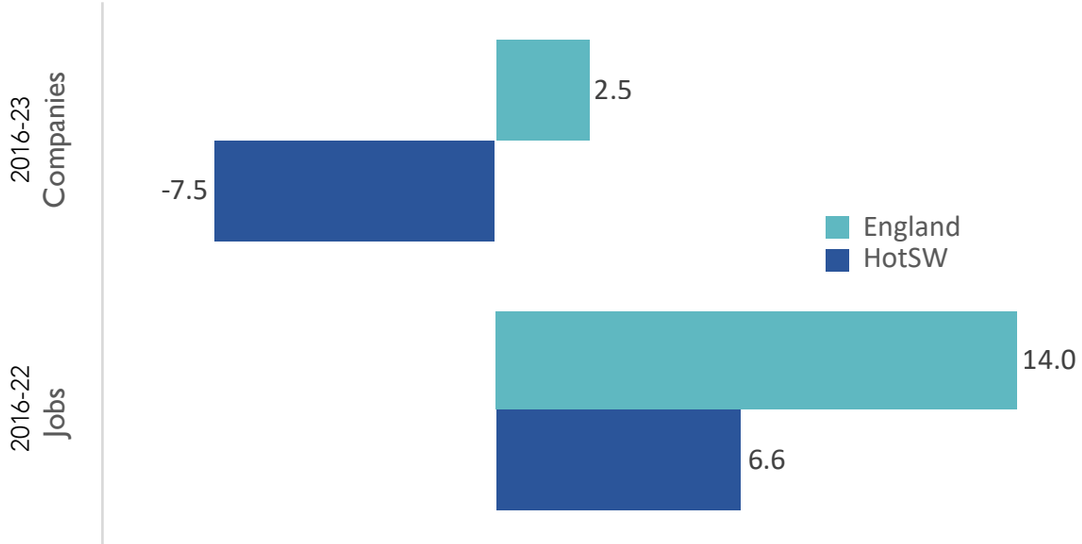
To next page

CLEAN GROWTH - environment

PAGE UPDATED

Environmental industries

HotSW has seen an increase of FT employees within the Environmental Industries sector (using its own relatively wide definition) but a fall in PT employees. Overall employment growth has been positive. **There were 10,450 FT employees and 885 PT employees**. Conversely, the latest data suggests that the number of environmental industries companies fell between 2017-2022, opposite to the growth seen nationally.



Waste

HotSW has a higher recycling rate than England (45.7% to 42.5%) and Somerset has the highest recycling rate at 56%. The latest data suggests that the HotSW now generates less waste than the England average (434 kg per person compared to 547kg). There is a lower figure in Plymouth in 2022 (406kg).

2022	Collected Household Waste per person (kg)	% of household waste sent for reuse, recycling or composting (Ex NI192)
England	547	42.5
Plymouth	406	34.5
Torbay	418	37.1
Devon	449	55.1
Somerset	463	56.2
HOTSW	434	45.7

