

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.

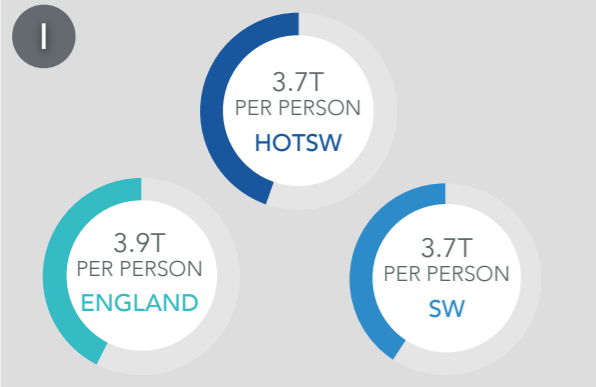
The HotSW area has made a number of positive changes but, in many instances, not enough to catch up with England and not nearly enough to meet wider zero carbon targets.

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.

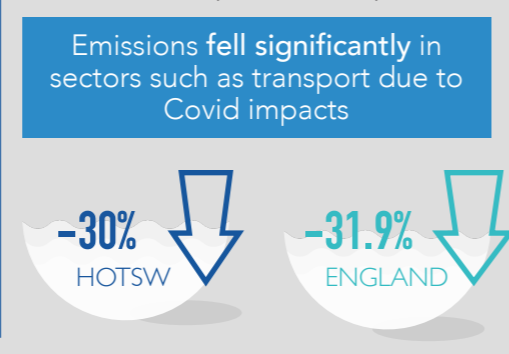
1850

2020

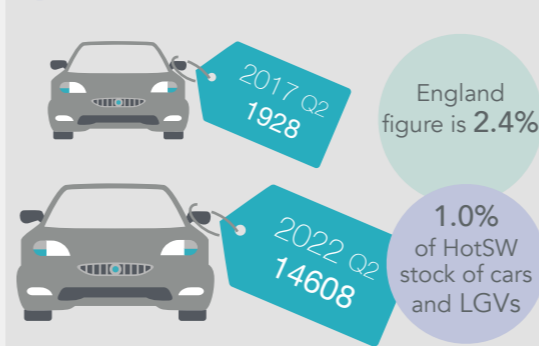
PER PERSON CO2 EMISSIONS (2020)



REDUCTION IN TOTAL CO2 EMISSIONS (2011 - 2020)



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 transport sector 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.

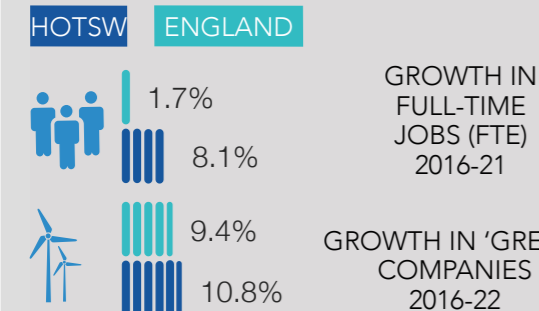
TRANSPORT

Electric vehicles make up a tiny, but increasing, percentage of those on the road. More EV charging are needed in rural areas.

ENERGY CONSUMPTION

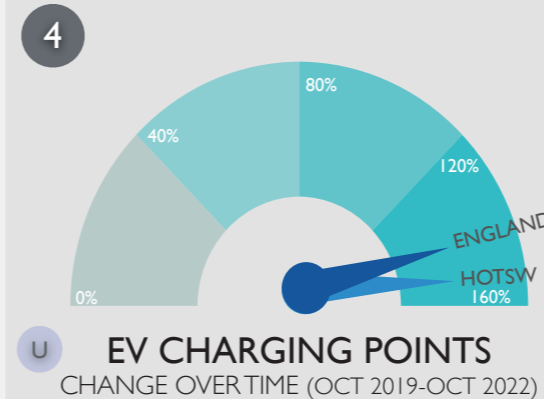
Overall, energy consumption in HotSW is increasing faster than England, with the transport sector using the highest proportion.

