



# LIVERPOOL CITY REGION COMBINED AUTHORITY CARBON EMISSIONS REPORT 2019/20



**LIVERPOOL  
CITY REGION**  
COMBINED AUTHORITY

**METROMAYOR**  
LIVERPOOL CITY REGION



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# FOREWORD

Climate change is the biggest environmental challenge facing the world today and we all have a part to play. Cutting carbon emissions is a key priority for all public sector organisations.

It was recently estimated by the Climate Change Committee that 'Local authorities can influence around one third of the emissions in their local areas through place shaping and partnerships'. That's why here at the Liverpool City Region Combined Authority we are determined to play our part in building a strong, sustainable, net zero carbon future.

This LCRCAs Carbon Emissions Report provides a baseline for carbon reduction planning for our own estate and direct operations and from this report we will set out a plan for action which will contribute to achieving our net zero carbon ambitions.

Thank you to Jodie Golightly and Tom Hennessy for your excellent project leadership.

*Katherine Fairclough*



## **Katherine Fairclough**

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Chief Executive, Liverpool City Region Combined Authority

# INTRODUCTION

Climate change has become the defining issue of our age. No longer a future threat, it presents a clear present danger to all of us right here and right now. Generations to come will look back at us as the leaders who had the chance to save the planet.

There is no single solution to climate change. No magic wand to be waved and no one person who can fix things. In the words of the American disability rights and political activist, Hellen Keller, “Alone we can do so little; together we can do so much.”

As mayor, I am investing in and promoting the large scale, pioneering projects that will accelerate our transition to net zero, such as HyNet, greener trains, hydrogen buses, and our own Mersey Tidal Power project, which will generate enough clean, predictable energy to power 1m homes for more than a century.

But we are also empowering local people and local communities to make their own small but significant changes too. Initiatives like the Community Environment Fund are helping to teach the next generation about the importance of safeguarding the planet and taking steps to improve our neighbourhoods.

I want us to lead by example. This report is an honest and frank examination of our own carbon emissions. It will be a useful tool for cutting our own outputs and leading the way to net zero by 2040 or sooner.

*Steve Rotheram*

**Steve Rotheram**

Mayor of the  
Liverpool City Region



# EXECUTIVE SUMMARY

The purpose of this report is to present information about the carbon emissions arising from the Liverpool City Region Combined Authority's (LCRCA) own estate and operations for the financial year 2019-20.

The reporting methods are in accordance with UK government guidance and the Greenhouse Gas Protocol (GHG). The GHG Protocol outlines a globally recognised framework for measuring emissions from public sector operations and explains that emission releasing activities are categorised into three groups known as Scopes. The three scopes are defined as follows:

