

The background of the cover features a photograph of several white wind turbines on a green hill under a clear blue sky. A large, semi-transparent green shape, resembling a stylized hill or a wave, is overlaid on the image, partially obscuring the turbines. A white curved line separates the green area from the white area below.

# West Yorkshire **Climate and Environment Plan**



West  
Yorkshire  
Combined  
Authority

Tracy  
Brabin  
Mayor of  
West Yorkshire

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## Foreword

The West Yorkshire Climate and Environment Plan 2025 – 2038 sets out our ambition to create a net zero carbon region.

The climate emergency is the defining challenge of our time, and here in West Yorkshire, we are determined to lead the way in tackling it.

Our region is built on innovation, resilience, and a strong sense of community – qualities we must harness to create a healthier, more prosperous, fairer future for everyone.

Reaching net zero carbon by 2038 will unlock opportunities to create well-paid jobs, improve the energy efficiency of homes and businesses, tackle health inequalities, improve public transport, and reverse the decline of nature and biodiversity.

Climate change has a disproportionate impact on the most vulnerable in our communities which is why the objectives set out in this Plan are broader than just decarbonisation and have people at their heart.

This strategy builds on our previous Climate and Environment Plan with a refreshed evidence base to develop a new emissions reduction pathway to net zero carbon and a framework for long-term action to 2038.

It will also take forward elements of our Local Growth Plan, which cites our net zero sector as one of the key mechanisms by which we can grow our economy.

We will continue to push for greater powers to help us deliver on our climate ambition, capitalising on the new momentum behind English devolution and regional mayors.

We will use our voice to advocate for West Yorkshire, so that we can secure further powers in areas such as transport, employment support and local growth.

Our Plan is bold and ambitious – and we cannot achieve our goal of net zero carbon by 2038 alone.

Only by working together, in close partnership with our region's businesses, institutions and communities, can we create a West Yorkshire that is fit for the future – one that leads in sustainability, innovation and fairness.

Tracy Brabin  
Mayor of West Yorkshire

## Plan summary

This Plan sets out long-term objectives to achieve the region's 2038 net zero carbon target. It also includes actions the Combined Authority will take - both on its own and in partnership with others - over the next four years, aligning to the current mayoral term of office, to support West Yorkshire to achieve its ambition.

This new Plan focusses on areas the Combined Authority has some control over, such as transport, housing retrofit and business support, as well as others currently controlled by the Government where it can only influence.

The Combined Authority has established a new long-term framework (Figure 1) for climate action which underpins a key aim of the West Yorkshire Plan - creating a sustainable West Yorkshire and making lives greener - and will enable the delivery of West Yorkshire's regional net zero carbon target. This is based upon five objectives that target the interventions most needed and where regional and local government can have the most control and influence.

The benefits to reaching net zero are wider than just decarbonisation, which is why this Plan is designed to deliver a broader set of benefits such as health improvements and climate resilience for the people of West Yorkshire.

**Vision:** A sustainable West Yorkshire, making lives greener

**Mission:** Tackling the climate and environment emergency and becoming net zero carbon by 2038 in an equitable and inclusive way

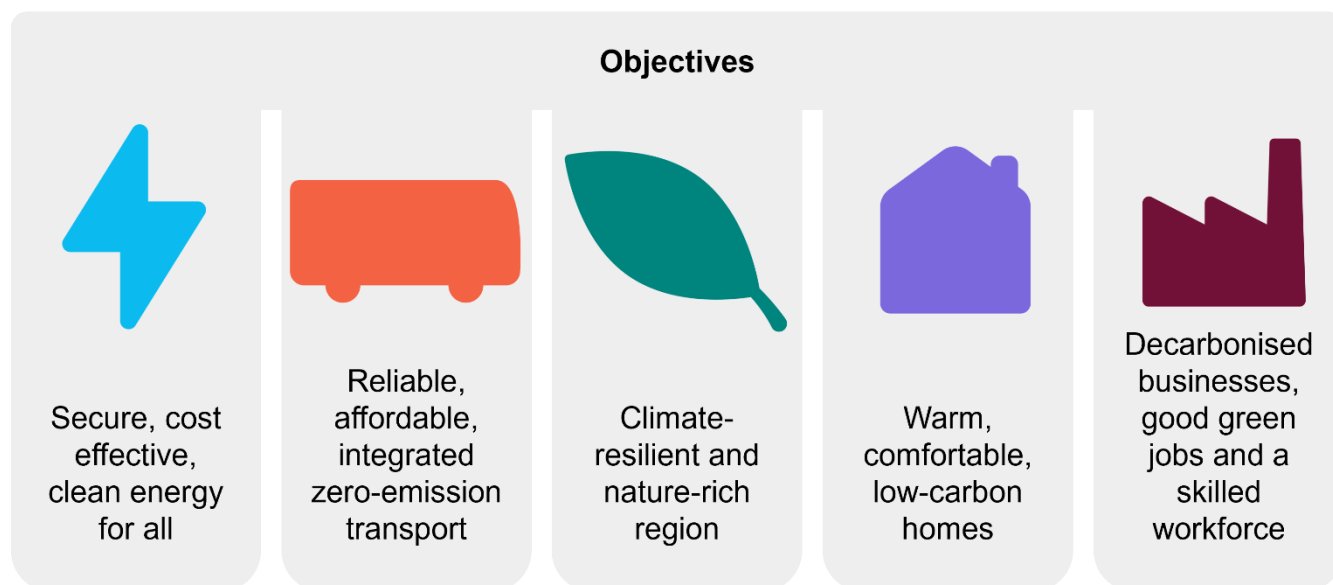


Figure 1. West Yorkshire Climate and Environment Plan long-term framework, setting out a vision to make West Yorkshire sustainable and lives greener, a mission to tackle the climate and environment emergency and become net zero carbon by 2038 in an equitable and inclusive way, and five objectives for climate action: secure, cost effective, clean energy for all; reliable, affordable, integrated zero-emission transport; a climate-resilient and nature-rich region; warm, comfortable low-carbon homes; and decarbonised businesses, good green jobs and a skilled workforce.

Everything in this Plan is based upon the five objectives and has been informed by evidence and shaped by feedback from residents, businesses and key stakeholders.

While all the activity documented in this Plan will contribute to achieving emission reductions, six flagship actions (Figure 2) have been identified to focus the Combined Authority's activity over the next four years. More detail on these actions is set out as part of each of the objectives. The proposed West Yorkshire Climate Fund, whilst cross-cutting in nature, is discussed as part of the energy objective, to reflect where this will sit within Combined Authority workstreams.

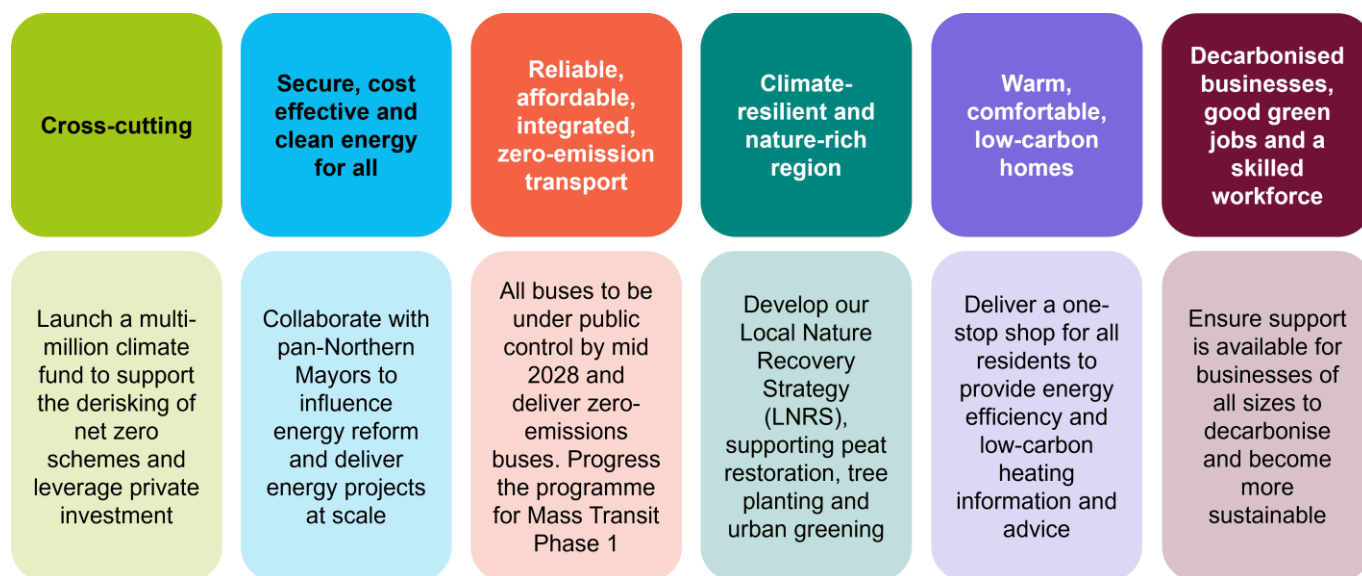


Figure 2. West Yorkshire Climate and Environment Plan flagship actions: launching a multi-million pound climate fund; collaborating with pan-Northern Mayors to influence energy reform; bringing all buses under public control by mid-2028, delivering zero-emissions buses, and progressing the programme for Mass Transit Phase 1; developing a Local Nature Recovery Strategy; delivering a one-stop shop for all residents to provide energy efficiency and low-carbon heating information and advice; and ensuring support is available for businesses of all sizes to decarbonise and become more sustainable.

The Plan categorises actions as ‘leading’, ‘partnering’ ‘influencing’ or ‘asks of government’ depending on the Combined Authority’s role. However, the Combined Authority is, by its nature, a partnership organisation, formed from each of West Yorkshire’s constituent local authorities. To deliver, the Combined Authority will need to work with local authority partners, and a range of other national, regional, and local stakeholders – this is the primary audience for the Plan.

This Plan is part of the wider policy framework (Figure 3) supporting the delivery of the West Yorkshire Plan and Local Growth Plan, helping to drive local, sustainable economic growth. It will help to deliver the priorities of the Local Growth Plan including investment in net zero schemes, providing and creating the skills and jobs to transition to a low carbon economy, and embedding climate resilience.



Figure 3. Wider Policy Framework, showing the West Yorkshire Plan at the top, the delivery of which will be supported in turn by the Local Growth Plan, Local Transport Plan, Climate and Environment Plan, and thematic delivery plans and local economic strategies.

While this Plan will make a significant contribution to achieving the climate and environmental ambitions of the Local Growth Plan, it is not the only mechanism. The other plans and strategies that support the Local Growth Plan will also help to deliver objectives set out here. For example, transport related activities will be achieved through the Combined Authority's Local Transport Plan.

This Plan does not replace or supersede the climate plans of West Yorkshire's local authorities, which for many residents will be the first point of reference for local action on the climate and environment. It will complement existing plans, providing a wider strategic direction, a regional evidence base, and key actions that the Combined Authority, with its devolved powers, can take to tackle the climate and environment emergency in partnership with local authorities and other stakeholders.<sup>1</sup>

West Yorkshire's approach in this Plan should also be considered alongside the Yorkshire & Humber Climate Commission's Climate Action Plan, which sets out actions that can be taken to reduce emissions across a broader geography, and provides a 'whole-society, whole-place' focus for climate action across Yorkshire and the Humber.<sup>2</sup>

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<sup>1</sup> District climate plans and/or further information on local action on the climate and environment emergency are available on the website of each local authority in West Yorkshire

<sup>2</sup>Yorkshire & Humber Climate Commission, September 2024, Climate Action Plan: [Yorkshire and Humber Climate Commission - Climate Action Plan](#)

# The story so far – what has been achieved?

## Emissions reduction in West Yorkshire

West Yorkshire has seen a significant reduction in emissions since 2005, reflecting the general downward trend in emissions across the UK. Based on figures from the Department of Energy Security and Net Zero, in 2005 emissions were 18.2 MtCO<sub>2</sub>e. In 2022, the year in which we have the most recent information for, emissions were approximately 10.5 MtCO<sub>2</sub>e.<sup>3</sup> This represents a 42.3% reduction in emissions since 2005. This trend is shown in figure 4.

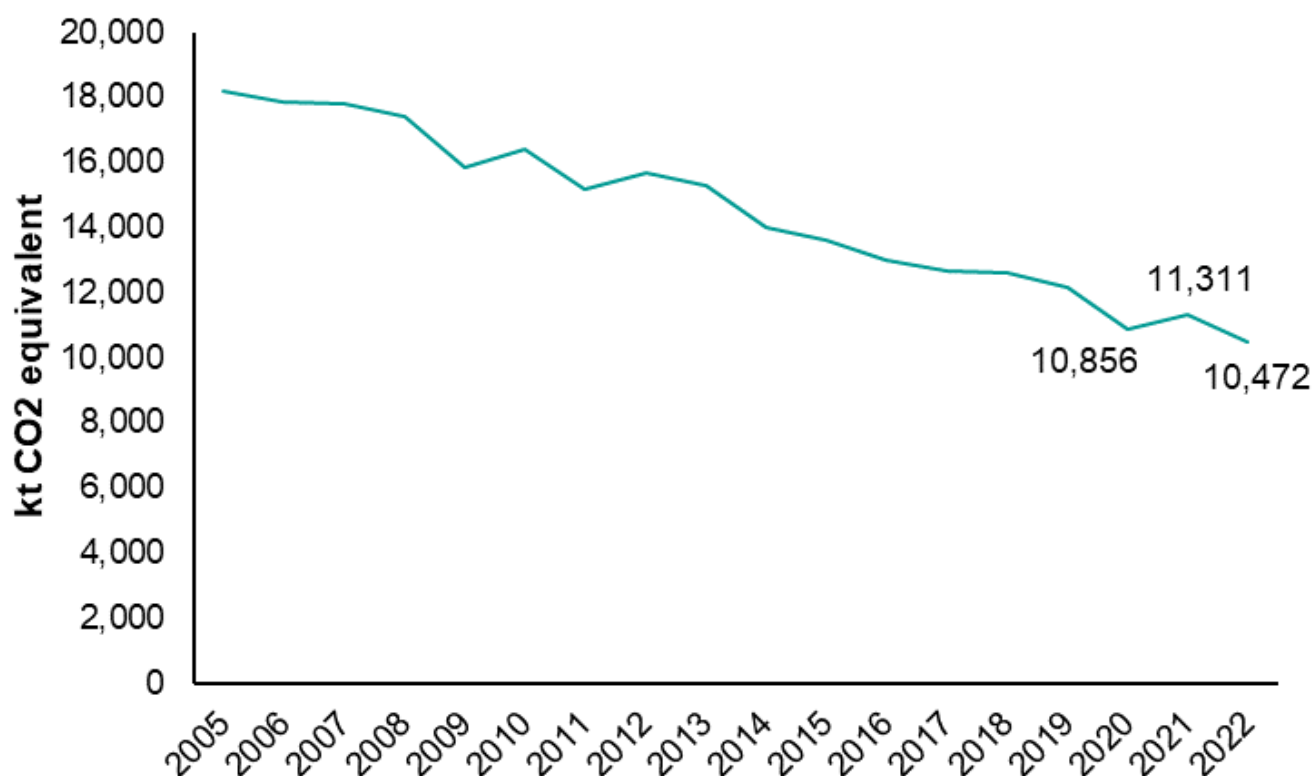


Figure 4. Trend in emissions for West Yorkshire (2005-2022): a line graph showing reductions in greenhouse gas emissions in West Yorkshire from 2005 to 2022. Using data from the Department of Energy Security and Net Zero, it shows greenhouse gas emissions decreasing from 18,200 kilotons of CO<sub>2</sub>e in 2005 to approximately 10,500 kilotons of CO<sub>2</sub>e in 2022.

Over recent years, global events have had a major impact on emissions in the region. In 2020, emissions fell substantially due to the COVID-19 pandemic – however, a rebound was seen in 2021 as the region's economy reopened. In 2022, emissions returned to their long-term downward trend, with a 7.4% reduction seen over the previous year and more importantly to their lowest level (2005 to 2022), which could have been driven in-part by the cost-of-living and commodities price shock of 2022.

## How do current emissions compare to regional ambitions?

Ahead of the introduction of the first Climate and Environment Plan, the Combined Authority developed its Carbon Emissions Reduction Pathways (CERPs). As well as a baseline pathway modelling the effect of committed government policies, the CERPs set out three pathways modelling different approaches to the interventions and technologies required to progress towards net zero emissions by 2038.

<sup>3</sup> West Yorkshire Combined Authority, report to Climate Energy and Environment Committee, 30 July 2024: [\(Public Pack\)Agenda Document for Climate, Energy and Environment Committee, 30/07/2024 14:00](#)

These pathways covered a 'balanced' approach, a 'high hydrogen' method, and a 'maximum ambition' pathway, which assumed significant electrification of heat, transport and industry supported by technologies such as demand-side response and energy storage.

Figure 5 shows the trend in West Yorkshire's greenhouse gas emissions in comparison to the original CERP, and shows that actual emissions are roughly aligned to the maximum ambition pathway. As referenced above, in most recent years the region's total emissions have fluctuated. In future years, actual emissions may diverge from this, as the pace and scale of intervention fails to keep up with the downward trajectory required.