> NOMIS environmental industry - jobs *(to query page)*

> NOMIS environmental industry - companies *(to query page)*

> Annual waste collection tables - at local authority level

Back to dashboard

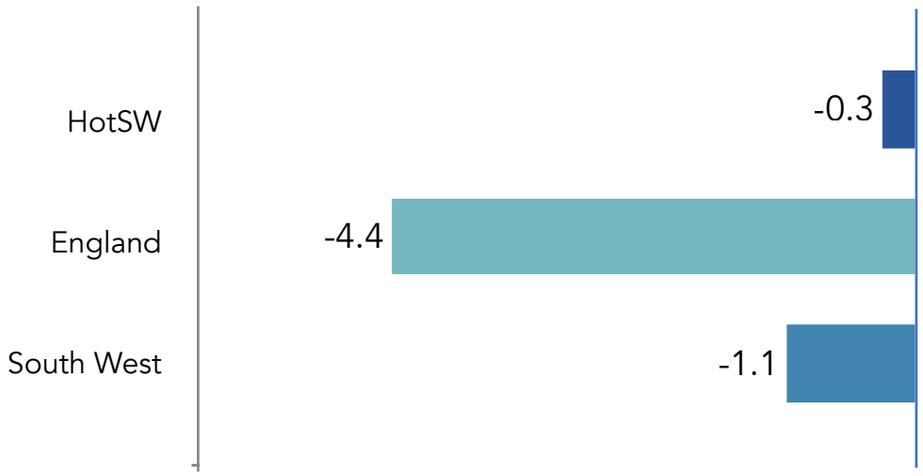
To next page

CLEAN GROWTH - energy consumption

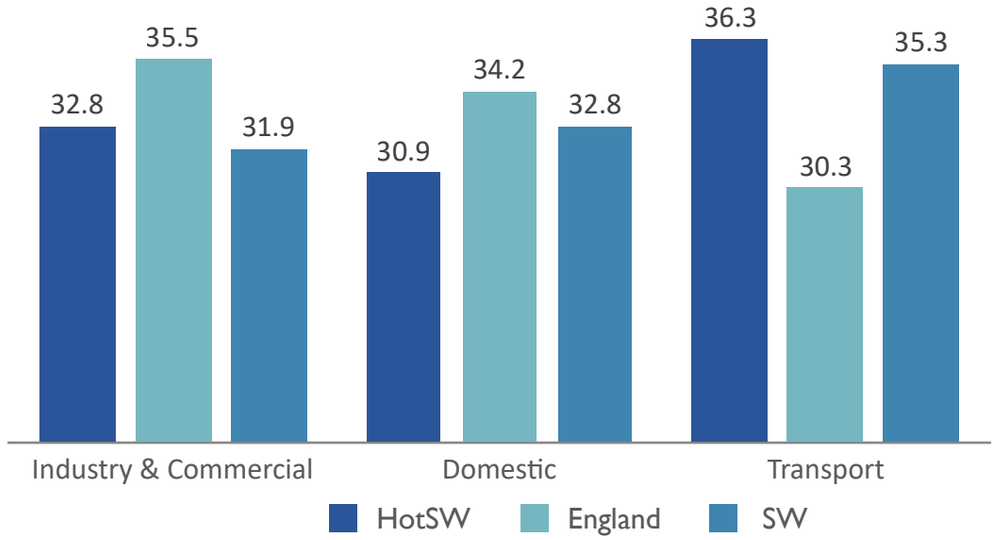
PAGE UPDATED

Energy consumption within HotSW decreased by 0.3% between 2016 and 2021. A lower decrease than England (4.4%) and the South West (1.1%). In 2021, the share of energy consumption is significantly higher for the transport sector in HotSW than England – reflecting greater rurality and dependency on personal transport. The latter part of 2021 marked the beginning of return to more usual circumstances post pandemic. However, there were still further lockdowns at the start of the year so the latest data will continue to reflect that.

% Change in Energy Consumption (2016 - 2021)



Energy Consumption 2021 by Consuming sector (% of total)



