

# Liverpool City Region Combined Authority



## Five Year Climate Action Plan 2023-2028



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# Foreword



Steve Rotheram

Mayor of Liverpool City Region



Since I was elected as Mayor of the Liverpool City Region, I've been working to build a fairer, greener and cleaner future for the 1.6m people who call it home.

The past few years have seen the climate crisis thrust into public consciousness like never before. It presents a challenge on a scale like nothing we have seen - and I believe we all have a moral duty to play our part.

It's why, in 2019, I made sure our area was the first in the country to declare a climate emergency and, whereas the UK government has outlined its

net zero 2050 goal, I've set our region the more ambitious target to hit net zero by 2040 – at least a decade before national government. While some may doubt our potential to achieve this – I believe that if anywhere is capable of achieving it, then it's the Liverpool City Region.

If trains, docks and canals made our area a leader in the First Industrial Revolution, then our natural assets and strengths in wind, tidal and hydrogen can make us Britain's Renewable Energy Coast – creating thousands of highly skilled jobs and training opportunities for local people in key industries of the future.

We have the all the skills, capabilities and political will to become a leader in the Green Industrial Revolution through projects like Glass Futures in

St Helens, which has the potential to blaze a trail in the decarbonisation of energy intensive industries, and HyNet, a revolutionary programme that has the potential to take 10m tonnes of emissions out of the atmosphere every year. We're fortunate to have these world-leading decarbonisation projects on our doorstep, however, I'm making sure that we're putting our money where our mouth is too.

From our investment in a fleet of publicly owned, zero emission hydrogen fuel cell electric buses and £500m battery powered trains, to the £70m we've invested in active travel, we're starting to build a London-style transport network that is cheaper and greener – and that provides people with a genuine alternative to the car.

I have committed to investing 5% of GVA in R&D over the next few years, nearly double government targets, to position our area at the forefront of UK science and innovation.

And, of course, we have Mersey Tidal Power, a pioneering energy production scheme that has the potential to generate enough clean, predictable power for a million homes. The Mersey has been the lifeblood of our fortunes for centuries – and it holds the key to our future success too.

I will be banging the drum over the next few years for more power, resource and funding from government to ensure that we are able to do our bit. I'm under no illusions about the scale of the task we have ahead of us, however, I've always believed that in every challenge, lies an even greater opportunity.

# Foreword



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Achieving net zero in Liverpool City Region we require us all to work collectively and quickly.

We need to keep our eyes on the long-term goal whilst taking urgent, short-term action that moves us in the right direction as fast as possible, and we call on everyone – from each individual right up to our largest businesses – to consider what actions they can take to make a difference right now.

All six Local Authorities that make up the Liverpool City Region have declared a Climate Emergency and all are taking targeted, local action on hundreds of different aspects of the climate challenge. They are working together as the Combined Authority to share ideas, lessons learned and to help each other to make faster progress to achieve net zero.

The fight against climate change is of course a huge threat and a challenge for us all, but in choosing to act we can also seize new opportunities. By investing in clean energy and putting our region at the forefront of the green industrial revolution we can not only address the climate emergency but create thousands of new jobs, grow our local economy, and create new opportunities for skills development, training and innovation from which we can all benefit.

We know that taking action on net zero also has other important benefits – for example, our £100m housing retrofit schemes have reduced energy bills for some of our most vulnerable residents, whilst keeping their homes cool in summer and warmer in winter to protect their health.

In our City Region we have all the ingredients to lead the way in the UK's journey to net zero, and along the way we can build the sustainable and fair future that our communities deserve.

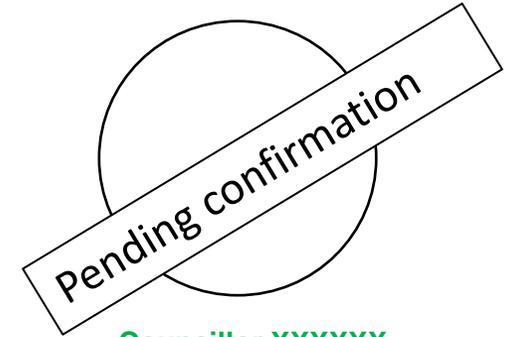
This is an existential challenge, and a huge opportunity. We cannot and we will not fail.



Councillor David Baines

**Leader of St Helens Borough Council**  
**Deputy Mayor of Liverpool City Region**  
Portfolio Holder: Net Zero and Air Quality

*David Baines*



Councillor XXXXXX

**XXXXXXXXX Council**  
Deputy Portfolio Holder: Net Zero  
and Air Quality



# Introduction

I am delighted that we are able to present the Liverpool City Region Combined Authority Five Year Climate Action Plan. It builds upon our Pathway to Net Zero document, which set out our ambition to achieve net zero by 2040 or sooner.

We have set actions within this Five Year Climate Action Plan that will contribute towards achieving our target. I look forward to working with the City Region local authorities and stakeholders in delivering this Plan. We are clear, however, that we will need more powers and resources to deliver what we need and so will continue to seek these from government. Whilst our ambition is high, we also understand that



**Katherine Fairclough**

**Chief Executive  
Liverpool City Region Combined Authority**

the journey towards net zero may not be easy for everybody and we are mindful of the need to strengthen collaboration and to facilitate a just transition to bring everyone along with us.

Our ambition is to be a city region at the forefront of climate action. I know that our stakeholders and residents will be instrumental in helping us achieve this. I hope that this plan also gives people the inspiration to take action.





# What's the Plan?

This Plan sets out actions for the Combined Authority to 2028. These actions will be critical in helping ensure that the City Region achieves its 2040 net zero carbon emissions target.

This Plan is divided into 5 pillars, each with associated actions, complemented by a series of cross-cutting actions.

These actions have timescales for completion – **short term** (1-2 years), **medium term** (3-4 years) and **long term** (up to 5 years or potentially running after 2028). Progress towards achieving them will be tracked and progress reported publicly to ensure our Plan is transparent as possible.

We will encourage others to set their own action plans and seize every opportunity to champion their efforts.

The Plan is embedded in the principle of a just transition; one that empowers all our communities to make the move to a sustainable future in a fair way. When reviewing this Plan, actions for the following years may be updated to ensure that opportunities to move forward more quickly or effectively are not missed.



Each action is classified depending on the role the Combined Authority will play. This means that the Combined Authority recognises that the action is needed, but that it won't necessarily be led by the Combined Authority itself.

The varying roles used throughout the plan are:

- **Lead** – An action that the CA will manage
- **Enable** – An action where the CA will work closely with the lead organisation and assist where needed
- **Champion** – An action that the CA will show support towards but is unlikely to be directly involved. The CA can act as a key stakeholder and/or consultee.

# Strategic Objectives

Achieving a **net zero** City Region, mitigating the impact of climate change and promoting a resilient natural environment within the context of a just transition, are a key strategic priorities for the Combined Authority. Our [Corporate Plan](#) commits us to creating a Fairer, Stronger and Cleaner City Region and this Climate Action Plan is key to the delivery of these corporate objectives.

In March 2022, the Combined Authority published its [Plan for Prosperity](#), an economic and place-based strategy for the next decade. We are clear that “prosperity” is more than just about money and pure economic growth; it is about prosperity in its widest sense, including the quality of our homes and environment, where we live, the air we breathe, how we move around, our health and the legacy we leave future generations. The Plan for Prosperity does recognise the significant economic benefits that will emerge as we transition to a **net zero** economy, including those arising from our nationally important renewable energy sector, including tidal range, wind power and hydrogen.

The Liverpool City Region has a long history of internationally important innovation and the [LCR Innovation Prospectus 2023](#) recognises that its importance will only increase, with the geography of the City Region making it ideally placed to lead the green industrial revolution. Whilst rapid change requires immediate uptake of existing solutions to decarbonise, innovation and partnership working across all pillars in this Plan is another crucial element in overcoming barriers to reaching net zero.

This Climate Action Plan is a key element of the Combined Authority’s policy framework, not only in supporting our Corporate Plan and the Plan for Prosperity, but also in helping shape the emerging **Local Transport Plan** and the **Spatial Development Strategy**.

As a Mayoral Combined Authority, the City Region has **devolution** agreements in place from 2015 and 2016. We will look to deepen and widen the scope of our **devolution** agreements which will be a critical action for us in delivering this Plan as we recognise that funding and powers, currently with government, are essential to the delivery of our **net zero** and climate change objectives.

“It’s a great privilege to Chair the [Climate Partnership](#) with such a wide range of members – the six local authorities, environmental experts, the universities, the NHS, voluntary sector, business, young people – all working together to give the Metro Mayor and the Combined Authority our best advice on how to respond to the Climate and Ecological Emergency we all face, and how to make our beautiful region one of the greenest in the country. “



**Gideon Ben-Tovim OBE**

Chair LCR Climate Partnership  
Chair Nature Connected



**Councillor Gill Wood**

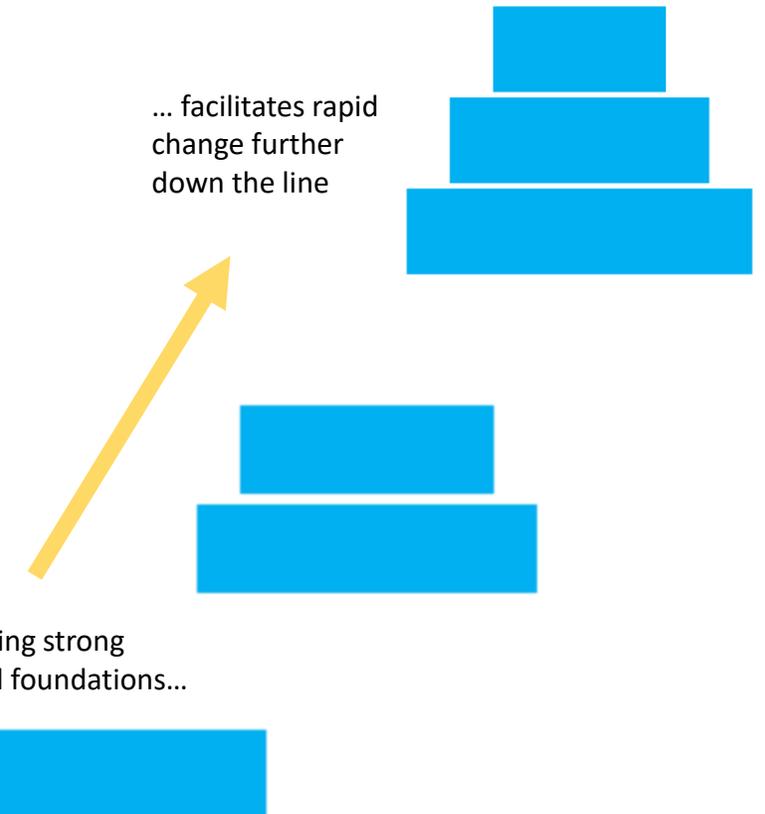
Wirral Council  
Vice-Chair LCR Climate Partnership

# Striking the Balance

Becoming a **net zero City Region** and addressing the wider impacts of climate change are key components of our objective to become a **globally competitive, environmentally responsible** and **socially inclusive City Region**. The actions in this Plan build on the solid foundations we are laying and as the benefits become apparent, these will be built on and any lessons learnt will allow us to move further and faster in the future.

With our objective in mind, it's vital to focus on short-term actions that move us forward. Short term action plans allow us to be flexible to take advantage of new opportunities, such as any new funding schemes, and changes in legislation and technology. Equally, looking some years ahead is also important. A five-year plan enables us to identify some key points in the future when we will have a big opportunity to make a change, such as when a building is ready for refurbishment.

