



Report Information

Title: West Midlands Sustainability Roadmap to 2030: Annual Monitoring Report 2025

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About Sustainability West Midlands

SWM was established in 2002 as an independent, not-for-profit company and is the sustainability adviser for the leaders of the West Midlands.

Our vision is that the West Midlands is leading in contributing to the national target of net zero greenhouse gas emissions by 2050 whilst addressing health inequality and driving inclusive growth. We monitor the West Midlands Sustainability 2030 Roadmap which acts as a framework that all organisations based or operating in the region can use to help them make changes to their activities in the knowledge that they will contribute to wider regional ambition.

SWM's support our <u>members</u> and other local stakeholders in the public, private and third sectors to implement these changes by enabling them to demonstrate innovation and leadership and provide opportunities to collaborate and celebrate success.

www.sustainabilitywestmidlands.org.uk

Registered company No.04390508

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1. Introduction and Background

1.1 Purpose of this Report

The purpose of this report is to provide evidence to policy makers within the West Midlands with progress on the economic, social and environmental sustainability goals and priorities for the region, set out in the West Midlands Sustainability Roadmap to 2030, launched at the end of 2019. This report outlines the progress on the targets that underpin the Roadmap, with the analysis of findings and graphical representation of the data, alongside the method for the data collection to enable replicability in the future.

The report also provides strategic context and recommendations for organisations reviewing or developing their strategies within the West Midlands and can help identify target areas for improvement and focus. SWM uses this work to help inform our priorities, sustainability reviews and strategies for our members and other stakeholders, developing cross-boundary programmes for funding.

1.2 Why is the Roadmap and Monitoring important?

SWM developed the Roadmap to act as a framework to help organisations operating in the region to further their sustainability activities. SWM acts as a catalyst to help these organisations operate more sustainably and contribute to our vision, which is that 'The West Midlands is leading in contributing to the national target of Net Zero greenhouse gas emissions by 2050 whilst addressing health inequality and driving inclusive growth.'

We do this by promoting:

- Innovation: Using new ideas, technologies, services, and processes to make positive changes quicker and more effectively.
- Leadership: Leading by example and promoting the ideas and perspectives of influencers and policymakers who can inspire and make a difference.
- Collaboration: Enabling the identification of partnerships and brokering connections between sectors to develop more powerful, sustainable solutions.
- Celebrating success: Sharing good practice and promoting the achievements of our members and stakeholders and enabling these to be scaled up and applied elsewhere.

Monitoring the success of our outreach and our role and, critically, the region's progress on sustainability would be almost impossible beyond anecdotal observation without setting relevant targets and annually analysing the data that underpin these. The Roadmap allows us to do this more effectively and enables us to determine those areas where progress is slower, and consequently where SWM should focus its priorities for the coming years.

Analysing these data since 2010 (or as far back in time as data collection commenced), from when our previous Roadmap to 2020 commenced, can allow us to predict the future trends of each metric, to ensure the targets are on track. The projections give clear indications about which targets need further action in order to reach the goal, and which are likely to be on track or to exceed the target set. The West Midlands's contribution to achieving these goals will play a part in acting as a region, and on a bigger scale in a global partnership to make the changes necessary for 2030.

1.3 Background to the Roadmap and Monitoring

SWM has overseen a regional sustainability Roadmap since 2010. We are the only region in the UK, as far as we are aware, to have a clear vision, plan, action, and annual monitoring to help achieve a more sustainable future. This has been possible due to our independent nature, our evidence-based approach, and the support of a range of partners and volunteers.

At our <u>Annual Conference in December 2019</u>, we launched this new ten-year Roadmap replacing the previous one, and we have set a greater range of targets than were being monitored during the lifetime of the 2010-2020 Roadmap.

The new Roadmap to 2030 was developed after an intense literature review and stakeholder engagement programme undertaken over 2017-2019. We analysed the relevant global, national and regional policies and strategies to understand their focus and targets and used these to inform our own. As part of the stakeholder engagement process, we consulted over 300 organisations through a series of events and 1-2-1 engagement. It is important to note that as new data become available the Roadmap targets may be updated (see section 1.4).

It should also be noted that due to the COVID-19 pandemic that commenced in March 2020, our baseline for monitoring the targets will be the year 2019. This is because 2020 is likely to have significant anomalies, due to the impact of lockdown. For example, we know that transport emissions declined sharply, which may have had a significant effect on carbon emissions for this period. Also, due to the lockdown the number of journeys taken is likely to have significantly lowered, which will thereby impact progress against our clean and active travel Roadmap theme.

1.4 Roadmap Midpoint Review

Alongside the usual annual monitoring, in 2024-25 SWM undertook an extensive review of the latest literature and policy, as well as engagement with sector experts, to mark the midpoint of the Roadmap's lifetime and ensure the targets set remain based on the most up to date picture. All current Roadmap targets were assessed to ensure they reflected the most up-to-date policy and were relevant to the region. The following Roadmap priority themes have had their targets updated or have had new targets added as part of the review:

Clean & Active Travel

Previous target for ULEV Sales:	By 2030, 80% of new cars should be Ultra Low Emission Vehicles (ULEVs)
New target for ULEV Sales:	By 2030, 100% of new cars should be Ultra Low Emission Vehicles (ULEVs)

Following their win in the 2024 general election, the Labour government reaffirmed that they would reverse previous policy adjustments, and that from 2030 all new cars sold must be Ultra Low Emission Vehicles (ULEVs). Following consultation with stakeholders, this change was confirmed, and is expected to be formalised in an upcoming update to the Zero Emission Vehicle (ZEV) Mandate.

Clean Air & Water

Previous target for water	N/A	
quality:		
New target for water quality:	By 2030, restore 75% of waterbodies within the West	
	Midlands to at least good ecological status	

Whilst we were able to establish a target focusing on air quality when the Roadmap launched, we have previously been unable to monitor water quality. However, the <u>Environmental Improvement Plan</u> released in 2023 provides a national target that we are also able to monitor at the regional level, which is that by 2030, restore 75% of waterbodies within the West Midlands to at least good ecological status. Following consultation with the Environment Agency, and in line with <u>River Basin Management Plans</u>, this target has been integrated into our Roadmap in 2025.

Natural Environment

Previous target:	N/A	
New target:	By 2030, at least 30% of land will be protected for nature	
	across the West Midlands	

Our new Natural Environment target mirrors the <u>30x30</u> target set by the United Nations, confirmed for use by UK government in the <u>Environmental Improvement Plan</u>, and supported by numerous local organisations including individual Wildlife Trusts. This target represents the commitment for 30% of all land to be protected for nature by 2030. In order for land to be protected for nature, areas with important biodiversity and wildlife-rich habitats must benefit from long-term conservation action and be supported by management plans.

Sustainable Growth

Previous target:	By 2030, sales in the Low Carbon Goods and Environmental Services sector will reach £40 billion			
	within the West Midlands			
New target:	By 2030, sales in the Low Carbon Goods and			
	Environmental Services sector will reach £32 billion			
	within the West Midlands			

Following the Low Carbon Environmental Goods and Services (LCEGS) Sector Refresh 2025 undertaken last year, consultants kMatrix recommended the original 2030 target should be updated based on the latest projections. The COVID-19 pandemic caused a downturn in sales in the LCEGS sector, and latest projections based on how the economy has reacted since then suggest achieving £40 billion in sales by 2030 is unrealistic. As such, this target has been updated, and the new vision statement is that sales in the LCEGS sector will reach £32 billion by 2030.

Sustainable Energy Use

Previous target:	By 2030, increase renewable energy generation by 799 from 2019 levels across the West Midlands			
New target:	By 2030, increase renewable electricity generation by 110% from 2019 levels across the West Midlands			

Previous target:	N/A
New target:	By 2030, 65,000 domestic heat pumps will be installed
	annually across the West Midlands

Previously, our intended target for Sustainable Energy Use had been derived to include renewable energy (electricity and heat) generation. However, as the data to measure this do not exist, a new target has been calculated for renewable electricity generation only, where available data are more accessible. This new target was set in consultation with National Grid, utilising data from their Distribution Future Energy Scenarios (DFES), and other local experts. These scenarios project the estimated renewable electricity generation needed in certain regions in order to meet Net Zero deadlines. In order to match our vision statement given in Section 2, Carbon Emissions, the DFES scenario Holistic Transition was chosen. This scenario projected that in order to reach Net Zero carbon emissions by 2050, the West Midlands will need to increase renewable electricity generation by 110% from 2019 levels by 2030.

As the updated target only accounts for renewable *electricity*, and does not measure renewable *heat*, it was recommended than an additional target to estimate trends in renewable heat was created. As such, an additional metric measuring annual heat pump installations has been included. The methodology for calculating the 2030 target for this dataset is the same as above.

1.5 Structure of the Report

This report provides an analysis of each sustainability priority theme that makes up our Roadmap to 2030, along with the overarching vision statement. We have provided a summary of the data and progress we are making on each target broken down, where possible, into local authority and a subregional level.

In previous reports, these subregions reflected the historical Local Enterprise Partnership (LEP) boundaries, however, in line with the UK Government's plans for devolution, the LEPs have since been disbanded. As such, the subregions used in this report have been updated to align more closely with current governance structures, and broadly mirror the ceremonial counties of the West Midlands. To avoid confusion, the ceremonial county of the West Midlands will be referred to as the WMCA region throughout this report. Additionally, data for the areas of Herefordshire, Shropshire and Telford & Wrekin have been combined to form a subregion known as The Marches.

A detailed breakdown of the local authorities included within each subregion is included in Annex 2, as well as a breakdown of the population for each subregion. The methodology used to obtain the data and measure targets is set out within each section, and recommendations have been provided for next steps.

1.6 Summary of Progress

Summary of Progress					
Roadmap Priority	2030 Target	Progress			
(0)	Achieve Net Zero carbon emissions by 2050	Sustain Current Action			
	Achieve a household recycling rate of 55%	More Action Needed			
	One third of all travel will be made by walking or cycling	Accelerate Progress			
A	100% of new cars sold will be Ultra Low Emission Vehicles (ULEVs)	More Action Needed			
(2)	Reduce the mortality rate from PM2.5 pollution exposure by 75% from 2019 levels	Accelerate Progress			
(2)	Restore 75% of waterbodies to good ecological status	More Action Needed			
(3)	At least 30% of land will be protected for nature	More Action Needed			
8	Sales in the Low Carbon Goods and Environmental Services sector will reach £32 billion	Accelerate Progress			
	Achieve a 40% in male and female health inequality from 2019 levels	More Action Needed			
	Reduce the proportion of households in fuel poverty by 50% from 2019 levels	Accelerate Progress			
1	Increase renewable electricity generation by 110% from 2019 levels	Accelerate Progress			
1	65,000 domestic heat pumps will be installed annually	More Action Needed			
	No target at present	-			

2. Carbon Emissions

2.1 2050 Vision Statement

By 2050, achieve Net Zero carbon emissions across the West Midlands.