Energy consumption by sector

Back to dashboard

To next page

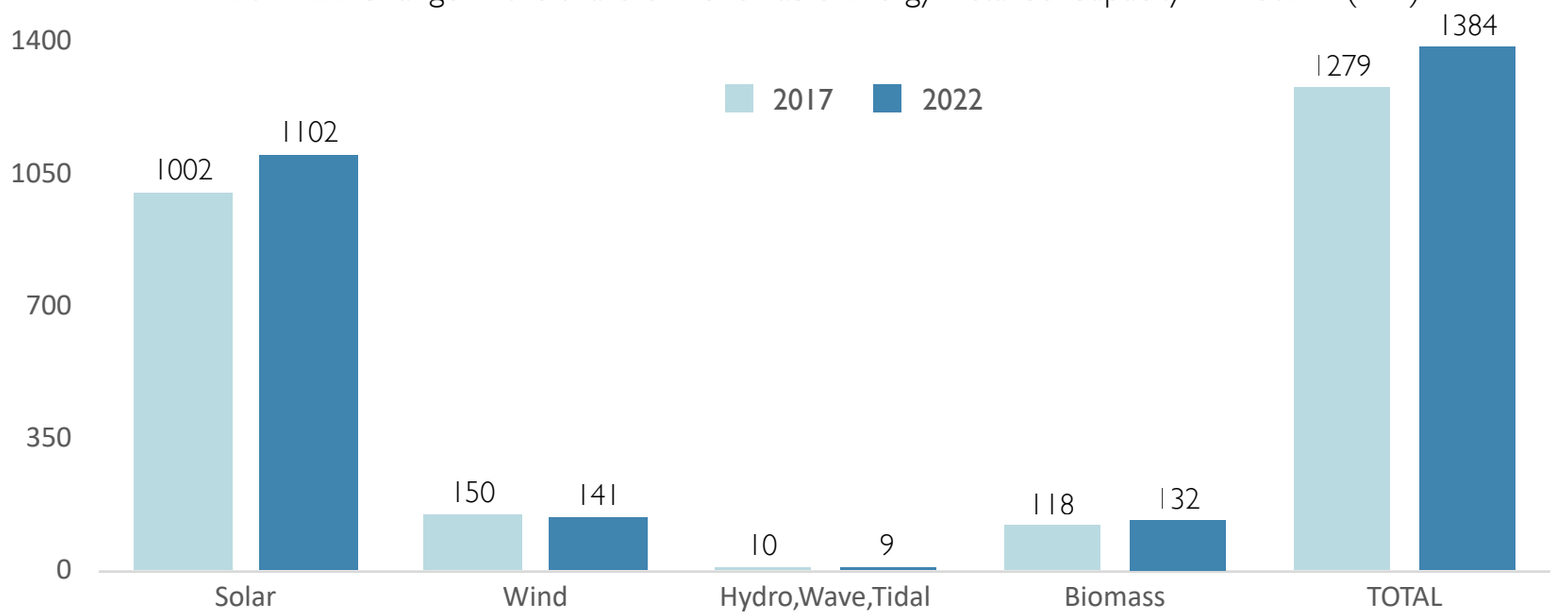
CLEAN GROWTH - renewable energy

PAGE UPDATED

Total renewable energy capacity within HotSW has grown from 1279 Mw in 2017 to 1384 Mw in 2022 - an 8% increase compared to a 33% increase for England. Installed renewable energy capacity has grown more slowly across the HotSW than across England as a whole.

There has been steady growth in the installed capacity for solar. Onshore wind capacity has fallen slightly. Renewable capacity is dominated by photovoltaics (solar) at 78% of the total. Despite a modest growth, 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.

2017-22 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

Back to dashboard

To next page

CLEAN GROWTH - plug-in vehicles

PAGE UPDATED

HotSW has seen a significant growth in the number of plug-in vehicles. Since 2019, the number of plug-in vehicles has increased by a factor of 3.8x - although lower than for England (5.1x).

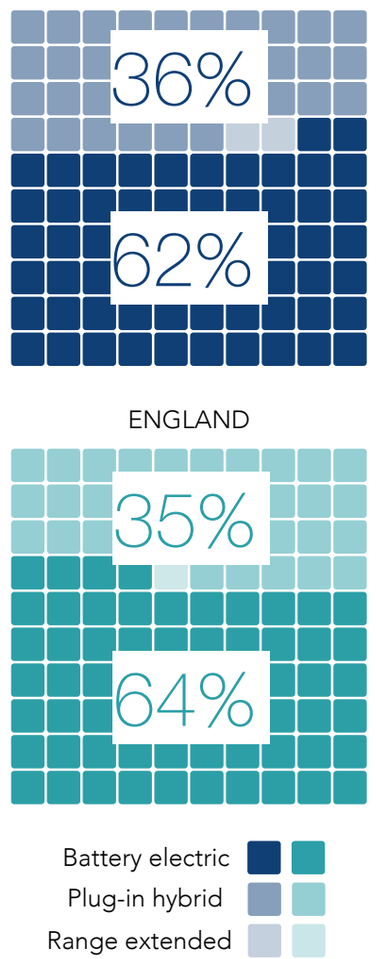
The urban areas of Plymouth and Torbay have both seen higher growth rates than England. There were 17,795 registered plug-in vehicles across HotSW in Q3 of 2023, 9783 (55%) were in Devon. However, on a per head basis ownership remains significantly lower than the national average (across the HotSW ownership 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 Q3	2020 Q3	2021 Q3	2022 Q3	2023 Q3	Change	Change %	per 100k pop (2022)
England	212,531	329,201	577,501	889,026	1,293,017	1,080,486	508.4	2,264
HOTSW	4,700	6,085	10,507	15,373	22,495	17,795	378.6	1,243
Plymouth	218	333	669	1,044	1,571	1,353	620.6	589
Torbay	197	334	558	876	1,207	1,010	512.7	865
Devon	2,961	3,465	5,971	8,399	12,744	9,783	330.4	1,542
Somerset	1,324	1,953	3,309	5,054	6,973	5,649	426.7	1,209

> Plug-in vehicle data (Table VEH0142)

SHARE OF PLUG-IN VEHICLES BY TYPE
Q3 2023



CLEAN GROWTH - charging points

PAGE UPDATED

HotSW has now seen a higher increase in both total and rapid charging points than the England average. Plymouth and Torbay are now the areas that have seen the quickest growth in rapid chargers within HotSW. On a per capita basis, the availability of all chargers remains lower than the national average.