**Scope 1:** Direct emissions – from activities controlled by LCRCA that release emissions into the atmosphere

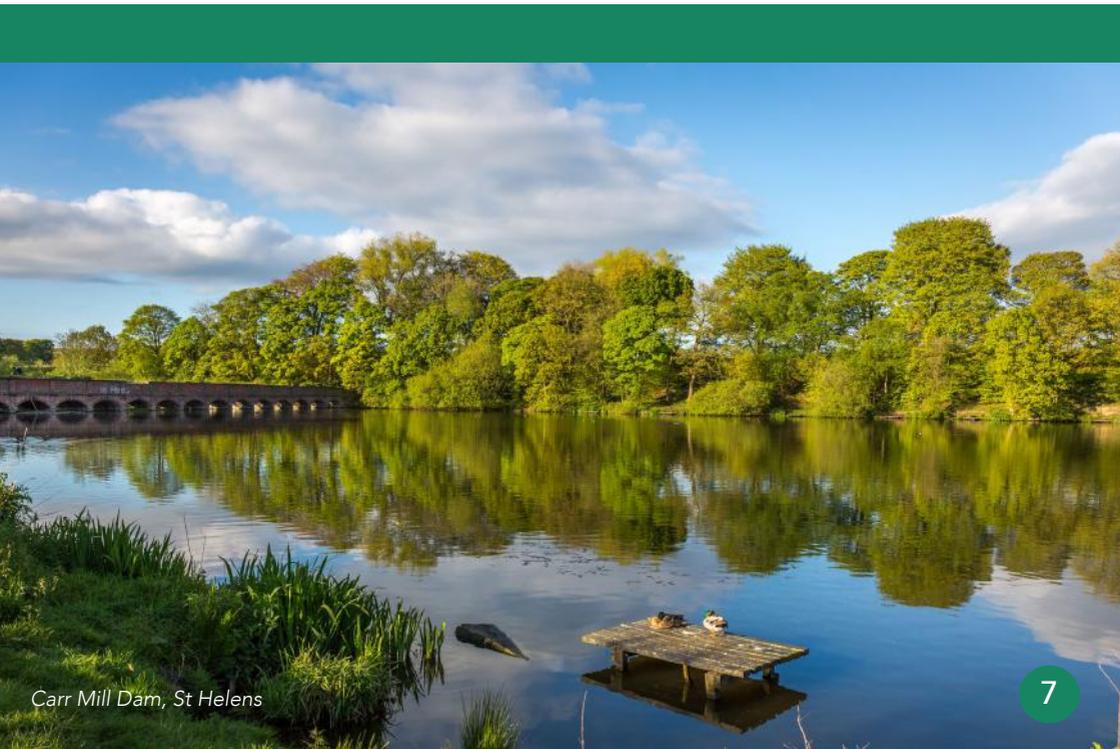
**Scope 2:** Indirect emissions – from LCRCA's consumption of purchased electricity

**Scope 3:** Other indirect emissions – activities which occur at sources that LCRCA does not own or control

LCRCA manages a varied portfolio of assets and operations, so it was necessary to enter periods of consultation, data collection and analysis in order to identify the activities that could be accurately reported on. As such, carbon emission data relating to buildings/ structures, street lighting, transport and waste is considered in this report.

The carbon emission data in this report is expressed in tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). It was calculated that the total emissions for LCRCA's estate and operations for the financial year of 2019/20 was 5,892 tonnes CO<sub>2</sub>e. Further analysis of the carbon emission data is available in this report. Note, carbon emission data for the financial year 2020/21 has not yet been collected.

The LCRCA is committed to making the Liverpool City Region net zero carbon by 2040. This report will supplement efforts to reduce carbon emissions across the LCRCA's estate and operations by providing a baseline for all future reporting, thus allowing the LCRCA to measure the impact of any emission reducing interventions.



# BACKGROUND



In June 2019, government passed legislation committing the UK to achieving net zero carbon emissions by 2050. Metro Mayor Steve Rotheram, having declared a climate emergency in May 2019, pledged that the Liverpool City Region (LCR) would become pioneers of the zero-carbon economy; a national leader in clean growth; and to achieve a net zero carbon city region by 2040.

Accomplishing this ambitious goal at least ten years ahead of the national target will 'require fast-paced transformative change to the way the city region functions' and collective action from every individual and organisation across the city region.

The Liverpool City Region Combined Authority (LCRCA) has set out its plans to deliver regional change through a series of activities documented in the Air Quality Action Plan, LCR Climate Action Plan, the LCRCA Corporate Plan 2021-24, the Local Industrial Strategy and the Economic Recovery Plan.

However, the LCRCA also recognises the need to lead by example, demonstrate accountability and be transparent as an organisation, by considering the carbon emissions that arise from its own assets and operations.

**Therefore, the LCRCA Carbon Emissions Report will:**

- Present LCRCA's own carbon emissions for the financial year 2019-20
- Set out the organisation's ambitions regarding reporting, monitoring and reducing carbon emissions going forward.

All associated risks relating to the LCRCA Carbon Emission report have been considered during internal consultation.