Carbon Emissions

Status: Sustain Current Action

2.2 Methodology

Information on local carbon emissions is sourced from the UK local authority and regional carbon emissions national statistics, <u>published annually</u> by the Department of Energy Security and Net Zero (DESNZ). At the time this dataset was analysed, data from 2010-2023 were available for analysis and therefore utilised within this report. Data at the local authority level within the West Midlands were extracted, comparing the 'grand total' column across the time frame identified above.

This data **do not** include aviation, shipping or military transport, but **do** include road transport, land use and industry and domestic sources of energy. This allowed for analysis by collating the data at a local authority level and establishing a graph for comparison of West Midlands local authorities against the year, on the x-axis. A total average for the West Midlands was also defined using the collected data.

To identify whether the 2050 target could be met, a trendline was plotted to predict the value for 2050. The methodology behind this can be found in Annex 1. This methodology is utilised for many of the datasets analysed throughout the report.

2.3 Findings

Figure 1 shows the total carbon emissions across the West Midlands from 2010 to 2023. The data show a steady decline since 2010, with the West Midlands reaching the lowest levels of carbon emissions for the years of data available in 2023, at 24,770 kT CO₂. This is a 38.2% decrease since 2010, and is lower than 2020, which saw lower carbon emissions than would ordinarily be expected due to the impacts of the COVID-19 pandemic, such as decreased travel and business operations.

Total Carbon Emissions in the West Midlands

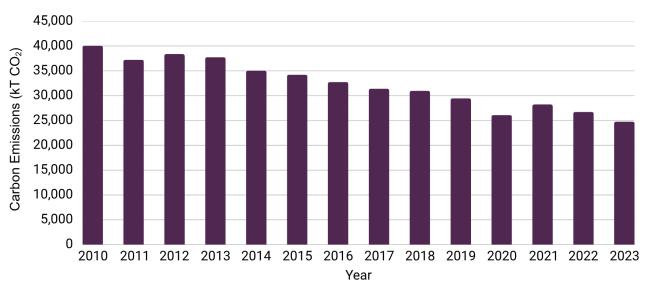


Figure 1 - Graph showing carbon emissions in the West Midlands for 2010-2023. Data are measured in kT CO2.

Projection of Total Carbon Emissions in the West Midlands

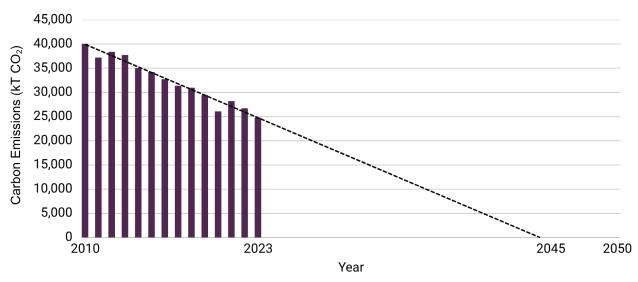


Figure 2 - Graph showing carbon emissions in the West Midlands for 2010-2023, with a trendline showing projection of future carbon emissions. Data are measured in kT CO₂.

Using the data, a regression line was calculated to be y = -1,153x + 41,025, as visualised by the trendline in Figure 2. Through regression analysis, it is possible to project carbon emissions for future years, assuming the current rate of decrease continues. According to this projection, the West Midlands is on track to meet and exceed the target of reaching Net Zero by 2050 and is predicted to reach Net Zero between 2044 and 2045. If 2020 data are excluded from this projection, this estimate is pushed back to between 2045 and 2046, which due to the unlikelihood of a similar event occurring again may make this the more probable projection.

Figure 3 displays the carbon emissions in the West Midlands divided into five subregions for the years 2010-2023. The WMCA has consistently been the highest emitting subregion due to the high population compared to other subregions, and the predominantly urbanised nature of the area. Positively, the WMCA area has also seen the largest reduction in carbon emissions compared to 2010, from 16,282kT CO₂ down to 9,429kT CO₂, a 42.1% decrease.

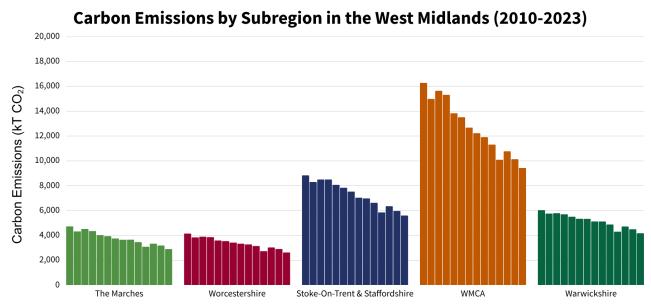


Figure 3 - Graph showing carbon emissions in the West Midlands for each subregion. Data are measured in kT CO₂.

Additionally, Figure 4 shows that whilst emissions in the WMCA are the highest compared to other areas of the region, the area has some of the lowest emissions per capita (i.e. emissions per head of population), with all six local authorities below six tonnes CO_2 . By taking population into account, we are provided with data that can be compared more easily between areas, better representing which local authorities are managing their emissions well. For example, despite having by far the largest total emissions, Birmingham's per capita emissions are relatively small (3.1 T/capita), and one of the lowest in the region. The highest emissions per capita can be found in Rugby (12.84 T/capita) and North Warwickshire (11.3 T/capita). Further investigation should take place to identify why these areas have especially high per capita emissions.

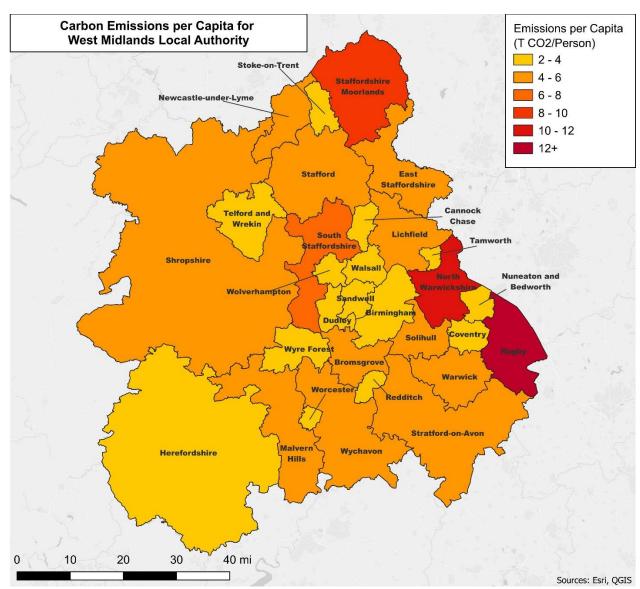


Figure 4 - Map showing carbon emissions per capita in 2023 for each West Midlands Local Authority, in tonnes of CO₂ per person.

Figure 5 shows the total amount of carbon emitted between 2010 and 2023 for all regions of England, allowing for an assessment of how the West Midlands is performing comparatively to other regions in England. It is clear to see that the North East emits the lowest amount of carbon, significantly lower than all other regions, and the highest amounts of carbon are emitted from the South East. The West Midlands is the fourth lowest emitter of carbon out of the nine regions in England, emitting 24,770 kT.

However, it should be noted that there are significant regional variations such as total area and population which impacts the total carbon emissions. Thus, a fairer comparison could be derived through analysing CO₂ per capita across each region. All regions have seen a decrease in carbon emissions over time, and 2023 is the lowest year on record for all nine regions. The greatest decrease of emissions has occurred in the South East with a reduction of 24,918 kT since 2010. The

region that has experienced the smallest decrease in carbon emissions is the East Midlands with a decrease of 11,550 kT between 2010 and 2023. The West Midlands has seen the sixth-largest decrease since 2010.

60,000 55,000 45,000 40,000 35,000 25,000 15,000 10,000 5,000 0 South East North West East of England Yorkshire & Humber East Midlands West Midlands London South West North East

Regional Comparison of Carbon Emissions in England (2010-2023)

Figure 5 - Graph showing carbon emissions for each region in England. Regions are ordered in descending order according to the 2023 data. West Midlands data are highlighted in pink. Data are measured in kT CO₂.

2.4 Recommendations

- In future reports, a more in-depth analysis of what policies and programmes are in place in different areas of the region may be helpful to investigate, in order to determine whether any of these are transferrable to areas where emissions are higher or declining at a slower rate.
- The establishment of a West Midlands target reflecting per capita emissions, i.e., emissions per head of population, could also be investigated for a 'truer' picture of which areas emit the greatest 'intensity' of carbon, and where interventions may be required.
- Currently, our West Midlands target is aligned with the government's 2050 Net Zero target. We
 do, however, recognise other scientific analyses suggests that more rapid decarbonisation is
 required to prevent the worst effects of climate change. We will continue to assess these and
 any potential impact on local or national policy and, consequently, how this may affect our
 target.

2.5 Summary

A decrease in carbon emissions has been observed since 2010, with emissions at their lowest in 2023 since data collection began. The region is currently on track to meet the 2050 Net Zero target prior to the vision statement year, therefore, current action should be sustained.

Status: Sustain Current Action

3. Resource Efficiency

3.1 2030 Vision Statement

By 2030, achieve a household recycling rate of 55% across the

West Midlands. **Status: More Action Needed**



3.2 Methodology

Local authority collected household waste figures from April 2000 to March 2024 is available from the Department for Environment, Food & Rural Affairs (Defra). The percentage of household waste sent for reuse, recycling or composting provided in the dataset was compared at both the local authority level and regional West Midlands level.

3.3 Findings

Figure 6 displays the percentage of household waste sent for reuse, recycling, or composting within the West Midlands between 2010/11 and 2023/24. The overall trend since 2010 has shown little fluctuation, with an average recycling rate of 40.7%. The highest average rate for the West Midlands was recorded in 2012/13 at 43.5%. Since 2019 there had been a decrease in all subsequent years, however 2023/24 has seen an increase of 1.3% compared to 2022/23. Whilst the current total of 42.1% is still significantly lower than the 2030 target, this may be an indicator of an upward trend.

