

**Manchester City Council
Report for Information**

Report to: Environment, Climate Change and Neighbourhoods Scrutiny Committee – 11 January 2024

Subject: Manchester Airport and Aviation Emissions

Report of: Manchester City Council, Manchester Airports Group, Centre for Aviation and Transport Emissions, Manchester Climate Change Agency

Summary

This report provides a further update to the Committee on emissions from Manchester Airport and aviation. The covering report sets out the Council’s role in relation to reducing aviation emissions via its shareholder relationship to Manchester Airports Group (MAG) who own and operate three UK airports including Manchester Airport, its membership of Manchester Climate Change Partnership and as an employer.

Three separate updates are also appended to the report. The first is from MAG which provides an update on their work to decarbonise their ground operations and flights to and from Manchester Airport. The second is a report from the Centre for Aviation and Transport Emissions (CATE) based at Manchester Metropolitan University on estimating the scale and impact of non-CO₂ aviation emissions on climate. The third is a University of Manchester report commissioned by the Manchester Climate Change Agency and Partnership which seeks to estimate the aviation related CO₂ emissions from flights taken by Manchester residents. The reports seek to provide the Committee with additional evidence from a range of sources to inform a discussion on the decarbonisation of Manchester Airport and aviation emissions to ensure that local, national and international targets can be met.

Recommendations

The Committee are invited to note and comment on the content of the report and appendices.

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 considers the relationship between aviation and carbon emissions. Aviation contributes around 2-3% to global carbon emissions and the emissions that arise from flying need to be considered as part of global and national carbon budgets as part of global efforts to keep global
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	<p>temperature rise to 1.5 degrees C of pre-industrial levels. The report sets out the Council's role in relation to aviation emissions alongside input from external organisations including Manchester Airports Group and the Centre for Aviation and Transport Emissions.</p>
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Manchester Strategy outcomes	Summary of how the report aligns to the OMS
A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities	Manchester Airport is a significant economic asset generating £1.4bn GVA for the UK and with 20,400 people employed on site. Aviation is, however, also a significant contributor to global carbon emissions and this report includes an update on work with the UK Government and international partners to reduce emissions in a way that is COP21 compliant.
A highly skilled city: world class and home grown talent sustaining the city's economic success	The aviation industry is a large employer in the city with 56,000 jobs supported through the full supply chain. Innovation such as the introduction of new technologies and sustainable aviation fuels will create new opportunities for Manchester residents which will require new skills pathways.
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	
A liveable and zero carbon city: a destination of choice to live, visit, work	Manchester Airport is a vital part of the city's tourism infrastructure with visitors from around the globe travelling to Manchester to access its leisure, cultural and sporting offer.
A connected city: world class infrastructure and connectivity to drive growth	Manchester Airport is the global gateway to the North of England which supports international trade, people to people connections and leisure. Improving the Airport and its wider transport infrastructure is a strategic priority for Manchester.

Financial Consequences – Revenue

N/A

Financial Consequences – Capital

N/A

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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.

Manchester Climate Change Framework 2020-25
www.manchesterclimate.com/framework-2020-25

2022 Update to the Manchester Climate Change Framework
www.manchesterclimate.com/content/2022-update

Manchester Climate Change Annual Report 2023
www.manchesterclimate.com/progress

Manchester Airport report to Economy and Regeneration Scrutiny Committee 5
December 2023

Manchester Airport and Aviation Emissions report to Environment, Climate Change
and Neighbourhoods Committee 12 January 2023

Aviation and Carbon Emissions report to Environment and Climate Change Scrutiny
Committee 9 December 2021