ENVIRONMENTAL INDUSTRIES

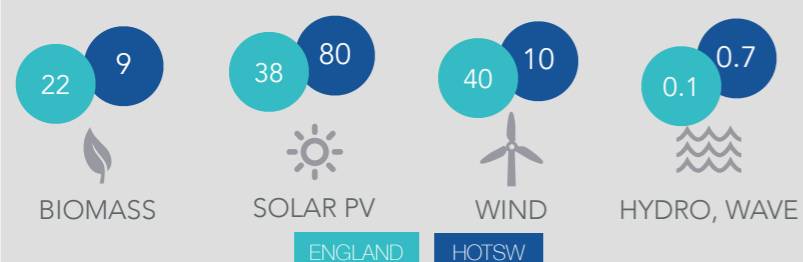


2 According to the Great South West prospectus, there is potential to add £10 billion of GVA and 175,000 jobs by 2030 within the energy sector alone - across the GSW area.

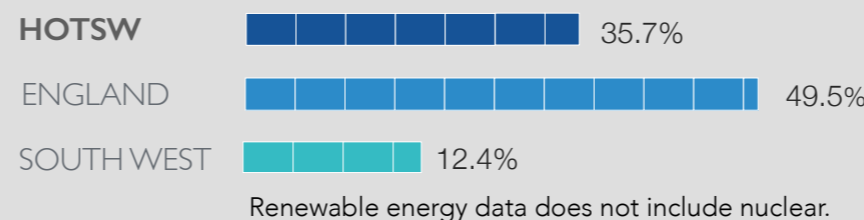
U In 2020, within HotSW, there were 8,600 FT and 780 PT employees working in Environmental Industries.



SHARE OF OVERALL RENEWABLE ENERGY (MW)

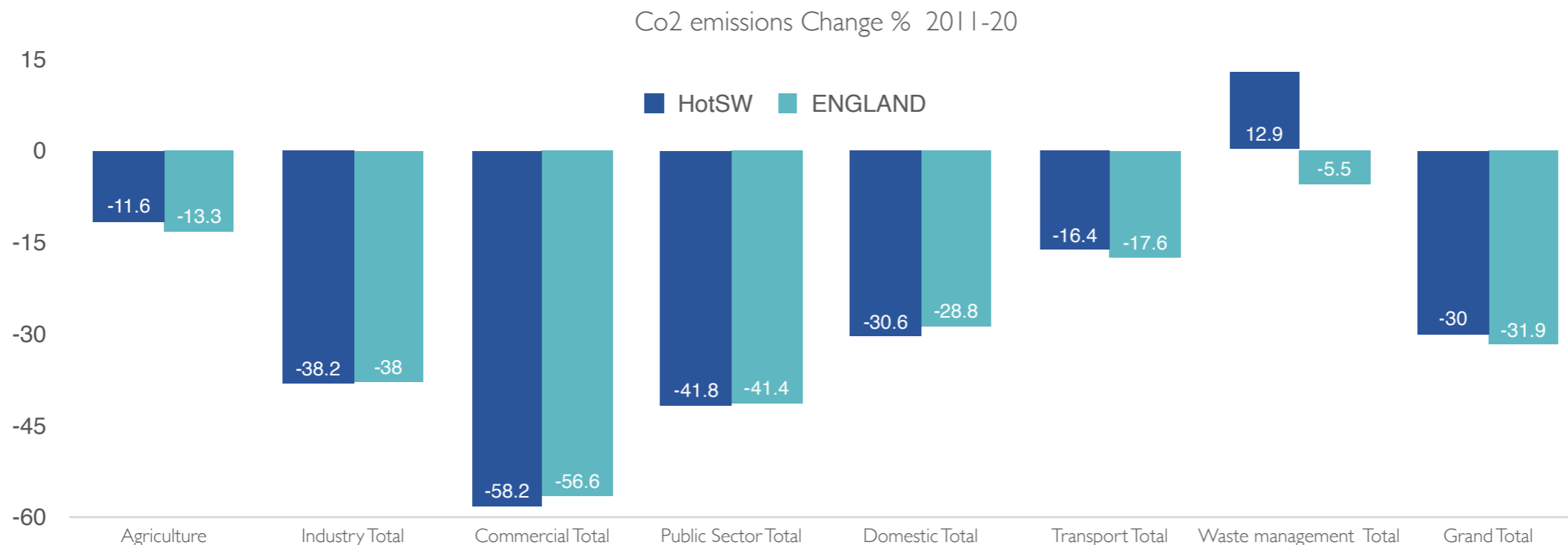


RENEWABLE ENERGY GENERATION INCREASE (MWH) 2016-2021 (%)