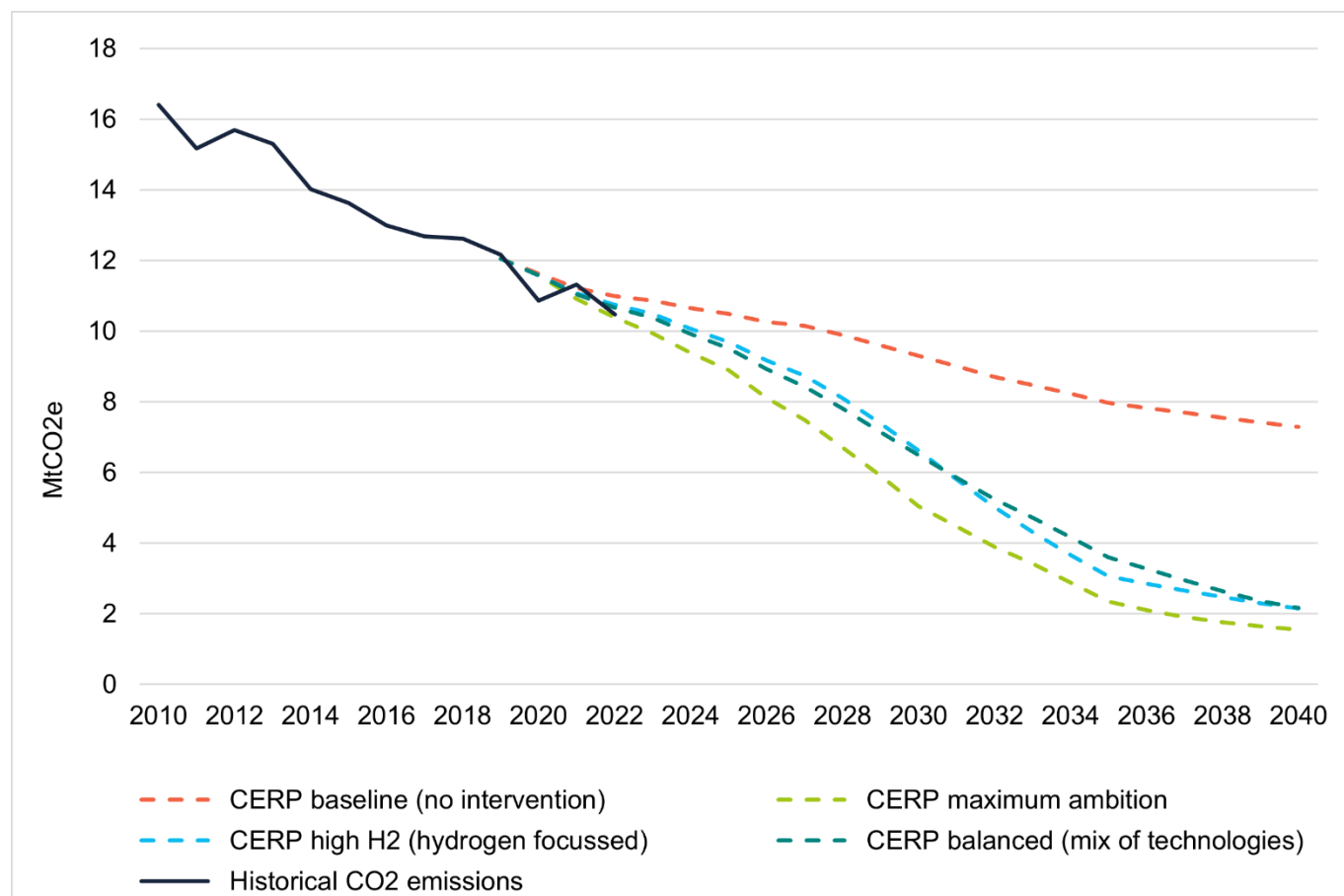


Figure 5. Trend in West Yorkshire emissions vs. Carbon Emission Reduction Pathways: a line graph comparing actual CO<sub>2</sub>e emissions against the previous Carbon Emission Reduction Pathways, showing baseline, high hydrogen, balanced, and maximum ambition emissions reduction pathways to 2040. The data shows that actual emissions were roughly aligned to the maximum ambition pathway in 2022.

## How did the first Plan contribute to emissions savings?

In 2021, the Combined Authority developed its first Climate and Environment Plan to help the region progress towards its net zero carbon target. This plan helped the Combined Authority make investment choices and to deliver schemes that tackle the climate emergency.

It is difficult to associate an exact emission reduction to the activity that was, and is, being delivered as part of the first Climate and Environment plan due to the nature and range of activity undertaken. However, the substantial level of investment (£217 million leveraging a further £94 million) that has occurred over the last four years makes it likely that significant emission reductions have been made as a result of the first plan, either directly in the schemes delivered, or indirectly through influencing others.

Figure 6 summarises the range of activity that has been undertaken.





Figure 6. Activity undertaken as part of the first Climate and Environment Plan: a figure summarising a range of climate activity delivered under the previous Climate and Environment Plan 2021 – 2024 across energy; transport, environment and flood management; housing; business support; skills; and leadership.

## The evidence base

Since producing the first Climate and Environment Plan, the evidence has moved on and technology has advanced. Drawing on and updating the original CERPs, the Combined Authority has identified one clear pathway that the region can take to move towards net zero carbon. This carbon emission reduction pathway (the Pathway) underpins the objectives and actions in this Plan.

The Pathway shows the emission reductions the region could achieve through local leadership and determined action from everybody if we are all focused on the 2038 target. This Pathway would achieve an 81% reduction in emissions against baseline emissions by 2038 (an 86% reduction in total carbon emissions from 2022 to 2038).<sup>4</sup> It is ambitious and at the limit of what is considered achievable at the current time - realising these emission reductions will therefore be challenging. A fully decarbonised, net zero West Yorkshire in 2038 is possible, but would require national government support and funding, quicker lifestyle shifts and technological innovation.

Figure 7 shows that all sectors of the economy could significantly reduce emissions if wide-ranging incentives and investment is put in place. For example, we would need to change the way people travel (including uptake of electric vehicles and more journeys completed by public and active transport modes) and convert to using low carbon technology to heat homes, such as heat pumps. Further detail on the Pathway and what it would require is set out in Appendix 1. Some key implications of the Pathway for each of the Plan's objectives is also set out below, and in Appendix 3.

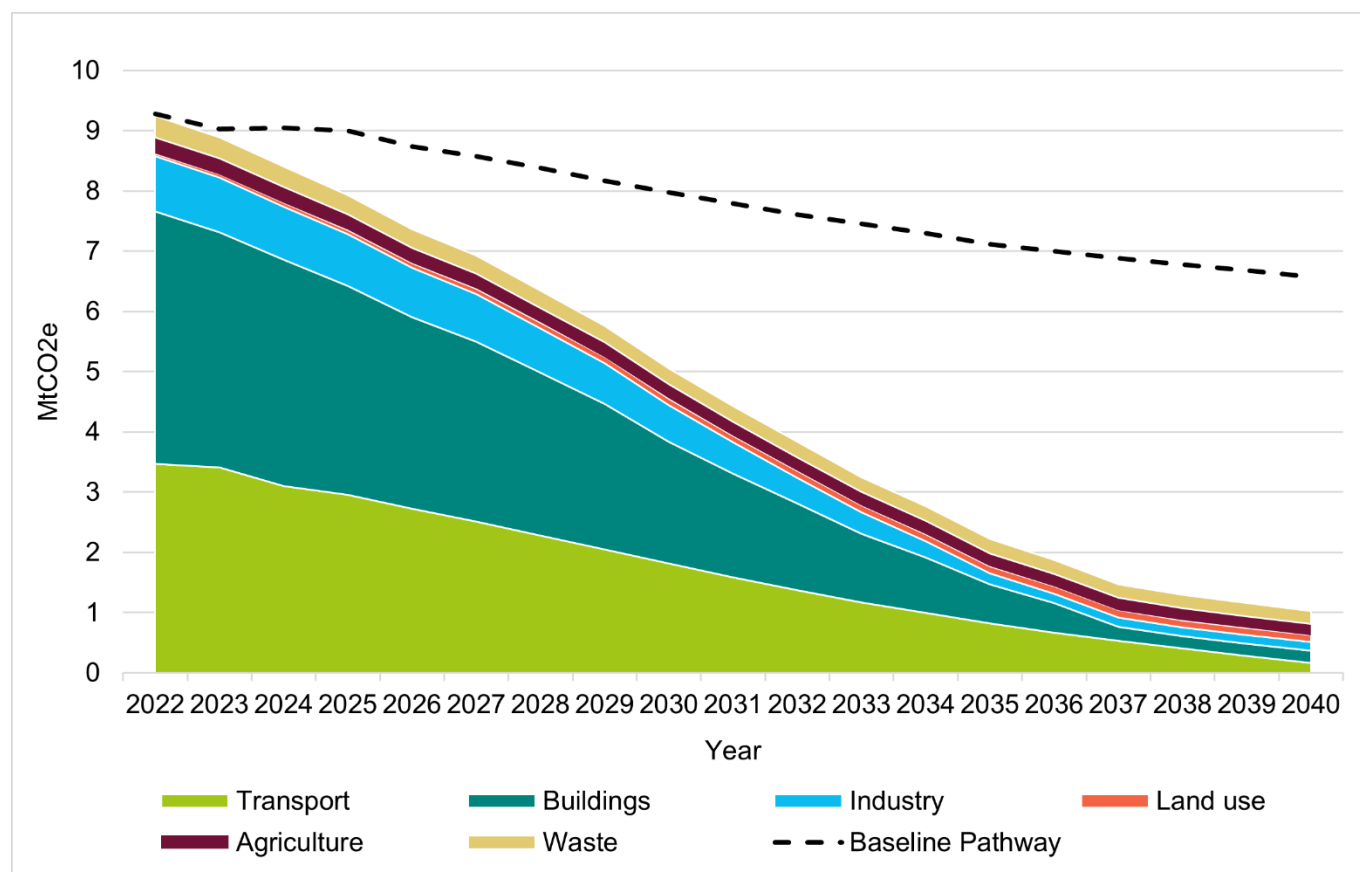


Figure 7. West Yorkshire Carbon Emission Reduction Pathway: a graph showing the modelled pathway of potential CO<sub>2</sub>e emissions reductions in the transport, buildings, industry, land use, agriculture and waste

<sup>4</sup> It is important to note that there is a difference between the figures in the Pathway, and the emissions figures produced by DESNZ (which the Combined Authority reports on in State of the Region report and to its Climate, Energy and Environment Committee). There are several methodological differences in respect of data sources, carbon factors, and assumptions which mean that the final numbers reported under the Pathway vary from DESNZ's own – key amongst these is that the DESNZ figures aggregate emissions in such a way (by sector and region) that modelling the Pathway to a sufficient level of detail requires different methods. Further detail on the Pathway is set out in Appendix 1, but some key challenges and opportunities arising from the net zero transition are explored below.

sectors from 2022 to 2040 in Mt CO<sub>2</sub>e. It shows significant emissions reductions in each sector compared to baseline emissions, culminating in an 81% reduction in emissions against baseline emissions by 2038.

It is important to distinguish between the Pathway and this Plan – the Pathway is a model, focused on a maximum ambition approach to emissions reduction across the region which the Combined Authority, its partners and stakeholders can use to guide policy development. As such, it is an evidence base and reference point which the Combined Authority can use when developing schemes for delivery, subject to assurance processes - there will be an ongoing need to develop further actions and interventions where the Combined Authority can have impact and influence, drawing on the Pathway's findings.

The independent evidence base underpinning this plan suggests public sector investment will be required in the region of £6 billion to support the transition to net zero. This will require a planned increase in investment at all levels of government, a scale of investment which is not yet committed. If sufficient funding was made available, the trajectory of this investment is unlikely to be flat as there are complexities including investment readiness, interface with private investments and immaturity of labour markets and supply chains as well as gaps in West Yorkshire's regional skills base. The actions in this Plan aim to tackle these barriers in the West Yorkshire region, to ensure that where capital is available this can be deployed as quickly as possible.

There are risks associated with the uncertainty and timing of public sector investment that need to be managed. For example, without long-term commitment to infrastructure investment to decarbonise, the necessary mobilisation may not happen at the pace required, meaning that when investment comes the capital cannot be deployed. As identified in the National Infrastructure Commission's Second National Infrastructure Assessment, government consistently underspends capital budgets.<sup>5</sup> There is also the risk that the cost of intervention could increase over time, for example the capital cost of household heating (currently in the form of public subsidy to purchase heat pumps or connect to heat networks) will cost more the longer it takes to retrofit all stock due to inflationary pressures.

Analysis of the Pathway's suggested actions shows that the majority of regional and local public sector investment would likely be concentrated in sectors with the largest emissions contributions - transport, buildings and energy infrastructure. In respect of the potential capital costs for these actions, energy investment accounts for nearly half of estimated total capital investment (49%), highlighting the substantial infrastructure investments needed to reduce emissions. The transport sector would also require high capital expenditure (31% of the total), again reflecting the extensive infrastructure and equipment required for transport projects. Projects to decarbonise buildings account for 20% of potential capital costs.

## Assets, opportunities and challenges

The transition to net zero carbon presents a unique opportunity to transform West Yorkshire's economy, create new skilled jobs, develop a reliable public transport network, and improve our health and our homes.

### Economic growth

West Yorkshire is a region with a resilient economy and world-leading assets. Delivering the Local Growth Plan (the 'LGP') has the potential to add £26 billion to regional gross value added over a ten-year period, meaning 18,000 additional businesses, 53,000 more people with Level 4 qualifications, 40,000 more jobs, and £3.2 billion more in investment each year.<sup>6</sup>

Achieving this will require growth in sectors of the economy where West Yorkshire has existing strengths, alongside the emergence of new opportunities from within specialist sectors. The LGP identifies net zero and green technology as an integral part of this. West Yorkshire's net zero sector is a 'high growth cluster', combining high growth-potential and existing regional strengths in energy, construction and water and waste. These strengths also include the knowledge-base and expertise of our universities, which the region can use to drive climate innovation.

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<sup>5</sup> National Infrastructure Commission, October 2023, Second National Infrastructure Assessment, [Second National Infrastructure Assessment - NIC](#)

<sup>6</sup> West Yorkshire Combined Authority, December 2024, Local Growth Plan: [West Yorkshire Combined Authority](#)

## West Yorkshire's net zero specialisms

The regional economy has many sub-specialisms and strengths, including in:

- **Textiles:** With textiles specialisms in three of the five local authorities, West Yorkshire has the highest level of employment in textiles of any region in high fashion to hi-tech materials. For example, Future Fashion Factory supports innovation across the textiles and fashion industry to enable the shift to more circular economies.
- **Materials and building:** The School of Civil Engineering at the University of Leeds has significant research expertise in materials and structures. It has world-leading capabilities in the design, development and operation of sustainable, low-carbon buildings. It houses the Centre for Infrastructure Materials, the Neville Centre of Excellence in Cement and Concrete Engineering and the Priestley Centre for Climate Futures, which advises the UN on global climate change. Anchor institutions and networking hubs in the region also include the Centre for Precision Technologies and the 3M Buckley Innovation Centre, which hosts facilities for the UK National Physical Laboratory.
- **Construction:** Methods such as offsite and modular construction provide strong potential for a manufacturing-led approach to construction, with the aim of improving efficiency and quality and providing better environmental and social outcomes. Notable successes include the Climate Innovation District in Leeds, which has provided 516 low energy, modular homes. Companies such as Elite Systems (GB) Limited in Cleckheaton, Thurston Group Estates Limited in Wakefield and Meckanho Homes Limited are all examples of firms operating in this sector.
- **Food and drink:** West Yorkshire is emerging as a key producer of free-from and plant-based foods and alternative proteins, which will be essential in reducing global carbon emissions related to agriculture and food production. The National Alternative Protein Innovation Centre is a national initiative based at the University of Leeds.
- **Chemicals:** West Yorkshire is home to one of the UK's largest fine and speciality chemicals clusters, with strengths in agri-chem, surface coatings and dyes, and world-leading research capability in green and sustainable chemistry and industrial biotechnology. Chemicals businesses represent some of the largest employers and exporters, including Huddersfield-based NuFarm and Syngenta, as well as centres of excellence in places like Manchester Road in Bradford.
- **Circular economy, waste management and recycling:** With distinct specialisms in reducing emissions, water and waste, this is an area of opportunity West Yorkshire can capitalize on. Companies include BH Energy Gap, which develops projects to divert household and commercial waste from landfill; Bright Green Plastics, based in Castleford, which recycles and repurposes plastics into compound materials; and circular economy research teams at the universities of Leeds (Yorkshire Circular Lab) and Bradford.
- **Clean energy and clean technology:** West Yorkshire has established knowledge bases in electricity, energy generation and energy management. Companies include FeTu Reticulate, a company based in Calderdale that has designed a green energy device targeting carbon reduction across a broad range of systems and industries and Clean Air Technology International Limited, which is working to cut transport fuel emissions and bills with CAT5 fuel catalyst.
- **Engineering and technical consulting:** The region has clusters of firms specializing in these areas in Leeds, Wakefield, Bradford, Kirklees and Calderdale. Companies include Fineline Architectural Design Ltd in Shipley, and Jeremy Benn Associated Limited, in Skipton.
- **Fintech:** Leeds has been recognised as an established fintech cluster and is home to FinTech North, part of the national fintech network, which includes a strength in green finance. The UK Centre for Greening Finance and Investment is also based in Leeds.

Investment will also be needed to develop the regional supply chain to support net zero, from retrofit of housing to electric vehicle infrastructure to the delivery of Mass Transit. There will be opportunities for existing and new businesses in these markets to grow their capability through leadership development and staff upskilling and training, which the Combined Authority will support. A net zero carbon economy will also be

driven by investing in clean energy infrastructure, building electricity generation capacity from low-carbon sources and expanding hydrogen production.

## Producing low carbon hydrogen in Bradford

Bradford Low Carbon Hydrogen will be the UK's largest hydrogen production facility, for which funding has been confirmed as part of a £2 billion programme to stimulate the production and demand for green hydrogen.

It will be located in the heart of Bradford. Based on the site of the Birkshall Gas Holders, which provided gas for local homes and businesses, it will provide a cleaner energy hub for the future.

Once fully operational, the plant will have the capacity to produce 12.5 tonnes of green hydrogen per day, which is enough to power the equivalent of 800 diesel buses. The project aims to provide a viable way for local businesses to decarbonise, as well as attracting new companies and jobs to the area.

## Jobs and skills

Over the coming years and decades, West Yorkshire has the potential to create thousands of good jobs in the net zero economy. These are jobs that directly contribute to – or indirectly support – the achievement of West Yorkshire's net zero emissions target and other environmental goals.

The Mayor's Green Jobs Task Force found that there were an estimated 73,400 green jobs in West Yorkshire in 2021, representing 7% of all jobs in the region (slightly higher than the UK average).<sup>7</sup> The largest number are in power, homes and buildings, and green professional and research services.

This is a strength on which the region can capitalise. Research from the Local Government Association has found that over 70,000 new green jobs in the low carbon and renewable energy economy could be created across West Yorkshire by 2050, potentially more than any other area in England.<sup>8</sup>

## Our urban and natural environment

West Yorkshire is an urban and densely populated region. Urban and built environments cover around one quarter of the region (26%)<sup>9</sup> and include a range of land uses. West Yorkshire's natural environment supports myriad habitats and species, ranging from upland bogs and heath in the Pennines to the west, to low-lying former coalfields in the east.

Increasing the region's resilience to extreme weather events, such as flooding, will be a key part of tackling the climate emergency. This also presents opportunities to restore habitats for wildlife, improve biodiversity and help more people connect with nature.