West Midlands Percentage of Household Waste Sent for Reuse, Recycling or Composting

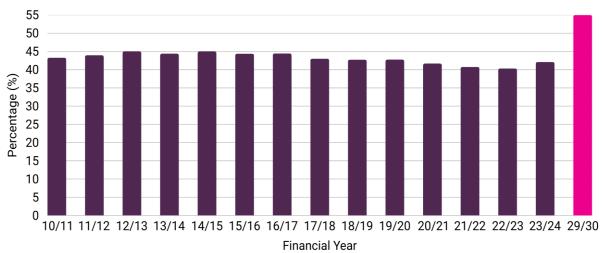


Figure 6 – Graph showing percentage of household waste sent for reuse, recycling, or composting within the West Midlands, 2010/11-2023/24. The West Midlands 2030 target of 55% is highlighted in pink.

Figure 7 examines household waste sent for reuse, recycling, or composting at a subregional level. Of the five subregions, three have seen increased rates since 2010, whilst Stoke-on-Trent & Staffordshire and the WMCA have seen significant decreases. These regions account for almost 70% of the population of the West Midlands, and therefore this decrease is likely to have implications for the average recycling rate across the whole region. However, all five regions have seen an increase when comparing 2023/24 data to 2022/23.

Percentage of Household Waste Sent for Reuse, Recycling or Composting by Subregion (10/11-23/24)

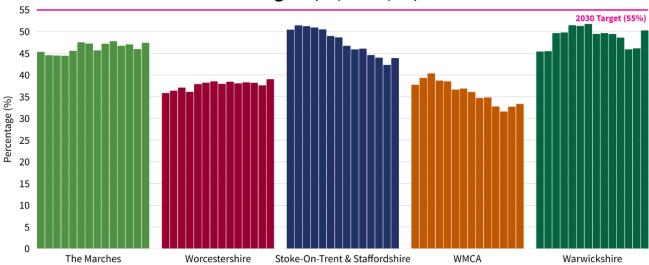


Figure 7 - Graph showing percentage of household waste sent for reuse, recycling, or composting for each subregion within the West Midlands, 2010/11-2023/24. The region-wide 2030 target of 55% is shown by a pink horizontal line.

Percentage of Household Waste Sent for Reuse, Recycling or Composting by Region in England (10/11-23/24)

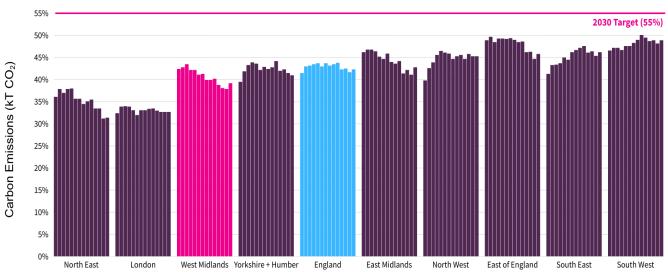


Figure 8 - Graph showing percentage of household waste sent for reuse, recycling, or composting for each region of England, 2010/11-2023/24. Regions are ordered in ascending order according to the 2023/24 data. West Midlands data are highlighted in pink, and the average for England is highlighted in blue. The West Midlands 2030 target of 55% is shown by a pink horizontal line.

Figure 8 compares the West Midlands region to the other eight regions in England. The West Midlands had the third-lowest recycling, reuse and composting rate in England in 2023, which is below the national average. The West Midlands has also seen the second biggest decrease in rates since 2010/11, with only the North East declining more. All but one of the regions increased from 2022/23 to 2023/24, and this has had a positive impact on the national average, although this remains at 42.3%, which is below 2019/20 levels. None of the nine regions are above 50%, and none are projected to reach 55% by 2030.

3.4 Recommendations

- Further analysis of which local authority areas are particularly contributing to the poor progress against this target would also be beneficial, alongside working with them to try and improve rates of reuse, recycling, and composting.
- Further analysis into different types of household waste, and how they are each individually reused, recycled, or composted would be beneficial. This would enable more tailored and improved recommendations for each household waste type.
- As of 31 March 2025, changes to waste regulations have both widened the definition of household waste meaning that many more establishments are included, and increased the material streams that must be separated for recycling. Going forwards, the analysis of the Resource Efficiency target will need to account for these legislative changes.

3.5 Summary

Further action must be taken to achieve the 2030 target, as current trends using data from 2010-2023 show the West Midlands is projected to be considerably lower than 55% by 2030.

Status: More Action Needed

4. Clean & Active Travel: Walking and Cycling

4.1 2030 Vision Statement

By 2030, one third of all travel within the West Midlands will be made by walking or cycling.

Clean & Active Travel

Status: Accelerate Progress

4.2 Methodology

Department for Transport statistics show the number of trips made by each mode of transport from 2010 to 2024 as part of its National Travel Survey. The data can be used to identify the total number of trips made by walking or cycling in the West Midlands, calculating a percentage of these against all trips. In 2020, the survey format transitioned from a previous face-to-face questionnaire to a telephone structure due to the COVID-19 pandemic. In 2021 and the first half of 2022, the survey format transitioned to a 'knock-to-nudge' methodology involving home visits followed by telephones interviews, which generated a higher number of responses than the 2020 methodology and produced numbers closer to pre-pandemic levels. Consequently, care should be taken when interpreting and comparing data collected from 2020-2022 to other years due to smaller sample sizes and alternative methodologies. A return to previous data collection methods from 2023 onwards has seen a return to pre-pandemic sample numbers.

4.3 Findings

Figure 9 shows the percentage of walking and cycling trips undertaken between 2010 and 2024 compared to those made by all other modes of transport in the West Midlands. The lowest percentage of 22.4% was recorded in 2014, while the highest percentage occurred in 2020 with 32.2% of trips being made by walking or cycling. This was a significant increase from 2019, being an outlier comparative to the overall trend, likely due to the COVID-19 pandemic.

The number of trips dropped significantly following 2020, but this has slowly increased over the previous four years. However, in 2024, there was a slight decrease in trips compared to 2023, with the latest available data showing 25.2% of trips are currently made by walking or cycling. The West Midlands has also consistently seen fewer people walking and cycling compared to the rest of the country (Figure 10). However, whilst the national average has decreased in the last four years, the West Midlands has increased, meaning the gap is getting smaller.

Percentage of Trips Made By Walking Or Cycling In The West Midlands

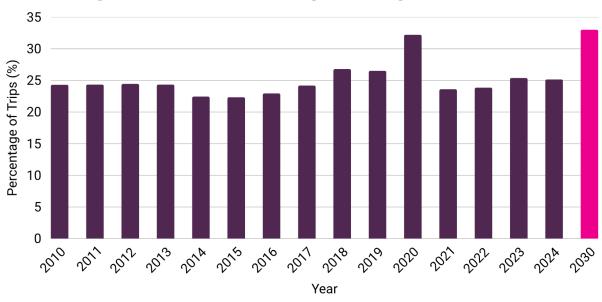


Figure 9 - Graph showing percentage of trips made by walking or cycling within the West Midlands, 2010-2024. The West Midlands 2030 target of 33.3% is highlighted in pink.

Percentage of Trips Made By Walking Or Cycling, Comparing West Midlands Data and National Data

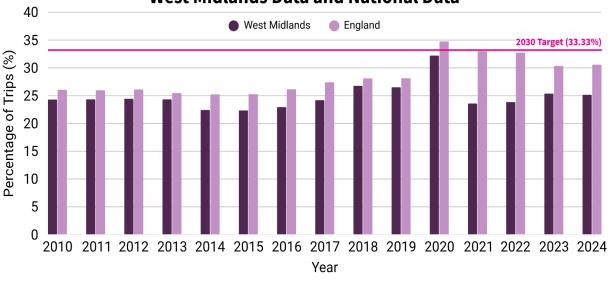


Figure 10 - Graph showing percentage of trips made by walking or cycling within the West Midlands (purple) and the average for England (lilac), 2010-2024. The West Midlands 2030 target of 33.3% is shown by a pink horizontal line.

The geography of the West Midlands may provide answers as to why the region has consistently been below the national average. The region consists of a densely populated urban core surrounded by a large rural envelope. Consequently, there may be fewer opportunities for the population located in this urban core to access green spaces, where they may be more encouraged

to travel via active travel methods of walking and cycling. This is explored in greater detail in Section 8, <u>Natural Environment</u>.

Conversely, whilst people living within the rural envelope may have greater access to green spaces, they are likely to have a greater reliance on the use of private vehicles within their travel routines because of potentially longer commutes than those in urban areas. This is consistent with the National Travel Survey finding that the fewest trips in the categories 'Walk' and 'Pedal Cycle' and the highest number of trips using a car or van were recorded in rural areas. Figure 11 shows the breakdown by travel mode for the entire region.

Percentage of Trips Made in the West Midlands by Mode of Transport

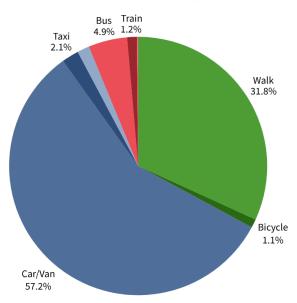


Figure 11 - Pie chart showing the percentage of trips made by each mode of transport within the West Midlands in 2024. Data are taken from the National Travel Survey. Active transport modes are coloured green, private vehicles are coloured blue, and public transport is coloured red.

4.4 Recommendations

- In future reports, it would be valuable to analyse the walking and cycling levels further at a
 county level alongside the West Midlands' averages to indicate specific areas that need targeted
 actions, and to ascertain the difference in rural and urban trends. Data are not currently
 available due to an insufficient sample size collected. The Department for Transport suggest
 that assessing at a more granular level would only be viable if multiple years of data were
 combined.
- A target measuring all sustainable modes of transport more broadly could be useful in giving a larger scale comparison of environmental impact from transport. This could include public transport, e-scooters and e-bikes. The Department for Transport intends to separately analyse

- e-scooters and e-bikes as new modes of transport for future reports which would be beneficial for comparing additional sustainable transport types.
- Assessing the impact of access to green space on walking and cycling data would be useful on a local scale. This would provide understanding of what is needed to alter behaviour change and what factors increase walking and cycling percentages.

4.5 Summary

Although there has been a gradual increase in the percentage of trips made by walking and cycling in recent years, more progress needs to be made to reach the 2030 target. 2020 data show that reaching one third of all trips is possible, although changes to behaviours and infrastructure are required.

