

MANCHESTER
CLIMATE CHANGE
AGENCY



MANCHESTER CLIMATE
CHANGE

2021

ANNUAL REPORT

NOVEMBER 2021



MANCHESTER
CLIMATE CHANGE
PARTNERSHIP

ZERO CARBON
MANCHESTER

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INTRODUCTION

Introduction from the Chair of Manchester Climate Change Partnership

The Sixth Assessment Report from the Intergovernmental Panel on Climate Change published in August 2021 could not be more clear. Human activity is warming our world, and current plans to reduce this are not enough to prevent damaging and irreversible impacts.

This report of the Manchester Climate Change Agency sets out, from the latest available data, how Manchester is doing to play its full part in addressing the challenges of climate change.

I am afraid to say that it tells the same story as the IPCC report. Even with significant emissions reduction caused by the lockdowns associated with the COVID-19 pandemic, Manchester has still not reduced its emissions at the rate we need to, to meet our obligations under the Paris Agreement.

However, this report is not all bad news.

It sets out how the Manchester community, public and private sectors, voluntary groups and individuals, are taking climate action.

It sets out how Manchester is collaborating with other cities around the world to inform our responses.

It sets out where Manchester is leading the way, for example in understanding how our climate action can address indirect emissions, the emissions arising from the things we buy and throw away.

Throughout the report run themes of inclusion and climate justice. The section on indirect emissions is clear about the greater emissions produced by the wealthier members of the Manchester community, and the disproportionate

impact of climate change on poorer communities. Addressing these, and making sure that all Manchester communities help shape our response, will be critical.

The large impact of aviation emissions are also clear from the report. I welcome the collaboration in the Partnership in this critical area.

Finally I would like to thank all those involved in the preparation of this report, and the work of the Partnership and Agency over the past year.

The challenge before us is clear, but also clear is the commitment across Manchester to meet that challenge and shape the thriving, resilient and Zero Carbon Manchester we know we can achieve.

Mike Wilton

Chair, Manchester Climate Change Partnership



PART 1

Manchester Climate Change Partnership and Agency Action 2020-21

In this section of the report we set out the progress that has been made during the year in taking forward the actions we committed to in 2020. The section describes activities undertaken by the Agency from April 2020 up until the end of August 2021.

OBJECTIVE 1:

Helping our city to set the right objectives and targets, in line with the Paris Agreement and the latest science

1. Establish Advisory Groups for:

- a) Health, wellbeing and climate change**
- b) Inclusive, zero carbon and climate resilient economy**

In progress:

a) Following an unprecedented year, due to relevant partners' focus on COVID-19 during 2020, the Partnership has re-engaged with Health & Social Care Partners during 2021. The intention is to liaise with the GM Health & Social Care Operational Group to involve them in the development of Framework V2.0. Also, to engage with the Manchester Health & Wellbeing Board to ascertain whether they would prefer to act as a direct sounding board or create a Health, Wellbeing and Climate Change Advisory Group as originally envisaged.

b) The Zero Carbon Business Working Group has now been established, led by the CEO of GM Chamber of Commerce and includes representatives from the Business Growth Hub, Manchester City Council, the City Business Climate Alliance and the World Business Council for Sustainable Development. With the inclusion of external expertise on inclusive growth it is anticipated that the Working Group will evolve into an Advisory Group once the Zero Carbon Business Programme is launched in 2022.

2. Further develop two of the Framework's objectives:

c) Consumption-based emissions: develop a more detailed understanding of our consumption-based emissions to enable us to target action and monitor progress.

c) In progress. As part of our Green Recovery work, researchers from the University of Manchester have completed a report investigating Manchester's consumption emission hotspots and outlines specific areas for action – some immediate 'low-hanging fruit' and more comprehensive and ambitious changes¹, An additional report 'Transitioning to a sustainable Manchester food system was published in summer 2021², discussing why food system innovation toward more sustainable food provision in Manchester should be a key part of a green and just recovery.

d) Adaptation and resilience: better understand the level of risk and vulnerability faced by our residents and businesses so that we can more effectively focus our efforts on the key risks and locations most in need.

d) In progress. The Manchester Climate Adaptation and Resilience Advisory Group was established in early 2020 to guide our effort in developing informed targets on resilience and adaptation, to identify how action across the city might be supported, and to make recommendations regarding how progress can be monitored and evaluated.

The first part of this work involved advising on the drafting of a framework to understand the city's climate vulnerabilities³.

This work is ongoing. Throughout 2021 and early 2022 work will continue to develop principles and actions to guide the city's objective to become more climate resilient, including the development of case studies on climate adaptation.

3. Establish performance indicators and data for all four Framework objectives, for inclusion in the Annual Report 2021.

Not complete. Work will continue throughout 2021/22 to establish performance indicators for each of the Framework's objectives.

¹ <https://www.manchesterclimate.com/green-recovery/decarbonising-consumption>

² <https://www.manchesterclimate.com/content/incorporating-food-manchester%E2%80%99s-climate-change-response>

³ <https://www.manchesterclimate.com/sites/default/files/Climate%20vulnerability%20framework.pdf>

OBJECTIVE 2:

Helping our city to establish the strategy, governance and partnerships needed to meet the targets

5. Appoint a new Chair for the Partnership (carried over from 2019).

Complete. Mike Wilton, Manchester Office Lead for Arup, was appointed as chair of the climate change partnership in November 2020⁴.

6. Develop the Agency's capacity, including the appointment of a new Director.

Complete. Director appointed – 1st October 2021.

Deputy Director recruitment underway.

Four new appointments underway to the Agency Community Interest Company (CIC) Board.

⁴<https://www.manchesterclimate.com/news/2020/11/mike-wilton-appointed-chair-manchester-climate-change-partnership>

7. Embed the priorities from the Framework in the Our Manchester Strategy reset and the city's recovery, in line with the letter to Manchester City Council in June 2020.

Complete. In September 2020 the Agency responded to the Our Manchester Strategy Consultation. The response set out twelve proposals that will help the city to both recover from COVID-19 and take action in line with the commitments in the Manchester Climate Change Framework 2020-25⁵.

The refreshed strategy, The Our Manchester Strategy Reset: Forward to 2025, was published in March 2021. It includes the commitment from the original strategy that 'Manchester will play its full part in limiting the impacts of climate change', as one of the six strategic priorities. It also commits the city to reduce its direct CO₂ emissions by 50% between 2020 and 2025, towards Manchester becoming a zero carbon city by 2038, at the latest⁶.

8. Develop a plan for refreshing the current Framework 1.0, including the production of a new 'Recovery Annex' (working title) by the end-2020. Followed by the production of a draft Framework 2.0 by September 2021 and a final Framework 2.0 by June 2022, at the latest, as part of the EU-funded Zero Carbon Cities project⁷.

Recovery Annex.

The Annex was intended to explore ways to maximise environmental benefit from pandemic recovery.

Not Complete. Due to a lack of resources, only limited work could be completed. Work completed includes deep-dives into two of the priorities in the Framework: Tackling Manchester's consumption-based emissions⁸ - published March 2021 and Transitioning to a sustainable Manchester food system - published August 2021⁹. The Partnership agreed to incorporate Recovery activity within Framework 2.0.

Framework V2.0

Underway. The Agency along with Anthesis are in the process of refreshing the Manchester Climate Change Framework 2020-2025

⁵ <https://www.manchesterclimate.com/news/2020/09/our-manchester-strategy-consultation-mcca-response>

⁶ https://secure.manchester.gov.uk/info/200024/consultations_and_surveys/8148/our_manchester_strategy_reset_forward_to_2025

⁷ <https://urbact.eu/zero-carbon-cities>

⁸ <https://www.manchesterclimate.com/green-recovery/decarbonising-consumption>

⁹ <https://www.manchesterclimate.com/content/incorporating-food-manchester%E2%80%99s-climate-change-response>

9. Start to further develop the membership of the Partnership, including through Manchester's participation in the 'City-Business Climate Alliance' project with seven other global cities, the C40, CDP and World Business Council for Sustainable Development¹⁰

In progress. Throughout 2020 and 2021 work has been ongoing through the City-Business Climate Alliance project and the Zero Carbon Business working group to understand the barriers against taking action on climate change faced by Manchester's businesses. In March 2021, MCCA in partnership with C40, CDP and WBCSD, held a Zero Carbon Business Workshop as a first step towards launching our Zero Carbon Business Programme in 2022.

25 key Manchester Businesses came together to discuss what they are already doing to tackle climate change and the support they need¹¹.

Applications for new Partnership members opened in July 2021 and engagement criteria are being developed with support from CBCA.

10. Diversity and inclusion: complete work to establish terms of reference and a work programme for the group. To include ensuring the full inclusion and participation of BAME people in the Partnership and all its activities and ensure that the Agency's staffing also reflects the racial diversity of our city region

In progress.

In the adverts for CIC Board Directors and Staff vacancies, applications have been welcomed from women, young people and those demographic groups under-represented. Additionally, a diverse demographic profile has been adopted for recruitment of citizen representatives to the Community Assembly and throughout the In Our Nature Programme.

Although work in this area has been delayed due to COVID-19 the Agency is planning to take a more robust approach to diversity and inclusion in 2021/22 and determine whether it is appropriate to establish an advisory group or to continue to mainstream diverse representation at each level, (see Priority 5, page 60)

¹⁰ <https://www.city-businessclimatealliance.org/>

¹¹ https://www.manchesterclimate.com/sites/default/files/MCR%20Zero%20Carbon%20Business%20Workshop%20Report%20Working%20Draft_v0.2%20.pdf

OBJECTIVE 3:

Helping our City to take action

11. Engaging and empowering businesses and organisations: work with partners to establish new/refreshed climate change action plans for all Partnership members (existing and new), to ensure they can all reset, recover and thrive, and play key roles in the city's green recovery.

In progress. Partners' progress on Climate Change actions plans continues to be monitored by the Partnership with presentations in 2020/21 from Manchester Metropolitan University and MAST (Manchester Arts Sustainability Team). In expanding the Partnership, new engagement criteria are in development to ensure a commitment to climate action as well as collaborating across the city. A bid has been made to the Community Renewal Fund, in conjunction with the Growth Company and GM Chamber of Commerce, to kick-start the Zero Carbon Business Programme.

12. Engaging and empowering residents and communities: work with partners to establish a new programme to engage and support Manchester's residents and communities to play an active role in and benefit from the city's green recovery.

In progress. In May 2021 the Agency in partnership with environmental charity Hubbub and The National Lottery's Climate Action Fund launched the largest community climate change campaign in Manchester called "In Our Nature". The programme delivery is led by a strategic partnership between Manchester Climate Agency and Partnership, Hubbub, The Tyndall Centre for Climate Change Research at the University of Manchester, Amity CIC and Commonplace¹².

The year-long innovative programme will support several communities across the city to develop community climate action plans and support communities and residents across the city to understand and act on climate change. Through supportive and shared local campaigns, partnership working and developing projects that mobilise community strengths, experiences,

and energy, we hope that together we can ignite a community led network of climate active neighbourhoods¹³.

13. Engaging and empowering young people: Manchester Climate Change Youth Board to develop and oversee the delivery of a new programme of youth-led climate action, supported by the Manchester Climate Partnership, Agency, Young Manchester, Groundwork, and other partners.

In Progress. The Agency has appointed a Youth Champion to drive forward the priorities of the Climate Change Youth Board and ensure the voices and aspirations of young people are represented at every level.

The Agency has supported the development of the Youth Board's manifesto which will be launched in October 2021. This will be a nationwide first and cements Manchester's commitment to an inclusive and people driven approach to meeting zero carbon by 2038.

14. Participate in the EU-funded GrowGreen project¹⁴ to support the roll-out of nature-based solutions citywide, building on the demonstration project in West Gorton.

The Agency has supported Manchester City Council (as the project lead) with the delivery of the GrowGreen project. The Agency has appointed a secondment from Groundwork to support the delivery of nature based solutions and their benefits to the residents and communities of Manchester in 2021/22.

¹² <https://zerocarbonmanchester.commonplace.is/project-team>

¹³ <https://zerocarbonmanchester.commonplace.is/>

¹⁴ <http://growgreenproject.eu/>

OBJECTIVE 4:

Helping our City to understand its progress

15. Annual reports: produce the Manchester report to CDP / Global Covenant of Mayors 2020 (August 2020); produce the Manchester Climate Change Annual Report 2021 (July 2021).

Complete. The CDP cities report submitted on 29th July 2021¹⁵.

The publication of this Annual Report was deferred on recommendation from our independent advisory groups to enable better alignment with the publication of government emissions data.

In lieu of an Annual Conference this year, the key findings of the Annual Report will be highlighted at the GM Green Summit on 18th October 2021.

Partners' Progress

Our partners have also progressed their own action plans and the highlights of these are attached in Appendix A.

¹⁵ <https://www.manchesterclimate.com/gcom-cdp-reports>



PART 2

Citywide Progress 2020-21

This section provides progress against the four objectives in the Manchester Climate Change Framework 2020-25:

- Staying within our carbon budgets
- Climate adaptation and resilience
- Health and wellbeing
- Inclusive, zero carbon and climate resilient economy

The Carbon Budgets and Adaptation and Resilience sections of this report have been produced by two independent advisory groups; the Zero Carbon Advisory Group and the Adaptation and Resilience Advisory Group. These groups have been established by Manchester Climate Change Partnership and Agency to provide independent monitoring and reporting against the city's commitments.

The advisory groups for Health, Wellbeing and Climate Change, and Inclusive, Zero Carbon and Climate Resilient Economy are not yet in place and will be established during 2021. These sections have therefore been produced by Manchester Climate Change Agency, based on data available publicly and from partners.

The Partnership and Agency believe this approach is important to ensure the city has an honest and transparent view of progress against its commitments. As a result it will enable the city to celebrate and encourage more activity in the areas where good progress is being made, at the same time as focusing attention on areas where progress is not yet good enough and new interventions are required.

WHERE DO OUR EMISSIONS COME FROM?

There are three main sources of CO₂ emissions that Manchester is responsible for or which we have influence over:

Direct (energy-related) CO₂ emissions: from homes, workplaces and ground transport activities inside the city.

Aviation CO₂ emissions: from flights taken by Manchester residents and organisations, from Manchester and other UK airports. Also recognising that we have a responsibility to work with UK Government, UK airports and others to ensure that emissions from all flights from Manchester Airport are in line with the Paris Agreement.

Indirect / consumption-based CO₂ emissions: from the things that we buy and ultimately dispose of, for example, food, clothes, phones, electrical equipment, furniture, construction materials, many of which are produced outside of the city.

Unless otherwise stated, the emissions data reported in this section relates to the period between April 2020 and March 2021.

STAYING WITHIN OUR CARBON BUDGETS



OUR HEADLINE OBJECTIVE FOR 2020-25:

To ensure that Manchester plays its full part in helping to meet the Paris Agreement objectives by keeping our direct CO₂ emissions within a limited carbon budget, taking commensurate action on aviation CO₂ emissions and addressing our indirect / consumption-based CO₂ emissions.

This section has been produced by the Manchester Zero Carbon Advisory Group:

Dr Ali Abbas,
Joint-coordinator,
Manchester Friends of the Earth

Dr Joe Blakey,
Lecturer, University of Manchester

Prof Paul Hooper,
Head of Enterprise Development, Centre for Aviation, Transport and the Environment, Manchester Metropolitan University

Dr Christopher Jones,
Knowledge Exchange Fellow, Tyndall Centre for Climate Change Research at the University of Manchester

Matt Rooney,
Principal Consultant,
Anthesis

This section covers progress against our three sub-objectives for:

- Direct CO₂ emissions
- Aviation emissions
- Consumption-based emission

Direct CO₂ Emissions

Prepared by Dr Chris Jones (University of Manchester)¹⁶

Manchester's direct energy use carbon dioxide (CO₂) emissions fell by 3% between 2018 and 2019A provisional estimate¹⁷ for 2020 suggests that emissions may have fallen by a further 11% in the past year due to COVID-19 restrictions.

Figure 1 shows Manchester's historic energy related CO₂ emissions (emissions from direct fuel use in buildings, transport and industry, and electricity on a Scope 2 basis), with estimated emissions for 2019 and 2020 based on the national trend.

The figure also shows the recommended emissions pathway related to the Manchester carbon budget. The estimated annual energy use emissions of CO₂ for Manchester in 2020 are 1.8MtCO₂.

The latest data release on regional and local CO₂ emissions covers the period of 2005 to 2019. There have been some changes to the methodology for producing local CO₂ emissions sets (See[1]). These have primarily affected land-use based emissions but have also had implications for the energy CO₂ emissions attributed to the city.

The variation is negligible for the 2009 to 2011 period but there is an upward revision of energy CO₂ emissions for 2011 to 2018 in the Manchester Local Authority. Table 1 shows how emissions attributed to Manchester in BEIS Local and Regional Database have changed between the 2020 and 2021 releases. The 2021 data release is used in the rest of this report.

¹⁶ **NB:** All views contained with this report are attributable solely to the author and do not necessarily reflect those of researchers within the wider Tyndall Centre for Climate Change Research.

¹⁷ The interim provisional estimate provided here is based on the latest provisional statistical release for UK territorial energy related CO₂ emissions (international aviation, shipping and land use CO₂ emissions removed for consistency with local data) at the time, which covers 2019 and 2020 [3]. This analysis applies the % year on year change for these emissions at the national level to the latest local authority emissions data for Manchester. This therefore assumes that in 2019 and 2020 Manchester followed the national trend in CO₂ emissions. For reference last year's update report set a provisional emissions change estimate of 4% based on the national trend while 3% was seen in the final data release.

Table 1: Comparison of Energy Related CO₂ Emissions Attributed to Manchester in 2021 and 2020 Local and Regional Carbon Dioxide Database Statistical Releases.