Effective action planning and execution, coupled with behaviour changes to reduce consumption, natural system restoration and a degree of carbon removal is how we envisage reaching **net zero** by 2040.



# Acting Together

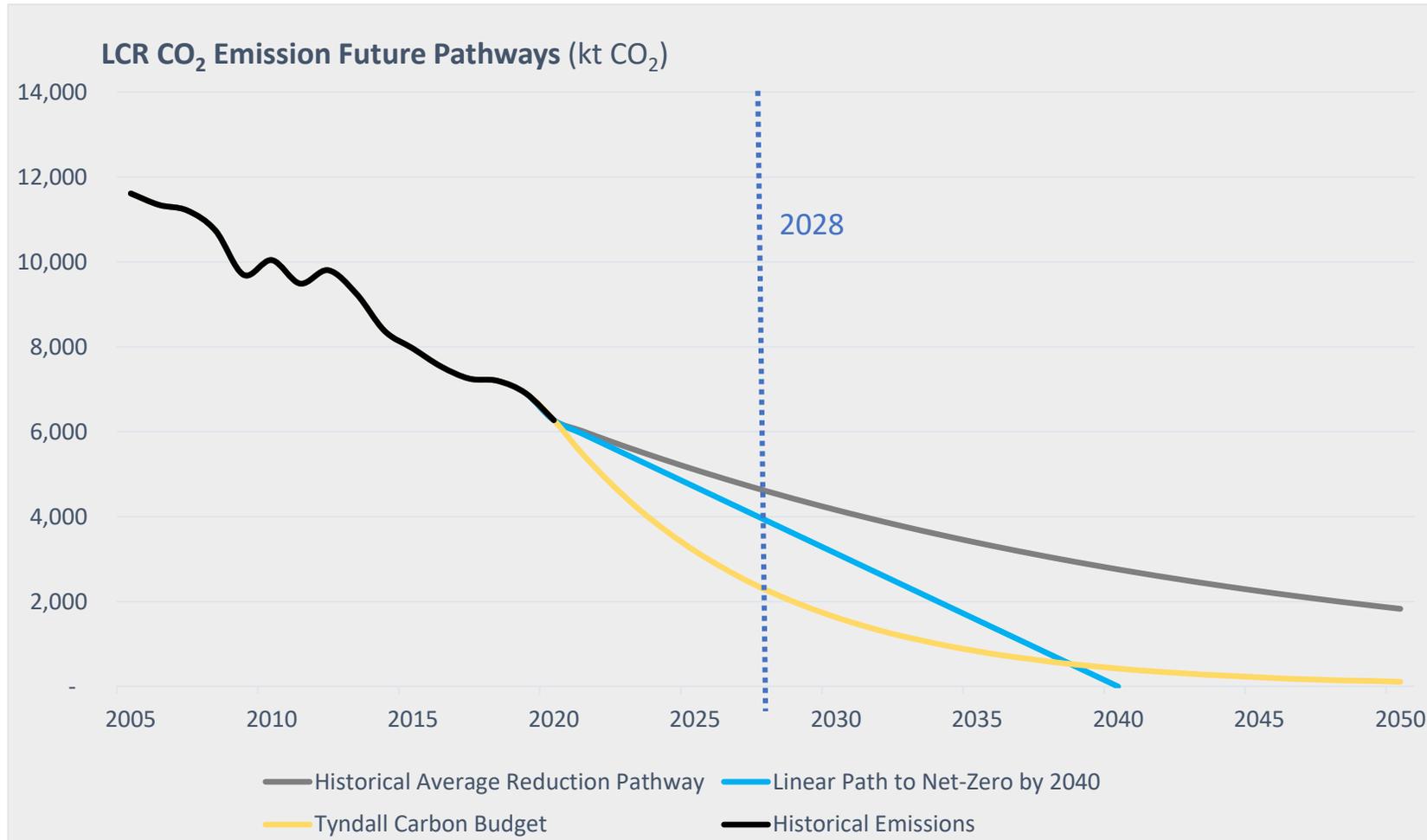
All six constituent Local Authorities in the Liverpool City Region have declared Climate Emergencies and all are taking action on different aspects of the climate and **net zero** agenda, reflecting the particular opportunities and challenges in their area. Whilst we share a **net zero** goal and have many challenges in common, focussed local action plans can maximise the benefits for communities and neighbourhoods.

In the short term, we will strengthen our partnership working within the Liverpool City Region, continuing working more closely with our local and waste authority partners, other public sector organisations such as the NHS, Police and Fire Authorities, MRWA, third sector partners, academia and the business community at all levels.



These themes for action are based on the [UN Sustainable Development Goals \(SDGs\)](#) which form a common global focus for sustainable action. These themes demonstrate that many climate actions have multiple, wide-ranging co-benefits.

# The Scale of the Challenge to 2028

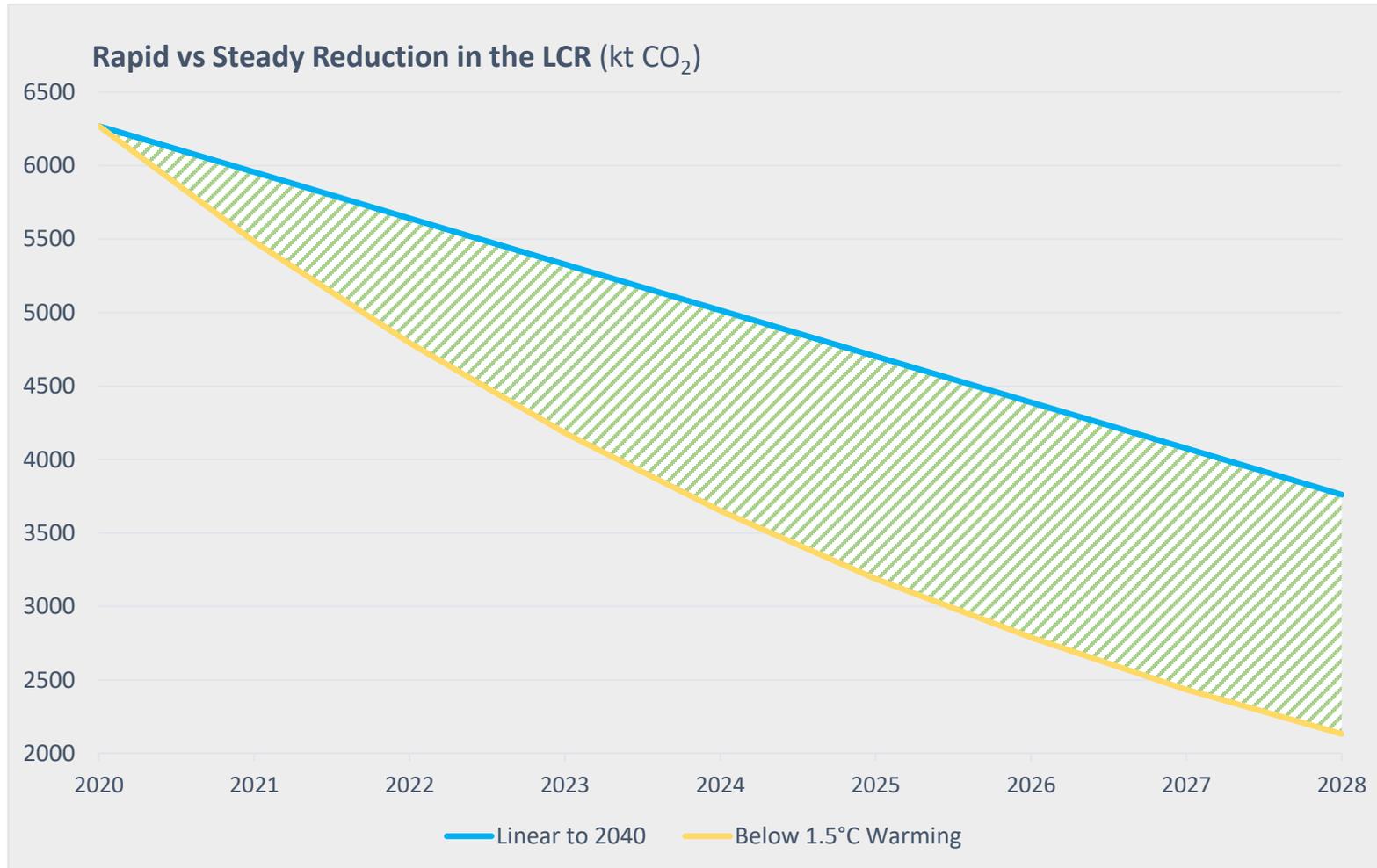


Based upon the historical emissions in the LCR, the shortfall of the historical average reduction pathway highlights the importance of significant early intervention in order to **decarbonise** by 2040.

In 2028, at the end of this 5-year plan:

- A linear decrease in emissions to 2040 would mean a **40%** reduction on 2020 emissions
- A decrease in-line with staying below 1.5°C warming of the planet by 2050, compared with pre-industrial temperatures, would mean a **66%** reduction of 2020 emissions

# Early Action Matters



The UK is legally bound to reduce emissions by 78% by 2035 compared to 1990 levels under the **Paris Agreement**. Reducing emissions on a trajectory that limits warming of the planet to below 1.5°C compared with pre-industrial temperatures, as per the **Paris Agreement**, will:

- Save a large amount of carbon from being released into the atmosphere over the initial stages of the pathway to **net zero**
- Significantly decrease the amount of carbon released over the total period

Over the time period displayed on the graph, if the ‘below 1.5°C warming’ trajectory were to be followed, a similar total weight of carbon that the LCR emitted in a year of the early 2000s will be prevented, compared with the linear trajectory.

# Bridging the Gap

Addressing this need for immediate and significant intervention means we need to deliver the actions set out in this Plan to generate and maintain momentum in the Liverpool City Region.

Many of these actions derive from stakeholder workshops held in Autumn 2022, designed to challenge us to be ambitious and brave. The actions have subsequently been consulted upon and revised. We have set an indicative timescale within the Plan for each action, focussing particularly on those that will be delivered in the early period (years 1-2) because early action is essential. The later years (3-5) are important but there is likely to be technological advances and changes in national policy which will be taken into account in any review of the Plan.

We have focussed on actions that will deliver real carbon savings where possible, but many of our actions are less measurable. **Even if we could quantify all these actions, it's unlikely that they would add up together to the volume of carbon reduction that we need to achieve in the next five years. Our data modelling clearly shows that in order to stay on track to achieve the required carbon reductions we need to move further and much, much faster.** We will need to regularly review the evidence base to embed new data and re-appraise our carbon reduction trajectory in light of changing national and international policy commitments.

This Plan, therefore, focusses on the actions that we can do, that will deliver real carbon reductions. But we need all individuals and organisations to act and so this Plan highlights where the CA can take a strategic role in leading, enabling or supporting delivery.

We will continue to seek opportunities to take further action and to accelerate progress, working with all of our partners and national Government to secure the resources we need to bridge the gap.

