

Manchester City Council Report for Information

Report to: Environment and Climate Change Scrutiny Committee – 13
October 2022

Subject: Manchester's Annual Climate Change Report 2022

Report of: Manchester Climate Change Agency

Summary

This report provides a summary of Manchester's Annual Climate Change Report for 2022 which is based on the latest emissions data released by the UK Government's Department for Business, Energy, and Industrial Strategy (BEIS).

The Annual Report enables Manchester to track its progress against the carbon reduction targets, carbon budget and zero carbon date of 2038 that are set out in the city's Climate Change Framework, and its recent 2022 Update.

The Report shows that the city achieved a 12% reduction in emissions in 2020 (the most recent data from BEIS) which, despite being a greater increase than previous years, is still below the original 13% per annum target and was largely driven by reduced activity during the COVID-19 pandemic lockdowns.

The Report also provides an estimate of emissions for 2021 which predicts an increase of 6% compared to 2020, driven by an increase in activity as we came out of lockdowns.

Finally, the Report provides a high level summary of activity that has been carried out in support of the city's Framework by Manchester Climate Change Partnership, its Advisory Groups, and Manchester Climate Change Agency in 2022. It does not identify new priorities for next year (as previous Annual Reports did) as these have been captured in granular detail in the 2022 Update to the Framework.

Recommendations

The Committee is recommended to consider and make comments on the content of the report.

Wards Affected: All

Environmental Impact Assessment - the impact of the issues addressed in this report on achieving the zero-carbon target for the city

This report is based on the Manchester Climate Change Framework 2020-25, the 2022 Update to the Framework, and progress towards its implementation. The Framework is the city's high-level strategy for tackling climate change. It sets out how Manchester will

'play its full part in limiting the impacts of climate change', a commitment in the Our Manchester Strategy 2016-25. The Framework's key aim is for "Manchester to play its full part in limiting the impacts of climate change and create a healthy, green, socially just city where everyone can thrive."

Equality, Diversity and Inclusion - the impact of the issues addressed in this report in meeting our Public Sector Equality Duty and broader equality commitments

A core principle of the Climate Change Framework is to ensure that all of Manchester's residents are protected from the impact of climate change and that actions to help the transition to a zero carbon and climate resilient city do not have a negative impact on the most vulnerable people, ensuring the costs do not fall unevenly on those that are least able to afford them.

Manchester Strategy outcomes	Summary of how this report aligns to the OMS/Contribution to the Strategy
A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities	The Climate Change Framework has the core objective: “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.
A highly skilled city: world class and home grown talent sustaining the city’s economic success	The Climate Change Framework notes: “By 2025 Manchester will be a key player in the global zero carbon economy, recognised as one of the best places in the world to innovate, invest and roll-out new solutions to climate change. Manchester businesses will be rewarded for their commitment to climate action by saving money, attracting talented workers and exporting their products and expertise across the UK and internationally.”
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	The Climate Change Framework has the core objective: “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.
A liveable and low carbon city: a destination of choice to live, visit, work	The Climate Change Framework notes: “By 2025 Manchester residents will have cleaner air, be walking and cycling more, be living in more energy efficient homes, have access to high quality green spaces in their neighbourhoods, and be securing good, well-paid jobs in socially and environmentally responsible Manchester businesses.”
A connected city: world class infrastructure and connectivity to drive growth	The Climate Change Framework has the core objective: “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

Contact Officers:

Name: Samantha Nicholson
Position: MCCA Director
E-mail: Samantha.nicholson@manchesterclimate.com

Name: Anna Bond
Position: MCCA Deputy Director
E-mail: anna.bond@manchesterclimate.com

Background documents (available for public inspection):

The following documents disclose important facts on which the report is based and have been relied upon in preparing the report. Copies of the background documents are available up to 4 years after the date of the meeting. If you would like a copy please contact one of the contact officers above.