	Manchester LA CO ₂ Emissions (exc. LULUCF) 2020 Data Release (ktCO ₂)	Manchester LA CO ₂ Emissions (exc. LULUCF) 2021 Data Release (ktCO ₂)	% Difference in Attributed Emissions
2005	3,275	3,275	0.0%
2006	3,364	3,365	0.0%
2007	3,224	3,225	0.0%
2008	3,230	3,230	0.0%
2009	2,884	2,885	0.0%
2010	3,030	3,033	0.1%
2011	2,745	2,755	0.4%
2012	2,951	2,966	0.5%
2013	2,853	2,871	0.6%
2014	2,487	2,511	1.0%
2015	2,374	2,404	1.3%
2016	2,196	2,235	1.8%
2017	2,075	2,118	2.0%
2018	2,035	2,094	2.9%

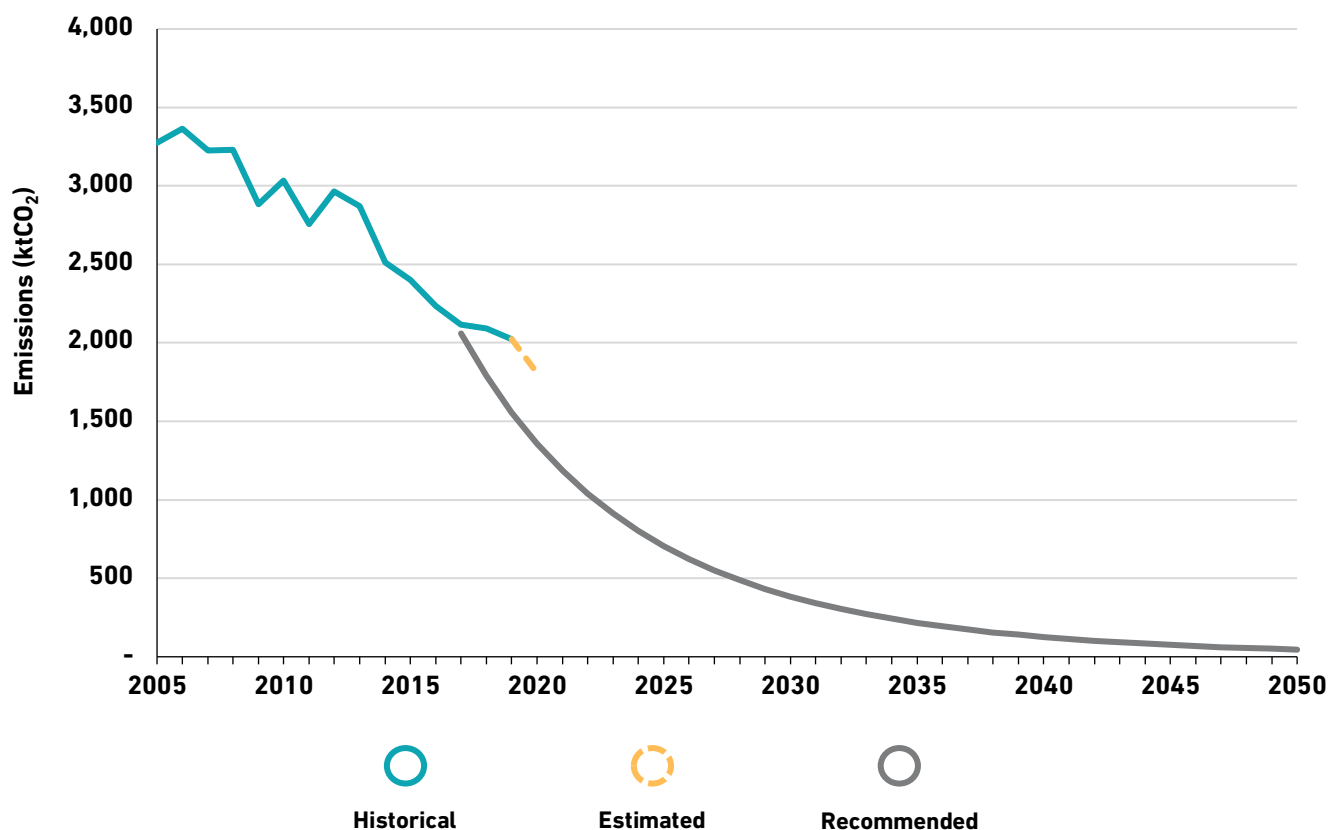


Figure 1: CO₂ Emissions for Manchester (Exc. LULUCF) and Recommended Emissions Pathway for the 2038 Carbon Budget

Manchester 2020 Carbon Target

Manchester has a long-standing carbon commitment to reduce scope 1 and 2 emissions by 41% against a 2005 baseline by 2020. This would equate to a carbon budget for 2005 to 2020 of 41.7 MtCO₂ with a linear (straight line) reduction rate. Including the provisional figure 2020, emissions for 2005 to 2020 were 42.8 MtCO₂. With the influence of the pandemic Manchester has bettered its 2020 endpoint goal, with emissions in 2020 45% lower than in 2005, however the implied budget for the period was exceeded by 3% due to higher than target emissions for many of the years prior to 2014.

Without the 11% reduction in emissions largely driven by lockdown restrictions in 2020, it is still likely that Manchester would have still achieved this end point target, having reached a 41% reduction in emissions against the 2005 baseline in 2019.

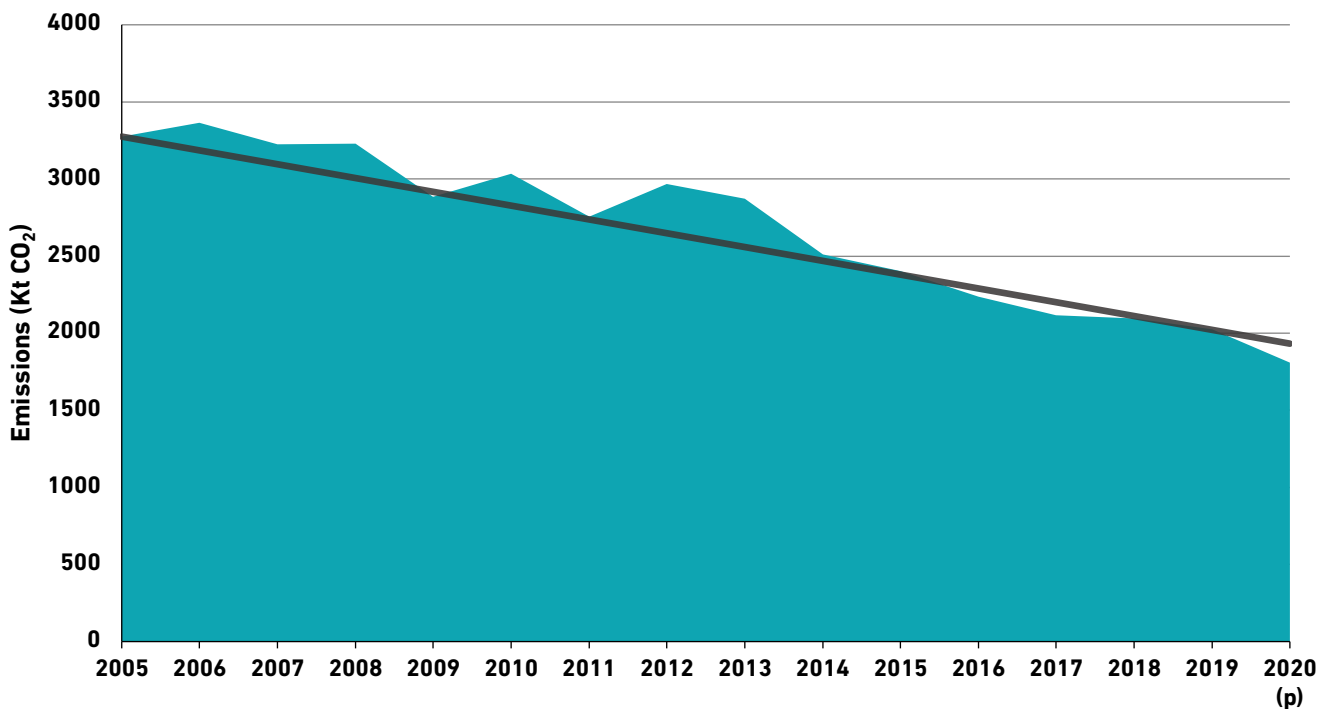


Figure 2: Progress Against Manchester's 2005 to 2020 Target. Data from [1] and Provisional Estimate Based on National Emissions Trend (p).



Budget used to date



Target (41% reduction by 2021)

Progress Against the 15 MtCO₂ Carbon Budget for Making a Fair Contribution to Meeting the UNFCCC Paris Agreement

Manchester has committed to a carbon budget that positions it to make a fair contribution to meeting the goals of the United Nations Paris Agreement. This sets a commitment for the city to limit its carbon emissions from energy from 2018 onwards to 15 MtCO₂ [2].

The figure below shows Manchester’s emissions [1] (provisional for 2020) compared to a pathway that evenly distributes the carbon budget over time. The emissions trend in the first three years of the carbon budget period (though 2020 is a provisional estimate) show Manchester is not yet following the recommended pathway, meaning that the carbon budget is being used at a faster rate. The distribution of the carbon budget can be varied in a number of ways, however slower reduction rates must be compensated for by faster reduction rates in the future to keep within the budget.

Notably the estimated 11% drop in emissions due to COVID-19 restrictions do not match the rate of mitigation needed to get Manchester onto the emissions pathway to stay within the carbon budget. An average reduction rate of 16% per year would now be required to stay within the budget based on an even distribution of the budget.

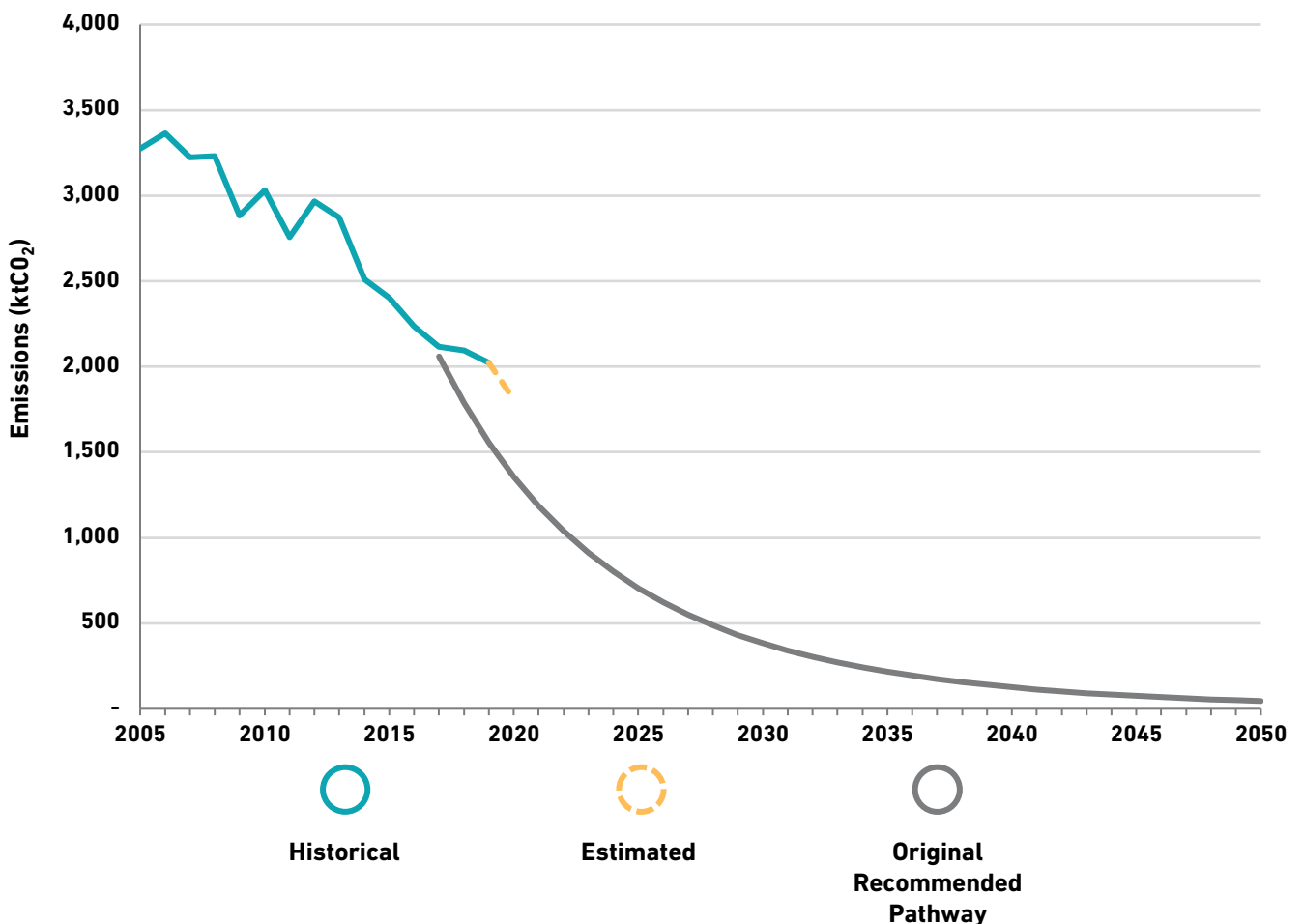


Figure 3: Progress in Reducing Energy Related CO₂ Emissions Against UN Paris Aligned Carbon Budget

The figure below shows how much of Manchester’s carbon budget, split into 5-year periods have been used so far. In the first three years 86% of the 2018 to 2022 interim carbon budget has been used. This means that Manchester will almost certainly exceed the first interim budget. The extent to which it does will depend on whether emissions resume, exceed or reverse pre-pandemic trends.

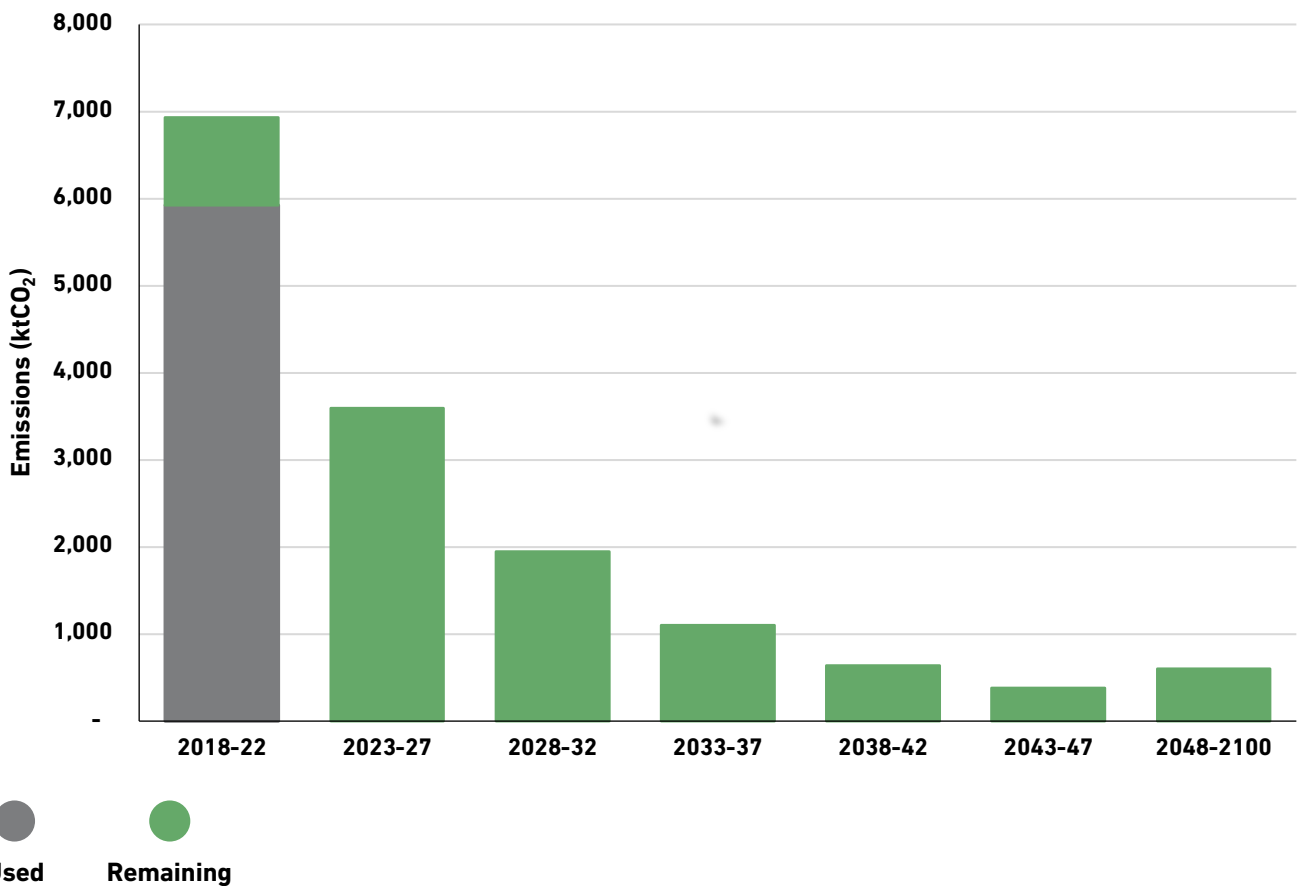


Figure 4: Manchester's Adopted Paris Agreement Aligned Carbon Budgets by Interim Period.

Pre-Covid Emissions Direct Emissions Trend

Due to the COVID-19 pandemic 2020 is a highly irregular year for emissions data. According to the provisional emissions data from BEIS, emissions fell by 11% in 2020 [3]. The biggest contributor to this reduction appears to be transport which had the largest proportional (20%) and absolute (24MtCO₂) decline over the year for the UK as a whole [3]. This sector has strong potential for a rebound if transport demand is not shifted to active travel and public transport modes on the relieving of COVID-19 restrictions.

Overall, there are considerable risks to Manchester staying within its carbon budget. Previous decreases in UK and Manchester emissions can largely be attributed to the decarbonisation of the UK national grid since 2012. Future emissions reductions will necessarily involve demand and technology changes for transport and the heating of buildings within Manchester itself. Manchester, as with the UK as a whole [4] is not yet on track to meet a Paris Agreement aligned carbon emissions pathway for well below 2°C of global warming.

