



Environment and Climate Change Scrutiny Committee

Date: Thursday, 21 July 2022

Time: 10.00 am

Venue: Council Antechamber, Level 2, Town Hall Extension

Everyone is welcome to attend this committee meeting.

There will be a private meeting for Committee Members only at 9:30am in Room 2006, 2nd Floor, Town Hall Extension

Access to the Antechamber

Public access to the Council Antechamber is on Level 2 of the Town Hall Extension, using the lift or stairs in the lobby of the Mount Street entrance to the Extension.

There is no public access from any other entrance.

Filming and broadcast of the meeting

Meetings of the Environment and Climate Change Scrutiny Committee are 'webcast'. These meetings are filmed and broadcast live on the Internet. If you attend this meeting you should be aware that you might be filmed and included in that transmission.

Membership of the Environment and Climate Change Scrutiny Committee

Councillors - Chohan, Doswell, Holt, Hughes, Ilyas, Jeavons, Lyons, Nunney, Razaq, Sheikh, Shilton Godwin (Chair) and Wright

Agenda

1. Urgent Business

To consider any items which the Chair has agreed to have submitted as urgent.

2. Appeals

To consider any appeals from the public against refusal to allow inspection of background documents and/or the inclusion of items in the confidential part of the agenda.

3. Interests

To allow Members an opportunity to declare any personal, prejudicial or disclosable pecuniary interest they might have in any items which appear on this agenda; and [b] record any items from which they are precluded from voting as a result of Council Tax/Council rent arrears. Members with a personal interest should declare that interest at the start of the item under consideration. If members also have a prejudicial or disclosable pecuniary interest they must withdraw from the meeting during the consideration of the item.

4. Minutes

To approve as a correct record the minutes of the meeting held on 23 June 2022.

Pages
5 - 10

5. Greater Manchester Clean Air Plan Review

Report of the Deputy Chief Executive & City Treasurer and City Solicitor

Pages
11 - 338

This report updates on progress made on the Greater Manchester Clean Air Plan policy review and seeks comments from members to inform finalisation of the review submission to government.

6. Manchester Climate Change Framework (2020-25): 2022 Update

Report of the Manchester Climate Change Partnership and Agency

Pages
339 - 398

This report provides the key contents of the 2022 Update to the Manchester Climate Change Framework (2020–2025).

7. Manchester City Council Climate Change Action Plan: Quarterly Progress Report, Quarter 1 April - June 2022

Report of the Deputy Chief Executive and City Treasurer

Pages
399 - 420

This report provides an update on progress in delivery of the Council's Climate Change Action Plan in Quarter 1 2022-23 (April – June 2022)

8. Overview Report

Report of the Governance and Scrutiny Support Unit

Pages
421 - 432

This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.

Information about the Committee

Scrutiny Committees represent the interests of local people about important issues that affect them. They look at how the decisions, policies and services of the Council and other key public agencies impact on the city and its residents. Scrutiny Committees do not take decisions but can make recommendations to decision-makers about how they are delivering the Manchester Strategy, an agreed vision for a better Manchester that is shared by public agencies across the city.

The Environment and Climate Change Scrutiny Committee areas of interest include The Climate Change Strategy, Waste, Carbon Emissions, Neighbourhood Working, Flood Management, Planning policy and related enforcement and Parks and Green Spaces.

The Council wants to consult people as fully as possible before making decisions that affect them. Members of the public do not have a right to speak at meetings but may do so if invited by the Chair. If you have a special interest in an item on the agenda and want to speak, tell the Committee Officer, who will pass on your request to the Chair. Groups of people will usually be asked to nominate a spokesperson. The Council wants its meetings to be as open as possible but occasionally there will be some confidential business. Brief reasons for confidentiality will be shown on the agenda sheet.

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Agenda, reports and minutes of all Council Committees can be found on the Council's website www.manchester.gov.uk.

Smoking is not allowed in Council buildings.

Joanne Roney OBE
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Further Information

For help, advice and information about this meeting please contact the Committee Officer:

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This agenda was issued on **Wednesday, 13 July 2022** by the Governance and Scrutiny Support Unit, Manchester City Council, Level 2, Town Hall Extension, Manchester M60 2LA

Environment and Climate Change Scrutiny Committee

Minutes of the meeting held on 23 June 2022

Present:

Councillor Shilton Godwin – in the Chair
Councillors Chohan, Doswell, Holt, Hughes, Ilyas, Lyons, Nunney, Razaq, Sheikh and Wright

Apologies: Councillor Jeavons

Also present:

Councillor Rawlins, Executive Member for Environment and Transport
Councillor Foley, Deputy Executive Member for Environment and Transport

ECCSC/22/17 Urgent Business – Clean Air Plan Policy Review

The Chair introduced an item of urgent business by explaining that the report entitled 'Clean Air Plan Policy Review' had been listed for consideration at this meeting. She advised the Committee that this item had been deferred to the July meeting and invited the Executive Member for Environment and Transport and the Deputy Chief Executive and City Treasurer to outline the reasons for this.

The Deputy Chief Executive and City Treasurer informed the Committee that the draft response to the Government was not currently available for scrutiny, however this would be presented to the Committee at the July meeting prior to its submission to the Executive. She stated this approach was being adopted across all the ten districts within Greater Manchester. She said that in order to meet the Government deadline of 1 July and enable the individual local authorities to consider it before a final version was submitted, the GM Air Quality Administration Committee, with political representation from each district, had agreed to submit a draft plan to meet the deadline but be clear that it remained a draft until it has been considered by the districts.

The Executive Member for Environment and Transport further commented that as soon as the papers were available for the Greater Manchester Air Quality Administration Committee, she would direct Members to these links.

Decision

The Committee noted the update.

ECCSC/22/18 Minutes

Decision

To approve the minutes of the meeting held on 26 May 2022 as a correct record.

ECCSC/22/19 Climate Change Action Plan Work Programme 2022-23

The Committee considered the report of the Deputy Chief Executive and City Treasurer that provided an update on the actions to be progressed in Year 3 of the Climate Change Action Plan (CCAP) 2020-25.

Key points and themes in the report included:

- The achievements and highlights of Year 2 will be detailed in the Annual Report 2021-22 which will be published in the Autumn of 2022 and will be available on the Council's website;
- Describing that a refresh of the CCAP 2020-25 was currently underway and would be completed in Autumn 2022;
- The refresh would align the CCAP to wider strategies, such as the Local Plan;
- Reiterating that the Council remained committed to maintaining transparency and would continue to publish quarterly progress reports on the Council's website; and
- Providing a description of the actions and priorities against five workstreams.

Some of the key points that arose from the Committee's discussions were: -

- Welcoming the report and the information provided;
- Reiterating the call made previously by the Committee for an end to the use of Glyphosate as a method of weed control across the city;
- The report did not present any SMART targets for the activities described;
- The need to clearly articulate the progress made to reduce carbon emissions so this was accessible and relevant to residents;
- An update was sought in relation to Carbon Literacy Training;
- The need to meaningfully engage with the Manchester Community Assembly on Climate Change;
- What support was offered by the Council to the Climate Change Partnership; and
- The issue of shading and heat stress across the public realm needed to be included in Workstream 4: Climate Adaptation and Carbon Sequestration. Noting the emerging evidence in relation to the 'heat island' effect of cities and the impact this had on individuals and the wider contribution to the heating of the planet.

In response the Executive Member for Environment and Transport advised the Committee that the policy in relation to the use of Glyphosate would be circulated to all Members for information. She advised that the Council was committed to reducing the use of this and that alternative methods of weed control across different settings were being considered. She noted that the Committee would be receiving a report on this issue at a future meeting. She advised that residents could opt out of having this used in a neighbourhood, on the condition that they would then take responsibility for removing the weeds themselves. She further advised that she would relay the comments from the meeting to Councillor Igbon, Executive Member for Vibrant Neighbourhoods.

The Zero Carbon Manager advised that the Manchester City Council Climate Change Action Plan was the Council's detailed plan and contained targets and deadlines agreed against actions. The Strategic Lead, Resources & Programmes added that

this report provided an overview of the coming year's priorities and had previously been requested by the Committee, however he noted the way this report and information provided to future meetings would be reviewed, noting the comments from Members. He further stated that the information that was published on the Council's website would be reviewed to ensure that it was appropriate for both Members and residents to access information in relation to the range of actions and activities undertaken by the Council to address climate change.

The Executive Member for Environment and Transport advised that both herself and the team remained committed to arranging any briefing sessions or training for Members of the Committee on the activities and work to tackle climate change.

The Strategic Lead, Resources & Programmes informed the Committee that they did engage in continued dialogue with the Community Assembly on Climate Change. Further, he informed the Members that the Council was an active partner, along with the Universities and Bruntwood in the Oxford Road Corridor Partnership. He further commented that these established links with the local Universities facilitated the understanding and implementation of new innovations and understandings to address climate change.

The Strategic Lead, Resources & Programmes advised that he would relay the comments regarding heat stress and the public realm to colleagues in the planning department. The Head of City Policy advised that as part of the Local Plan, consideration was being given to developing policies to deliver zero carbon new build.

The Principal Resources & Programmes Officer informed the Committee that to date 1,400 staff and 54 Councillors were certified as having completed the Carbon Literacy Training. She advised that this training was now mandatory for staff. She further stated that the ambition was for the Council to achieve Gold standard accreditation for this activity, and a dedicated resource had been allocated to deliver this ambition.

The Deputy Chief Executive and City Treasurer advised that the Committee would be considering the Climate Change Action Plan 2020/25 Refresh at the September meeting and consideration would be given to resilience and adaptation as part of this reporting. She reiterated the commitment that addressing climate change was embedded across all Council decision making.

Decision

To note the report.

ECCSC/22/20 Carbon Reduction Procurement Progress Report

The Committee considered the report of Strategic Lead Integrated Commissioning and Head of Integrated Commissioning and Procurement that updated the Members on the steps that had been taken within the council's procurements to support carbon reduction and highlighted planned next steps.

Key points and themes in the report included:

- Providing an introduction and background, noting that as part of the Climate Change Action Plan, the council was working to reduce the emissions associated with the goods, services and works contracts that the council procured;
- In March 2021, the council added a new 10% evaluation weighting specifically in relation to climate change and the environment as part of the Social Value element of contracts;
- Examples of how this weighting had been applied and the outcomes achieved;
- Providing a summary of the main practical challenges and issues that were having to be addressed; and
- Appended to the report was the Internal Audit Briefing Note that provided a high level overview of the current arrangements in place to support carbon reduction through sustainable procurement.

Some of the key points that arose from the Committee's discussions were: -

- Welcoming the report and the progress to date, noting that this was an important area of activity for the Council;
- Welcoming the Internal Audit Briefing Note, noting that it was important to engage a 'critical friend' to provide an opinion on this important activity;
- Noting that environmental commitments related to wider activities, in addition to reducing carbon emissions;
- What was being done to support SMEs (Small and medium-sized enterprises), noting that many of these were committed to people and place;
- What monitoring was undertaken to ensure that contractors awarded adhered to delivery on their environmental commitments;
- Were the Questions and Answers used in the awarding of contracts available for the public to access;
- Mindful of commercial sensitivity, anonymised case studies should be included in future update reports;
- Had all the staff involved in the procurement process completed the Carbon Literacy training, noting the extremely high level of technical and innovative information that commissioning officers would need to assess;
- Directing officers to the Competition and Markets Authority 'Green claims code: making environmental claims' guidance as a useful resource; and
- Noting that to avoid accusations of greenwashing, carbon off setting should be deterred.

In response the Head of Integrated Commissioning and Procurement stated that the 10% weighting was for the value of the total valuation score, noting that currently Manchester was pioneering this approach. He stated that the monitoring of the delivery of this by successful contractors was undertaken as part of the ongoing contract management arrangements over the life of the contract, and this was to be standardised across all departments within the Council. The Committee were advised that with the exception of very new staff, all staff involved in the procurement process were Carbon Literacy trained. He further added that work was currently underway to capture and centralise the recording of all data on this activity.

The Head of Integrated Commissioning and Procurement advised that discussions regarding the 10% evaluation weighting in relation to climate change were had with various department Strategic Leads when contract specifications were brought forward prior to tender, noting that there was an escalation process to the Deputy Chief Executive and City Treasurer if required.

The Strategic Lead Integrated Commissioning stated that wider environmental benefits, such as delivering green space and supporting biodiversity were considered and assessed, noting that the additional 20% minimum Social Value element of contracts could also be used to support such initiatives. However, the requirement to address carbon emissions was explicit in the tender process as this supported and mirrored the ambitions for the city. He added that carbon offsetting was not promoted and actively discouraged; however, he acknowledged there would be circumstances when this would be used, adding that if this was done it needed to benefit the city.

The Strategic Lead Integrated Commissioning advised that the Growth Company and the Council's Work and Skills Team had established links and support to local SMEs. The Head of Integrated Commissioning and Procurement further added that advice and constructive feedback was also provided to all unsuccessful bidders as to how they could improve any future applications.

The Strategic Lead Integrated Commissioning advised that there was an online toolkit where the type of questions asked could be viewed and this resource also provided a useful narrative for prospective applicants. Noting that bids were commercially sensitive, consideration would be given to providing anonymised examples in future update reports, commenting that there was evidence that suppliers were actively engaging in this programme as carbon reduction plans had been submitted as part of the tender process. He further added that as this work progressed the examples could be used to inform and educate the market so as to embed this understanding and approach.

Both officers described the learning and sharing of good practice from the Manchester experience that was shared across a range of local and national forums, including Greater Manchester procurement colleagues, other Core Cities and the Local Government Association. Officers further acknowledged the comment regarding the Competition and Markets Authority 'Green claims code: making environmental claims' guidance.

The Chair concluded this item by acknowledging the achievements to date and recognising the importance of this activity not only for the city but also the world. She advised that the Committee would request an update report at an appropriate time.

Decision

To note the report and request that an update report is provided for consideration at an appropriate time.

ECCSC/22/21 Overview Report

The report of the Governance and Scrutiny Support Unit which contained key decisions within the Committee's remit and responses to previous recommendations was submitted for comment. Members were also invited to agree the Committee's future work programme.

Members requested that an update be provided for the next meeting for the listed outstanding recommendations. The Deputy Chief Executive and City Treasurer stated she would take this away as an action.

The Chair advised the Committee that she would be attending the July meeting of Economy Scrutiny Committee for the item on Active Travel. She stated that if any Members of this Committee had any questions relating to that item that they would like to raise at that meeting to contact her, and she would raise these on behalf of the Committee.

Decision

The Committee notes the report and agrees the work programme, noting the requests for update reports arising from consideration of the previous agenda items.

**Manchester City Council
Report for Resolution**

Report to: Environment and Climate Change Scrutiny Committee – 21 July 2022
Executive – 22 July 2022

Subject: Greater Manchester Clean Air Plan Review

Report of: Deputy Chief Executive & City Treasurer and City Solicitor

Summary

This report updates on progress made on the Greater Manchester Clean Air Plan (GM CAP) policy review and seeks comments from Members to inform finalisation of the review submission to government.

Recommendations

1. The Environment and Climate Change Scrutiny Committee is invited to comment on the report.
 2. The Executive is recommended to:
 - (1) Note the 'Case for a new Greater Manchester Clean Air Plan' document attached as Appendix 1 and associated appendices 2 to 6 has been submitted to the Secretary of State as a draft document subject to any comments from Manchester City Council ahead of the next Air Quality Administration Committee.
 - (2) Note that Cllr Tracey Rawlins as the Manchester City Council appointed representative on the Air Quality Administration Committee will represent Manchester City Council's comments;
 - (3) Note the initial screening undertaken to assess which protected characteristics are likely to be impacted by the new GM Clean Air Plan, and in scope for the Equalities Impact Assessment;
 - (4) Note the updated Do Minimum position for 2023 and 2025 and the forecasted points of exceedance in GM in 2023 and 2025; and
 - (5) Note the participatory policy development approach and the next steps for the GM CAP.
 - (6) Note the new 'ask' from Government to remove out-of-area operation by private hire drivers/vehicles to support the new GM Clean Air Plan;
 - (7) Note feedback from early engagement activity with vehicle owner representative groups;
 - (8) Note the NO₂ monitoring results and the exceedances of the annual mean across sites set up for GM CAP purposes between 2018 and 2021.
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Wards Affected: All

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

The GM CAP is a place-based solution to tackle roadside NO₂ which is expected to have a positive impact on carbon.

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

The Equality Impact Assessment (EqIA) completed for the previous GM CAP concluded that improved air quality resulting from that CAP would have had a disproportionate benefit for many protected characteristic groups namely, pregnancy and maternity; older people, young people and children; those with disability or ill-health; and those from minority ethnic and faith groups who are more likely to live in deprived neighbourhoods. A new EqIA will be undertaken as part of the CAP review and equalities issues will inform the review and proposals developed.

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 GM Clean Air Plan aims to improve air quality across Greater Manchester. By doing so the city will become a more attractive place to live, work and visit and this is likely to support a stronger economy.
A highly skilled city: world class and home grown talent sustaining the city's economic success	Improved air quality will improve the city's liveability and increase its appeal to retain and attract talent.
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	Ensuring residents can access job opportunities and other facilities in a safe and healthy environment, will enable everyone to contribute to the success of the city.
A liveable and low carbon city: a destination of choice to live, visit, work	Reducing congestion and air pollution will improve the attractiveness of the city, as well as supporting reduction in carbon emissions.
A connected city: world class infrastructure and connectivity to drive growth	Investing in the city's transport infrastructure will increase competitiveness and productivity, and help drive growth.

Full details are in the body of the report, along with any implications for:

- Equal Opportunities Policy
- Risk Management
- Legal Considerations

Financial Consequences – Revenue

Initial Financial Case set out in Clean Air Plan OBC (March 2019), with all development and delivery costs to be covered by central Government.

Financial Consequences – Capital

Initial Financial Case set out in Clean Air Plan OBC (March 2019), with all development and delivery costs to be covered by central Government

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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.

- 1 July 2022, Report for AQAC: GM Clean Air Plan – July 22 Update
- 23 March 2022, Report to the GM Air Quality Administration Committee (AQAC): GM Clean Air Plan-March 22 Update
- 28 February 2022, Report for AQAC: GM Clean Air Plan – February 22 Update
- 2 February 2022, report to the GM Clean Air Charging Committee (CACC): GM Clean Air Plan – update to the temporary exemption qualification date for GM-licensed hackney carriages and private hire vehicles
- 20 January 2022, report to AQAC: GM Clean Air Plan – A628/A57, Tameside – Trunk Road Charging Scheme update
- 20 January 2022, report to AQAC: GM Clean Air Plan – Financial Support Scheme Jan 22 Update
- 20 January 2022, report to AQAC: GM Clean Air Plan – Clean Air Zone Discount & Exemptions Applications
- 18 November 2021, report to AQAC: GM Clean Air Plan – GM Clean Air Funds assessment mechanism

- 18 November 2021, report to CACC: GM Clean Air Plan – GM Clean Air Plan Policy updates
- 13 October 2021, report to AQAC: GM Clean Air Plan – Operational Agreement for the Central Clean Air Service
- 13 October 2021, report to CACC: GM Clean Air Plan – Showmen’s Vehicle Exemption
- 13 October 2021, report to CACC: GM Clean Air Plan – Clean Air Zone daily charge refund policy
- 13 October 2021, report to CACC: GM Clean Air Plan – A628/A57, Tameside – Trunk Road Charging Scheme
- 21 September 2021, report to AQAC: GM Clean Air Plan – Clean Air Zone: Camera and Sign Installation
- 21 September 2021, report to AQAC: GM Clean Air Plan – Bus Replacement Funds
- 28 July 2021 GM Clean Air Plan report to Executive and Appendices
- 17 February 2021, report to MCC Executive: GM Clean Air Plan: Consultation
- 31 January 2021, report to GMCA: GM Clean Air Plan: Consultation
- 9 September 2020, report to MCC Executive: Clean Air Plan and Minimum Licensing Standards for Taxis and Private Hire Vehicles
- 31 July 2020, report to GMCA: Clean Air Plan Update
- 3 July 2020 report to MCC Executive: Greater Manchester Clean Air Plan - Tackling Nitrogen Oxide Exceedances at the Roadside - Outline Business Case
- 29 May 2020, report to GMCA: Clean Air Plan Update
- 31 January 2020, report to GMCA: Clean Air Plan Update
- 26 Jul 2019, report to GMCA: Clean Air Plan Update
- 1 March 2019, report to GMCA: Greater Manchester’s Clean Air Plan – Tackling Nitrogen Dioxide Exceedances at the Roadside - Outline Business Case
- 11 January 2019, report to GMCA/AGMA: Clean Air Update
- 14 December 2018, report to GMCA: Clean Air Update
- 30 November 2018, report to GMCA: Clean Air Plan Update
- 26 October 2018, report to GMCA: GM Clean Air Plan Update on Local Air Quality Monitoring
- 15 November 2018, report to HPEOS Committee: Clean Air Update
- 16 August 2018, report to HPEOS Committee: GM Clean Air Plan Update
- UK plan for tackling roadside nitrogen dioxide concentrations, Defra and DfT, July 2017

1 Introduction

- 1.1 This report provides an update on progress made on the Greater Manchester Clean Air Plan (GM CAP) review.

2 Background

- 2.1 The Government has instructed many local authorities across the UK to take quick action to reduce harmful Nitrogen Dioxide (NO₂) levels following the Secretary of State (SoS) issuing a direction under the Environment Act 1995. In Greater Manchester, the 10 local authorities, the Greater Manchester Combined Authority (GMCA) and Transport for Greater Manchester (TfGM) are working together to develop a Clean Air Plan to tackle NO₂ Exceedances at the Roadside, herein known as Greater Manchester Clean Air Plan (GM CAP).
- 2.2 The development of the GM CAP is funded by Government and is overseen by Joint Air Quality Unit (JAQU), the joint DEFRA and DfT unit established to deliver national plans to improve air quality and meet legal limits. The costs related to the business case, implementation and operation of the GM CAP are either directly funded or underwritten by Government acting through JAQU and any net deficit over the life of the GM CAP will be covered by the New Burdens Doctrine, subject to a reasonableness test¹.
- 2.3 The GM CAP is a package of measures to deliver NO₂ reductions to within legal limits within the shortest possible time and by 2026 at the latest. The GMCA – Clean Air Final Plan report on 25 June 2021² endorsed the GM Final Clean Air Plan and policy following a review of all of the information gathered through the GM CAP consultation and wider data, evidence and modelling work. This included the GM Clean Air Plan Policy, that outlined the boundary, discounts, exemptions, daily charges of the proposed Clean Air Zone (CAZ) as well as the financial support packages offered towards upgrading to a compliant vehicle, including the eligibility criteria to be applied. The aim of the funding is to support an upgrade to a compliant vehicle and to mitigate the negative socio-economic effects of the GM CAZ.
- 2.4 Throughout the development of the GM Clean Air Plan the Authorities have made clear the expectation that the UK Government would support the plans through:
- Clear arrangements and funding to develop workable, local vehicle scrappage / upgrade measures;
 - Short term effective interventions in vehicle and technology manufacturing and distribution, led by national Government;
 - Replacement of non-compliant buses; and

¹ The new burdens doctrine is part of a suite of measures to ensure Council Tax payers do not face excessive increases. [New burdens doctrine: guidance for government departments - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/guidance/new-burdens-doctrine)

² Also considered by the GM authorities through their own constitutional decision-making arrangements.

- A clear instruction to Highways England³ to implement measures which deliver compliance with legal limits for NO₂ on the strategic road network, for which they are responsible, in the shortest possible time⁴.
- 2.5 The GMCA Clean Air Update report of 29 May 2020 detailed that in March 2020 the government provided initial funding of £41m for clean vehicle funds to award grants or loans to eligible businesses: £15.4m for bus retrofit, £10.7m for Private Hire Vehicles, £8m for HGVs, £4.6m for coaches and £2.1m for minibuses. These figures include Joint Air Quality Unit (JAQU) estimated delivery costs at 5%.
- 2.6 The GMCA – Clean Air Final Plan report detailed that GM had been awarded £14.11m for Hackney Carriages and £73.5m for Light Goods Vehicles. The Hackney Carriage award comprises £10.61m to support grants and loans to upgrade vehicles. These figures include JAQU estimated delivery costs at 5%.
- 2.7 The 25 June 2021 GMCA report set out that the Air Quality Administration Committee has the authority to establish and distribute the funds set out in the agreed GM Clean Air Plan policy.
- 2.8 On 21 September the Air Quality Administration Committee approved the establishment and distribution of the bus replacement funds.
- 2.9 On 13 October the Air Quality Administration Committee agreed the distribution of Clean Air funds set out in the agreed GM Clean Air Plan policy as follows:
- From 30 November 2021 applications for funding would open for HGVs.
 - Opened the funds to applications from LGV, Hackney, PHV and Minibus owners who were detrimentally impacted by the decision of the AQAC to defer the wider opening of the Financial Support Scheme.
- 2.10 On 18 November 2021 the Air Quality Administration Committee agreed the assessment mechanism to allow for Clean Air Funds to be adapted, if necessary (including a process for considering whether additional funding is required), if the impacts of the Clean Air Zone prove to be more severe than forecast once opened.
- 2.11 On 20 January 2022 the Air Quality Administration Committee considered the findings of an initial review of conditions within the supply chain of Light Good Vehicles which is impacting the availability of compliant vehicles. The

³ On 19 August 2021 it was announced that Highways England changed its name to 'National Highways' reflecting the new focus the company has on delivering the government's £27bn strategic roads investment programme, while also continuing to set highways standards for the whole UK.

⁴ GM Authorities are directed to take action on the local road network. Those roads managed by National Highways, such as motorways and trunk roads are excluded from the Clean Air Plan.

Committee agreed that a request should be made to the Secretary of State (SoS) for Environment, Food and Rural Affairs to agree to pause the opening of the next phase of Clean Air Funds to enable an urgent and fundamental joint policy review with Government to identify how a revised policy can be agreed to deal with the supply issues and local businesses' ability to comply with the GM CAP.

- 2.12 On 28 February 2022 the Air Quality Administration Committee noted that Government had issued a new direction and that a revised plan is required to be submitted to the SoS by 1st of July. The committee also noted the interim arrangements for the Clean Air Zone in the meantime, including signage, funding and discount/exemption applications.
- 2.13 On 23 March 2022 the Air Quality Administration Committee noted the scope of the review of the Clean Air Plan and the participatory policy development approach, as well as delivery arrangements, including signage and funding.
- 2.14 On 1 July 2022 the Air Quality Administration Committee noted the 'Case for a new Greater Manchester Clean Air Plan' document and associated appendices would be submitted to the Secretary of State on the 1 July as a draft document subject to any comments of Greater Manchester local authorities.

3 Overview

- 3.1 Poor air quality is a significant public health issue, causing certain types of disease and in Greater Manchester contributing to 1,200 deaths a year.
- 3.2 Improving air quality is a key objective for Manchester City Council and forms a fundamental part of several of our major strategies, policies and action plans for the city, including Our Manchester; the Climate Change Action Plan; the City Centre Transport Strategy and Manchester 5-Year Delivery Plan under the GM 2040 Transport Strategy; the GM Air Quality Action Plan (including the range of action outside of the GM Clean Air Plan); and Green & Blue Infrastructure Strategy, amongst others.
- 3.3 Air pollution particularly affects the most vulnerable in society: children, the elderly, and those with existing health conditions. Low-income communities are more affected by air pollution because areas with poor air quality are also often less affluent areas. Conditions caused or exacerbated by air pollution may significantly reduce quality of life and can result in affected people being less able to work, attend education or carry out their normal daily lives. These impacts in turn widen the health inequality gap further.
- 3.4 The report *Build Back Fairer in Greater Manchester: Health Equity and Dignified Lives* (otherwise known as the Marmot report) highlighted several points that align with and demonstrate, in the context of public health, equalities and the particular challenges faced by Manchester, the importance of addressing air quality alongside wider measures to enhance sustainable transport across the city. This includes the following observations:

- Transport poverty relates to the affordability and accessibility of transport. Low-income neighbourhoods served by unreliable public transport causes a significant barrier to employment.
 - Achieving long-term, equitable and sustainable changes in transport requires more than equitable provision of active transport and clean public transport.
 - Increases in both active travel (cycling and walking) and public transport are needed to improve health and reduce health inequalities.
- 3.5 Government has issued directions to local authorities in the UK, including those in Greater Manchester, to take action to address illegal exceedances of Nitrogen Dioxide (NO₂) in the shortest possible time and, initially in the case of GM, by 2024 at the latest.
- 3.6 Greater Manchester authorities kept the original GM Clean Air Plan, agreed in Summer 2021, under constant review; by tracking emerging evidence and listening to GM businesses and residents who said that it would cause them financial hardship. In late 2021 GM authorities commissioned an independent review of emerging global supply chain issues and the impact this could have on the cost and availability of vehicles, particularly vans.
- 3.7 The review illustrated that the previous agreed plan in summer 2021 would cause businesses and residents financial hardship and the Government agreed with Greater Manchester's assessment that the plan was no longer likely to achieve compliance in 2024 due to the impact of the pandemic and the supply chain issues for compliant vehicles.
- 3.8 The Government revoked the direction requiring the implementation of a category C charging Clean Air Zone so as to achieve compliance with legal limits for NO₂ in the shortest possible time and by 2024 at the latest and Greater Manchester is now required by 1st July 2022 to review existing measures, determine if any changes should be made and to submit that review to the Secretary of State.
- 3.9 A new plan must be deliverable and reduce NO₂ concentrations to below legal limits in the shortest possible time and by 2026 at the latest, in a way that recognises the cost-of-living crisis and post pandemic economic conditions. This new plan aims to be both fair to businesses and residents and should not cause financial hardship to people in Greater Manchester.
- 3.10 The new plan will use the £120 million of Clean Air funding that the Government has awarded to Greater Manchester to deliver an investment led approach to invest in vehicle upgrades, rather than imposing daily charges and in particular through the delivery of zero emission buses in the Bee Network (a London-style integrated transport network). The new plan will ensure that the reduction of harmful emissions is at the centre of GM's wider objectives.
- 3.11 The ten GM local authorities have taken a GM-wide approach to producing a Clean Air Plan because air pollution does not respect local authority

boundaries, particularly across densely populated urban areas. This enables a consistent and coordinated approach to maximise air quality benefits for all people living and working in Greater Manchester; whilst minimising the risk of unintended consequences, such as displacing existing, elevated NO₂ concentrations to other locations within Greater Manchester.

4 Why a new plan?

4.1 A number of factors mean the original GM CAP (comprising a blanket measure across the city-region in the form of a charging CAZ C) is no longer the right solution to achieve compliance:

- The NO₂ forecasts show that the number of sites in exceedance reduces over time, moving from a GM-wide problem in 2023 to a localised problem from 2025 focused on the regional centre.
- The cost of living and post-pandemic economic circumstances in GM needs to be considered in developing the right solution.
- Global supply chain issues and the impact this is having on the cost and availability of compliant vehicles.
- GM-led investment in the Bee Network (the GM wide sustainable transport network) from now to 2027 and sustainable clean vehicles including Zero Emission Bus (ZEB).
- Confirmation of bus franchising - From September 2023 at least 50 new zero emission buses will be brought into service with the launch of the regulated bus system in Wigan and Bolton.
- ZEBRA funding awarded – 170 zero emission buses – equal to 10% of the whole bus fleet in the city-region – running from Stockport by 2024.
- City Region Sustainable Transport Settlement (CRSTS) funding, which provides significant benefits from delivering zero emission buses, £115m earmarked for a third of the bus fleet in GM to be zero emission by 2027.

5 Core objectives of the new Clean Air Plan

5.1 The new GM CAP will target investment in vehicle upgrades rather than imposing daily charges, identified as contributing to where NO₂ exceedances have been modelled. The plan's core objectives are:

- To reduce NO₂ concentrations to below the legal limits in the shortest possible time and by 2026 at the latest;
- Achieve compliance in a way that is fair to businesses and residents, and does not damage business or cause financial hardship to people in Greater Manchester; and
- Ensure the reduction of harmful emissions is at the centre of GM's wider objective for delivering the Bee Network.

6 A strong track record of delivering the right solutions for GM

6.1 Tackling the issue of poor air quality in GM is not a new phenomenon. GM has a strong history of collaborative working to secure a sustainable transport system that also tackles the issue of poor air quality. The Clean Air Plan will run alongside existing strategies, commitments and investments to achieve sustainable transport, contributing to better air quality:

- Five-Year Transport Delivery Plan (2021-26)⁵ – sets out the practical actions planned to deliver the 2040 Transport Strategy over this five-year period.
- City Centre Transport Strategy⁶
- GM 5-Year Environment Plan⁷
- EV Charging Strategy⁸

6.2 Over the past decade, combined Greater Manchester investment in public transport has been second only to London. Using a blend of funding sources, both local and national, GM has delivered a range of key transport infrastructure projects that have helped drive GM's regional and local economies. These include: Metrolink expansion and improvements, bus priority, smart ticketing and information systems, park and ride sites across the conurbation, channelling investment of around £200m each year to radically enhance clean public transport.

6.3 This built on the ground-breaking £1.5bn GM Transport Fund, established by the ten GM local authorities, which paid for the massive expansion of the Metrolink network, the Leigh Salford Manchester guided busway, as well as key transport interchanges, supporting town centres and regeneration efforts across the conurbation.

6.4 The forthcoming City Region Sustainable Transport Fund, of around £1.2bn will further expand and integrate the network, focusing on improvements to bus routes, funding zero emission fleets and providing further investment in GM's rapidly expanding cycling and walking network.

7 Participatory approach to the development of the new plan

7.1 GM leaders have committed to a participatory approach to the development of the new Plan to ensure that GM's proposals are well-grounded in evidence in terms of the circumstances of affected groups and possible impacts of the Plan on them, and therefore the deliverability and effectiveness of that Plan.

7.2 As part of the previous GM Clean Air Plan, Greater Manchester secured £120m funding to support those with the most polluting vehicles to upgrade. The Clean Air Funds policy and allocations were designed based on a GM-

⁵ [Our Five Year Transport Delivery Plan | Transport for Greater Manchester \(tfgm.com\)](https://www.tfgm.com/our-five-year-transport-delivery-plan)

⁶ [City Centre Transport Strategy | Transport for Greater Manchester \(tfgm.com\)](https://www.tfgm.com/city-centre-transport-strategy)

⁷ [Five-Year Environment Plan - Greater Manchester Combined Authority \(greatermanchester-ca.gov.uk\)](https://www.greatermanchester-ca.gov.uk/five-year-environment-plan)

⁸ [Greater Manchester's EV charging strategy | TfGM Electric Travel](https://www.tfgm.com/greater-manchesters-ev-charging-strategy)

wide Category C Clean Air Zone and including HGV, Taxi, PHV, Coaches and Minibuses and LGVs. The funding package and levels were based on an analysis in 2020 and 2021, prior to the cost-of-living crisis and supply chain issues for certain vehicles.

- 7.3 Government has indicated that this funding will continue to be available to support the new plan and the right funding for the vehicle upgrades needed to secure compliance is a significant component of the investment led approach. Government and Greater Manchester have expressed a desire to release funding to tackle NO₂ emissions as soon as possible. As part of the Policy Development Process, it is critical that the scope of these funds, the levels and application criteria provide the right incentive for those who GM need to upgrade from non-compliant to compliant vehicles to do so. This will require an evidence-based approach developed in consultation with those business and trade representatives who are best placed to understand how the changes required in the new plan can be secured.
- 7.4 The purpose of engagement, following submission of the draft plan in July 2022 is to:
- Seek views on the elements of the GM's proposals addressing economic conditions as well as evidence submissions on vehicle types.
 - Support an early understanding around impacts and any unintended consequences.
 - Inform the ongoing plan for engagement around the plan as detail develops, including consideration of future consultation requirements.

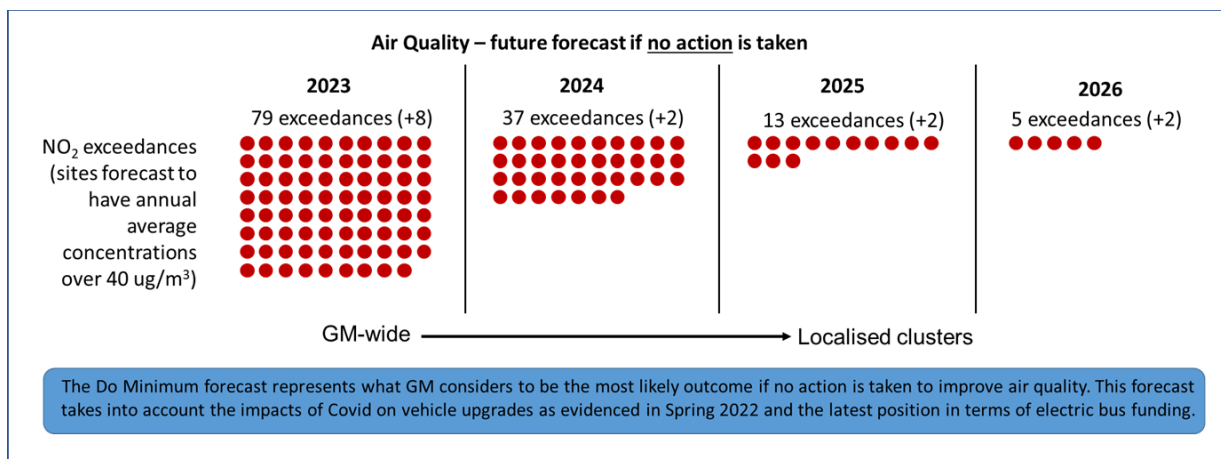
8 The way forward: an investment led non charging Clean Air Plan

- 8.1 The primary focus of the new plan is to achieve compliance in a way that considers the current cost of living crisis and associated economic challenge faced by businesses and residents. An investment-led approach will be combined with all the wider measures that GM is implementing and aims to reduce NO₂ emissions to within legal limits, in the shortest possible time and at the latest by 2026. Unlike the previous charging-led scheme defined by Government guidance, the investment-led scheme seeks to factor in the cost-of-living crisis, it will actively consider the impacts of the pandemic and wider global economic instability on supply chains, will be delivered from 2023, and crucially considers the significant beneficial effects that the delivery of electric bus can have along key routes. In particular:
- The **cost-of-living crisis** means that businesses are less able to afford to invest in vehicle upgrades, whilst households are less able to absorb any costs that may be passed on to them.
 - This is exacerbated by **rising vehicle prices** and – for some vehicle types – lower residual values of non-compliant vehicles. There is evidence that illustrates the demand for new and compliant second-hand vehicles is exceeding supply, leading to longer wait times and rising prices.

- A charging Clean Air Zone could therefore cause **unacceptable financial hardship** and contribute to business failures and the evidence suggests is less likely to succeed due to the changes in vehicle markets outlined.
- In addition, **new opportunities have arisen** – via the approval of bus franchising and new funding for electric buses – this means that GM has the opportunity to tackle emissions in a different way.
- The exceedances become more localised in 2025 and 2026, therefore **action can be targeted** at those locations suffering the worst air quality.
- It is clear that the GM-wide Clean Air Zone category C as approved in summer 2021 could lead to hardship in GM and that implementing a materially revised charging CAZ, for example with a different boundary, vehicles in scope or discounts and exemptions, would take time to design and consult upon and then implement.

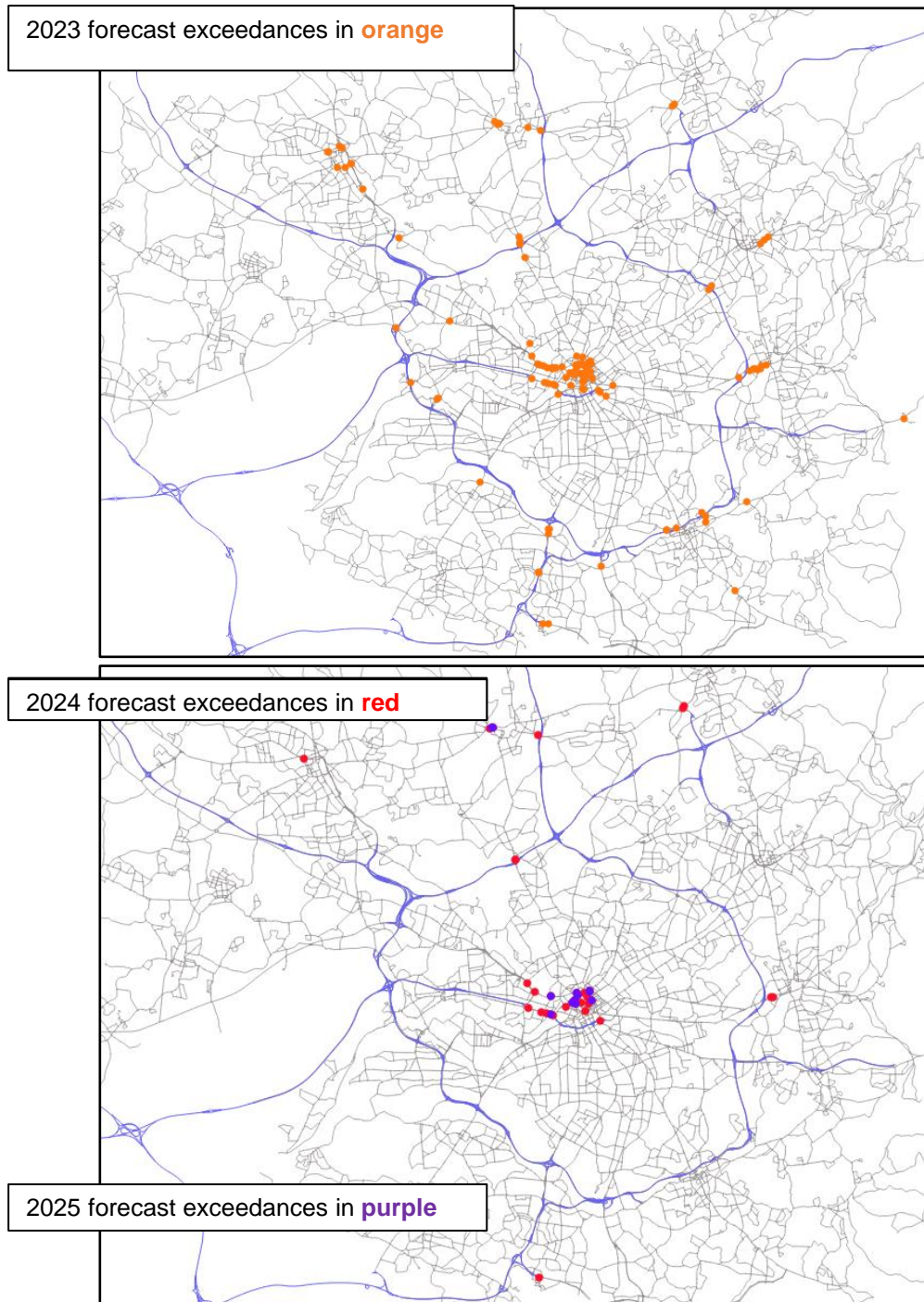
9 NO₂ Exceedances forecast 2023-2026

- 9.1 GM has forecast expected NO₂ exceedances in each future year to 2027, if no further action is taken. The forecasts show that the number of sites in exceedance reduces over time, moving from a GM-wide problem in 2023 to a localised problem from 2025 focussed on the regional centre.
- 9.2 The GM CAP needs to be targeted at reducing NO₂ concentrations at the last remaining locations of non-compliance.



9.3 NO₂ Forecast in 2023:

- 79 exceedances in total.
- Exceedances in 9 out of 10 authorities (all except Wigan).

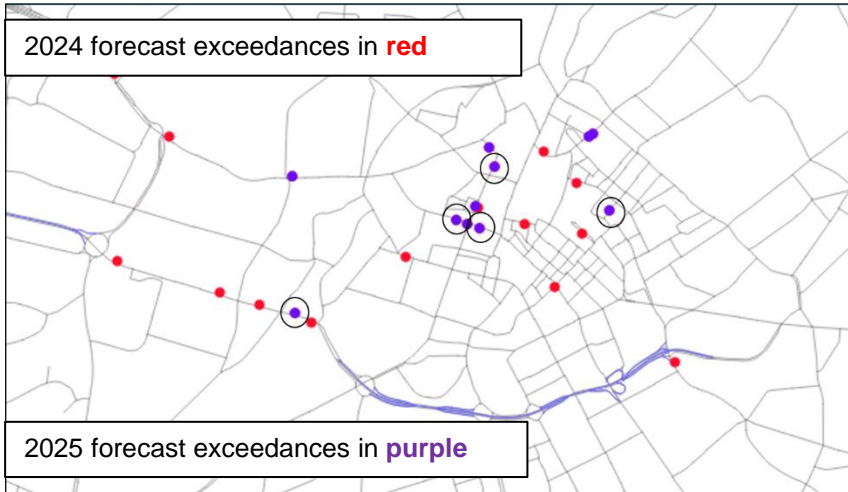


9.4 NO₂ Forecast in 2024 and 2025:

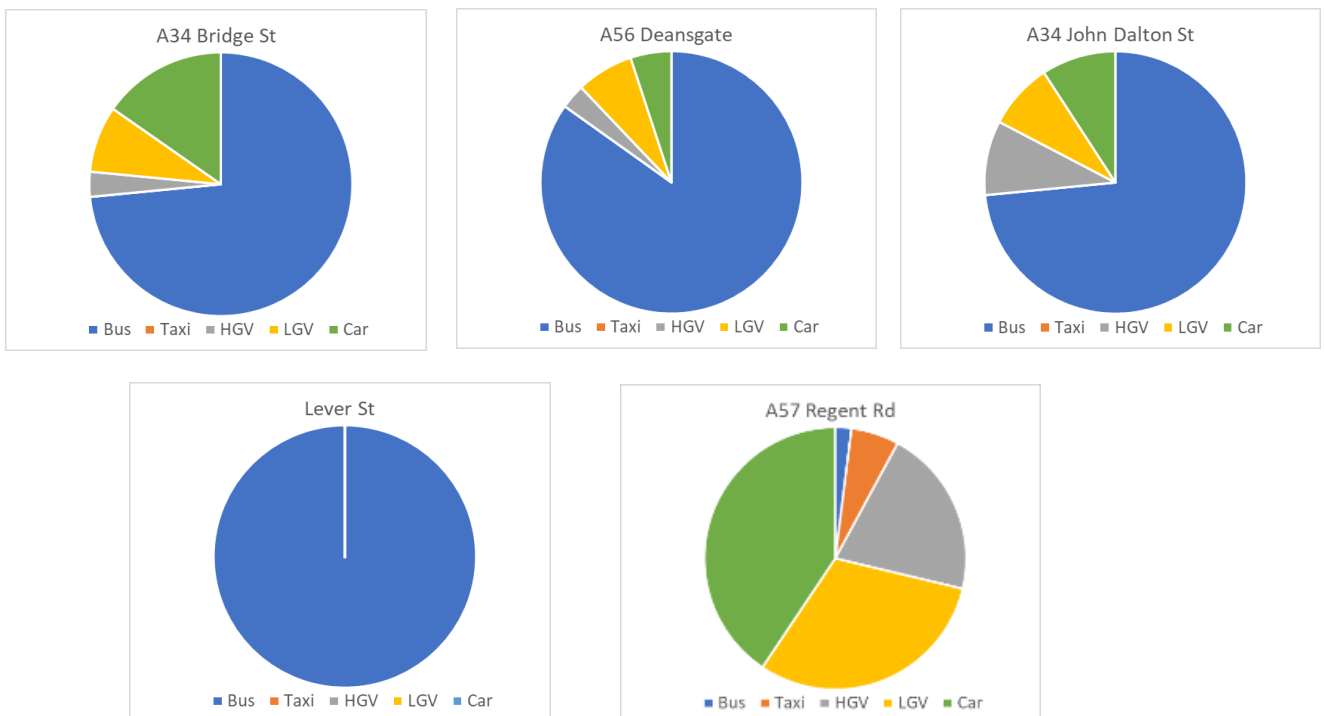
- 37 exceedances in 2024, 13 exceedances by 2025.
- By 2024, Oldham, Stockport, Trafford and Wigan are expected to be compliant.
- By 2025, Bolton, Rochdale and Tameside are also expected to be compliant.
- Exceedances remain in Bury, Manchester and Salford in 2025.

9.5 NO₂ Forecast of last remaining sites in 2026:

- By 2025, exceedances found only in Manchester and Salford and at Bury Bridge.
- By 2026, Bury Bridge is expected to be compliant.
- The last remaining sites in 2026 are at the A57 Regent Rd, A34 John Dalton / Bridge St, A56 Deansgate, and Lever St (circled).
- Natural compliance forecast in 2027.



9.6 City Centre emissions



- At the four city centre sites that are forecast to remain non-compliant in 2025, bus accounts for over 70% of emissions, meaning that electric buses could be very effective in improving air quality.⁹

- In contrast, Regent Road has very few buses running on it and acts as a major strategic route for commercial vehicles – with particularly high volumes of HGVs – and cars heading to the city centre and inner ring road.

9.7 The analysis and evidence set out in sections 8 and 9 support the case for targeted action at exceedance points, through a non-charging investment-led Clean Air Plan, in the context of the current cost of living crisis and issues identified with the previous plan.

10 NO₂ Monitoring Results 2021

10.1 Greater Manchester undertakes NO₂ monitoring to determine compliance with NO₂ legal limit values in accordance with GM CAP and Government direction and the 10 districts also monitor NO₂ in accordance with the requirements of the Environment Act 1995 and associated statutory guidance, also called Local Air Quality Management or 'LAQM'.

10.2 The two monitoring regimes have different siting criteria to assess exposure in different types of locations. The GM CAP monitoring assesses exposure as defined by the Air Quality Standards Regulations (England) 2010 limit values, with roadside being typically worst-case and hence the focus for monitoring. The LAQM monitoring is concerned with exposure at locations of relevant public exposure¹⁰ where the Air Quality Objectives apply, which can include the roadside but only in exceptional circumstances. LAQM monitoring also includes measurements at background¹¹ and industrial locations and is not limited to road traffic sources.

10.3 Additionally, the two regimes have different values by which they determine an exceedance. LAQM determines that the legal limit of 40µg/m³ has been exceeded by any result over 39.9µg/m³¹², whereas for the GM CAP, JAQU (Government's Joint Air Quality Unit,) determine anything over 40.4µg/m³ to be an exceedance¹³. These differences in definition should be taken into

⁹ NOTE: The relative taxi contributions are under-estimated, and car emissions over-estimated inside the Regional Centre Inner Relief Route. Further detailed analysis will be undertaken for a substantial city-centre Electric Taxi policy.

¹⁰ All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes etc. Kerbside locations are on the whole excluded, unless members of the public are likely to be exposed for longer than the time used to determine the legal limit for the pollutant concerned. Box 1.1 for TG16 give more detail [LAQM-TG16-April-21-v1.pdf \(defra.gov.uk\)](#)

¹¹ Background sites are used to provide useful information such as long-term trends, general population exposure and an indication of reduction in pollution away from roadside sources, as opposed to measuring exceedances.

¹² An exceedance defines a period of time during which the concentration of a pollutant is greater than, or equal to, the appropriate air quality criteria. For Air Quality Standards, an exceedance is a concentration greater than the Standard value. For Air Pollution Bandings, an exceedance is a concentration greater than, or equal to, the upper band threshold. <https://uk-air.defra.gov.uk/air-pollution/glossary#E>

¹³ The IPR guidance underpinning the Air Quality Standards Regulations 2010 stipulates that compliance should be assessed using data of 'the same numeric accuracy' as the limit value, therefore a value of 40.4ug/m³ is rounded down to 40ug/m³ and is not exceeding. https://ec.europa.eu/environment/air/quality/legislation/pdf/IPR_guidance1.pdf

consideration when comparing the results from individual monitoring locations.

- 10.4 There are two legal limits in relation to NO₂:
- A short-term hourly limit of 200µg/m³ (not to be exceeded more than 18 times a calendar year).
 - The long-term annual average limit of 40µg/m³.
- 10.5 To determine compliance with the NO₂ 1-hour mean Air Quality Limit Values, research undertaken on behalf of Defra and outlined in Technical Guidance Note LAQM.TG (16) (Defra, 2021) identified that road traffic emission related exceedances are unlikely to occur where the annual mean concentration is below 60 µg/m³.
- 10.6 For the purpose of the GM CAP, the government has directed GM (and other areas) under the Environment Act 1995 to address NO₂ exceedances at the roadside in the shortest possible time. In GM this direction specifically focuses on the long-term annual average legal limit (40µg/m³).
- 10.7 The GM local authorities carry out air quality monitoring for NO₂ using a combination of:
- Continuous automatic monitoring sites: There are currently 21 continuous air quality monitoring stations, twelve of which are located at the roadside.
 - Diffusion tubes: 436 sites are set up for local air quality management (LAQM) purposes. In addition, approximately 460 sites are set up for GM Clean Air Plan monitoring and evaluation purposes¹⁴.
- 10.8 Monitoring for NO₂ for GM Clean Air Plan purposes uses diffusion tubes at sites where “target determination”¹⁵ modelling predicted illegally high levels of NO₂ for 2021. Three new continuous automatic air quality monitoring stations are planned to be installed in 2022 at the last key points of exceedance in Greater Manchester.
- 10.9 Table 1 below summarises NO₂ concentrations and exceedances of the annual mean objective (AMO) across sites set up for local air quality management (LAQM) purposes (automatic and non-automatic) across GM in 2021.
- 10.10 Maps showing the location of the LAQM monitoring sites are provided on the [CleanAirGM Data Hub](http://www.cleairgm.com/datahub). <http://www.cleairgm.com/datahub>

¹⁴ 22 of these were active for the full 2021 calendar year.

¹⁵ The government’s Joint Air Quality Unit undertook a process called ‘target determination’, which involves comparing the outputs of the local and national modelling, verifying the local modelling methodology and then agreeing the forecast concentration assessment to be compared to the limit value for each exceedance. The outcome of this is an agreement of the NO₂ problem Greater Manchester must resolve (“target determination”) and the basis for the Greater Manchester Clean Air Plan.

Table 1 Summary of LAQM NO₂ monitoring in GM in 2021

Authority	Automatic sites (with valid data capture 2021)	Non-automatic sites	Concentration range (all sites) ($\mu\text{g}/\text{m}^3$)	Exceedances of NO ₂ Annual Mean (non-automatic sites)	
				In AQMA	Outside AQMA
Bolton MBC	1	48	41.5 – 10.9	1	-
Bury MBC	3	20	40.9 – 19.1	1	-
Manchester CC	3	40	44.8 – 14.1	3	-
Oldham MBC	1	27	46.3 – 15.3	2	-
Rochdale MBC	1	27	36.6 – 10.2	-	-
Salford CC	3	47	44.3 – 11.5	2	1
Stockport MBC	2	29	35.8 – 9.7	-	-
Tameside MBC	2	53	42.5 – 9.8	2	-
Trafford MBC	3	20	31.3 – 11.5	-	-
Wigan MBC	2	125	44.6 – 13.8	-	1
Total	21	436	46.3 – 9.7	11	2

- 10.11 In 2021 across sites set up for local air quality management (LAQM) purposes, 13 exceedances of the AMO (Annual Mean Objective) for NO₂ (40 $\mu\text{g}/\text{m}^3$) were recorded by diffusion tubes. This is an increase of 11 from 2020, which was a year of a notably low number of exceedances due to the lockdown measures during the COVID-19 pandemic. In 2019, 61 exceedances were recorded out of 359 operational sites, suggesting an overall downward trend in annual mean concentrations.
- 10.12 Two of the exceedances in 2021 were recorded at non-automatic sites located outside of the AQMA, in Salford (SA86 on Bury Old Rd, very close to AQMA boundary) and in Wigan (WI180 – 4 Winwick Lane, Wigan). Exceedances at these sites are acknowledged and mitigation measures are being explored in Wigan, but in the case of any exceedances outside of the AQMA, and in agreement with Defra, the decision to declare an additional AQMA or to expand the current AQMA is being delayed until the outcome of the GM CAP is realised.
- 10.13 The GM CAP will have the most significant impact on air quality in the city-region going forward, in addition to actions taken to meet the 2038 city-region's carbon neutral target and the decarbonisation of transport. The GM Clean Air Plan also monitors NO₂, using diffusion tubes. However, the GM

Clean Air Plan monitors different sites¹⁶ to those that need to be reported in the ASR.

- 10.14 The initial Greater Manchester Clean Air Plan monitoring survey, covering all 10 Greater Manchester authorities, started in January 2018. These locations were based on the roads predicted to be in exceedance in 2021 in the government's "UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations" (Defra, 2017).
- 10.15 Diffusion tubes were placed at roadside locations around Greater Manchester to determine the concentrations of NO₂ across the extent of the GM CAP study area. The diffusion tubes were replaced monthly throughout the survey with supply and analysis by Staffordshire Scientific Services.
- 10.16 As set out in Table 2, in June 2019 and October 2021, the diffusion tube survey was extended, and new diffusion tube monitoring sites were installed along roads predicted to be in exceedance by the GM CAP target determination modelling process. Additional sites were also included in Manchester city centre where street canyons may be leading to elevated air pollution concentrations.

Table 2 Number of GM CAP Monitoring Sites

Authority	Number of monitoring Sites			
	2018	2019	2020	2021
Bolton	5	8	14	14
Bury	5	13	16	16
Manchester	20	72	91	91
Oldham	0	6	9	9
Rochdale	0	7	12	12
Salford	5	16	27	27
Stockport	10	18	19	19
Tameside	5	9	14	14
Trafford	5	11	14	14
Wigan	0	2	6	6
Total	55	162	222	222

- 10.17 Table 3 below summarises NO₂ concentrations and exceedances of the annual mean across sites set up for GM CAP purposes between 2018 and 2021. Maps showing the location of the GM CAP monitoring sites are provided on the [CleanAirGM Data Hub](https://cleanairgm.com/data-hub/). <https://cleanairgm.com/data-hub/>

¹⁶ The GM Clean Air Plan monitor those sites where "target determination" modelling predicted illegally high levels of NO₂ in 2021. See footnote 15 and cleanairgm.com for more detail.

Table 3 Number of GM CAP Exceedances

Authority	Number of Exceedances (>40.4µg/m³)			
	2018	2019	2020	2021
Bolton	1	4	1	2
Bury	2	10	0	2
Manchester	14	65	8	25
Oldham	0	5	0	1
Rochdale	0	4	1	1
Salford	1	16	0	7
Stockport	6	15	2	3
Tameside	4	6	4	4
Trafford	1	3	0	0
Wigan	0	1	0	0
Total	29	129	16	45

10.18 During 2020, overall national road traffic levels were approximately 21% lower than in 2019. This reduction was due to the COVID-19 pandemic and associated social distancing and travel restrictions.¹⁷

10.19 For the year ending September 2021, overall national road traffic levels were approximately 16% lower than pre-pandemic levels.¹⁸

10.20 Therefore 2021 had overall higher road traffic levels than 2020, which is considered to be a factor causing the increase in annual average NO₂ concentrations.

11 Changes in economic context since Summer 2021

11.1 Since the original GM Clean Air Plan, agreed in Summer 2021, external factors associated with the pandemic, global supply chain challenges, and the cost-of-living crisis have the potential to create additional financial hardship for local businesses and families. These include:

- Impacts from war in Ukraine.
- Increased cost of energy.
- Increased cost of fuel for motorists.
- Increased cost of food, and other products.
- Supply chain issues - on-going impact of Covid lockdowns etc.
- How the impact of inflation is distributed across society.
- Changes to Bank of England base rate and forecasts - 0.25% in Jan 22, risen to 1.25% (16th June 22) - moving into a phase of more expensive borrowing.
- Consumer confidence.

¹⁷ Department for Transport, Road Traffic Statistics 2020 Summary, <https://roadtraffic.dft.gov.uk/summary>

¹⁸ Department for Transport, Provisional Road Traffic estimates, Oct 2020 – Sep 2021, <https://www.gov.uk/government/statistics/provisional-road-traffic-estimates-great-britain-october-2020-to-september-2021/provisional-road-traffic-estimates-great-britain-october-2020-to-september-2021>

- GM business composition and outlook from Growth Company Survey.
- GM resident population - wage growth, disposable income, etc.
- UK inflation reached a 40-year high of 9% during April 2022, up from 2% in July 2021.
- Inflation is forecast by the Bank of England to rise to 11% in the autumn of 2022.

Emerging conclusions to changes in economic context

- 11.2 Evidence is already pointing to consumer demand being dampened. GM is particularly vulnerable to high inflation - noting its relatively high volume of small businesses, and a higher than average (vs.UK) proportion of residents who typically have below average disposable household incomes.
- 11.3 The Bank of England has increased the Base Rate to 1.25% (up from 0.1% in July 2021) - signalling that further rate rises are likely. This in turn will increase the cost of borrowing to both businesses and residents who require finance and are not protected by fixed rates. Meanwhile the Bank of England's latest Monetary Policy Report (May 2022) points to an expectation for GDP to fall in Q4 2022 and be 'broadly flat' during 2023.
- 11.4 In summary, any intervention, such as a charging clean air zone, that could see businesses forced to pass costs on to the consumer in the near-term would likely come at a time when trading conditions are particularly challenging.

12 The changed conditions within the vehicle market

- 12.1 The price of new and used commercial vehicles is rising, making upgrade less affordable.
- 12.2 Some sectors potentially in scope for the Clean Air Plan have still not recovered from the impacts of the pandemic.

Vehicle Type	Commentary on changed conditions
HGV Est. 70,900 vehicles serving GM 81% compliant in 2023 ¹⁹	<ul style="list-style-type: none"> • Having remained stable for many years, record-breaking price rises are being reported of around 40% for Euro 6 vehicles, with the price gap between Euro 6 vs 5 vehicles increasing. • Dealers are reporting constraints on availability of new vehicles – due to shortages of materials including semi-conductors – and that this means people are extending leases (so fewer vehicles enter the second-hand market) or trying to buy second-hand, leading to shortages in that market. • Price rises reflect these shortages as well as increases in the cost of materials (for new vehicles).
Vans	<ul style="list-style-type: none"> • There is substantial evidence of significant price increases in the second-hand van market – the scale of those rises has a high

¹⁹ best estimate in a highly changeable economic/vehicle market situation, forecast should be considered subject to review

Vehicle Type	Commentary on changed conditions
Est. 277,400 vehicles serving GM ¹⁹ 52% compliant in 2023 ¹⁹	<p>degree of variability depending on the particular vehicle. The extent of the reported rise varies between 13% and almost 60%.</p> <ul style="list-style-type: none"> Overall, the evidence suggests that demand for new and second-hand vans remains strong, and therefore that the loss of supply caused by lockdowns in 2020 and more recently by the semiconductor shortage is leading to price rises in the new and second-hand markets, and to long lead times for new vehicle orders. A high proportion of non-compliant vans are owned by sole traders and very small businesses which are vulnerable to the impacts of inflation and the cost-of-living crisis.
Coach 1,700 vehicles serving GM 59% compliant in 2023 ¹⁹	<ul style="list-style-type: none"> The coach sector was badly affected by the pandemic, with lockdown restrictions meaning that many were forced to stop operating for long periods. Demand from tourism and major events remained constrained during 2021, and recovery is expected to be slow. The SMMT states that demand for new buses and coaches dropped further in 2021 and was the weakest year since records began in 1996.
Hackney Cabs 2,100 Hackneys licensed in GM 35% compliant in 2023 ¹⁹ PHV 12,400 PHVs licensed in GM 68% compliant in 2023 ¹⁹	<ul style="list-style-type: none"> Hackneys and PHVs lost a substantial proportion of their trade during the pandemic, as travel for business, leisure and tourism purposes ceased. The number of vehicles licensed has reduced and drivers report that demand has not returned to pre-pandemic levels. The number of new vehicles entering the Hackney and PHV licensed fleets was much lower than normal in 2020 and 2021, so that the age of the fleet has increased. This is assumed to result from market conditions and conditions in the wider economy, as well as continued uncertainty about licensing and clean air requirements for the fleet. Furthermore, there is anecdotal evidence that the trade-in value of Euro 5 and older Hackney cabs is falling, as more cities bring in tighter licensing standards and/or Clean Air Zones.

13 Development of the new plan

- 13.1 The participatory approach to the development of the new plan will test with vehicle owners that where non-compliant vehicles are identified as contributing to locations where NO₂ exceedances have been modelled, GM Authorities will have funding packages to incentivise upgrades to the cleanest possible vehicle, in order to get the greatest emissions reduction and therefore the swiftest public health benefit from every funded upgrade.
- 13.2 Rather than as part of a formally signed charging CAZ, the ANPR cameras could be used to better understand those vehicles where GM would get the greatest emissions reduction from those non-compliant vehicles travelling regularly through GM's most NO₂ polluted places.

14 New Plan Measures

14.1 Greater Manchester CAP Vehicle and other Investment Measures

Vehicle type	Measure subject to review during participatory policy approach
Bus	<ul style="list-style-type: none"> • Continue with existing funding. • Ensure franchising and other governance/planning processes are established so that electric buses are running on routes containing most persistent exceedance points to ensure compliance - with a focus on the regional centre/city centre as the transport hub of the city-region. • Initial sensitivity testing indicates that delivery of sufficient bus electrification would achieve compliance at modelled exceedance locations except Regent Road by 2025. A delivery plan is under development with the aim of achieving this.
HGV	<ul style="list-style-type: none"> • Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance.
Coach	<ul style="list-style-type: none"> • Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance.
Greater Manchester Hackney Carriage	<ul style="list-style-type: none"> • Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance – most Hackney Carriages are licensed in MCC. • Target GM CAP funding to increase roll out of dedicated taxi and other general electric vehicle charging infrastructure points in/around the city centre, to ensure fleet upgrade to electric vehicles is viable and taxi industry is supported. Consider opportunities for regulatory measures such as licensing standards to complement funding incentives to accelerate fleet upgrades.
Greater Manchester PHV	<ul style="list-style-type: none"> • Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance. Consider opportunities for regulatory measures such as licensing standards to complement funding incentives to accelerate fleet upgrades.

Vehicle type	Measure subject to review during participatory policy approach
Other clean air investment initiatives	<ul style="list-style-type: none"> • Explore opportunities for EVCI investment to support expansion of Car Club in and around city centre and wider city. • Target GM CAP funding to continue to roll out sustainable transport infrastructure investment and messages particularly in and around the regional centre to reduce emissions in key exceedance areas. This will include a particular focus on city centre in points of persistent exceedance, such as Deansgate and surrounding streets, as well as other active travel and public transport schemes. • Explore opportunities for GM CAP funding to support other infrastructure investment to address air quality issues, such as green infrastructure.

14.2 Greater Manchester CAP Cluster Measures

Exceedance cluster	Measure subject to review during participatory policy approach
City centre	<ul style="list-style-type: none"> • In the city centre, bus emissions account for at least 70% of total NOx emissions at the majority of locations and therefore electric buses can be very effective. Initial sensitivity testing indicates that delivery of sufficient bus electrification would achieve compliance at these locations by 2025. A delivery plan is under development with the aim of achieving this. • Further work is also underway to develop a proposition for taxi that encourages upgrade to the cleanest vehicles, and to explore how investment in highway and other transport infrastructure under the city centre transport strategy can best support clean air.
Regent Road	<ul style="list-style-type: none"> • Emissions on Regent Road are principally derived from commercial and logistics traffic, which accounts for c.50%. In addition, the corridor is immediately fed by the M602 motorway and subject to the implications of National Highways signage and traffic management policies. • Salford City Council (SCC) and MCC have commissioned analysis via TfGM to improve understanding of the operation of the road and nature of the traffic on Regent Road to help with the joint working with National Highways (NH) which must include how the deployment of funds can support appropriate solutions to deal with the exceedance at this location. • Note that Electric Towns and Cities Infrastructure initiative (ETCI) – NH initiative being explored for mitigation for sections of the SRN.
Bury Bridge	<ul style="list-style-type: none"> • The electrification of bus services over the bridge should happen with the first 50 new zero emission buses that will be

Exceedance cluster	Measure subject to review during participatory policy approach
	brought into service with the launch of the regulated bus system in Wigan and Bolton. Initial sensitivity testing indicates that delivery of sufficient bus electrification would achieve compliance at this location by 2025. A delivery plan is under development with the aim of achieving this.

15 Equality considerations

- 15.1 Under Section 149 of the Equality Act (2010), public bodies are subject to the Public Sector Equality Duty, which requires GM to give ‘due regard’ to the ‘need to eliminate unlawful discrimination, harassment and victimisation to advance equality of opportunity to foster good relations between people from different groups.’ This can be demonstrated via an Equality Impact Assessment (EqIA) and can identify whether people with protected characteristics could be affected by the GM CAP disproportionately or differentially.
- 15.2 An initial screening has been undertaken to assess which protected characteristics are likely to be impacted by the new GM Clean Air Plan, and in scope for the EqIA.
- 15.3 Some groups are more sensitive to changes in air quality and will therefore benefit more quickly from improvements in air quality. The following five protected characteristics are likely to be disproportionately or differentially impacted by changes in air quality and NO₂ levels and will therefore be considered within the EqIA for the new GM CAP:

Protected characteristic	Likely to be disproportionately affected by improved air quality	Likely to be differentially affected by improved air quality
Age		X
Disability (includes all forms of physical and mental disability)		X
Pregnancy and maternity		X
Gender (male drivers)	x	
Race	x	
Low income / socio-economic deprivation	x	

- 15.4 The new plan aims to reduce the health impacts of air pollution as well as reduce NO₂ concentrations to below legal limits, and by 2026 at the latest, whilst minimising any negative socio-economic impacts. The EqIA will consider the impact of this plan on the groups above.

- 15.5 In addition, people in the following protected characteristics could be impacted by the measures adopted within the new GM CAP as owners or drivers of impacted vehicles or users of services impacted. As a result, the following protected characteristics will also be considered in the EqIA:

Protected characteristic	Potential disproportionate impact dependent on option
Age	X
Disability (includes all forms of physical and mental disability)	X
Pregnancy and maternity	X
Race	X
Religion / belief	X
Sex	X
Gender Reassignment	X
Sexual Orientation	X
Low income / socio-economic deprivation	X

- 15.6 In addition to the above, the ‘Good Lives for All in Greater Manchester will inform the EqIA. The report, a product of the Greater Manchester Independent Inequalities Commission, highlights the health inequalities experienced across the city-region and recommends that the wellbeing and equality goals sit at the heart of the Greater Manchester Strategy. The findings of the report will inform the planned EqIA for the new CAP.
- 15.7 To inform a full EqIA for the new GM CAP the approach to Participatory Policy Development will include engagement with GM based groups representing the protected characteristic groups potentially impacted by the new GM CAP.

16 Risk Management

- 16.1 Initial risk register set out in Clean Air Plan OBC (March 2019).

17 Legal Considerations

- 17.1 On 8th February 2022 The Environment Act 1995 (Greater Manchester) Air Quality Direction 2022 was issued. The new direction requires that the GM local authorities:
- Review the measures specified in the existing Plan; and
 - Determine whether to propose any changes to the detailed design of those measures, or any additional measures.
- 17.2 The GM authorities must ensure that the Plan with any proposed changes will secure that:
- Compliance with the legal limit value for NO₂ is achieved in the shortest possible time and by no later than 2026; and

- Exposure to levels above the legal limit for NO₂ is reduced as quickly as possible.

17.3 This new direction revoked the direction dated March 2020 which required the ten Greater Manchester Local Authorities to implement a Category C Clean Air Zone to achieve compliance with the legal limit value for NO₂ in the shortest possible time and by 2024 at the latest.

17.4 This report sets out the case for a new Greater Manchester Clean Air Plan.

18 Government asks

18.1 One specific new 'ask' from Government is to support the new GM Clean Air Plan, would be to remove out-of-area operation by private hire drivers/vehicles.

18.2 GM Authorities are keen to work with DfT to consider an appropriate regulatory device. This would require that all private hire journeys within GM must be undertaken by a driver and vehicle which are both licensed by one of the ten GM local authorities.

18.3 As it stands, out-of-area operation enables the evasion of fair, safe and democratically determined local licensing standards. In context of the GM Clean Air Plan, this measure would provide local authorities with stronger regulatory tools to improve the emission standards of all private hire fleets operating in GM.

18.4 Greater Manchester will continue to seek to ensure that the Government takes appropriate action to address exceedances on the A57/A628 a stretch of Strategic Road network, managed by National Highways that cuts through the villages of Hollingworth and Mottram.

19 Targeted engagement to test support for the case for a new GM CAP

19.1 An initial series of discussions has been carried out to review the evidence GM has gathered describing current economic and vehicle market conditions and the challenges facing non-compliant vehicle owners. This early engagement has been undertaken so that groups representing vehicle owners have the opportunity to feed in any further evidence.

19.2 Sessions have been held with the following groups and a summary of their feedback is set out below:

Group	Summary of Feedback
GM Business Representatives – 30 June 2022	<ul style="list-style-type: none"> • This is a business-friendly approach and is broadly welcomed. • There are many health & economic benefits to Clean Air and GM needs to

Group	Summary of Feedback
	<p>ensure that the Plan is seen as part of its wider strategies</p> <ul style="list-style-type: none"> • Look forward to working with GM through the participatory policy approach.
<p>Road Haulage Association – 22 June 2022</p>	<ul style="list-style-type: none"> • Our members are reporting challenging trading circumstances and an investment supported non-charging Clean Air Plan for Greater Manchester is definitely going in the right direction, the devil will be in the detail. • We would be very happy to work with Greater Manchester to get a revised clean air plan right and we know our members would like to see the funding opened up to those who trade in Greater Manchester rather than just being based in region.
<p>Confederation of Passenger Transport – 21 June 2022</p>	<ul style="list-style-type: none"> • While the reasons for clean air initiatives are appreciated, in the coach sector the prospect of upgrading, retrofitting or being faced with charges is difficult to comprehend. A typical Euro 5 vehicle is on average only 5 years old. • If there is indeed no charging zone, we expect our members would be generally supportive of the new investment-led GM Clean Air Plan, provided there are no hidden restrictions, for example on the sites of exceedances.
<p>All GM Hackney and Private Hire Vehicle representatives – 23 June 2022</p>	<ul style="list-style-type: none"> • An investment-led non charging Clean Air Plan is broadly welcomed as it has listened to the concerns of the trade. • All our members want clean air but want to be able to afford it, funding is key and needs to be in place as soon as possible. • Welcome the suggestion to address out of area licensing - but local authorities could help the trade by reducing the time taken to license in GM. • Look forward to engaging with GM to develop a more detailed policy. • Vehicle availability both new and second hand is of concern.
<p>One Bus Network – 23 June 2022</p>	<ul style="list-style-type: none"> • Always said charging zone is not the way, an investment led approach is the best forward and so supportive of this approach.

Group	Summary of Feedback
	<ul style="list-style-type: none"> Keen to see low bus speeds in the city centre resolved, as this is contributor to bus emissions.

20 Next steps

- 20.1 Whilst Greater Manchester has put in place governance arrangements to enable the joint discharge of relevant GM local authority and GMCA functions in respect of the Greater Manchester Clean Air Plan via the Air Quality Administration Committee, before the Air Quality Administration Committee confirms the submission as an agreed document there is now an opportunity for the 'Case for a new Greater Manchester Clean Air Plan' document attached as Appendix 1 and associated appendices 2 to 6 to be considered, through the local governance arrangements of the individual authorities.
- 20.2 Subject to any comments of Greater Manchester local authorities the next Air Quality Administration Committee will confirm the final submission and notify the Secretary of State of the change in status.
- 20.3 By applying a Participatory Policy Development process, GM will develop, assess and agree a package of measures forming a proposed new GM CAP. This package of measures will be consulted upon in early 2023.
- 20.4 GM will review the responses to the consultation and make any adaptations to the proposals as necessary. It is anticipated that a decision could be made to proceed with the new GM CAP thereafter.

21 Recommendations

- 21.1 The Environment and Climate Change Scrutiny Committee is invited to comment on the report.
- 21.2 The Executive is recommended to:
- Note the 'Case for a new Greater Manchester Clean Air Plan' document attached as Appendix 1 and associated appendices 2 to 6 has been submitted to the Secretary of State as a draft document subject to any comments from Manchester City Council ahead of the next Air Quality Administration Committee.
 - Note that Cllr Tracey Rawlins as the Manchester City Council appointed representative on the Air Quality Administration Committee will represent Manchester City Council's comments;
 - Note the initial screening undertaken to assess which protected characteristics are likely to be impacted by the new GM Clean Air Plan, and in scope for the Equalities Impact Assessment;
 - Note the updated Do Minimum position for 2023 and 2025 and the forecasted points of exceedance in GM in 2023 and 2025; and

- Note the approach to the participatory policy development approach and the next steps for the GM CAP.
- Note the new 'ask' from Government to remove out-of-area operation by private hire drivers/vehicles to support the new GM Clean Air Plan;
- Note feedback from early engagement activity with vehicle owner representative groups;
- Note the NO2 monitoring results and the exceedances of the annual mean across sites set up for GM CAP purposes between 2018 and 2021.

Appendices

Appendix 1 – Case for a New GM Clean Air Plan – attached as a supplementary paper.

Appendix 2 – Technical Note: Vehicle Sector Review – HGV Sector
(Appendix 1 document attached as supplementary paper refers to this as Appendix A.)

Appendix 3 – Technical Note: Vehicle Sector Review – Taxis (Hackney Carriages and Private Hire Vehicles)
(Appendix 1 document attached as supplementary paper refers to this as Appendix B.)

Appendix 4 – Technical Note: Current issues in the Van Sector
(Appendix 1 document attached as supplementary paper refers to this as Appendix C.)

Appendix 5 – Technical Note: Vehicle Sector Review – Coach and Minibus
(Appendix 1 document attached as supplementary paper refers to this as Appendix D.)

Appendix 6 – Changes in economic context since July 2021
(Appendix 1 document attached as supplementary paper refers to this as Appendix E.)

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Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside

Case for a New GM Clean Air Plan



Bolton
Council



Salford City Council



Bury
COUNCIL



STOCKPORT
METROPOLITAN BOROUGH COUNCIL



MANCHESTER
CITY COUNCIL



Tameside
Metropolitan Borough



Oldham
Council



TRAFFORD
COUNCIL



ROCHDALE
BOROUGH COUNCIL



Wigan
Council

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Version Status:	DRAFT FOR APPROVAL	Prepared by:	Transport for Greater Manchester on behalf of the 10 Local Authorities of Greater Manchester
Authorised by: Date:	Simon Warburton June 2022		

Contents List

1	Executive Summary	4
2	Introduction	13
3	Why are Greater Manchester and the Government taking action on NO ₂ ?	15
4	What has led to Greater Manchester revising its approach to the GM CAP? .	18
5	What has changed since Summer 2021?.....	23
6	What is Greater Manchester already doing about poor air quality?.....	34
7	What are the current air quality issues in Greater Manchester?.....	40
8	Where are the persistent exceedance areas in Greater Manchester?	52
9	Why Greater Manchester needs a new GM CAP – A Summary	62
10	The way forward: an Investment-led non-charging GM CAP	69
11	How will Greater Manchester deliver the New GM CAP?.....	74
12	How will Greater Manchester ensure a participatory approach to the development of a New CAP?.....	75
13	What are the equalities considerations?.....	77
14	Government asks	80
15	Next steps	82

List of appendices

Appendix A – Technical Note: Vehicle Sector Review – HGV Sector

Appendix B – Technical Note: Vehicle Sector Review – Taxis (Hackney Carriages and Private Hire Vehicles)

Appendix C – Technical Note: Current issues in the Van Sector

Appendix D – Technical Note: Vehicle Sector Review – Coach and Minibus

Appendix E – Changes in economic context since July 2021

DRAFT FOR APPROVAL

1 Executive Summary

1.1 Background

- 1.1.1 The Government has instructed many local authorities across the UK to take quick action to reduce harmful roadside levels of Nitrogen Dioxide (NO₂) following the Secretary of State (SoS) for Environment, Food and Rural Affairs issuing a Direction under the Environment Act 1995 in 2017 requiring them to undertake feasibility studies to identify measures for reducing NO₂ concentrations to within legal limit values in the “shortest possible time”. In Greater Manchester, the 10 local authorities, the Greater Manchester Combined Authority (GMCA) and Transport for Greater Manchester (TfGM) are working together to develop a Clean Air Plan to tackle NO₂ exceedances at the roadside, herein known as Greater Manchester Clean Air Plan (GM CAP).
- 1.1.2 In March 2019 the GM Authorities agreed the submission of the Outline Business Case (OBC) that proposed a package of measures that was considered would deliver compliance in Greater Manchester in the shortest possible time, at the lowest cost, least risk and with the least negative impacts. This involved a Charging Clean Air Zone Class C with additional measures.
- 1.1.3 In July 2019 the SoS issued a Direction under section 85 of the Environment Act 1995 requiring the 10 Greater Manchester local authorities to implement the local plan for NO₂ compliance for the areas for which they were responsible, including a Charging Clean Air Zone Class C with additional measures, but with an obligation to provide further options appraisal information to demonstrate the applicable class of Charging Clean Air Zone and other matters to provide assurance that the local plan would deliver compliance in the shortest possible time and by 2024 at the latest.
- 1.1.4 The SoS subsequently issued a Direction to the ten Greater Manchester local authorities in March 2020 that required them to take steps to implement the local plan for NO₂ compliance so that compliance with the legal limit for NO₂ is achieved in the shortest possible time, and by 2024 at the latest, and so that exposure to levels above the legal limit for NO₂ is reduced as quickly as possible.
- 1.1.5 A statutory consultation on the proposals took place in Autumn 2020.

- 1.1.6 The GMCA – Clean Air Final Plan report on 25 June 2021¹ endorsed Greater Manchester’s Final CAP and policy following a review of all of the information gathered through the GM CAP consultation and wider data, evidence and modelling work. Throughout the development of the previous Plan, JAQU reviewed and approved all technical and delivery submissions. The Plan was agreed by the ten Greater Manchester local authorities. Within this document, this is referred to as the Previous GM CAP.
- 1.1.7 On 20 January 2022 the Air Quality Administration Committee considered the findings of an initial review of conditions within the supply chain of Light Good Vehicles (LGVs) in particular which were impacting the availability of compliant vehicles. The Committee agreed that a request should be made to the SoS to pause opening of the next phase of Clean Air Funds to enable an urgent and fundamental joint policy review with Government to identify how a revised policy can be agreed to deal with the supply issues and local businesses’ ability to comply with the GM CAP.
- 1.1.8 On the 8th February 2022, a new Direction was issued by the SoS² which confirmed that the March 2020 Direction to implement a Class C charging Clean Air Zone (CAZ) had been revoked and required that a new plan be submitted to the SoS by 1st July 2022 which should:³
- review the measures specified in the local plan for NO₂ compliance and associated mitigation measures; and
 - determine whether to propose any changes to the detailed design of those measures, or any additional measures.
- 1.1.9 The Direction also states that compliance with the legal limit value for nitrogen dioxide is achieved in the shortest possible time and no later than 2026 and exposure to levels above the legal limit for nitrogen dioxide is reduced as quickly as possible.
- 1.1.10 Within this document, this new plan, and any subsequent further development of the new plan, is referred to as the New GM CAP.

1.2 Overview

- 1.2.1 Breathing in polluted air contributes to the equivalent of 1,200 premature deaths a year in Greater Manchester⁴. Both long- and short-term exposure to air pollution are known to adversely affect health. Some of the most vulnerable in society are hit hardest – children, older people and those already in poor health. Greater Manchester has a particular imperative to improve health, as the region has one of the lowest life expectancies at birth in England and significant health inequalities between areas.

¹ Also considered by the Greater Manchester authorities through their own constitutional decision-making arrangements.

²

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1054931/Environment_Act_1995_Greater_Manchester_Air_Quality_Direction_2022.pdf

³ In addition to recommendations about interim arrangements for changes to delivery arrangements for the CAZ in the meantime, including signage, funding and discount/exemption applications.

⁴ Public Health England – Air Quality in Greater Manchester – from a Public Health Perspective (September 2018)

1.3 Why a New Greater Manchester Clean Air Plan?

1.3.1 it is proposed that the Previous GM CAP developed pre-pandemic and agreed in Summer 2021 (comprising a blanket measure across the city-region in the form of a Class C charging CAZ) is no longer the right solution to achieve compliance with Legal Limits for NO₂ on the local road network in Greater Manchester. The most significant reasons in summary are:

- The **cost-of-living crisis** means that businesses are less able to afford to invest in vehicle upgrades, whilst households are less able to absorb any costs that may be passed on to them.
- This is exacerbated by **rising vehicle prices** and – for some vehicle types – lower residual values of non-compliant vehicles. There is evidence that illustrates the demand for new and compliant second-hand vehicles is exceeding supply; leading to longer wait times and rising prices.
- A charging CAZ could therefore cause **unacceptable financial hardship** and potentially contribute to business failures.
- In addition, **new opportunities have arisen** – via the approval of bus franchising and new funding for electric buses – that mean that Greater Manchester has the opportunity to directly tackle a major source of emissions in a different, more targeted way.
- The exceedances become more localised from 2025 onwards, therefore **action can be targeted** at those locations suffering the worst air quality.

1.3.2 It is clear that the GM-wide Class C charging CAZ as approved in Summer 2021 could lead to hardship in Greater Manchester and that to develop and deliver a revised charging CAZ would take time to design, consult upon and implement.

1.3.3 Unlike the previous charging-led scheme, the New GM CAP will attend to the emerging cost-of-living crisis and other factors set out in this section. It will actively consider the impacts of Covid-19 and wider global economic instability on supply chains, aims to be delivered in 2023, and crucially takes into account the significant benefits that the delivery of electric buses can have along key routes with persistent exceedances.

1.4 Core objectives

1.4.1 The core objectives of the New GM CAP are as follows:

- To reduce NO₂ concentrations to below the legal limits in the shortest possible time and by 2026 at the latest;
- Achieve compliance in a way that is fair to businesses and residents, and does not damage business or cause financial hardship to people in Greater Manchester; and

- Ensure the reduction of harmful emissions is at the centre of Greater Manchester 's wider objective for delivering the Bee Network's core objectives.

1.4.2 An investment-led non-charging GM CAP will aim to encourage upgrade to cleaner vehicles, leading to better air quality, by providing funding packages to those most polluting vehicles travelling in locations experiencing NO₂ exceedances.

1.5 Why is Greater Manchester not proposing a revised charging Plan?

1.5.1 The primary focus of the new GM CAP is to achieve compliance in a way that considers the current cost of living crisis and associated economic challenge faced by businesses and residents. Through an investment-led approach, that together with all the wider measures that Greater Manchester is implementing as part of its efforts to create a safe, integrated, clean and sustainable transport network, aims to reduce NO₂ emissions in the shortest time possible, and at the latest by 2026. Unlike the previous charging-led scheme defined by Government guidance, the investment-led non-charging GM CAP also seeks to attend to the cost-of-living crisis – through avoiding the use of charging.

1.5.2 In particular, it will actively consider the impacts of the pandemic (particularly given the shape of the remaining NO₂ problem over time) on the regional centre, where GM needs to support its ongoing recovery as a result of changes in economic activity and wider global economic instability on supply chains. The investment-led non-charging GM CAP can be delivered from 2023.

1.5.3 The updated modelling summarises the existing areas of exceedance that are likely to remain unless action is taken through the New GM CAP during the period from now until 2026. Targeting these areas of exceedance will form the basis of the New GM CAP and Greater Manchester's local authorities are now making the case to Government that this should take the form of an investment-led non-charging GM CAP, which aims to achieve compliance in the shortest possible time and by 2026 at the latest but without creating additional financial hardship for local businesses and families.

- 1.5.4 Without the need to mitigate a Greater Manchester-wide charging CAZ, a new investment-led non-charging GM CAP can target resources more effectively at the most persistent exceedances. For example, at the city centre locations sites that are forecast to remain non-compliant in 2025, buses account for over 70% of emissions, meaning that electric buses could be very effective in improving air quality. In contrast, Regent Road has very few buses running on it and acts as a major strategic route for commercial vehicles – with particularly high volumes of HGVs – and cars heading to the city centre and inner relief road. With supported funding through the City Region Sustainable Transport Settlement (CRSTS), targeted investment in electric bus could feasibly enable Greater Manchester to reduce the number of last exceedances. Regent Road is still expected to remain in exceedance without other action by 2026.
- 1.5.5 Importantly, this plan is not just a request of Government funds. Greater Manchester will also review local policy changes, such as local servicing plans, alongside regulatory measures such as licensing standards to accelerate fleet upgrades.

1.6 Nitrogen Dioxide (NO₂) exceedances forecast

- 1.6.1 The results of the updated modelling demonstrate there are more points of exceedance (71 to 79 in 2023) from the 'Approved GM CAP' model Do Minimum with exceedances in all districts in 2023 with the exception of Wigan. By 2025, exceedances are only predicted in Manchester, Salford, and Bury, which is consistent with the Consultation and 'Approved GM CAP' modelling scenarios. The majority of the last points of exceedance are located within the regional centre and within or near the Inner Relief Route (IRR). By 2025, there are 13 exceedances in the core scenario and 5 exceedances in the Clean Bus Fund (CBF) test which reduces to 5 sites in the core scenario and 1 site in the CBF test in 2026.

1.7 Changes to the economic context

- 1.7.1 The economic context in the UK has changed dramatically in the period since July 2021. A range of factors associated with the pandemic, impact from war in Ukraine, increased costs of energy and fuel, changes to Bank of England base rates and forecasts, global supply chain challenges, and the cost-of-living crisis have combined to create a context of increased financial hardship for businesses and families. UK inflation reached a 40-year high of 9% during April 2022, up from 2% in July 2021. It is widely accepted that inflation will increase to higher levels still during the remainder of 2022, with evidence already pointing to consumer demand being dampened.

1.7.2 Greater Manchester is not insulated from the impacts of high inflation and higher interest rates, in fact in some respects it is particularly vulnerable - noting its relatively high volume of small businesses, and a higher than average (vs.UK) proportion of residents who typically have below average disposable household incomes. Any intervention that could see businesses forced to pay additional charges and potentially pass costs on to the consumer, could have severe consequences for those groups who are already struggling to cope with the cost of living crisis. A charging CAZ could therefore cause unacceptable financial hardship and potentially contribute to business failures.

1.8 Changed conditions within the vehicle market

1.8.1 Research was commissioned in late 2021 to analyse and report on the market conditions. It found evidence that the used van market had materially changed, with evidence suggesting that second-hand van prices had increased by between 13% and c.60% since the modelling for the Previous GM CAP had been undertaken.

1.8.2 Advisors concluded that at that level, fewer van owners would choose to (or be able to) upgrade in response to the charging CAZ and that this price inflation devalues the funding offer for vans, with the Previous GM CAP being particularly sensitive to van prices given their number in Greater Manchester.

1.8.3 For Heavy Goods Vehicles (HGVs), the evidence illustrated that record-breaking price rises are being reported of around 40% for Euro 6 vehicles, with the price gap between Euro 6 vs 5 vehicles increasing. The price rises reflect these shortages as well as increases in the cost of materials (for new vehicles).

1.8.4 The evidence also illustrates that the coach sector was badly affected by the pandemic, many were forced to stop operating for long periods. Additionally, demand from tourism and events remained constrained during 2021, and the recovery is expected to be slow.

1.8.5 For taxis, both Hackneys and Private Hire Vehicles (PHVs), the evidence indicates that they lost a substantial proportion of their trade during the pandemic. The number of vehicles licensed has reduced and drivers report that demand has not returned to pre-pandemic levels. The number of new vehicles entering the Hackney and PHV licensed fleets was much lower than normal in 2020 and 2021, so that the age of the fleet has increased.

- 1.8.6 The air quality Do Minimum (without scheme) modelling forecast has been updated because the evidence presented to the Government in February 2022 showed that business as usual (BAU) car sales were lower than expected in 2021, meaning that the fleet was older than forecast, and that this was likely to delay compliance with legal limits of NO₂ with the scheme as planned. Additionally, a sensitivity test has been conducted to forecast the impact on bus emissions of bus retrofits and upgrades already funded and approved via the Clean Bus Fund (CBF).

1.9 Equality considerations

- 1.9.1 Under Section 149 of the Equality Act (2010), public bodies are subject to the Public Sector Equality Duty, which requires that they give due regard to the need to eliminate unlawful discrimination, harassment and victimisation, advance equality of opportunity and foster good relations between people from different groups. In terms of the New GM CAP, this will be evidenced through the development of an Equality Impact Assessment (EqIA) to identify whether people with protected characteristics could be affected by the New GM CAP disproportionately or differentially.
- 1.9.2 An initial screening has been undertaken to assess which protected characteristics are likely to be impacted by the New GM CAP, and in scope for the EqIA.
- 1.9.3 Some groups are more sensitive to changes in air quality and will therefore benefit more quickly from improvements in air quality. The five protected characteristics, identified in **Table 1** are likely to be disproportionately or differentially impacted by changes in air quality and NO₂ levels and will therefore be considered within the EqIA for the New GM CAP:

Table 1 Equality Considerations - Protected Characteristics

Protected characteristic	Likely to be disproportionately affected by improved air quality	Likely to be differentially affected by improved air quality
Age		x
Disability (includes all forms of physical and mental disability)		x
Pregnancy and maternity		x
Gender (male drivers)	x	
Race	x	
Low income / socio-economic deprivation	x	

- 1.9.4 The New GM CAP aims to reduce the health impacts of air pollution as well as reduce NO₂ concentrations to below legal limits in the shortest possible time and by 2026 at the latest whilst minimising any negative socio-economic impacts. The EqIA will consider the impact of this New GM CAP on the groups above.

1.10 Government asks

- 1.10.1 The New GM CAP includes one new specific 'ask' from Government – to remove out-of-area operation by private hire drivers/vehicles. Greater Manchester Authorities are keen to work with the Department for Transport to consider an appropriate regulatory device that would require that all private hire journeys within Greater Manchester to be undertaken by a driver and vehicle which are both licensed by one of the ten Greater Manchester local authorities. In context of the GM CAP, this measure would provide local authorities with stronger regulatory tools to improve the emission standards of all private hire fleets operating in Greater Manchester.
- 1.10.2 Greater Manchester will continue to seek to ensure that the Government takes appropriate action to address exceedances on the A57/A628 a stretch of Strategic Road network, managed by National Highways that cuts through the villages of Hollingworth and Mottram.
- 1.10.3 Under an investment-led non-charging GM CAP the ANPR cameras installed for the Class C charging CAZ could be used to inform and support the development of investment-led solutions. GM also wants to work with Government to agree the use of the GM CAP ANPR cameras to support identification of vehicles that could be upgraded, and also for potential law enforcement activity related to the detection of crime.

1.11 Participatory Policy Development

- 1.11.1 The approach to Participatory Policy Development will include engagement with GM based groups representing the protected characteristic groups potentially impacted by the New GM CAP.
- 1.11.2 Any plan should be developed in conjunction with the residents and businesses in Greater Manchester. The ten Greater Manchester authorities are currently working to develop the New GM CAP, in conjunction with a range of stakeholders. Further participatory approach will ensure that the New GM CAP works for the residents and businesses of Greater Manchester. Greater Manchester will test with vehicle owners their plan that where non-compliant vehicles are identified as contributing to locations where NO₂ exceedances have been modelled, Greater Manchester Authorities will have funding packages to incentivise upgrades to the cleanest possible vehicle, in order to get the greatest emissions reduction.

1.12 Next steps

- 1.12.1 Before the Air Quality Administration Committee can confirm the submission as an agreed document there needs to be an opportunity for the 'Case for a New Greater Manchester CAP' document and associated appendices attached as **Appendix A-E** to be considered, as required, through the local governance arrangements of the individual authorities. This will take place in the next month and before the next Air Quality Administration Committee who can then formally confirm the submission as final.
- 1.12.2 Following the Participatory Policy Development process, Greater Manchester will develop, assess and agree a package of measures forming a proposed New GM CAP. This package of measures will be consulted upon in early 2023.
- 1.12.3 Greater Manchester will review the responses to the consultation and make any adaptations to the proposals as necessary. It is anticipated that a decision could be made to proceed with the New GM CAP in July 2023.

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2 Introduction

- 2.1.1 The Government has instructed many local authorities across the UK to take quick action to reduce harmful roadside levels of Nitrogen Dioxide (NO₂) following the Secretary of State (SoS) issuing a Direction under the Environment Act 1995. In Greater Manchester, the 10 local authorities, the Greater Manchester Combined Authority (GMCA) and Transport for Greater Manchester (TfGM) are working together to develop a Clean Air Plan to tackle NO₂ exceedances at the Roadside, herein known as Greater Manchester Clean Air Plan (GM CAP).
- 2.1.2 The GMCA – Clean Air Final Plan report on 25 June 2021⁵ endorsed Greater Manchester’s Final CAP and policy following a review of all of the information gathered through the GM CAP consultation and wider data, evidence and modelling work. Throughout the development of the previous Plan, JAQU reviewed and approved all technical and delivery submissions. The Plan was agreed by the ten Greater Manchester local authorities. Within this document, this is referred to as the Previous GM CAP.
- 2.1.3 On the 8th February 2022, a new Direction was issued by the SoS⁶ which confirmed that the March 2020 Direction to implement a Class C charging Clean Air Zone (CAZ) had been revoked and required that a new plan be submitted to the SoS by 1st July 2022 which should:⁷
- review the measures specified in the local plan for NO₂ compliance and associated mitigation measures; and
 - determine whether to propose any changes to the detailed design of those measures, or any additional measures.
- 2.1.4 The Direction also states that the local plan for NO₂ compliance must ensure the achievement of NO₂ compliance in the shortest possible time and by 2026 at the latest. It should also ensure that human exposure to concentrations of NO₂ above the legal limit is reduced as quickly as possible.
- 2.1.5 Within this document, this new Plan, and any subsequent further development of the new Plan, is referred to as the New GM CAP.

⁵ Also considered by the Greater Manchester authorities through their own constitutional decision-making arrangements.

⁶

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1054931/Environment_Act_1995_Greater_Manchester_Air_Quality_Direction_2022.pdf

⁷ In addition to recommendations about interim arrangements for changes to delivery arrangements for the CAZ in the meantime, including signage, funding and discount/exemption applications.

2.1.6 The development of the GM CAP is funded by Government and overseen by the Joint Air Quality Unit (JAQU), a joint DEFRA and DfT unit established to deliver national plans to improve air quality and meet legal limits of NO₂ concentrations. The costs related to the business case, implementation and operation of the GM CAP are either directly funded or underwritten by Government acting through JAQU and any net deficit over the life of the GM CAP will be covered by the New Burdens Doctrine, subject to a reasonableness test.⁸

2.2 What does this document set out?

2.2.1 This document sets out the case for Greater Manchester's proposal for a New GM CAP. It sets out why the ten local authorities of Greater Manchester believe that an investment-led non-charging GM CAP is the best solution to address the region's NO₂ problem, highlighting:

- A summary of the background to the GM CAP to date;
- What the Greater Manchester authorities are already doing to improve air quality through the work undertaken to date on the GM CAP and via other strategies and investments;
- How economic conditions have changed over the last year, both globally and locally, and how this has impacted Greater Manchester's residents and businesses;
- The current position and the way forward, to include a further submission to Government later in the year;
- Equality impact considerations; and
- Next steps.

2.2.2 This document does not provide the detailed design of a New GM CAP. In conjunction with a range of stakeholders, as detailed within **Section 15**, the ten Greater Manchester authorities are currently working to develop that detail collaboratively and will submit this to Government in due course. The collaborative approach is referred to in this document as the 'participatory policy development' approach.

⁸ The new burdens doctrine is part of a suite of measures to ensure Council Taxpayers do not face excessive increases.

3 Why are Greater Manchester and the Government taking action on NO₂?

- 3.1.1 Poor air quality has a real and significant effect on people's health. Air pollution is the largest environmental risk linked to deaths every year. Pollutants such as NO_x, principally NO₂, and PM (PM_{2.5} and PM₁₀) that are not visible to the naked eye are found at harmful levels in many urban areas across the UK and particularly on busy roads.
- 3.1.2 Breathing in polluted air contributes to the equivalent of 1,200 premature deaths a year in Greater Manchester.⁹ Both long- and short-term exposure to air pollution are known to adversely affect health. It affects people's lungs in the short and long term, worsening respiratory issues such as asthma or bronchitis, as well as cardiovascular problems, and reduces life expectancy¹⁰. Health damage caused by air pollution can begin as early as a baby's first few weeks in the womb and exposure over a long time can lead to heart and lung disease. Some of the most vulnerable in society are hit hardest – children, older people and those already in poor health.
- 3.1.3 There has been analysis conducted by the Office for National Statistics (ONS) to understand whether exposure to air pollution increases the risk of dying from Covid-19. Although there is caution expressed regarding the link between air pollution and Covid-19 and consideration of other factors, early evidence from the pandemic showed that Covid-19 deaths were more common in highly polluted areas. In total, it is estimated that the health and social care costs of air pollution in England could reach £5.3bn by 2035 unless action is taken.¹¹
- 3.1.4 Greater Manchester has a particular imperative to improve health, as the region has one of the lowest life expectancies at birth in England and significant health inequalities between areas. For example, there is an 18-year gap for men and a 13-year gap for women in healthy life expectancy across Greater Manchester when comparing those areas of highest healthy life expectancy with the lowest.¹² Low-income communities are more affected by air pollution. Achieving a major improvement in air quality across Greater Manchester will not only be important for improving human health but will also help to make Greater Manchester a more attractive place to live, visit and invest. Alongside this, there is a growing body of evidence that relates poor air quality with a secondary set of health impacts arising from spending less time outside, which can lead to more sedentary lifestyles and negative psychological effects on our mental health.¹³

⁹ Public Health England – Air Quality in Greater Manchester – from a Public Health Perspective (September 2018)

¹⁰ <https://www.local.gov.uk/air-quality-briefing-directors-public-health>

¹¹ <https://www.gov.uk/government/publications/nitrogen-dioxide-effects-on-mortality>

¹² <https://blog.policy.manchester.ac.uk/posts/2016/10/life-on-the-line-life-expectancy-and-where-we-live/>

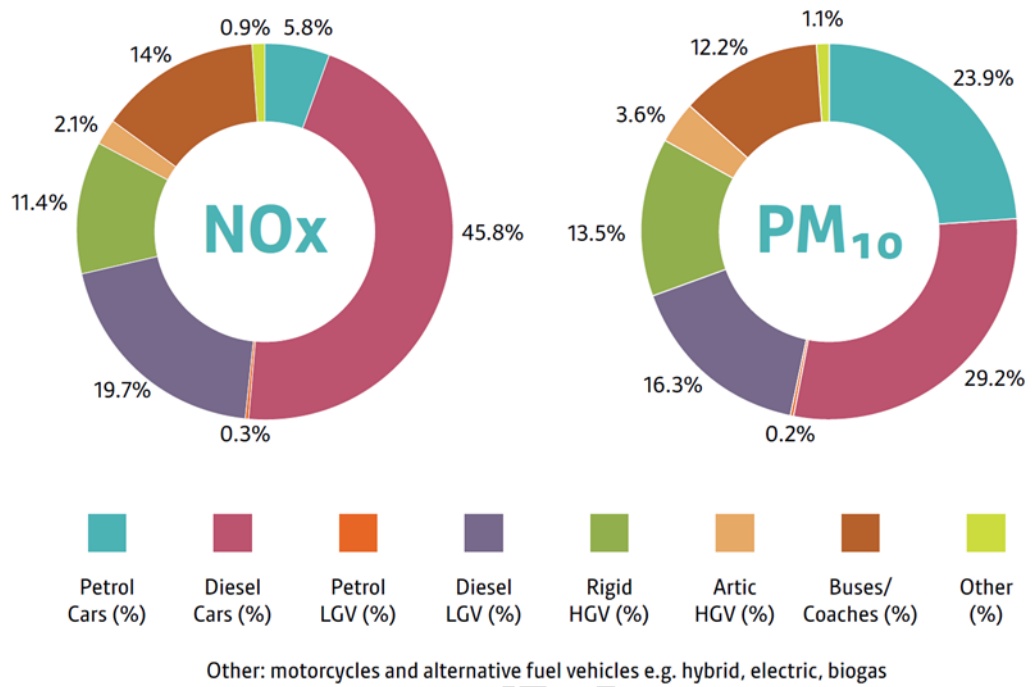
¹³ https://paa.confex.com/paa/2017/mediafile/ExtendedAbstract/Paper13493/IndividualPsychologicalDistress_April7.pdf

- 3.1.5 The people living in places with the dirtiest air are often those least likely to drive, and some of Greater Manchester's most deprived communities suffer the worst air pollution, living close to busy roads. A Public Health England review in 2019 described air pollution as the largest environmental risk to the public's health, reporting strong evidence of the association between air pollution and cardiovascular and respiratory disease and emerging evidence of other possible health effects such as dementia, low birth rates and diabetes. Around 7% of Greater Manchester's population, nearly 200,000 people, live in areas with roads that are close to or in exceedance of the Limit Value for NO₂ and many more people regularly spend time visiting these areas and travelling on these roads.
- 3.1.6 In our society, the youngest, oldest, those living in more deprived places, and those with existing heart or lung problems are at the greatest risk of developing symptoms due to exposure to air pollution.^{14,15} Greater Manchester contains some of the most deprived communities in the country, often living in urban areas with high levels of traffic. Conditions caused or exacerbated by air pollution may significantly reduce quality of life and can result in affected people being less able to work, attend education or carry out their normal daily lives. These impacts in turn widen the health inequality gap further. Further discussion of these equalities considerations is provided in **Section 13** and it is planned that a full Equalities Impact Assessment (EqIA) will be published based on the New GM CAP.
- 3.1.7 Diesel vehicles are the main source of road-based NO_x emissions in Greater Manchester, as shown in **Figure 1**, and older vehicles are typically more polluting than newer vehicles.

¹⁴ Air Quality – A Briefing for Directors of Public Health (2017), <https://www.local.gov.uk/air-quality-briefing-directors-public-health>

¹⁵ RCP and RCPCH London, Every breath we take lifelong impact of air pollution (2016), <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

Figure 1 Vehicles responsible for emissions damaging to health in Greater Manchester¹⁶



¹⁶ <https://www.greatermanchester-ca.gov.uk/media/1276/low-emission-strategy-dec-2016.pdf>

4 What has led to Greater Manchester revising its approach to the GM CAP?

- 4.1.1 Since 2010, the UK has been in breach of the legal limits for concentrations of NO₂ in major urban areas. The Air Quality Standards Regulations 2010 implemented the Ambient Air Quality Directive (2008/50/EC), which sets legally binding limits for concentrations of major air pollutants that affect human health, including NO₂ and particulates, into English law, and requires the SoS to draw up and implement a national air quality plan to achieve the relevant limit within the 'shortest possible time'.
- 4.1.2 In 2015 compliance with the legal limits of NO₂ had still not been achieved. In response, the UK Government was held to be in breach of its legal obligations and was required to take action by the UK Supreme Court.
- 4.1.3 In July 2017 the UK Government published its Air Quality Plan requiring local authorities with persistent exceedances to undertake local action to consider the best option to meet the legal NO₂ Limit Value in the shortest possible time. In the same month, the SoS issued a Direction under the Environment Act 1995 requiring seven Greater Manchester local authorities to produce a feasibility study to identify the option which will deliver compliance with the requirement to meet legal limits of NO₂ in the shortest possible time¹⁷.
- 4.1.4 Oldham Metropolitan Borough Council (MBC) was not directed along with the other Greater Manchester local authorities (alongside Rochdale MBC and Wigan MBC) in 2017, however following a court ruling in 2018¹⁸ the UK Government was ordered to produce supplements to the UK 2017 Air Quality Plan.
- 4.1.5 Consequently, Oldham MBC was directed to conduct a feasibility study and provide the SoS with a document setting out the measure(s) that would achieve compliance with the Legal Limits in the shortest possible time.
- 4.1.6 In October 2018 the UK Government produced a supplemental plan,¹⁹ which acknowledged that, as Oldham MBC is part of the Greater Manchester Plan, the Oldham exceedances were being considered as part of the GM CAP. Local modelling in the Target Determination exercise also identified exceedances in Rochdale and Wigan.

¹⁷ Environment Act 1995 (Feasibility Study for Nitrogen Dioxide Compliance) Air Quality Direction 2017. Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/746095/air-quality-no2-plan-directions-2017.pdf

¹⁸ Client Earth (No3) v (1) Secretary of State for the Environment, Food & Rural Affairs; (2) The Secretary of State for Transport and (3) Welsh Ministers [2018] EWHC 315.

¹⁹ Supplement to the UK plan for tackling roadside nitrogen dioxide concentrations October 2018.

- 4.1.7 The Greater Manchester authorities have collaborated on the preparation of the GM CAP since 2017, with the clear intention of securing a Plan in agreement with Government that best reflects both the impact of NO₂ roadside emissions at a city-region level and the wider strategies for social, economic and environmental improvement in Greater Manchester.
- 4.1.8 Throughout the development of the GM CAP the local authorities have made clear the expectation that the Government would support the plans through:
- Clear arrangements and funding to develop workable, local vehicle scrappage / upgrade measures;
 - Short term effective interventions in vehicle and technology manufacturing and distribution, led by national Government;
 - Replacement of non-compliant buses; and
 - A clear instruction to Highways England²⁰ to implement measures which deliver compliance with legal limits for NO₂ on the strategic road network, for which they are responsible, in the shortest possible time.²¹
- 4.1.9 In March 2019, all ten Greater Manchester local authorities collaboratively submitted an Outline Business Case (OBC) for the GM CAP to JAQU outlining a package of measures (including a Class C charging CAZ) to deliver regional compliance with the Limit Value for NO₂ concentrations. The OBC and associated documentation are available to view on the Clean Air Greater Manchester website.²²
- 4.1.10 Ministerial feedback was received in July 2019 along with a further Direction under the Environment Act 1995 requiring all ten of the Greater Manchester local authorities to implement a Class C²³ charging CAZ across the region.
- 4.1.11 This was superseded by a further Direction issued in March 2020 which required the ten Greater Manchester authorities to implement the GM CAP so that:
- (a) compliance with the legal Limit Value for NO₂ is achieved in the shortest possible time and by 2024 at the latest; and
 - (b) exposure to levels above the legal limit for NO₂ are reduced as quickly as possible.

²⁰ On 19 August 2021 it was announced that Highways England changed its name to 'National Highways' reflecting the new focus the company has on delivering the government's £27bn strategic roads investment programme, while also continuing to set highways standards for the whole UK.

²¹ Greater Manchester Authorities are directed to take action on the local road network. Those roads managed by National Highways, such as motorways and trunk roads are excluded from the CAP.

²² Accessible at: <https://cleanairgm.com/technical-documents/>

²³ The following vehicle types would be charged under a charging CAZ Class C: Buses, coaches, taxis, private hire vehicles, heavy goods vehicles, vans, minibuses. Source: <https://www.gov.uk/guidance/driving-in-a-clean-air-zone>

- 4.1.12 Throughout 2020/2021, progress was made by Greater Manchester in preparing to implement a Class C charging CAZ across the region with Government, including the procurement of operational services, operational readiness and implementation of infrastructure to support a Class C charging CAZ to be operational from 30 May 2022.
- 4.1.13 The GMCA – Clean Air Final Plan report on 25 June 2021²⁴ endorsed Greater Manchester’s Final CAP and policy following a review of all of the information gathered through the GM CAP consultation and wider data, evidence and modelling work. Throughout the development of the Previous GM CAP, JAQU reviewed and approved all technical and delivery submissions. The Previous GM CAP was agreed by the ten Greater Manchester local authorities. This included the GM CAP Policy, that outlined the boundary, discounts, exemptions, daily charges of the Class C charging CAZ as well as the financial support packages offered towards upgrading to a compliant vehicle, including the eligibility criteria to be applied with an agreement to keep funding arrangements under review. The aim of the funding was to support an upgrade to a compliant vehicle and to mitigate the negative socio-economic effects of a Class C charging CAZ.
- 4.1.14 Concurrently, Greater Manchester has already begun to implement measures to improve air quality across the city-region, launching the Clean Bus Fund and Clean Heavy Goods Vehicle (HGV) Fund in December 2020 and November 2021 respectively as well as expanding the network of Electric Vehicle chargers across Greater Manchester. Since May 2021, over 1,000 buses have been awarded funding to upgrade their vehicles by either retrofit or replacement. Additionally, over 300 HGVs have been awarded funding through the Clean HGV Fund. Greater Manchester is also implementing a number of additional schemes that will have a positive impact upon air quality across the region and further detail on this is set out in **Section 6**.
- 4.1.15 In Summer 2021 when the Previous GM CAP was agreed by the Greater Manchester Authorities, there was only evidence of a temporary disruption in vehicle supply due to the pandemic in 2020, which was assumed to be addressed by the market, with the Society of Motor Manufacturers and Traders (SMMT) predicting some level of ‘catch up’.²⁵ Greater Manchester sought a number of measures to address this, including negotiating improved vehicle replacement funding with Government in early 2021 to reflect our understanding of the impact of the pandemic at that stage.

²⁴ Also considered by the Greater Manchester authorities through their own constitutional decision-making arrangements.

²⁵

https://assets.ctfassets.net/tlpgbv1k6h2/2ZMJ3DJXiv7p3xOeZu4CYQ/247196ef60e33ac89f7f8938e1e16418/Appendix_6D_GM_proposed_approach_to_representing_the_impact_of_Covid-19_in_core_modelling_scenarios.pdf

- 4.1.16 Consultants Arup and AECOM were commissioned in late 2021²⁶ to analyse and report on the market conditions within the LGV sector in particular. The investigation found evidence that the used van market had materially changed, with evidence suggesting that second-hand van prices had increased by between 13% and c.60% since the modelling for the Previous GM CAP had been undertaken.
- 4.1.17 GM concluded that at that level, fewer van owners would choose to (or be able to) upgrade in response to the Class C charging CAZ, devaluing the funding offer for vans, with the Previous GM CAP being particularly sensitive to van prices given their number in Greater Manchester.
- 4.1.18 At the same time, in early 2022, analysis carried out as part of GM's ongoing commitment to review vehicle sales trends also found that sales of new private cars had been lower than expected in 2021, reducing the natural rate of fleet upgrade, indicating that the impacts of an older fleet of private cars based on recorded sales would be expected to lead to a delay in the predicted year of compliance for the Previous GM CAP, irrespective of any other changes to the assumptions.
- 4.1.19 GM concluded that independently either factor could be sufficient to delay compliance beyond 2024 and that this risk would be amplified if both factors are occurring simultaneously. In light of the above, the Greater Manchester Air Quality Committee requested that the SoS agreed to pause opening of the next phase of the Clean Air Funds at the end of January to enable an urgent and fundamental joint policy review with Government to identify how a revised policy can be agreed to deal with the supply issues and local businesses' ability to comply with the GM CAP.
- 4.1.20 Following this, the Greater Manchester Mayor met the SoS for Environment to relay the issues set out above and the formal request for suspension. It was agreed that further evidence would be shared between officials and a report was prepared by Greater Manchester, *Issues Leading to Delayed Compliance Based on the Approved GM CAP Assumptions*.²⁷
- 4.1.21 This report was shared with JAQU on 2 February 2022. It concluded that the Previous GM CAP could no longer be expected to achieve compliance in 2024.
- 4.1.22 On 4 February 2022 Jo Churchill, Parliamentary Under-SoS at the Department for Environment, Food and Rural Affairs, Andy Burnham, Mayor of Greater Manchester and Cllr Andrew Western, GMCA portfolio lead for clean air met to find a solution. Subsequently, a new Direction was issued to Greater Manchester, requiring a review of the GM CAP with any revised proposals to achieve compliance in the shortest possible time and by 2026 at the latest.²⁸

²⁶ https://democracy.greatermanchester-ca.gov.uk/documents/s18685/ARUP_Technical_Note.pdf

²⁷ https://democracy.greatermanchester-ca.gov.uk/documents/s19330/Appendix_3_Issues_leading_to_delayed_compliance_report.pdf
(greatermanchester-ca.gov.uk)

²⁸ [The Environment Act 1995 \(Greater Manchester\) Air Quality Direction 2022 \(publishing.service.gov.uk\)](#)

4.1.23 This new (2022) Direction revoked the Direction dated March 2020 which required the ten Greater Manchester local authorities to implement a Class C charging CAZ so as to achieve compliance with the legal Limit Value for NO₂ in the shortest possible time and by 2024 at the latest.²⁹

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²⁹ [Appendix 2 - 200316 Greater Manchester NO2 Plan Direction.pdf \(greatermanchester-ca.gov.uk\)](#)

5 What has changed since Summer 2021?

- 5.1.1 The Previous GM CAP was developed based upon the best evidence available at the time and following prescribed Government guidance. After the initial OBC submission, a series of technical notes were published setting out the results of analysis and research carried out to better understand the vehicles in scope for the scheme. This evidence formed the basis of the development of the Option for Consultation.
- 5.1.2 From March 2020, it became clear that the pandemic would affect the GM CAP; a programme of work was carried out in 2020/2021 to better understand the possible impacts of the Covid-19 pandemic on the Plan, published as the *Impacts of Covid Report* in June 2021.³⁰ This evidence, alongside feedback from the Consultation, was used to inform the GM CAP following consultation as approved by the ten Greater Manchester local authorities in June/July 2021.
- 5.1.3 At that time, Greater Manchester identified a number of possible risks to the GM CAP, which included concerns about the risk of vehicle price increases and the impact of any further lockdowns in the UK or countries in the supply chain. To evaluate the case for a New GM CAP, analysis into the changed economic environment has been conducted to determine whether the Previous GM CAP remains fit for purpose (**Appendix E**). Additionally, a series of vehicle evidence papers have been developed, as set out in **Appendix A to D**, to evaluate the ability of affected vehicle owners to upgrade their vehicles following the impacts on the global supply chain and the cost-of-living crisis.