Climate resilience will also play a strong role in delivering growth by giving businesses the confidence to remain located in vulnerable areas and grow their businesses sustainably. It could also help to attract more inward investment as navigating extreme weather becomes an increasing challenge for businesses. One study suggests that by reforesting 5% of uplands, landscapes can reduce flood peaks by 30%.<sup>10</sup> Moreover, if we can allocate just 2% of UK pension and wealth assets to nature, then this could generate £100 billion.<sup>11</sup>

## The co-benefits of climate action for residents and businesses in West Yorkshire

Analysis for the Pathway shows that there is a wide range of potential co-benefits to residents and businesses from taking action on the climate emergency. These benefits could have a real impact on people's lives, helping to improve their health and wellbeing, income and employment, and their local environment. These are set out in a high-level summary in Figure 8.

<sup>7</sup> West Yorkshire Combined Authority, Green Jobs Taskforce Recommendations Report, September 2023: [https://www.westyorks-ca.gov.uk/media/11362/green-jobs-taskforce-report\\_digital\\_access-updated-logos.pdf](https://www.westyorks-ca.gov.uk/media/11362/green-jobs-taskforce-report_digital_access-updated-logos.pdf)

<sup>8</sup> As above

<sup>9</sup> OS Built Up Extents layer in combination with manmade land cover types in 'Other non-agricultural land use types' in RPA land cover categories [Rural payments: land use codes 2023 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/rural-payments-land-use-codes-2023)

<sup>10</sup> Impacts of Upland Land Management on Flood Risk (2008) FRMRC. [https://nora.nerc.ac.uk/id/eprint/5890/1/ur16\\_impacts\\_upland\\_land\\_management\\_wp2\\_2\\_v1\\_0.pdf](https://nora.nerc.ac.uk/id/eprint/5890/1/ur16_impacts_upland_land_management_wp2_2_v1_0.pdf)

<sup>11</sup> Rebalance Earth (2025) Investing in Nature as business-critical infrastructure.





Figure 8. Co-benefits of climate action: a diagram showing the potential benefits of climate action aside from emissions reduction, including benefits in respect of health and wellbeing, the environment, economic prosperity, public services, and inclusivity and civil society.

The objectives and actions of this Plan have been drafted to help ensure that it helps deliver these benefits for the people of West Yorkshire. Below are some examples of how the actions in this Plan can deliver co-benefits and help to ensure a just transition to net zero carbon by 2038:

- **Secure, cost effective and clean energy for all:** Developing cheaper, cleaner and more reliable energy will lead to reductions in fuel poverty, better air quality, and improved climate resilience. This will open up opportunities to grow green skills and employment as well as support local small and medium enterprise (SME) growth in the region, linked to sustainable and efficient energy infrastructure.
- **Reliable, affordable, integrated, zero-emission transport:** Getting more people to walk, cycle or travel by electric car, bus or train will improve health and wellbeing, as well as air quality. Making transport cheaper, more reliable and accessible will help to open opportunities for more people and reduce inequalities. There is also sizeable potential for local SME growth by their participation in designing and implementing solutions with the Combined Authority and local authorities.
- **Climate resilient and nature-rich region:** Restoring and enhancing nature will lead to improved water and soil quality, biodiversity gains, as well as supporting the development of associated skills and employment opportunities and reduced socioeconomic inequalities.
- **Warm, comfortable, low-carbon homes:** Improving the energy efficiency of homes will help people manage their energy costs, and there is potential for public health and safety co-benefits through retrofits that address thermal comfort and improve energy access, as well as reducing socioeconomic inequalities. Development of skills and employment is also expected to support supply chains that underpin roll out of these actions.
- **Decarbonised business, good green jobs and a skilled workforce:** Helping the region's economy to grow sustainably will generate co-benefits related to skills and employment and local SME growth, as well as climate resilience. Additionally, there should be improvements to air quality, water and soil quality, energy and material efficiency, and the decarbonisation of local industrial operations. Actions could also support local circular economy networks.

## Inequalities and the impact of climate change

As well as the positive case for action, it is important to understand that existing inequalities mean climate change and extreme weather events can have a greater impact on vulnerable or disadvantaged people. For example, the elderly or those with health conditions are more at risk from heat exposure or poor air quality,

and other factors such as location, low income, and poor-quality housing all contribute to people either being more vulnerable to the effects of climate change or having reduced capacity to adapt.<sup>12</sup> In addition, health conditions and disability can leave people critically dependent on the functioning of infrastructure. For example, people who are dependent on public transport for access to treatment are more vulnerable to infrastructure failure as a result of climate change.

West Yorkshire has a number of underlying characteristics that may increase the vulnerability of its population to the effects of climate change, including:<sup>13</sup>

- Gross disposable household income is only 80% of the national average, partly reflecting the region's underperformance on productivity. There is also a persistent gender pay gap, with data also showing an ethnicity pay gap faced by some groups and a widening pay gap for disabled people.
- An estimated 27% of households live in fuel poverty as of November 2024. This is higher than the national average of 20%.
- Homes with an Energy Performance Certificate (EPC) are less likely to have an energy efficiency rating of Band C or above compared to the national average – 41.9% versus 49.8%. Improving the energy efficiency of properties is an important lever for reducing emissions but also for helping households manage their living costs.
- Increases in flood vulnerability associated with rising temperature disproportionately affect the most deprived communities, with two thirds of people living in areas seeing the biggest rises in flood vulnerability living in the 20% most deprived areas.

The Combined Authority will ensure that the schemes delivered under this Plan take into account or directly help to address these underlying inequalities and regional characteristics as part of a just transition, whilst maximising delivery of co-benefits.

## Capacity to act

As well as being more vulnerable to the impacts of climate change, deprived communities often lack the social infrastructure to take local climate action. The same neighbourhoods are among the least resilient to rapid decarbonisation and structural change. They face potential negative economic impacts resulting from changes in the labour market and the consequences of adaptation to zero carbon in areas including energy, housing and transport.<sup>14</sup>

The Combined Authority and its partners will therefore need to consider the impacts on vulnerable communities of both climate change, and the actions taken to mitigate and adapt.

## Climate change and public health

Climate change is a public health issue, and there is substantial evidence on the different ways in which it will impact on health and wellbeing in the UK.<sup>15</sup> There are direct health impacts from increased extreme weather events, such as heatwaves, flooding or drought, which affect our physical and mental health through injuries or trauma. There are indirect health impacts through the effects on the planet's life-support systems, such as crop failure and food shortages, safe water availability and changing patterns of infectious diseases, like mosquito and tick-borne diseases like malaria or Lyme disease. There are also indirect health impacts mediated through social systems, such as livelihood loss, rising prices of food and fuel, supply chain disruption, pressure on health and care services, and conflict or forced migration. Furthering many of these indirect impacts, we know that living in poverty and having reduced financial resources is bad for health: it affects peoples' ability to live healthy lives and access health and care services.<sup>16</sup>

<sup>12</sup> See for example Climate Change Committee, Climate Change Committee, June 2021 Independent Assessment of UK Climate Risk, [Independent-Assessment-of-UK-Climate-Risk-Advice-to-Govt-for-CCRA3-CCC.pdf](#)

<sup>13</sup> All indicators reported by West Yorkshire Combined Authority, 2023, State of the Region Report, [full-indicator-report-final.pdf](#) and updates to Climate, Energy and Environment Committee, March 2025: [WYCA - Modern Gov](#)

<sup>14</sup> West Yorkshire Combined Authority, State of the Region Report, 2023: [full-indicator-report-final.pdf](#)

<sup>15</sup> Association of Directors of Public Health Yorkshire & the Humber, October 2023, Improving Health, Protecting the Planet Climate change narrative (long read); UK Health Security Agency, Health Effects of Climate Change (HECC) in the UK, 2023, State of the Evidence 2023, [Health Effects of Climate Change in the UK: state of the evidence 2023](#)

<sup>16</sup> The King's Fund, 18 March 2024, Illustrating the relationship between poverty and NHS services, [The Relationship Between Poverty And NHS Services | The King's Fund](#)

These are not abstract concerns; for example, the UK Climate Change Committee reported that the UK's 2018 summer heatwave resulted in 864 heat-related deaths nation-wide.<sup>17</sup> Heat-related deaths have been projected to increase to an annual average of between 3,000 and 13,000 in the 2050s.<sup>18</sup>

Climate change has the potential to widen existing health inequalities, as the health impacts fall disproportionately on the most vulnerable populations. This includes older people, those who are socially disadvantaged, people living in poverty, people with long term physical or mental health issues and those with disabilities. In West Yorkshire, just over 132,000 residents (5.6% of the population) reported being in "bad" or "very bad" health in the 2021 census. After accounting for differences in population age structures, all districts within West Yorkshire have a lower share of their populations in good health than England.<sup>19</sup> Furthermore, 414,000 people (17.6% of the population) in West Yorkshire are disabled under the Equality Act.<sup>20</sup>

Taking action on the climate emergency provides an opportunity to improve health and reduce inequalities for West Yorkshire's communities. Achieving each objective of this Plan will lead to improvements in health, and examples of these co-benefits are illustrated in Figure 9. It is important that the Plan's actions are targeted, so that co-benefits are distributed equitably and felt by the most vulnerable populations. Health-related indicators relevant to climate action, such as healthy life expectancy, are monitored as part of the West Yorkshire Plan.

The Combined Authority has a partnership agreement with the West Yorkshire Health and Care Partnership (WYHCP). This agreement ensures alignment on key priorities, including recognising the links between climate change and health inequalities. The actions and health co-benefits in this Plan will complement and support the ongoing work led by WYHCP to respond to the climate emergency in our health-care systems.

Objective	Secure, cost-effective, clean energy for all	Reliable, affordable, integrated zero-emission transport	Climate resilient and nature rich region	Warm, comfortable, low-carbon homes	Decarbonised businesses and green jobs
Examples of co-benefits for health <sup>21,22,23,24</sup>	Reducing households in fuel poverty, with more people living in warm homes (see co-benefits under warm, comfortable, low-carbon homes)  Avoids increased air pollution from burning fossil fuels, reducing	Reducing traffic-related air pollution, reducing health risks (e.g. lung cancer, asthma, stroke)  Increased active travel (cycling, walking) with associated physical and	Increasing access to nature and green spaces, increasing physical activity and mental health benefits  Protecting against and reducing the impacts of extreme weather events like	Warmer homes with less damp or mold.  Reduce the risks of health problems like respiratory, circulatory and mental health issues (e.g. asthma, stroke or depression) and social factors (e.g. poor educational	Increasing access to high quality secure jobs – with associated benefits on health and wellbeing (e.g. safe work environments, reduced stress, adequate pay)

<sup>17</sup> Climate Change Committee, June 2021 Independent Assessment of UK Climate Risk, [Independent-Assessment-of-UK-Climate-Risk-Advice-to-Govt-for-CCRA3-CCC.pdf](#)

<sup>18</sup> Institute of Health Equity, October 2020, Sustainable Health Equity: Achieving a Net-Zero UK [Sustainable-Health-Equity-Achieving-a-Net-Zero-UK-report-FINAL.pdf](#)

<sup>19</sup> West Yorkshire Combined Authority, 19 January 2023, Census 2021 Topic Summary: Health, Disability & Unpaid Care [PowerPoint Presentation \(westyorks-ca.gov.uk\)](#)

<sup>20</sup> West Yorkshire Combined Authority, 19 January 2023, Census 2021 Topic Summary: Health, Disability & Unpaid Care [PowerPoint Presentation \(westyorks-ca.gov.uk\)](#)

<sup>21</sup> The Health Foundation, 'Health and climate change: complex problems with co-benefits', January 2023: [Health and climate change: complex problems with co-benefits | The Health Foundation](#)

<sup>22</sup> UK Health Security Agency, Health Effects of Climate Change (HECC) in the UK, 2023: [HECC 2023 report chapter 14. Net zero: health impacts of policies to reduce greenhouse gas emissions](#)

<sup>23</sup> Public Health England, Fuel poverty and cold-home related health problems, September 2014: [Briefing7 Fuel poverty health inequalities.pdf](#)

<sup>24</sup> Public Health England, Promoting good quality jobs to reduce health inequalities, September 2015: [2b Promoting good quality jobs-Briefing.pdf](#)



Objective	Secure, cost-effective, clean energy for all	Reliable, affordable, integrated zero-emission transport	Climate resilient and nature rich region	Warm, comfortable, low-carbon homes	Decarbonised businesses and green jobs
	health risks (e.g. lung cancer, asthma, stroke)	mental health benefits Better connected communities who can access work, education and care facilities.	drought or floods, including health impacts (e.g. injury, trauma, access to clean water, food security)	performance in children)	

Figure 9: a table showing example of co-benefits for health for each objective of the Plan

## West Yorkshire's views on the climate emergency

People are at the heart of this Plan – it is part of a wider Combined Authority objective to improve the lives of everyone in the region.

Residents and businesses have told the Combined Authority directly that there is a strong case for acting on the climate emergency. The Mayor's Big Climate Chat – a public engagement exercise conducted by the Combined Authority in 2023 and 2024 – highlighted both regional concern about the climate emergency and its impacts, as well as flagging some of the key barriers to decarbonisation and behaviour change.

The findings of this exercise are a valuable resource which has shaped this Plan, and which will help inform scheme development as the Combined Authority develops and delivers the actions in this Plan.

## Case study: The Mayors Big Climate Chat

In 2023 and 2024, the Combined Authority started a significant piece of engagement in the form of the Mayor's Big Climate Chat, which received nearly 1,500 responses.<sup>25</sup>

Three-quarters of respondents were either very worried (54%) or worried (21%) about the climate and environment emergency, with most feeling that not enough was being done to tackle it. The engagement also highlighted that many respondents were 'very worried' about the impacts of extreme weather (43%) and feel at least a little affected by air pollution (65%).

Respondents flagged a number of potential barriers to them taking action:

- Housing: most respondents said cost was a barrier in reducing energy use / carbon emissions in the home (69%) and that grant funds would help (65%).
- Transport: most respondents found that public transport does not take them to where need to go (58%) and would like a more reliable bus services (47%) and rail service (40%).
- Employment: 19% of respondents would like training through their job to help tackle the climate and environment emergency and 42% said energy efficiency support would help make their workplace more sustainable.
- Weather resilience: the majority of respondents are worried about extreme weather (73%) and said the Government needs to make natural flood defenses a priority (84%).
- Nature and air quality: the majority of respondents found it very important to connect with nature (71%) and 45% felt affected by air pollution, and were worried about the living environment for children (62%)

The Combined Authority also spoke to young people, with 66% of the 384 young people who took part saying they felt that tackling the climate and environment emergency was important or very important.

The survey showed that there is both a challenge and an opportunity to increase awareness of the climate and environment emergency amongst young people, as well as future opportunities. For example, 48% of young people who responded said that they knew of ways to combat the climate emergency, but 28% said they did not, and 25% said they were not sure. In addition, 66% of young people said they did not know what a green job is, whilst 34% of young people said they did know.

The Combined Authority has considered how this Plan should respond to the feedback provided by residents through the Mayor's Big Climate Chat. A summary of how the actions in this Plan will help to address the concerns raised is at Appendix 2.

<sup>25</sup> West Yorkshire Combined Authority, 2024, Mayor's Big Climate Chat outcome report [The Mayor's Big Climate Chat | Your Voice](#)

## Influence and control

Delivering the Pathway is the responsibility of all West Yorkshire. The Combined Authority and West Yorkshire's local authorities can only control or influence a relatively small proportion of emissions. The Combined Authority's focus will be on driving emissions reductions in the areas where it has direct control or can have meaningful influence.

As context for this Plan, local and regional authorities are directly responsible for 2-5% of the region's emissions through buildings, operations and travel. Local and regional government can influence approximately 33% of emissions through procurement, place-making, showcasing, partnerships, engagement and communication with communities.<sup>26</sup>

Combined and local authorities in West Yorkshire can advocate for and influence best practice in climate interventions through our services, planning and enforcement, and roles in housing, regeneration, economic development, education and skills. Combined and local authorities can also use devolved powers and a unified regional voice to influence government and national, regional and local organisations to accelerate progress to our net zero carbon target. Figure 10 shows examples of sources of emissions that we have different levels of control and influence over.

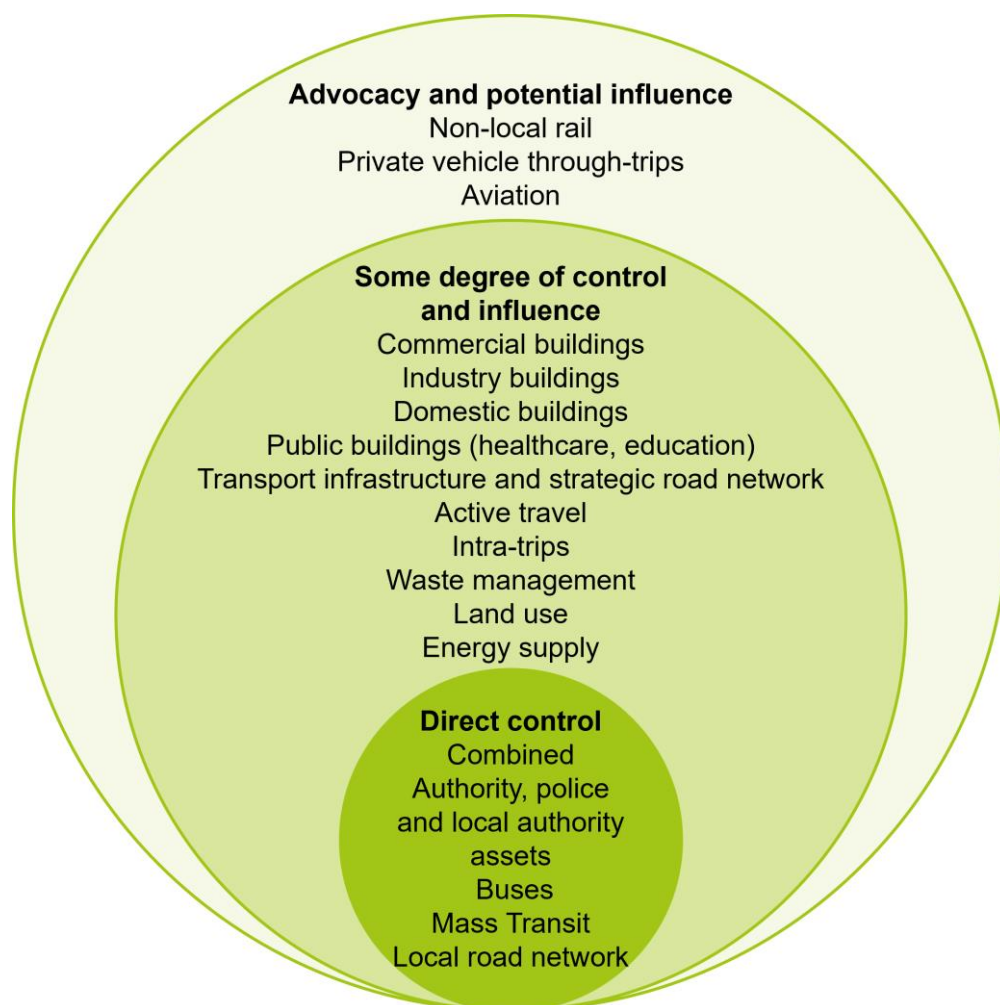


Figure 10: a diagram showing activity/emissions sources within the control and influence of the Combined Authority / local authorities. The smallest circle shows emissions within the direct control of combined and local authorities, such as their assets and operations. The second circle shows emissions over which combined and local authorities have some degree of control and influence, such as commercial and domestic buildings, active travel, and energy supply. The final circle shows emissions which may be open to advocacy and potential influence, such as non-local rail, private vehicle through-trips and aviation.