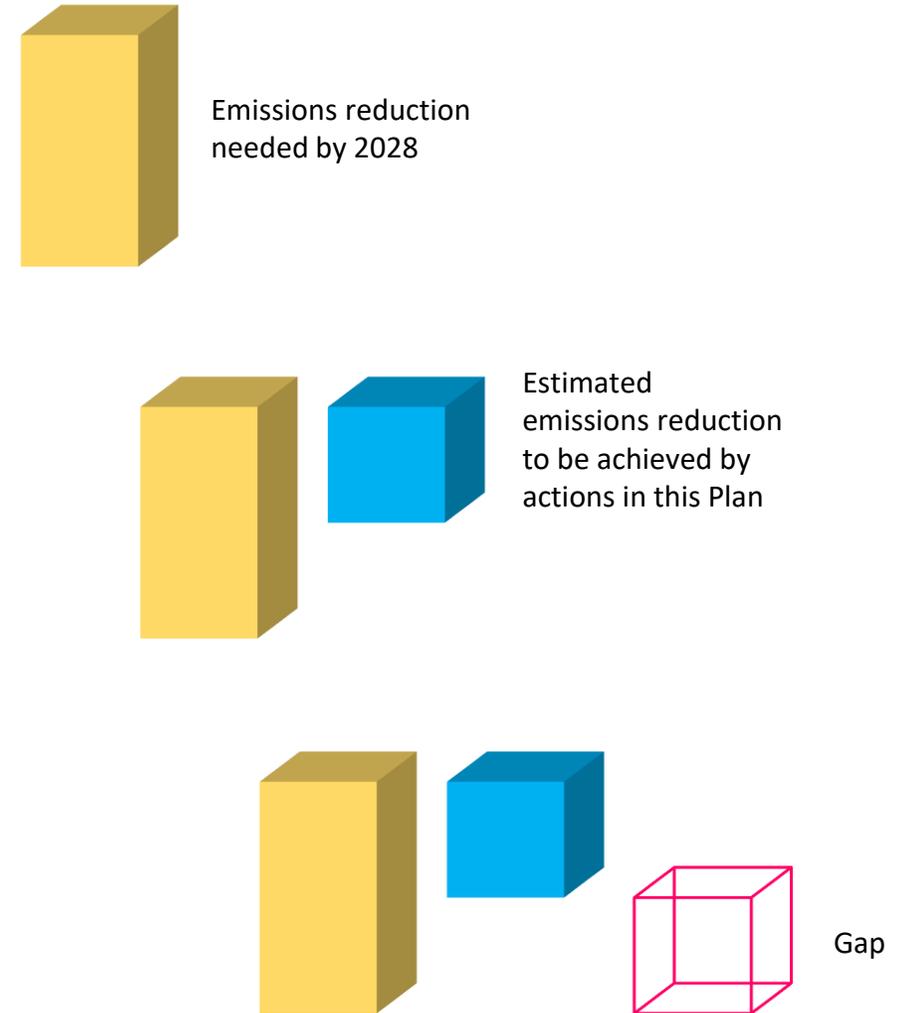


Diagram for illustrative purposes only

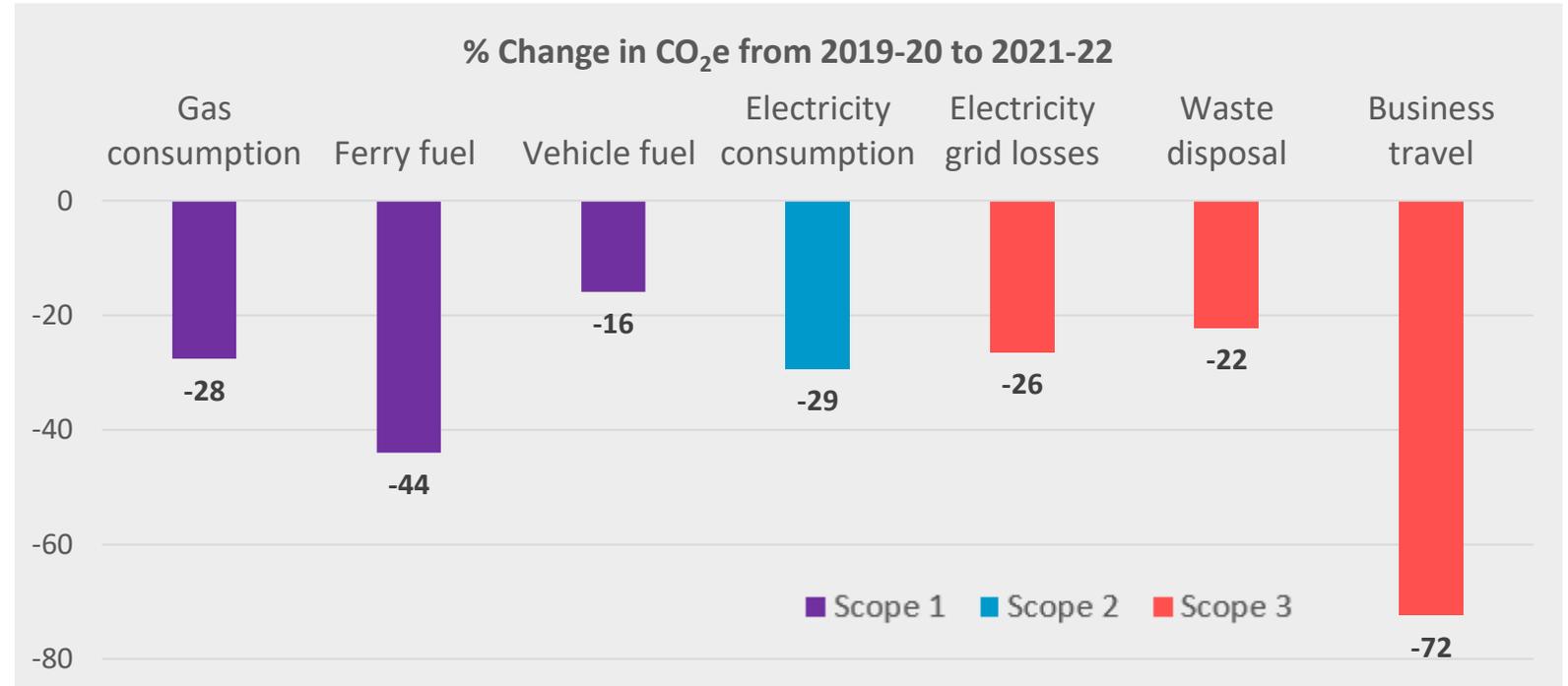
# What is the Combined Authority Doing Already?

Whilst the Combined Authority has a crucial role in enabling and supporting action across the Liverpool City Region, we also manage a varied portfolio of assets and operations ourselves. This includes building energy use, lighting and fleet vehicles including the Mersey Ferries, as well as electricity consumed by structures such as Mersey Tunnel lighting and ventilation.

Whilst our total annual carbon emissions are less than 1% of the Liverpool City Region total, as an organisation we know we have to play our part in reducing our carbon footprint as much and as fast as possible.

We commit to reporting our carbon footprint, our progress to reduce our carbon emissions and future project **pipeline** on an annual basis.

We also commit to working with our public sector partners to identify shared initiatives that will help us all to reduce our own footprint contributions.



Since the baseline year for carbon reporting 2019-20, Combined Authority emissions from the same sources have seen a 32% decrease, partly due to the global pandemic and greening of the electrical grid as well as our carbon reduction projects.

# Reducing Combined Authority Carbon Emissions

## Case Study: Wallasey Asset Management Building / Depot

The Wallasey depot is the largest gas user in the CA estate which, in 2021-22, used 1,193,635 kWh gas - equivalent on average to 99 British households - producing over **219 tonnes** of carbon through onsite combustion in gas boilers.

Our Assets Team have overseen **retrofits** costing £2.069m to the building that will lower the building footprint and further the CA's journey to **net zero**; specifically:

- Increased insulation with the installation of a new roof
- External wall insulation cladding system
- New double glazing
- Removing all fossil fuel boilers, saving an estimated **5500 tonnes** of direct emissions over the building lifetime (30 years)
- Installing air source heat pumps, a new distribution pipe network, heat emitters and future proofed smart controls
- Integrated metering and monitoring to provide effective reporting

The work being done on the depot will immediately decrease energy demand through use of more efficient heating systems and better building efficiency.



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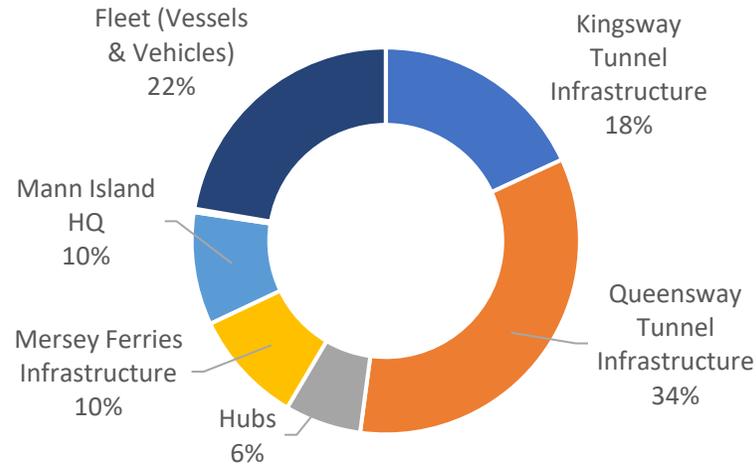


Installation of external wall cladding insulation

# Reducing the Combined Authority carbon emissions

Mersey Tunnels in 2021-22 accounted for 52% of the total 3793 tonnes of CO<sub>2</sub>e Combined Authority direct and indirect (purchased power) emissions.

2021-22 Scope 1 & 2 CO<sub>2</sub>e Emissions by Source



## Case study: Queensway Tunnel Lighting Replacement

The £11m Queensway Tunnel lighting replacement project is underway, following-on from a similar project in the Kingsway Tunnel. The 16 month project will:

- Replace 2000 fluorescent luminaires with 1056 LED luminaires
- Reduce consumption from a minimum 56W to circa 20W per light fitting
- Replace the current control system with a comprehensive control system, allowing varying levels of light output whilst maintaining regulation levels
- For the same assumed operating periods as with the current system, demand 83% less energy, representing a **saving of 382.5 tonnes of CO<sub>2</sub>e per year**



“By reducing our carbon emissions we can be...healthier through reduced pollution and access to green space, wealthier because of better health and green jobs. Climate change is affecting us now.” - Wirral resident

# Cross-cutting Actions

Some of the actions we need to take cut across all of the five pillars. These actions cover areas such as; strategy development, engagement and climate literacy, influencing and support, learning and developing more green skills through the [Green Jobs & Skills Plan](#). The impacts of a changing climate on our communities and infrastructure also fits in this category.



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# Cross-cutting Actions

Reference	Action	Role	Timeframe	
CC1	Embed <b>net zero</b> and climate change mitigation goals into the emerging <b>devolution</b> agenda.	Lead	Short	
CC2	Develop influencing agenda and actions to help shape national government policy, both pro-active and reactive.	Lead	Short	
CC3	Work with our constituent Local Authorities to share ideas, help each other and support all our communities in making these changes.	Lead	Short	
CC4	Roll out carbon literacy training across the Combined Authority and enable more people and businesses to access such training to understand their current climate impact and potential actions.	Lead	Short	
CC5	Publicise and regularly clear pathways to enable young people and adults to develop the green skills required by employers for use in careers and job search support, raising awareness of the career opportunities available in all sectors.	Lead	Short	
CC6	Ensure that the development of green skills of all types is at the heart of Combined Authority skills commissioning plans.	Lead	Short	
CC7	Ensure that education providers have employer engagement to develop relevant and up to date curricula and facilities.	Lead	Short	
CC8	Support the assessment of climate change risk and vulnerability, identifying risks and opportunities to the Liverpool City Region associated with a changing climate.	Enable	Short	
				

# Cross-cutting Actions

Reference	Action	Role	Timeframe
CC9	Develop and apply calculation methodology to understand the carbon impact of potential interventions.	Lead	Short
CC10	Work with partners to develop a non-technical communication strategy to highlight key <b>net zero</b> carbon and natural environment issues, encourage behaviour change and public and private engagement in solutions for the Liverpool City Region.	Enable	Short
CC11	In conjunction with Local Authority partners, explore opportunities for greater involvement by citizens in climate policy and strategy-setting, including opportunities to influence climate action across Liverpool City Region.	Enable	Short
CC12	Regularly review energy consumption and demand forecasts for each pillar to inform Liverpool City Region policy setting and action planning.	Lead	Short
CC13	Embed <b>net zero</b> , natural environment and climate change implications into the emerging <b>Spatial Development Strategy</b> and other relevant LCRCA strategies and policies, including the CA <b>Investment Strategy</b> and <b>Local Transport Plan</b>	Lead	Medium
CC14	Support businesses to transition to <b>net zero</b> and establish support to help businesses become more circular in their waste practices, for example by promoting joint working to increase resource efficiency.	Enable	Medium
CC15	Support the delivery of a <b>Circular City Region Scan</b> to understand material resource flows and waste generation across Liverpool City Region.	Champion	Medium
CC16	Develop <b>net zero aligned</b> procurement principles and embed within all Combined Authority contracts alongside social value considerations.	Lead	Medium
CC17	Create an inward investment proposition to support <b>net zero</b> development in Liverpool City Region.	Enable	Medium



# Transport

An overwhelming 67% of the carbon emissions from transport in Liverpool City Region are from cars.