5.2 Economic context

- 5.2.1 The economic context in the UK has changed dramatically in the period since July 2021. A range of factors associated with the pandemic, global supply chain challenges, and the cost-of-living crisis have combined to create a context of increased financial hardship for businesses and families. As a result of these changed conditions since Summer 2021 and the Previous GM CAP, Greater Manchester has undertaken research to understand the size and scale of the impacts. It should be noted that these factors continue to evolve, and the economic forecast is currently extremely difficult to predict. These levels of uncertainty only exacerbate the negative impact on businesses and households.
- 5.2.2 A summary of the outcomes of this research are set out as follows:
- National / international drivers;
 - Regional (North West) drivers; and
 - Factors specific to Greater Manchester.

³⁰ Accessible at: <https://cleanairgm.com/technical-documents/>

(1) National / international drivers

War in Ukraine (commenced late February and on-going)

- 5.2.3 Global inflationary pressures have intensified sharply following Russia's invasion of Ukraine. This has led to a material deterioration in the economic outlook for world and UK growth.³¹ In addition, Consumer Price Index inflation is expected to rise further over the remainder of the year, to just over 9% in 2022 Quarter 2 and averaging slightly over 10% at its peak in 2022 Quarter 4.³²
- 5.2.4 The war in Ukraine is also influencing the cost of energy and food as summarised below:
- Russia is a prominent exporter of energy, producing 17% of the world's natural gas supply and 12% of its oil³³. 8% of UK oil demand is directly imported from Russia, this is to be phased out by end of 2022, a move which could serve to place extra stress on prices; and
 - Russia and Ukraine are major agricultural exporters in grain, impacting food community prices with a 30% increase in the price of wheat and c.20% in the price of maize/corn since the war started.^{34,35}

Increases in the cost of energy

- 5.2.5 The energy price cap calculated by Ofgem increased by 12% in October 2021 to £1,277. Additionally, an increase to the price cap in April 2022 resulted in approximately 17 million households seeing their annual bill raise by 54% to £1,971, equating to a £693 increase (difference due to rounding). A further increase to the price cap is expected in October 2022 of c.£700-£850.³⁶
- 5.2.6 Unlike residential households, businesses on commercial energy tariffs are not protected by any price cap and tariff prices have been rising in reaction to the spike in wholesale energy prices around the world. Small businesses have a greater tendency to operate on tighter margins and have cashflow restrictions and are therefore more susceptible to increases in running costs. Furthermore, they are more likely to be forced to pass on their running cost increases to consumers through price hikes, just in order to survive. This has potential to put them at a competitive disadvantage.

³¹ <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-summary-and-minutes/2022/monetary-policy-summary-and-minutes-may-2022.pdf>

³² <https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/april2022>

³³ <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/country-and-regional-insights/russia.html>

³⁴ <https://www.fao.org/3/cb9236en/cb9236en.pdf>

³⁵ <https://tradingeconomics.com/commodities>

³⁶ https://obr.uk/docs/dlm_uploads/CCS0222366764-001_OBR-EFO-March-2022_Web-Accessible-2.pdf

Increases in the cost of fuel for motorists

- 5.2.7 Fuel prices have risen by 42% for petrol and 44% for diesel vehicles between July 2021 and June 2022, costing consumers an additional £0.55 for petrol and £0.59 for diesel per litre³⁷. Fuel price increases will particularly affect vehicle-operating businesses with high mileage such as the logistics and delivery sectors, with press reports that the annual cost to fuel an HGV has risen up to £20,000 per year.³⁸

Increasing cost of food and other products

- 5.2.8 Inflationary pressures have pushed up grocery prices by an additional £271 (5.9%) for each household per year.³⁹ This is likely to have a disproportionate impact on the poorest in society with their ability to absorb any additional costs comparatively diminished.

Ongoing global impacts of Covid-19

- 5.2.9 Shanghai, which is home to the world's largest container port, has been the subject of city-wide lockdown during April 2022 related to the Omicron variant. Global supply chains that were already stretched are being hampered further⁴⁰.
- 5.2.10 The global semi-conductor shortage is still impacting consumer products with retailers expected to increase costs.⁴¹ Intelligence from the Bank of England's Agency network suggests that shortages of semi-conductors have been exacerbated by recent lockdowns in China. Contacts also reported difficulties in obtaining components and other inputs owing to the war in Ukraine, and were seeking alternative suppliers or running down existing stockpiles to support output.⁴²

How the impact of inflation is distributed across society

- 5.2.1 Evidence from an independent think tank, the Resolution Foundation, has stated that the poorest tenth of households (by income) spend three times as much as a share of expenditure on gas and electricity bills as the richest tenth. This means the lowest income tenth of people are facing an inflation rate at least 1.5 percentage points higher than the richest tenth. The Bank of England has warned the UK could see double-digit inflation later this year.⁴³

³⁷ <https://www.rac.co.uk/drive/advice/fuel-watch/>

³⁸ <https://www.bbc.co.uk/news/business-61716039>

³⁹ <https://www.kantar.com/inspiration/fmccg/2022-wp--uk-shoppers-look-out-value-as-grocery-inflation-hits-11-year-high>

⁴⁰ <https://www.controlrisks.com/our-thinking/insights/china-lockdowns-prompt-domestic-shortages>

⁴¹ <https://www.popsci.com/technology/global-chip-shortage/> -
:-:text=What%20is%20the%20chip%20shortage,ripped%20up%20the%20supply%20chain.

⁴² <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2022/may/monetary-policy-report-may-2022.pdf>

⁴³ <https://www.resolutionfoundation.org/publications/cap-off/>

Interest Rate Changes

- 5.2.2 In response to rising inflation, the Bank of England has increased interest rates from 0.25% in January 2022 to 1.25% in June 2022. This has had a direct impact on the cost of borrowing with rates on lending to small and medium-sized enterprises rising by around 110 basis points between January and March this year and are now slightly above their 2019 levels. While larger firms' ability to access credit is broadly unchanged, credit conditions have tightened slightly for smaller firms since January 2022.⁴⁴

Removal of Government Covid-support schemes

- 5.2.1 The UK Government has withdrawn funding for Covid-19 support schemes such as the job retention (furlough) scheme, enhanced sick pay, business rates pauses, and the Universal Credit uplift across end of 2021 and Q1 of 2022.^{45,46}

Revised Projections for UK GDP Growth

- 5.2.2 The Bank of England estimates that quarterly UK Gross Domestic Product (GDP) growth was 0.9% in 2022 Q1. Growth slowed sharply over the first half of the year, reflecting the significant adverse impact of higher global commodity and tradable goods prices on UK demand. GDP is projected to fall in 2022 Q4, driven largely by the decline in households' real incomes, including that stemming from the projected rise of around 40% in retail gas and electricity prices when the Ofgem price caps are next reset in October. Calendar year GDP growth is forecast to be broadly flat in 2023. Q4 GDP growth picks up to around 0.75% by the end of 2023 as the pressures on household incomes ease somewhat, although this is still below pre-pandemic rates.⁴⁷

(2) Regional (North West) drivers

- 5.2.3 Regionally, the biggest driver in terms of the economic factors that influence the GM CAP, is the labour market, which shows a mixed picture as the economy recovers from the Covid-19 pandemic.
- 5.2.4 Whilst labour market data released by the ONS showed that the employment rate in the North West continued to fall, with the gap between the North West and the UK at its widest in two years in the Jan-March 2022 data (a gap of 2%). Nationally, the employment rate for the UK was 75.7% - up from 75.5% in the three months to February. The North West therefore seems to be on a different trajectory from wider UK patterns.⁴⁸

⁴⁴ <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2022/may/monetary-policy-report-may-2022.pdf>

⁴⁵ <https://commonslibrary.parliament.uk/examining-the-end-of-the-furlough-scheme/>

⁴⁶ <https://www.gov.uk/guidance/claim-back-statutory-sick-pay-paid-to-employees-due-to-coronavirus-covid-19>

⁴⁷ <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2022/may/monetary-policy-report-may-2022.pdf>

⁴⁸ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/regionallabourmarket/latest>

- 5.2.5 An increase in working age economic inactivity has attracted national attention. In the North West of England, the Covid-driven rise is more marked than the national average. As well as the inactivity rate returning to a pandemic high of 23.5% in the most recent data, the gap with the UK has widened once more (2.1ppts).⁴⁹

(3) Factors specific to Greater Manchester

Greater Manchester business composition

- 5.2.6 Based on 2021 data, Greater Manchester has more small businesses (+c.15,000) compared to other areas of comparable total and working age populations such as the West Midlands.⁵⁰

Outlook for Greater Manchester businesses

- 5.2.7 A report by the Growth Company in May 2022 collated 246 surveys with businesses (almost all who responded were based in Greater Manchester) undertaken during April 2022.⁵¹ The report stated that a growing concern was the proportion of businesses facing business finance challenges (43% vs 33% March 2022) and increasingly impacted by the rising costs of raw materials - April 2022 reported a value of 28% vs. 16% for July 2021.
- 5.2.8 Recruitment has been a key challenge for businesses, with total vacancies across all sectors having been at high levels over 2021/2022 – resulting in some businesses facing significant challenges in staffing their operations - Manchester Airport being a key example. Transport operators such as bus, coach and taxi operators have faced driver shortages as the economy emerges out of the pandemic. This has in part been driven by an increase in economic inactivity brought about by the pandemic with the size of the workforce available to Greater Manchester businesses likely having shrunk (in the North West during Jan-March 2022 the working age inactivity rate (the number of people who are not in work and not looking for a job) was 23.5% vs. a national inactivity rate of 21.4% - this is higher than it was at the beginning of 2020).⁵²

Wages in Greater Manchester

- 5.2.9 Median pay in Greater Manchester is over £100 a month below the UK median based upon ONS 'experimental' data (note: this data is unadjusted for inflation and indicates the trend only).⁵³ The wage gap was at its widest in January of 2022 (£127 a month).

⁴⁹

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/regionallabourmarket/latest>

⁵⁰ <https://www.nomisweb.co.uk/sources/ukbc>

⁵¹ <https://www.businessgrowthhub.com/coronavirus/business-survey>

⁵²

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/uklabourmarket/may2022>

⁵³

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/realtimeinformationstatisticsreferencetableseasonallyadjusted>

Understanding the Greater Manchester residential population

- 5.2.10 53% of Greater Manchester's residential population is classified as either 'Financially Stretched'⁵⁴ or 'Urban Adversity'⁵⁵ based on the Acorn segmentation tool categories, whereas across the UK this figure stands at just 40%. This disparity demonstrates the comparative economic vulnerability of the Greater Manchester population to inflation associated with non-discretionary spend.⁵⁶
- 5.2.11 For 'Financially Stretched' and 'Urban Adversity' households, disposable income is typically well below average, and often below £10,000. This means that those with limited disposable income are likely to be even more vulnerable to any costs that may be passed onto them. It also serves as a reminder that Greater Manchester businesses that predominately serve local markets could be particularly vulnerable to weakening consumer demand.
- 5.2.12 Launched in October 2020 during the Covid-19 pandemic, the Greater Manchester Independent Inequalities Commission undertook a six-month analysis of inequalities across the city region, resulting in the *Good Lives for All in Greater Manchester report*.⁵⁷ Amongst the findings, the report highlights the health inequalities experienced across the city region and recommended that wellbeing and equality goals sit at the heart of the Greater Manchester Strategy, and that universal basic services are accessible to the most disadvantaged groups. The findings of the report will inform the planned EqIA for the New GM CAP.

Economic conditions summary

- 5.2.13 UK inflation reached a 40-year high of 9% during April 2022, up from 2% in July 2021. It is widely accepted that inflation will increase to higher levels still during the remainder of 2022, with evidence already pointing to consumer demand being dampened. Inflationary pressures are already having a significant impact on household bills with the average annual grocery bill on course to rise by £380 according to research conducted by Kantar.⁵⁸
- 5.2.14 Greater Manchester is not insulated from the impacts of high inflation, in fact in some respects it is particularly vulnerable - noting its relatively high volume of small businesses, and a higher than average (compared to the UK) proportion of residents who typically have below average disposable household incomes.

⁵⁴ This category contains a mix of traditional areas of Britain. Incomes tend to be well below average. Although some have reasonably well paid jobs more people are in lower paid administrative, clerical, semi-skilled and manual jobs. Apprenticeships and O levels are more likely educational qualifications. Unemployment is above average as are the proportions of people claiming other benefits.

⁵⁵ This category contains the most deprived areas of large and small towns and cities across the UK. Household incomes are low, nearly always below the national average. The level of people having difficulties with debt or having been refused credit approaches double the national average. The numbers claiming Jobseeker's Allowance and other benefits is well above the national average. Levels of qualifications are low and those in work are likely to be employed in semi-skilled or unskilled occupations.

⁵⁶ Source: Acorn 2021. CACI Limited. The applicable copyright notices can be found at <http://www.caci.co.uk/copyrightnotices.pdf>

⁵⁷ <https://www.greatermanchester-ca.gov.uk/media/4605/the-next-level-good-lives-for-all-in-greater-manchester.pdf>

⁵⁸ <https://www.kantar.com/uki/inspiration/fmcg/2022-wp-uk-grocery-bills-to-rise-by-380-per-year-but-inflation-fails-to-dampen-iubilee-joy>

- 5.2.15 The Bank of England has already responded by increasing the base rate to 1.25% (up from 0.1% in July 2021) - signalling that further rate rises are likely. This in turn will increase the cost of borrowing to both businesses and residents who require finance and are not protected by fixed rates. Meanwhile the Bank of England's Monetary Policy Report (May 2022) points to an expectation that GDP will fall in Q4 2022 and may be 'broadly flat' during 2023.
- 5.2.16 In summary, any intervention, such as a charging CAZ, that could see businesses forced to pay additional charges and potentially pass costs on to the consumer, could have severe consequences for those groups who are already struggling to cope with the cost of living crisis.

5.3 Vehicle sector impacts

- 5.3.1 Greater Manchester has undertaken research to understand the changed conditions within the vehicle market and subsequent impacts from the economic factors, as discussed in **Section 5.2**, and lasting impacts from the Covid-19 pandemic. The research has been structured into a set of vehicle evidence papers which are provided within **Appendix A – D** and include total vehicle numbers, vehicle type apportionment and non-compliant proportions. The findings are summarised below:

LGV

- 5.3.2 A summary of the LGV sector impacts has been provided below:
- Pre-pandemic, there was significant growth in LGV mileage and LGV stock over a number of years and the expectation was that both growth trends would continue.
 - However, whilst the early phases of the pandemic and subsequent lockdowns and restrictions in 2020 constrained demand, it appears that this effect was temporary and has been offset by growth in demand from some LGV-owning sectors.
 - The pandemic had a major impact on the number of new LGVs sold in the UK, initially due to the halting of production lines and local lockdowns around the world.
 - Whilst new LGV sales recovered to some extent in 2021, they are still not back to 2019 levels and so there is a substantial 'lost supply' that has not been recovered equating to 80,000 vehicles on a conservative assumption that 2019 levels had been maintained.
 - The global semiconductor (an element of electronic circuits) shortage has also impacted the automotive industry and its effects are ongoing.
 - The industry is reporting significant supply issues with extended lead times for new orders.

- It is anticipated that the introduction of CAZs at particular locations in the UK will introduce some regional disparity in terms of the availability of certain vehicles and place additional demand pressure on the market in general.
- Reliable data on the variation in the price of new LGVs as a consequence is not available as it is commercially sensitive.
- There is substantial evidence of significant price increases in the second-hand LGV market – the scale of those rises has a high degree of variability depending on the particular vehicle. The extent of the reported rise varies between 13% and almost 60%.
- Overall, the evidence suggests that demand for new and second-hand LGVs remains strong, and therefore that the loss of supply caused by lockdowns in 2020 and more recently by the semiconductor shortage is leading to price rises in the new and second-hand markets, and to long lead times for new vehicle orders.

HGV

5.3.3 A summary of the HGV sector impacts has been provided below:

- Whilst HGV traffic was significantly reduced in the early lockdown of spring 2020, the overall volume and usage of HGVs recovered quicker than other modes and has generally returned to pre-pandemic levels.
- HGV purchasing patterns were atypical in 2019 and 2020 as a result in a change in regulation, which meant that 2019 saw much higher than normal HGV sales as vehicle owners brought forward sales to avoid the impact of new vehicle regulations. Therefore, sales in 2020 were expected to be lower than normal and it is difficult to disaggregate this impact from that of the pandemic. Overall, between 2019 and 2020, sales were similar on average to sales in previous years.
- The HGV sector is experiencing significant issues in relation to demand and supply of new vehicles. HGV production has been hampered by the shortages in components, particularly semi-conductors. This shortage has impacted on the ability of manufacturers to meet the increased demand as demand from some sectors grows and the requirement to 'catch up' with lower production in Q2 2020. The issue is so significant that some major manufacturers are not taking new orders for this year.
- Significant price increases have been observed, particularly in the second-hand compliant market. For new vehicles, the more significant issue is availability and lead times as noted above.

- Whilst the situation is fluid, responses from vehicle manufacturers and dealerships suggest that the issue will not be resolved until 2023. This means that higher prices for new and used vehicles and a lack of availability of HGVs are likely to continue throughout 2022.

Taxi (Hackney Carriage and Private Hire Vehicle (PHV))

5.3.4 A summary of taxi sector impacts has been provided below:

- Industries served by the taxi industry have suffered heavily through Covid-19. Leisure trips comprised of over half of all taxi journeys in 2019 with Government restrictions having a significant impact on the leisure market, particularly bars, pubs, restaurants and nightclubs. Equally, other important taxi markets have been constrained during the pandemic, stemming from Government restrictions on commuting, shopping and tourism. Emerging from the pandemic, taxis are older and more non-compliant than previously assumed and there are fewer taxis and taxi drivers operating in Greater Manchester compared to pre-pandemic levels.
- The number of new Greater Manchester-licensed Hackney Carriages and PHVs was significantly lower during the pandemic compared to pre-pandemic levels. The number of Greater Manchester licensed taxis decreased from 2019 to 2022 by 5.4% for PHVs and 7.7.% for Hackney Carriages.
- The average age of Hackney Carriages and PHVs has grown older in 2020 and 2022 compared to pre-pandemic levels (2019) with taxi fleets estimated to be one year older than pre-pandemic.
- There has been no significant shift in fuel types for Hackney Carriage with 89% still fuelled by diesel. However, there has been a shift from diesel to hybrid-electric for PHVs, rising from 14% in 2019 to 29% in 2022. The EV uptake remains very low at less than 1% for both Hackney Carriages and PHVs.
- Hackney Carriages, in particular, are likely to have faced a more significant impact from the Covid-19 pandemic, compared to PHVs, due to their dependency on Manchester City Centre where sectors have been hit the hardest. Both Hackney Carriage and PHV owners are likely to have lower cash reserves to upgrade their vehicles than prior to the pandemic.
- Hackney Carriages are older, more non-compliant and are being upgraded at a slower rate compared to PHVs.

- The ability for Hackney Carriage owners to upgrade their vehicles is likely to be more constrained compared to PHV owners due to the higher cost of replacement vehicles and the likelihood of more substantive Covid-19-related impacts. However, there is some evidence to suggest that whilst Hackney Carriage vehicle prices are stable, and even falling for certain vehicle types (although this is based on very limited evidence), the vehicle prices for new and second-hand compliant PHVs are increasing in-line with rising wider car market vehicle prices. For example, Toyota models increased in price by 21% in 2022 compared to 2019 prices and Skoda Octavia prices increased by 14% in 2022 compared to 2019 prices.

Coach/Minibus

5.3.5 A summary of the coach and minibus sector impacts has been provided below:

- The first UK national lockdown in March 2020 had a significant impact on the coach and minibus market, with many coach and minibus operators either having to stop their services altogether or only operate at a significantly reduced capacity.
- Coach operators can be categorised as offering three types of services:
 - Special regular services (e.g. school travel provision);
 - Regular services; and
 - Occasional services, for example for tourism, leisure and events.
- Other than school services, which are largely back to normal, the ongoing impact on the coach market is dependent on how soon tourism and general travel returns to 'normal' levels. At the present time, that remains uncertain though there has been a general increase in leisure travel in recent months.
- Low margin or not-for-profit minibus operators, such as charity transport providers, rely on customers in order to operate and are likely to have reduced demand during the pandemic due the customers they serve being older and government restrictions, reducing already limited cash reserves to upgrade their vehicles.
- The impact of the pandemic has generally reduced prices for both new and second-hand coaches due to the reduced demand in the sector.
- Conversely the price of new and second-hand minibuses has increased other than for second-hand non-compliant vehicles.

- There is a wider range of organisations / businesses that use minibuses. Local authority, community transport and education related are all likely to be relatively unaffected as they are less demand dependant. But local bus and coach operators and leasing companies will be subject to the same travel demand uncertainties associated with the bus and coach sector.

Conclusion

- 5.3.6 Current economic conditions present new challenges, requiring changes to the GM CAP necessary to mitigate against additional costs to Greater Manchester residents and businesses. Since the Previous GM CAP, agreed in Summer 2021, external factors associated with the pandemic, global supply chain challenges, and the cost-of-living crisis are resulting in additional financial challenges for local residents and businesses.
- 5.3.7 In particular, rising inflation, falling consumer confidence, lack of GDP growth and rising cost of borrowing mean that Greater Manchester's businesses and households are more vulnerable to the impact of increased costs and less able to invest in vehicle upgrades than in July 2021. This has been exacerbated by rising vehicle prices and constraints on the supply of new vehicles, with demand for compliant second-hand vehicles outstripping supply in many sectors.
- 5.3.8 For some sectors, the pandemic is still affecting their businesses with demand not having returned to pre-pandemic levels.
- 5.3.9 Overall, it is clear that current economic conditions mean that imposing a charging CAZ would be an additional cost for local residents and businesses at a time of existing financial challenges, and could potentially lead to job losses and business closures.

6 What is Greater Manchester already doing about poor air quality?

6.1.1 This section sets out:

- What the GM CAP has already delivered to improve air quality; and
- Other ways Greater Manchester is investing in schemes and action to deliver air quality improvements.

6.1.2 Some, but not all, of these developments have occurred since the Previous GM CAP was originally approved in Summer 2021. Therefore, this wider action needs to be taken into account when considering an appropriate New GM CAP for the region.

6.2 What has the GM CAP delivered already?

6.2.1 The GM CAP has already taken steps to improve air quality across the city-region, launching the Clean Bus Fund and Clean HGV Fund in December 2020 and November 2021 respectively. As of May 2022, over 1,000 buses have been awarded funding to upgrade their vehicles. Additionally, over 300 HGVs have been awarded funding through the Clean HGV Fund. This has been supplemented by £3.5m of GM CAP funding to deliver a 30 rapid charging points to encourage the transition to Zero Emission Capable vehicles with installation due to commence in late 2022 and continue throughout 2023.

6.2.2 Greater Manchester has secured £3m of early measures funding in advance of submitting the GM CAP. These funds are being used to promote electric vehicles (EVs) and cleaner choices – this includes:

- **The installation of EV charging points:** These funds are being used for the installation of 24 dual-headed rapid EV charging points. The project is nearing completion with 22 charging points having been installed since 2019 up to May 2022, including the first dedicated taxi charging point. The remaining charging points are scheduled to be complete in 2022. The Greater Manchester Electric Vehicle network, comprising approximately 140 charging points, has transitioned to the Be.EV network, an electric vehicle charging infrastructure provider appointed by TfGM. A taxi membership scheme and EV tariff was introduced in October 2021;
- **Promotion of EVs:** Early measures funding has also been used to promote the use of EVs, EV charging and Greater Manchester's expanded publicly owned network; and
- **Communications campaign:** A communications campaign was delivered to support the wider GM CAP by raising awareness of the need to clean up our air and promote alternative travel options.

6.3 What else is Greater Manchester doing to tackle poor air quality?

- 6.3.1 Over the past decade, investment by Greater Manchester in public transport has been second only to London. Using a blend of funding sources, both local and national, Greater Manchester has delivered a range of key transport infrastructure projects that have helped drive Greater Manchester's regional and local economies. These include Metrolink expansion and improvements, bus priority, smart ticketing and information systems, park and ride sites across the conurbation, channelling investment of around £200m each year to radically enhance clean public transport.
- 6.3.2 This built on the ground-breaking £1.5bn Greater Manchester Transport Fund, which paid for the significant expansion of the zero-emission Metrolink network, the Leigh-Salford-Manchester guided busway, as well as key transport interchanges, supporting town centres and regeneration efforts across the conurbation.
- 6.3.3 Greater Manchester have been awarded around £1.2bn through the CRSTS, which will further expand and integrate the network, focusing on improvements to bus routes, funding zero emission fleets and providing further investment in Greater Manchester's rapidly expanding cycling and walking network.
- 6.3.4 Investment in upgrading buses to zero emission standard has been secured through the Zero Emission Buses Regional Area (ZEBRA) Scheme. £35.8m of funding has been awarded after a joint bid to the DfT submitted by GMCA, TfGM, Stockport Council and Stagecoach Group PLC. The ZEBRA funding will be matched by £37.8m of funds from Stagecoach and topped up with £12.5m from GMCA and will support the introduction of 170 zero emission buses running from Stockport by 2024. This equates to 10 per cent of the whole bus fleet in Greater Manchester.
- 6.3.5 Greater Manchester will be bringing buses back under local control for the first time in the City Region since de-regulation in 1986.⁵⁹ The GMCA will introduce a fully franchised system across three phases starting in 2023. From the two rounds of consultation, 86% of responses to the first consultation period supported the franchising scheme with 82% for the second consultation period from more than 12,500 responses.
- 6.3.6 The ability for Greater Manchester to operate a franchised bus system will allow the GMCA / TfGM to directly control bus emission standards for the first time, for example, enabling the transport authority to direct the exclusive use of zero emission buses along particular corridors or within defined geographical areas where there may be specific air quality issues that need addressing.

⁵⁹ <https://www.gmconsult.org/strategy-team/greater-manchester-bus-consultation/>

6.3.7 From September 2023, Greater Manchester is also planning to introduce 50 new zero emission buses into service with the launch of the Area 1 Bus Franchise in Wigan and Bolton.

6.3.8 Greater Manchester has consistently used its available transport funding to improve public transport and active travel options, thereby encouraging people to travel more sustainably. Greater Manchester works to maximise all opportunities to access funding for the region to make it easier and more appealing to travel by transport choices with lower emissions per person including public transport, bike or on foot. In particular:

- **Transforming Cities Fund 1:** Delivering £160m of major walking and cycling improvements across Greater Manchester, supported by an additional £40m Cycle City Ambition Grant, as well as £83m towards 27 new Metrolink trams and supporting infrastructure, which started to come into service in 2021.
- **Transforming Cities Fund 2:** In the 2018 Autumn budget, Greater Manchester was granted an additional £69.5m (to be spent by 2023). The intention is to prioritise this funding to deliver on improving public transport provision for both existing communities, and housing and employment growth areas identified in the Places for Everyone (formally Greater Manchester Spatial Framework) . In January 2021, GMCA announced the scheme prioritisation for investment including £15m for a new rail station at Golborne, £10m for Quality Bus Transit schemes, £10m contribution to the Greek Street Bridge project in Stockport and £2m for a travel hub (including Park & Ride provision) at Tyldesley. This fund has been incorporated into the City Region Sustainable Transport Settlement Fund.
- **Active Travel Fund:** Greater Manchester has been awarded £15.97m, as part of the £2bn Government fund, to deliver 24 miles of cycling and walking routes and dozens of new neighbourhood interventions. The Fund has been used to sustain the unprecedented levels of walking and cycling, attributed to the impacts of the Covid-19 pandemic, delivering measures across Greater Manchester. The schemes include:
 - ‘School Streets’, where streets around schools are closed to motorists at school times
 - Active neighbourhoods, where residential side streets are closed to through traffic to stop rat-running
 - Segregated cycle lanes
 - Pedestrian improvements

- **Growth Deal:** Delivering over £400m of improvements through schemes such as Stockport Town Centre Accessibility Improvements, Salford Bolton Network Improvements and Ashton-under-Lyne Interchange. Delivery of the Ashton-under-Lyne Interchange has been completed alongside a number of key centre transport improvements. Going beyond the levels agreed with Government, Growth Deal investment in Greater Manchester is expected to deliver 7,000 jobs and £364m in private sector investment in the next few years.
- **City Region Sustainable Transport Settlement:** On 20 July 2021, DfT issued the guidance for the renamed Intra-City Funding Settlement, now City Region Sustainable Transport Fund (CRSTF) and Settlement (CRSTS) process, which will combine certain elements of existing capital funding (including the Integrated Transport Block, Maintenance Funding, and future years Transforming Cities Funding) in addition to the new £4.2 billion. On 10th September, GMCA approved the submission of the Prospectus based upon the upper bound guideline of £1.19bn for government consideration as part of the 2021 Spending Review process. On 22 November 2021, the Secretary of State wrote to the Greater Manchester Mayor to say that GMCA had been allocated an indicative £1.07 billion of capital funding conditional on the submission of a programme business case by the end of January 2022, noting that initially the Secretary of State letter requested submissions by January, which were submitted to government on 31st January 2022. On 1st April 2022, the Secretary of State wrote to the Greater Manchester Mayor to confirm that Greater Manchester would receive the full amount of the indicative allocation of £1.07bn, subject to agreeing to a series of conditions and the final scheme list.⁶⁰
- **Clean Bus Technology Fund:** Greater Manchester also secured c.£6m from the Clean Bus Technology Fund (CBTF) to upgrade the local bus fleet, targeted at air quality hotspots. The CBTF provides support to operators to retrofit their vehicles as follows:
 - 280 buses have been awarded retrofit funding at a total cost of £4.26m; and
 - The remaining £1.73m of funding is currently planned to be distributed through the GM CAP as part of proposals to support bus operators.

6.3.9 Greater Manchester has recently been successful in securing further funding to support the delivery of a low emission bus and taxi fleet:

⁶⁰ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1066118/crstf-funding-settlement-letter-for-greater-manchester-1-april-2022.pdf

- **Office for Zero Emission Vehicles (OZEV):** £1.8m of funding has been secured to deliver 30 dual-headed rapid charging devices installed across Greater Manchester for primary use by Hackney Carriages and private hire vehicles (PHVs). This will be supported by local match-funding of circa £600k. This has been combined with £3.5m of GM CAP funding to deliver a further 30 rapid charging points. A total of 60 dual-headed charging points will be delivered through the project, across the 10 Local Authorities. Feasibility studies have been completed and work on detailed design has commenced. Installation is due to commence in late 2022 and continue throughout 2023.
- **Zero Emission Buses Regional Area (ZEBRA) Scheme:** GMCA was awarded £35.7m in March 2022 for the replacement of 170 diesel buses that operate from Stockport Bus Depot to Zero Emission technology, by Spring 2024.
- **City Region Sustainable Transport Settlement for Zero Emission Buses:** £115m of funding has been secured and TfGM is currently developing detailed plans for the deployment of these funds. Greater Manchester expects to have sufficient funds to deploy 400 to 500 zero emission buses by 2027. In combination with the ZEBRA Stockport 170 buses and the Stagecoach ULEB 32 Zero Emission Buses that run on routes 43 and 111, this represents approximately one third of the fleet. The deployment plan is being heavily influenced by Clean Air considerations. Analytical work is underway to ensure the buses are deployed onto streets in Greater Manchester with the worst air quality, thereby helping to deliver the greatest strategic impacts for the CRSTS funds invested.
- **Bus Service Improvement Plan (BSIP):** On 5th April 2022, it was confirmed that Greater Manchester would receive an indicative allocation of £94.8m of BSIP funding from the government's Bus Back Better strategy.⁶¹ The BSIP will work towards achieving the interim-year 2030 "Right Mix" target for bus travel and removing enable Greater Manchester to remove up to 450,000 tonnes of carbon tailpipe emissions over the period to 2030. This includes reductions associated with the conversion of the bus fleets to fully electric as proposed within this BSIP.

6.3.10 Greater Manchester uses its local transport levy and the Mayoral Precept to fund a range of public transport services. This includes concessions, supported bus services (which make up 20% of the network) and Ring & Ride Services, which provides door-to-door, demand responsive transport to restricted local residents.

⁶¹ https://assets.ctfassets.net/nv7y93idf4iq/1Cu66Ouc9StC7JIRPiuSVI/95b9734bb0096523ec1328dd7c582035/BSIP-PM-PUB-0005_GM_Bus_Service_Improvement_Plan_October_2021.pdf

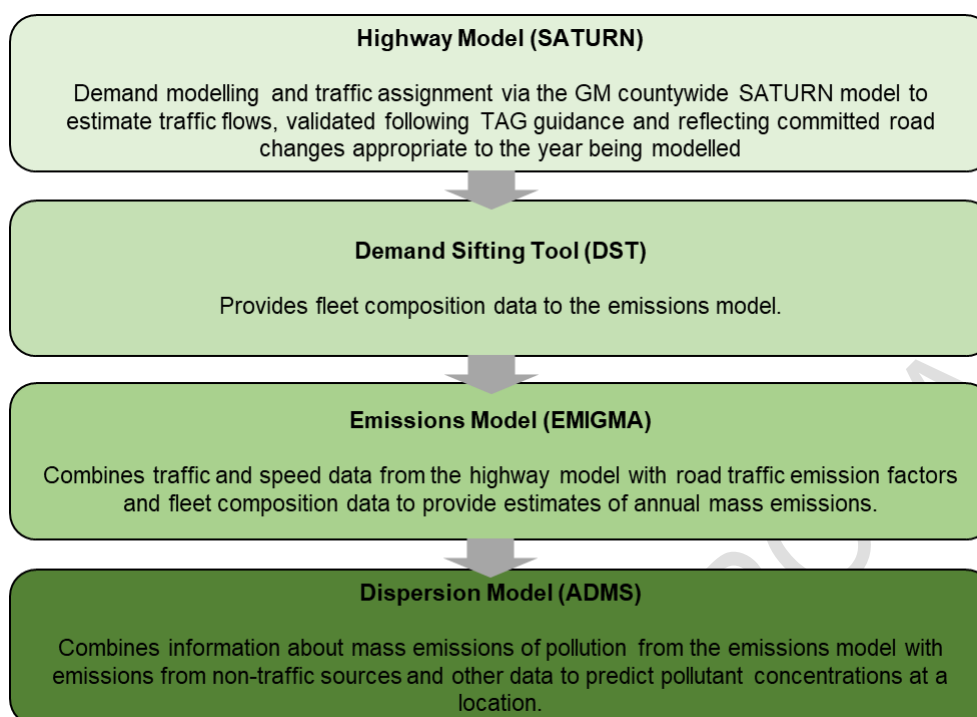
6.3.11 Local authorities in Greater Manchester are seeking new sources of funding to deliver cleaner air and improve sustainable travel options in the city region:

- **Future High Streets Fund:** Six towns in Greater Manchester have been granted full funding, totalling an estimated £90m, to improve transport links, build new homes and transform underused spaces in a key milestone for the government's levelling up agenda. Stretford (£17.6m), Rochdale (£17.1m), Wigan (£16.6m), Stockport (£14.5m), Farnworth (£13.3m) and Oldham (£10.8m) have all received a share of the fund.
- **Towns Fund:** Announced in 2019, 100 places were invited to develop investment priorities and proposals as part of a £3.6bn Towns Fund. The investment includes planning and land use and development of local transport schemes that complement regional and national networks. The 2020 budget announced 45 areas of England have been successful in their funding bids including three areas in Greater Manchester: Bolton (£22.9m), Cheadle (£13.9m) and Rochdale (£23.6m).
- **National Highways (formerly Highways England):** In addition to major committed schemes, National Highways has discretion to fund a range of smaller projects through its Designated Funds, of which £936m has been allocated in the next five years. Greater Manchester will work with National Highways to identify opportunities where use of Designated Funds may be appropriate to deliver infrastructure. The funds cover a range of projects including safety and congestion; users and communities; environment and well-being; and innovation and modernisation. Greater Manchester will also work closely with National Highways on their Route Strategy process which will inform the determination of funding needs and priorities for the next Road Investment Strategy (RIS) which will commence in 2025.

7 What are the current air quality issues in Greater Manchester?

7.1 Methodology

- 7.1.1 Air quality in Greater Manchester has been modelled as part of the GM CAP, and areas of exceedance of the Limit Values identified. This modelling has been updated at relevant stages throughout the development of the plan for a number of reasons, for example to reflect changes to the key phasing dates, to revise underpinning assumptions such as vehicle fleet age (due to Covid-19), or as a response to policy refinements as a result of the public 'conversation' or consultations.
- 7.1.2 Air quality is expected to gradually improve over time as a result of the ongoing cycle of newly purchased vehicles replacing older more polluting equivalents. The Government has required that the GM CAP delivers compliant air quality, using modelling to forecast future concentrations and showing how potential measures might reduce concentrations.
- 7.1.3 The air quality problem for Greater Manchester is assessed by reference to the "Do Minimum" scenario modelling, which sets out air quality as forecast if no action is taken by the GM CAP. The forecast does take into account other investment/interventions that are planned, funded and committed, where they have an impact on travel, traffic or the road network. The forecast appraisal years were developed as the original planned scheme commencement date for the GM CAP (2021 – not updated), the current expected scheme commencement date (2023) and a further year to inform the trajectory of improvement to compliance with the Limit Values (2025).
- 7.1.4 The GM CAP is underpinned by an evidence base derived from data collection, research, analysis and modelling. Throughout the technical development process from 2017 to date, Greater Manchester has used best practice methodology and assumptions and worked closely with Government, including for example by delivering updates to incorporate the impacts of Covid-19 to the GM CAP in accordance with national guidance.
- 7.1.5 The modelling approach has been updated to reflect the impacts of Covid-19 in line with JAQU guidance and changes to the GM CAP Policy following public consultation and now in respect to changing market conditions and further Covid-19 related impacts.
- 7.1.6 The purpose of the modelling process is to quantify the impact of traffic by vehicle type on emissions and consequently on concentrations of NO₂ at the roadside in Greater Manchester. A brief summary of the Do Minimum modelling input steps feeding into the appraisal is presented in **Figure 2**, which shows each of the modelling components and their linkages within the modelling suite.

Figure 2 Overview of the Do Minimum Modelling Process

- 7.1.7 The Do Minimum forecast has been updated because the evidence presented to the Government in February 2022 showed that business as usual (BAU) car sales were lower than expected in 2021, meaning that the fleet was older than forecast, and that this was likely to delay compliance with legal limits of NO₂ with the scheme as planned. Therefore, in order to update the Do Minimum forecast, the underpinning assumptions have been reviewed to ensure they remain up-to-date. These changes are set out in **Table 2** below. In addition to those set out in the table, work is ongoing to carry out a sensitivity test representing the impact of key schemes affecting the road network in Manchester and Salford, as part of the City Centre Transport Strategy (CCTS).

Table 2 Do Minimum Modelling Assumptions – Changes since February 2022

Vehicle Type	Criteria	Changes
HGV	Fleet age	<ul style="list-style-type: none"> No changes made in 2021 version as evidence did not suggest HGV purchases had been affected by the pandemic in 2020 (given impact of regulatory change in 2019 which had distorted purchase patterns such that lower than normal purchases were expected in 2020 anyway). No changes made in latest forecast.

Vehicle Type	Criteria	Changes
LGV	Fleet age	<ul style="list-style-type: none"> Delay applied in 2021 version. Evidence suggests sales in 2021 were similar to Greater Manchester's forecast and therefore no additional changes are proposed.
Car	Fleet age	<ul style="list-style-type: none"> Delay applied in 2021 version to reflect loss of sales in 2020 and SMMT forecast of gradual Covid recovery. New evidence suggests that car purchases were lower than expected in 2021 and therefore this additional delay has been reflected in this forecast version, with a delay of one year applied.
Taxi	Fleet age	<ul style="list-style-type: none"> Evidence in 2021 suggested that upgrades had been delayed but could not quantify impact, therefore a delay of one year was applied as a cautious estimate in that version. No changes made in latest forecast.
Bus	Funding	<ul style="list-style-type: none"> Electric bus funding was represented in the model as follows: <ul style="list-style-type: none"> Removal of ULEB funding from Vantage and Free Bus routes Addition of ZEBRA funding for Stockport CRSTS funding not yet assigned so cannot be represented in Do Minimum scenario.

7.2 Updated modelling results

7.2.1 Modelling has been undertaken for the following scenarios:

- Do Minimum (i.e. No GM CAP)**, which represents what would be forecast to happen in the absence of all GM CAP proposals. In reality this is overly pessimistic because funds for buses and HGVs have been available and successfully applied since these aspects of the GM CAP opened in 2021. This scenario is used to enable appraisal of the full impact of the GM CAP itself; and

- **Do Minimum plus CBF grants test** – a sensitivity test scenario, which represents what is forecast to happen with incorporation of approved GM CAP Clean Bus Fund (CBF) grants. The test is based upon the number of buses in each Greater Manchester operator's fleet where grants have been approved as of March 2022 (around 1,000 buses have been approved for retrofit or replacement funding, with 500 already on the road), with adjustments made to each specific operator's fleet mix to represent a newer set of buses running their service routes, reducing forecast emissions. It is not certain that all operators would now utilise an approved grant in the absence of a CAZ charge to penalise use of their non-compliant buses. Therefore, this scenario is being treated as a sensitivity test at this stage. However, it is expected that investment in bus fleets and the transition to bus franchising in Greater Manchester consider this test to become a most likely scenario.

- 7.2.2 Note that the Stockport depot ZEBRA funded buses are not expected to be fully deployed until 2024. To enable the interpolation of modelled concentrations for 2024, using the available 2023 and 2025 forecast models, the Stockport ZEBRA electric buses have been applied in the 2023 model as well as the 2025 model. This means that the emissions and concentration predictions along these bus routes, which are predominantly on the corridors from central Stockport towards the Manchester regional centre, will be under-predicted in 2023 because many buses would still be diesel variants at that time.
- 7.2.3 Note that this does not include representation of the City Centre Transport Strategy (CCTS) schemes which are expected to have been opened by 2025. Further sensitivity testing of the Do Minimum scenario is underway to better reflect the possible impact of these schemes.

Emission results

- 7.2.4 Summary results from the EMIGMA modelling for the tests are presented below in **Table 3**, which shows modelled mass NO_x emission totals for 2023 and 2025 for Greater Manchester as a whole, disaggregated by vehicle type.
- 7.2.5 It should be noted that overall emissions in this Do Minimum version are approximately 2% greater in 2025 than in the Do Minimum scenario used for the Previous GM CAP. This is mainly a result of the increased age of the private car fleet due to the latest understanding of Covid-19 impacts leading to reduced new cleaner vehicle sales, with private car fleet emissions increasing by 5% in 2025. This total mass emissions value also includes a reduction in emissions associated with new electric buses, but these emission improvements are confined to specific bus route corridors, whereas the private car fleet delay leads to a more geographically even spread of increased vehicle emissions.

- 7.2.6 **Table 3** show that across Greater Manchester as a whole, emissions from road traffic are released from a wide range of vehicle types, with private cars releasing most, followed by commercial freight vehicles (HGVs, LGVs) and then buses and taxis. However, the nature of road traffic varies widely across road types, and further detailed site-specific breakdowns of the sources at the most persistent exceedances are provided in the next section. It can also be seen that forecast emissions are reducing into the future with a reduction from 6,345T to 5,281T predicted from 2023 to 2025 as a result of the natural cycle of vehicle replacement and renewal with cleaner newer models.
- 7.2.7 As a result of the CBF grants, bus emissions are forecast to reduce by 60% in 2023 (if the upgrades have been fully delivered by then) and 44% in 2025 compared to the Do Minimum forecasts for those years, delivering localised improvements along bus routes. This equates to potential reductions in total road vehicle NO_x emissions over Greater Manchester of approximately 4% relative to the Do Minimum in 2023 and 3% in 2025.

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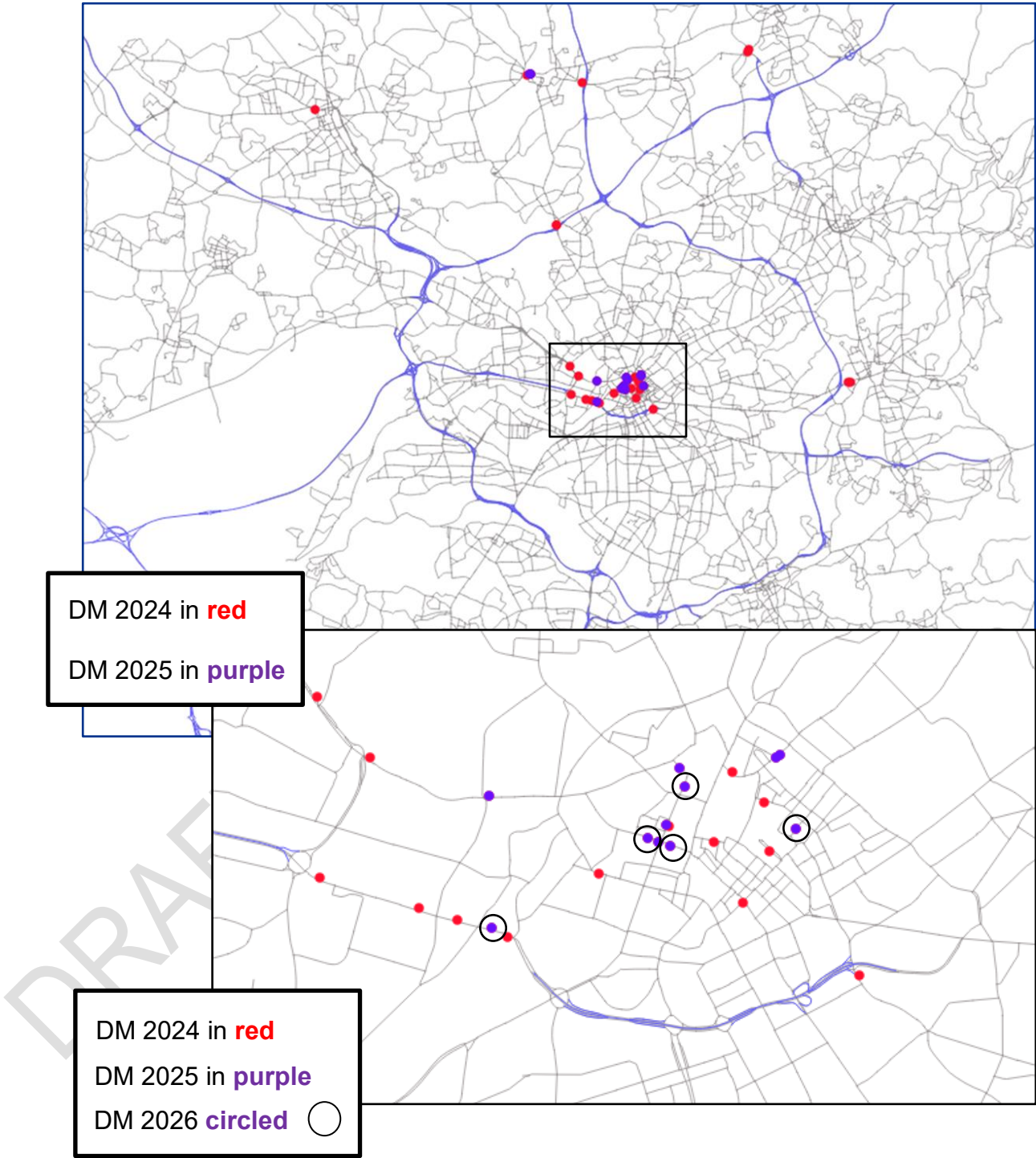
Table 3 Mass NO_x Emission Totals from EMIGMA Modelling (Greater Manchester, Tonnes per Year (T), with Percentage Changes Relative to the Do Minimum)

2023						
Scenario	Car	LGV	HGV	Taxi	Bus	Total
Do-Minimum	2,938	1,888	796	357	449	6,435
Do Min with CBF	2,938	1,888	796	357	179	6,165
% Change (DM)	0%	0%	0%	0%	-60%	-4%
2025						
Scenario	Car	LGV	HGV	Taxi	Bus	Total
Do-Minimum	2,526	1,610	523	294	320	5,281
Do Min with CBF	2,526	1,610	523	294	179	5,140
% Change (DM)	0%	0%	0%	0%	-44%	-3%
Notes:						
<i>Taxis comprise Private Hire Vehicles and Hackney Carriages combined</i>						
<i>% Changes for the Do Min with CBF are relative to the Do Minimum</i>						
<i>Totals may not sum due to rounding</i>						

Air quality results

- 7.2.8 **Table 4** and **Table 5** summarise the updated Do Minimum scenario modelling results and the Do Minimum with CBF Test, both of which incorporate the current understanding of the impacts of Covid-19 on vehicle fleets, for the Do Minimum years of 2023 and 2025. These results are then reported as the number of exceedances by each district in **Table 6**.
- 7.2.9 The location of the predicted exceedances in 2024 and 2025 are shown in **Figure 3**, with the spatial pattern continuing to resemble that in the 'Option for Consultation' and 'Previous GM CAP' modelling iterations.

Figure 3 Greater Manchester Do-Minimum Exceedance Points in 2024, 2025 and 2026



Air quality in the Do Minimum scenario

- 7.2.10 As shown in **Table 4**, there is an increase in the number of points of exceedance in 2023 from the Previous GM CAP model Do Minimum as modelled in spring/summer 2021 (from 71 to 79). This is primarily associated with the wider road network outside of the regional centre where private car emissions have increased due to an older fleet profile due to Covid-19, leading to increases in NO₂ concentrations of typically 0.5 µg/m³ up to 1.0 µg/m³. However, on the route corridors where the new electric buses will operate there are improvements, with a reduction in exceedances inside the Inner Relief Route (IRR) on these routes. Conversely, on the Vantage and FreeBus routes where the ULEB funding will no longer be available it is assumed that diesel variants would still be operating, with associated increases in NO₂ concentrations.
- 7.2.11 By 2025, the number of exceedances reduces due to the natural upgrade of the vehicle fleet, which is expected to continue despite the depressive effect of Covid-19 on some markets, and which has been accounted for where relevant. Compared with the Previous GM CAP Do Minimum scenario, there has been an increase in the overall number of exceedances (from 11 to 13).
- 7.2.12 There are predicted to be exceedances in all districts with the exception of Wigan in the Do Minimum scenario for 2023.⁶² By 2025, exceedances are only predicted in Manchester, Salford, and Bury, which is consistent with the Consultation and Previous GM CAP modelling scenarios.
- 7.2.13 The updated modelling shows results consistent with the methodological modelling alterations described previously. The locations where car flows are greatest have an increased number of exceedances, typically sites classed as 'Other Locations'. The last points of exceedance (13 in total) in 2025 still remain at:
- Inside the IRR, including the A34 Bridge St /John Dalton St, Lever St and the A56 Deansgate;
 - A57 Regent Rd, Salford;
 - A6 Chapel St, Salford; and
 - A58 Bolton Road, Bury.
- 7.2.14 The modelling indicates that exceedances would remain in 2026 at 5 sites: 4 inside the IRR and on the A57 Regent Road. However, the A6 Chapel Street and the A58 Bolton Road would by this point have become compliant. All sites are predicted to be compliant by 2027 in the Do Minimum scenario.

⁶² Note that analysis carried out based upon the Do Minimum modelling as at consultation suggested that all local authorities would remain non-compliant in 2022. Updated analysis for 2022 has not yet been completed.

7.2.15 Note that this does not include representation of the CCTS schemes which are expected to have been opened by 2025. A further sensitivity test of the Do Minimum modelling is underway to incorporate the CCTS schemes which are expected to be in place in the relevant forecast years.

Table 4 Predicted annual mean NO₂ concentrations at points on the Greater Manchester road network – 2023 to 2026 without action ('Do Minimum')

Road classification ⁶³	Compliant sites		Non-compliant sites			
	Very compliant (below 35 µg/m ³)	Compliant but marginal (35 to 40 µg/m ³)	Non-compliant (>40 to 45 µg/m ³)	Very non-compliant (>45 to 50 µg/m ³)	Extremely non-compliant (>50 µg/m ³)	Total non-compliant (>40 µg/m ³)
2023						
Inside Manchester-Salford Inner Relief Route (IRR)	211	33	23	8	0	31
Urban centres	209	24	4	0	0	4
Other locations	1829	157	38	6	0	44
Total	2249	214	65	14	0	79
2024 (Interpolated)						
Inside IRR	227	32	11	5	0	16
Urban centres	223	12	2	0	0	2
Other locations	1936	75	18	1	0	19
Total	2386	119	31	6	0	37
2025						
Inside IRR	243	23	9	0	0	9
Urban centres	233	4	0	0	0	0
Other locations	1984	42	4	0	0	4
Total	2460	69	13	0	0	13

⁶³ "Inside Inner Relief Route" is the area encircled by the Inner Relief Route. "Urban centres" are areas that met a definition used for the purposes of air quality modelling for OBC Option testing. "Other locations" are roads outside of Urban centres and the Inner Relief Route.

Road classification ⁶³	Compliant sites		Non-compliant sites			
	Very compliant (below 35 µg/m ³)	Compliant but marginal (35 to 40 µg/m ³)	Non-compliant (>40 to 45 µg/m ³)	Very non-compliant (>45 to 50 µg/m ³)	Extremely non-compliant (>50 µg/m ³)	Total non-compliant (>40 µg/m ³)
2026 (Extrapolated)						
Inside IRR	257	14	4	0	0	4
Urban centres	235	2	0	0	0	0
Other locations	2008	21	1	0	0	1
Total	2500	37	5	0	0	<u>5</u>

Air quality in the Do Minimum plus CBF Grants scenario

7.2.16 The assumption is that when the CBF grants have been utilised by the relevant operators to upgrade non-compliant buses to Euro VI diesel, this will lead to an improvement in air quality across bus corridors, and a reduction in the number of predicted exceedances. Note that Greater Manchester is assuming that all CBF grants will be utilised as planned.

7.2.17 As shown in **Table 5**, under this scenario, there is a predicted decrease in the number of points of exceedance in 2023 from the Do Minimum from 79 to 44. This is primarily associated with the regional centre inside the IRR, where bus emissions comprise a greater proportion of total emissions, alongside the arterial routes that lead into the IRR on wider road network outside of the regional centre.

7.2.18 There are predicted to be exceedances in all districts with the exception of Wigan, Trafford and Oldham in the Do Minimum plus CBF scenario for 2023.

7.2.19 By 2025, the number of exceedances reduces due to the natural upgrade of the vehicle fleet. Compared with the Do Minimum scenario, there would be a decrease in the overall number of exceedances from 13 to 5 as a result of the CBF.

7.2.20 By 2025, whilst there are fewer exceedances predicted, the key locations remain as per the Do Minimum scenario at:

- Inside the IRR, including the A34 Bridge St /John Dalton St;
- A57 Regent Rd, Salford; and
- A58 Bolton Road, Bury.

7.2.21 The modelling indicates that exceedances would remain in 2026 at one site, on the A57 Regent Road. All sites are predicted to be compliant by 2027 in the Do Minimum plus CBF Grants scenario.

Table 5 Predicted annual mean NO₂ concentrations at points on the Greater Manchester road network – 2023 to 2026 without further action (Do Minimum with CBF Grants)

Road classification ³	Compliant sites		Non-compliant sites			
	Very compliant (below 35 µg/m ³)	Compliant but marginal (35 to 40 µg/m ³)	Non-compliant (>40 to 45 µg/m ³)	Very non-compliant (>45 to 50 µg/m ³)	Extremely non-compliant (>50 µg/m ³)	Total non-compliant (>40 µg/m ³)
2023						
Inside Manchester-Salford Inner Relief Route (IRR)	241	26	8	0	0	8
Urban centres	219	14	4	0	0	4
Other locations	1881	117	30	2	0	32
Total	2341	157	42	2	0	<u>44</u>
2024 (Interpolated)						
Inside IRR	250	19	6	0	0	6
Urban centres	228	8	1	0	0	1
Other locations	1952	66	12	0	0	12
Total	2430	93	19	0	0	<u>19</u>
2025						
Inside IRR	259	13	3	0	0	3
Urban centres	233	4	0	0	0	0
Other locations	1995	33	2	0	0	2
Total	2487	50	5	0	0	<u>5</u>
2026 (Extrapolated)						
Inside IRR	265	10	0	0	0	0
Urban centres	237	0	0	0	0	0
Other locations	2011	18	1	0	0	1
Total	2513	28	1	0	0	<u>1</u>

Air Quality results by local authority**Table 6 Number of sites remaining in exceedance of legal limits for NO₂ concentrations by year, Greater Manchester, by local authority for the Do Minimum and Do Minimum with CBF Grants Test Scenario**

District	2023		2024 (interpolated)		2025		2026 (extrapolated)	
	Do Min.	Do Min with CBF Test	Do Min.	Do Min. with CBF Test	Do Min.	Do Min with CBF Test	Do Min.	Do Min. with CBF Test
Bolton	3	2	1	0	0	0	0	0
Bury	11	7	6	4	2	1	0	0
Manchester	40	16	18	7	9	3	4	0
Oldham	1	0	0	0	0	0	0	0
Rochdale	2	2	2	2	0	0	0	0
Salford	14	10	8	5	2	1	1	1
Stockport	3	3	0	0	0	0	0	0
Tameside	4	4	2	1	0	0	0	0
Trafford	1	0	0	0	0	0	0	0
Wigan	0	0	0	0	0	0	0	0
GM Total	79	44	37	19	13	5	5	1

Note: Calculation of 2024 and 2026 was undertaken using linear interpolation or extrapolation from 2023 and 2025 year's modelled NO₂ results for each model output point.

7.2.22 It is important to note that the modelled scenarios do not include representation of the CCTS schemes which are expected to have been opened by 2025. A further update to the Do Minimum modelling is underway. There are a number of schemes which could alter the nature of local traffic flows and routing, especially on the A34 Bridge St/John Dalton St, A56 Deansgate, A57 Regent Road and A6 Chapel St. These schemes have the potential to interact, so the exact values presented in this section should be treated with caution.

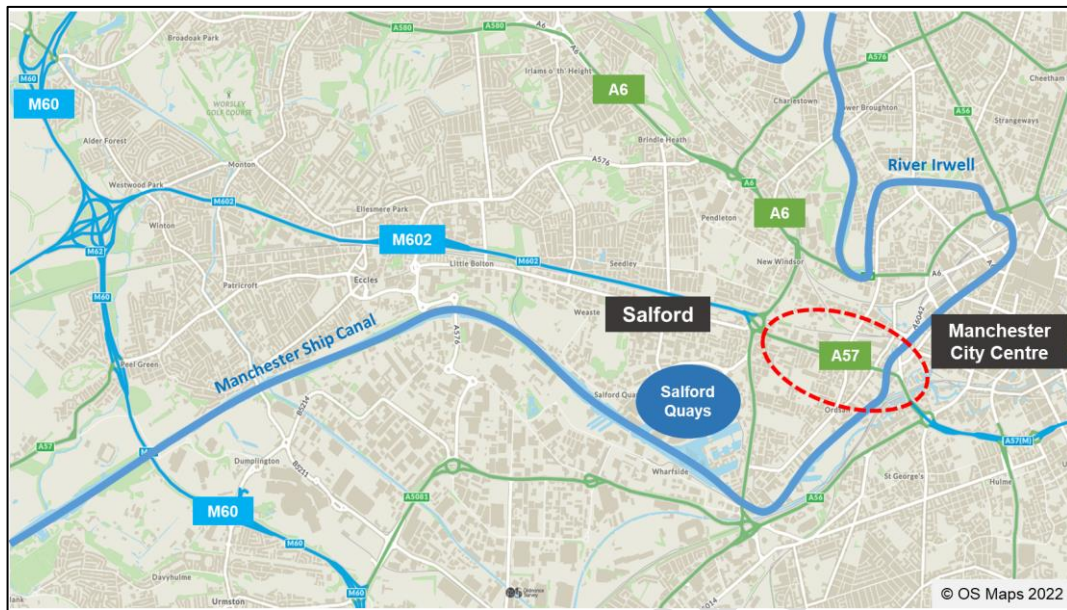
8 Where are the persistent exceedance areas in Greater Manchester?

- 8.1.1 This section builds upon the updated do-minimum modelling outputs presented in **Section 7**. The persistent exceedance areas, detailed in this section, are included to provide supporting evidence of the underpinning of poor air quality at these locations. In many cases these can be seen to be driven by bus emissions and therefore the CBF test, which represents bus upgrades, delivered as part of the GM CAP to date would demonstrably deliver improvements in-line with the objectives of the GM CAP.
- 8.1.2 In 2025, there are predicted to be 13 points where roadside NO₂ exceedances persist. These exceedance points are concentrated in three Greater Manchester local authority areas, namely, Manchester, Salford and Bury. This section will provide further information on the location and source apportionment (in other words, how each vehicle type contributes to emissions at that location) of each point of last exceedance (2025). Under the CBF sensitivity test, only the exceedance at the A57 Regent Road (Salford) would remain in 2026.
- 8.1.3 In addition to the points of last exceedances which have been identified through the updated do-minimum modelling outputs, the A628/A57 at Mottram, Tameside is an area with very special route characteristics to be considered. The A57 and the A628 form part of the Strategic Road Network (SRN) operated by National Highways and runs east-west linking the M67 motorway in Greater Manchester towards West Yorkshire and Sheffield over the Pennines. Measured and modelled concentrations indicate exceedances can be expected up to 2026 and beyond.
- 8.1.4 Source apportionment data has been extracted based on the persistent exceedance areas in 2025 and shown in **Sections 8.2-8.4**. It is believed that the Previous GM CAP could no longer be expected to achieve compliance in 2024 and therefore persistent exceedance areas are based upon 2025 data.

8.2 Persistent Exceedance Area (2025) - A57 Regent Road

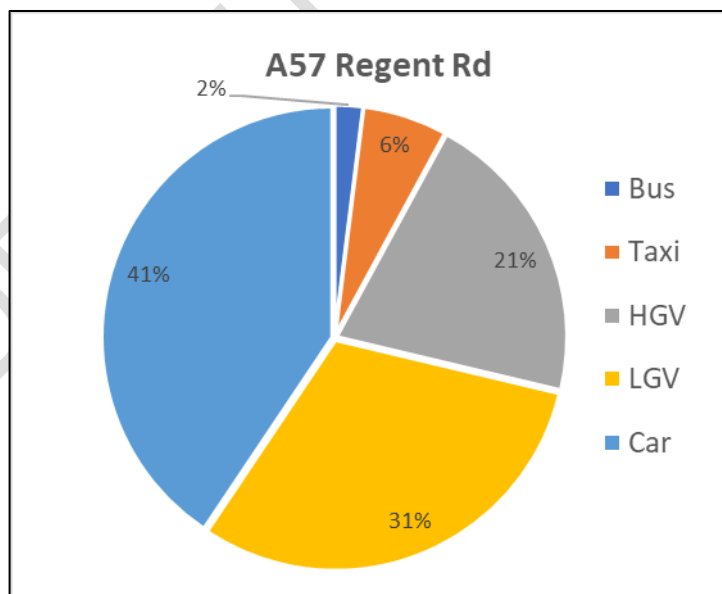
- 8.2.1 **Figure 4** shows the location of the A57 Regent Road in context of the wider highway network. The A57 Regent Road is an important highway corridor providing an East-West connection through Manchester City Centre and joining the M602, part of the Strategic Road Network which is managed by National Highways.

Figure 4 Persistent exceedance area: A57 Regent Road



8.2.2 **Figure 5** shows the source apportionment for Regent Road. This route contains a relatively high proportion of commercial vehicles, with emissions from HGVs & LGVs at c50% of total emissions, and the remainder primarily derived from private cars c40%. Emissions from buses are very low (just 2% of total), with very few bus services operating on this corridor. This reflects the nature of this route as a primary arterial route from the Strategic Road Network, serving traffic demands of the Regional Centre and surrounding area.

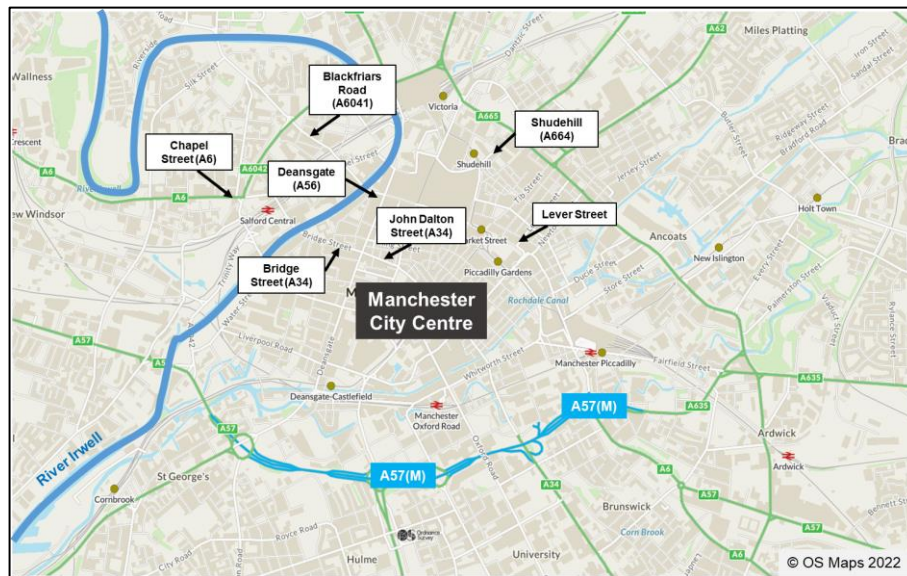
Figure 5 A57 Regent Road Source Apportionment



8.3 Persistent Exceedance Area (2025) - Regional Centre / IRR, Manchester and A6 Chapel Street, Salford

- 8.3.1 The majority of the last points of exceedance are located within Manchester City Centre and the IRR. This persistent exceedance area also includes locations close to the IRR such as Chapel Street. **Figure 6** shows the high-level location of each of the exceedance road links.

Figure 6 Persistent exceedance area: Regional Centre / IRR, Manchester and A6 Chapel Street, Salford



- 8.3.2 The source apportionment indicates that bus emissions dominate the contributions to the predicted exceedances at almost all locations, typically 70% to 100% of vehicle emissions. This can be viewed in **Figure 7** to **Figure 13**. This reflects the higher frequency of buses running on these routes compared with wider Greater Manchester, but also the slower traffic speeds inside the IRR where queuing and congestion occurs more frequently, and signalised junctions occur at a greater density. At low speeds, buses and HGV NO_x emissions are elevated even for Euro VI models.
- 8.3.3 The A56 Deansgate and A6 Chapel Street show a different source pattern to the other exceedance locations, with a lower but still significant proportion of bus emissions (15% or less), and higher proportion of private car and LGV emissions.

Figure 7 A34 Bridge St Source Apportionment

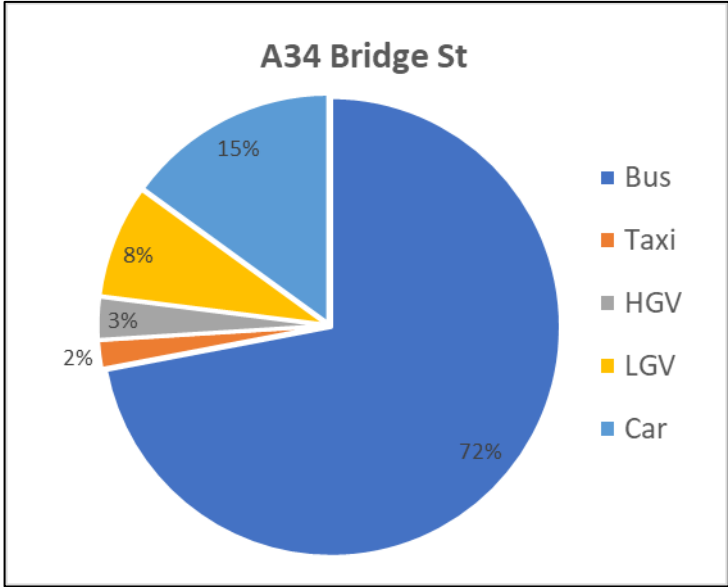


Figure 8 A34 John Dalton St Source Apportionment

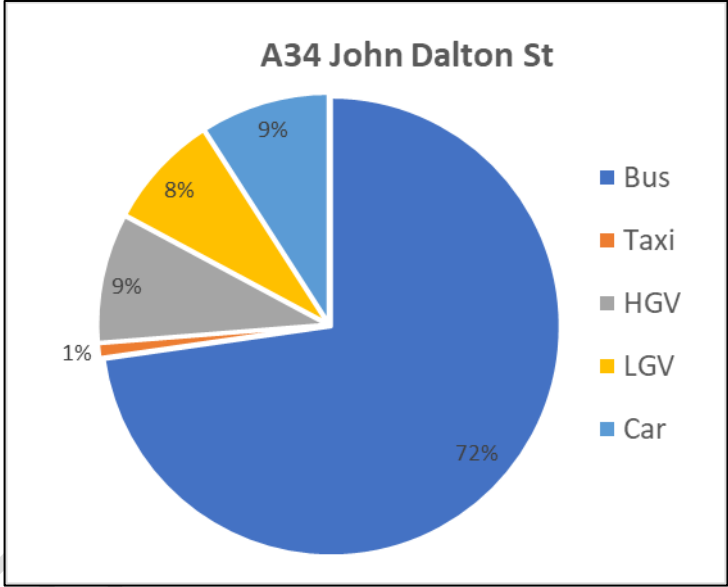


Figure 9 A56 Deansgate Source Apportionment

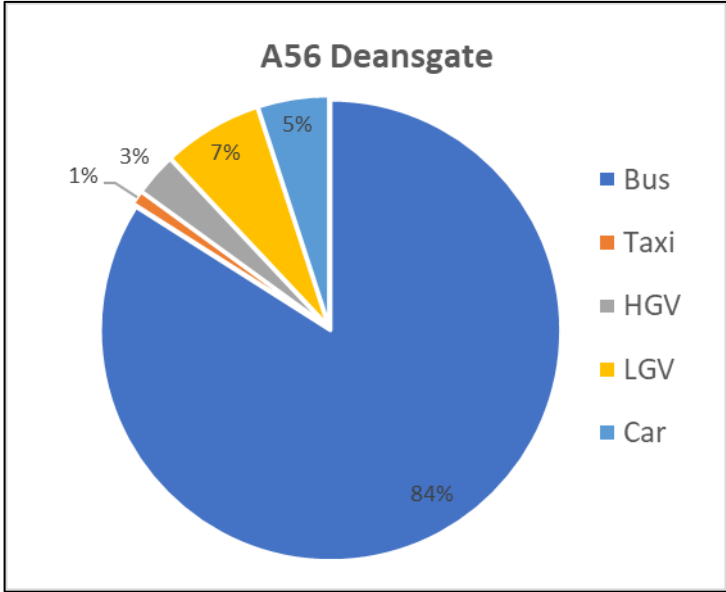


Figure 10 Lever St Source Apportionment

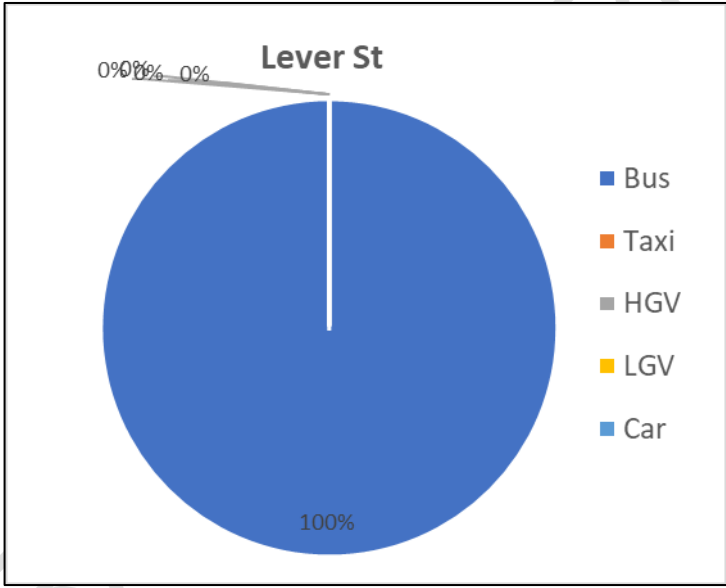


Figure 11 A6 Chapel St Source Apportionment

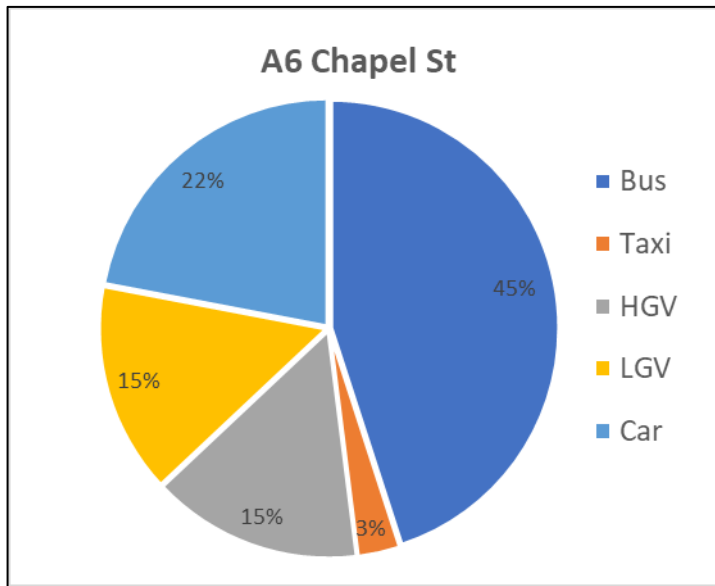


Figure 12 A6041 Blackfriar's Rd Source Apportionment

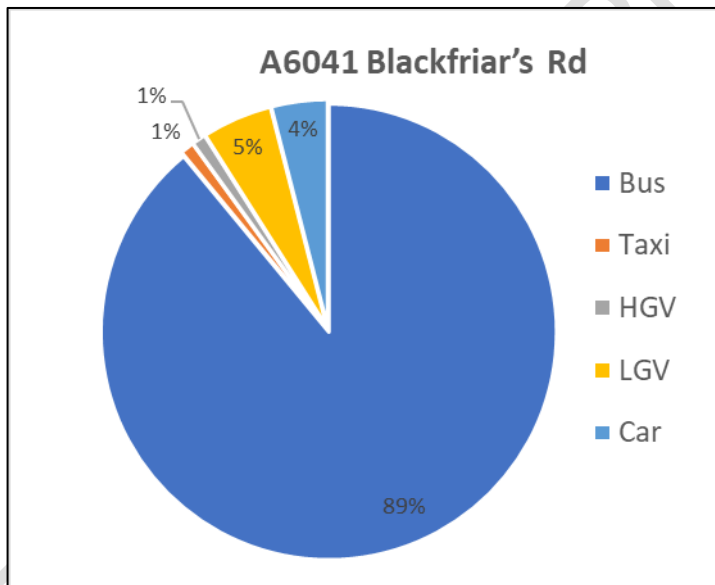
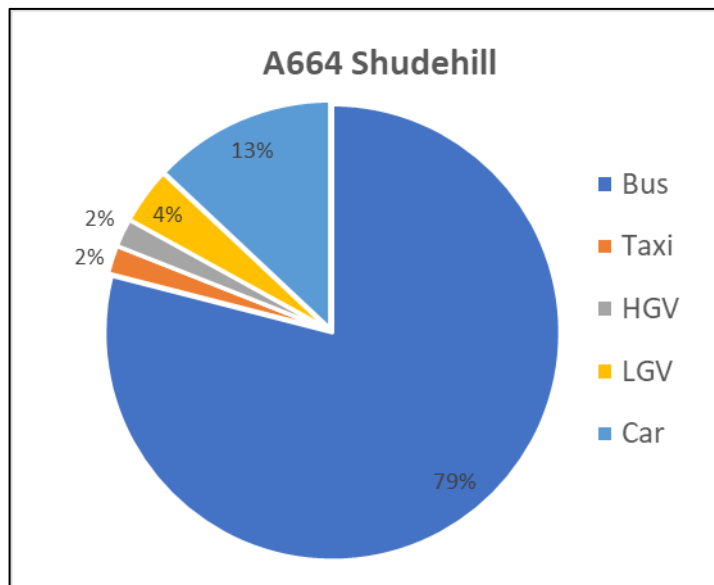


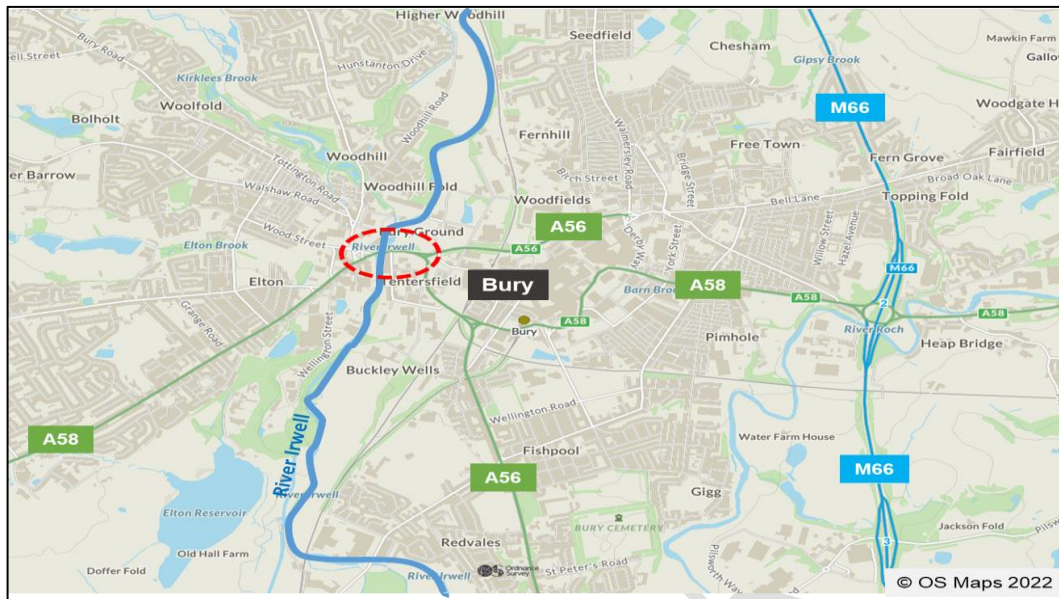
Figure 13 A664 Shudehill Source Apportionment

8.3.4 Finally, analysis of ANPR data indicates that the modelling under-represents the proportion of taxi movements within the IRR. This is because the modelling process does not have a user class for taxi available, and taxi movements have been represented as a fixed proportion of private car trips, across GM as a whole. The modelling process could be locally refined to address this issue if required.

8.4 Persistent Exceedance Area (2025) – A58 Bolton Road (Bury Bridge)

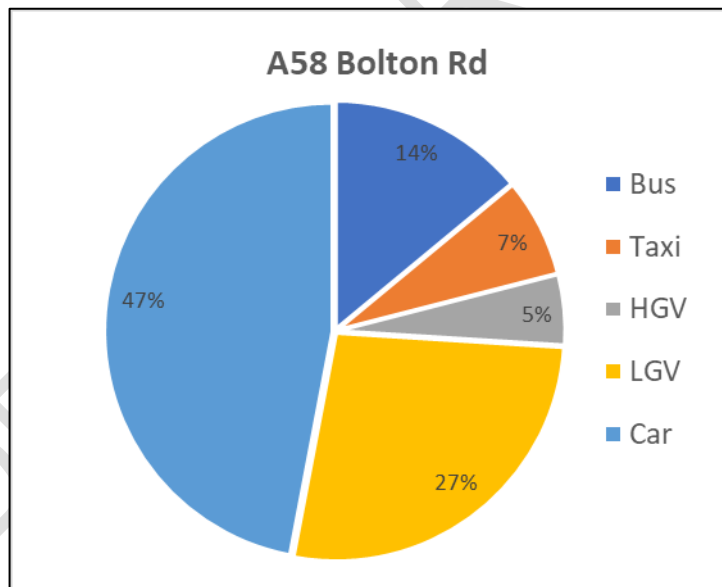
8.4.1 **Figure 14** shows the location of the A58 Bolton Road exceedance at Bury Bridge. At this location, the A58 Bolton Road is a dual carriageway over the River Irwell, serving traffic from the confluence of the A58, B6196 & B6213 roads to and from the Bury town centre ring road. There are modelled exceedances on both of the carriageways but these essentially both represent the same traffic flows.

Figure 14 Persistent exceedance area: A58 Bolton Road (Bury Bridge)



8.4.2 **Figure 15** shows the source apportionment for the A58 Bolton Road, Bury. The contribution from HGVs is low on this link, with the majority of emissions derived from private cars and LGVs. However, there is also a material proportion of emissions from diesel buses.

Figure 15 A58 Bolton Road (Bury Bridge), Bury Source Apportionment

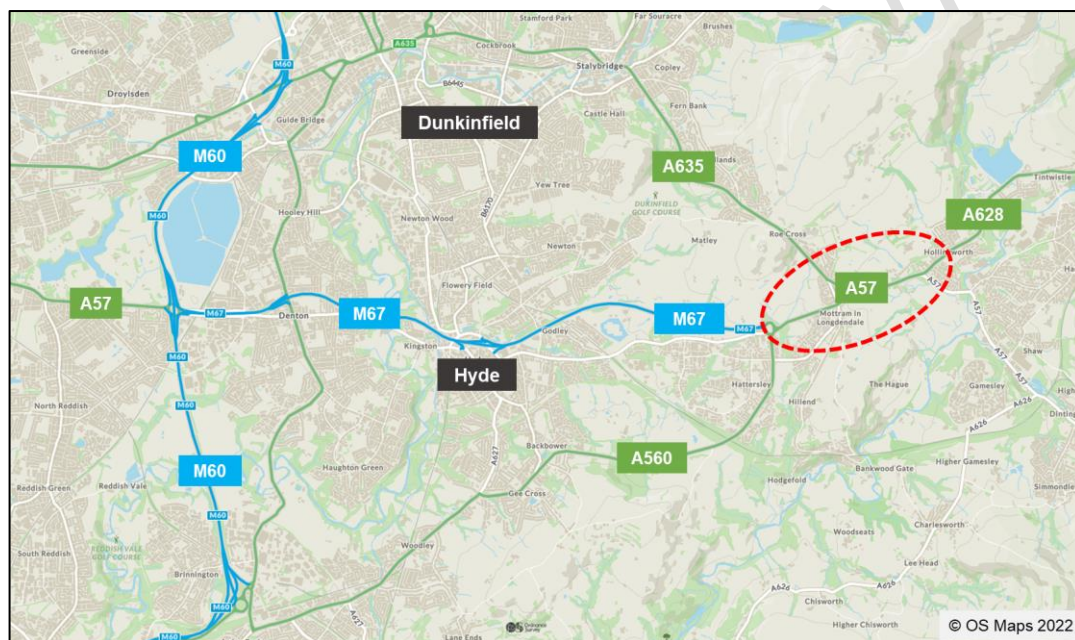


8.5 A57 / A628 Strategic Road Network, Tameside

8.5.1 The ten Greater Manchester local authorities continue to ask the Government to direct National Highways to tackle NO₂ exceedances on the SRN in the same way the Greater Manchester local authorities are having to take action on the local road network.

- 8.5.2 Tameside MBC has highlighted to Government ministers that the inconsistency in approach between the SRN and local road network is leaving many residents unprotected, particularly, around the A628/A57, a strategically important trans-Pennine route that passes through the villages of Hollingworth and Mottram as a single carriageway. This route, managed by National Highways (formerly Highways England), will be left with NO₂ exceedances that are not being addressed, despite the area being declared as part of Greater Manchester's Air Quality Management Area.
- 8.5.3 **Figure 16** shows the location of the A57 and the A628 in context of the wider highway network.

Figure 16 Persistent exceedance area: A57 and A628



- 8.5.4 However, in this location the SRN resembles more typically 'local' roads, rather than a motorway environment, with frequent signalised junctions, single-lane carriageways, pedestrian pavements and residential facades abutting the road.
- 8.5.5 Following a review of the beneficial impact to compliance with NO₂ legal limits shown by National Highways in their *Assessment of Impact of Potential Charging on A57/A628*, Ministers wrote to Tameside Metropolitan Borough Council in June 2021 to confirm that a section of the A57/A628 should be included as part of the upcoming GM Class C charging CAZ. Ministers noted, the inclusion must be deliverable within current legislative provisions, and with the objective of integrating seamlessly with the GM Class C charging CAZ in order to minimise complexity and confusion for road users.

8.5.6 A joint officer working group concluded that there were two viable options: a trunk road charging scheme (complementary to the local charging scheme required to implement the GM CAZ) or a De-trunking Order (the process of returning the National Highways road to the control of Tameside Council - the Highway Authority). Whilst the working group concluded that both options are legally viable. as they presented legal, administrative and procedural complexities, JAQU advised that the options needed further consideration by Ministers. In December 2021 JAQU advised that both options identified did not offer a timeline that guaranteed implementation could coincide with the planned launch of the Class C charging CAZ on the 30 May 2022.

8.5.7 In January 2022 the Air Quality Administration Committee received an update and resolved that:

- the inclusion of the identified section of the A57/A628 SRN remains critical and vital to delivering improved air quality in Greater Manchester; and
- Greater Manchester authorities are resolute in continuing to press Government for the expedient implementation of the scheme on the A628/A57 SRN as a matter of urgency to ensure the benefits to the health of the residents in the villages of Hollingworth and Mottram can be realised without any further delay.

8.5.8 Until the outcome of the review is complete and any revised plans are agreed, JAQU has not been able to commit to any specific course of action in relation to the A57/A628. However, because in this instance a trunk road charging scheme cannot be made without a local charging scheme being in place, if the GM charging CAZ does not proceed there can be no charging scheme on the A57/A628, unless and until those roads are detrunked. Notwithstanding this, the Greater Manchester local authorities want to ensure that as government takes appropriate action in relation to exceedances in this locale. It is also recognised that additional SRN is planned by National Highways close to this location through the A57 Link Roads scheme which includes proposals for the creation of two new link roads between the M67 Junction 4 roundabout and the A57 in Woolley Bridge to reduce pollution to neighbouring properties in Mottram in Longdendale as well as improvements in journey time reliability and reductions in congestion and severance impacts.⁶⁴ The scheme is currently awaiting a Development Consent Order (DCO) outcome and the SoS for Transport is anticipated to make a decision around Autumn 2022.

⁶⁴ <https://nationalhighways.co.uk/our-work/north-west/a57-link-roads/>

9 Why Greater Manchester needs a new GM CAP – A Summary

- 9.1.1 The information presented in **Sections 2-8** sets out the background to the GM CAP, the circumstances leading to the current review (the impact of the pandemic such as global supply chain challenges, and the cost-of-living crisis) and the updated evidence in terms of air quality modelling and areas of exceedance.
- 9.1.2 In summary, and considering all the above, it is proposed that the Previous GM CAP developed pre-pandemic and agreed in Summer 2021 (comprising a blanket measure across the city-region in the form of a Class C charging CAZ) is no longer the right solution to achieve compliance with Legal Limits for NO₂ on the local road network in Greater Manchester. The most significant reasons for this have been set out in depth in this paper, and in summary are:
- The **cost-of-living crisis** means that businesses are less able to afford to invest in vehicle upgrades, whilst households are less able to absorb any costs that may be passed on to them.
 - This is exacerbated by **rising vehicle prices** and – for some vehicle types – lower residual values of non-compliant vehicles. There is evidence that illustrates the demand for new and compliant second-hand vehicles is exceeding supply; leading to longer wait times and rising prices.
 - A charging CAZ could therefore cause **unacceptable financial hardship** and potentially contribute to business failures.
 - In addition, **new opportunities have arisen** – via the approval of bus franchising and new funding for electric buses – that mean that Greater Manchester has the opportunity to directly tackle a major source of emissions in a different, more targeted way.
 - The exceedances become more localised from 2025 onwards, therefore **action can be targeted** at those locations suffering the worst air quality.
- 9.1.3 It is clear that the GM-wide Class C charging CAZ as approved in Summer 2021 could lead to hardship in Greater Manchester and that to develop and deliver a revised charging CAZ would take time to design, consult upon and implement.
- 9.1.4 Unlike the previous charging-led scheme, the New GM CAP will attend to the emerging cost-of-living crisis and other factors set out in this section. It will actively consider the impacts of Covid-19 and wider global economic instability on supply chains, aims to be delivered in 2023, and crucially takes into account the significant benefits that the delivery of electric buses can have along key routes with persistent exceedances.

9.2 Cost-of-living crisis

- 9.2.1 As a result of the ongoing impacts of the pandemic and the more recent impacts of the war in Ukraine, the UK is experiencing a cost-of-living crisis, with inflation reaching a 40 year high of 9% during April 2022, compared to 2% in July 2021. This crisis is far from over – inflation and interest rates are expected to keep rising and this is being reflected in consumer confidence, which has plummeted, and in falling consumer demand.
- 9.2.2 Greater Manchester has a higher than average proportion of small businesses and low income households, making the region particularly vulnerable to inflationary impacts. The evidence shows that prices of basic goods and commodities such as energy and fuel are rising faster and therefore those on lower incomes, who spend a higher proportion of their income on necessities and have less disposable income to cover any cost increases, will be affected more.
- 9.2.3 From a business perspective, those businesses that rely on high vehicle mileage will be particularly affected by rising fuel prices, which were a third higher in March 2022 than July 2021 (for diesel, used in most commercial vehicles) and have risen further since. Furthermore, key vehicle owning sectors such as construction and manufacturing are being affected by the rising cost of materials such as steel, with just under three in ten businesses surveyed by the GM Growth Company reporting such concerns in April 2022, compared to under 5% in autumn last year.
- 9.2.4 The cost of borrowing is increasing, making capital investments such as a vehicle upgrades more challenging and expensive. The Bank of England base rate has risen from 0.25% at the start of the year to 1.25% by early June. The real cost of borrowing will be higher than this for many consumers and will vary depending on their personal circumstances.
- 9.2.5 Businesses and consumers are already feeling the impact of rising costs being passed on, and measures that increase those costs, such as the imposition of a charging CAZ, could lead to real financial hardship and potentially business closures.
- 9.2.6 During this period of widespread economic hardship, the local Government will do its utmost to support the public economically, rather than create additional financial demands and hardship.

9.3 Supply chain issues and vehicle price increases

- 9.3.1 The price of new and used commercial vehicles is rising, making upgrade less affordable. For some vehicle types, there are long lead times for the purchase of new vehicles, and for second-hand vehicles demand is outstripping supply in some sectors. There is some evidence of a growing gap between the value of non-compliant (Euro 5 and older) and compliant (Euro 6) vehicles, adding to the capital cost of upgrade for vehicle owners losing trade-in value of their existing vehicle.

9.3.2 **Table 7** sets out the conditions affecting each vehicle type, based on the evidence Greater Manchester has collected. **Appendix A – D** set this information out in more depth.

Table 7 Changed conditions in vehicle markets

Vehicle Type	Commentary on changed conditions
<p>HGV</p> <p>Est. 70,900 vehicles serving Greater Manchester 81% compliant in 2023⁶⁵</p>	<ul style="list-style-type: none"> • Having remained stable for many years, price rises are being reported of around 40% for Euro 6 vehicles, with the price gap between Euro 6 vs 5 vehicles increasing. • Dealers are reporting constraints on availability of new vehicles – due to shortages of materials including semi-conductors – and that this means people are extending leases (so fewer vehicles enter the second-hand market) or trying to buy second-hand, leading to shortages in that market. • Price rises reflect these shortages as well as increases in the cost of materials (for new vehicles).
<p>Van</p> <p>Est. 277,400 vehicles serving Greater Manchester 52% compliant in 2023⁶²</p>	<ul style="list-style-type: none"> • There is substantial evidence of significant price increases in the second-hand van market – the scale of those rises has a high degree of variability depending on the particular vehicle. The extent of the reported rise varies between 13% and almost 60%. • Overall, the evidence suggests that demand for new and second-hand vans remains strong, and therefore that the loss of supply caused by lockdowns in 2020 and more recently by the semi-conductor shortage is leading to price rises in the new and second-hand markets, and to long lead times for new vehicle orders. • A high proportion of non-compliant vans are owned by sole traders and very small businesses which are vulnerable to the impacts of inflation and the cost-of-living crisis.
<p>Coach</p> <p>1,700 vehicles serving Greater Manchester 59% compliant in 2023⁶²</p>	<ul style="list-style-type: none"> • The coach sector was badly affected by the pandemic, with lockdown restrictions meaning that many were forced to stop operating for long periods. • Demand from tourism and major events remained constrained during 2021, and recovery is expected to be slow. • The SMMT states that demand for new buses and coaches dropped further in 2021 and was the weakest year since records began in 1996.

⁶⁵ best estimate in a highly changeable economic/vehicle market situation, forecast should be considered subject to review

Vehicle Type	Commentary on changed conditions
<p>Hackney Cab</p> <p>2,100 Hackneys licensed in Greater Manchester 35% compliant in 2023⁶²</p>	<ul style="list-style-type: none"> • Hackneys and PHVs lost a substantial proportion of their trade during the pandemic, as travel for business, leisure and tourism purposes ceased. • The number of vehicles licensed has reduced and drivers report that demand has not returned to pre-pandemic levels. • The number of new vehicles entering the Hackney and PHV licensed fleets was much lower than normal in 2020 and 2021, so that the age of the fleet has increased.
<p>PHV</p> <p>12,400 PHVs licensed in Greater Manchester 68% compliant in 2023⁶²</p>	<ul style="list-style-type: none"> • This is assumed to result from market conditions and conditions in the wider economy, as well as continued uncertainty about licensing and clean air requirements for the fleet. • Furthermore, there is anecdotal evidence that the value of Euro 5 and older Hackney Carriage is falling, as more cities bring in tighter licensing standards and/or CAZs.

9.3.3 This evidence shows that, in addition to the cost-of-living crisis, some key vehicle owning sectors are still experiencing impacts from the pandemic, with travel demand not back to pre-pandemic levels in some sectors for example.

9.3.4 Rising vehicle prices, constraints of the availability of compliant new and second-hand vehicles, as well as rising borrowing costs, mean that upgrade is less affordable and may take more time than previously assumed.

9.3.5 This in turn would mean that any charging CAZ proposal would be less effective – with less upgrade and a higher proportion choosing to stay-and-pay. Negative economic impacts would also be increased, with potential equalities impacts for affected vehicle owning groups.

9.4 New opportunities for electrification of the bus fleet

9.4.1 Since the Previous GM CAP was developed, there has been a significant increase in funding opportunities for electric buses in Greater Manchester. This has had an impact on the Do-Minimum forecast, as set out in **Section 7.2**.

9.4.2 In April 2022, following a court ruling that the decision to franchise bus services was lawfully carried out, as were all other aspects of the franchising process, the GMCA confirmed that it would be proceeding with bus franchising across Greater Manchester. The current programme sees the first franchised services in place by September 2023, and across the whole of the city region by the end of 2024.

- 9.4.3 Bus franchising will enable the integration of the bus network across bus services and with other modes of transport, significantly increasing the efficiency of the network. It will allow the introduction of integrated ticketing and a single, clear point of customer information. Critically for the GM CAP, it allows Greater Manchester to invest in buses with the confidence that they have control of the strategic delivery. Crucially, franchising allows TfGM to specify the vehicles to be used on the network. Under franchising, governance/planning processes are being established so that the cleanest buses are running on routes containing most persistent exceedance points to ensure compliance - with a focus on the regional centre/city centre as the transport hub of the city-region.
- 9.4.4 In April 2022, Greater Manchester was awarded its City Region Sustainable Transport Settlement (CRSTS) and an indicative allocation of £115m from that award has been made to towards zero emission buses, with the aim that a third of the bus fleet in Greater Manchester will be zero carbon by 2027. These funds will build on the existing ZEBRA scheme, and will be used to fund the incremental costs of updating buses to zero emission over above the cost of new diesels. A commitment has been made that from September 2023, 50 new zero emission buses will be brought into service with the launch of the regulated bus system in Wigan and Bolton which will be a major contributor to resolving exceedances at the Bury Bridge persistent exceedance location.
- 9.4.5 Early analysis indicates that the CRSTS funding could support the deployment of sufficient numbers of electric buses targeted at the most persistent exceedance locations in order to achieve compliance at those locations, subject to a delivery plan. This could mean that, because poor air quality at the majority of the locations contains a significant contribution from diesel bus emissions, most areas of Greater Manchester could potentially be compliant in 2025, if electric buses were deployed at those locations.
- 9.4.6 The exception is the A57 Regent Road, which has very few bus services, and therefore electric buses cannot deliver significant reductions in vehicle emissions. Without supporting funding (CRSTS), it is likely that compliance would be achieved in most areas (excluding the A57 Regent Road – which has very few bus services) in 2026, under the CBF test scenario. This scenario is currently not included in Greater Manchester’s core modelling, because take up of the CBF grants is less certain without the charge and because Greater Manchester cannot be certain where on the network the upgraded buses will be deployed.

9.5 Targeting the most persistent exceedances

- 9.5.1 As shown, the spatial pattern of exceedances within the timeline now under consideration is such that a Greater Manchester-wide charging CAZ would be an excessive solution to address the issues remaining in 2025.

- 9.5.2 In addition, a Greater Manchester-wide charging CAZ is increasingly unacceptable given the current economic conditions, as set out in this paper. In Summer 2021, Greater Manchester had proposed a Greater Manchester-wide charging CAZ, forecast to achieve compliance in 2024. By February 2022, it had become clear that the Previous GM CAP was no longer likely to achieve compliance by that date, as a result of greater-than-expected reductions in new car purchases in 2021 and rising van prices. Concerns were also emerging about the affordability of upgrade for key groups given rising prices and supply constraints.
- 9.5.3 In February 2022, the Government revoked the 2020 Direction to Greater Manchester which required the implementation of a Class C charging CAZ in the shortest possible time and by 2024 at the latest and gave Greater Manchester until 1st July to present a new plan to achieve compliance with legal air quality standards in the shortest possible time and by 2026 at the latest.
- 9.5.4 The Do Minimum NO₂ forecasts show that the number of sites in exceedance reduces over time, moving from a Greater Manchester -wide problem in 2023 to a localised problem from 2025 focused around the regional centre with some acute outliers. This means that, in order to achieve compliance by 2026, Greater Manchester can target measures as part of an investment-led approach, such as deployment of electric buses to those most persistent exceedances, which are particularly found in and around the city centre.
- 9.5.5 The updated modelling summarises the existing areas of exceedance that are likely to remain unless action is taken through the New GM CAP during the period from now until 2026. Targeting these areas of exceedance will form the basis of the New GM CAP and the Greater Manchester local authorities are now making the case to Government that this should take the form of an investment-led non-charging GM CAP, which aims to achieve compliance in the shortest possible time and by 2026 at the latest but without creating additional financial hardship for local businesses and families. Without the need to mitigate a Greater Manchester-wide charging CAZ, a New GM CAP should target resources efficiently and effectively at the most persistent exceedances while providing support to those vehicles contributing the most to poor air quality. Additionally, with supported funding for electric bus through CRSTS, targeted investment could enable Greater Manchester to reduce the number of exceedances to only one point remaining in exceedance without other action by 2026.

9.6 A revised charging CAZ would take time to design, consult upon and implement

- 9.6.1 In summary, as shown in this document, the spatial pattern of exceedances within the timeline now under consideration is such that a Greater Manchester-wide charging CAZ would be an excessive to address the issues remaining in 2025. In addition, a Greater Manchester-wide charging CAZ is increasingly unacceptable given the current economic conditions, as set out in this paper. The updated modelling summarises the existing areas of exceedance that are likely to remain unless action is taken through the New GM CAP during the period from now until 2026. Targeting these areas of exceedance will form the basis of the New GM CAP and the Greater Manchester local authorities are now making the case to Government that this should take the form of an investment-led non-charging GM CAP, which aims to achieve compliance in the shortest possible time and by 2026 at the latest but without creating additional financial hardship for local businesses and families.
- 9.6.2 Since this review commenced, Greater Manchester necessarily paused the implementation of the Previous GM CAP, to allow the review to take place. For the reasons set out above, implementing a Greater Manchester-wide Class C charging CAZ, as per the Previous GM CAP, is no longer the right plan for Greater Manchester as it would result in unacceptable financial hardship and would not be expected to achieve compliance in 2024 as previously forecast.
- 9.6.3 Implementing a materially revised charging CAZ, for example with a different boundary, vehicles in scope or discounts and exemptions, would take time to design and consult upon and then implement.

10 The way forward: an Investment-led non-charging GM CAP

10.1.1 An investment-led non-charging GM CAP will target action at the most polluted places. This could be delivered using a three-pillared approach including:

- Funding for electric buses;
- Funding to support vehicle upgrades; and
- Working in partnership with delivery bodies and other stakeholders to develop targeted solutions.

10.1.2 The new investment-led non-charging GM CAP will develop measures based on the following core objectives:

- To reduce NO₂ concentrations to below the legal limits in the shortest possible time and by 2026 at the latest;
- Achieve compliance in a way that is fair to businesses and residents, and does not cause financial hardship to people in Greater Manchester; and
- Ensure the reduction of harmful emissions is at the centre of Greater Manchester's wider objective for delivering the Bee Network's core objectives.

10.1.3 Targeted investment is envisaged to be developed based on the following three mechanisms:

10.2 Electric buses

10.2.1 Investment in electric buses across the network and particularly targeting the last points of exceedance will bring significant air quality benefits, as set out in **Sections 7-9**, though further work is required to develop this evidence base.

10.2.2 It is anticipated that this investment would include 50 electric buses delivered in September 2023 in the first phase of Greater Manchester's bus franchising programme. This programme of works has been approved for delivery recently, and is therefore only now able to be factored into the New GM CAP. The New GM CAP will also likely specify funding for electric buses on services travelling through the regional centre, particularly at key 'last compliance' sites as set out in this report.

10.2.3 Bus accounts for a high proportion of emissions at the majority of the most persistent locations of exceedance in Greater Manchester. By targeting zero emission bus investment at services passing through those locations, Greater Manchester could achieve substantial reductions in NO_x emissions and reduce NO₂ concentrations. This approach could bring air quality improvements and additional benefits to passengers benefiting from high quality new buses without the need to implement a charging CAZ.

10.3 Vehicle upgrades

- 10.3.1 An investment-led non-charging GM CAP will also aim to encourage upgrade to cleaner vehicles, leading to better air quality, by providing funding packages to those most polluting vehicles travelling in locations experiencing NO₂ exceedances.
- 10.3.2 Under an investment-led non-charging GM CAP, rather than a formally signed charging CAZ, the ANPR cameras could be used to inform and support the development of investment-led solutions, which will be developed further.
- 10.3.3 An investment-led non-charging GM CAP could facilitate upgrade for those still in a financial position to do so, over a timescale that they can achieve, without requiring any investment from those not able to afford it. This approach will provide businesses that could be in a position to upgrade with financial support to do so, bringing fresh investment into Greater Manchester's local economy and allowing businesses to access cleaner vehicles that may be cheaper and more efficient to operate. Under an investment-led approach and without a charging CAZ in place, those businesses and individual vehicle owners who are not in a financial position to upgrade are able to continue operating as now, without any increase in costs imposed by the scheme.

10.4 Partnership working

- 10.4.1 The 10 authorities are committed to working in partnership with stakeholders and with other transport bodies to deliver solutions that are area-specific and appropriate for Greater Manchester. This could include working with National Highways to tackle poor air quality on Regent Road and on the A628/A57 at Mottram (some of the last compliance sites that are discussed in more depth in **Section 8**). Partnership working could also include working with vehicle-owning stakeholders to ensure the New GM CAP delivers change and meets their needs.
- 10.4.2 **Table 8** sets out the type of measures that an investment-led non-charging GM CAP could consider; the next steps are to carry out a participatory policy development exercise to determine a package of measures to deliver the best possible investment-led non-charging GM CAP. Further detail on this planned approach is set out in **Section 12**.
- 10.4.3 Under an investment-led non-charging GM CAP, rather than a formally signed charging CAZ, the ANPR cameras could be used to better understand those vehicles where GM would get the greatest emissions reduction from those non-compliant vehicles travelling regularly through GM's most NO₂ polluted places. This will be explored in further detail, alongside other approaches to targeting the funds in the most impactful manner.

Table 8 Greater Manchester CAP Vehicle Measures

Vehicle type	Measure subject to review during participatory policy approach
Bus	<p>Continue with existing funding.</p> <p>Ensure franchising and other governance/planning processes are established so that electric buses are running on routes containing most persistent exceedance points to ensure compliance - with a focus on the regional centre/city centre as the transport hub of the city-region.</p> <p>Initial sensitivity testing indicates that delivery of sufficient bus electrification would achieve compliance at modelled exceedance locations except Regent Road by 2025. A delivery plan is under development with the aim of achieving this.</p>
HGV	<p>Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance.</p>
Coach	<p>Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance.</p>
Greater Manchester Hackney Carriage	<p>Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance – most Hackney Carriages are licensed in the Manchester City Council (MCC) district.</p> <p>Target GM CAP funding to increase roll out of dedicated taxi and other general electric vehicle charging infrastructure points to ensure fleet upgrade to electric vehicles is viable and taxi industry is supported. Consider opportunities for regulatory measures such as licensing standards to complement funding incentives to accelerate fleet upgrades.</p>
Greater Manchester PHV	<p>Consider offer including eligibility for funding, in light of needing to ensure the cleanest vehicles are running in areas containing most persistent exceedance points to ensure compliance. Consider opportunities for regulatory measures such as licensing standards to complement funding incentives to accelerate fleet upgrades.</p>
Clean air promotion of clean air initiatives	<p>Explore opportunities for EVCI investment to support expansion of Car Club in and around city centre and wider city.</p> <p>Target GM CAP funding to continue to roll out sustainable transport infrastructure investment and messages particularly in and around the regional centre to reduce emissions in key exceedance areas. This will include a particular focus on city centre in points of persistent exceedance, such as Deansgate and surrounding streets, as well as other active travel and public transport schemes.</p>

Vehicle type	Measure subject to review during participatory policy approach
	Explore opportunities for GM CAP funding to support other infrastructure investment to address air quality issues, such as green infrastructure.

Table 9 Greater Manchester CAP Cluster Measures

Exceedance cluster	Measure subject to review during participatory policy approach
City centre	<p>In the city centre, bus emissions account for at least 70% of total NO_x emissions at the majority of locations and therefore electric buses can be very effective. Initial sensitivity testing indicates that delivery of sufficient bus electrification would achieve compliance at these locations by 2025. A delivery plan is under development with the aim of achieving this.</p> <p>Further work is also underway to develop a proposition for taxi that encourages upgrade to the cleanest vehicles, and to explore how investment in highway and other transport infrastructure under the city centre transport strategy can best support clean air.</p>
Regent Road	<p>Emissions on Regent Road are principally derived from commercial and logistics traffic, which accounts for c.50%. In addition, the corridor is immediately fed by the M602 motorway and subject to the implications of National Highways signage and traffic management policies.</p> <p>Salford City Council (SCC) and MCC have commissioned analysis via TfGM to improve understanding of the operation of the road and nature of the traffic on Regent Road to help with the joint working with National Highways (NH) which must include how the deployment of funds and local servicing plans can support appropriate solutions to deal with the exceedance at this location.</p> <p>Note that Electric Towns and Cities Infrastructure initiative (ETCI) – NH initiative being explored for mitigation for sections of the SRN.</p>
Bury Bridge	<p>The electrification of bus services over the bridge should happen with the first 50 new zero emission buses that will be brought into service with the launch of the regulated bus system in Wigan and Bolton. Initial sensitivity testing indicates that delivery of sufficient bus electrification would achieve compliance at this location by 2025. A delivery plan is under development with the aim of achieving this.</p>

- 10.4.4 Under an investment-led non-charging GM CAP the ANPR cameras installed for the Class C charging CAZ could be used to inform and support the development of investment-led solutions- for example, ANPR cameras could help determine eligibility for upgrade funding by identifying those non-compliant vehicles travelling most regularly through areas of NO₂ exceedance. GM would also want to utilise the ANPR cameras for potential law enforcement activity related to the detection of crime.
- 10.4.5 Greater Manchester will continue to seek to ensure that the Government takes appropriate action to address exceedances on the A628/A57, a stretch of the Strategic Road network, managed by National Highways that cuts through the villages of Hollingworth and Mottram.

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11 How will Greater Manchester deliver the New GM CAP?

- 11.1.1 The ten Greater Manchester local authorities have taken a region-wide approach to producing a GM CAP because it is recognised that air pollution does not respect local authority boundaries. This enables a consistent and coordinated approach, maximising air quality benefits for all people living and working in Greater Manchester, whilst minimising the risk of unintended consequences. These could include the displacement of existing, elevated NO₂ concentrations to other locations within Greater Manchester. A coordinated approach also helps to ensure, as far as possible, alignment between the GM CAP and other Greater Manchester strategies, including the existing Greater Manchester Air Quality Action Plan.^{66,67}
- 11.1.2 Governance arrangements for the ten Greater Manchester local authorities have been established through the Greater Manchester Clean Air Charging Authorities Committee⁶⁸ (a committee created to enable joint decision-making by the 10 local authorities as charging authorities) and the Air Quality Administration Committee⁶⁹ (a further joint committee created by the ten Greater Manchester local authorities and the GMCA).
- 11.1.3 Whilst the New GM CAP will propose an alternative to a Greater Manchester-wide Class C charging CAZ, as set out in **Section 9**, the approach to delivery of the New GM CAP will not change and will build upon the existing collaborative delivery and governance arrangements already developed between the ten local authorities through the development of the Previous GM CAP. The New GM CAP will also be developed in conjunction with a range of stakeholders, using a 'Participatory Policy Development' process, which is described in **Section 12**.

⁶⁶ <https://www.greatermanchester-ca.gov.uk/media/1272/air-quality-action-plan-2016-21.pdf>

⁶⁷ <https://www.greatermanchester-ca.gov.uk/media/1276/low-emission-strategy-dec-2016.pdf>

⁶⁸ [Clean Air Charging Authorities Committee Terms of Reference.pdf \(greatermanchester-ca.gov.uk\)](#)

⁶⁹ [Terms of Reference - Air Quality Administration Committee.pdf \(greatermanchester-ca.gov.uk\)](#)

12 How will Greater Manchester ensure a participatory approach to the development of a New CAP?

12.1 Changing Public Awareness

12.1.1 The Previous GM CAP development has gone through multiple stages including an options assessment. That options assessment concluded in February 2019 that a Greater Manchester-wide Class C charging CAZ was the preferred option to achieved air quality compliance in the shortest possible time, as accepted by government per ministerial Directions issued in 2019 and 2020. Since that stage, the proposals forming the GM CAP have been refined based on further evidence gathering and stakeholder consultation which formed the Previous GM CAP in Summer 2021. This included:

- In 2019, a public conversation⁷⁰ was held on the proposals at the outline business case, with over 3,300 responses.
- Between 8 October and 3 December 2020, a statutory consultation on the GM CAP was held on the proposed Class C charging CAZ. A total of 4,768 responses were received during the consultation period.
- A six-week public consultation commenced from the 1st September 2021 on the inclusion of motorhomes classified as MSP1 within the scope of CAZ charges and on the inclusion in the GM CAZ of the A575 and A580 at Worsley. The analysis of consultation responses was paused when the review of the Previous GM CAP commenced.

12.1.2 Signage implementation for the GM Class C charging CAZ commenced on 29th September 2021 with temporary sign faces developed in accordance with existing DfT authorisation to raise awareness about the zone. In January 2022 a Facebook group formed asking Greater Manchester leaders to rethink the GM CAP. In a short space of time this group gathered 85,000 followers on a social media page with the core aim of the campaign stating something needed to be changed or the scheme needed to be scrapped all together.

12.2 Participatory Approach

12.2.1 The ten Greater Manchester authorities are currently working to develop the New GM CAP, in conjunction with a range of stakeholders. This wider, more participatory approach will ensure that the Plan works for the residents and businesses of Greater Manchester. This process is set out below.

⁷⁰ The information provided at the conversation, as well as the summary of responses can be found here: <https://cleanairgm.com/technical-documents>

- 12.2.2 The 10 authorities are working to ensure that the New GM CAP is the right fit to deal with Greater Manchester's challenges, both in economic and air quality terms. Given the situation – a poor economic outlook for the UK as a whole and for Greater Manchester – and increasing evidence of the harm poor air quality causes, this is a delicate balance.
- 12.2.3 Integral to the success of any New GM CAP is active engagement with those it will affect. Greater Manchester is committed to undertaking a participatory approach to the development of the New GM CAP to ensure that Greater Manchester's proposals consider evidence regarding deliverability and the impacts on affected groups. Greater Manchester has conducted such engagement throughout the development of the GM CAP, and will continue to do so at this next, critical, stage.
- 12.2.4 Due to the timescales governing the initial submission back to Government, it is proposed that Greater Manchester will continue with a process of Participatory Policy Development after this initial submission is provided. This is described further in **Section 15** and will involve engaging with a wide range of stakeholder groups to continue to gather feedback on proposals as they are developed.

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13 What are the equalities considerations?

13.1.1 Under Section 149 of the Equality Act (2010), public bodies are subject to the Public Sector Equality Duty, which requires that they have due regard to the need to:

- Eliminate discrimination, harassment, victimisation, and any other conduct that is prohibited by or under the Act;
- Advance equality of opportunity between persons who share a protected characteristic and persons who do not share it; and
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

13.1.2 The aim of an Equality Impact Assessment (EqIA) is to identify whether people with protected characteristics could be affected by the GM CAP disproportionately or differentially:

- Disproportionate effects arise when an impact has a proportionately greater effect on people with protected characteristics than the rest of the population.
- Differential effects arise where people with protected characteristics could be affected differently from the rest of the population, due to a particular need or sensitivity.

13.1.3 In addition to the 9 protected characteristics covered within the Equality Act, the majority of Greater Manchester's local authorities also consider socio-economic deprivation as a characteristic in their equality assessments. As such, low income / socio-economic deprivation will be considered in this instance.

13.1.4 A full EqIA will be undertaken to support and inform the development of the policy and measures within the New GM CAP. This will build on the learning from the work undertaken in 2020-2021, taking into account the proposed measures and updated demographic and socio-economic data, including the 2021 census data if available.

13.1.5 An initial screening has been undertaken to assess which protected characteristics are likely to be impacted by the New GM CAP, and in scope for the EqIA as shown in **Table 10**.

Table 10 Equality Considerations - Protected Characteristics

Protected characteristic	Likely to be disproportionately affected by improved air quality	Likely to be differentially affected by improved air quality
Age		x
Disability (includes all forms of physical and mental disability)		x
Pregnancy and maternity		x
Gender (male drivers)	x	
Race	x	
Low income / socio-economic deprivation	x	

13.1.6 The 2022 Direction requires that any revised GM CAP must reduce NO₂ concentrations to below legal limits in the shortest possible time and by 2026 at the latest. In addition to a GM-wide assessment of the impact of improved air quality on the scoped-in groups, the EqIA will pay particular attention to those communities within, or neighbouring the last points of exceedance: namely, those in the city centre, at Bury Bridge and Regent Road.

13.1.7 Those impacted by air quality changes with protected characteristics could potentially be impacted by the proposed measures adopted within the New GM CAP. The nature and scale of the impact will depend on the preferred policy option and the measures chosen. Therefore, **Table 11** provides a summary of the protected characteristics which will also be considered in the EqIA.

Table 11 Equality Considerations – Protected Characteristics Scope

Protected characteristic	Potential disproportionate impact dependent on option
Age	X
Disability (includes all forms of physical and mental disability)	X
Pregnancy and maternity	X
Race	X
Religion / belief	X

Protected characteristic	Potential disproportionate impact dependent on option
Sex	X
Gender Reassignment	X
Sexual Orientation	X
Low income / socio-economic deprivation	X

13.1.8 As a result of this screening process, marriage and civil partnership will not be scoped into the EqIA process for the New GM CAP.

13.1.9 To inform a robust EqIA for the New GM CAP the approach to Participatory Policy Development, as described in **Section 12**, will include engagement with Greater Manchester-based organisations and networks which represent protected characteristic groups that could potentially be impacted by the New GM CAP. Representative groups will be identified at the next stage and their feedback will also be used to inform the final EqIA.