2022 Update of the Manchester Climate Change Framework (2020-25)

<https://www.manchesterclimate.com/content/2022-update>

Previous Annual Reports from 2013-2021

<https://www.manchesterclimate.com/progress>

Previous Environment and Climate Change Scrutiny papers from 8th September 2022

[Agenda for Environment and Climate Change Scrutiny Committee on Thursday, 8th September, 2022, 10.00 am \(manchester.gov.uk\)](#)

1.0 Introduction

- 1.1 The Our Manchester Strategy sets out the commitment that ‘Manchester will play its full part in limiting the impacts of climate change.’
- 1.2 The responsibility for developing and facilitating the delivery of the citywide strategy to fulfil this commitment is devolved to the Manchester Climate Change Partnership (the Partnership, MCCC) and Manchester Climate Change Agency (the Agency, MCCA).
- 1.3 The Manchester Climate Change Framework (2020-25) is the city's high-level strategy for tackling climate change. It uses a science-based approach to set a carbon budget and a zero carbon date for the city. The Framework's key aim is for “Manchester to play its full part in limiting the impacts of climate change and create a healthy, green, socially just city where everyone can thrive”.
- 1.4 Annual Climate Change Reports have been produced for Manchester since 2013, detailing the city's progress against its climate change targets. From 2015, these have been produced by MCCA and the independent advisory groups that support the Partnership (<https://www.manchesterclimate.com/advisory-groups>).
- 1.5 The Annual Reports present the latest emissions data for Manchester as released by the UK Government's Department for Business, Energy, and Industrial Strategy (BEIS). There is a time lag on this data meaning that the latest emissions data is for ~two years prior to the report date.
- 1.6 The Annual Reports enable Manchester to track its progress against the carbon reduction targets, carbon budget and zero carbon date of 2038 that are set out in the city's Climate Change Framework, and its recent 2022 Update.
- 1.7 They also provide a high level summary of activity that has been carried out in support of the city's Framework by Manchester Climate Change Partnership, its Advisory Groups, and Manchester Climate Change Agency in year.

2.0 Background

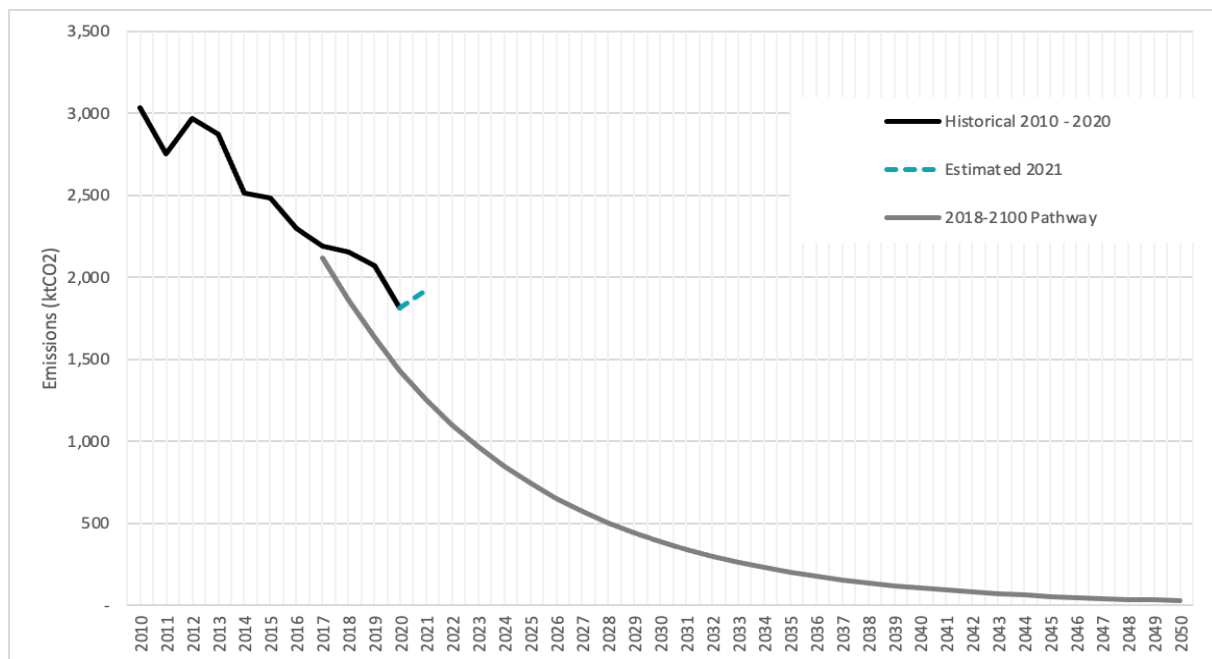
- 2.1 Manchester reduced its direct, energy related carbon emissions by 41% between 2005-2020.
- 2.2 The city's Climate Change Framework (2020-25) sets a carbon budget of 15m tCO₂ for the period 2018-2100, a milestone to halve emissions by 2025, and a target to reach zero carbon by 2038 at the latest.
- 2.3 Meeting these targets required that Manchester reduce its emissions by 13% per annum from 2018 onwards.
- 2.4 The actual level of reductions reported in the city's recent Annual Reports is as follows:
 - 2018 – 2%