<sup>26</sup> Climate Change Committee, Local Authorities and the Sixth Carbon Budget, December 2020: [Local-Authorities-and-the-Sixth-Carbon-Budget.pdf](#)

The Combined Authority heard from a number of stakeholders on the importance of reducing emissions from aviation. It should be noted that aviation is an area over which the Combined Authority has no direct control and very limited influence – this is why aviation has been excluded from the Pathway, as this is a sector where the UK Government and industry lead on decarbonisation efforts. Nevertheless, this Plan recognises that the Combined Authority has scope to advocate for emissions reduction in this sector and includes action to engage with government on plans to reduce emissions from aviation, including support for sustainable aviation fuels.

It should also be noted that the UK's 2050 net zero target is both an enabler and potential constraint on achieving net zero carbon by 2038, with the national target (rather than West Yorkshire's) often driving commitments, investments and action across all sectors. For example, stakeholder engagement during the development of this Plan highlighted that stakeholders have differing net zero targets and aspirations. Whilst there is support for tackling climate change and working in partnership, investments and decisions are not necessarily aligned to the 2038 target, and this must be recognized as a potential constraint on our regional ability to influence and control emissions reductions.

## Objectives and impact

### Where will action have the most impact?

#### The long-term vision, mission and objectives

To ensure this Plan's long-term framework is consistent with the West Yorkshire Plan, the vision of this Plan is to make West Yorkshire more sustainable, and residents' lives greener. To achieve this, the regional mission of West Yorkshire becoming a net zero carbon region by 2038 will need to be delivered in an equitable and inclusive way. In response to the Combined Authority's desire to secure the best possible outcomes for West Yorkshire, this Plan sets out five objectives for action on the climate emergency, focused on energy; transport; housing; jobs, industry and business; and a climate resilient and nature rich region.

This Plan focuses on areas that the Combined Authority has some control or substantive influence over, such as transport, housing retrofit and business support. It takes into account where the Combined Authority can lead, where we will work in partnership, and areas it can influence but where emissions reductions will need to be delivered by others. The Plan also includes a number of asks of government in respect of driving emissions reductions.

**Vision:** A sustainable West Yorkshire, making lives greener

**Mission:** Tackling the climate and environment emergency and becoming net zero carbon by 2038 in an equitable and inclusive way

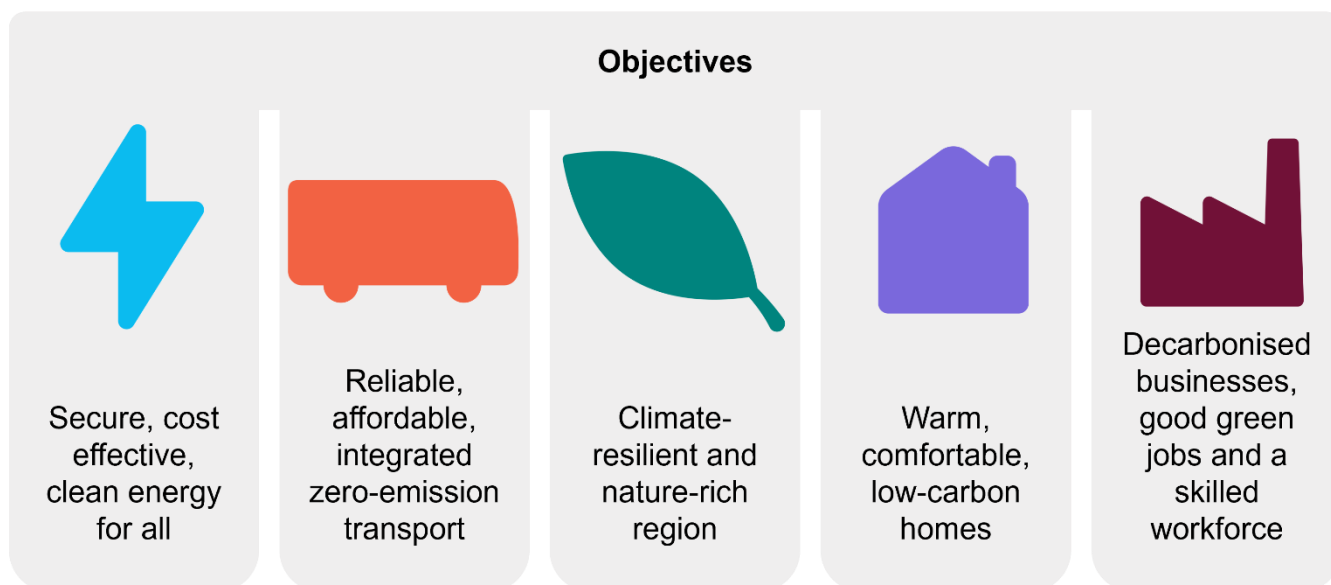


Figure 11. Climate and Environment Plan Framework, a graphic setting out a vision to make West Yorkshire sustainable and lives greener, a mission to tackle the climate and environment emergency and become net zero carbon by 2038 in an equitable and inclusive way, and five objectives for climate action: secure, cost effective, clean energy for all; reliable, affordable, integrated zero-emission transport; a climate-resilient and nature-rich region; warm, comfortable low-carbon homes; and decarbonised businesses, good green jobs and a skilled workforce.

#### Impact

The Pathway tells us that, in 2022, approximately 37% of West Yorkshire's emissions were from transport, around 45% from buildings (including 31% from residential buildings) and the remainder is from other sectors, with industry the largest component of those.

According to the Pathway, emissions in West Yorkshire in 2022 were 9.3 MtCO<sub>2</sub>e.<sup>27</sup> Assuming up to approximately 38% of these emissions are in the direct control or influence of the Combined Authority and partner councils (based on work of the Climate Change Committee on control and influence over emissions, discussed above) the Combined Authority estimates that it and our partner councils could potentially drive forward emissions reductions that target 3.5 MtCO<sub>2</sub>e of emissions, both through this Plan and the actions and activities of our district local authorities.

Given the Combined Authority's role and areas of control and influence the highest carbon savings over the next four year period (to 2028) under this Plan are likely to be:

- Decarbonisation of transport and modal shift: people having the choice to use active and public transport modes rather than private vehicles, and for internal combustion engine cars to be replaced with electric vehicles.
- Low carbon heating in homes: no longer using gas but clean technology such as heat pumps.

Many of the Combined Authority's actions will therefore be targeted at driving the decarbonisation of transport and modal shift and low-carbon heating in homes. However, we know that to meet our net zero carbon ambition, change – including changes across the region in the ways we travel and heat our homes – will need to occur at a scale and pace that we have not yet seen. This will require a substantial national effort, with funding to match.

The diagram below shows these key areas of investment in transport and housing and the carbon savings they could potentially achieve through successful partnerships and if adopted by target audiences in West Yorkshire. It also shows what else the Combined Authority and its partners need to act on to be able to achieve these actions – ultimately, this Plan's objectives and its actions should be complementary, and support emissions reductions in the round. For example, reforming the energy system and making electricity cheaper will be key to ensuring the right incentives are in place for households to switch to low carbon heating.

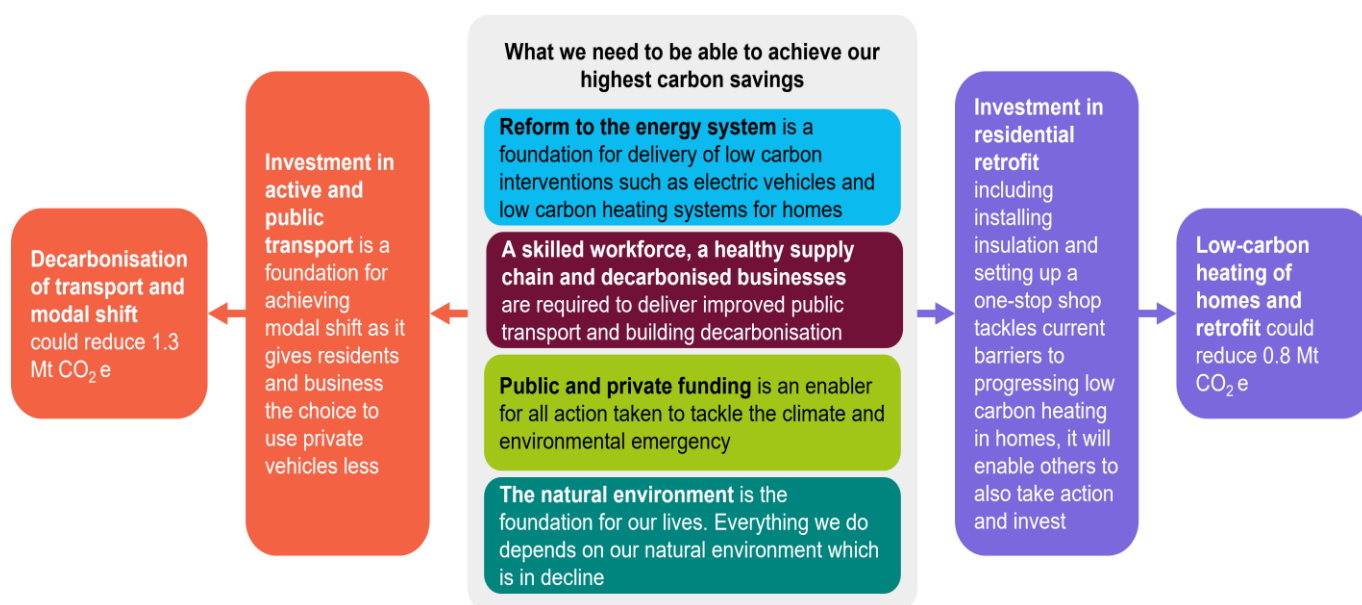


Figure 12. Where our actions will have the most impact: a graphic showing how the objectives of this Plan will support carbon emissions savings. Decarbonisation of transport and modal shift, and the installation of low-carbon heating in homes together with retrofit, will likely result in the biggest emissions savings, supported by reform to the energy system, a skilled workforce, healthy supply chains and decarbonised businesses, public and private funding, and a resilient natural environment.

While the Plan estimates potential emissions reduction that will be achieved through the delivery of the two areas set out in Figure 12, at this stage it is not possible to determine the likely emission reductions that will be delivered by this Plan in isolation and in its entirety. This is due, at this stage, to having not developed the level of ambition for each delivery activity and therefore the likely emissions reductions that will be achieved.

<sup>27</sup> Please see Appendix 1 to this Plan and above note on the methodological differences between DESNZ greenhouse gas emissions reporting and our Pathway

As project development for each activity progresses, more detail will be developed around the emissions savings that could be achieved.

## Reasons for intervening and approach to monitoring progress

The rationale for intervening in respect of each of our objectives is set out below. A fuller overview of the evidence base for each objective and why action is needed is set out at Appendix 3.

The Plan's proposed approach to monitoring progress against our State of the Region indicators – which provide a snapshot of key elements of the state of West Yorkshire's climate and environment - the Pathway, and of schemes delivered by the Combined Authority at Appendix 4.

Up to date indicators can be accessed through regular reports to our Climate, Energy and Environment Committee papers [here](#).

## The action plan

The following sections set out the activity to be delivered under each of the Plan's five objectives, in the period 2025 - 2028. Each set of actions has been structured according to role that the Combined Authority has over their delivery under the categories of leading, partnering, influencing and asks of government.

Estimated costs for the Plan's actions for 2025 – 2028 have also been included, using the scale set out in the table below. The Combined Authority will take the high-level actions in this Plan into detailed scheme development, which will determine the level of resources it is possible for the Combined Authority to allocate against each.

Scale	Estimated Cost
£	£1 to £500,000
££	£500,000 to £5m
£££	£5m to £50m
££££	£50m to £500m
£££££	£500m+

## Secure, cost effective and clean energy for all

### What is the rationale for intervening?

Becoming a net zero carbon region by 2038 will require West Yorkshire to be powered by electricity generated by wind, solar and other low-carbon sources. The Pathway models that electricity demand will increase substantially as interventions such as zero-emission vehicles and low-carbon heating are adopted. This demand will need to be met in large part by renewable energy.

The region's electricity supply needs to be more diverse, secure and affordable. This will help to tackle fuel poverty, reduce energy bills for households, and maximize the region's growth potential. Decarbonising energy also offers the potential for lowering bills, improving price stability and ultimately reducing energy prices for both residents and businesses. The role of hydrogen in our energy mix also needs to be considered.

The Plan's proposed actions focus on planning energy infrastructure, increasing our energy generation assets, working to secure more funding for net zero energy projects and using our powers and influence to bring down the costs of electricity. As detailed scheme development progresses, the Combined Authority will ensure that its actions in the energy sector are focussed on delivering secure, cost effective and clean energy for residents, businesses and communities across West Yorkshire over the next four years and up to 2038, and further actions will be developed beyond 2028 accordingly.

### What are the implications for West Yorkshire in 2038?

The following needs to occur if the ambition is to be met:

- Meeting an increased demand for electricity with demand increasing to 15.9 terawatt hours (TWh) per year in 2038, up from 10.1 TWh per year in 2022.
- Renewable energy generation in the region contributing 1.2 TWh per year of clean, secure power to meet our demand for electricity in 2038.
- Increasing investment in renewable electricity, grid reinforcement and capacity to allow greater low carbon electricity to be used in the region.
- Catering for 20% of industrial demand for energy via hydrogen.

### Actions 2025 - 2028

Figure 13 sets out the actions that will be delivered as part of this objective.



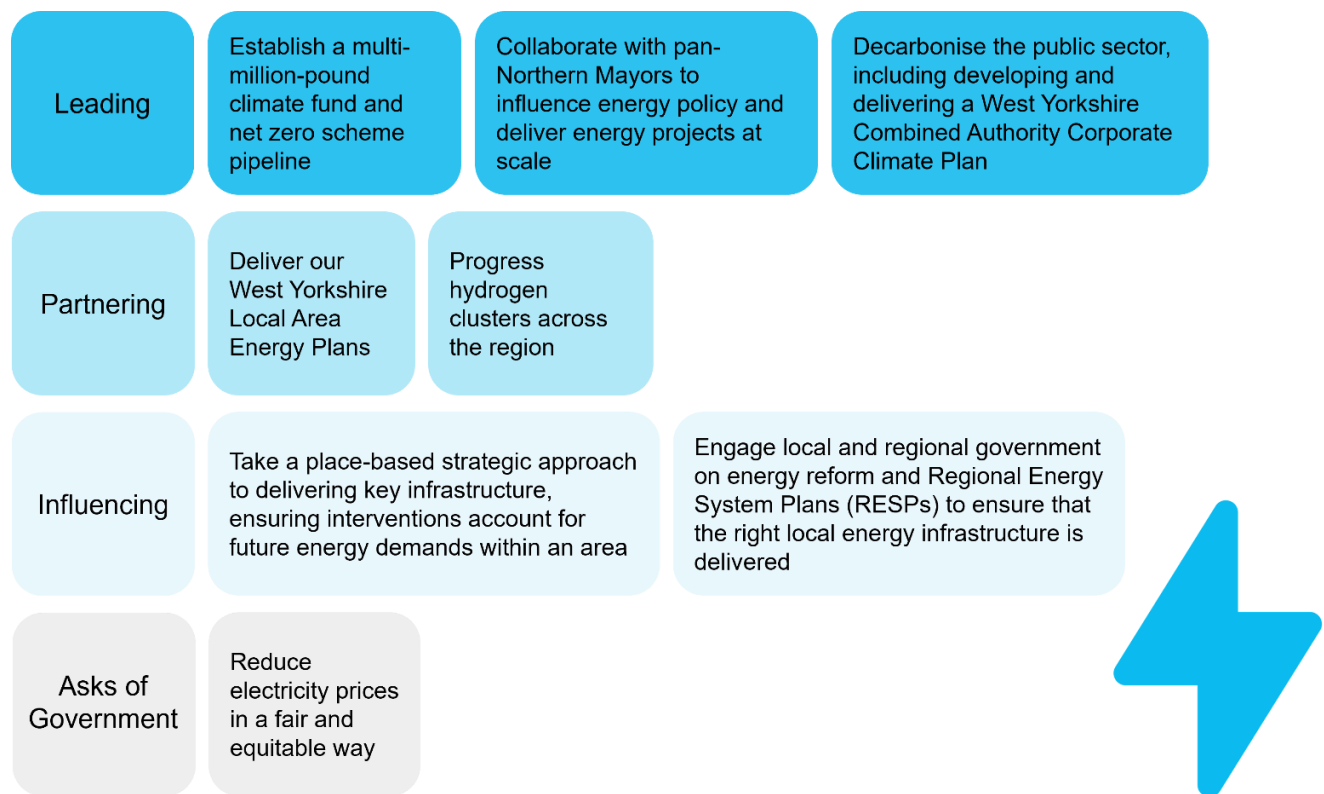


Figure 13. Secure, cost effective and clean energy for all actions: a graphic setting out the actions for this objective, which are described in detail below.

## Case study: The Strategic Climate and Environment Partnership

The Combined Authority is currently forging closer ties with the private sector through its Strategic Climate and Environment Partnership.

Established in 2024, the partnership will create closer working relationships between the Combined Authority and four key private sector partners - Centrica, Daikin, SSE and Sustainable Building Services - with the aim of accelerating the pace and scale of schemes that contribute to our net zero goals.