14 Government asks

14.1.1 Throughout the development of the GM CAP the local authorities have made clear the expectation that the UK Government would support the plans through:

- Clear arrangements and funding to develop workable, local vehicle scrappage / upgrade measures;
- Short term effective interventions in vehicle and technology manufacturing and distribution, led by national Government
- Replacement of non-compliant buses; and
- A clear instruction to National Highways to implement measures which deliver compliance with legal limits for NO₂ on the strategic road network, for which they are responsible, in the shortest possible time⁷¹.

14.1.2 In particular, Greater Manchester had been clear from the outset in the OBC for the GM CAP (2019) that any GM CAP based on significant vehicle change could only be sustained under stable vehicle market conditions. Greater Manchester had been from the outset concerned about the scale and diversity of the LGV fleet/LGV-owning business sectors; the fact that compliant diesel LGVs had only become available in 2016; the high volume of diverse and active Small and Medium-sized Enterprises (SMEs) in Greater Manchester, many of whom rely on small commercial vehicles on a daily basis; and the relatively old age profile of LGVs in Greater Manchester.

14.1.3 Greater Manchester therefore required Government to maintain a clear oversight of the supply chain conditions, within which the GM CAP would have to operate, recognising the structural nature of markets that are beyond the influence of any one local authority or area.

14.1.4 Further, one key barrier preventing Greater Manchester local authorities from being able to effectively oversee the progressive improvement of private hire vehicle (and therefore emission) standards, is the ongoing ability of vehicle owners / drivers to be licensed 'out of area'.

14.1.5 Over the past three years, the ten Greater Manchester local authorities have worked together to adopt Minimum Licensing Standards to increase public safety including driver standards, rationalising age and emissions policies and livery on vehicles. However, the effect of out-of-area licensing has been to undermine Greater Manchester's approach, and to negatively impact public safety while doing nothing to improve public confidence in a well-regulated local trade.

⁷¹ Greater Manchester Authorities are directed to take action on the local road network. Those roads managed by National Highways, such as motorways and trunk roads are excluded from the CAP.

- 14.1.6 Accordingly, Greater Manchester is looking to secure, via Greater Manchester's Devolution Trailblazer bid, a commitment from Government to devise an appropriate regulatory approach that will legally require that all private hire journeys within the Greater Manchester boundary must be undertaken by a driver and vehicle which are both licensed by one of the ten Greater Manchester local authorities. The effect would be to ensure that private hire operators with a license to operate in one or more of the ten Greater Manchester local authorities will be required to serve any intra Greater Manchester journey request with a locally licensed driver and locally licensed vehicle.
- 14.1.7 Greater Manchester represents the ideal spatial scale to introduce this vital measure. With over 40 million trips taken each year by hackney and private hire vehicles, around 20,000 driver licenses issued and 13,000 vehicle licensed locally across an area with a coherent economic geography, the vast majority of these trips are undertaken within the external boundary of the ten Greater Manchester local authorities.
- 14.1.8 Government's response to the DfT Task and Finish Group on taxi and private hire licensing report was to highlight that *"Local authorities are accountable for licensing in their areas and it is only right that they have the powers to properly shape and influence their local market."* To this end, *Greater Manchester is keen to work with the Department to "consider further (with a view to legislation) how it might best work in detail".*⁷²
- 14.1.9 As it stands, out-of-area operation enables the evasion of fair, safe and democratically determined local licensing standards, which undermines public safety as well as local measures to progressively improve up driver and vehicle standards.
- 14.1.10 In context of the GM CAP, the ability to provide local licensing standards would help to improve the emission standards of taxis operating in Greater Manchester whilst providing incentives to upgrade non-compliant vehicles. This complementary measure would provide more certainty in Greater Manchester's ability to meet required exceedance levels.
- 14.1.11 Under an investment-led non-charging GM CAP the ANPR cameras installed for the Class C charging CAZ could be used to inform and support the development of investment-led solutions. GM also wants to work with Government to agree the use of the GM CAP ANPR cameras to support identification of vehicles that could be upgraded, and also for potential law enforcement activity related to the detection of crime.

⁷² <https://www.gov.uk/government/publications/taxi-and-private-hire-vehicle-licensing-government-response-to-independent-report>

15 Next steps

- 15.1.1 Greater Manchester recognises that the current economic climate has changed. This has impacted on individuals and businesses' ability to upgrade their vehicles and ultimately, deliver compliance in the shortest possible time.
- 15.1.2 This submission has set out the evidence base underpinning Greater Manchester's belief that a charging CAZ scheme is no longer the best solution to deliver compliance. Additionally, this submission has set out that an investment-led non-charging GM CAP is the best solution to address the air quality problem in Greater Manchester.
- 15.1.3 In support of this submission, Greater Manchester has engaged with the following key groups to discuss their experiences of current economic and vehicle market conditions and validate the evidence and conclusions set out throughout this submission document. The groups that have been engaged with prior to this submission are:
- Greater Manchester business leaders as convened through the LEP Chair;
 - Road Haulage Association;
 - A number of Hackney Carriage and PHV groups including trade representation organisations, the National Private Hire and Taxi Association and the Licensed Private Hire Car Association;
 - One Bus Partnership – representing bus operators in Greater Manchester; and
 - The Confederation of Passenger Transport.
- 15.1.4 Feedback from these discussions is reported to the Air Quality Administration Committee on the 1st July 2022. Following submission of this document, Greater Manchester will undertake a Participatory Policy Development process. This will involve exploration of three aspects of policy:
- Developing Greater Manchester's electric bus proposition, including identifying bus routes and services to be upgraded, assessing the impact on NO₂ concentrations and proposing a delivery plan;
 - Developing a Fund proposition and any other measures to encourage upgrade to cleaner vehicles considering questions such as what funding offer would be effective, who should be in scope for funding, and whether funds should be targeted at the last points of exceedance; and
 - Carrying out local area studies of the last points of exceedance to assess what measures are required to achieve compliance at each site.

15.1.5 The policy development process will involve the following stages:

- Evidence gathering – including via stakeholder engagement, research and the development of analytical tools and methods for estimating the impact of different measures;
- Review of that evidence to define the challenge and inform the development and assessment of different individual measures and policy options; and
- Development of a package of proposed measures and assessment of that package.

15.1.6 At each stage of this process, stakeholder input and feedback will be sought and this will be used to inform the proposed package of measures and ensure that it has been designed in collaboration with those affected by the scheme.

15.1.7 Alongside the Participatory Policy Development process, Greater Manchester will work with JAQU to agree the submission requirements for a New GM CAP and will review delivery plans and operational requirements for any new scheme, including financial and commercial considerations.

15.1.8 As the final output of the Participatory Policy Development process, Greater Manchester will have developed, assessed and agreed a package of measures forming a proposed New GM CAP, suitable for public consultation. It is anticipated that local authorities would be in a position to proceed with public consultation in early 2023.

15.1.9 The requirement for statutory consultation on the GM CAP arose as a consequence of the use of Transport Act 2000 powers for road user charging and therefore it is likely that an investment-led non-charging GM CAP would not require statutory consultation. However, in line with the principles for the review outline by Greater Manchester authorities in the Spring, it is proposed that broad public engagement on the New GM CAP will be undertaken in line with good local authority practice, to ensure impacts are understood, and in particular to inform the ongoing equality impact analysis.

15.1.10 Greater Manchester will review the responses to the consultation and make any adaptations to the proposals as necessary. It is anticipated that local authorities could be in a position to make a decision to proceed with the New GM CAP in July 2023.

15.1.11 Greater Manchester will agree with JAQU the nature and timescale of a submission to Government. Alongside the proposed package of measures and policy for a New GM CAP, it is anticipated that this would include analysis setting out the air quality and socio-economic impacts of the scheme and an EqIA.

- 15.1.12 The submission will set out Greater Manchester's approach to managing the performance of the scheme through a performance management plan, a monitoring and evaluation plan and an adaptive planning process if alterations to the scheme post-implementation are required. This will ensure that the policy contained in the New GM CAP remain appropriate throughout the lifetime of the interventions. Air quality monitoring data will be kept under review and further action may be taken at any sites identified as being at risk of persistent exceedance.
- 15.1.13 Through preparation and commissioning of the Previous GM CAP, Greater Manchester has experience in engaging and appointing contractors to deliver clean air benefits. The scheme submission will include a delivery plan to provide confidence in the proposed procurement and management approach for delivery of each aspect of an investment-led non-charging GM CAP.

DRAFT FOR APPROVAL

Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside

Appendix A - Technical Note: Vehicle Sector Review – HGV Sector

DRAFT FOR APPROVAL

June 2022

1. Introduction

Background

- 1.1 After the initial OBC submission, a series of technical notes were published setting out the results of analysis and research carried out to better understand the vehicles in scope for the scheme.
- 1.2 For heavy goods vehicles (HGVs), this included, in particular, Technical Note 3: Analysis of the Freight Market, Technical Note 12: Evidence of the impact of a 2021 implementation of a CAZ C (without exemptions), and Technical Note 20: GM Specialist Goods Survey Results Summary¹. Further notes were produced setting out the development of analytical tools for freight, with the latest published summary of that work provided in T4 Appendix A of the Modelling for Consultation².
- 1.3 This evidence formed the basis of the development of the Option for Consultation. From March 2020, it became clear that the pandemic would affect the Greater Manchester Clean Air Plan (GM CAP); a programme of work was carried out in 2020/2021 to better understand the possible impacts of the Covid 19 pandemic on the GM CAP, published as the Impacts of Covid Report in June 2021³. This evidence, alongside feedback from the Consultation, was used to inform the revised GM CAP as approved by the ten GM local authorities in June/July 2021.
- 1.4 At that time, GM identified a number of possible risks to the GM CAP, which included concerns about the risk of vehicle price increases and the impact of any further lockdowns in the UK or countries in the supply chain.
- 1.5 This report draws a series of findings and conclusions to better understand the circumstances affecting HGV owners in Spring 2022 (based upon the previous' GM CAP implementation date) and the implications for the GM CAP and surrounding policy framework.
- 1.6 Since Spring 2022, there have been further dramatic changes to the economic context in the UK which are not explicitly addressed in this report but are set out in **Appendix E**. A range of factors associated with the impact from war in Ukraine, increased costs of energy and fuel, changes to Bank of England base rates and forecasts, global supply chain challenges, and the cost-of-living crisis have combined to create a context of increased financial hardship for businesses and families.

Structure of Note

- 1.7 The remaining sections of the report are structured as follows:
 - **Section 2** provides a review of the in scope vehicles of the HGV sector in GM;
 - **Section 3** reviews the impacts of Covid-19 on the HGV sector, with a particular focus on the availability and indicative purchase prices of new and used HGVs. This chapter also considers the vulnerability impacts of Covid-19 on the sector; and

¹ All available at <https://cleanairgm.com/technical-documents/>

² [https://assets.ctfassets.net/tlpgbvvy1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4 - Appendix A Behavioural Response Cost Models and Demand Sifting Tool.pdf](https://assets.ctfassets.net/tlpgbvvy1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf)

³ GM CAP- Impact of COVID Report. Available at: <https://cleanairgm.com/technical-documents/>

- **Section 4** provides a summary of the key findings, also presenting details of any risks or issues facing the sector in responding to GM CAP.

1.8 In addition, **Appendix A** provides a list of data used to inform the report and **Appendix B** reviews the recent changes in travel behaviour within GM through the pandemic up until January 2022.

2. Overview of the HGV sector in GM

Overview of Vehicle Sector

- 2.1 In the UK, the term HGV is used for any lorry with a maximum gross weight of over 3.5 tonnes. Vehicles over 7.5 tonnes gross require a Heavy Goods Vehicle driver's license.
- 2.2 In 2020 GB registered HGVs carried over 1.27bn tonnes of goods and travelled 16.2bn vehicle kilometres.⁴
- 2.3 At the end of 2020 there were 485,900 HGVs operating in the UK, with 99.4% of those powered by diesel.⁵ Vehicles have got larger and heavier, with the average Gross Vehicle Weight now 22.8 tonnes (up from 18.7 tonnes in 2000) and the percentage of vehicles over 41 tonnes (GVW) rising from 17.4% in 2010 to 24.2% in 2020.⁶
- 2.4 An Operator's Licence is required for businesses that use goods vehicles over 3,500kg. The number of goods vehicle operator licences currently issued in Great Britain declined to under 100,000 in 2009/10 falling further to 69,000 in 2019/20. During this period the average size of an operators' fleet increased from 3.8 vehicles to 5.2 vehicles per licence, meaning fewer individual licences covering more vehicles. This means fleets are getting larger, however the sector is still dominated by SMEs, including owner-drivers who drive and operate their own vehicle.⁷
- 2.5 In Greater Manchester it is estimated there are over 20,000 HGVs⁸ registered in the area. Vehicles in the sector vary in size, from 7.5 tonne 4-wheeler box vehicles often deployed on shorter, local runs (such as deliveries to the end customer) to 44 tonne articulated vehicles often used for strategic 'trunking' movements (such as taking a container from a port in the South of England to a Distribution Centre in the Midlands or North of England).
- 2.6 The age profile of HGV fleets has not significantly varied since 2000, with between 25%-30% of the national HGV fleet newer than 3 years old.⁹
- 2.7 Vehicle lifespans vary; companies operating larger fleets, such as those in the food and retail sectors, typically replace vehicles more frequently and are therefore more

⁴ Domestic Road Freight Statistics, United Kingdom 2020, Department for Transport

⁵ Department for Transport Statistics, Table VEH0503 Licensed heavy goods vehicles at the end of the year by propulsion / fueltype, Great Britain from 1994; also United Kingdom from 2014

⁶ Department for Transport Statistics, Table VEH0506 Licensed heavy goods vehicles at the end of the year by gross vehicle weight (tonnes), Great Britain from 1994; also United Kingdom from 2014

⁷ Domestic Road Freight Statistics, United Kingdom 2020, Department for Transport

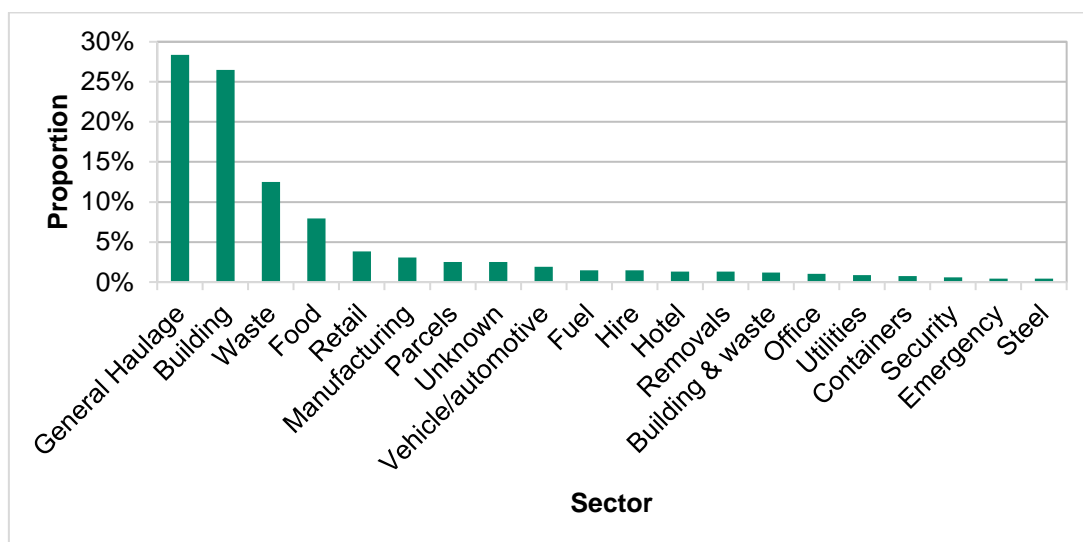
⁸ Based on size of market served by HGV (population served). GM equates to 4.2% of UK population, allocation of circa 500,000 HGVs based in UK (Source: SMMT)

⁹ Department for Transport Statistics, Table VEH0507 Licensed heavy goods vehicles at the end of the year by number of years since first registration, Great Britain from 1994; also United Kingdom from 2014

likely to have CAZ compliant vehicles at present, although some parts of those sectors have been badly affected by the pandemic in terms of extended periods of closure or constrained operations. Longer vehicle lifespans are associated with sectors such as waste and removals, the main factors are the margins on product being moved or the level of intensity that a vehicle is used.

2.8 The largest sector, General Haulage, makes up 29.1% of the GM market and includes over 2,000 vehicles affected by the GM CAP¹⁰. (See **Figure 2-1**).

Figure 2-1 HGV Traffic Volumes in Greater Manchester, Feb '20

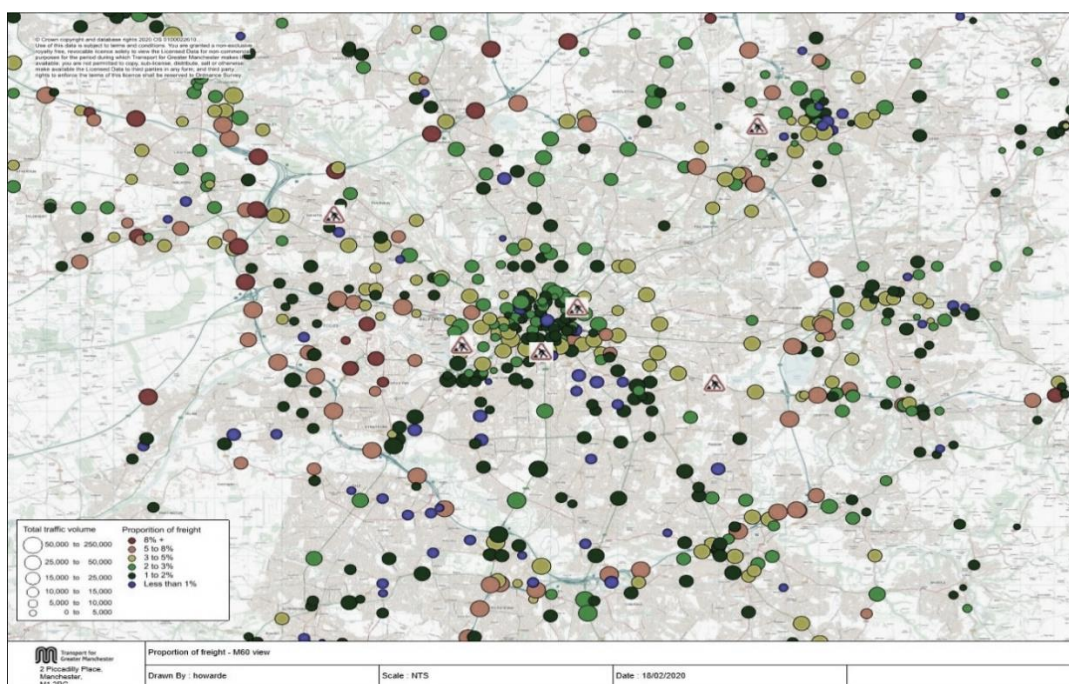


Source: AECOM Specialised Goods Vehicle Surveys, UK

2.9 **Figure 2-2** demonstrates the HGV pre-pandemic traffic proportions in Greater Manchester. The data used to populate the map was taken from traffic count information collected in mid-February 2020. This date was chosen as it would represent a typical “working” weekday in the first quarter of a year. The Strategic Road Network (SRN) generally has higher volumes of traffic overall and higher proportions of freight-related traffic. Key radial routes into the city often have relatively high volumes of freight vehicles, however form a lower proportion of overall traffic volumes, due in part to high volumes of commuter traffic.

¹⁰ Source: AECOM Specialised Goods Vehicle Surveys, UK

Figure 2-2 HGV Traffic Volumes in Greater Manchester, Feb '20



Source: Draft TfGM Freight Strategy

Review of in scope Vehicles

2.10 For context, the proportion of vehicle types in GM, relative to the regional and national averages, are provided in **Table 2-1** based on the latest available registration statistics from the DfT. There will be instances, particularly for commercial usage, where vehicles are licensed in one location but used in another, but this table provides an overview of the relative size of each fleet.

Table 2-1 Proportion of Vehicle Types Registered by Area, 2022

	Cars	Van	HGV	Bus & Coach	Other
GB	85.0%	11.3%	1.3%	0.4%	2.1%
England	85.1%	11.3%	1.3%	0.4%	1.9%
NW	85.7%	10.9%	1.5%	0.3%	1.6%
GM	85.6%	11.8%	1.6%	0.4%	0.7%

Source: Department for Transport., Statistical data set, All vehicles (VEH01), Last updated 13 January 2022

2.11 **Table 2-2** presents the number of HGVs serving Greater Manchester in 2019, split by compliant and non-compliant vehicles.

Table 2-2 2019 HGV Volumes, 2019

Modelled Response	GM Based	Non-GM Based	Total
Compliant	12,212	29,852	42,064
Non-Compliant	13,525	15,203	28,728
Total	25,737	45,055	70,792

Source: Air Quality Modelling Report: with impacts of Covid-19 and Post Consultation Package Measures

Changes to HGVs Over Time

- 2.12 Projection of the 2019 HGV totals, as set out in **Table 2-2**, was undertaken to forecast the natural change in compliant vehicles into the future, without any interventions applied (Do Minimum – No GM CAP). This was undertaken to understand the market's proportion of natural upgrades. Natural upgrades, without the impact of the pandemic, have been incorporated into the key forecast years (2022, 2023 and 2025) through retention of a constant age profile with the number of non-compliant vehicles reducing over time, summarised in **Table 2-3**.
- 2.13 This shows that natural vehicle upgrades grow the proportion of compliant vehicles serving GM from 42,064 (59%) in 2019 to 54,213 (77%) by 2022. This results in an 8.5% annual change in the split between compliant and non-compliant HGVs serving the GM market.

Table 2-3 Forecast Do Minimum (without CAP) Compliant HGVs

Year	Modelled Response	GM Based	Non-GM Based	Total
2022	Compliant	18,410	35,803	54,213
	Non-Compliant	7,327	9,252	16,579
	Total	25,737	45,055	70,792
2023	Compliant	19,749	37,523	57,272
	Non-Compliant	5,988	7,532	13,520
	Total	25,737	45,055	70,792
2025	Compliant	22,002	40,785	62,787
	Non-Compliant	3,735	4,270	8,005
	Total	25,737	45,055	70,792

Source: Air Quality Modelling Report: with impacts of Covid-19 and Post Consultation Package Measures

Note: All years indicate the beginning of the year

Review of Fleet Profile

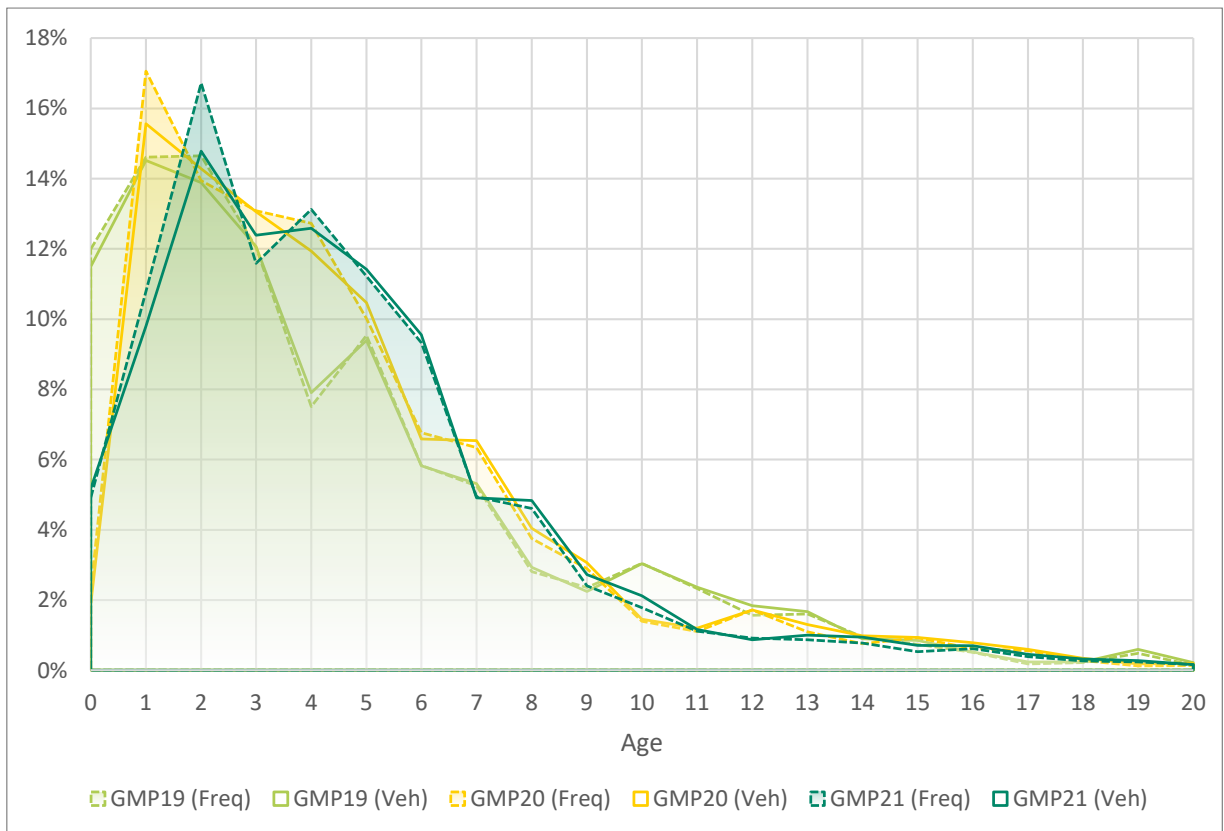
ANPR

- 2.14 Three sets of ANPR data were used, based on available data, these comprise the following time periods:
- GMP19 - January 2019 (pre Covid-19 pandemic);
 - GMP20 - September 2020; and
 - GMP21 - November 2021.

2.15 **Figure 2-3** presents the vehicle age profile of HGV in each survey. The proportion of newly purchased HGVs (i.e. less than 1 year-old) captured by ANPR cameras decreased from near 12% to 2% from 2019 to 2020¹¹ and recovered to close to 6% by the end of the 2021. These figures are likely to be slightly overestimated due to differences in the sample size (10 months' worth of 'new vehicles' captured in the January 2019 survey compared to 6 and 8 months captured in the September 2020 and November 2021 surveys).

2.16 The analysis, as shown in **Figure 2-3** suggests that the average age of HGVs increased by 0.5 years from the beginning of 2019 to the end of 2021.

Figure 2-3 HGV fleet age distribution



Source: GMP ANPR Data analysis

Table 2-4 Average HGV Age

Data set	GMP19	GMP20	GMP21
Frequency			
Average Age	4.6	5.0	5.0
Most common age group	2	1	2
Unique Vehicles			
Average Age	4.8	5.2	5.3
Most common age group	1	1	2

Source: GMP ANPR Data analysis

¹¹ Acknowledging that 2020 is missing at least 3 months of data since the survey was taken in September.

SMMT

- 2.17 The latest figures from SMMT as this document was reviewed shows that HGV registrations are on the rise, but still not at the same levels from the years prior to the pandemic. Sales of new HGVs had been brought forward into 2019 by many hauliers. Given the relatively low divergence of HGV registrations over the 2019-2021 period, it is not possible to distinguish how Covid-19 has impacted on the longer-term pattern of HGV investment cycles.
- 2.18 In July 2019, Specialised Goods Vehicle Counts (SGVC) were undertaken across 3 sites in Salford and Manchester on key approaches to the city centre. This exercise was repeated in October 2020, which demonstrated that compliance rates had improved. This may be due to a general natural trend in improvements to the fleet over time. Although it may also reflect changing travel behaviour due to the restrictions in place at the time, which could have impacted on the types of HGVs accessing these parts of the Regional Centre at this time.
- 2.19 **Table 2-5** shows the results of these surveys, which shows that a significant proportion of non-compliant vehicles are from the building/construction sector.

Table 2-5 Specialised Goods Vehicle Count Results (2019 & 2020)

Location	No of HGVS observed (2019)	Compliance (2019)	Compliance (2020)	Non-Compliance by sector (2019)
Bridge Street, Manchester	271	58%	75%	22% Building 22% Waste 17% Food
Regent Road, Salford	1,071	66%	71%	29% Building 20% General Haulage
A6 (immediately South of Mancunian Way)	612	60%	n/a	27% Building 13% General Haulage

Source: AECOM SGVC Survey, note the A6 site was not resurveyed in 2020

3. Review of Covid-19 impacts on the HGV vehicle sector

Overview

3.1 The HGV sector has been reviewed to consider pre-pandemic background characteristics, Covid-19 related impacts on the industries affected by the sector, and review of the expected vulnerabilities when responding to GM CAP.

Pre-Pandemic – Sector related trends

3.2 Unlike the van sector, which has seen significant growth in the number of vehicles in recent years, the HGV market pre-pandemic has remained largely constant over the last 20 years, with a 2% reduction in vehicle numbers overall since 2000.¹²

3.3 However, HGV registrations do fluctuate as shown in **Figure 3-1** and **Since 2000**, although total HGV numbers have been relatively stable there is some evidence of downsizing from HGVs to LCVs to accommodate more agile supply chains.

3.4 Figure 3-2 showing the impact that the financial downturn experienced in 2009 had on the number of HGVs being registered and subsequent 'bounce-back' as the economy recovered.

Figure 3-1 Number of HGV Registered Per Year in the UK

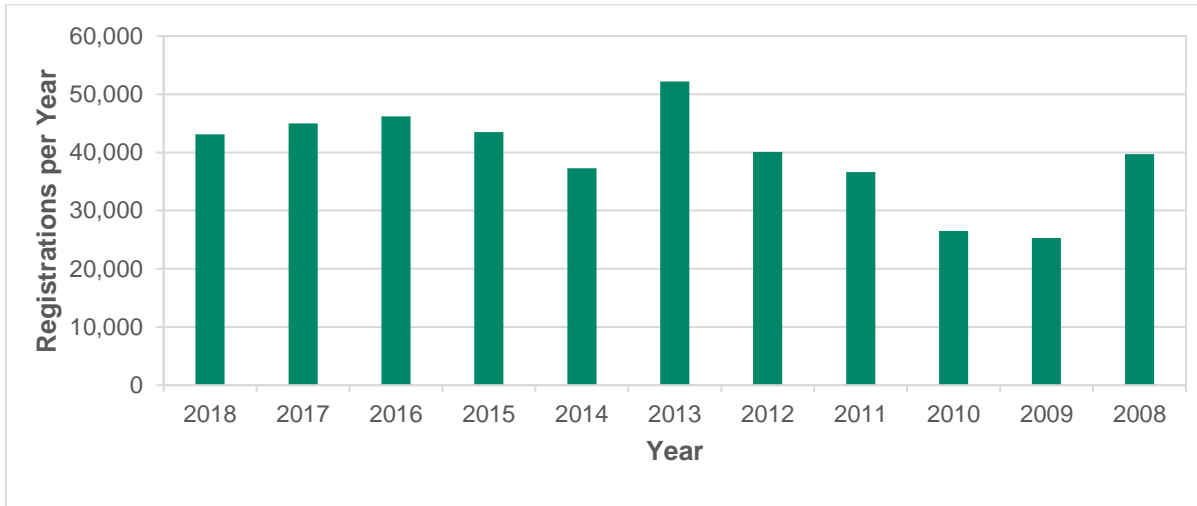
Year	No. of HGVs (000's)	% of HGVs	Euro Standard
2018	43.1	8.2%	Euro 6
2017	45	8.5%	
2016	46.2	8.8%	
2015	43.5	8.2%	
2014	37.3	7.1%	
2013	52.2	9.9%	Euro 5
2012	40.1	7.6%	
2011	36.6	6.9%	
2010	26.5	5.0%	
2009	25.3	4.8%	
2008	39.7	7.5%	Euro 4
2007	32.8	6.2%	
2006	31.5	6.0%	
2005	27.8	5.3%	

Source: <https://www.smmmt.co.uk/vehicle-data/heavy-goods-vehicle-registrations/>

¹² Source: SMMT

3.5 Since 2000, although total HGV numbers have been relatively stable there is some evidence of downsizing from HGVs to LCVs to accommodate more agile supply chains.¹³

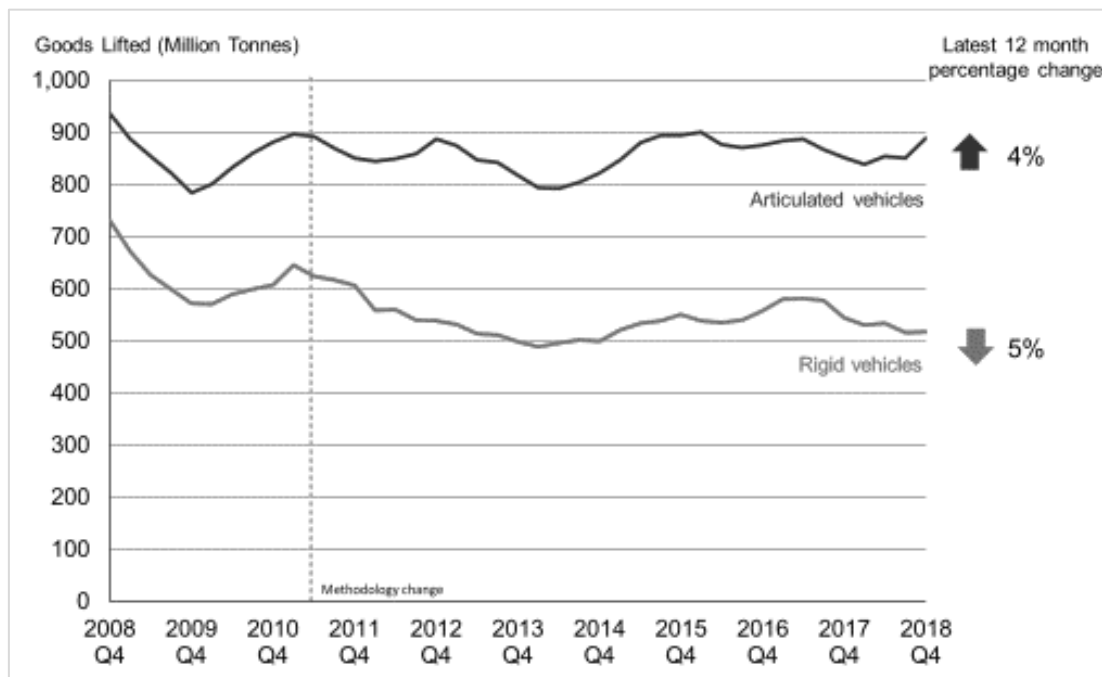
Figure 3-2 HGV Registrations over 10 years



Source: <https://www.smmmt.co.uk/vehicle-data/heavy-goods-vehicle-registrations/>

3.6 There has been a move towards greater uptake of larger HGVs able to transport heavier consignments. HGVs deployed in the UK range from a gross vehicle weight of 3.5 tonnes to 44 tonnes, with articulated vehicles - which tend to be longer, larger, heavier vehicles - carrying more freight (see **Figure 3-3**). In 2018, articulated vehicles carried 889 million tonnes (63%) of freight, whereas rigid vehicles only carried 517 million tonnes (37%) of freight.¹⁴

Figure 3-3 Goods lifted by GB-registered HGVs, by type of vehicle



Source: Domestic Road Freight Statistics, United Kingdom: 2018, Department of Transport

3.7 In 2018 the 5 most common commodity divisions (representing 64% of all goods) lifted by GB-registered HGVs in the UK were food products (20%), Metal ore and

¹³ Source: SMMT

¹⁴ Domestic Road Freight Statistics, United Kingdom: 2018, Department of Transport

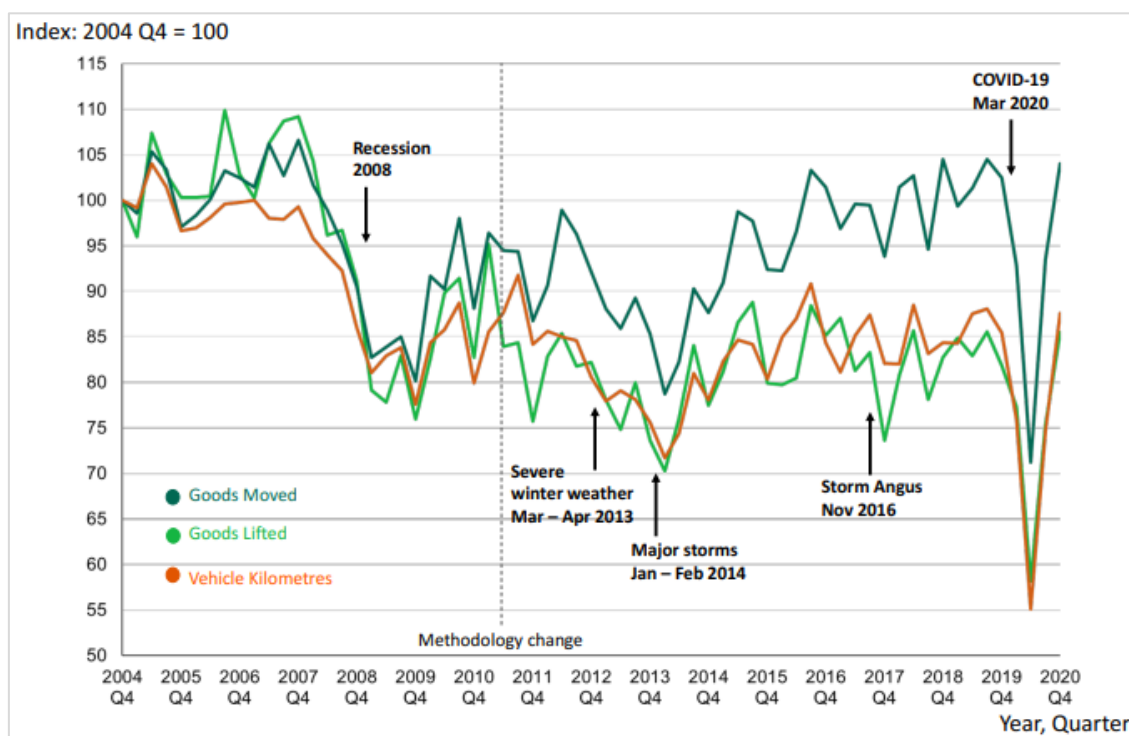
other mining and quarrying (13%), Waste related products (11%), Groupage (10%) and Glass, cement and other non-metallic mineral products (10%).¹⁵

Covid-19 Effects on the HGV sector

Overview

- 3.8 The pandemic caused disruption at all levels of the vehicle sales market, particularly in 2020, where production lines were halted and lockdown rules affected the global supply chain. Skills shortages have been noticed in almost every field, but have been particularly noticeable amongst HGV drivers, leading to government initiatives to bring more people into the field. This driver shortage has had an impact on the demand of HGV vehicles.¹⁶
- 3.9 As with all other modes of transport, the HGV sector was significantly impacted in the aftermath of the March 2020 Covid-19 restrictions as large sections of the economy were shut down. However, by 2020 Q4 domestic road freight had returned to pre-pandemic levels (see **Figure 3-4**).

Figure 3-4 Impact of coronavirus (Covid-19) on quarterly data trends



Source: Domestic Road Freight Statistics, United Kingdom: 2020, Department of Transport

- 3.10 According to the Transport Exchange Group,¹⁷ the cost of road haulage in January 2022 was up by 15% compared to January 2021 as a result of issues in the wider economy amid recent inflation.

¹⁵ Domestic Road Freight Statistics, United Kingdom: 2018, Department of Transport

¹⁶ Business Live <https://www.business-live.co.uk/ports-logistics/hgv-crisis-set-worsen-amid-22146925>

¹⁷ Transport Exchange Group, February 2022 <https://transportexchange.com/road-transport-price-index/january-22/>

Review of Covid-19 impacts on vehicle sales market

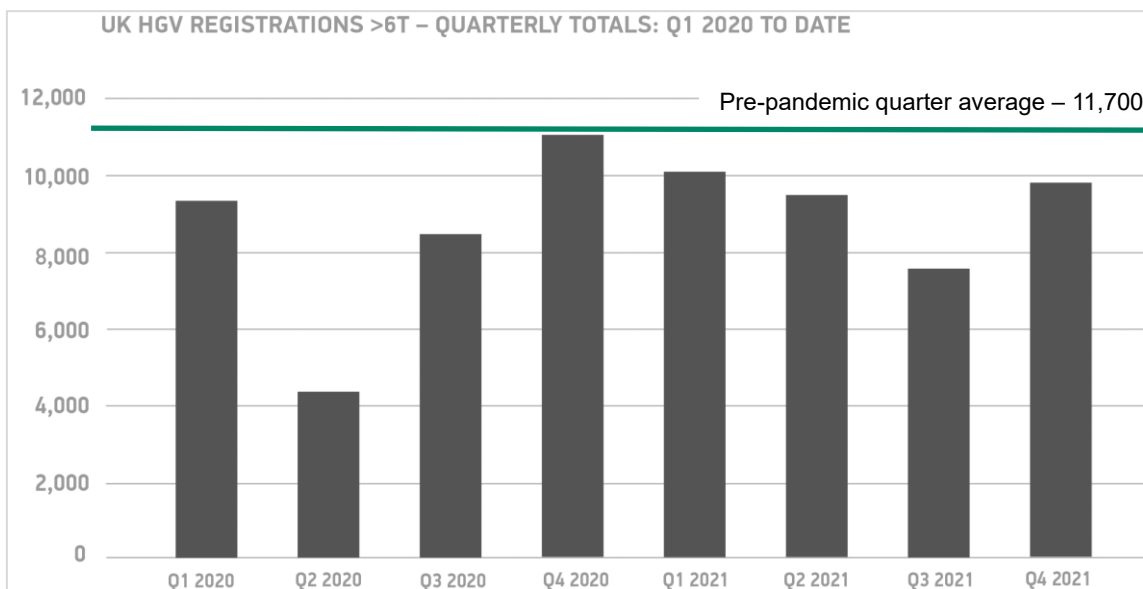
Overview

3.11 The key changes in the HGV sales market during the pandemic are discussed below.

Vehicle Registrations

3.12 Data produced by SMMT shows that despite an initial decrease in HGV registrations, particularly noticeable in quarter two of 2020, HGV registrations are on the rise, but still not at the same levels from the years prior to the pandemic. For example, in the year and a half prior to the pandemic (Q4 2018 – Q1 2020), average registrations per month were around 11,700 per quarter, compared to an average of around 8,500 per quarter since pandemic (Q2 2020 – Q3 2021). In this time, no quarter has reached the same levels as the pre-pandemic quarter average. **Figure 3-5** shows the UK HGV registrations by quarter since Q4 2017.

Figure 3-5 UK HGV Registrations Q1 2020 – Q4 2021



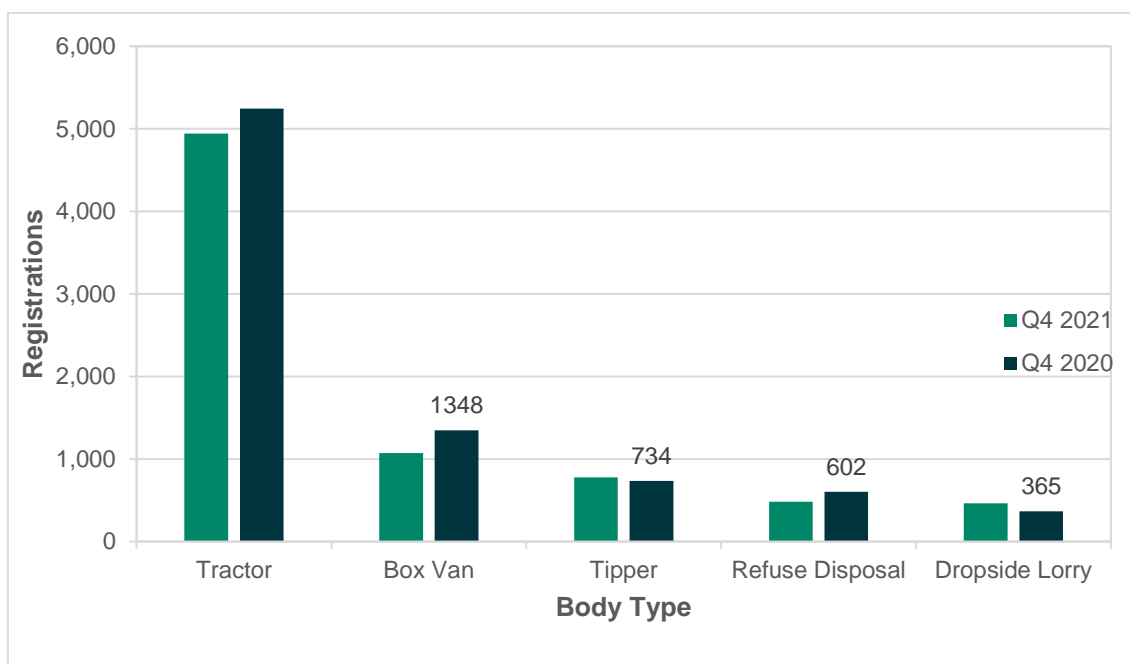
Source: SMMT

- 3.13 Some 37,163 units were registered last year, 57.1% of which were rigids, while 42.9% were articulated trucks, in line with market splits seen in previous years, though both segments grew with 2,239 more rigids (+11.8%) and 2,006 more artics (+14.4%) registered than 2020.¹⁸
- 3.14 As construction began to recover during the year, tipper demand rose by 32.5% to 3,808 units. Tractor units were the most popular type of HGV, with 15,679 units (+16.0%) representing a market share of 42.1%, while refuse trucks increased by 2.0% to 2,067 units between 2020 and 2021, despite a drop in Q4 2021 on the previous years.¹⁹

¹⁸ <https://www.smmt.co.uk/2022/02/hgv-market-accelerates-12-9-in-2021-to-defy-supply-challenge/>

¹⁹ <https://www.smmt.co.uk/2022/02/hgv-market-accelerates-12-9-in-2021-to-defy-supply-challenge/>

Figure 3-6 Top 5 Body Types



Source: <https://www.smmmt.co.uk/2022/02/hgv-market-accelerates-12-9-in-2021-to-defy-supply-challenge/>

Vehicle Availability

3.15 To enhance understanding of HGV availability in the current market, three major vehicle manufacturers and dealerships were consulted. The three companies chosen represent around 60% of the new truck market in 2021. Their responses provide an insight into the availability of new and used HGVs.

Commercial Dealership (1) Manchester – 11th February 2022
Consultation with a dealership in Greater Manchester outlined the significant issues of vehicle supply and availability of new HGVs. Lead times for certain models were approximately 8 months, 10 months, and 11 months respectively, timescales which do not include postproduction fit outs. The branch broke its sales record in 2021, however were required to close to new orders in December 2021 due to supply issues. Vehicles have been held back due in part to the semiconductor shortage, with key components such as window modulators missing. The manufacturer has also increased prices over the last year.

The used HGV sector is experiencing similar issues with availability, with all HGV types scarce, but curtainsider rigids and tractor units were identified as being particularly difficult to source. Prices were also reported to be high, with the same vehicles fetching the same price second-hand two years on from the initial sale.

Feedback suggests that the company do not expect the situation to be resolved in 2022 at the earliest.

Commercial Dealership (2), Manchester – 17th February 2022

. Lead times for new HGVs were reported to be significant, with an approximate 12 month wait for a new diesel vehicle once ordered. Certain electric models were said to be available in around 14 weeks for the chassis. But there is industry reticence to invest in HGV EVs at the moment.

Trucks were reported to be semi-built, waiting for components (primarily semiconductors). The lack of semiconductors was described as still an issue to all Auto OEMs. The wait for tractor units) was longer than rigid HGVs, due to their relative lack of complexity (rigid wait times being 6-9 months). Prices of new vehicles have risen gradually across the year mainly due to increases in the cost of energy, rubber and steel. 85% of the unladen weight of a typical truck weighing 8500kg is metal and producing steel is very energy intensive.

The availability of used HGVs is also limited, with dealers extending leases whilst new vehicles are being manufactured. This is creating a shortfall in the market and it was reported that vehicles up to 4 years old are fetching higher prices at auction than their original brand new price. The GM CAP is already playing a role in shifting demand, with Euro V vehicles often being sold abroad.

The respondent felt that the market was 2 years away from returning to 'normal' levels and as manufacturers are unable to construct vehicles at the high level that they are being ordered, the waiting list is currently growing.

Commercial Dealership (3) – 14th February 2022

Consultation with the dealership suggested that the future supply of new HGVs was uncertain and whilst there were a small number of vehicles available to sell, the delivery of further trucks from the manufacturer was uncertain.

It was stated as 'likely' that any orders placed now could not be fulfilled until 2023 and that the issues of new vehicle availability was having an impact on the used HGV sector, with owners holding on to their vehicles for longer and dealerships were unable to fulfil large fleet renewal orders.

New Vehicle Prices

- 3.16 Prices of new HGVs did not significantly change in years immediately before the pandemic. In 2018, the cost of an 18-tonne rigid vehicle was £66.7k, in 2019 and 2020 the price was £67.9k, showing only a 1.8% price increase over 2 years. A similar increase of 1.7% can be seen in 44-tonne artic vehicles (£83.2k rising to £84.6k).²⁰
- 3.17 However, consultation with manufacturers and dealers, shown in the boxes above, has demonstrated that the prices of new vehicles has increased in 2021 and 2022 as scarcity and cost of parts and materials has risen.²¹

Second-hand Vehicle Prices

- 3.18 In contrast, the second-hand market has seen price increases much larger than that of new vehicles. In the article *Continuing strong demand predicted to lead to a record year for used HGV prices*²², Commercial Fleet notes positive feedback from dealers, suggesting strong retail appetite and conditions and notes that the 58% increase in average selling price of all heavy goods vehicles is record breaking. The article notes that Cox Automotive states that a significant contributing factor to this is the high demand for Euro 6 HGVs, with a 42% year on year increase in price on these vehicles from 2020 to 2021. Manheim expect the price difference between Euro 5 and Euro 6 to continue to grow from the current value of £9,000.
- 3.19 Second-hand dealers are reflecting the demand for vehicles to be Clean Air Zone (based on national criteria as applied in local zones across the country) and Ultra Low Emission Zone compliant as a selling point by advertising this on their websites.

Review of Vulnerability in responding to GM CAP

- 3.20 Covid-19 has had an impact on the HGV sector. The national lockdowns and Covid-19 restrictions have resulted in a reduced availability of new HGVs to the markets. This has increased the market purchase price of new vehicles and at the same time reduced the availability of newer second-hand vehicles to the market. This has in turn pushed the price of available second-hand HGVs to a level close to that of new vehicles. Most second-hand vehicles coming to the market already have buyers lined up.
- 3.21 There has been a drop in demand for Euro V vehicles, probably due to the GM CAP, with high proportions of Euro V HGVs coming to the markets being sold abroad.
- 3.22 This section reviews the original vulnerability assessment of the HGV sector undertaken in 2019 and assesses how the Covid-19 pandemic has impacted vulnerability to the GM CAP.

²⁰ Motor Transport, MTR_141220_028-030.indd (motortransport.co.uk)

²¹ <https://www.commercialfleet.org/fleet-management/best-practices/used-values-soar-as-van-and-truck-shortages-continue>

²² <https://www.coxautoinc.eu/content-hub/fuel/continuing-strong-demand-predicted-to-lead-to-a-record-year-for-used-hgv-prices/>
Continuing strong demand predicted to lead to a record year for used HGV prices (September 2021)

Market Segment	Pre Covid-19 – Responding to GM CAP	Covid-19 Impact	Impact on Responding to GM CAP (Post Covid-19)
<p>HGV</p>	<p>Medium impact Significant cost to upgrade if existing vehicles are non-compliant. Period for leased vehicles average 4 years, high proportion of these would already be compliant. Likely less impact to larger haulage companies and higher impact on smaller companies as fleet more likely second-hand or not be renewed as quickly. GM CAP having an influence on the second-hand sales market with high proportion of Euro V class HGVs being sold abroad.</p>	<p>High impact likely. A reduction in HGV movements initially during the first national lockdown had recovered to pre-pandemic levels by Q4 2020. Cost of road haulage has increased 15% from Jan 2021 to Jan 2022, due to current economic climate, partially due to Covid-19 pandemic. Driver shortages sector wide. HGV demand for new vehicles exceeds supply resulting in up to 12 months lead times. Caused by supply chain issues and part shortages. Lack of new vehicle supply has resulted in second-hand HGV prices significantly increasing, as there is reduced vehicle rotation.</p>	<p>Medium impact New HGVs experiencing increased lead times, resulting in second-hand vehicle being used for increased length of time. Lack of second-hand vehicles is resulting in prices of second-hand HGVs exceeding cost of new HGVs in some cases.</p>

4. Conclusion

Summary

- 4.1 This note has sought to address the following key considerations:
- A review of the current position of the HGV fleet;
 - Report on the impact of Covid-19 in terms of changes to travel behaviour within GM, including changing transport trends and economic trends as a result of the Covid-19 pandemic;
 - Specific Covid-19 pandemic impacts on this vehicle type (HGVs); and
 - Comment on the extent to which those changes may be considered material to the success of the GM CAP given the vulnerability of the vehicle type (HGVs) to meet GM CAP compliance.
- 4.2 HGVs account for around 1.5% of the total vehicle fleet in GM.
- 4.3 Based on 2019 data, it is estimated there were approximately 71,000 HGVs serving GM, with 60% of those being compliant.
- 4.4 Vehicle fleets are tending to get larger, however the sector is still dominated by SMEs, including owner-drivers who drive and operate their own vehicle.
- 4.5 The age profile of HGV fleets has not significantly varied since 2000, with between 25%-30% of the national HGV fleet newer than 3 years old.
- 4.6 Vehicle lifespans vary; companies operating larger fleets, such as those in the food and retail sectors, typically replacing vehicles more frequently whilst longer vehicle lifespans are associated with sectors such as waste and removals, the main factors are the margins on product being moved or the level of intensity that a vehicle is used. The largest sector, General Haulage, makes up 29.1% of the GM market and includes over 2,000 vehicles affected by the GM CAP.
- 4.7 Whilst there was a significant impact in 2020, the overall volume and usage of HGVs has generally returned to pre-pandemic levels.
- 4.8 The HGV sector is experiencing significant issues in relation to demand and supply of new vehicles. HGV production has been hampered by the shortages in components, particularly semiconductors. This shortage has impacted on the ability of manufacturers to meet the increased demand as the economy grows and the requirement to 'catchup' with lower production in Q2 2020. The issue is so significant that some major manufacturers are not taking new orders for this year.
- 4.9 Significant price increases have been observed, particularly in the second-hand compliant market. For new vehicles, the more significant issue is availability and lead times as noted above.
- 4.10 Whilst the situation is fluid, responses from vehicle manufacturers and dealerships suggest that the issue will not be resolved until 2023. This means that higher prices for new and used vehicles and a lack of availability of HGVs are likely to continue throughout 2022.

Appendix A – List of Documents

This Appendix provides a list of documents and data sources used to inform this report.

Document Title	Date	Description	Relevance to GM CAP
Chapter 1			
Mayor of Greater Manchester writes to Government reiterating call for non-charging Clean Air Zone	May 2022	Announcement, provide background on current status of GM CAP https://www.greatermanchester-ca.gov.uk/news/mayor-of-greater-manchester-writes-to-government-reiterating-city-region-s-call-for-non-charging-clean-air-plan/	Current Status of GM CAP
GM CAP Technical Documents (various)	Various	All available at Technical Documents Clean Air Greater Manchester (cleanairgm.com) https://cleanairgm.com/technical-documents/	Published Technical Reports for GM CAP
Chapter 2			
Domestic Road Freight Statistics	2020	HGV industry statistics - Department for Transport	Understand UK HGVs industry statistics
Table VEH0503 Licensed heavy goods vehicles at the end of the year by propulsion	May 2021	Department for Transport Statistics - Licensed heavy goods vehicles at the end of the year by propulsion	Understand UK HGVs Statistics
Table VEH0506 Licensed heavy goods vehicles at the end of the year by gross vehicle weight (tonnes)	May 2021	Department for Transport Statistics - Licensed heavy goods vehicles at the end of the year by gross vehicle weight (tonnes)	Understand UK HGVs Statistics
HGV data (SMMT)	various	Based on size of market served by HGV (population served). GM equates to 4.2% of UK population, allocation of circa 500,000 HGVs based in UK	To understand the HGV market in the GM
Table VEH0507 Licensed heavy goods vehicles at the end of the year by number of years since first registration,	May 2021	The age profile of HGV fleets has not significantly varied since 2000, with between 25%-30% of the national HGV fleet newer than 3 years old	Understand UK HGVs Statistics
AECOM Specialised Goods Vehicle Surveys	Various	Specialised Goods Vehicle Count Results	Provides background details of the HGV sector 2019 & 2020
All vehicles (VEH01)	Jan 2022	Data on all licensed and registered vehicles, produced by Department for Transport.	Provided the proportion of Vehicle Types Registered by Area, 2022

Air Quality Modelling Report: with impacts of Covid-19 and Post Consultation Package Measures	2021	https://cleanairgm.com/technical-documents/	GM CAP Technical Report
GMP ANPR Data analysis	Various	Data on average HGV age	Understand GM HGVs average age
Chapter 3			
HGV SMMT report	2019	HGV market pre-pandemic has remained largely constant over the last 20 years, with a 2% reduction in vehicle numbers overall since 2000	Understand pre-pandemic HGV market
HGV Registrations - SMMT	2019	HGV Registrations over 10 years https://www.smmt.co.uk/vehicle-data/heavy-goods-vehicle-registrations/	To understand the UK HGV registration trend
Domestic Road Freight Statistics - DfT	2018	Goods lifted by GB-registered HGVs.	To understand the UK HGV types and commodity divisions
HGV crisis set to worsen amid mass exodus of drivers over conditions	Nov 2021	This driver shortage has had an impact on the demand of HGV vehicles https://www.business-live.co.uk/ports-logistics/hgv-crisis-set-worsen-amid-22146925	Impact of driver shortage on the demand of HGV market
January '22 Highest ever price-per-mile for January: TEG Road Transport Price Index up 15% on last January	Jan 2022	the cost of road haulage in January 2022 was up by 15% compared to January 2021 as a result of issues in the wider economy amid recent inflation. https://transportexchange.com/road-transport-price-index/january-22/	Cost of road haulage as a result of inflation
HGV market accelerates 12.9% in 2021 to defy supply challenge - SMMT	Feb 2022	Provide recent HGV registrations post-covid. https://www.smmt.co.uk/2022/02/hgv-market-accelerates-12-9-in-2021-to-defy-supply-challenge/	Information on post-covid HGV market
Annual cost tables history - MotorTransport	Dec 2020	Prices of new HGVs did not significantly change in years immediately before the pandemic. In 2018, the cost of an 18-tonne rigid vehicle was £66.7k, in 2019 and 2020 the price was £67.9k, showing only a 1.8% price increase over 2 years. https://motortransport.co.uk/annual-cost-tables-history/	Information about prices of new HGVs
Used values soar as van and truck shortages continue	July 2021	The prices of new vehicles has increased in 2021 and 2022 as scarcity and cost of parts and materials has risen https://www.commercialfleet.org/fleet-management/best-practices/used-values-soar-as-van-and-truck-shortages-continue	Information on increased price of vehicles
Continuing strong demand predicted to lead to a record year for used HGV prices	Sept 2021	The second-hand HGV market has seen price increases much larger than that of new vehicles. https://www.coxautoinc.eu/content-hub/fuel/continuing-strong-demand-predicted-to-lead-to-a-record-year-for-used-hgv-prices/	Provide information on second-hand HGV market
Chapter 4			
		(No new Sources in Chapter 4)	

Appendix A			
		(No new Sources in Appendix A)	
Appendix B			
Coronavirus (Covid-19) UK Government Dashboard	Oct 2020	https://coronavirus.data.gov.uk/	Background of Covid Timeline
“Greater Manchester’s Covid-19 Management Plan: how we control outbreaks”	2022	https://greatermanchester-ca.gov.uk/coronavirus/Covid-19-management-plan/	Background of Covid Timeline
“Prime Minister announces new local COVID Alert Levels”	Oct 2020	https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels	Background of Covid Timeline
TfGM’s C2 Database	various	Traffic flow data was extracted and analysed from TfGM’s C2 Database https://tfgmc2.drakewell.com/multinodemap.asp	Information on local traffic impacts
“Budget 2021: Fuel duty rise axed as petrol prices hit record highs”	Oct 2021	Fuel Prices Increase: https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html	Information on Economic Related Impacts
“GDP monthly estimate, UK : December 2021”	Dec 2021	GDP information https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021	Information on Economic Related Impacts
“Average weekly earnings in Great Britain: February 2022”	Dec 2021	Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022	Information on Economic Related Impacts
“UK economy latest”	Dec 2022	Information on Goods import and exports https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomylatest/2021-01-25#output	Information on Economic Related Impacts
“Cities Outlook 2022”	Jan 2022	Change in pub and restaurant sales in City Centres and Suburbs. Weekday footfall in Birmingham, Manchester and London https://www.centreforcities.org/wp-content/uploads/2022/01/Cities-Outlook-2022-2.pdf	Information on Economic Related Impacts

Appendix B – Review of COVID Impacts

Overview

B.1 Travel behaviour and the economy have been impacted by the Covid-19 pandemic and have resulted in changes in the way that people travel and the way businesses operate. In this chapter we will assess some of the key data findings found throughout the period to better understand the levels of impact on transport and travel generally.

COVID Timeline

- B.2 In January 2020, Covid-19 first appeared in the UK. By 30th November 2020, there were an estimated total of 1.6 million people testing positive to the virus in the UK with 58,24523 cases resulting in deaths.²⁴
- B.3 As stated within the GMCA Covid-19 Management Plan Executive Summary, GM had more than 16,000 confirmed cases and nearly 2,800 people died during the first four months of the Covid-19 pandemic.²⁵
- B.4 In Summer 2020, North West England was one of the worst affected areas by the pandemic with GM placed under additional restrictions on 31st July 2020. Throughout 2020, GM continued to experience a disproportionate impact to the rest of the UK from these additional restrictions, such as the three-tier system for lockdowns across England. This three-tiered system was first announced by the Government in October 2020 to ‘*simplify and standardise local rules*’.²⁶
- B.5 On 5th November 2020, the Government imposed a second national lockdown with restrictions on continued business activity in England. These restrictions were in place between 5th November and 2nd December 2020, followed by a return to 3 Tier system restrictions.
- B.6 On 19th December 2020 the Government introduced an additional 4th Tier, with lockdown measures beginning in London and the South East, after having identified the Alpha (Kent) variant, coming into effect on 21st December 2020 until a third nationwide lockdown was re-introduced on 6th January 2021.
- B.7 March 2021 saw Step 1 of the Government’s roadmap being introduced, with schools reopening and outdoor gatherings being allowed with the proviso of staying local. April 2021 saw Step 2 of the roadmap allowing limited indoor contact, businesses such as hairdressers to reopen and outdoor hospitality. Step 3 came into effect in May 2021, allowing indoor meetings limited to 6 people and 10,000 people for large sport stadiums. Step 4, on 19th July 2021, saw the remaining venues such as nightclubs reopen, and the removal of most other restrictions.
- B.8 With the discovery of the Omicron variant, Plan B measures (face coverings indoors and use of Covid Passes at specific settings such as nightclubs), which

²³ UK deaths is based on deaths within 28 days of a positive test and does not include excessive deaths.

²⁴ Coronavirus (COVID-19) UK Government Dashboard <https://coronavirus.data.gov.uk/> (accessed 01/10/20)

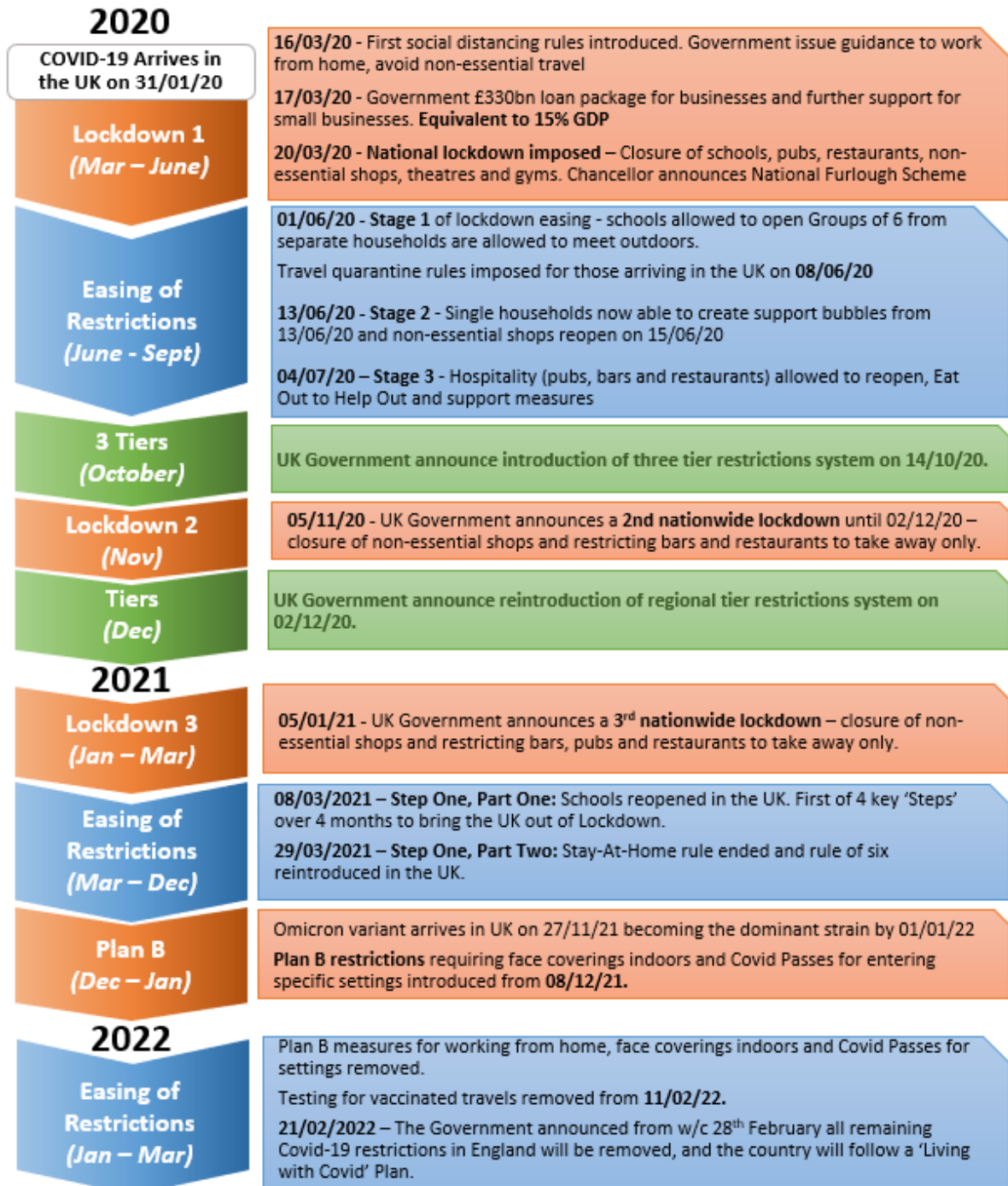
²⁵ COVID-19 Management Plan – Executive Summary (GMCA) <https://greatermanchester-ca.gov.uk/coronavirus/COVID-19-management-plan/>

²⁶ Prime Minister announces new local Covid Alert Levels - <https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels>

also recommended working from home where possible, were implemented from 8th December 2021 to 27th January 2022.

B.9 A summary of the key Covid-19 events and Government responses has been captured in **Figure B-1**.

Figure B-1 Covid-19 Timeline January 2020 to March 2022



B.10 The Covid-19 pandemic has had a transformative global impact to health, businesses, the economy, and way we live and interact with one another.

B.11 At the time of the production of this note in March 2022, the UK appears to be exiting the pandemic. Case numbers are stabilising, death and in-patient numbers

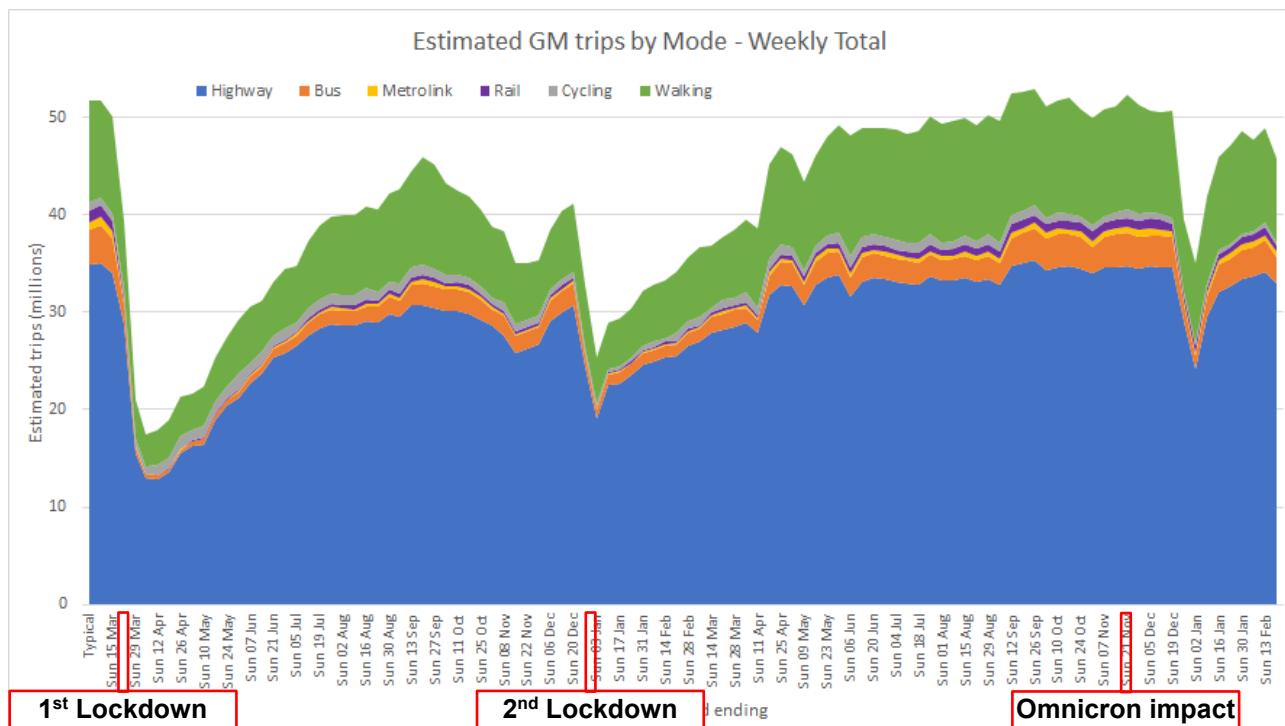
remain low, reflecting the positive impact of a successful vaccine programme rollout.

- B.12 However, emerging evidence gathered over the course of 2020 and 2021 has shown that there have been substantial changes to the economy, travel patterns and our behaviours. These changes have been driven by Government policy in the short term, however some of the behaviours adopted during Government lockdowns may continue as restrictions ease. In addition to this, economic impacts following the recent easing of restrictions have resulted in impacts which can be seen locally, nationally and globally within the economy.

Covid-19 Impacts on Travel Behaviour

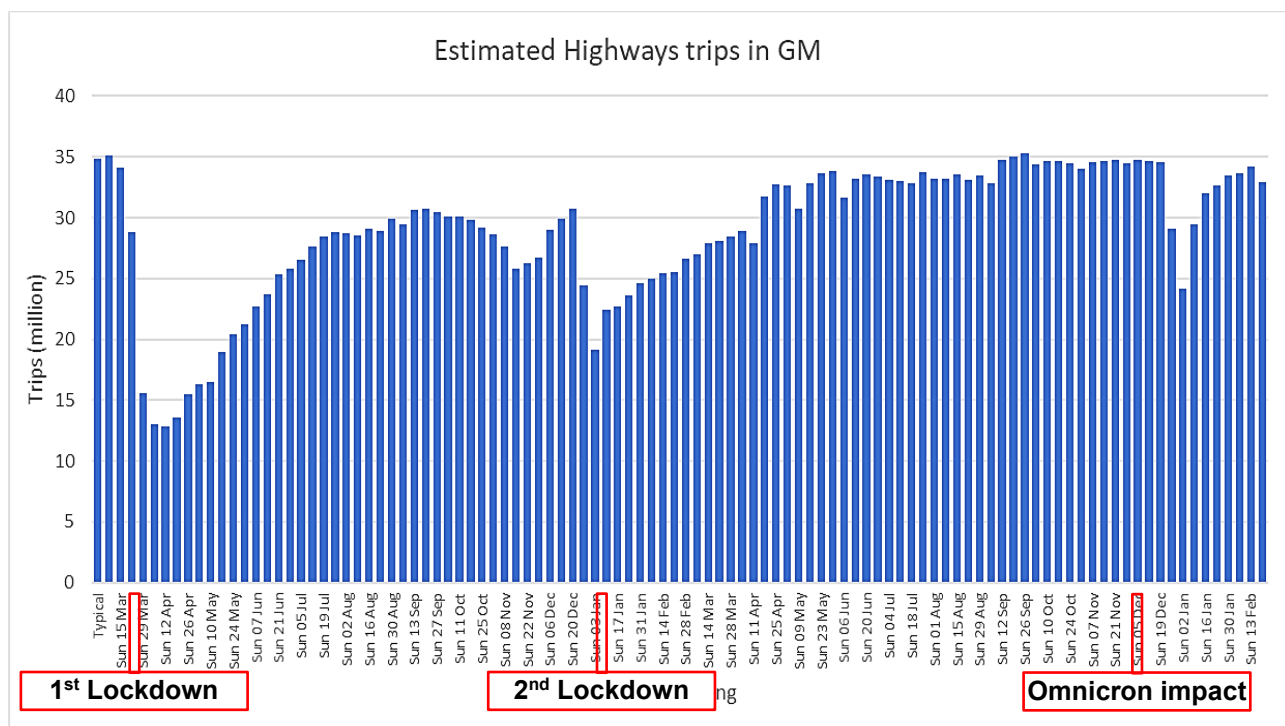
- B.13 Detailed analysis has been undertaken on the impacts of Covid-19 on travel demand within GM to compare 'pre-pandemic' and 'during pandemic' travel levels within GM.
- B.14 As shown in **Figure B-1**, there are a number of Government interventions which have had an impact on traffic levels (for all modes of transport). These include:
- Government guidance issued on 16th March 2020 to work from home 'where possible';
 - Closure of all UK schools to children, apart from those who have key worker guardians on 20th March 2020;
 - Closure of the hospitality and leisure sector on the 20th March 2020 including pubs, bars, restaurants, gyms, theatres etc.;
 - Re-opening of schools to all children in September 2020 alongside the UK Government encouraging workers to return to the office;
 - Implementation and extension of the Government Tiered restrictions;
 - Return to lockdown conditions on 5th November 2020, 2nd December 2020 and 6th January 2021; and
 - Hotel quarantine for travelers from high-risk countries.
- B.15 Since the beginning of the pandemic, travel patterns across the UK have significantly changed, driven by changing Government guidelines and the perception of transmission risks on certain forms of transport. An overview of the changing trends of travel behaviour by mode in Greater Manchester is provided in **Figure B-2** to **Figure B-6**; the data has been provided by TfGM. Three key dates have been flagged in each figure: the first and second national lockdowns plus the emergence of the Omicron variant.

Figure B-2 Overview of travel behaviour – All Modes



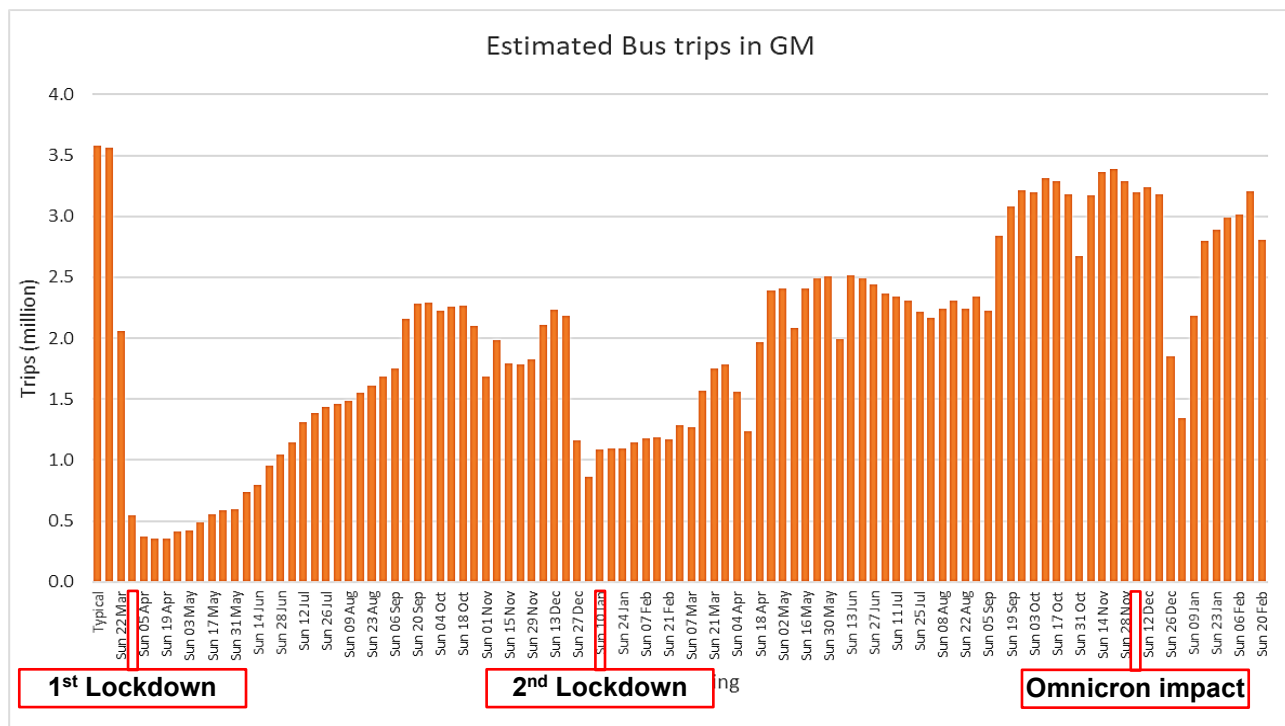
Source: TfGM

Figure B-3 Overview of travel behaviour – Highway



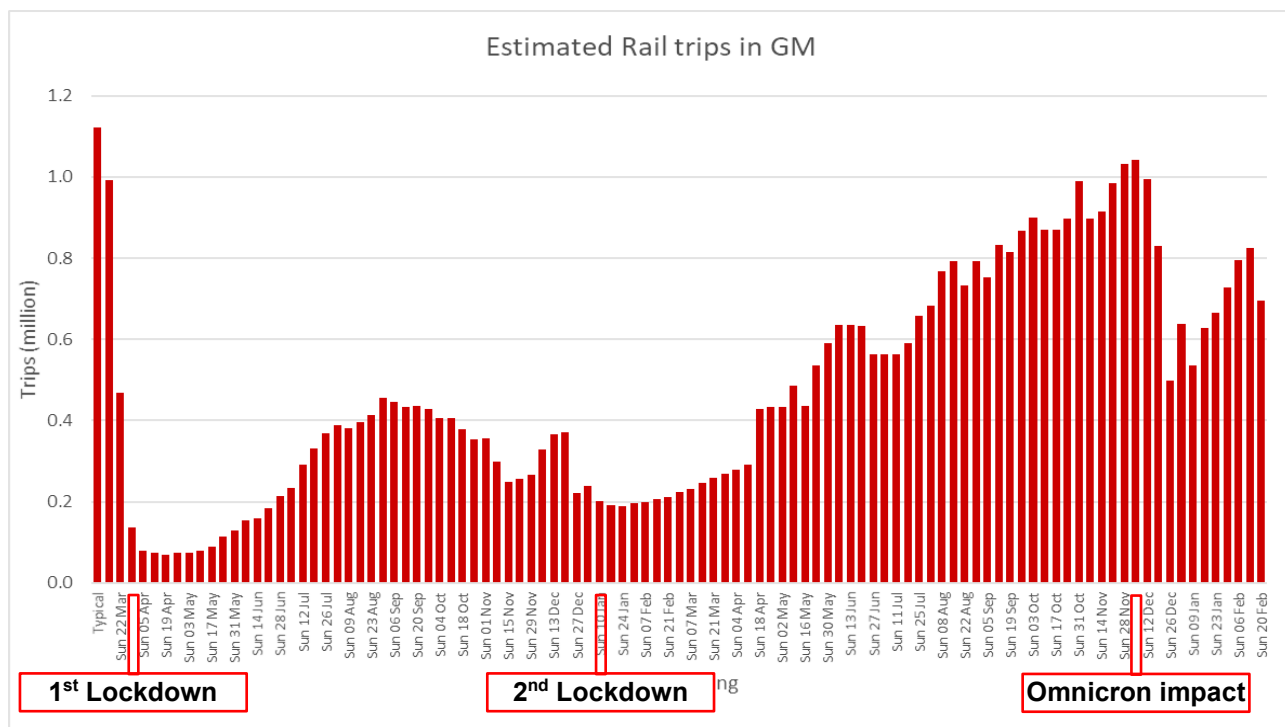
Source: TfGM

Figure B-4 Overview of travel behaviour – Bus



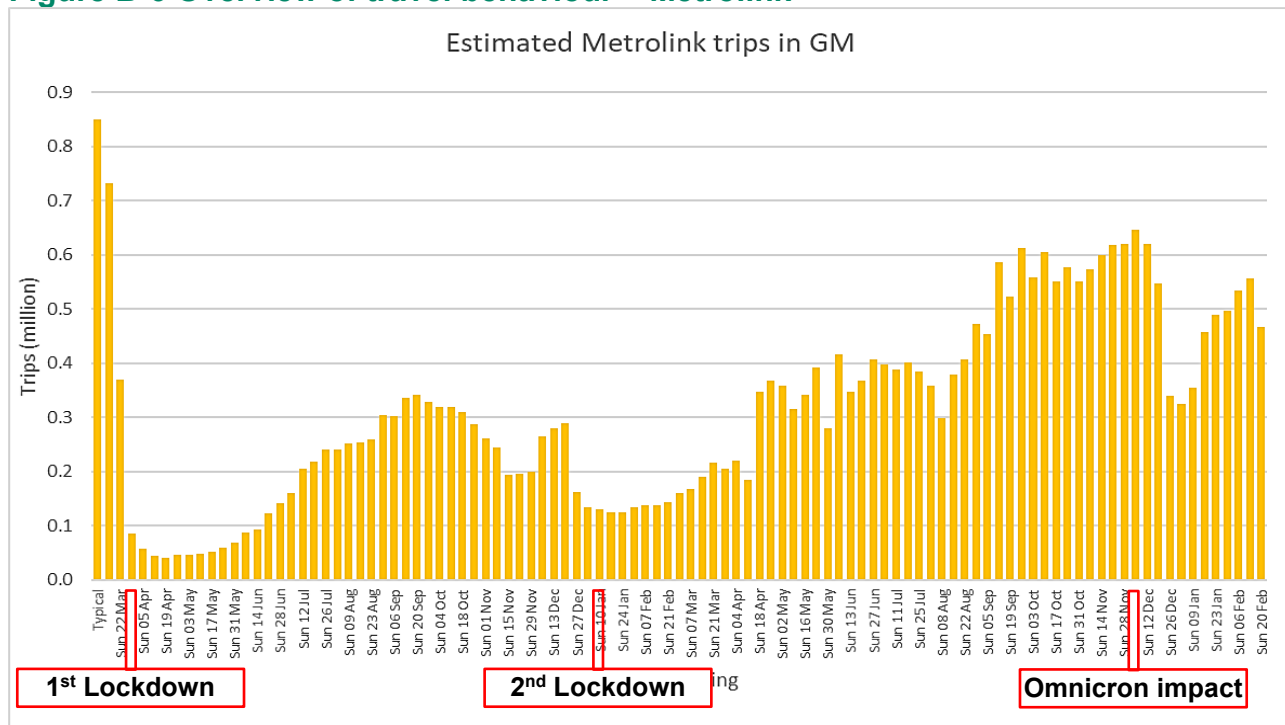
Source: TfGM

Figure B-5 Overview of travel behaviour – Rail



Source: TfGM

Figure B-6 Overview of travel behaviour – Metrolink



Source: TfGM

- B.16 These figures illustrate that the impact of the pandemic has been pronounced and the extent to which pre-pandemic travel volumes have returned varies by mode. In summary, at the aggregate level across GM:
- Highway trips are close to pre-pandemic levels (approximately 95% of 'typical'); and
 - Public transport trip levels are between 60% and 75% of pre-pandemic / typical levels with bus performing more strongly than rail / Metrolink.

Local Traffic Impacts

- B.17 Further analysis was undertaken regarding traffic flows on the local highway network, in order to understand the changing highway demand levels at various points through the pandemic. This has provided an insight into how the Covid-19 related travel guidance and changing behaviours because of the pandemic have impacted travel across GM.
- B.18 This analysis has considered changing travel levels at a range of locations across Greater Manchester, to understand how traffic flows have changed on the following:
- Roads near to the Regional Centre;
 - Key radial routes;
 - Roads adjacent to local centres within GM; and
 - Roads accessing centres of employment.
- B.19 The analysis has considered several points in time, comparing:
- September 2019 (before the pandemic);

- September 2020 (during the pandemic);
- November 2021 (during pandemic – pre Omicron); and
- January 2022 (most recent, though impacted by Omicron variant).

B.20 Traffic flow data was extracted and analysed from TfGM's C2 Database²⁷. These have been reviewed and presented for the 2-way hourly link volumes, by hour, at the following locations:

- Manchester Rd (A56) / 15m South of Ashlor St, Bury (ATC);
- Princess Rd (A5103) / 100m North of Bonsall St, Hulme, Manchester (ATC);
- Washway Rd (A56) / 40m North of Hunston Rd, Sale, Trafford (ATC);
- Bury New Rd (A56) / 90m North of Kingswood Rd, Prestwich, Bury (ATC); and
- Centenary Way (A576) / 160m North of Guinness Rd, Trafford Park, Trafford (ATC)

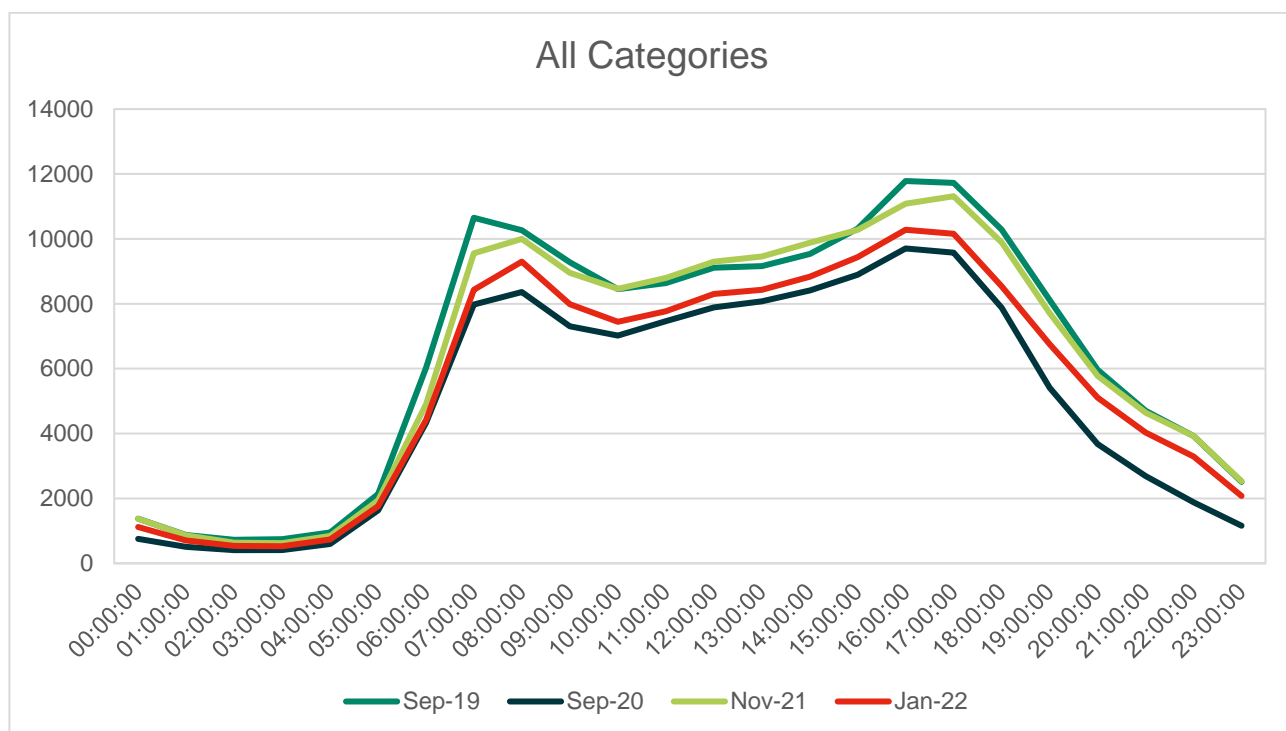
B.21 Using these specific locations around Greater Manchester the traffic behaviours at each location type can be assessed.

General Traffic Conditions

B.22 Averaging the sites identified above (see **Figure B-7**) suggests there has been a change in travel behaviour throughout the pandemic, noting the following key observations:

- The AM and PM peak periods have remained, although there is a dampening down effect on the peaks, with less variation between peak flows and interpeak flows, as the interpeak has continued to perform strongly.
- During late 2021, highway demand was almost back at pre-pandemic levels, there was then a noticeable drop again in demand as a result of the Omicron variant in December 2021.
- There has been some recovery during the peak periods, though they have not yet returned to pre pandemic levels.
- It is also noted that the earlier part of the AM peak is less strong than pre pandemic levels, with the AM peak now occurring 08:00 to 09:00, rather than 07:00 to 08:00 based on the sample of data sites.
- It also appears that the evening traffic (after 19:00) in 2022 is recovering at a slightly faster rate than the daytime traffic flows. This returned to pre-pandemic levels in November 2021 however, there has been a slight drop again in 2022, although it has been less impacted than other times of day. During the 2020 restrictions, the evening economy was significantly restricted by the Covid-19 restrictions in place at the time.

²⁷ <https://tfgmc2.drakewell.com/multinodemap.asp>

Figure B-7 Change in traffic flow levels by time of day (all areas)

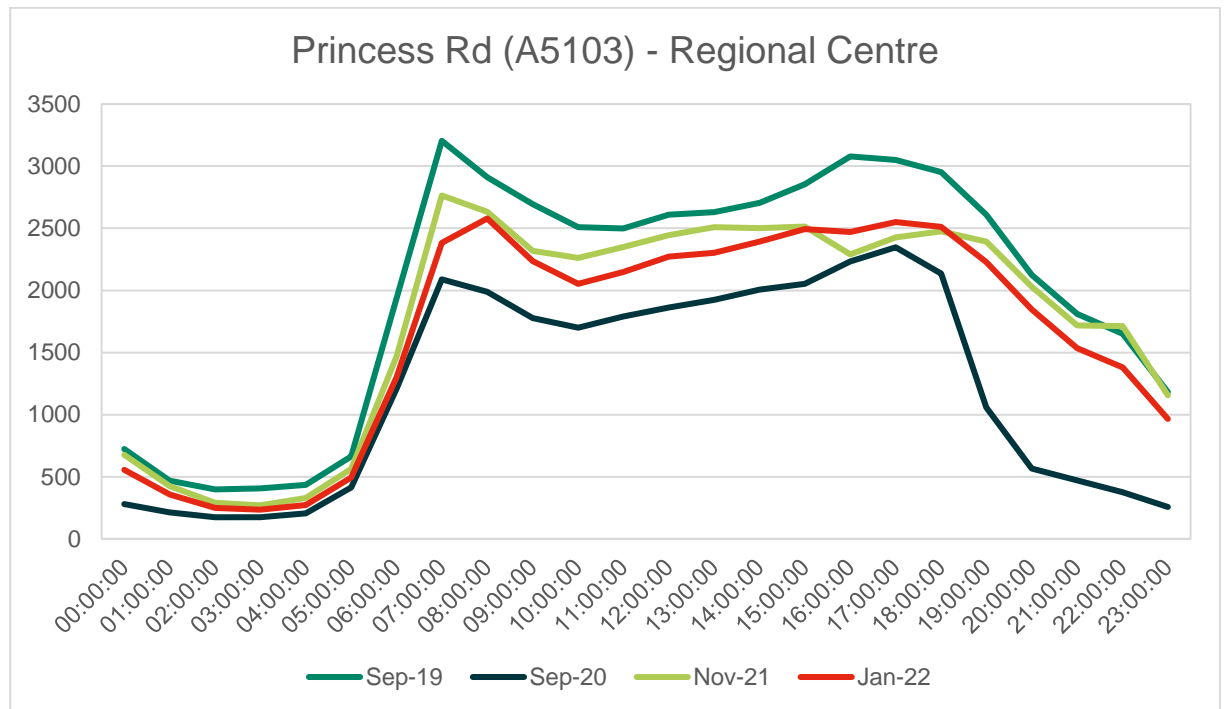
Source: TfGM C2 Database

Roads adjacent to the Regional Centre

B.23 Traffic flows adjacent to the Regional Centre have been significantly impacted throughout the pandemic (see **Figure B-8**). The following key trends have been identified:

- From the data assessed, the pandemic (and associated restrictions) appears to have had the greatest impact on regional centre flows, with the largest decrease in 2020 and the slowest recovery;
- The recovery of traffic flows in the peaks is still subdued, though traffic flows during the Omicron variant have been higher than in Autumn 2020, unlike what is seen at local centres;
- In 2020, Covid-19 restrictions had a considerable impact on demand for travel relating to the Regional Centre, with heavy restrictions placed on sectors such as leisure, tourism, and the night time economy. By November 2021, the easing of COVID restrictions resulted in a return of travel demand to the Regional Centre, showing considerable recovery at particular times of day, reaching close to 2019 levels. The 2022 travel demand to Mar-22 also showed a strong return of traffic during the evening periods, though the Omicron variant is likely to be keeping these slightly below pre-pandemic levels at present.
- The early part of the AM peak is now much weaker than prior to the pandemic, and the PM peak is less pronounced. In November 2021, traffic flows were slightly reduced from pre pandemic levels, with the PM peak most strongly impacted. In January 2022, the PM peak appears to be starting to recover, with a slightly later AM peak.

Figure B-8 Change in traffic flow levels by time of day (Regional Centre)

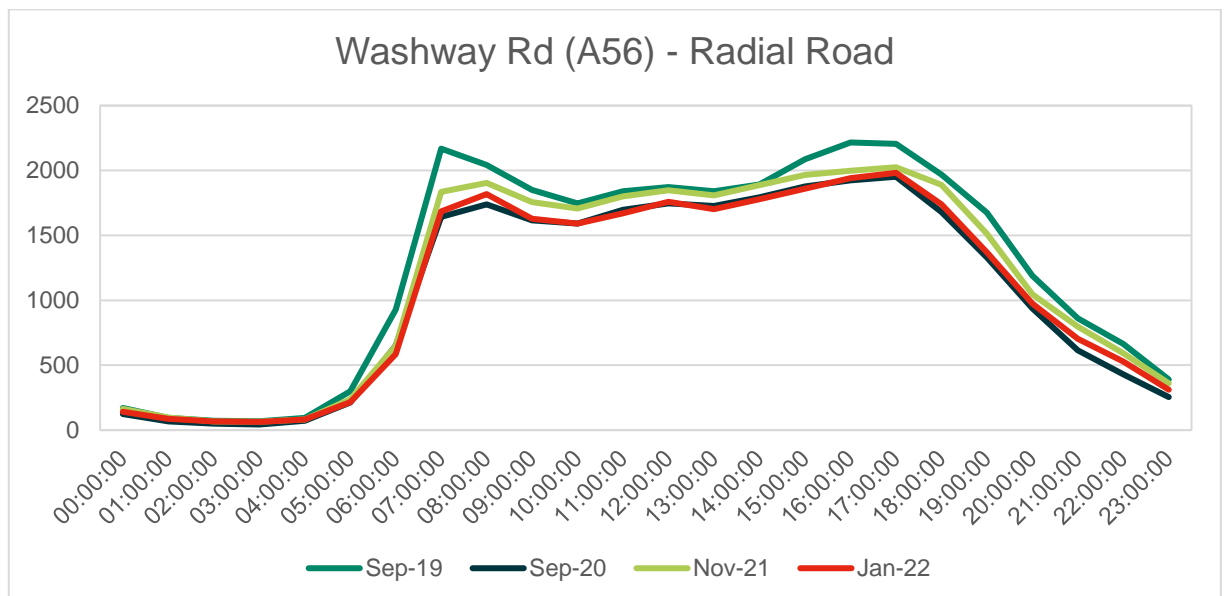


Source: TfGM C2 Database – Location N of Bonsall St, Hulme

Radial Roads

B.24 On Washway Road in Sale (see **Figure B-9**), its proximity close to the M60, and as a key radial route, has resulted in a high level of traffic demand at various points throughout the pandemic. The site is also close to the Local Centre of Sale. Demand has remained strong at the various points assessed although, as with most other locations, the peak periods are showing slightly lower demand in 2022.

Figure B-9 Change in traffic flow levels by time of day (Radial Roads Outside M60)

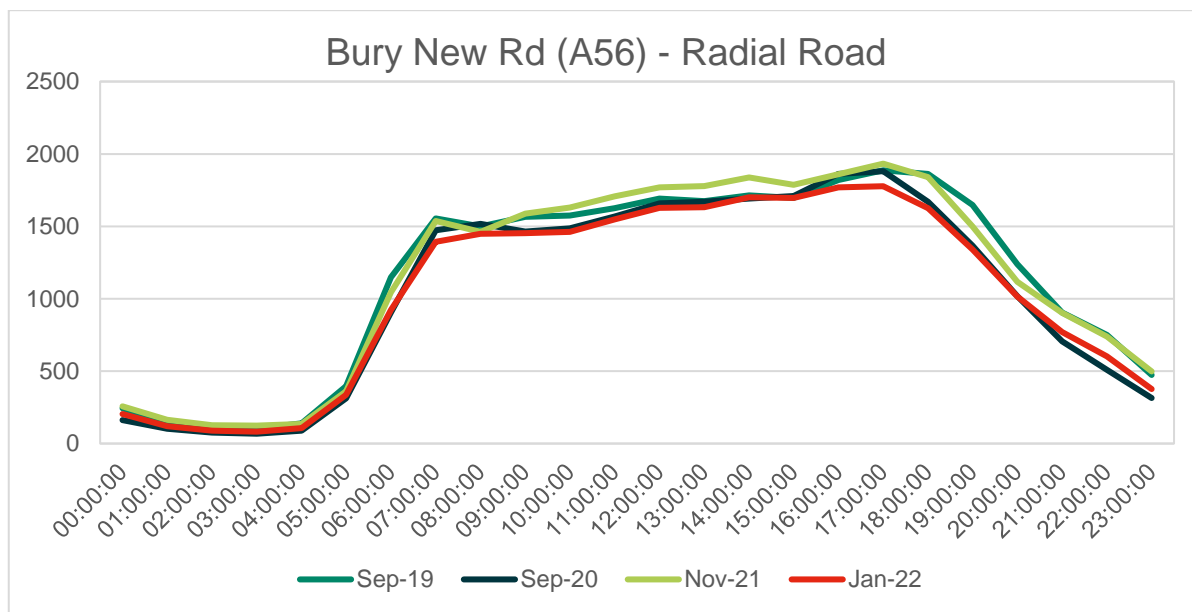


Source: TfGM C2 Database – Location adjacent to Sale Local Centre

B.25 Another key radial route north of the Regional Centre is Bury New Road (see **Figure B-10**). This site is also a key radial, though also serves local centres, such as at Prestwich. This location has shown a strong recovery of travel behaviour with travel at certain times of day exceeding pre-pandemic levels, especially during the

interpeak, both in autumn 2020, autumn 2021 and currently in 2022. The evening period has, however, shown a slower recovery.

Figure B-10 Change in traffic flow levels by time of day (Radial Roads Inside M60)

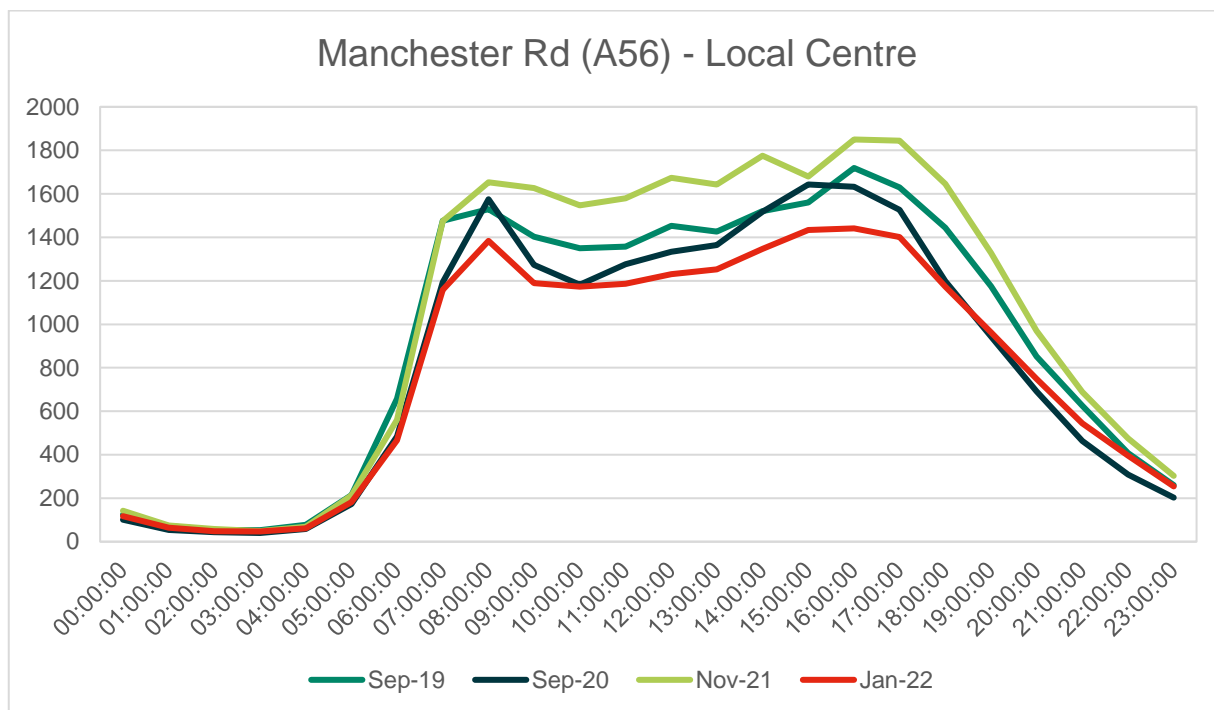


Source: TfGM C2 Database – Location N of Kingswood Rd, Prestwich (Near to M60 J17)

Local Centres

- B.26 Throughout the pandemic, as the UK Government eased travel guidance, travel demand in the vicinity of local centres, have bounced back strongly. **Figure B-11**, shows the A56 Manchester Road near Bury, which experienced a strong bounce back effect in Autumn 2020, when travel restrictions were eased. **Figure B-11** shows the later part of the AM peak and the early part of the PM peak exceeding pre pandemic levels, plus a strong interpeak and was likely an impact of more localised travel.
- B.27 By the end of 2021, demand had exceeded 2019 pre-pandemic levels by a clear margin, however this demand fell significantly in January 2022. The recent 2022 data shows the impacts of restrictions associated with the Omicron variant which has suppressed traffic flows once again.

Figure B-11 Change in traffic flow levels by time of day (adjacent to Local Centres)

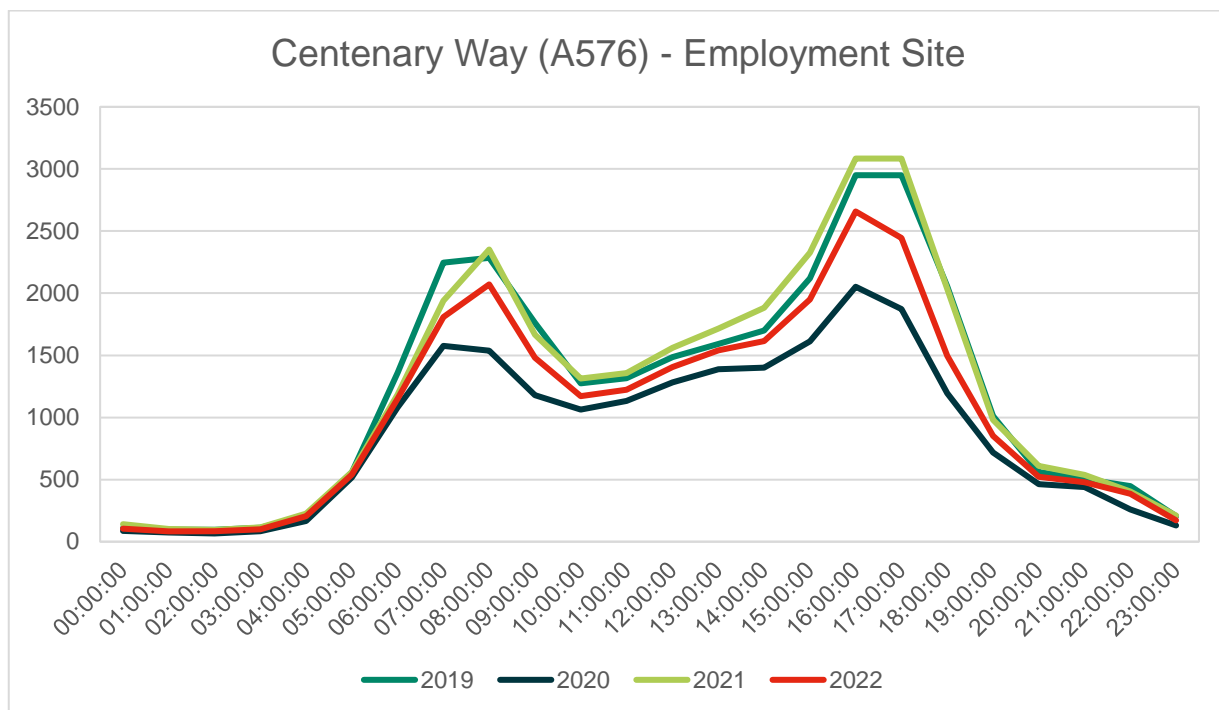


Source: TFGM C2 Database – Location S of Ashlor St, Bury

Centres of Employment (Trafford Park)

- B.28 Trafford Park is a major site of employment within Greater Manchester, with traffic flows accessing this employment area changing significantly during the pandemic.
- B.29 During the limited easing of travel restrictions in Autumn 2020, traffic flows to/from Trafford Park remained low, with limited return of higher peak time travel flows. This was possibly due to the higher levels of working from home at the time. The more recent data from November 2021 shows flows higher than pre-pandemic levels. January 2022, though impacted by the Omicron variant, shows a recovery of peak hour travel demand, close to pre pandemic levels, although the early part of the AM peak and the later part of the PM peak show a slightly weaker recovery. Interpeak travel is also similar to pre pandemic levels (See **Figure B-12**).

Figure B-12 Change in traffic flow levels by time of day (Centres of Employment)



Source: TFGM C2 Database – Location Trafford Park, Trafford

Summary

- B.30 The review of local traffic flows at various locations across GM has shown considerable variations in changing travel behaviour by location, when compared to pre-pandemic levels. This is likely to be impacted by changing travel habits, although the recent Omicron variant is likely to be impacting some travel behaviour in the 2022 data, as shown in **Figure B7**, general traffic levels in Autumn 2021 showed overall recovery in traffic flows above pre-pandemic levels.
- B.31 The change in travel behaviour by location since September 2019 is summarised in **Table B-1**.
- B.32 Considering the position in November 2021, when travel patterns were least affected, it is notable that Local Centre traffic flows were higher than previously whilst the Regional Centre flows were still much reduced. For radial routes and employment centres, overall (daily) levels were back to pre-pandemic but with some variation during the day; the morning peak being less pronounced but the interpeak higher.

Table B-1 Traffic flow changes by location type from September 2019 to January 2022

Location Type	Period	Change relative to Sep-19 (Index=100)			
		Sep-19	Sep-20	Nov-21	Jan-22
Regional Centre	AM	100	67	88	81
	IP	100	73	95	88
	PM	100	41	92	85
	Eve	100	26	95	85
	Daily	100	61	88	83
Radial inside M60	AM	100	98	98	93
	IP	100	98	105	96
	PM	100	101	102	96
	Eve	100	80	94	83
	Daily	100	92	101	91
Local Centres	AM	100	103	108	90
	IP	100	96	115	88
	PM	100	94	113	86
	Eve	100	74	110	87
	Daily	100	90	111	86
Employment Centre	AM	100	69	95	86
	IP	100	83	108	94
	PM	100	61	102	79
	Eve	100	74	99	91
	Daily	100	74	102	88

Source: TfGM C2 Database

Economic Related Impacts

Introduction

B.33 Changes in the economic situation are also likely to have had an influence on travel behaviour. The section below presents the trends for a range of factors impacting the economy, several of which are likely to impact the way people travel and businesses operate.

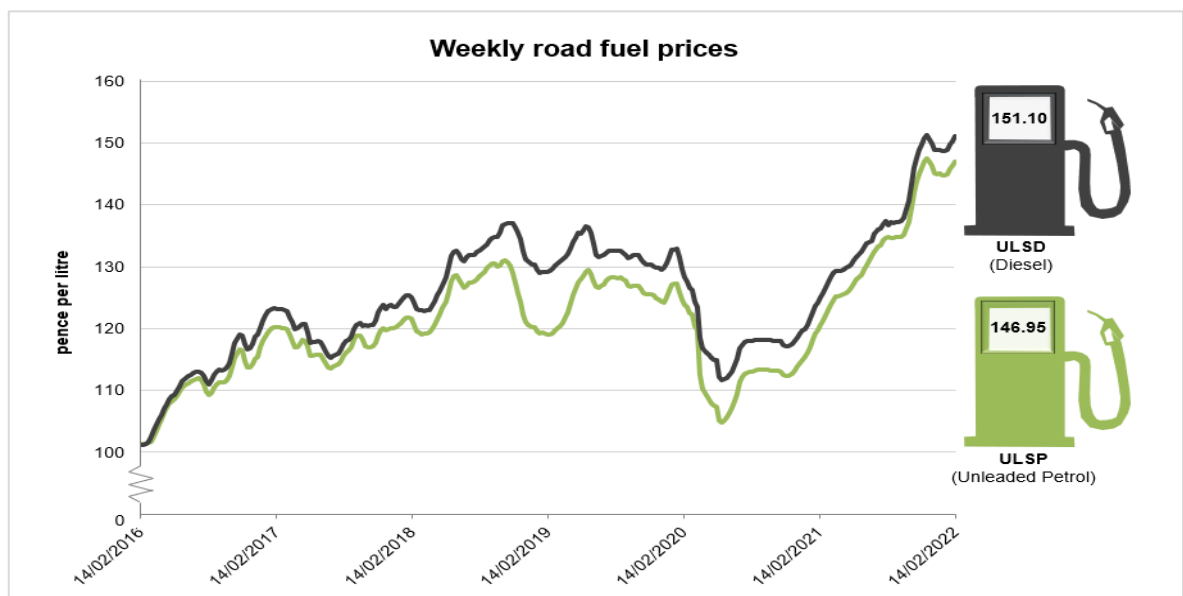
Fuel Prices

B.34 There are six companies (four oil companies and two supermarkets) that feed into the weekly fuel price survey prepared by the government. These companies cover around 65% of the market. The change in fuel price is displayed in **Figure B-13**.

B.35 The price of road fuel is volatile over shorter time periods, with prices regularly rising and falling. The key trends from during the pandemic are:

- At the start of 2020 prices appear to have been on the decline. There was then a significant fall in both Diesel and Unleaded Petrol in early 2020, corresponding with the first national lockdown.
- During the second part of 2020, prices appear to be stable, with prices beginning to rise steadily throughout 2021 in line with global oil market prices.
- There is a steep rise in prices towards the end of 2021, reaching record highs. This corresponds with a sudden rise in post-pandemic energy demand. This has triggered a tax freeze on petrol and diesel for the twelfth year in a row²⁸.
- In September 2021 long queues and forecourt closures were witnessed, caused by panic buying throughout the country, sparking a fuel shortage in Britain.

Figure B-13 Weekly Road Fuel Prices



Source: [gov.uk](https://www.gov.uk)

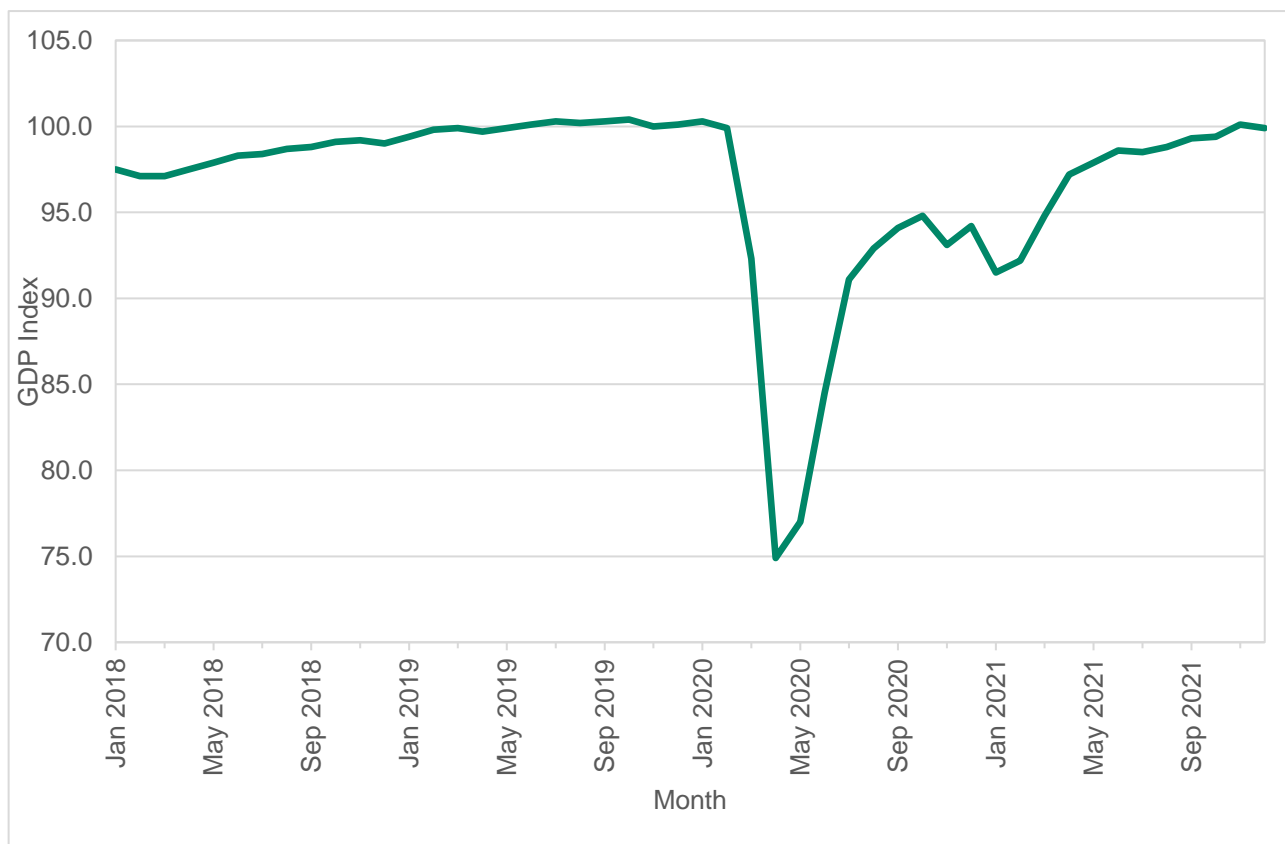
²⁸ <https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html>

B.36 It was already likely that the price of fuel would remain unsteady for some time as a consequence of the impact of the pandemic and recent events in Ukraine have brought additional uncertainty to that market.

GDP

B.37 From bulletins on the ONS data website²⁹ the end of 2021 saw a drop in GDP by 0.2%, to equal the pre pandemic level of February 2020. In December 2021 services and construction are both above pre-pandemic levels, while production remained below. Consumer facing services fell within December, driven by a fall in retail, 8.4% below pre-coronavirus levels, contributing to the GDP fall in December 2021 (see **Figure B-14**).

Figure B-14 GDP in the UK (Index, 2019 = 100)



Source: [ons.gov.uk/economy](https://www.ons.gov.uk/economy)³⁰

B.38 Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021³¹. In real terms (adjusted for inflation), total and regular pay fell for the year by 0.1% and 0.8% respectively.