CLEAN GROWTH - CO2 emissions

HotSW has higher emissions per head than England. The latest data (also covering the early stages of Covid lockdowns) shows that emissions have fallen (albeit marginally lower than nationally). As would be expected, a large proportion of the fall in emissions in 2020 was associated with transport - as the number of journeys fell dramatically. The significant fall in commercial shown in the chart contains the longer-term impact of improving energy efficiency in commercial activity, but also the short-term effect of lockdown in 2020. We would expect to see some (strong) rebound in emissions data as the 2021 data becomes available.



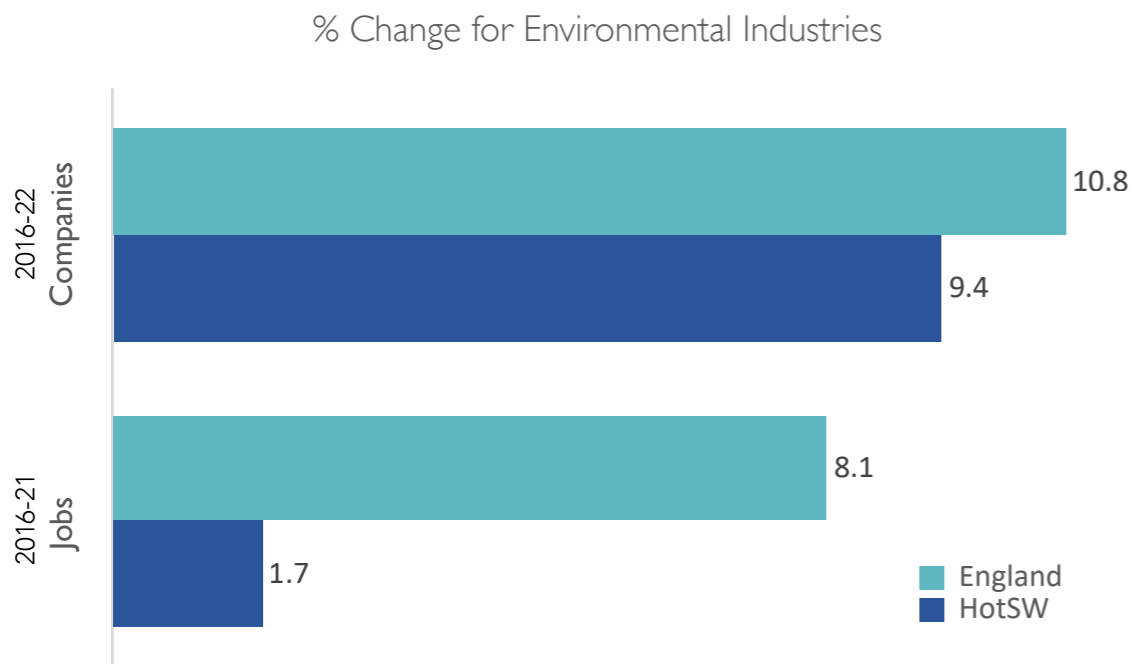
[UK Government CO2 emissions data](#)

[Carbon tracker site](#)

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.