The companies will work alongside the Mayor on targeted activity to deliver green skills, decarbonise homes and businesses, and help the region on the path to net zero carbon by 2038. In return, the firms will benefit from the Mayor and Combined Authority's influence and leadership on climate and the environment, giving them the confidence to invest in West Yorkshire at scale.

The Combined Authority is also working with the National Wealth Fund (formerly UK Investment Bank), which is providing advisory support on a range of net zero schemes including the development of Local Area Energy Plans.



The table below sets out the actions under this objective, together with a brief description of them.

Action	Description	Estimated cost 2025 - 28
Leading		
Establish a multi-million-pound climate fund and net zero scheme pipeline (the "Fund")	<p>Net zero schemes will not happen without the availability of funding for their deployment. There is capital available, however typically this has not been at a cheap enough rate for project sponsors to access due to the risk profile generally attached to net zero schemes. Furthermore, the Combined Authority is aware that investors are interested in funding a portfolio of schemes of significant financial value, something that is currently missing in West Yorkshire.</p> <p>Getting to the point at which an investment decision can be made has been difficult in the region. A lack of resources and expertise to undertake the detailed project development activity required to progress schemes has long been an issue. The Combined Authority's existing Net Zero Region Accelerator programme attempts to close this gap and will be increasingly important in the establishment of the Fund.</p>	£££££

Action	Description	Estimated cost 2025 - 28
	<p>To address these market failures a West Yorkshire Climate Fund will be established. The funding required will be scheme dependent, therefore the Fund will be designed to derisk schemes, providing funding where traditional forms of capital might not be appropriate.</p> <p>The ultimate aim of the Fund is to provide a route to market for the pipeline of schemes that will need to be developed to meet the region's net zero carbon ambition. For example, solar PV, battery storage, heat networks, heat pumps and other renewable / low carbon technologies. The Combined Authority will also consider, as part of the Fund, how communities can be supported to develop their renewable and low-carbon energy aspirations, plans and projects, working alongside partners such as GB Energy and the North East and Yorkshire Net Zero Hub to develop effective support and engagement mechanisms.</p> <p>To deliver this action, the Combined Authority will work with the public and private sectors to attract funding and investment into a pipeline of net zero schemes, supporting the development of project development and business cases through our existing project development support programme.</p> <p>The Combined Authority will also call on government to promote a stable and favourable national environment for net zero investment. Institutions such as the National Wealth Fund and Great British Energy need to help de-risk investment and accelerate uptake of low carbon projects, including support for pathfinder projects to accelerate innovation.</p>	
Collaborate with pan-Northern Mayors to influence energy policy and deliver energy projects at scale	<p>Devolution represents a once in a generation opportunity to decentralise power from Whitehall to the places that know and understand their communities. The Combined Authority will use this opportunity and its relationship with other northern mayors to work collectively to drive forward action at a greater scale and pace than has previously been seen.</p> <p>Changes to energy policy represent a key area in which the collective influence of northern mayors can drive forward tangible change. For example, working together to ensure electricity prices are as cheap as possible for all consumers, and to attract investment for net zero projects.</p> <p>The Combined Authority will use its role as part of the Great North grouping of mayors to lead and coordinate a strong, collective voice that drives the deployment of infrastructure and investment in an energy system that delivers net zero carbon.</p>	£
Decarbonise the public sector, including developing	The Combined Authority will work to decarbonise its assets and operations, as well as to support the	££££

Action	Description	Estimated cost 2025 - 28
and delivering a West Yorkshire Combined Authority corporate climate plan	<p>decarbonisation of the public sector more widely, including through leading on regional delivery of the Public Sector Decarbonisation Scheme which is expected to become a devolved responsibility. This scheme provides grants to public sector bodies to fund heat decarbonisation and energy efficiency measures, and aims to reduce emissions from public sector buildings by 75% by 2037 (compared to a 2017 baseline).</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>• Introducing dedicated internal resources for this area of the organisation.</li> <li>• Obtaining strong senior leadership commitment for decarbonisation activity.</li> <li>• Ensuring organisation-wide departmental buy-in and cooperation to enable data collection and reporting activities.</li> <li>• Setting ambitious internal targets to drive action now and inform future decisions.</li> <li>• Developing and implementing a corporate climate plan for the Combined Authority</li> <li>• Leading on regional delivery of the Public Sector Decarbonisation Scheme, once funding is devolved as part of an integrated financial settlement with government.</li> <li>• Considering the support required by the broader public sector to enable estate decarbonisation, including consulting with local authority partners to help identify local needs and barriers.</li> </ul>	
Partnering		
Deliver our West Yorkshire Local Area Energy Plans	<p>The Combined Authority is developing Local Area Energy Plans (LAEPs) for the region. LAEPs are a data-driven method to plan local energy systems, resulting in a costed and spatial plan that identifies a pipeline of projects. LAEPs will inform, shape and enable the transition to a net zero carbon energy system, using a technology neutral approach. This intelligence and information will be shared to facilitate the business planning and investments of our partners.</p> <p>LAEPs are being developed in partnership with local authorities and key stakeholders such as Northern Powergrid, Northern Gas Networks, Yorkshire Water, housing providers and representatives of regional industries and businesses.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>• Working with local authority partners to ensure a robust LAEP is developed for each district</li> </ul>	£

Action	Description	Estimated cost 2025 - 28
	<p>(integrating the Calderdale LAEP that is already complete).</p> <ul style="list-style-type: none"> <li>Providing regional coordination and action to support our local partners with their energy planning, including supporting accurate and timely data sharing to help partners understand the potential implications of the LAEPs at an early stage, such as in respect of generation and load demand assumptions.</li> <li>Working closely with partners and stakeholders to explore and develop projects that are identified by the LAEPs, ensuring that these plans are used as 'living' documents.</li> </ul>	
Progress hydrogen clusters across the region	<p>Development of the evidence base for this Plan has helped the Combined Authority establish a set of principles to shape the deployment of hydrogen in West Yorkshire.</p> <p>These principles include that only low carbon hydrogen<sup>28</sup> should be deployed in the region, and that spatial planning should be used to establish the best locations for hydrogen deployment.</p> <p>In addition to supporting localised hydrogen development, the Combined Authority will also continue to engage with key stakeholders such as Northern Gas Networks in national and regional endeavors to develop a hydrogen economy where appropriate and cost effective.</p>	£
Influencing		
Take a place-based strategic approach to delivering key infrastructure, ensuring interventions account for future energy demands within an area	<p>The Combined Authority will develop the spatial evidence base to tackle the climate and environment emergency and use this to inform and influence a West Yorkshire Infrastructure Strategy and West Yorkshire Spatial Development Strategy.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Completing and maintaining evidence through the LAEPs and using these to inform investments.</li> <li>Inputting into the Infrastructure Strategy, drawing together evidence from existing specific strategies and identifying gaps with a view to develop an overarching framework to drive investment in strategic infrastructure projects that support achieving the region net zero carbon target, including in respect of renewables.</li> </ul>	£

<sup>28</sup> As defined by the UK Low Carbon Hydrogen Standard ([UK Low Carbon Hydrogen Standard - GOV.UK](https://www.gov.uk/government/publications/uk-low-carbon-hydrogen-standard))

Action	Description	Estimated cost 2025 - 28
	<ul style="list-style-type: none"> <li>Building on the opportunities presented by reforms to the National Planning Policy Framework.</li> <li>Considering the most suitable areas for future power projects, including renewables, flexibility technologies and whether pre-designated areas for different types of renewables can be identified, taking into account land availability and infrastructure / grid connection.</li> <li>Reviewing heat network zoning legislation and taking on coordination of heat network zoning as required, working with our districts to plan and implement the methodology for establishing zones alongside results from the Local Area Energy Plans.</li> <li>Developing and implementing a regional heat decarbonisation hierarchy for inclusion, as appropriate, in our emerging Spatial Development Strategy.</li> <li>Supporting the development of hydrogen zoning plans to identify areas where hydrogen can be effectively integrated with end user requirements.</li> <li>Using convening and influencing powers to support renewable energy projects.</li> </ul>	
Engage local and regional government on energy system reform and Regional Energy Strategic Plans to ensure that the right local energy infrastructure is delivered	<p>The Combined Authority will engage fully with the energy system reform. The implementation of a new National Energy System Operator (NESO) presents an opportunity for regional planning and coordination of the energy system which was previously absent.</p> <p>Regional Energy Strategic Plans (RESPs) will allow the development of 'whole system' approaches to the energy system, covering gas and electricity distribution, but also heat, transport and industry.</p> <p>RESPs will be shaped by local characteristics and needs (including local net zero ambitions), facilitating long-term investment – the first RESPs are expected to be published in 2027, with a transitional or 'tRESP' expected early in 2026.</p> <p>The Combined Authority and its local authority partners will play a critical role in the RESPs by successfully delivering our Local Area Energy Plans, which will comprise a key source of local data. The Combined Authority will also use this process to develop its future approach in supporting communities to realise their community energy aspirations.</p> <p>NESO will implement a governance mechanism to help ensure regional democratic accountability, and the Combined Authority will participate fully in proposed</p>	£

Action	Description	Estimated cost 2025 - 28
	governance arrangements to represent the needs of West Yorkshire's energy system.	
Asks of government		
Reduce electricity prices in a fair and equitable way	<p>The Combined Authority will press the Government to make electricity cheaper in a fair and equitable way in line with the region's drive towards an electrified economy, including via the Government's proposed consultation on this subject.<sup>29</sup></p> <p>The Climate Change Committee has made a clear recommendation that electricity prices should be reduced by removing market distortions, addressing 'a range of policy and social costs that are currently levied on electricity bills, including legacy policy costs associated with the historical deployment of less mature low-carbon electricity generation.' Demonstrating the impact of high electricity prices in the UK, the Committee draws on international comparisons of the ratio of electricity to gas prices to illustrate its impact on the rate of heat pump adoption.<sup>30</sup></p> <p>Lower electricity prices will therefore help ensure that consumers are incentivised to switch to low carbon technologies, particularly heat pumps, with their greater efficiency more accurately reflected in running costs.</p>	£

<sup>29</sup> [Committee on Climate Change 2024 progress report: government response](#)

<sup>30</sup> Climate Change Committee, 18 July 2024, 2024 Progress Report to Parliament: [Progress in reducing emissions 2024 Report to Parliament - Climate Change Committee](#)

## **Reliable, affordable, integrated zero-emission transport**

### **What is the rationale for intervening?**

Transport is currently one of the highest emitting sectors in the region, accounting for 37% of all greenhouse gases emitted. Road transport is the biggest contributor to roadside air pollution, and West Yorkshire's urban areas have some of the highest levels of transport emissions in the UK.

West Yorkshire therefore needs to decarbonise its transport network at a faster rate, shift modes of travel and ensure the transport network is resilient and reliable. The evidence base for this Plan shows that the region needs to see more journeys completed by walking, cycling and public transport, widespread uptake of electric vehicles and the switching of freight to sustainable modes.

The proposed actions under this objective focus on planning regional transport through the Local Transport Plan, as well as what needs to be done to make key modes of transport more sustainable, including the introduction of our Mass Transit system. The actions in this Plan aim to deliver an integrated network, linking public and active travel across modes, in support of this objective – the Local Transport Plan will help drive network integration accordingly.

### **What are the implications for West Yorkshire in 2038?**

The following needs to occur if the ambition is to be met:

- Shifting away from cars, with only 54% of passenger kilometres by private car (down from 81% in 2022), 15% by train (up from 7%), 8% by bus (up from 6%), 12% cycling (up from 1%), 5% from walking, and 5% from car sharing.
- Widespread adoption of clean vehicles, with 85% of vehicle kilometres travelled by car and 100% of vehicle kilometres travelled by bus being zero emission.
- Providing residents and businesses with opportunities and options to travel in a low carbon way, including reliable and integrated public and active transport and access to electric vehicle charge points.
- Widespread electrification of the rail network.
- Road freight emissions reduce through the ambitious uptake of low and zero emission vehicles and reductions due to behaviour change and consolidation.

### **Actions 2025 - 2028**

Figure 14 below sets out the actions that will be delivered as part of this objective.



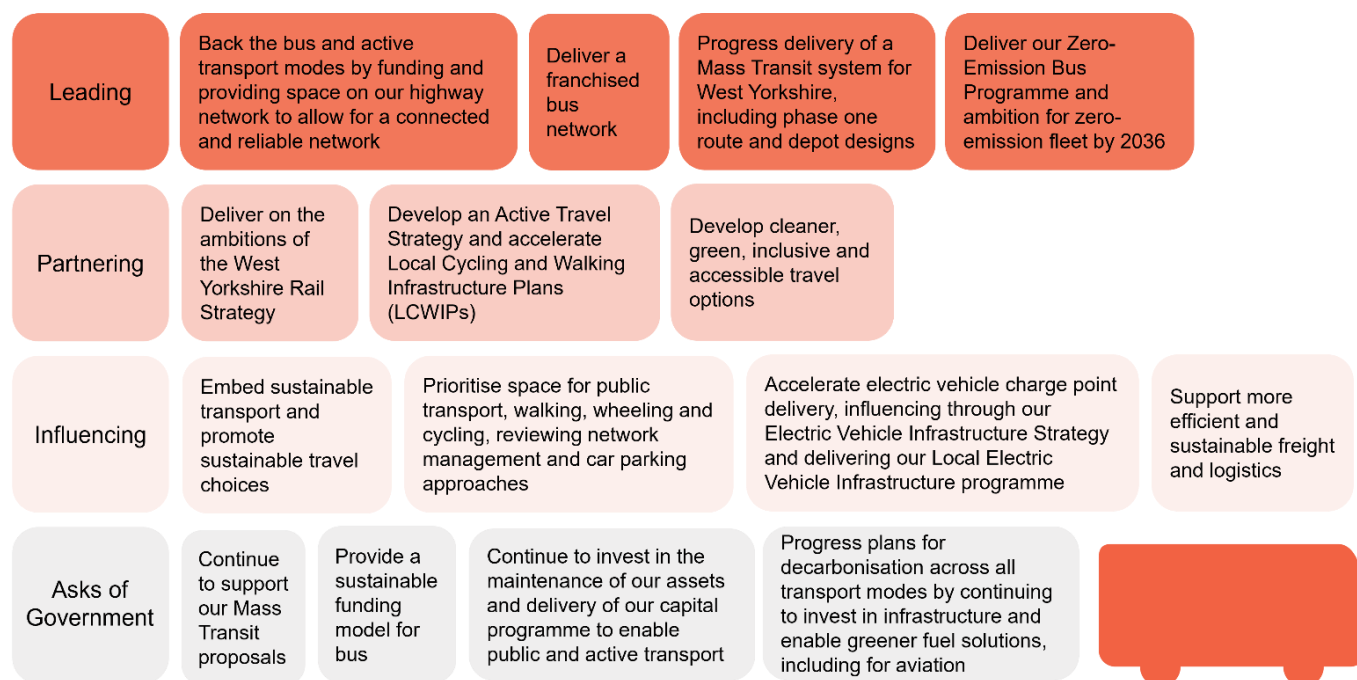


Figure 14. Reliable, affordable, integrated zero emission transport actions: a graphic setting out the actions for this objective, which are described in detail below.

### Case study: Zero Emission Bus

A key part of delivering against the Plan's leading actions is developing and delivering a Zero-Emission Bus (ZEB) programme. As part of the ambition for a zero-emission fleet by 2036, the ZEB programme will introduce between 179 and 245 ZEBs along with supporting infrastructure (subject to all funding being secured).



The programme consists of several schemes to invest in ZEBs across the region. One of them is the Zero Emission Bus Regional Area (ZEBRA), which has received £56.2 million in funding from the Department for Transport. The funding will help to introduce zero emission buses and associated depot infrastructure for routes across Bradford, Leeds and Wakefield.

So far, 57 all-electric buses have been added to the fleet to replace older polluting diesel vehicles. The new buses also feature upgrades to the customer experience, such as audio-visual 'next stop' technology and USB charging ports.

Other schemes that support the introduction of ZEBs and associated infrastructure include:

- **Transforming Cities Fund:** a £4 million project to introduce eight ZEBs and associated charging infrastructure on routes in Calderdale and Kirklees. This has a specific focus on exploring the impact of topography and introducing ZEBs to smaller operator fleets running tendered services.
- **City Region Sustainable Transport Settlement:** a £21 million project to introduce between 60 and 126 ZEBs and associated charging infrastructure across the region.

This programme will convert between 14% and 19% of the West Yorkshire bus fleet to ZEBs. It will also build the infrastructure needed to support future rollouts of electric buses. This will future-proof bus infrastructure and support the introduction of bus franchising.

The table below sets out the actions under this objective, together with a brief description of them.