Imports and Exports

B.39 **Figure B-15** shows the trends in UK goods imports and exports throughout 2019, 2020, and 2021. After an initial decrease in imports at the beginning of the pandemic, this appears to have recovered. There was another significant decrease at the end of 2020, however imported goods are on the increase back to

²⁹ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

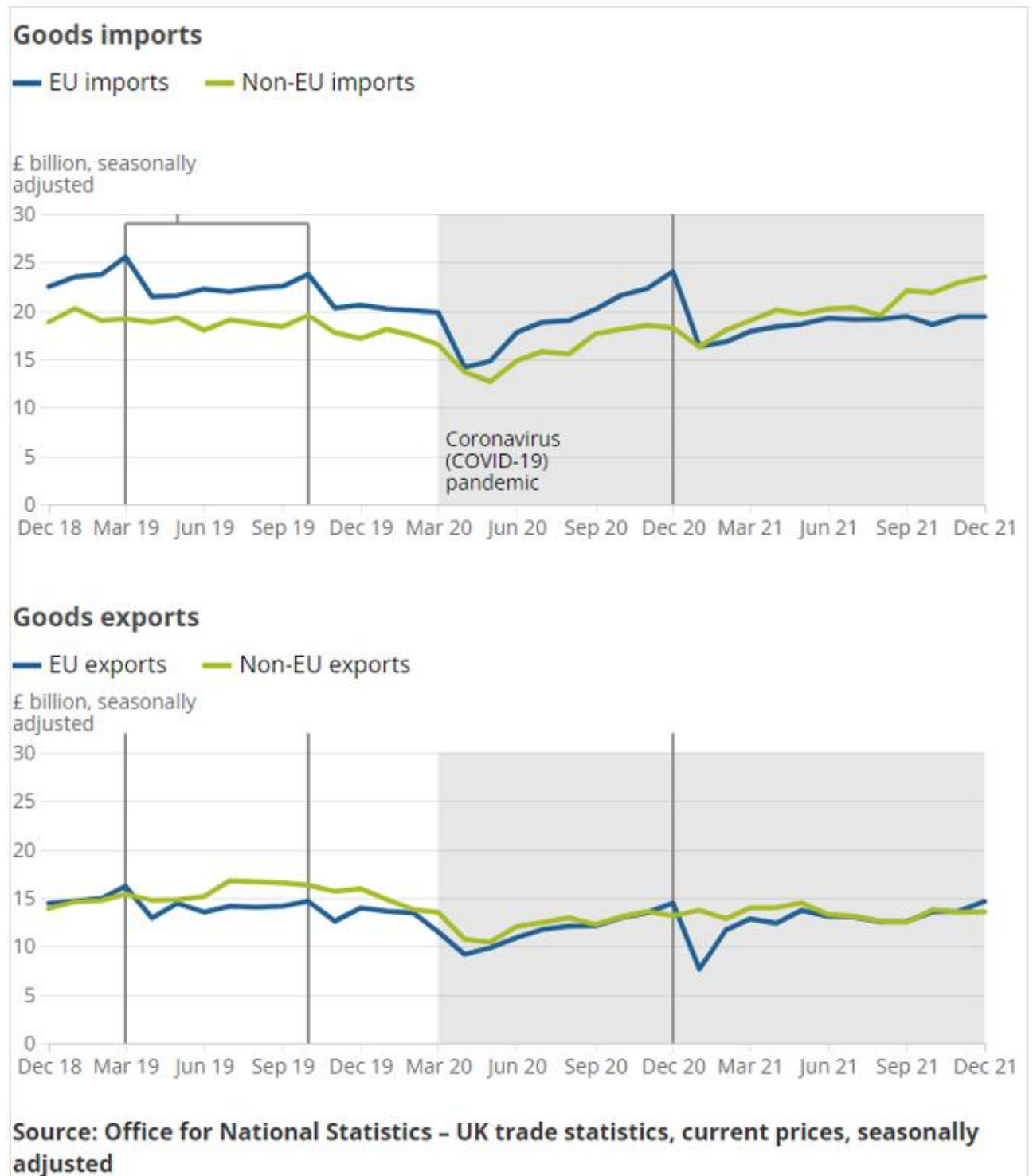
³⁰ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

³¹

<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022>

pre-pandemic levels. There was less impact on exports, with these remaining steady throughout.

Figure B-15 Import and Exports



Source: ons.gov.uk/economy³²

Centre for Cities – Cities Outlook

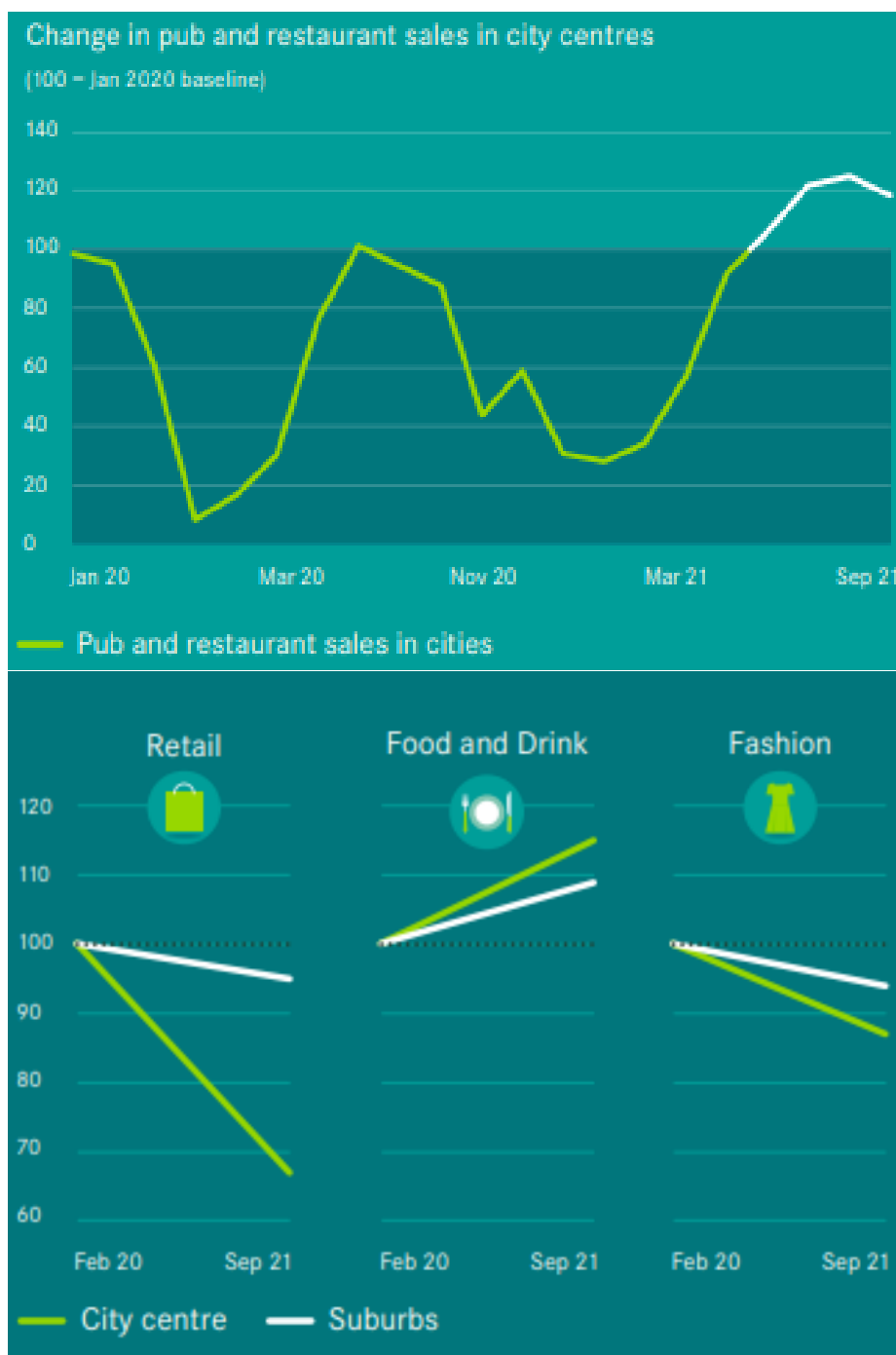
- B.40 Centre for Cities produced the Cities Outlook 2022 report looking in-depth at the state of UK high streets, to get a sense of the short-term impact of the pandemic on Britain's town and city centres, and the long-term consequences and implications this has for the Government's levelling up agenda. This report showed

³² <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomylatest/2021-01-25#output>

that there was a quick and considerable shift away from high streets to online shopping during the pandemic. However, in most cities the shift stalled, or slightly fell again once shops reopened.

- B.41 The Cities Outlook report also studies the impacts on pubs and restaurants, stating that the fashion sector was hit harder than pubs and restaurants. **Figure B-16** shows the trend in sales throughout 2020 and 2021. There are clear decreases in sales corresponding to the national lockdowns but in all instances, these soon recover when the sector reopens. This is also reflected in the suburbs, with retail and fashion experiencing a slight decline from Feb 2020 to September 2021 but food and drink on a steady incline.

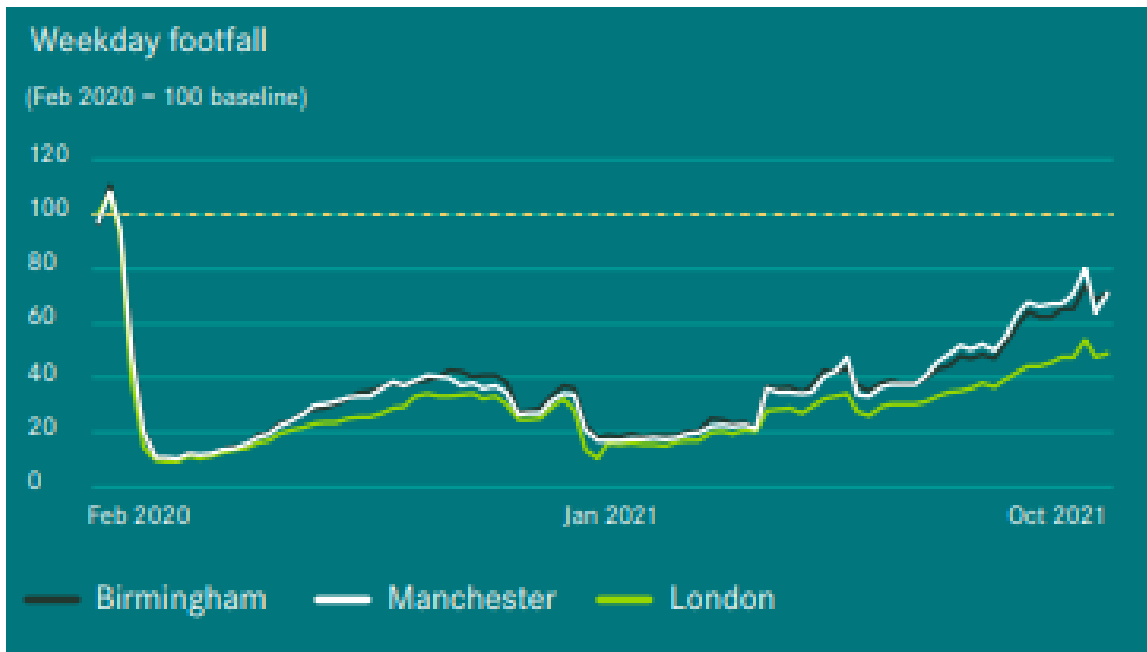
Figure B-16 Change in pub and restaurant sales in City Centres and Suburbs



Source: ons.gov.uk/economy³³

- B.42 Due to the work from home regulations and, for many, working from home becoming a regular part of the working week, it is feared the reduced footfall in cities will have a lasting effect on retail, hospitality, and transport sectors. **Figure B-17** show the weekday footfall in London, Manchester and Birmingham. Although not yet back to pre-pandemic levels, there is a steady climb in footfall in the major cities with Manchester appearing to recover more quickly than Birmingham, and London taking considerably longer.
- B.43 The more significant impact on London may be related to the impact of Covid-19 on international tourism.

Figure B-17 Weekday footfall



Source: ons.gov.uk/economy

³³ <https://www.centreforcities.org/>

Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside

Appendix B - Technical Note: Vehicle Sector Review – Taxis (Hackney Carriages and Private Hire Vehicles)

DRAFT FOR APPROVAL

June 2022

1. Introduction

Background

- 1.1 After the initial Outline Business Case (OBC) submission in March 2019, a series of technical notes were published setting out the results of analysis and research carried out to better understand the vehicles in scope for the scheme. For taxis, this included, in particular, *Technical Note 10: Taxi Behavioural Responses Note*, and *Technical Note 19: Taxi and Private Hire Vehicle Fleet Research*.¹
- 1.2 Further notes were produced setting out the development of analytical tools for taxis, with the latest published summary of that work provided in *T4 Appendix A* of the *Modelling for Consultation*.² Research was carried out with taxi owners potentially in scope for the scheme, including deliberative research³ and a survey with 66 taxi owners.⁴
- 1.3 This evidence formed the basis of the development of the Option for Consultation. From March 2020, it became clear that the Covid-19 pandemic would affect the Greater Manchester Clean Air Plan (GM CAP); a programme of work was carried out in 2020/2021 to better understand the possible impacts of the Covid-19 pandemic on the GM CAP, published as the *Impacts of COVID Report* in June 2021.⁵ This evidence, alongside feedback from the Consultation, was used to inform the revised GM CAP as approved by the ten GM local authorities in June/July 2021.
- 1.4 At that time, GM identified several possible risks to the GM CAP, which included concerns about the risk of vehicle price increases and the impact of any further lockdowns in the UK or countries in the supply chain.
- 1.5 This report, which was originally developed in February 2022, draws a series of findings and conclusions to better understand the circumstances affecting hackney and PHV owners in Spring 2022 (based upon the previous' GM CAP implementation date) and the implications for the GM CAP and surrounding policy framework.
- 1.6 Since Spring 2022, there have been further dramatic changes to the economic context in the UK which are not explicitly addressed in this report but are set out in **Appendix E**. A range of factors associated with the impact from war in Ukraine, increased costs of energy and fuel, changes to Bank of England base rates and forecasts, global supply chain challenges, and the cost-of-living crisis have combined to create a context of increased financial hardship for businesses and families.

Structure of Note

- 1.7 The remaining sections of the report are structured as follows:

¹ All available at <https://cleanairgm.com/technical-documents/>

² https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf

³ https://assets.ctfassets.net/tlpgbv1k6h2/15ZwMWdJ0EQ1NvqPNG1Hgw/f856512a823040934674eb543573ff70/GM_CAP_Deliberative_Research_ALL_-_Spring_2019.pdf

⁴ https://assets.ctfassets.net/tlpgbv1k6h2/5e5iXeGPZwXiSvaTTWqID0/4c93aa82e0d4ec3e5f4f7ddcb29ae9ff/GM_CAP_Survey_and_Interviews_VAN_-_Autumn_2019.pdf

⁵ https://assets.ctfassets.net/tlpgbv1k6h2/2vJXVuLxfXON7HexGli29Q/4726e8696145d9f10bd1b19c16bdc1dd/Appendix_5_Impact_of_Covid-19_Report.pdf

- **Section 2** provides a review of the in-scope vehicles of the current Taxi sector in GM;
 - **Section 3** reviews the impacts of Covid-19 on the Taxis sector, with a particular focus on the availability and prices of purchasing new and used taxis. This chapter also considers the vulnerability impacts of Covid-19 on the sector; and
 - **Section 4** provides a summary of the key findings, also presenting details of any key risks or issues facing the sector in responding to GM CAP.
- 1.8 In addition, **Appendix A** provides a list of data used to inform the report and **Appendix B** reviews the recent changes in travel behaviour within GM through the pandemic up until January 2022.

2. Review of Vehicles in Scope

Overview of Vehicle Sector

- 2.1 Taxis offer a flexible form of door-to-door public transportation. The taxi vehicle sector comprises of two vehicle types:
- Hackney Carriage; and
 - Private Hire Vehicles (PHVs).
- 2.2 Hackney Carriages can be distinguished from PHVs in their licensing and operating regime. Hackney Carriages can legally be hailed by passengers in the street, pick up fares from taxi ranks and take pre-bookings from within their licensing authority (or an origin outside their area in the case of pre-bookings only). PHVs must be pre-booked with a licensed operator and cannot be hailed by passengers in the street or use taxi ranks. For the purposes of this note, 'taxi' refers to the collective term for both Hackney Carriages and PHVs.
- 2.3 Local Authorities regulate Hackney Carriage fare tariffs and have control over total Hackney Carriage numbers through the issue of licences. A licence is required for both the Hackney Carriage and for any person driving a Hackney Carriage. PHVs fares are not regulated by the local authorities and the council has no power to regulate fares charged.
- 2.4 Detailed research on taxis has been carried out as part of the Clean Taxi Fund (CTF) - Case for Measure, produced in Autumn 2020 and Cost Response Model reports.
- 2.5 It is important to note that there are a small number of Hackney Carriage that operate within GM that are not registered to a GM Local Authority (LA), these vehicles would also be affected by GM CAP. Due to Hackney Carriage operational requirements, non-GM licensed Hackney Carriages are not permitted to take fares solely within GM. Therefore, non-GM Hackney Carriages operating within GM will be for trips where the journey origin is outside GM or for pre booked journeys.
- 2.6 For context, the proportion of vehicle types in GM, relative to the regional and national averages, are provided in **Table 2-1** based on the latest available registration statistics from the DfT. There will be instances, particularly for commercial usage, where vehicles are registered in one location but used in another, but this table provides an overview of the relative size of each fleet.

Table 2-1 Proportion of Vehicle Types Registered by Area, Jan-22

	Cars	Van	HGV	Bus & Coach	Other
GB	85.0%	11.3%	1.3%	0.4%	2.1%
England	85.1%	11.3%	1.3%	0.4%	1.9%
NW	85.7%	10.9%	1.5%	0.3%	1.6%
GM	85.6%	11.8%	1.6%	0.4%	0.7%

Source: Department for Transport, Statistical data set, All vehicles (VEH01), Last updated 13 January 2022

- 2.7 Within these national statistics, Hackneys are one of a number of vehicle types categorised as 'other'; PHVs are included within the cars category.

- 2.8 Referring to ANPR data captured by GM in 2019, compared to the GM Taxi fleet list, GM licensed taxis as a proportion of cars registered in GM equates to approximately 1.4%.

In-scope Vehicles

Compliance of the Hackney Carriage fleet serving GM

- 2.9 **Table 2-2** presents the number of Hackney Carriages estimated to be serving GM in 2019 and 2023, including splits by compliant and non-compliant vehicles which failed to meet Euro VI standards at that point.

Table 2-2 Number of Hackneys Carriages in GM by compliance – 2019 & 2023 (without CAP)

	2019			2023 ⁶		
	GM Licensed	Non-GM Licensed	Total	GM Licensed	Non-GM Licensed	Total
Compliant	259 (12%)	37 (13%)	296 (12%)	738 (36%)	105 (36%)	844 (36%)
Non-Compliant	1,821 (88%)	259 (87%)	2,080 (88%)	1,342 (64%)	191 (64%)	1,532 (64%)
Total	2,080 (100%)	296 (100%)	2,376 (100%)	2,080 (100%)	296 (100%)	2,376 (100%)

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates (FBC – includes 1 year delay in natural fleet upgrade)

- 2.10 In 2019, there were 2,376 Hackney Carriages serving GM, with 296 (12%) deemed compliant and 2,080 (88%) non-compliant. Non-GM licensed vehicles represent 10% of the total.
- 2.11 The large proportion of Hackney Carriages which are non-compliant is partly due to a relatively long lifespan, with many Hackney Carriage owners typically holding onto vehicles for several years (given the limited second-hand market for this vehicle type). Also, compliant Hackney Carriages did not come onto the market until 2015, with the Euro VI standard coming into force for Hackney Carriages in 2015.
- 2.12 GM forecast that the number of non-compliant Hackney Carriages serving GM will have reduced from 2,080 in 2019 to 1,532 by 2023 as a result of ongoing vehicle upgrades. This means that 548 vehicles would have been upgraded from a non-compliant vehicle as a result of business-as-usual purchase.
- 2.13 The anticipated rate of upgrade for Hackney Carriages was revised in 2021 based on evidence that the Covid-19 pandemic had delayed vehicle purchases, such that the fleet was estimated to be around 12 months older than previously forecast (note this delay is represented within the values quoted in **Table 2-2**).

⁶ Note: 2023 vehicle volumes include a one-year delay in the natural turnover of the taxi fleet assumption. This assumption was agreed with JAQU in Spring 2021 and incorporated within the 2021 modelling undertaken by GM support the FBC and is currently being reviewed based on new available data.

2.14 The rationale and methodology for this change is set out in the report “GM’s proposed approach to representing the impact of Covid-19 in core modelling scenarios”.⁷ This had the effect of reducing the number of GM-based Hackney Carriages expected to make a business-as-usual upgrade between 2019 and 2023 by 149.⁸

Compliance of the PHV fleet serving GM

2.15 **Table 2-3** presents the number of PHVs estimated to be serving GM in 2019 and 2023, including splits by compliant and non-compliant vehicles which failed to meet Euro VI standards at that point.

Table 2-3 Number of PHVs in GM by compliance – 2019 & 2023 (without CAP)

	2019			2023		
	GM Licensed	Non-GM Licensed*	Total	GM Licensed	Non-GM Licensed	Total
Compliant	3,595 (29%)	1,384 (29%)	4,979 (29%)	8,425 (68%)	3,243 (68%)	11,668 (68%)
Non-Compliant	8,806 (71%)	3,390 (71%)	12,196 (71%)	3,976 (32%)	1,530 (32%)	5,506 (32%)
Total	12,401 (100%)	4,773 (100%)	17,174 (100%)	12,401 (100%)	4,773 (100%)	17,174 (100%)

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates. *Note: Non-GM fleet information estimated based on FOI request data. Note: 2023 values include a 12 month delay to the natural turnover of the fleet due to the pandemic

2.16 In 2019, there were 17,174 PHVs serving GM, with 4,979 (29%) deemed compliant and 12,196 (71%) non-compliant. Vehicles licensed with one of GM’s ten local authorities are as likely to be compliant as non-GM licensed vehicles (29% compliant).

2.17 A proportion of the PHVs within the taxi fleet would normally be upgraded each year, with the oldest vehicles being scrapped out of the fleet. GM’s forecast suggests that the number of non-compliant PHVs serving GM will have reduced from 12,196 in 2019 to 5,506 by 2023. Meaning 6,690 vehicles would have been upgraded from a non-compliant vehicle as a result of business-as-usual purchase.

2.18 Based on evidence that the Covid-19 pandemic had delayed vehicle purchases, the anticipated rate of upgrade for PHVs was revised in 2021, such that the fleet was estimated to be around 12 months older than previously forecast. The rationale and methodology for this change is set out in the report “GM’s proposed approach to representing the impact of Covid-19 in core modelling scenarios”⁹. This had the effect of reducing the number of GM-based PHVs expected to make a business-as-usual upgrade between 2019 and 2023 by 965¹⁰.

⁷

https://assets.ctfassets.net/tlpgbvvy1k6h2/2ZMJ3DJXiv7p3xOeZu4CYQ/247196ef60e33ac89f7f8938e1e16418/Appendix_6D_GM_proposed_approach_to_representing_the_impact_of_Covid-19_in_core_modelling_scenarios.pdf

⁸ TN 37 Vehicle Populations, compared to T4 Annex C

⁹

https://assets.ctfassets.net/tlpgbvvy1k6h2/2ZMJ3DJXiv7p3xOeZu4CYQ/247196ef60e33ac89f7f8938e1e16418/Appendix_6D_GM_proposed_approach_to_representing_the_impact_of_Covid-19_in_core_modelling_scenarios.pdf

¹⁰ TN 37 Vehicle Populations, compared to T4 Annex C

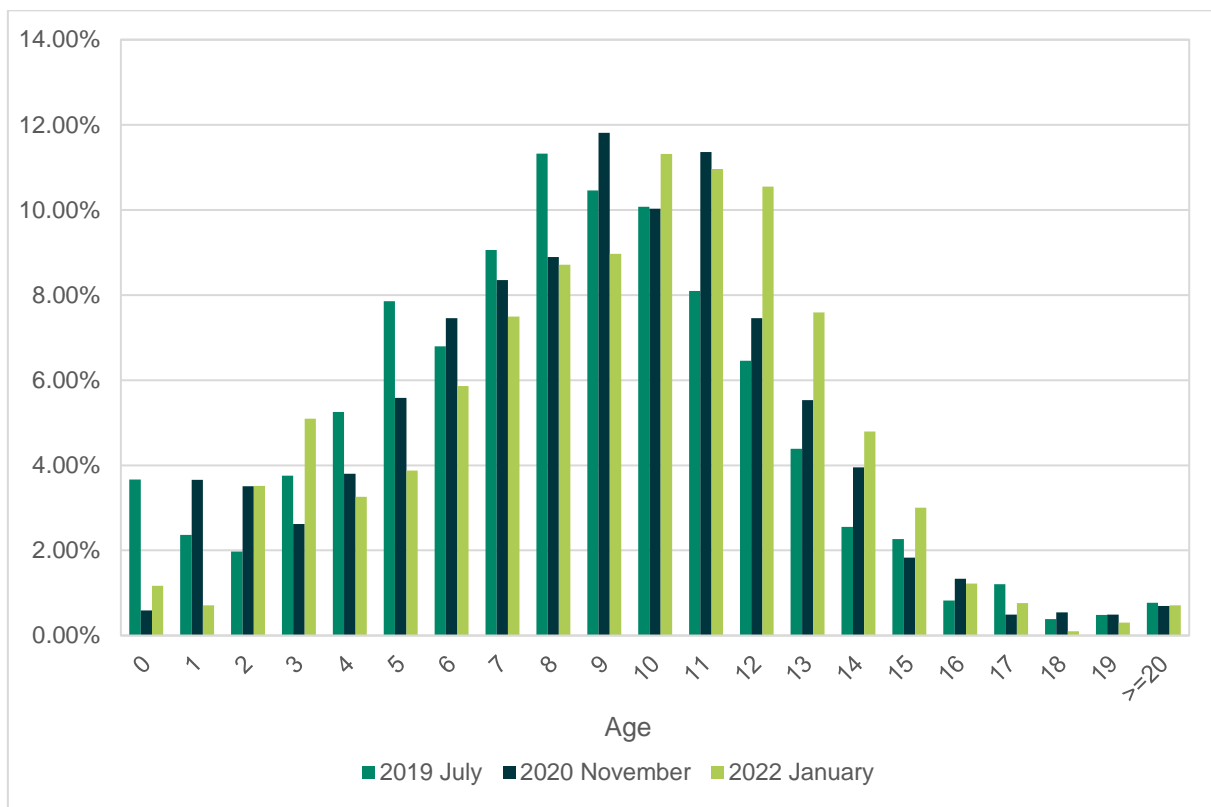
Review of Fleet Profile

2.19 Taxi licensing data from GM local authorities has been obtained and compared across July 2019, November 2020 and January 2022 to understand the taxi fleet profile operating in GM and how it has changed over time.

2.20 **Figure 2-1** below provides an insight into the change of GM-registered Hackney Carriage age profile over time. Only 12 brand-new Hackney Carriages (0-year-old) were licensed within GM within the year before November 2020 which is significantly lower than that of 2019 when 76 brand-new Hackney Carriages were licensed. The number of brand-new Hackney Carriages licensed increased from 12 to 23 in 2022 although this is still lower than the 2019 figure of 76, and suggests that the purchasing of new Hackney Carriages has significantly reduced since 2019.

2.21 It can be seen clearly that the Hackney Carriage age profile has been slightly “shifted” to the right from 2019 to 2022, which indicates that fleet age has grown older, and the fleet natural upgrade process had been delayed slightly.

Figure 2-1 Change in Hackney Carriage Fleet Age Distribution

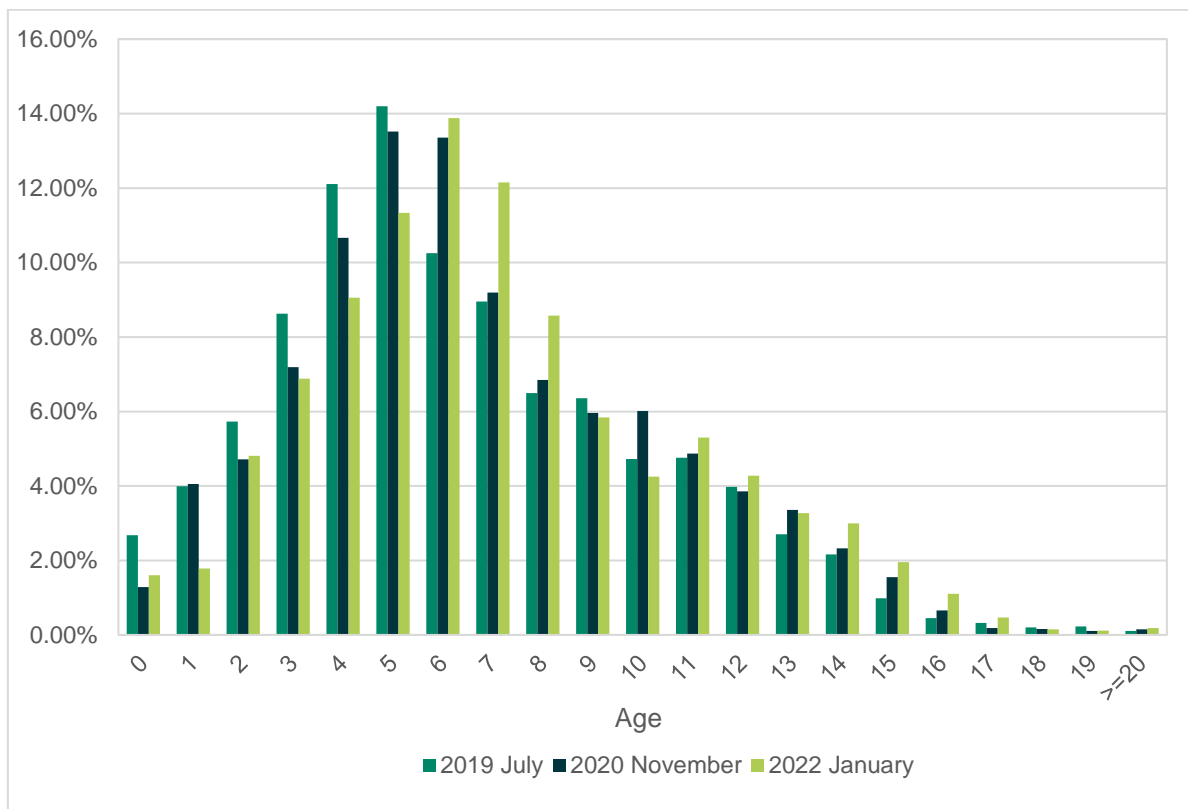


Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

2.22 A similar trend can be seen in PHVs as shown in **Figure 2-2**, with 147 brand-new PHVs licensed in the year before November 2020, which is less than half of the number in 2019 (327). 181 brand-new PHVs were licensed in 2022, a slight increase from 2020, although still lower than the number in year 2019 (327). This suggests there has been a reduction in the purchasing of brand-new PHVs since 2019.

2.23 The PHV fleet age profile had also grown older in 2020 and 2022 comparing to 2019, which indicates that the PHV fleet natural-upgrade process had also been delayed. However, the upgrade delay seems to be less significant when compared to that of Hackney Carriages.

Figure 2-2 Change in PHV Fleet Age Distribution



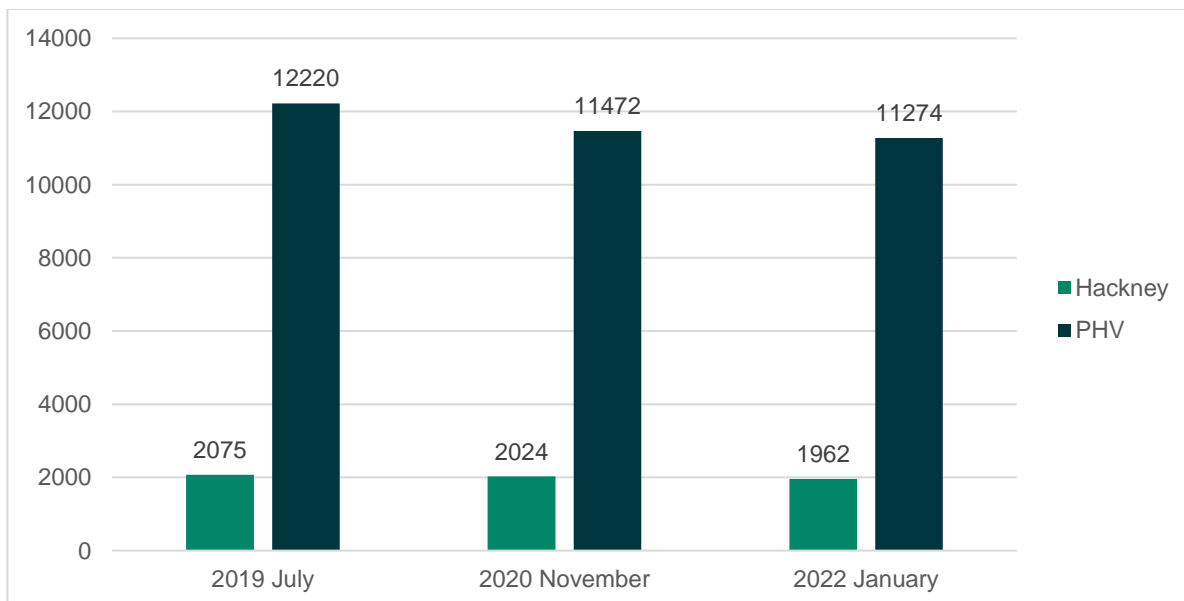
Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

2.24 ANPR data shows the age distribution for both GM registered Hackney Carriages and PHVs increased from 2019 to 2021. Comparisons of key vehicle profiles have been conducted to examine the changes over time. The key findings are as follows:

Total GM registered taxi numbers

2.25 The total number of GM licensed taxis decreased from 2019 to 2022 by 5.4% for PHVs and 7.7.% for Hackney Carriages as shown in **Figure 2-3**.

Figure 2-3 Total GM Licensed Hackney Carriage and PHV Numbers



Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Taxi age profile

2.26 The average age of both PHVs and Hackney Carriages in the GM licensed fleet increased from 2019 to 2022 as shown in **Table 2-4**. The PHV average age increased by 0.7 years and Hackney Carriages by 0.9 years. The average age of PHVs is now 7.1 years and 9.1 years for Hackney Carriages

Table 2-4 Average Vehicle Age

Taxi Types	Data year	2019	2020	2022
Hackney Carriage	Average Age	8.2	8.7	9.1
	Most common age group	8	9	10
PHV	Average Age	6.4	6.8	7.1
	Most common age group	5	5	6

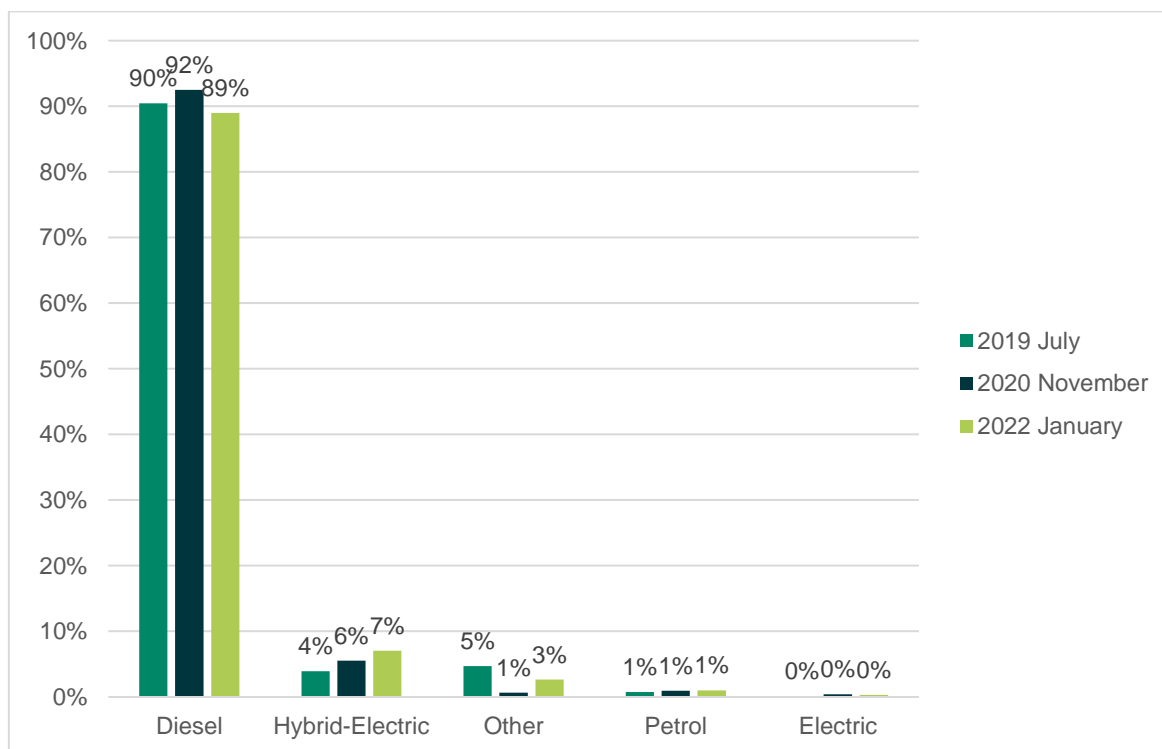
Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Fuel types

2.27 The change of the fuel types of Hackney Carriages and PHVs licensed in GM are shown in **Figure 2-4** and **Figure 2-5**.

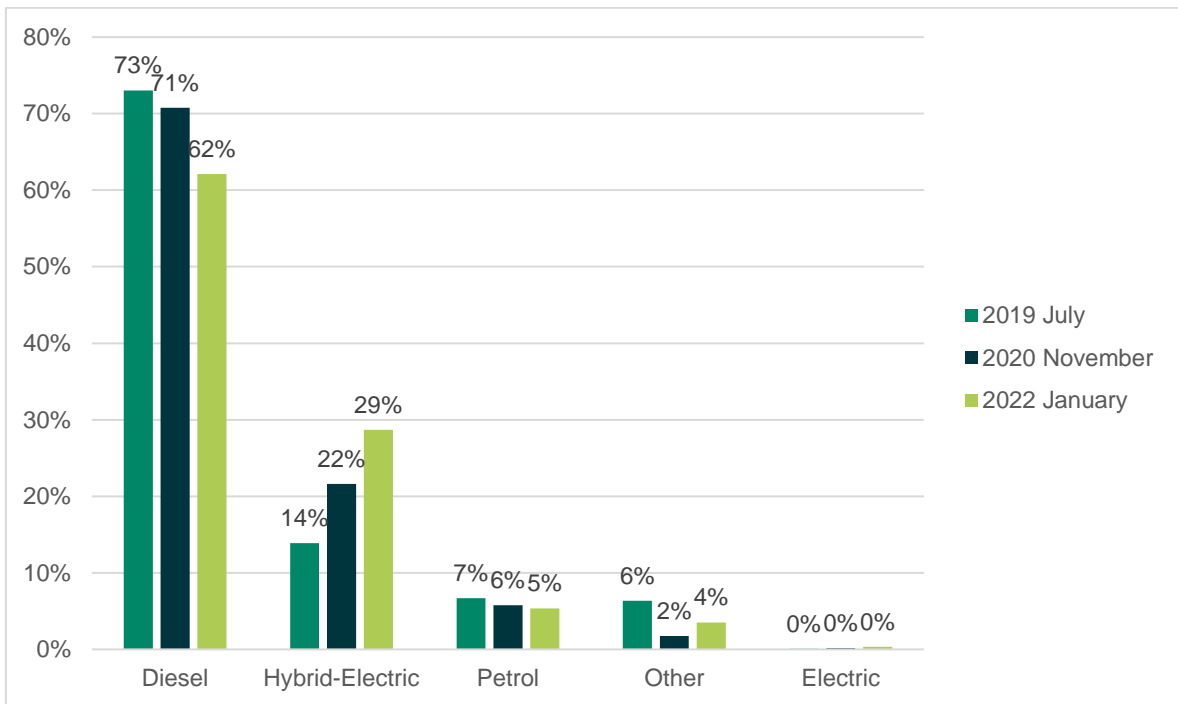
2.28 No significant change has been seen in Hackney Carriage fuel types with 89% still fuelled by diesel. Conversely, the proportion of PHVs fuelled by diesel has fallen from 73% to 62% between 2019 and 2022. There has been a shift from diesel to Hybrid-electric for PHVs, with Hybrid-Electric PHVs rising from 14% 2019 to 29% in 2022. The EV uptakes remain very low at less than 1% for both PHVs and Hackney Carriages.

Figure 2-4 Fuel Types for GM Hackney Carriages



Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Figure 2-5 Fuel Types for GM PHVs

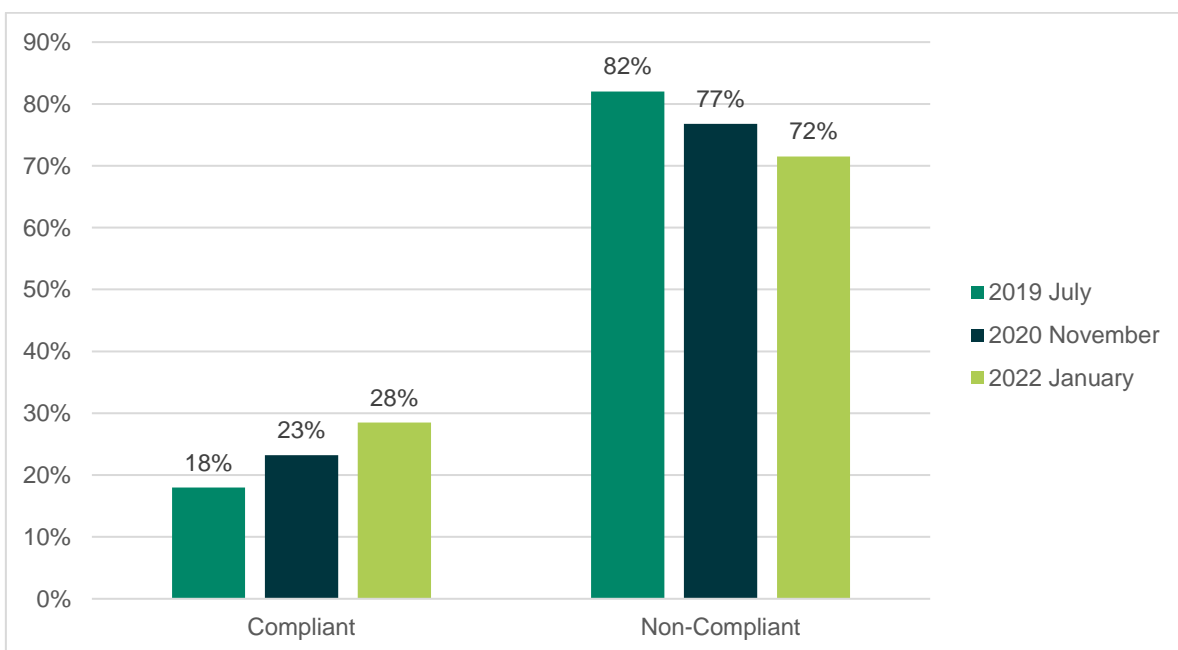


Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Compliance rate

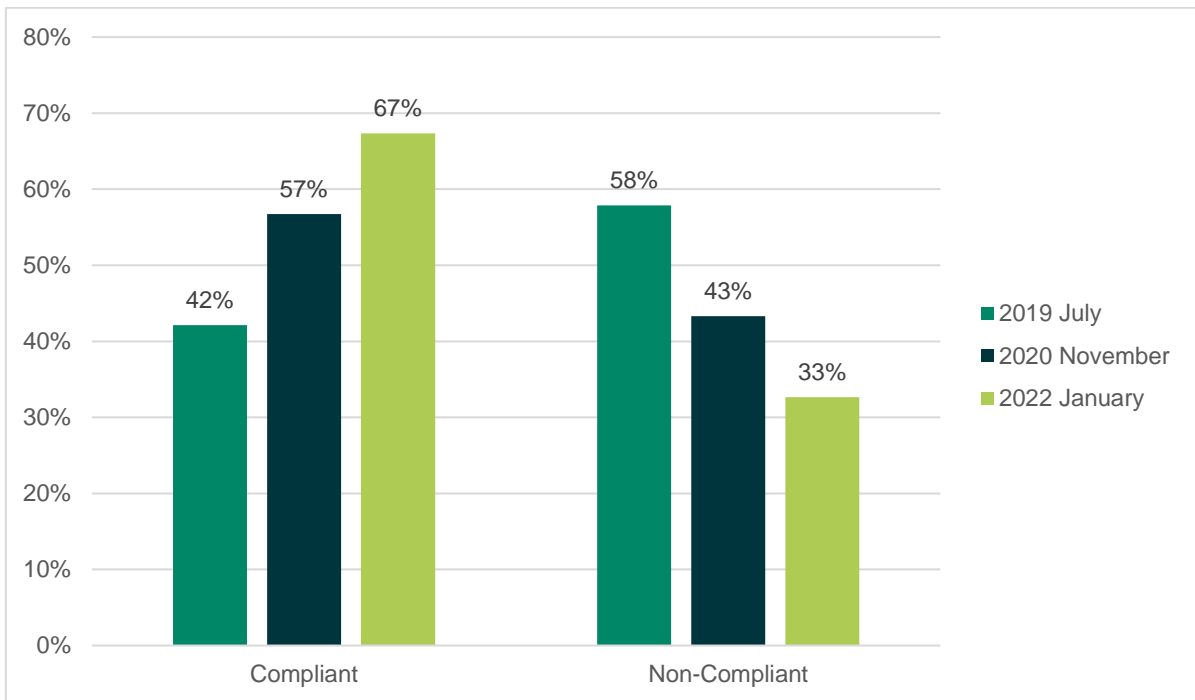
2.29 Hackney Carriage compliance has increased from 18% in 2019 to 28% in 2022, averaging a 20% increasing compliance rate per annum over the observed period as shown in **Figure 2-6**. PHV compliance has increased from 42% in July 2019 to 67% in January 2022, averaging a 21% increase compliance rate per annum over the observed period as shown in **Figure 2-7**. In addition, the PHV compliance level in 2019 is significantly higher than the compliance level of Hackney Carriages.

Figure 2-6 Hackney Carriage Compliance Rates



Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Figure 2-7 PHV Compliance Rates



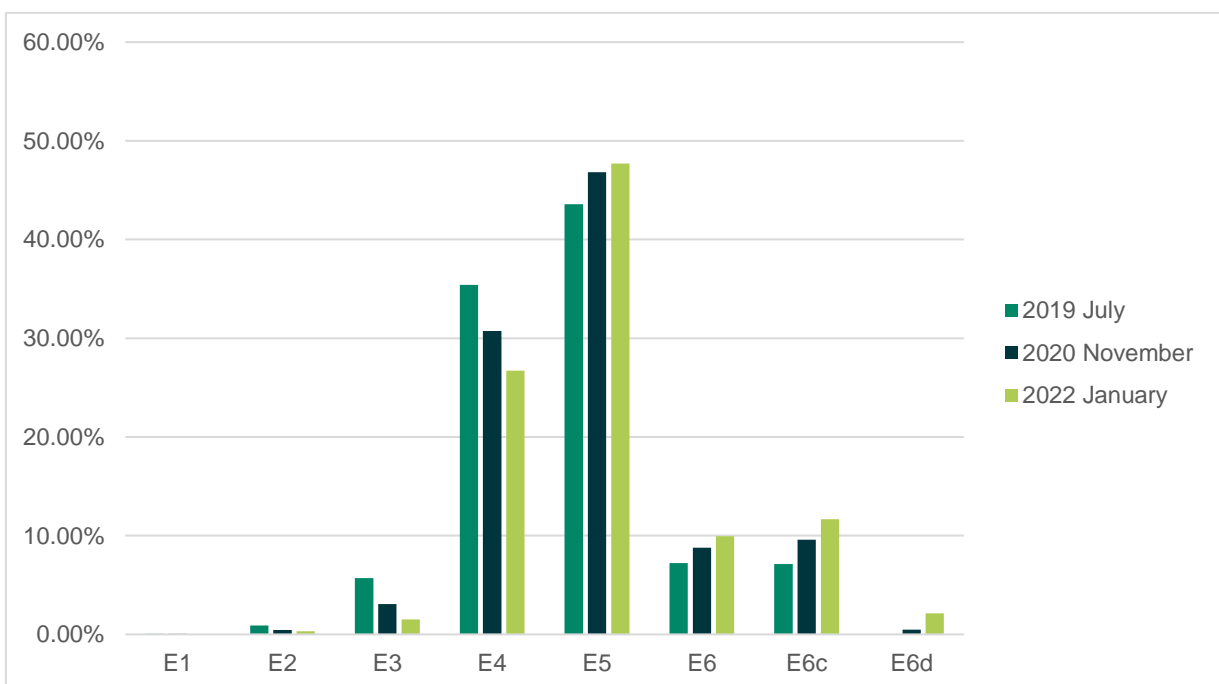
Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Euro classifications

2.30 There is a sustained reduction in Hackney Carriage Euro IV (E4) engines across the observed period. The E5 remains the predominant engine standard for Hackney Carriages in 2022 with 48% share which has increased between 2019 and 2022.

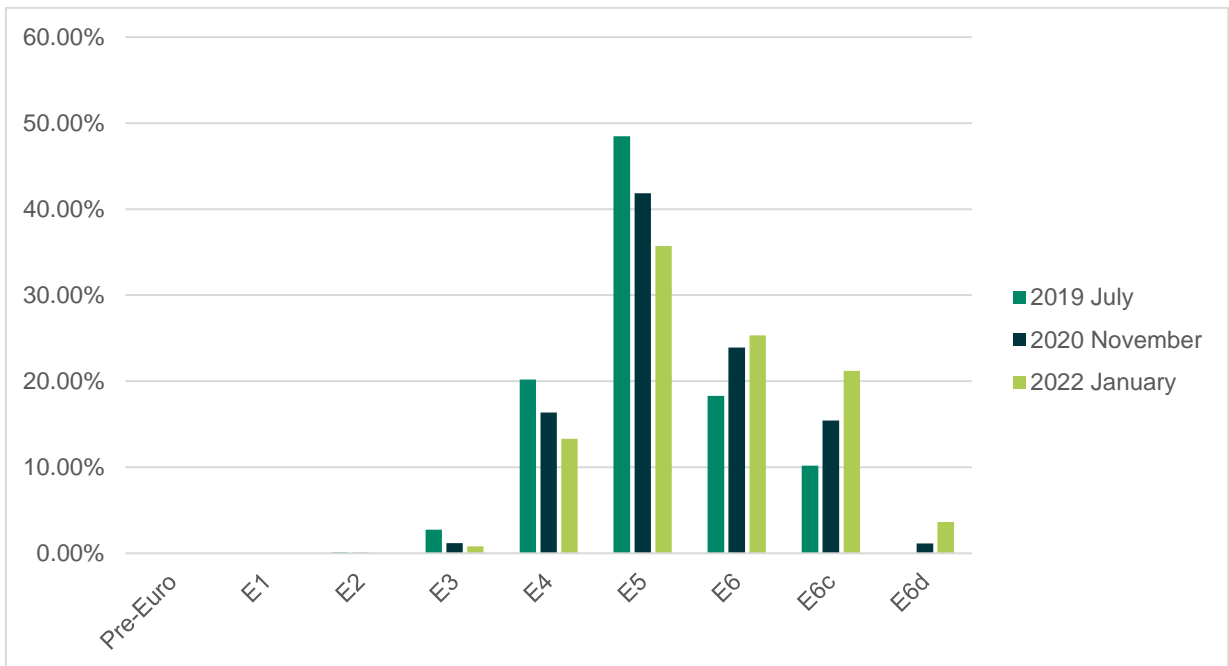
2.31 A significant reduction was seen in PHV E4 and E5 engines and corresponding increases were seen in E6 and E6c. It is worth noting that the proportion of PHVs with E5 engines decreased between 2019 and 2022 unlike Hackney Carriages.

Figure 2-8 Hackney Carriage Euro Classification trend



Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Figure 2-9 PHVs Euro Classification trend



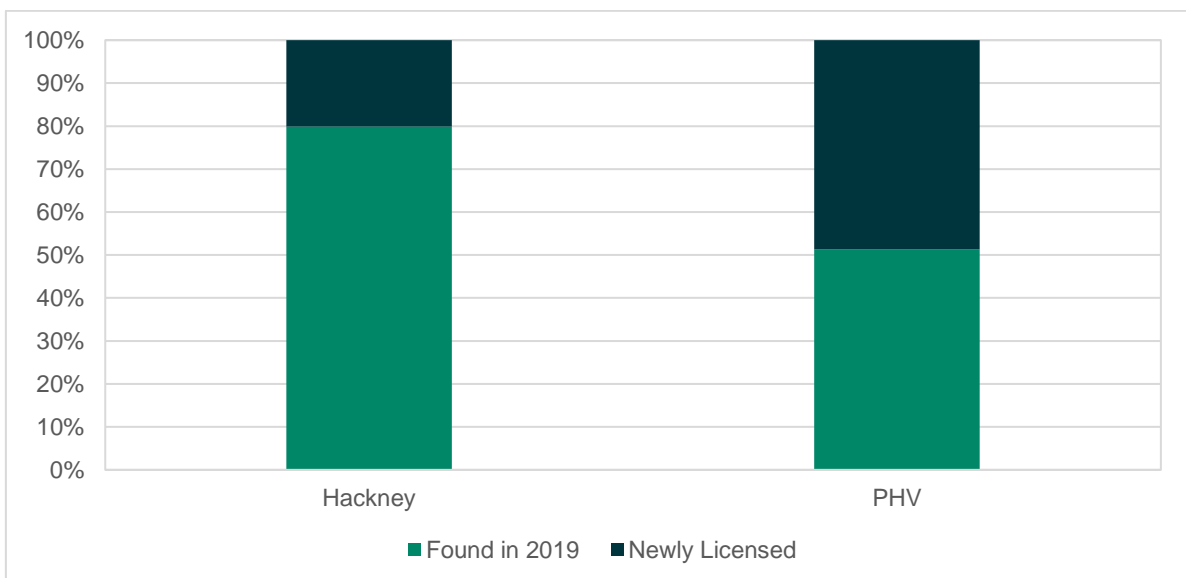
Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Registration by LAs

2.32 Vehicle registrations for Hackney Carriages and PHVs have been examined in 2022 to compare with 2019 showing the proportion of unique registration plates in GM to demonstrate the churn in the vehicle market.

2.33 **Figure 2-10** shows the percentage of Hackney Carriages and PHVs licensed in 2022 that were found in 2019, suggesting that since 2019, 20% of licensed Hackney Carriages and 49% of licensed PHVs are 3 years old or less. The level of natural churn experienced in the PHV fleet is significantly higher than in the Hackney Carriage fleet, demonstrating a quicker, natural trajectory within the PHV market to achieve compliance with the GM CAP. This would be in-keeping with the average age of the vehicles, as presented earlier within this section which demonstrates that in GM PHVs are two years younger than Hackney Carriages on average.

Figure 2-10 2022 Hackney Carriages and PHVs found in 2019 records



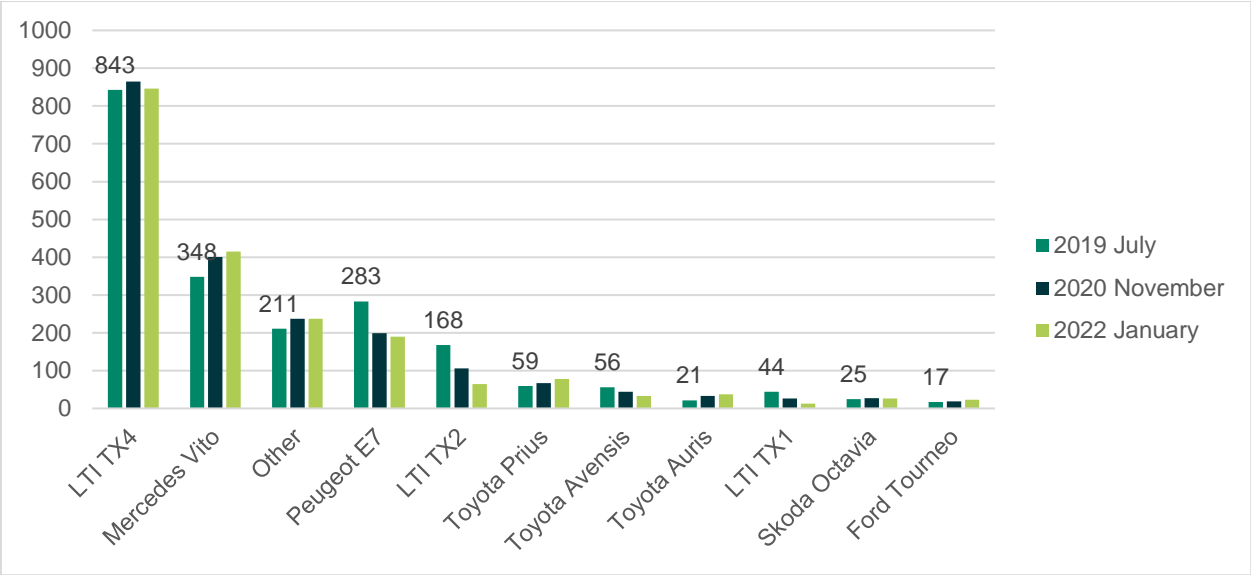
Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Taxi makes and models

2.34 The London Taxi Company TX4 (LTI TX4) has remained the most popular vehicle representing 43% of GM’s Hackney Carriage fleet in 2022 as shown in **Figure 2-11**.

2.35 The most common PHV used in GM in 2022 is still the Skoda Octavia which accounts for 19% of the fleet as shown in **Figure 2-12**.

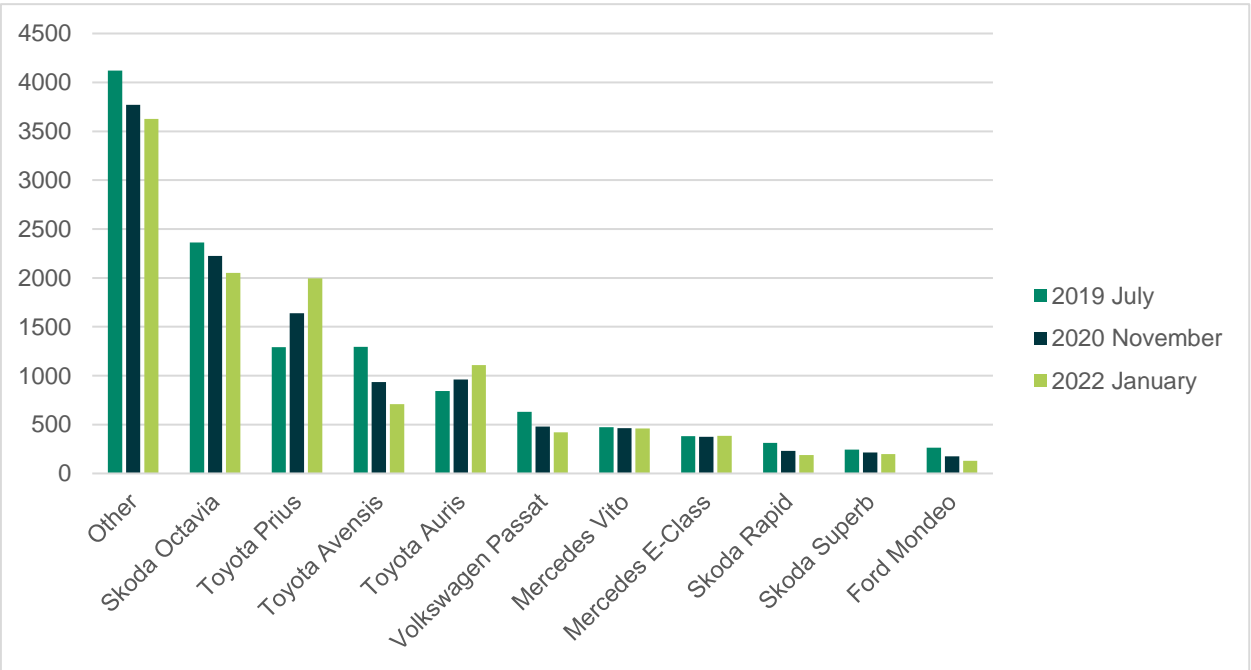
Figure 2-11 GM Hackney Carriage Make and Model Trend



Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Note: Some vehicle types included in this graph are typical of a PHV fleet however they are permitted for Hackney Carriage licensing by some GM local authorities

Figure 2-12 GM PHVs Make and Model Trend



Source: TfGM, GM Taxi Licensing Data (2019, 2020 and 2022)

Note: Some vehicle types included in this graph such as Mercedes Vito, are more commonly associated with Hackney Carriages however a smaller proportion are operated as a PHV

Updated traffic and travel patterns

2.36 Using ANPR data, Hackney Carriage and PHV frequencies have been observed across multiple locations within GM¹¹. The observations show how proportions of Hackney Carriages and PHVs change over the observed years at different locations.

Hackney Carriage

2.37 **Table 2-5** shows the proportions of Hackney Carriages by GM location and the change in proportions from 2019 to 2021. Using ANPR data, taxis were observed at locations inside the M60, outside the M60 and inside the Inner Ring Road (IRR).

2.38 Across the observed period (2019-2021), there was a reduction in the proportion of Hackney Carriages located in the IRR whilst there was a proportional increase in the number of Hackney Carriages located inside the M60. The largest proportion of Hackney Carriages inside the M60 were observed on the A5103 Princess Road, with 25% in 2019, observing a 4% increase from 2019 to 2021. Inside the IRR a high proportion of Hackney Carriages were observed on the B6469 Fairfield Street in 2019 (21%), close to Manchester Piccadilly rail station, which observed a 6% decrease from 2019 to 2021.

Table 2-5 Proportion of Hackney Carriages by GM Location

	2019	2020	2021	2019-2021 % Change
Inside M60¹²	57%	52%	62%	5%
Outside M60	7%	11%	7%	0%
Inside Inner Ring Road (IRR)	36%	37%	30%	-6%

Source: ANPR (2019, 2020 and 2021)

PHV

2.39 Similar proportions can be seen for PHVs, as shown in **Table 2-6**, with the category 'Inside M60' having the largest proportions and 'Outside M60' having the smallest proportion. However, the proportion of PHVs inside the IRR is lower than Hackney Carriages which could be associated with Hackney Carriage depots located in Manchester City Centre and pick-up areas such as at Manchester Piccadilly rail station.

2.40 The proportion of PHVs inside the M60 increased by 2% from 2019 to 2021, from 71% in 2019 to 73% in 2021. Inside the M60 saw a 1% increase from 2019 and 2021, and inside the IRR a 3% decrease from 2019 and 2021 was observed.

¹¹ ANPR data based on data collection from following number of sites by location: Inside M60 = 9 sites, Outside M60 = 3 sites, Inside IRR = 3 sites

¹² 'Inside M60' refers to taxis captured inside the M60 motorway but outside the IRR.

Table 2-6 Proportion of PHVs by GM Location

	2019	2020	2021	2019-2021 % Change
Inside M60	71%	68%	73%	2%
Outside M60	9%	12%	10%	1%
Inside IRR	20%	20%	17%	-3%

Source: ANPR (2019, 2020 and 2021)

- 2.41 Similarly to Hackney Carriage, the largest proportion of PHVs observed inside the M60 in 2019 were on the A5103 Princess Road (27%), with an observed 1% increase from 2019 to 2021. Across both taxi types, the proportion of vehicles recorded inside the IRR fell between 2019 and 2021 which is consistent with the findings by TfGM across modes for the 'regional centre'. Error! Reference source not found.

3. Review of Covid-19 impacts on vehicle sector

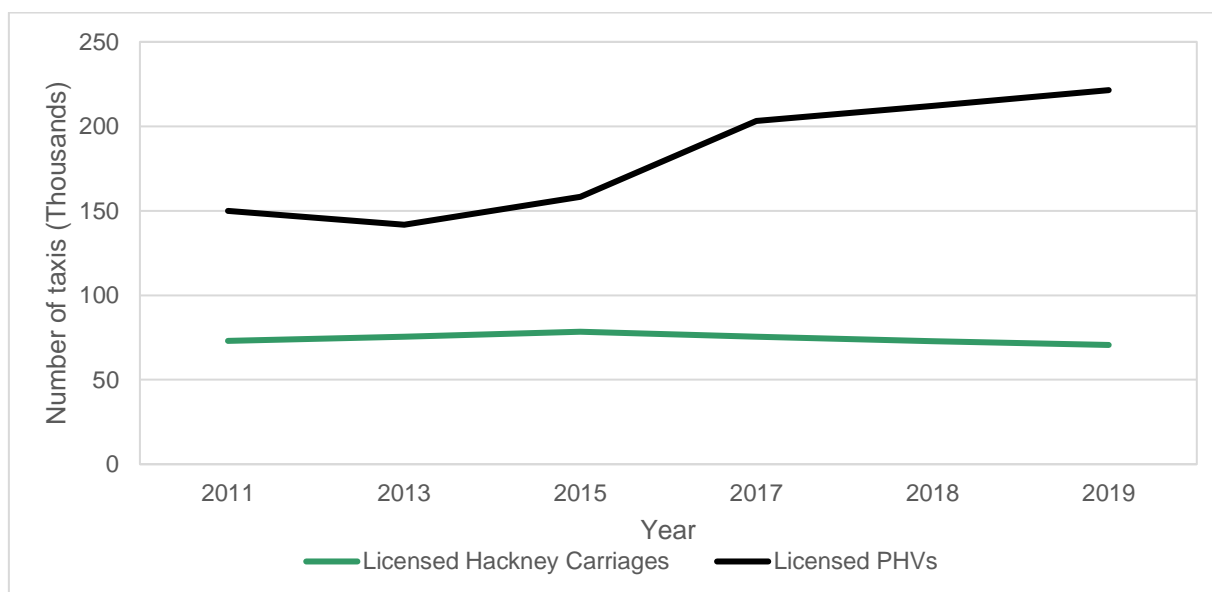
Overview

- 3.1 This section provides an update on the direct impacts the Covid-19 pandemic and associated restrictions have had on taxi fleets and licensed drivers.
- 3.2 This section also assesses the impact Covid-19 has had on the taxi market for the purchasing of new and second-hand compliant vehicles.

Pre-Pandemic – Sector Related Trends

- 3.3 The following charts, displaying DfT Taxi Statistics¹³, show the trend in licensed taxi vehicles and drivers between 2011 and 2019. The dataset follows the same trend for both.
- 3.4 Assessing pre-pandemic conditions (2011-2019), **Figure 3-1** and **Figure 3-2** show the following:
- there is a direct collation between the trend in licensed Hackney Carriage and PHVs with the number of licensed Hackney Carriage and PHV drivers;
 - the number of licensed Hackney Carriage vehicles and drivers in England has remained stable across the pre-pandemic period. Whilst the number of licensed Hackney Carriage drivers in England has increased by 2% in 2019 compared to 2011, the number of licensed Hackney Carriages in England has decreased by 3%; and
 - the number of licensed PHVs and drivers in England has steadily increased over the period, increasing 32% in the number of PHVs in 2019 compared to 2011 and 28% in the number of licensed drivers in 2019 compared to 2011.

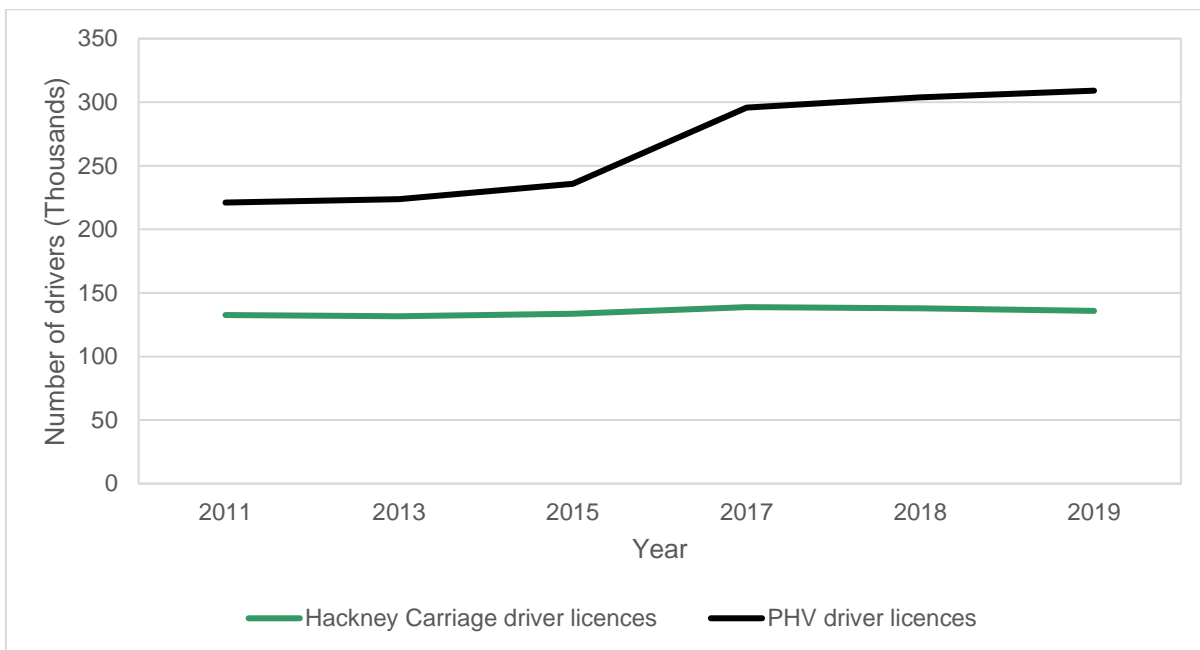
Figure 3-1 Licensed Hackney Carriage and licensed PHVs: England



Source: <https://www.gov.uk/government/collections/taxi-statistics>

¹³ <https://www.gov.uk/government/organisations/department-for-transport/series/taxi-statistics>

Figure 3-2 Licensed Hackney Carriage drivers and Licensed PHV drivers: England

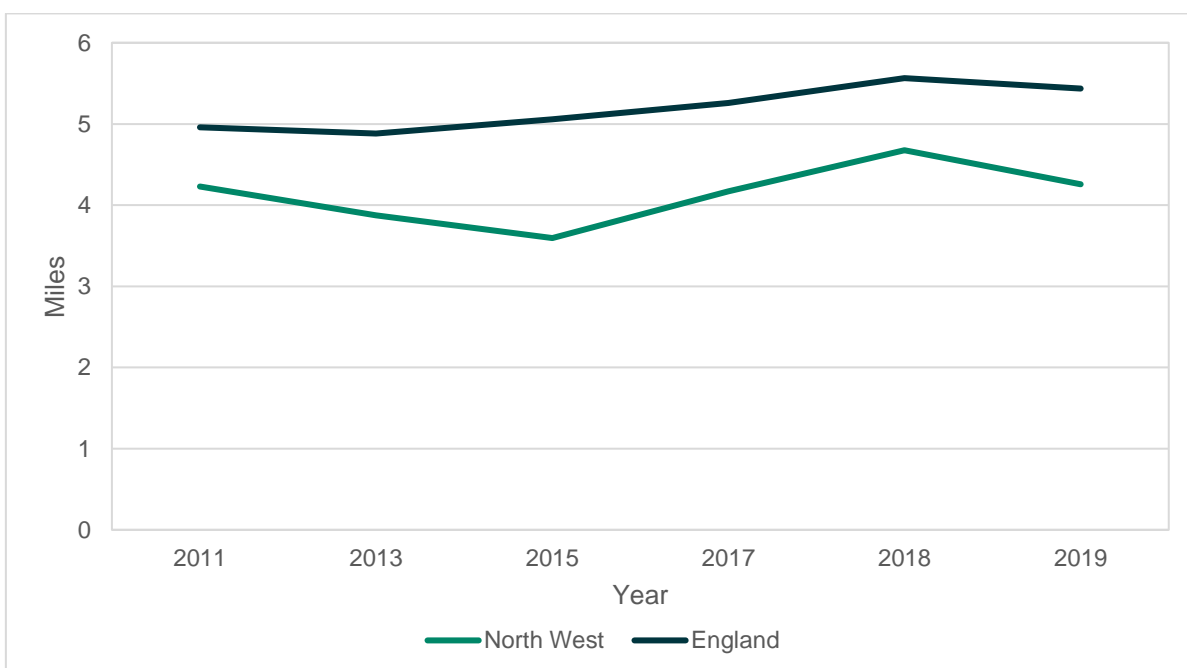


Source: <https://www.gov.uk/government/collections/taxi-statistics>

Mileage

3.5 The average trip lengths taken in Hackney Carriages and PHVs has remained steady over the observed period as shown in **Figure 3-3**. Assessing pre-pandemic conditions (2011-2019), trends show that the average trip mileage in a taxi in the North West is lower than the average for England however the gap narrowed in 2018.

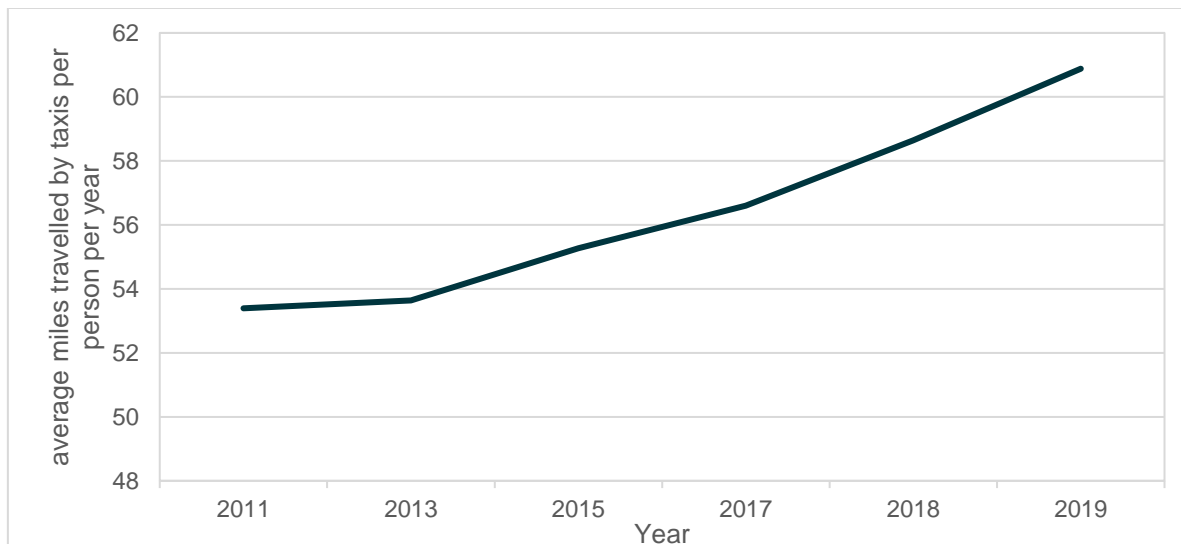
Figure 3-3 Average trip lengths of Hackney Carriage and PHVs



Source: <https://www.gov.uk/government/statistical-data-sets/nts03-modal-comparisons>

- 3.6 **Figure 3-4** displays the average miles travelled by taxis per person per year in England. The results show that the average miles travelled by taxis per person per year has increased year-on-year of the observed period prior to the pandemic.

Figure 3-4 Average miles travelled by Hackney Carriage or PHV per person per year: England



Source: <https://www.gov.uk/government/statistical-data-sets/nts03-modal-comparisons>

Covid-19 Different Industries' Effects on the Hackney Carriage and PHV Sector

Background

- 3.7 The first UK national lockdown in March 2020 had a significant impact on the Hackney Carriage and PHV sector, with demand significantly decreasing as restrictions limited mobility across the UK.
- 3.8 After 10 years of stable numbers, licensed Hackney Carriages fell between 2020 to 2021. Licensed PHVs have taken a significant fall from March 2020 to March 2021, a fall of 38,000 vehicles.
- 3.9 Of the national totals for licensed taxis, 20% are registered within GM (2018 18%) and 15% of licensed drivers are registered within GM (2018 13%). Between 2020 and 2021 there was a reduction of 1,500 licensed vehicles within GM, although there was an increase of 331 licensed drivers within GM between 2020 and 2021, this does not follow the national trend with a decrease of 7,082 in England and Wales during the same time period. However, the number of GM licensed drivers has not recovered to 2019 (pre-pandemic) levels.
- 3.10 Through review of GM based ANPR data, the number of unique Hackney Carriage vehicles fell 22% between 2019 and 2020 and PHVs fell 7% over the same period. The number of unique Hackney Carriages and PHVs recovered in 2021 with a 14% increase for Hackney Carriages compared to 2020 and 11% increase for PHVs compared to 2020 however 2021 volumes were still below pre-pandemic (2019). In addition, trip frequency between 2019 and 2020 fell 49% for Hackney Carriages and 23% for PHVs. Trip frequency recovered between 2020 and 2021 however 2021 data were marginally below average trip frequency recorded in 2019 with Hackney Carriages 0.6% and PHVs 5% below 2019 levels.

- 3.11 The Licensed Private Hire Car Association (LPHCA) estimated in 2021 that only 160,000 of the nearly 300,000 pre-Covid-19 cab drivers are now active. An interview conducted with PHV firm, Cresta Cars, based in Manchester, indicated that, since the pandemic, the number of drivers has reduced from 400 to 300¹⁴.
- 3.12 As a result of the reduction in demand and trade, due to the pandemic, drivers were forced to move into jobs which remained resilient during the pandemic, such as the supermarket and delivery sector with some drivers not returning to the taxi industry.
- 3.13 Some drivers moved to part time work, only 9% of drivers were working 7 days a week in April 2020, a reduction from 22% in April 2019, this could be explained by reduced trade during the pandemic and the need to find alternative employment. Contributing factors to the driver shortage also include those taking the opportunity to retire in higher numbers than pre-pandemic and a backlog to become licensed again with a 5.7% reduction in the number of Hackney Carriage and PHV driver licences in 2021 compared with 2020¹⁵.
- 3.14 Along with lack of drivers is the lack of actual vehicles. Hackney Carriages in particular can be expensive to own and insure, and with older diesels falling foul of clean-air rules based upon a London example with circa 5,000 London black cabs were handed back, sold or scrapped as demand reduced in 2020, and only 13,500 remain in 2021.¹⁶
- 3.15 According to the NTS the majority of trips taken by Hackney Carriage or PHV are for leisure purposes, with a share of 51% in 2019¹⁷. As lockdowns were brought into effect across the UK, the leisure industry was hit significantly, bringing profound changes to consumer behaviour and thus adversely reducing the demand on the Hackney Carriage and PHV sector. According to DfT Hackney Carriage and PHV statistics (June 2021), there were 251,100 licensed Hackney Carriages and PHVs in 2021 nationally, a decrease of 15.9% since 2020. There was a 5.4% reduction of drivers between March 2020 and March 2021, equating to over 24,000.
- 3.16 The following section provides a summary of Covid-19 impacts for the key sectors which the taxi industry relies on.

Covid-19 Impacts on Industry Sectors that are served by the Taxi Sector

- 3.17 This section provides a narrative for the reduction in demand for taxis during the Covid-19 pandemic which have been influenced by Government policy and public confidence to travel. The section provides the background behind the underlying financial stability of the taxi industry and how the pandemic may have influenced their ability to have sufficient levels of cash reserves to upgrade non-compliant vehicles.

Leisure

- 3.18 According to the NTS, leisure trips made up 51% of all Hackney Carriage and PHV journeys in 2019, this was significantly impacted during the pandemic¹⁸. Restrictions introduced on March 23rd ordered people in the UK to “stay at home”, limiting all non-essential business and leisure activities.

¹⁴ <https://lphca.co.uk/lphca-news/industry-driver-shortages>

¹⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/997793/taxi-and-private-hire-vehicle-statistics-2021.pdf

¹⁶ <https://www.theguardian.com/uk-news/2021/nov/13/taxi-taxi-why-its-suddenly-getting-so-hard-to-find-a-cab>

¹⁷ Taxi and Private Hire Vehicle Statistics: England 2021

¹⁸ Taxi and Private Hire Vehicle Statistics: England 2021

- 3.19 As part of the restrictions to curb the spread of Covid-19, a 10pm curfew for bars and restaurants was introduced on 24th September 2020. The closure of these establishments has undoubtedly affected the taxi industry. In February 2021, nightclubs were trading at just 5% of their pre-COVID annual revenue, bars were trading at 9% and pubs at 11%.¹⁹
- 3.20 Following the easing of restrictions, consumer demand for leisure activities has increased, the Leisure Consumer state in their 2021 report that in the first quarter of 2021 there was a 50% increase in demand for eating out when compared to the final quarter of 2020, similar increases are expected for visiting pubs and bars and culture and entertainment.²⁰
- 3.21 As COVID restrictions continued to ease, some sectors have bounced back strongly, such as the Manchester evening economy which was previously severely impacted by the pandemic. Although, recent media articles have suggested difficulties in passengers obtaining taxis;

“In Manchester, which has a good night-time economy, it’s a real problem,” says Derek Brocklehurst, manager of Cresta Cars, one of the city’s largest private hire firms. After more than 40 years in business, he says: “We feel embarrassed, unable to fulfil our customers’ requirements, with people having to wait one or two hours.” Some drivers only want to work workdays since the pandemic, he says: “They’ve taken on different jobs, their work-life has changed and they are spending more time with their families.”²¹

Travel and Tourism

- 3.22 The Covid-19 pandemic has impacted the travel and tourism sector heavily as restrictions in the UK and worldwide have hindered, and in cases prevented domestic and international travel. Unnecessary travel was first discouraged in March and was again impacted by the second and third English lockdowns in November 2020 and January 2021.
- 3.23 In June 2021 Eurocontrol published a report stating that the UK aviation sector has lost a total of 2 Million flights since March 2020, a 72% decrease from 2019. In March 2020 the average daily flights departing and arriving Manchester was 135, a 79% decrease from 2019, and flights travelling to or from the UK were down by 49%²². In 2019 Hackney Carriages and PHVs made up just under a third (29%) of the transport modes used by passengers travelling to/from Manchester Airport²³.
- 3.24 The reduction in air travel impacted the demand for airport Hackney Carriage and PHV journeys, with the lack of passengers needing a taxi to travel to or from airports in the UK declining during the pandemic and thus negatively impacting airport trade for Hackney Carriages and PHVs.
- 3.25 The continued reduced levels of aviation travel, due to wider international Covid-19 restrictions still in place, taxi journeys to / from Manchester airport are likely to continue to be operating at below pre-pandemic levels. It is not clear when tourism activity will reach pre-pandemic growth levels.

¹⁹ APPG submission by UK Hospitality, February 2021

²⁰ The Leisure Consumer 2021, Emerging from the Pandemic

²¹ <https://www.theguardian.com/uk-news/2021/nov/13/taxi-taxi-why-its-suddenly-getting-so-hard-to-find-a-cab>

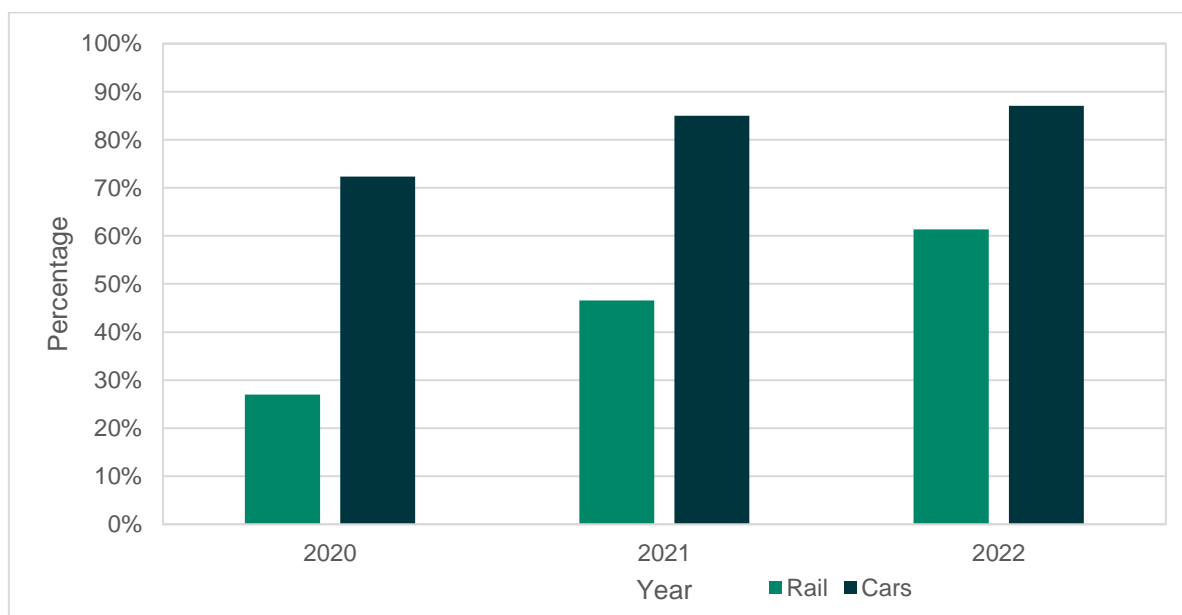
²² Covid-19 Impact on EUROCONTROL Member States, EUROCONTROL States Briefing, June 2021

²³ <https://www.statista.com/statistics/303820/modes-of-transport-to-manchester-airport-uk-united-kingdom/>

Transport Hubs – Access to Rail

- 3.26 Taxis also provide an important role serving a mode of access to transport hubs for onward public transport travel, especially at larger rail stations across GM.
- 3.27 GM has a number of important railway stations that see high volumes of passengers every year. Two of the busiest in the region are Manchester Piccadilly and Manchester Victoria. Both these stations normally have busy taxi ranks. However, Covid-19 has had a significant impact on the number of people travelling by rail as the advice to work from home and avoid unnecessary travel was issued from the government at the start of the pandemic.
- 3.28 Data released from DfT show the percentage of rail users from the start of the first national lockdown between 2020 and 2022 compared against cars²⁴; this is shown in **Figure 3-5**. Rail patronage levels continue to recover in 2022 however they still remain significantly below pre-pandemic levels with less than two thirds (61%) of pre-pandemic rail trips made. In comparison, car has recovered to 87% as a 2022 average compared to pre-pandemic levels.
- 3.29 For taxis serving transport hubs across Greater Manchester, this significant reduction in rail travel will result in a substantial reduction in the demand for taxis to serve these transport hubs. Although this data does not provide direct findings for GM stations it does give an insight into the significant reductions in train travel which undoubtedly have had an impact on those drivers and operators that rely on train passengers, though it is noted that taxi makes up a small proportion of overall station access trips.

Figure 3-5 Use of transport modes: Great Britain, since 1 March 2020 – Rail and Car



Source: <https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic>

Note: Data does not represent full year date and corresponds to the following period – 01/03/2020 to 14/03/2022

²⁴ <https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic>

Commuting

- 3.30 Commuting made up 11% share in trip purpose for Hackney Carriages and PHVs in 2019²⁵, with the ONS Labour Force Survey implying that 70% of the entire UK labour force was commuting most working days prior to the pandemic. Government restrictions and advice to work from home across the nation saw around 40% of the population working from home during the pandemic. This resulted in a significant decrease in commuting numbers, therefore fewer people relied on the Hackney Carriage and PHV sector.
- 3.31 It is expected that many people will adopt the new working habit of commuting to the workplace part time and working from home part time. The demand for taxis for commuting is therefore expected to rise again, however not to the extent that it was pre pandemic²⁶.

Shopping

- 3.32 Shopping made up 14% of all Hackney Carriage and PHV trips in 2019, however the introduction of the lockdown in March 2020 saw the closure of all non-essential high street businesses. Restrictions on shopping continued throughout the pandemic and sales in April 2020 were 19% lower than in February 2020, with significant decrease in the number of people making journeys to and from high-street business and retail outlets ²⁷.
- 3.33 Restrictions on non-essential high street businesses eased throughout the pandemic, and now operate with no restrictions, which has seen total retail sale volumes recover to above pre-pandemic levels. From data presented in **Section 2**, for both Hackney Carriage and PHVs, the IRR (also known as city centre) had the largest decreases in taxis operating by GM area across 2019-2021 compared to locations inside and outside the M60. This would align to the sector concentrations within GM with the IRR having the highest proportion of leisure and hospitality uses.

Review of Covid-19 impacts on vehicle sales market

Overview

- 3.34 The UK vehicle market has made a slow recovery due to a combination of manufacturing issues and lack of consumer purchasing. The vehicle market has seen a slow return to pre-pandemic manufacturing levels, experiencing supply chain interruptions, export disruption and the closure of manufacturing plants. In January 2021, commercial vehicle production, including the production of purpose designated taxis, was 31.5% lower when compared to pre pandemic production in January 2020²⁸.

²⁵ Taxi and Private Hire Vehicle Statistics: England 2021

²⁶ <https://www.economicsobservatory.com/what-is-the-future-of-commuting-to-work>

²⁷ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/impactofthecoronavirusCOVID19pandemiconretailsalesin2020/2021-01-28#:~:text=1.-,Main%20points,remain%20below%20pre%2Dpandemic%20levels>

²⁸ <https://www.smm.co.uk/vehicle-data/manufacturing/>

- 3.35 A lack of consumer purchasing could explain the reduction in the number of Hackney Carriages and PHVs registered between 2019 and 2022. According to PwC Research's QuantiBus survey, there has been a lack of vehicle purchasing as uncertainty has increased and the demand outlook has declined, this is likely due to financial constraints following the pandemic²⁹. The lack of vehicle upgrades resulted in a limited second-hand market during the pandemic, used car sales, which form the sales for PHVs, fell by 2.2% in March 2020, however between 2020 and 2021 the used car market has seen an increase of 11.5%.
- 3.36 This section provides an update on the changes in market price of new and second-hand taxi fleet. Vehicle price information has been gathered based on the following:
- Extracted from 2019, 2020 and 2021 to examine whether any changes in vehicle sales could be attributed to the Covid-19 pandemic;
 - Prices shown for the most popular taxi fleet for Hackney Carriage and PHV, defined as vehicle make and models which comprise of having a 10% or greater share of the market.
 - Based on estimates, gathered from various sources and, in particular for second-hand vehicles, are subject to other variables including vehicle condition, service history, mileage etc.

New Hackney Carriage

- 3.37 LTI TX4s are the most common Hackney Carriage used in GM with 844 registered in 2019. The LTI TX fleet conjure the 'typical' Hackney Carriage look, however the TX4 is no longer in production as of 2017 so therefore only second-hand vehicles are available. In a shift to cleaner vehicles, LTI relaunched as the London Electric Vehicle Company (LEVC) in 2017 with new petrol/diesel Hackney Carriages no longer available.
- 3.38 **Table 3-1** and **Figure 3-6** displays the estimated cost for the most popular Hackney Carriage vehicles (greater than 10% market share).

Table 3-1 Estimated Cost for New Hackney Carriage vehicles

Vehicle Make	Upgrade	Estimate Cost 2019	Estimate Cost 2021	Estimate Cost 2022
LTI TX4 / LEVC TX	LEVC TX Electric Taxi	Prices starting from £55,599	No data	£63,000*
Mercedes Vito	Euro 6 Upgrade	£42,000	£42,000 - £47,000	From £39,995
Peugeot E7	Euro 6 Upgrade	£30,000	£24,000	£26,000

Source Cabdirect³⁰ and LEVC³¹ (2022)

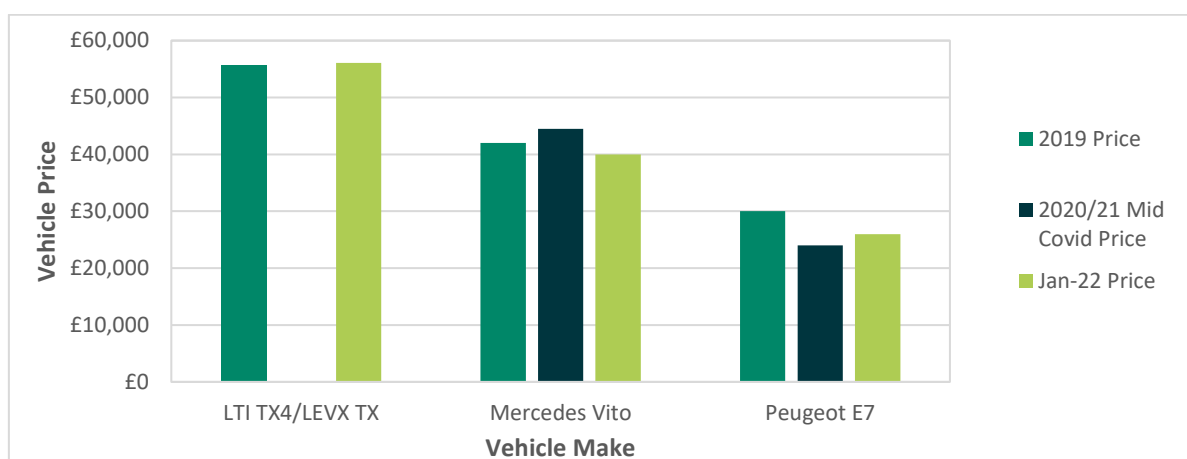
* Does not include Plug-in Taxi Grant (PITG)

²⁹ <https://www.pwc.co.uk/industries/automotive/insights/uk-automotive-demand-in-the-wake-of-Covid-19.html>

³⁰ <https://www.cabdirect.com/>

³¹ <https://levc.com/event/tx-offer-national/>

Figure 3-6 Estimated Cost for New Hackney Carriage vehicles



Source: Cabdirect³² and LEVC³³ (2022) Note: No new Hackney Carriage vehicle price information was available for LTI / LEVC in 2020/21

3.39 For new purpose-built Hackney Carriages, manufacturers do not release their prices online and require individual enquiries to gain a quote, for this reason alternative websites were used to get 2022 prices. The LEVC TX price was obtained from UK price spec guide. The other Hackney Carriage style taxis (Mercedes Vito and Peugeot E7) were priced from Cabdirect.com, directed from Mercedes Benz website as approved Hackney Carriage provider.

3.40 Vehicle price information for new Hackney Carriage vehicles across the period 2019-2022 show that there have been minimal price changes across the most popular models observed however there are slight variances by model type.

New PHV

3.41 **Table 3-2** and **Figure 3-7** displays the estimated cost for the most popular PHV vehicles within GM.

3.42 There has been a number of vehicle model changes for Toyota across the observed period. Due to the Toyota Avensis, Auris and Prius no longer being available to purchase as new vehicles in the UK market³⁴, the vehicle price information has been combined to represent a typical, popular PHV model. Other available models within a similar price range, such as the Toyota Corolla are available to purchase in the UK. It is worth noting that both, the Toyota Corolla and Skoda Octavia are available as petrol-hybrid models.

Table 3-2 Estimated Cost for New PHVs

Vehicle Make	Upgrade	Estimate Cost 2019	Estimate Cost 2021	Estimate Cost 2022
Toyota Prius	Euro 6 Upgrade	£19,500 - £27,500	£25,000 - £29,000	£30,000
Skoda Octavia	Euro 6 Upgrade	£18,500 - £31,500	£21,500 - £30,500	£22,000 - £37,000

Source: Toyota³⁵ and Skoda³⁶ (2022)

³² <https://www.cabdirect.com/>

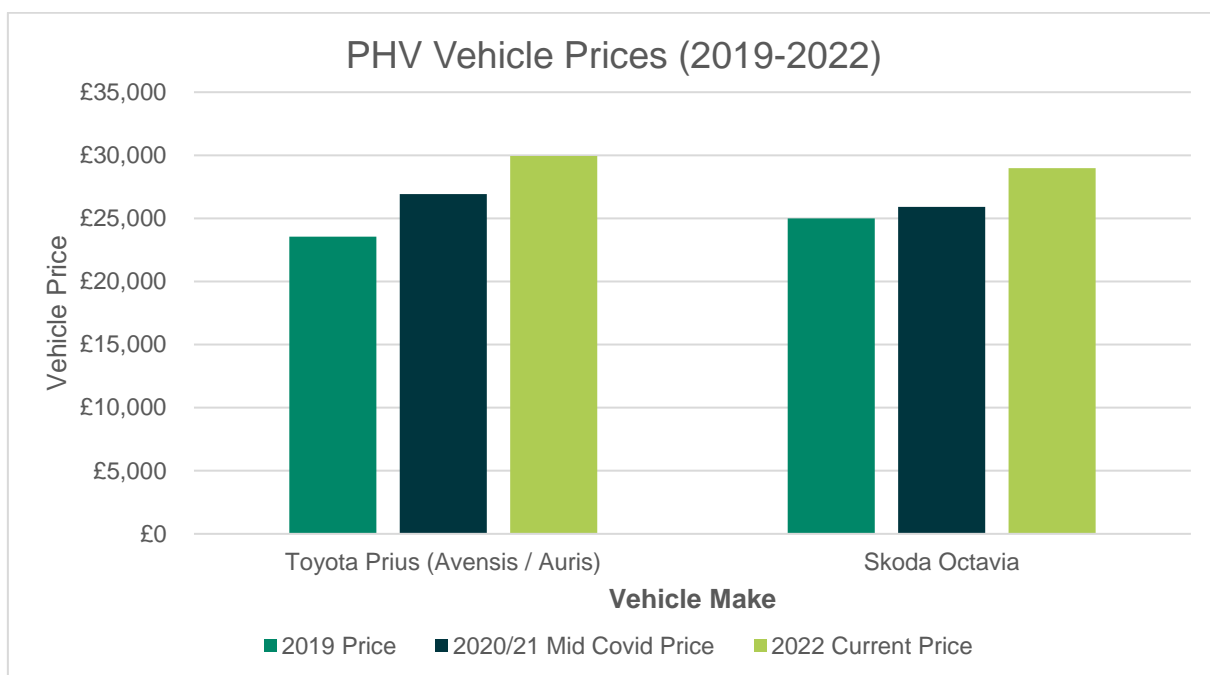
³³ <https://levc.com/event/tx-offer-national/>

³⁴ <https://www.toyota.co.uk/new-cars/prius/>

³⁵ <https://www.toyota.co.uk/new-cars/model-filter?errType=ToyotaModelNotFound&model=prius>

³⁶ <https://cc.skoda-auto.com/gbr/en-GB/summary-scenic?activePage=summary&aid=ced75e7b-4b2f-4a66-94c2-43d8bc93337b&color=1Z1Z&configurationId=C7HZXPDH&extraEquipments=UZZCWA2%7CMMKEEM1%7CMMFA7J2%7CGPT1PT1>

Figure 3-7 Estimated Cost for New PHVs



Source: Toyota³⁷ and Skoda³⁸ (2022)

- 3.43 The 2022 market prices were obtained for a mid-specification, new vehicle priced using the dealer websites.
- 3.44 Consistent across both PHV vehicle model types, there has been an upward trend in vehicle prices across the observed period (2019-2022) with Toyota models increasing 21% in 2022 compared to 2019 prices and Skoda Octavia increasing 14% in 2022 compared to 2019 prices. This included 5 vehicles ranging in age from 1 year to 4 years (registered 2018 – 2021). This is compared to the same data collected in 2019.

Second-hand Hackney Carriage

- 3.45 There was a wide range of second-hand prices found in the study conducted in 2019. A price range of £15,500 to £42,995 was found, however it is worth noting that the highest end vehicle was 2019 registered so less than 12 months out at the time of the search. The most common price in 2019 was around £20,000.
- 3.46 The lowest priced vehicle in the same search repeated in January 2022 was £26,995, this is almost £7000 more than the average price in 2019. There was only one vehicle prices within the £20,000 - £30,000 price bracket, all other available second-hand Mercedes Vito’s were prices between £35,000 and £40,000. This shows a clear and significant price increase.

<https://www.toyota.co.uk/new-cars/model-filter?errType=ToyotaModelNotFound&model=prius>

<https://cc.skoda-auto.com/gbr/en-GB/summary-scenic?activePage=summary&aid=ced75e7b-4b2f-4a66-94c2-43d8bc93337b&color=1Z1Z&configurationId=C7HZXPDH&extraEquipments=UZZCWA2%7CMMKEEM1%7CMMFA7J2%7CGPT1PT1%7CMGRA8T8%7CGPWZPWZ%7CGPJAPJA%7CGPJ3PJ3%7CGWU1WU1&id=GBR%3Bskoda%3B2022%3BNX33LD%3B1%3BGY02Y02%3Bmda20220124120504%3Ben-GB%3B%3B63003%3B63063&interior=BG&modifiedPages=colors%7Cwheels%7Cengines%7Cextraequipments&snapshotVersion=047fedec-cc29-4574-8822-1acfae823c79&state=NEW&trimline=NX3%7CSE6306363003&visitedPages=colors%7Cwheels%7Cinteriors%7Cengines%7Cextraequipments%7Cservices>

3.47 During the desktop study conducted in 2019 for second-hand compliant LTI TX4 it was discovered that there was only one vehicle listed that was CAZ compliant, the vehicle had a 2017 registration plate and was listed for £31,495. This exercise was repeated in 2022 and again only one vehicle was listed at a cost of £28,680. It was therefore worthwhile to again assess the prices of second-hand compliant Mercedes Vito as the second most popular Hackney Carriage as shown in **Table 3-3**. The Mercedes Vito estimate is based on a range of prices available on 18th January 2022 This included 5 vehicles ranging in age from 1 year to 4 years (registered 2018 – 2021). This is compared to the same data collected in 2019.

Table 3-3 Second Hand Compliant Hackney Carriages

	Year of Manufacture	Estimated Cost 2019	Estimated Cost 2022
LTI TX4	2015 – current	£31,495 (2017) *	£28,680 (2016) *
Mercedes Vito	2015 – current	£15,500 - £43,000	£27,000 - £38,500

Source: Online Vehicle Price Data sourced by AECOM (2022)*only one second-hand vehicle for sale at time of research

3.48 Due to limitations in second-hand Hackney Carriage vehicle prices, **Table 3-4** provides an overview of the emerging second-hand EV Hackney Carriage market, as stated within Section 2, a second-hand LEVC TX market has started to emerge over the latest few years. As shown in **Figure 2-4**, there has been steady growth in hybrid-electric vehicles from observed ANPR data in GM however the proportion of Hackney Carriages that are electric remain below 1% in 2022.

Table 3-4 Second-Hand EV Hackney Carriage Market

Model	Year	Average Mileage	Average Cost
TX Vista	2018	73,543	£43,750
TX Vista Comfort	2018	77,531	£43,000
TX Vista Comfort Plus	2018	93,004	£42,913

Source: <https://levc.com/>

Second-hand PHV

3.49 **Table 3-5** displays the data comparison for the PHV Skoda Octavia. The Skoda Octavia is available in both diesel and petrol engine. As there is a difference in manufacturing years for compliance of the Euro 6 diesel engines and Euro 4 petrol engines the table provides data for both engine types separately, this was provided in the original 2019 study. From this table it is clear that the price of available second-hand Skoda Octavia's has increased between 2019 and 2022. The higher end of vehicles available have increased by circa 10%, whereas the lower end vehicles available have increased by circa 5%. This is reflective of the full second-hand vehicle market.

Table 3-5 Second-Hand Compliant Skoda Octavia PHV

Year of Manufacture	Fuel Type	Price Range 2019	2022 Update
2015 – current	Diesel	£5,500 - £32,000	£6,000 - £35,000
2005 – current	Petrol	£1,500 - £33,000	£7,000 - £39,000

Source: Online Vehicle Price Data sourced by AECOM (2022)

3.50 An assessment of the price change of second-hand non-compliant taxi models was carried out, as in 2019. The data showed that, for Hackney Carriages registered between 2008 and 2014, there was little price difference between the 2019 and 2022 prices. The second hand non-compliant Skoda Octavia prices mirrored the trend as seen in **Table 3-5**, with there being a notable increase in price of available vehicles at both the lower and higher ends of the market. It is worth noting that whilst PHV prices have been presented based on diesel and petrol vehicles, as shown in **Figure 2-5**, there has been substantial growth in hybrid-electric PHVs with 29% of the total observed ANPR movements in 2022 compared to 14% in 2019. Whilst this substantial growth has been seen in hybrid-electric vehicles, the proportion of electric PHVs remains below 1%.

Review of Vulnerability in responding to GM CAP

3.51 As part of the 2019 data study a qualitative assessment of vulnerability impacts on the taxi sector was prepared and has since been reviewed in January 2022. This assessment has considered how the Covid-19 pandemic has impacted Hackney Carriage and PHV vulnerability in responding to the GM CAP.

3.52 The review findings are presented in **Table 3-6** showing that both Hackney Carriage and PHVs were previously highly vulnerable to the introduction of GM CAP, and vulnerability has increased considerably due to the pandemic.

Table 3-6 Taxi Sector Vulnerability Review

	Vulnerability				
	Oct 2019	Situation: Oct 2020		Situation: Jan 2022	
	GM CAP (Pre-Covid-19)	Covid-19 (2020)	GM CAP (Post-Covid-19)	Covid-19 (2022)	GM CAP (Post-Covid-19)
Hackney Carriage	High	Disadvantaged / Negative Affected	Very High	Disadvantaged / Negatively Affected	Very High
PHV	High	Disadvantaged / Negative Affected	Very High	Disadvantaged / Negatively Affected	Very High

- 3.53 The Hackney Carriage sector within GM was vulnerable to GM CAP pre-Covid-19 due to the high proportion of non-compliant vehicles that are currently operating within GM. During the early part of the pandemic, the COVID restrictions in place in 2020 and 2021 resulted in a significant reduction in demand for Hackney Carriages, this placed Hackney Carriage owners in a more challenging financial position when responding to GM CAP. Since Covid-19 restrictions have eased, there has been some recovery of the sector, although not to pre-pandemic levels. Also, due to increased average age of GM Hackney Carriage fleet, and reduced natural turnover of the fleet during the pandemic, Hackney Carriage owners continue to face a considerable challenge when responding the GM CAP.
- 3.54 Similarly to Hackney Carriages, the PHV sector was vulnerable to GM CAP pre-COVID, and has experienced considerable challenges during the pandemic, due to restrictions on sectors serving the taxi market and changing travel behaviours which have affected the taxi market as a whole. Whilst Covid-19 guidance has eased and there has been some recovery of the sector, PHVs continue to face changes in recovery from increasing vehicle prices and the availability of new PHV type vehicles has been identified as a key factor currently impacting on the PHV sector. This will add extra financial pressure to the already vulnerable sector when responding to GM CAP.

4. Conclusion

Summary of Current Conditions

4.1 This note has sought to capture the following key considerations:

- A review of current taxi fleet compliance;
- A summary of the impact of Covid-19 in terms of changes to travel behaviour within GM, including changing transport trends and economic trends as a result of the Covid-19 pandemic;
- Pre-pandemic sector-related circumstances;
- Sector-related trends during the pandemic; and
- Evaluation to how sector-related trends have changed and to what extent has this impacted on the ability of taxi owners to meet GM CAP compliance.

Key Risk and Issues

4.2 The challenges faced by the taxi market, mainly associated with the impact of the Covid-19 pandemic, has affected Hackney Carriages and PHVs, to some extent, unequally. However, it is also important to recognise the unbalanced profile and trends of Hackney Carriages and PHVs individually to provide a more balanced view of the key risks and issues. Key risks and issues have been categorised into: pre-pandemic circumstances, Covid-19 impacts and emerging trends and are report below.

Pre-Pandemic Circumstances

- In 2019, only 12% of Hackney Carriages and 29% of PHVs serving GM were deemed compliant.
- Hackney Carriages operating in GM are typically older than PHVs with the average age of a Hackney Carriage in 2019 being 8 years old compared to 6 years old for a PHV.
- The number of licensed Hackney Carriage vehicles and drivers remained stable across the pre-pandemic period. During this period, the number of licensed PHV drivers increased by 2% in 2019 compared to 2011, the number of licensed PHVs in England has decreased by 3%.
- Average trip length has remained stable for taxis with the average miles travelled by taxi per person per year increasing in England over the pre-pandemic period.

Covid-19 Impacts

- The number of new GM-licensed Hackney Carriages and PHVs was significantly lower during the pandemic compared to pre-pandemic levels. The number of GM licensed taxis decreased from 2019 to 2022 by 5.4% for PHVs and 7.7.% for Hackney Carriages.
- The average age of Hackney Carriages and PHVs has grown older in 2020 and 2022 compared to pre-pandemic levels (2019) with taxi fleets estimated to be one year older than pre-pandemic.

- There has been no significant shift in fuel types for Hackney Carriage with 89% still fuelled by diesel. However, there has been a shift from diesel to hybrid-electric for PHVs, rising from 14% in 2019 to 29% in 2022. The EV uptake remains very low at less than 1% for both Hackney Carriages and PHVs.
- Industries served by the taxi industry have suffered heavily through Covid-19. Leisure trips comprised of over half of all taxi journeys in 2019 with Government restrictions having a significant impact on the leisure market, particularly bars, pubs, restaurants and nightclubs. Equally, other important taxi markets have been constrained during the pandemic, stemming from Government restrictions on commuting, shopping and tourism.
- A higher proportion of Hackney Carriages operate within the Regional Centre (inside the Inner Ring Road (IRR)) compared to PHVs with the Regional Centre believed to have the highest impact from the Covid-19 pandemic across GM due to the location of a large number of hospitality and leisure businesses. This is in-keeping with the taxi licensing data which states that approximately 55% of Hackney Carriages are licensed to Manchester City Council. The proportion of within IRR trips between 2019 and 2021 fell for both Hackney Carriages and PHVs.

Emerging Trends

- Emerging from the pandemic, taxis are older, more non-compliant than previously assumed and there are fewer taxis and taxi drivers operating in GM compared to pre-pandemic levels.
- Hackney Carriages, in particular, are likely to have faced a more significant impact from the Covid-19 pandemic, compared to PHVs, due to their prominent origins and destinations being located in Manchester City Centre where sectors have been hit the hardest. Both Hackney Carriage and PHV owners are likely to have lower cash reserves to upgrade their vehicles than prior to the pandemic.
- Hackney Carriages are older, more non-compliant and being upgraded at a slower rate compared to PHVs.
- The ability for Hackney Carriage owners to upgrade their vehicles is likely to be more constrained compared to PHV owners due to the higher cost of replacement vehicles and the likelihood of more substantive Covid-19-related impacts. However, there is some evidence to suggest that whilst Hackney Carriage vehicle prices are stable, and even falling for certain vehicle types, the vehicle prices for new and second-hand compliant PHVs are increasing in-line with rising wider car market vehicle prices.

Appendix A – List of Data Sources

List of data sources used within this document.

Document Title	Date	Description	Relevance to GM CAP
Chapter 1			
Mayor of Greater Manchester writes to Government reiterating call for non-charging Clean Air Zone	May 2022	Announcement, provide background on current status of GM CAP https://www.greatermanchester-ca.gov.uk/news/mayor-of-greater-manchester-writes-to-government-reiterating-city-region-s-call-for-non-charging-clean-air-plan/	Current Status of GM CAP
GM CAP Technical Documents (various)	various	All available at Technical Documents Clean Air Greater Manchester (cleanairgm.com) https://cleanairgm.com/technical-documents/	Published Technical Reports for GM CAP
Technical Note 10: Taxi Behavioural Responses Note	July 2019	https://cleanairgm.com/technical-documents/	Background on Taxi Sector
Technical Note 19: Taxi and Private hire Vehicle Fleet Research		https://cleanairgm.com/technical-documents/	Background on Taxi Sector
Technical Note 12: Evidence of the Impact of a 2021 Implementation of a CAZ C (Without exemptions)	July 2019	Describes analysis carried out by GM to assess the risks of implementing a CAZ C in 2021 without also implementing a two-year sunset period as was proposed in the OBC. https://cleanairgm.com/technical-documents/	analysis of vulnerability by sector, based on the proportion of the fleet that would be non-compliant
T4 Appendix A (Modelling for Consultation)	Jan 2020	Discusses the modelling tools used to assess the impacts of GM CAP https://cleanairgm.com/technical-documents/	Modelling tools used to assess impacts of GM CAP
Deliberative Research	Nov 2019	Research was carried out with taxi drivers potentially in scope for the scheme, including deliberative research and surveys of van owners https://cleanairgm.com/technical-documents/	Understanding the taxi sector and views of taxi owners
GM CAP Impacts of Covid-19 Report	June 2021	Considers the impacts of the pandemic on GM and reviews the potential and actual impacts of Covid-19 on the GM CAP. https://cleanairgm.com/technical-documents/	Review of impacts of Covid-19, including impacts on taxis
Chapter 2			
Proportion of Vehicle Types Registered by Area	Jan 2022	https://www.gov.uk/government/statistical-data-sets/all-vehicles-veh01	Proportion of the fleet
T4 Appendix V (previously TN37)	2021	(Current version not published) – Provides details of vehicle proportions by mode, including future year forecasts	Number of impacted vehicles
Taxi Fleet Data	Various (2019 – 2022)	Comparison of the changing taxis fleet over time. Sourced from the GM Taxi Licencing data (raw data not published) e.g. age profile / fuel type / number of taxis	Understand changes in taxi fleet over time
GMP ANPR Data	Various (2019 – 2022)	GMP ANPR data – to review changing characteristics of the vehicle fleet operating within GM	Understand changes to taxis over time
Chapter 3			
Taxi and private hire vehicle statistics, England: 2021	June 2021	https://www.gov.uk/government/collections/taxi-statistics	Understanding make up of taxi operations

Industry Driver Shortages	2021	https://lphca.co.uk/lphca-news/industry-driver-shortages	Research
Taxi? Taxi? Why it's suddenly getting so hard to find a cab	Nov 2021	https://www.theguardian.com/uk-news/2021/nov/13/taxi-taxi-why-its-suddenly-getting-so-hard-to-find-a-cab	Research
APPG submission by UK Hospitality	Feb 2021	https://www.ukhospitality.org.uk/page/APPG	Research
Emerging from the Pandemic	2021	The Leisure Consumer Group https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/consumer-business/deloitte-uk-the-leisure-consumer-2021.pdf	Research
Covid-19 Impact on EUROCONTROL Member States	June 2021	https://www.eurocontrol.int/sites/default/files/2021-06/eurocontrol-brief-on-covid19-impact-spain-en-09062021.pdf	Research
Modes of transport used by passengers traveling to Manchester Airport between 2002 and 2019	2019	Historical mode shares for surface access, Manchester Airport (pre-COVID) – showing high taxi mode share https://www.statista.com/statistics/303820/modes-of-transport-to-manchester-airport-uk-united-kingdom/	Research
Transport use during the coronavirus (Covid-19) pandemic	2022	https://www.gov.uk/government/statistics/transport-use-during-the-coronavirus-covid-19-pandemic	Research
What is the future of commuting to work?	May 2021	https://www.economicsobservatory.com/what-is-the-future-of-commuting-to-work	Research
Impact of the coronavirus (Covid-19) pandemic on retail sales in 2020	Feb 2021	https://www.ons.gov.uk/economy/grossdomesticproduct/gdp/articles/impactofthecoronavirusCOVID19pandemiconretailsalesin2020/2021-01-28#:~:text=1.-,Main%20points,remain%20below%20pre%2Dpandemic%20levels.	Research
Manufacturing Data	Various	Review of new vehicle production levels & impacts due to the pandemic https://www.smmmt.co.uk/vehicle-data/manufacturing/	Research
Uk automotive demand in the wake of COVID 19	2021	https://www.pwc.co.uk/industries/automotive/insights/uk-automotive-demand-in-the-wake-of-Covid-19.html	Research
Taxi price search	various	Changing prices for taxis https://www.cabdirect.com/	Taxi Prices
LEVC – Taxi Prices	various	https://levc.com/event/tx-offer-national/	Taxi Prices
Toyota Prius vehicle price	various	Review of taxi prices of popular types of PHV https://www.toyota.co.uk/new-cars/prius/	Taxi Prices
Skoda Octavia Prices	Various	Review of taxi prices of popular types of PHV https://cc.skoda-auto.com	Taxi Prices
Chapter 4			
		(No additional Sources in Chapter 4)	
Appendix A			
		No additional Sources in Appendix A	
Appendix B			
Coronavirus (Covid-19) UK Government Dashboard	Oct 2020	https://coronavirus.data.gov.uk/	Background of Covid Timeline

"Greater Manchester's Covid-19 Management Plan: how we control outbreaks"	2022	https://greatermanchester-ca.gov.uk/coronavirus/Covid-19-management-plan/	Background of Covid Timeline
"Prime Minister announces new local COVID Alert Levels"	Oct 2020	https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels	Background of Covid Timeline
TfGM's C2 Database	various	Traffic flow data was extracted and analysed from TfGM's C2 Database https://tfgmc2.drakewell.com/multinodemap.asp	Information on local traffic impacts
"Budget 2021: Fuel duty rise axed as petrol prices hit record highs"	Oct 2021	Fuel Prices Increase: https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html	Information on Economic Related Impacts
"GDP monthly estimate, UK : December 2021"	Dec 2021	GDP information https://www.ons.gov.uk/economy/grossdomesticproduct/gdp/bulletins/gdpmonthlyestimateuk/december2021	Information on Economic Related Impacts
"Average weekly earnings in Great Britain: February 2022"	Dec 2021	Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022	Information on Economic Related Impacts
"UK economy latest"	Dec 2022	Information on Goods import and exports https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomylatest/2021-01-25#output	Information on Economic Related Impacts
"Cities Outlook 2022"	Jan 2022	Change in pub and restaurant sales in City Centres and Suburbs. Weekday footfall in Birmingham, Manchester and London https://www.centreforcities.org/wp-content/uploads/2022/01/Cities-Outlook-2022-2.pdf	Information on Economic Related Impacts

Appendix B – Review of COVID Impacts

Overview

- B.1 Travel behaviour and the economy have been impacted by the Covid-19 pandemic and have resulted in changes in the way that people travel and the way businesses operate. In this chapter we will assess some of the key data findings found throughout the period to better understand the levels of impact on transport and travel generally.
- B.2 Chapter 3 focuses on the impacts of Covid-19 on the coach and minibuss sectors.