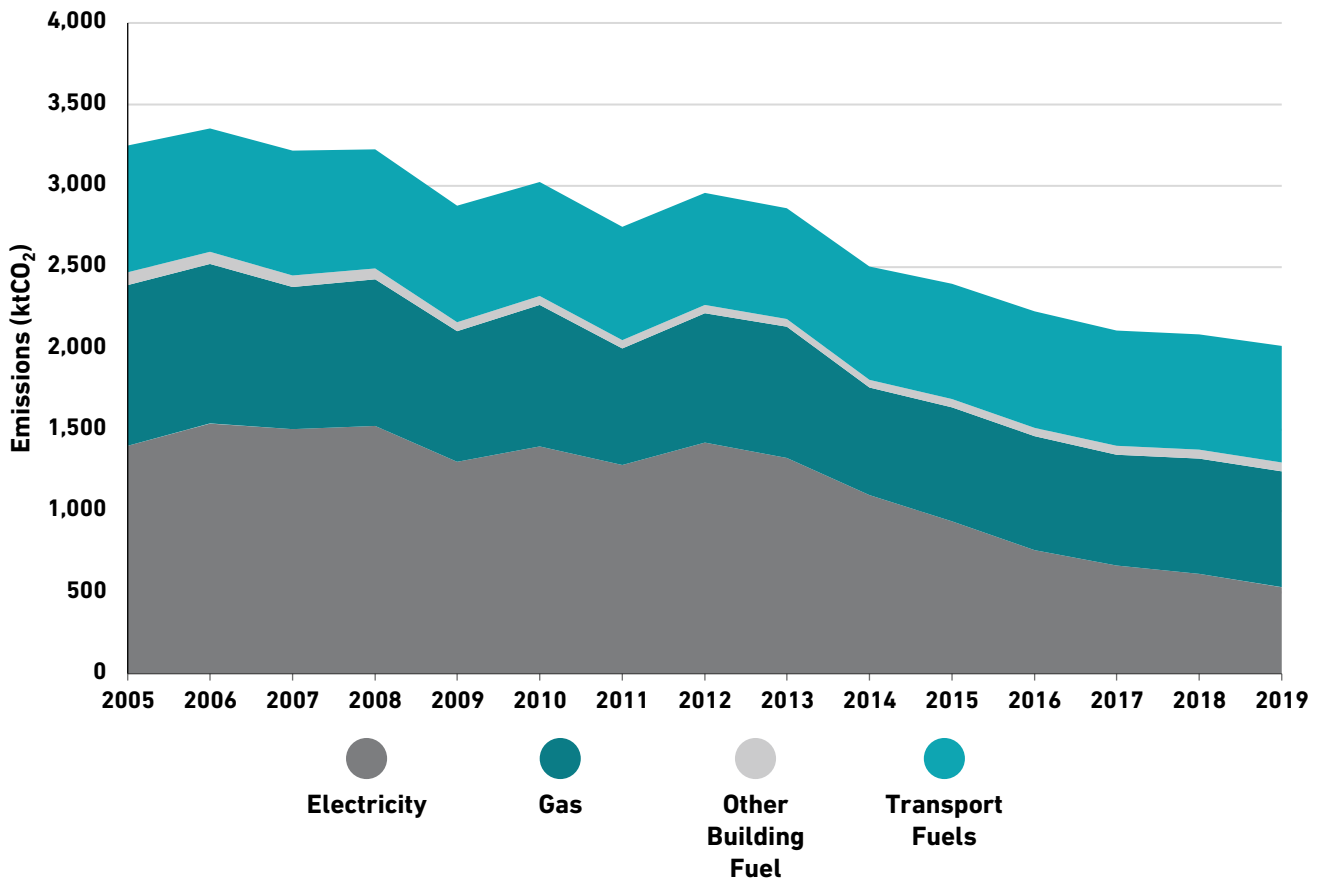


Figure 5: Manchester Direct Energy CO₂ Emissions by Fuel Type 2005 to 2019 [1]

Figure 6 shows how Manchester's direct energy use emissions have changed between 2005 to 2019, as reported in BEIS Local and Regional CO₂ Database. It shows how the significant reduction in electricity use emissions from around 2012 is the main contributor to emissions savings to date.

Figure 7 shows that this has happened while Manchester's population has grown, with electricity use emissions falling 64% between 2005 and 2019, while the population grew by 18% over the same period – highlighting the potential for emissions to reduce while population grows.

The Figure also shows however that per capita transport and building heating emissions have not fallen significantly and have been largely static since 2013.

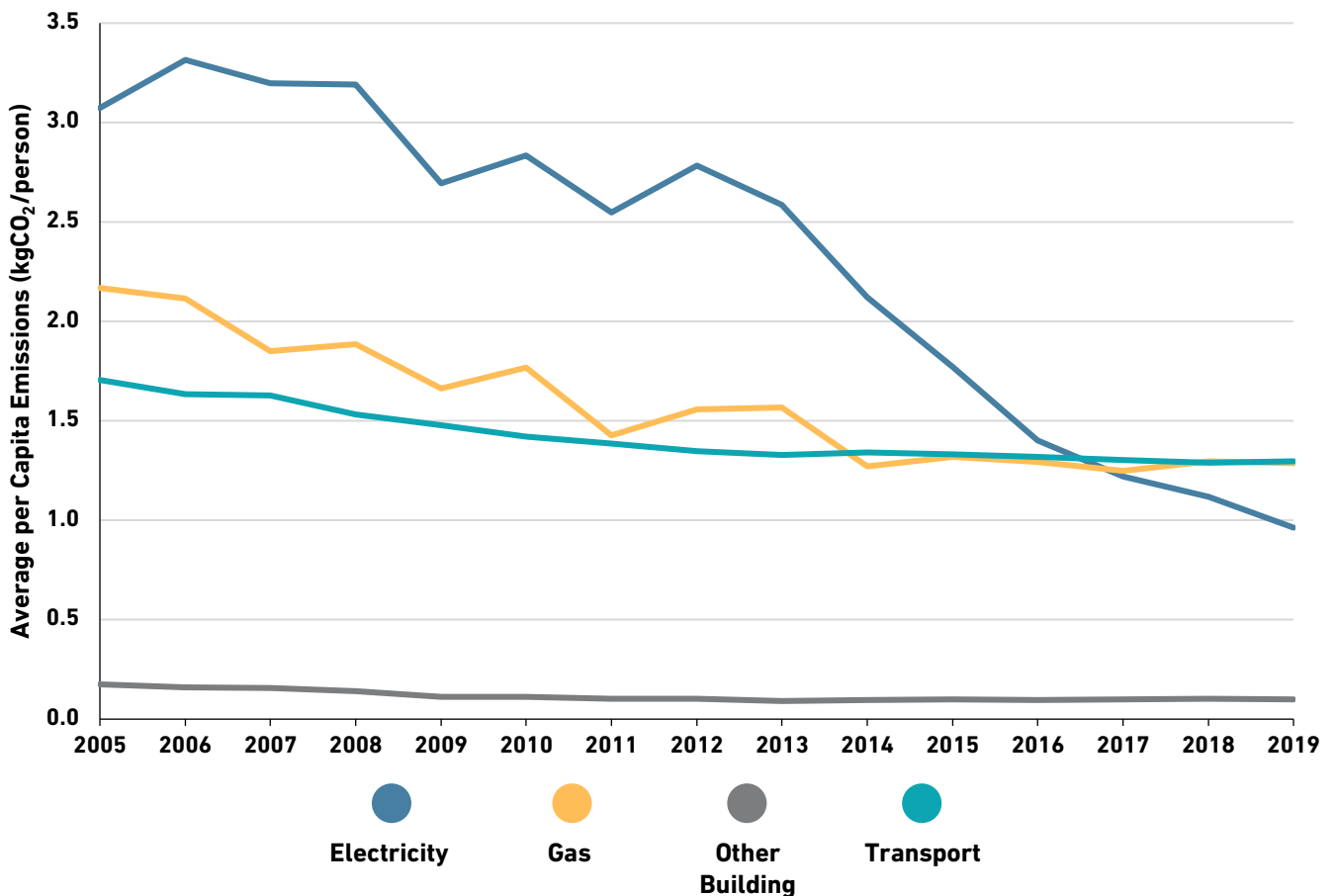


Figure 6: Manchester Direct Energy Use Emissions Averaged per Capita [1]

According to the BEIS data, vehicle emissions on minor roads are an important contributor to the lack of reductions in transport. Across road transport as a whole, emissions have reduced very little over the past decade, with an increase in the 2018 to 2019 period. This is likely primarily due to growing vehicle use on minor roads, offsetting some reduced emissions on A-Roads.

This also has implications for local air quality and vehicle emissions related ill-health and deaths. There is a wider national trend on transport emissions starting to increase pre-COVID-19 [3] which may reflect changes in the vehicle stock towards heavier petrol and diesel vehicles.¹⁸

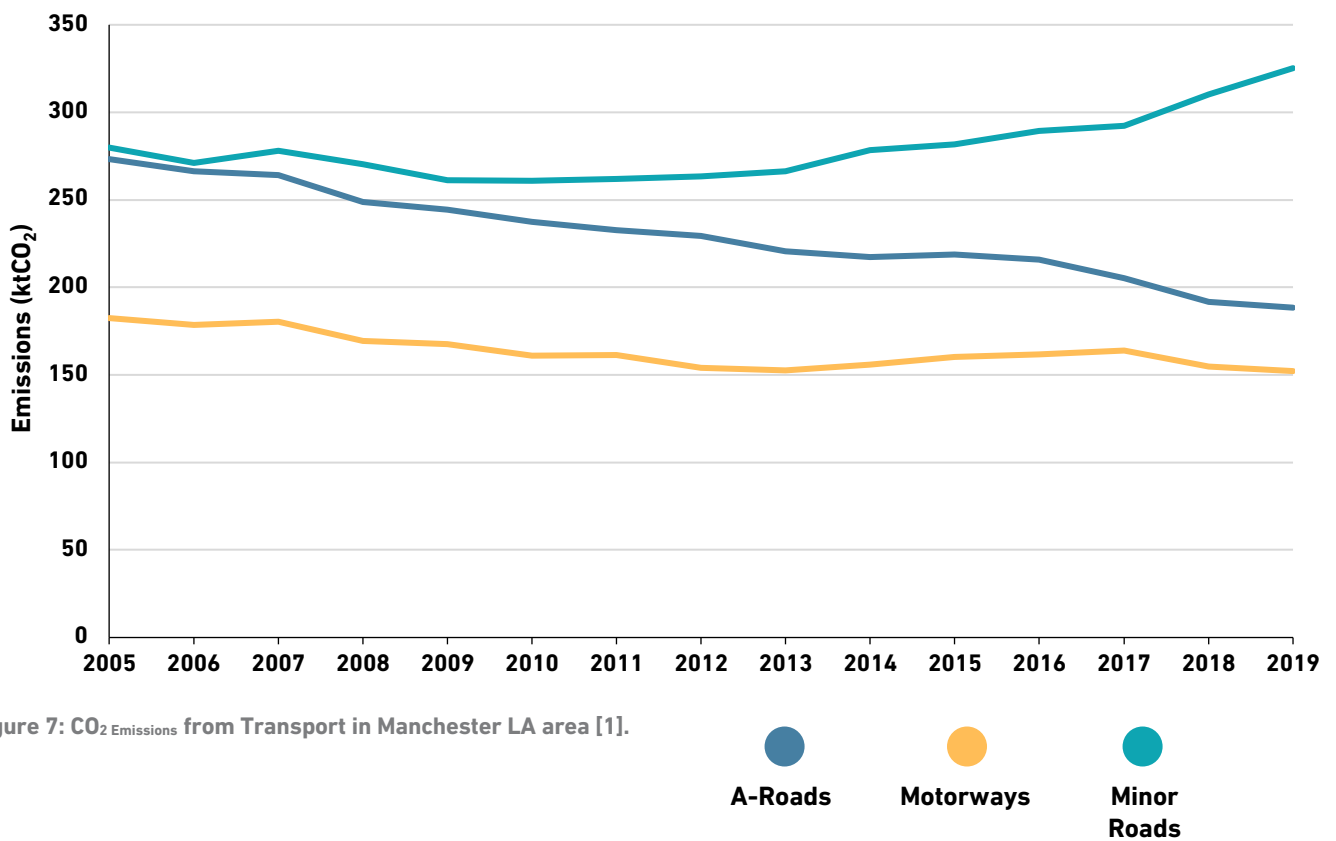


Figure 7: CO₂ Emissions from Transport in Manchester LA area [1].

¹⁸ <https://www.iea.org/commentaries/growing-preference-for-suvs-challenges-emissions-reductions-in-passenger-car-market>

A return to pre-pandemic trends will see Manchester continue to drift off-track from the rates of carbon reduction needed to stay within its Paris Agreement aligned carbon budget. While decarbonisation of the National Grid and improved energy efficiency in electrical appliances will continue to produce some further emissions savings, this alone will not put Manchester on track to meet its climate change goals.

City-wide initiatives to tackle natural gas use in homes and fossil fuel transport in Manchester are needed so that these sectors pull their weight. This is a situation replicated at the UK national level where there is a widening gap between stated ambition and policy to achieve this [4]. This risk is amplified if changes post-COVID-19 restrictions, particularly in transport, lead to a rebound in emissions to greater than 2019 levels. It is therefore a critical time for determining whether Manchester can meet its goal on direct energy use CO₂ emissions.

References

- [1] Department for Business, Energy and industrial strategy, "UK local authority and regional carbon dioxide emissions national statistics: 2005-2019," 2021. [Online]. Available: <https://www.gov.uk/government/collections/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics%0A>.
- [2] J. Kuriakose, K. Anderson, J. Broderick, and C. Mclachlan, "Quantifying the implications of the Paris Agreement for the City of Manchester," 2018. [Online]. Available: <http://www.manchesterclimate.com/sites/default/files/Manchester Carbon Budget.pdf>.
- [3] Department for Business, Energy & Industrial Strategy, "Provisional UK Greenhouse Gas Emissions National Statistics 1990-2020," 2021. [Online]. Available: <https://www.gov.uk/government/statistics/provisional-uk-greenhouse-gas-emissions-national-statistics-2020>.
- [4] Climate Change Committee, "Progress in reducing emissions 2021 Report to Parliament," 2021. [Online]. Available: <https://www.theccc.org.uk/publication/2021-progress-report-to-parliament/>.

Aviation Emissions

The COVID-19 pandemic had an unprecedented impact on many sectors of the economy, and the aviation industry had a particularly significant impact.

Restrictions on non-essential travel saw passenger numbers at Manchester Airport fall by 94% from 29.3 million in 2019 to 1.6 million in 2020.

Reduced demand and social distancing also led to a marked drop in load factors from 82% in 2019 to 64.5% in 2020. With planes flying with fewer passengers, this in turn led to a 63% increase in emissions per passenger.

As a result, we estimate that the fall in emissions from flights from Manchester Airport was slightly less steep than that in passenger numbers - a 91% reduction from 3.7 million tonnes CO₂ in 2019 to 0.34 million tonnes CO₂ in 2020.

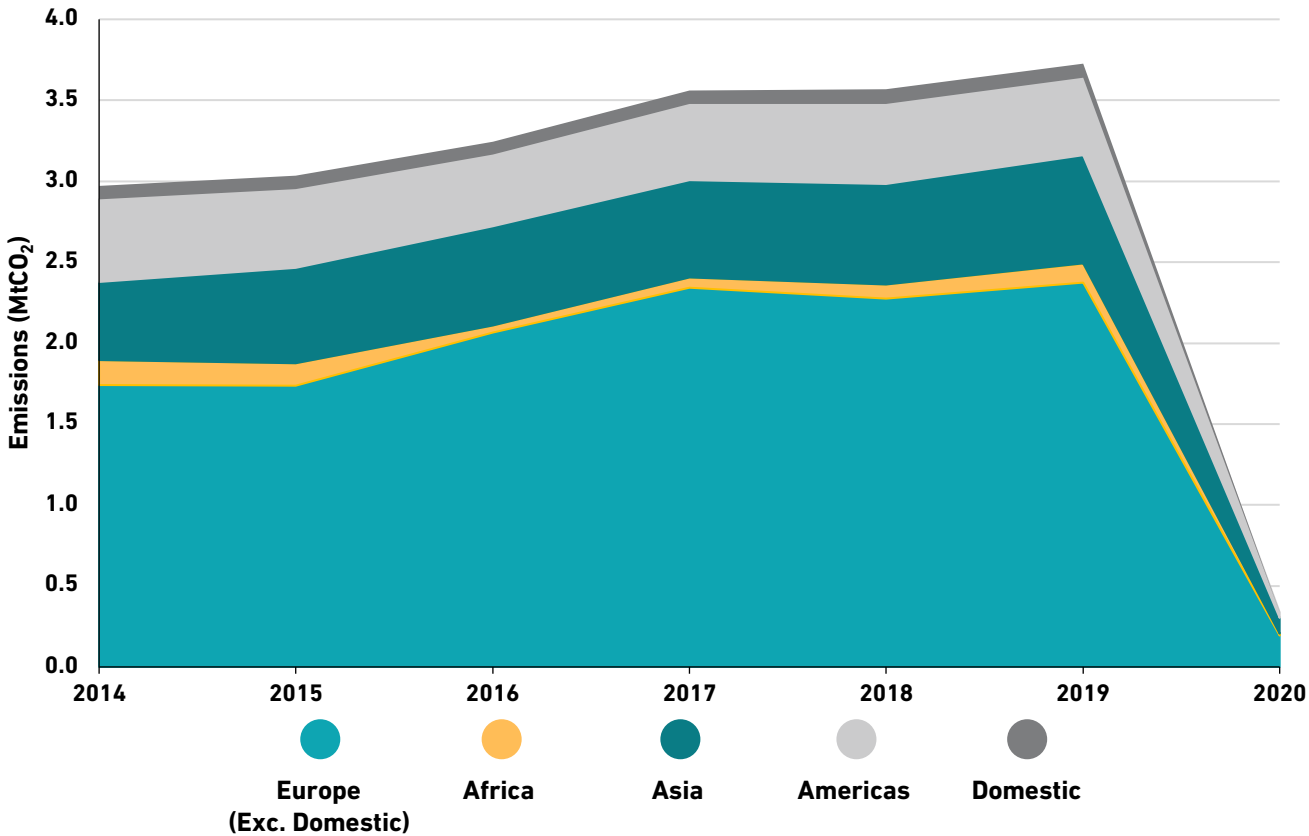


Figure 8: Manchester Airport, Carbon Footprint of Departing Flights 2014-2020

In comparison, UK aviation emissions are projected to have fallen by 75% from 37 million tonnes CO₂ in 2019 to 9.4 million tonnes CO₂ in 2020.