Action	Description	Estimated cost 2025 - 28
Leading		
Back the bus and active transport modes by funding and providing space on our highway network to allow for a connected and reliable network	<p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Delivering major sustainable transport programmes, City Region Sustainable Transport Settlement (CRSTS) and Transforming Cities Fund (TCF) by March 2027, which will deliver a range of improvements across the transport system to make public, shared and active travel easier to use, providing an alternative to car travel.</li> <li>Using the Local Transport Plan (LTP) process to ensure transport networks are fit for the future and properly managed in a safe, sustainable, environmentally friendly and cost-effective way, exploring climate adaptation and resilience and identifying the risks and opportunities to the region from a changing climate.</li> </ul>	££££
Deliver a franchised bus network	<p>The Combined Authority will bring the bus network under public control, following a decision made by the Mayor of West Yorkshire in March 2024 to introduce the proposed franchising scheme.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Delivering a fully franchised bus network, as set out in the Bus Reform Assessment, by October 2028.</li> <li>Seeking Combined Authority ownership of fleet and depots, supporting the transition to a fully zero emission fleet by 2036.</li> <li>Introducing contract mechanisms to encourage operators to invest in zero emission buses when a contract is not connected to a Combined Authority depot and continue to support operators in their innovation more widely.</li> <li>Introducing contract mechanisms to ensure customers receive a bus service that is punctual and reliable that will encourage modal shift away from the private car.</li> <li>Adopting a consistent approach to customer service and information to create a more attractive bus service offer.</li> </ul> <p>Through the franchised bus network, the Combined Authority will deliver the Bus Service Improvement Plan (BSIP) including better local bus services and priorities such as more green and better buses, new and enhanced services, and simple, affordable fares. This will</p>	££££

Action	Description	Estimated cost 2025 - 28
	support modal shift and decarbonisation of the bus network.	
Progress delivery of a Mass Transit system for West Yorkshire, including phase one route and depot designs	<p>Mass Transit is a large-scale public transport system and is a key part of the pathway for net zero. It will help to combat climate change, provide climate resilient infrastructure, and will provide a high-quality sustainable travel alternative to the car.</p> <p>The Combined Authority will continue to develop a mass transit system for West Yorkshire by:</p> <ul style="list-style-type: none"> <li>• Progressing Mass Transit Phase 1 route and depot designs and having 'spades in the ground' by 2028.</li> <li>• Working to obtain authorisation in 2026 for the project routes, alongside producing an Environmental Impact Assessment.</li> <li>• Publishing the Mass Transit Sustainability Strategy and continuing to develop an implementation plan, which will develop targets and measures for each theme in the Sustainability Strategy.</li> <li>• Developing Spatial Development Frameworks for mass transit, maximising opportunities for access to and use of mass transit alongside securing maximised environmental benefits (SUDs, BNG/Green Links etc).</li> <li>• Preparing a framework to support district Local Plans to provide robust policy support for mass transit and support the consenting process.</li> <li>• Producing an Economic Growth Prospectus that sets out the economic benefits of mass transit and its role in facilitating sustainable growth.</li> <li>• Applying the design principles that we outlined in our Approach to Placemaking guidance to the project to deliver sustainable places.</li> <li>• Engaging with partners and stakeholders throughout the project, as well as consulting the public at key milestones.</li> </ul>	£££££

Action	Description	Estimated cost 2025 - 28
Deliver the Zero Emission Bus Programme and ambition for a zero emission fleet by 2036	<p>The Combined Authority will implement its Bus Service Improvement Plan and supporting investment programmes such as:</p> <ul style="list-style-type: none"> <li>• Progression of the £95 million Zero Emission Bus Programme, which will look to introduce up to 200 zero emission buses and supporting charging infrastructure across West Yorkshire by March 2027.</li> <li>• Continued exploration of the best fuel types and technologies for the region.</li> <li>• Development of a framework for zero emission bus uptake to encourage movement towards a fully ZEB fleet ahead of franchising, including exploring how we can assist smaller operators.</li> <li>• Replacement of the AccessBus fleet with high quality, zero emission vehicles.</li> <li>• Continuing to improve the bus customer offer through investment in vehicles to be cleaner and positioning bus as a more attractive, sustainable transport option.</li> <li>• Developing a fleet strategy as part of bus franchising and as set out in the Bus Reform Assessment.</li> </ul>	££££
Partnering		
Deliver on the ambitions of the West Yorkshire Rail Strategy	<p>The Combined Authority will deliver on the ambitions of the West Yorkshire Rail Strategy. We will do this by:</p> <ul style="list-style-type: none"> <li>• Promoting electrification on the rail infrastructure and engaging with operators to promote the expansion of low carbon rolling stock.</li> <li>• Continuing to engage with key partners (e.g. Network Rail, train freight operators, Department for Transport) to champion improvement in services that align with the Combined Authority's aspirations</li> <li>• Continuing to make the case for investment and seek to influence rail programmes designed to support capacity growth.</li> <li>• Exploring and funding new stations to provide greater access to the network</li> <li>• Continuing to fund accessibility improvement and maximise any funding opportunities to remove barriers and make rail accessible at stations.</li> <li>• Supporting modal shift to rail as an alternative to car use by promoting reliability and performance improvements.</li> </ul>	£

Action	Description	Estimated cost 2025 - 28
Develop an Active Travel Strategy and accelerate Local Cycling and Walking Infrastructure Plans (LCWIPs)	<p>The Combined Authority will support, encourage and enable active travel, with the aim of ensuring everyone can access opportunities for walking, wheeling and cycling, particularly for shorter journeys.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>• Developing an Active Travel Strategy for West Yorkshire as part of the new Local Transport Plan.</li> <li>• Accelerating the development and implementation of Local Cycling and Walking Infrastructure Plans (LCWIPs).</li> <li>• Developing behaviour change and road safety programmes that assist in the development and promotion of active travel schemes, initiatives and funded programmes.</li> <li>• Working with local authorities to develop a pipeline of schemes for future funding. These will be reflected in the Implementation Plan for the new LTP.</li> <li>• Working alongside West Yorkshire Police to improve the designs of open space, public realm and street space to ensure people feel safe using the whole transport network. Alongside active policing, we will provide safe spaces and use technology to facilitate reporting where people feel most at risk.</li> <li>• Assisting local authorities in developing and delivering active travel schemes through Active Travel Fund, CRSTS, TCF and other funding opportunities.</li> </ul>	£££
Develop cleaner, green, inclusive and accessible travel options	The Combined Authority will use the LTP process to develop cleaner, green options for travel through electrification and alternative fuels, including policies and schemes to enable the transition to zero emission fuels and support the development of alternative fuels infrastructure.	££
Influencing		
Embed sustainable transport and promote sustainable transport choices	<p>The Combined Authority will work to ensure public transport and active travel options are widely understood and easy to use, providing an alternative to car travel.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>• Maximising possible investment in sustainable transport improvements by working with other agencies and securing appropriate private sector contributions towards sustainable transport access to new developments.</li> </ul>	££

Action	Description	Estimated cost 2025 - 28
	<ul style="list-style-type: none"> <li>Continuing to deliver significant behaviour change programmes that support the infrastructure improvements delivered through current and future transport investment, enabling and encouraging people to use lower carbon modes of transport by reducing barriers to active, public and shared forms of travel.</li> <li>Exploring shared transport options that are integrated with the public transport network as an alternative to car ownership.</li> <li>Reducing the harmful impacts of transport on our communities, including poor air quality and noise pollution, which will help to support more active, healthier, safer communities.</li> <li>Providing an affordable and attractive fares and ticketing offer, integrated across public transport.</li> </ul>	
Prioritise space for public transport, walking, wheeling and cycling, reviewing network management and car parking approaches	<p>The Combined Authority will support sustainable travel by working with partners to consider how we prioritise space for public transport, walking, wheeling and cycling on West Yorkshire's streets and roads, and review highways network management and car parking approaches.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Developing a West Yorkshire Streets for Everyone Strategy, which sets out how to design, manage and fund the region's streets to provide safe space for sustainable transport.</li> <li>Reallocating space on streets to give priority to public transport on, but not limited to, the core bus network and Mass Transit Phase 1 Route.</li> <li>Developing an approach to network management that focuses on improving network efficiency.</li> <li>Developing an approach to car parking that is fair, equitable and regionally consistent.</li> </ul>	£
Accelerate electric vehicle charge point delivery, influencing through our Electric Vehicle Infrastructure Strategy and delivering our Local Electric Vehicle Infrastructure Programme	<p>The Combined Authority will accelerate electric vehicle charge point delivery, ensuring that provision meets the needs of those who live and work in West Yorkshire and offers equality of access across the region, aiming to promote take up of electric vehicles.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Developing an ambitious Electric Vehicle Infrastructure Strategy for West Yorkshire as part of the LTP, to establish the objectives for public electric vehicle infrastructure and action plan for accelerating deployment.</li> <li>Continuing with delivery of the £17 million Local Electric Vehicle Infrastructure (LEVI) programme,</li> </ul>	£££

Action	Description	Estimated cost 2025 - 28
	<p>primarily focused on chargepoints for those without access to off-street parking.</p> <ul style="list-style-type: none"> <li>Working with government and industry to identify and secure funding to deliver chargepoint schemes, striving for equality of access in EV charging, levelling up coverage across West Yorkshire.</li> <li>Collaborating with Northern Powergrid to better understand grid capacity and supporting coordinated planning activity.</li> <li>Working with employers in the region, focusing on the public sector, to support ambitions for fleet decarbonisation, specifically around identifying opportunities for collaborative work between organisations and promoting funding opportunities.</li> </ul>	
Support more efficient and sustainable freight and logistics	<p>The Combined Authority will support more efficient and sustainable freight and logistics, working in collaboration with the freight and logistics industry to support the efficiency, safety, security and sustainability of their operations.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Supporting opportunities for modal shift of freight from road to rail and water where appropriate.</li> <li>Exploring options for first-last mile freight.</li> </ul>	£
Asks of government		
Continue to support our Mass Transit proposals	<p>As part of CRSTS1, the Combined Authority has funding to develop the business case for Mass Transit Phase 1. The Combined Authority requires £2.5 billion to deliver phase one of the Mass Transit network, and so we need continued support for Mass Transit through the local transport funding settlement from 2027 and beyond.</p>	£
Provide a sustainable funding model for bus	<p>A sustainable revenue funding model for bus is needed, to ensure that the Combined Authority can continue to promote attractive bus fares.</p> <p>The Combined Authority asks that the Government establishes a priority working agreement to revise the current Bus Services Operators Grant and establish a long-term revenue funding system which reflects the economic, social, and environmental impact of competitive bus fares.</p>	£
Continue to invest in the maintenance of our assets and delivery of our capital	<p>As part of future transport funding, the Combined Authority needs further support to address the challenge of managing and maintaining transport assets, to ensure the network remains safe, reliable and resilient and meets the expectations of customers – with the challenge</p>	£

Action	Description	Estimated cost 2025 - 28
programme to enable public and active transport	of a backlog of repairs needed for the highways network which exceeds £1.3 billion.	
Progress plans for decarbonisation across all transport modes by continuing to invest in infrastructure and enable greener fuel solutions, including for aviation	<p>The Combined Authority needs an ongoing commitment to decarbonisation of transport, through phase out dates for diesel and petrol vehicles and investment in alternative fuels, particularly for heavy goods vehicles.</p> <p>The Combined Authority will also engage with government and stakeholders on plans to reduce emissions from aviation, including potential government support for sustainable aviation fuels.</p>	£



## Climate resilient and nature-rich region

### What is the rationale for intervening?

Climate change poses a significant threat to the natural world, with national surveys continuing to show the decline of biodiversity. Recent decades in the UK has, on average, been warmer, wetter and sunnier, with each of the warmest 10 years since 1884 being recorded in the 21st century.

These changing weather patterns have significantly impacted farmers and landowners. Higher temperatures, waterlogged ground and unpredictable weather impact food production, which can raise costs and reliance on imports.

Flooding is also likely to become a more frequent occurrence because of climate change. Approximately 39,000 residential properties and 13,000 commercial properties are threatened by flood risk throughout the region and fall within a flood zone. We also need to safeguard water quality to prevent crop failures and harm to wildlife.

Urban areas are highly exposed to climatic events too. Devoid of natural systems that can manage water and heat, dealing with these extreme events can be costly to the region and its communities. Financially, the deterioration of the natural environment could result in UK GDP being 6% to 12% lower by 2030.<sup>31</sup>

All these effects place pressure on species and habitats that are vital to ecosystems. The natural environment is a precious asset, and it has a key role to play in helping to manage the effects that climate change has already locked in, while also reducing future emissions in the natural environment.

### What are the implications for West Yorkshire in 2038?

The following needs to occur if the ambition is to be met:

- Protecting urban environments, ensuring they can adapt to future climate events and provide a healthy and safe place for residents to live, work and study.
- Increasing tree planting and peatland restoration to restore nature and reduce emissions. Continuing to safeguard nature recovery and habitats.
- Using regenerative agriculture and supporting more farmers to deliver for nature.
- Continuing to ensure that the region's businesses are safeguarded and that the growth it needs can be achieved.
- Managing impacts of drought to prevent risks to the drinking water supply and broader adverse environmental impacts, such as crop failures and wildlife die-offs.
- Asking national government to support the delivery of West Yorkshire's Local Nature Recovery Strategy by providing robust legislation, policy, funding, and other support for nature restoration.

### Actions 2025 - 2028

Figure 15 sets out the actions that will be delivered as part of this objective.

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<sup>31</sup> Green Finance Institute (2024) Assessing the Materiality of Nature-Related Financial Risks for the UK.  
<https://www.greenfinanceinstitute.com/wp-content/uploads/2024/06/GFI-GREENING-FINANCE-FOR-NATURE-FINAL-FULL-REPORT-RDS4.pdf>

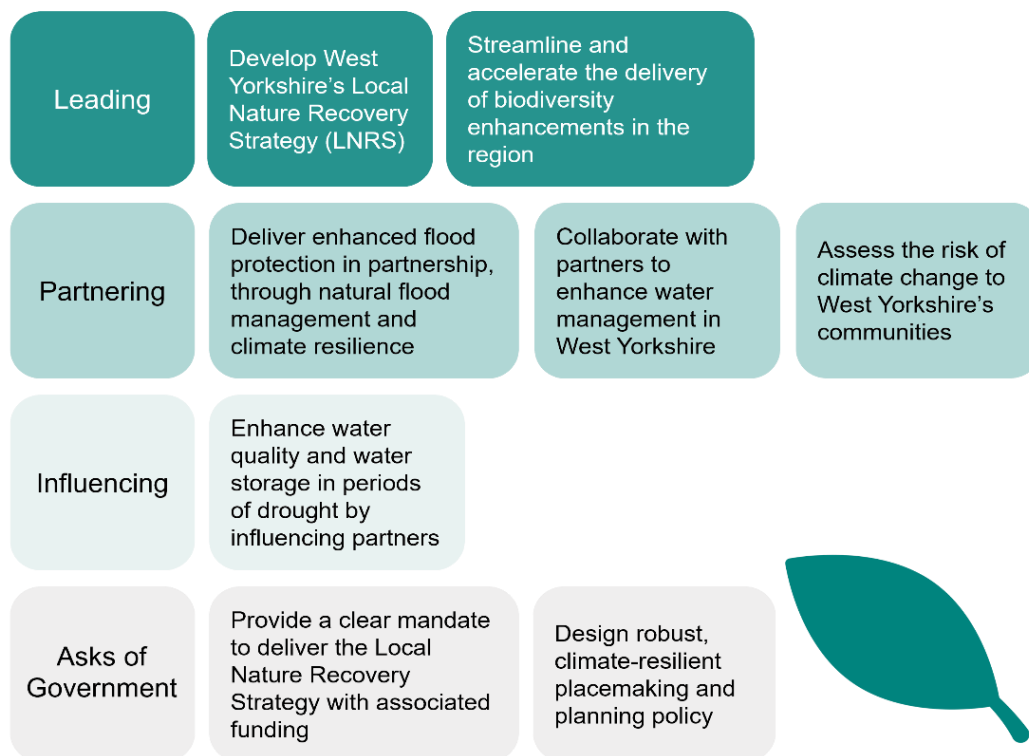


Figure 15. Climate resilience and nature-rich region actions: a graphic setting out the actions for this objective, which are described in detail below.

## Case study: Natural flood management

The National Trust has been working with community partners Slow the Flow to implement natural flood management (NFM) and manage the impact that water flowing through the landscape has on downstream communities and businesses. This project has been funded through the Combined Authority's Landscapes for Water programme, which has enabled the National Trust to design and deliver the new flood management measures at Hardcastle Crag.



Together, they are using logs and brush to create leaky dams across smaller streams. These give the water more time to soak into the ground, rather than running straight into rivers. As well as reducing flood risk, this work is also benefiting nature. Beech trees are being replaced by a variety of more native species, allowing more light to the forest floor meaning smaller plants can flourish, in turn helping to slow the flow of water.

Whilst some rivers will still require engineered infrastructure improvements further downstream to reduce flooding, by slowing the flow of water with NFM in the upper catchments, we can use smaller, less intensive hard infrastructure downstream. This reduces the carbon impact of these projects, as well as their impact on the local environment, helping to promote a healthier ecosystem as a whole.

In West Yorkshire, where many communities are under regular threat of flooding, this work helps reduce that risk and builds resilience to cope with future flooding risks – a key concern as climate change means the UK faces warmer, wetter weather throughout the year.

Slow the Flow and the National Trust run volunteer days where people can help build leaky dams and other natural flood management tasks. Through working with local people, over 1000 leaky dams have been built, which also helps raise awareness of flood risk and measures in the local population. Taking action for nature in this way also increases a sense of feeling close to nature – 'nature connectedness'. Landscapes for Water is looking to replicate the success of the work at Hardcastle Crag at other sites across the region, with future schemes to be confirmed.

The table below sets out the actions under this objective, together with a brief description of them.