COVID Timeline

- B.3 In January 2020, Covid-19 first appeared in the UK. By 30th November 2020, there were an estimated total of 1.6 million people testing positive to the virus in the UK with 58,24539 cases resulting in deaths.⁴⁰
- B.4 As stated within the GMCA Covid-19 Management Plan Executive Summary, GM had more than 16,000 confirmed cases and nearly 2,800 people died during the first four months of the Covid-19 pandemic.⁴¹
- B.5 In Summer 2020, North West England was one of the worst affected areas by the pandemic with GM placed under additional restrictions on 31st July 2020. Throughout 2020, GM continued to experience a disproportionate impact to the rest of the UK from these additional restrictions, such as the three-tier system for lockdowns across England. This three-tiered system was first announced by the Government in October 2020 to ‘*simplify and standardise local rules*’.⁴²
- B.6 On 5th November 2020, the Government imposed a second national lockdown with restrictions on continued business activity in England. These restrictions were in place between 5th November and 2nd December 2020, followed by a return to 3 Tier system restrictions.
- B.7 On 19th December 2020 the Government introduced an additional 4th Tier, with lockdown measures beginning in London and the South East, after having identified the Alpha (Kent) variant, coming into effect on 21st December 2020 until a third nationwide lockdown was re-introduced on 6th January 2021.
- B.8 March 2021 saw Step 1 of the Government’s roadmap being introduced, with schools reopening and outdoor gatherings being allowed with the proviso of staying local. April 2021 saw Step 2 of the roadmap allowing limited indoor contact, businesses such as hairdressers to reopen and outdoor hospitality. Step 3 came into effect in May 2021, allowing indoor meetings limited to 6 people and 10,000 people for large sport stadiums. Step 4, on 19th July 2021, saw the remaining venues such as nightclubs reopen, and the removal of most other restrictions.

³⁹ UK deaths is based on deaths within 28 days of a positive test and does not include excessive deaths.

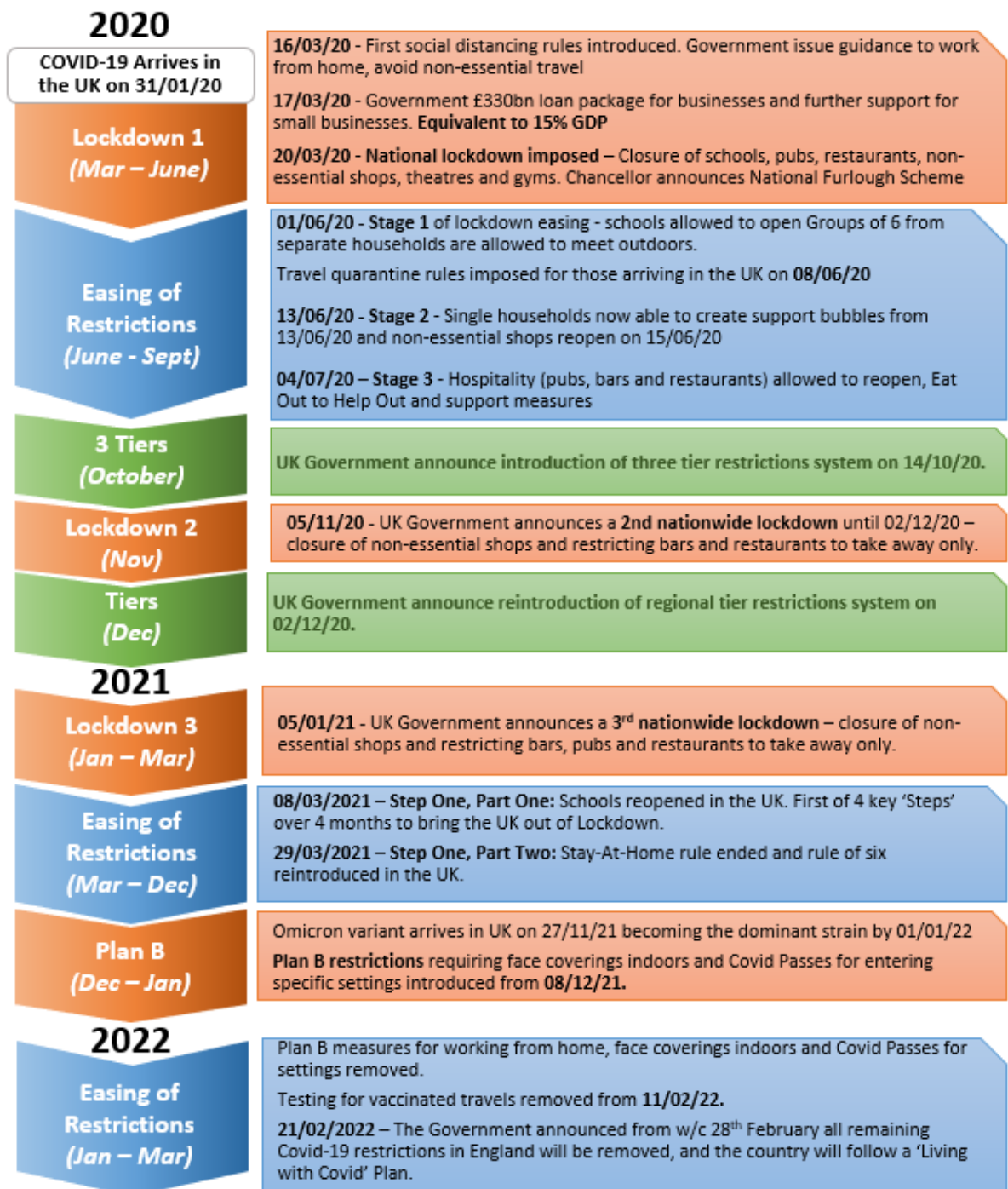
⁴⁰ Coronavirus (Covid-19) UK Government Dashboard <https://coronavirus.data.gov.uk/> (accessed 01/10/20)

⁴¹ Covid-19 Management Plan – Executive Summary (GMCA) <https://greatermanchester-ca.gov.uk/coronavirus/Covid-19-management-plan/>

⁴² Prime Minister announces new local Covid Alert Levels - <https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels>

- B.9 With the discovery of the Omicron variant, Plan B measures (face coverings indoors and use of Covid Passes at specific settings such as nightclubs), which also recommended working from home where possible, were implemented from 8th December 2021 to 27th January 2022.
- B.10 A summary of the key Covid-19 events and Government responses has been captured in **Figure B-1**.

Figure B-1 Covid-19 Timeline January 2020 to March 2022



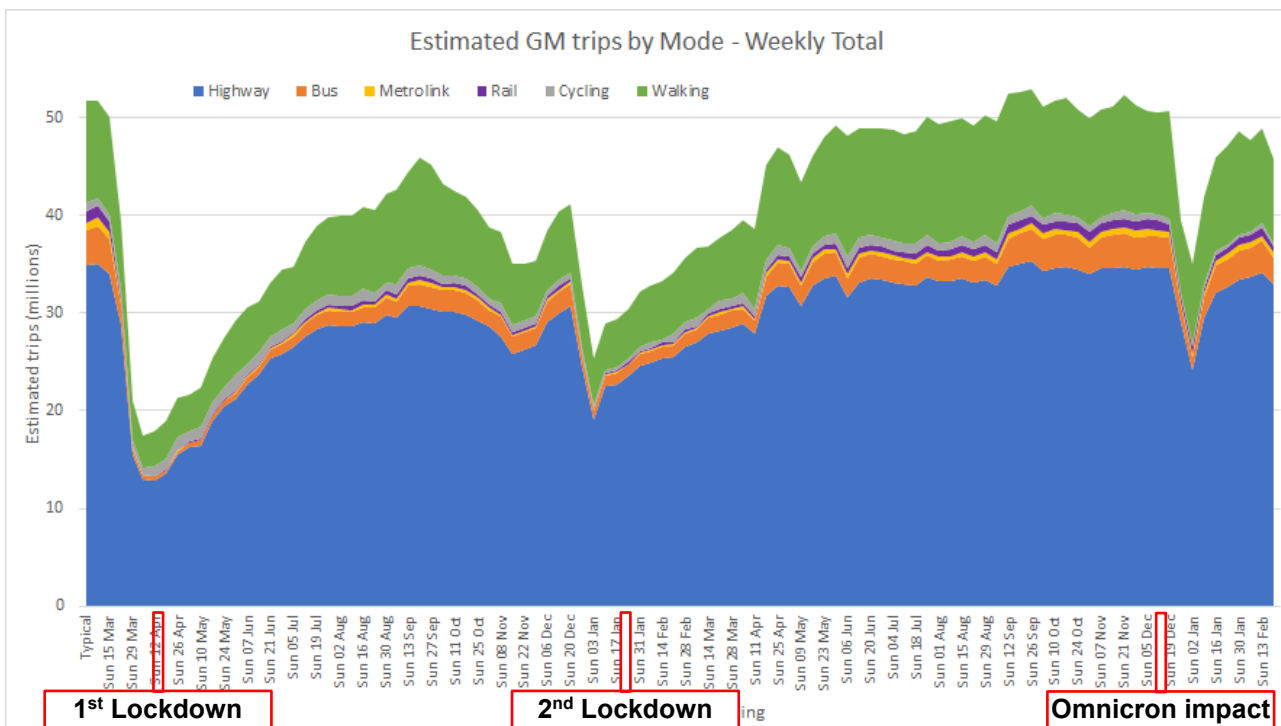
- B.11 The Covid-19 pandemic has had a transformative global impact to health, businesses, the economy, and way we live and interact with one another.

- B.12 At the time of the production of this note in March 2022, the UK appears to be exiting the pandemic. Case numbers are stabilising, death and in-patient numbers remain low, reflecting the positive impact of a successful vaccine programme rollout.
- B.13 However, emerging evidence gathered over the course of 2020 and 2021 has shown that there have been substantial changes to the economy, travel patterns and our behaviours. These changes have been driven by Government policy in the short term, however some of the behaviours adopted during Government lockdowns may continue as restrictions ease. In addition to this, economic impacts following the recent easing of restrictions have resulted in impacts which can be seen locally, nationally and globally within the economy.

Covid-19 Impacts on Travel Behaviour

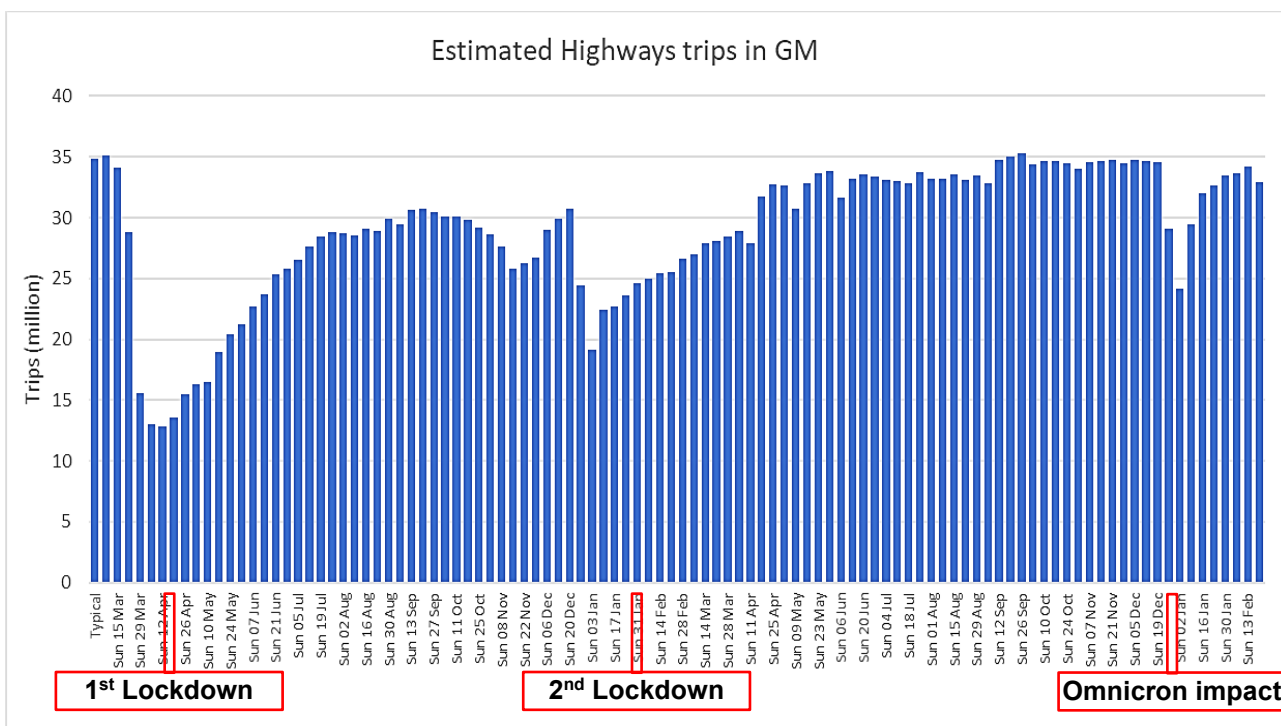
- B.14 Detailed analysis has been undertaken on the impacts of Covid-19 on travel demand within GM to compare 'pre-pandemic' and 'during pandemic' travel levels within GM.
- B.15 As shown in **Figure B-1**, there are a number of Government interventions which have had an impact on traffic levels (for all modes of transport). These include:
- Government guidance issued on 16th March 2020 to work from home 'where possible';
 - Closure of all UK schools to children, apart from those who have key worker guardians on 20th March 2020;
 - Closure of the hospitality and leisure sector on the 20th March 2020 including pubs, bars, restaurants, gyms, theatres etc.;
 - Re-opening of schools to all children in September 2020 alongside the UK Government encouraging workers to return to the office;
 - Implementation and extension of the Government Tiered restrictions;
 - Return to lockdown conditions on 5th November 2020, 2nd December 2020 and 6th January 2021; and
 - Hotel quarantine for travelers from high-risk countries.
- B.16 Since the beginning of the pandemic, travel patterns across the UK have significantly changed, driven by changing Government guidelines and the perception of transmission risks on certain forms of transport. An overview of the changing trends of travel behaviour by mode in Greater Manchester is provided in **Figure B-2 to Figure B-6**; the data has been provided by TfGM. Three key dates have been flagged in each figure: the first and second national lockdowns plus the emergence of the Omicron variant.

Figure B-2 Overview of travel behaviour – All Modes



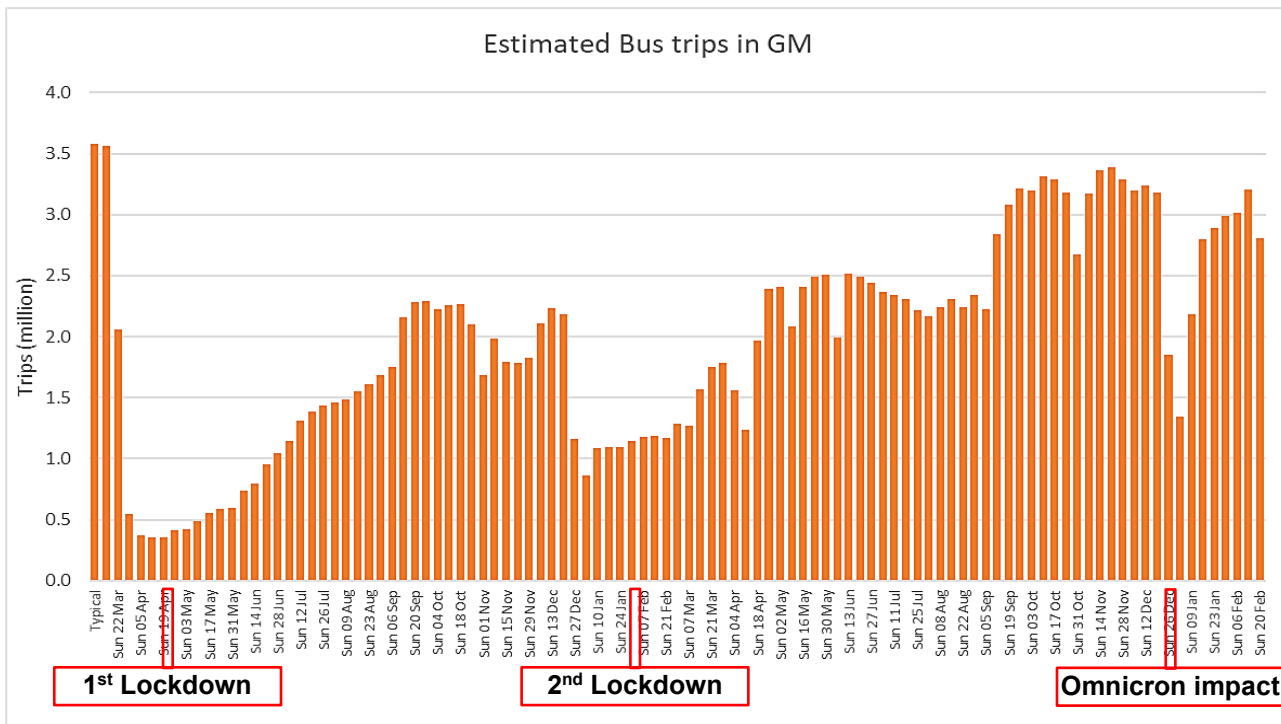
Source: TfGM

Figure B-3 Overview of travel behaviour – Highway



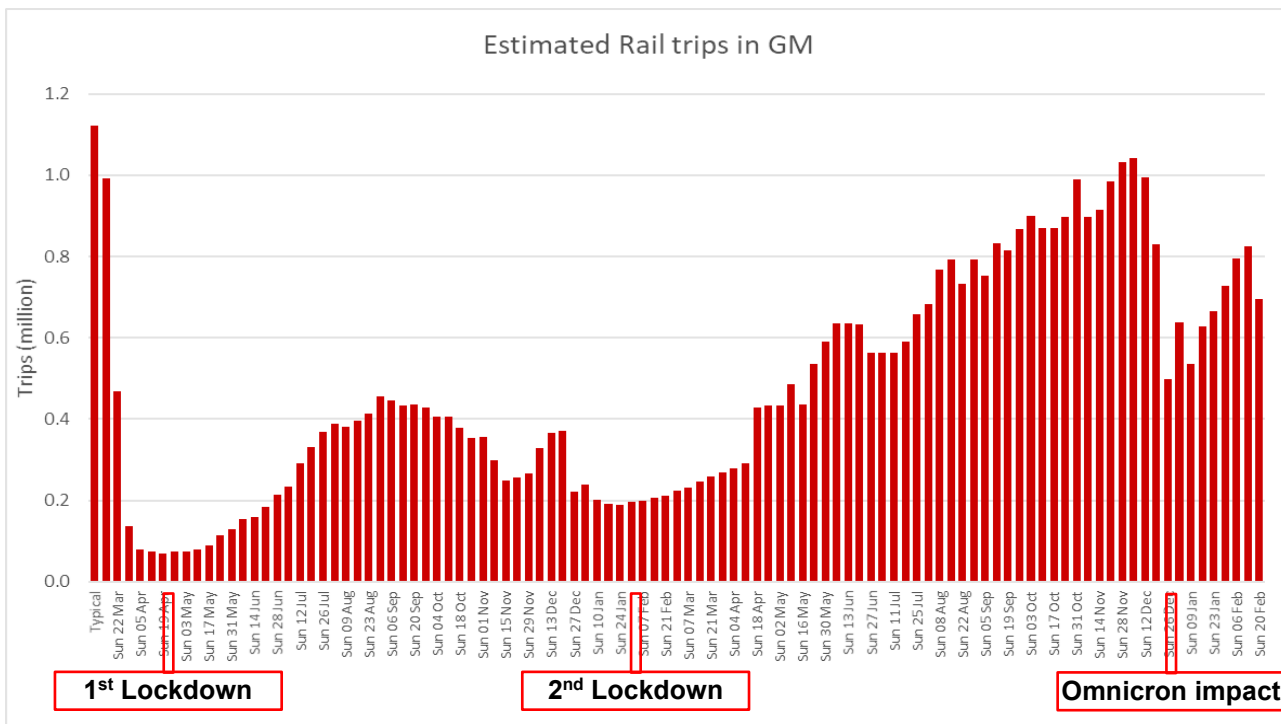
Source: TfGM

Figure B-4 Overview of travel behaviour – Bus



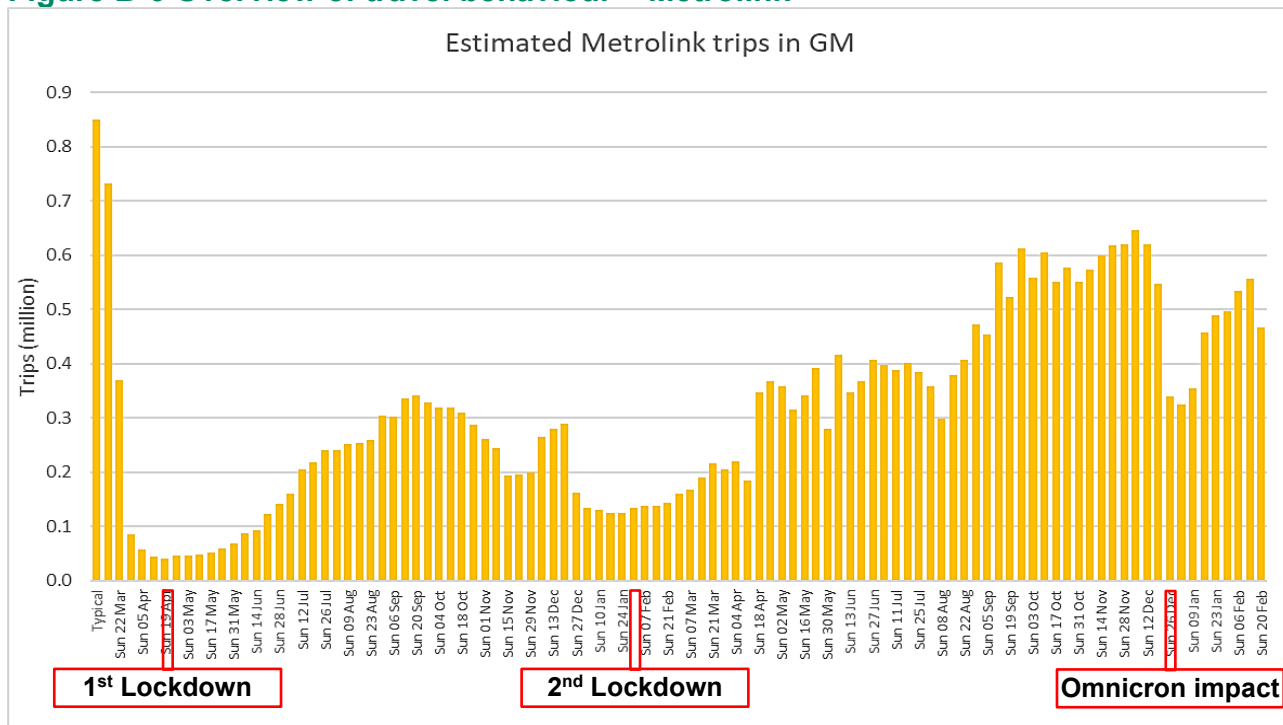
Source: TfGM

Figure B-5 Overview of travel behaviour – Rail



Source: TfGM

Figure B-6 Overview of travel behaviour – Metrolink



Source: TfGM

B.17 These figures illustrate that the impact of the pandemic has been pronounced and the extent to which pre-pandemic travel volumes have returned varies by mode. In summary, at the aggregate level across GM:

- Highway trips are close to pre-pandemic levels (approximately 95% of ‘typical’); and
- Public transport trip levels are between 60% and 75% of pre-pandemic / typical levels with bus performing more strongly than rail / Metrolink.

Local Traffic Impacts

B.18 Further analysis was undertaken regarding traffic flows on the local highway network, in order to understand the changing highway demand levels at various points through the pandemic. This has provided an insight into how the Covid-19 related travel guidance and changing behaviours because of the pandemic have impacted travel across GM.

B.19 This analysis has considered changing travel levels at a range of locations across Greater Manchester, to understand how traffic flows have changed on the following:

- Roads near to the Regional Centre;
- Key radial routes;
- Roads adjacent to local centres within GM; and
- Roads accessing centres of employment.

B.20 The analysis has considered several points in time, comparing:

- September 2019 (before the pandemic);

- September 2020 (during the pandemic);
- November 2021 (during pandemic – pre Omicron); and
- January 2022 (most recent, though impacted by Omicron variant).

B.21 Traffic flow data was extracted and analysed from TfGM's C2 Database⁴³. These have been reviewed and presented for the 2-way hourly link volumes, by hour, at the following locations:

- Manchester Rd (A56) / 15m South of Ashlor St, Bury (ATC);
- Princess Rd (A5103) / 100m North of Bonsall St, Hulme, Manchester (ATC);
- Washway Rd (A56) / 40m North of Hunston Rd, Sale, Trafford (ATC);
- Bury New Rd (A56) / 90m North of Kingswood Rd, Prestwich, Bury (ATC); and
- Centenary Way (A576) / 160m North of Guinness Rd, Trafford Park, Trafford (ATC)

B.22 Using these specific locations around Greater Manchester the traffic behaviours at each location type can be assessed.

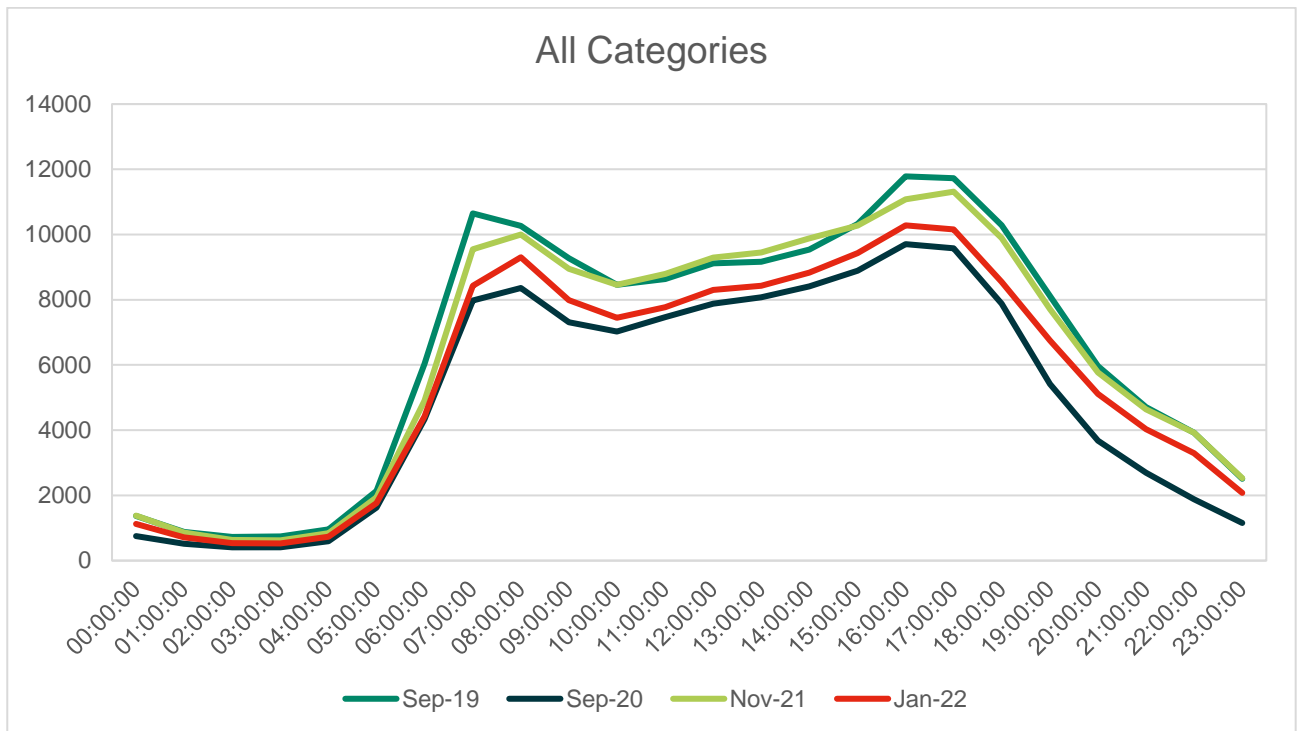
General Traffic Conditions

B.23 Averaging the sites identified above (see **Figure B-7**) suggests there has been a change in travel behaviour throughout the pandemic, noting the following key observations:

- The AM and PM peak periods have remained, although there is a dampening down effect on the peaks, with less variation between peak flows and interpeak flows, as the interpeak has continued to perform strongly.
- During late 2021, highway demand was almost back at pre-pandemic levels, there was then a noticeable drop again in demand as a result of the Omicron variant in December 2021.
- There has been some recovery during the peak periods, though they have not yet returned to pre pandemic levels.
- It is also noted that the earlier part of the AM peak is less strong than pre pandemic levels, with the AM peak now occurring 08:00 to 09:00, rather than 07:00 to 08:00 based on the sample of data sites.
- It also appears that the evening traffic (after 19:00) in 2022 is recovering at a slightly faster rate than the daytime traffic flows. This returned to pre-pandemic levels in November 2021 however, there has been a slight drop again in 2022, although it has been less impacted than other times of day. During the 2020 restrictions, the evening economy was significantly restricted by the Covid-19 restrictions in place at the time.

⁴³ <https://tfgmc2.drakewell.com/multinodemap.asp>

Figure B-7 Change in traffic flow levels by time of day (all areas)



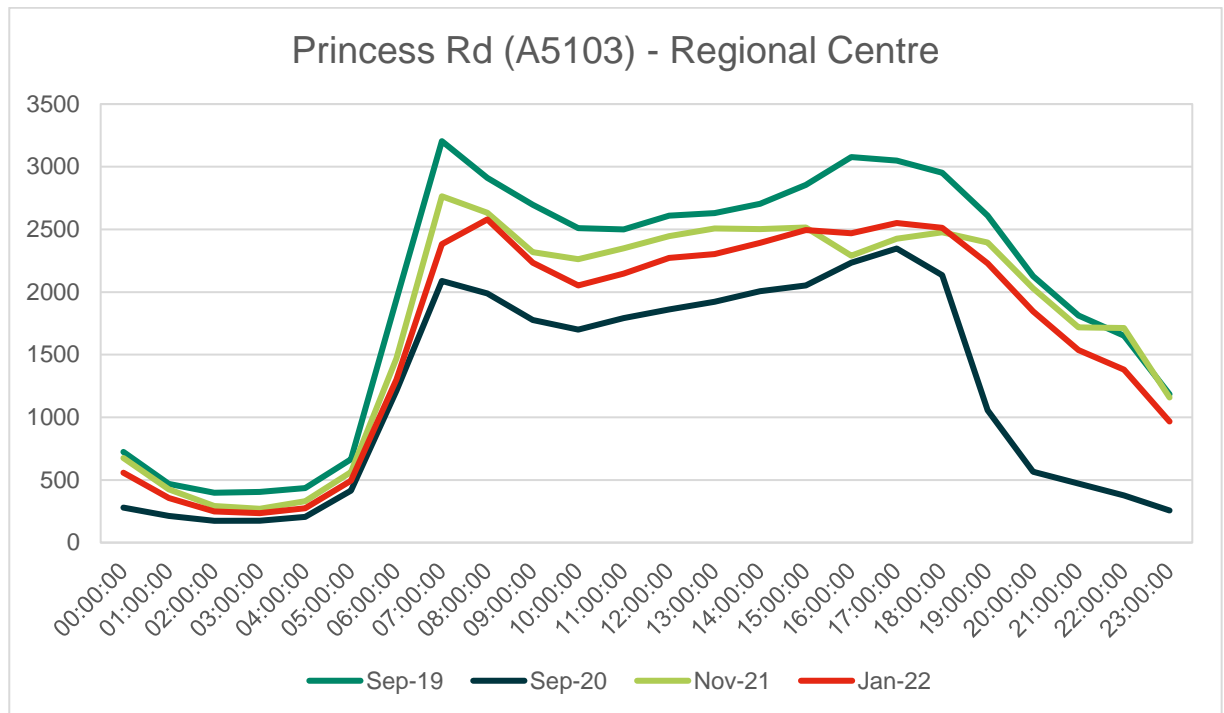
Source: TfGM C2 Database

Roads adjacent to the Regional Centre

B.24 Traffic flows adjacent to the Regional Centre have been significantly impacted throughout the pandemic (see **Figure B-8**). The following key trends have been identified:

- From the data assessed, the pandemic (and associated restrictions) appears to have had the greatest impact on regional centre flows, with the largest decrease in 2020 and the slowest recovery;
- The recovery of traffic flows in the peaks is still subdued, though traffic flows during the Omicron variant have been higher than in Autumn 2020, unlike what is seen at local centres;
- In 2020, Covid-19 restrictions had a considerable impact on demand for travel relating to the Regional Centre, with heavy restrictions placed on sectors such as leisure, tourism, and the night time economy. By November 2021, the easing of COVID restrictions resulted in a return of travel demand to the Regional Centre, showing considerable recovery at particular times of day, reaching close to 2019 levels. The 2022 travel demand to Mar-22 also showed a strong return of traffic during the evening periods, though the Omicron variant is likely to be keeping these slightly below pre-pandemic levels at present.
- The early part of the AM peak is now much weaker than prior to the pandemic, and the PM peak is less pronounced. In November 2021, traffic flows were slightly reduced from pre pandemic levels, with the PM peak most strongly impacted. In January 2022, the PM peak appears to be starting to recover, with a slightly later AM peak.

Figure B-8 Change in traffic flow levels by time of day (Regional Centre)

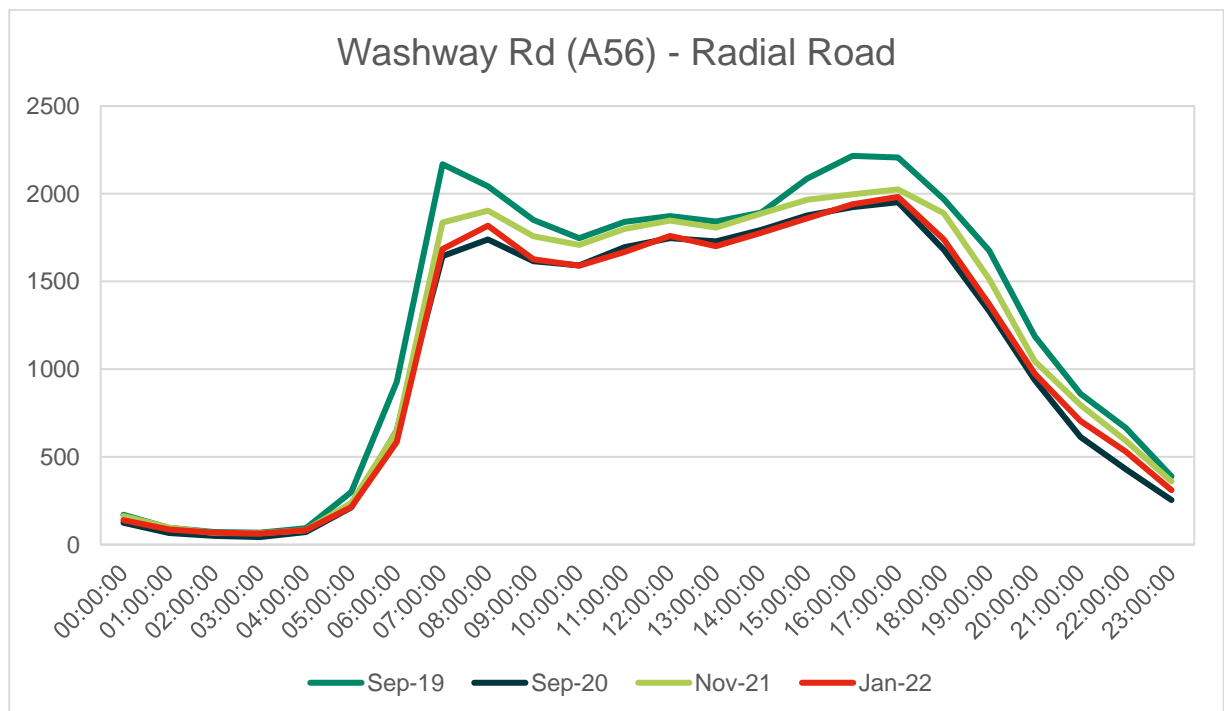


Source: TfGM C2 Database – Location N of Bonsall St, Hulme

Radial Roads

B.25 On Washway Road in Sale (see **Figure B-9**), its proximity close to the M60, and as a key radial route, has resulted in a high level of traffic demand at various points throughout the pandemic. The site is also close to the Local Centre of Sale. Demand has remained strong at the various points assessed although, as with most other locations, the peak periods are showing slightly lower demand in 2022.

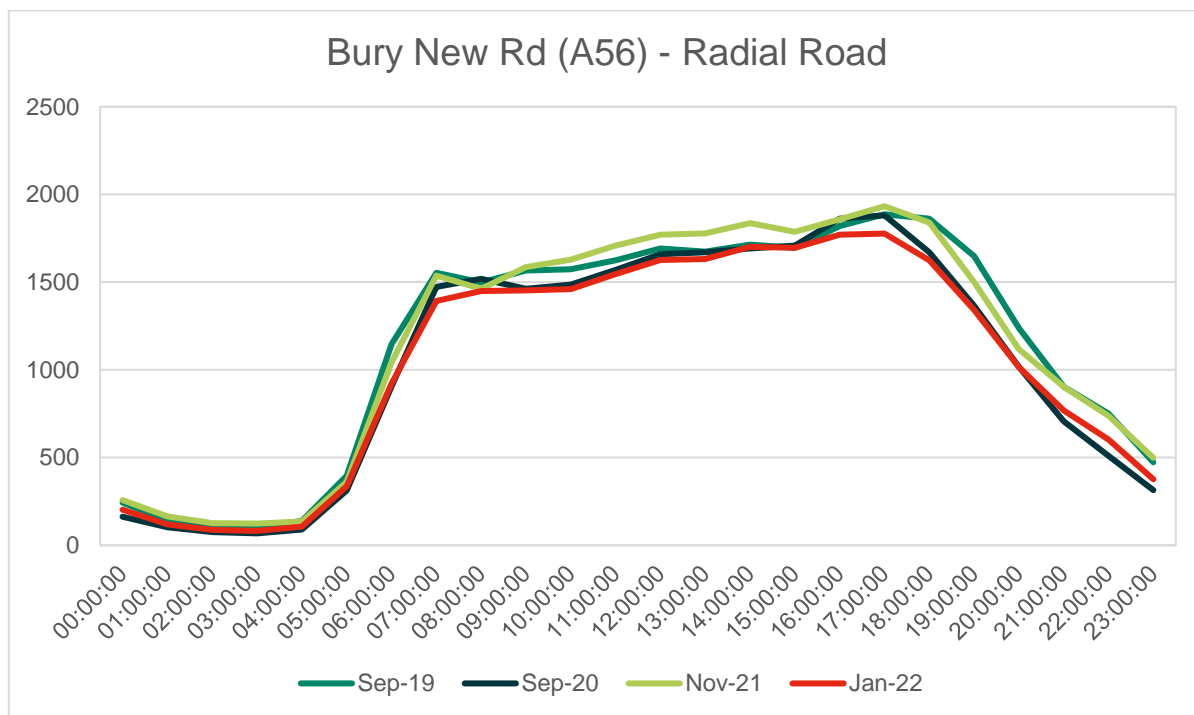
Figure B-9 Change in traffic flow levels by time of day (Radial Roads Outside M60)



Source: TfGM C2 Database – Location adjacent to Sale Local Centre

B.26 Another key radial route north of the Regional Centre is Bury New Road (see **Figure B-10**). This site is also a key radial, though also serves local centres, such as at Prestwich. This location has shown a strong recovery of travel behaviour with travel at certain times of day exceeding pre-pandemic levels, especially during the interpeak, both in autumn 2020, autumn 2021 and currently in 2022. The evening period has, however, shown a slower recovery.

Figure B-10 Change in traffic flow levels by time of day (Radial Roads Inside M60)



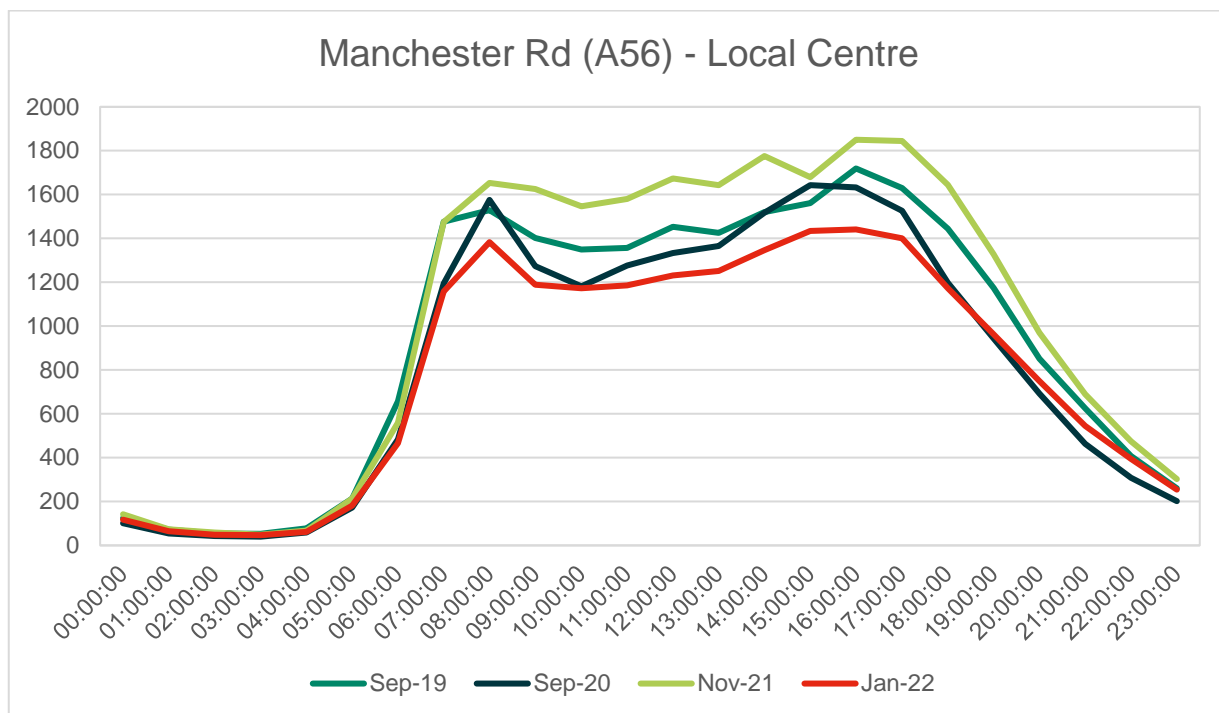
Source: TfGM C2 Database – Location N of Kingswood Rd, Prestwich (Near to M60 J17)

Local Centres

B.27 Throughout the pandemic, as the UK Government eased travel guidance, travel demand in the vicinity of local centres, have bounced back strongly. **Figure B-11**, shows the A56 Manchester Road near Bury, which experienced a strong bounce back effect in Autumn 2020, when travel restrictions were eased. **Figure B-11** shows the later part of the AM peak and the early part of the PM peak exceeding pre pandemic levels, plus a strong interpeak and was likely an impact of more localised travel.

B.28 By the end of 2021, demand had exceeded 2019 pre-pandemic levels by a clear margin, however this demand fell significantly in January 2022. The recent 2022 data shows the impacts of restrictions associated with the Omicron variant which has suppressed traffic flows once again.

Figure B-11 Change in traffic flow levels by time of day (adjacent to Local Centres)

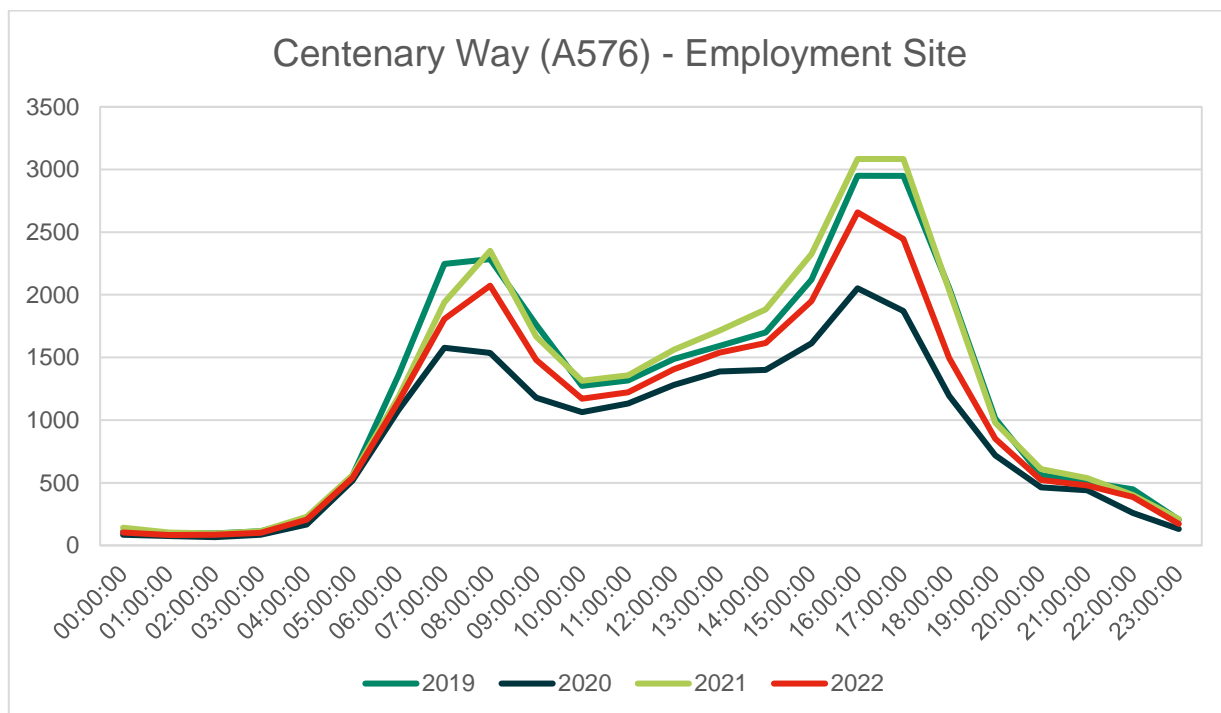


Source: TfGM C2 Database – Location S of Ashlor St, Bury

Centres of Employment (Trafford Park)

- B.29 Trafford Park is a major site of employment within Greater Manchester, with traffic flows accessing this employment area changing significantly during the pandemic.
- B.30 During the limited easing of travel restrictions in Autumn 2020, traffic flows to/from Trafford Park remained low, with limited return of higher peak time travel flows. This was possibly due to the higher levels of working from home at the time. The more recent data from November 2021 shows flows higher than pre-pandemic levels. January 2022, though impacted by the Omicron variant, shows a recovery of peak hour travel demand, close to pre pandemic levels, although the early part of the AM peak and the later part of the PM peak show a slightly weaker recovery. Interpeak travel is also similar to pre pandemic levels (See **Figure B-12**).

Figure B-12 Change in traffic flow levels by time of day (Centres of Employment)



Source: TfGM C2 Database – Location Trafford Park, Trafford

Summary

- B.31 The review of local traffic flows at various locations across GM has shown considerable variations in changing travel behaviour by location, when compared to pre-pandemic levels. This is likely to be impacted by changing travel habits, although the recent Omicron variant is likely to be impacting some travel behaviour in the 2022 data, as shown in **Figure B7**, general traffic levels in Autumn 2021 showed overall recovery in traffic flows above pre-pandemic levels.
- B.32 The change in travel behaviour by location since September 2019 is summarised in **Table B-1**.
- B.33 Considering the position in November 2021, when travel patterns were least affected, it is notable that Local Centre traffic flows were higher than previously whilst the Regional Centre flows were still much reduced. For radial routes and employment centres, overall (daily) levels were back to pre-pandemic but with some variation during the day; the morning peak being less pronounced but the interpeak higher.

Table B-1 Traffic flow changes by location type from September 2019 to January 2022

Location Type	Period	Change relative to Sep-19 (Index=100)			
		Sep-19	Sep-20	Nov-21	Jan-22
Regional Centre	AM	100	67	88	81
	IP	100	73	95	88
	PM	100	41	92	85
	Eve	100	26	95	85
	Daily	100	61	88	83
Radial inside M60	AM	100	98	98	93
	IP	100	98	105	96
	PM	100	101	102	96
	Eve	100	80	94	83
	Daily	100	92	101	91
Local Centres	AM	100	103	108	90
	IP	100	96	115	88
	PM	100	94	113	86
	Eve	100	74	110	87
	Daily	100	90	111	86
Employment Centre	AM	100	69	95	86
	IP	100	83	108	94
	PM	100	61	102	79
	Eve	100	74	99	91
	Daily	100	74	102	88

Source: TfGM C2 Database

Economic Related Impacts

Introduction

B.34 Changes in the economic situation are also likely to have had an influence on travel behaviour. The section below presents the trends for a range of factors impacting the economy, several of which are likely to impact the way people travel and businesses operate.

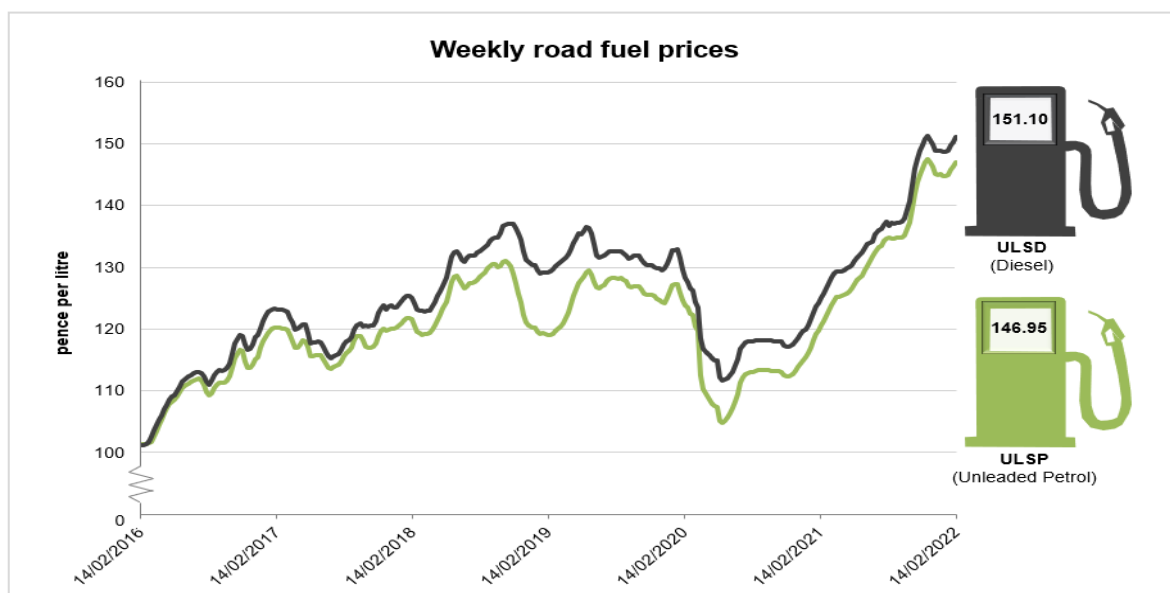
Fuel Prices

B.35 There are six companies (four oil companies and two supermarkets) that feed into the weekly fuel price survey prepared by the government. These companies cover around 65% of the market. The change in fuel price is displayed in **Figure B-13**.

B.36 The price of road fuel is volatile over shorter time periods, with prices regularly rising and falling. The key trends from during the pandemic are:

- At the start of 2020 prices appear to have been on the decline. There was then a significant fall in both Diesel and Unleaded Petrol in early 2020, corresponding with the first national lockdown.
- During the second part of 2020, prices appear to be stable, with prices beginning to rise steadily throughout 2021 in line with global oil market prices.
- There is a steep rise in prices towards the end of 2021, reaching record highs. This corresponds with a sudden rise in post-pandemic energy demand. This has triggered a tax freeze on petrol and diesel for the twelfth year in a row⁴⁴.
- In September 2021 long queues and forecourt closures were witnessed, caused by panic buying throughout the country, sparking a fuel shortage in Britain.

Figure B-13 Weekly Road Fuel Prices



Source: [gov.uk](https://www.gov.uk)

B.37 It was already likely that the price of fuel would remain unsteady for some time as a consequence of the impact of the pandemic and recent events in Ukraine have brought additional uncertainty to that market.

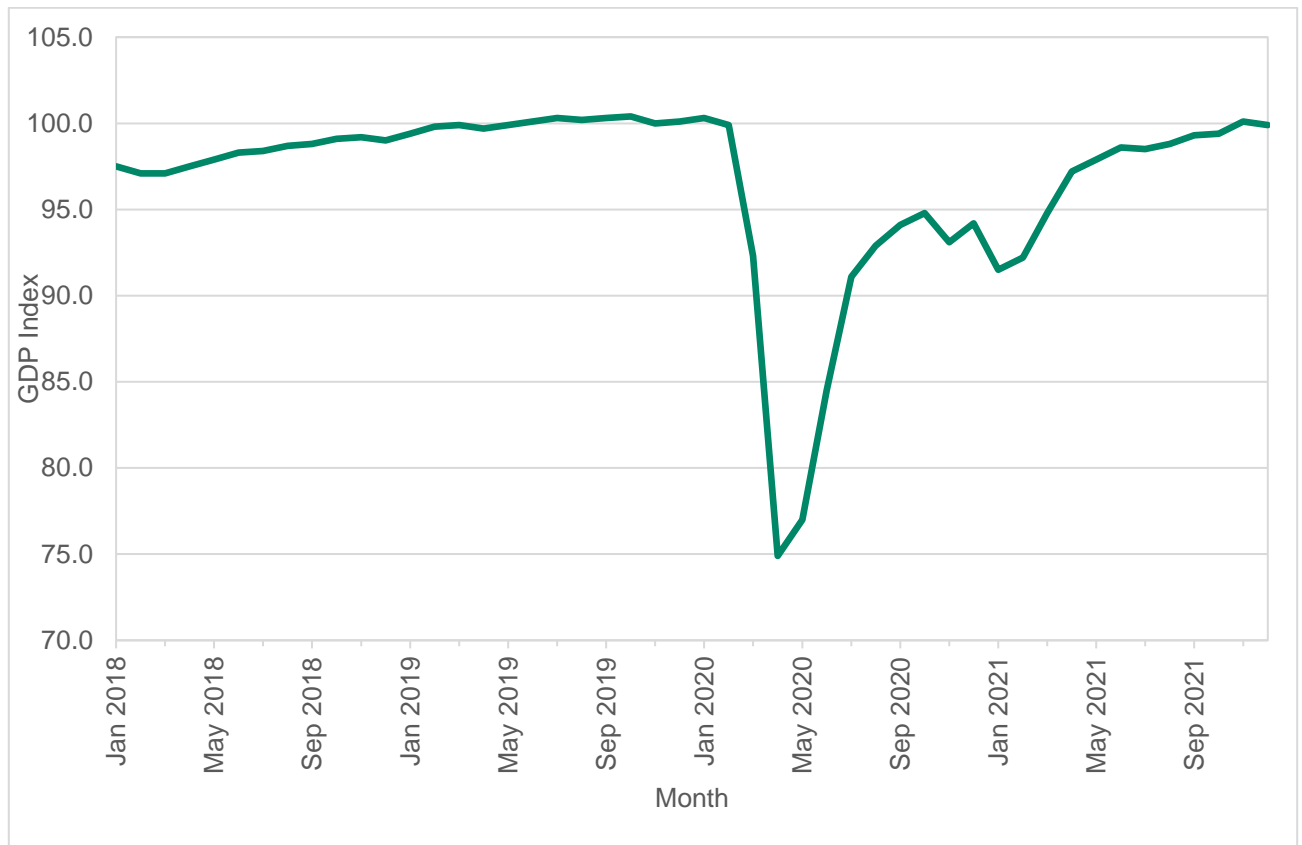
GDP

B.38 From bulletins on the ONS data website⁴⁵ the end of 2021 saw a drop in GDP by 0.2%, to equal the pre pandemic level of February 2020. In December 2021 services and construction are both above pre-pandemic levels, while production remained below. Consumer facing services fell within December, driven by a fall in retail, 8.4% below pre-coronavirus levels, contributing to the GDP fall in December 2021 (see **Figure B-14**).

⁴⁴ <https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html>

⁴⁵ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

Figure B-14 GDP in the UK (Index, 2019 = 100)



Source: ons.gov.uk/economy⁴⁶

B.39 Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021⁴⁷. In real terms (adjusted for inflation), total and regular pay fell for the year by 0.1% and 0.8% respectively.

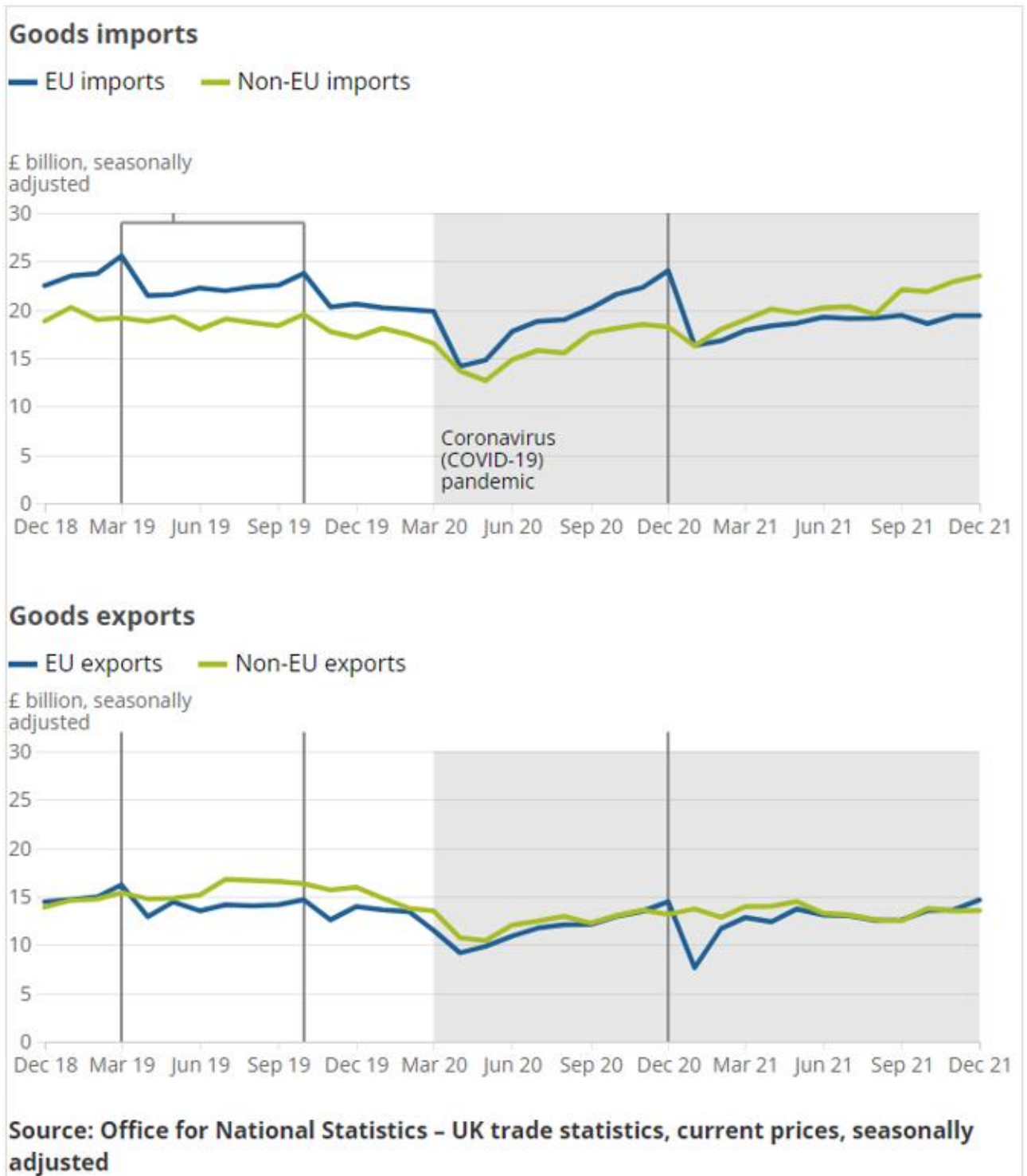
Imports and Exports

B.40 **Figure B-15** shows the trends in UK goods imports and exports throughout 2019, 2020, and 2021. After an initial decrease in imports at the beginning of the pandemic, this appears to have recovered. There was another significant decrease at the end of 2020, however imported goods are on the increase back to pre-pandemic levels. There was less impact on exports, with these remaining steady throughout.

⁴⁶ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

⁴⁷ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022>

Figure B-15 Import and Exports



Source: ons.gov.uk/economy⁴⁸

Centre for Cities – Cities Outlook

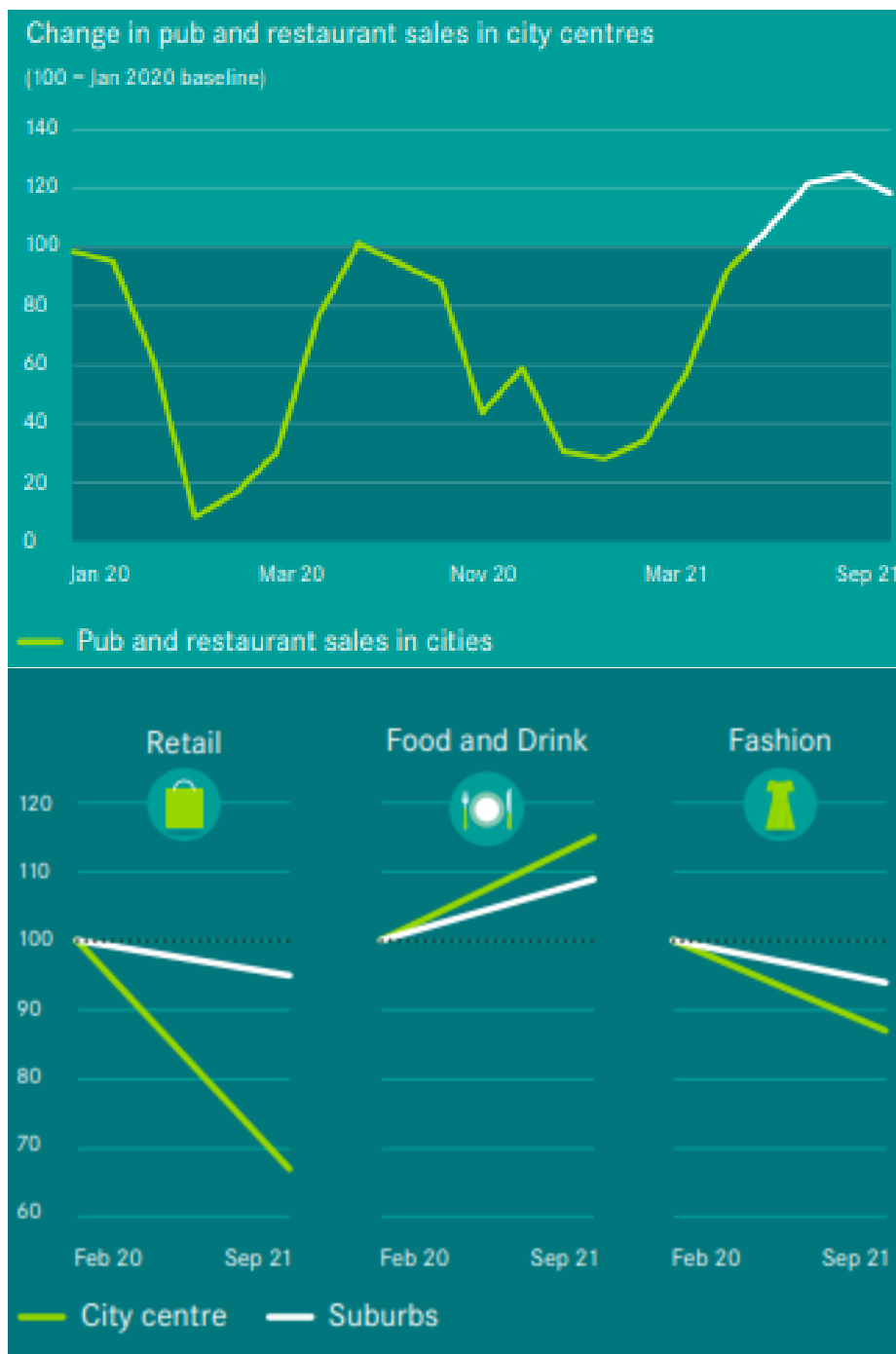
- B.41 Centre for Cities produced the Cities Outlook 2022 report looking in-depth at the state of UK high streets, to get a sense of the short-term impact of the pandemic on Britain's town and city centres, and the long-term consequences and implications this has for the Government's levelling up agenda. This report showed that there was a quick and considerable shift away from high streets to online

⁴⁸ <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomy/latest/2021-01-25#output>

shopping during the pandemic. However, in most cities the shift stalled, or slightly fell again once shops reopened.

B.42 The Cities Outlook report also studies the impacts on pubs and restaurants, stating that the fashion sector was hit harder than pubs and restaurants. **Figure B-16** shows the trend in sales throughout 2020 and 2021. There are clear decreases in sales corresponding to the national lockdowns but in all instances, these soon recover when the sector reopens. This is also reflected in the suburbs, with retail and fashion experiencing a slight decline from Feb 2020 to September 2021 but food and drink on a steady incline.

Figure B-16 Change in pub and restaurant sales in City Centres and Suburbs



Source: ons.gov.uk/economy⁴⁹

⁴⁹ <https://www.centreforcities.org/>

- B.43 Due to the work from home regulations and, for many, working from home becoming a regular part of the working week, it is feared the reduced footfall in cities will have a lasting effect on retail, hospitality, and transport sectors. **Figure B-17** show the weekday footfall in London, Manchester and Birmingham. Although not yet back to pre-pandemic levels, there is a steady climb in footfall in the major cities with Manchester appearing to recover more quickly than Birmingham, and London taking considerably longer.
- B.44 The more significant impact on London may be related to the impact of Covid-19 on international tourism.

Figure B-17 Weekday footfall



Source: ons.gov.uk/economy

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Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside

Appendix C - Technical Note: Current issues in the Van Sector

DRAFT FOR APPROVAL

June 2022

1. Introduction

Background

- 1.1 After the initial OBC submission, a series of technical notes were published setting out the results of analysis and research carried out to better understand the vehicles in scope for the scheme. For vans, this included in particular Technical Note 3: Analysis of the Freight Market, Technical Note 12: Evidence of the impact of a 2021 implementation of a CAZ C (without exemptions), and Technical Note 20: GM Specialist Goods Survey Results Summary¹.
- 1.2 Further notes were produced setting out the development of analytical tools for freight, with the latest published summary of that work provided in T4 Appendix A of the Modelling for Consultation². Research was carried out with vehicle owners potentially in scope for the scheme, including deliberative research³ and a survey with 800 van owners⁴.
- 1.3 This evidence formed the basis of the development of the Option for Consultation. From March 2020, it became clear that the pandemic would affect the Greater Manchester Clean Air Plan (GM CAP); a programme of work was carried out in 2020/2021 to better understand the possible impacts of the Covid 19 pandemic on the GM CAP, published as the Impacts of Covid Report in June 2021⁵. This evidence, alongside feedback from the Consultation, was used to inform the revised GM CAP as approved by the ten GM local authorities in June/July 2021.
- 1.4 At that time, GM identified a number of possible risks to the GM CAP, which included concerns about the risk of vehicle price increases and the impact of any further lockdowns in the UK or countries in the supply chain.
- 1.5 This report, which was originally developed in January 2022, draws a series of findings and conclusions to better understand the circumstances affecting van owners in Spring 2022 (based upon the previous' GM CAP implementation date) and the implications for the GM CAP and surrounding policy framework.
- 1.6 Since Spring 2022, there have been further dramatic changes to the economic context in the UK which are not explicitly addressed in this report but are set out in **Appendix E**. A range of factors associated with the impact from war in Ukraine, increased costs of energy and fuel, changes to Bank of England base rates and forecasts, global supply chain challenges, and the cost-of-living crisis have combined to create a context of increased financial hardship for businesses and families.

Structure of Note

- 1.7 The remaining sections of the report are structured as follows:
 - Section 2 provides an overview of the van sector in GM;

¹ All available at [Technical Documents | Clean Air Greater Manchester \(cleanairgm.com\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4)

² <https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4> - Appendix A Behavioural Response Cost Models and Demand Sifting Tool.pdf

³ [GM CAP Deliberative Research ALL - Spring 2019.pdf \(ctfassets.net\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4)

⁴ [CCTS Listening Exercise \(ctfassets.net\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4)

⁵ [GM CAP- Impact of COVID Report \(ctfassets.net\)](https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4)

- Section 3 describes the national van market trends and vehicle volumes;
- Section 4 describes issues affecting the demand for vans;
- Section 5 describes issues affecting the supply of vans;
- Section 6 sets out the impact of supply and demand on van prices;
- Section 7 considers the impact of supply constraints and price rises on the GM CAP; and
- Section 8 provides a summary of the key findings and recommendations.

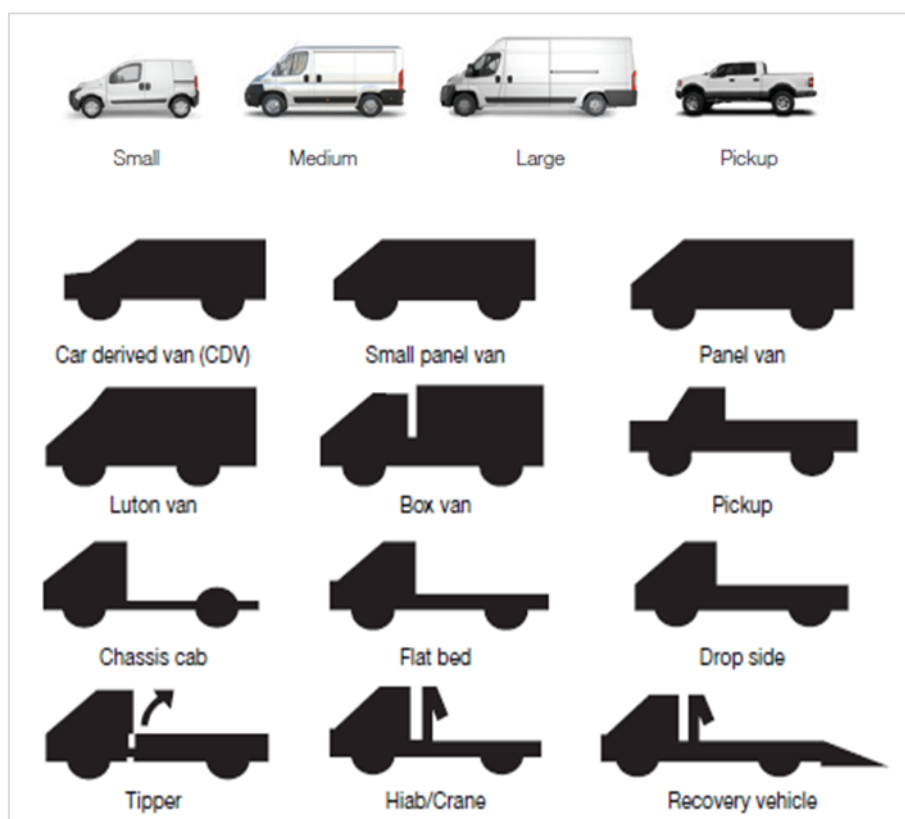
1.8 In addition, **Appendix A** provides a list of data used to inform the report and **Appendix B** reviews the recent changes in travel behaviour within GM through the pandemic up until January 2022.

2. Overview of the van sector in GM

Diversity and importance of the Van Sector

- 2.1 Vans are vital to the UK economy. Nationally, 3.4 million people use or depend on vans for their work and half a million people drive a van as the main part of their job. In total, vans support 10% of the UK's workforce, delivering a combined wage bill of £56bn or 11% of GDP⁶.
- 2.2 There has been a 56% growth in the van sector since 2000, mainly in the larger van market. This has been driven by an increase in the number of self-employed tradespeople and the rapid rise in online shopping. The pandemic has strengthened the trend towards online shopping, with many (especially older) people shopping online for the first time⁷.
- 2.3 More than three quarters of vans are medium or large, and the van market encompasses a wide range of vehicle types, as shown in **Figure 2-1**. Some vehicles will include refrigeration or other modifications, and many van owners will have fitted out their van interior to include shelving, for example.
- 2.4 Vans serve a wide range of sectors, as illustrated in **Figure 2-2**. A quarter of GM's vans fleet serves the construction sector (24%), with other major sectors including wholesale & retail (16%), manufacturing (13%), and transport & storage (9%).

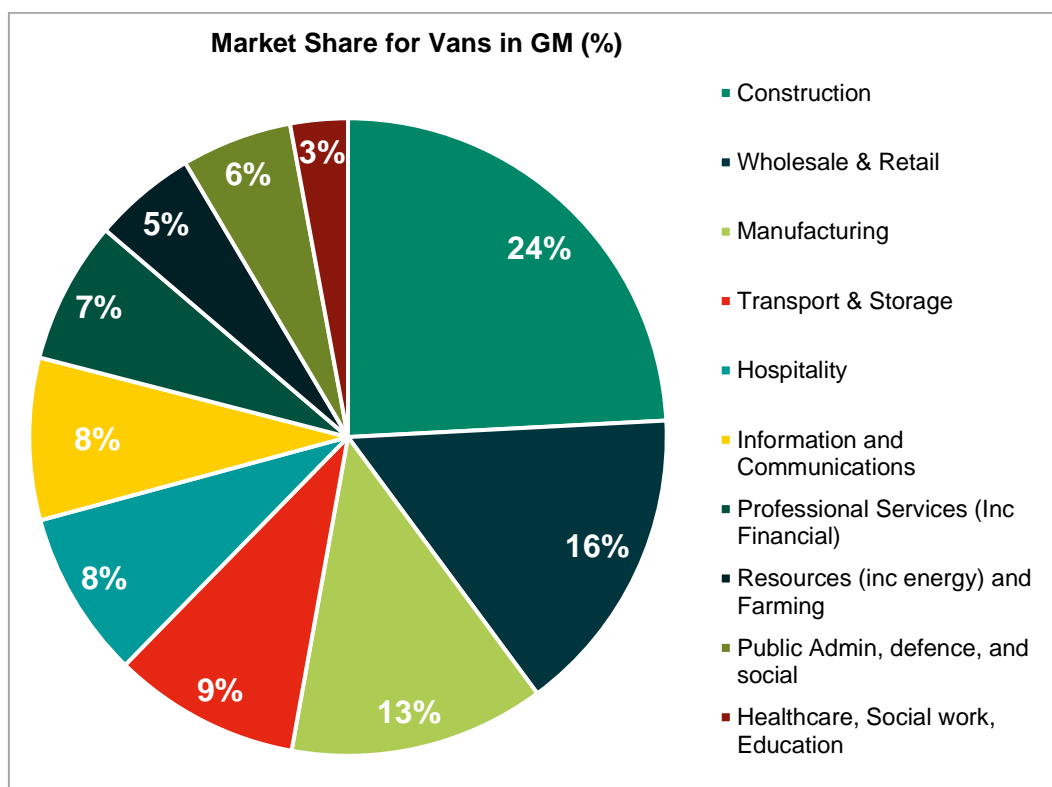
Figure 2-1 Vehicle Types Classified as a Van



Source: Ford Commercials

⁶ Data throughout this section sourced from [Note 3 - GM CAP Analysis of the Freight Market \(ctfassets.net\)](https://www.ctfassets.net)

⁷ Statista Accessed 5th January 2022 <https://www.statista.com/statistics/1230225/changes-in-online-buying-among-uk-consumers-since-covid-19/>

Figure 2-2 Market share by industrial sector for Vans in GM

Source: <https://www.smmmt.co.uk/wp-content/uploads/sites/2/SMMT-Light-Commercial-Vehicles-Delivering-for-the-UK-economy.pdf>

2.5 GM carried out analysis considering how vulnerable different sectors were to the GM CAP. This was carried out before the pandemic in Autumn 2019, and then revisited in Autumn 2020 based on evidence of the impact of Covid on each sector⁸. A summary of that analysis is shown in **Figure 2-3**.

2.6 There is a high proportion of sole traders in the most vulnerable sectors. Van drivers have low average incomes, with analysis suggesting that the cost of the charge could equate to 15% of average income.

2.7 Longer vehicle lifespans are associated with smaller businesses and sole traders most commonly found in sectors such as removals and construction. Companies operating larger fleets, such as those in the food and retail sectors, typically replace vehicles more frequently and are therefore more likely to have CAZ compliant vehicles at present, although some parts of those sectors have been badly affected by the pandemic in terms of extended periods of closure or constrained operations.

2.8 Research conducted by GM in Autumn 2019⁹ with 800 sole traders and microbusinesses found that 48% of businesses change their LGVs when they are over 10 years old or no longer fit for purpose, in comparison with 20% who update their vehicles before they are 4 years old¹⁰.

2.9 The largest sector, construction, makes up 24% of the GM market and includes over 21,000 vehicles affected by the GM CAP, 38% of the total overall affected vans. LGVs in the construction sector have the longest lifespans, with an average replacement age of 15 years.

⁸ [GM CAP- Impact of COVID Report \(ctfassets.net\)](https://www.ctfassets.net)

⁹ [CCTS Listening Exercise \(ctfassets.net\)](https://www.ctfassets.net)

¹⁰ [CCTS Listening Exercise \(ctfassets.net\)](https://www.ctfassets.net)

Figure 2-3 Vulnerability to the GM CAP by van-owning sector

Sectors	Sector Percentage	Vehicle Replacement Age	Non-compliant percentage	Responding to CAP	
				Vulnerability (Pre COVID – 2019)	Vulnerability (Spring 2022)
Construction	24%	15	56%	Very High	Very High
Wholesale, retail & repair of motor vehicles	16%	10	34%	Medium	High
Manufacturing	13%	10	34%	Medium	High
Transport & storage	9%	10	34%	Medium	High
Accommodation & food services	8%	9	27%	Low	Medium
Information & communication	6%	9	27%	Low	Medium
Professional, scientific & technical activities	4%	10	34%	Medium	High
Mining, energy & water supply	4%	10	34%	Medium	High
Public admin. & defence; social security	4%	12	45%	High	Very High
Human health & social work activities	2%	12	45%	High	Very High
Other services	2%	12	45%	High	Very High
Financial & insurance activities	2%	9	27%	Low	Medium
Administrative & support services	2%	12	45%	High	Very High
Agriculture, forestry & fishing	1%	15	56%	Very High	Very High
Real estate activities	1%	9	27%	Low	Medium
Education	1%	10	34%	Medium	High
Royal Mail	1%	9	0%	Very Low	Very Low
Total	100%	-	40%		-

Vulnerability Criteria	
10% and below	Very Low
11-20%	Low
21-30%	Medium
31-40%	High
40% and above	Very High

Compliance of the van fleet serving Greater Manchester

- 2.10 Based on ANPR data and DfT Statistics, GM estimates that there are around 278,000 vans serving the region, of which around 136,000 are thought to be located within the GM boundary.
- 2.11 **Table 2-1** presents the number of LGVs estimated to be serving Greater Manchester in 2019, including splits by compliant and non-compliant vehicles which failed to meet Euro VI standards at that point.

Table 2-1 Number of vans in GM by compliance – 2019

	GM Based	Non-GM Based	Total
Compliant	27,290 (20%)	74,147 (52%)	101,437 (37%)
Non-Compliant	108,456 (80%)	67,535 (48%)	175,991 (63%)
Total	135,746	141,682	277,428

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates

- 2.12 In 2019, there were 277,400 LGVs serving Greater Manchester¹¹ with 37% deemed compliant and 63% non-compliant. Vehicles based in GM had a lower level of compliance than those based outside GM, with only 20% of LGVs deemed compliant and 80% non-compliant (compared to 52% compliance for LGVs based outside of GM). Overall, there were slightly more LGVs serving GM that were not based in GM (141,700) in comparison with LGVs based in the city region (135,700).
- 2.13 The large proportion of LGVs which are non-compliant is in part due to relatively long vehicle lifespans, typically ranging between 9-15 years depending on the industrial sector in question, and due to the fact that compliant vans did not come onto the market until 2015, with the Euro 6 standard coming into force for vans in 2016.
- 2.14 A proportion of the vans in the fleet would normally be upgraded each year, with the oldest vehicles being scrapped out of the fleet. GM's forecasting suggests that the number of non-compliant vans based in GM will have reduced from 108,500 in 2019 to 75,400 by 2023. This means that around 31,100 vans would have been upgraded from a non-compliant to compliant vehicle as a result of business-as-usual purchases prior to the COVID-19 Pandemic.
- 2.15 The anticipated rate of upgrade for vans was revised in 2021 based on evidence that the Covid-19 pandemic had delayed vehicle purchases, such that the fleet was estimated to be around 3 months older than previously forecast. The rationale and methodology for this change is set out in the report "GM's proposed approach to representing the impact of Covid 19 in core modelling scenarios"¹². This had the effect of reducing the number of GM-based vans expected to make a business-as-usual upgrade between 2019 and 2023 by 1,4000.
- 2.16 **Table 2-2** sets out the number of vans estimated to be serving GM in 2023, by whether they are expected to be compliant without the GM CAP being introduced.

¹¹ Based upon 2019 ANPR splits

¹²

https://assets.ctfassets.net/tlpgbvy1k6h2/2ZMJ3DJXiv7p3xOeZu4CYQ/247196ef60e33ac89f7f8938e1e16418/Appendix_6D_GM_proposed_approach_to_representing_the_impact_of_Covid-19_in_core_modelling_scenarios.pdf

Table 2-2 Number of vans in GM by compliance – 2023

	GM Based	Non-GM Based	Total
Compliant	58,935 (43%)	86,122 (61%)	145,056 (52%)
Non-Compliant	76,811 (57%)	55,560 (39%)	132,371 (48%)
Total	135,746	141,682	277,428

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates

Impact of the GM CAP on Van Upgrades

- 2.17 As set out above, it is anticipated that 76,800 GM-based vans will be non-compliant in 2023 and will therefore need to upgrade their vehicle or pay the charge in response to the GM CAP until compliance with the Government Direction has been achieved.
- 2.18 Of these, it is estimated that up to 59,000 may be in scope¹³ for support from the Clean Commercial Vehicle Fund. This Fund provides financial support of up to £3,500 for the purchase of a compliant van up to 1.6t and up to £4,500 for the purchase of larger compliant van up to 3.5t, with a grant of up to £5,000 available for retrofit where available, subject to eligibility criteria. GM has secured £70m to support the upgrade of vans, sufficient to support around 15,900 vehicles.
- 2.19 **Table 2-3** sets out the number of vans estimated to be serving GM in 2023, by whether they are expected to be compliant with the introduction of the GM CAP.

Table 2-3 Number of vans in GM by compliance, with GM CAP – 2023

	GM Based	Non-GM Based	Total
Compliant	107,345 (79%)	129,550 (91%)	236,895 (85%)
Non-Compliant	28,401 (21%)	12,132 (9%)	40,533 (15%)
Total	135,746	141,682	277,428

Source: FBC Appendix V, T4 Annex C: Vehicle Population Estimates

¹³ https://assets.ctfassets.net/tlpgbvvy1k6h2/2VNncClzejAvGh3CrVn0oo/d45528de22e593c9be285ddf5b26373b/Appendix_1_-_GM_Clean_Air_Plan_Policy_following_Consultation.pdf

Review of Fleet Profile

ANPR

2.20 Three sets of ANPR data were used, based on available data, these comprise the following time periods:

- GMP19 - January 2019 (pre COVID-19 pandemic);
- GMP20 - September 2020; and
- GMP21 - November 2021.

2.21 The LGV vehicle age profile change is presented in **Figure 2-4**. The proportion of newly purchased LGVs (i.e. less than 1 year-old) captured by ANPR cameras decreased from near 12% to 3% from 2019 to 2020 and recovered to close to 7% by the end of the 2021. It is noted that these figures are likely to be slightly overestimated due to differences in the sample size (10 months' worth of 'new vehicles' captured in the January 2019 survey compared to 6 and 8 months captured in the September 2020 and November 2021 surveys).

2.22 **Table 2-4** suggests that the average age of LGVs increased by 0.8 years from the beginning of 2019 to the end of 2021.

Figure 2-4 LGV fleet age distribution

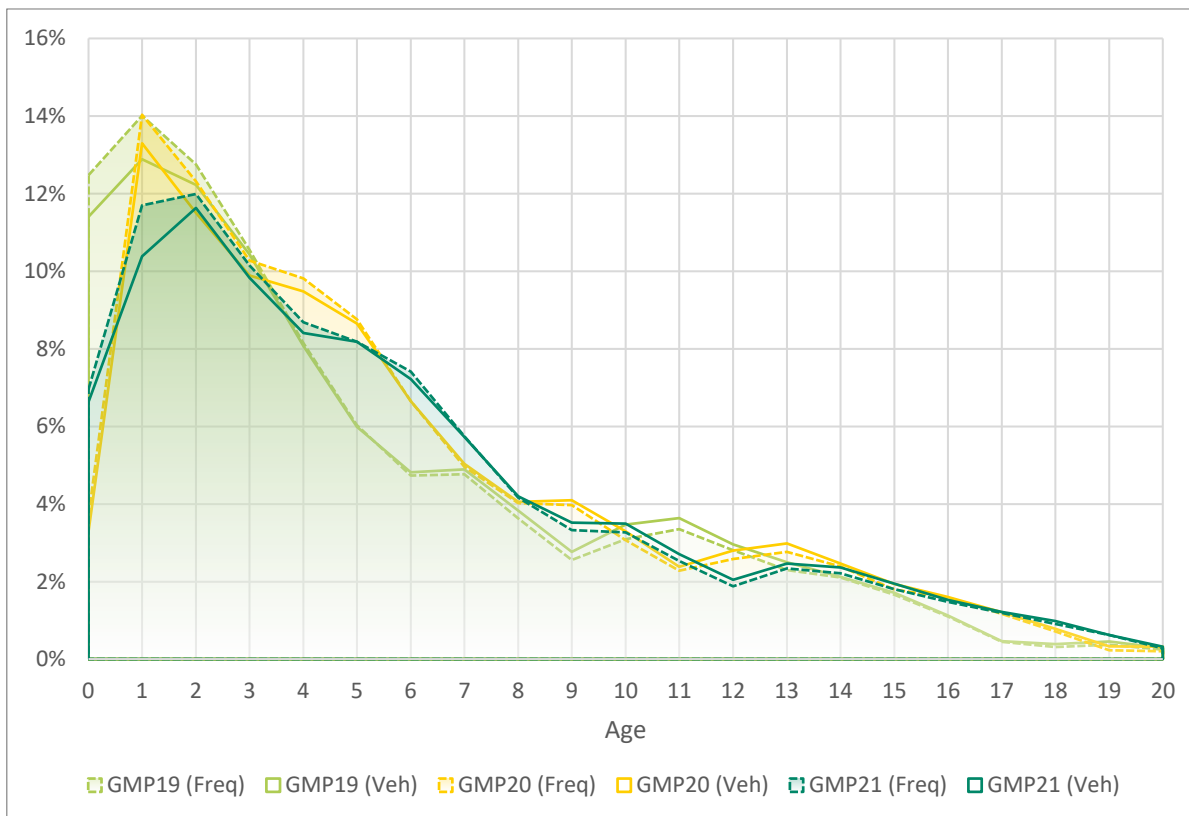


Table 2-4 Average LGV Age

Data set	GMP19	GMP20	GMP21
Frequency			
Average Age	5.3	6.0	6.1
Most common age group	1	1	2
Unique Vehicles			
Average Age	5.8	6.5	6.6
Most common age group	1	1	2

SMMT

2.23 The pandemic had a large impact on the number of new vans sold in the UK in 2020, but sales recovered to nearly pre-Covid levels in 2021. Sales forecasts indicate that market supply will recover the majority of the lost sales by 2025.

3. National Van Market

Overview of the Van Market

- 3.1 On average, around 367 thousand new vans are registered nationally each year. New vehicles are primarily purchased by larger businesses, vehicle rental companies and the leasing sector. Many large fleet operators lease rather than own their vehicles, and most such vehicles are kept for around 3 to 5 years, with vehicles from the rental sector typically entering the second-hand market first. These good quality second-hand vehicles are typically purchased by small businesses.
- 3.2 Vehicles may then be released onto the market again at 8 to 10 years old, into the third-hand van market, which are typically purchased by people and businesses working in the construction, transport and storage sectors.
- 3.3 Compliant diesel vans came onto the market in 2016 (some early models may have been available from 2015), meaning that the second-hand market for compliant vans started to exist at scale from 2019 onwards.
- 3.4 Pre-pandemic evidence suggested that there are around 10-12,000 second-hand van sales per week nation-wide, of which around 4% take place in GM.
- 3.5 This evidence is set out in more detail in GM CAP Technical Note 3: Analysis of the Freight Market¹⁴.

Van Ownership and Usage

- 3.6 The Department for Transport (DfT) undertook a survey of van activity in Great Britain in 2019¹⁵. This looked at van ownership, van mileage, where and when vans are traveling, and environmental factors. The survey field work was carried out in 2019-20, prior to any Covid-19 related restrictions.
- 3.7 The survey showed that the most common primary usage of licensed vans was for 'carrying equipment, tools and materials' (54%), followed by 'delivery/collection of goods' (16%) and 'private/domestic non-business use' (16%).
- 3.8 Over half (57%) of business kept vans were new; 35% owned outright and 22% owned via a hire purchase agreement. Most privately kept vans were second-hand (82%). Within the DfT survey, the keeper of the vehicle is defined as that responsible for registering and taxing the vehicle only. The keeper of the vehicle is not necessarily the owner or the driver. Furthermore, the keeper is either an individual or a business (including sole trader, partnership or limited company).
- 3.9 Around half of all vans (51%) in Great Britain stayed local, within 15 miles of their base, on a typical day.
- 3.10 Associated statistics produced by the department showed that average mileage for vans has remained broadly stable in recent years (pre-pandemic) at around 13,000 miles per year.

¹⁴ https://assets.ctfassets.net/tlpgbv1k6h2/sxMVbAwfJrcq3tFd9Thb7/fd8843b6d128ef318da320ee22ca6ac5/3_-_GM_CAP_Analysis_of_the_freight_market.pdf

¹⁵ DfT Statistical Release 15 April 2021, Final Van Statistics April 2019 - March 2020

Van Manufacturers

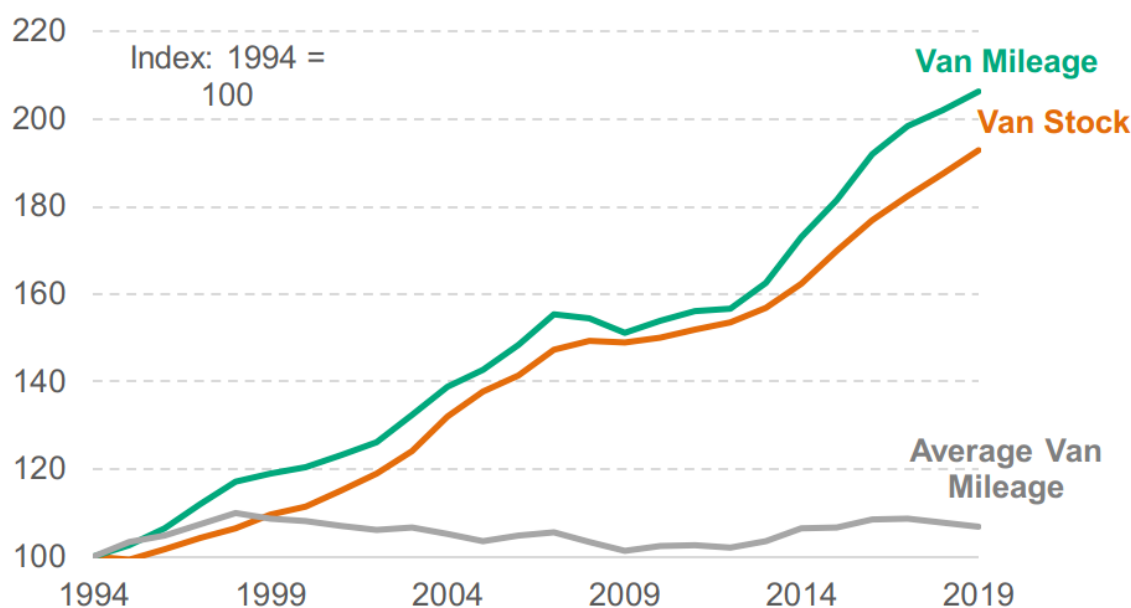
- 3.11 The British van market in 2021 has sales of 355,380 vehicles under 3.5 tonnes. The biggest growth in recent times is in the area of large vans (2.5-3.5 tonnes) which are typically used by parcel companies, food home deliveries and in the construction sector.
- 3.12 The top 10 selling models represent around 60% of the market. Within this top 10 there are three Ford Transit variants which represent 99,185 of sales (28% of the total market) and these vans are made in Turkey. The next best seller is Mercedes Sprinters with 6% of the market. The main van made in the UK is the Vauxhall Vivaro made by Stellantis, and this had sales of 17,957 (5%) of the market.
- 3.13 Almost 95% of vans sold in the UK are imported and reliance on imports has grown over the last twenty years and changed significantly when Ford shut their van plant in Hampshire. Around 330,000 vans were imported last year whilst 60% of vans made in the UK are exported.

4. Van Demand

Historical Trends Pre-Pandemic

- 4.1 The Department for Transport's (DfT) road traffic estimates indicate that van travel has grown substantially over the last 25 years, increasing 106% to 55.5 billion vehicle miles in 2019. Van travel as a proportion of all motor vehicle miles has increased from 10% to 16% over the same period.
- 4.2 This, together with the relationship to the scale of the van stock, is illustrated in **Figure 4-1** from the DfT statistical bulletin relating to the 2019 survey¹⁶.

Figure 4-1 Trend of Van Stock and Van Traffic, Great Britain 1994-2019



Source: Road Traffic estimates in Great Britain: 2019, Vehicle Licensing Statistics: 2019

- 4.3 The increase in van stock in recent years evident from **Figure 4-1** reflects the significant demand for new vans which has been on a consistently upward trend for many years.

Demand Trends Pre-Covid

- 4.4 The Society of Motor Manufacturers and Traders (SMMT) 2019 Report¹⁷ identified the following as aspects in the increase in demand seen in the sector since 2000:
- the van parc (the total number of vehicles in operation) has grown by 59% while, by contrast, the HGV parc has shrunk by 2%;
 - the majority of this growth has been driven by demand for larger vans (2,600-3,500 kg Gross Vehicle Weight);
 - Factors fuelling this growth include a fundamental shift in consumer behaviour with the growth of online shopping;

¹⁶ DfT Statistical Release 15 April 2021, Final Van Statistics April 2019 - March 2020

¹⁷ Light Commercial Vehicles, Delivering for the UK Economy, 2019 Report

- an increase in vans as businesses seek to develop more agile logistics operations in response to the growth in the ‘fulfilment from store’ model (a service which previously would have been completed by an HGV); and
- a rise in self-employment (from 3.3 million in 2001 to 4.8 million in 2017)¹⁸.

Impact of Covid

- 4.5 Van sales have been heavily impacted by pressures associated with Covid. SMMT data shows April and May 2020 being particularly poor months for new van registrations.
- 4.6 Supply constraints on delivery of new vehicles in the early 2020 lockdown, were gradually released into the summer as already purchased and manufactured vehicles could be delivered and received. At this point, new orders were likely delayed due to market uncertainty in the early phases of the pandemic.
- 4.7 However, whilst the early phases of the pandemic and subsequent lockdowns and constraints in 2020 constrained demand, it appears that this effect was temporary based on SMMT new van registration monthly data (see later in **Figure 5-1**) and has been offset by growth in demand from other sectors.
- 4.8 Home deliveries surged during the lockdown in 2020, with traditional ‘bricks and mortar’ retail affected by closures for at least three months of the year. This led to many consumers increasing their use of on-line deliveries or using it for the first time.¹⁹ This includes the grocery sector, which whilst not subject to the enforced closures of other retailers, saw increased demand for home deliveries as customers looked to avoid social contact in-store.
- 4.9 This has seen an increase in the use of and demand for vans as companies frequently use these vehicles for home deliveries (although some companies have drivers using their own cars). Vans are the vehicle of choice as larger HGVs are impractical and undesirable for most residential streets and the more stringent regulation and licensing requirements of those vehicles.²⁰

Green Agenda/Corporate Social Responsibility

- 4.10 Many fleet operators and individual van owners are looking to transition their fleets to vehicles using low or zero emission fuels. In the Mayor’s round table session with large fleet operators held in December 2021, many commented that they had corporate goals to speed up the transition of their fleet to electric, from Euro 5 or 6 diesel, but that they were finding it difficult to do so because of the issues in the supply chain. In some cases, this meant that they were retaining existing vehicles for longer whilst they waited for new vehicles to arrive.

¹⁸ Trends in Self-Employment in the UK Office for National Statistics

¹⁹ Statista Accessed 5th January 2022 <https://www.statista.com/statistics/1230225/changes-in-online-buying-among-uk-consumers-since-covid-19/>

²⁰ Motor Trader Accessed 5th January 2022 <https://www.motortrader.com/motor-trader-news/automotive-news/booming-home-delivery-construction-fuel-demand-vans-auction-25-08-2021>

4.11 Electric vans, in particular, are increasingly attractive as their price relative to conventionally fuelled vehicles drops, range increases and lifecycle costs become more certain. Sales of electric vans are increasing, albeit from a low base and a lower market share than electric cars²¹. This may be placing additional demand pressure on the market, if operators are bringing forward vehicle replacements.

Clean Air Plan Initiative

4.12 Modelling associated with the GM CAP forecast that almost 70% of van owners whose vehicles operate in Greater Manchester were expected under previous conditions to upgrade their vehicles to Euro VI engines or better to avoid the charge, taking advantage of associated funding support. Similarly, the London Ultra Low Emission Zone, along with other smaller city centre CAZs will lead to increased demand for compliant Euro 6 models.

4.13 This will increase demand for compliant vehicles, and more substantially at a regional level in GM and London, which for the used vehicle market could lead to regional disparities in purchasing trends and therefore demand across the wider UK.

Forecasting Van Demand

4.14 In October 2021 SMMT released a forecast of van sales for the next 3 years, demonstrating that they expect registrations to increase each year to 2023.

Table 4-1 Forecast van sales between 2021 and 2023, SMMT

Forecast Year	2021	2022	2023
Projected van registrations (thousands)	340*	364	378

Source: SMMT

Note: The 2021 sales achieved 355,000, 15,000 more than the October 2021 projection.

4.15 The SMMT historic forecast van sales estimates are useful to understand how the manufacturing base anticipates demand and enables supply. The SMMT annual forecasts have been analysed against the actual van sales to help gain insight on trend in supply versus predicted demand.

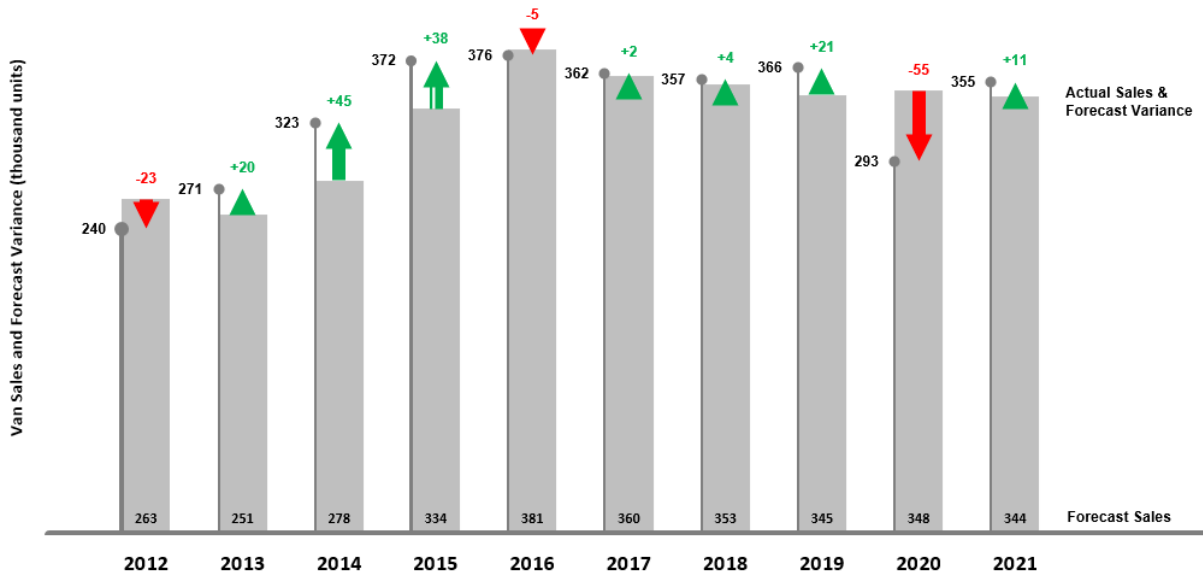
4.16 **Figure 4-2** and **Figure 4-3** show the variance between actual new van registrations and the SMMT January forecast for the forthcoming year and the following year, respectively²².

²¹ Fleet Europe Accessed 5th January 2022 <https://www.fleeteurope.com/en/last-mile/europe/analysis/why-electric-van-sales-are-set-soar?a=JMA06&t%5B0%5D=e-LCV&t%5B1%5D=Dataforce&t%5B2%5D=Arrival&t%5B3%5D=EV100&t%5B4%5D=Renault&t%5B5%5D=Nissan&t%5B6%5D=Mercedes-Benz%20Vans&curl=1>

²² SMMT accessed 9th January 2022, <https://www.smmt.co.uk/category/vehicle-data/used-car-sales-data/>

Figure 4-2 SMMT Van Sales, Actual Sales and Variance from 1-Year Forecast

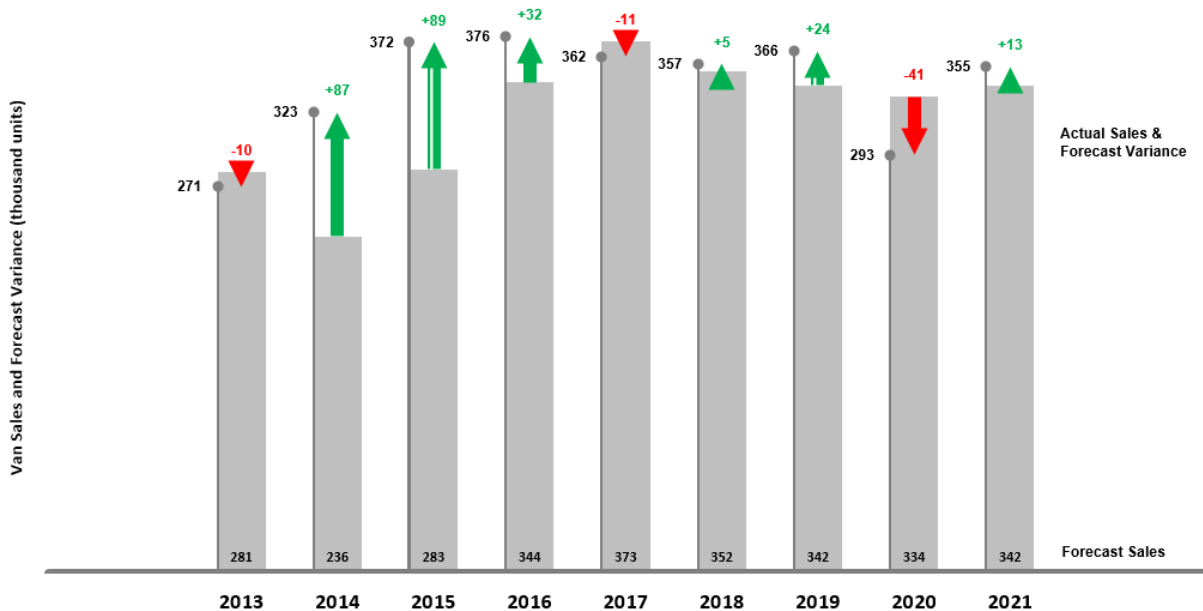
Forecast Sales for the Forthcoming Year vs Actual



Source: SMMT

Figure 4-3 SMMT Van Sales, Actual Sales and Variance from 2-Years On Forecast

Forecast Sales for Two Years On vs Actual



Source: SMMT

4.17 What this shows is that the SMMT forecasts have typically under-predicted sales, with the 2 Years On under-prediction more significant, which may be expected if demand is increasing quickly above previous trends.

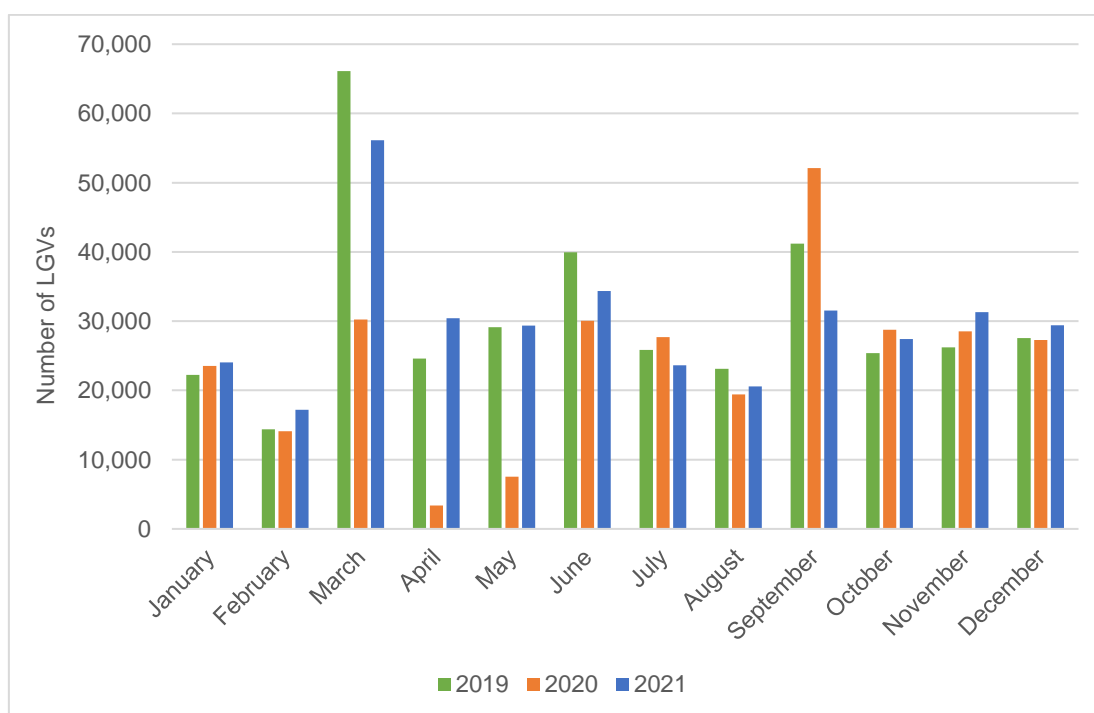
- 4.18 The graphs also show that, prior to the Covid-19 pandemic, total van sales had been stable since 2015, with average sales at 367,000 per annum. Van sales in 2021 recovered back to close to typical levels, after the substantial drop in 2020. So, whilst 2021 sales maybe similar to pre-Covid, the overall reduced new vehicle sales in 2020/21 would require a very significant increase in 2022 to recapture lost sales in time for the GM CAP 2023 opening. To simply recover the lost sales in 2020/2021, the 2022 registrations would need to be 448,000, equivalent to an immediate 23% increase over pre-Covid levels. This is in the face of supply constraints in the manufacturing process and ongoing economic uncertainty. In fact, the SMMT forecasts for 2022/23 presented in **Table 4-1** suggest continued typical levels, meaning there is predicted to be a shortfall in the new van fleet and associated impacts for the used van market too.
- 4.19 However, it can also be inferred that despite these constraints, manufacturing in 2021 has managed to deliver at previous levels of supply, and also owners purchasing new vehicles have been able to afford them. This indicates that there is strong and resilient demand in some sectors, at least those companies able to purchase new vehicles. What isn't clear from these data is how this might filter to the used van market nor whether some groups or sectors are deferring purchases due to high prices or lack of availability of suitable vehicles. The GM CAP behavioural modelling has been based primarily on a sustainable used van market and associated pricing, rather than the cost and availability of new vehicles.

5. Van Supply

Impact of the Pandemic

- 5.1 The pandemic had an initial direct impact on all types of vehicle production as production lines were halted at various times around the world dependant on local lockdown rules. The ability of vehicle manufacturers to respond to demands for increased production is still being limited by the pandemic amongst other factors.
- 5.2 One factor arising from the pandemic is the pronounced effect that it had on the logistics sector, with employees across the supply chain required to isolate causing delays in the supply of parts, with parts from places such as Asia being unavailable due to production issues and temporary staff shortages there.²³
- 5.3 To review the impact of Covid-19 on national van sales, data from 2019 to 2021 for the registration of new vans has been used from SMMT.²⁴ As the registration data demonstrates in **Figure 5-1** van sales were significantly lower in March, April and May 2020 during the first lockdown.
- 5.4 **Table 5-1** displays the total number of vans registered in 2020 and 2021 compared to the last pre-pandemic year of 2019. Sales in 2019 were similar to the previous 5-year average of 367,000 and is therefore a reasonable comparator. In 2020 there were significantly fewer new sales with the total registered down 20%. There was some recovery in 2021 though sales remained 3% below pre-pandemic levels. The net effect is a reduction of over 80,000 new vans in circulation compared to what would have been expected based on pre-pandemic sales.

Figure 5-1 Registration of New Vans from 2019 to 2021



Source: SMMT

²³ Baker McKenzie Accessed 6th January 2022 <https://www.bakermckenzie.com/en/newsroom/2020/04/global-supply-chains-under-huge-pressure-covid-19>

²⁴ LCV Registrations – SMMT - <https://www.smmt.co.uk/vehicle-data/lcv-registrations/>

Table 5-1 Total number of new vans registered in 2019-2021

Year	Total	% Change from 2019
2019	365,778	-
2020	292,657	-20%
2021	355,380	-3%

Source: SMMT

Semiconductor Shortages

- 5.5 The global shortage of semiconductors began in the first quarter of 2021. Analysis by McKinsey²⁵ suggests that the demand for semiconductors in the auto industry in 2020 was below expectations by around 15%. But at the same time, some other market areas experienced rapid expansion, resulting in overall growth of 5% to 9% in semiconductor sales above forecasts. When the automotive sector's demand recovered, the semiconductor industry had already shifted production to meet demand for other applications.
- 5.6 As with other markets and industries there are also now Covid-related closures at semiconductor factories and international shipping ports²⁶.
- 5.7 Consultation with SMMT and vehicle manufacturers demonstrates the significant impact of the semiconductor shortage, with new vehicles typically containing over 1,000 semiconductor chips. This has led to manufacturers reducing their production targets, limiting the number of new vans entering the market.
- 5.8 Reports from Commercial Fleet earlier in 2021²⁷ highlighted that new vehicle supply was affected by the global semiconductor crisis with lead times for new vehicles increased and then standing at up to 12 months for certain factory-order models. Manufacturers were also reported to be removing some non-essential components (e.g. infotainment systems) from vehicle specification to maintain production.

Britain leaving the EU

- 5.9 It is challenging to disaggregate the impact of Britain leaving the EU and the Covid pandemic on supply chains and consumer confidence, however the changing trading arrangements with the EU meant that there were supply issues as businesses got used to new customs requirements (particularly in January/February 2020), which caused delays at major ports. This backlog is likely to have fed into the number of vehicles produced and subsequent registrations.

²⁵ <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/coping-with-the-auto-semiconductor-shortage-strategies-for-success>

²⁶ <https://www.autocar.co.uk/car-news/business-tech%2C-development-and-manufacturing/latest-updates-semiconductor-chip-crisis>

²⁷ <https://www.commercialfleet.org/news/van-news/2021/04/28/used-lcv-prices-to-rise-as-semiconductor-supply-crisis-hits-new-van-production>

Views from the Industry

5.10 Consultation was undertaken with SMMT and van manufacturers, as well as a review of industry press on the issue.

Conversations with Society of Motor Manufacturers and Traders (SMMT) in 2021 & 2022:

The semi-conductor shortage has had a significant impact on vehicle production, with the typical vehicle comprising of 1,500 semi-conductor chips. Due to Covid-19 restrictions in South East Asia, approximately 19 semi-conductor plants have been closed, affecting supply. In addition, due to 'stay-at-home' restrictions, demand from other sectors such as the gaming industry has risen, further reducing supply. Car producers have been hit hardest as it is more difficult for high volume manufacturers to source chips. HGV manufacturers have more specialist providers which means they can source chips more easily and overall volumes are much lower.

The lag on production means that shortages are being felt now and are likely to become more pronounced in early 2022.

As a result of this shortage some specialist orders are not being fulfilled until 2023. The typical delivery date for an HGV has increased from 12 to 26 weeks. However, the SMMT believe this will stabilise and return to normal, with no medium- or long-term impact. They envisage it will take 12 months to correct so some time during 2023.

SMMT also reported that manufacturers were now looking at sourcing semi-conductors from alternative providers, including those not previously focused on the automotive sector

Conversations with Volkswagen Van Centre Greater Manchester, 2021:

VW's most popular van model, the Transporter, is produced at the company's German-based plant and brought over to the UK. Transporters are already sold out for 2022, meaning new customers will now need to wait until Q1 2023 for their van.

Several issues underpin the shortage in vans. The most pressing issue is the shortage in semi-conductors.

Another factor is the 70% increase in the price of steel which has resulted in price rises for customers. Together, these issues have led to four price increases in the last 12 months. As a result, Volkswagen has ceased to provide its usual price guarantees for all new sales and customers have now lost price protection.

The second-hand market is performing strongly. Customers are reselling their vans now more than they ever have before and prices are the highest they have ever been

- 5.11 Reports from industry press also state that supply issues could last until 2023. Speaking at the IAA Munich auto show in September 2021 Daimler CEO Ola Kallenius said soaring demand for semiconductors means the auto industry could struggle to source enough of them throughout next year and into 2023, though the shortage should be less severe by then. BMW CEO Oliver Zipse said: *"I expect that the general tightness of the supply chains will continue in the next six-to-12 months."*
- 5.12 Numerous Ford models are affected and Ford's plant in Turkey, where the Transit van is built, was also closed this summer. The manufacturer is now shipping some models with missing features as noted previously in this report.
- 5.13 Other reports are stating six to nine month lead times for ubiquitous models such as the Ford Transits.
- 5.14 Information from the wider commercial sector was also provided by the Road Haulage Association (RHA) that reflected some of the issues their members were experiencing. Whilst this relates to the heavy goods vehicle sector, it does reflect a similar picture in terms of supply side issues within the automotive market.

Selected extracts from RHA member correspondence:

(1) We have currently stopped pricing & closed our order books for the short term due to the increased difficulty in predicting pricing close to 12 months down the line.

(2) We had requested rate from our commercial supplier for a tractor unit and 2 trailers on long term rental, but we were quickly met with a response of "unfortunately this isn't something we are going to be able to provide in time for next year". I have also spoken with {anonymous} used and could be supplied a used tractor unit, but that option is very limited to what vehicles are coming in off contract. as for new purchase we were told by a sales rep at {anonymous} we would be looking at 2023 deliver times now.