1.0 Introduction and Background

- 1.1 Manchester Airport performs an important economic role for Manchester, Greater Manchester and the wider region. The latest post-pandemic data from 2022 demonstrates that the Airport supported direct employment (both with MAG and third parties on-site) of 20,200 jobs and directly generated £1.4 billion in GVA to the national economy through its operations. Indirect employment through Manchester Airport's supply chain and the resulting induced spending in the wider economy increases the impacts to nearly 56,000 jobs and over £3.6 billion in GVA.
- 1.2 The Airport is forecasting 27.4 million passengers in 2023/24 which is equivalent to 95% of 2019 levels. These passengers come from across the North West, Yorkshire and Humber, North East, the Midlands, Wales and Scotland.
- 1.3 The direct and indirect economic benefits of having Manchester Airport located in the city are considerable and are recognised in economic and international strategies. However, the Airport and the aviation sector in general make a significant contribution to carbon emissions including travel to and from the Airport and the operation of planes in and out of the Airport. Aircraft emit a range of greenhouse gases during their operation and research shows that these gases have different effects when emitted at higher altitudes.
- 1.4 It is estimated that the aviation industry contributes approximately 2-3% of global energy-related CO₂ emissions, therefore decarbonising this sector is a national and international priority. Some progress has been made including the 2022 agreement of the International Civil Aviation Organisation's 193 members states to adopt a long-term global aspirational goal (LTAG) to achieve net-zero emissions by 2050. Technological developments are also progressing such as the use Sustainable Aviation Fuels and plans for the UK's first green airline 'Ecotricity' to be launched in 2024 starting with small scale electric powered flights between Edinburgh and Southampton.
- 1.5 The appended reports contain detailed technical information for the Committee to consider in relation to the operation of MAG, the aviation industry more generally and aviation emissions in the context of Manchester residents and the city's ambition to be zero carbon by 2038 at the latest. The Centre for Aviation Emissions report on non CO₂ emissions responds directly to discussions on contrails and other gasses at the January 2023 Committee meeting.
- 1.6 The remainder of this report identifies the ways in which the Council can influence aviation emissions at MAG, within the city and the organisation.

2.0 Overview of appendices

- 2.1 Given the importance of decarbonising aviation to achieving international climate change targets, Manchester Airport being the third busiest in the UK,

and the technical nature of some aspects of the debate, the Committee have been provided with three appended reports which seek to provide additional evidence and information to inform the discussion. These are summarised below.

- 2.2 **Appendix 1: Manchester Airport Group Report.** This report provides an overview of the activity MAG are delivering as an organisation and in partnership to decarbonise the Airport's ground operations by 2038 including travel to and from the Airport. Emissions from these activities all contribute towards the city's carbon budget and as such form part of the annual Manchester emissions reports published by MCCA. The report also provides MAG's perspectives on the decarbonisation of the aviation sector including the use of alternative fuels, aircraft efficiency and carbon removals. It also provides an update on the delivery of the government's Jet Zero Strategy and the International Civil Aviation Organisation long-term aspirational goal, both of which target aviation achieving net zero by 2050.
 - 2.3 **Appendix 2: Centre for Aviation Transport Emissions Report.** During the January 2023 Committee discussion, a number of questions centred on the impact of non CO₂ aviation emissions on climate change. CATE is based at Manchester Metropolitan University and works with airports, airlines and aircraft manufacturers researching the impact of aircraft on climate change, local air quality, noise and local communities and provides scientific and policy advice to airports, aircraft manufacturers, government and regulatory authorities around the world. Being home to a world leading institution in this field resulted in CATE being invited to attend the Committee and provide a summary paper on their research into the climate change impacts of non CO₂ aviation emissions. The report provides an overview of this work which concludes that non CO₂ effects are more complex and uncertain than CO₂ effects. This report, and CATE's attendance at the Committee, is intended to provide additional research data to inform the discussion and an independent expert perspective on aviation emissions.
 - 2.4 **Appendix 3: Manchester Aviation Emissions Report.** This report summarises the aviation objectives within the Manchester Climate Change Framework. It also provides an update on Manchester's Aviation Emissions Report, the analysis of which was commissioned to the University of Manchester (UoM) and is due to be published by Manchester Climate Change Partnership (MCCP) in January 2024. The UoM methodology estimates that emissions from flights taken by Manchester residents in 2021 totalled 0.15 m tCO₂ of which 0.13 m tCO₂ are from flights from Manchester Airport. Further work will be undertaken to improve these estimates in future years using additional data from MAG to ensure these are as accurate as possible.
- 3.0 **Manchester City Council's role as a MAG shareholder**
 - 3.1 The Council has a 35.5% stake in MAG with 29% owned collectively by the other 9 GM Councils and 35.5% owned by IFM Global Infrastructure Fund. Prior to the pandemic, over £600m in dividend payments were distributed to the GM Councils, however, a dividend has not been paid since 2019 and in