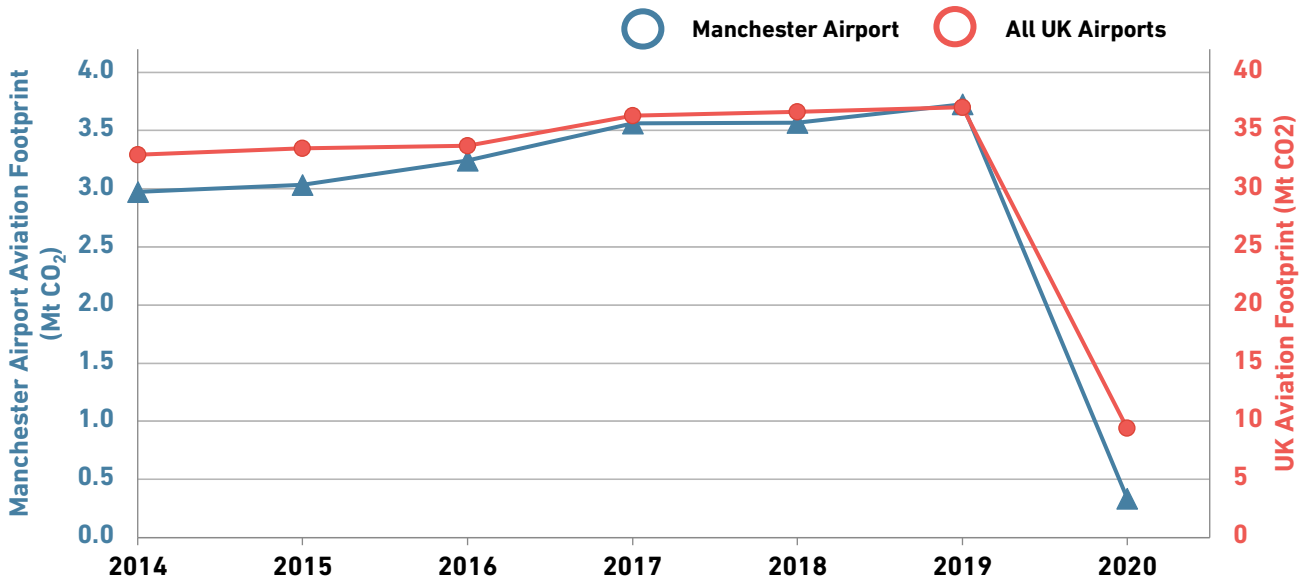


Figure 9: UK Aviation Footprint, Manchester Airport Aviation Footprint

Emissions from flights taken by Manchester residents from all UK airports followed a similar trend, falling by 91% from 0.19 Mt CO₂ in 2019 to 0.018 Mt CO₂ in 2020.

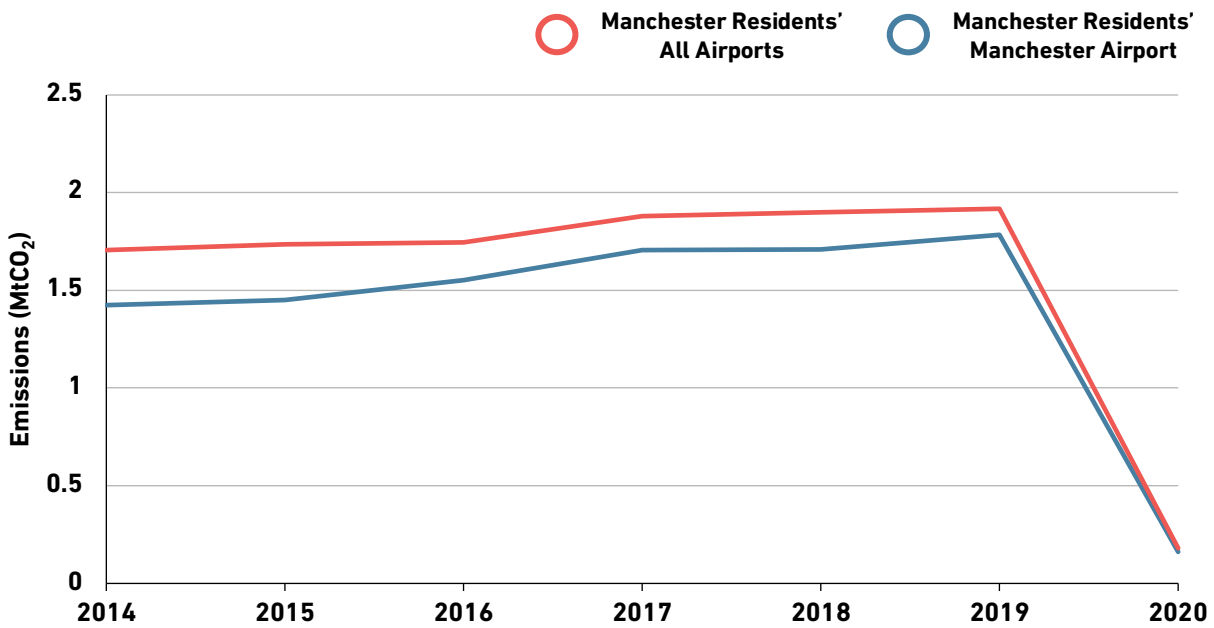


Figure 10: Emissions from Manchester Citizen Flights

In the last year, we've also seen the publication of two notable reports on future UK aviation pathways:

In 2020, Sustainable Aviation - a coalition of UK airlines, airports and manufacturers - issued its roadmap to net zero to 2050 through technological improvements, sustainable aviation fields and carbon offsetting and removal¹⁹, followed in June 2021 by an update with interim targets²⁰.

The Climate Change Committee published its Sixth Carbon Budget²¹, which recommended that aviation emissions in 2030 should be 20% below 2019 levels, without carbon offsetting or removal.

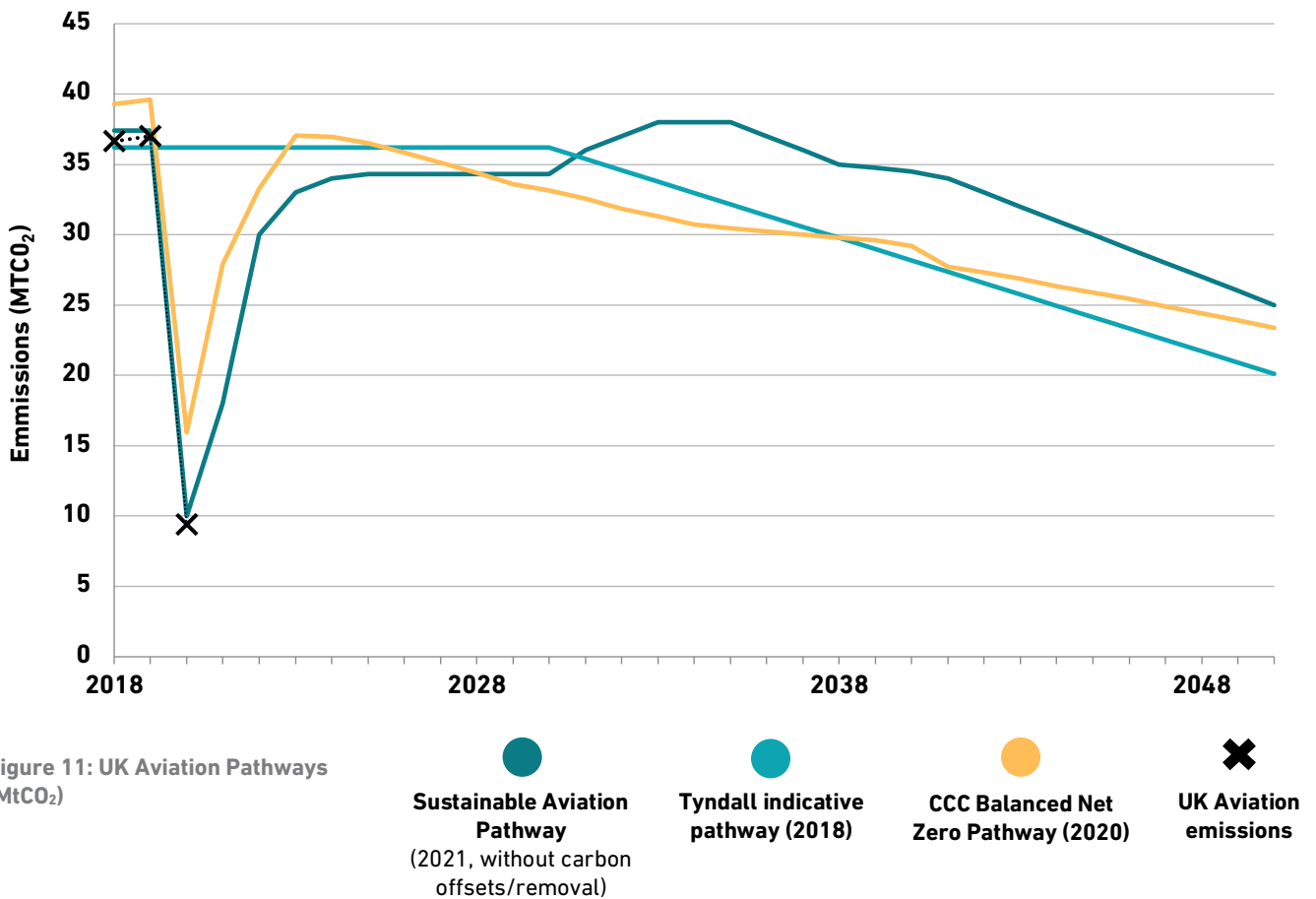


Figure 11: UK Aviation Pathways (MtCO₂)

¹⁹ https://www.sustainableaviation.co.uk/wp-content/uploads/2020/02/SustainableAviation_CarbonReport_20200203.pdf
²⁰ <https://www.sustainableaviation.co.uk/news/uk-aviation-industry-strengthens-commitment-to-achieving-net-zero-and-launches-first-interim-decarbonisation-targets/>
²¹ <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

There is still a great deal of uncertainty about the speed and nature of the aviation industry's recovery. The industry is expecting a relatively quick rebound in leisure flights, but the future trajectory of business flights is less clear with virtual meetings having become embedded during the pandemic.

The aviation sub-group (sitting underneath the Zero Carbon Advisory Group) will continue to monitor aviation emissions, and work with the Partnership to help members play their part in keeping to a pathway aligned with the Tyndall carbon budget and the recommendations of the Climate Change Committee.

Produced by the Manchester Zero Carbon Advisory Group – Aviation Sub-group:

Dr Ali Abbas,
Joint Coordinator,
Manchester Friends of the Earth

Dr Joe Blakey,
Lecturer, University of Manchester

Prof Paul Hooper,
Head of Enterprise Development, Centre for Aviation, Transport and the Environment, Manchester Metropolitan University

Dr Jaise Kuriakose,
Lecturer, Tyndall Centre for Climate Change Research, University of Manchester

Dr Christopher Pailing,
Senior Lecturer, Manchester Metropolitan University

Consumption-based Emissions

A consumption-based approach measures all of the carbon emissions consequent of goods and services consumed within the city, regardless of where they are produced. This contrasts the 'direct' or 'production-based' approach that underpins Manchester's zero-carbon budget, which instead relates to emissions directly occurring within the city and those underpinning the electricity it consumes.

A consumption-based approach is therefore an alternative way to understand the impact of Manchester's actions on planetary carbon emissions. Consider, for instance: a punnet of strawberries grown in Cheshire; a mobile phone manufactured in Zhengzhou, China; or cement produced in the Peak District, each of these are used by Manchester Residents, but their production creates emissions counted in other places.

According to a study led by C40 Cities, the consumption-based emissions of large

cities like Manchester need to be reduced by two-thirds²² within the next decade to play our full part in fulfilling the Paris Agreement. These would be overlooked if we only focused on direct emissions - which is why tackling our consumption-based footprint in parallel is vital for a more holistic picture.

The Manchester Climate Change Framework 2020-25 committed to better understanding the broader climate change impact of the city's consumption of goods and services and to take action to develop more sustainable consumption practices for the city's residents and organisations.

²² <https://www.c40.org/consumption>

Understanding Manchester's Consumption-Based Footprint

In November 2019 the Tyndall Centre was commissioned by the Manchester Climate Change Agency to review the city's climate change targets. As part of this review Dr Christopher Jones made a series of recommendations on how Manchester might measure and manage its consumption-based emissions²³.

This review noted that obtaining accurate and up-to-date data for city-level consumption-based footprints is a major challenge. Centrally, city-level consumption-based footprints rely heavily on assumptions, downsampling and estimations, painting a fuzzy picture. The lack of local data also means it is very hard to account for change that is specific to Manchester. We cannot, therefore, currently effectively track our progress year-on-year or set consumption-based emissions targets.

Based on a study by the C40 Cities Group²⁴ and the results of the Tyndall centre study we had previously

made a very rough estimate that Manchester's consumption-based footprint was around 60% greater than its production-based footprint - around 3.3 MtCO_{2e} for 2017.

More recently, the Centre for Research into Energy Demand Solutions (CREDS) has developed a place-based consumption-based carbon calculator²⁵. Though they also paint a somewhat fuzzy picture due to the data issues described above, their work has offered a greater resolution of understanding, as they draw upon UK-specific data and break down the footprint into numerous sectors.

CREDS estimate that Manchester residents are responsible for 5,645.3 kgCO_{2e} - 29% lower than the England average (Figure 12). Based on the population of the city in 2019 we can estimate a total consumption-based footprint of 3.12 MtCO_{2e} for Manchester in the year 2019. The largest proportion of our consumption-based footprint is estimated to be from flying (17%), followed by food and drink (16%) and gas usage (15%). It is important to note, however, that CREDS estimate huge geographical inequalities within

Manchester's consumption-based footprint²⁶.

These differences are because of big variations between individuals in their consumption of flying, food and drink, other goods, and recreation. These levels of consumption are closely correlated with individual wealth and income.

It is too early to say what effect the UK COVID-19 lockdowns and their economic consequences might have had on our consumption-based footprint. One study in Italy predicted that consumption-based emissions had fallen by 20%²⁷, whilst planetary emissions fell by around 7%²⁸.

²³ [https://www.manchesterclimate.com/sites/default/files/Consumption Based Carbon Target Setting.pdf](https://www.manchesterclimate.com/sites/default/files/Consumption%20Based%20Carbon%20Target%20Setting.pdf)

²⁴ <https://www.c40.org/researches/consumption-based-emissions>

²⁵ <https://www.carbon.place/la/>

²⁶ <https://www.carbon.place/>

²⁷ <https://doi.org/10.1016/j.scitotenv.2020.139806>

²⁸ <https://www.globalcarbonproject.org/carbonbudget/>

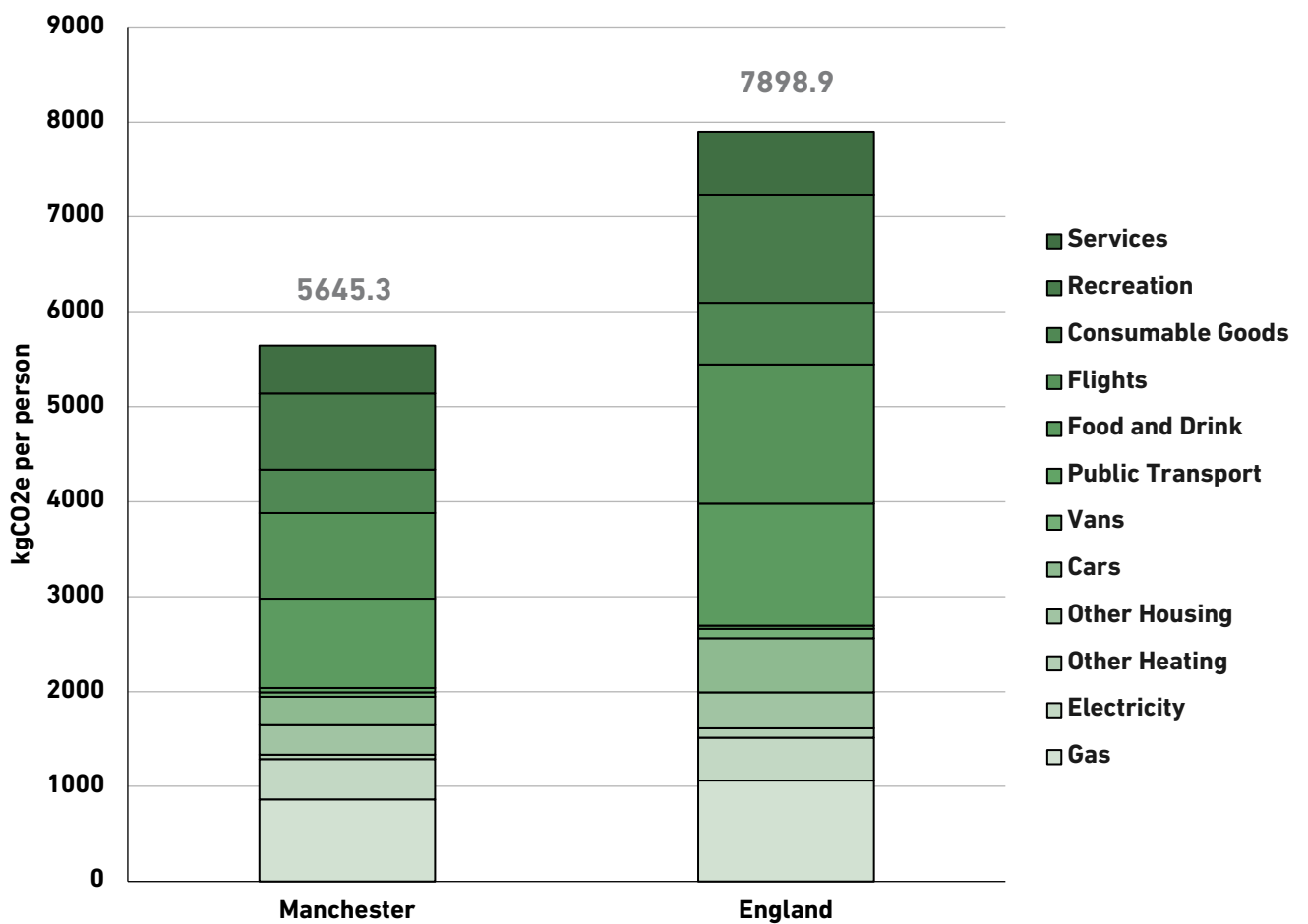


Figure 12: Estimated consumption-based footprint per capita for the City of Manchester compared to England. Adapted from CREDS.

Decarbonising Consumption Hotspots in the COVID-19 Recovery

Jones (2019)²⁹ advised that action should focus on the following consumption-based emissions hotspots: food and drink, transport, construction, clean and waste water, and other manufactured goods. In February 2021 Dr Jane Wendler and Dr Joe Blakey extended this review to look at how these consumption-based emissions hotspots can be decarbonised in the economic recovery³⁰ from COVID-19. It brought together academic and grey literature alongside insights generated from two workshops with academics, organisations and citizens held in October 2020 to explore the 'low hanging fruit' alongside the more radical actions necessary to keep us within safer levels of warming. Meanwhile, Dr Josephine Mylan undertook a 'deep dive' study on the role of food in particular³¹. Both studies made inroads for strategizing on mitigating consumption-based emissions in the pandemic recovery and will form an appendix to the refresh of the Manchester Climate Change Framework.

The first report highlighted the need for a climate-first recovery from the COVID-19 lockdown.

Economic recovery interventions from policy-makers have tended to encourage consumption and thus risk increasing consumption-based carbon emissions. Cities have a key role to play in ensuring this does not happen.