(3) We predominantly run {anonymous} HGVs. Having had a verbal conversation with the dealer about pricing and lead times, we have been advised by them that for any orders placed within the next few weeks we will be looking at quarter 1 of 2023 for delivery of a chassis to the dealer. We then have to factor in further time for crane installation and truck body build etc. Realistically if this remains the case, we will end up not getting new trucks until the end of Quarter 2 of 2023, almost 2 years from now! They have also said that pricing quoted is not guaranteed and is subject to fluctuation due to pricing of raw materials changing between now and the vehicle being built and supplied.

(4) {anonymous} have closed their order books last Friday until 2023, they are concentrating on back orders and are waiting for their suppliers to provide software for their hardware, i.e computers to operate the gearboxes etc etc. They have loads of incomplete trucks at {anonymous} airport awaiting cpu's for various tasks.

6. Van Prices

New Vehicles

- 6.1 Van prices are a function both of the production and supply costs, combined with market demand versus available supply.
- 6.2 As a result of the constraints described previously, new vans are therefore expected to see their value rise more acutely as the semi-conductor crisis persists limiting supply, alongside the newfound shortages in other crucial resources such as rubber and metal, thus pushing up costs.²⁸
- 6.3 The rising costs of materials, caused in part by reduced production associated with Covid are also affecting vehicle prices, with VW reporting that the cost of steel has risen significantly during 2021, causing them to raise prices. Steel prices have reduced in recent months but remain volatile.²⁹
- 6.4 For reasons of commercial sensitivity, it has not been possible to obtain reliable data on changes to prices paid for new vans during the period under review. Advertised prices may be obtainable but records on actual sale values are not available.

Used Vehicles

- 6.5 It was to be expected that the reduction in new vehicles entering the fleet in 2020/21 would also have a knock-on effect to the used van market as the natural turnover of vehicles is stalled, reducing supply at this stage as well. Given the ongoing demand, this would normally lead to increased prices and there is considerable evidence of this occurring as shown later in this section.
- 6.6 Used light commercial vehicle values rose during November according to BCA (www.bca.co.uk) as demand for vehicles to service the online and home delivery sector increased in the run-up to Christmas with average values increasing by 15% from the start of November. Average monthly values continue to be well ahead year-on-year, with November 2021 values up by 16.4% increase compared to the same month last year.
- 6.7 Stuart Pearson, COO at BCA UK, said: *“The used LCV market remains exceptionally competitive and average selling values at BCA have consistently outperformed guide price expectations throughout 2021. The strong market that we’ve experienced reflects the ongoing economic shift supported by consume-driven online activity plus the well-documented challenges with new LCV supplies. In addition, and as we anticipated, we have seen demand increase in the final weeks of the year to meet the needs of the hub delivery, courier and final mile home delivery sectors.”*
- 6.8 Matthew Davock, director of commercial vehicles at Cox Automotive, believes the wholesale performance of the past 12 months will never be witnessed again, but warns that the early part of next year, at least, looks to continue similar trends.
- 6.9 He said the market is likely to reposition itself when stock shortages are resolved halfway through 2022. According to Davock, *“the shortage in the supply of used Euro 6 vans and demand for vehicles that comply with emissions zones such as ULEZ, will*

²⁸ Ibid

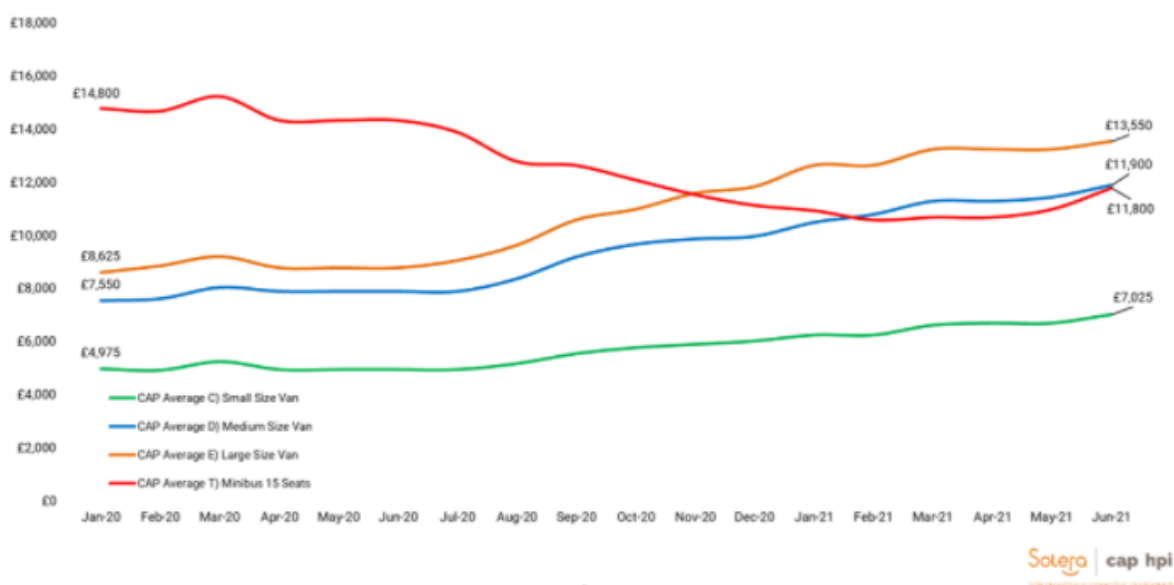
²⁹ Trading Economics Accessed 6th January 2022 <https://tradingeconomics.com/commodity/steel>

impact the market for the next few months at least, affecting wholesale stock dynamics for at least the next three years”.

- 6.10 Earlier in the year BCA reported that used van values remained stable in September, following a period of rapid growth, earlier in the year. That earlier growth was of the order of 25% based on a year on year comparison from September 2021.
- 6.11 The general picture is of considerable market volatility, most pronounced earlier in 2021 but still remaining to some extent as we enter 2022. Overall used light commercial vehicle price rises of at least 40% between the pre-pandemic market and late 2021 are not uncommon.
- 6.12 Commercial Fleet News reported in July 2021³⁰ reported significant increases in second-hand van prices including the example of a three-year-old medium-sized van, with 60,000 miles, being 58% higher at that time than it was at the start of 2020. The same report included data, from Cap HPI (the vehicle valuation company), which revealed that *“the typical medium van was worth £7,550 18 months ago, but is now achieving an average selling price of £11,900 – an increase of £4,350”*. The graphic from CAP HPI is reproduced as **Figure 6-1**.

Figure 6-1 Data from CAP HPI on Used Van Price Trends (as of July 2021)

Value for a typical 3year/60k vehicle 2020/2021- by sector



- 6.13 It should be noted that this reflects wholesale prices (which a dealer pays at places like auctions) as opposed to retail and therefore the dealer margin is not included. This data is collected by Cap HPI, which collects data on transactions in the automotive sector, recording each sale live as it is completed. Dealers are likely to pass on this increased cost to customers or chose to take a reduced margin. Alternatively, where demand is high and additional funding is available related to CAP scheme with associated deadlines, margins may be increased. There is therefore a difference in absolute value between this information and data elsewhere in this report.

³⁰ <https://www.commercialfleet.org/news/van-news/2021/07/05/used-van-values-up-50-in-18-months-despite-mileage-and-age-increasing>

- 6.14 A review of online adverts carried out in January 2022 shows the price of one of UK's most popular vans in 2022 was 13% higher in real terms (£19,495) than a model of the same age in early 2019 (£17,244).³¹ The values are presented in **Table 6-1**.
- 6.15 Specialist vans like dropsides, tippers and Lutons are achieving big values at auction due to the lack of availability on new conversions. Fleet managers are also reporting that they are running vans for longer, with 6-9 month extensions on leases or hiring additional rental vans rather than replacing them.³²

Table 6-1 Example change in second-hand van prices between 2019 and 2022

Type	Manufacture Year	Sold Year	Age	Mileage	Price	Increase by
Ford Transit Custom	2016	2019	3	50,000	£17,244	-
Ford Transit Custom	2018	2022	3	50,000	£19,495	13%

Source: Autotrader UK

³¹ <https://www.carpricetracker.com/car/239343/Ford+Transit+Custom+2.2+TDCi+290+L1H1+Limited+Double+Cab-in-Van+6dr>

³² Automotive Management Accessed 4th January 2022 <https://www.am-online.com/news/market-insight/2021/10/15/supply-shortages-creating-perfect-storm-for-van-sector>

7. Impact of supply constraints and price rises on the GM CAP

Compliance in the shortest possible time

- 7.1 Modelling carried out to support the decision to approve the GM CAP, carried out in June 2021, demonstrated that the 2021 GM CAP was forecast to achieve compliance with legal limits of NO₂ concentrations by 2024, as per the Ministerial Direction, based on the proposals set out in the previous Policy³³ and the assumptions made at that time in terms of the age of the fleet and the cost of upgrade amongst other factors³⁴.
- 7.2 Sensitivity testing has been carried out to better understand the possible impact of uncertainty in the appraisal of the GM CAP. In particular, the aim is to understand whether variations in the assumptions underpinning the modelling, or the modelling methodology, would lead to a different decision or outcome, or conversely to provide additional confidence in the conclusions.
- 7.3 The evidence set out in this report has implications for two aspects of the sensitivity testing. Firstly, in terms of the rate of business-as-usual upgrades and the age of the fleet in the 'Do Minimum' scenario (in other words, how old the vehicle fleet would be without any action being taken by policy makers). Secondly, in terms of the impact of changes to the cost of upgrade on how vehicle owners may respond to the measures introduced by the GM CAP.

Rate of upgrade and the age of the fleet

- 7.4 The Do Minimum fleet mix as modelled at Consultation (January 2021) assumed a normal pattern of vehicle upgrades, including the purchase of new vehicles, trading of second-hand vehicles and the scrapping of the oldest vehicles from the fleet.
- 7.5 However, GM's analysis suggested that the impacts of the Covid 19 pandemic included:
- Reduction in the number of new vehicles manufactured due to lockdowns;
 - Delay in transactions due to lockdown constraints;
 - Reduction in vehicle upgrades due to direct economic impact of lockdown or wider recessionary impacts, or because vehicles are not being used as heavily as before; and therefore
 - The oldest vehicles remaining in the fleet for longer.
- 7.6 Analysis showed that these impacts vary between different vehicle types and business sectors with some more affected than others.
- 7.7 As a result, adjustments were made to the car, van and taxi fleets to reflect the emerging evidence that the normal pattern of vehicle upgrades has been affected for those fleets³⁵.

³³ [Appendix 1 - GM Clean Air Plan Policy following Consultation \(ctfassets.net\)](#)

³⁴ [DRAFT GM CAP Post-Covid Post-Consultation AQ Modelling Summary Report v1 \(ctfassets.net\)](#)

³⁵ [Air Quality Modelling Summary Report Appendix D \(ctfassets.net\)](#)

- 7.8 While the recent evidence has been used to create reasonable adjustments, uncertainty remained as to whether sales will ‘catch up’ to their pre-pandemic trajectory or indeed continue to remain below previously assumed levels as a result of the pandemic or other factors and therefore sensitivity testing relating to fleet age assumptions was carried out as follows:
- **Fleet is older than modelled:** HGV, vans and private cars all assumed to be one year older than pre-Covid Do Minimum, taxi to be two years older, no change assumed to Bus. This test showed increased concentrations sufficient to delay the year of compliance. The roads outside of the inner ring road are more sensitive to this test, because car and van emissions are more prevalent compared to buses. However, it is considered unlikely that the fleet age would be as old as this test assumes, given that changes have already been applied to the core to reflect Covid-19 related delays in vehicle upgrades. The most recent data from SMMT suggests that whilst vehicle sales have not caught up with pre-pandemic conditions, van and car sales have not been delayed to the extent of a full year.
 - **Fleet is as per the pre-Covid Do Minimum** (the Consultation Option Do Minimum) as Covid-related changes prove to be transitory and fleet quickly reverts to trend, with the fleet tested as assumed in the Consultation Option Do Minimum. This test produced a reduction in concentrations, but with exceedances remaining in 2023 and therefore would not affect the decision to proceed with the GM CAP but demonstrates that there could be greater certainty of achieving compliance as forecast if vehicle sales recovered to their pre-pandemic position.
- 7.9 GM has used the national SMMT vehicle registrations to assess fleet impacts. The latest data on van registrations to end 2021 suggests that the assumptions with regards to vans remain valid, but given the supply and demand issues set out above, GM will need to keep the evidence under urgent review.
- 7.10 Monitoring of the on-road fleet will be undertaken throughout the lifetime of the GM CAP using ANPR data and can be compared with the quarterly/annual SMMT releases to assess whether the GM CAP is likely to be affected by changes to purchasing patterns other than those forecast.

Price of upgrade and behavioural responses to the GM CAP

- 7.11 In summer 2021, GM was concerned that prices could increase as a result of constraints in the availability of compliant vehicles, as set out above, or due to increased demand arising from sustained behavioural changes post-pandemic. For example, GM was aware that the rise in internet shopping during the initial lockdown periods led to increased demand for vans, with anecdotal evidence that vans temporarily released by construction firms were re-purposed for deliveries during lockdown. In summer 2021, GM noted that a sustained increase in van demand could place pressure on the van market and that media reports were suggesting that the price of second-hand vans may be rising. Since then, the evidence of price rises resulting from supply not being able to keep up with demand has strengthened, as set out in this report.
- 7.12 Sensitivity testing carried out in 2021 suggested that whilst HGV behavioural responses are relatively insensitive to vehicle price increases, for vans an increase of

8% in the price of vehicles (compared to the price as assumed in the modelling) could be sufficient to delay compliance by one year, all other things being equal.

- 7.13 This is because if van prices rise, more van owners are expected to stay-and-pay rather than upgrade their vehicle, and therefore the emissions reductions would be less than previously forecast.
- 7.14 The evidence suggests that currently price rises in excess of 8% are being experienced in the van market and therefore that, if these price rises were to be sustained to 2023, and all other things being equal, GM could face an increased risk in terms of achieving compliance by 2024.

Socio-economic impacts on vehicle owners

- 7.15 If, by June 2023, van owners have been unable to access an affordable compliant vehicle, they may reconsider how to respond to the scheme.
- 7.16 Van drivers/owners may look to pass the charge onto customers and keep their non-compliant vehicle. As discussed, the demand for those working in the construction/home improvement sector (tradespeople) in particular means that there are often long lead times for work to commence as skills gaps emerge and the price of materials rises.³⁶ In the context of higher prices and long waiting times, customers may be more willing to accept these charges, which are likely to represent a small proportion of the overall cost of the work. Those charging lower rates or in more competitive markets will be less able to pass on the cost to their customers. If realized, the impacts of this would be a reduction in the environmental benefits of the GM CAP and increased costs for consumers.
- 7.17 Vans in certain sectors often have low load factors (e.g. operate without a full load) and as such it is feasible that van drivers may switch to larger passenger cars, particularly estate or Multi-Purpose Vehicle (MPVs such as a Ford Galaxy) cars. Some parcel company business models have drivers using their own vehicles, usually cars and it is not uncommon for tradespeople to use larger estate cars if it suits their required tasks. As cars are not subject to any charges associated with GM CAP, this approach may become more attractive. Depending on the type of cars that businesses and drivers transition to (and their availability), this could reduce the environmental benefits of the scheme.
- 7.18 The Funding policy is designed to support the smallest businesses, sole traders and private owners to upgrade their vehicle. However, in the worst-case scenario, if van owners cannot afford to upgrade their vehicle even with the funding available, and are not able to pass on the cost of upgrade to their customers, they may cease trading or leave the region.
- 7.19 The impacts of the pandemic and Britain leaving the EU have not been experienced equally across business sectors, with some experiencing major disruptions, costs and loss of business whilst others have been able to benefit from new opportunities created by new ways of working and living. GM's evidence already suggested that a number of vehicle owners were at risk of being placed in hardship as a result of the scheme and it is clear that rising vehicle prices risks worsening that position. However, better evidence is needed to understand the possible nature and extent of such impacts, and who is most at risk.

³⁶ PBC Today Accessed 5th January 2022 <https://www.pbctoday.co.uk/news/planning-construction-news/builders-delays/100980/>

8. Summary and Recommendations

Summary of current conditions in the van market

- 8.1 Pre-pandemic, there was significant growth in van mileage and van stock over a number of years and the expectation was that both growth trends would continue.
- 8.2 However, whilst the early phases of the pandemic and subsequent lockdowns and constraints in 2020 constrained demand, it appears that this effect was temporary and has been offset by growth in demand from some van-owning sectors.
- 8.3 The pandemic had a major impact on the number of new vans sold in the UK, initially due to the halting of production lines and local lockdowns around the world.
- 8.4 Whilst new van sales recovered to some extent, they are still not back to 2019 levels and so there is a substantial 'lost supply' that has not been recovered equating to 80,000 vehicles on a conservative assumption that 2019 levels had been maintained.
- 8.5 The global semiconductor shortage has also impacted the automotive industry and its effects are ongoing.
- 8.6 The industry is reporting significant supply issues with extended lead times for new orders.
- 8.7 It is anticipated that the introduction of clean air zones at particular locations in the UK will introduce some regional disparity in terms of the availability of certain vehicles and place additional demand pressure on the market in general.
- 8.8 Reliable data on the variation in the price of new vans as a consequence of the supply side issues discussed in Chapter 4 is not available.
- 8.9 There is substantial evidence of significant price increases in the second-hand van market – the scale of those rises has a high degree of variability depending on the particular vehicle. The extent of the reported rise varies between 13% and almost 60%.
- 8.10 Overall, the evidence suggests that demand for new and second-hand vans remains strong, and therefore that the loss of supply caused by lockdowns in 2020 and more recently by the semi-conductor shortage is leading to price rises in the new and second-hand markets, and to long lead times for new vehicle orders.

Recommendations

- 8.11 Whilst there is strong evidence relating to the supply of new vans, there is less insight into the full extent of demand beyond the evidence of rising prices. A better understanding of demand would provide insight into the extent of the shortfall in the market. Further consultation with manufacturers, traders and van owners would be informative.
- 8.12 There is a lack of robust national data on second-hand van transactions which is important in the context of forecasting and monitoring the impacts of the various clean air zones around the country. This data should be made available by Government.

- 8.13 There is a lack of robust national data about vehicle prices; this needs to be addressed by Government.
- 8.14 In addition, it is unclear as to how those affected will respond to the changing circumstances. Research was undertaken with van owners in 2019, followed by consultation activity in 2020, prior to issues described in this note becoming as pronounced as they are at present. Previous assumptions may need to be revisited, which would require engagement with those who operate non-compliant vans.
- 8.15 It appears that supply constraints and price increases may be more severe for those operating more unusual or specialist vehicles. More research and analysis is required to better understand the types of specialist vehicle operating in the LGV market and how these are being affected by current market circumstances.
- 8.16 It is apparent that there is strong demand for vans and that high prices are currently being tolerated without reducing demand for vehicles. This suggests that some sectors may be experiencing growth and stronger economic conditions. Nevertheless, it is also clear from previous evidence that rising prices will mean that, for some, it is increasingly unaffordable to upgrade their vehicle. Therefore, more work is required to better understand market conditions by van-owning sector, and to reassess how vulnerable different groups are to the impacts of the GM CAP.
- 8.17 In particular, GM and Government could consider revisiting analysis carried out previously on the socio-economic impacts of the GM CAP and also review any potential equalities issues that may emerge from changing market conditions.

Appendix A – List of Documents

This Appendix provides a list of documents and data sources used to inform this report

Document Title	Date	Description	Relevance to GM CAP
Chapter 1			
Mayor of Greater Manchester writes to Government reiterating call for non-charging Clean Air Zone	May 2022	Announcement, provide background on current status of GM CAP https://www.greatermanchester-ca.gov.uk/news/mayor-of-greater-manchester-writes-to-government-reiterating-city-region-s-call-for-non-charging-clean-air-plan/	Current Status of GM CAP
GM CAP Technical Documents (various)	various	All available at Technical Documents Clean Air Greater Manchester (cleanairgm.com) https://cleanairgm.com/technical-documents/	Published Technical Reports for GM CAP
Technical Note 3: Analysis of the Freight Market	July 2019	Describes the number of HGVs operating in GM, the compliance status of those vehicles, and the business and usage patterns of those vehicles. https://cleanairgm.com/technical-documents/	Background on Freight Sector
Technical Note 12: Evidence of the Impact of a 2021 Implementation of a CAZ C (Without exemptions)	July 2019	Describes analysis carried out by GM to assess the risks of implementing a CAZ C in 2021 without also implementing a two-year sunset period as was proposed in the OBC. https://cleanairgm.com/technical-documents/	analysis of vulnerability by sector, based on the proportion of the fleet that would be non-compliant
Technical Note 20: GM Specialist Goods Survey Results Summary	Aug 2019	Sets out the results of on-street surveys carried out at three sites identified in the local exceedances study where freight was a significant contributor of emissions. The surveys provide estimates of vehicle volumes by size, compliance status and industry. https://cleanairgm.com/technical-documents/	Reviews the composition of the freight vehicles operating at specific location in GM
T4 Appendix A (Modelling for Consultation)	Jan 2020	Discusses the modelling tools used to assess the impacts of GM CAP https://cleanairgm.com/technical-documents/	Modelling tools used to assess impacts of GM CAP
Deliberative Research	Nov 2019	Research was carried out with vehicle owners potentially in scope for the scheme, including deliberative research and surveys of van owners https://cleanairgm.com/technical-documents/	Understanding the vans sector and views of van owners
GM CAP Impacts of COVID-19 Report	June 2021	Considers the impacts of the pandemic on GM and reviews the potential and actual impacts of COVID-19 on the GM CAP. https://cleanairgm.com/technical-documents/	Review of impacts of COVID-19, including impacts on vans

Chapter 2			
Percentage change in online purchases due to the coronavirus (COVID-19) pandemic	Jan 2022	Percentage change in online purchases due to the coronavirus (COVID-19) pandemic in the United Kingdom from March 2020 to February 2021 https://www.statista.com/statistics/1230225/changes-in-online-buying-among-uk-consumers-since-covid-19/	Linked to vans activities for certain sectors
Light Commercial Vehicles Delivering for the UK Economy	2019	Background on Light Commercial Vehicles Sector https://www.smmmt.co.uk/wp-content/uploads/sites/2/SMMT-Light-Commercial-Vehicles-Delivering-for-the-UK-economy.pdf	Provides background details of the vans sector (Pre-Covid-19)
T4 Appendix C – Vehicle Populations	2021	Provides details of vehicle proportions impacted by GM CAP (NB: Current version not published – TN37, link below provides previous version of this note) https://cleanairgm.com/technical-documents/	Details of vans vehicle proportions (compliant / non-compliant splits)
GMP ANPR Data	2019 / 2020 / 2021	Greater Manchester Police – ANPR camera data, reviewed to understand the composition of the vans fleet, including age profile of the fleet (Raw Data not published)	Understand composition of the vans fleet (e.g. fleet age distribution)
Chapter 3			
Vans Sales data (SMMT)	Various	Sales data as reported by Society of Motor Manufacturers and Traders (SMMT) https://www.smmmt.co.uk/vehicle-data/lcv-registrations/	Vans sales data
Vans Statistics	Apr 2021	DfT Statistical Release 15 April 2021, Final Van Statistics April 2019March2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1065072/van-statistics-2019-to-2020.pdf	Vans Statistics
Chapter 4			
Self Employment Stats (ONS)	Feb 2022	Trends in Self-Employment in the UK Office for National Statistics https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/trendsinselfemploymentintheuk/2018-02-07	To understand business types for van ownership
Booming home delivery and construction fuel demand for vans	Aug 2021	Motor Trader review of market sectors https://www.motortrader.com/motor-trader-news/automotive-news/booming-home-delivery-construction-fuel-demand-vans-auction-25-08-2021	Understand impacts of COVID on Vans sectors
Why electric van sales are set to soar	Mar 2021	Review of position of electric vehicle take up https://www.fleeteurope.com/en/last-mile/europe/analysis/why-electric-van-sales-are-set-soar?a=JMA06&t%5B0%5D=e-LCV&t%5B1%5D=Dataforce&t%5B2%5D=Arrival&t%5B3%5D=EV100&t%5B4%5D=Renault&t%5B5%5D=Nissan&t%5B6%5D=Mercedes-Benz%20Vans&curl=1	Understand likely EV uptake on vans sector
SMMT Car Sales data	Various	Review of ongoing changes in vehicle sales data. Covers other modes than car	Reviewing trends of

		https://www.smmmt.co.uk/category/vehicle-data/used-car-sales-data/	vehicle registrations / sales
Chapter 5			
Baker McKenzie	Jan 2022	https://www.bakermckenzie.com/en/newsroom/2020/04/global-supply-chains-under-huge-pressure-covid-19	Impacts of the pandemic on supply chains
LCV Registrations	Various	https://www.smmmt.co.uk/vehicle-data/lcv-registrations/	Changing fleet profile over time
Coping with the auto-semiconductor shortage: Strategies for success	May 2021	https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/coping-with-the-auto-semiconductor-shortage-strategies-for-success	Research
Latest updates as semiconductor chip crisis cripples industry	Feb 2022	https://www.autocar.co.uk/car-news/business-tech%2C-development-and-manufacturing/latest-updates-semiconductor-chip-crisis	Research
Used values to rise as semiconductor crisis hits new van production	Apr 2021	https://www.commercialfleet.org/news/van-news/2021/04/28/used-lcv-prices-to-rise-as-semiconductor-supply-crisis-hits-new-van-production	Research
Chapter 6			
Steel Prices	Various	Changing Price of Steel – impacts on supply chains https://tradingeconomics.com/commodity/steel	Research
LCV Market Statement	2021	BCA – Statements Stuart Pearson, COO at BCA UK www.bca.co.uk	Research
LCV Market Statement	2021	Cox Automotive Statement - Matthew Davock, director of commercial vehicles	Research
Changes in Van Prices	2021	Changing van prices provided by CAP HPI https://www.cap-hpi.com/	Research – Vehicle prices
Used van values up 50% in 18 months despite mileage and age increasing	Jul 2021	https://www.commercialfleet.org/news/van-news/2021/07/05/used-van-values-up-50-in-18-months-despite-mileage-and-age-increasing	Research
Used Van Prices	2019 / 2022	https://www.autotrader.co.uk/	Research – Vehicle prices
Van Prices	Various	https://www.carpricetracker.com/car/239343/Ford+Transit+Cus tom+2.2+TDCi+290+L1H1+Limited+Double+Cab-in-Van+6dr	Research – Vehicle prices
Supply shortages creating 'perfect storm' for van sector	Oct 2021	https://www.am-online.com/news/market-insight/2021/10/15/supply-shortages-creating-perfect-storm-for-van-sector	Research

Chapter 7			
Appendix 1 - GM Clean Air Plan Policy following Consultation	2021	https://cleanairgm.com/technical-documents/	GM CAP Technical Report
DRAFT GM CAP Post-Covid Post-Consultation AQ Modelling Summary Report v1	2021	https://cleanairgm.com/technical-documents/	GM CAP Technical Report
Air Quality Modelling Summary Report Appendix D	2021	https://cleanairgm.com/technical-documents/	GM CAP Technical Report
89% of builders face job delays as shortages continue	Oct 2021	https://www.pbctoday.co.uk/news/planning-construction-news/builders-delays/100980/	Research
Chapter 8			
		(No new Sources in Chapter 8)	
Appendix A			
		(No new Sources in Appendix A)	
Appendix B			
Coronavirus (COVID-19) UK Government Dashboard	Oct 2020	https://coronavirus.data.gov.uk/	Background of Covid Timeline
“Greater Manchester’s COVID-19 Management Plan: how we control outbreaks”	2022	https://greatermanchester-ca.gov.uk/coronavirus/COVID-19-management-plan/	Background of Covid Timeline
“Prime Minister announces new local COVID Alert Levels”	Oct 2020	https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels	Background of Covid Timeline
TfGM’s C2 Database	various	Traffic flow data was extracted and analysed from TfGM’s C2 Database https://tfgmc2.drakewell.com/multinodemap.asp	Information on local traffic impacts
“Budget 2021: Fuel duty rise axed as petrol prices hit record highs”	Oct 2021	Fuel Prices Increase: https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html	Information on Economic Related Impacts

"GDP monthly estimate, UK : December 2021"	Dec 2021	GDP information https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021	Information on Economic Related Impacts
"Average weekly earnings in Great Britain: February 2022"	Dec 2021	Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022	Information on Economic Related Impacts
"UK economy latest"	Dec 2022	Information on Goods import and exports https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomylatest/2021-01-25#output	Information on Economic Related Impacts
"Cities Outlook 2022"	Jan 2022	Change in pub and restaurant sales in City Centres and Suburbs. Weekday footfall in Birmingham, Manchester and London https://www.centreforcities.org/wp-content/uploads/2022/01/Cities-Outlook-2022-2.pdf	Information on Economic Related Impacts

Appendix B – Review of COVID Impacts

Overview

B.1 Travel behaviour and the economy have been impacted by the COVID-19 pandemic and have resulted in changes in the way that people travel and the way businesses operate. In this chapter we will assess some of the key data findings found throughout the period to better understand the levels of impact on transport and travel generally.

COVID Timeline

- B.2 In January 2020, COVID-19 first appeared in the UK. By 30th November 2020, there were an estimated total of 1.6 million people testing positive to the virus in the UK with 58,24537 cases resulting in deaths.³⁸
- B.3 As stated within the GMCA COVID-19 Management Plan Executive Summary, GM had more than 16,000 confirmed cases and nearly 2,800 people died during the first four months of the COVID-19 pandemic.³⁹
- B.4 In Summer 2020, North West England was one of the worst affected areas by the pandemic with GM placed under additional restrictions on 31st July 2020. Throughout 2020, GM continued to experience a disproportionate impact to the rest of the UK from these additional restrictions, such as the three-tier system for lockdowns across England. This three-tiered system was first announced by the Government in October 2020 to '*simplify and standardise local rules*'.⁴⁰
- B.5 On 5th November 2020, the Government imposed a second national lockdown with restrictions on continued business activity in England. These restrictions were in place between 5th November and 2nd December 2020, followed by a return to 3 Tier system restrictions.
- B.6 On 19th December 2020 the Government introduced an additional 4th Tier, with lockdown measures beginning in London and the South East, after having identified the Alpha (Kent) variant, coming into effect on 21st December 2020 until a third nationwide lockdown was re-introduced on 6th January 2021.
- B.7 March 2021 saw Step 1 of the Government's roadmap being introduced, with schools reopening and outdoor gatherings being allowed with the proviso of staying local. April 2021 saw Step 2 of the roadmap allowing limited indoor contact, businesses such as hairdressers to reopen and outdoor hospitality. Step 3 came into effect in May 2021, allowing indoor meetings limited to 6 people and 10,000 people for large sport stadiums. Step 4, on 19th July 2021, saw the remaining venues such as nightclubs reopen, and the removal of most other restrictions.
- B.8 With the discovery of the Omicron variant, Plan B measures (face coverings indoors and use of Covid Passes at specific settings such as nightclubs), which

³⁷ UK deaths is based on deaths within 28 days of a positive test and does not include excessive deaths.

³⁸ Coronavirus (COVID-19) UK Government Dashboard <https://coronavirus.data.gov.uk/> (accessed 01/10/20)

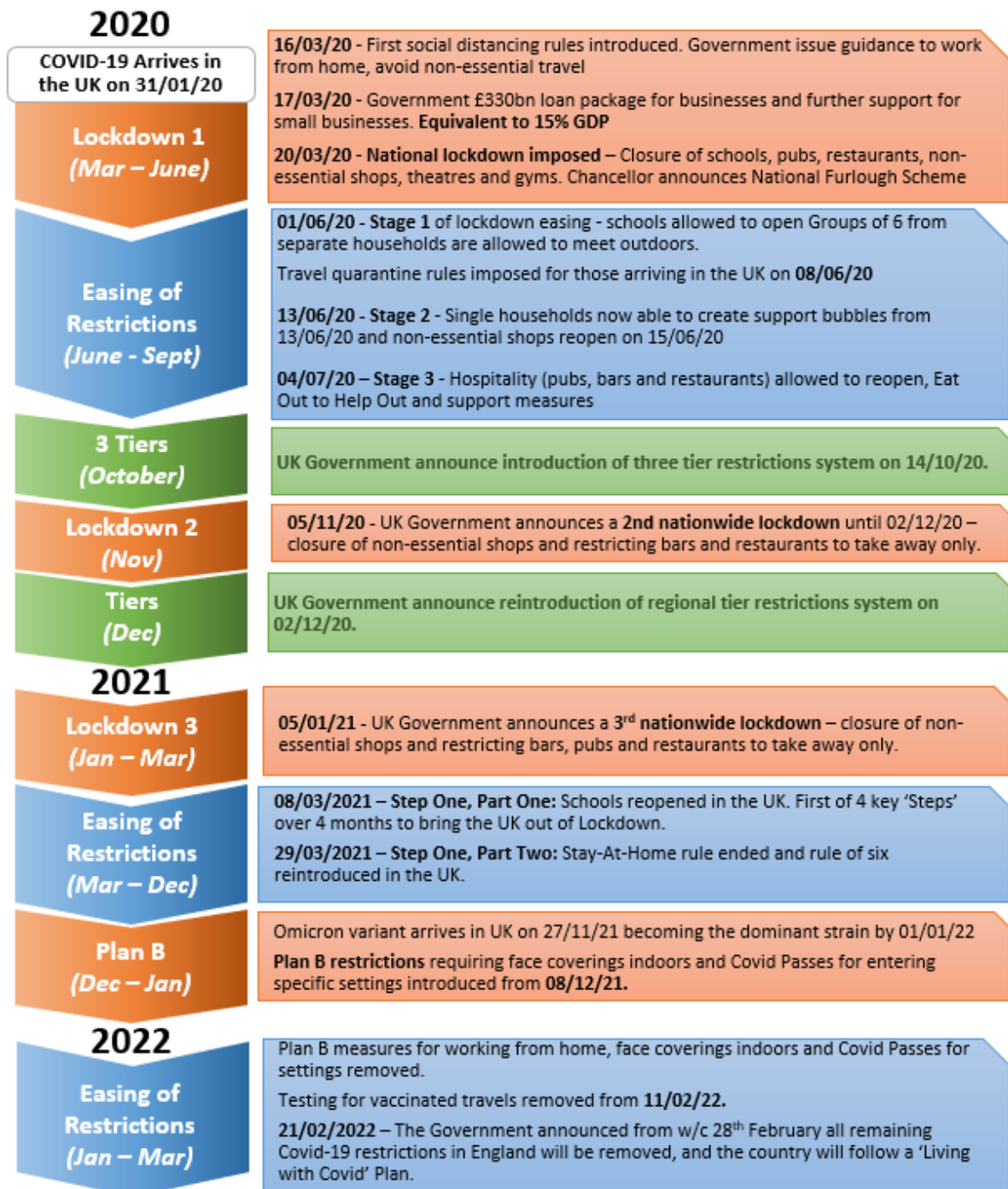
³⁹ COVID-19 Management Plan – Executive Summary (GMCA) <https://greatermanchester-ca.gov.uk/coronavirus/COVID-19-management-plan/>

⁴⁰ Prime Minister announces new local Covid Alert Levels - <https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels>

also recommended working from home where possible, were implemented from 8th December 2021 to 27th January 2022.

B.9 A summary of the key COVID-19 events and Government responses has been captured in **Figure B-1**.

Figure B-1 COVID-19 Timeline January 2020 to March 2022



B.10 The COVID-19 pandemic has had a transformative global impact to health, businesses, the economy, and way we live and interact with one another.

B.11 At the time of the production of this note in March 2022, the UK appears to be exiting the pandemic. Case numbers are stabilising, death and in-patient numbers

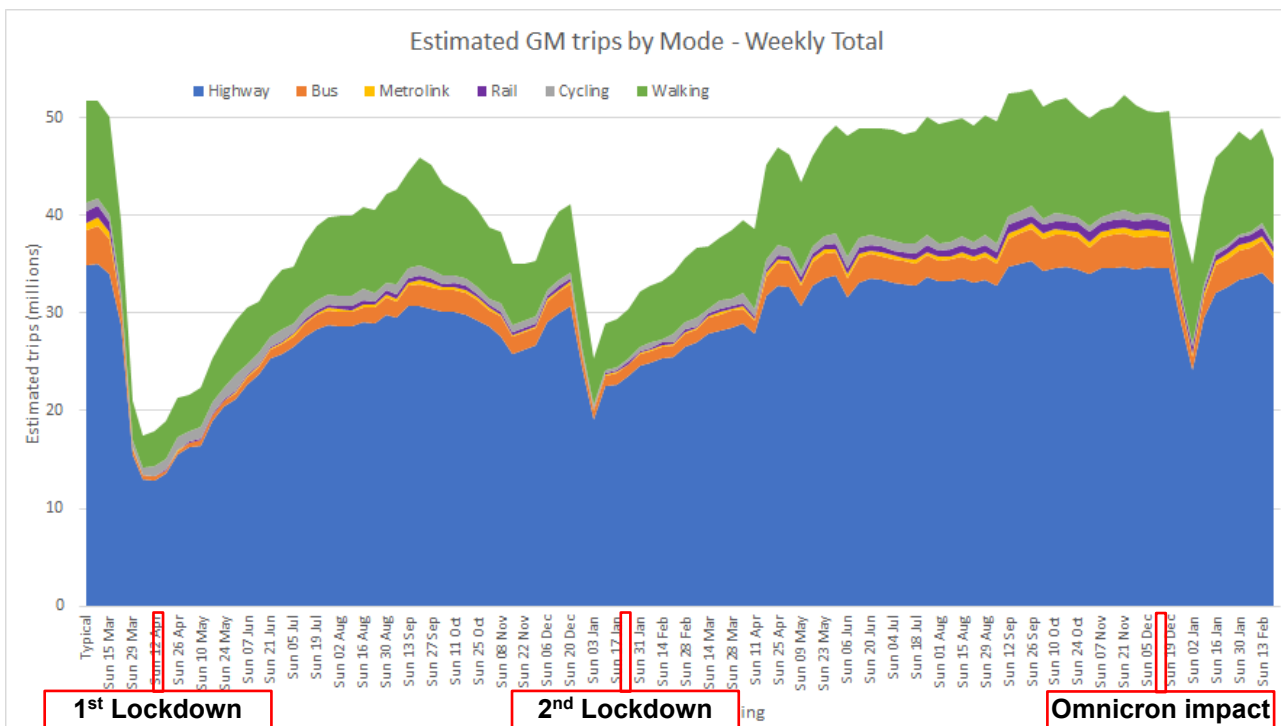
remain low, reflecting the positive impact of a successful vaccine programme rollout.

- B.12 However, emerging evidence gathered over the course of 2020 and 2021 has shown that there have been substantial changes to the economy, travel patterns and our behaviours. These changes have been driven by Government policy in the short term, however some of the behaviours adopted during Government lockdowns may continue as restrictions ease. In addition to this, economic impacts following the recent easing of restrictions have resulted in impacts which can be seen locally, nationally and globally within the economy.

COVID-19 Impacts on Travel Behaviour

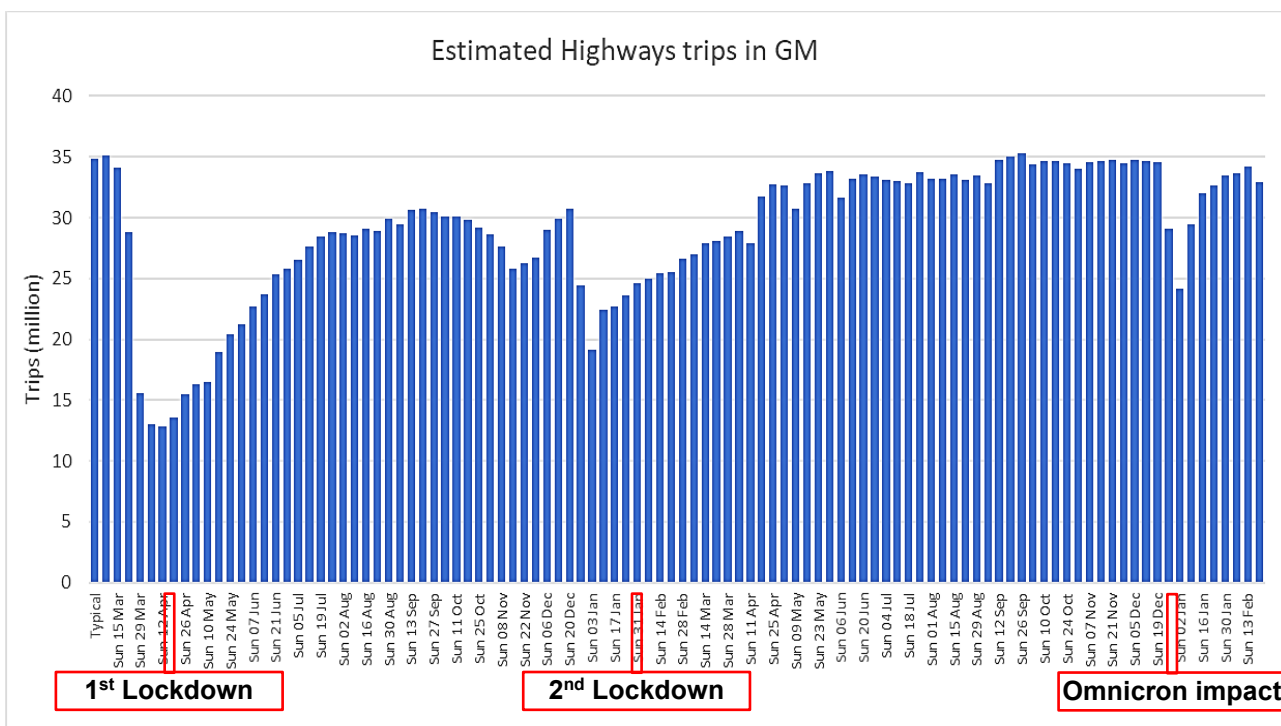
- B.13 Detailed analysis has been undertaken on the impacts of COVID-19 on travel demand within GM to compare 'pre-pandemic' and 'during pandemic' travel levels within GM.
- B.14 As shown in **Figure B-1**, there are a number of Government interventions which have had an impact on traffic levels (for all modes of transport). These include:
- Government guidance issued on 16th March 2020 to work from home 'where possible';
 - Closure of all UK schools to children, apart from those who have key worker guardians on 20th March 2020;
 - Closure of the hospitality and leisure sector on the 20th March 2020 including pubs, bars, restaurants, gyms, theatres etc.;
 - Re-opening of schools to all children in September 2020 alongside the UK Government encouraging workers to return to the office;
 - Implementation and extension of the Government Tiered restrictions;
 - Return to lockdown conditions on 5th November 2020, 2nd December 2020 and 6th January 2021; and
 - Hotel quarantine for travellers from high-risk countries.
- B.15 Since the beginning of the pandemic, travel patterns across the UK have significantly changed, driven by changing Government guidelines and the perception of transmission risks on certain forms of transport. An overview of the changing trends of travel behaviour by mode in Greater Manchester is provided in **Figure B-2** to **Figure B-6**; the data has been provided by TfGM. Three key dates have been flagged in each figure: the first and second national lockdowns plus the emergence of the Omicron variant.

Figure B-2 Overview of travel behaviour – All Modes



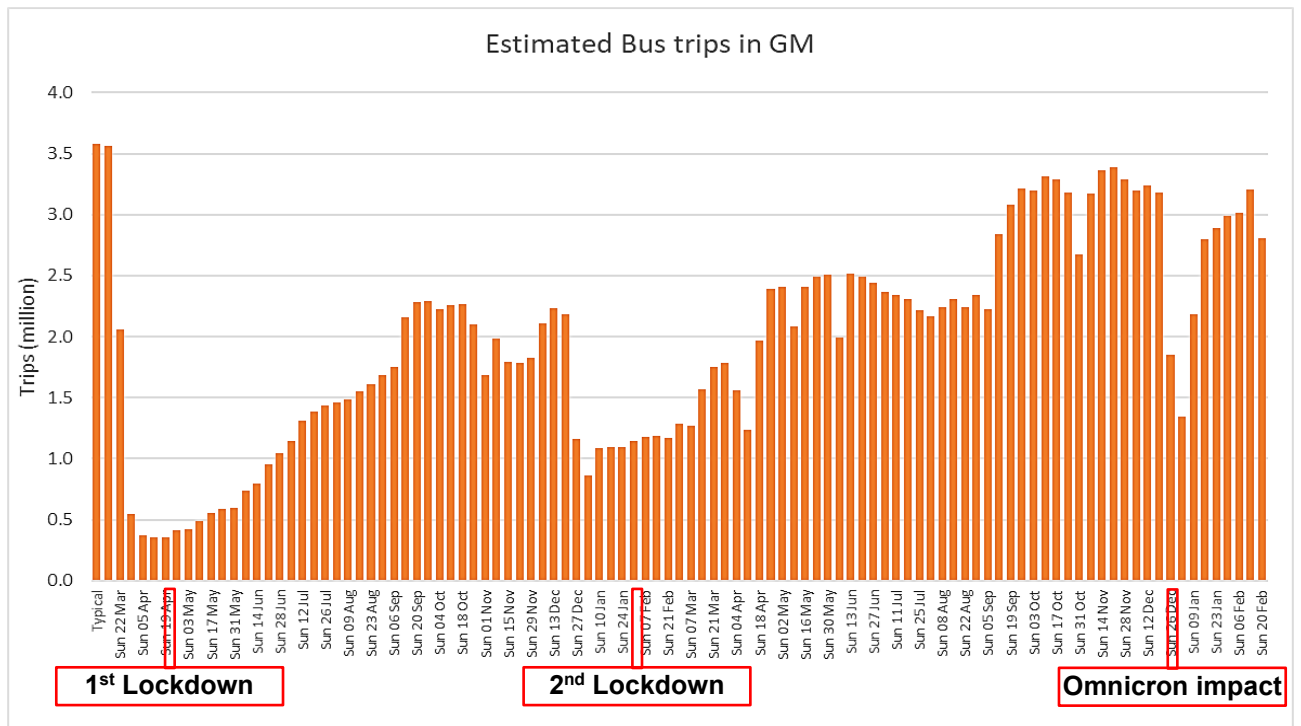
Source: TfGM

Figure B-3 Overview of travel behaviour – Highway



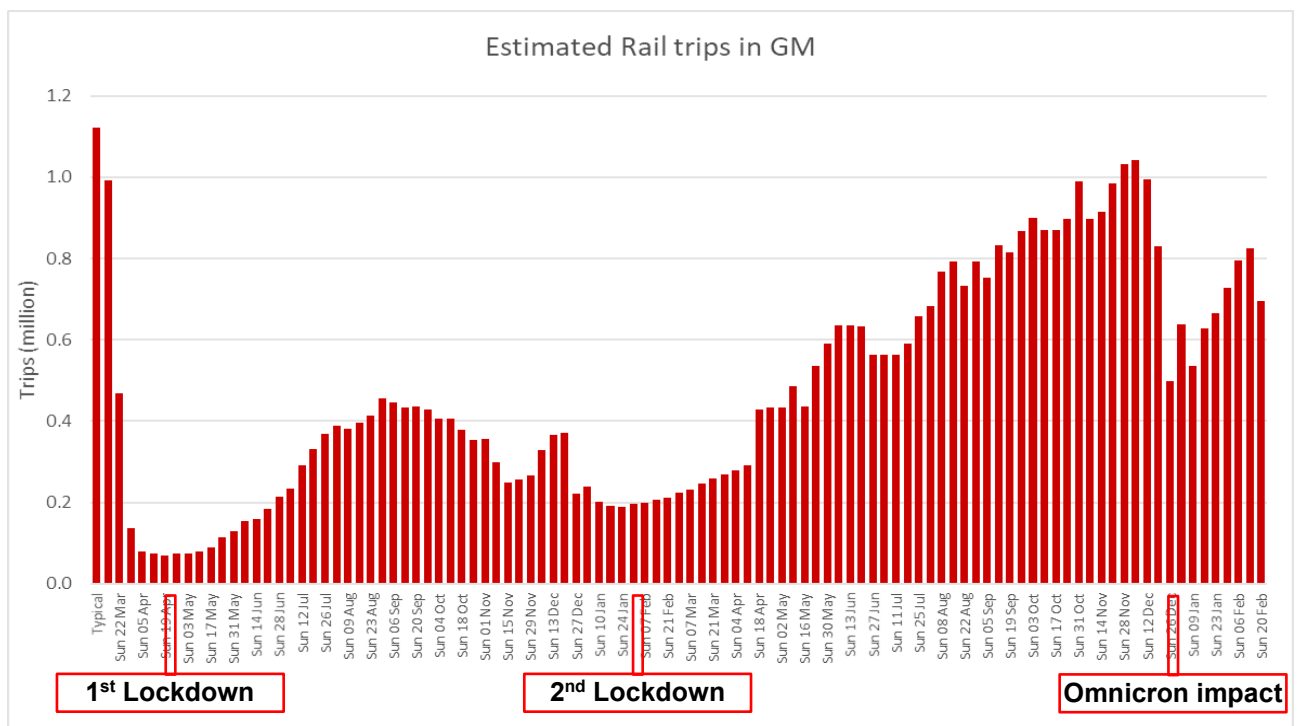
Source: TfGM

Figure B-4 Overview of travel behaviour – Bus



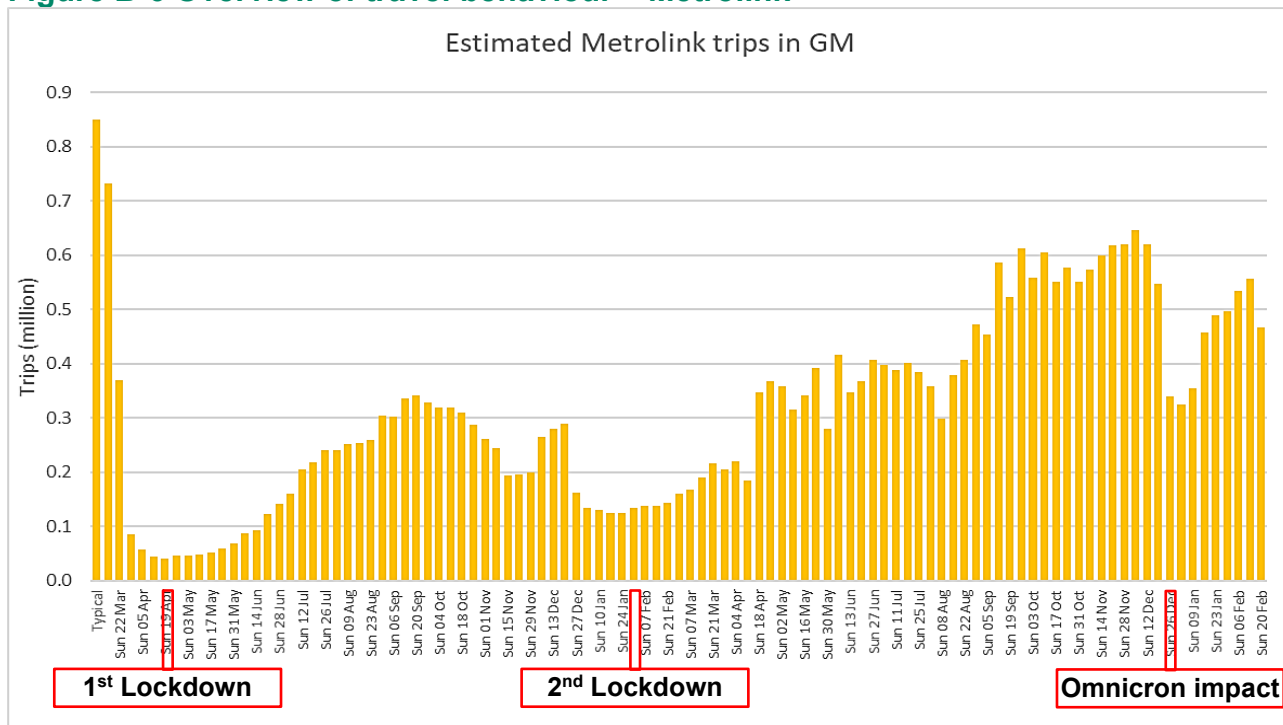
Source: TfGM

Figure B-5 Overview of travel behaviour – Rail



Source: TfGM

Figure B-6 Overview of travel behaviour – Metrolink



Source: TfGM

B.16 These figures illustrate that the impact of the pandemic has been pronounced and the extent to which pre-pandemic travel volumes have returned varies by mode. In summary, at the aggregate level across GM:

- Highway trips are close to pre-pandemic levels (approximately 95% of ‘typical’); and
- Public transport trip levels are between 60% and 75% of pre-pandemic / typical levels with bus performing more strongly than rail / Metrolink.

Local Traffic Impacts

B.17 Further analysis was undertaken regarding traffic flows on the local highway network, in order to understand the changing highway demand levels at various points through the pandemic. This has provided an insight into how the COVID-19 related travel guidance and changing behaviours because of the pandemic have impacted travel across GM.

B.18 This analysis has considered changing travel levels at a range of locations across Greater Manchester, to understand how traffic flows have changed on the following:

- Roads near to the Regional Centre;
- Key radial routes;
- Roads adjacent to local centres within GM; and
- Roads accessing centres of employment.

B.19 The analysis has considered several points in time, comparing:

- September 2019 (before the pandemic);

- September 2020 (during the pandemic);
- November 2021 (during pandemic – pre Omicron); and
- January 2022 (most recent, though impacted by Omicron variant).

B.20 Traffic flow data was extracted and analysed from TfGM's C2 Database⁴¹. These have been reviewed and presented for the 2-way hourly link volumes, by hour, at the following locations:

- Manchester Rd (A56) / 15m South of Ashlor St, Bury (ATC);
- Princess Rd (A5103) / 100m North of Bonsall St, Hulme, Manchester (ATC);
- Washway Rd (A56) / 40m North of Hunston Rd, Sale, Trafford (ATC);
- Bury New Rd (A56) / 90m North of Kingswood Rd, Prestwich, Bury (ATC); and
- Centenary Way (A576) / 160m North of Guinness Rd, Trafford Park, Trafford (ATC)

B.21 Using these specific locations around Greater Manchester the traffic behaviours at each location type can be assessed.

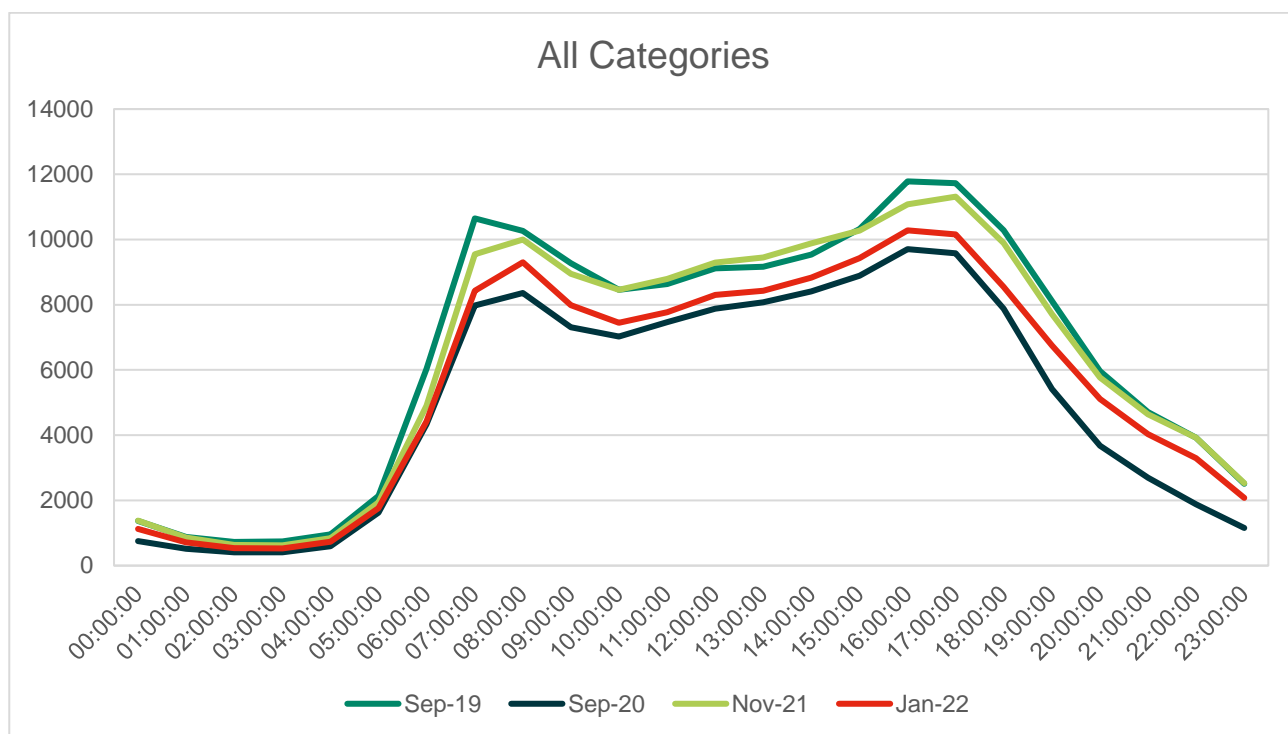
General Traffic Conditions

B.22 Averaging the sites identified above (see **Figure B-7**) suggests there has been a change in travel behaviour throughout the pandemic, noting the following key observations:

- The AM and PM peak periods have remained, although there is a dampening down effect on the peaks, with less variation between peak flows and interpeak flows, as the interpeak has continued to perform strongly.
- During late 2021, highway demand was almost back at pre-pandemic levels, there was then a noticeable drop again in demand as a result of the Omicron variant in December 2021.
- There has been some recovery during the peak periods, though they have not yet returned to pre pandemic levels.
- It is also noted that the earlier part of the AM peak is less strong than pre pandemic levels, with the AM peak now occurring 08:00 to 09:00, rather than 07:00 to 08:00 based on the sample of data sites.
- It also appears that the evening traffic (after 19:00) in 2022 is recovering at a slightly faster rate than the daytime traffic flows. This returned to pre-pandemic levels in November 2021 however, there has been a slight drop again in 2022, although it has been less impacted than other times of day. During the 2020 restrictions, the evening economy was significantly restricted by the COVID-19 restrictions in place at the time.

⁴¹ <https://tfgmc2.drakewell.com/multinodemap.asp>

Figure B-7 Change in traffic flow levels by time of day (all areas)



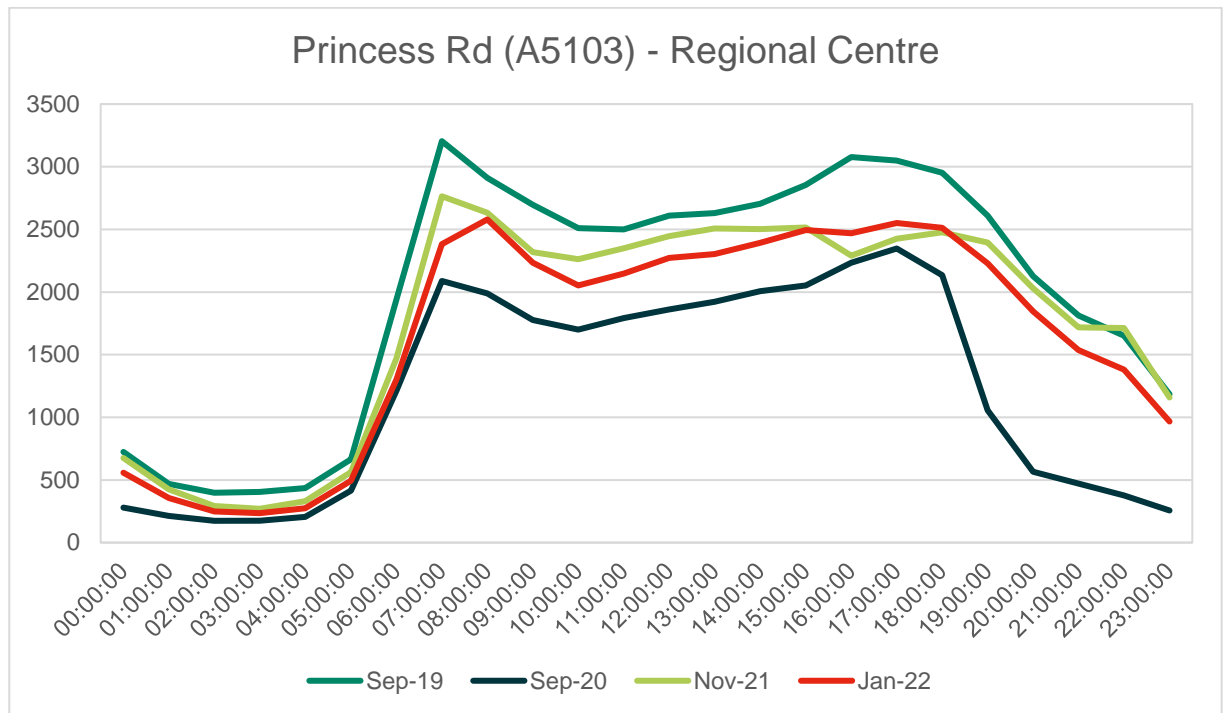
Source: TfGM C2 Database

Roads adjacent to the Regional Centre

B.23 Traffic flows adjacent to the Regional Centre have been significantly impacted throughout the pandemic (see **Figure B-8**). The following key trends have been identified:

- From the data assessed, the pandemic (and associated restrictions) appears to have had the greatest impact on regional centre flows, with the largest decrease in 2020 and the slowest recovery;
- The recovery of traffic flows in the peaks is still subdued, though traffic flows during the Omicron variant have been higher than in Autumn 2020, unlike what is seen at local centres;
- In 2020, COVID-19 restrictions had a considerable impact on demand for travel relating to the Regional Centre, with heavy restrictions placed on sectors such as leisure, tourism, and the night time economy. By November 2021, the easing of COVID restrictions resulted in a return of travel demand to the Regional Centre, showing considerable recovery at particular times of day, reaching close to 2019 levels. The 2022 travel demand to Mar-22 also showed a strong return of traffic during the evening periods, though the Omicron variant is likely to be keeping these slightly below pre-pandemic levels at present.
- The early part of the AM peak is now much weaker than prior to the pandemic, and the PM peak is less pronounced. In November 2021, traffic flows were slightly reduced from pre pandemic levels, with the PM peak most strongly impacted. In January 2022, the PM peak appears to be starting to recover, with a slightly later AM peak.

Figure B-8 Change in traffic flow levels by time of day (Regional Centre)

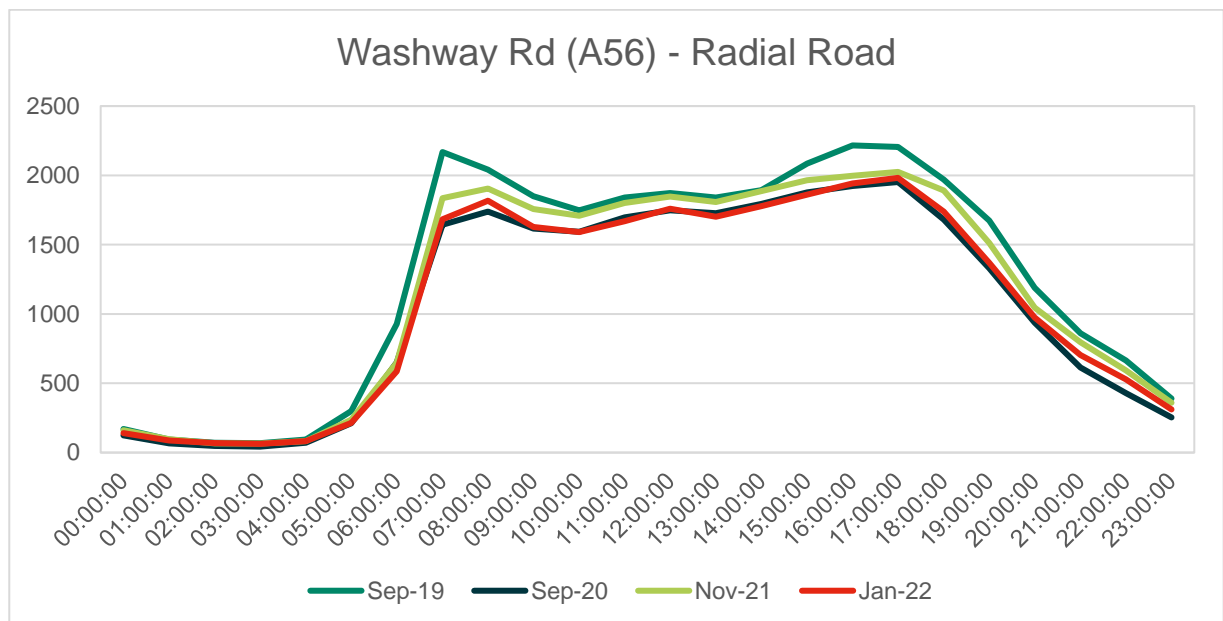


Source: TfGM C2 Database – Location N of Bonsall St, Hulme

Radial Roads

B.24 On Washway Road in Sale (see **Figure B-9**), its proximity close to the M60, and as a key radial route, has resulted in a high level of traffic demand at various points throughout the pandemic. The site is also close to the Local Centre of Sale. Demand has remained strong at the various points assessed although, as with most other locations, the peak periods are showing slightly lower demand in 2022.

Figure B-9 Change in traffic flow levels by time of day (Radial Roads Outside M60)

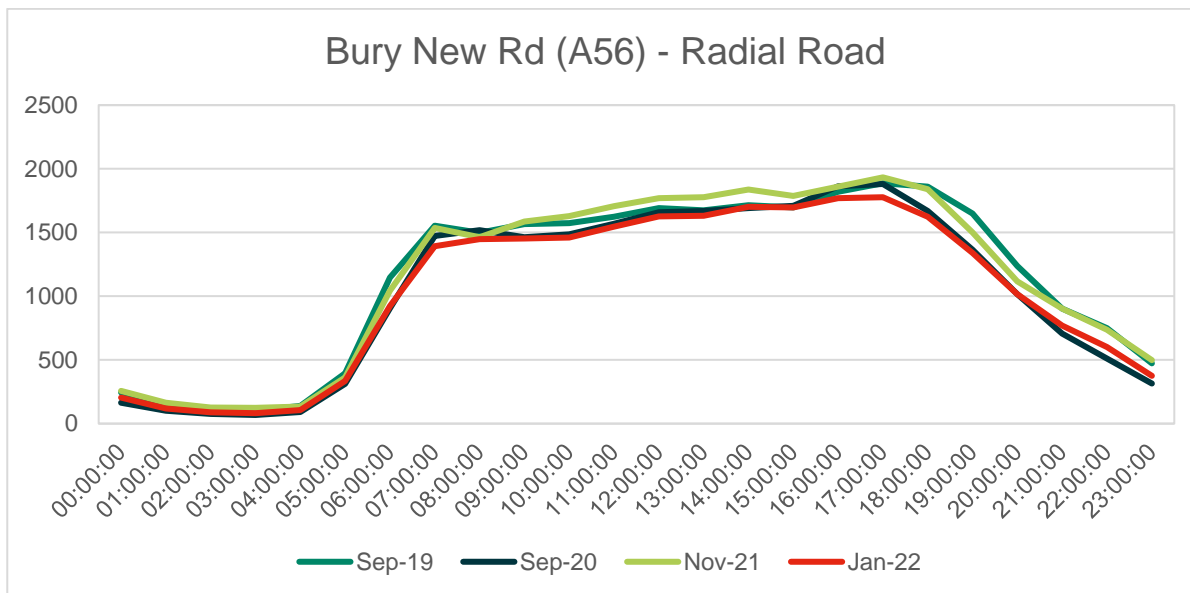


Source: TfGM C2 Database – Location adjacent to Sale Local Centre

B.25 Another key radial route north of the Regional Centre is Bury New Road (see **Figure B-10**). This site is also a key radial, though also serves local centres, such

as at Prestwich. This location has shown a strong recovery of travel behaviour with travel at certain times of day exceeding pre-pandemic levels, especially during the interpeak, both in autumn 2020, autumn 2021 and currently in 2022. The evening period has, however, shown a slower recovery.

Figure B-10 Change in traffic flow levels by time of day (Radial Roads Inside M60)

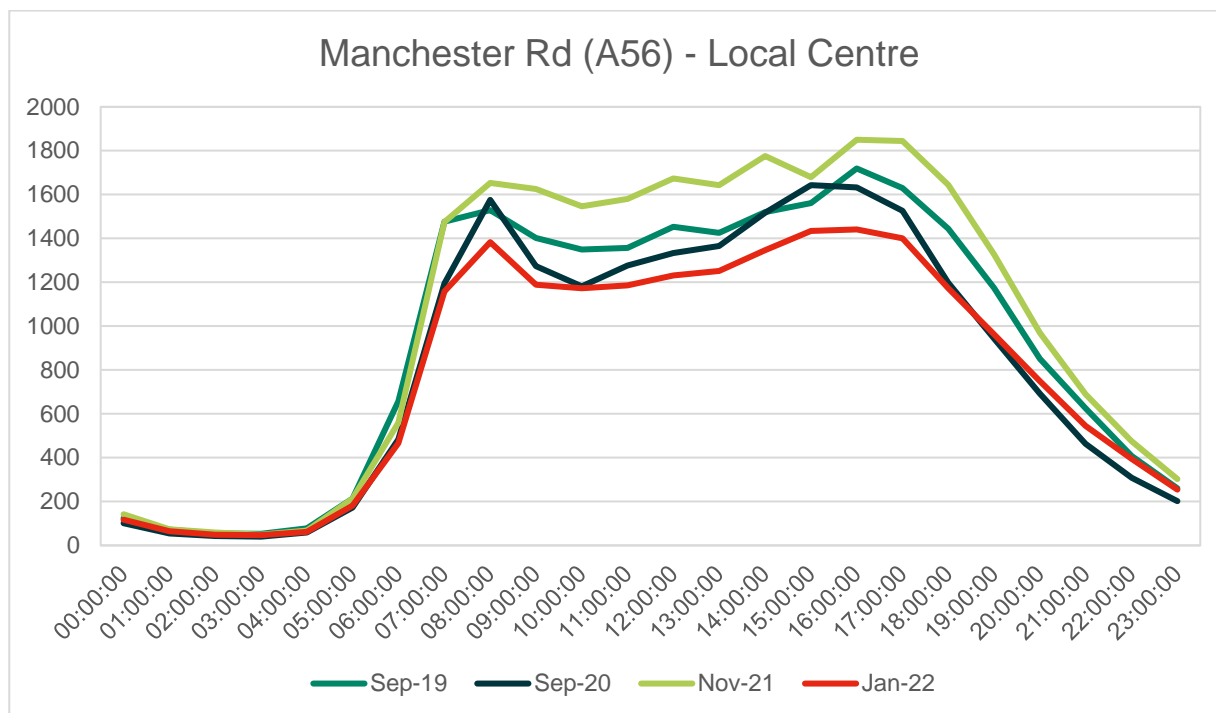


Source: TfGM C2 Database – Location N of Kingswood Rd, Prestwich (Near to M60 J17)

Local Centres

- B.26 Throughout the pandemic, as the UK Government eased travel guidance, travel demand in the vicinity of local centres, have bounced back strongly. **Figure B-11**, shows the A56 Manchester Road near Bury, which experienced a strong bounce back effect in Autumn 2020, when travel restrictions were eased. **Figure B-11** shows the later part of the AM peak and the early part of the PM peak exceeding pre pandemic levels, plus a strong interpeak and was likely an impact of more localised travel.
- B.27 By the end of 2021, demand had exceeded 2019 pre-pandemic levels by a clear margin, however this demand fell significantly in January 2022. The recent 2022 data shows the impacts of restrictions associated with the Omicron variant which has suppressed traffic flows once again.

Figure B-11 Change in traffic flow levels by time of day (adjacent to Local Centres)

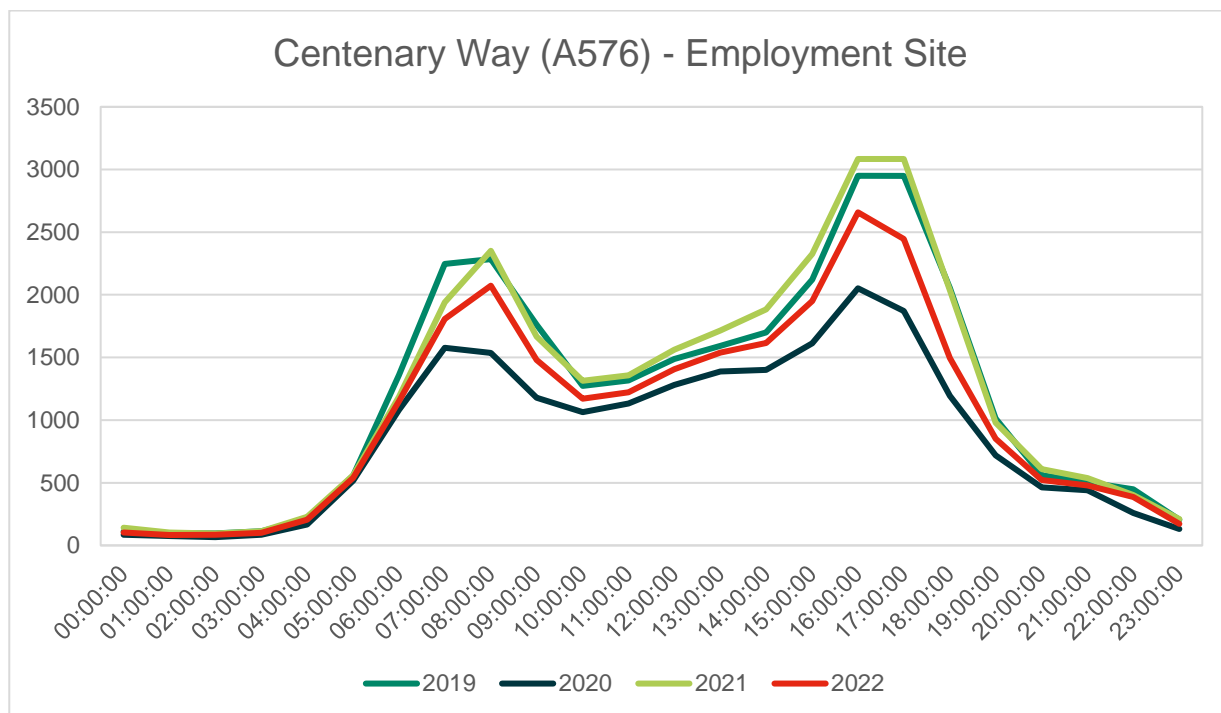


Source: TfGM C2 Database – Location S of Ashlor St, Bury

Centres of Employment (Trafford Park)

- B.28 Trafford Park is a major site of employment within Greater Manchester, with traffic flows accessing this employment area changing significantly during the pandemic.
- B.29 During the limited easing of travel restrictions in Autumn 2020, traffic flows to/from Trafford Park remained low, with limited return of higher peak time travel flows. This was possibly due to the higher levels of working from home at the time. The more recent data from November 2021 shows flows higher than pre-pandemic levels. January 2022, though impacted by the Omicron variant, shows a recovery of peak hour travel demand, close to pre pandemic levels, although the early part of the AM peak and the later part of the PM peak show a slightly weaker recovery. Interpeak travel is also similar to pre pandemic levels (See **Figure B-12**).

Figure B-12 Change in traffic flow levels by time of day (Centres of Employment)



Source: TfGM C2 Database – Location Trafford Park, Trafford

Summary

- B.30 The review of local traffic flows at various locations across GM has shown considerable variations in changing travel behaviour by location, when compared to pre-pandemic levels. This is likely to be impacted by changing travel habits, although the recent Omicron variant is likely to be impacting some travel behaviour in the 2022 data, as shown in **Figure B7**, general traffic levels in Autumn 2021 showed overall recovery in traffic flows above pre-pandemic levels.
- B.31 The change in travel behaviour by location since September 2019 is summarised in **Table B-1**.
- B.32 Considering the position in November 2021, when travel patterns were least affected, it is notable that Local Centre traffic flows were higher than previously whilst the Regional Centre flows were still much reduced. For radial routes and employment centres, overall (daily) levels were back to pre-pandemic but with some variation during the day; the morning peak being less pronounced but the interpeak higher.

Table B-1 Traffic flow changes by location type from September 2019 to January 2022

Location Type	Period	Change relative to Sep-19 (Index=100)			
		Sep-19	Sep-20	Nov-21	Jan-22
Regional Centre	AM	100	67	88	81
	IP	100	73	95	88
	PM	100	41	92	85
	Eve	100	26	95	85
	Daily	100	61	88	83
Radial inside M60	AM	100	98	98	93
	IP	100	98	105	96
	PM	100	101	102	96
	Eve	100	80	94	83
	Daily	100	92	101	91
Local Centres	AM	100	103	108	90
	IP	100	96	115	88
	PM	100	94	113	86
	Eve	100	74	110	87
	Daily	100	90	111	86
Employment Centre	AM	100	69	95	86
	IP	100	83	108	94
	PM	100	61	102	79
	Eve	100	74	99	91
	Daily	100	74	102	88

Source: TfGM C2 Database

Economic Related Impacts

Introduction

B.33 Changes in the economic situation are also likely to have had an influence on travel behaviour. The section below presents the trends for a range of factors impacting the economy, several of which are likely to impact the way people travel and businesses operate.

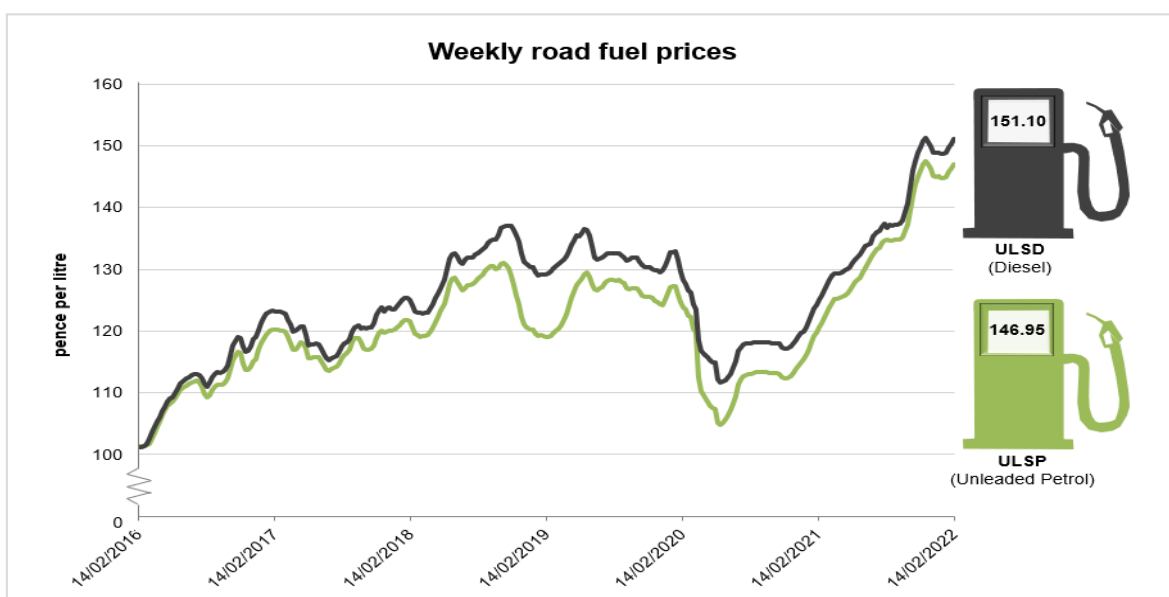
Fuel Prices

B.34 There are six companies (four oil companies and two supermarkets) that feed into the weekly fuel price survey prepared by the government. These companies cover around 65% of the market. The change in fuel price is displayed in **Figure B-13**.

B.35 The price of road fuel is volatile over shorter time periods, with prices regularly rising and falling. The key trends from during the pandemic are:

- At the start of 2020 prices appear to have been on the decline. There was then a significant fall in both Diesel and Unleaded Petrol in early 2020, corresponding with the first national lockdown.
- During the second part of 2020, prices appear to be stable, with prices beginning to rise steadily throughout 2021 in line with global oil market prices.
- There is a steep rise in prices towards the end of 2021, reaching record highs. This corresponds with a sudden rise in post-pandemic energy demand. This has triggered a tax freeze on petrol and diesel for the twelfth year in a row⁴².
- In September 2021 long queues and forecourt closures were witnessed, caused by panic buying throughout the country, sparking a fuel shortage in Britain.

Figure B-13 Weekly Road Fuel Prices



Source: gov.uk

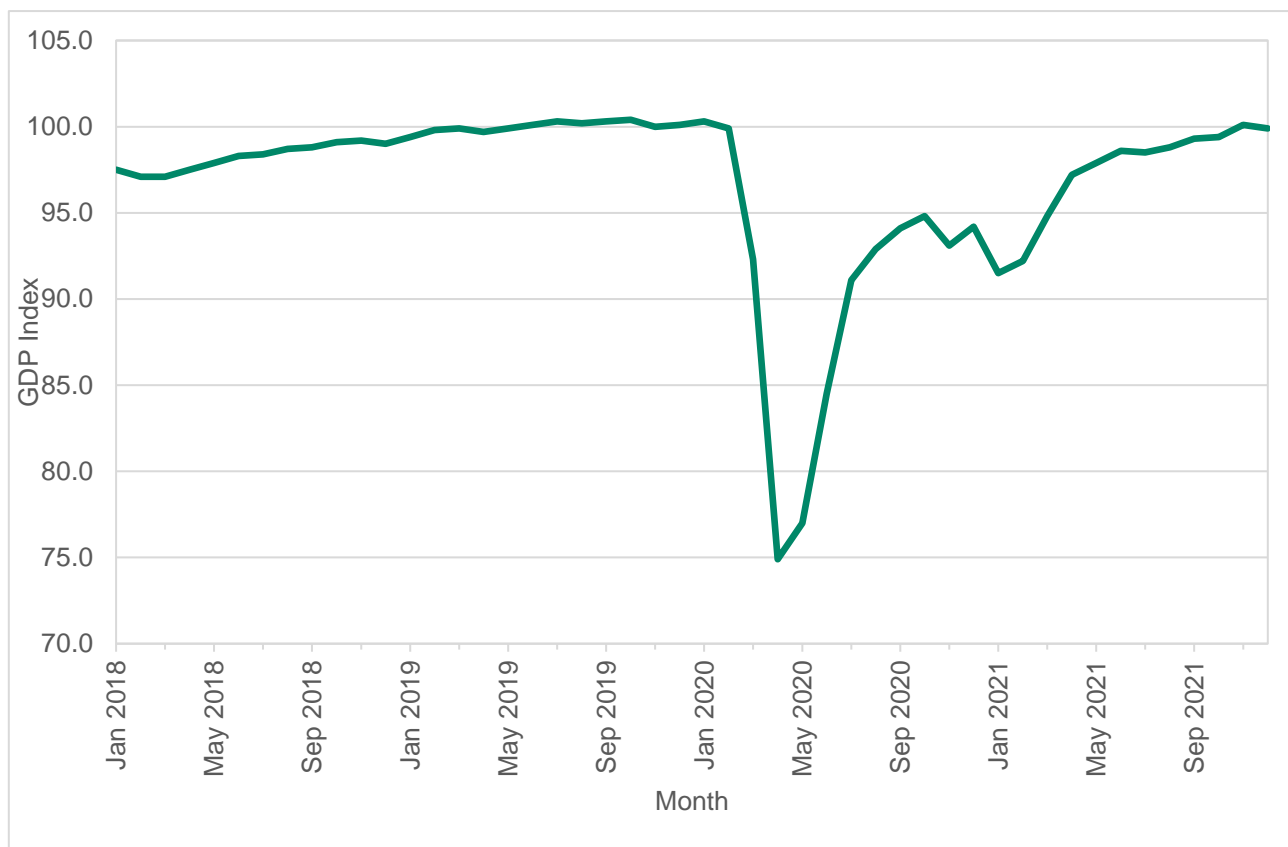
⁴² <https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html>

B.36 It was already likely that the price of fuel would remain unsteady for some time as a consequence of the impact of the pandemic and recent events in Ukraine have brought additional uncertainty to that market.

GDP

B.37 From bulletins on the ONS data website⁴³ the end of 2021 saw a drop in GDP by 0.2%, to equal the pre pandemic level of February 2020. In December 2021 services and construction are both above pre-pandemic levels, while production remained below. Consumer facing services fell within December, driven by a fall in retail, 8.4% below pre-coronavirus levels, contributing to the GDP fall in December 2021 (see **Figure B-14**).

Figure B-14 GDP in the UK (Index, 2019 = 100)



Source: [ons.gov.uk/economy](https://www.ons.gov.uk/economy)⁴⁴

B.38 Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021⁴⁵. In real terms (adjusted for inflation), total and regular pay fell for the year by 0.1% and 0.8% respectively.

Imports and Exports

B.39 **Figure B-15** shows the trends in UK goods imports and exports throughout 2019, 2020, and 2021. After an initial decrease in imports at the beginning of the pandemic, this appears to have recovered. There was another significant decrease at the end of 2020, however imported goods are on the increase back to

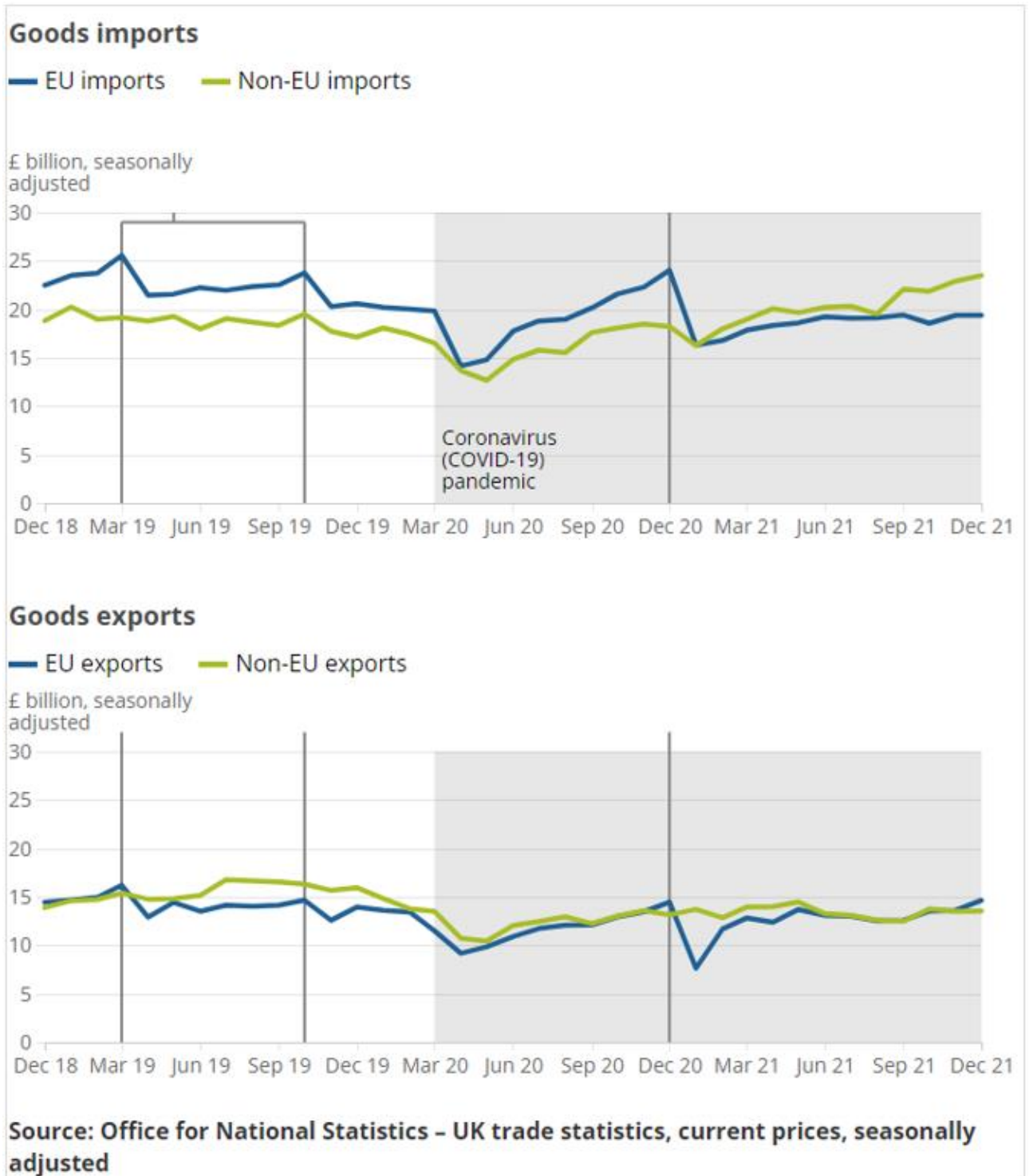
⁴³ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

⁴⁴ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

⁴⁵ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022>

pre-pandemic levels. There was less impact on exports, with these remaining steady throughout.

Figure B-15 Import and Exports



Source: ons.gov.uk/economy⁴⁶

Centre for Cities – Cities Outlook

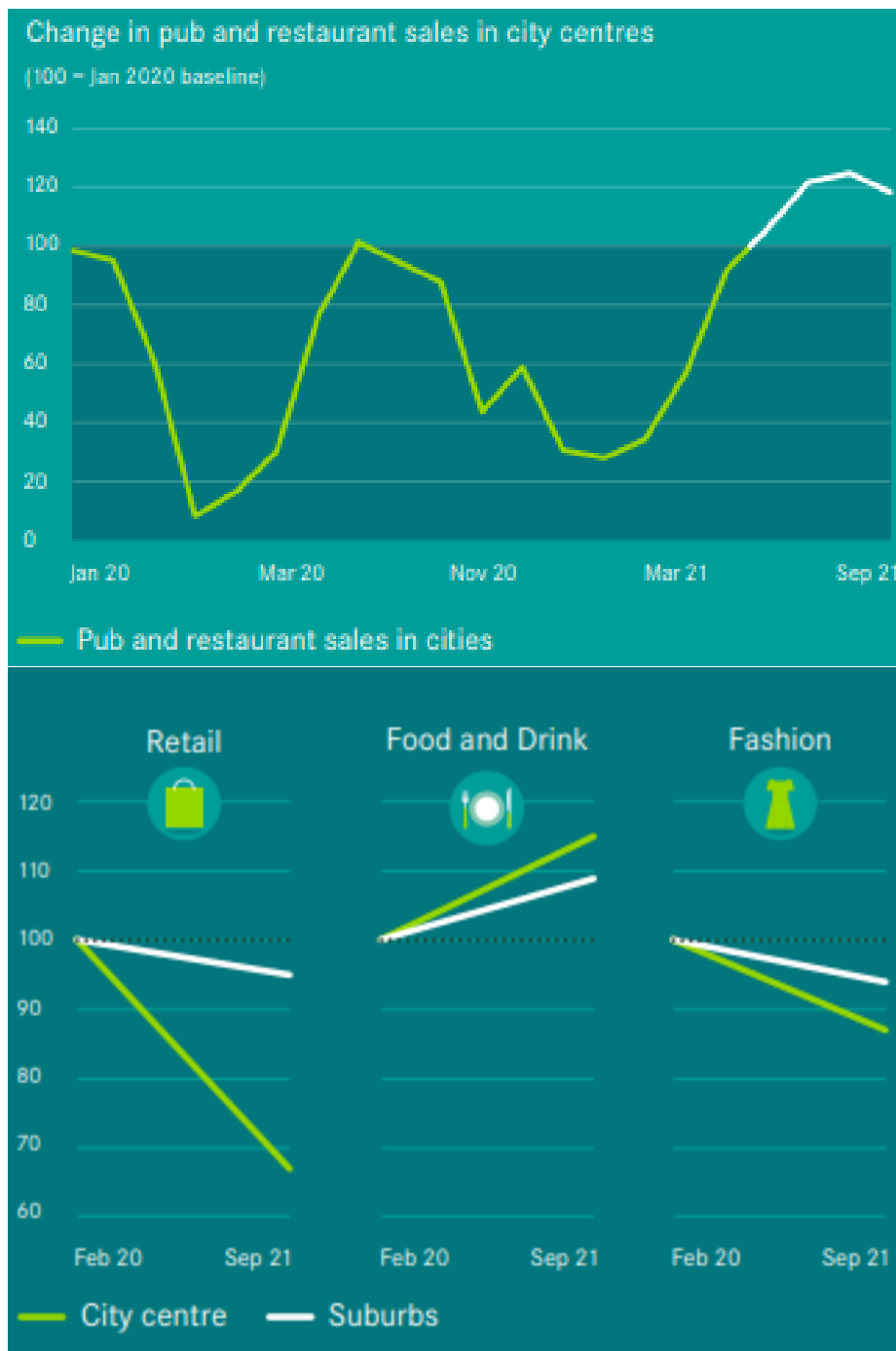
B.40 Centre for Cities produced the Cities Outlook 2022 report looking in-depth at the state of UK high streets, to get a sense of the short-term impact of the pandemic on Britain's town and city centres, and the long-term consequences and

⁴⁶ <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomy/latest/2021-01-25#output>

implications this has for the Government’s levelling up agenda. This report showed that there was a quick and considerable shift away from high streets to online shopping during the pandemic. However, in most cities the shift stalled, or slightly fell again once shops reopened.

B.41 The Cities Outlook report also studies the impacts on pubs and restaurants, stating that the fashion sector was hit harder than pubs and restaurants. **Figure B-16** shows the trend in sales throughout 2020 and 2021. There are clear decreases in sales corresponding to the national lockdowns but in all instances, these soon recover when the sector reopens. This is also reflected in the suburbs, with retail and fashion experiencing a slight decline from Feb 2020 to September 2021 but food and drink on a steady incline.

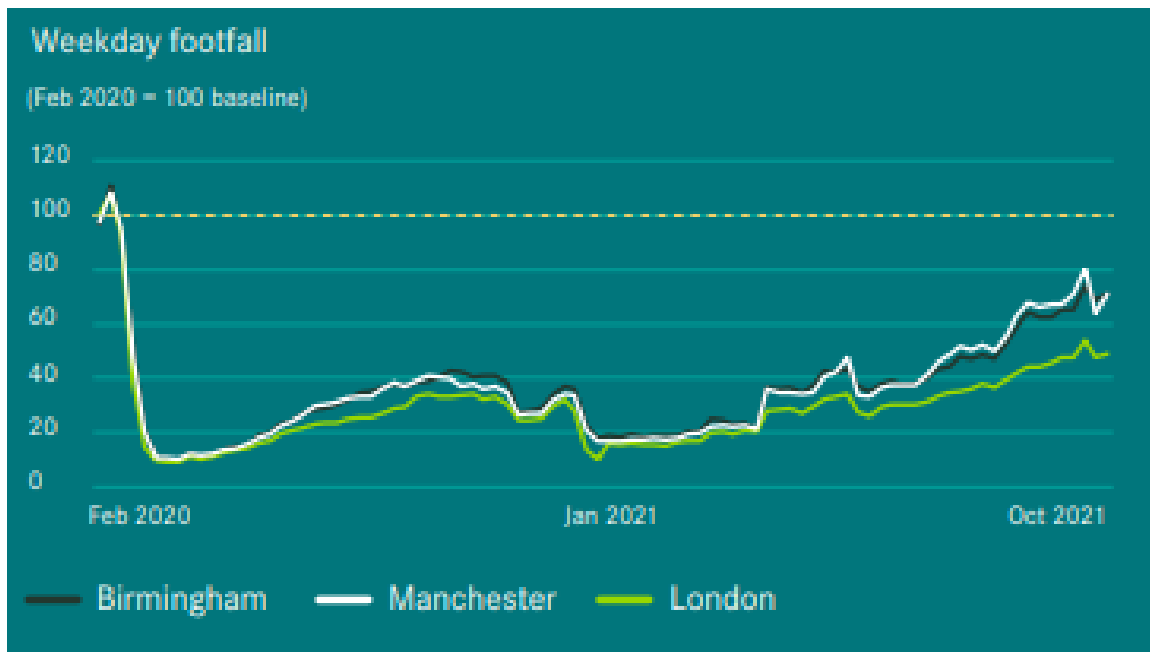
Figure B-16 Change in pub and restaurant sales in City Centres and Suburbs



Source: ons.gov.uk/economy⁴⁷

- B.42 Due to the work from home regulations and, for many, working from home becoming a regular part of the working week, it is feared the reduced footfall in cities will have a lasting effect on retail, hospitality, and transport sectors. **Figure B-17** show the weekday footfall in London, Manchester and Birmingham. Although not yet back to pre-pandemic levels, there is a steady climb in footfall in the major cities with Manchester appearing to recover more quickly than Birmingham, and London taking considerably longer.
- B.43 The more significant impact on London may be related to the impact of COVID-19 on international tourism.

Figure B-17 Weekday footfall



Source: ons.gov.uk/economy

⁴⁷ <https://www.centreforcities.org/>

Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside

Appendix D - Technical Note: Vehicle Sector Review – Coach and Minibus

DRAFT FOR APPROVAL

June 2022

1. Introduction

Background

- 1.1 After the initial Outline Business Case (OBC) submission in March 2019, a series of technical notes were published setting out the results of analysis and research carried out to better understand the vehicles in scope for the scheme.
- 1.2 For coaches and minibuses this included, in particular, *Technical Note 4: Analysis of the Coaches Market*, and *Technical Note 18: Minibus Vehicle Research*.¹ Further notes were produced setting out the development of analytical tools, with the latest published summary of that work provided in *T4 Appendix A of the Modelling for Consultation*.²
- 1.3 This evidence formed the basis of the development of the Option for Consultation. From March 2020, it became clear that the COVID-19 pandemic would affect the Greater Manchester Clean Air Plan (GM CAP); and a programme of work was carried out in 2020/2021 to better understand the possible impacts of the COVID-19 pandemic on the GM CAP, published as the *Impacts of Covid Report* in June 2021.³ This evidence, alongside feedback from the Consultation, was used to inform the revised GM CAP as approved by the ten GM local authorities in June/July 2021.
- 1.4 At that time, GM identified several possible risks to the GM CAP, which included concerns about the risk of vehicle price increases and the impact of any further lockdowns in the UK or countries in the supply chain.
- 1.5 The report, which was originally developed in February 2022, draws a series of findings and conclusions to better understand the circumstances affecting Coach and Minibus owners in Spring 2022 and the implications for the GM CAP and surrounding policy framework.
- 1.6 Since Spring 2022, there have been further dramatic changes to the economic context in the UK which are not explicitly addressed in this report but are set out in **Appendix E**. A range of factors associated with the impact from war in Ukraine, increased costs of energy and fuel, changes to Bank of England base rates and forecasts, global supply chain challenges, and the cost-of-living crisis have combined to create a context of increased financial hardship for businesses and families.

Structure of Note

- 1.7 The remaining sections of the report are structured as follows:
 - **Section 2** provides a review of the in-scope vehicles of the current Coach and Minibus sector in GM;
 - **Section 3** reviews the impacts of COVID-19 on the Coach and Minibus sector, with a particular focus on the availability and prices of purchasing new and used coach and minibuses. This section also considers the vulnerability impacts of COVID-19 on the sector; and

¹ All available at <https://cleanairgm.com/technical-documents/>

² https://assets.ctfassets.net/tlpgbv1k6h2/3AKtd1g0fg5OwQFNzc5FIQ/2b42ae34e93d292a5ec2eb26f7f5e8fb/T4_-_Appendix_A_Behavioural_Response_Cost_Models_and_Demand_Sifting_Tool.pdf

³ GM CAP- Impact of COVID Report. Available at: <https://cleanairgm.com/technical-documents/>

- **Section 4** provides a summary of the key findings, also presenting details of any key risks or issues facing the sector in responding to the GM CAP.
- 1.8 In addition, **Appendix A** provides a list of data used to inform the report and **Appendix B** reviews the recent changes in travel behaviour within GM through the pandemic up until January 2022.

2. Review of Vehicles in Scope

Overview of Vehicle Sector

- 2.1 A coach is considered to fall within vehicle category M3 of the DfT vehicle classifications, defined as a 'Motor vehicles with at least four wheels designed and constructed for the carriage of passengers' comprising of more than eight seats and a maximum mass exceeding 5 tonnes, whereas a minibus falls into category M2 by not exceeding 5 tonnes maximum mass⁴ (see **Table 2-1**).

Table 2-1 Categorisation of vehicles with at least four wheels and used for the carriage of passengers

Classification	Description
M1	Vehicles designed and constructed for the carriage of passengers and comprising no more than eight seats in addition to the driver's seat.
M2	Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass not exceeding 5 tonnes.
M3	Vehicles designed and constructed for the carriage of passengers, comprising more than eight seats in addition to the driver's seat, and having a maximum mass exceeding 5 tonnes.

Source: transportpolicy.net/standard/eu-vehicle-definitions/

Review of In-scope Vehicles

Overview

- 2.2 For context, the proportion of vehicle types in GM, relative to the regional and national averages, are provided in **Table 2-2** based on the latest available registration statistics from the DfT. There will be instances, particularly for commercial usage, where vehicles are based in one location but used in another, but this table provides an overview of the relative size of each fleet.

Table 2-2 Proportion of Vehicle Types Registered by Area

	Cars	Van	HGV	Bus & Coach	Other
GB	85.0%	3.4%	11.3%	1.3%	0.4%
England	85.1%	3.5%	11.3%	1.3%	0.4%
NW	85.7%	2.9%	10.9%	1.5%	0.3%
GM	85.6%	2.1%	11.8%	1.6%	0.4%

Source: Department for Transport., Statistical data set, All vehicles (VEH01), Last updated 13 January 2022

⁴ Definition of Vehicle Categories, Vehicle Certification Agency

Coaches

- 2.3 **Table 2-3** shows the number of coaches serving GM that are GM and non-GM based as of 2019, showing that the GM based fleet is typically more non-compliant than the non-GM based fleet, this may be reflected in the smaller organisations operating in a more local basis, whereas longer distance out of area coaches, are more likely to be operated by larger organisations and to be generally more compliant.

Table 2-3 Number of Coaches Serving GM (2019)

	GM Based	Non-GM Based	Total
Compliant	233	529	762
Non-Compliant	464	448	912
Total	697	977	1,674

Source: T4 Appendix C, Vehicle Population Estimates

- 2.4 Without intervention there will be a natural turnover of the coach fleet serving GM. Based on a typical assumed lifespan of a coach of up to 20 years, and assuming the same fleet age composition, the coach fleet was projected into the future. This was applied for each year by removing the oldest vehicles and replacing with a new one (whilst keeping the overall age profile consistent). This naturally leads to an increase in Euro 6 (compliant) coaches over time. The coach fleet serving GM, (pre-COVID-19) was therefore projected from 2019 to 2023. These projections are presented in **Table 2-4**.

Table 2-4 Forecast Do Minimum (without CAP) Compliant Coaches 2023

	GM Based	Non-GM Based	Total
Compliant	386	600	986
Non-Compliant	311	377	688
Total	697	977	1,674

Source: T4 Appendix C

Minibuses

- 2.5 **Table 2-5** shows the number of minibuses serving GM that are GM and non-GM based as of 2019.

Table 2-5 Number of Minibuses Serving GM (2019)

	GM Based	Non-GM Based	Total
Compliant	130	306	436
Non-Compliant	1,903	805	2,707
Total	2,032	1,111	3,143

Source: T4 Appendix C, Vehicle Population Estimates

- 2.6 The minibus fleet has been projected forward in a similar fashion to the coach fleet as described earlier. A typical lifespan of 20 years has been assumed. These projections are presented in **Table 2-6** and are based on pre-COVID-19 natural fleet turnover assumptions.

Table 2-6 Forecast Do Minimum (without CAP) Compliant Minibuses 2023

	GM Based	Non-GM Based	Total
Compliant	417	413	830
Non-Compliant	1,616	698	2,313
Total	2,032	1,111	3,143

Note: Values above exclude those minibuses that operate as PHVs

3. Review of COVID-19 impacts on the Coach and Minibus vehicle sector

Overview

- 3.1 The Coach and Minibus sector has been reviewed to consider pre-pandemic background characteristics, COVID-19 related impacts on the industries affected by the sector, and a review of the expected vulnerabilities when responding to the GM CAP.
- 3.2 On 17th February 2022, the Society of Motor Manufacturers and Traders (SMMT) released an article stating that UK bus and coach registrations had fallen to the lowest recorded level as demand dwindled after the pandemic⁵.

COVID-19 Effects on the Coach sector

Background

- 3.3 The first UK national lockdown in March 2020 had a significant impact on the coach and minibus market, with many coach and minibus operators either having to stop their services altogether or only operate at a significantly reduced capacity.
- 3.4 According to the Confederation of Passenger Transport (CPT), coach tourism operators, on average, require a coach occupancy of 47-53% to breakeven. With the implementation of the 1m physical distancing, depending on vehicle type, social bubbling and additional COVID-19 mitigation factors, coaches were having to operate at a maximum of 35-50% occupancy during the pandemic.⁶
- 3.5 Once the lockdown restrictions began to ease and destinations began to reopen, more coach and minibus operators were then able to begin operating again albeit with restricted passenger numbers and dampened demand as not all sectors could re-open. The ongoing restrictions and guidance, whilst not as restrictive as the national lockdowns, continued to affect road passenger transport, with declining ridership impacting operator confidence and orders for new vehicles.
- 3.6 During this time, key sectors served by the coach and minibus sector, in particular the tourism and hospitality sector, were badly affected by the restrictions in place. In 2021, a recovery in this sector occurred due to ongoing restrictions on international travel resulting in a boom in domestic holidays. However, whilst the sector saw an improvement, the coach and minibus market continued to be negatively impacted by reductions in international travel⁷ and, due to social distancing requirements, weak demand for coach and minibus travel.

⁵ <https://www.smmt.co.uk/2022/02/uk-bus-and-coach-registrations-fall-to-lowest-recorded-level-as-pandemic-dents-ridership/>

⁶ <https://www.cpt-uk.org/media/ijn13w4f/aid-to-trade-document.pdf>

⁷ <https://www.route-one.net/news/difficult-road-ahead-for-incoming-coach-tourism-recovery/>

- 3.7 Schools, colleges and universities have remained open during the pandemic, although government restrictions during the pandemic placed restrictions on face-to-face learning at various points throughout the pandemic. This has impacted the number of people travelling on a daily basis to access education which will have reduced at various points through the pandemic, though as education establishments have remained largely open, the coach and minibus operators that transport students to educational establishments are less likely to be negatively affected than other sectors.
- 3.8 On 28th November 2021, a report was released by Unite union after a survey of bus driver members. This revealed the bus driver shortages are at far higher levels than previously indicated, with 99% of bus garages experiencing driver shortages and 79% of respondents to the survey recording that vacancies had increased since the pandemic began in March 2020⁸.
- 3.9 There is limited quantifiable data available to analyse the impact of COVID-19 on the coach market and the impacts after the first lockdown, but there are several reports that qualitatively surmise how certain operators have been affected. The remainder of this section discusses the COVID-19 impacts on Regular, Special, and Occasional Coach Services.

Impact of COVID-19 on Regular Coach Services

- 3.10 Regular coach services are defined as all services which provide for the carriage of passengers at specified intervals along specified routes, with passengers being picked up and set down at predetermined stopping points.
- 3.11 Whilst the larger national operators of regular services do not have large numbers of vehicles based within GM (e.g. National Express / Megabus), prior to the pandemic, GM was served by a frequent operation of scheduled long-distance coach services serving a large and varied number of destinations across the UK. Within this context, there are also some franchise operations which operate services on behalf of national operators, such as Selwyns, which is based in GM, and operates services on behalf of National Express.
- 3.12 National Express is one of the largest coach operators in the UK. In August 2021, National Express brought together several existing brands such as Fareham based Lucketts and Woods Coaches of Leicester into National Express Leisure, aimed at providing one place for holidays and leisure travel by coach with operations in Fareham and Birmingham⁹.

⁸ <https://www.unitetheunion.org/news-events/news/2021/november/new-survey-reveals-shocking-shortage-of-bus-drivers/>

⁹ <https://www.nationalexpressgroup.com/media/news-releases/2021/national-express-takes-next-step-into-uk-leisure-travel-market/>

Case Study: National Express

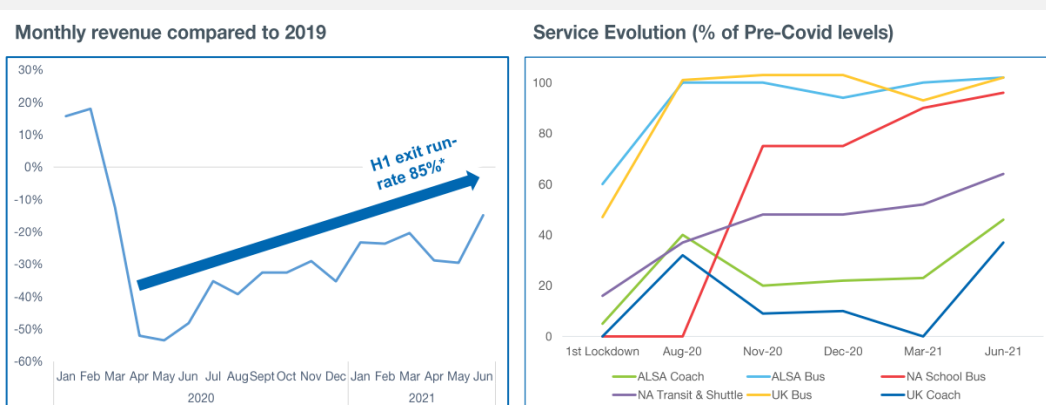
National Express are one of the largest operators in the UK, operating regular services between major cities and key destinations. The company have central depots in Birmingham and London.



A common aspect of their business model is to franchise services out to private operators, who are then required to buy or lease vehicles as specified by National Express.

How COVID-19 Affected National Express

- Reported £60m losses for the first half of 2020¹⁰ resulting in a hit to the company share price, trading at £1.59 compared to £4.69 at the start of 2020.
- Although aggregate demand fell by 80% during the spring 2020, revenues were approximately 50% of normal levels by end of 2020, due to pre-existing contracts and support from government and local authorities for services such as school buses.
- Secured cash from Bank of England COVID Financing scheme and the selling of new shares to investors was enough to see it through a slow 2021.
- National Express is currently in the process of a takeover by Stagecoach. The proposal is subject to a number of approvals and is expected to be completed towards the end of 2022.
- June 2021 Q1 figures show a revenue of £172.8m compared to Q1 2020 revenue of £189.9m. The 9% decrease was due to temporary mothballing of coach operations. This was counteracted by a revenue growth in Bus services, operating at 102% for much of the period.
- Profits were operating at a loss of £20m, but this was a much-reduced level to Q2 2020, which reflected the loss in Coach. The decline in revenue was partly mitigated by payroll savings through the use of the Coronavirus Job Retention Scheme (CJRS) and other cost actions¹¹.



- The above charts show total National Express monthly revenue compared to 2019 and Service Evolution as a percentage of pre-COVID-19 levels, these are for National Express as a total, including ALSA (Spain) and North American divisions along with UK.
- By June 2021 revenue was at 85% of June 2019 level.

¹⁰ <https://www.theguardian.com/business/2020/aug/13/national-express-shares-fall-warns-covid-19-recovery-slow>

¹¹ <https://www.nationalexpressgroup.com/media/i2tdj5xc/national-express-hy-2021-presentation-post-final-tweak-11-aug-2021.pdf>

Impact of COVID-19 on Special Regular Services

School Services

- 3.13 The Home to School (HTS) scheme that was introduced by the Government in August 2020 helped some coach operators to gain extra revenue (to help cover lost revenue from suppressed passenger demand) as a result of the COVID-19 restrictions¹². The scheme gave local authorities extra funding to help procure additional vehicles, including coaches, to accommodate social distancing policies on public transport for the reopening of schools. However, many operators argued that it was not enough support, as only 15% to 20% of coach operators were providing those services, leaving the rest with no extra revenue income to fill the gap¹³.
- 3.14 In December 2021, the Government announced the intention to extend existing Vehicle Accessibility Regulations 2000 exemptions for HTS services to the end of the 2021 to 2022 academic year, and qualified medium-term exemptions for rail replacement (RR) and HTS services that are still not compliant when existing exemptions expire in summer 2022¹⁴. These exemptions will ensure that essential HTS and RR services can continue while requiring operators to become increasingly compliant with existing legal obligations.

Rail Replacement Services

- 3.15 Some operators have been able to adapt to the changing environment by offering rail replacement services as an extra revenue stream. However, this limits many coach operators as vehicles must be Public Service Vehicle Accessibility Regulations (PSVAR) vehicles in order to provide this service. Though it should be noted that the rail network has also been significantly impacted by a large decrease in passenger demand and, as a result, it is expected that there will be limited rail replacements requiring support from coach operators.
- 3.16 Rail demand in January 2022 was at 55% of pre-pandemic levels, as a result of timetable reductions due to staff shortages following the Omicron wave, having previously returned to 70% of pre-pandemic demand¹⁵.
- 3.17 There are some operators during the pandemic that have used rail replacement services as their main source of income. Spencer Graham Coaches of Silloth invested in three PSVAR vehicles and have provided rail replacement services, which has provided the company enough revenue to survive during COVID-19¹⁶. Whilst this example is from an operator from outside of GM, it does provide an indication of how the wider coach market may need to adapt in the future, including coach operators based in GM, although this is unlikely to be enough to make up the difference in lost revenue from the tourism industry.

Impact of COVID-19 on Occasional Coach Services

Tourism Industry Effects on Coach Sector

- 3.18 The tourism industry forms an important part of the coach sector market¹⁷. Coach operators deliver vital footfall to attractions across the UK and carry spectators to

¹² <https://www.ft.com/content/424808f0-c5d8-4b64-a127-c2e802b67d17>

¹³ <https://www.ft.com/content/424808f0-c5d8-4b64-a127-c2e802b67d17>

¹⁴ <https://www.gov.uk/government/publications/public-service-vehicles-accessibility-regulations-2000-and-their-application-to-home-to-school-and-rail-replacement-coach-services>

¹⁵ <https://www.dailymail.co.uk/news/article-10394121/Demand-trains-plummets-timetables-slashed-Rail-travel-55-pre-pandemic-levels.html>

¹⁶ <https://www.route-one.net/features/covid-19-positive-change-for-the-coach-industry/>

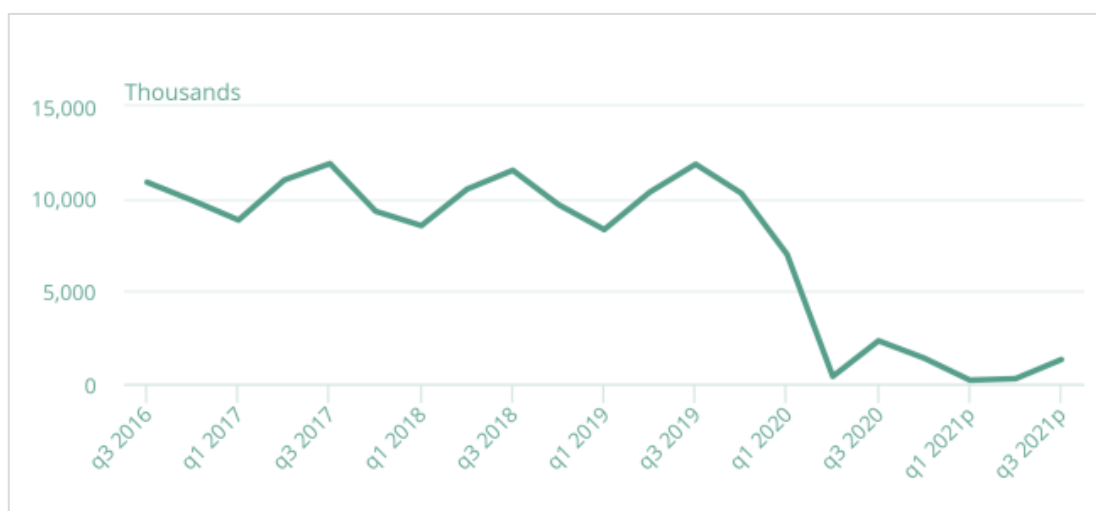
¹⁷ <https://publications.parliament.uk/pa/cm200001/cmselect/cmtrdind/268/01101p11.htm>

concerts, festivals and sporting events, as well as coach tours around the UK. Pre-pandemic, in 2019, coach travel catered for over 23 million tourism visits a year and contributed £14bn to the UK economy¹⁸. Many of the coach companies based within GM will support the tourism sector and will have been significantly impacted by the downturn in this market. Around 80% of the coach industry's income is derived from tourism related activities¹⁹.