To reduce the environmental impact, we need to encourage people out of cars to walk, wheel and use public transport. Integral to this is creating a London-style public transport that is quicker, cheaper and more reliable.

We also need to create places built for people, not traffic.



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**As part of reaching net zero in the transport sector by 2040, the average person needs to reduce the number of car trips per year by 48 – 72.**

**Investment in public transport, including public bus systems and active travel will be at the heart of achieving this change. We are already working to deliver a London-style system that is affordable, frequent and safe for everyone.**

“The benefits to active travel are almost incalculable for me but even greater for my children.” – Liverpool Resident



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# Transport

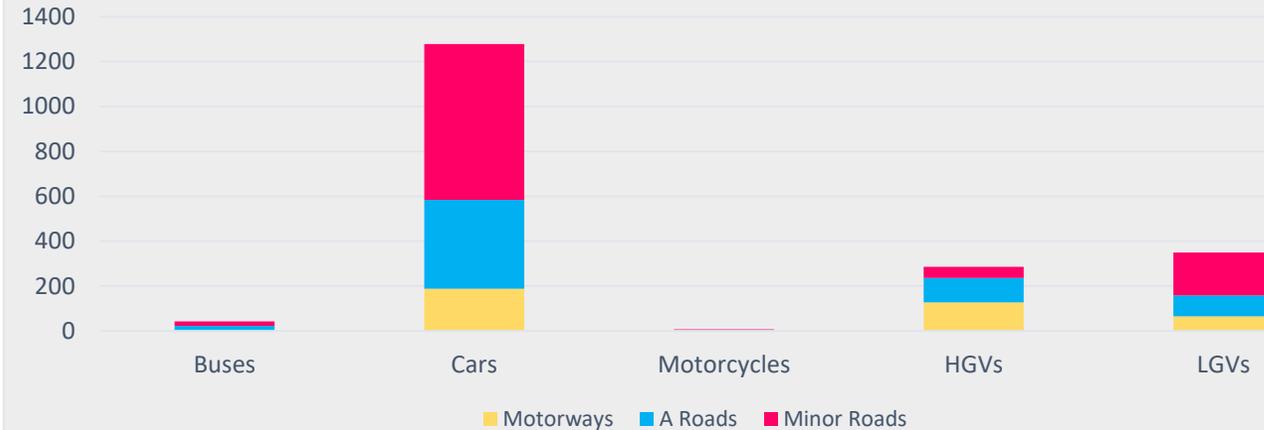
## Our Ambition

Our vision is for a clean, safe and accessible transport for moving people and goods and which contributes to our net zero objectives.

By 2040, the Department for Transport expects around 62% of personal vehicle journeys will be made in vehicles powered by electricity and there will be only a few remaining fossil fuel vehicles, mostly vintage which cannot be converted. This is largely due to the UK-wide ban on sale of new petrol and diesel cars by 2030. Electrical charging (for cars, light vehicles and many larger vehicles) will be widespread and low carbon hydrogen fuelling depot facilities will be available at strategic locations to enable large and heavy vehicle fuelling. But simply making existing vehicle engines zero emission is not the whole story – we must also reduce the dominance of motor vehicles and traffic on our communities.



Emissions in the LCR by Road Transport Mode - 2020 (kt CO<sub>2</sub>e)



Aviation and shipping emissions are not represented in the regional Government data and are attributed to national emissions.

In Government data, transport accounted in 2020 for around 32% of all Liverpool City Region emissions. Road transport contributed 98% of these emissions.

2/3 of all journeys within the LCR are less than 3 miles and half of these journeys are made by car. This is reflected in the emissions data above, which shows that most car emissions from journeys are produced by cars driving on minor roads and A roads.

# Transport



Transport scenarios, each with varying inputs to represent what the LCR transport landscape may look like in the future, have been modelled as part of the work going into producing LCRCA's Local Transport Plan 4. This is closely aligned to the aims of this plan, but over a longer timeframe to 2040.

**Projections within the model show that by 2040, the LCR will still be 10% - 35% short of where it needs to be to achieve net zero in the Transport sector by 2040.**

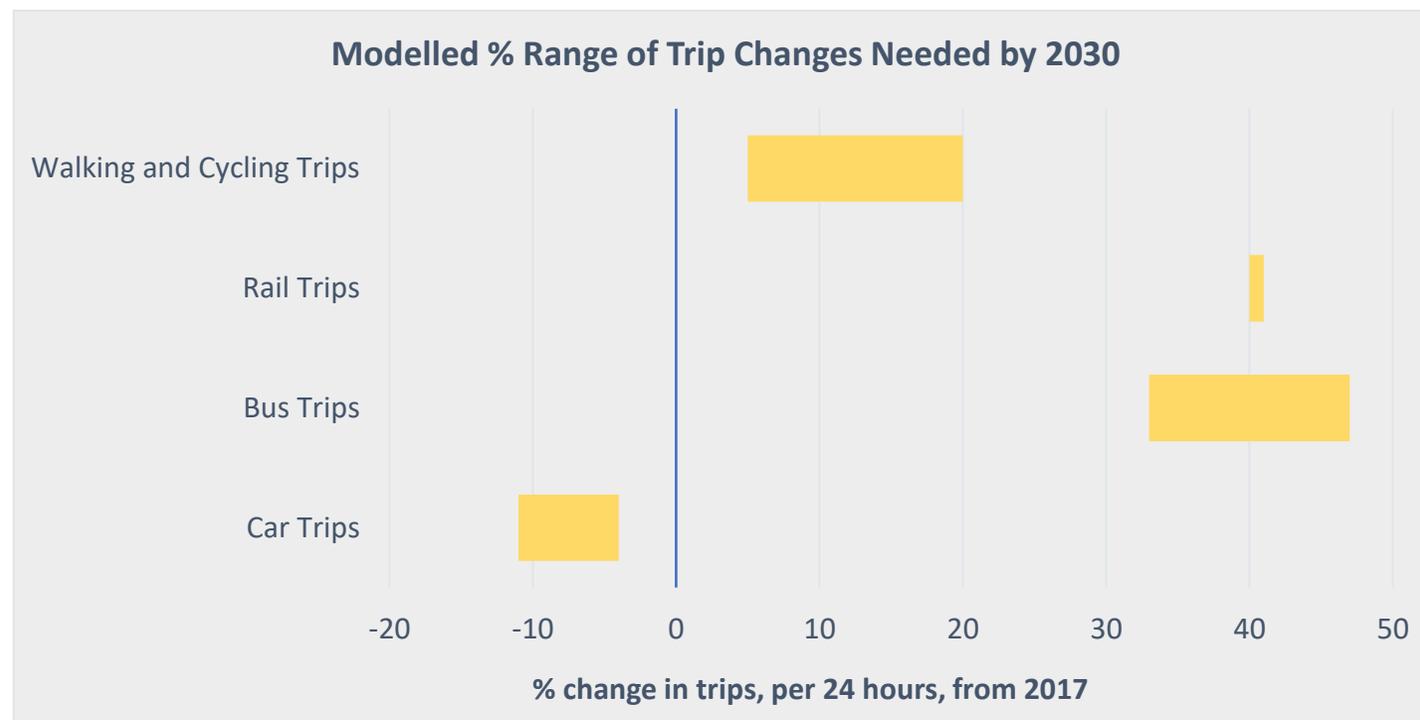
Shifts away from pre-COVID petrol/diesel car use levels to reach this target have been modelled to an interim year of 2030, 2 years after the end of this plan.

Being on-track in 2030 means that:

- Electric vehicle uptake and **modal shifts** has accelerated beyond current projections of 63% - 75%
- The **average person has reduced the number of car trips per year by between 18 and 29 trips**, based on an average of 433 trips per year (around 1 in 20 car trips)
- Uptake of alternative modes of travel accelerates as per the modelled range for several travel demand scenarios for the LCR on the figure opposite

## Key Stakeholders and Partners in the Transport pillar *include*:

- Local Authorities
- Delivery bodies i.e.: Network Rail
- LCR business community
- LCR LEP
- Schools
- The NHS and health sector
- Bus operators
- Train operators
- 3<sup>rd</sup> party car park owners
- Charging infrastructure providers
- Housing developers
- Logistics companies
- Central Government



# Liverpool E-Scooter Trial

An electric scooter trial was launched in October 2020 in Liverpool as part of a national trial scheme, announced by the Department for Transport in May 2020. The trials have now been extended to May 2024 in a deal which will also see operator Voi introduce e-bikes to the city to replace existing Citybikes.

Part of the aim of the trial was to promote active travel during the COVID pandemic and to provide evidence on whether e-scooters should be permanently legalised or not. Over 850 scooters were introduced to the Liverpool area as part of the trial in a phased approach.

## Results

The e-scooter operator, Voi, published results of the trial, which was one of the most successful in Europe. Liverpool had the 2<sup>nd</sup> highest car replacement figures of all Voi locations trialled, where it was found that **33% of e-scooter trips replaced car trips in Liverpool, saving 1.3m car trips.**

The trial period measured saved **655 tonnes of CO<sub>2</sub>e** and **96kg of fine particulate matter (PM2.5)** from being emitted.