Status: Accelerate Progress

5. Clean & Active Travel: ULEV Sales

5.1 2030 Vision Statement

By 2030, 100% of new cars sold should be Ultra Low Emission Vehicles (ULEVs)

Status: More Action Needed



5.2 Methodology

The Ultra Low Emission Vehicles (ULEV) <u>dataset</u> for cars is collected from the Department for Transport (DfT), where data specific to the West Midlands region are accessible. This is sent as a spreadsheet directly to SWM by the Department's Vehicle Statistics team, as it is not publicly available. The percentage of new cars sold that are ULEVs is calculated using both this spreadsheet, and the DfT <u>dataset</u> for all vehicle sales. Data for EV chargepoints is provided by SWM Members <u>Cenex</u>, taken from their <u>Public EV Infrastructure Metrics</u>.

5.3 Findings

As seen in Figure 12, the proportion of ULEV sales has increased significantly in the last five years. In 2024, 26,373 ULEVs were sold in the West Midlands, accounting for 18.4% of all car sales. This highlights the growing sentiment of the need to reduce greenhouse gas emissions as well as the increasing number of policies championing fuel efficiency and the reduction of carbon emissions.

There was a reduction in the percentage of car sales that were ULEVs in 2023 compared to the previous year, and this was the first time the percentage had declined since 2013. One possible cause for this decline could have been uncertainty around EV policies and targets, with the previous Conservative government pushing back targets for all car sales to be ULEVs to 2035. Since then, this target has been reverted to the original 2030 target by the current Labour government. There was an increase in the percentage of ULEV sales in 2024 compared to the previous year, and it will be important to assess how this trend increases in the coming years now that the target has been reverted to 2030.

A regression analysis was used to project the percentage of ULEV car sales compared to total car sales in the West Midlands and this anticipates that by 2030, 25% of new car sales will be ULEVs. This is significantly below the 100% target in the 2030 Vision Statement, suggesting that significantly more action is needed in this sector. However, the increase in the purchase of ULEVs is

likely to continue in line with the Government's target for all new sales to be fully zero emission by 2030. Furthermore, measures such as the Birmingham City Clean Air Zone should continue to encourage residents to transition to electric vehicles, and improvements to EV charging infrastructure will help increase demand.

Percentage of New Cars Sold in the West Midlands that are ULEVs 100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% Vear

Figure 12 - Graph showing percentage of new cars sold that are ultra-low emissions vehicles (ULEVs) within the West Midlands, 2010-2024. The West Midlands 2030 target of 100% is highlighted in pink.

Figure 13 displays the number of ULEVs registered for the first time between 2010 and 2024 for regions of England. It is evident that there is an overall national trend of ULEVs increasing since 2010. Unlike in the Midlands, however, most regions did not experience a decrease in percentage of sales that are ULEVs from 2022 to 2023, although increases in this year were smaller than in years either side. Many regions, including the North East, East of England and London have experienced very large increases in 2024, and the national average suggests this growth is expected to continue in the coming years.

As of 2024, the West Midlands is placed second lowest in terms of percentage of new cars sold that are ULEVs. Whilst there are a number of factors that could influence this, including population, geography and income, this does indicate that there is more that could be done to increase uptake. One of the main reasons reported for a lack of interest in EV uptake is poor EV infrastructure in certain areas, making charging inconvenient and more expensive.

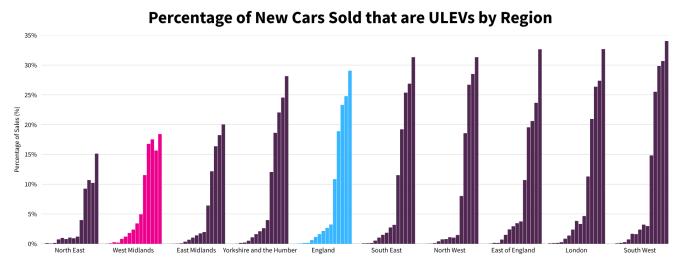


Figure 13 - Graph showing percentage of new cars sold that are ultra-low emissions vehicles (ULEVs) for each region in England, 2010-2024. Regions are ordered in ascending order according to the 2024 data. West Midlands data are highlighted in pink, and the average for England is highlighted in blue.

SWM members <u>Cenex</u>, who track EV infrastructure metrics for all local authorities in England, suggest that in order to increase EV sales, local authorities need to ensure that two metrics are addressed. These include, firstly, ensuring at least 20% of households without driveways are within a four-minute walk of public chargepoints (Chargepoint Distribution %) and secondly, maintaining a positive supply versus demand ratio. Supply versus demand refers to the number of years that supply of public chargepoints is ahead (positive) or behind (negative) demand.

Figure 14 shows a scatter plot for each local authority in the West Midlands against these metrics. The top right quadrant represents 'good distribution', which is where Cenex recommend all local authorities sit within by 2030. Currently, only four have the required EV infrastructure: Birmingham, Coventry, Shropshire and Solihull. Coventry is by far the furthest ahead and is one of the national leaders in this area, with 75% chargepoint distribution and supply nine years ahead of demand. However, the majority of West Midlands local authorities are below the required levels and are far below the national average. Increasing EV infrastructure to the levels recommended by Cenex would likely increase ULEV sales, increasing the likelihood of meeting the 2030 target.

Local Authority EV Chargepoint Statistics

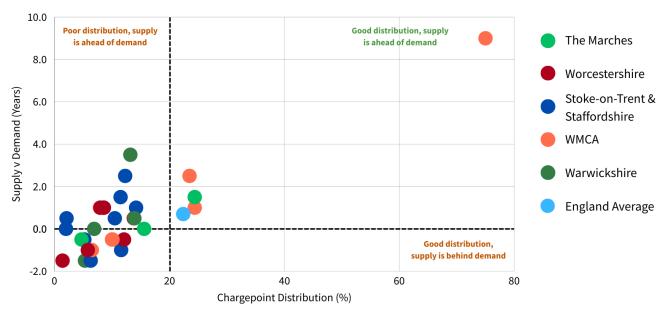


Figure 14 - Scatter plot showing the distribution of EV chargepoints and supply versus demand metrics for each local authority in the West Midlands. Each local authority is represented by a circle, coloured by the subregion it is located within. A light blue dot indicates the average for England. Data are provided by Cenex.

5.4 Recommendations

- It may be beneficial to ascertain whether the data representing ULEVs registered for the first time can be broken down into local authority level for further insight. This would be especially helpful to determine if the uptake of electric vehicles is slower in rural areas where perhaps infrastructure is limited, and range anxiety is still a greater concern than in urban areas.
- It is expected that the Government's mandate for all new vehicle sales by 2030 to be zero emission will accelerate the trend, so although we have indicated that more action is needed, the data analysed mostly reflects uptake prior to this announcement. Should uptake not accelerate in the next couple of years, the concern around progress would be greater.
- It is also important to note that there may be different reasons for ULEV cars not to be purchased by the public, especially due to their current cost. This is something which needs to be investigated and thought about further to accelerate progress of this target. There may need to be a way to make ULEV cars more accessible, to encourage more people to invest in them.

5.5 Summary

Based on current trends, a further acceleration of uptake is ULEV sales is needed to meet the 2030 vision statement and UK Government target.

Status: More Action Needed

6. Clean Air & Water: Air Quality

6.1 2030 Vision Statement

By 2030, reduce the mortality rate from PM2.5 pollution exposure by 75% from 2019 levels across the West Midlands.



Status: Accelerate Progress

6.2 Methodology

The dataset used to assess this target was gathered from Office for Health Improvement and Disparities' Fingertips Public Health Profiles and is broken down into local authorities to show mortality as a result of PM2.5 pollution exposure from 2010-2023. Since 2021, this dataset has been calculated using a new methodology, which has since been backdated to include figures as far back as 2018, which means all data post-target is comparable. However, all data from 2010-2017 is no longer directly comparable with the current methodology and so has been excluded from this report. Details on the methodologies used for this metric are available on the Fingertips website. The West Midlands percentage data were collected, and subregional averages were calculated. A trendline was generated to predict the 2030 value (see Annex 1 for full calculations).

6.3 Findings

Figure 15 displays the percentage of mortality attributed to particulate air pollution within the West Midlands between 2018 and 2023. There is a clear difference between data before 2020 and after, likely due to the impacts of the COVID-19 pandemic. Rates post-2020 are significantly lower than previous years, and despite a gradual increase from 2020-2022, the most recent data show the mortality rate from PM2.5 is currently declining, and sits at 4.9% for the region in 2023.

Using a regression line with the equation y = -0.0037x + 0.0702, we can predict that mortality rate attributed to PM2.5 within the West Midlands is expected to continue to decrease to 2.2% by 2030, based on the current trend. Whilst this is still 0.4% above the target, it is heading in the right direction. However, the small dataset and the gradual increase observed between 2020-2022 mean that this projection should be monitored for accuracy over the coming years, and a more sustained decrease will be required in order to meet the 2030 target.

Figure 16 shows the percentage of mortality attributed to particulate air pollution for each subregion in the West Midlands. Generally, trends are very similar for all five subregions, observing a large decrease in 2020, followed by a small increase until 2022, and then a decrease in 2023. The two subregions experiencing the lowest mortality rates due to poor air quality are The Marches

(3.9%) and Worcestershire (4.3%), likely due to their rural nature and are therefore likely have lower air pollution levels.

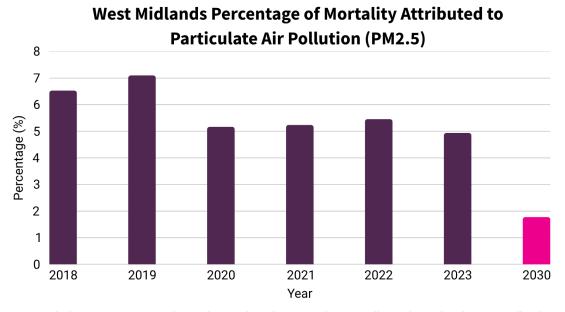


Figure 15 - Graph showing percentage of mortality attributed to particulate air pollution (PM2.5) in the West Midlands, 2018-2023. The West Midlands 2030 target of 1.8% is highlighted in pink – this represents a 75% reduction from 2019 levels.