It also highlighted the key role of tackling inequalities in consumption. Consumption-based emissions of the poorest half of the world's citizens fell by nearly a quarter in the years between 1990 and 2015 and grew by 3% for the richest 10%³². At the same time, the richest 10% of the world's population are responsible for more than half of the world's emissions. It has been estimated that a net worth of around £67,500 (financial assets, plus real assets, minus debts) would put you in the richest 10% of people around the world in 2018³³

The reports also made a series of more specific recommendations for actions on each hotspot:

Food and drink - included supporting a low carbon food culture, low carbon school meals, creating a better work life balance to allow people to engage more in sustainable food practices, and promoting low carbon food in workplaces. Dr Mylan's 'deep dive' report

will similarly advocate a systemic approach, leveraging Manchester's role in generating demand for food, by engaging with activities such as:

- food processing by businesses, food retail, and the hospitality sector;
- the provision of meals in public contexts (e.g. schools and hospitals);
- shaping the infrastructure provided to households (e.g. proximity of food retail to housing; waste collection; transport); and
- direct engagement with consumers (e.g. through education and information campaigns).

It also highlights the multiple economic, social and environmental co-benefits of addressing key problem areas identified in the city's food provision, including reducing food waste, meat consumption, single use plastics and food insecurity.

Construction – included enforcing carbon indicators in planning and procurement, encouraging experimentation in low carbon construction, creating a local base of low-carbon skills, and building only when absolutely necessary.

²⁹ <https://www.manchesterclimate.com/sites/default/files/Consumption%20Based%20Carbon%20Target%20Setting.pdf>

³⁰ <https://www.manchesterclimate.com/green-recovery/decarbonising-consumption>

³¹ <https://www.manchesterclimate.com/content/incorporating-food-manchester%E2%80%99s-climate-change-response>

³² <https://www.oxfam.org/en/research/confronting-carbon-inequality-european-union>

³³ <https://www.cnn.com/2018/11/07/how-much-money-you-need-to-be-in-the-richest-10-percent-worldwide.html>

Other manufactured goods

- included removing advertisements for high-carbon goods from public spaces, decarbonising final mile delivery through bicycles, buying less and buying better, and working to move away from our high-consumption and often throwaway culture.

Waste and wastewater

- included tackling food waste by supporting businesses that redistribute it, reducing water demand (and hence the need for treatment), moving towards low-consumption and circular economies, and creating better waste management infrastructure to avoid landfill and incineration.

Transport beyond the city

- included accelerating active travel schemes, enabling cycles on trams, encouraging working from home, discouraging international business travel, and addressing travel inequalities (aviation, for instance, accounts for around half of the emissions of the super-rich³⁴).

Moving Forwards

The Consumption-Based Emissions Sub-Group of The Manchester Zero Carbon Advisory Group, led by Dr Joe Blakey (The University of Manchester), will work to expand our understanding of Manchester's consumption-based emissions, enabling the city to better monitor and manage them.

We will continue to work towards tackling these hotspots, whilst also improving our understanding of Manchester's overall consumption-based footprint and working to track changes year-on-year.

Produced by the Manchester Zero Carbon Advisory Group – Consumption-based emissions sub-group:

Dr Joe Blakey,
Lecturer, The University of Manchester

Dr Josephine Mylan
Lecturer, The University of Manchester

Dr Jana Wendler
Playfuel Games/ The University of Manchester

³⁴ <https://www.nature.com/articles/s41558-019-0402-3>

ADAPTATION AND RESILIENCE TO THE CHANGING CLIMATE



OUR HEADLINE OBJECTIVE FOR 2020- 25:

*Our objective for 2020-25:
To adapt the city's
buildings, infrastructure
and natural environment to
the changing climate and
to increase the climate
resilience of our residents
and organisations.*

This section has been produced by the Manchester Adaptation and Resilience Advisory Group:

Dr Jeremy Carter,
Senior Lecturer, University of Manchester

Karl Astbury,
Senior Policy Advisor,
Greater Manchester
Combined Authority

Matt Ellis,
Climate Resilience Lead,
The Environment Agency

Dr Paul O'Hare,
MCCA Adaptation and
Resilience lead, Senior
Lecturer, Manchester
Metropolitan University

The Partnership and Agency acknowledge the adaptation and resilience dimension of work to address climate change requires further development if our commitments and actions are to reach parity with – and complement – mitigation efforts.

Manchester is exposed to a range of weather hazards. These will be exacerbated by climate change, potentially creating significant future challenges for the health, wellbeing and prosperity of the city. There is a projected shift towards higher temperatures and seasonal changes in precipitation patterns with drier, hotter summers, wetter winters and an increased incidence of extreme weather events.

Flooding is Manchester's most prominent extreme weather and climate change threat. Floods in February 2020 and 'near-misses' in January 2021 are just the latest indicators of the damage and disruption that these events can cause. Although currently relatively uncommon, droughts, heatwaves and wildfires represent future risks. Of particular concern is the impact that hotter summers will have on the health and wellbeing of the city's residents, workers, and visitors.

Understanding climate change hazards is just one dimension of our climate risk. We must consider our exposure and vulnerability to climate hazards, as well as our capacity to respond to them if we are to fully appreciate the full extent of our climate risk.

Many aspects of the city are exposed to the direct and indirect impacts of weather hazards. Earlier this year, the Agency published Manchester's climate risk: a framework for understanding hazards & vulnerability³⁵. This document establishes an evidence base and structure for more detailed climate risk assessments for the city and its stakeholders. It identifies weather related hazards in the city and considers how climate change might affect them. It also establishes a framework to support a comprehensive assessment of the city's vulnerabilities and exposure to climate change and to evaluate our capacity – or lack thereof – to respond to these threats.

More effort is required to fully appreciate the extent of the risk of climate change for Manchester, both in terms of exposure and vulnerability. This is a complex but vital task that will support coordinated action to collectively create a more climate resilient Manchester.

Although the risk associated with climate change cannot be eliminated altogether, it is possible to build capacity and take action to adapt and to enhance climate resilience. On-going work at the Agency will develop an overarching strategic vision for a more climate resilient Manchester. Making progress is further supported by the bolstering of strong stakeholder networks in Manchester, and more widely in Greater Manchester and beyond.

This includes work to co-produce a vision for a climate resilient Manchester which will explicitly link adaptation and resilience responses to other priorities in the city, including inclusive economic growth, in realising social justice and in identifying and maximising synergies between climate adaptation and mitigation. This will be accompanied by a series of principles that will frame action on the part of strategic stakeholders, businesses, communities and citizens to collectively realise greater climate resilience and adaptation.

³⁵ <https://www.manchesterclimate.com/sites/default/files/Climate%20vulnerability%20framework.pdf>

Work throughout the remainder of 2021 and into early 2022 will identify good practice for the realisation of climate adaptation and resilience across the city. This will include monitoring the development of indicators for adaptation and resilience and building on learning from the IGNITION project review of green infrastructure target setting. We will also work with stakeholders to identify and report progress that is already being made and is on-going to enhance climate resilience.

The current Climate Change Framework places particular emphasis on enhancing green infrastructure (GI) and nature-based solutions (NBS) as a key response to the changing climate. GI and NBS can help to reduce risks linked to flooding and high temperatures and can also reap a range of co-benefits for the city, its inhabitants, workers and visitors.

In practical terms, the following examples are some of the activities taking place to enhance Manchester's climate resilience.

IGNITION³⁶: the headline objective of this project is to establish innovative funding and delivery mechanisms to increase Greater Manchester's urban green infrastructure over the next two decades. To date the project has produced a green infrastructure baseline that will be used to better understand and plan the enhancement of existing and new green spaces in Manchester. IGNITION is also developing a planning support system that can inform decisions on locations where GI investments could be targeted to maximise positive outcomes.

GrowGreen³⁷: an €11.2m project running from 2017-22, coordinated by Manchester City Council, to support cities to develop and implement plans to become greener and better adapted to climate change. Manchester's new community park in West Gorton has now opened and demonstrates how nature-based solutions such as swales, bio-retention tree pits, rain gardens and permeable paving can be used to reduce surface water flooding in urban areas. Additionally, a piece of work has been commissioned to develop a river valley strategy for Manchester

demonstrating how they can be better utilised to mitigate the impact of climate change and maximise other benefits such as improved biodiversity and health and wellbeing.

Green and Blue Infrastructure Action Plan Refresh: This refresh will include 18 streamlined actions making it easier for organisations to see where their commitments can fit in and add value, building momentum around the GI agenda and to the city's overall climate resilience³⁸.

Northern Gateway development³⁹: this development, on the River Irk, is planning to invest over £16m into flood mitigation and river works alongside major enhancements to the existing green spaces.

Mayfield development⁴⁰: Mayfield will include a new multifunctional city park to provide recreation space for Manchester residents and visitors, manage flood water, and increase biodiversity. It will be the biggest creation of public open space in the city since the Victorian parks were created.

³⁶ <https://www.greatermanchesterca.gov.uk/what-we-do/environment/ignition/>

³⁷ www.growgreenproject.eu

³⁸ https://secure.manchester.gov.uk/info/500002/council_policies_and_strategies/7061/green_and_blue_infrastructure

³⁹ <http://northerngatewaymanchester.co.uk/>

⁴⁰ <https://mayfieldmanchester.co.uk/>

During 2021 and 2022 we plan to:

1. Refine the emerging vision for realising greater climate resilience and adaptation. This will include the development of a series of objectives for resilience, and associated actions for strategic stakeholders, business, and communities.
2. Support research and planning that assesses climate risk and develops associated adaptation and resilience responses.
3. Include adaptation and resilience in the engagement, education and support activities delivered by Manchester Climate Change Agency, and across the wider Partnership. This will include giving specific attention to climate resilience and adaptation in the Framework refresh and associated consultations.
4. Continue to deliver the 'Green Infrastructure and Nature-based Solutions' action in the Climate Change Framework. Support will also be given to the refresh of the city-wide Green & Blue Infrastructure Strategy currently underway.
5. Provide constructive support and input to refresh of the Manchester Local Plan which will provide an opportunity to update the statutory planning framework for the city to ensure it is supportive of efforts to increase the pace of adaptation and aspiration to build a more resilient city. Issues for consideration will include, the approach to flood risk, dealing with heat stress in new buildings and delivering sustainable drainage systems.

Together, these efforts will coordinate our collective effort to enhance the city's resilience to climate change.



TRANSPORT



The transport sector is now responsible for the largest share of carbon dioxide emissions nationally, and the level of transport related emissions has been relatively static in recent years in contrast to the quite significant reductions in the energy sector made through the decarbonisation of the national grid. During the last year, the Climate Change Agency and Partnership have engaged with the City Council and Transport for Greater Manchester in relation to the development of transport policy and strategy and have made representations on key policy documents being developed during the year. TfGM's Head of Strategic Planning, Insight and Innovation has been appointed to the MCCP Board during 2021 to help further strengthen the Partnership and Agency's work on transport related matters. The Partnership has also recently considered a paper outlining the content of the Government's Transport Decarbonisation Strategy

which was published in July 2021.

The Partnership was consulted during the development of the City Centre Transport Strategy (CCTS) which was adopted by Manchester City Council in June 2021⁴¹. The document forms a sub-strategy of Transport 2040, the Local Transport Plan produced by TfGM and adopted by the Greater Manchester Combined Authority in December 2020⁴².

The CCTS sets out a vision for the City Centre to be:

"..... a well-connected, zero-carbon city centre at the heart of the North, offering our residents, employees and visitors a great place to work, live and visit."

The Partnership was supportive of the bold ambition contained within the Strategy to make 90% of morning peak journeys into the city centre by active travel modes or public transport. This is in support

of the "Right Mix" vision that aims for a million more sustainable journeys across the conurbation every day by 2040.

During the COVID-19 pandemic there was a tremendous increase in walking and cycling across the city. This was assisted by the implementation of various projects to reallocate road space to Active Travel. Now 13% of residents in GM cycle at least once a week. However, there is a risk that as travel patterns return to pre-pandemic levels, the gains in more healthy modes of transport could be lost.

Significant progress was made in implementing measures to support Active Travel during the year with the Bee Network being developed across the city and the wider conurbation. The Bee Network is a 10-year, £1.5 billion plan for a 1,800 mile cycling and walking network.

⁴¹ https://secure.manchester.gov.uk/downloads/download/1871/transport_strategy_for_manchester_city_centre

⁴² <https://tfgm.com/2040-transport-strategy>

There is now a comprehensive overview of the proposed projects to be brought forward to implement that step-change ambition⁴³.

The Agency has also recently made representations regarding Transport for the North's Draft Decarbonisation Strategy and has stressed the importance of working to deliver on an approach to transport decarbonisation, based on science based targets.

The intention is for Framework 2.0 to be more explicit about the range of transport measures and changes in travel behaviour that will be required to deliver the scale of transport related carbon reduction for the city to live within the adopted carbon budget.

This will include encouraging individuals and businesses to change their travel behaviours as well as identifying the actions that will be required to remove barriers to individuals and businesses that want to do more to reduce their transport related carbon emissions but may currently be deterred from doing so.

The intention will be for the Plan to be used to advocate for the resources that the city needs to address these barriers and improve active travel infrastructure, public transport alternatives and electric vehicle charging facilities.

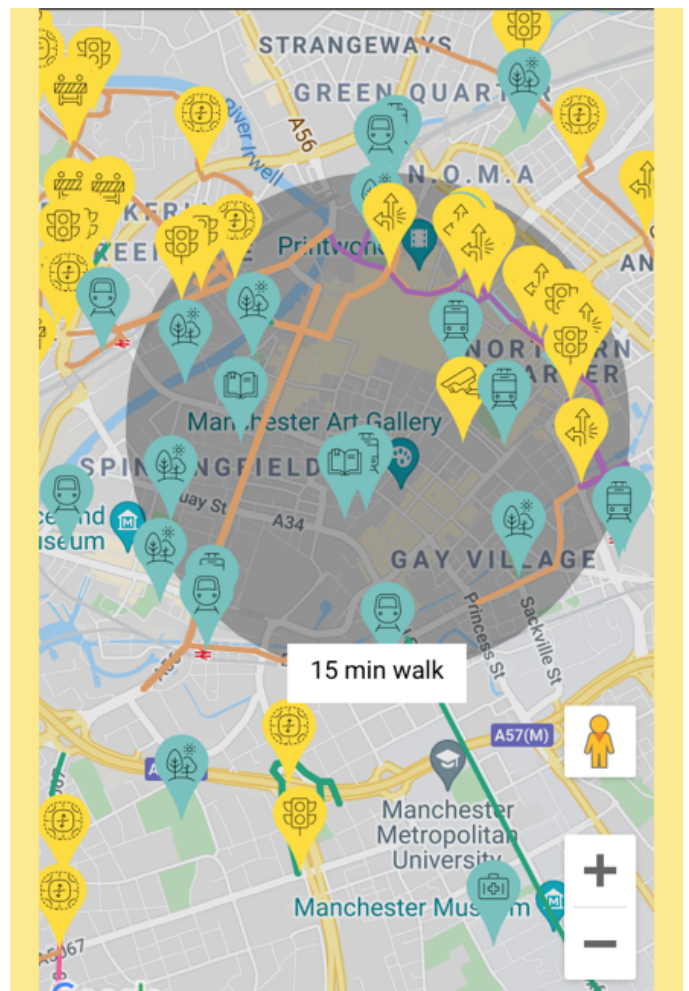


Figure 13: Interactive Map of Manchester's Cycling and Walking Projects

⁴³ <https://activetravel.tfgm.com/>

Clean Air Plan

The UK Health Advisory Group highlighted the issue of air pollution as a cross-cutting area of concern and stated the need to “support a just energy transition that minimises air pollution from all sources”. Poor air quality is the biggest environmental risk to public health⁴⁴.

In recognition of the urgency of acting on this issue, all ten local authorities have worked together to develop the Greater Manchester Clean Air Plan⁴⁵. This will help bring nitrogen dioxide (NO₂) levels on local roads within legal limits by 2024.

It includes a Greater Manchester-wide Clean Air Zone, which is anticipated to launch on 30 May 2022. More than £120m in government funding will also be available to support eligible Greater Manchester businesses, people and organisations to move to cleaner vehicles before the Zone is introduced.

The Greater Manchester Clean Air Zone will operate 24 hours a day, seven days a week, all year round, and include most local roads in Greater Manchester. Most roads managed by Highways England, such as motorways and trunk roads, will not be included, with a few exceptions.

The categories of vehicles included in the Clean Air

Zone, and minimum emission standards, are set by government in its Clean Air Zone Framework. Private cars, motorbikes and mopeds are not included in the Zone. The following vehicles will pay a daily charge if they don't meet emission standards:

- Light goods vehicles, heavy goods vehicles, buses, coaches, hackney cabs, private hire vehicles and minibuses.

There will also be some temporary and permanent exemptions, and discounts.

This transformative investment will not only address poor air quality but also result in a complementary reduction in carbon emissions.

As an example of innovative investment in this field, Manchester City Council has spent £10m commissioning 27 electric Refuse Collection Vehicles, that are now providing a cleaner, greener service across the city. This electric fleet is a first for the UK. The vehicles have been well received and have been given nicknames such as: Sparkus Trashford, Usain Volt, Trashienda, Bin Diesel and Binspiral Carpets.

This investment will allow the Council to make significant progress against its zero-carbon action plan that aims to halve its direct emissions by 2025, as part of the wider

drive to make Manchester zero carbon by 2038, at the latest.

⁴⁴ <https://www.theccc.org.uk/publication/ucl-sustainable-health-equity-achieving-a-net-zero-uk/>

⁴⁵ <https://cleanairgm.com/clean-air-plans>



HEALTH AND WELLBEING



OUR HEADLINE OBJECTIVE 2020-25:

To improve the health and wellbeing of everyone in Manchester through actions that also contribute to our objectives for CO₂ reduction and adaption and resilience, with particular focus on those most in need.

Following an unprecedented year, and due to relevant partners' focus on the pandemic during 2020, the Partnership has re-engaged with Health & Social Care Partners during 2021. The intention is to engage the Manchester Health & Wellbeing Board and the GM Health & Social Care Operational Group in the development of Framework V2.0 and to seek their support with creation of Advisory Group to the Partnership on Health & Wellbeing. Awaiting the outcome of that engagement, this section has therefore been produced by Manchester Climate Change Agency, based on publicly available data and from the work of Manchester organisations.

There have been a number of reports published over the last year that will inform and influence the work of the Partnership in taking climate action that also addresses the conclusions and recommendations in those reports.

“The Climate emergency is a Health Emergency”

So declared the World Health Organisation (WHO)⁴⁶ when commenting on the publication of a major report by the Intergovernmental Panel on Climate Change (IPCC) – the world’s largest and most comprehensive assessment of the state of the planet⁴⁷.