# POLICY/STRATEGY

*Since declaring a Climate Emergency in 2019, the LCRCA has made great strides towards achieving its LCR net zero carbon goal...*

- The LCRCA Corporate plan 2021-2024 sets out the LCRCA's ambition and strategic objectives to living, travel and doing business in order to be recognised as a pioneer in sustainable approaches and become a UK leader in clean energy - at the forefront of the Green Industrial Revolution.
- The Year One Climate Action Plan will make sure that opportunities for early intervention are not missed, enabling early achievements in the City Region to be captured without detracting from the important goals that must form part of the longer-term net zero carbon 2040 action plan.



*New Brighton, Wirral*



Port Sunlight, Wirral

- The LCRA has invested in and commissioned a number of projects which focus on addressing the climate emergency such as:
  - Purchasing a £500m fleet of publicly owned energy-efficient electric trains.
  - 600km of new cycling and walking infrastructure.
  - Procuring a fleet of 20 hydrogen buses.
  - developing the Mersey Tidal Power project;
  - Funding 58 environmental projects across LCR through the Mayor’s Community Environment Fund and a further 10 environmental projects through the Future Innovation Fund.
- The LCRA has also, amongst other projects, developed plans to retrofit 1200 homes to make them more energy efficient and have approved the Green Bus Routes programme to improve bus journeys on key corridors.

The LCRA Carbon Emissions Report is an essential part of the wider range of strategic and policy tools needed to enable us to reduce its own carbon footprint. Ultimately it will help the Combined Authority as an organisation deliver on the wider LCR’s targets.

# REPORTING METHODS AND SCOPE

## Reporting period:

This report covers the financial period 1st April 2019 to 31st March 2020. Carbon emission data for the financial year 2020/21 has not yet been collected and is therefore not considered in this report.

## Approach:

This report has been prepared in accordance with UK Government guidance and the globally recognised Greenhouse Gas Protocol (GHG) framework for measuring emissions from public sector operations.

## Scopes:

The GHG Protocol explains that emission releasing activities are categorised into three groups known as Scopes. The three scopes are defined as follows:

- **Scope 1:** Direct emissions – from activities controlled by LCRCA that release emissions into the atmosphere.
- **Scope 2:** Indirect emissions – from LCRCA's consumption of purchased electricity.
- **Scope 3:** Other indirect emissions – from activities which occur at sources that LCRCA do not own or control.

It was necessary to engage in extensive periods of consultation, data collection and analysis in order to identify the areas of LCRCA's own estate and operations that could be accurately reported on.

Table 1 offers a full breakdown of the scopes and related activities considered in this report.

### **Data:**

The carbon emission data presented in this report is expressed in tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). The carbon emission data was calculated using the carbon conversion factors published in 2019 by the Department for Business, Energy and Industrial Strategy (BEIS). The 2019-2020 carbon emission data will provide the baseline for all future LCRCA Carbon Emission reports.

### **Limitations:**

The information presented in this report is based on the availability of comprehensive and reliable data. Several activities including Staff Commuting, Water Treatment, Supported Bus Services and Purchased Goods (Supply Chains) were investigated but ultimately not included in the report due to the unavailability of quality data. The LCRCA will consider measures to improve the accuracy and reliability of data collection going forward and further emphasis will be placed on Scope 3 emissions.

# 2019/20 BASELINE DATA

Scope 1 – Direct Emissions
Owned Buildings Gas Consumption: <ul style="list-style-type: none"> <li>Gas used to heat buildings / structures across the LCRCA estate</li> </ul>
Owned Buildings Refrigerant Gas Loss: <ul style="list-style-type: none"> <li>Refrigerant gas escaping air conditioning and refrigeration units across the LCRCA estate</li> </ul>
Fleet - Ferry Vessel Fuel Consumption: <ul style="list-style-type: none"> <li>Fuel consumed by the Mersey Ferry vessels</li> </ul>
Fleet - Vehicle Fuel Consumption: <ul style="list-style-type: none"> <li>Fuel consumed by the LCRCA's fleet of vehicles</li> </ul>
Scope 2 – Indirect Emissions
Owned Buildings & Lighting - Electricity Consumption: <ul style="list-style-type: none"> <li>Electricity consumed by buildings/structures/high mast lighting across the LCRCA estate (including Mersey Tunnels ventilation and lighting)</li> </ul>
Scope 3 - Other Indirect Emissions
Transmission and Distribution - Electric Grid Losses: <ul style="list-style-type: none"> <li>The energy losses that occur in getting the electricity from the source (power plant) to the organisation who purchases it (the LCRCA)</li> </ul>
Waste Disposal: <ul style="list-style-type: none"> <li>Waste produced by the LCRCA, disposed of off-site by an external party</li> </ul>
Business travel: <ul style="list-style-type: none"> <li>Travel undertaken by LCRCA employees on behalf of the organisation</li> </ul>