The latest data shows that the whilst the pace of rapid chargers has been higher than average, on a per capita basis it is marginally lower. However, there is significant variation across the HotSW in terms of the level of installed rapid chargers - with Devon having the most on a per capita basis and much higher than the national average'.

All chargers	Jan-20	Jan-21	Jan-22	Jan-23	Jan-24	Change	%	per 100k pop
ENGLAND	13,719	17,459	24,159	31,466	46,374	33,825	269.5	81.2
HotSW	367	471	594	856	1,309	999	322.3	72.3
Plymouth	52	71	74	123	177	136	331.7	66.3
Torbay	19	24	24	29	34	25	277.8	24.4
Devon	189	248	314	442	730	556	319.5	88.3
Somerset	107	128	182	262	368	282	327.9	63.8

Rapid chargers	Jan-20	Jan-21	Jan-22	Jan-23	Jan-24	Change	%	per 100k pop
ENGLAND	2,288	3,214	4,258	5,631	8,428	6,420	319.7	14.8
HotSW	70	99	121	168	313	254	430.5	14.0
Plymouth	7	8	9	8	29	25	625.0	10.9
Torbay	2	5	5	7	12	10	500.0	8.6
Devon	44	62	69	103	195	155	387.5	23.6
Somerset	17	24	38	50	77	64	492.3	13.3

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 for AC current; or 50kW and above for DC current. Ultra rapid chargers are typically in the 100 - 250kW range.