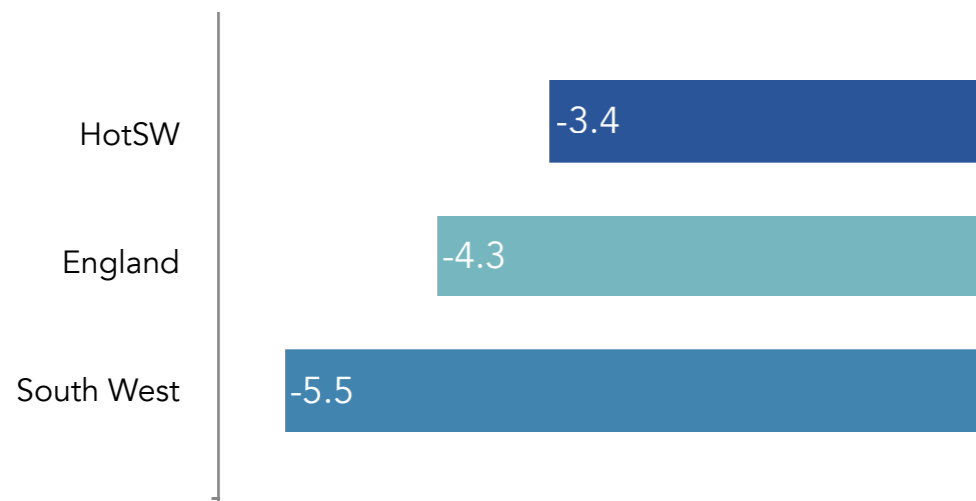
2021	Collected Household Waste per person (kg)	% of household waste sent for reuse, recycling or composting (Ex NII92)
England	406	42.3
Plymouth	407.2	30.6
Torbay	428.4	35.5
Devon	447.2	55.3
Somerset	461.1	52.4
HOTSW	436	43.5

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

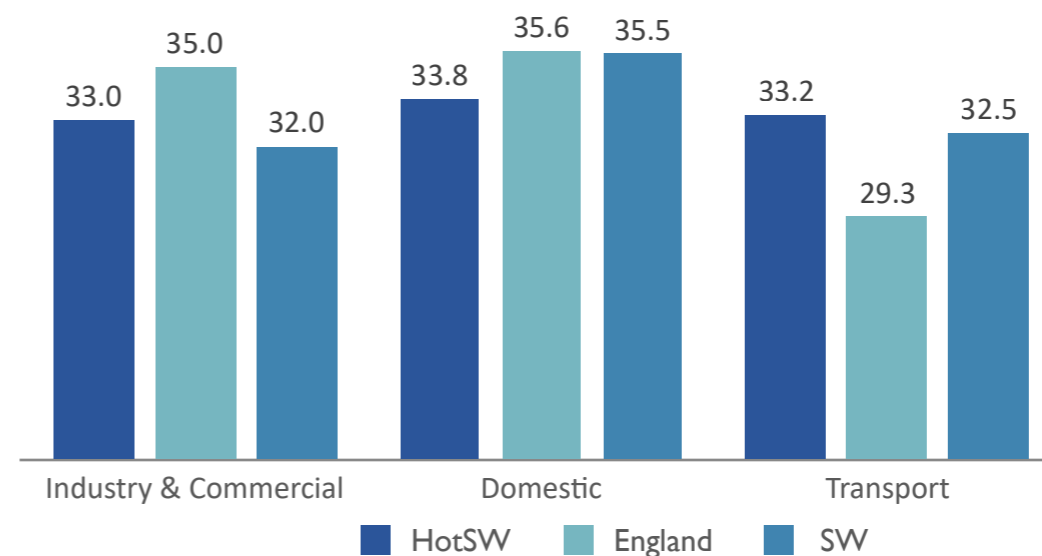
CLEAN GROWTH - energy consumption

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)