- 2019 – 3%

3.0 Key updates on Framework objectives in the Annual Report

Direct Emissions

- 3.1 Direct carbon emissions are those from energy use in buildings, transport and industry.
- 3.2 Manchester's direct energy related emissions were 1.8m tCO₂ for 2020, equivalent to a 12% decrease from 2019.
- 3.3 This reduction was primarily caused by a fall in emissions from the transport sector due to travel restrictions during the COVID-19 pandemic.
- 3.4 A provisional estimate for 2021, made by the Tyndall Centre for Climate Change Research, suggests that emissions will be around 1.9m tCO₂ which would represent a 6% increase from 2020.
- 3.5 This increase is the projected impact of the lifting of COVID-19 travel restrictions.
- 3.6 The Manchester Climate Change Framework (2020-25) divides the city's total carbon budget into 5-year 'interim' budgets. The budget for 2018-2022 is 6.9m tCO₂.
- 3.7 The sum of emissions for 2018, 2019 and 2020, plus the estimate for 2021, is 7.9m tCO₂ which means the city has already exceeded the interim budget by 15% with one of the five years still remaining.
- 3.8 The graph below shows Manchester's historic energy related CO₂ emissions, including the latest accurate data for 2020, and the estimated emissions for 2021.



- 3.9 For the city to stay within its carbon budget by 2038, urgent action is needed at scale not seen before.
- 3.10 If the predicted rise in emissions for 2021 proves accurate, an average reduction rate of 21% per year would be required to stay within the budget (based on an even distribution of reductions over time).
- 3.11 The distribution of the carbon budget can be varied in a number of ways and reductions do not need to be evenly distributed, however, slower reduction rates in earlier years must be compensated for by faster reduction rates in the future to keep within the budget.
- 3.12 The 2022 Update of the Framework identifies a number of emissions reduction scenarios to stay within the carbon budget by 2038, with different levels of action over different timelines, but all requiring urgent action at scale.

Consumption-Based/Indirect emissions

- 3.13 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.
- 3.14 Consumption-based emissions are significant as they can be 60% greater than our direct emissions but are more difficult to assess accurately, particularly at city-scale, and so target-setting and granular monitoring is not yet possible.

- 3.15 Based on research by The Centre for Research into Energy Demand Solutions (CREDS), The Update to the Framework and last year's annual report both set out an estimated consumption-based emissions footprint for the city for 2019. The 2019 data for this has been updated and shows a slight increase in emissions (from 3.14 to 3.24 MtCO₂e).