Action	Description	Estimated cost 2025 – 2028
Leading		
Develop West Yorkshire's Local Nature Recovery Strategy	<p>The Combined Authority will work across a broad partnership to develop West Yorkshire's Local Nature Recovery Strategy and support its delivery.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Continuing to work with Natural England and supporting authorities to publish the first West Yorkshire Local Nature Recovery Strategy.</li> <li>Working with supporting partners such as Yorkshire Water, National Trust, Moors for the Future, Yorkshire Peat Partnership, White Rose Forest, Yorkshire Wildlife Trust Nature North and supporting authorities to deliver the agreed priorities within the Local Nature Recovery Strategy and accelerate delivery following publication in late 2025. This could include, for example, restoring the region's nature, landscapes, and peatland.</li> <li>Engaging with landowners to explore and implement nature recovery opportunities.</li> <li>Developing a pipeline of investment-ready environmental projects (including Habitat Bank sites), mapping potential funding opportunities and engaging with investment partners.</li> <li>Supporting others to explore farming practices that can help deliver for nature and farmers together. These include making space for nature and restoring natural features and systems that help protect and manage the land.</li> </ul>	£
Streamline and accelerate the delivery of biodiversity enhancements in the region	<p>The Combined Authority will develop regional opportunities to streamline and accelerate delivery of nature recovery (including biodiversity net gain) to ensure the impact of new development is minimised and mitigated near a site or within the region.</p> <p>This will include working in partnership with the private sector to ensure they have a range of opportunities to manage their biodiversity net gain requirements within the region.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Accelerating delivery of nature recovery in West Yorkshire, including on local authority owned land.</li> </ul>	£

Action	Description	Estimated cost 2025 – 2028
	<ul style="list-style-type: none"> <li>Engaging with private landowners to ensure they are aware of the opportunities for nature recovery on their land.</li> <li>Encourage government to refine and update biodiversity net gain to ensure its effective delivery.</li> </ul>	
Partnering		
Deliver enhanced flood protection through natural flood management and climate resilience	<p>The Combined Authority will work with the Yorkshire Regional Flood and Coastal Committee (YRFCC), the Environment Agency and other partners to deliver enhanced flood protection, incorporating natural flood management, and climate resilience to communities, homes and businesses across West Yorkshire.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Working in partnership with the YRFCC, Environment Agency, Risk Management Authorities, and other partners to deliver the six-year West Yorkshire Capital Flood Risk Management programme.</li> <li>Continuing to engage with government to outline the case for greater and accelerated delivery of flood risk management infrastructure to realise our ambition for a climate- resilient region. This will include identifying further investment to support the Combined Authority's flood programme to provide enhanced flood protection for communities including natural flood management.</li> <li>Supporting the development of improved land-use activities relating to drainage and flooding, by working with partners on local planning policy and through future development of the Spatial Development Strategy.</li> <li>Supporting White Rose Forest to deliver schemes that provide new trees and woodland as well as natural flood management in North and West Yorkshire.</li> </ul>	££££
Collaborating with partners to enhance water management in West Yorkshire	<p>The five lead local flood authorities in West Yorkshire, Environment Agency, Combined Authority and Yorkshire Water need to continue their collaboration to develop new approaches for the management of water in the region.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Continuing to support the work of partners and ensuring alignment with the Combined Authority's work programmes.</li> </ul>	£

Action	Description	Estimated cost 2025 – 2028
	<ul style="list-style-type: none"> <li>Considering new integrated approaches for water management.</li> </ul>	
Assess the risks of climate change to West Yorkshire's communities	<p>The Combined Authority and partners will assess the risks of climate change to West Yorkshire by:</p> <ul style="list-style-type: none"> <li>Commissioning a Climate Risk Assessment by 2027 in partnership – a piece of research that maps areas of vulnerability (the likelihood of adverse climate change impacts), including major events like floods, and outlines the ways to mitigate and minimise these risks to reduce the impact on West Yorkshire.</li> <li>Using the Climate Risk Assessment as the basis for shaping future interventions in West Yorkshire to ensure solid evidence base and framework for partnership action, in the creation of a climate adaptation plan.</li> <li>Ensuring the Combined Authority's investments are developed and designed with climate resilience accounted for.</li> <li>Using the Climate Risk Assessment to map areas susceptible to heat islands and/or flooding risks, and supporting delivery of urban greening in these areas to mitigate those risks.</li> <li>Influencing government to unlock future funding to address the impacts of climate change on West Yorkshire communities.</li> </ul>	£
Influencing		
Enhance water quality and water storage in period of drought by influencing partners	<p>The Combined Authority will work with partners to support opportunities to enhance water quality.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Engaging with government, Yorkshire Water, Environment Agency, Lead Local Flood Authorities and other partners to address water quality issues.</li> <li>Working with partners to support delivery of nature-based solutions to support improvements to water quality, including measures such as treatment wetlands, sustainable drainage systems and natural flood storage.</li> </ul>	£
Asks of government		
Provide a clear mandate to deliver the Local Nature Recovery Strategy with associated funding	<p>The Combined Authority will work with government to ensure that the Local Nature Recovery Strategy is deliverable for all West Yorkshire.</p> <p>The Combined Authority will do this by:</p>	£

Action	Description	Estimated cost 2025 – 2028
	<ul style="list-style-type: none"> <li>Working closely with the Government to design legislation that ensures nature recovery is deliverable.</li> <li>Working with the Government to make the case for sufficient funding and support for nature recovery.</li> </ul>	
Design robust, climate resilient placemaking and planning policy	<p>The Combined Authority will work with the Government on designing robust, climate-resilient placemaking and planning policy.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Collaborating through the UK Mayors Network, helping us shape knowledge and speak with one voice as a group of Mayoral Combined Authorities.</li> <li>Feeding into government consultations, sharing knowledge and helping shape future legislation and central policy.</li> </ul>	£

## Warm, comfortable, low carbon homes

### What is the rationale for intervening?

The Pathway shows that West Yorkshire's housing is responsible for emitting 2.8 million metric tonnes of CO<sub>2</sub> per year, approximately 31% of the region's total emissions. Most of these emissions come from using fossil fuels to heat homes.

The Pathway also sets out a highly ambitious rate of emissions reduction, achieved through a combination of measures that include improving the efficiency and performance of existing and new buildings and widespread adoption of low-carbon heating such as heat pumps.

Improving the energy efficiency of properties will be central to helping households manage their energy costs, and quality retrofits will help improve thermal comfort and energy access. The need to retrofit homes is even greater and more challenging in West Yorkshire than nationally, given the prevalence of both fuel poverty and of very old homes (pre-1919 homes represent 23% of dwellings compared to 19% nationally), which are harder to retrofit.

Long-term funding options need to be explored, supported by increased retrofit awareness and education, to enable more residents to improve the energy performance of their homes. The Combined Authority will work with stakeholders and partners where appropriate to deliver the actions under this objective - including giving full consideration to how the private sector can support delivery and financing of retrofit roll out and low carbon heating, for example.

### What are the implications for West Yorkshire in 2038?

The following needs to occur if the ambition is to be met:

- Energy efficient retrofitting 100% of social and 50% of private homes means they are warm, healthy and efficient.
- Fitting 838,000 heat pumps and connecting 205,000 homes to heat networks means heating is clean and low emissions, with no gas for heating homes by 2038.
- Installing 569 megawatts of rooftop solar capacity by 2038 contributes to emission reductions.
- Delivering a regional supply chain and green skills capable of supporting widespread retrofit and low carbon heating installation.
- Ensuring new housing is affordable to run and warm, comfortable and low carbon from the outset.

### Actions 2025 - 2028

Figure 16 below sets out the actions that will be delivered as part of this objective.

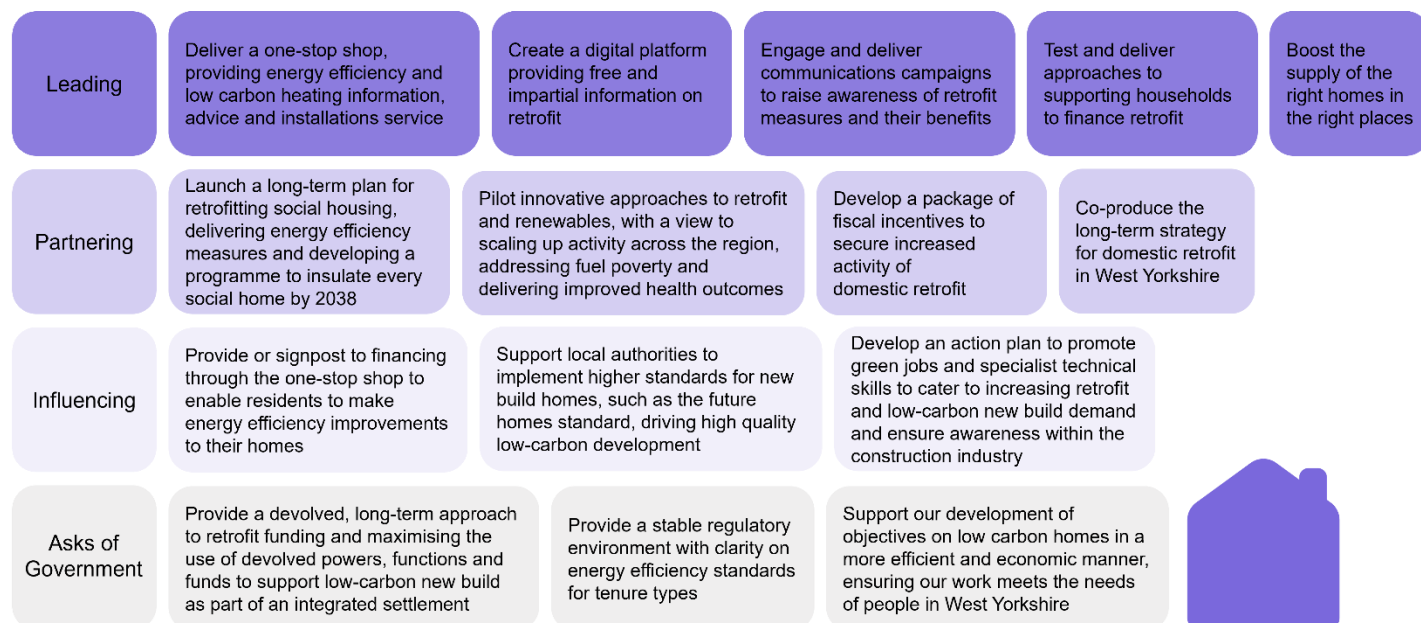




Figure 16. Warm, comfortable, low carbon homes: a graphic setting out the actions for this objective, which are described in detail below.

### Case Study: Home energy loan

As part of Home Energy West Yorkshire, the Combined Authority provided low-interest finance to local residents to help them retrofit their homes. Access to affordable finance is a significant barrier preventing people from making their homes more energy efficient.



By providing public sector funding, interest rates can be kept low. This makes the loans more affordable and accessible to those who most benefit from them. The loans can be used for a variety of energy efficiency and low carbon technology. This includes insulation, ventilation, windows, solar panels, heat pumps and more.

Mr and Mrs R. own a 1930s home in Leeds. They wanted to replace their aging windows to improve their comfort and energy efficiency but were concerned about high costs.

They applied for a loan after doing research on their funding options. It offered them a manageable and low-interest alternative to other forms of credit.

The impact was immediate. Their home felt warmer, more secure and nicer to look at. It enhanced their home's value and made it more comfortable.

"It's a relief knowing the windows are sorted," said Mrs R. "The loan was fantastic, without the high interest rates we saw elsewhere," Mr R added.

The table below sets out the actions under this objective, together with a brief description of them.

Action	Description	Estimated cost 2025 - 2028
Leading		
Deliver a one-stop shop, providing energy efficiency and a low carbon heating information, advice and installations service	<p>The Combined Authority will launch a one-stop shop which will act as a 'single front door' for home energy efficiency and low-carbon heating support in West Yorkshire, as well as providing information and advice for residents. The Combined Authority will continue to add more to support packages as needed to ensure all West Yorkshire residents and landlords are supported.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Devising a phased implementation approach to the one stop shop starting Summer 2025, with the aim of ensuring that everyone in West Yorkshire is able to benefit from this service.</li> <li>Utilising learning from resident engagement campaigns and projects to ensure that all residents in West Yorkshire, particularly those from under-served communities, are able to</li> </ul>	£££



Action	Description	Estimated cost 2025 - 2028
	access appropriate retrofit support and services.	
Create a digital platform providing free and impartial information on retrofit	The Combined Authority will establish a digital platform in Summer 2025 where residents and landlords of West Yorkshire can access free and impartial information on retrofit.	£
Engage and deliver communications campaigns to raise awareness of retrofit measures and their benefit	The Combined Authority will deliver communications and engagement campaigns within West Yorkshire communities to raise awareness of retrofit measures and their benefits with the aim of improving resident and landlord uptake of retrofit measures. This is an ongoing action to maintain active communications and promote activity.	£
Test and deliver approaches to support households to finance retrofit	<p>The Combined Authority aims to ensure that everyone in West Yorkshire can retrofit their home, therefore affordable finance is crucial. The Combined Authority will explore long-term funding options to enable more residents to improve the energy performance of their homes.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Continuing to make the case and submit proposals to government to secure sustainable long-term funding for West Yorkshire's retrofit ambitions.</li> <li>Evaluating options for a financial proposition to enable residents to make energy efficiency and low-carbon heating improvements in their homes.</li> <li>Understanding the barriers to finance for the most vulnerable residents, including considerations of different communities' financial needs.</li> </ul>	£££
Boost the supply of the right homes in the right places	<p>Where we are intervening or supporting development across West Yorkshire, the Combined Authority will prioritise delivery of homes on brownfield and look to re-use existing and heritage buildings. The Combined Authority will focus activity on creating well-connected communities, and delivering sustainably located housing.</p> <p>Additionally, the Combined Authority will champion the development of active travel infrastructure connected to housing development, ensuring safe and sustainable transport options are available that connect housing to key opportunities for education, employment, and recreation.</p>	£
Partnering		

Action	Description	Estimated cost 2025 - 2028
Launch a long-term plan for retrofitting social housing, delivering energy efficiency measures and developing a programme to insulate every social home by 2038	<p>The Combined Authority will support the retrofit of West Yorkshire's social housing by coordinating with housing providers and ensure that we maximise the use of all funding streams available.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Working with the West Yorkshire Housing Partnership to create a coordinated long-term investment plan for retrofitting social housing by 2038 and to help stimulate demand for energy efficient homes and retrofit across other tenures based upon social housing data.</li> <li>Using the investment plan, developing an enabling programme to remove technical and social barriers in order to ensure that insulation measures are installed in every social home by 2038.</li> <li>Delivering energy efficiency measures in social housing through government funded schemes such as Social Housing Decarbonisation Fund (SHDF), the Warm Homes: Social Housing Fund and the Combined Authority funded West Yorkshire Housing Partnership Solar programme, working with our providers to ensure that the social housing need is effectively communicated.</li> <li>Developing a targeted resident engagement plan to support residents to understand the benefits of retrofit and adjust their behaviours to maximise those benefits.</li> </ul>	££££
Pilot innovative approaches to retrofit and renewables, with a view to scaling up activity across the region, addressing fuel poverty and delivering improved health outcomes	<p>The Combined Authority will explore new models to accelerate the delivery of domestic retrofit and renewables in the region, working in partnership with stakeholders including our local authorities, West Yorkshire Housing Partnership, private sector partners and the voluntary and community sector.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Piloting innovative approaches to retrofit to accelerate their delivery, inform how we can scale up deployment in West Yorkshire, and embed the learning in the one stop shop.</li> <li>To accelerate delivery of solar PV and battery storage on domestic properties, increasing awareness of its benefit and the deployment of rooftop solar PV and battery storage solutions.</li> <li>Exploring how to work with and support the private rented sector and owner occupiers to decarbonise their properties, in addition to the</li> </ul>	££

Action	Description	Estimated cost 2025 - 2028
	<p>development of a social housing investment plan.</p> <ul style="list-style-type: none"> <li>Exploring how to support retrofit skills development to enable delivery of the ambition.</li> </ul>	
Develop a package of fiscal incentives to secure increased activity of domestic retrofit	The Combined Authority will develop a package of financial products and incentives to help overcome the upfront cost barrier to retrofit, making it easier for households to take steps towards energy efficiency improvements. The Combined Authority will explore opportunities to work with the private sector to shape financial products which will make retrofit financing more accessible, attractive, and widely available to homeowners.	££
Co-produce the long-term strategy for domestic retrofit in West Yorkshire	The Combined Authority will work with partners across West Yorkshire to develop a long-term strategy for scaling-up retrofit demand in a sustainable way, whilst supporting the supply chain to meet those needs.	£
Influencing		
Provide or signpost to financing through the one stop shop to enable residents to make energy efficiency improvements to their homes	The Combined Authority will use the one stop shop to provide both financial support and information to enable people to make energy efficiency and low-carbon heating improvements in their homes, including continued delivery of its low interest loan pilot, solar collective buying scheme pilot, and other financial measures.	£
Support local authorities to implement higher standards for new build homes, such as the future homes standard, driving high quality low-carbon development	<p>The Combined Authority will work to ensure the right planning policies are in place to implement higher standards for new build homes and drive high quality low-carbon development.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Supporting West Yorkshire's local authorities to implement government standards for new build homes, such as the Future Homes Standard.</li> <li>Seeking where possible to drive high-quality, low-carbon development through further devolution and the development of a Spatial Development Strategy.</li> <li>Continuing to work with existing and future partnerships, such as the West Yorkshire Housing Partnership and our Strategic Place Partnership with Homes England, to secure high-quality, low carbon development across the region through collective action.</li> </ul>	£
Develop an action plan to promote green jobs and specialist technical skills to	The Combined Authority will support the development of the regional retrofit and renewables supply chain, workforce and associated skills infrastructure to ensure	£

Action	Description	Estimated cost 2025 - 2028
cater to increasing retrofit and low-carbon new build demand and ensure awareness within the construction industry	<p>the supply chain can respond to retrofit needs in West Yorkshire.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Bringing together experts, educators, industry and housing partners to create a regional retrofit advisory board that will meet the required capacity of retrofit ambition, working with the UK's only specialised construction further education college, Leeds College of Building.</li> <li>Promoting green jobs and skills with the aim of increasing awareness of potential retrofit career options and training opportunities, including by supporting education providers to implement retrofit and specialist skills for new build education into the curriculum.</li> <li>Drawing on this knowledge and expertise to develop an action plan to promote green jobs and skills for retrofit and new build in West Yorkshire.</li> </ul>	
Asks of government		
Provide a devolved, long-term approach to retrofit funding and maximising the use of devolved powers, functions and funds to support low-carbon new build as part of an integrated settlement	The Combined Authority will work with the Government to enable the devolution of retrofit funding as part of an integrated single settlement for the Combined Authority. Where powers are devolved, government should utilise flexibilities to support low and zero-carbon new build developments where appropriate.	£
Provide a stable regulatory environment with clarity on energy efficiency standards for tenure types	The Combined Authority will continue to lobby government on providing a stable environment which allows owner-occupiers, private landlords and social housing providers the confidence to invest in their properties for the long-term. This will also demonstrate longevity and consistency of demand for services that will provide confidence to the region's retrofit and low-carbon heating workforce to upskill, retrain and recruit.	£
Support our development of objectives on low carbon homes in a more efficient and economic manner, ensuring our work meets the needs of people in West Yorkshire	The Combined Authority has demonstrated it can deliver retrofit activity through, for example, performance on social housing retrofit. It will seek to develop and deliver interventions in partnership with government which are shaped to most effectively meet the needs of households West Yorkshire, and to drive higher standards of energy efficiency, including for new build properties.	£

## Decarbonised businesses, good green jobs and a skilled workforce

### What is the rationale for intervening?

While direct industrial emissions in the region are small due to limited heavy industry, there are key energy-intensive industries: large glass and chemical plants, some smaller food and drink manufacturers, and other minerals sites. However, business and industry also contribute significantly to other sectors associated with emissions – notably heating of non-domestic properties, transport and waste.

To reach the region's net zero target, it is vital that business and industry are supported to decarbonize, and to maximise opportunities for business innovation and growth in key sectors and clusters that will support a just transition.

Becoming a net zero carbon region requires a skilled workforce. The Combined Authority will need to champion green skills and collaborate with education and skills providers and employers to support provision across different education levels and employment sectors. Mass infrastructure projects related to decarbonisation (such as mass transit and our retrofit ambitions) will require significant forecasting related to labour and skills supply, to ensure these projects can be undertaken successfully.

Some specifics remain unclear around the roles, industries, locations and training requirements for the growth of green jobs, which limits forecasting of interventions. As new technologies related to decarbonisation are developed, the impact on the labour force may also be affected in unpredictable ways. However, estimates from the Local Government Association show that:

- 235,000 jobs in West Yorkshire could be affected by the transition to net zero.
- 116,000 of these jobs will require some form of upskilling and support.
- 71,000 new clean growth jobs will be created in West Yorkshire by 2050 (potentially more than any other area in England).
- The highest impact will be on construction roles (60%) and manufacturing roles (49%).
- In domestic retrofit alone, 30,000 jobs will be required in West Yorkshire by 2028

Decarbonising the economy will therefore require a robust plan for skills, training and employment. This includes supporting young people in schools and colleges, developing and retaining the region's graduates, and retraining and upskilling the current workforce. A key role will be convening with public bodies, the education sector and employers to understand the challenges and respond strategically.