Climate change is now an existential health problem overshadowing all others. Unprecedented changes in the Earth’s climate have been recorded in every region and the world is currently 1.09°C warmer than in the second half of the 19th century. The past five years have been the hottest on record since 1850.

Climate change is adversely affecting human health by increasing exposure and vulnerability to climate related stresses. Observed and detected climatic changes that affect human health include extreme weather events, a changing distribution of health risks, increased risks of undernutrition, displacement of populations and greater risks of injuries, disease and death⁴⁸.

Risks are projected to be lower at 1.5°C than at 2°C for heat-related morbidity and mortality, ozone-related

mortality, and undernutrition. However, even the impacts of 1.5°C could disproportionately affect disadvantaged and vulnerable populations through food and water insecurity, higher food prices, income losses, lost livelihood opportunities, adverse health impacts, and population displacements.

Urban areas are particularly vulnerable to global warming when it comes to human health, because of the heat island effect in urban areas. The extent of risk to human health depends on human vulnerability and the effectiveness of adaptation for regions (coastal and non-coastal), the nature of informal settlements, and the design of infrastructure sectors (energy, water, and transport).

Climate change is projected to be a poverty multiplier. The health risks that come with global warming are unevenly distributed and are generally greater for disadvantaged people and communities in countries at all levels of development. Some examples of health impacts are illustrated to the right (from WHO)⁴⁹.



EXTREME WEATHER EVENTS

- Injuries
- Fatalities
- Mental health effects
- Mass migration events



HEAT STRESS

- Heat-related illness and death



AIR QUALITY

- Exacerbations of asthma and other respiratory diseases and allergies
- Cardiovascular disease
- Lung cancer



WATER QUANTITY AND QUALITY

- Campylobacter infection
- Cholera
- Cryptosporidiosis



FOOD SUPPLY AND SAFETY

- Undernutrition
- Foodborne diseases
- Mycotoxin effects



VECTOR DISTRIBUTION AND ECOLOGY

- Chikungunya
- Dengue
- Malaria
- Encephalitis



SOCIAL FACTORS

- Physical and mental health effects of violent conflict and forced migration (complex and context-specific risks)



WILDFIRES

- Injuries
- Fatalities
- Mental health effects
- Displacement

⁴⁶ <https://twitter.com/WHO/status/1424735822985764873?s=20>

⁴⁷ <https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>

⁴⁸ https://cdn.who.int/media/docs/default-source/climate-change/who-the-1-5-healthreport.pdf?sfvrsn=61b2098_3&download=true

⁴⁹ <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

UK Health Expert Advisory Group

These international warnings have been echoed nationally. The UK Health Expert Advisory Group was formed by the Climate Change Committee (CCC) in 2020 to advise on developing an approach to assessing the health impacts of setting the sixth carbon budget covering 2033-2037, which will set a new path towards the target date of net-zero carbon emissions by 2050⁵⁰.

The key conclusion is that climate change is already damaging the health of populations in the UK and globally and has the potential to increase health inequalities. Actions to combat climate change, done in the right way, could improve health and health equity. Conversely, actions to improve health and health equity have the potential to reduce greenhouse gas (GHG) emissions.

The group identified four key areas in which action would bring benefits to public health and reduction of health inequalities whilst contributing to the mitigation of, and adaptation to, climate change: transport, buildings, diets, and sustainable economic and employment models that better support health and wellbeing. A further theme that ran

through all of these was air pollution.

In summary, these are:

- Support a just energy transition that minimises air pollution from all sources;
- Design and retrofit homes to be energy efficient, climate resilient and healthy;
- Build a sustainable, resilient and healthy food system; and
- Develop a transport system that promotes active travel and road safety which minimises pollution;

The UK Health Expert Advisory Group also advocated a move towards a sustainable economic model that values health & wellbeing.

All of these actions form part of the Partnership's priorities for activity in 2021/22.

⁵⁰ <https://www.theccc.org.uk/publication/ucl-sustainable-health-equity-achieving-a-net-zero-uk/>

Greater Manchester: A Marmot City Region

In 2019 the UCL Institute of Health Equity was asked by Greater Manchester Combined Authority (GMCA) to support Greater Manchester to become the first Marmot City Region. The motivation for this was to assess what more Greater Manchester could do to address health inequalities in the city-region and to further develop system-wide approaches. Marmot principles had been used to inform Greater Manchester's new unified public services model and the ambition in 2019 was to develop these further and incorporate new approaches outlined in the 2020 update of the Marmot Review⁵¹.

The Review acknowledged that Greater Manchester has made efforts to encourage collaboration across the ten boroughs to better respond to environmental emergencies. Greater Manchester has identified that more deprived areas are more susceptible to environmental shocks and has worked together to identify the likely impacts of climate change for residents.

The Marmot Review 10 years on report describes selected outcomes for five of the six Marmot priority areas for health inequalities, as set out in the original 2010

Review. These five areas are the causes of health inequalities related to early child development, education, good working conditions, people having enough money to live healthily on, and creating safe and healthy environments⁵².

Data from IMD suggests that in eight out of ten boroughs in Greater Manchester the proportion of Lower Super Output Areas which are in the most deprived 10% of LSOAs nationally has increased between 2015 and 2019. This suggests relative deprivation has increased in some parts of Greater Manchester including in Manchester. In addition, the child poverty level for Greater Manchester in 2017/18 was estimated at 29 percent before housing costs (BHC) and 36 percent after housing costs (AHC). This translates into approximately 200,000 children living in poverty BHC in Greater Manchester and 250,000 AHC.

Reflecting the view of the UK Health Expert Advisory Group, the Marmot Review confirmed that efforts to mitigate impacts of climate change and reduce greenhouse gas emission are positive for health and health inequalities.

⁵¹ <https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on>

⁵² <https://www.instituteofhealthequity.org/resources-reports/greater-manchester-evaluation-2020>

The Impact of COVID-19

The social inequity around health outcomes was sharply illustrated during the COVID-19 pandemic. In a report commissioned by the Greater Manchester Health and Social Care Partnership from Sir Michael Marmot, it was revealed that the coronavirus death rate in Greater Manchester was 25% higher than the England average during the year to March 2021, leading to “jaw-dropping” falls in life expectancy and widening social and health inequalities across the region over the past year.

COVID-19 mortality rates varied within the region from around 400 males per 100,000 in the poorer boroughs to fewer than 250 per 100,000 in more affluent areas.

As the bar chart below indicates, Manchester’s Covid morbidity was the worst across Greater Manchester.

The report is entitled Build Back Fairer in Greater Manchester: Health Equality and Dignified Lives and it also detailed a series of ‘beacon indicators’ to monitor the improvement in health outcomes should further investment be made available⁵³. Along with Health & Social Care partners, the Agency will consider which indicators are the most appropriate to track in defining improvements in both climate action and impact on health outcomes.

As well as considering the suitability of those ‘beacon indicators’ the Partnership’s intention is to adopt the recommendation of the UK Health Expert Advisory Group that health equity impact assessments be carried out on a sector-by-sector basis for the City’s carbon budget that includes both mitigation and adaptation. In that way, it is intended that Health & Wellbeing becomes a cross-cutting theme with a requirement that all sectors reflect on their impact.

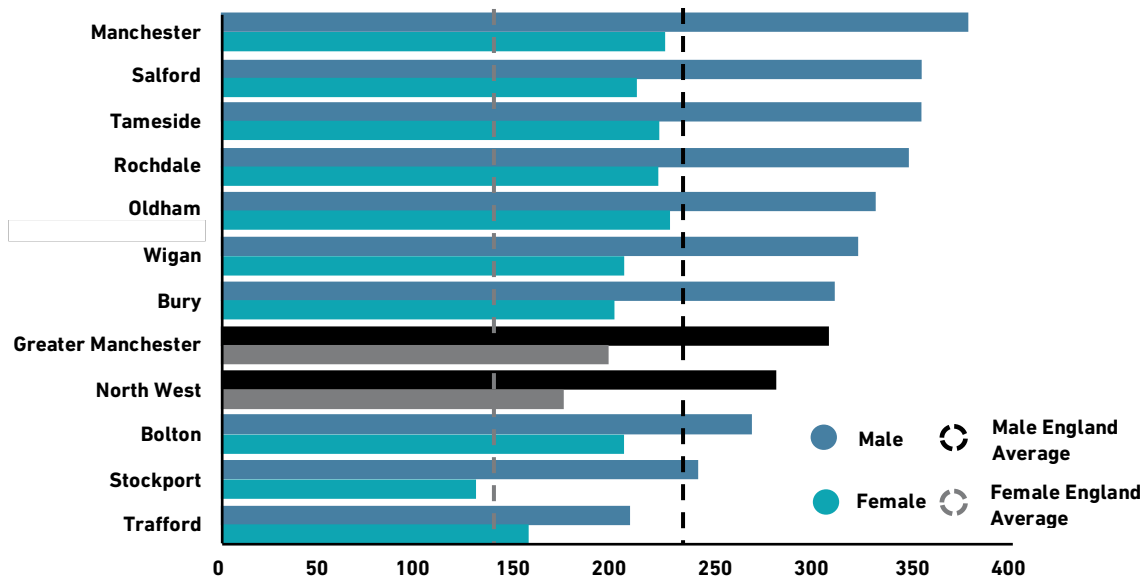


Figure 14: Age Standardised Mortality Rate (per 10,000) due to COVID-19

Note: Deaths due to COVID-19’ only include deaths where COVID 19 was the underlying (main) cause.

Source: ONS: Age-standardised from COVID-19, People, Local Authorities and Regions in England and Wales, deaths registered between March 2020 and March 2021

⁵³ <https://www.instituteofhealthequity.org/resources-reports/build-back-fairer-in-greater-manchester-health-equity-and-dignified-lives>

NHS & Transport

The health and care system in England is responsible for an estimated 4-5% of the country's carbon footprint. It is estimated that 6.7 billion road miles each year are from patients and their visitors travelling to the NHS.

It is recognised that the NHS is the largest public sector emitter of greenhouse gases in the UK, emitting 22.8 million tonnes of carbon dioxide equivalents in England in January 2016. The NHS carbon footprint includes emissions from buildings and energy use 17%, travel 13%, goods and services purchased 70%.

The NHS England Long Term plan encourages the delivery of care closer to home. This care strategy enables a better experience for patients who do not need to be in a large, often city centre, hospital environments. Additionally, it provides the opportunity to reduce patient road miles and for a more environmentally sustainable care model. In January 2020 Simon Stevens, launched the 'for a greener NHS' campaign, which is aiming to work towards the NHS reaching net zero.

In recognition of the linkage between Transport, Health and carbon emissions, TfGM (Transport for Greater Manchester), have developed a policy

framework especially with regard to the development of GM's Integrated Care System, and the refresh of the GM 2040 Transport Strategy. This is part of a wider European project which showcases the approach that Manchester is taking⁵⁴

⁵⁴ <https://sump-plus.eu/city-labs/decarbonisation-through-health-transport>



INCLUSIVE, ZERO CARBON AND CLIMATE RESILIENT ECONOMY



OUR HEADLINE OBJECTIVE 2020-25:

To ensure that Manchester establishes an inclusive, zero carbon and climate resilient economy where everyone can benefit from playing an active role in decarbonising and adapting the city to the changing climate.

The Zero Carbon Business Working Group has now been established, led by the CEO of GM Chamber of Commerce and including representatives from the Growth Hub, Manchester City Council, the City Business Climate Alliance and the World Business Council for Sustainable Development. It is anticipated that the Working Group will evolve into an Advisory Group once the Zero Carbon Business Programme is launched in 2022. Pending its formal establishment, this section has therefore been produced by Manchester Climate Change Agency, based on data available publicly and from Manchester organisations.

Towards a Green Recovery

In March 2020, the Manchester Climate Change Framework 2020-25⁵⁵ was endorsed as the city's strategy to meet our science-based targets.

Since then, COVID-19 has changed the city and the world immeasurably. However, whilst the context for their delivery has changed, the aims, objectives and priorities set out in the Climate Change Framework have not. Not only does the latest science tell us they are still the right ones for the city to play its full part on climate change, but the growing body of evidence in favour of a green recovery tells us that that they are now more relevant than ever in helping the city to reset, recover and thrive.

Partnership and Agency Commitment to a Green Recovery

In June 2020, Manchester Climate Change Partnership and Agency wrote to Manchester City Council⁵⁶ to set out our views on the need for a green recovery. Not only to ensure that we get on track to meet our climate change commitments, but also to ensure we realise the opportunity to make Manchester a green, healthy, fair, inclusive and socially just city where everybody can thrive. The letter also set out an offer to support the City Council in its recovery work and the Our Manchester Strategy Reset, to ensure the Climate Change Framework commitments are fully embedded.

Manchester City Council Commitment to a Green Recovery

Manchester City Council responded positively in July 2020⁵⁷, re-confirming their commitment to a green recovery and accepting the Partnership and Agency's offer of support.

To start this work, and to begin to gather views from residents and businesses, the Manchester Climate Change Conference on 22nd July 2020 focused on the question 'What do we want from the city's green recovery?'⁵⁸

⁵⁵ <http://www.manchesterclimate.com/framework-2020-25>

⁵⁶ <http://www.manchesterclimate.com/news/2020/06/manchester-climate-change-partnerships-green-recovery-proposal>

⁵⁷ <http://www.manchesterclimate.com/news/2020/07/manchester-city-council-commit-green-recovery>

⁵⁸ <http://www.manchesterclimate.com/news/2020/07/manchester-climate-change-annual-conference-2020>

Agency Response to the Our Manchester Strategy Consultation

The overarching strategy for the city, the Our Manchester Strategy, was reset during 2020. To contribute to this work the Agency's response set out twelve proposals that will help the city to both recover from the pandemic and take action in line with the commitments in the Manchester Climate Change Framework 2020-25⁵⁹.

Our Manchester Strategy Reset: Forward to 2025

The Our Manchester Strategy, covering the period 2016 to 2025, was 'reset' during 2020-21, to take account of the impacts of the COVID-19 pandemic and to provide an opportunity to revisit and reset the city's priorities for the coming five years. The Our Manchester Strategy Reset: Forward to 2025⁶⁰ was published in March 2021. It includes the commitment from the original strategy that 'Manchester will play its full part in limiting the impacts of climate change', as one of the six strategic priorities. It also commits the city to reduce its direct CO₂ emissions by 50% during 2021-25, towards Manchester becoming a zero carbon city by 2038, at the latest.

Manchester Economic Recovery and Investment Plan

The Plan sets out Manchester's approach to kickstarting the city's economic recovery from COVID-19⁶¹. Manchester Climate Change Partnership and Agency were invited by the City Council to support the plan's development, to help further align the city's economic and climate change objectives. Further work remains to achieve full alignment but the Plan represents an important step forward, building on the Manchester Industrial Strategy of 2019⁶². The Plan includes £290m of 'zero carbon and climate resilience' projects, from a list of approximately £800m of projects.

The plan includes the specific aim of helping to deliver the Climate Change Framework and making Manchester a thriving, zero-carbon, climate resilient city. The challenge for the recovery phase from the pandemic has been to find ways to urgently restart the city's economy to protect the income and livelihoods of people whilst striving to capitalise on some of the positive environmental benefits enjoyed during the COVID-19 lockdown period

⁵⁹ <https://www.manchesterclimate.com/news/2020/09/our-manchester-strategy-consultation-mcca-response>

⁶⁰ https://secure.manchester.gov.uk/info/200024/consultations_and_surveys/8148/our_manchester_strategy_reset_forward_to_2025

⁶¹ https://secure.manchester.gov.uk/info/500113/city_centre_regeneration/8063/powering_recovery_manchester_s_recovery_and_investment_plan

⁶² https://www.manchester.gov.uk/downloads/download/7156/our_manchester_industrial_strategy

and enable positive behaviour change that endures for the long term. Zero/low carbon is therefore a key strand of the city's Economic Recovery Plan and Zero-Carbon and Housing Retrofit one of its four strategic investment propositions. A number of innovative projects are proposed in the Plan (see Table 2) which, when delivered, could have a significant impact on contributing to our zero carbon targets.

This investment represents a major opportunity to establish Manchester as a centre for green technology and services, and to work with local skill providers to ensure that the city's residents are given the best possible opportunities to access these exciting new careers. In response to the economic challenge of the national lockdown, the city is developing a range of employability and skill initiatives to help people upskill and take up new employment opportunities. These programmes will prioritise green economy skills to broaden the skills base and support growth in the digital economy.

In terms of benefit, new investment would lead to:

1. £300 million of construction work over the next two years, supporting 1,200 jobs for three years, with a significant expenditure on the supply chain
2. A minimum of 15% of the workforce being in supported employment places
3. An accompanying skills programme providing training support for a minimum of 200 people per annum for three years, including a number of apprenticeship places
4. A supply-chain initiative developing innovative green products and providing opportunities for local businesses and companies

As the world prepares for COP26 in Glasgow in November 2021, this plan sets out how businesses, third-sector organisations, the Government, local government and citizens can work together to ensure Manchester is an active player in the global Race to Zero.

Table 2: Breakdown of the Zero Carbon and Climate Resilient Projects featured in Manchester's Recovery and Investment Plan

PROGRAMMES	INVESTMENT
Fleet Decarbonisation and new Smithfield Market	£10m
Manchester Housing Provider Retrofit Programme	£260m
Zero-carbon Innovation Zone (PV and EV Project)	£6m
Zero-carbon Business Support and Project Delivery Unit	£4.6m
Manchester Solar Schools Programme	£3.5m
Community Food Growing: Nurturing the Green Recovery	£1.3m
Carbon Literacy for the Net Zero Economy	£2m
Environmental Action Programme	£2m
Total	£289.4m

PART 3

Priorities for 2021-22

Manchester Climate Change Partnership and Agency Priorities 2021/2022

The Manchester Climate Change Framework 2020-25 sets out four headline objectives for the Partnership and Agency to deliver during 2020-2. This section sets out commitments for the period 2021-22 only.

Framework V2.0

During the year the Agency will be working to refresh the city's Climate Change Framework.

The Climate Change Partnership has been given the role of developing and facilitating the delivery of Manchester's strategy to ensure it plays its full part in limiting the impacts of climate change. Version 1.0 of the Manchester Climate Change Framework 2020-25 was published in February 2020 and was formally endorsed by the City Council in March 2020. It set the carbon budget for the city and the four headline objectives to tackle emissions reduction, climate adaptation and resilience, health and wellbeing, and sustainable economic growth. Version 2.0 of the Framework is being produced during 2021 for launch in 2022 and will provide more detail of what needs to be achieved by when, particularly in

reference to staying within the carbon budget.