Aviation

- 3.16 The Covid-19 pandemic had an unprecedented impact on many sectors of the economy, and the aviation industry was no exception. Restrictions on non-essential travel saw passenger numbers at Manchester Airport fall by 94% to 1.8 million in 2020.
- 3.17 In 2021, passenger numbers climbed to 4.8 million, still well below the pre-pandemic level of 29.3 million in 2019. As a result, we estimate that emissions from flights from Manchester Airport increased by 180% from 0.34m tCO₂ in 2020 to 0.94m tCO₂ in 2021. In comparison, UK aviation emissions are projected to have fallen by 16% from 14.3m tCO₂ in 2020 to 12m tCO₂ in 2021.
- 3.18 Emissions from flights taken by Manchester residents from all UK airports also grew, increasing by 240% from 0.018m tCO₂ in 2020 to 0.062m tCO₂ in 2021.
- 3.19 There is a risk that aviation emissions may return to pre-pandemic levels. However, it is still unclear how quickly this will happen, if at all, with high fuel costs and staff shortages acting as a constraint on growth.

Adaptation and Resilience

- 3.20 Climate change creates risks for our communities, buildings, critical infrastructure, wider economy, and natural environment; yet we do not fully understand the impacts we face at local level and so cannot plan and prioritise effective action. Adaptation needs to play an increasing role as we work to stay within our carbon budget.
- 3.21 Over the past year MCCA has developed Manchester Climate Ready: risk, resilience, and adaptation. This provides a vision for a climate resilient Manchester and identifies seven principles to catalyse coherent action. The work has been integrated as part of the 2022 Update to the Framework.

Health and Wellbeing

- 3.22 A newly convened advisory group on health and wellbeing has been established by the Manchester Health & Wellbeing Board, MCCP and MCCA and has fed into the Update regarding the intersection between addressing health inequalities and climate action. A key focus across 2022/23 will be identifying indicators and metrics to aid reporting against the Update of the Framework.

4.0 Commentary on other priorities in the 2021 Annual Report

- 4.1 Appendix 1 provides a detailed progress update against the priorities set out in the 2021 Annual Report. Notable progress is highlighted here.
- 4.2 A key focus in the past year has been the 2022 update of the Manchester Climate Change Framework (2020-25). It sets new granular targets for reducing the city's direct emissions by 50% plus associated actions for all sectors in the city to deliver.
- 4.3 MCCA successfully secured £2.5m from The National Lottery Community Fund - Climate Action Fund to support residents and communities across Manchester play an active role in tackling climate change. This 3-year, citywide programme started in September 2022 and will catalyse action, share tools, techniques and best practice, and measure the impact of resulting activity, whilst building a climate movement in Manchester.
- 4.4 MCCA adopted a new agreement on tackling aviation emissions which is included in the 2022 Update to the Manchester Climate Change Framework. It was co-created by the Aviation sub-group of MCCA's Zero Carbon Advisory Group.
- 4.5 The University of Manchester has continued to support the city in understanding its consumption-based emissions, with the second part of its research on food. Additional work is underway in collaboration with Leeds University.
- 4.6 MCCA secured funding to support a secondment from Manchester Metropolitan University which with support from MCCA's Adaptation and Resilience Advisory Group, has produced a vision for progressive resilience which identifies the key characteristics of such a resilient city, and seven principles to guide both ambition and practical action. These can be found on the new Manchester: Climate Ready website along with examples of adaptation best practice from MCCA members.
- 4.7 MCCA is part of the 3Ci initiative exploring ways to unlock private investment into the transition to zero carbon. MCCA is also part of the Bee Net Zero partnership which brings together business support organisations from across Greater Manchester to collaborate on making this the easiest place in the UK for every business to become a green business.
- 4.8 MCCA is supporting MCCA to develop new programmes of work that will help to accelerate the decarbonisation of member organisations, including via sharing best practice between Manchester organisations and internationally via our involvement in the City Business Climate Alliance initiative (CBCA).
- 4.9 Five new members have joined MCCA: Deloitte, Wates, and THG, The Carbon Literacy Trust and Arup and further connections are being explored through the CBCA initiative.

4.10 MCCA has a new Director and two new Deputy Directors in place, and the Community Interest Company also has five new Directors on its Board.

5.0 Recommendations

5.1 The Scrutiny Committee is asked to consider and make comments on the content of the report.