Recent policy changes could result in mortality attributed to particulate air pollution continuing to decrease at a significant rate in the coming years, most notably the Clean Air Zone initiative within Birmingham City Centre. Additionally, an increased number of ULEVs on the road and increased use of public transport and active travel will reduce particulate air pollution over a sustained period of time, improving air quality and reducing mortality. Monitoring this dataset closely over the coming years will be crucial to understand the impact of these potential changes.

Percentage of Mortality Attributed to Particulate Air Pollution (PM2.5) by Subregion (2018-2023)

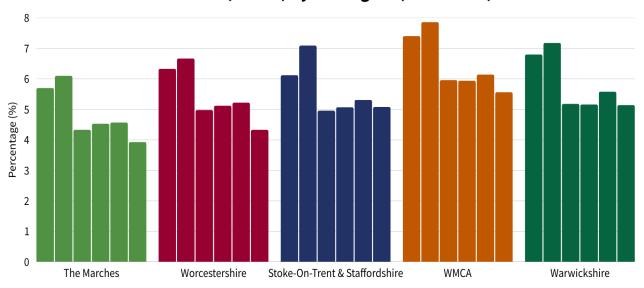


Figure 16 – Graph showing percentage of mortality attributed to particulate air pollution (PM2.5) for each subregion in the West Midlands, 2018-2023.

6.4 Recommendations

- If the data are available, it may be useful to analyse air quality data in addition to mortality attributed to air quality. This could be useful to understand spatial variation over the entire region, particularly the difference between urban and rural settings, and identification of air pollution hotspots in the region. Work is currently being done to understand whether these data are available.
- In future reports, it will be important to assess if the mortality rates attributed to air pollution
 fall in accordance with introduced air pollution measures and a shift towards lower emission
 vehicles in line with government policy.

6.5 Summary

Whilst there has been positive progress over the last five years, the current projections suggest that progress needs to be accelerated if the West Midlands is to meet the 2030 target.

Status: Accelerate Progress

7. Clean Air & Water: Water Quality (NEW TARGET)

7.1 2030 Vision Statement

By 2030, restore 75% of waterbodies within the West Midlands to at least good ecological status.

Status: More Action Needed



7.2 Methodology

The data used to measure this target were taken from the Environment Agency's <u>Catchment Data Explorer</u>, which contains classifications for all waterbodies in England. These classifications include measurements for ecological status, chemical status and pollutants. In order to measure against the target, the overall status for each waterbody was obtained. All waterbodies that contain at least 50% of their catchment area within the West Midlands' boundary were analysed for this theme.

The Environment Agency is legally obliged to publish a full set of data for every waterbody in England every six years. The last full set was in 2019, with the next due to be released in late 2025. Additional targeted sampling was undertaken between 2019 and 2021, allowing an updated dataset to be released in 2022, which contained updates for all West Midlands waterbodies.

7.3 Findings

Figure 17 shows the latest available data analysing the ecological status of all waterbodies in the West Midlands. This includes data for both 2019 and 2022. Water quality in West Midlands waterbodies is currently well below the required levels to support a healthy and sustainable ecosystem, with just 3.2% considered above "good" ecological status. This means that over 96% of waterbodies in the West Midlands are ranked "moderate", "poor" or "very poor", and have been significantly altered from natural conditions, leading to reduced biodiversity and habitat suitability. Of the 12 waterbodies currently denoted as "good" ecological status, nine of these are located in the River Severn Catchment Area, with the remaining three in the River Humber Catchment Area. Six of the nine River Severn waterbodies are located within Herefordshire. A map of the locations of all waterbodies and their status is shown in Figure 18.

Whilst the latest figures show that water quality remains significantly below the 2030 target, the upcoming 2025 data update will be crucial in indicating the scale of effort needed to meet the target on time. The revised <u>Environmental Improvement Plan 2023</u> highlights the need to improve

the ecological status of our waterbodies, and it is hoped that this government target, combined with the legal requirements set out in the <u>Water Framework Directive (WFD) regulations 2017</u>, will lead to a significant improvements in the coming years.

Ecological Status of Waterbodies in the West Midlands						
	Bad	Poor	Moderate	Good	High	Percentage Good or High
2019	18	116	227	11	0	2.96%
2022	16	125	219	12	0	3.23%

Figure 17 - Table showing the ecological status of all waterbodies in the West Midlands, 2019 & 2022.

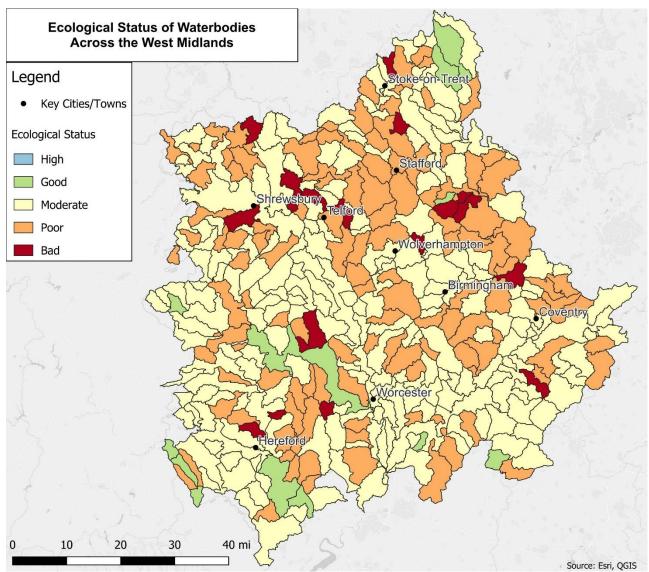


Figure 18 - Map showing the ecological status of all waterbodies in the West Midlands in 2022. Each waterbody is represented by its catchment area.

7.4 Recommendations

- The 2025 data release will be crucial to understanding the current trend of waterbody status and determining whether meeting the 2030 target will be possible.
- Comparing levels of water quality across England may be beneficial to determine whether the insufficient levels are mirrored in other regions.
- Each waterbody in England is covered by a River Basin Management Plan, which sets objectives
 for the ecological status for each waterbody. Analysis could be undertaken to understand
 whether certain River Basin Management Plans are having a greater impact on water quality
 than others, with successful initiatives expanded to other regions.

7.5 Summary

Although the 2025 data update will be key to determining the urgency of future action, the most up-to-date data available to us shows the region is significantly below the levels required to meet the 2030 target, and further action must be taken.

Status: More Action Needed

8. Natural Environment (NEW TARGET)

8.1 2030 Vision Statement

By 2030, at least 30% of land will be protected for nature across the West Midlands.

Status: More Action Needed



8.2 Methodology

The definition of 'land protected for nature' in relation to this target includes areas that are formally protected or effectively conserved for nature, such as designated nature reserves, national parks, Sites of Special Scientific Interest (SSSIs) and other areas managed for long term biodiversity conservation. These areas must also have a management plan, and the sites must be in favourable or recovering condition.

The list of sites that contribute to this target can be extracted from Natural England's <u>SSSI</u> <u>database</u>. Whilst this dataset is regularly updated, a number of the sites have not been assessed in recent years, and so information on the condition of certain sites may be out of date. Despite this, it remains the most accessible data available reflecting progress on the natural environment at the current time, and reflects the methodology that sector experts and the government agree is the most appropriate.

Geospatial data were analysed, with all sites outside of the West Midlands, and all sites not in favourable or recovering condition, removed. The total area covered by these sites was calculated, divided by the total area of the West Midlands to calculate the percentage of land protected for nature. Data for the total land protected for nature across England has been taken from the Wildlife and Countryside Link 30x30 Annual Progress Report, where the same methodology is used.

8.3 Findings

Figure 19 shows the latest available data on the percentage of land in the West Midlands that is protected for nature. Currently, only 2.3% of the is classified as in favourable or recovering condition, covering an area of approximately 300km². These sites represent areas where habitats are being maintained or restored to support healthy ecosystems, safeguard biodiversity and enhance the long-term resilience of nature. An additional 0.5% of the region is covered in land with the potential to count towards the target, should its condition be improved. As this is the first year

this dataset is being monitored at a West Midlands level, we do not know what the current trend is, and cannot predict what will happen in the future. However, the current level is clearly significantly below the 2030 target, showing that more action will be needed in order to meet it.

Percentage of West Midlands Area Protected for Nature

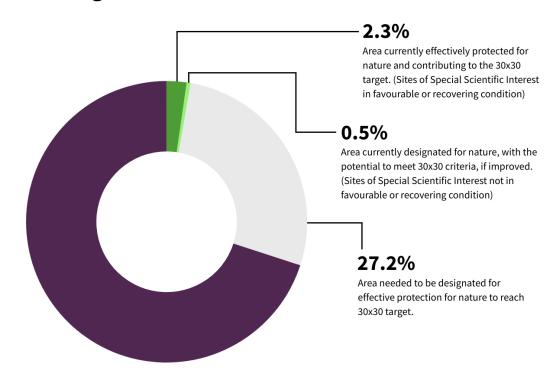


Figure 19 - Chart showing the current percentage of land in the West Midlands that is protected for nature (2024).

Figure 20 shows a spatial representation of where land that is protected for nature is located. The majority of these sites are in rural areas, with very little in the heavily urbanised cities such as Birmingham, Coventry and Stoke-on-Trent. It is likely that there are large areas of land within the West Midlands with strong potential to be included towards the target in the coming years. The Shropshire Hills, Malvern Hills and parts of the Cotswolds, all of which are Natural Landscapes, as well as parts of the Peak District located in Staffordshire, have a relatively small proportion of their area that is contributing towards the target. In order to increase their contribution, these areas will need to dedicate more land for nature, have management plans outlining future commitments to maintaining the land and biodiversity, and the condition of the sites will need to be monitored regularly.

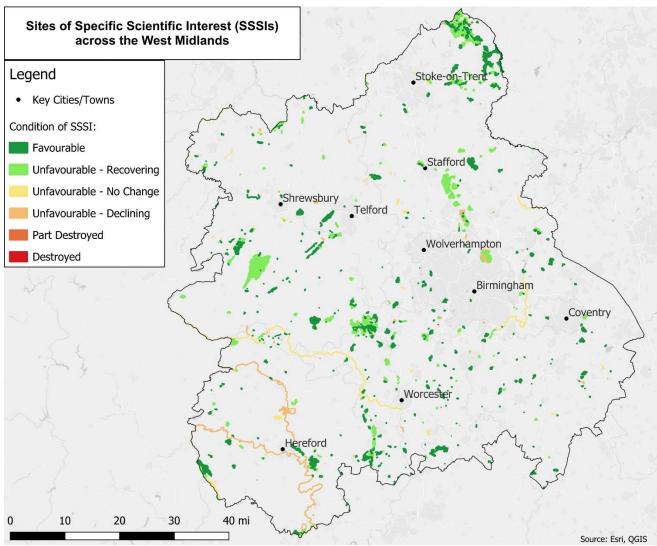


Figure 20 - Map showing the location and condition of all sites protected for nature across the West Midlands, according to 2024 data.