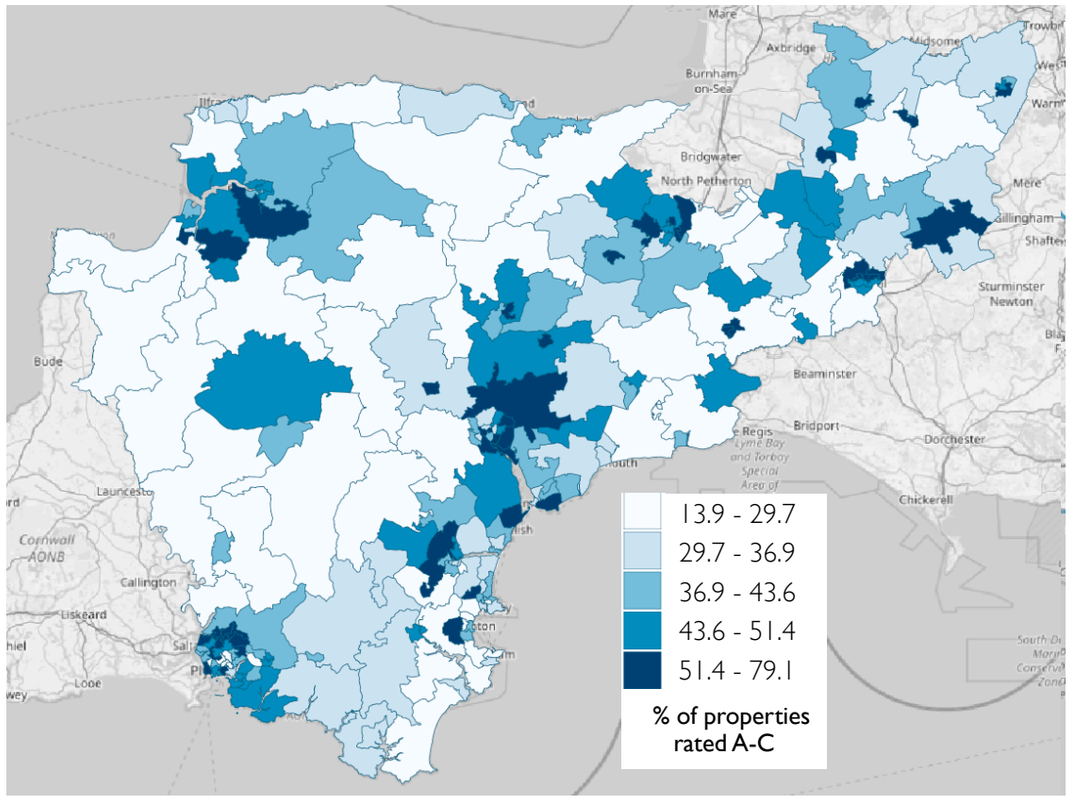
UK Govt charging point data

CLEAN GROWTH - small area maps

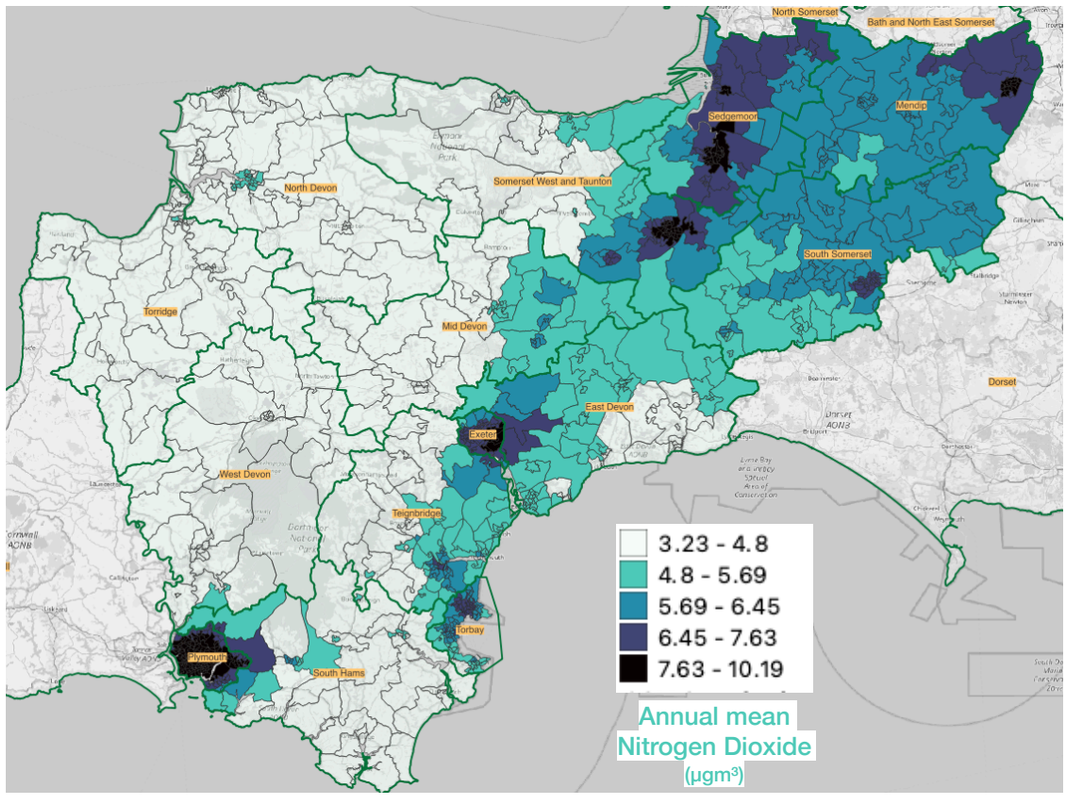
The energy efficiency score shows the energy efficiency of a building at the time of its EPC assessment. An energy efficiency rating band from A to G is used to represent this score, where A is very energy efficient and G is very energy inefficient. This data shows the % of properties where energy efficiency is good or above. **Older housing stock, especially in rural areas is lagging behind.**

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. **As expected, areas closest to large conurbations and transport corridors have poorer air quality.**

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



Nitrogen Dioxide (NO2) emissions from Access to Healthy Assets and Hazards (AHAH)



Constructed in QGIS by Understanding Data usingONS, 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.

Back to dashboard

CLEAN GROWTH - data notes

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. It is useful to note that the latest data release does not contain some sources of RE generation and therefore it is difficult to get a comprehensive picture of total HotSW RE generation

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 29th February 2024.

Unless otherwise stated, data has been sourced, collated, analysed and visualised by Ash Futures Ltd. simon@ashfutures.co.uk

ASH FUTURES MAKING DATA ACCESSIBLE
www.ashfutures.co.uk

Back to dashboard