Table 1 – breakdown of scopes and related activities, categorised in line with GHG

The total carbon emission figure for LCRCA's estate and operations for the financial year of 2019/20 was 5,892 tonnes CO<sub>2</sub>e.

The accompanying charts and tables detail the breakdown of emissions under Scopes 1, 2 and 3.

Scope 1	Total CO <sub>2</sub> e Emissions (tonnes)
Owned Buildings: Gas Consumption	852
Owned Buildings: Refrigerant Gas Loss	-
Fleet: Ferry Vessel Fuel Consumption	1,248
Fleet: Vehicle Fuel Consumption	176
<b>Total:</b>	<b>2,276</b>
Scope 2	Total CO <sub>2</sub> e Emissions (tonnes)
Owned Buildings: Electricity Consumption and Lighting	3,298
<b>Total:</b>	<b>3,298</b>
Scope 3	Total CO <sub>2</sub> e Emissions (tonnes)
Transmission and Distribution (Electric Grid Losses)	280
Waste Disposal	9
Business Travel	29
<b>Total:</b>	<b>318</b>
<b>Overall Total CO<sub>2</sub>e Emissions (tonnes):</b>	<b>5,892</b>

Table 2 – Breakdown of LCRCA carbon emissions by scope

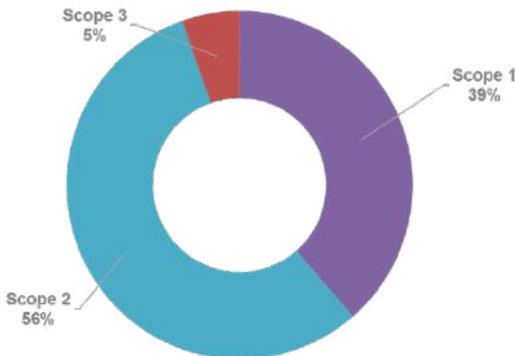


Figure 1 – % of LCRCA carbon emissions by scope

The carbon emission data presented in this report will inform the LCRCA’s ambitions regarding the reporting, monitoring and reducing of carbon emissions going forward.

The accompanying charts shown here detail the breakdown of carbon emissions for each scope, by building type and source. Interrogation of this data will allow the LCRCA to prioritise carbon reduction in specific areas and consider how best to influence the direct and indirect emissions that arise from its estate and operations that will contribute to rapid reductions in GHG emissions.

The 2019-20 carbon emission data will provide the baseline for all future carbon reporting, allowing the LCRCA to measure the impact of any emission reducing interventions carried out over a specific period of time.