The Framework will have 5 key components:

- Overall Aim
- Headline objectives: CO₂ reduction, climate adaptation and resilience, health and inclusive economy
- Areas for action: buildings, renewable energy, transport, food, things we buy and throw away, green infrastructure and nature-based solutions
- Bottom up – Actions for all residents and businesses
- Top Down - Setting out an approach to removing barriers to action

The City Council, working with MCCA, has procured Anthesis, an environmental consultancy, to support the Framework refresh, including consultations with residents and businesses.

They will also look to define actions required for different sectors or themes. Science based targets determine the pace of change required. The actions will be focused on the following key themes:

- Buildings
- Renewable energy
- Transport
- Food
- Things we buy and throw away,
- Green infrastructure and nature-based solutions

For each theme, wherever possible, the aim is to develop Specific, Measurable, Achievable, Realistic and Time Bound (SMART) objectives. The objectives will be accompanied by a list of specific actions that will signpost Manchester people, businesses and other organisations to take the actions required. It will also identify where we need to take action at a city region level or advocate nationally for change.

The aim is that the Framework will provide the city with a clear set of actions that will, if taken, reduce emissions by the required amount to ensure that the city stays within its carbon budget and becomes a zero carbon city by 2038, at the latest. . In overall terms the Framework is intended to further support efforts to position the city as a leader, both nationally and internationally, in the response it is taking to mitigation, adaptation and resilience. As a result the objective is that through these actions the city will be seen as a better place to live, work, play and invest in because of the progressive approach it is taking to this key global challenge.

The Framework will provide a context for all the Agency's activity. Below we set out some of the specific actions that will be the focus of activity during the current year.

PRIORITY 1:

Helping our city to set the right objectives, targets and actions, in line with the Paris Agreement and the latest science

1. Adopt mitigation actions and indicators presented in the refresh of the Climate Change Framework 2020-25 across all headline objectives
2. Living within our Carbon budget
 - a. Direct Emissions: Continue to monitor progress against the direct carbon budget and investigate methods to improve accuracy of emissions local reporting
 - b. Aviation Emissions: Work with partners and other UK cities to establish a target for aviation emissions
 - c. Consumption-Based Emissions: develop a more detailed understanding of our consumption-based emissions to enable us to target action and establish performance indicators to monitor progress
3. Climate Adaptation and Resilience: Better understand the extent of risk and vulnerability faced by our residents and businesses to focus effort on the key risks and locations most in need. Further work will establish a vision for resilience, a framework to guide further action on adaptation and to scope possible performance indicators to measure progress.
4. Health and Wellbeing: Explore local partnerships and the need for advisory groups. Establish performance indicators
5. Inclusive, Zero Carbon & Climate Resilient Economy: Assist the City in the delivery of the Economic Recovery plan including supporting the case for the necessary investment. Explore local partnerships and the need for advisory groups. Establish performance indicators

PRIORITY 2:

Helping our city to take action

6. Engaging and empowering businesses and organisations: work with partners to establish new/refreshed climate change action plans for all Partnership members, to ensure that they can all benefit from and contribute to the city's Economic Recovery and Investment Plan and implement the actions developed in Framework V2.0.
7. Engaging and empowering residents and communities: continue to work with partners to further develop and roll out the In Our Nature climate action programme across the city and develop new programmes that engage and support Manchester's residents and communities to play an active role in tackling climate change.

8. Engaging and empowering young people: continue to support the delivery of the Youth Board's manifesto. Establish the formation of manifesto priority working groups and establish a monitoring framework to record progress and Increase awareness and the citywide impact of the Youth Board through establishing a rolling outreach programme for the Youth Board and create and embed neighbourhood level youth climate action groups.
9. Participate in the EU-funded GrowGreen project to support the roll-out of nature-based solutions citywide, building on the demonstration project in West Gorton.

PRIORITY 3:

Helping our city to understand its progress, strive for best practice and learn from others

10. Annual reports: produce the Manchester report to CDP / Global Covenant of Mayors 2022 (July 2022); produce the Manchester Climate Change Annual Report 2022 (September 2022).
11. Continue to develop the Partnership and Agency-wide communications to communicate key messages and collaboration opportunities across the city and conurbation. Specific engagement and communication strategies will be developed for each programme – Communities, Business and Young People.

12. To work with other partners in Greater Manchester and nationally to seek to influence Government and other key institutions to provide more powers and resources to unblock barriers to local action. To also work collaboratively nationally and internationally by sharing learning and best practice, e.g. at the GM Green Summit 2021 and through the Zero Carbon Cities programme and the CBCA Cohort Cities network.

PRIORITY 4:

Helping our city ensure climate action initiatives are inclusive, informed and driven by seldom heard voices

13. Removing barriers: Work with partners to remove barriers of participation for all outreach and consultation work and engage with established groups and organisations to build relationships with traditionally considered 'difficult to reach communities'.
14. Diversity: Ensure the range of our work reflects the racially and culturally diverse geographical communities of Manchester.
15. Adopting best practice: Work with partners to establish regular training on engaging with seldom heard groups and adopt and formally integrate best practice in our work.
16. Embedding participatory ethos: Work with partners to embed the ladder of participation in our work to ensuring communities

always feel that their contributions are respected.

PRIORITY 5:

Helping our city to establish the strategy, governance and partnerships needed to meet the targets

17. Develop the Agency's capacity, securing the resources to recruit to the approved structure
18. Embed the priorities of the Climate Change Framework V2.0 across key citywide policy frameworks, including the Local Plan.
19. Develop and publish the Manchester Climate Change Framework V2.0 by July 2022 as part of the EU-funded Zero Carbon Cities project.
20. Further develop the membership of the Partnership, including through Manchester's participation in the 'City-Business Climate Alliance' project with seven other global cities, the C40, CDP and World Business Council for Sustainable Development.

CITYWIDE PRIORITIES 2020-21

What we need to do as a city is set out in the Manchester Climate Change Framework 2020-25, across our six priority areas:

- Buildings: retrofitting existing and building zero carbon new buildings,
- Renewable energy: working towards 100% of our energy needs being met by renewable sources,
- Transport: walking and cycling more; using more public transport; switching to zero emission vehicles,
- Food: ensuring food security, minimise environmental impacts and support a shift to more plant-based diets that are better for our health and the planet.
- The things we buy and throw away: buying less; only buying products and services with high environmental and social credentials; reusing and recycling more,

- Green infrastructure and nature based solutions: protect and enhance the City's natural environment to adapt to the changing climate and absorb CO₂ as well as increasing biodiversity, improving health and achieving other benefits.

Urgent and sustained action in all these areas is needed to ensure we meet our existing climate change commitments. And also realise the opportunity to create jobs, support the growth of socially responsible businesses, improve Manchester residents' health, and address the inequalities that still exist throughout our city. This integrated approach needs to continue to be at the heart of Manchester's recovery.

In support of this Manchester Climate Change Partnership and Agency will work with Manchester City Council and the wider Manchester community to deliver the climate change ambitions at the heart of the Our Manchester Reset and implement the green

recovery now incorporated into the city's Economic Recovery and Investment Plan.

The Council is currently undertaking work to refresh the Manchester Local Plan. As part of this, it will consider options for policies to deliver on the city's zero carbon and wider environmental agenda, including how the planning system and our built environment can contribute to this.

Following consultation on key issues for the Local Plan in 2020, the next stage will be an options paper to be released for consultation in late 2021. This work is underway, and the Partnership's recent report on net zero new build will provide a useful part of the evidence base to inform policy options for the Plan. As ever, the new Local Plan will need to deliver on a range of fronts – however, climate change is clearly a foremost concern for the city and this will be integral to the Plan and our delivery of outcomes through the wider planning and development system.

15 Actions for Every Resident and Organisation

Every individual and organisation in the city needs to play their part in helping the city to meet its targets, and, at the same time, realising the wider financial, health and wellbeing benefits that will also come as a result. The Agency has developed a list of 15 suggested Actions for every individual and organisation in the city to take:

<http://www.manchesterclimate.com/15-actions>

You can also get inspiration from the many actions already being delivered right across the city. Check out the news on our website at:

<http://www.manchesterclimate.com/news>

Follow us on Twitter at: <https://twitter.com/MCRclimate>

Get Involved in the In Our Nature Programme

In May 2021 a yearlong programme and campaign called In Our Nature launched in Manchester.

This unique programme is an opportunity for everyone to get involved in climate action across the city by sharing their views on how to make Manchester a zero-carbon city and getting involved in projects and activities across the city including a Nature Takeover in Moss Side or setting up a Community Fridge in your neighbourhood!

There is lots of support and ideas on our Commonplace Portal, and if you live in one of our 5 pilot areas you can also have your say on what action you'd like to see and get involved in community campaigns later this year.

To find out more: Sign up to the newsletter!

<https://hubbub.us9.list-manage.com/subscribe?u=67b4819223cbe3616e119e7c7&id=ef139af8b1>

Share stories we love!

<https://zerocarbonmanchester.commonplace.is/proposals/stories-we-love/step1>

Get involved and have your say!

<https://zerocarbonmanchester.commonplace.is/proposals>

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THANK YOU

Manchester Climate Change Partnership and Agency wishes to thank all those involved in the production of this report:

Members of the Zero Carbon Advisory Group and Sub-groups

Members of the Adaptation and Resilience Advisory Group

And finally, thank you for reading. If you have any feedback or questions please contact Manchester Climate Change Agency at info@manchesterclimate.com

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MANCHESTER

Annual Report 2021 - Appendix A

MANCHESTER CLIMATE CHANGE PARTNERSHIP MEMBER UPDATES

The Manchester Climate Change Partnership (MCCCP, the Partnership), was established in May 2018 to maximise engagement with the diverse range of business sectors and communities that exist across the city and build on the work of the previous Manchester A Certain Future (MACF) steering group

The Partnership brings together organisations from the city's public, private, community, faith, education and academic sectors that share the common goal to achieve the ambitious objectives and targets in the Manchester Climate Change Framework 2020-25. Partnership members have committed to:

- **Take urgent action within the scope of their own activities, and**
- **Work collaboratively through the Partnership to help others in the wider Manchester community and economy to take urgent action.**

The Manchester Climate Change Partnership is the city's main mechanism for engaging and inspiring organisations and residents to act. The Partnership currently has 60 members, across 10 sectors, with responsibility for over 20% of Manchester's direct CO2 emissions. Its members also have reach into the remaining 80% through their staff, students, customers, tenants, football fans, theatre-goers, worshippers, and others. By working with their supply chains members are also helping to reduce the city's consumption-based CO2 emissions.



The chart below shows Partnership members contribution to the City's carbon footprint, which was calculated as part of the work to develop Framework V1.

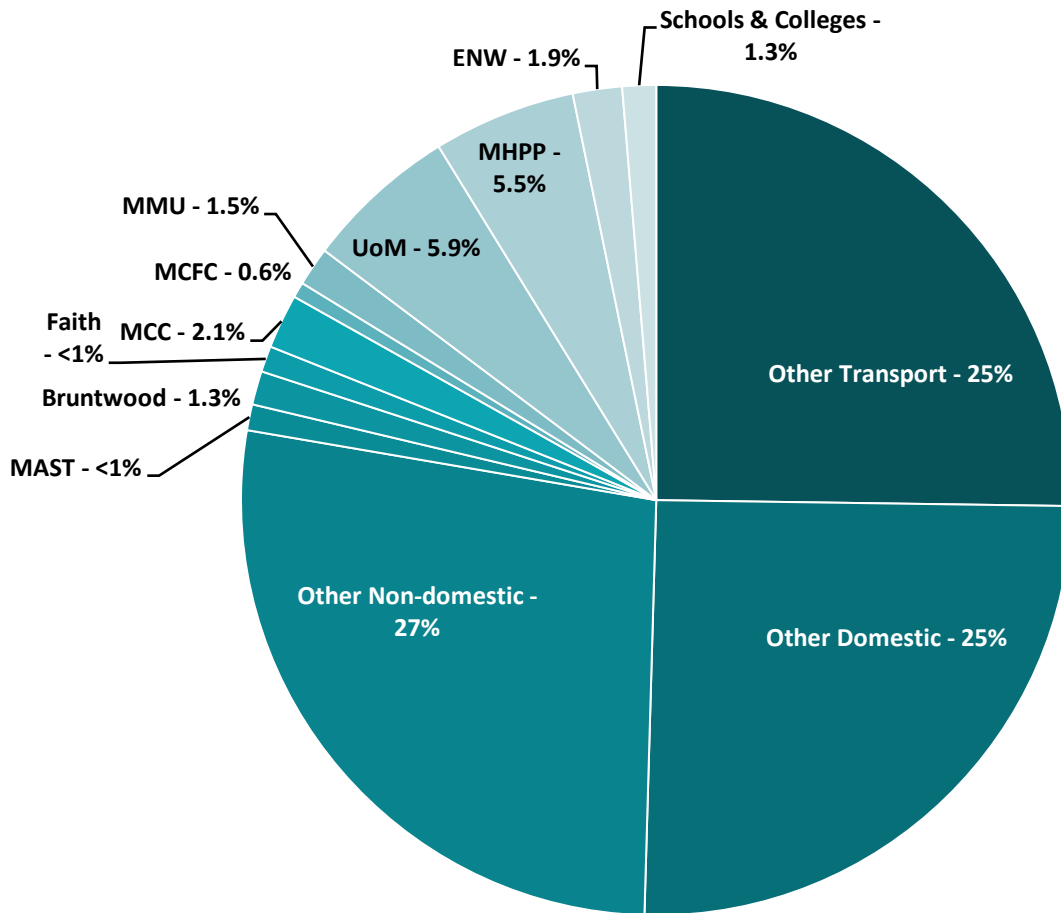


Figure 1: Breakdown of Manchester Climate Change Partnership Members contribution to the City's overall emissions as of 2017

The following pages detail Partner contributions to reducing the City's emissions over 2020/21.



BRUNTWOOD

MEMBER SINCE:

2018

bruntwood

PROGRESS OVER 2020/21

Bruntwood has been creating thriving cities for over forty years and is deeply connected with the cities it operates in. It plays a pivotal role in creating vibrant places and unlocking economic potential. Employing over 800 people, Bruntwood has over £1.4bn in assets and more than 100 properties across Manchester, Leeds, Liverpool and Birmingham. Working with over 3,000 businesses, provides everything from coworking space and meeting rooms to serviced, managed and leased offices.

Acting sustainably has always been key to Bruntwood's approach as a business. From the very beginning, they have chosen to recycle rather than rebuild, bringing new value and life to buildings and communities by realising their full potential. Their commitment to a sustainable built environment led them to be the first property company in the UK to sign up to the World Green Building Council's Advancing Net Zero commitment.

As a member of the Partnership, Bruntwood has signed MCCA's commitment to act and has been working collaboratively with the Agency and Partnership over the past year to determine their climate change action plan as well as taking part in cross-cutting projects across the Partnership such as the UK Climate Resilience: Embedded Researcher scheme and the Roadmap to Net Zero Carbon Buildings.

Bruntwood's headline target is to reduce carbon intensity (kgCO₂e/m²) by 100% by 2030 compared to a 2017/18 baseline. They are also urgently driving to develop Science-Based Targets for Scope 3 emissions and procure 100% renewable electricity for all their estate.

Recent work:

In 2019 Bruntwood began working with Carbon Trust to set Science Based Targets (SBTs). Since then they have reduced carbon emissions by 21%. This year they are working with Carbon Intelligence to re-baseline their SBT's. Whilst setting SBT's is an important step in reducing overall emissions, it's key that these are reviewed and re-baselined as their portfolio expands and contracts, ensuring alignment with the Paris Agreement.

Bruntwood has installed a blue-green roof at Bloc, in partnership with Polypipe Civils & Green Urbanisation. Over the next two years, the 'smart' blue-green roof will allow United Utilities to assess how storing and reusing rainwater at roof level can reduce the volume of surface run-off entering its sewer network. As a result, it will help to lower the flood risk associated with the prolonged high-intensity storm events that are becoming increasingly frequent as the climate changes.

In 2020/21 Bruntwood achieved ISO 50001 certification, integrating energy management to help use energy more efficiently and set targets for reduction.



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[INFO@MANCHESTERCLIMATE.COM](mailto:info@manchesterclimate.com)
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They have worked with Farm Urban to install the UK's first hydroponic edible wall in a workspace. Deployed solar PV installations at Bruntwood properties Atria, Landmark, Station House, Booth's Park, Lancastrian, Innovation Birmingham, Sale Point and 111 Piccadilly. Continued to roll out EV charging at a number of buildings. They are planning to continue installing EV charging points to meet customer demand for increased electric vehicle usage and as travel patterns continue to change.

Received carbon negative certification for fit-outs at Circle Square and developed a new appraisal model for net zero carbon (NZC) buildings and developed a plan for NZC 2030.

Link: [How is Bruntwood working towards Net Zero Carbon](#)



ELECTRICITY NORTH WEST

MEMBER SINCE:

2018



PROGRESS OVER 2020/21

Electricity North West is the distribution network operator responsible for the maintaining and upgrading of the network that distributes electricity throughout the North West of England. As the network operator, Electricity North West also plays a key role in the North West reaching its Net Zero targets.

Their '[Leading the North West to Zero Carbon plan](#)', sets out plans to invest £63.5m between 2019 and 2023 to decarbonise their operations and help Manchester businesses, colleagues and customers to do the same.

Progress and headlines for 2020/21

Electricity North West have completed the roll out of free Electric Vehicle (EV) chargers on their own sites and are currently reviewing an increase in the number and types of chargers due to the high demand from colleagues wanting to switch to an EV. They are also in the process of installing 400m² of solar panels across four buildings as well as a brand new solar power car port. All sites are being made energy efficient including on-site generation and heat pumps at 'exemplar' depots.

EV themed events have been held in Greater Manchester for businesses and other organisations needing decarbonisation help and advice, and these will be rolled out across Lancashire and Cumbria. Electricity North West are also a lead partner in [Zero Carbon partnership and portal](#) specifically developed for SMEs. The Zero Carbon Business Partnership was established in 2020 and is a collaboration between some of the Energy Networks and the leading national business and professional organisations (FSB, CBI, Chambers of Commerce) on a shared online portal to help smaller businesses and entities adapt their business models to transition to net zero carbon emissions.

Electricity North West became the world's first 'carbon literate' network operator after receiving a bronze accreditation from the Carbon literacy project in 2019. [A training programme](#) has been developed and rolled out which is an essential part of raising employee awareness and will help the business achieve silver accreditation.

The carbon footprint for the organisation in 2020/21 was 14,097tCO₂e against a target of 18,000. This is a 22% reduction on the previous year's emissions and 21% ahead of the target for the year.