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# Action on Transport

Reference	Action	Role	Timeframe	Themes
T1	Develop clear transport policy framework for the LCR via Local Transport Plan 4 (2023-2040) with policies and actions to achieve quantifiable carbon reductions from transport, facilitate a major shift to public transport and active travel, and support a people-first, fair, inclusive and accessible transport system.	Lead	Short	
T2	Complete Phase 2 of 'State of Freight' investigation into a future zero carbon freight solution, ensuring that this is aligned with our <b>Freeport</b> goals of <b>decarbonisation</b> and good jobs to deliver outcomes including last mile ZE deliveries and reduce trips, scope options for mechanisms to seek to support decarbonisation of freight, and develop a freight strategy and that connects Freeport locations in a net zero manner.	Enable	Short	
T3	Secure funding to deliver the investment priorities identified in the <b>Bus Service Improvement Plan</b> which, when delivered, will enable a fundamental shift in how bus services are delivered so that more passengers want, and are able to, travel by bus. Investment priorities include: <ul style="list-style-type: none"> <li>• Green Bus Routes</li> <li>• Bus Rapid Transit</li> <li>• Wider enhancements to the bus network across the City Region</li> <li>• Ticketing reform to make fares more affordable and ticketing more convenient</li> <li>• An emission-fee bus system - scaling up deployment of zero emission buses, building on the Hybus project</li> </ul> <p>To support delivery, the Combined Authority will reform its bus services, with Franchising the option preferred by the Metro Mayor and City Region Leaders in March 2022 and this will be the subject of public consultation.</p>	Lead	Medium	
T4	Explore the potential of a city region wide Electric Vehicle fuelling strategy and infrastructure delivery plan, linked to funding opportunities available through LEVI (local electric vehicle infrastructure) funding in 2023/24 and 2024/25.	Lead	Short	

# Action on Transport

Reference	Action	Role	Timeframe	Themes
T5	Review and implement a fully integrated public transport network that supports large-scale shift from private car usage and improves levels of connectivity. This will be aided by the LCRCA's proposals to move to bus franchising; new, flexible electric/battery-powered trains; a new operating model for Merseyrail in 2028; related rail reform opportunities from the transition to Great British Railways and; 'first and last mile' links by active travel and new forms of micromobility.	Lead	Long	
T6	<p>Deliver £710m <b>City Region Sustainable Transport Settlement (CRSTS)</b> interventions in full, which will facilitate the following outcomes</p> <ul style="list-style-type: none"> <li>• Embedding of <b>decarbonisation</b> in transport of people and goods, along with testing and quantifying carbon reduction and setting future directions for government funding streams</li> <li>• Behavioural change, awareness, and marketing campaigns</li> <li>• Expansion and promotion of Active Travel Training with schools, colleges and businesses</li> <li>• Development of sustainable Transport Charters to support uptake of sustainable travel</li> <li>• Support local authority partners to review and enhance coverage of City Bike sharing scheme and Voi E-Scooter schemes along active travel corridors</li> <li>• Identify spaces along <b>CRSTS</b> Corridors, for reallocation to active/public spaces, including reallocation of road space</li> <li>• Increased usage of lower impact (recycled content and recyclable) materials and implementation of sustainable urban draining systems</li> <li>• Review interventions to assess success</li> <li>• Feasibility investigations into potential expansion of the Merseyrail network</li> <li>• Continue to explore role of bus franchising in the City Region and roll out of zero emission bus fleet</li> <li>• Explore feasibility of Liverpool Central Station enhancement and expansion to promote rail travel in the City Region</li> <li>• Explore how road space can best be used to support the efficiency of public transport and active travel</li> </ul>	Lead	Long	

# Action on Transport

Reference	Action	Role	Timeframe	Themes
T7	Develop and negotiate with Government a new pipeline of transport projects and interventions beyond 2027 to shape second round of 5-year CRSTS funding to support transport decarbonisation trajectory beyond 2027.	Lead	Long	  



# Buildings

Emissions from households make-up 67% of emissions from domestic, commercial and public sector buildings.

Reducing energy consumption and removing fossil fuels from all buildings is essential to a rapid transition to net zero.



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# Buildings

## Our Ambition

To **decarbonise** our existing housing and commercial stock to ensure that everybody has access to warm, energy efficient spaces to live and work that produce no carbon emissions.

By 2040, no buildings will use fossil gas for heating or cooking and all grid electricity will be generated from clean, renewable sources. Many buildings will generate their own power using integrated renewable technologies and building energy use will have halved due to improved efficiency (through **retrofit**) and controls.

Upskilling in the LCR will ensure that the knowledge exists to meet demand to deliver large scale energy-saving changes to buildings. We have launched the Green Jobs and Skills Plan to address the gap in skills that are needed to drive a **net zero** transition as well as improve prosperity in the LCR.



Domestic gas usage in 2020 accounted for the largest proportion of CO<sub>2</sub>e emitted within the Liverpool City Region energy demand, within Government data; with the largest dependence on gas usage within the Buildings pillar.

The data shows that with domestic properties making-up the largest proportion of emissions within the Buildings sector, decarbonising our homes through uptake of energy efficiency and electrification measures will make an enormous contribution to achieving net zero.

# Buildings

As well as behaviour changes that reduce energy consumption, to stay on-track to reach our 2040 target, 60,000 homes per year need to be **decarbonised** through a combination of the following measures:

- Cavity wall and loft insulation
- External wall insulation
- Replacement of gas and oil heating systems with electric heat pumps
- Connect properties with district heat networks
- Increase domestic renewable energy generation, such as electricity and hot water from solar panels



Ensuring that new commercial and residential developments are incorporating **net zero** design principles from the planning stage will mean that that all new buildings are low carbon by design moving forward.

Sustainable design principles will have a major impact on furthering the development of a **circular economy** in the LCR by thinking about reduction in materials, responsible materials sourcing, lifespan of materials and end of life of assets from the outset.

The UK Green buildings Council state that due to projected decreases in **operational emissions**, that by 2035, **embodied emissions** from buildings in the UK will contribute over half of built environment emissions, compared with the 20% today.

Full **decarbonisation** of the built environment sector is therefore heavily reliant on the **decarbonisation** of manufacturers and their products and processes, which make-up these **embodied emissions**.

## Key Stakeholders and Partners in the Buildings pillar *include*:

- Local Authorities
- Building owners
- Tenants
- Housing associations
- Energy providers
- Private sector
- Education sector
- Construction sector
- Central Government
- Hospitals
- Universities
- Faith Groups

# Energy consumption needs to be halved by 2040



**Achieving this will reduce household energy bills by 45% compared with 2021**



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# Buildings: Case Study



## Housing Retrofits

Around 60% of homes in the Liverpool City Region's 700,000 homes are rated below the EPC Band C standard, meaning low energy efficiency and higher energy bills for residents.

**Retrofitting** this part of the housing stock as part of the Social Housing Decarbonisation Fund and Home Upgrade Grant remains a key area of focus for the Metro Mayor and a further £42m of funding has been secured to make nearly 5,000 of the region's low-income households more energy efficient and cheaper to heat; taking total **retrofit** investment up to £105m to fund **retrofit** of roughly 10,000 low-income homes in total.

Funding will be spent in the next 2 years to make improvements to:

- 4,355 social properties, in collaboration with housing associations
- Around 500 properties that are low income and not on the gas grid

Funding will tackle fuel poverty and reduce carbon emissions by fitting:

- Electric heat pumps in-place of gas boilers
- External wall insulation for older properties
- Roof insulation
- Solar panels

We are seeking further investment funding to increase **retrofit** for many more homes.

# Action on Buildings

Reference	Action	Role	Timeframe	Themes
B1	Conduct a feasibility assessment of the low carbon heat and renewable energy opportunities within Liverpool City Region’s property sector to understand the pathway to low carbon heat and renewable energy opportunities for the range of building types within the sector.	Lead	Short	   
B2	Identify high-opportunity zones as areas for groups of home/business owners to plan <b>retrofits</b> together or create low carbon communal/district energy schemes and smart networks.	Lead	Short	  
B3	Work with partner local authorities to develop an approach to increase onsite low-carbon energy generation and reduce the demand for energy.	Lead	Short	 
B4	Deliver the <b>decarbonisation</b> plans for the first 50 public buildings to get ready to bid for Public Sector Decarbonisation Scheme funding.	Lead	Short	   
B5	Identify forthcoming government grant funding opportunities and work to attract all appropriate government grants, maximising delivery opportunities for the Liverpool City Region.	Enable	Short	 
B6	Deliver current housing <b>retrofit</b> programmes and continue to attract government grants to deliver housing <b>retrofit</b> and <b>decarbonisation</b> .	Lead	Short	 
B7	Include <b>decarbonisation</b> funding in <b>devolution</b> ask from national Government.	Lead	Short	 
B8	Coordinate learning between the local authorities and other partners within the city region including through the <b>North West Net Zero Hub</b> .	Enable	Short	 

# Action on Buildings



Reference	Action	Role	Timeframe	Themes
B9	Develop resources to signpost homeowners, landlords, housing associations and renters on how to reduce energy use in property including use of fabric and energy efficiency measures.	Enable	Short	    
B10	Engage with building owners/landlords and tenants to understand what <b>net zero</b> carbon means to them through 'climate juries'.	Champion	Short	 
B11	Identify major building portfolio owners and operators and work with them to baseline carbon emissions, set targets and to improve thermal efficiency and act to <b>decarbonise</b> their building stock to deliver a measurable improvement and showcase to other portfolio owners.	Enable	Medium	   
B12	Work with local industries and suppliers to develop standard <b>retrofitting</b> solutions for common local building archetypes (e.g. solid-walled 3-bed terrace), including those that are 'hard-to-treat', including bringing in learning from other regions.	Champion	Medium	   
B13	The <b>SDS</b> to review the potential for a policy on <b>net zero</b> buildings, subject to viability considerations.	Lead	Medium	 
B14	Develop and implement an approach to supporting the decarbonising of homes, recognising the specific opportunities and challenges faced by renters and homeowners and reflecting the need to particularly support those in fuel poverty.	Lead	Medium	  





# Action on Buildings

Reference	Action	Role	Timeframe	Themes
B15	Work with local construction industries and business to encourage them to become accredited to environmental surveying, installation and maintenance standards such as ISO14001, Trustmark, PAS2035 etc.	Enable	Medium	 
B16	Encourage and develop centralised heat networks to supply cheap, green heat to homes and businesses, incorporating waste heat recovery where available.	Enable	Medium	 
B17	Work with schools and colleges to develop education programmes around developing skills for installation of new heating technologies.	Enable	Medium	   
B18	Identify a programme of public building “shovel ready” projects and create partnerships and other frameworks to enable speedy response to funding opportunities. Develop finance models for Building <b>Decarbonisation</b> , including seeking match funding from Governments Public Sector Decarbonisation Scheme.	Lead	Medium	 
B19	Work with financial partners to scope out mechanisms to enable affordable renewable energy and efficient products and invest in community energy projects.	Enable	Medium	 



# Industry

Liverpool City Region and the wider North West has the significant potential to deliver effective industrial **decarbonisation** by 2040.

Liverpool City Region industries can create and protect high value jobs and position LCR companies and research institutions at the forefront of global industrial emissions reductions.

To effectively transition to net zero, our industrial base will need cost-effective access to clean power, low carbon hydrogen and **carbon capture** and storage technologies alongside resource efficiency improvements in process and delivery systems



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# Industry

## Our Ambition

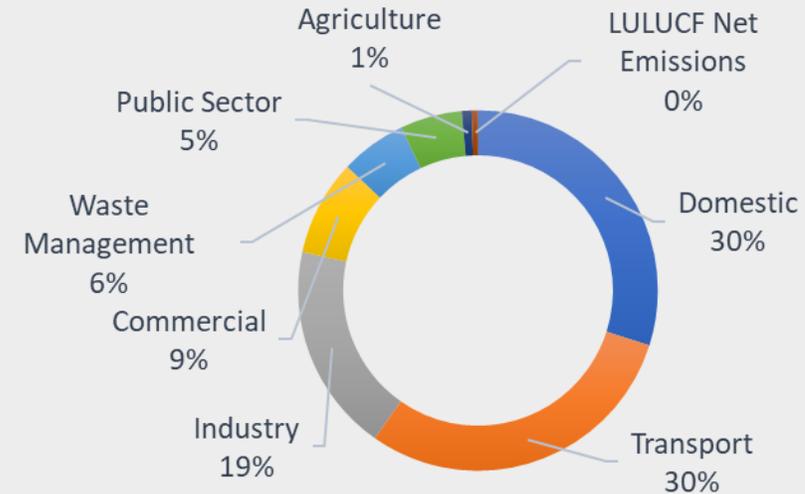
To facilitate Liverpool City Region industrial **decarbonisation** planning in line with the Net Zero North West plan. This change will enable a 30% reduction in industrial energy use in Liverpool City Region by 2040. It will decouple industrial growth from emissions to make Liverpool City Region a highly attractive UK location for inward investment and new industrial businesses.

Effective **decarbonisation** will give our industrial base significant competitive advantage and provide opportunities for upskilling and supportive research and development.