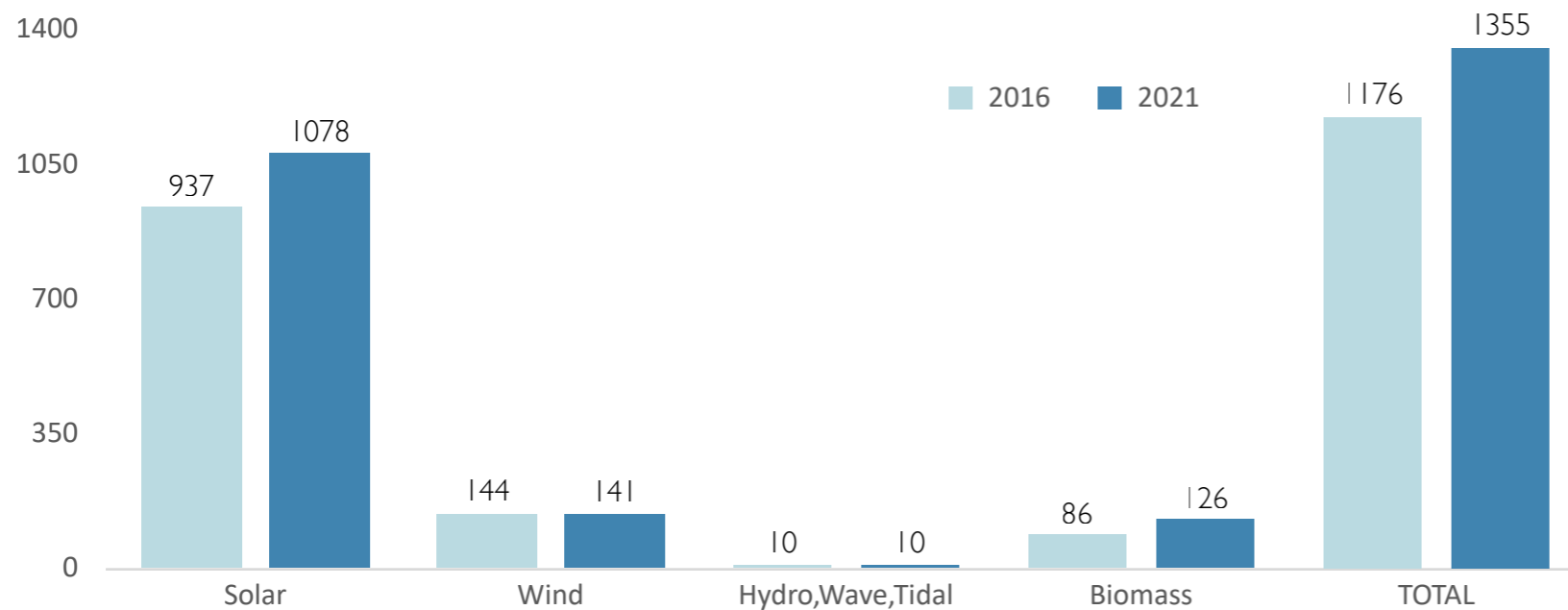
[Energy consumption by sector](#)

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 2017, the number of plug-in vehicles has increased by a factor of 7.5x - slightly lower than for England (8x).

Plymouth and Torbay have both seen higher growth rates than England. There were 14,608 registered plug in vehicles in Q2 of 2022, 7,990 of these were within Devon. Despite the growth in plug-in vehicles, on a per head basis ownership remains significantly lower than the national average (across the HotSW ownership is just above half of national rate on a per capita basis) - particularly 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.

	2017Q2	2018Q2	2019Q2	2020Q2	2021Q2	2022Q2	Change	Change	per 100k pop
England	101,880	146,233	195,987	280,510	510,037	824,793	722,913	709.6	1,460
HOTSW	1,928	2,996	4,268	5,682	9,559	14,608	12,680	657.7	817
Plymouth	94	168	214	295	599	1,035	941	1001.1	391
Torbay	86	131	204	319	519	827	741	861.6	594
Devon	1,159	1,859	2,642	3,338	5,532	7,990	6,831	589.4	984
Somerset	589	838	1,208	1,730	2,909	4,756	4,167	707.5	832



Plug-in vehicle data (Table VEH0142)

CLEAN GROWTH - charging points

HotSW has now seen a higher increase in both total and rapid charging points than the England average. There is evidence that growth in charging points is now happening more quickly in urban areas (Plymouth and Torbay - data not available for Exeter). Somerset remains the location with quickest growth in rapid chargers over the that England as a

whole. On a per capita basis the availability of chargers is lower than national average although the gap is closing

Increasing the amount of accessible rapid charging points should be a focus within future investments e.g. should it be policy that all physical developments supported by the LEP include the installation of rapid charging points?