General Impact on Tourism

- 3.19 Pre-pandemic, UK residents consistently made more visits abroad than foreign residents made to the UK. As a result, the total amount spent by UK residents during visits abroad was higher than the total brought into the UK by foreign residents visiting²⁰. As international travel restrictions ease into and out of the UK, the emerging trend appears to follow the same path with over 4 times more UK tourists traveling overseas compared to foreign tourists arriving in Quarter 3 (July to September) 2021.
- 3.20 According to the Office for National Statistics (ONS), overseas residents made 1.3 million visits by air to the UK in Q3 2021. This is a decrease of 86% compared with Q3 2019, due to the continued restrictions on international travel and perceptions of international travel (see **Figure 3-1**). Overseas residents spent a total of £1.2 billion on their visits to the UK during this period (which covers the typical summer peak travel period); this is a decrease of 87% on the same quarter in 2019²¹ (see **Figure 3-2**).
- 3.21 COVID-19 restrictions prevented the collection of data at ports, therefore Sea and Eurotunnel data has not been assessed throughout the pandemic. Typically, Sea and Eurotunnel numbers make up 20% of all pre-COVID-19 travel numbers, so this may account for slightly lower numbers. However, analysis of administrative data, shows a 95% drop in passenger numbers when compared with Q3 2019.

Figure 3-1 Visits to the UK by Overseas Residents, 2016 to 2021 (Q1 – Q3 2021, air only)



Source: [ons.gov.uk/peoplepopulationandcommunity/leisureandtourism](https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism)

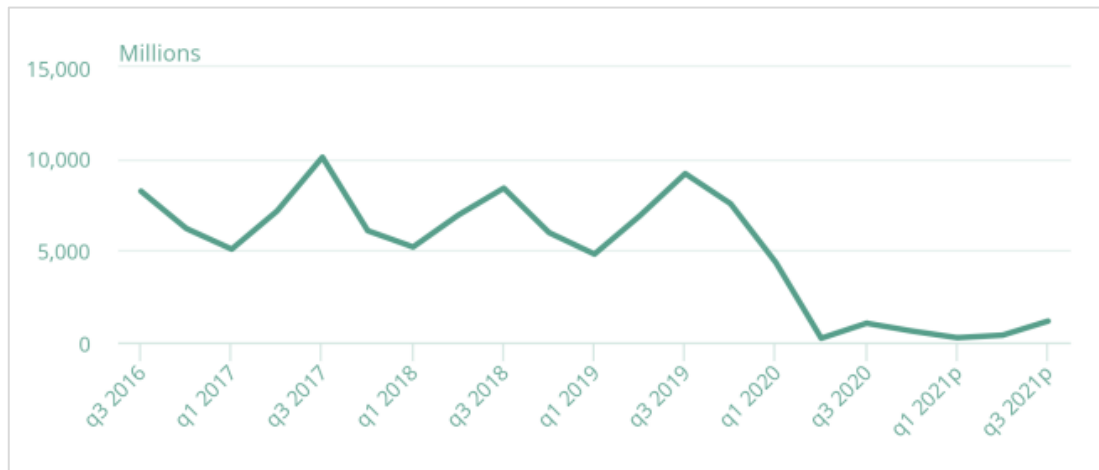
¹⁸ <http://www.movingforwardtogether.uk/covid-19-latest-news/14bn-and-10-000s-of-jobs-at-risk-if-coach-travel-sector-collapses-warns-cpt/>

¹⁹ <https://www.cpt-uk.org/media/ijn13w4f/aid-to-trade-document.pdf>

²⁰ <https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/bulletins/overseastravelandtourism/january2019provisionalresults>

²¹ <https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/bulletins/overseastravelandtourism/julytoseptember2021>

Figure 3-2 Spending in the UK by Overseas Residents, 2016 to 2021 (Q1 – Q3 2021, air only)



Source: ons.gov.uk/peoplepopulationandcommunity/leisureandtourism

3.22 Reasons for travel into the UK were recorded as part of the ONS travel and tourism data survey²²; all trips had a significant decline, but holiday visits were still down by 95%. Visiting family and relatives had decreased by 70% and business trips decreased by 90%.

3.23 On 17 November 2021, VisitBritain released its 2022 tourism forecast²³. The key points on inbound international travel are:

- Inbound visits are forecast to increase to 24.0 million, 59% of 2019 levels;
- Spending associated with inbound visits is forecast to be £19.2 billion, 67% of 2019 levels;
- By the end of 2022 the UK is forecast to have recovered to approximately 68% of pre-COVID-19 levels;
- Visits from Europe are forecast to recover sooner than long haul; and
- Spend per visit expected to remain higher than pre-pandemic due to longer average length of stay and higher prices.

3.24 The VisitBritain forecast for 2022 domestic tourism is not currently available, the most recent 2021 forecast, (late 2021), stated that:

- There was expected to be recovery to £56.2 billion in domestic tourism spending in 2021, an increase of 65% on 2020 but still only 61% of the level of spending seen in 2019; and
- There was a revision on the initial numbers stated for 2021 as domestic tourism is recovering slower than expected.

How Have Coach Operators Coped?

3.25 National Express reported a £445m loss in 2020 due to the COVID-19 pandemic. However, they are optimistic as, throughout 2021, they have seen a rapid recovery in demand when travel restrictions have been lifted²⁴. They have also been using the down time during the pandemic to reduce costs, diversify contracts and access government loans to ensure the business emerges financially stronger.

²² <https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/bulletins/overseastravelandtourism/julytoseptember2021>

²³ <https://www.visitbritain.org/2022-tourism-forecast>

²⁴ <https://www.theguardian.com/business/2021/mar/18/national-express-reports-445m-loss-for-2020-after-80-drop-in-passengers>

- 3.26 The Birmingham-based group whose markets include UK, North America and Spain, secured £900m of new contracts through a move to win profitable contracts from weaker bus and coach operators that are at the brink of collapse after the pandemic. This could trigger consolidation within the sector²⁵.
- 3.27 Many small travel companies have not recovered from 2020, with financial times stating 76 passenger vehicle groups entering into insolvency within the UK²⁶, although this represents a small overall share of the market.
- 3.28 Notwithstanding any further restrictions, the outlook for 2022 is positive. As an example, Andersons Travel had returned to around 60% of pre-pandemic business by the end of 2021. A degree of this has been due to diversification, for example home-to-school is now a predominant area of work²⁷.
- 3.29 It is hoped that spring / summer 2022 the coach sector will see the postponed 2020 and 2021 bookings, along with new bookings, providing a much-needed boost to coach tourism.

COVID-19 Effect on the Minibus Sector

Background

- 3.30 It is important to note that there is limited data or published articles available to provide direct insight into the effects of COVID-19 on the minibus sector. Therefore, the following information presented considers mainly qualitative anecdotal information on the performance of the minibus sector, in the context of the wider markets they serve.
- 3.31 As stated in *Technical Paper 18*, the minibus sector is made up of several types of operators that will have been affected differently by COVID-19. These are:
- Community Transport;
 - Local Authorities;
 - Local Bus Operators;
 - Coach Operators;
 - Rental / Leasing Companies; and
 - Education Establishments.
- 3.32 Local authorities, community transport and education establishments are unlikely to have been as significantly financially impacted as commercial operators as they do not use their vehicles for commercial reasons. These services are less reliant on passenger income generation. Although with COVID-19 restrictions in place demand for these services will have reduced significantly during the pandemic, it is likely that as restrictions ease and confidence rises these will return to operate largely as normal.
- 3.33 With the closure of schools during the first national lockdown, it is likely that minibus drivers serving daily travel to and from school may have been placed onto the furlough scheme as these services would not have been in operation, though will have likely restarted operation once schools returned in September 2020. These

²⁵ <https://www.ft.com/content/02a27f99-8955-4220-95c4-3e15e9844ad8>

²⁶ <https://www.ft.com/content/02a27f99-8955-4220-95c4-3e15e9844ad8>

²⁷ <https://www.route-one.net/news/difficult-road-ahead-for-incoming-coach-tourism-recovery>

services will have been paused again in January 2021 as schools remain closed for the majority of pupils following another national lockdown, though returned to operation through the remainder of 2021.

- 3.34 In the case of the Ring and Ride service provided by TfGM, the service was completely stopped for just over two months when the first national lockdown occurred but has since restarted, albeit at a reduced service level, since 18th May 2020²⁸ and has continued to serve lower passenger numbers. To support the COVID-19 vaccine roll out in 2021, the Ring & Ride service has been used to support travel to vaccine centres where limited public transport is available.
- 3.35 Local bus operators, coach operators and rental and leasing companies will have been impacted severely due to their minibuses being used to provide an income-generating service. Using the coach sector as an example, minibus operators will likely have placed many of their staff on furlough and taken payment holidays for any vehicles they have used a loan to buy. Also, with the continued impacts on the sector, many drivers of coaches and minibuses are likely to have transferred to other sectors which have been more resilient through the pandemic.
- 3.36 Other minibus groups are likely to be sole operators, owned by individuals, small businesses and have fleets of only a few minibuses. For this sector it is highly likely that the small businesses will have been heavily impacted by COVID-19 and most likely have had to utilise the furlough scheme and payment holidays.

Changes as a Result of COVID-19

- 3.37 There is no direct evidence that could be found to support exactly how minibus owners and operators have been affected by COVID-19.
- 3.38 For local bus operators, coach operators, rental and leasing companies and smaller sole operators, the effects are likely to be greater as companies in these industries rely on their vehicles to generate income.
- 3.39 Similarly, the rental and leasing sector has been impacted by COVID-19. A report from the British Vehicle Rental and Leasing Association (BVRLA) produced in September 2020, states that 94% of their members expect reduced revenues compared to their forecasts pre-COVID-19²⁹. Although the report does not state how heavily affected the revenues will be, it does give an indication on the severity to which the market has been affected.

Will the Coach and Minibus Sector Recover?

- 3.40 There is little to no evidence to indicate exactly how the industry has been affected by COVID-19 and how it will recover. With vehicles used across different industries, there are likely to be differences in the scale of recovery depending on the sector they are in and how heavily impacted it is by COVID-19.
- 3.41 The coach sector has been heavily impacted by COVID-19 and is reliant on the tourism and events-based sector recovering, as well as consumer confidence improving. Whilst there was some recovery through 2021, many large events were cancelled. Also, continued restrictions on international travel, and nervousness in the use of public transport, is likely to result in a slow recovery of the coach sector. This slow recovery, combined with continued uncertainty in the market, could result in

²⁸ <https://www.wigantoday.net/news/uk-news/minibus-services-relaunched-across-greater-manchester-help-vulnerable-residents-2857659>

²⁹ <https://www.bvrla.co.uk/resource/aug-2020-covid19-research-presentation.html>

several coach operators ceasing their operations permanently, leading to fewer vehicles on the road. Many drivers may have switched away from the coach and minibus sector, to other sectors performing more strongly, such as HGV and vans haulage and delivery sectors. This is noted in a recent article with sky news that The Unite union stated that there are more than 4,000 vacancies for bus and coach drivers across the UK and some companies have been forced to cancel services because drivers are not available³⁰.

- 3.42 Local bus operators are likely to have a quicker recovery as they provide a daily service for people to travel to their desired location. Although passenger numbers remain low at present, operators can still provide a level of service albeit at a reduced scale. Passenger numbers on buses have decreased sharply from 80% of pre-pandemic levels to less than 60% since the rise of the Omicron variant and the re-introduction of work-from-home advice in December 2021, leaving firms reliant on recovery grants to run services³¹. It is possible that, as the COVID-19 recovery continues, passenger numbers will begin to increase, but if this increase in patronage will return to pre-pandemic levels is uncertain.
- 3.43 Smaller operators are likely to be the most vulnerable to COVID-19 and may struggle to survive due to their lack of capital. Whilst operators have been able to access the furlough scheme, the sustained restrictions placed on travel that utilise the coach and minibus sector may have placed many businesses in a vulnerable position post pandemic.
- 3.44 The future of the minibus sector is unclear and is difficult to predict due to the sustained reductions in travel by public transport and uncertainty around whether public transport demand will return to pre-pandemic levels. Some sectors such as local authorities, community transport and education establishments will likely be able to survive COVID-19 and most likely return to pre-COVID-19 levels due to the nature of their sector. The local bus operators, coach operators, leasing and rental companies and smaller businesses are in the most precarious positions.

Review of COVID-19 impacts on vehicle sales

Overview

- 3.45 The key changes in the coach and minibus sales market during the pandemic are discussed below.

Vehicle Registrations

- 3.46 Before the pandemic, the UK new bus and coach market was already in decline, with the market falling by 18.8% in 2019, with annual registrations falling for a third consecutive year to 5,874 units, according to figures released by the SMMT³². Whilst there was some growth in Q4, this was driven by minibus registrations, which were up 49.0% to 1,311 units. SMMT suggest that the reasons for this continued decline were due to a combination of weak business confidence, declining passenger numbers and some confusion over clean air zones which has depressed demand³³.

³⁰ <https://news.sky.com/story/theyre-leaving-in-droves-uk-faces-bus-driver-shortage-as-hgv-industry-offers-better-pay-12442971>

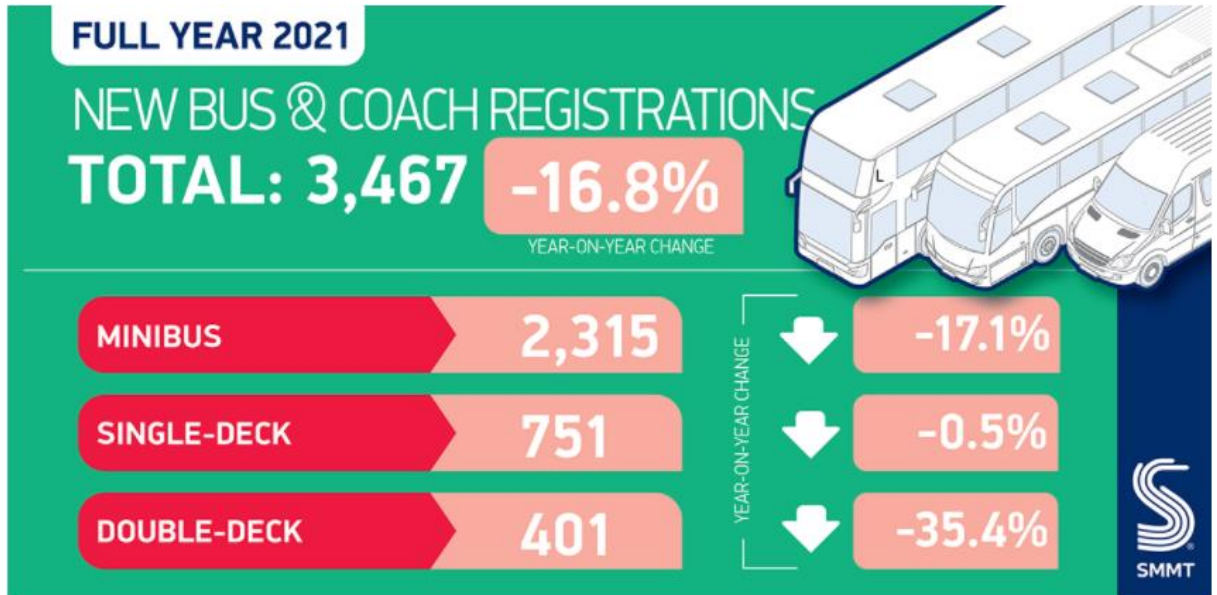
³¹ <https://www.theguardian.com/business/2022/jan/11/bus-services-in-england-face-axe-as-end-to-emergency-covid-funding-looms>

³² <https://www.smmt.co.uk/2020/02/third-year-of-decline-for-uk-bus-coach-market/>

³³ <https://www.smmt.co.uk/2020/02/third-year-of-decline-for-uk-bus-coach-market/>

3.47 An article released on 17 February 2022 by SMMT³⁴ states that demand for new buses and coaches dropped further in 2021 and was the weakest year since records began in 1996, with a total of 3,467 new registered buses (see **Figure 3-3**).

Figure 3-3 Bus and Coach and Minibus Registrations 2021

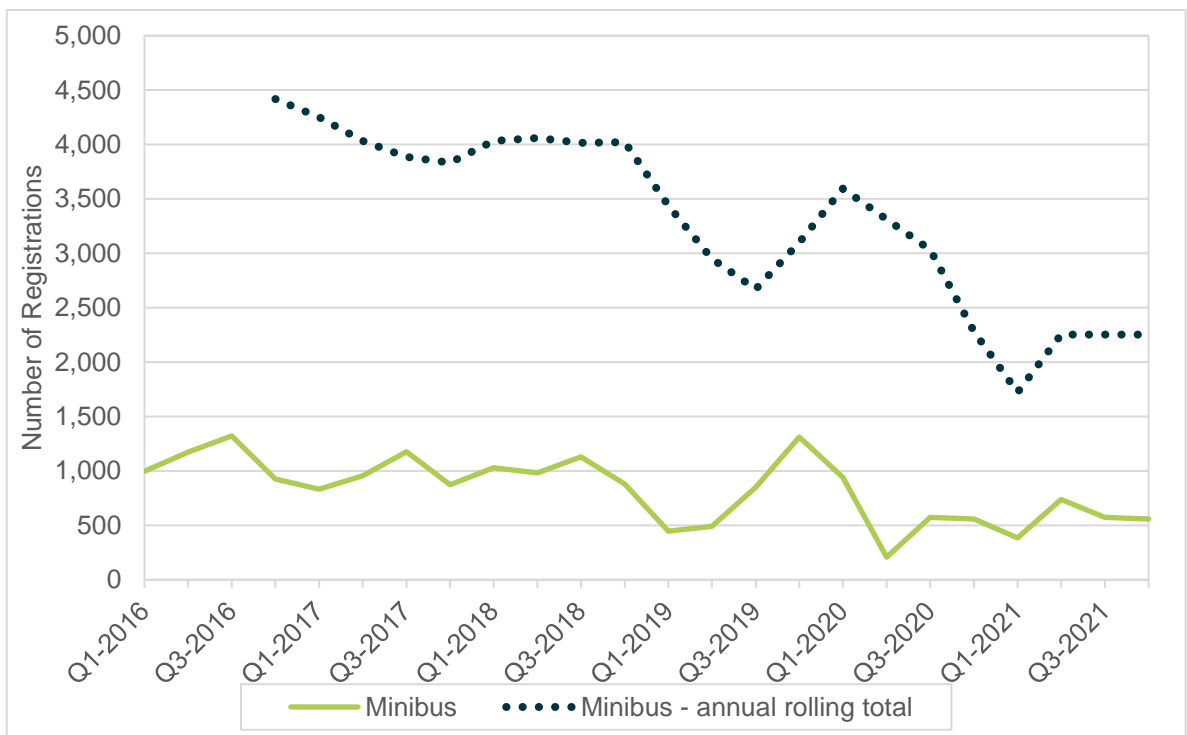


Source: SMMT

3.48 Details of quarterly registrations for minibus, bus and coach for recent years are illustrated in **Figure 3-4** and **Figure 3-5**, based on data held by SMMT.

3.49 There was a clear downward trend in both markets prior to the pandemic which was then exacerbated in 2020. There is some early evidence of the position stabilising towards the end of 2021.

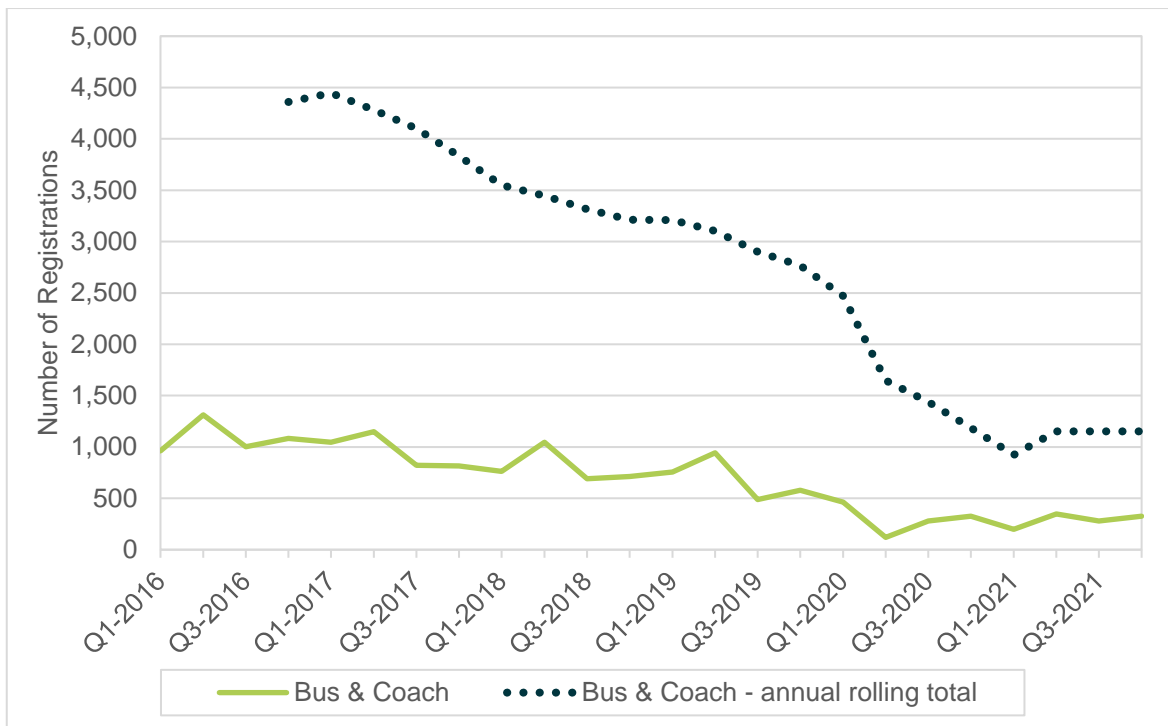
Figure 3-4 Trend in Minibus Registrations



³⁴ <https://www.smmt.co.uk/2022/02/uk-bus-and-coach-registrations-fall-to-lowest-recorded-level-as-pandemic-dents-ridership/>

Source: SMMT

Figure 3-5 Trend in Bus & Coach Registrations



Source: SMMT

Vehicle Availability

3.50 There is limited information on the availability of coaches. From a review of the online listings of second-hand coaches available for sale³⁵, there does appear to be a wider range of second-hand vehicles available for purchase.

New Prices – Coach

3.51 The findings show that the cost for new coach vehicles that have between 45 and 60 seats was typically over £250,000, with a median price of approximately £280,000 in 2019 and approximately £225,000 in 2022. Even with the supply chain issues and rising manufacturing costs, it is likely this fall is due to reduced demand.

Table 3-1: Costs of New Coaches

2019 Price	2022 Price
Between £250,000 – £300,000	~ £225,000

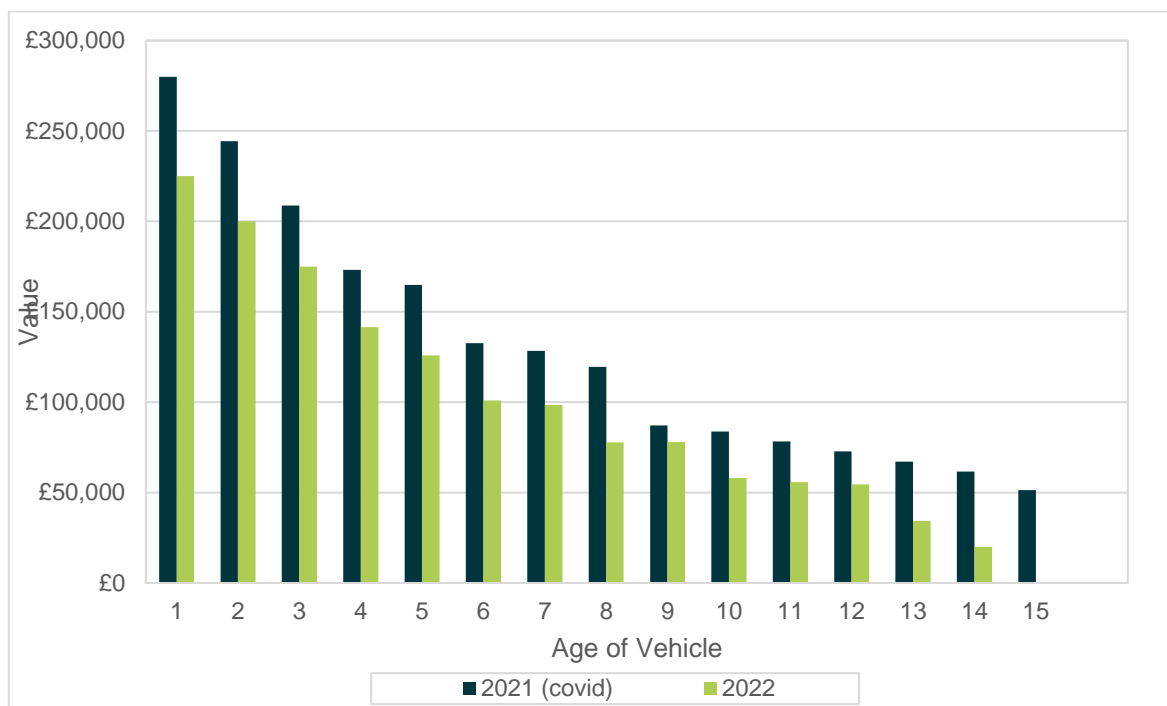
Second-hand Prices – Coach

3.52 An assessment of available second-hand coaches (45 – 60 seats) was undertaken in 2021. Second-hand coach prices also took a fall during 2021 compared to 2019, likely to be because of COVID-19. The assessment was therefore repeated in January 2022, and this shows there has not yet been a recovery in price, instead

³⁵ <https://classifieds.busandcoachbuyer.com/classifieds/coaches/>

falling further. It is noted that this is in contrast to other sectors such as the vans sector. (see **Figure 3-6**).

Figure 3-6 Second-hand Coach Purchase Prices



Source: average prices extracted from search of classifieds.busandcoachbuyer.com undertaken in 2021 and 2022

3.53 **Table 3-2** displays the price comparison for a second-hand compliant coach pre- COVID-19, in Autumn 2021, versus current market prices. Second-hand coaches on the market varied in price depending on age, mileage and condition.

3.54 Second-hand compliant coaches ranged in type and condition. A review in January 2022 of Mercedes-Benz models (the most common on the market and registered in GM) found that prices ranged from £86,000 to £207,000, with the higher end being a 2020 registered vehicle. The average cost of a popular model; the Tourismo, was approximately £168,000 in 2019 compared to £133,000 in 2022. The mid and high-end prices appear to be recovering slightly whilst the lower end vehicles have continued to fall in value.

3.55 This indicates a potential loss of confidence and demand in the market due to COVID-19 as operators take stock of their operations and vehicles. Most operators will likely be holding back renewals of their fleet until the market improves.

Table 3-2: Second Hand Compliant Coach Cost Estimates

Category	Model	2019 Price Range (Pre-COVID-19)	Autumn 2020 (Mid-COVID-19)	2022 Price Range
Lower	Mercedes-Benz (all on market)	£142,000	£115,000	£86,000
Mid	Mercedes-Benz Tourismo	£168,000	£130,000	£133,000

Higher	Mercedes-Benz (all on market)	£180,000	£165,000	£207,000
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Table 3-3: Second Hand Non-Compliant Coach Cost Estimates

Age (years old)	2019 Price Range (Pre-COVID-19)	Autumn 2020 (Mid-COVID-19)	2022 Price Range
15+	~ £20,000	~ £15,000	Less than £20,000
10-15	£42,000 - £80,000	£20,000 - £70,000	£20,000 - £56,000
5-10	£80,000 - £115,000	£45,000 - £85,000	£56,000 - £101,000

3.56 **Table 3-3** shows the same price comparison for second hand non-compliant coaches. The same trend as the compliant coaches is evident. Comparing to the autumn 2020 prices it does appear the newer end of the market has recovered slightly but is not yet back to pre-pandemic levels.

3.57 An alternative, more affordable approach for coach operators to become compliant is to retrofit their vehicles, for those vehicles where retrofit is possible. As stated in *Technical Note 4*, the cost to retrofit would range between £13,000 to £20,000³⁶ and with grants available from the GM CAP of up to £16,000, this could be a viable way for coach operators to achieve compliance for GM based fleet.

3.58 However, only Euro V engines can be retrofitted which would equate to 120 GM coaches as stated in *Technical Note 37*. This would leave 191 non-compliant GM coaches that cannot be retrofitted, thus requiring a more expensive solution.

New Prices – Minibus

3.59 New market prices for minibuses range from between £25,000 and £55,000, with the vehicles over £50,000 being primarily the Mercedes eVito electric vehicles.

3.60 CAP HPI data provided to AECOM in February 2022 allowed for the comparison of new purchase prices for a Ford Transit minibus in summer 2019 compared to January 2022 – the data shows there has been a 7% increase in purchase price.

Table 3-4: Estimated Cost of a New Minibus

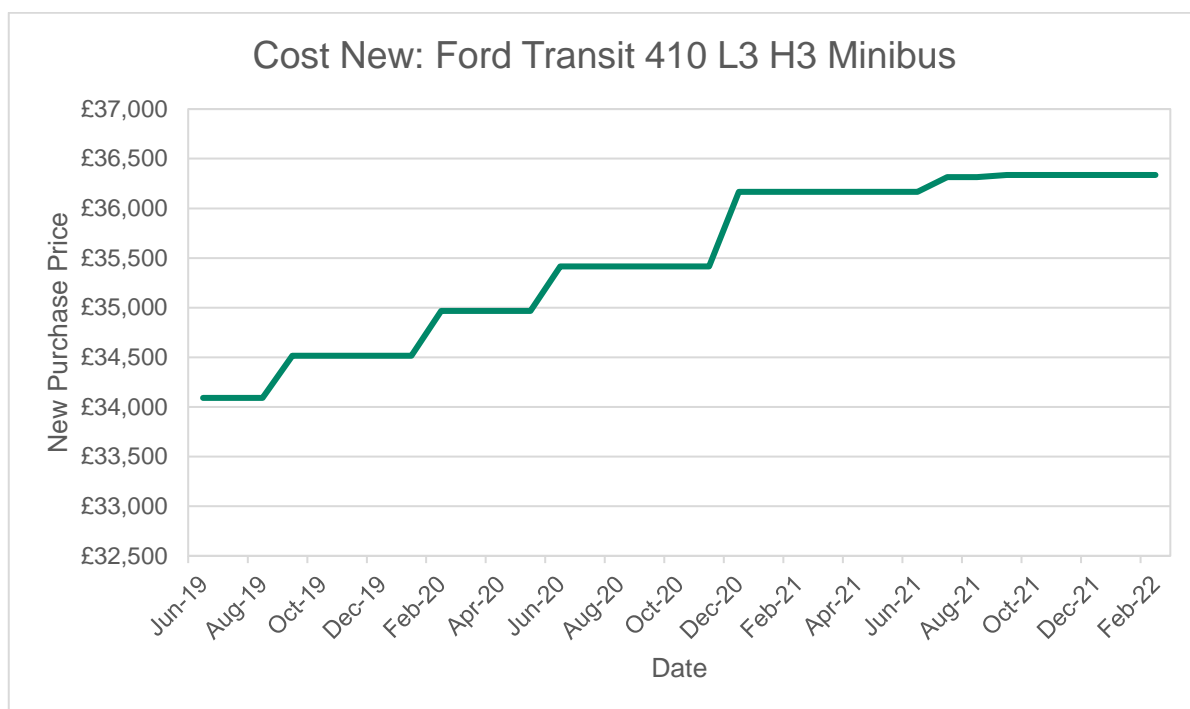
2019 Typical Price	2022 Typical Price
£34,000	£36,500

Source: CAP HPI data request 2022 – data provided on 15th February 2022.

3.61 The CAP HPI data allows for the trend of new minibus prices to be displayed (see **Figure 3-7**). This shows that since summer 2019, there has been a steady and continued increase in the purchase price of a new Ford Transit minibus. It does appear that the price has remained stable since summer 2021.

³⁶ Note these values were derived prior to the emerging global costs crisis, which may have also impacted retrofit costs.

Figure 3-7 New Minibus Purchase Price (retail condition, excluding VAT)



Source: CAP HPI data request 2022 – data provided on 15th February 2022.

Second-hand Prices – Minibus

3.62 Second-hand minibus prices have been obtained for available compliant and non-compliant vehicles from Auto Trader. This data is compared against market price data collected in 2019 and 2020 and is summarised in **Table 3-5 & Table 3-6**.

Table 3-5: Second Hand Compliant Minibus Cost Estimates

Model	9 – 12 Seats			13 – 15 Seats		
	2019 Price (Pre-COVID-19)	Autumn 2020 (Mid-COVID-19)	2022 Price	2019 Price (Pre-COVID-19)	Autumn 2020 (Mid-COVID-19)	2022 Price
Ford Transit	£12,000	£16,000	£21,000	£20,000	£16,000	£22,000
Mercedes-Benz Sprinter	£29,500	£20,500	n/a	n/a	n/a	£29,000
Average	£21,000	£18,500	n/a	n/a	n/a	n/a

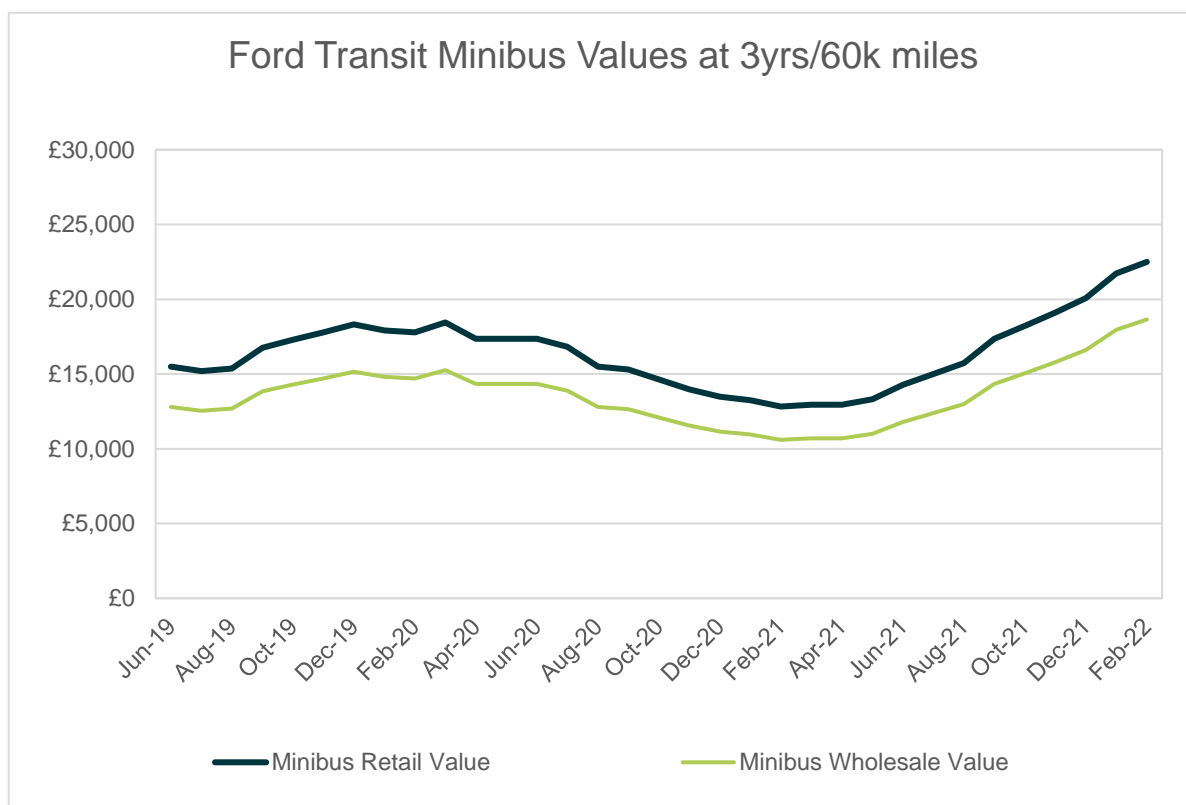
Table 3-6: Second Hand Non-Compliant Minibus Cost Estimates

Model	9 – 12 Seats			13 – 15 Seats		
	2019 Price (Pre-COVID-19)	Autumn 2020 (Mid-COVID-19)	2022 Price	2019 Price (Pre-COVID-19)	Autumn 2020 (Mid-COVID-19)	2022 Price
Ford Transit	£12,000	£9,000	£2,500 – 20,000	£20,000	£8,500	£5,000 – 9,500
Mercedes-Benz Sprinter	£29,500	£12,000	n/a	n/a	n/a	£7,500*
Average	£21,000	£10,000	n/a	n/a	n/a	n/a

* Only one vehicle available at time of search

3.63 There was a reduction in price of second-hand compliant minibuses during 2020 and this appears to have recovered with the price of both a smaller and larger minibus now equal to or exceeding pre-pandemic prices. The purchase price of second hand non-compliant vehicle has continued to fall and the average price of a non-compliant minibus is considerably lower now than in both 2019 and 2020.

3.64 From the CAP HPI data **Figure 3-8** shows the trend in the value of second-hand minibuses throughout the pandemic. An initial small rise in value in March 2020 was followed by a significant fall in value throughout the remainder of 2020. The value began to recover in early 2021 and, by the start of 2022, the value of a second-hand Ford minibus is exceeding 2019 pre-pandemic levels.

Figure 3-8 New Minibus Purchase Price (retail condition excluding VAT)

Source: CAP HPI data request 2022 – data provided on 15th February 2022.

Review of Vulnerability in responding to GM CAP

How have Coach Operators Coped?

- 3.65 COVID-19 has had a big impact on the coach and minibus sector. In particular, the coach operators that serve the tourism and events-based sectors have suffered the most due to the tourism industry taking a significant hit during the pandemic. The operators that provide regular services between destinations have also been impacted but have, at least, been able to operate at a reduced capacity. Whilst those that provide transport for students have most likely seen an increase in business through the introduction of the Home to School scheme, if these trends persist or are fundamentally different to the original assumptions made on the GM CAP, this could have a significant impact on the vulnerability of the coach and minibus sector response to the GM CAP.
- 3.66 This section reviews the original vulnerability assessment of the coach and minibus sector undertaken in 2019 and assesses how the COVID-19 pandemic has impacted coach and minibus vulnerability to the GM CAP.
- 3.67 Smaller operators are the most vulnerable due to the small capital they are likely to have in reserve. Larger operators have been able to diversify, with National Express able to raise over £1 billion from stock market offerings.
- 3.68 As shown in **Table 3-7** the coach industry will be impacted differently depending on the service type. Occasional services are likely to be the most heavily impacted due to their reliance on the tourism and events-based industries that have seen continued reductions in visitors and demand. We cannot yet predict when this service type might fully recover, restrictions are being scaled back and demand is increasing as

confidence rises, however the lasting impacts to the tourism and events-based industries are unclear.

- 3.69 Regular services are also likely to be highly impacted but not as significantly as occasional services. Regular services, such as National Express and Megabus, were able to recommence services once the first national lockdown was lifted and were able to operate at reduced capacity. Though during the January 2021 lockdown, both operators had, once again, suspended their services. The reduced capacity on their timetable and number of passengers on each coach will mean that, financially they are still vulnerable, but are more likely to have a faster recovery when restrictions are fully lifted. Recovery is dependent on customer confidence in their ability to provide a safe and hygienic travelling environment. There will also be a dependency on the speed of international recovery.
- 3.70 The special regular services are likely to have experienced the smallest impacts of COVID-19 and, in some cases, even benefit from it. The HTS scheme from central government has given extra funding for Local Authorities to provide extra vehicles to transport students to and from school. This extra funding has meant that more coaches have been used to fulfil this need. Unfortunately, there is no data available to identify how many GM coach operators this has helped.

Table 3-7: COVID-19 effect on Coach Industry by Service Type

Market Segment	Example	Pre COVID-19 – Responding to GM CAP	COVID-19 Impact	Impact on Responding to GM CAP (Post COVID-19)
Special regular services	Regular, scheduled service, not open to all passengers, such as: school services	<p>Medium impact</p> <p>Primarily owned by larger companies that have higher percentage or newer, GM CAP compliant fleet already.</p> <p>For those larger companies with a larger fleet size of non-compliant vehicles, this will result in a significant cost to upgrade.</p>	<p>Likely to have a medium impact.</p> <p>Will have seen a reduced service from reduction in school trips during lockdown.</p> <p>Some operators will have gained more work from the Home to School Scheme, but this would only impact 15% to 20% of the market.</p>	<p>High impact.</p> <p>Market price of new coaches has fallen by over £25,000.</p> <p>Good availability of second-hand compliant vehicles, lower and mid-range have decreased in price, higher end has seen a price increase. The impact from COVID-19 reduced demand.</p>
Regular services	Regular, scheduled service open to all passengers	<p>Medium impact</p> <p>Primarily owned by larger companies that have higher percentage of newer, GM CAP compliant fleet already.</p> <p>For those larger companies with a larger fleet size of non-compliant vehicles, this will result in a significant cost to upgrade</p>	<p>High impact likely.</p> <p>Operating at reduced capacity, both in the number of routes and the number of passengers on board.</p> <p>Susceptible to any possible national or regional lockdown which is likely to affect number of passengers on board.</p> <p>Likely to recover when COVID-19 is under control and numbers can recover to pre-COVID-19 levels.</p>	<p>High impact.</p> <p>Market price of new coaches has fallen by over £25,000.</p> <p>Good availability of second-hand compliant vehicles, lower and mid-range have decreased in price, higher end has seen a price increase. The impact from COVID-19 reduced demand.</p>
Occasional services	<p>Multi-day visit, or tour requested by a customer or offered by a carrier.</p> <p>Excursion or day trip requested by a customer or offered by a carrier.</p> <p>Local excursion or day trip offered to those already on a multi-day visit or tour.</p>	<p>High impact</p> <p>Likely to be smaller companies, older fleets. Significant cost to upgrade vehicles.</p>	<p>Very high impact likely.</p> <p>Relies heavily on tourism and events sector which have seen a massive reduction in tourist numbers and heavy restrictions</p> <p>Will remain at high risk until the tourism and events sectors recover.</p>	<p>Very high impact</p> <p>Price of new and second-hand compliant vehicles have reduced; however, the price of second-hand non-compliant vehicles have reduced further resulting in a larger capital required to upgrade. Significant COVID-19 impacts to demand and operations.</p>

- 3.71 It is possible that larger companies may keep their compliant vehicles for longer than normal, due to the financial losses incurred from COVID-19 and as many of their coaches will not have been used during the first national lockdown and are currently operating at a reduced service therefore vehicles will have lower mileage than normal. This could therefore reduce the availability of second-hand compliant vehicles on the market, leading to a potential supply gap.
- 3.72 Alternatively, if the financial losses are too severe, more coach operators may go into administration, resulting in more compliant (as well as non-compliant) vehicles entering the second-hand market. This will likely drive the price down, potentially making it more affordable to buy compliant vehicles. It is more likely that this could particularly impact smaller companies, who typically operate a higher proportion of non-compliant vehicles and could result in an increase in this type of vehicle for sale, which the larger companies will be less likely to want to buy.
- 3.73 As mentioned previously, in 2019 there were 269 non-GM based coaches serving GM, of which 259 are non-compliant. This figure represents 12% of the total non-compliant vehicles serving GM. Being non-GM these vehicles would not qualify for any funding for an upgrade to a compliant vehicle. The CAZ could discourage these coaches from operating in GM, or if continuing to operate as a non-compliant vehicle they will be liable for the charge, hindering the success of the GM CAP and having a continued detrimental effect on air quality.
- 3.74 A factor that will have an impact on the industry's ability to respond to the GM CAP is how the UK economy responds post COVID-19. Coach operators that are dependent on the tourism and events-based sectors are tied to how long it takes these sectors to fully reopen and recover and whether they can return to pre-pandemic levels.
- 3.75 It is likely that larger operators will survive due to their ability to raise capital to cover the losses as well as their ability to diversify and acquire contracts from small companies.
- 3.76 If smaller operators do go out of business, it is likely that there will be a larger number of vehicles on the second-hand market, and the data shows many smaller operators have non-compliant vehicles.
- 3.77 During consultation undertaken in 2020, many operators noted that the combined impact of the GM CAZ and COVID-19 could force them to close their business. Operators specified that the GM CAZ charge would be 'too significant' in their ability to be able to afford the charge given their current financial situation due to COVID-19 and upgrading to a compliant vehicle would be 'too expensive', especially after COVID-19.

Minibuses Vulnerability Review

- 3.78 Local authorities and education establishments (as long as schools remain open) are both likely to have low impacts. This is due to neither sectors' reliance on customers to operate.
- 3.79 Community transport services are predicted to have a medium impact. Although the industry does rely on customers to operate, they do not operate for a profit so therefore not reliant on demand, and their overheads are likely to be small. It is important to note that community minibuses are exempt from the CAZ so will not affect the overall success of GM CAP.

- 3.80 Local bus operator, using minibuses, are likely to have been highly impacted during the lockdowns due to the large reduction in demand as a result of the restrictions on the movement of people. However, the industry has received help from the government so operators are likely to survive and, as the demand continues to increase, the industry should be able to recover.
- 3.81 Coach operators, using minibuses, are likely to be the most affected by COVID-19 due to the lack of financial support from the government and the reliance on the tourism and events-based sectors. The recovery of this industry will depend on whether they get financial support and the rate at which demand increases and returns to pre-COVID-19 levels.
- 3.82 The leasing and rental industry is also likely to be highly impacted as they have experienced a significant reduction in demand for their services. As tourism continues to return to pre-pandemic levels, these sectors should also recover.
- 3.83 Those classified as being in 'other' are also likely to have felt a high impact. In particular, the smaller operators are unlikely to have the capital to survive the impact of COVID-19 suppressing demand in 2020 and into 2021.

Table 3-8: COVID-19 effect on Minibus Industry by Service Type

Market Segment	Typical Example	Pre COVID-19 – Responding to GM CAP	COVID-19 Impact	Impact on Responding to GM CAP (Post COVID-19)
Local Authorities (13%)	Public sector owned and operated vehicles.	Low impact Public sector owned	Low impact likely. Do not rely on customers to operate so are likely to operate as normal. Those minibuses that provide a service to the community are likely to operate at a reduced service.	Medium impact Price of new minibus has increased by 7% due to vehicle supply issues. There has been an increase in price of second-hand compliant vehicles, however no increase in second-hand non-compliant so current vehicle value reduced.
Community Transport (9%)	Vehicles that are operated for community groups and charities. In this group there can be cross over between charities and local authorities as operators.	Medium impact Significant cost to upgrade if existing vehicles are non-compliant	Medium impact likely. Rely on customers in order to operate and are likely to have reduced demand due the customers they serve being older and at a greater risk of COVID-19 effects, but they are able to operate at reduced capacity.	High impact With the increase in price of compliant vehicles the impact will increase to a high level
Education Establishments (18%)	Institute that owns and operates their own minibus fleet, such as schools, specialist schools, colleges and universities.	Medium impact Cost to upgrade if existing vehicles are non-compliant	Low impact likely. Do not rely on customers to operate and most likely own their own vehicles. Most likely return to pre-COVID activity when safe to do so.	Medium impact Price of new minibus has increased by 7% due to vehicle supply issues. There has been an increase in price of second-hand compliant vehicles, however no increase in

Market Segment	Typical Example	Pre COVID-19 – Responding to GM CAP	COVID-19 Impact	Impact on Responding to GM CAP (Post COVID-19)
		Likely to own low volume of vehicles.		second-hand non-compliant so current vehicle value reduced.
Local Bus Operators (2%)	A local bus operator that offers minibus services in parallel to bus services.	Medium impact Significant cost to upgrade if existing vehicles are non-compliant.	High impact likely. Rely on customers in order to operate and have seen a large reduction in demand and revenue. Have received financial help from the government so are likely to survive.	High impact With the increase in price of compliant vehicles combined with the impact of reduced income due to COVID-19.
Coach Operators (2%)	Coach operators that offer minibus services in parallel to coach services (both commercial and private).	High impact Significant cost to upgrade if existing vehicles are non-compliant.	Very high impact likely. Rely on customers in order to operate and have seen a large reduction in demand. Have not received financial help from the government so face a precarious future.	Very High impact Business already highly impacted by COVID-19, on top of increased prices to upgrade to compliant vehicles
Leasing / Rental companies (10%)	Rental companies that offer a range of vehicles for leasing, which includes a range of minibuses	High impact Significant cost to upgrade if existing vehicles are non-compliant.	High impact likely. Have seen a large reduction in demand. Benefit from government schemes such as the Furlough scheme. Members of BVRLA state they are confident of being able to recover once COVID-19 is over.	Very High impact Business already highly impacted by COVID-19, on top of increased prices to upgrade to compliant vehicles
Other (36%)	Minibuses that are owned by individuals, such as sole traders or individuals for private use.	High impact Significant cost to upgrade if existing vehicles are non-compliant, sole traders or private use, non-commercial.	High impact likely. Sole traders rely on customers to operate. May not have capital to survive reduced demand.	Very High impact Business already highly impacted by COVID-19, on top of increased prices to upgrade to compliant vehicles – may not be business, could be for personal use so may not be eligible.
Taxi and Private Hire Vehicles (10%)	Not assessed within this Evidence Note			

4. Conclusion

Summary

- 4.1 This note has sought to address the following key considerations:
- A review of the current position of the coach and minibus fleet;
 - Report on the impact of COVID-19 in terms of changes to travel behaviour within GM, including changing transport trends and economic trends as a result of the COVID-19 pandemic;
 - Specific COVID-19 pandemic impacts on this vehicle type (Coaches and Minibuses); and
 - Comment on the extent to which those changes may be considered material to the success of the GM CAP given the vulnerability of the vehicle type (Coaches and Minibuses) to meet GM CAP compliance.
- 4.2 The most recent national datasets cover bus, coach and minibus combined. They show that this sector accounts for less than 2% of all vehicles and that is consistent locally, regionally and nationally.
- 4.3 Based on 2019 data, there are 1,700 coaches serving GM with 60% of those being compliant. There are 3,100 minibuses serving GM with 15% of those being compliant.
- 4.4 We do not have recent observed patronage data for the bus, coach and minibus sectors individually but public transport trip levels generally are between 60% and 75% of pre-pandemic / typical levels with bus performing more strongly than rail / Metrolink.
- 4.5 Coach operators can be categorised as offering three types of services:
- Special regular services (e.g. school travel provision);
 - Regular services; and
 - Occasional services.
- 4.6 Other than school services, which are largely back to normal, the ongoing impact on the coach market is dependent on how soon tourism and general travel returns to 'normal' levels. At the present time, that remains uncertain though there has been a general increase in leisure travel in recent months.
- 4.7 The impact of the pandemic has generally reduced prices for both new and second-hand coaches due to the reduced demand in the sector.
- 4.8 Conversely the price of new and second-hand minibuses has increased other than for second-hand non-compliant vehicles.
- 4.9 There is a wider range of organisations / businesses that use minibuses. Local authority, community transport and education related are all likely to be relatively unaffected as they are less demand dependant. But local bus and coach operators and leasing companies will be subject to the same travel demand uncertainties associated with the bus and coach sector.

Appendix A – List of Documents

This Appendix provides a list of documents and data sources used to inform this report.

Document Title	Date	Description	Relevance to GM CAP
Chapter 1			
Mayor of Greater Manchester writes to Government reiterating call for non-charging Clean Air Zone	May 2022	Announcement, provide background on current status of GM CAP https://www.greatermanchester-ca.gov.uk/news/mayor-of-greater-manchester-writes-to-government-reiterating-city-region-s-call-for-non-charging-clean-air-plan/	Current Status of GM CAP
GM CAP Technical Documents (various)	various	All available at Technical Documents Clean Air Greater Manchester (cleanairgm.com) https://cleanairgm.com/technical-documents/	Published Technical Reports for GM CAP
Chapter 2			
Definition of Vehicle Categories	Feb 2022	Definition of Vehicle Categories, Vehicle Certification Agency transportpolicy.net/standard/eu-vehicle-definitions/	Definition of Vehicle Categories
UK Coach Fleet Database - Transport Resources International Limited (2019)	2019	Provides information about coach makes and registrations	Coach makes and registrations
DfT (2018) Analysis of DVLA registered vehicle database records (version Q2 2016)	2018	Provides information about minibus registrations in GM	GM Minibus registrations
DfT, Statistical data set	Jan 2022	Provided the proportion of vehicle types registered by area	Vehicle types registered by area
T4 Appendix C, Vehicle Population Estimates	2019	Provided numbers of coaches/minibus serving GM by regions and compliances	Published Technical Reports for GM CAP
Chapter 3			
Online article from the Society of Motor Manufacturers and Traders (SMMT) -	Feb 2022	Stating falling demand and registrations of UK bus and coach: https://www.smmt.co.uk/2022/02/uk-bus-and-coach-registrations-fall-to-lowest-recorded-level-as-pandemic-dents-ridership/	Understand impacts of COVID on coach/minibus sector
Confederation of Passenger Transport (CPT) aid-to-trade-document	Various	Providing coach occupancy information https://www.cpt-uk.org/media/ijn13w4f/aid-to-trade-document.pdf	Research

Online article from route-one.net	Aug 2021	Covid impact on coach and minibus sector https://www.route-one.net/news/difficult-road-ahead-for-incoming-coach-tourism-recovery/	Research
“New survey reveals shocking shortage of bus drivers” - Online article from Unite The Union	Nov 2021	This revealed the bus driver shortages https://www.unitetheunion.org/news-events/news/2021/november/new-survey-reveals-shocking-shortage-of-bus-drivers/	Research
“National Express takes next step into UK leisure travel market” - National express	Aug 2021	Impact of COVID-19 on Regular Coach Services: https://www.nationalexpressgroup.com/media/news-releases/2021/national-express-takes-next-step-into-uk-leisure-travel-market/	Research
“National Express shares fall as firm warns Covid-19 recovery will be slow” – The Guardian	Aug 2020	How COVID-19 Affected National Express: https://www.theguardian.com/business/2020/aug/13/national-express-shares-fall-warns-covid-19-recovery-slow	Research
“Half Year Results” – National Express	Jul 2021	How COVID-19 Affected National Express: https://www.nationalexpressgroup.com/media/j2tdj5xc/national-express-hy-2021-presentation-post-final-tweak-11-aug-2021.pdf	Research
“UK coach sector warns of looming disaster without government support” - FT	Sept 2020	The Home to School (HTS) scheme that was introduced by the Government in August 2020 helped some coach operators to gain extra revenue (to help cover lost revenue from suppressed passenger demand) as a result of the COVID-19 restrictions: https://www.ft.com/content/424808f0-c5d8-4b64-a127-c2e802b67d17	Research
Public Service Vehicles Accessibility Regulations 2000 and their application to home-to-school and rail replacement coach services	Dec 2021	The Government announced the intention to extend existing Vehicle Accessibility Regulations 2000 exemptions for HTS services: https://www.gov.uk/government/publications/public-service-vehicles-accessibility-regulations-2000-and-their-application-to-home-to-school-and-rail-replacement-coach-services	Research
Demand for trains plummets after timetables were slashed: Rail travel is 55% of pre-pandemic levels after Omicron wave saw firms axe services to cope with staff shortages	Jan 2022	Rail demand in January 2022 was at 55% of pre-pandemic levels, as a result of timetable reductions due to staff shortages following the Omicron wave, having previously returned to 70% of pre-pandemic demand: https://www.dailymail.co.uk/news/article-10394121/Demand-trains-plummets-timetables-slashed-Rail-travel-55-pre-pandemic-levels.html	Research
COVID-19: Positive change for	Jun 2020	Spencer Graham Coaches of Silloth invested in three PSVAR vehicles and have provided rail replacement	Research

the coach industry?		services, which has provided the company enough revenue to survive during COVID-19 https://www.route-one.net/features/covid-19-positive-change-for-the-coach-industry/	
Memorandum submitted by the Confederation of Passenger Transport	Oct 2000	The tourism industry forms an important part of the coach sector market: https://publications.parliament.uk/pa/cm200001/cmselect/cmtrdind/268/01101p11.htm	Research
£14bn and 10,000s of jobs at risk if coach travel sector collapses warns CPT	Sep 2020	Pre-pandemic, in 2019, coach travel catered for over 23 million tourism visits a year and contributed £14bn to the UK economy https://www.cpt-uk.org/news/14bn-and-10-000s-of-jobs-at-risk-if-coach-travel-sector-collapses-warns-cpt/	Research
Proposition of support that enables the coach to tourism industry to trade out of the Covid-19 crisis		Around 80% of the coach industry's income is derived from tourism related activities https://www.cpt-uk.org/media/ijnl3w4f/aid-to-trade-document.pdf	Research
Overseas travel and tourism: January 2019 provisional results	Jan 2019	The total amount spent by UK residents during visits abroad was higher than the total brought into the UK by foreign residents visiting https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/bulletins/overseastravelandtourism/january2019provisionalresults	Research
Overseas travel and tourism, UK, provisional: July to September 2021	Feb 2022	Overseas residents spent a total of £1.2 billion on their visits to the UK during this period (which covers the typical summer peak travel period); this is a decrease of 87% on the same quarter in 2019 https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/bulletins/overseastravelandtourism/julytoseptember2021	Research
2022 tourism forecast	Nov 2021	VisitBritain released its 2022 tourism forecast https://www.visitbritain.org/2022-tourism-forecast	Research
National Express reports £445m loss for 2020 after 80% drop in passengers	Mar 2021	National Express reported a £445m loss in 2020 due to the COVID-19 pandemic. However, they are optimistic as, throughout 2021, they have seen a rapid recovery in demand when travel restrictions have been lifted: https://www.theguardian.com/business/2021/mar/18/national-express-reports-445m-loss-for-2020-after-80-drop-in-passengers	Research
National Express targets smaller rivals struggling in pandemic	Mar 2021	Have Coach Operators Coped pandemic. https://www.ft.com/content/02a27f99-8955-4220-95c4-3e15e9844ad8	Research
'Difficult road ahead' for incoming coach tourism recovery	Aug 2021	Andersons Travel had returned to around 60% of pre-pandemic business by the end of 2021. A degree of this has been due to diversification, for example home-to-school is now a predominant area of work https://www.route-one.net/news/difficult-road-ahead-for-incoming-coach-tourism-recovery	Research
Minibus services relaunched across Greater	May 2020	The Ring and Ride service provided by TfGM was completely stopped for just over two months when the first national lockdown occurred but has since restarted	Research

Manchester to help vulnerable residents		https://www.wigantoday.net/news/uk-news/minibus-services-relaunched-across-greater-manchester-help-vulnerable-residents-2857659	
Aug 2020 Covid19 Research Presentation - UPDATE	Sep 2020	British Vehicle Rental and Leasing Association (BVRLA) states that 94% of their members expect reduced revenues compared to their forecasts pre-COVID-19. https://www.bvrla.co.uk/resource/aug-2020-covid19-research-presentation.html	Research
'They're leaving in droves': UK faces bus driver shortage as HGV industry offers better pay	Oct 2021	The Unite union stated that there are more than 4,000 vacancies for bus and coach drivers across the UK and some companies have been forced to cancel services because drivers are not available https://news.sky.com/story/theyre-leaving-in-droves-uk-faces-bus-driver-shortage-as-hgv-industry-offers-better-pay-12442971	Research
Bus services in England face axe as end to emergency Covid funding looms	Jan 2022	Passenger numbers on buses have decreased sharply from 80% of pre-pandemic levels to less than 60% since the rise of the Omicron variant and the re-introduction of work-from-home advice in December 2021, leaving firms reliant on recovery grants to run services https://www.theguardian.com/business/2022/jan/11/bus-services-in-england-face-axe-as-end-to-emergency-covid-funding-looms	Research
Third year of decline for UK bus & coach market	Feb 2020	The UK new bus and coach market was already in decline, with the market falling by 18.8% in 2019, with annual registrations falling for a third consecutive year to 5,874 units SMMT suggest that the reasons for this continued decline were due to a combination of weak business confidence, declining passenger numbers and some confusion over clean air zones https://www.smmt.co.uk/2020/02/third-year-of-decline-for-uk-bus-coach-market/	Research
UK bus and coach registrations fall to lowest recorded level as pandemic dents ridership	Feb 2022	Demand for new buses and coaches dropped further in 2021 and was the weakest year since records began in 1996, with a total of 3,467 new registered buses. https://www.smmt.co.uk/2022/02/uk-bus-and-coach-registrations-fall-to-lowest-recorded-level-as-pandemic-dents-ridership/	Research
Coaches For Sale	Feb 2022	Coach sale info: https://classifieds.busandcoachbuyer.com/classifieds/coaches/	Research
CAP HPI data	Feb 2022	New Minibus Purchase Price <i>(Raw Data not published).</i> Data request 2022 – data provided on 15th February 2022.	Research
Leger Holidays	Feb 2022	Evidence of larger operators with bigger fleets tend to have a higher percentage of compliant fleets https://www.leger.co.uk/content/business-update	Research

Chapter 4			
		(No additional sources in Chapter 4)	
Appendix A			
		(No additional sources in Appendix A)	
Appendix B			
Coronavirus (COVID-19) UK Government Dashboard	Oct 2020	https://coronavirus.data.gov.uk/	Background of Covid Timeline
“Greater Manchester’s COVID-19 Management Plan: how we control outbreaks”	2022	https://greatermanchester-ca.gov.uk/coronavirus/COVID-19-management-plan/	Background of Covid Timeline
“Prime Minister announces new local COVID Alert Levels”	Oct 2020	https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels	Background of Covid Timeline
TfGM’s C2 Database	various	Traffic flow data was extracted and analysed from TfGM’s C2 Database https://tfgmc2.drakewell.com/multinodemap.asp	Information on local traffic impacts
“Budget 2021: Fuel duty rise axed as petrol prices hit record highs”	Oct 2021	Fuel Prices Increase: https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html	Information on Economic Related Impacts
“GDP monthly estimate, UK : December 2021”	Dec 2021	GDP information https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021	Information on Economic Related Impacts
“Average weekly earnings in Great Britain: February 2022”	Dec 2021	Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022	Information on Economic Related Impacts
“UK economy latest”	Dec 2022	Information on Goods import and exports https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomylatest/2021-01-25#output	Information on Economic Related Impacts
“Cities Outlook 2022”	Jan 2022	Change in pub and restaurant sales in City Centres and Suburbs. Weekday footfall in Birmingham, Manchester and London https://www.centreforcities.org/wp-content/uploads/2022/01/Cities-Outlook-2022-2.pdf	Information on Economic Related Impacts

Appendix B – Review of COVID Impacts

Overview

- B.1 Travel behaviour and the economy have been impacted by the COVID-19 pandemic and have resulted in changes in the way that people travel and the way businesses operate. In this chapter we will assess some of the key data findings found throughout the period to better understand the levels of impact on transport and travel generally.
- B.2 Chapter 3 focuses on the impacts of COVID-19 on the coach and minibus sectors.

COVID Timeline

- B.3 In January 2020, COVID-19 first appeared in the UK. By 30th November 2020, there were an estimated total of 1.6 million people testing positive to the virus in the UK with 58,24537 cases resulting in deaths.³⁸
- B.4 As stated within the GMCA COVID-19 Management Plan Executive Summary, GM had more than 16,000 confirmed cases and nearly 2,800 people died during the first four months of the COVID-19 pandemic.³⁹
- B.5 In Summer 2020, North West England was one of the worst affected areas by the pandemic with GM placed under additional restrictions on 31st July 2020. Throughout 2020, GM continued to experience a disproportionate impact to the rest of the UK from these additional restrictions, such as the three-tier system for lockdowns across England. This three-tiered system was first announced by the Government in October 2020 to '*simplify and standardise local rules*'.⁴⁰
- B.6 On 5th November 2020, the Government imposed a second national lockdown with restrictions on continued business activity in England. These restrictions were in place between 5th November and 2nd December 2020, followed by a return to 3 Tier system restrictions.
- B.7 On 19th December 2020 the Government introduced an additional 4th Tier, with lockdown measures beginning in London and the South East, after having identified the Alpha (Kent) variant, coming into effect on 21st December 2020 until a third nationwide lockdown was re-introduced on 6th January 2021.
- B.8 March 2021 saw Step 1 of the Government's roadmap being introduced, with schools reopening and outdoor gatherings being allowed with the proviso of staying local. April 2021 saw Step 2 of the roadmap allowing limited indoor contact, businesses such as hairdressers to reopen and outdoor hospitality. Step 3 came into effect in May 2021, allowing indoor meetings limited to 6 people and 10,000 people for large sport stadiums. Step 4, on 19th July 2021, saw the remaining venues such as nightclubs reopen, and the removal of most other restrictions.

³⁷ UK deaths is based on deaths within 28 days of a positive test and does not include excessive deaths.

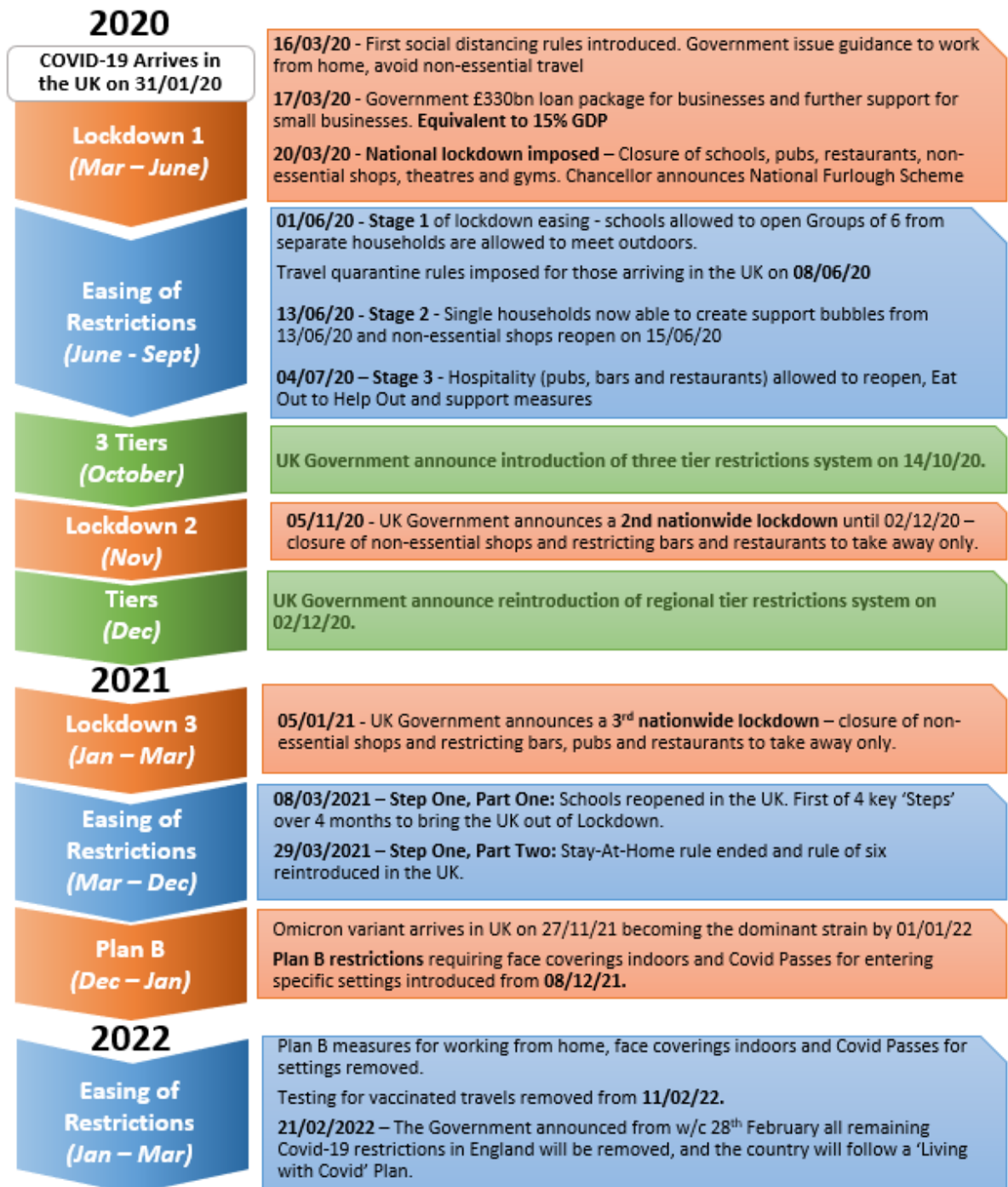
³⁸ Coronavirus (COVID-19) UK Government Dashboard <https://coronavirus.data.gov.uk/> (accessed 01/10/20)

³⁹ COVID-19 Management Plan – Executive Summary (GMCA) <https://greatermanchester-ca.gov.uk/coronavirus/COVID-19-management-plan/>

⁴⁰ Prime Minister announces new local Covid Alert Levels - <https://www.gov.uk/government/news/prime-minister-announces-new-local-covid-alert-levels>

- B.9 With the discovery of the Omicron variant, Plan B measures (face coverings indoors and use of Covid Passes at specific settings such as nightclubs), which also recommended working from home where possible, were implemented from 8th December 2021 to 27th January 2022.
- B.10 A summary of the key COVID-19 events and Government responses has been captured in **Figure B-1**.

Figure B-1 COVID-19 Timeline January 2020 to March 2022



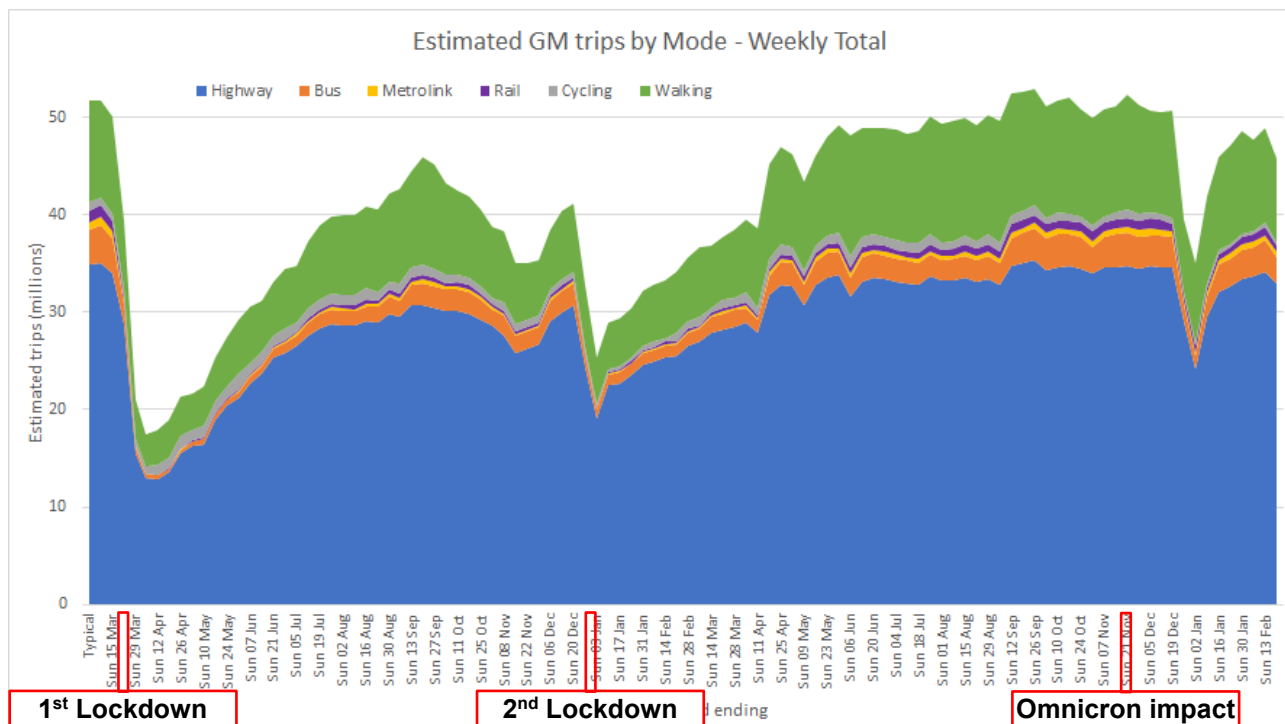
- B.11 The COVID-19 pandemic has had a transformative global impact to health, businesses, the economy, and way we live and interact with one another.

- B.12 At the time of the production of this note in March 2022, the UK appears to be exiting the pandemic. Case numbers are stabilising, death and in-patient numbers remain low, reflecting the positive impact of a successful vaccine programme rollout.
- B.13 However, emerging evidence gathered over the course of 2020 and 2021 has shown that there have been substantial changes to the economy, travel patterns and our behaviours. These changes have been driven by Government policy in the short term, however some of the behaviours adopted during Government lockdowns may continue as restrictions ease. In addition to this, economic impacts following the recent easing of restrictions have resulted in impacts which can be seen locally, nationally and globally within the economy.

COVID-19 Impacts on Travel Behaviour

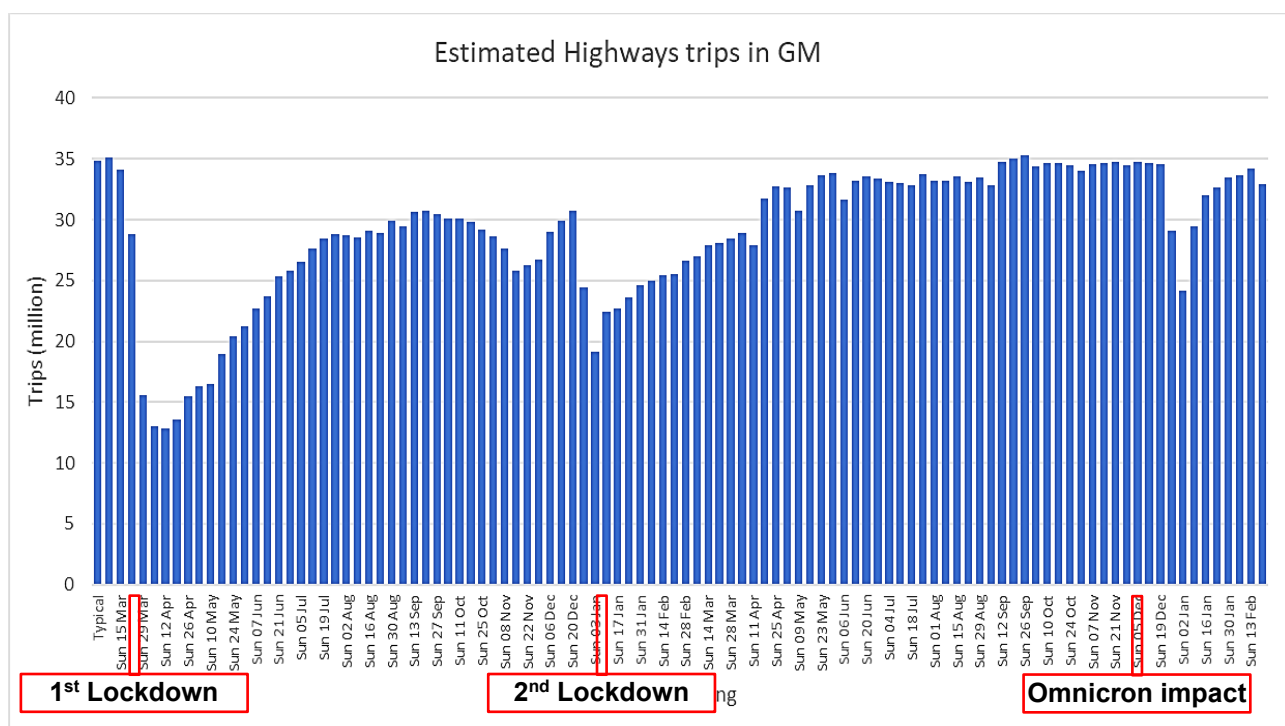
- B.14 Detailed analysis has been undertaken on the impacts of COVID-19 on travel demand within GM to compare 'pre-pandemic' and 'during pandemic' travel levels within GM.
- B.15 As shown in **Figure B-1**, there are a number of Government interventions which have had an impact on traffic levels (for all modes of transport). These include:
- Government guidance issued on 16th March 2020 to work from home 'where possible';
 - Closure of all UK schools to children, apart from those who have key worker guardians on 20th March 2020;
 - Closure of the hospitality and leisure sector on the 20th March 2020 including pubs, bars, restaurants, gyms, theatres etc.;
 - Re-opening of schools to all children in September 2020 alongside the UK Government encouraging workers to return to the office;
 - Implementation and extension of the Government Tiered restrictions;
 - Return to lockdown conditions on 5th November 2020, 2nd December 2020 and 6th January 2021; and
 - Hotel quarantine for travelers from high-risk countries.
- B.16 Since the beginning of the pandemic, travel patterns across the UK have significantly changed, driven by changing Government guidelines and the perception of transmission risks on certain forms of transport. An overview of the changing trends of travel behaviour by mode in Greater Manchester is provided in **Figure B-2 to Figure B-6**; the data has been provided by TfGM. Three key dates have been flagged in each figure: the first and second national lockdowns plus the emergence of the Omicron variant.

Figure B-2 Overview of travel behaviour – All Modes



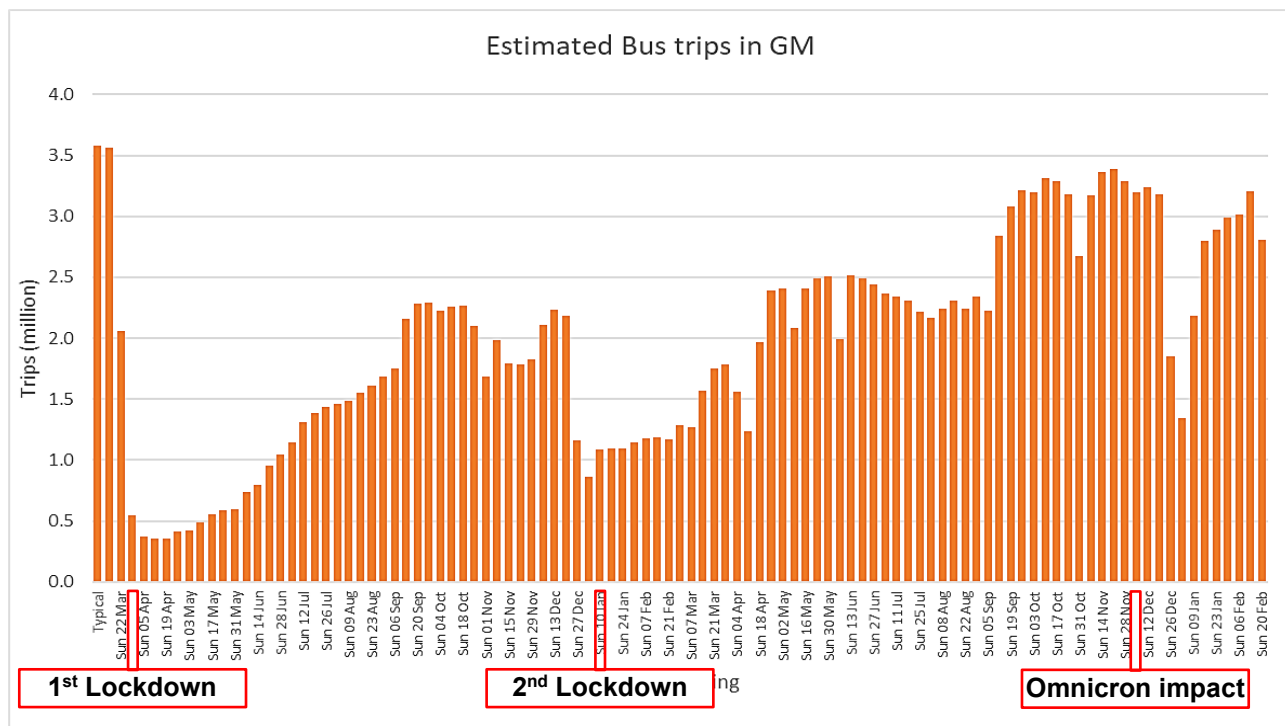
Source: TfGM

Figure B-3 Overview of travel behaviour – Highway



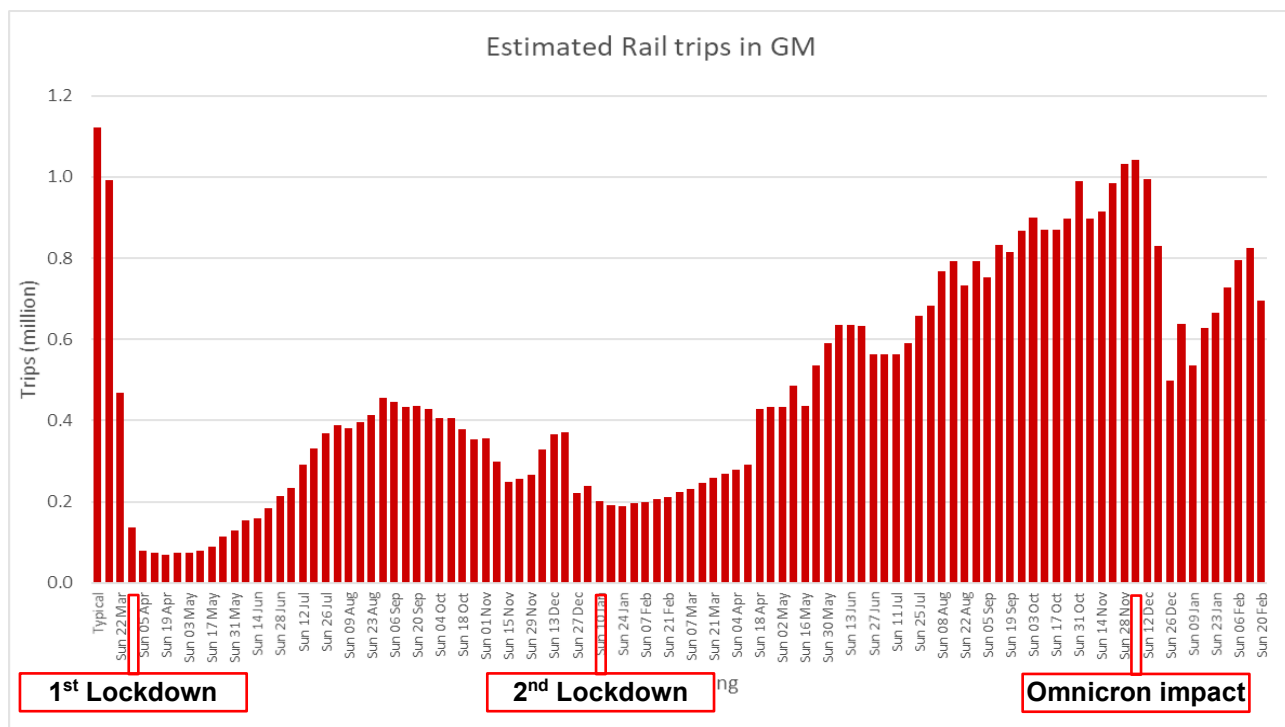
Source: TfGM

Figure B-4 Overview of travel behaviour – Bus



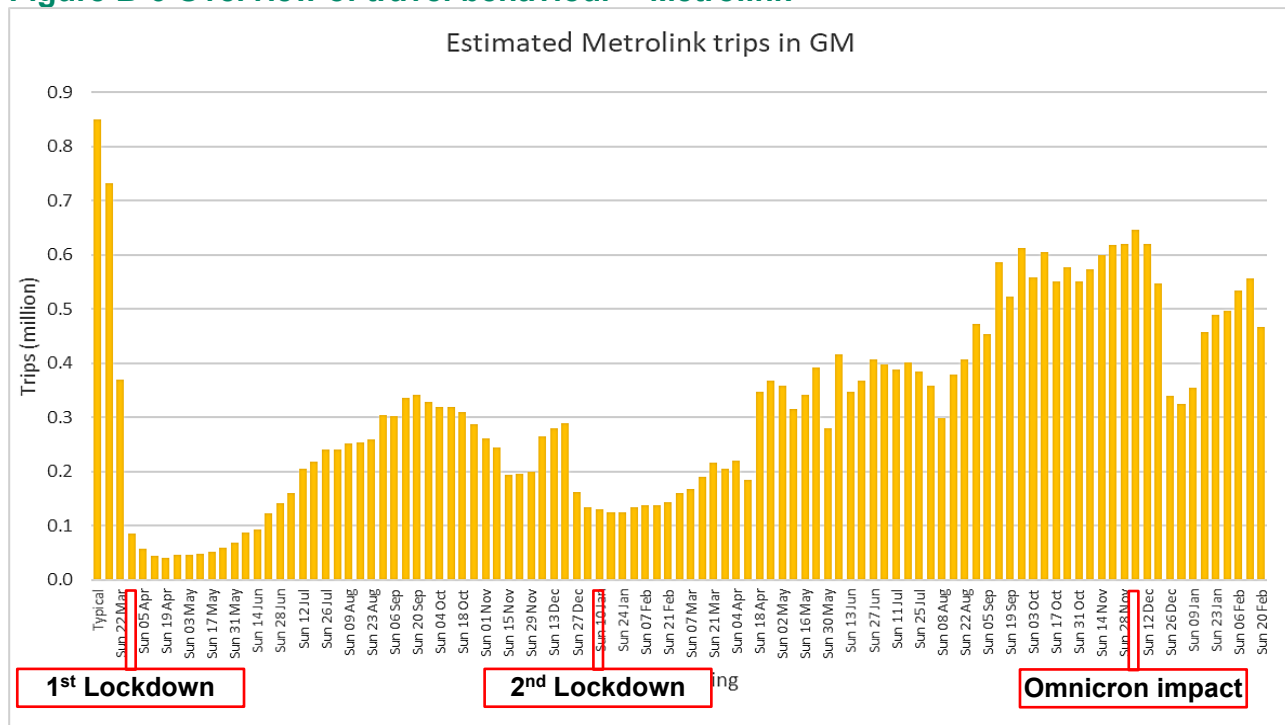
Source: TfGM

Figure B-5 Overview of travel behaviour – Rail



Source: TfGM

Figure B-6 Overview of travel behaviour – Metrolink



Source: TfGM

- B.17 These figures illustrate that the impact of the pandemic has been pronounced and the extent to which pre-pandemic travel volumes have returned varies by mode. In summary, at the aggregate level across GM:
- Highway trips are close to pre-pandemic levels (approximately 95% of 'typical'); and
 - Public transport trip levels are between 60% and 75% of pre-pandemic / typical levels with bus performing more strongly than rail / Metrolink.

Local Traffic Impacts

- B.18 Further analysis was undertaken regarding traffic flows on the local highway network, in order to understand the changing highway demand levels at various points through the pandemic. This has provided an insight into how the COVID-19 related travel guidance and changing behaviours because of the pandemic have impacted travel across GM.
- B.19 This analysis has considered changing travel levels at a range of locations across Greater Manchester, to understand how traffic flows have changed on the following:
- Roads near to the Regional Centre;
 - Key radial routes;
 - Roads adjacent to local centres within GM; and
 - Roads accessing centres of employment.
- B.20 The analysis has considered several points in time, comparing:
- September 2019 (before the pandemic);

- September 2020 (during the pandemic);
- November 2021 (during pandemic – pre Omicron); and
- January 2022 (most recent, though impacted by Omicron variant).

B.21 Traffic flow data was extracted and analysed from TfGM's C2 Database⁴¹. These have been reviewed and presented for the 2-way hourly link volumes, by hour, at the following locations:

- Manchester Rd (A56) / 15m South of Ashlor St, Bury (ATC);
- Princess Rd (A5103) / 100m North of Bonsall St, Hulme, Manchester (ATC);
- Washway Rd (A56) / 40m North of Hunston Rd, Sale, Trafford (ATC);
- Bury New Rd (A56) / 90m North of Kingswood Rd, Prestwich, Bury (ATC); and
- Centenary Way (A576) / 160m North of Guinness Rd, Trafford Park, Trafford (ATC)

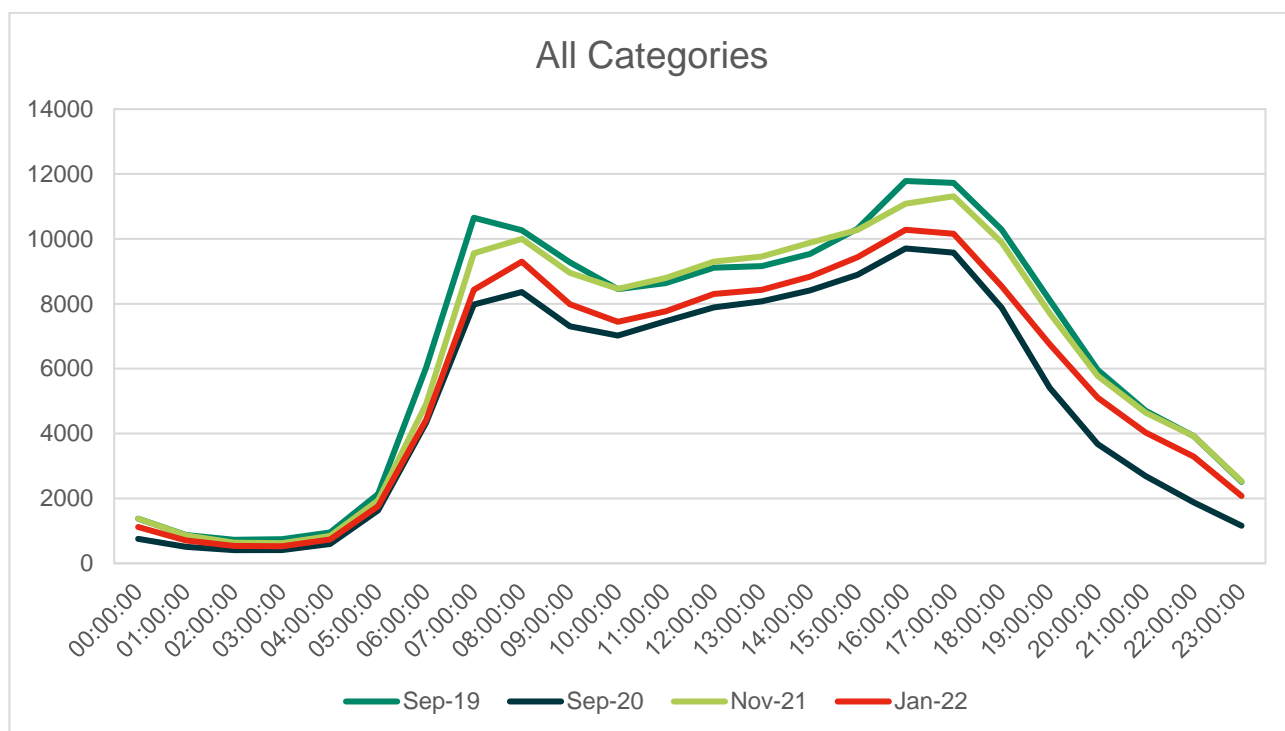
B.22 Using these specific locations around Greater Manchester the traffic behaviours at each location type can be assessed.

General Traffic Conditions

B.23 Averaging the sites identified above (see **Figure B-7**) suggests there has been a change in travel behaviour throughout the pandemic, noting the following key observations:

- The AM and PM peak periods have remained, although there is a dampening down effect on the peaks, with less variation between peak flows and interpeak flows, as the interpeak has continued to perform strongly.
- During late 2021, highway demand was almost back at pre-pandemic levels, there was then a noticeable drop again in demand as a result of the Omicron variant in December 2021.
- There has been some recovery during the peak periods, though they have not yet returned to pre pandemic levels.
- It is also noted that the earlier part of the AM peak is less strong than pre pandemic levels, with the AM peak now occurring 08:00 to 09:00, rather than 07:00 to 08:00 based on the sample of data sites.
- It also appears that the evening traffic (after 19:00) in 2022 is recovering at a slightly faster rate than the daytime traffic flows. This returned to pre-pandemic levels in November 2021 however, there has been a slight drop again in 2022, although it has been less impacted than other times of day. During the 2020 restrictions, the evening economy was significantly restricted by the COVID-19 restrictions in place at the time.

⁴¹ <https://tfgmc2.drakewell.com/multinodemap.asp>

Figure B-7 Change in traffic flow levels by time of day (all areas)

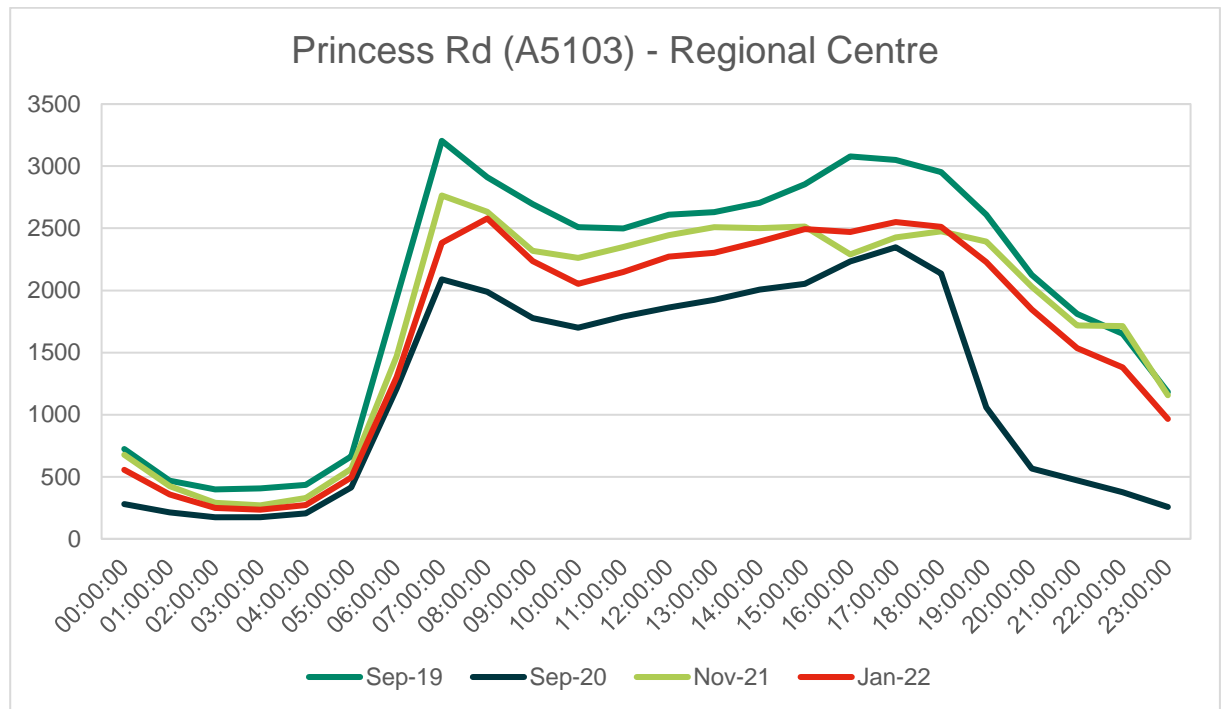
Source: TFGM C2 Database

Roads adjacent to the Regional Centre

B.24 Traffic flows adjacent to the Regional Centre have been significantly impacted throughout the pandemic (see **Figure B-8**). The following key trends have been identified:

- From the data assessed, the pandemic (and associated restrictions) appears to have had the greatest impact on regional centre flows, with the largest decrease in 2020 and the slowest recovery;
- The recovery of traffic flows in the peaks is still subdued, though traffic flows during the Omicron variant have been higher than in Autumn 2020, unlike what is seen at local centres;
- In 2020, COVID-19 restrictions had a considerable impact on demand for travel relating to the Regional Centre, with heavy restrictions placed on sectors such as leisure, tourism, and the night time economy. By November 2021, the easing of COVID restrictions resulted in a return of travel demand to the Regional Centre, showing considerable recovery at particular times of day, reaching close to 2019 levels. The 2022 travel demand to Mar-22 also showed a strong return of traffic during the evening periods, though the Omicron variant is likely to be keeping these slightly below pre-pandemic levels at present.
- The early part of the AM peak is now much weaker than prior to the pandemic, and the PM peak is less pronounced. In November 2021, traffic flows were slightly reduced from pre pandemic levels, with the PM peak most strongly impacted. In January 2022, the PM peak appears to be starting to recover, with a slightly later AM peak.

Figure B-8 Change in traffic flow levels by time of day (Regional Centre)

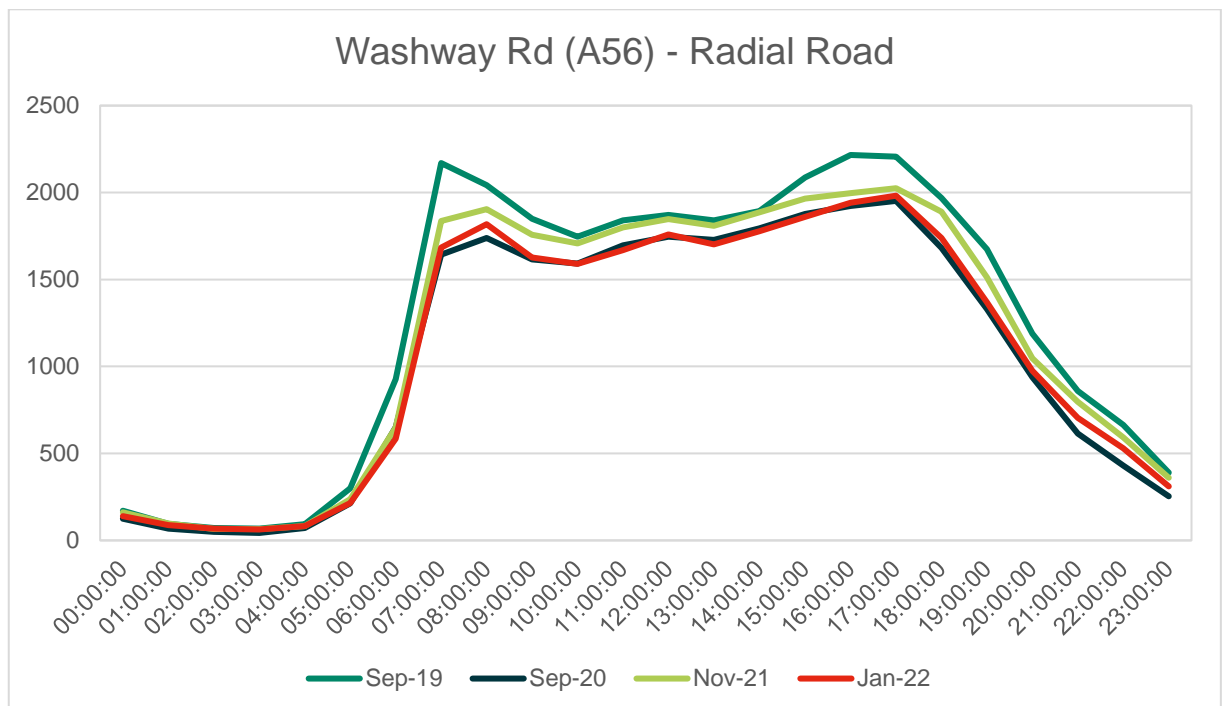


Source: TfGM C2 Database – Location N of Bonsall St, Hulme

Radial Roads

B.25 On Washway Road in Sale (see **Figure B-9**), its proximity close to the M60, and as a key radial route, has resulted in a high level of traffic demand at various points throughout the pandemic. The site is also close to the Local Centre of Sale. Demand has remained strong at the various points assessed although, as with most other locations, the peak periods are showing slightly lower demand in 2022.

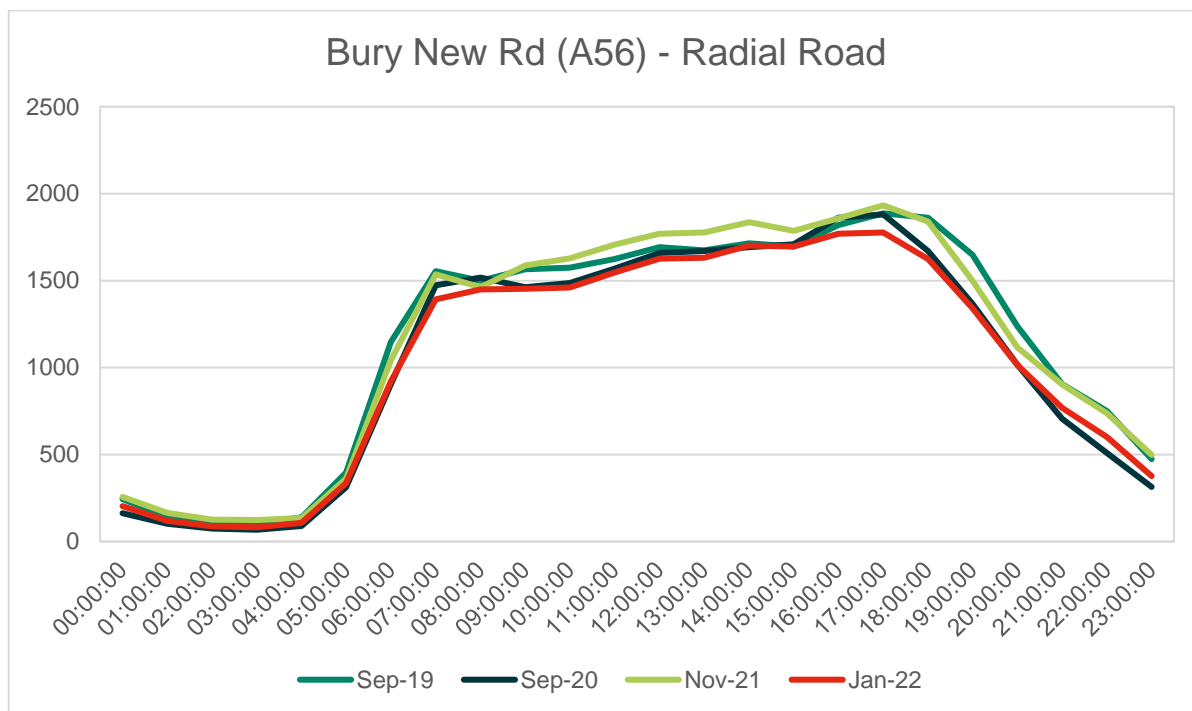
Figure B-9 Change in traffic flow levels by time of day (Radial Roads Outside M60)



Source: TfGM C2 Database – Location adjacent to Sale Local Centre

B.26 Another key radial route north of the Regional Centre is Bury New Road (see **Figure B-10**). This site is also a key radial, though also serves local centres, such as at Prestwich. This location has shown a strong recovery of travel behaviour with travel at certain times of day exceeding pre-pandemic levels, especially during the interpeak, both in autumn 2020, autumn 2021 and currently in 2022. The evening period has, however, shown a slower recovery.

Figure B-10 Change in traffic flow levels by time of day (Radial Roads Inside M60)



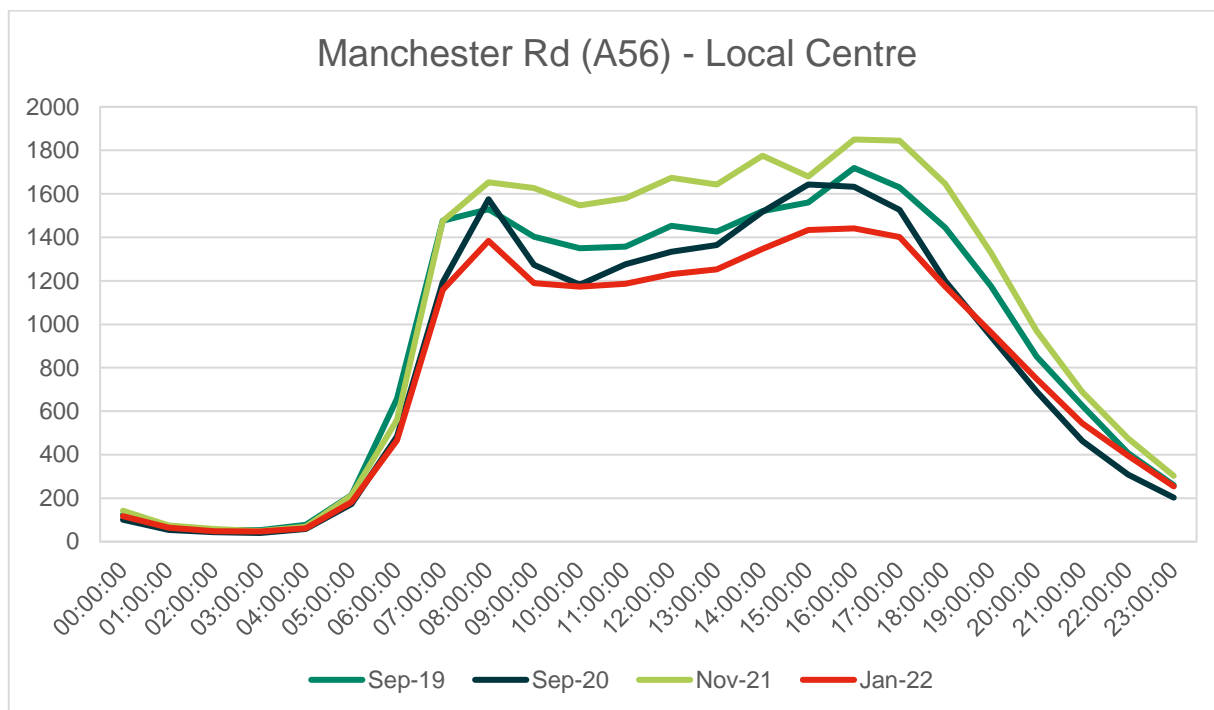
Source: TfGM C2 Database – Location N of Kingswood Rd, Prestwich (Near to M60 J17)

Local Centres

B.27 Throughout the pandemic, as the UK Government eased travel guidance, travel demand in the vicinity of local centres, have bounced back strongly. **Figure B-11**, shows the A56 Manchester Road near Bury, which experienced a strong bounce back effect in Autumn 2020, when travel restrictions were eased. **Figure B-11** shows the later part of the AM peak and the early part of the PM peak exceeding pre pandemic levels, plus a strong interpeak and was likely an impact of more localised travel.

B.28 By the end of 2021, demand had exceeded 2019 pre-pandemic levels by a clear margin, however this demand fell significantly in January 2022. The recent 2022 data shows the impacts of restrictions associated with the Omicron variant which has suppressed traffic flows once again.

Figure B-11 Change in traffic flow levels by time of day (adjacent to Local Centres)

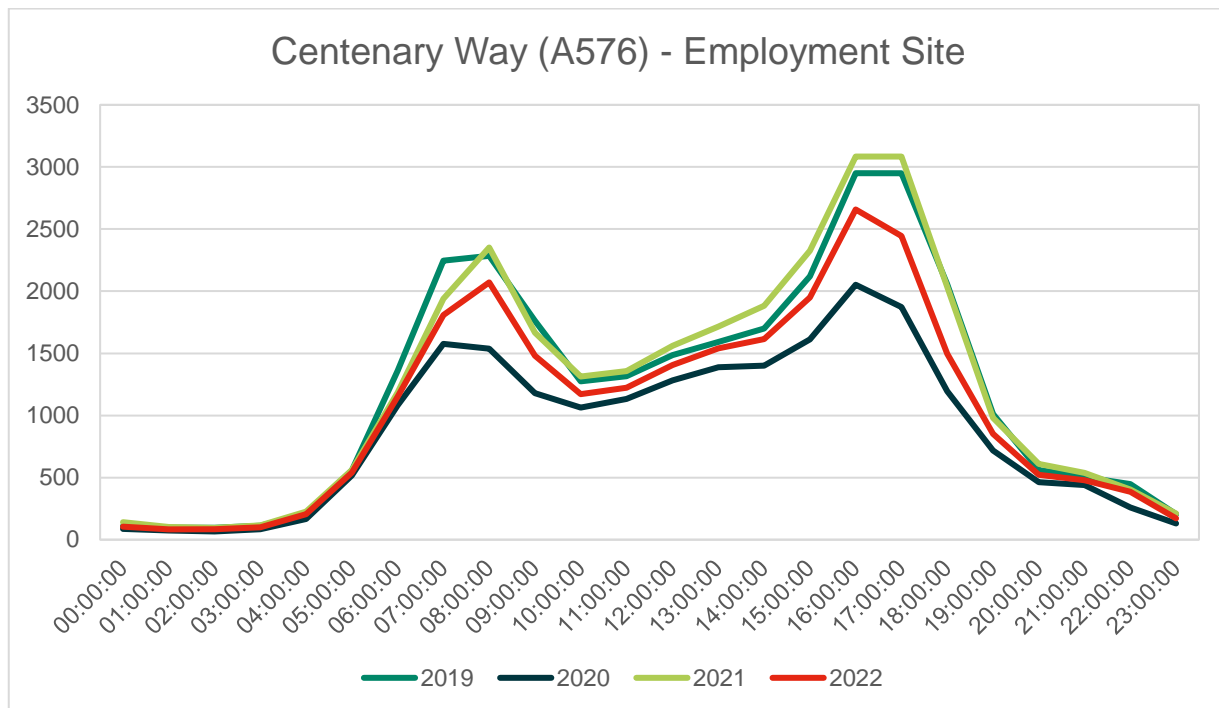


Source: TFGM C2 Database – Location S of Ashlor St, Bury

Centres of Employment (Trafford Park)

- B.29 Trafford Park is a major site of employment within Greater Manchester, with traffic flows accessing this employment area changing significantly during the pandemic.
- B.30 During the limited easing of travel restrictions in Autumn 2020, traffic flows to/from Trafford Park remained low, with limited return of higher peak time travel flows. This was possibly due to the higher levels of working from home at the time. The more recent data from November 2021 shows flows higher than pre-pandemic levels. January 2022, though impacted by the Omicron variant, shows a recovery of peak hour travel demand, close to pre pandemic levels, although the early part of the AM peak and the later part of the PM peak show a slightly weaker recovery. Interpeak travel is also similar to pre pandemic levels (See **Figure B-12**).

Figure B-12 Change in traffic flow levels by time of day (Centres of Employment)



Source: TFGM C2 Database – Location Trafford Park, Trafford

Summary

- B.31 The review of local traffic flows at various locations across GM has shown considerable variations in changing travel behaviour by location, when compared to pre-pandemic levels. This is likely to be impacted by changing travel habits, although the recent Omicron variant is likely to be impacting some travel behaviour in the 2022 data, as shown in **Figure B7**, general traffic levels in Autumn 2021 showed overall recovery in traffic flows above pre-pandemic levels.
- B.32 The change in travel behaviour by location since September 2019 is summarised in **Table B-1**.
- B.33 Considering the position in November 2021, when travel patterns were least affected, it is notable that Local Centre traffic flows were higher than previously whilst the Regional Centre flows were still much reduced. For radial routes and employment centres, overall (daily) levels were back to pre-pandemic but with some variation during the day; the morning peak being less pronounced but the interpeak higher.

Table B-1 Traffic flow changes by location type from September 2019 to January 2022

Location Type	Period	Change relative to Sep-19 (Index=100)			
		Sep-19	Sep-20	Nov-21	Jan-22
Regional Centre	AM	100	67	88	81
	IP	100	73	95	88
	PM	100	41	92	85
	Eve	100	26	95	85
	Daily	100	61	88	83
Radial inside M60	AM	100	98	98	93
	IP	100	98	105	96
	PM	100	101	102	96
	Eve	100	80	94	83
	Daily	100	92	101	91
Local Centres	AM	100	103	108	90
	IP	100	96	115	88
	PM	100	94	113	86
	Eve	100	74	110	87
	Daily	100	90	111	86
Employment Centre	AM	100	69	95	86
	IP	100	83	108	94
	PM	100	61	102	79
	Eve	100	74	99	91
	Daily	100	74	102	88

Source: TfGM C2 Database

Economic Related Impacts

Introduction

B.34 Changes in the economic situation are also likely to have had an influence on travel behaviour. The section below presents the trends for a range of factors impacting the economy, several of which are likely to impact the way people travel and businesses operate.

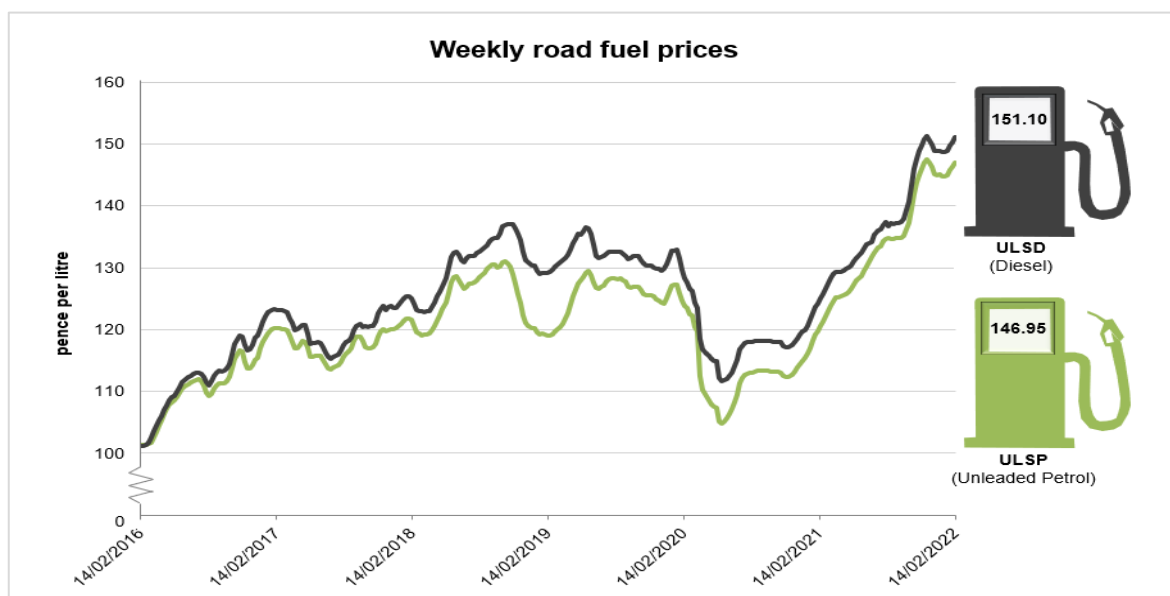
Fuel Prices

B.35 There are six companies (four oil companies and two supermarkets) that feed into the weekly fuel price survey prepared by the government. These companies cover around 65% of the market. The change in fuel price is displayed in **Figure B-13**.

B.36 The price of road fuel is volatile over shorter time periods, with prices regularly rising and falling. The key trends from during the pandemic are:

- At the start of 2020 prices appear to have been on the decline. There was then a significant fall in both Diesel and Unleaded Petrol in early 2020, corresponding with the first national lockdown.
- During the second part of 2020, prices appear to be stable, with prices beginning to rise steadily throughout 2021 in line with global oil market prices.
- There is a steep rise in prices towards the end of 2021, reaching record highs. This corresponds with a sudden rise in post-pandemic energy demand. This has triggered a tax freeze on petrol and diesel for the twelfth year in a row⁴².
- In September 2021 long queues and forecourt closures were witnessed, caused by panic buying throughout the country, sparking a fuel shortage in Britain.

Figure B-13 Weekly Road Fuel Prices



Source: gov.uk

B.37 It was already likely that the price of fuel would remain unsteady for some time as a consequence of the impact of the pandemic and recent events in Ukraine have brought additional uncertainty to that market.

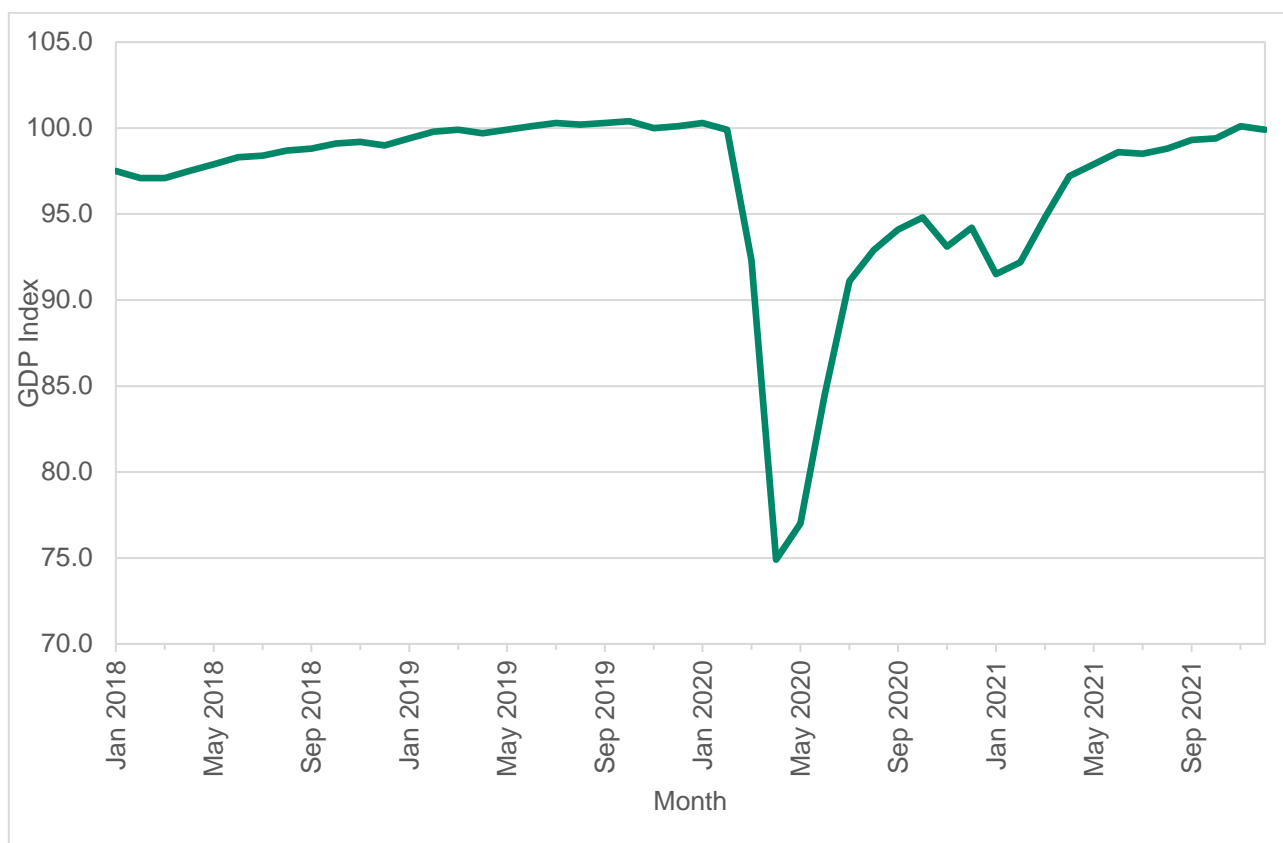
GDP

B.38 From bulletins on the ONS data website⁴³ the end of 2021 saw a drop in GDP by 0.2%, to equal the pre pandemic level of February 2020. In December 2021 services and construction are both above pre-pandemic levels, while production remained below. Consumer facing services fell within December, driven by a fall in retail, 8.4% below pre-coronavirus levels, contributing to the GDP fall in December 2021 (see **Figure B-14**).