The [roll out of 'Smart Street'](#) has continued with the technology being rolled out in 14 locations and 180 future sites now selected, many in the Greater Manchester area. Smart Street increases the efficiency of the power networks and customer appliances and reduces energy consumption by 8% without customers having to take any action.



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New plans and next steps

Electricity North West have just published (July 2021) their [draft business plan](#) which highlights 'Leading the way to Net Zero' as one of three headline commitments and describes a pathway to decarbonise in line with GM's 2038 target as part of a £2bn investment in the region from 2023-2028. This plan, which will be assessed by Ofgem, is based on two years of engagement with 18,500 people and stakeholders in the North West. The company was one of only two network operators to publish an early draft of its business plan for feedback from residents, businesses and others across the region.

The focus for action in 2021/22 is to build on progress to date and prepare the delivery of the new Business Plan from 2023 onwards.

In July 2021 Electricity North West joined the '[Race to net Zero](#)', thereby committing to setting climate targets in line with limiting global temperature rise to 1.5oC. They join a group of leading companies that are demonstrating the highest level of ambition on climate and becoming part of 'Race to Zero', a UN-backed global campaign. The development of 'Science-based targets' is the next step.

A new partnership, '[The Trees for Climate Programme](#)' has been launched involving Electricity North West partnering with City of Trees to create community forests in the North West. Recent progress includes the planting of 370 trees planted on ground surrounding the Slack lane substation in Westhoughton. Electricity North West has committed to planting 10k trees a year in the Business Plan.

Link: [ENWL Go Net Zero](#)



MANCHESTER AIRPORT GROUP

MEMBER SINCE:

2020



PROGRESS OVER 2020/21

Manchester Airport Group (MAG) operates Manchester, London Stansted and East Midlands Airports. Before the COVID-19 pandemic, MAG provided important global connectivity for 62 million passengers and 700,000 tonnes of air cargo, supporting Global Britain and enabling 130,000 jobs in our supply chain, with 40,000 people employed at our sites. Just under 30 million of these passengers travelled through Manchester Airport, the North's Global Gateway, in 2019.

This year has been important for MAG. Despite the significant impact of the pandemic, which reduced passenger numbers by up to 99%, MAG has continued to implement its CSR Strategy which targets net zero carbon operations by 2038. This year, MAG's energy use reduced by 14% and its gross market-based emissions by 8%. MAG continues to offset its residual emissions, operating carbon neutral airports certified to Level 3+ Airport Carbon Accreditation. Despite the significant impact of the pandemic on the business, MAG has seized the opportunity to implement a range of efficiency measures, avoiding the operational disruption that engineering activities usually cause at busy airports. It is also developing proposals to install renewable energy at its airports. This year MAG built upon its climate reporting, aligning its annual reporting with recommendations from the Task Force for Climate-related Financial Disclosures and supplementing its 'Comprehensive' Global Reporting Initiative disclosures with a dedicated greenhouse gas report that includes emissions from aircraft.

During the year, MAG's CEO Charlie Cornish was asked to join the Government's new Jet Zero Council, Chaired by the Secretaries of State for Transport and Business, Energy and Industrial Strategy and focussed on decarbonising flight. This follows MAG's chairmanship of the cross-industry Sustainable Aviation coalition which last year led the UK aviation industry to become the first in the world to commit to net zero carbon by 2050. To complement these developments, and place MAG at the centre of the transition to more sustainable travel, last autumn, MAG launched a competition offering five years free landing fees – worth over £1m – to the first zero carbon commercial aircraft to operate at one of its airports. This year, the Government will consult on its Jet Zero Strategy and a sustainable aviation fuel mandate, with a realistic prospect that – through Fulcrum Bioenergy's plans for the North West – Manchester could become the first airport in the world to be directly connected by pipeline to a low carbon sustainable aviation fuel production facility.

Link: [Zero Carbon Airports](#)



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MANCHESTER ARTS AND SUSTAINABILITY TEAM

MEMBER SINCE:

2018



PROGRESS OVER 2020/21

The Manchester Arts Sustainability Team (MAST) is a cross-sector network of cultural and arts organisations committed to working together to reduce their environmental impacts and working towards a zero carbon Manchester pathway.

They hold a key opportunity to influence member and attendee behaviours in addition to their own buildings and transport. Manchester was recognised as an URBACT Good Practice city and is now leading an URBACT Transfer Network on best practice in the arts and culture sector to reduce emissions.

During 2020/2021, the network has grown to over 50 organisations working collectively across the city-region and they have been supporting emerging networks in other cities including Leeds, Liverpool and Oxford who have been inspired by MAST's work to date.

In February 2020 the Manchester Cultural Leaders Group, chaired by the city's Director of Culture, agreed to prioritise the climate and ecological crisis as well as endorse the targets set out in the Manchester Climate Change Framework 2020-25.

C-Change – Arts and Culture Leading Climate Action in Cities sees the MAST practice applied to an 'URBACT Transfer Network', a network of five other European cities looking to learn from Manchester's approach to engaging and mobilising a city's culture sector. Manchester City Council, working with MAST, led the network and this has offered the opportunity to take the model to the next level. MAST have focused on capacity-building and leadership in the sector through training and the development of resources available via the new GMAST website. It is also aimed at other cities and their cultural sectors and will be open source <https://www.g-mast.org/c-change>

MAST have also co-funded a programme of cultural community engagement projects as part of C-Change aimed at educating and inspiring behaviour change in Manchester citizens. The legacy of this project gives them new and lasting relationships with Manchester City Council. In Autumn 2021, they will formally launch their new online home, it will feature 10 Years of cultural collaboration and the sector's more detailed response to the Manchester Climate Change Framework 2020-25. They will look to this critical next decade in advance of COP 26 and Arts Council England's (ACE) National Portfolio Round. The network has been awarded grant support by ACE to develop its future model. The network will also become known as GMAST. <https://www.g-mast.org>

Link: [GMAST](https://www.g-mast.org)



MANCHESTER CITY COUNCIL

MEMBER SINCE:

2018



MANCHESTER
CITY COUNCIL

PROGRESS OVER 2020/21

Manchester City Council have developed their own climate change action plan for 2020-25, setting out how they will contribute to the citywide Climate Change Framework:

www.manchester.gov.uk/zerocarbon

The Council are one-year into delivering their Climate Change Action Plan 2020-25, which includes action from across all parts of the Council. The policies, plans, infrastructure and funding are now being put in place to support the city to transition to zero carbon. Headline achievements and actions for 2020/21 include:

- Replacing all 56,000 street lights in the city with low emission LED alternatives.
- Investing in 27 new electric bin lorries to replace more than half of our waste collection fleet with emission-free alternatives.
- Installing electric vehicle charging points at the three biggest council depots to support the wider electrification of council vehicles.
- Nearing completion of the Civic Quarter Heat Network, a shared heating system that will reduce emissions and costs across prominent city centre buildings including the Town Hall Extension and Central Library.
- Beginning work on the 6.5acre Mayfield Park, the first new city centre park for decades.
- Completing and opening West Gorton's new 'sponge park', designed to help prevent flooding and a pilot for how nature-based solutions can help combat the impacts of climate change.
- Retrofitting Council buildings to cut emissions and energy costs, and to generate renewable energy. In 202, £19.1m in Government funding was secured to support this work.
- Getting underway with the £1m Tree Action MCR programme, which will plant thousands of new trees by 2022.
- Securing a further £5.5m in funding for active travel schemes to promote walking and cycling, and better links with public transport, in the city centre and Wythenshawe.
- Creating the UK's first Cyclops junction in Hulme, fully optimised for cycling and walking, as part of the development of the £13.4m Manchester to Chorlton cycle route.
- Working with communities in all 32 wards of the city to embed climate change action in ward plans and taking steps to recruit three new Climate Change Neighbourhood Officers.

The latest progress report can be found [here](#)

Link: [Zero Carbon Manchester](#)



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MANCHESTER CITY FOOTBALL CLUB

MEMBER SINCE: 2018

PROGRESS OVER 2020/21



Manchester City Football Club, as a member of the Partnership, has annually measured, recorded and reported its environmental impact and has a wide-ranging agenda in environmental and social sustainability.

It is Manchester City's aim to be a CO2 Neutral by the end of the decade. In line with this, the Club's action plan has been broadened to over the eleven clubs throughout City Football Group. A full audit to understand and provide a baseline of the current position of and the priorities of each CFG club and their host cities and nations has been completed so that all the clubs progress actively and learn, share and support each other within this important programme.

Manchester City completed a major project in 2021 to move all its lighting, including stadium floodlights to LED, resulting in reductions in excess of 1.75m kw/h. All of the Club's electricity is procured through a PPA utilising certified renewable energy. Work to continually reduce non-essential consumption continues.

Adding to the existing rainwater harvesting system at City Football Academy, the Etihad Stadium itself had a new water recycling system installed under the pitch in 2021.

Completing its efforts to remove all single use plastics – over a million single use cups, cutlery and wrappings have been taken out of operations – this extended to sachets, and a range of products, whilst trials are in place to remove and find options to PET plastics.

The Club has a practical and credible travel and transport plan that is working and in place – with emphasis on active travel – for fans, staff, visitors, authorised travel reduction of 5% and fan travel by 2.3% (estimated). Further develop their biodiversity and ecology – with year-on-year growth in habitat, wildlife and active engagement. Develop their estate and property in line with the UN Sustainable Development Goals and have a fully engaged, knowledgeable and innovative workforce and supporter base that champions best practice and challenges actions and impact.

The Club's ecology programme was recognised by the Institute of Groundsmanship's national awards scheme, where City Football Academy gained the Environment/Ecology Project of the year. It was also recognised for new-to-the-north-west wildlife species and providing homes for voles and an extended bee population.

The Club reduced energy and water consumption, and continued its programme to measure and report all its environmental impact covering scopes 1,2 and 3. The Club also reports under SECR.

Link: [Manchester City Football Club Sustainability](https://www.manchesterclub.com/sustainability)



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MANCHESTER CLIMATE CHANGE YOUTH BOARD

MEMBER SINCE:

2018



PROGRESS OVER 2020/21

The Manchester Climate Change Youth Board (MCCYB) was established in November 2017 to capture and represent the voices of young people who live, work and study in the city. MCCYB is wholly youth led and is driven only by the aspirations and priorities of young people from across the city of Manchester.

2020-21 has been a challenging year for the Youth Board. The Youth Board have adapted to the challenges that covid posed and have worked digitally. In the last year the Youth Board in partnership with the Manchester Climate Change Agency has:

- Developed an ambitious Climate Action manifesto that challenges organisations across Manchester to work more ambitiously to ensure the transition to carbon zero by 2038 is socially just, inclusive and truly transformational.
- Appointed the Youth Champion and agreed an ambitious work programme for the next three-year period.
- Established a permanent link between MCCYB and the Manchester Youth Council to better amplify the voices and priorities of young people in Manchester.
- Began developing a strategy for multigenerational projects for cross-generational climate action priorities.
- Wished several long-established members well as they left the Youth Board for new opportunities. MCCYB have begun an induction process for a further 7 newly recruited members.

Link:

[Manchester Climate Change Youth Board](#)



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MANCHESTER HOUSING PROVIDERS PARTNERHSIP

MEMBER SINCE:

2018

PROGRESS OVER 2020/21



The Manchester Housing Providers Partnership (MHPP) brings together Manchester's registered housing providers which are working collaboratively with Manchester through the MCCP. There are 17 registered housing providers that are all members with stock holdings across Manchester.

In 2019/20 they have:

- agreed to develop investment plans to quantify the cost of making all assets zero carbon by 2025;
- agreed to move to fully electrified fleet by 2025.
- agreed to become a fully Carbon Literate by 2025; and
- agreed to develop a communications strategy to be delivered through all available channels and action plan for targeted engagement.

The Manchester Housing Providers Partnership (MHPP) has established a collaborative approach to addressing the first year of its five year action plan. Significant progress has been against establishing a baseline position of carbon emissions for housing providers' portfolios and estimating the level of investment needed to meet the 2038 zero carbon target. This has culminated in the development of a bid to Government through MCCA and the Council for investment to kickstart an initial 4-year retrofit programme to enable MHPP members to establish a collaborative approach to procurement and delivery of around 3,500 properties per year and funding of £260m.

Until funding has been secured, members of MHPP have been continuing to deliver their retrofit programmes to improve the standards of their existing stock. There has considerable success in attracting external funding through the Green Homes Grants, Decarbonisation Fund and European Regional Development Fund.

Significant progress has also been made on improving standards in new build developments with a number of organisations moving towards no gas ahead of the 2025 national target and specifying new developments at standards in excess of the current Building Regulations.

The coming year will see the group merged with the wider Greater Manchester Housing Provider Group and an agreed shared resource will be established to focus on the key priorities in the MHPP five year zero carbon plan. The focus for 2021/22 will be to reinforce the scale of investment required to retrofit social housing, gain greater understanding of the technology and level of measures required, and to continue lobbying national government for longer term funding to start accelerating investment in homes.

Link: [MHPP – Zero Carbon](#)



MANCHESTER METROPOLITAN UNIVERSITY

MEMBER SINCE:

2018

PROGRESS OVER 2020/21



Manchester Metropolitan University (MMU) is the sixth-largest university in the United Kingdom by enrolment (33,010 total students) and a Member of Manchester Climate Change Partnership. Manchester Metropolitan University is the UK's second greenest university according to the People and Planet League 2019. They are also working with Manchester Climate Change Agency with the UKRI embedded researcher scheme.

During 2021/21:

MMU approved its Carbon Management Plan (CMP) 2020-26, the first of three six-year CMPs in its journey towards zero carbon by 2038, at the latest. It also delivered Carbon Literacy to its university leaders and is launching a Carbon Literacy for Leaders programme in May 2021.

The University's Young Enterprise programme was recognised for enhancing students' enterprise skills in a way that brings benefits to society and the environment, winning a national Green Gown Award.

The University, with GMCA, Trafford Council, Carlton Power, Cadent Gas and Electricity North West will be joining forces to set up Greater Manchester's first hydrogen hub. The hub will be a new addition to Trafford Low Carbon Energy Park – a green energy storage facility, which already consists of a number of net zero industrial projects.

The University is leading a new project that aims to define and develop the skills needed by the future workforce to support the North West's decarbonisation plans. MMU, along with partners across the region, is working to define the existing skills gaps in the sustainable energy sector and highlight where investment in infrastructure and employment is needed. A strategy will be developed to bridge these skills gaps and outline a roadmap to a low carbon future in line with the Government's targets to have net zero carbon emissions by 2050. The goal is to develop the roles required by the sector and create as many as 33,000 jobs in the UK.

Manchester Met was named in the world top 100 of the Times Higher Education's (THE) University Impact Rankings 2021. It was the first year MMU entered THE's Impact Rankings; ranking 66th globally in the league table and 15th in the UK.

MMU is developing its new Sustainability Strategy to 2030. The Strategy will set out the University's response to the climate crisis and commitments to support global agendas to tackle poverty, inequality and injustice and will be launched in November 2021.

Link: [Manchester Metropolitan University Sustainability](https://www.manchestermet.ac.uk/sustainability)



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NHS FOUNDATION TRUST

MEMBER SINCE:

2018



PROGRESS OVER 2020/21

Manchester University
NHS Foundation Trust

In Manchester, there are 9 hospitals plus GP surgeries, walk-in clinics and community healthcare facilities. These are a part of the Manchester University's NHS Foundation Trust (MFT) which is a member of the MCCP and has been working collaboratively with the city to reduce its carbon emissions as the NHS's footprint is directly impacted by other city sectors such as transport and housing.

Manchester Foundation Trust oversees the hospitals – its headline action is to reduce core carbon emissions by 33% by 2023/24 against the 2017/18 baseline. It also plans to include travel and transport sustainability criteria within key contracts and embrace new and existing digital technologies to reduce the environmental impact of care, prevent ill health and manage long-term health conditions.

MFT has continued to make progress across the sustainability agenda during 2020/21, although the COVID-19 pandemic has had a significant impact on some priorities. A 14% reduction in the carbon impact of anaesthetic gases has been achieved, facilitated by clinically-led behaviour change campaigns strongly encouraging the use of less carbon-intensive gases. Carbon emissions from energy have reduced by 7%, and this year a REGO-certified energy tariff has been introduced for imported electricity. The Renewable Energy Guarantees of Origin scheme provides transparency to consumers about the proportion of electricity that suppliers source from renewable generation. The in-house transport fleet has been upgraded with the introduction of 9 electric vans replacing diesel equivalents, and a pilot has begun to trial the use of an electric cargo bike service for transport needs within the Chorlton area. Continued work has taken place to remove single-use plastic from catering outlets and MFT has supported the Greater Manchester NHS research to identify and target the top 100 single-use plastic items within the healthcare supply chain. Collaboration with NHS Forest has facilitated the planting of 86 trees, including a mini-orchard at Trafford General Hospital, improving the biodiversity and resilience of the site.

£100,000 of charity funding has been secured to improve cycling infrastructure and facilitate active commuting. £7 million has been secured through the Government's Public Sector Decarbonisation Fund to further support progress to net zero. Both of these schemes will be fully implemented in 2021/22.

Manchester Health and Care Commissioning is working with some of its GP providers and Greater Manchester to revise on how asthma could be managed well with inhalers whose carbon footprint is much less than the inhalers used currently. This is also on the NHS Long term plan and the local health care system would be working towards it. North Manchester General – The regeneration project has the reduction of the carbon footprint as a key objective.

Link: [MFT Annual Sustainability Report](#)



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UNIVERSITY OF MANCHESTER

MEMBER SINCE:

2018

PROGRESS OVER 2020/21



The University of Manchester

The University of Manchester (UofM) is the second-largest university in the United Kingdom by enrolment (40,490 total students) and the largest single-site university in the UK.

The University is a member of the partnership and is committed to becoming zero carbon across scopes 1 and 2 by 2038 at the latest, in line with the Manchester City Council target created in collaboration with the Tyndall Centre for Climate Change Research. This target is one of the University's eight key performance indicators, as set out in the "Our Future" strategy.

2020 was a challenging year for the University of Manchester's sustainability plans, with COVID slowing or halting work in some areas. However, plans are gathering pace for action throughout the rest of 2021 and beyond.

Funding has been approved for the University to develop a 'Zero Carbon Masterplan', which will inform how the University can deliver on its 2038 commitment. In addition, a new strategy will be developed which will bring together all our work in relation to the environment, including carbon, biodiversity, food, research, teaching and public engagement and more. The launch of this new strategy and accompanying action plan will give fresh impetus to our environmental sustainability work, building on the work in recent years.

UofM has just been ranked number one in the world in the Times Higher Education's (THE) University Impact Rankings 2021 for the quality and scale of their impact against the UN's Sustainable Development Goals (SDGs).

Link:

[UofM Environmental Sustainability](#)



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