All chargers	Oct 19	Oct 20	Oct 21	Oct 22	Change	Change %	per 100k pop
ENGLAND	12549	16456	21925	29774	17225	137.3	52.7
HotSW	310	460	568	802	492	158.7	42.2
Plymouth	41	70	74	126	85	207.3	47.9
Torbay	9	25	26	27	18	200.0	19.8
Devon	174	243	301	422	248	142.5	52.1
Somerset	86	122	167	227	141	164.0	40.3
Rapid chargers	Oct 19	Oct 20	Oct 21	Oct 22	Change	Change %	per 100k pop
ENGLAND	2,008	2,909	4,058	5,325	3,317	165.2	9.4
HotSW	59	93	119	157	98	166.1	9.8
Plymouth	4	8	9	8	4	100.0	3.0
Torbay	2	5	5	7	5	250.0	5.1
Devon	40	58	70	97	57	142.5	12.0
Somerset	13	22	35	45	32	246.2	8.0

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

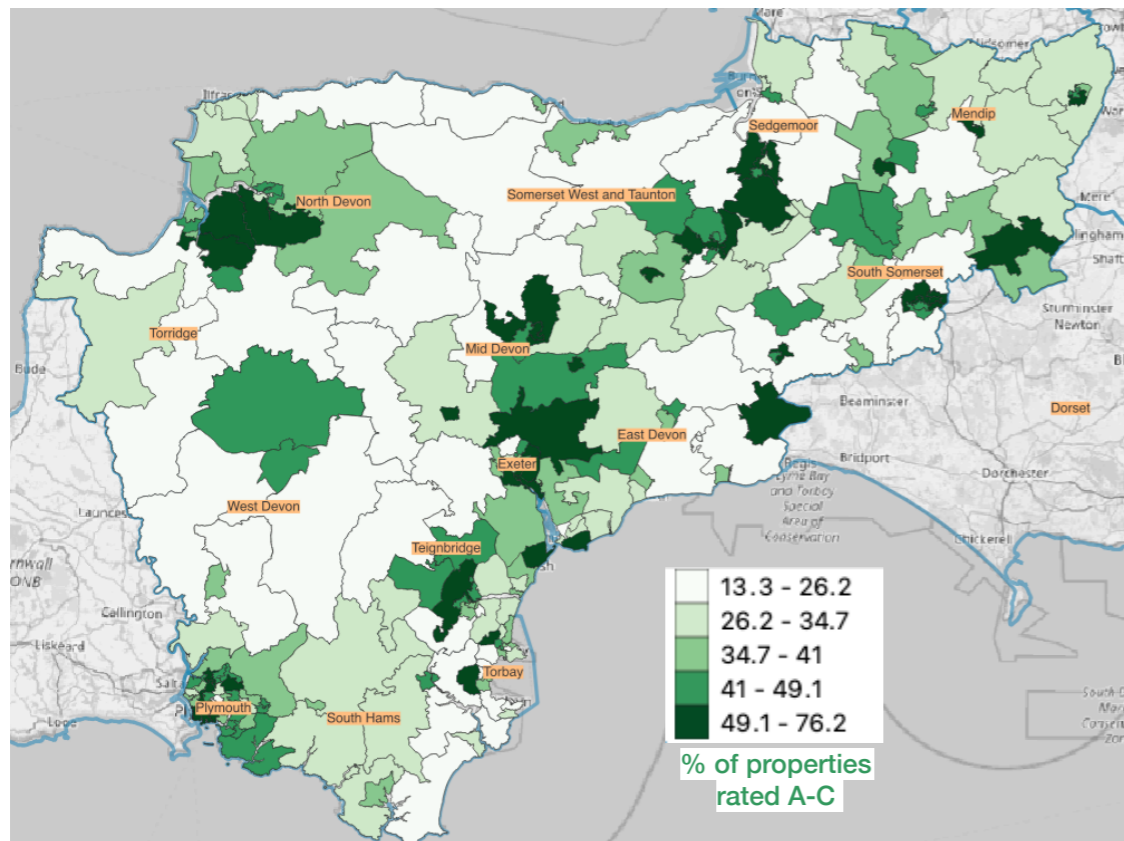
'Rapid devices' are those whose fastest connector is rated at 43kW and above.