Area Protected for Nature (%)						
Year	2021	2022	2023	2024		
England	3.00	3.22	3.11	2.93		
West Midlands	-	-	-	2.29		

Figure 21 - Table showing the percentage of land protected for nature in England, 2021-2024, and in the West Midlands, 2024.

According to the Wildlife and Countryside Link <u>30x30 Annual Progress Report</u>, the decrease in percentage of land protected for nature in the last two years can be attributed to an increase in annual monitoring of site condition, with sites that had not been measured for a number of years now denoted as not in favourable or recovering condition. In order to meet this target, the number

of sites monitored every year must be increased, so whilst this may represent a further decline in land protected for nature, this is a positive step forward in painting a clear picture towards reaching the 2030 target.

According to the 2024 data (see Figure 21), there is a smaller percentage of land protected for nature in the West Midlands than the rest of the country. Whilst geography may play a large role in this, with the West Midlands only home to a few, smaller National Landscapes and National Parks, comparing the rate of growth between the West Midlands and the rest of the country in future years will be important.

8.4 Recommendations

- Continue to compare West Midlands data with national data in the coming years. This will give
 an indication as to how the region is performing compared to the rest of the country and may
 highlight potential actions that could help the West Midlands increase land protected for
 nature.
- In future years, identify any key sites that are not currently classed as SSSIs or as designated for nature, but have the potential to count towards the target with the correct management. This could include National Landscapes, National Parks, NGO nature reserves and local wildlife sites, as well as potential Other Effective Area-based Conservation Methods (OECMs) that may qualify as protected for nature. Unlike SSSIs, OECMS are not areas that are legally designated but are areas that deliver long-term biodiversity conservation and nature protection. Understanding how OECMs can count towards this target and establishing clear processes for identifying and monitoring these could be key to increasing the percentage.
- There may be local sites that are eligible to contribute towards the target but are not captured by the datasets used. Engagement with SWM members could provide insight into any additional sites that we could capture and include in our analysis.

8.5 Summary

Whilst we are unable to determine the current trend for this data, current analysis shows the percentage of land currently protected for nature in the West Midlands is significantly below the 2030 target, and more action will be needed to meet it.

Status: More Action Needed

9. Sustainable Growth

9.1 2030 Vision Statement

By 2030, sales in the Low Carbon Goods and Environmental Services (LCEGS) sector will reach £32 billion within the West Midlands.



Status: Accelerate Progress

9.2 Methodology

The sustainable growth target was new for 2021 and was derived via analysis into the Midlands' LCEGS sector, <u>published in April 2021</u>. This study analysed the state of the sector in great depth and SWM was directly involved, leading on stakeholder engagement. Consultants kMatrix carried out the data analysis, and it is with their advice that SWM could establish this new target which gives us a strong ambition to accelerate sales in the LCEGS sector by 2030. kMatrix provided us with a summary of their projections for 2030 on sales and their reasoning behind this. Last year, an update to this dataset was undertaken as part of the <u>Low Carbon Environmental Goods and Services Sector Refresh 2025</u>. This has allowed us to monitor data for 2022/23 and 2023/24.

9.3 Findings

Figure 22 shows the total annual sales in the LCEGS sector in the West Midlands, for financial years 2017/2018 to 2023/2024. The latest data show that in the last two years, sales in the sector have grown in the West Midlands. Additionally, growth in the last three years has increased exponentially; 6% in 2021/22, 8.4% in 2022/23 and 12.2% in 2023/24. For the most recent year on record, 2023/24, total sales in the West Midlands were calculated to be £19.1 billion.

Using a regression line with the equation y = 0.6383x + 13.449, we can predict that by 2030, total sales in the West Midlands are likely to reach £21.7 billion. However, by looking solely at the data post 2020, following a dip likely due to the COVID-19 pandemic, this prediction changes to £27.3 billion. Whilst this is still below the level specified in the 2030 vision statement, consultants kMatrix project that the rate of growth will increase in the coming years, and at the current rate achieving £32 billion in annual sales should be possible.

Total Sales in the Low Carbon Environmental Goods and Services Sector

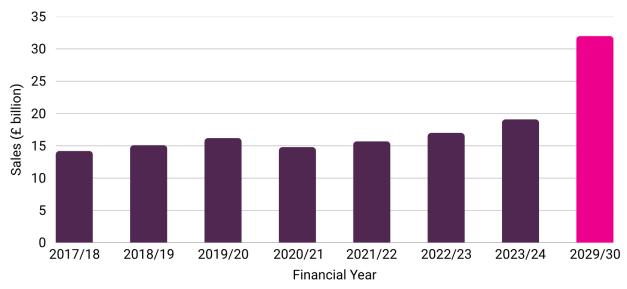


Figure 22 – Graph showing the total sales in the low carbon environmental goods and services sector in the West Midlands, 2017-2024.

The West Midlands 2030 target of £32 billion is highlighted in pink.

9.4 Recommendations

- Despite the recent data update, there is no guarantee that updates to this dataset will be
 available annually. Should another refresh of the study take place, it may be several years
 before the data for this target is updated again. As a result, further research should be
 carried out to ensure other datasets can be accessed to enable monitoring of this target.
- Data at a local authority level are available for the current dataset. For the next report, analysis of this data should be undertaken to determine subregions and local authorities where progress is slow, and additional support may be needed.
- A detailed list of recommendations on how the LCEGS sector can be supported at a regional, subregional and local authority level can be viewed in the respective reports released in January 2025, which can be found here.

9.5 Summary

Consistent, exponential growth in the past four years suggest that achieving this target by 2030 will be possible. However, current projections suggest the rate of progress in the coming years will need to continue to grow.

Status: Accelerate Progress

10. Social Equity & Health: Health Inequality

10.1 2030 Vision Statement

By 2030, achieve a 40% decrease in male and female health inequality from 2019 levels across the West Midlands.

Status: More Action Needed



10.2 Methodology

Following a three-year period where this dataset was not updated, data for the years 2021-2023 are now available. Data reflecting health inequality was extracted from <u>Local Authority Health Profiles</u> hosted by Office for Health Improvement and Disparities. The life expectancy gap between the richest and poorest areas was identified for both males and females within the West Midlands, broken into local authority areas and a regional average calculated. Male and female rates are shown below, followed by a comparative graph with both genders plotted.

Discrepancies were noticed in the data captured for previous years, and this has now been backdated and amended. It is therefore possible that data in previous years' reports will not match the data in this year's report.

10.3 Findings

Figures 23 and 24 illustrate the average life expectancy gap between the most and least deprived areas in the West Midlands between 2013 and 2023, for males and females respectively. From 2019 to 2022, life expectancy inequality increased for both males (growing by 0.5 years) and females (growing by 1.1 years). However, this trend was halted in 2023, where male life expectancy inequality remained stable, and female life expectancy inequality dropped by 0.2 years. Despite this however, the latest data for both males and females surpass 2019 levels, and achieving a 40% decrease from this level by 2030 is currently very unlikely.

Plotting a regression line for both datasets allows us to make projections for 2030. Male life expectancy inequality is projected to exceed 2019 levels, reaching a difference of 9.5 years between the most and least deprived areas in the West Midlands, whilst the same trend is projected for females, reaching a life expectancy inequality of 8.1 years.

Male Life Expectancy Inequality in the West Midlands

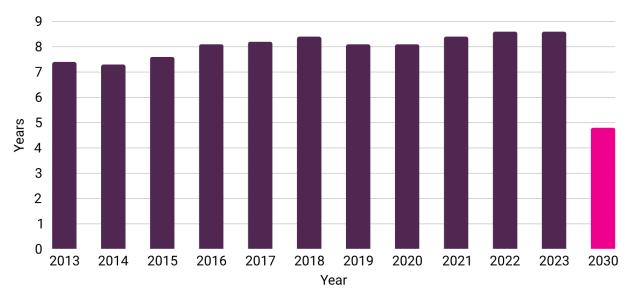


Figure 23 – Graph showing the average male life expectancy inequality across the West Midlands, 2013-2023. The West Midlands 2030 target of a 40% reduction from 2019 levels is highlighted in pink.

Female Life Expectancy Inequality in the West Midlands

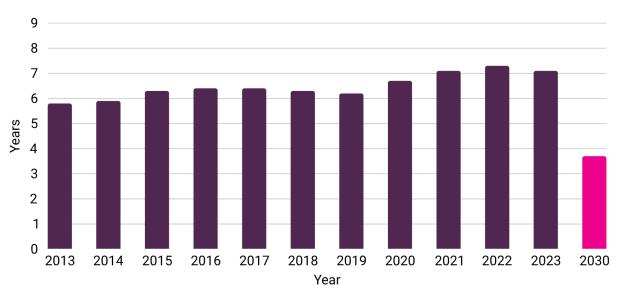


Figure 24 – Graph showing the average female life expectancy inequality across the West Midlands, 2013-2023. The West Midlands 2030 target of a 40% reduction from 2019 levels is highlighted in pink.

Figure 25 and Figure 26 show the average life expectancy gap between the most and least deprived areas for each subregion in the West Midlands between 2013 and 2023, for males and females respectively. Unsurprisingly, these data shows similar trends, with significant increases for both males and females since 2019. These graphs highlight the spatial variation in life expectancy inequality for different subregions. The WMCA and Stoke-on-Trent & Staffordshire consistently have

the highest inequality levels, whilst The Marches has the lowest, followed by Warwickshire. These graphs also highlight how inequality has changed in 2023. For males, only The Marches and the WMCA have experienced decreases in life expectancy inequality, but for females, all subregions have seen a decrease in 2023 except in The Marches. Understanding the reasons for this regional variation, as well as the reasons for recent increases and decreases, will be key to identifying potential actions that need to be taken in the future.