Key industrial **decarbonisation** technologies including clean energy supply, low carbon hydrogen and **carbon capture** and storage need to be deployed at scale and at pace to enable principle industrial clusters in each LCR area to accelerate their **decarbonisation** process.

Carbon reduction for many industrial sectors will come in the form of step-change improvements as a process or fuel supply is switched. The opportunities to make these switches will often come at times of plant upgrades. Consequently, these improvement windows need to be identified and prioritised.

Emissions in the LCR by Sector - 2020 (kt CO<sub>2</sub>e)



Government data shows that the industrial sector accounts for 19% of emissions produced across the LCR. These are the emissions deemed to be from industry that largely serves the LCR and not further afield, nationally.

## Key Stakeholders and Partners in the Industry and Clean Energy pillars *include:*

- Industrial estate/building owners/businesses
- Local Authorities
- Net Zero North West
- Central Government
- Private sector
- OFGEM
- Large emitters
- Chambers
- “Invest in” LA groups
- Network operators
- Investors
- Land owners
- Business networking groups
- Local trade bodies
- Research & innovation bodies

# Industry

## Hydrogen

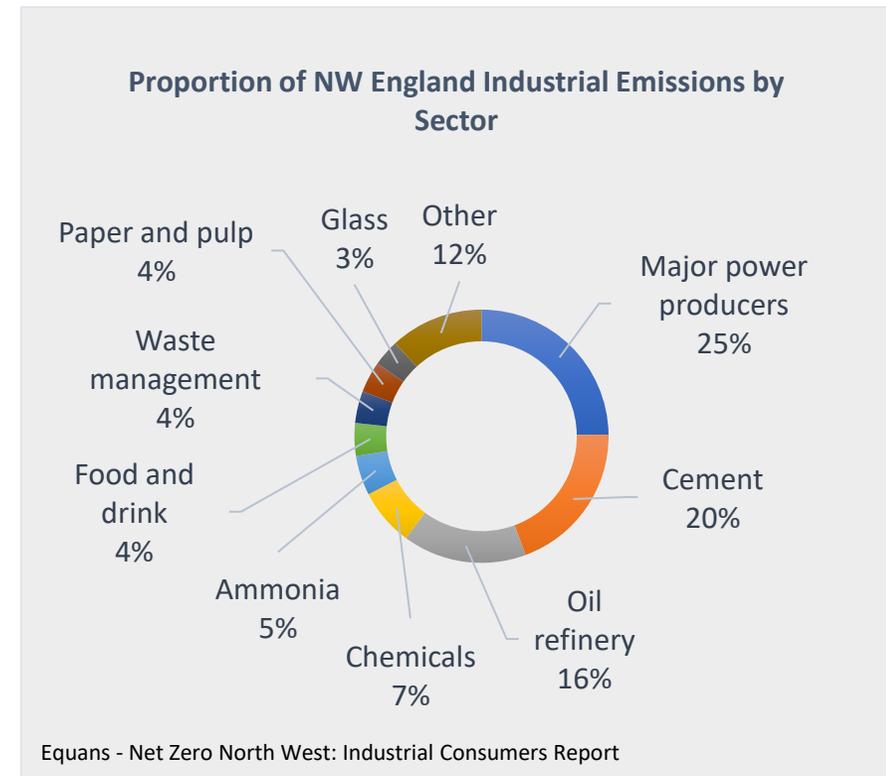
Total Hydrogen demand in the North West by 2030 is forecast at between 17TWh and 24TWh. The bulk of North West Hydrogen supply for industry up to 2030 is likely to originate from CCUS-enabled SMR production facilities linked to industrial sites by dedicated pipelines. However, there is a significant push in the market to increase the volume of electrolytic Hydrogen supply available as it may allow earlier deployment at smaller scales, close to industrial and transport demand locations. This embedded capacity may allow accelerated hydrogen deployment over network solutions during the period up to 2030 as industrial sites commence their transition.

The LCR has access to increasing volumes of clean power from offshore wind, solar and latterly tidal. This growing supply capacity can be aligned to the area's long-established industrial centres of excellence to create an internationally significant cluster for electrolytic (green) hydrogen. This could enable a more rapid deployment of hydrogen to our industry and transport sectors and be an attractive pull for investment in this globally significant market.

## Carbon Capture and Storage

**Carbon Capture and Storage (CCS)** opportunities up to 2030 centre around the HyNet project. This will link a number of large industrial facilities to depleted gas fields in Liverpool Bay via dedicated pipelines. Current proposals indicate that the initial phases of pipeline available by 2030 will cover industrial sites in Halton but not other industrial clusters in the LCR.

The deployment costs and timescales of CCS (capture technology and distribution infrastructure) will need to be reduced to enable enhanced levels of take up in the LCR.



# Industry: case study



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Whilst glass packaging is 100% recyclable, making it an important material in moving towards a **circular economy**, glass manufacturing is however a very carbon intensive process. In order to transition rapidly to **net zero**, the future of glassmaking together with securing the socio-economic benefits of the glassmaking industry in the LCR depends upon the ability of the industry to increase resource efficiency in production and the supply chain as well as to shift to lower carbon technologies.

Based in the traditional centre of the UK glass making industry in St Helens, Glass Futures is a unique, industry-backed Research and Technology Organisation, leading collaboration across some of the largest companies in the global glass industry and its supply chain, together with academia, St Helens Council, The Combined Authority and central government.

The £54 million project is creating the world's first openly accessible test and trial furnace facility, used to deliver industry and government-backed R&D projects focused on **decarbonising** glass production.

# Action on Industry



Reference	Action	Role	Timeframe	Themes
IN1	Identify Industrial stakeholders within LCR industrial clusters. Map development and <b>decarbonisation</b> plans against LCR <b>decarbonisation</b> pathways.	Lead	Short	
IN2	Develop and publish an LCR Hydrogen Vision document. The document to outline existing and potential demand and supply points for Hydrogen in LCR, a hierarchy of Hydrogen applications and opportunities and challenges to creating suitable support infrastructure including skills and regulation.	Lead	Short	
IN3	Work with existing industry groups at LCR, North West and national levels to ensure that LCR is at the forefront of forthcoming investments, and development prioritisation for key technologies such as clean energy, hydrogen, <b>carbon capture</b> storage and materials innovation.	Lead	Short	
IN4	Deepen relationships and understanding with key Government departments, regulators and stakeholders to ensure LCR is recognised as a principal area for industrial <b>decarbonisation</b> and projects have the social licence to operate within our communities.	Enable	Medium	
IN5	Form a <b>decarbonisation</b> plan for existing and planned industrial clusters linked to <b>local area energy planning</b> , including buildings and transport.	Enable	Medium	
IN6	Support the development of an industrial <b>decarbonisation</b> project pipeline including consideration of barriers, funding and future structure, focussed on key aspects such as technology development, deployment, regulation and funding and community integration.	Enable	Medium	



# Waste & Circular Economy



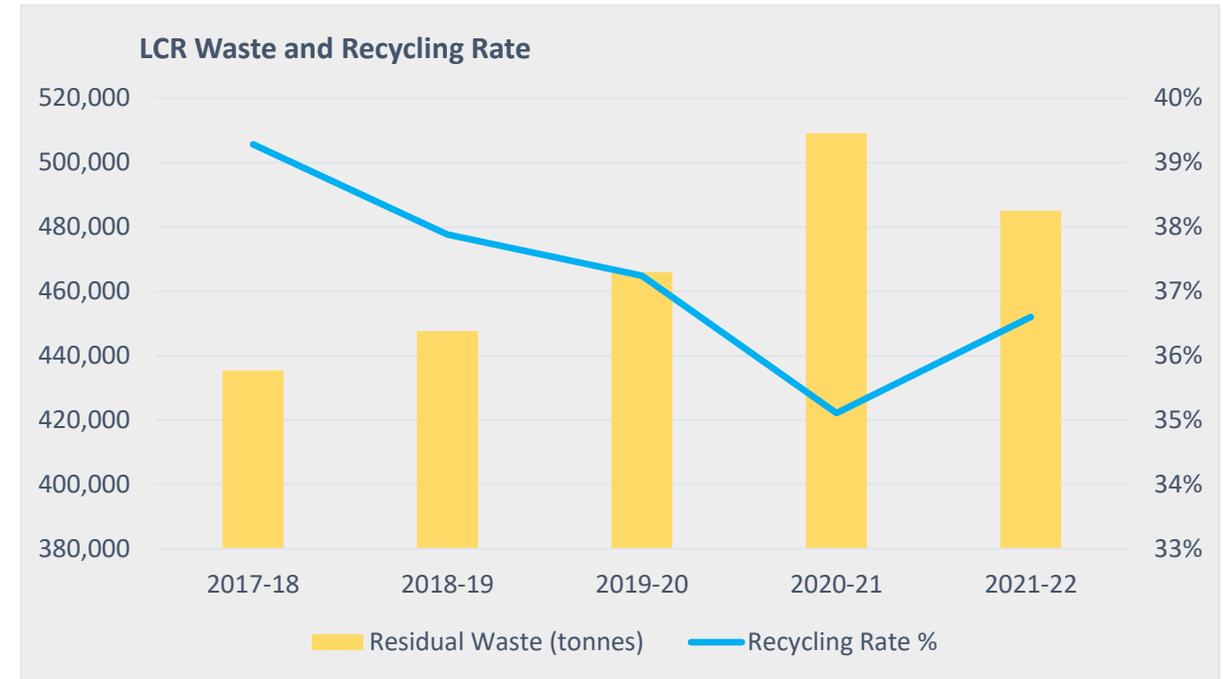
Merseyside Recycling and Waste Authority (MRWA) completed a Waste Composition Analysis in 2021 of household waste generated in the LCR.

The analysis found that:

- The LCR needs to reduce the amount of residual waste
- Food waste is the biggest component of residual waste to be reduced. In 2021 **food waste made up 33.5% of LCR household waste bins.**
- The LCR needs to increase the amount (and types) of recycling. In 2021, **18.7% of collected residual waste could have been placed into LCR recycling collections.**

A large proportion of the waste picture in the LCR is however absent, due to the lack of data on waste being produced by industrial and commercial activities, which nationally, makes-up 19% of waste generation, compared with household waste at 12%. MWRA and their District Partners (LCR Strategic Waste Partnership) have produced a [Zero Waste Framework](#) that does however address all types and sources of waste.

The MRWA LCR Zero Waste 2040 Strategy sits firmly in the context of climate change to deliver a net zero City Region by 2040, as well as implementing the requirements of the Government's Resources and Waste Strategy and the Environment Act 2021. This will be delivered through coordinated action by each of the LCR strategic waste partners.