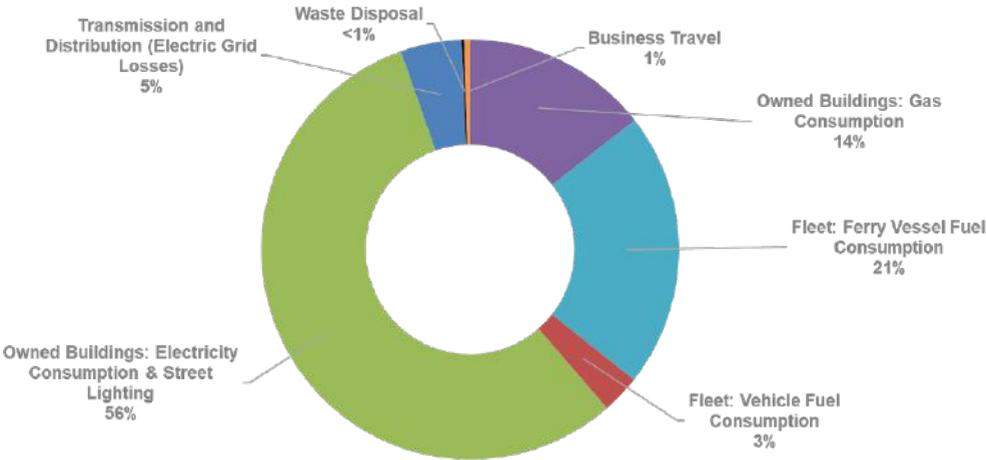


Figure 2 – Breakdown of Total LCRCA Carbon Emissions by source or activity

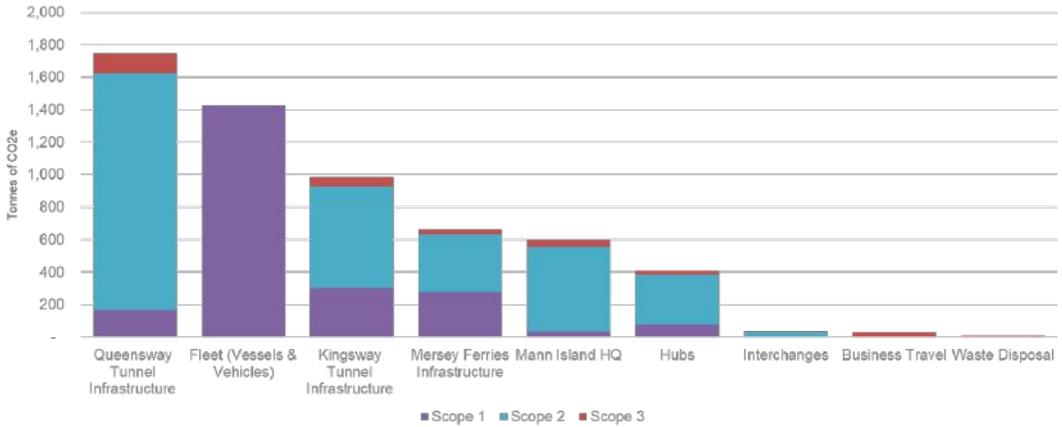


Figure 3 – Breakdown of LCRCAs emissions by assets and scope

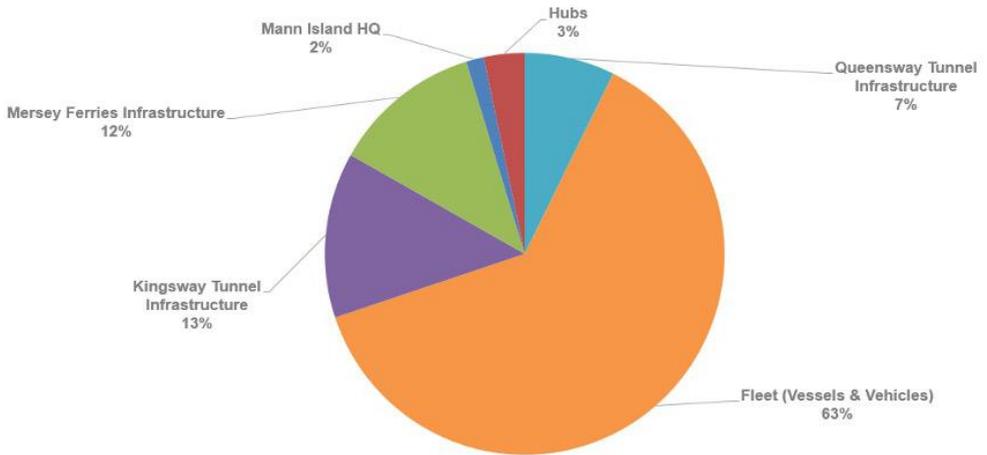


Figure 4 - Scope 1 CO2e emissions by building type and source

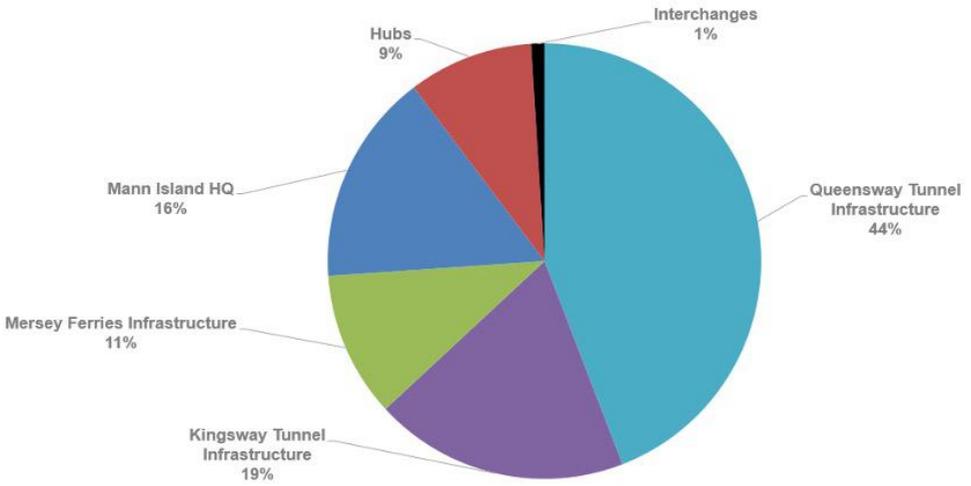


Figure 5 - Scope 2 CO2e emissions by building type and source

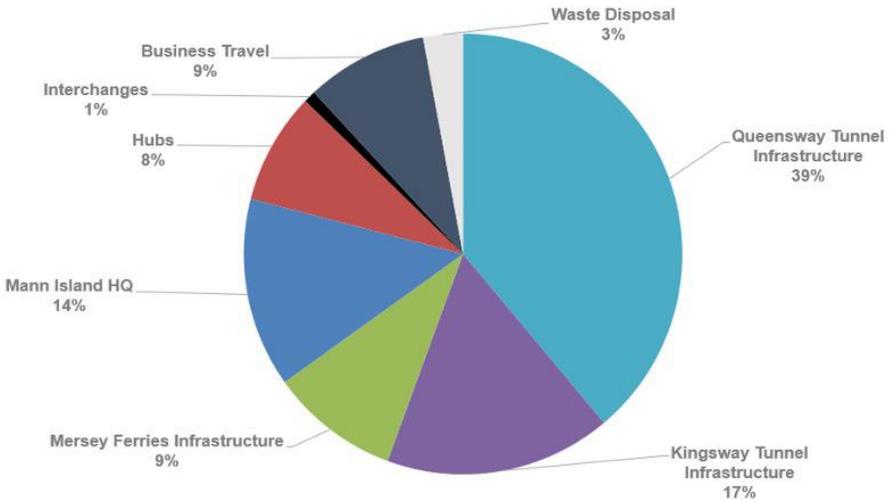


Figure 6 - Scope 3 CO2e emissions by building type and source



Knowsley Hall

# THE FUTURE



We recognise the national policy and regulatory context around CO<sub>2</sub>e emissions is changing rapidly and we will need to respond to these changes flexibly to address emerging challenges and embrace new opportunities. We do not have all the answers now but are committed as an organisation to reducing our own emissions and achieving net zero carbon status. Our early strategy has been guided by our existing commitments below.

### **UK100 Pledge:**

Metro Mayor Steve Rotheram signed the [UK100 net zero pledge](#) on behalf of the city region in July 2021.

The pledge is designed to demonstrate the ambition and ability of elected local leaders to deliver on net zero. It is also intended to create the conditions for stronger climate action at national level to help local authorities reach net zero faster. The UK100 full guidance and clarifications are set out [here](#).