Male Life Expectancy Inequality Comparing Subregions in the West Midlands (2013-2023)

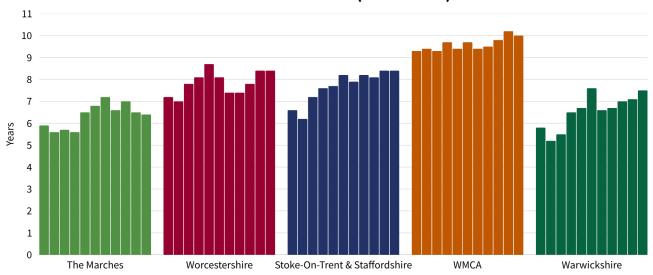


Figure 25 - Graph showing the average male life expectancy inequality for each subregion in the West Midlands, 2013-2023.

Female Life Expectancy Inequality for Subregions in the West Midlands (2013-2023)

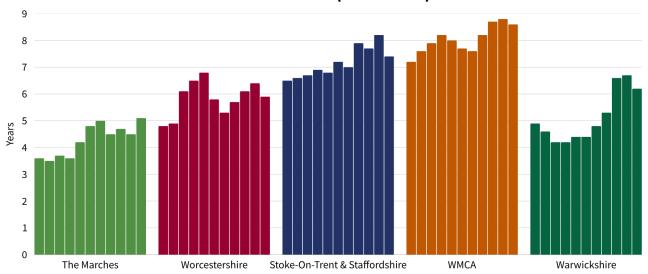


Figure 26 -- Graph showing the average female life expectancy inequality for each subregion in the West Midlands, 2013-2023.

10.4 Recommendations

- In future reports, it may be useful to include a graph comparing the West Midlands health inequality levels against other regions and the UK as a whole, to give insight into whether the West Midlands is the only region experiencing a lack of progress on this issue.
- Incorporating life expectancy data and plotting this alongside life expectancy inequality data
 may provide important context. This may highlight whether areas of high inequality are also
 areas experiencing the lowest life expectancy, as well as providing information on trends in life
 expectancy data.
- Health inequality levels have consistently been steady or rising since we commenced analysis
 of this metric back in 2010. Further work needs to be done to identify the reasons for this so
 that the trend can be reversed.

10.5 Summary

According to our projections, it is extremely unlikely that the target for improving health inequality for both males and females by 2030 will be reached, and more action is necessary to meet this goal.

Status: More Action Needed

11. Social Equity & Health: Fuel Poverty

11.1 2030 Vision Statement

By 2030, reduce the proportion of households in fuel poverty by 50% from 2019 levels across the West Midlands.

Social Equity & Health

Status: Accelerate Progress

11.2 Methodology

The data for this Roadmap priority were gathered from 'fuel poverty sub regional statistics' collated by DESNZ and the data are broken down into local authority areas. The graphs produced identify the percentage of households in fuel poverty within the West Midlands, and fuel poverty in each subregional area. A trendline was generated to predict the 2030 value (see Annex 1 for detailed methodology).

In 2021, the methodology used by DESNZ to measure this statistic was altered. Previously, fuel poverty in England was measured using the Low Income High Costs (LIHC) indicator. However, from 2021 onwards, the methodology switched to use the Low Income Low Energy Efficiency (LILEE) indicator. The data release in 2021 contained data for the year 2019, and as such this is the earliest year that will be analysed in this report to ensure all year's data are consistent with each other.

11.3 Findings

Figure 27 illustrates the percentage of households that are experiencing fuel poverty across the West Midlands. It reveals that despite a consistent increase in fuel poverty since 2019, 2023 saw a significant reduction, reaching the lowest level in five years at 16.7%. Despite this decrease, plotting a linear regression trendline for the data gives us a line with the equation of y = 0.0002x + 0.1797, and projects that by 2030 fuel poverty levels will still be at approximately 18%. However, if the decrease experienced in 2023 can continue in future years, there is a greater potential that the target of a 50% reduction by 2030 will be reached.

Figure 28 depicts the percentage of households in fuel poverty across the West Midlands by subregion. The WMCA has the highest levels of fuel poverty of all the subregions, with a maximum of 20.7% in 2022, and at 17.2% in 2023. The fewest number of people in fuel poverty has been recorded in Warwickshire, with the lowest figure of 14.7% in 2019. Overall, all subregions have

followed the trend of a continuous increase up until 2022, and then a significant decrease in 2023. The WMCA saw the biggest decrease this year, falling by 3.6%.

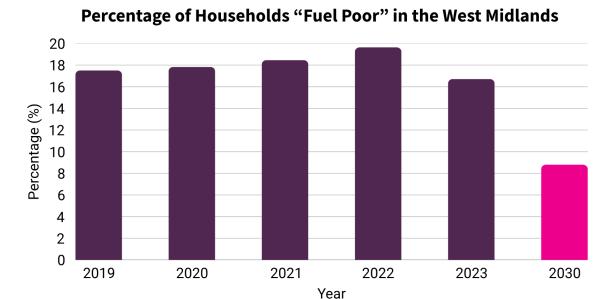


Figure 27 - Graph showing the percentage of households in fuel poverty within the West Midlands, 2019-2023. The West Midlands 2030 target of 8.8% is highlighted in pink.

Percentage of Households "Fuel Poor" for Subregions in the

West Midlands (2019-2023) 22 20 18 16 14 12 Years 10 8 6 4 2 0 The Marches Worcestershire Stoke-On-Trent & Staffordshire WMCA Warwickshire

Figure 28 - Graph showing the percentage of households in fuel poverty within each subregion in the West Midlands, 2019-2023. The West Midlands 2030 target of a 50% reduction from 2019 levels is indicated by a dashed pink horizontal line, measured for each

subregion.

Figure 29 shows an overview of fuel poverty across England and how it varies by region. The West Midlands has the highest level of fuel poverty in 2023 with 16.7% of households being fuel poor, which is 4.3% higher than the national average. This suggests that greater work is needed to tackle the issue and highlights the opportunity to potentially better understand the actions of other

regions to see whether any measures can be replicated in the West Midlands. However, this result could be due to the inherent characteristics of the region rather than the lack of action being taken.

Percentage of Households "Fuel Poor" for Regions in England (2023) 18 16 14 12 10 West Midlands Yorkshire + Humber North West East Midlands North East South West South East East of England London

Figure 29 - Graph showing percentage of households in fuel poverty within each region of England, 2019-2023. Regions are ordered in descending order according to the 2023 data. West Midlands data are highlighted in pink.

11.4 Recommendations

- The region's efforts to decarbonise and retrofit homes to meet Net Zero targets could indirectly
 impact on fuel poverty levels. There is an opportunity to ensure that homes that are prioritised
 for measures are those that have historically suffered from fuel poverty. The impact of such
 measures should be monitored in these terms using this dataset, as well as analysing regional
 carbon emissions.
- Understanding the reasons for the decrease from 2022 to 2023 could be key to understanding
 what actions have the biggest influence on reducing fuel poverty. Any policies or schemes that
 were implemented during this time and are known to have been successful should be rolled
 out further.
- Exploration of the actions and measures taken by other regions in England could be beneficial
 to assess whether the West Midlands could take on board their actions and apply any new
 measures.

11.5 Summary

Despite a significant decrease in 2023, the region is still projected to fall short of the 2030 vision statement. However, if this decrease can be sustained in future years, then achieving this target is possible.

Status: Accelerate Progress

12. Sustainable Energy Use: Renewable Electricity Generation (NEW TARGET)



12.1 2030 Vision Statement

By 2030, increase renewable electricity generation by 110% from 2019 levels across the West Midlands.

Status: Accelerate Progress

12.2 Methodology

Data to measure this target is obtained from the Department for Energy Security and Net Zero (DESNZ) Regional Renewable Statistics: Generation dataset. This dataset includes a total for all renewable electricity that is generated within the West Midlands region, as well as a breakdown of electricity generation by source. The following electricity sources are defined as renewable: wind, wave and tidal, solar PV, hydro, landfill gas, sewage gas, anaerobic digestion, biomass and waste.

12.3 Findings

Figure 30 shows the annual renewable electricity generation in the West Midlands from 2016 to 2023. There has been a gradual increase throughout this period, rising from 1,803 GWh in 2016 to 2,455 GWh in 2023. This total has increased every year, except in 2019, although growth from 2017 to 2021 was very minimal. In the last two years, the rate of growth has started to increase, seeing an 8% rise in 2022 and a 6% rise in 2023.

However, this increase is not currently enough to reach the 2030 target. Using the data, a regression line was calculated to be y = 68.698x + 1838.2. Through regression analysis, a projected value for 2030 renewable electricity generation has been calculated as 2,873 GWh, which falls well below the 2030 vision statement. Even if the growth rate from the previous year is maintained, the projected 2030 value would be 3,691 GWh, and it would take until 2034 to reach the target. This would mean that the West Midlands would be four years behind schedule for the *holistic transition* timeline, representing the necessary renewable electricity generation to meet Net Zero by 2050, according to the National Grid <u>Distribution Future Energy Scenarios</u> (DFES).

Renewable Electricity Generation in the West Midlands

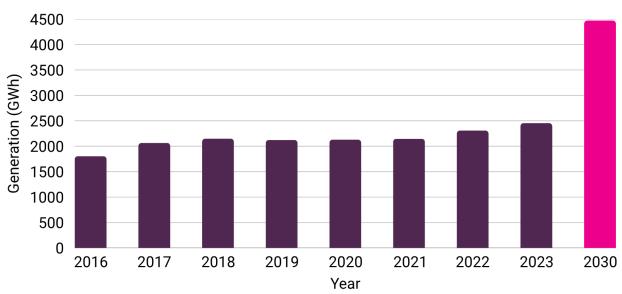


Figure 30 - Graph showing the total annual renewable electricity generation within the West Midlands, 2016-2023. The West Midlands target of a 110% increase from 2019 levels is highlighted in pink.

Figure 31 displays the total generation in 2023 for each source of renewable electricity in the West Midlands. The source generating the most renewable electricity is Solar PV, which generated 977 GWh in 2023, and was responsible for 40% of the total renewable electricity generation. Other significant sources of electricity in the West Midlands include Biomass & Waste, Anaerobic Digestion (AD) and gas from landfill and sewage. Large urban areas producing lots of waste provide opportunities for generation from biomass, landfill and sewage, whilst the agricultural land available in Herefordshire, Shropshire and Staffordshire mean there is potential for electricity generation from AD.

However, the geography of the West Midlands also means that a number of renewable electricity sources are not viable. The region has no coastline and so there is no opportunity for Wave and Tidal electricity, and there are fewer opportunities for hydroelectric power. Additionally, the lack of coastline means there is no possibility to benefit from offshore wind, and the region also has some of the lowest wind speeds in the country, making onshore wind less efficient than in other parts of the country.