The supply chain for the green economy must also be developed, to further facilitate the transition to net zero carbon and seize opportunities in the green economy sector.

### What are the implications for West Yorkshire in 2038?

The following needs to occur if the Net Zero 2038 ambition is to be met:

- Transforming industry to be more energy and resource efficient, switching from fossil fuels to cleaner electricity and (in certain cases) hydrogen, reducing costs, providing low-carbon heat and improving productivity.
- Increasing use of electricity to meet industrial energy needs, which reduces emissions because of decarbonisation of the power sector
- Connecting industry (and other non-domestic buildings) to heat networks (34,000 non-domestic buildings) and using heat pumps (71,000 non-domestic heat pumps).
- Applying carbon capture and storage of emissions from natural gas, bioenergy and industrial processes, particularly as a last resort in situations where there are no or limited technological alternatives and where the evidence base for the need is clear.
- Building strong regional supply chains to deliver the net zero transition.
- Growing effective green skills provision to deliver the skilled workforce a net zero carbon region requires.

- Developing a green economy in West Yorkshire in accordance with our Local Growth Plan.

## Actions 2025 - 2028

Figure 17 below sets out the actions that will be delivered as part of this objective.

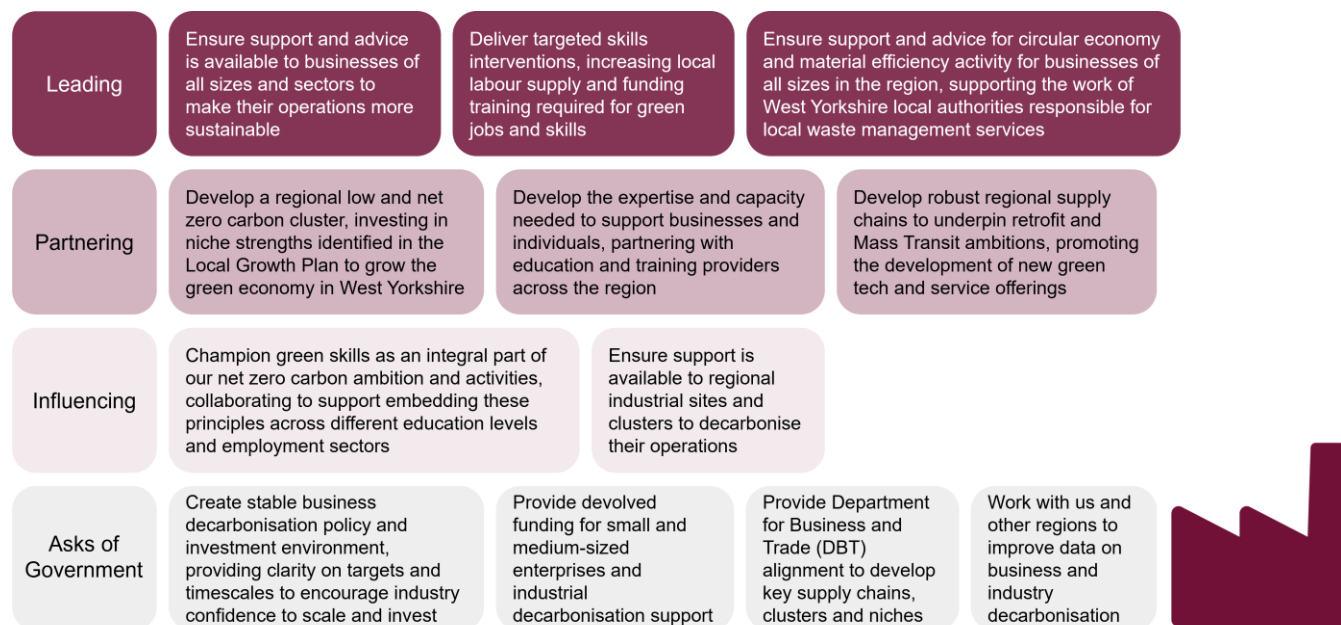


Figure 17. Decarbonised business, good green jobs and a skilled workforce actions: a graphic setting out the actions for this objective, which are described in detail below.

## Case study: Business sustainability support

Since April 2023, the Combined Authority has worked with more than 500 local businesses to improve their sustainability. It has helped almost 350 to develop a simple action plan to support their journey, and supported green skills training for more than 100 people in 2023-24 through adult upskilling courses, with half of those who participated progressing into jobs in the green economy.

Eureka!, the national children's museum in Halifax, has used support to accelerate its net zero carbon ambitions. The museum has undertaken a circular economy review of its waste streams and is introducing new practices to reduce food and consumables waste.

The Combined Authority is also helping it to draw up a decarbonisation plan for the heritage building the museum occupies. As part of this effort, the Combined Authority has provided grant funding towards a 230kWp solar panel system. This will save the museum 33 tonnes of carbon and more than £35,000 a year.

"The entire process has been straightforward, from the first contact with the Combined Authority to the delivery of the final grant payment. The team has supported us every step of the way." - Tudor Gwynne, Strategic Projects Director at Eureka!



The table below sets out the actions under this objective, together with a brief description of them.

Action	Description	Estimated cost 2025 - 2028
Leading		
Ensure support and advice is available to businesses of all sizes and sectors to make their operations more sustainable	<p>The Combined Authority will build on the success of the existing regional programme for businesses by ensuring they have the support and advice they need to make their operations more sustainable, including support for decarbonisation and circular economy activity, helping businesses to develop decarbonisation and sustainability roadmaps, and encouraging behaviour change. The Combined Authority will also link to the Local Nature Recovery Strategy and Local Area Energy Plans to maximise engagement of the business community.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Evaluating current provision and undertaking a 'lessons learned' study, with an interim evaluation by 31 March 2025.</li> <li>Working with regional partners to develop proposals to evolve current provision to meet</li> </ul>	£ - ££

Action	Description	Estimated cost 2025 - 2028
	<p>emerging business needs and market failures and developing targeted support programmes to complement this where necessary, with an initial revised intervention programme implemented by 31 March 2026.</p> <ul style="list-style-type: none"> <li>• Promoting good business behaviours by supporting businesses across a range of themes, including good work, becoming greener, and investing in technology.</li> <li>• Leveraging private sector engagement and participation in the provision of advice and funding for SME sustainability.</li> <li>• Reviewing support for solar PV and battery storage technologies during 2025 and developing interventions for businesses to support ongoing take up, potentially including consideration of finance and collective buying models.</li> <li>• Exploring and developing alternative green finance models working with external public and private sector partners.</li> <li>• Considering how best to promote technical support to help SMEs reduce carbon emissions and waste and prepare for the impact of climate change as part of our review of Business Support to be implemented in summer 2025.</li> <li>• Supporting the delivery of digital infrastructure to enable greater opportunities for greener, smarter and more flexible activities, and embedding the application of digital enabled technologies to influence behaviour change to reduce emissions and improve the environment.</li> </ul>	
Deliver targeted skills interventions, increasing local labour supply and funding training required for green jobs and skills	<p>The Combined Authority will deliver targeted skills interventions, increasing local labour supply and funding training required for green skills and jobs.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>• Working with government and education partners to strengthen the delivery of green skills interventions, embedding these across existing education / training provision. This may include the utilisation of apprenticeships to encourage entry into / re-skilling / up-skilling for career pathways related to the green and low-carbon economy.</li> <li>• Continuing to utilise devolved adult skills funding to deliver targeted skills interventions</li> </ul>	££££



Action	Description	Estimated cost 2025 - 2028
	<p>and increase local labour supply in key areas related to the green economy.</p> <ul style="list-style-type: none"> <li>• Delivering pilot schemes to ensure green economy businesses have access to a strong, well-skilled source of graduate talent to fill 'green' job opportunities.</li> <li>• Where appropriate, funding specific training provision required for green skills – based on the job demands related to green economy, building on the 96 learners that have already benefited from previous provision.</li> </ul>	
Ensure support and advice for circular economy and material efficiency activity is available for businesses of all sizes in the region, supporting the work of West Yorkshire local authorities responsible for local waste management services	<p>The Combined Authority will ensure support and advice is available for circular economy and material efficiency activity in the region, supporting the work of West Yorkshire local authorities responsible for local waste management services, and giving due consideration to the waste hierarchy.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>• Undertaking research and coordination of schemes to progress the circular economy through industrial recycling, remanufacturing and the introduction of alternative circular business models, working with businesses to identify any gaps which might prevent adoption of circular economy principles/action.</li> <li>• Working with local authorities and other regional partners to identify opportunities to introduce a circular economy and to develop a regional circular business model facilitation programme, working with businesses to develop links between those with unwanted resources that can be utilised by other businesses.</li> <li>• Engaging with large scale industrial and manufacturing companies whose operations produce heat as a waste or by-product and identifying and exploring opportunities relating to using waste heat from other sources as a heat source for district heat networks and industrial processes.</li> <li>• Exploring the feasibility of an annual / biennial regional Circularity Gap Report with a view to implementation by the end of this Plan's period.</li> </ul>	££
Partnering		
Develop a regional low and net zero carbon cluster, investing in	We will support the development of regional low and net zero carbon clusters and niche strengths	££

Action	Description	Estimated cost 2025 - 2028
niche strengths identified in the Local Growth Plan to grow the green economy in West Yorkshire	<p>identified in the Local Growth Plan - delivering our Local Growth Plan priorities, supporting emerging opportunities within the green economy, and aligning with regional assets including in green finance.</p> <p>The Combined Authority will capitalise on the academic knowledge and expertise in the region to develop and support innovation that increases the ability of West Yorkshire to meet its net zero carbon target and contribute to economic growth, nature recovery and climate readiness.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>• Collaborating with public and private sector stakeholders to develop a green economy cluster development plan by June 2025.</li> <li>• Undertaking analysis of green economy strengths in the region, and mapping regional, national and international markets and collaboration opportunities by March 2026</li> <li>• Co-designing and developing targeted support with key stakeholders to support innovative climate and clean tech businesses with high growth potential, including start-up and scale-up. In particular, promising clusters on clean energy and clean tech will require engagement with government where alignment with national priorities is needed. Target interventions will be co-developed by March 2026.</li> <li>• Exploring opportunities for incubators and accelerators to facilitate accelerated innovation development by green/climate tech businesses that will support regional climate objectives and good green job growth.</li> <li>• Work with local authority and other partners including universities and colleges to create shared spaces for commercial eco-innovation and investment opportunities, including schemes targeted at SMEs.</li> <li>• Participating in the Yorkshire and Humber Policy Engagement and Research Network, connecting to leading research and academic expertise across the wider Yorkshire and Humber Region.</li> <li>• Supporting businesses to access overseas growth opportunities and encouraging inward investment from existing and new foreign owned green/climate tech businesses.</li> </ul>	

Action	Description	Estimated cost 2025 - 2028
	<ul style="list-style-type: none"> <li>Facilitating access to the finance needed to support growth ambitions and help to deliver a just transition, working with colleagues to review and develop options by March 2026.</li> <li>Exploring opportunities to embed the agenda as part of a mission-led approach to innovation (e.g. through the Innovative Entrepreneurs programme and innovation competitions).</li> <li>Developing technical education qualifications to address skills gaps where they arise</li> <li>Working with partners to address issues with the recruitment and retention of tutors, with a focus on sectors experiencing rapid technological advancements.</li> </ul>	
Develop the expertise and capacity needed to support businesses and individuals, partnering with education and training providers from across the region	<p>The Combined Authority will develop the expertise and capacity needed to support businesses and individuals with green skills and access to green jobs.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Developing the environmental and sustainability expertise and capacity needed to support the upskilling of people and businesses, in turn promoting growth within the green economy.</li> <li>Supporting the implementation and funding of training in areas recognised by education providers and employers as key to sustainable growth and green economic growth – especially those that may be experiencing skills shortages.</li> <li>Developing resources and information for all young people to help them further understand the skills associated with green skills, and the educational / technical pathways available to develop these skills.</li> <li>Supporting primary schools to inform, educate and inspire young people about the possibilities of a career in the ‘green economy’, and develop long term skills pipelines.</li> </ul>	££
Develop robust regional supply chains to underpin retrofit and Mass Transit ambitions, promoting the development of new green tech and service offerings	<p>The Combined Authority will support the development of robust regional supply chain clusters to underpin retrofit and mass transit ambitions, as well as to promote the development of new green technology and service offerings.</p> <p>The Combined Authority will do this by:</p>	££

Action	Description	Estimated cost 2025 - 2028
	<ul style="list-style-type: none"> <li>Increasing understanding of the scope and scale of the Low Carbon and Environmental Goods and Services (LCEGS) sector in West Yorkshire throughout 2025 through further analysis of existing research and data sets, and new research as required.</li> <li>Engaging with the Home Energy West Yorkshire team and external partners to identify other regional needs around the retrofit supply chain.</li> <li>Working with existing manufacturers to explore the potential for scaling up component / product manufacturing to support key technologies that will be required in volume, for example heat pump production.</li> <li>Working with businesses in the LCEGS sector to understand business needs to meet regional objectives.</li> <li>Engaging with private and public sector stakeholders to develop networks and opportunities to build captive demand, to de-risk expansion and innovation for smaller businesses.</li> <li>Learning from the UKSPF Growing the Green Economy in West Yorkshire pilot during 2025, to develop sector specific SME support and access routes to new business opportunities for regional SMEs in this sector.</li> <li>Putting green jobs and skills at the heart of all new capital expenditure projects by including skills plans and encouraging partnership investment in combatting the skills gaps identified in high carbon projects and sectors.</li> </ul>	
Influencing		
Champion green skills as an integral part of our net zero carbon ambition and activities, collaborating to support embedding these principles across different education levels and employment sectors	<p>The Combined Authority will continue to champion green skills and collaborate to support and embed these principles across different education levels and employment sectors.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Building on the Combined Authority funded Sustainability Champion and Embedding Sustainability into Your Business training courses, promoting greater understanding of how sustainability can drive economic growth.</li> </ul>	£

Action	Description	Estimated cost 2025 - 2028
	<ul style="list-style-type: none"> <li>Ensuring that green skills are embedded into the organisation by collaborating across departments to ensure skills are at the heart of Combined Authority infrastructure projects – namely Home Energy West Yorkshire and Mass Transit – and by supporting Combined Authority colleagues to undertake carbon literacy training.</li> <li>Engaging with partners and those involved in Combined Authority supply chains to leverage social value investment related to skills and careers within large infrastructure projects. This will ensure green skills remain known as key to inclusive growth and can support the wider demand for the region to reach net zero carbon.</li> </ul>	
Ensure support is available to regional industrial sites and clusters to decarbonise their operations	<p>The Combined Authority will consider support for regional industrial sites to assist with the decarbonisation of their operations. The Combined Authority will develop and ensure focused support for industrial heat decarbonisation is available, with a particular focus on key industrial clusters and aligning activity with the Local Area Energy Plan.</p> <p>The Combined Authority will do this by:</p> <ul style="list-style-type: none"> <li>Gathering evidence and considering the options for support for industrial sites and clusters to carry out audits and feasibility studies for developing decarbonisation plans and roadmaps.</li> <li>Conducting energy roundtable events which bring together the region's largest industrial energy users to gather intelligence on decarbonisation projects either planned or underway, provide suggestions on how the Combined Authority and / or government can support and assist the acceleration of investment in decarbonisation technologies. The Combined Authority will aim to host up to two roundtables a year, subject to industry interest.</li> <li>Leveraging relationships with stakeholders including Northern Powergrid and Northern Gas Networks to identify and facilitate creative solutions to industry decarbonisation challenges.</li> <li>Exploring and developing financial support (where funding allows) to address the market failure around industrial heat decarbonisation, with an aim to have reviewed this by mid-2026.</li> </ul>	£££

Action	Description	Estimated cost 2025 - 2028
Asks of government		
Create stable business decarbonisation policy and investment environment, providing clarity on targets and timescales to encourage industry confidence to scale and invest	<p>West Yorkshire's businesses are facing some of the most challenging trading conditions they have faced in decades. To meet the region's net zero carbon ambitions, it is critical that businesses are able to invest with confidence.</p> <p>To do this the Combined Authority needs to support government to create a long-term national net zero carbon policy, funding and support environment, aligned with the Clean Power Plan aspirations and carbon budgets, with clear direction of travel on major opportunities and challenges such as hydrogen and carbon capture.</p>	£
Provide devolved funding for small and medium-sized enterprises and industrial decarbonisation support	<p>The Combined Authority's support for SME decarbonisation since 2016 has seen hundreds of local businesses take action to reduce emissions. The Combined Authority's aspiration is to continue to provide support for businesses of all sizes, and it has had discussions with the Government about a national roll-out of SME decarbonisation support following the pilot in the West Midlands.</p> <p>The Combined Authority's ask is for stable, devolved funding to be made available to continue to deliver successful interventions, tailored to meet the needs of West Yorkshire's local SME business base.</p>	£
Provide Department for Business and Trade alignment to develop key supply chains, clusters and niches	<p>The Combined Authority's Local Growth Plan sets out aspirations to grow the green economy in West Yorkshire, building on existing supply chain strengths such as in the wind sector, and supporting regional innovators and pioneers to access opportunities across the UK and internationally.</p> <p>To do this, alignment is needed with the Department of Business and Trade to highlight green economy investment innovation and opportunities overseas, and to support new investment into the regional green economy - for example from established heat pump manufacturers looking to access regional growth opportunities and take advantage of our world class engineering and manufacturing supply chain in pumps, valves and refrigeration.</p>	£
Work with West Yorkshire and other regions to improve data on business and industry decarbonisation	<p>The Combined Authority's work depends on high quality, accurate data to inform the scale of the challenge, identify where interventions may be needed, and enable us to track progress effectively.</p> <p>The current data sets around energy use, emissions and net zero activity are helpful, but incomplete and do not allow the Combined Authority to accurately perform these tasks or enable comparisons between</p>	£

## West Yorkshire Climate and Environment Plan

April 2025

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Action	Description	Estimated cost 2025 - 2028
	regions. The Combined Authority's ask is that government works with Mayoral Combined Authorities across the country to identify and implement improved data collection processes.	



**Find out more**  
[\*\*westyorks-ca.gov.uk\*\*](https://westyorks-ca.gov.uk)

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All information correct at time of writing