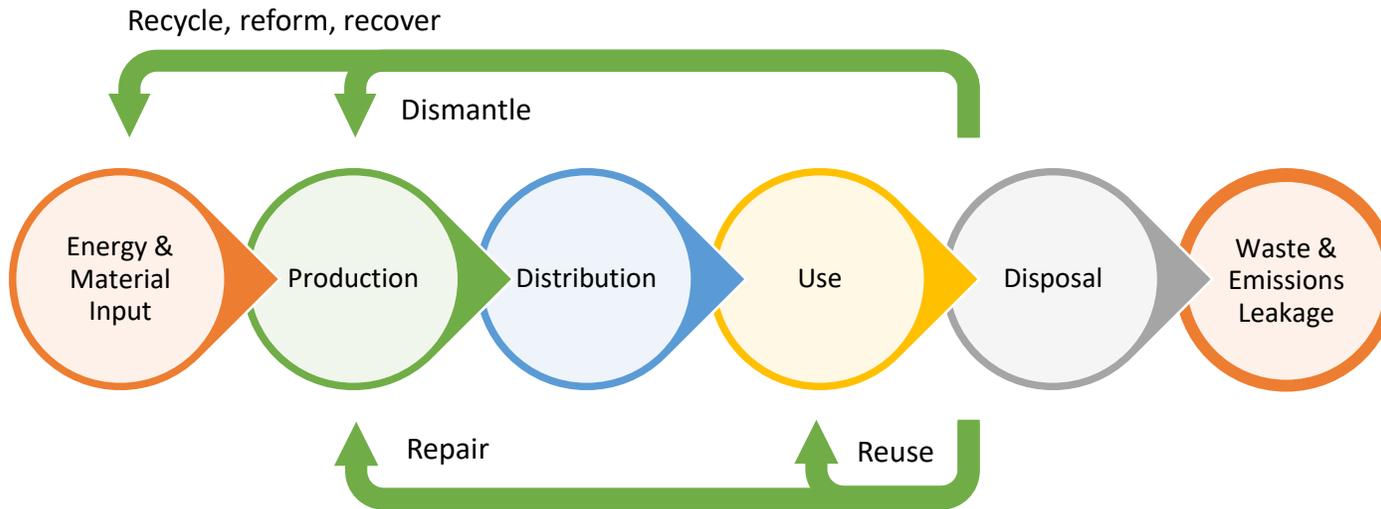
The above figure shows the trend of household waste generation and recycling rates over the past 5 years. In the main COVID-19 pandemic year, 2020-21, waste generation in homes spiked to over 500,000 tonnes and has since started to return to pre-pandemic levels. Recycling rates have shown an inverse relationship to volumes of waste generated. Pre-pandemic however, recycling rates were already in decline.

# Waste & Circular Economy



The LCR Strategic Waste Partnership has set a Zero Waste by 2040 target. Achieving this means moving to a circular economy where:

- The economy decouples from production of waste and emissions
- Changing attitudes towards consumption, waste and reuse among consumers leads to a reduction in material resources used
- Maximum value is extracted from each part of the lifecycle of materials



With inefficiency in current technologies and processes, a large amount of energy is wasted across multiple pillars. Internal combustion engines for example are only able to use around 40% of the energy stored in the fuel to drive the wheels, with most energy being lost through the exhaust system, compared to around 77% efficiency for electric motors.

It is impossible to reach **net zero** as a City Region if the lifecycle emissions of infrastructure, products and services are not considered. This means that emissions associated with the production, use and disposal of material is considered by consumers and in large-scale decision-making, rather than just the emissions produced at point of use. Striking the right balance in interventions between the **embodied emissions** vs the **operational emissions** over the lifecycle of an asset is crucial for effective **decarbonisation**.

As production processes within industry **decarbonise**, so will the lifecycle emissions of products and services, but this is reliant on both intervention to facilitate the **decarbonisation** and the uptake from consumers.

# Clean Energy

Clean energy avoids any carbon emissions.

Liverpool City Region has plentiful opportunity for renewable energy generation, right on our doorstep.

We are the UK's Renewable Energy Coast and may even be able to export to others.



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# Clean Energy

## Our Ambition

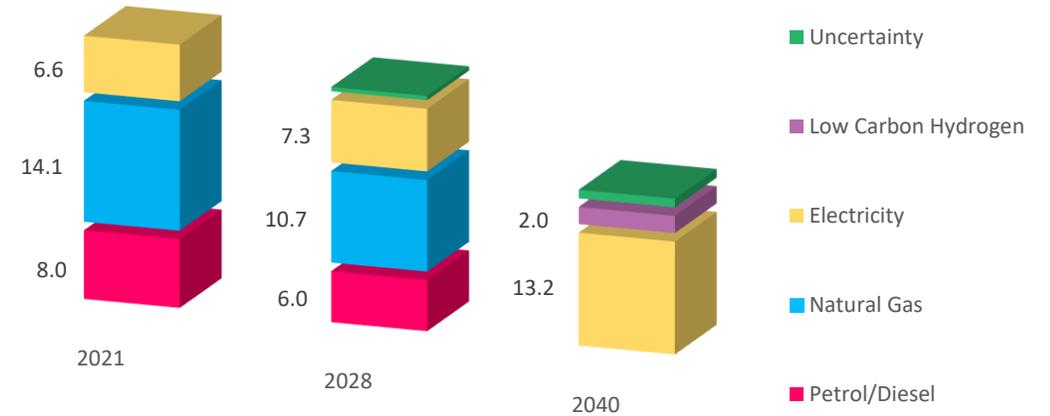
To attain **net zero** we need to halve energy usage in the region by rapidly changing and not using carbon emitting fossil fuels.

Our current energy supply mix is made up mainly of natural gas, petrol/diesel, heating oil and then electricity. Our route to **net zero** means rapid electrification of our energy system. Where electrification is not the answer, then we will need low carbon hydrogen or alternate clean energy sources.

The national electricity system is the first and fastest sector to look at reducing carbon emissions and will be **net zero** by 2032. From 2032, electricity demand is set to double in the UK and by 2040 more than 80% of energy in LCR needs to be from electricity.

Taking action to halve LCR emissions by 2028 through industry, transport and building sector actions is a vital element of this 5 year plan if we are to meet our 1.5°C carbon budget target. At the same time, all new developments and investments in the LCR need to be **net zero** from day one if we are to retire the use of fossil fuels at the pace required.

This section of the action plan focusses on actions to drive maximisation of clean, renewable energy deployment in the Liverpool City Region.



Indicative change in current LCR energy mix (TWh)

In alignment with modelling to 2040, based upon the National Grid 'Consumer Transformation' Future Energy Scenario, by 2028 in the LCR, compared with 2021 data:

- Natural gas consumption reduces by around a quarter. In the LCR, this is roughly equivalent to removing 2 in 5 domestic gas boilers.
- Petrol / diesel consumption also reduces by a quarter. Achieving this would mean 1.3 billion fewer miles being travelled in petrol / diesel vehicles per year, which is a reduction of just over 800 miles per person per year in the LCR.
- Electricity consumption increases by roughly 10% to power technology needed to transition from fossil fuel usage

# Clean Energy



## Electricity – the main energy of the future

Emissions from the electricity supply have reduced from 4 MT to 1 MT consumption in the Liverpool City Region from 2005 to 2020. This is due to the retirement of coal plant and the addition of offshore wind, solar and possibly tidal power, to our system.

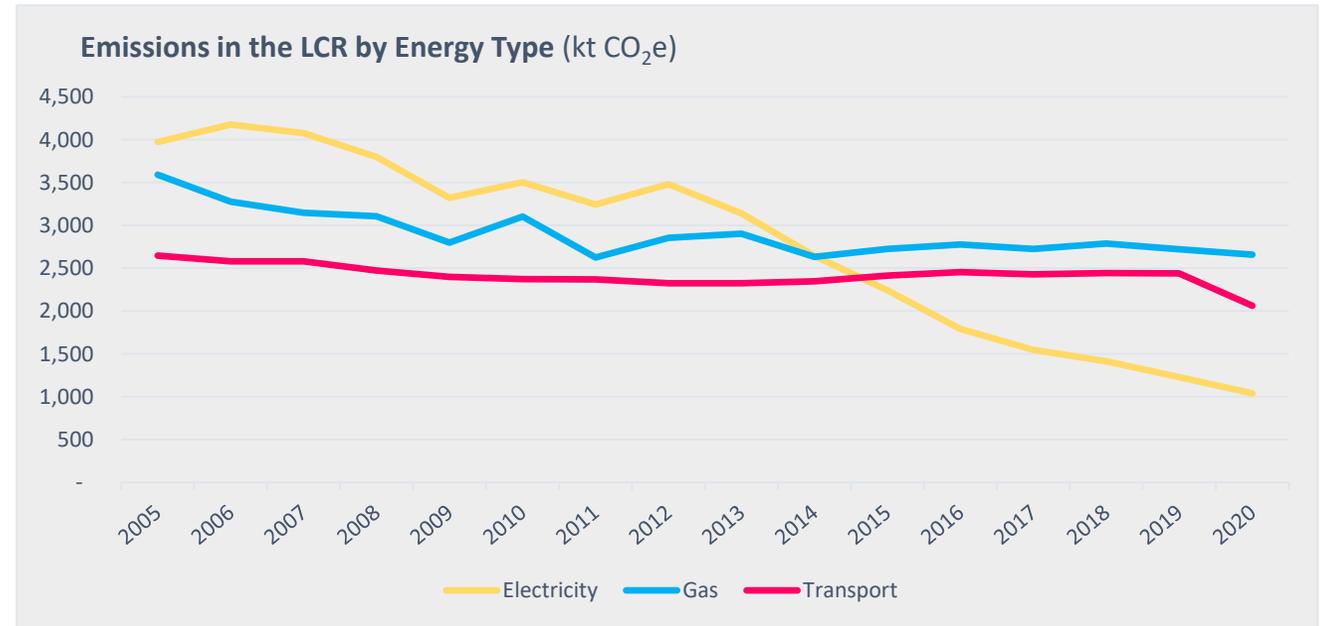
## Natural Gas – no longer an affordable domestic fuel source

Emissions from burning natural gas for industrial process and for heating remain high over the past decade. Concerns over climate and security of supply mean that we must remove gas and its emissions urgently.

## Petrol / Diesel – more public transport and fewer private miles

Transport emissions from petrol and diesel have also remained high, other than the year 2020 when travel decreased due to COVID-19. We need to better use our public transport and encourage active travel to reduce private mileage and emissions.

We need to reduce energy consumption, increase efficiency, make physical changes in our homes and communities and switch from fossil fuels as soon as possible.



Electrification will reduce energy use and current reliance on fossil fuels. According to projections made by **DNV**, UK household energy expenditure in 2040 will be up to 45% less than in 2021. This would be as a result of:

- Increasing electrification of the passenger vehicle and vehicle energy efficiency as a result of doing so
- Replacement of natural gas boilers with electric heat pumps and heat networks to heat homes, again, improving system efficiency
- Improved insulating and **retrofitting** of homes to decrease energy consumption

# Action on Clean Energy



Reference	Action	Role	Timeframe	Themes
E1	Develop and publish a road map for clean energy supplies to reach <b>net zero</b> , building upon the 'LCR Clean Energy supply section of the Net Zero Evidence Base' with an ambition to 2040.	Lead	Short	
E2	Complete work to establish the Offshore Energy Alliance as a North-West regional cluster that promotes the opportunity for low carbon, renewable energy in the Liverpool Bay and Irish Sea	Enable	Short	
E3	Progress the Phase 3 development activities related to Mersey Tidal and commence Phase 4 activity to Consent a UK first of a kind (FOAK) Tidal range scheme.	Lead	Short	
E4	Complete delivery of LCR's Green Hydrogen Vision Study to assess transition from fossil fuels	Lead	Short	
E5	Explore undertaking LCR wide <b>Local Area Energy Plans (LAEP)</b> to provide LA specific geographical and customer needs evidence base for electricity and heat to enable meaningful engagement with HMG, OFGEM and <b>SPEN</b> and demonstrate pathways for place-based carbon reduction.	Enable	Short	
E6	Support capacity building programme for clean energy projects through eco-system mapping including goods, services, education, training and skills development.	Enable	Medium	
E7	Develop and confirm the Portfolio and <b>Pipeline</b> of LCR / Regional Clean Energy Projects that create foundation for clean energy supply be attained by 2030 and 2040 respectively and assess the enablers, barriers and risks associated to a realisation including investment opportunities.	Enable	Medium	



# Action on Clean Energy



Reference	Action	Role	Timeframe	Themes
E8	Work with Electrical Grid District Network Operator to identify local network developments to enable <b>decarbonisation</b> , utilising information from industry, transport and buildings pillars.	Enable	Medium	



“More green space would mean space for children to spend time actively - currently there's lack of green space for children.” – Liverpool Resident

# Natural Environment

Our natural environment and the surroundings that make-up our neighbourhoods are vital parts of the climate picture.