However the key criteria impacting our actions going forward are:

- **Net Zero target date:** Combined Authority operations and wider area emissions by 2045\* at the latest.
- **Interim Targets:** set interim targets, focusing on early actions and prioritising sectors/projects that will contribute to rapid reductions in GHG emissions.
- **Reporting:** Reporting should be annual, from 2022 onwards.
- **Scopes:** Reporting should cover at least scopes 1 and 2 for council emissions and area wide emissions.
- **Offsets:** offsets should be limited and used only as a last resort when reducing emissions to net zero at source is not possible. Offsets should aim to be as local as possible.

## **LCRCA Corporate plan 2021-24 sets out:**

- Reduce LCR carbon emissions by 2024 by 35% in line with the Net Zero 2040 Plan.
- Produce an evidence-based plan to meet the city region's net zero carbon target.
- Deliver a series of programmes, projects and strategies (most of which fall within Scope 3).



## **As part of 2019-20 Carbon Emissions Report the LCRCA now also commits to:**

- Assigning dedicated resource within the LCRCA to collate and calculate LCRCA's carbon footprint annually, develop and implement carbon reduction projects and align strategy and processes to monitor and reduce our own CO<sub>2</sub>e to achieve the terms set out by the UK100 Pledge and support our corporate strategy objectives.
- Seek to increase scope 3 reporting to include at least all transport operations.
- Ensure data management is consistent and reporting is automated where possible.
- Build upon the work in this report by using the 2019-20 data as a baseline from which all future performance will be measured.
- Embed carbon management as a key priority for the organisation by setting performance indicators.

## **Ultimate benefits hoped to be achieved in 5 years are:**

- Directly reduce our CO<sub>2</sub>e emissions and improve energy efficiency.
- Embed the consideration of carbon.
- Invest to save carbon and save money.
- Raise awareness and carbon literacy amongst staff.



# CONCLUSION

Climate change is the biggest existential challenge facing the world today. Although the grid is getting smarter and technology better, we cannot afford rest on our laurels. Collective - and decisive - action must be taken.

The LCRCA recognises the need to lessen its impact on climate change by reducing our own carbon emissions and is determined to do our bit to help tackle this global issue and become an ever more environmentally responsible organisation within a cleaner, net zero carbon city region by 2040 at the latest.

This report has outlined a high-level process and strategic way forward for the Combined Authority to deliver carbon reduction of its own emissions and produced a baseline year of CO<sub>2</sub>e emissions against which all future reporting will be measured. Going forward we've set out our commitment to annual reporting in line with the UK100 pledge and outlined the measures we'll take to ensure these considerations remain at the centre of LCRCA's strategies, policies and operations.

This report is not an end in itself - but instead marks the start of our journey to deliver on the wider our LCR targets and achieve a greener future together.

The CO<sub>2</sub>e baseline calculation tool used to produce this report is available upon request.

**Background reading:**

- [The Year One Climate Action Plan](#)
- [Liverpool City Region Combined Authority Corporate Plan 2021-2024](#)
- [Air Quality Action Plan](#)
- [The LCR Local Cycling and Walking Infrastructure Plan](#)
- [Local Industrial Strategy](#)
- [Towards a Green Future for Liverpool City Region](#)
- [UK 100 pledge](#)

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## **Organisational Information**

The Liverpool City Region Combined Authority is a public body serving over 1.6 million people across six local authorities: Halton, Knowsley, Liverpool, Sefton, St Helens and Wirral.

It employs around 1000 staff as of 31 March 2021. It operates from a varied portfolio of assets and operations including offices, transport hubs, tunnels, ferry vessels and trains and operates a fleet of around 60 vehicles.

## **Legislation**

The Climate Change Act 2008 outlines the UK's responsibility for tackling climate change and reducing carbon emissions to net zero by 2050. Although there is no statutory duty for the LCRCA to report on carbon emissions, the organisation recognises the moral obligation to do so.

## **External / Internal assurance**

The LCRCA will seek external scrutiny from the city region's Climate Partnership and the LCRCA Scrutiny committee in November 2021.



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