2020 the 10 GM Councils provided a loan to MAG to help deal with the impact of the pandemic following a lack of government support. MAG has recovered well from the pandemic both in terms of passenger numbers and its wider economic impact. This is evidenced by Fitch Ratings upgrading MAG to a BBB+ rating in August 2023 and MAG successfully raising £360m in the UK capital markets through the issuance of an 18-year bond, at a rate of 6.125%.

- 3.2 The Council is represented on the Board of Directors by the Leader of the Council and plays a key role in influencing MAG's Corporate Social Responsibility (CSR) activity. The recent report to Economy and Regeneration Scrutiny Committee on 5 December 2023 provided a detailed summary of MAG's work in this area. 'Zero Carbon Airports' is one of the three strategic priorities within the MAG CSR Strategy and a 'sustainable future for all' is one of MAG's five corporate values.
- 3.3 Having 64.5% of MAG's shareholding stake owned by GM Councils has helped to drive MAG to become a leader on climate change. The Council's shareholding has helped influence MAG to decarbonise their ground operations which has seen them become a climate neutral airport and set a zero carbon target of 2038, joining the Manchester Climate Change Partnership, investing in new technologies such as Sustainable Aviation Fuels via their partnership with Fulcrum Energy and their partnership with HyNet on their proposed hydrogen fuel pipeline. This has led to the Financial Times recognising MAG as a climate leader two years in a row.

4.0 The Council's leadership role on the Manchester Climate Change Partnership (MCCP)

- 4.1 The Council is a member of the MCCP which is the city's cross-sector partnership focussed on the common goal of helping Manchester to limit its greenhouse gas emissions and build resilience to a changing climate. As well as being instrumental in bringing MAG onto the Partnership, the Council has also provided strategic leadership on the setting of carbon budgets for the city.
- 4.2 The 2022 Update to the Manchester Climate Change Framework includes a joint agreement on aviation emissions which was provided as an appendix to the January 2023 report to the Committee which is available at this link. [Appendix 1 Extract from the 2022 Update to the Manchester Clim.pdf](#)

5.0 Aviation emissions from Council staff

- 5.1 Emissions from staff business travel made up 2% of the Council's total CO2 emissions in 2022/23, with the largest contributors being buildings at 76%, waste collection fleet at 10% and streetlights at 9%. The Council's Staff Travel Policy was approved in December 2021 and encourages all Council employees to use the most environmentally friendly mode of transport that is practical and accessible for their journey.
- 5.2 The Policy includes the following statement in relation to air travel:

“Air travel is restricted to business-critical cases. Given the carbon impact of air travel, this option should only be pursued for international travel, unless in exceptional circumstances. All air travel requires prior approval from the City Treasurer or Chief Executive.”

- 5.3 Council staff are also educated about carbon emissions from aviation and their own carbon budget as part of the Carbon Literacy training programme which targets 50% of all staff becoming trained by 2025.
- 5.4 The recovery from the COVID-19 pandemic has led to changes in the ways of working with a big focus on the use of digital communication to progress international partnerships. There are, however, circumstances where international travel is necessary to help deliver the Council and city’s strategic priorities such as through attracting funding, influencing, building strong partnerships or learning from others.

6.0 Recommendations

- 6.1 The Committee are invited to note and comment on the content of the report and appendices.