Our natural environment not only supports our wildlife and biodiversity, but also provides locally grown food, protection from flooding, air filtration, helps with our wellbeing and provides us with the space to exercise and have fun.



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# Natural Environment

## Our Ambition

To ensure that the transition to **net zero** is done in partnership with the natural environment; seeking a balanced focus on biodiversity, food security, **climate adaptation** and **carbon capture** potential. To ensure that the co-benefits delivered by the natural environment for health and community are not overlooked in decision making.

To reach **net zero** by 2040, the Liverpool City Region natural spaces, inclusive of agriculture, will need to both decrease emissions and increase absorption of carbon from the atmosphere. By 2040, nature will have started the process of recovery, particularly in high priority areas, and local communities will be feeling the benefits delivered by the natural environment.



Taking action to understand and influence how Land Use, Land Use Change and Forestry (LULUCF) can increase provision for nature to thrive and reverse the rapid trends of biodiversity decline is absolutely vital.

In doing so, the natural environment will be better able to provide ecosystem services to the LCR, namely:

- Increasing the adaptive capacity of the LCR to the impacts of climate change
- Improving air quality and reducing water pollution
- Providing other health benefits, both mental and physical to residents and visitors to the LCR
- Removing carbon from the atmosphere, which is a function of the type, expanse and the health of these natural systems

Work to reduce barriers to achieving increased natural value, such as from water pollution, disease and invasive non-native species is also crucial for accelerating action in the LULUCF area.

## Key Stakeholders and Partners in the Natural Environment pillar *include*:

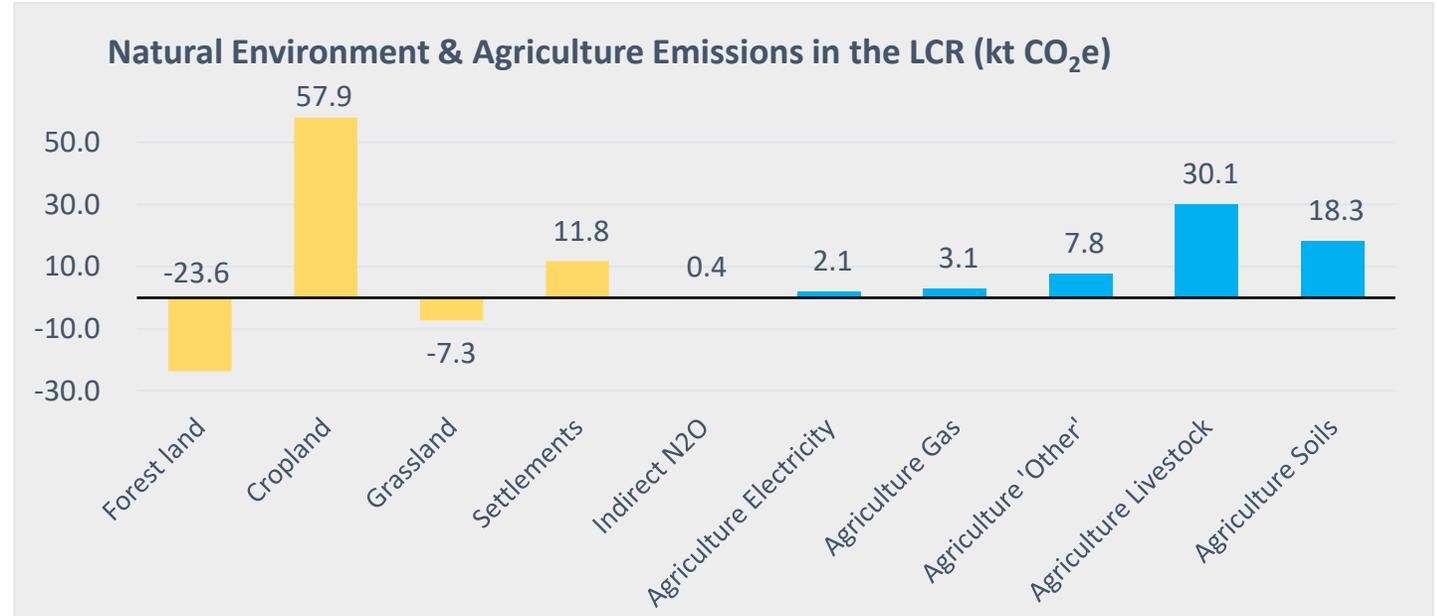
- |                                |                      |
|--------------------------------|----------------------|
| • Local Authorities            | • Partnership        |
| • MEAS                         | • Major developers   |
| • The Mersey Forest            | • Academia           |
| • NFU                          | • Voluntary &        |
| • Agricultural business groups | • community sector   |
| • Crown Estate                 | • Utility companies  |
| • Canal & Rivers Trust         | • Cheshire and       |
| • Environment Agency           | • Merseyside Health  |
| • Natural England              | • Care Partnership   |
| • LCR Climate                  | • Merseyside BioBank |



# Natural Environment

2020 in the LCR saw 39 kt CO<sub>2</sub>e (39 million kg) net emission of greenhouse gases from the natural environment and 62 kt CO<sub>2</sub>e (62 million kg) from agriculture. Forest land and grassland already capture a proportion of carbon emitted in the LCR, but intervention is needed to increase **carbon capture** by natural environments.

- To be in-keeping with the Committee on Climate Change (CCC) projections for forest growth, by 2040, the LCR will need to see a minimum increase of forest coverage of around 915 hectares and 366 hectares by 2028. It will be important to ensure that the needed increase in tree cover is delivered in the right place, to maximise **carbon capture** potential and other benefits.
- If forest area was increased in this area and was performing at optimal functionality, it is estimated that the LCR would benefit from an additional 23 kt CO<sub>2</sub> (23 million kg) of **carbon capture** per year, on top of that already captured.
- **Carbon capture** potential of other natural environments (such as salt marsh) is emerging and will be factored into future work on this subject.



Working to become **net zero** in the Natural Environment pillar by 2028 would put in place the necessary mechanisms to continue to limit emissions and enhance the natural environment, so that the natural environment in the LCR can become an ever-increasing net sink of carbon in subsequent years.

This can be achieved by working with key stakeholders to better understand and decrease emissions from agricultural land and developed land, such as parkland and human settlements, then but also by working with partners to enhance the natural environments that the LCR has in order to increase their role in capturing carbon.

# Community Environment Fund



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The 2 rounds of the Metro Mayor's Community Environment Fund has seen 92 community environment projects share a total of £1 million of support.

Examples include:

- Community garden on derelict land
- Climate change education
- Reuse and repair of second-hand bikes
- Reducing pollution in our watercourses

Such projects are vital in ensuring that as many areas of the community as possible are empowered to make a positive change to support growth in prosperity in the LCR through resource efficiency, nature recovery and carbon reductions, along with the underlying social benefits of the projects.

Work is ongoing to build a more self-sustaining fund, backed by private investment.

# Natural Environment Actions



Reference	Action	Role	Timeframe	Themes
NE1	Scope production of an <b>Integrated Water Management Plan</b> to target action on water management (water quality and water quantity) across Liverpool City Region, including the identification of nature-based solutions.	Lead	Short	
NE2	Plan and carry out public and stakeholder engagement on biodiversity and nature recovery in Liverpool City Region, seeking views on potential outcomes and mechanisms, which will influence the emerging <b>Local Nature Recovery Strategy</b> .	Lead	Short	
NE3	Create a publicly available map of Liverpool City Region habitats and priority species to assist future nature recovery strategy and delivery plan.	Lead	Short	
NE4	Produce a statutory <b>Local Nature Recovery Strategy</b> ensuring a balanced approach to biodiversity and other co-benefits for communities.	Lead	Short	
NE5	Support the development of mechanisms to enable investment in <b>natural capital</b> , bringing together landowners, land-managers, developers and investors.	Enable	Short	
NE6	Develop a partnership with the agricultural community and other stakeholders in LCR to better understand farming and private land practices in the city region.	Enable	Short	
NE7	Work with relevant partners in the health and VSFCE sectors across the LCR to platform Green Social Prescribing provision across viable green and blue spaces in the region.	Champion	Short	
NE8	<b>Spatial Development Strategy</b> to explore accessibility to green/blue infrastructure, especially for young people, ethnic minorities, and residents in disadvantaged socio-economic areas.	Lead	Medium	
NE9	Identify mechanisms to optimise integration of biodiversity, sustainable drainage and green infrastructure into active travel interventions such as cycleways and pedestrian routes.	Enable	Medium	



# Natural Environment Actions

Reference	Action	Role	Timeframe	Themes
NE10	Work with partners to bid for funding to implement flood resilience projects and drainage infrastructure across the LCR, particularly in areas affecting residential properties and businesses, focussing on nature based solutions where applicable and learning lessons from existing flood defence initiatives.	Enable	Medium	
NE11	Develop a <b>pipeline</b> and identify potential funding for pilot innovative and sustainable agricultural projects, such as <b>urban farming</b> , greenbelt agroecological farming, <b>carbon capture</b> etc.	Enable	Medium	
NE12	In alignment with Local Authority allotment strategies and the <b>Zero Waste Framework</b> , work with partners to implement an engagement strategy to encourage development of sustainable food growing projects within communities, including education pieces around <b>urban farming</b> and <b>aeroponics</b> , and champion the work of others in this space.	Enable	Medium	
NE13	In conjunction with Local Authorities, set out and publish a plan to improve data on air quality to help prioritisation and decision making, utilising existing data resources where possible.	Enable	Medium	
NE14	Support partners in delivering the LCR Recreation Mitigation Strategy which seeks to protect important biodiverse sites which are being impacted by increased recreational use.	Enable	Medium	
NE15	Identify methodology and carry out scoping exercise for baselining <b>carbon capture</b> potential in all terrestrial and marine ecosystems, green-space, and farmland in LCR, identifying priority areas to maintain and improve natural carbon capture.	Enable	Medium	
NE16	Amplify the conservation and restoration of coastal wetlands, intertidal areas and subtidal areas, encouraging biodiversity, greater natural storm protection and increasing <b>carbon capture</b> potential.	Champion	Medium	
NE17	Seek to obtain funding for small-scale community environment projects in Liverpool City Region.	Enable	Medium	

# Natural Environment Actions



Reference	Action	Role	Timeframe	Themes
NE18	In co-operation with agricultural and land managers, plan and undertake a system-wide review of farming and private land management practices in the LCR.	Enable	Medium - Long	
NE19	Use the collected evidence base to propose an optimal approach that balances food security with biodiversity, climate resilience, and <b>carbon capture</b> potential.	Enable	Medium - Long	
NE20	Support the delivery of the <b>Local Nature Recovery Strategy</b> through collaborative action with Local Authority partners and other key stakeholders.	Enable	Medium - Long	
NE21	Develop a programme to identify potential locations for piloting innovative approaches for natural <b>carbon capture</b> in the marine, coastal, freshwater and terrestrial environment.	Lead	Long	
NE22	Support forestry projects in strategic locations across the city region, including the implementation of The Mersey Forest 2022-2027 Delivery Plan, working towards doubling woodland cover in the Liverpool City Region by 2050, while ensuring trees are planted for maximal environmental gains.	Enable	Long	
NE23	Amplify restoration of the Mersey River and other LCR watercourses to eliminate polluting discharges, improve biodiversity and increase access to blue/green space and public engagement with nature.	Champion	Long	