Because of these geographic factors, the region will likely always be a net importer of electricity, relying on electricity generated in other regions to meet demand. As such, it would not be especially useful beneficial to compare renewable electricity generation in the West Midlands to other regions in the country.

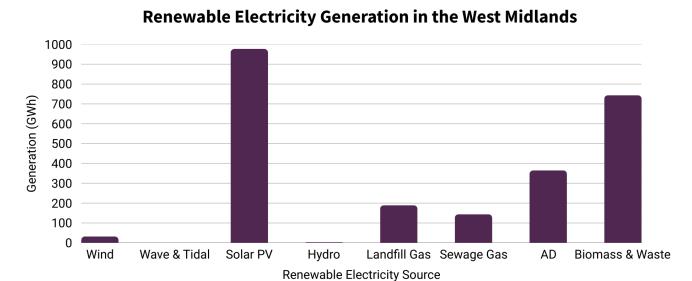


Figure 31 - Graph showing the total annual renewable electricity generation for each source of renewable electricity within the West Midlands in 2023.

12.4 Recommendations

- Data are available breaking down renewable electricity generation by local authority. Analysing
 this dataset would give an understanding of which areas are performing well against this target,
 and which have the greatest potential to improve.
- It would be useful to investigate whether there are any key renewable electricity infrastructure projects that are set to be built in the region in the coming years, and estimating the impact this could have on renewable electricity generation.
- Whilst increasing renewable electricity generation is a positive, understanding the relationship between electricity generation and energy consumption is important. If energy usage grows faster than renewable electricity generation, the region may still need to rely heavily on imported power and non-renewable electricity, which could prevent the region reaching net zero carbon emissions by 2050.
- In addition to increasing renewable electricity generation, addressing the structural challenges of energy distribution and flexibility will be crucial to fully enable the region's transition to renewable energy. Support should be given to the efforts of the Smart Energy Systems Cluster, which is working to make these structural challenges less limiting.

12.5 Summary

Although renewable electricity generation has continuously increased in the region, the rate of growth will need to improve in order to meet the 2030 vision statement.

Status: Accelerate Progress

13. Sustainable Energy Use: Heat Pump Installations (NEW TARGET)



13.1 2030 Vision Statement

By 2030, 65,000 domestic heat pumps will be installed annually across the West Midlands.

Status: More Action Needed

13.2 Methodology

The dataset used to assess this target is taken from the Department for Energy Security and Net Zero (DESNZ) <u>Heat Pump Deployment Statistics</u>. This dataset contains the number of hydronic heat pumps with a capacity of up to 45kW installed and includes all types of heat pumps including air and ground source heat pumps. The data are broken down regionally and quarterly, and the four quarters for each year have been combined to create annual figures for the West Midlands.

13.3 Findings

Figure 32 shows the number of heat pump installations in the West Midlands per year, from 2018 to 2024. The first data available for heat pump installations covers 2018, where just 395 were installed in the West Midlands. This number has increased regularly since then, and in 2024 annual installations were totalled at 2,994. This is a 75% increase from 2023, showing that whilst total installations are still low, the rate of growth is significant.

A regression line of the data was plotted as y = 406.54x – 237.86. When using this to project the value in 2030, this gives us a value of 5,047 heat pumps installed. This value is significantly below the 2030 vision statement, however due to the small sample size of the data, this may not be an accurate projection. Additionally, due recent policy changes, and the increase of standards requiring energy efficiency measures such as heat pumps in new build homes, the rate of growth of this metric is likely to increase rapidly. For example, the recent Future Homes Standard (FHS) will mandate low-carbon heating systems in new build homes, with heat pumps expected to be the most common solution to this. It will be important to pay close attention to whether these changes are reflected in the data in future years, and therefore whether achieving the 2030 target is likely.

Annual Heat Pump Installations in the West Midlands

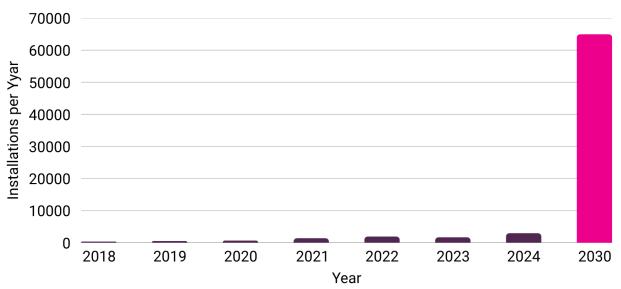


Figure 32 - Graph showing the annual heat pump installations in the West Midlands, 2018-2024. The West Midlands 2030 target of 65,000 a year is highlighted in pink.

13.4 Recommendations

- Due to the expected increase in demand for heat pumps in the coming years, assessing future progress in upcoming reports will be key to determining whether achieving the 2030 vision statement is possible.
- Whilst heat pumps are considered the most common form of low carbon heating, there are a
 number of other renewable heat sources that are likely to increase in demand in the coming
 years, such as solar thermal heating, heat networks and hydrogen boilers. If possible, finding
 datasets to monitor these devices in addition the heat pumps would be very valuable, and
 would provide a more accurate assessment of increases to renewable heat generation.

13.5 Summary

Despite strong growth in the last year, the number of heat pumps installed annually in the West Midlands remains significantly below the 2030 target.

Status: More Action Needed

14. Adapting to Climate Change

14.1 Overview

We are in a climate emergency. Climate change is happening, and the West Midlands is experiencing its impact, just as other areas around the world are. We are seeing more extreme weather events such as



flooding and heatwaves, which cause huge impacts on the way we live our lives by affecting supply chains, damaging infrastructure, and putting pressure on health services. 2022 saw temperature records broken in the UK (over 40 degrees for the first time) and the West Midlands, and 2025 was the warmest summer on record. We are wedded to a certain degree of climatic change and are arguably already at a point where we are unable to reverse some of the effects. It is for this reason we must be prepared for an ever-changing environment and adapt the way we live. We can no longer ignore the issue or hide behind its inconvenience.

This is why one of our Roadmap priorities is climate change adaptation and SWM is working with stakeholders <u>on various projects</u> that aim to accelerate action on adaptation across the West Midlands and beyond. However, to date we have yet to establish a suitable data-based target that reflects progress in this area.

In 2019, we engaged with the Environment Agency to try and establish a target around flood risk, in terms of whether there were any data that could show how many properties in the region were at risk, to then set an appropriate target. Such data are available, but we could not obtain historic data to enable monitoring trends over time, or granular enough data to look for vulnerable areas. There are also potential gaps for monitoring other metrics too, such as those around overheating and water scarcity, but as yet data that can adequately reflect progress on such issues is not available.

14.2 Recommendations

- Continue engagement with the Environment Agency and other stakeholders on sourcing flood risk data.
- Continue seeking potential guidance on other data sources that could be used, such as excess summer deaths caused by extreme heat.

15. Summary of Progress

Summary of Progress						
Roadmap Priority	2030 Target	Progress				
(0)	Achieve Net Zero carbon emissions by 2050	Sustain Current Action				
	Achieve a household recycling rate of 55%	More Action Needed				
₫ %	One third of all travel will be made by walking or cycling	Accelerate Progress				
A	100% of new cars sold will be Ultra Low Emission Vehicles (ULEVs)	More Action Needed				
	Reduce the mortality rate from PM2.5 pollution exposure by 75% from 2019 levels	Accelerate Progress				
(2)	Restore 75% of waterbodies to good ecological status	More Action Needed				
4	At least 30% of land will be protected for nature	More Action Needed				
8	Sales in the Low Carbon Goods and Environmental Services sector will reach £32 billion	Accelerate Progress				
4	Achieve a 40% in male and female health inequality from 2019 levels	More Action Needed				
	Reduce the proportion of households in fuel poverty by 50% from 2019 levels	Accelerate Progress				
1	Increase renewable electricity generation by 110% from 2019 levels	Accelerate Progress				
	65,000 domestic heat pumps will be installed annually	More Action Needed				
	No target at present	-				

Annex 1: Regression Line Methodology

In order to calculate the projected figures for each metric to see if we have met our 2030 Roadmap targets (or 2050, in the case of Net Zero emissions), a line of best fit was found for each dataset using Microsoft Excel. Using the graphical tools provided by Excel, a trendline could be added to the graph which shows how the different levels change over time.

This trendline has an equation in the form y= mx+ c, also generated by Excel, where:

- y = the metrics on the y-axis of the graph
- x = the year, where the earliest year is converted to 1. For example, 2010=1, 2011=2 2012=3...2030=21.
- m = the gradient of the line
- c = a constant.

Both m & c are automatically generated by Excel. As m, x and c are all known, y can be calculated. This has been done to see whether the set 2030 targets are likely to be met based on current trends.

Annex 2: Subregional Areas

Local Authority	Subregion				
Birmingham	WMCA				
Bromsgrove	Worcestershire				
Cannock Chase	Stoke-On-Trent & Staffordshire				
Coventry	WMCA				
Dudley	WMCA				
East Staffordshire	Stoke-On-Trent & Staffordshire				
Herefordshire	The Marches				
Lichfield	Stoke-On-Trent & Staffordshire				
Malvern Hills	Worcestershire				
Newcastle-under-Lyme	Stoke-On-Trent & Staffordshire				
North Warwickshire	Warwickshire				
Nuneaton and Bedworth	Warwickshire				
Redditch	Worcestershire				
Rugby	Warwickshire				
Sandwell	WMCA				
Shropshire	The Marches				
Solihull	WMCA				
South Staffordshire	Stoke-On-Trent & Staffordshire				
Stafford	Stoke-On-Trent & Staffordshire				
Staffordshire Moorlands	Stoke-On-Trent & Staffordshire				
Stoke-on-Trent	Stoke-On-Trent & Staffordshire				
Stratford-on-Avon	Warwickshire				
Tamworth	Stoke-On-Trent & Staffordshire				
Telford & Wrekin	The Marches				
Walsall	WMCA				
Warwick	Warwickshire				
Wolverhampton	WMCA				
Worcester	Worcestershire				
Wychavon	Worcestershire				
Wyre Forest	Worcestershire				

Population of Subregions in the West Midlands							
	The Marches	Worcestershire	Stoke-on-Trent & Staffordshire	WMCA	Warwickshire	West Midlands	
2022	704,768	609,216	1,146,249	2,953,816	607,604	6,021,653	