[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.

Energy Performance Certificate % of properties graded A to C

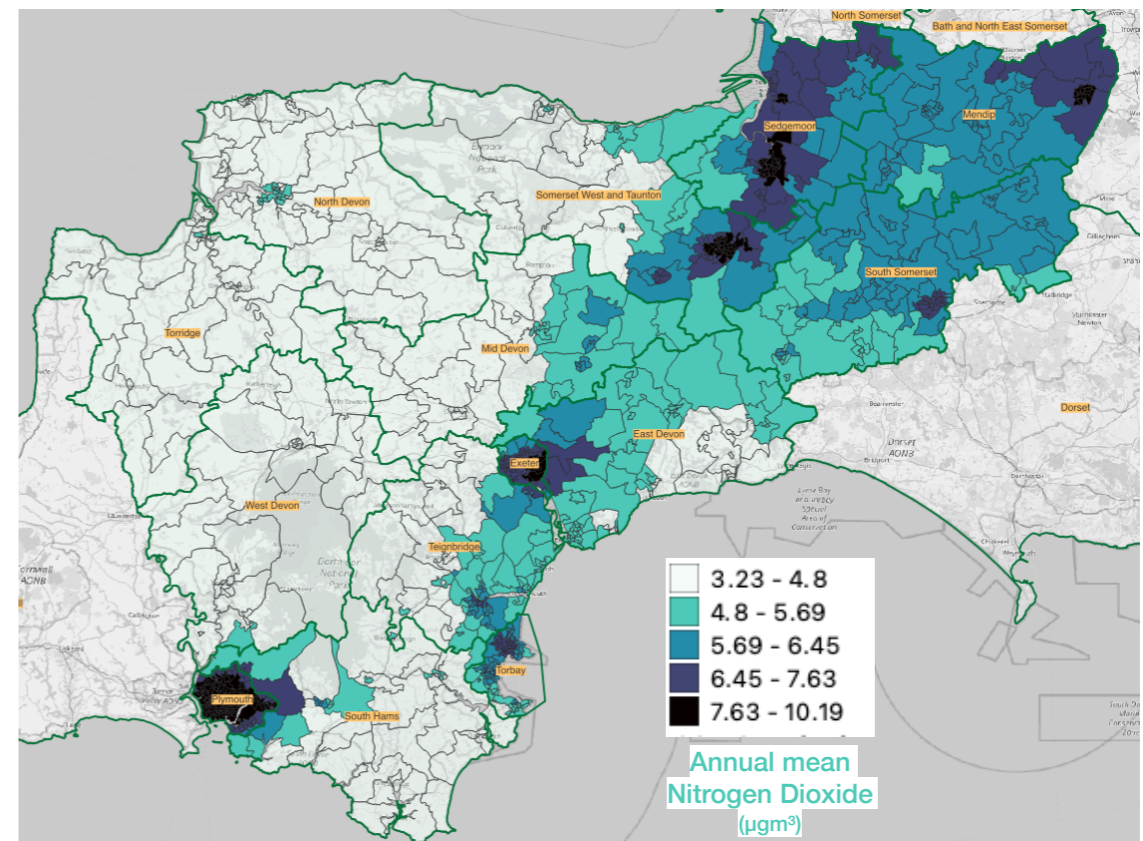


Constructed in QGIS by Understanding Data using ONS, OS and AHAH data under respective licences.

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



CLEAN GROWTH - data notes

PAGE
UPDATED

Slide 1

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

Slide 2

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 3

Energy Consumption data is aggregated from Local Authority data

Slide 4

Renewable Energy Capacity is aggregated from Local Authority data

Slide 5

Plug In Vehicle Data is aggregated from Local Authority data

Slide 6

Rapid Charging point data is aggregated from Local Authority data

Slide 7

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.

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