⁴² <https://www.standard.co.uk/news/politics/budget-2021-fuel-duty-rise-axed-petrol-prices-record-highs-b962832.html>

⁴³ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

Figure B-14 GDP in the UK (Index, 2019 = 100)



Source: ons.gov.uk/economy⁴⁴

B.39 Growth in average total pay (including bonuses) of 4.3% and growth in regular pay (excluding bonuses) of 3.7% among employees was seen in October to December 2021⁴⁵. In real terms (adjusted for inflation), total and regular pay fell for the year by 0.1% and 0.8% respectively.

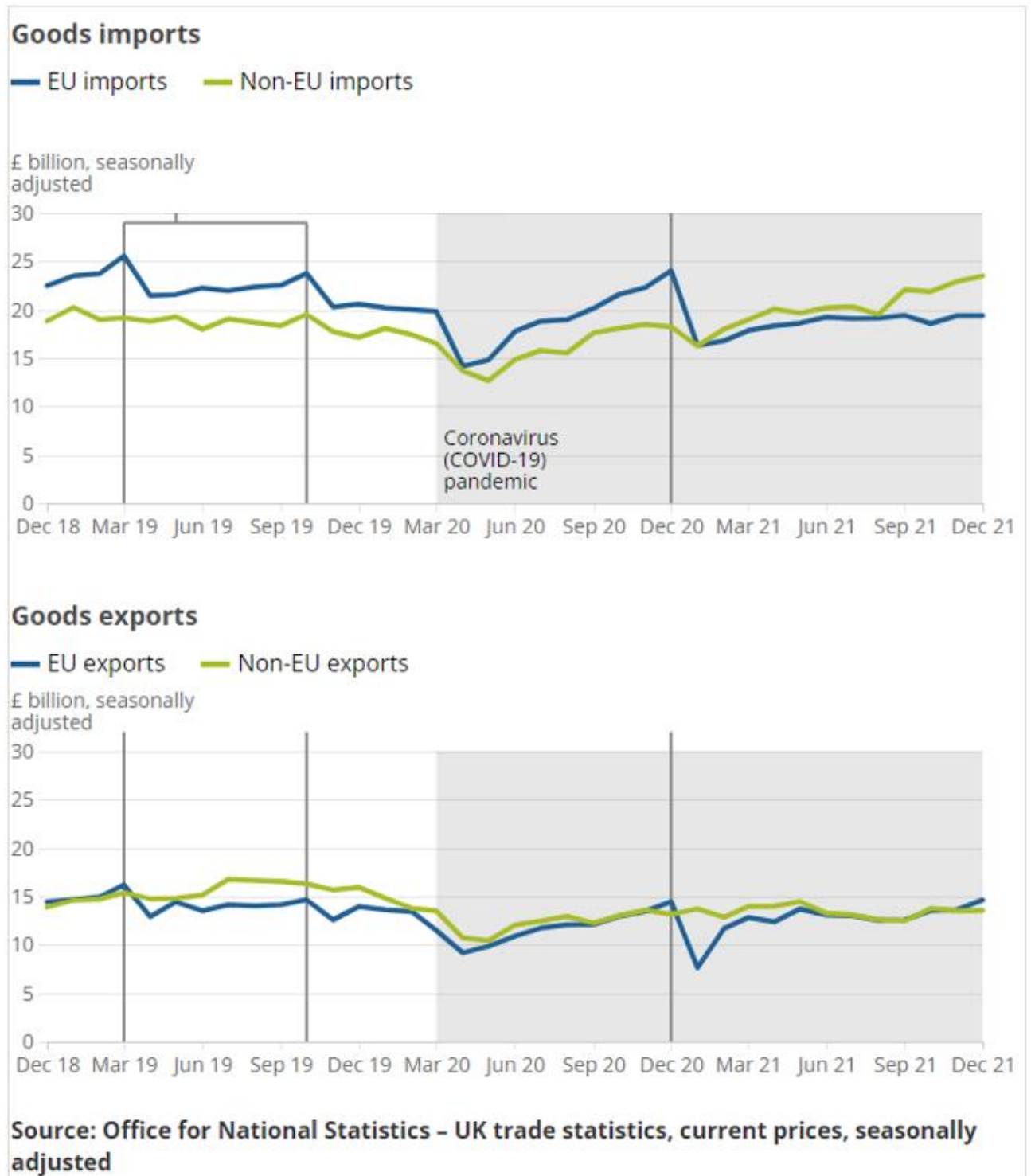
Imports and Exports

B.40 **Figure B-15** shows the trends in UK goods imports and exports throughout 2019, 2020, and 2021. After an initial decrease in imports at the beginning of the pandemic, this appears to have recovered. There was another significant decrease at the end of 2020, however imported goods are on the increase back to pre-pandemic levels. There was less impact on exports, with these remaining steady throughout.

⁴⁴ <https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/december2021>

⁴⁵ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/february2022>

Figure B-15 Import and Exports



Source: ons.gov.uk/economy⁴⁶

Centre for Cities – Cities Outlook

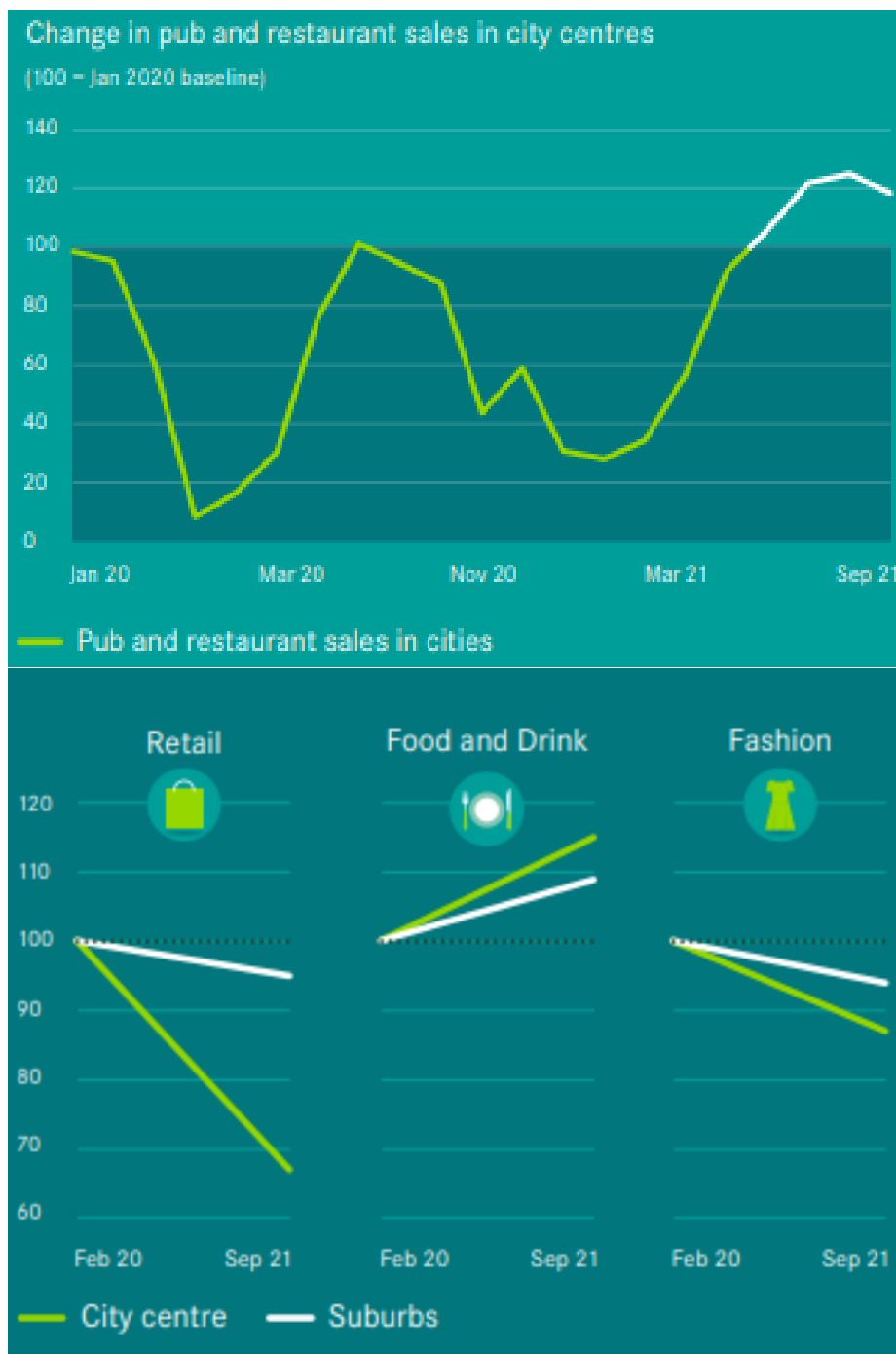
B.41 Centre for Cities produced the Cities Outlook 2022 report looking in-depth at the state of UK high streets, to get a sense of the short-term impact of the pandemic on Britain's town and city centres, and the long-term consequences and implications this has for the Government's levelling up agenda. This report showed that there was a quick and considerable shift away from high streets to online

⁴⁶ <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/ukeconomy/latest/2021-01-25#output>

shopping during the pandemic. However, in most cities the shift stalled, or slightly fell again once shops reopened.

B.42 The Cities Outlook report also studies the impacts on pubs and restaurants, stating that the fashion sector was hit harder than pubs and restaurants. **Figure B-16** shows the trend in sales throughout 2020 and 2021. There are clear decreases in sales corresponding to the national lockdowns but in all instances, these soon recover when the sector reopens. This is also reflected in the suburbs, with retail and fashion experiencing a slight decline from Feb 2020 to September 2021 but food and drink on a steady incline.

Figure B-16 Change in pub and restaurant sales in City Centres and Suburbs



Source: ons.gov.uk/economy⁴⁷

⁴⁷ <https://www.centreforcities.org/>

- B.43 Due to the work from home regulations and, for many, working from home becoming a regular part of the working week, it is feared the reduced footfall in cities will have a lasting effect on retail, hospitality, and transport sectors. **Figure B-17** show the weekday footfall in London, Manchester and Birmingham. Although not yet back to pre-pandemic levels, there is a steady climb in footfall in the major cities with Manchester appearing to recover more quickly than Birmingham, and London taking considerably longer.
- B.44 The more significant impact on London may be related to the impact of COVID-19 on international tourism.

Figure B-17 Weekday footfall



Source: ons.gov.uk/economy

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Greater Manchester's Clean Air Plan to tackle Nitrogen Dioxide Exceedances at the Roadside

Appendix E: Changes in economic context since July 2021



Bolton
Council



Salford City Council



Bury
COUNCIL



STOCKPORT
METROPOLITAN BOROUGH COUNCIL



MANCHESTER
CITY COUNCIL



Tameside
Metropolitan Borough



Oldham
Council



TRAFFORD
COUNCIL



ROCHDALE
BOROUGH COUNCIL



Wigan
Council

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Authorised by:	Nicola Kane		
Date:	June 2022		

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Glossary

Term	Definition	Source
Base Rate	Bank of England base interest rate	Interest rates and Bank Rate Bank of England
BoE	Bank of England – UK central bank	What does the Bank of England do? Bank of England
CCI	Consumer Confidence Index - a measure of how people view the state of their personal finances and wider economic prospects	Leading indicators - Consumer confidence index (CCI) - OECD Data
CPI	Consumer Price Index – UK main economic inflationary index.	Consumer Price Indices: A brief guide - Office for National Statistics
CPIH	Consumer Price Index Harmonised - Harmonised Index of Consumer Prices, inclusive of housing cost	Consumer Price Indices: A brief guide - Office for National Statistics
CVL	Creditors Voluntary Liquidation	Liquidation and Insolvency Guidance UK Government
Economic inactivity	People not in employment who have not been seeking work within the last 4 weeks and/or are unable to start work within the next 2 weeks.	Economic inactivity - Office for National Statistics (ons.gov.uk)
Energy Price Cap	Ofgem (UK Energy Regulator) market price cap setting maximum tariff rates for gas and electricity	Check if the energy price cap affects you Ofgem
GDP	Gross Domestic Product - measures the value of goods and services produced in the economy	Gross Domestic Product (GDP) - Office for National Statistics (ons.gov.uk)
GC	Growth Company / Business Growth Hub	GC Business Growth Hub: Resources to support and grow your business GC Business Growth Hub
LTV	Loan-to-value ratio	Understanding LTV ratio Experian
MPC	Bank of England Monetary Policy Committee	Monetary Policy Committee Bank of England
OBR	Office for Budget Responsibility	What we do - Office for Budget Responsibility (obr.uk)
ONS	Office for National Statistics	About us - Office for National Statistics (ons.gov.uk)
OOH	Owner Occupiers Housing Cost	Consumer Price Indices: A brief guide - Office for National Statistics
Ofgem	UK National energy regulator	About us Ofgem
RPI	Retail Price Index	Consumer Price Indices: A brief guide - Office for National Statistics
Semi-conductor	Essential component for manufacture of electronic devices	About Semiconductors SIA Semiconductor Industry Association
SME	Small and Medium sized enterprise	SME definition (europa.eu)

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1 Introduction

1.1 This note summarises notable changes in economic context since July 2021. It demonstrates how factors associated with the pandemic, global supply chain challenges, and the cost-of-living crisis have the potential to create additional financial hardship for local businesses and families.

1.2 The evidence is set out as follows:

- National / international drivers (many of which are interconnected).
- Regional (North West) - labour market review.
- GM specific factors.

2 National / international drivers

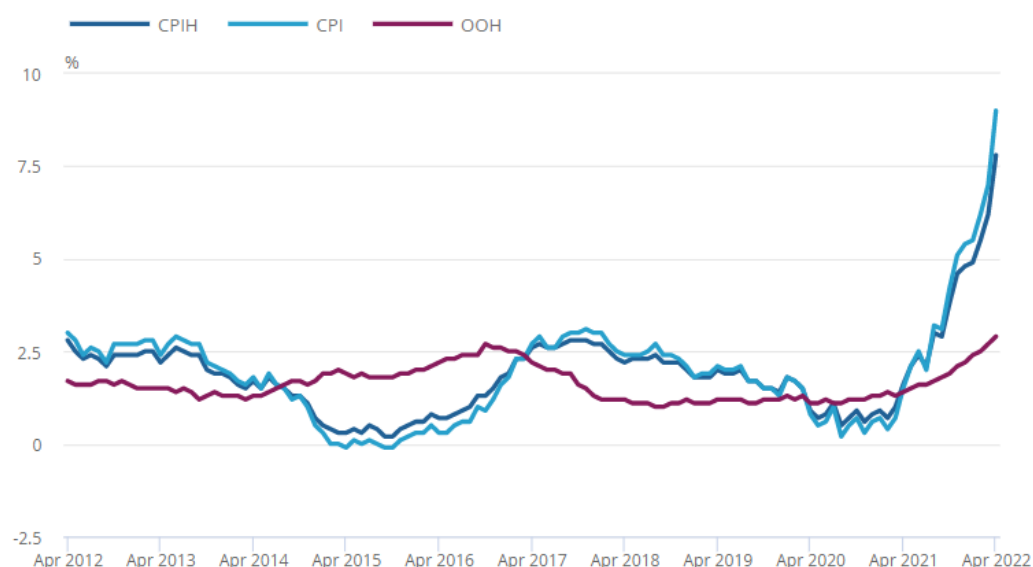
2.1 War in Ukraine (commenced late February and on-going)

2.1.1 *Global inflationary pressures have intensified sharply following Russia's invasion of Ukraine. This has led to a material deterioration in the outlook for world and UK growth. (Source: [Monetary Policy Summary, May 2022 Bank of England](#))*

2.1.2 In the May Report central projection, CPI inflation is expected to rise further over the remainder of the year, to just over 9% in 2022 Q2 and averaging slightly over 10% at its peak in 2022 Q4 (note: July 2021 CPI was 2.0% - Source: [Consumer price inflation, UK: April 2022, ONS](#)). On the 18th May 2022, CPI was announced as 9% in April.

Figure 1: The annual CPIH inflation rate was last higher in April 1991

CPIH, OOH component and CPI 12-month inflation rates for the last 10 years, UK, April 2012 to April 2022



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- 2.1.3 Russia is a prominent exporter of energy, producing 17% of the world's natural gas supply and 12% of its oil. (Source: [BP Country Insight - Russia](#))
- 2.1.4 8% of UK oil demand is directly imported from Russia, this is to be phased out by end of 2022, a move which could serve to place extra stress on prices. (Source: [UK to phase out Russian oil imports](#))
- 2.1.5 Both Russia and Ukraine are major agricultural exporters: both keystone producers of grain for direct consumption, milling or animal feeds. Impacts are already significant on key food commodity prices (since the war began there has been a c.30% increase in the price of wheat, and c.20% in the price of maize/corn). (Sources: [FAO of the UN: The importance of Ukraine and the Russian Federation for global agricultural](#) and [Commodity prices, Trading Economics](#))
- 2.2 Increases in the cost of energy
- 2.2.1 The energy price cap calculated by Ofgem increased by 12% in October 2021 to £1,277 (based on 'typical' levels of dual fuel consumption paid by direct debit), and this has since been followed by the April 2022 price cap increase which resulted in about 18 million households on standard tariffs seeing their annual bill jump from £1,277 to £1,971 (54%) - an average increase of £693 (difference due to rounding).
- 2.2.2 A further increase to the price cap is expected in October 2022 of c.£700-£850 (OBR forecasts published alongside the Spring Statement assume £830 - Source: [Economic and fiscal outlook, March 2022, OBR](#)) on top of current bills remains a likely 'good case' scenario - one that assumes that won't be significant impact from limiting Russian imports and associated impact on wholesale prices. Nevertheless, UK wholesale gas price remains highly volatile so there is significant uncertainty about exactly what rise can be expected.
- 2.2.3 Unlike residential households, businesses on commercial energy tariffs are not protected by any price cap and tariff prices have been rising in reaction to the spike in wholesale energy prices around the world.
- 2.2.4 *"Unfortunately, there will also be a delayed impact from rising energy prices as they feed through into the prices of other goods and services. In this context it is worrying that UK manufacturers' input prices were rising at an annual rate of 18.6 per cent in April, with some of those costs set to feed through into higher prices for consumers."* (Source: [Cap off - understanding the April 2022 inflation increase, Resolution Foundation](#))

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2.2.5 With a greater tendency for tight margins and restricted cash flow, small businesses are often less well placed than their large corporate counterparts to swallow increases in business running costs, such as a rise in energy bills. Small businesses are more likely to be forced to pass on their running cost increases to consumers through price hikes, just in order to survive. This has potential to put them at a competitive disadvantage. (Source: [Federation of Small Businesses urges government to tackle cost of living crisis at root](#))

2.3 Increases in the cost of fuel for motorists.

2.3.1 In early May the EU announced its intention to withdraw from Russian oil imports by the end of 2022; further threatening to push up fuel prices for motorists and businesses across Europe, who are already facing record high costs to fill up their tanks. In July 2021 pump price (per litre) for unleaded petrol was £1.32, and diesel £1.34 – on 15th June 2022 comparable prices were £1.87 (+42%) for unleaded petrol, and £1.93 (+44%) for diesel. (Source: [RAC Fuel Watch](#) - note dashed lines on the chart below represent wholesale costs)

UK pump and wholesale fuel prices over time

Latest prices in pence per litre for **unleaded petrol** and diesel



Errors and omissions excepted Based on latest available data

Source: [RAC Fuel Watch](#) · Embed

RAC

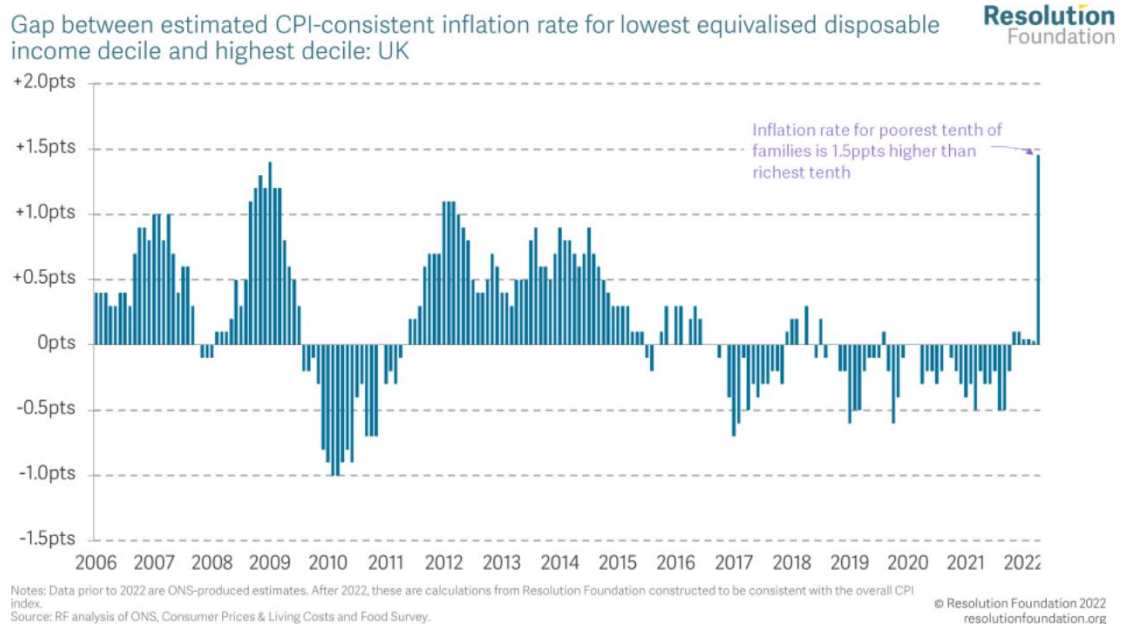
2.4 Increasing cost of food, and other products

2.4.1 Like for like grocery price inflation stood at 5.9% in April 2022, its highest level since December 2011. The average household will now be exposed to a potential extra £271 per year. A lot of this is going on non-discretionary, everyday essentials which will prove difficult to cut back on as budgets are squeezed. This is translating to a clear flight to value as shoppers watch their pennies. (Source: [UK shoppers seek out value as grocery inflation hits 11-year high](#), Kantar)

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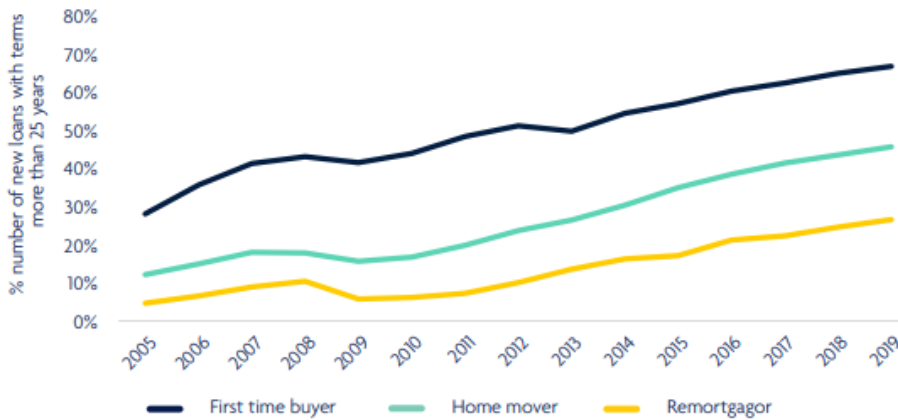
- 2.4.2 The average asking price of a used car in the UK has risen 18% between July 2021 (£14,781) and April 2022 (£17,418). (Source: [AutoTrader Retail Price Index](#))
- 2.4.3 Regulated rail fare increase at highest in 9-years at 3.8%. (Source: [Highest rail fare rise in nine years takes effect - BBC News](#))
- 2.5 On-going global impacts of COVID e.g. lockdown restrictions in the east - notably China, are still affecting supply chains in the west, impacting cost and availability of materials/parts.
- 2.5.1 Shanghai, which is home to the world's largest container port, has been the subject of city-wide lockdown during April 2022 related to the Omicron variant. Global supply chains that were already stretched are being hampered further. (Source: [China lockdowns prompt domestic shortages](#))
- 2.5.2 The global semi-conductor shortage is still impacting consumer products with retailers expected to increase costs. (Source: [Understanding the global chip crisis](#)). Intelligence from the Bank of England's Agency network suggests that shortages of semiconductors have been exacerbated by recent lockdowns in China. Contacts also reported difficulties in obtaining components and other inputs owing to the war in Ukraine, and were seeking alternative suppliers or running down existing stockpiles to support output. (Source: [Monetary policy report, May 2022, BoE](#)).
- 2.6 How the impact of inflation is distributed across society
- 2.6.1 *"Lower income families are more exposed to the rising cost of living, and not just because poorer families have fewer opportunities to cut back spending. The poorest tenth of households (by income) spend three times as much as a share of expenditure on gas and electricity bills as the richest tenth. This means the lowest income tenth of people are facing an inflation rate at least 1.5 percentage points higher than the richest tenth (see chart below). The Bank of England has warned the UK could see double-digit inflation later this year. Poorer households are already living with it."* (Source: [Cap off - understanding the April 2022 inflation increase, Resolution Foundation](#))

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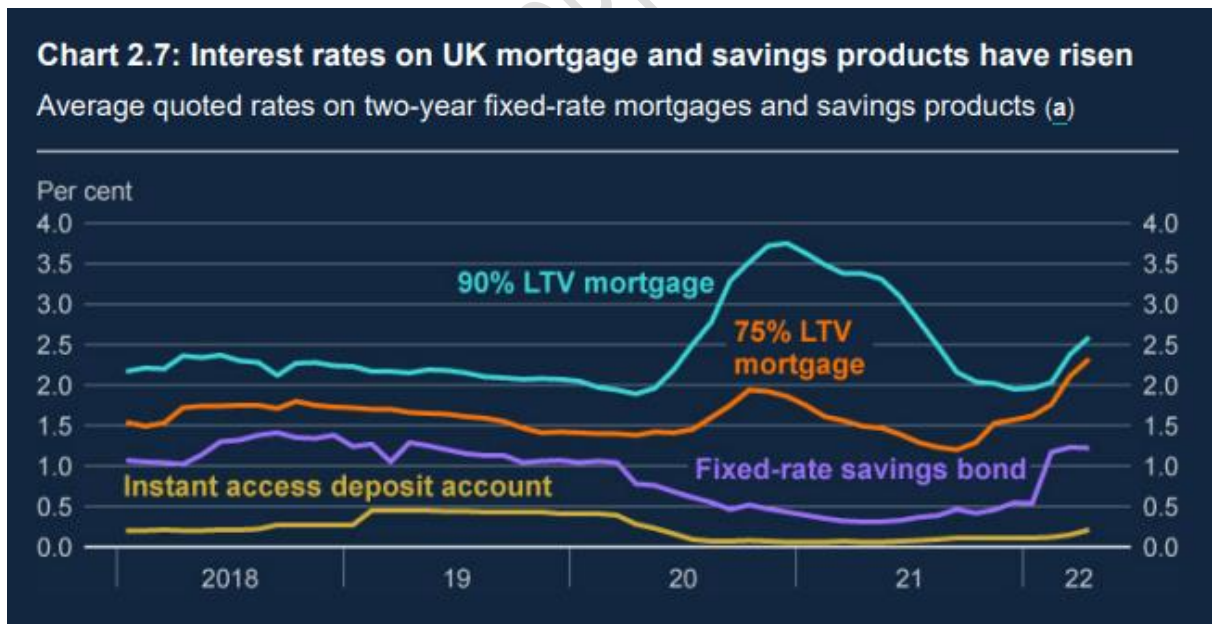
- 2.7 Changes to Bank of England base rate - 0.25% in Jan 2022, risen to 1.25% (16th June) - moving into a phase of more expensive borrowing.
- 2.7.1 *Rates on new lending to SMEs rose by around 110 basis points between January and March this year, and are now slightly above their 2019 levels. While larger firms' ability to access credit is broadly unchanged, credit conditions have tightened slightly for smaller firms since January 2022. (Source: [Monetary policy report, May 2022, BoE](#)).*
- 2.7.2 *'Surveys of business activity have generally remained strong. There have, however, been signs from indicators of retail spending and consumer confidence that the squeeze on real disposable incomes is starting to weigh on the household sector. The level of GDP is expected to be broadly unchanged in Q2.'* (Source: [BoE MPC May 2022 minutes](#))
- 2.7.3 About a third of UK adults have a mortgage. Of those, three-quarters have a fixed mortgage, so will not be immediately affected. The rest - about two million people - will see their monthly repayments rise.
- 2.7.4 The popularity of 5-year fixed deals has increased in recent years, in comparison to shorter 2-year fixes. This change in preference has taken place amidst a backdrop in which mortgage terms have lengthened (in part a response to rising house prices). This points to less flexibility for homeowners to reduce their monthly outgoings should they find themselves exposed to higher interest rates when their fixed product period ends. (Source: [The changing shape of the UK mortgage market - UK Finance](#))

Chart 8 - Lengthening mortgage terms



Source: UK Finance - restricted access data

2.7.5 “Quoted rates on mortgages have recently increased across all LTVs, reflecting the pass-through of higher risk-free rates. The quoted rate on a 75% LTV mortgage has risen by around 70 basis points since January, while the rate on a 90% LTV mortgage is up by 65 basis points.” (Source: [Monetary policy report, May 2022, BoE](#)).

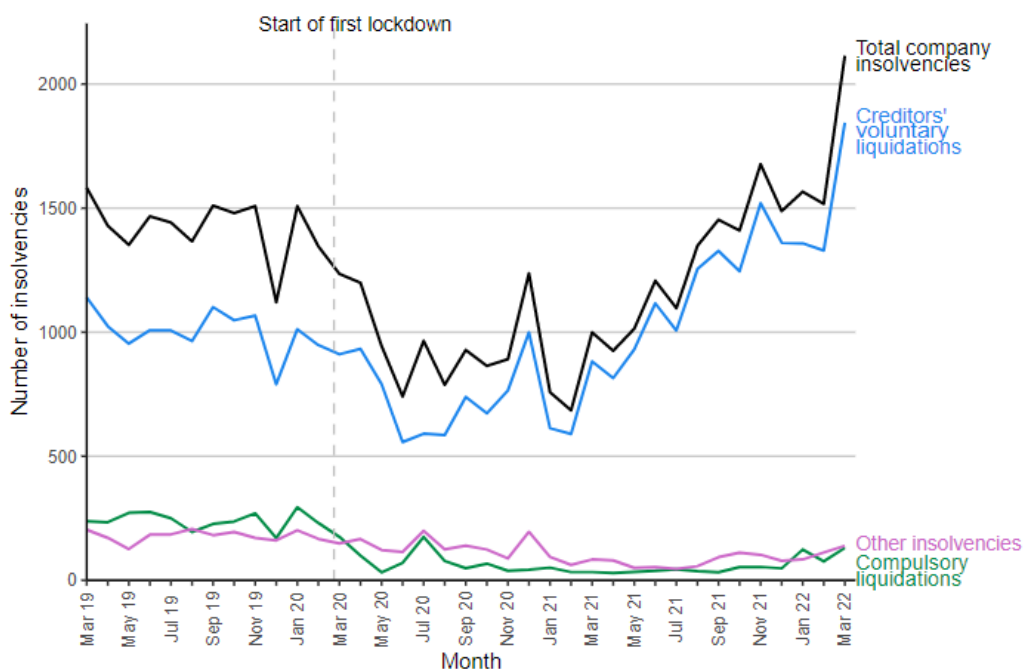


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- 2.8 Removal of Government Covid-support schemes, such as furlough, enhanced sick pay, business rates pauses, and the Universal Credit uplift. Also, businesses are starting to have to pay back Covid loans.
- 2.8.1 *“Businesses that were just hanging on before the recent interest rate rises have seen the rise in borrowing costs push them over the edge. Between interest rates and inflation, this is the most difficult period for businesses since the height of the pandemic. This time they are having to manage without government support. UK businesses will be hit by the ‘cost of living crisis’, just as consumers will be.”* Rebecca Dacre, partner at Mazars.
(Source: [Business insolvencies increase amidst spiralling inflation](#))
- 2.8.2 The moratorium winding up petitions prevented creditors from applying to make a business insolvent because of unpaid debts during the Covid crisis, but this ended on 31 March. The end of this protection for struggling businesses will likely result in more insolvencies in the coming months - the number of registered company insolvencies in March 2022 (England and Wales) climbed above pre-pandemic levels. (Source: [Monthly insolvency statistics - March 2022](#))

Figure 1: The number of registered company insolvencies in March 2022 was higher than pre-pandemic levels, driven by a higher number of CVLs.

England and Wales, March 2019 to March 2022, Not seasonally adjusted



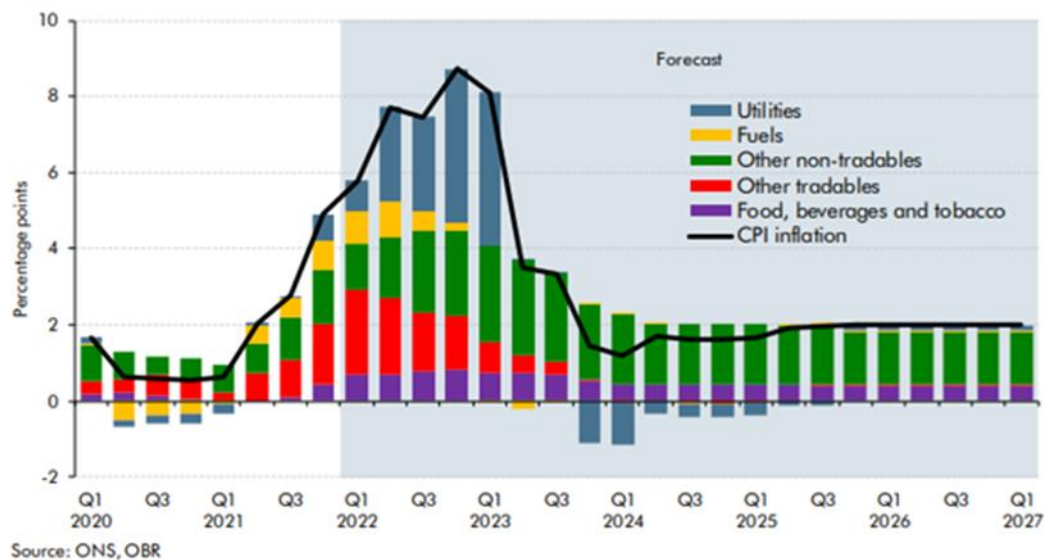
Sources: Insolvency Service (compulsory liquidations only); Companies House (all other insolvency types)

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2.9 Since July 2021, time has passed for the 'squeeze' on consumer demand to take effect – whilst it is hard to judge exactly when the peak impact on society will be, it is clear that it is still to come.

2.9.1 The chart below demonstrates that inflation is expected to peak in Q4 2022 – it is important to note however that since this was published in March 2022, expectations for CPI have been revised upwards for Q4 2022 from the previous 'close to 9%' to 10.25% under a new central forecast for CPI from the Bank of England. Sources: [Economic and fiscal outlook, March 2022, OBR](#) and [Monetary policy report, May 2022, BoE](#))

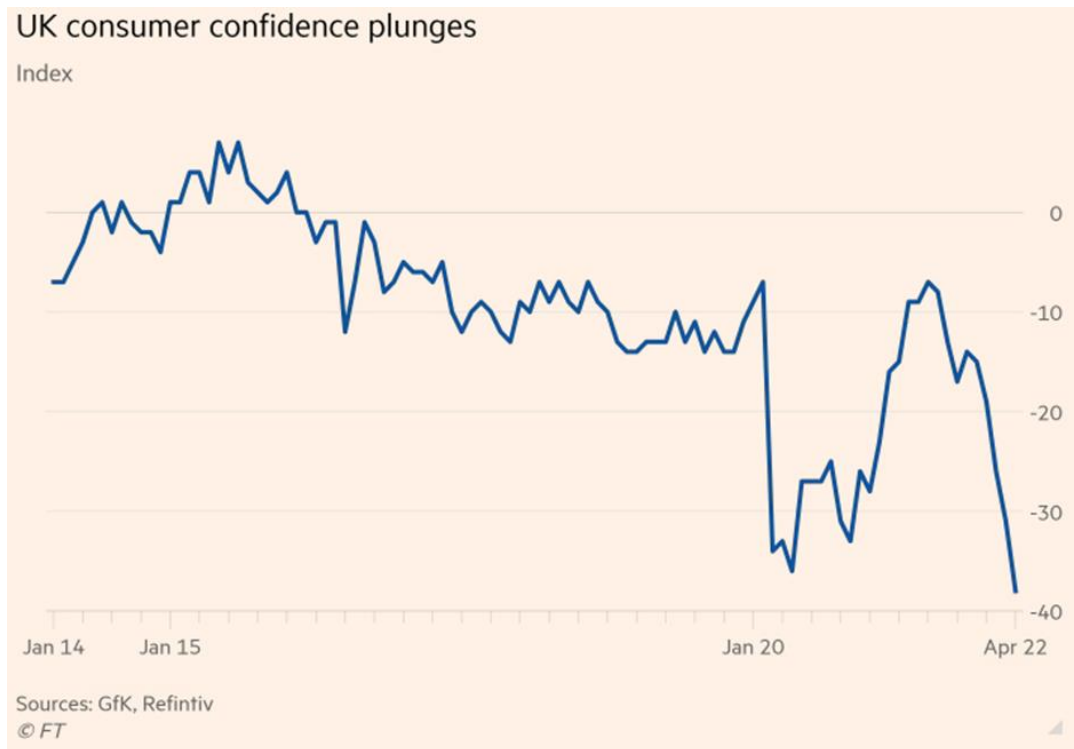
Chart 2.7: Contributions to CPI inflation



2.9.2 See previous reference to *'There have, however, been signs from indicators of retail spending and consumer confidence that the squeeze on real disposable incomes is starting to weigh on the household sector.'* (Source: [BoE MPC May 2022 minutes](#))

2.9.3 The UK consumer confidence index, a measure of how people view the state of their personal finances and wider economic prospects, crashed seven points to minus 38 in April, its lowest level since 2008 when it was minus 39, according to research company GfK. (Source: [UK consumer confidence plunges - Financial Times](#))

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2.10 Revised projections for UK GDP Growth

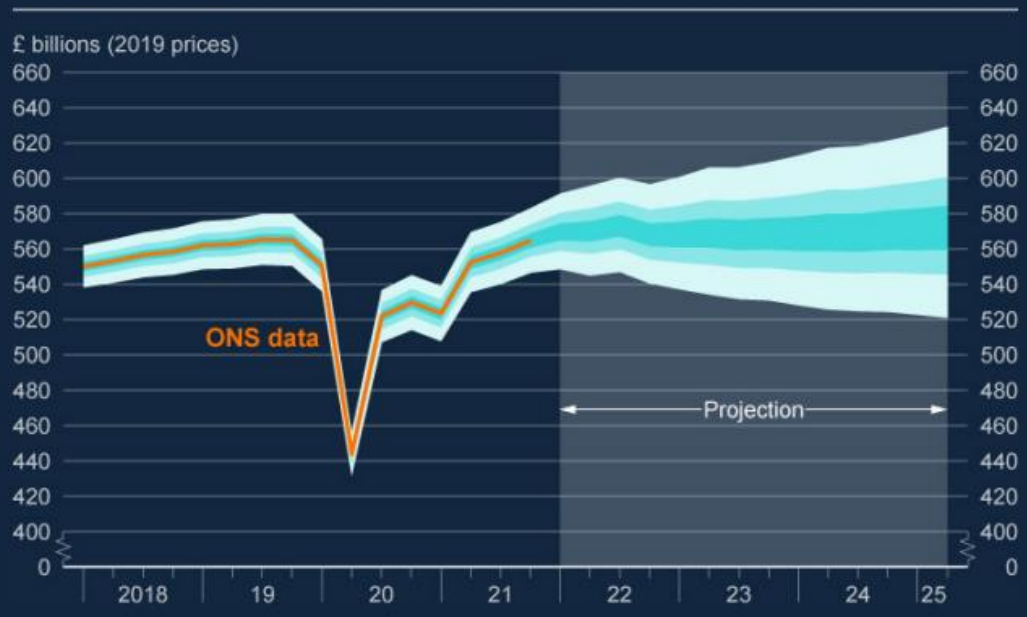
- 2.10.1 BoE estimates that quarterly UK GDP growth was 0.9% in 2022 Q1. Growth slows sharply over the first half of the projection (see first chart below), reflecting the significant adverse impact of higher global commodity and tradable goods prices on UK demand. GDP is projected to fall in 2022 Q4 (see second chart below), driven largely by the decline in households' real incomes, including that stemming from the projected rise of around 40% in retail gas and electricity prices when the Ofgem price caps are next reset in October. Calendar year GDP growth is broadly flat in 2023. Four-quarter GDP growth picks up to around 0.75% by the end of the projection as the pressures on household incomes ease somewhat, although this is still below pre-pandemic rates. (Source: [Monetary policy report, May 2022, BoE](#)).

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Chart 1.1: GDP growth projection based on market interest rate expectations, other policy measures as announced



Chart 1.2: GDP projection based on market interest rate expectations, other policy measures as announced

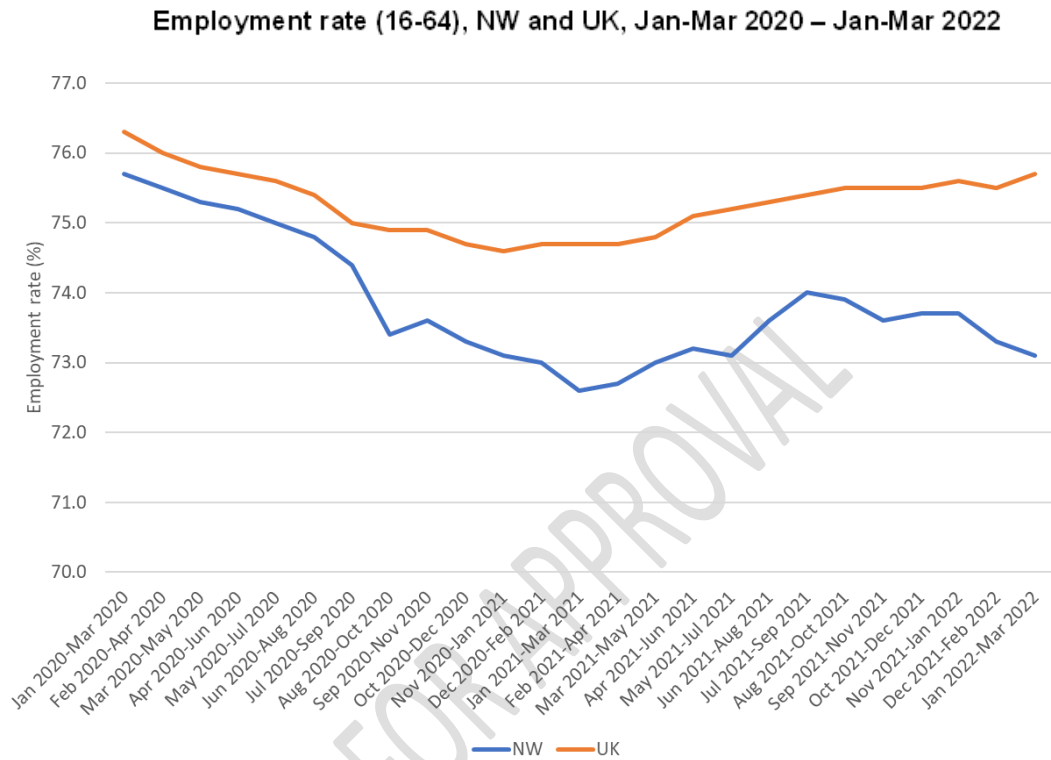


3 Regional (North West) - labour market review

- 3.1 Labour market data released by the Office for National Statistics on 17 May 2022 showed that the employment rate in the North West continued to fall. It was 73.1% in the three months to March 2022. At the start of the pandemic it was 75.7%. The North West has about 130,000 fewer jobs than before the pandemic.

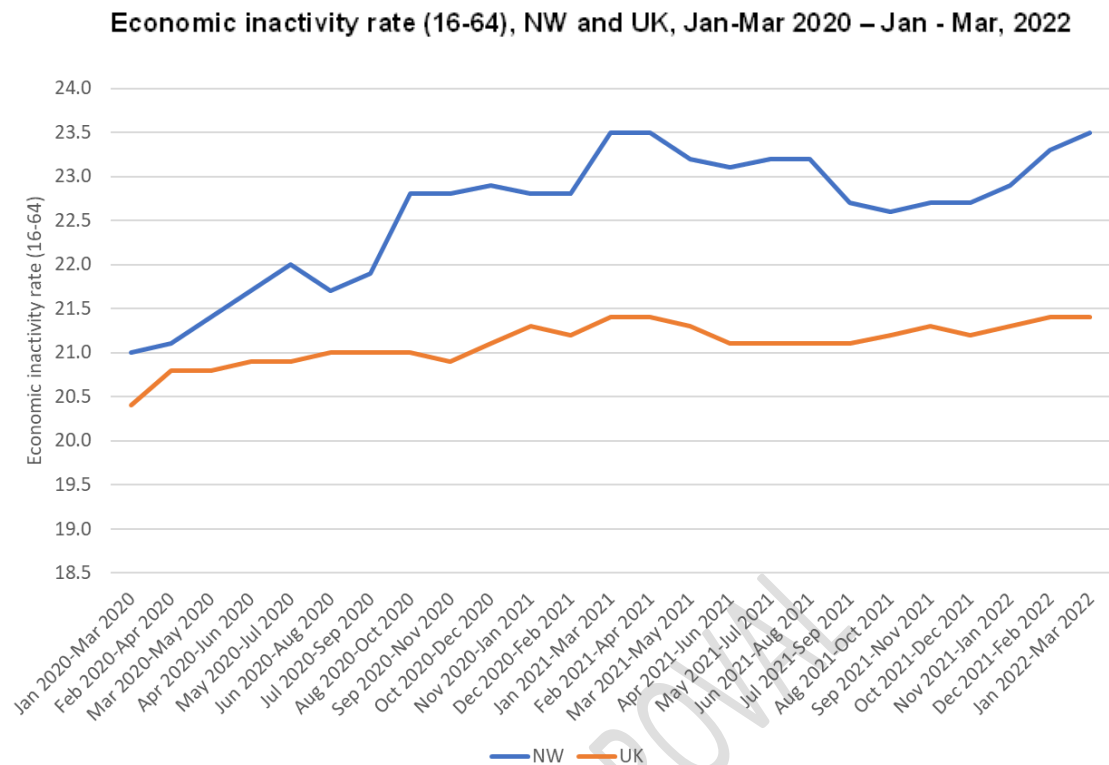
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- 3.2 The gap between the jobs performance of the North West and that of the UK was at its widest in two years in the Jan-Mar 2022 data (a gap of 2.6ppts). Nationally, the employment rate for the UK was 75.7% - up from 75.5% in the three months to February. The North West therefore seems to be on a different trajectory from UK patterns. (Source: [Labour market in the regions of the UK: May 2022](#))



- 3.3 An increase in working age economic inactivity has attracted national attention. In the NW of England the Covid-driven rise is more marked than the national average. As well as the inactivity rate returning to a pandemic high of 23.5% in the most recent data the gap with the UK has widened once more (2.1ppts). (Source: [Labour market in the regions of the UK: May 2022](#))

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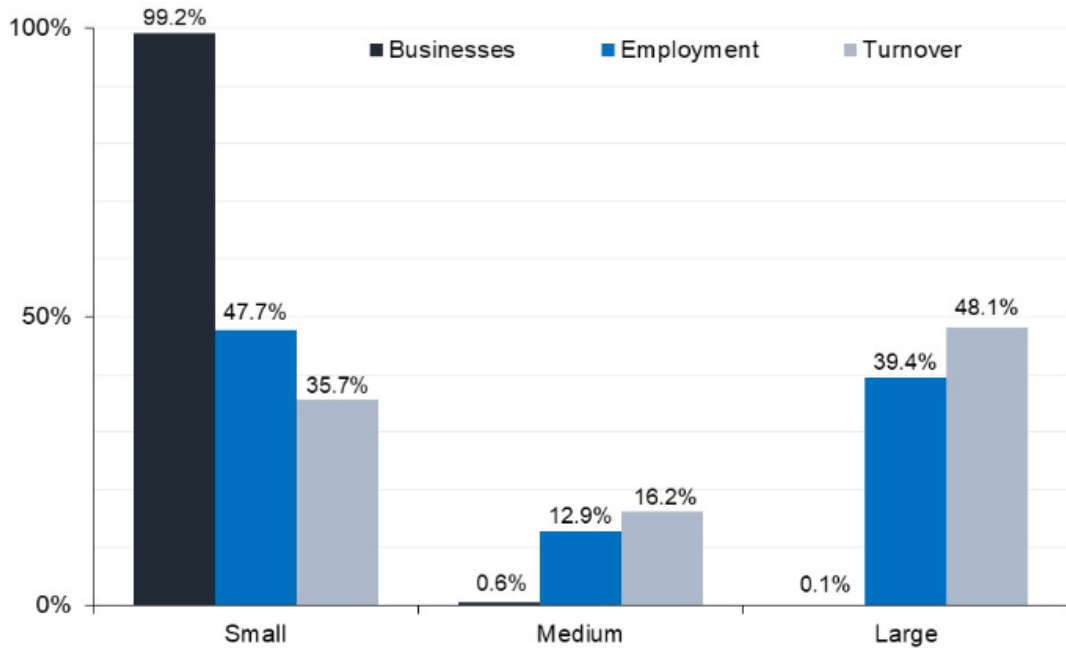


4 GM specific factors

4.1 GM Business composition

- 4.1.1 In 2021 GM had c.107,000 registered businesses – 98% of which had less than 50 employees (defined here as ‘small’). Despite having comparable total and working age populations, GM has an additional c.15,000 ‘small’ businesses in comparison to the West Midlands combined authority area. (Source: [UK Business Counts 2021 - enterprises by industry and employment size band](#))
- 4.1.2 The chart below is based on UK wide data, but it is important for demonstrating the importance of ‘small’ businesses in terms of both employment and turnover. (Source: [Business population estimates for the UK and regions 2021, BEIS](#))

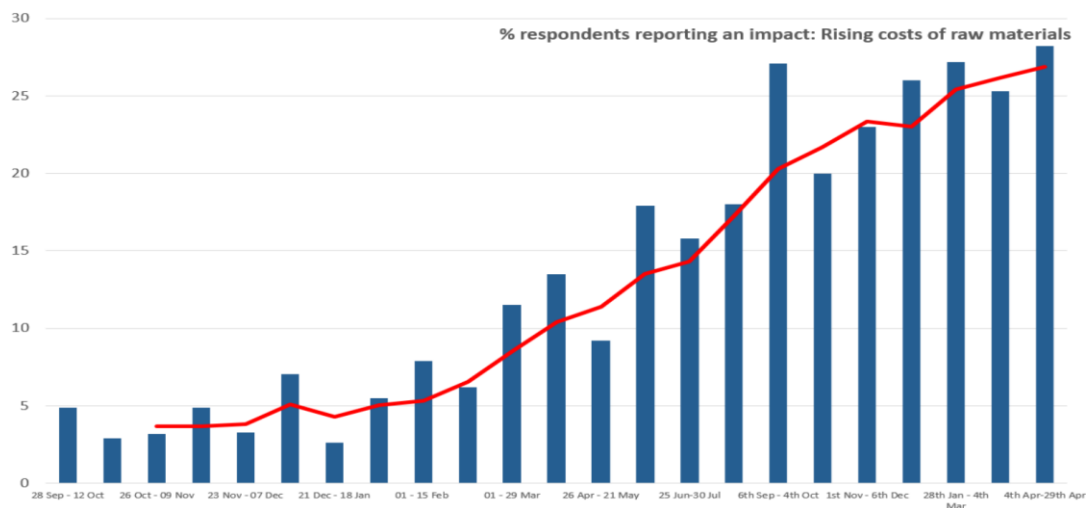
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4.2 Outlook for GM Businesses

- 4.2.1 The GC Situation Report May 2022 contains findings based on 246 surveys completed with firms (almost all in Greater Manchester), between the 4th April and 29th April 2022.
- 4.2.2 The GC survey and other national statistics and surveys show that there is heightened concern about input prices and the volatility of supply chains.
- 4.2.3 The stand-out change in the survey results for April is the proportion of firms identifying the pressing challenges of managing overall business finances (43% vs 33% previously). This is mirrored by a four percentage-point rise in businesses reporting insolvency risk / financial stress in other third party risk data (RedFlagAlert).
- 4.2.4 The chart below points to the increasing proportion of GM businesses being impacted by the rising costs of raw materials - April 2022 reported a value of 28% vs. 16% for July 2021 (Source: [Growth Company Business Survey](#))

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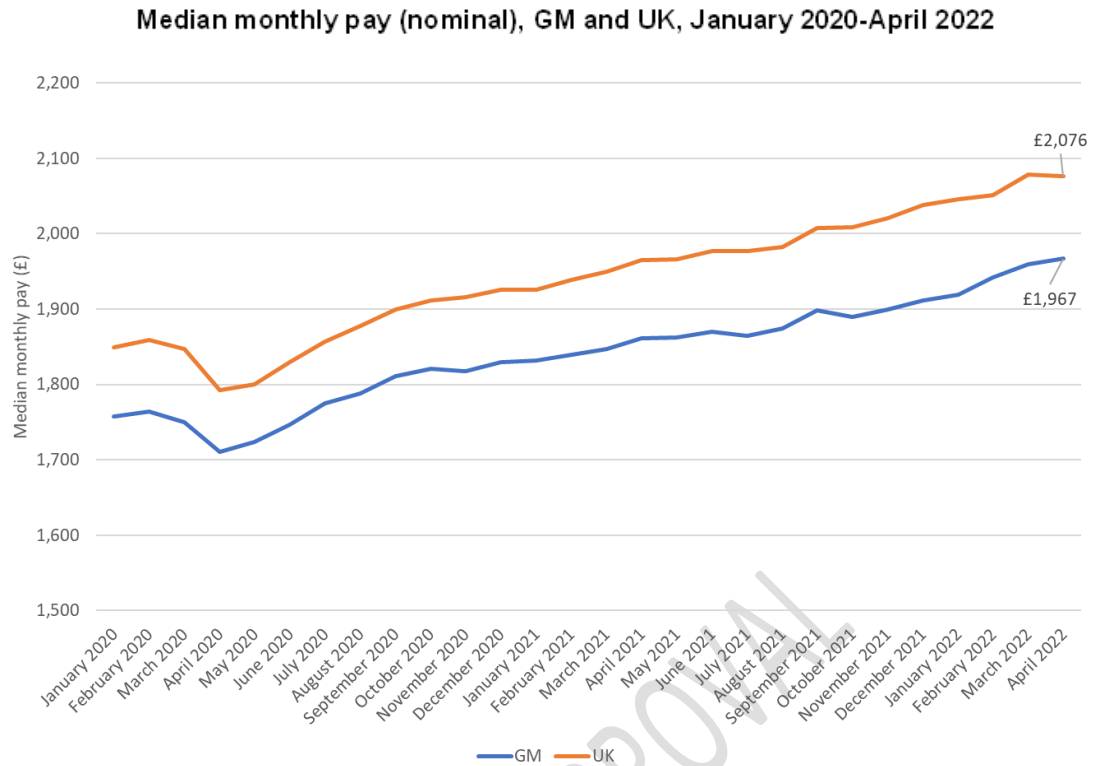


4.2.5 Recruitment remains a key challenge for business, with total vacancies across all sectors having been at high levels over the last year - this is meaning that some firms are finding significant challenges in staffing their operations - Manchester Airport being a key example. The previously noted increase in economic inactivity brought about by the pandemic has likely shrunk the size of the available workforce to GM businesses (in the North West during Jan-March 2022 the working age inactivity rate was 23.5% vs. a national inactivity rate of 21.4% - this is higher than it was at the beginning of 2020. (Source: [Labour market overview, UK: May 2022, ONS](#))

4.3 Wages in Greater Manchester (ONS 'experimental' data)

4.3.1 The chart below indicates that estimated median pay in GM is over £100 a month below the UK median (note: this data is unadjusted for inflation and indicates the trend only). The wage gap was at its widest in January of 2022 (£127 a month). The data suggests that GM nominal median pay has increased since last month, but fallen slightly in the UK. Real terms pay has been falling recently in the midst of cost of living increases. (Source: [Earnings and employment from Pay As You Earn Real Time Information, seasonally adjusted, ONS](#))

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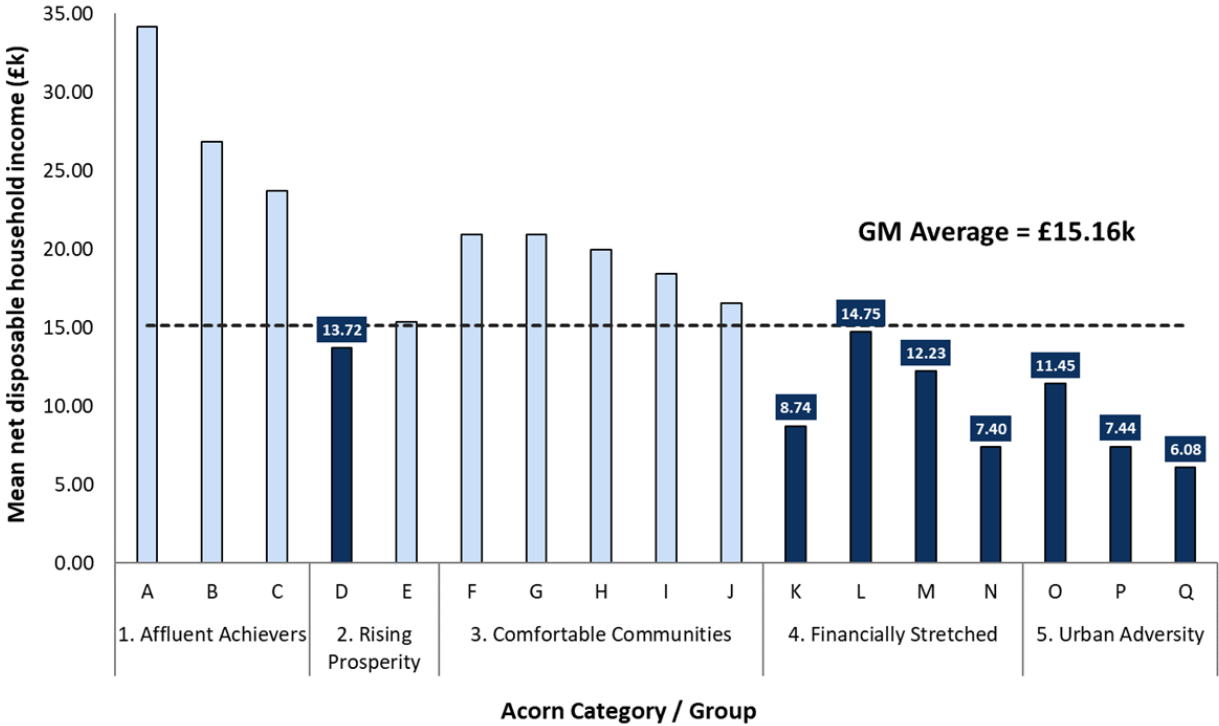
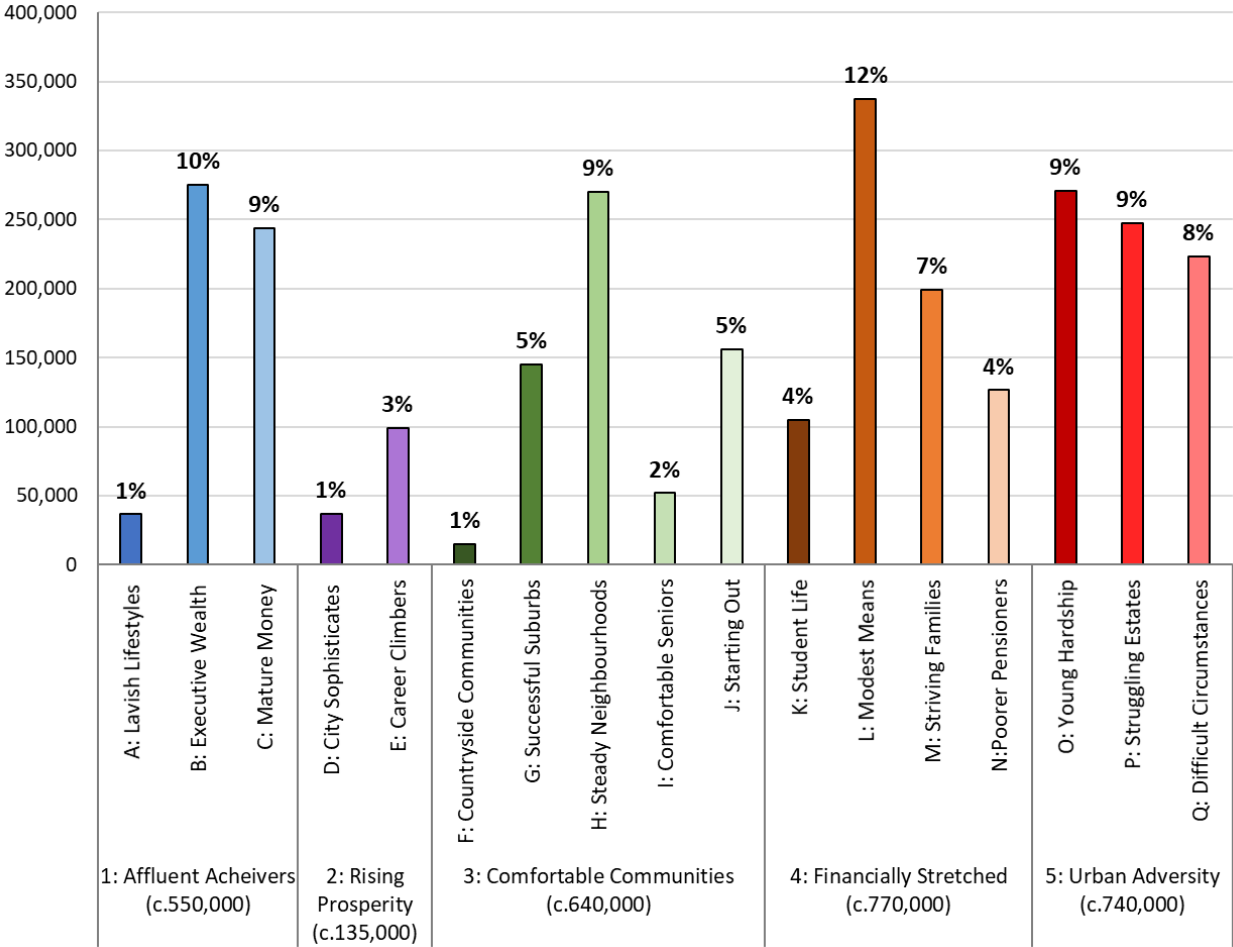


4.4 Understanding the GM residential population

4.4.1 53% of the GM resident population is classified as either 'Financially Stretched' or 'Urban Adversity', the corresponding value for the UK is just 40% - this demonstrates the greater vulnerability of the GM population to inflation associated with non-discretionary spend (Source: Acorn 2021. CACI Limited. The applicable copyright notices can be found at <http://www.caci.co.uk/copyrightnotices.pdf>)

4.4.2 For 'Financially Stretched' and 'Urban Adversity' households - disposable income is typically well below average, and often below £10k - note: the values shown in the chart below are prior to the full impact of the recent 2022 surge in inflation being felt. This means that those with limited disposable income as of 2021, are now likely to be even more vulnerable to any costs that may be passed onto them as a result of CAP related interventions. It also serves as a reminder that GM businesses that rely on demand from GM residents, could be particularly vulnerable to weakening consumer demand.

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(Source: Acorn 2021, Paycheck Disposable Income. CACI Limited. The applicable copyright notices can be found at <http://www.caci.co.uk/copyrightnotices.pdf>)

5 Conclusion

- 5.1 UK inflation reached a 40-year high of 9% during April 2022, up from 2% in July 2021. It is widely accepted that inflation will increase to higher levels still during the remainder of 2022, with evidence already pointing to consumer demand being dampened.
- 5.2 GM is not insulated from the impacts of high inflation, in fact in some respects it is particularly vulnerable - noting its relatively high volume of small businesses, and a higher than average (vs.UK) proportion of residents who typically have below average disposable household incomes.
- 5.3 The Bank of England has already responded by increasing base rate to 1.25% (up from 0.1% in July 2021) - signalling that further rate rises are likely. This in turn will increase the cost of borrowing to both businesses and residents who require finance and are not protected by fixed rates.
- 5.4 Meanwhile the Bank of England's Monetary Policy Report (May 2022) points to an expectation for GDP to fall in Q4 2022, and be 'broadly flat' during 2023.
- 5.5 In summary, any intervention, such as a charging clean air zone, that could see businesses forced to pay additional charges and potentially pass costs on to the consumer, could have severe consequences for those groups who are already struggling to cope with the cost of living crisis.

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**Manchester City Council
Report for Information**

Report to: Environment and Climate Change Scrutiny Committee – 21 July 2022

Subject: Manchester Climate Change Framework (2020–25): 2022 Update

Report of: Manchester Climate Change Partnership and Agency

Summary

This report provides the key contents of the 2022 Update to the Manchester Climate Change Framework (2020–2025).

Recommendations

The Scrutiny 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

The Manchester Climate Change Framework 2020-25 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."

Manchester Strategy outcomes	Summary of how this report aligns to the OMS
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."

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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 2020-2025:
<https://www.manchesterclimate.com/framework-2020-25>

UK Climate Investment Commission Report:
<https://cp.catapult.org.uk/news/uk-cities-climate-investment-commission-report/>

'Incorporating Food into Manchester's Climate Change Response' by the University of Manchester's Sustainable Consumption Institute:
https://www.manchesterclimate.com/sites/default/files/Sustainable%20Food%20Mission_Part%201_Final_1.pdf

'Manchester Climate Risk – A Framework for Understanding Hazards and Vulnerability':
<https://www.manchesterclimate.com/sites/default/files/Climate%20vulnerability%20framework.pdf>

Report on health inequalities and climate to the Health and Wellbeing Being Board:
<https://democracy.manchester.gov.uk/documents/s29934/Manchester%20Climate%20Change%20Framework%2025-10-2021.pdf>

Report on food by the Manchester Food Board:
<https://democracy.manchester.gov.uk/documents/s31397/Manchester%20Food%20Board.pdf>

Manchester Climate Assembly Mandate:
https://res.cloudinary.com/commonplace-digital/limited/image/upload/v1633687544/projects/zerocarbonmanchester/workshops/Mandate_Upload.pdf

Manchester Youth Board Manifesto:
https://www.manchesterclimate.com/sites/default/files/MCCYB%20Manifesto_0.pdf

1.0 Introduction

- 1.1 The Manchester Climate Change Partnership (MCCP) and Agency (MCCA) are responsible for setting and maintaining Manchester’s strategy for tackling the climate emergency.
- 1.2 The Manchester Climate Change Framework (2020-25) is the city's high-level strategy for tackling climate change. 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”. This is aligned to a key commitment in the Our Manchester Strategy 2016-25.
- 1.3 The Framework is being updated to ensure it remains responsive to a changing city and increasingly urgent climate emergency, and to provide more information on the scale of action needed for the city to stay within its carbon budgets. The city is not currently on track to do this.

2.0 Background

- 2.1 Manchester’s Climate Change Framework 2020-25 (the Framework) sets a science-based target for the city to reach zero carbon emissions by 2038 and sets a total carbon budget for our direct emissions of 15m tCO₂ for the period 2018-2100. The first milestone on this pathway is for the city to reduce its direct emissions by 50% by 2025. See graph and table below.

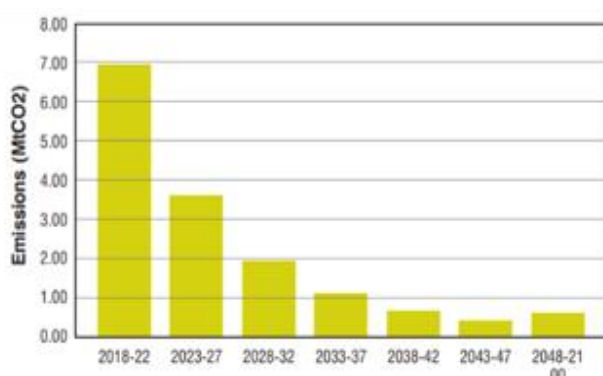


Figure 4: Emissions projections consistent with the 15 MtCO₂ budget – starting from common year (2017)

Time Period	CO ₂ budget (MtCO ₂)
2018-22	6.93
2023-27	3.59
2028-32	1.95
2033-37	1.10
2038-42	0.64
2043-47	0.38
2048-2100	0.59
Total	15.17

Table 2: Manchester’s 15 MtCO₂ budget by time period

- 2.2 The budget was set with support from the Tyndall Centre for Climate Change at Manchester University and includes direct, energy-related emissions in the city’s carbon budget. These are sometimes described as territorial emissions. Indirect emissions are not included in the budget but are addressed by the Framework.
- 2.3 The Framework identifies four headline objectives for the city to tackle:
- Staying within our carbon budgets
 - Climate adaptation and resilience
 - Health and wellbeing
 - Inclusive, zero carbon and climate resilient economy

2.4 It also identifies six priority areas:

- Buildings (existing and new)
- Renewable energy
- Transport and flying
- Food
- The things we buy and throw away
- Green infrastructure and nature-based solutions

2.5 It sets out a range of broad city-level actions against each of those six priority areas, for example to “improve the energy efficiency of our buildings as far as possible to reduce our demand for gas” and defines 15 actions that every resident and organisation needs to take to help meet the challenge.

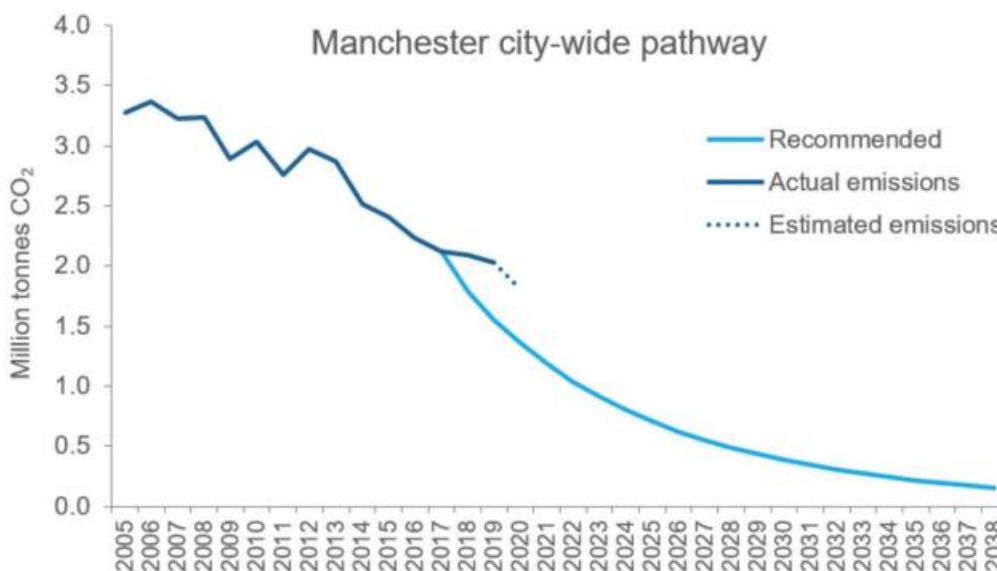
2.6 Much work has been undertaken by Manchester Climate Change Agency and Partnership to support delivery of the Framework and meeting its targets. This Includes:

- developing a Zero Carbon New Build standard addressing both
- operational and embodied energy which has been shared with the Council as part of the development of the new Local Plan
- delivering the In Our Nature programme engaging communities across Manchester on local climate action
- representing Manchester within the UK Cities Climate Investment Commission (UKCCIC) which has identified the scale of investment needed to decarbonise the UK’s core cities and proposed new ways of attracting large-scale private finance in to fund the actions needed
- securing Manchester’s place as one of three focus areas for phase two of the UKCCIC work looking in detail at the capacity and systems that local areas will need to develop project pipelines that can unlock private finance
- creating a mandate for action from Manchester’s residents via a community climate assembly
- supporting the creation and launch of a signposting service for businesses looking to reduce their emissions and grow their companies:
www.beenetzzero.co.uk
- leading development of the GrowGreen project which brought £3.5 million to the city and enabled the development of the West Gorton Community Park that demonstrates how nature-based solutions such as rain gardens and permeable paving can be used to reduce surface water flooding in urban areas and maximise other benefits such as improved biodiversity and health and well-being.

2.7 MCCP members have also been driving their own organisations to reduce their emissions. Details of these plans can be found in the Appendix 2 of the Framework itself, and updated in Appendix A of the Annual Report published in 2021.

3.0 Updating the Framework

- 3.1 The Framework is being updated to ensure it remains responsive to a changing city and evolving local and national policy, to improving data and modelling, plus to the increasing need for urgent action to tackle the climate emergency.
- 3.2 To stay within its carbon budget, the city needs to be reducing its emissions by 13% each year from 2018. The Annual Reports produced by MCCA, which hold the city accountable to the commitments made in the Framework, show that, at a city level, Manchester has not been reducing its emissions at this rate and so the pace of change needs to increase in future years to compensate for this.
- 3.3 The graph below shows the trajectory that the city should be on to stay within its carbon budgets and the actual rate of emissions reductions alongside. It shows the city is not decarbonising at the required rate.



- 3.4 To support a targeted and effective upscaling of action, the main content of the Framework Update has identified the scale of action needed to reduce direct emissions and stay within our carbon budgets.

4.0 Direct emissions - staying within our carbon budgets

- 4.1 In summer 2021, MCCA commissioned the environmental consultancy Anthesis to provide a detailed evidence base of Manchester's current carbon emissions and to use its innovative data model called SCATTER (Setting City Area Targets and Trajectories for Emissions Reduction) to outline the type and scale of action required to stay within the carbon budget. This work was supported by funding from Manchester City Council and the EU URBACT Zero Carbon Cities programme.
- 4.2 The work began by assessing the current emissions profile of the city in detail,

using the most up to date local and national data, with a focus on direct emissions, i.e., those generated within the city, that are the subject of our carbon budgets.

- 4.3 The next step was to deploy the SCATTER model to develop pathways to reduce our emission by 50% as the first milestone in staying within our carbon budgets.
- 4.4 The data in the space is complex and can be both incomplete and time lagged. Modelling tools must make certain assumptions around, for example, technology development and how to scale data from national to local level, or vice versa, as well as take into account the context of macro-factors such as grid decarbonisation and local and national policy.
- 4.5 The output is a set of more granular targets that describe what needs to happen for the city to reduce its direct emissions by 50%; by definition, these targets focus on buildings, ground transport and an increase in renewable energy generation.
- 4.6 These targets have:
- Carbon savings calculated for them, showing how each contribute to the overall emissions reductions required.
 - Indicative costs identified, including capital and operational expenditure as relevant, along with potential funding streams.
 - Challenges outlined, based on research in the relevant sector and local consultations.
 - Co-benefits identified, highlighting the positive results in other areas that can be brought about by climate action.
 - Stakeholders and relevant partners identified who can support change.
 - Recommended actions needed to deliver the granular target that are categorised by where there is agency to act locally, with Greater Manchester partners, and with national government.
- 4.7 Outputs have been cross-referenced from SCATTER to the Local Area Energy Plan, recently produced for the Greater Manchester Combined Authority by the Energy Systems Catapult, and with the UK Climate Investment Commission report recently produced by the Connected Places Catapult for the Core Cities, including Manchester.

5.0 Indirect emissions – tackling our consumption patterns

- 5.1 Whilst the key focus of the Update is on setting targets for the city's direct emissions, an update is being provided on recent work to better understand and address indirect emissions, including on research carried out by the University of Manchester's Sustainable Consumption Institute on consumption emissions and the recovery from Covid-19, and on food with support from the Manchester Food Board.

6.0 Adaptation and resilience to climate change

- 6.1 The Update will include an overview of research to move the city forwards on climate adaptation and resilience. This centres around work by Manchester Metropolitan University to develop a framework for understanding Manchester's vulnerability to climate risk, a vision for a climate ready city and a set of principles and actions for different stakeholders to implement.

7.0 Health and wellbeing

- 7.1 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.

8.0 Engagement with stakeholders

- 8.1 Engagement with stakeholders has been a core part of the process of co-designing the recommended actions in the Update. This has involved multiple departments within Manchester City Council including planning, city policy, transport, highways, estates, housing, and neighbourhoods; and wider partners including members of the Manchester Climate Change Partnership and its advisory groups; Manchester Housing Providers Partnership; the Strategic Housing Board; Manchester Food Board; ENWL; Transport for Greater Manchester, and Greater Manchester Combined Authority (GMCA) environment team.
- 8.2 For businesses, this has included extensive conversations with local business support organisations including the Chamber of Commerce, Business Growth Hub, BITC and Pro Mcr to access their knowledge and experience from working with thousands of companies across many sectors, and on a review of existing research on the barriers and drivers for action by Anthesis.
- 8.3 For residents, this has been informed by the Community Climate Assembly held in 2021 which included a series of workshops where residents discussed climate-related issues including transport, buildings, energy, food and fashion. This was supplemented by a small-scale survey of residents disseminated via the In Our Nature community engagement programme.
- 8.4 A final opportunity for residents and business to comment on the Update will be launched via social media later in July as part of this phase of review and comment with stakeholders.

9.0 Next steps

- 9.1 Comments and feedback will be collated from this Committee, MCCP members and wider city stakeholders, including residents and business and fed into the final publication, due for release in September.

10.0 Recommendations

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

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MANCHESTER CLIMATE CHANGE FRAMEWORK (2020-25)

2022 UPDATE

1. INTRODUCTION

Manchester's Climate Change Framework 2020-25 (the Framework)

The aim of the Framework¹ is that:

Manchester will play its full part in limiting the impacts of climate change and create a healthy, green, socially just city where everyone can thrive

Its vision is for:

A green city with walkable neighbourhoods, clean air, good jobs in successful businesses, warm homes and affordable energy, safe cycling routes and a public transport system that works for everyone.

The Framework used a science-based targets approach to set a zero carbon date of 2038 and a carbon budget for direct emissions of 15m tCO₂ for the period 2018-2100 for the city.

The Framework set four headline objectives:

- **Staying within our carbon budgets** – whilst this primarily relates to our direct emissions, it also recognises the need to tackle our indirect emissions (from the things we consume, and which generate greenhouse gases through their production, transportation and disposal) and aviation emissions.
- **Climate adaptation and resilience** – adapting the city's buildings, infrastructure and natural environment to the changing climate and increasing the climate resilience of our residents and organisations.
- **Health and wellbeing** – improving the health and wellbeing of everyone in Manchester through actions that also contribute to our objectives for CO₂ reduction and climate adaptation.
- **Inclusive, zero carbon and climate resilient economy** – ensuring we have an economy where everyone can play an active role in decarbonising and adapting the city to the changing climate.

It also identified six priority areas for action:

- Buildings (existing and new)
- Renewable energy
- Transport and flying
- Food
- The things we buy and throw away
- Green infrastructure and nature-based solutions

Manchester Climate Change Partnership (MCCP) was established in 2018 and brings together organisations from across the city's public, private, community, faith, health, culture, and academic sectors that share the common goal of helping Manchester to limit its greenhouse gas emissions and build resilience to a changing climate.

¹ [Manchester Climate Change Framework 2020-25 | Manchester Climate Change](#)

Its aim is to work with the Manchester Climate Change Agency (MCCA), Manchester communities and other relevant partners to ensure the city develops and successfully implements a climate change strategy aligned with the latest science and built on the views of city stakeholders.

Its objectives are to work with MCCA and other partners to: ensure the city maintains climate targets aligned to the Paris Agreement; has a robust strategy and implementation plan to the meet those targets; champions the delivery of effective climate action across sectors; engages and influences stakeholders and communities to act; provides evidence based reporting on the city's progress towards its climate targets and objectives; and helps to establish Manchester as a world class city for action on climate change.

In line with these objectives, Manchester's Climate Change Framework (and this 2022 Update) comes from Manchester's Climate Change Partnership, as produced by Manchester Climate Change Agency, and provides an independent, expert strategy, targets and plan for the city to play its full part in tackling the climate crisis in a just and equitable way.

Purpose of the 2022 Update

The 2022 Update to the Framework is not making any changes to the zero carbon date of 2038, nor to the carbon budget or its associated headline objectives or priority areas.

The purpose of the Update is to provide more granularity to the targets, and more specificity to the actions we need to take, in order that we may more successfully deliver on our ambition to become a thriving, zero carbon city.

Manchester is not currently on track to stay within its carbon budget. We have not been reducing our direct emissions by 13% per annum, and so urgent action must be taken.

The first milestone within the city's carbon budget is to achieve a 50% reduction in our direct emissions by 2025. Our current trajectory means we are at risk of missing this target.

A core intention of this Update, therefore, is to set out the **scale of action needed, at granular level, to reduce our direct emissions by 50%** to give us the best chance of staying within our overall carbon budget.

As such, the direct emissions from our buildings and ground transport, supported by an increase in renewable energy, are a major focus of the new granular targets in this Update. The evidence base for these new granular targets was provided by the SCATTER² model developed by Anthesis. An overview of this tool, including notes on assumptions made within the modelling data will be included as an appendix to the final publication of the Update.

Alongside these targets, the Update presents **detailed, specific recommended actions**, co-created with a wide range of stakeholders (more information in section 9), that focus on where there is agency to act, that is, where there is direct control to deliver, affect or influence the required level of emissions reductions.

Four categories have been identified for the recommended actions:

- **To be delivered locally / direct control lies in Manchester**
- **To work at city-region level / with Greater Manchester partners on**
- **To advocate for national government to do**
- **To do differently / opportunities to innovate**

² [SCATTER: Emissions Reporting Tool for Local Authorities - Anthesis Group](#)

The Update also shows the impact that our performance to date is having, and could have, on our overall carbon budget. It sets out a series of scenarios for the city – **different pathways of emissions reductions** – to show what needs to be done to get back on track by 2025, to stay within our carbon budget by 2038, and if we continue to decarbonise at the average rate we were achieving before the pandemic.

Finally, this Update also provides **details of new research and initiatives** that have been delivered in support of the Framework since it was published relating to the objectives for Adaption and Resilience, Health and Wellbeing, and Inclusive Economy. This is in line with commitments made in the Framework itself and with the objectives of the MCCP - to ensure the city has a robust strategy, targets, and plan, aligned to the latest science, policy and technology development, to enable to play its full part in tackling the climate crisis.

Key messages

Urgent action is needed to **reduce direct emissions** from our buildings and ground transport, and to increase renewable energy generation, if Manchester is to stay within its carbon budget.

Decisive action is needed to assess the city's vulnerability to climate change and to ensure we are adapting our infrastructure, buildings, economy, and residents to **be resilient to a changing climate**.

Everyone has a role to play – individuals, organisations, local and national government – and there is a great deal we have the power to achieve locally, if we **work collaboratively**.

The cost of transitioning to zero carbon cannot be borne solely by the public purse, so we need to find innovative ways to **unlock private finance investment**.

Moving to a low carbon and climate resilient city brings opportunities to **deliver wider strategic ambitions**, including improving people's health, reducing fuel and food poverty, creating new jobs and economic growth, and delivering a greener city for everyone.

Purpose of this report

This report contains detailed updates against the following headings that will form the main part of the 2022 Update to Manchester's Climate Change Framework (2020-25).

The information is being provided to a wide range of stakeholders **for review and comment** in July, before the final 2022 Update is published in September.

1. Introduction and overview
2. Staying within our carbon budget
 - a. Buildings
 - b. Renewable energy
 - c. Transport
 - d. Aviation
 - e. Indirect emissions
3. Adaptation and resilience
4. Health and wellbeing
5. Inclusive, zero carbon and climate resilient economy
6. Ensuring a just transition
7. Financing the transition
8. Engagement with stakeholders

Additional sections, for example a Foreword from MCCP and a range of appendices, will be included in the final publication; all graphs and charts will also be labelled at this time.

Next steps

Feedback on this report will be captured throughout July and the final version of the 2022 Update will be approved by MCCP and published in September.

MCCP will then work with MCCA and relevant partners to champion and instigate actions set out in the Update.

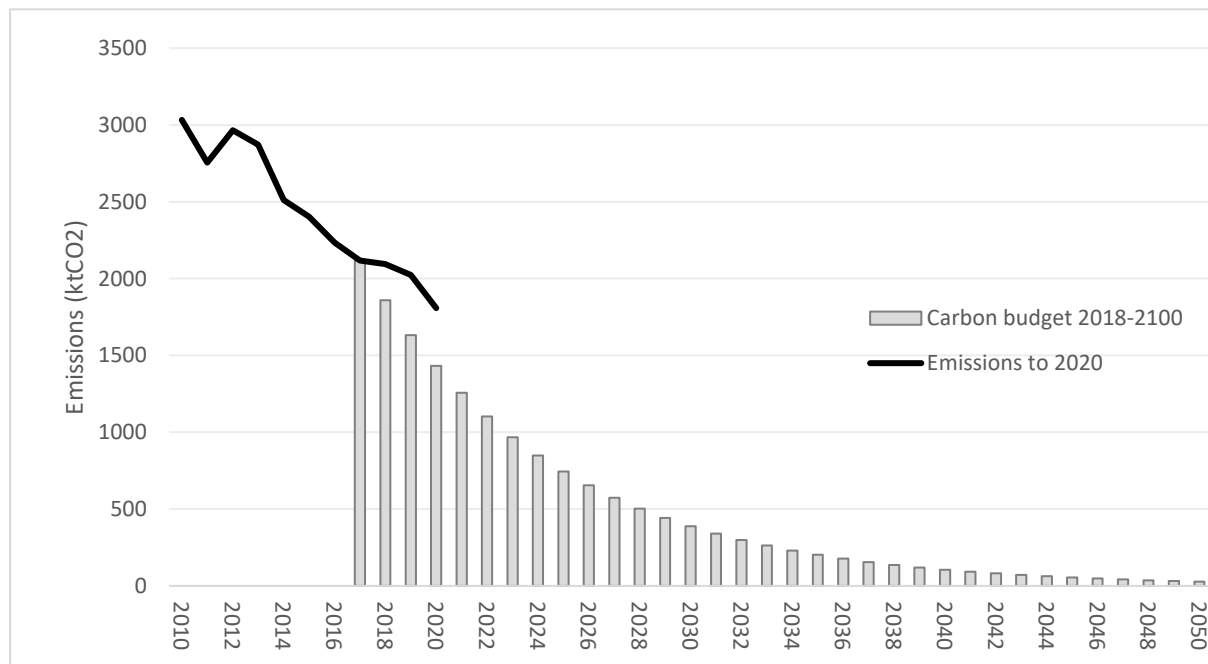
MCCP will also work with MCCA to identify methods and resources by which the more granular targets and recommended actions can be tracked and reported to the city, enabling a more detailed picture of progress to be presented. This will build on the existing Climate Change Annual Reports³ produced for the city that focus primarily on the overall CO2 emissions data generated by the UK government on an annual basis (with 2 year lag).

2. STAYING WITHIN OUR CARBON BUDGETS

Manchester’s Climate Change Framework (2020-2025) sets a science-based target for the city to reach net zero by 2038 and a carbon budget for direct emissions of 15m tCO2 for the period 2018-2100. **The first milestone in the Framework is for the city to reduce its direct emissions by 50% by 2025.**

Direct emissions are sometimes described as territorial emissions and include emissions from our buildings and from ground transport inside the city.

Graph XX shows Manchester’s carbon budget (vertical bars) and our actual emissions to 2020 (descending line). The gap between the line and the bars means we are not on track to stay within our carbon budget, as reported in the city’s Climate Change Annual reports.



³ [How are we doing? | Manchester Climate Change](#)

Scenarios for staying within our carbon budget

Graph XX sets out two scenarios for the city to remain within its carbon budget to illustrate the challenge we face, and the urgency and scale of action needed.

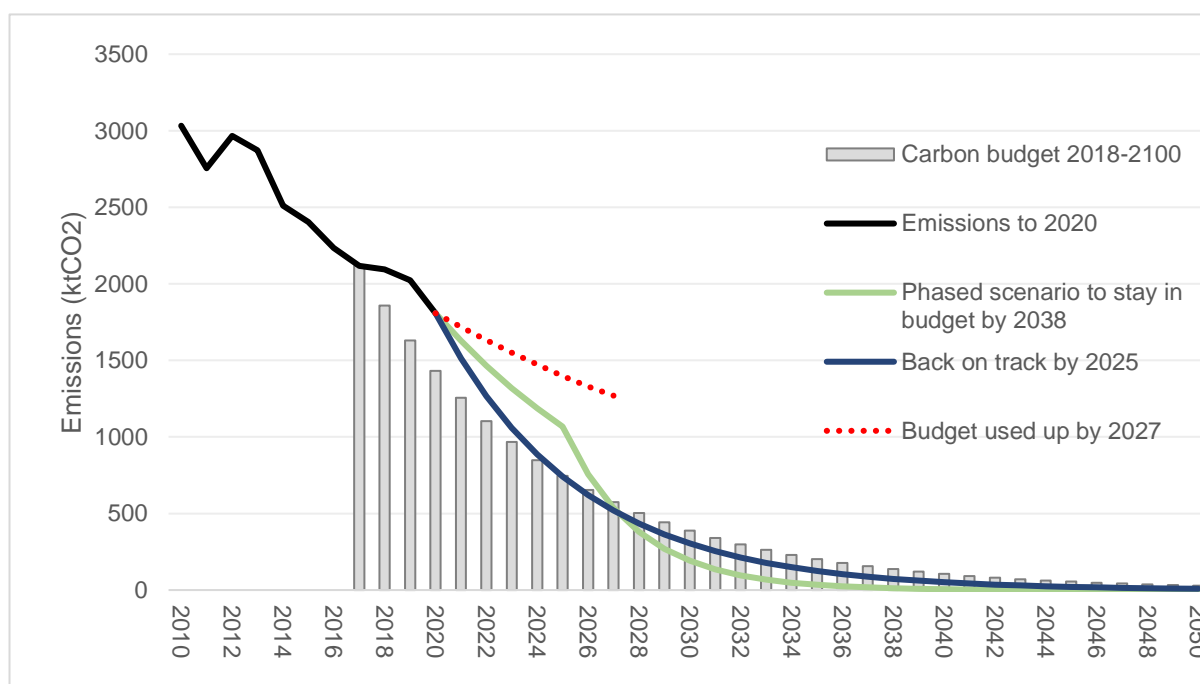
The **blue line** gets the city back on track by 2025.

It requires immediate, large-scale action and investment to deliver a 16% reduction in direct emissions per annum (pa) every year until 2038. This is a higher annual reduction than originally proposed (13%) and much higher than the average achieved pre-pandemic (just under 5% pa).

The **green line** ensures the city stays within its carbon budget to 2038 via a phased approach to emissions reductions.

The first phase to 2025 requires a 10% pa reduction in direct emissions, just below the levels achieved during lockdowns in 2020. This provides time for the city to develop the projects, financial investment and delivery systems needed in phase two. Phase two requires a much steeper reduction in direct emissions of 29% pa, every year to 2038.

The **red dotted line** shows we will use up our carbon budget by 2027 if we continue to reduce our direct emissions at just above the average rate the city was achieving pre pandemic (5% pa).



Scale of action required to reduce direct emissions by 50%

The following sections of this 2022 Update identify the **scale of action** needed to achieve a 50% reduction in our direct emissions, as defined by the SCATTER model.

They identify granular targets for new and existing buildings, ground transport⁴, and renewable energy generation.

⁴ Ground transport includes cars, vans, motorbikes, trams, and trains

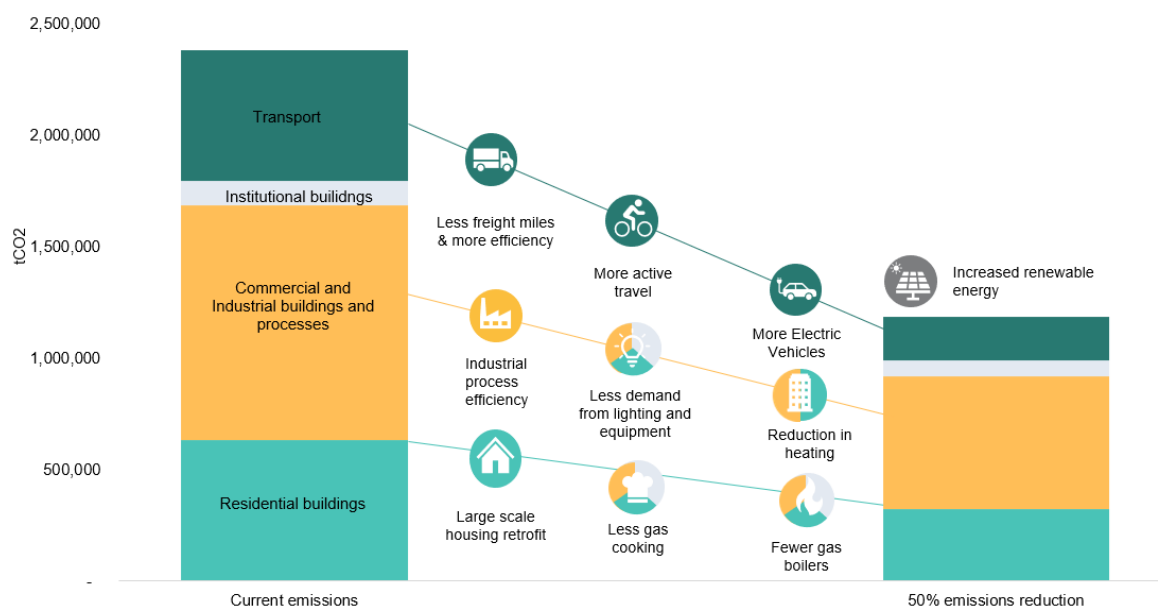
Graph XX summarises this visually.

The left hand column shows our current direct emissions and how they are split between ground transport and buildings.

Buildings are disaggregated into institutional⁵, commercial and industrial⁶, and domestic buildings.

The right hand column shows how each of these categories needs to shrink so that collectively the city's direct emissions reduce by 50%.

The 'zip wires' between the two columns highlight the key actions needed to achieve the required reduction in direct emissions.



In each of the following sections, the granular targets are accompanied by:

- Carbon savings - showing how each action contributes to the overall emissions reductions required.
- Indicative costs - including upfront capital investment and operational savings, along with potential funding streams.
- Challenges of implementation - based on research in the relevant sector and local consultations.
- Co-benefits - highlighting the positive impacts that climate action can deliver in other areas.
- Stakeholders, sectors, and relevant partners - identifying who can support change.
- Recommended actions – specific steps that can be taken locally, at city region level, and nationally to help achieve the targets. These have been developed in collaboration with a range of stakeholders (see section 9).

⁵ Institutional buildings include schools, hospitals, government offices, street lighting, and other public facilities

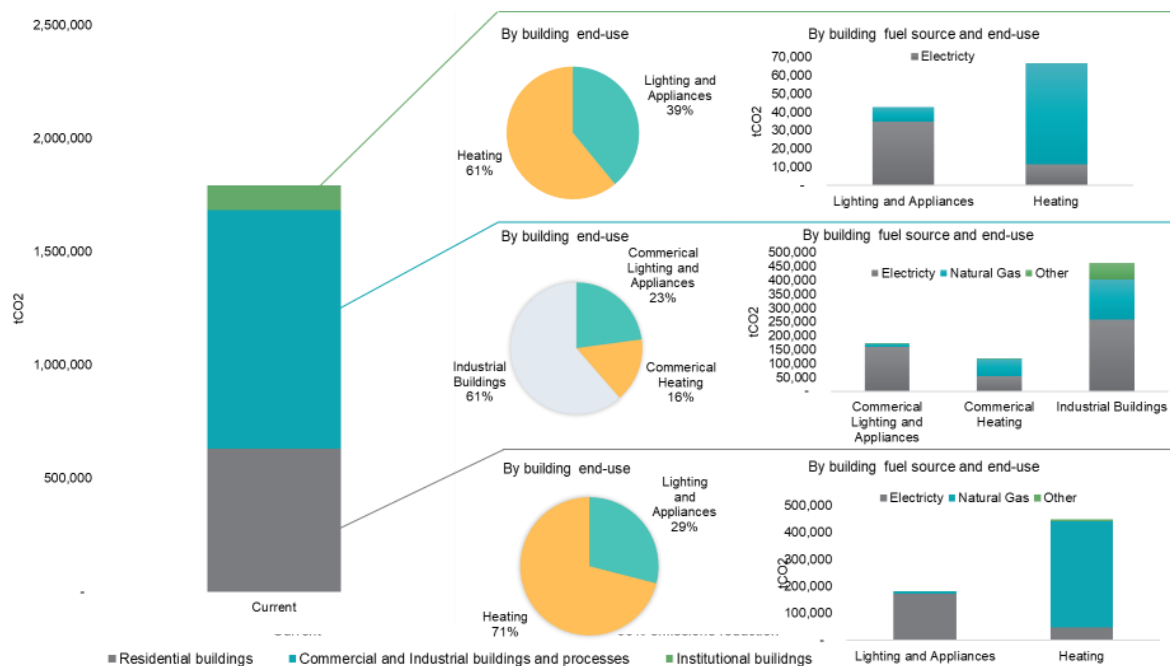
⁶ Commercial and industrial buildings include direct emissions from industrial processes

2a. Buildings

Current emissions

Modelling shows the built environment is responsible for 64% of Manchester's direct emissions.

Graph XX below shows how the emissions from Manchester's built environment are broken down by building type, end-use in the building, and by the mix of fuel.



Institutional buildings

Institutional buildings are public buildings such as schools, hospitals, government offices, highway street lighting, and other public facilities⁷.

- 6% of Manchester's total carbon emissions are from institutional buildings
 - 61% of institutional emissions are from space heating and hot water
 - 89% of heating is powered by gas and 11% by electricity
 - 39% of emissions are from lighting and appliances

Commercial buildings

Commercial premises are buildings that serve the public including restaurants, offices, hotels, retail stores.

85% of the office stock in Manchester is at risk of not meeting the Government's target for all non-domestic properties to have an EPC B rating by 2030⁸.

- 21% of Manchester's total carbon emissions are from commercial buildings
 - 48% of commercial emissions are from space heating and hot water
 - 67% of heating powered by gas and 32% by electricity
 - 52% of emissions are from lighting and appliances

⁷ Institutional buildings refers to emissions from energy used in public buildings such as schools, hospitals, government offices, highway street lighting, and other public facilities.

⁸ [Sustainability and Value in Regions JLL](#)

Industrial buildings

Industrial buildings include all types of manufacturing, processing and logistics operations and the data used here covers both the buildings and the operations contained within.

- 31% of Manchester's total carbon emissions are from industrial buildings
 - 61% of industrial emissions are associated with the buildings
 - 41% powered by gas, 42% electric and 17% petroleum products
 - 39% of industrial emissions come from industrial processes
 - 79% of that is from general manufacturing operations
 - 34% of emissions from industrial are fugitive emissions

Domestic buildings

Manchester has 228,786 domestic properties, housing 586,100 residents⁹. The mix of buildings is 39% flats, 34% terraced houses, 24% semi-detached, and 3% other.

- 22% of Manchester's total carbon emissions are from domestic buildings
 - 71% of domestic carbon emissions are from space heating and hot water
 - 92% of domestic heating is powered by gas, 6% electricity and the remaining by other sources (coal and petroleum)
 - 39% of domestic carbon emissions are from electric lighting and appliances

60% of homes in Manchester were built before 1965, 23% were built before 1919¹⁰. The UK Green Building Council (UKGBC) say 80% homes we will occupy in 2050 are already built¹¹.

The ownership of Manchester homes can be split into three categories: 33% owned by their occupants, 39% privately rented and 28% socially rented (7% above national average).

Over half (58%) of the 238,000 homes are energy inefficient with Energy Performance Rating (EPC) D – G¹² failing to deliver health and comfort to inhabitants¹³ and costly to heat.

In 2019, 20% of Manchester's households were fuel poor, more than the English average¹⁴. Each year, these residents would have to spend £223 more on their energy to keep warm than a household that is not in fuel poverty¹⁵

In order to reach zero carbon

- We need to **retrofit existing building stock at scale** – Our homes, institutions and commercial premises need to be better insulated, switch off gas for heating and use more efficient appliances; this will reduce emissions and bring co-benefits such as helping to create warm dry homes that address fuel poverty and health inequality.
- We need to ensure **new buildings** are constructed to extremely high standards of energy efficiency performance and do not add to our emissions or the future cost of decarbonization. Manchester is set to build over 56,000 new homes between 2021-2037¹⁶.

⁹ https://www.manchester.gov.uk/info/200088/statistics_and_intelligence/7611/intelligence_hub and https://www.manchester.gov.uk/info/200088/statistics_and_intelligence/438/population

¹⁰ [Council Tax: stock of properties Statistical Summary - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/council-tax-stock-of-properties-statistical-summary)

¹¹ [Climate change - UKGBC - UK Green Building Council](https://www.ukgbc.org.uk/)

¹² [Energy Performance of Buildings Certificates \(EPC\) in England and Wales 2008 to March 2022](https://www.theade.co.uk/assets/docs/resources/Energising_Greater_Manchester_050718v2.pdf)

¹³ https://www.theade.co.uk/assets/docs/resources/Energising_Greater_Manchester_050718v2.pdf

¹⁴ <https://www.gov.uk/government/statistics/sub-regional-fuel-poverty-2021>

¹⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1056777/annual-fuel-poverty-statistics-lilee-report-2022-2020-data.pdf

¹⁶ <https://www.greatermanchester-ca.gov.uk/what-we-do/planning-and-housing/places-for-everyone/>

Scale of action needed to reduce emissions by 50%:

Modelling by SCATTER indicates the following scale of action is needed.

Domestic buildings

- Over 84,000 homes to be retrofitted¹⁷
- 21% reduction in energy demand from domestic heating and hot water
- 31% reduction in energy demand from domestic appliances and lighting
- 39% of homes to switch off gas heating and install electric heat pumps

Commercial buildings

- 61% reduction in overall energy demand from commercial premises, including
 - 17% reduction for heating, cooling and hot water
 - 33% reduction in gas use for space heating, cooling, and hot water
 - 74% reduction for lighting, appliances, equipment and catering

Institutional buildings

- 45% reduction in overall energy demand from institutional buildings
 - 37% reduction for heating, cooling and hot water
 - 63% reduction for lighting, appliances, equipment and catering

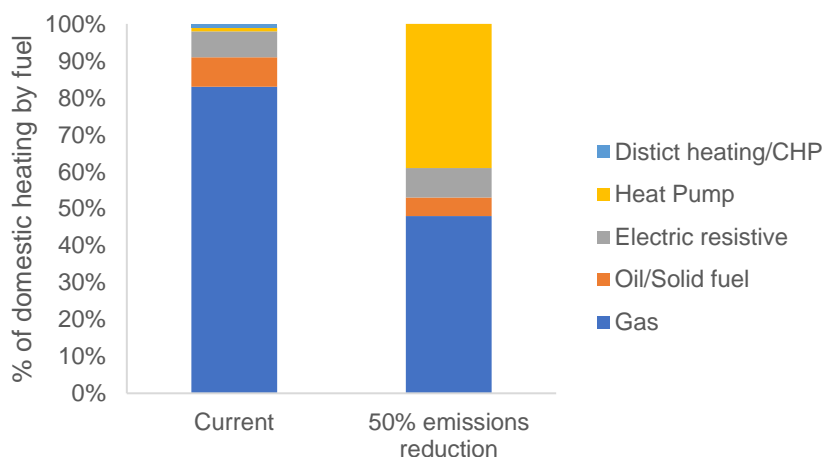
Industrial buildings

- 58% reduction in overall energy demand from industrial buildings and processes
 - 55% reduction for buildings and facilities including heating, cooling, hot water, lighting, and appliances
 - 63% reduction from industrial processes¹⁸

New buildings

- 100% of new homes must meet Passivhaus standard at minimum

Graph XX shows how the heating of our homes needs to change to deliver a 50% reduction in emissions; the key message being we need to shift off gas to electrified heating, primarily via adoptions of air source or ground source heat pumps.



¹⁷ <https://scattercities.com/pages/pathways-methodology/> and Appendix XX https://www.energyrating.org.uk/energy_performance_certificate1.html

¹⁸ Fugitive emissions are excluded from this data

CO2 savings

The expected CO2 savings from delivering all the above actions is **3,402k tCO₂e**

- 1,375k tCO₂e – Domestic heating and hot water
- 379k tCO₂e – Non-domestic heating and hot water
- 245k tCO₂e – Domestic lighting, appliances, and cooking
- 322k tCO₂e – Non-domestic lighting, appliances, equipment and catering
- 828k tCO₂e – Industrial buildings and facilities
- 253k tCO₂e – Industrial process efficiency

Costs and savings

The estimated capital cost of delivering the above actions is **£1.2bn.**

The cumulative operational cost savings are estimated to be **£31m.**

It should be noted that the upfront cost of retrofitting buildings and the savings accrued from increased energy efficiency are often incurred by different parties.

Potential Funding sources:

There are a range of funding sources that can support building decarbonisation:

- Public Sector Decarbonisation Scheme
- Green Homes Grant Local Authority Delivery Scheme
- Affordable Warmth Scheme (winter payments scheme)
- Home upgrade / boiler upgrade grants
- The Energy Company Obligation (ECO) scheme
- Domestic & Non-Domestic Renewable Heat Incentives
- BEIS Heat Networks Investment Programme
- Green Heat Network Fund (GHNF) Transition Scheme
- Social Housing Decarbonisation Fund
- Public Works Loan Board

More work is needed to develop new and innovative business models that can unlock private finance at scale (see section 7).

Other policy drivers and enablers

- Manchester's Local Area Energy Plan echoes the need for building retrofit at scale, targeting 100,000 homes to be retrofit and 180,000 heat pumps to be deployed by 2038¹⁹
- Manchester's Strategic Housing Plan commits that 50% of homes built by 2025 will be low or zero carbon, at least a third of the city's 70,000 social homes will be retrofitted to low carbon standards by 2032, and a retrofit programme will be developed for all the houses in the city²⁰
- By 2030, Greater Manchester Combined Authority's (GMCA) 'retrofitGM'²¹ headline objective is to have reached an average of 61,000 domestic retrofits a year, and all

¹⁹ The Manchester LAEP is being published on the Green City Region website in July 2022

²⁰ [New Housing Strategy looks to deliver 10,000 new affordable homes in the next 10 years | Manchester City Council](#)

²¹ <https://www.greatermanchester-ca.gov.uk/media/6018/retrofitgm.pdf>

non-domestic buildings reaching an average of Energy Performance Certificate rating C or Display Energy Certificate B.

- All Greater Manchester Local Authorities to obtain an average DEC rating of D or better by 2024, and C or better by 2030, for their buildings where economically viable²²
- Manchester's Climate Change Partnership developed a Zero Carbon New Build Roadmap²³, led by the development community, setting targets for operational and embodied carbon emissions, in line with the objective to shift all new builds to zero carbon from 2023 articulated in the city's Climate Change Framework 2020-25
- GMCA have a goal for all new developments to be net zero carbon by 2028²⁴
- UKGBC²⁵ have set out detailed standards for operational and embodied carbon limits, including pathways to reduce this over time, to transition the construction sector to zero carbon
- From April 2018, homes that are privately rented are subject to minimum energy efficiency standards and those with F and G ratings will have to improve^{26,27}.
- The Committee on Climate Change (CCC), say that 19 million heat pumps need to be installed by 2050²⁸ Heat pumps are a well-established technology that have already seen widespread deployment across much of Europe²⁹
- The cost of retrofitting a new build is 3-5 times higher³⁰ than ensuring it meets stretching zero carbon standards at the point of design and construction
- The cost uplift of building to zero carbon standards are calculated as 6.2% for office and 3.5% for residential compared to the baseline scenarios³¹. This cost uplift can be considered feasible today given these costs will likely be offset by the value benefits, including increased rental premiums, lower tenancy void periods, lower offsetting costs, and lower operating/ lifecycle costs³².
- Results from UKGBC report³³ demonstrate the importance of including offset payments within the capital cost appraisal for new buildings. Carbon prices will only increase over the next decade, and this will impact the absolute values of buildings.

²² <https://www.skillsforgrowthsme.co.uk/news/posts/2021/september/retrofit-powering-the-future-of-greater-manchester-sustainability-agenda/>

²³ <https://www.manchesterclimate.com/sites/default/files/Roadmap%20to%20Net%20Zero%20Carbon%20-%20Report.pdf>

²⁴ <https://www.greatermanchester-ca.gov.uk/news/greater-manchester-calls-on-government-not-to-cap-climate-ambition-for-new-homes/>

²⁵ <https://www.ukgbc.org/wp-content/uploads/2021/11/UKGBC-Whole-Life-Carbon-Roadmap-A-Pathway-to-Net-Zero.pdf>

²⁶ <https://scattercities.com/pages/pathways-methodology/>

²⁷ <https://www.gov.uk/guidance/domestic-private-rented-property-minimum-energy-efficiency-standard-landlord-guidance>

²⁸ <https://www.theccc.org.uk/wp-content/uploads/2019/05/Net-Zero-Technical-report-CCC.pdf>

²⁹ https://www.ehpa.org/fileadmin/red/09_Events/2019_Events/Market_and_Statistic_Webinar_2019/20190624_-_EHPA_Webinar_outlook_2019_-_Thomas_Nowak.pdf

³⁰ <https://www.theccc.org.uk/wp-content/uploads/2019/07/The-costs-and-benefits-of-tighter-standards-for-new-buildings-Currie-Brown-and-AECOM.pdf>

³¹ https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2020/09/05144623/Executive-Summary_-_Building-the-Case-for-Net-Zero.pdf

³² <https://www.jll.co.uk/content/dam/jll-com/documents/pdf/research/Sustainability%20and%20Value%20in%20the%20Regions%20-%20Final%20Report.pdf>

³³ https://ukgbc.s3.eu-west-2.amazonaws.com/wp-content/uploads/2020/09/05144621/Building-the-Case-for-Net-Zero_UKGBC.pdf

- Evidence demonstrates that there is significant energy efficiency potential within non-domestic buildings. Mandatory energy disclosure as part of performance-based rating systems across multiple sectors is needed to stimulate markets to realise this potential³⁴.

Challenges

- National and local policy is not currently driving change at the pace and scale required, either in retrofit or new build standards.
- There are competing priorities for policy makers, for example balancing the demand for more housing with the need to increase zero carbon standards in new builds.
- The capital cost of retrofit, lack of grant funding and an under-developed supply chain are discouraging property owners to retrofit.
- There are limited market signals to stimulate supply chain growth and the provision of skills development, further restricting capacity for action at scale.
- Immature industry standards for new build and retrofit make it difficult to drive consistent uptake of zero carbon measures or reporting.
- Absence of standardised energy efficiency disclosure means progress cannot be tracked at city scale.
- The UK currently has one of the highest ratios of gas to electricity across Europe, sometimes known as a ‘spark gap’, with the price of electricity being close to four times that of gas per kWh³⁵. This is in a large part due to the taxation placed on electricity above that of gas. According to Ofgem, the environmental and social obligation costs represent 20.44% of an electricity bill,³⁶ whereas for gas the same proportion is 1.6%.³⁷

Co-Benefits of action - Links to other headline objectives

Adaptation and resilience

- Retrofitting homes helps to ensure residents are better placed to withstand heat waves or excessively cold spells.
- Energy efficient appliances, including dishwashers and washing machines, can also minimise water use therefore help mitigate against water scarcity.
- Increasing the energy efficiency of housing stock can reduce overall energy security concerns and help build local energy resilience.
- Zero carbon new builds often incorporate nature-based solutions to climate adaptation in their surrounding areas and so build resilience to a changing climate.

Health and wellbeing

- Fuel poverty can be addressed by increasing the energy efficiency of a dwelling to EPC C which would save an average of £223 per year on fuel costs³⁸.

³⁴ <https://www.ukgbc.org/wp-content/uploads/2021/11/UKGBC-Whole-Life-Carbon-Roadmap-A-Pathway-to-Net-Zero.pdf>

³⁵ https://www.ehpa.org/fileadmin/red/09_Events/2019_Events/Market_and_Statistic_Webinar_2019/20190624_-_EHPA_Webinar_outlook_2019_-_Thomas_Nowak.pdf

³⁶ <https://www.ofgem.gov.uk/data-portal/breakdown-electricity-bill>

³⁷ <https://www.ofgem.gov.uk/data-portal/breakdown-gas-bill>

³⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1056777/annual-fuel-poverty-statistics-lilee-report-2022-2020-data.pdf

- Retrofitting measures create warmer, drier homes and thus impact positively on the health and wellbeing of their residents.
- An improved indoor climate can create health benefits, such as fewer diseases and reduced mortality.
- High energy bills can create financial stress and so reduced energy costs can help the prevention of mental disorders (e.g., anxiety, depression).
- Investing £1 in keeping homes warm is estimated to reduce direct health costs by £0.42³⁹.

Inclusive, zero carbon and resilient economy

- Upgrading the energy efficiency of Manchester's homes will present a huge opportunity to boost the local economy⁴⁰.
- Growing the market for green products and services creates opportunities for local companies and local people to diversify and develop new skills and new businesses.
- 9,800 jobs could be supported in the Northwest⁴¹ by an energy efficiency programme in the UK.
- Ambitious retrofit programmes in the public sector and social housing sector, build demand for skills and supply chain growth by providing a stable pipeline to enable rapid expansion of market delivery capability.

Examples of good practice

- Many institutional buildings, including those of Manchester City Council (MCC), the city's universities and its health sector, have committed to achieve zero carbon by 2038 and have action plans in place⁴².
- Over £20m is being deployed by MCC and other public institutions across Manchester to retrofit their built estate (Public Sector Decarbonisation Scheme)⁴³
- 'Your Home Better' has been launched in Greater Manchester to support housing retrofit, initially targeting owner occupiers that are able to pay to help create certainty for the retrofit market to grow into.
- Since 2009, the percentage of Manchester's non-domestic buildings with an EPC rating between A-C has increased from 34% to 60%.
- MCCP worked collaboratively across the city to publish a zero carbon roadmap for new buildings⁴⁴
- Manchester has one of the highest proportions of existing BREEAM 'Good to Outstanding' office stock⁴⁵, however there are currently very few net-zero offices disclosed in the city that meet the UKGBC standard for net zero⁴⁶.

³⁹ https://www.nea.org.uk/wp-content/uploads/2021/11/0000_NEA_Fuel-Poverty-Report-and-Exec-Summary_v2.pdf

⁴⁰ https://www.theade.co.uk/assets/docs/resources/Energising_Greater_Manchester_050718v2.pdf

⁴¹ <https://friendsoftheearth.uk/sites/default/files/downloads/making-better-job-it-full-report-75291.pdf>

⁴² <https://www.manchesterclimate.com/sites/default/files/MCCA%20Annual%20Report%202021%20Final.pdf>

⁴³ https://www.manchester.gov.uk/news/article/9001/19m_energy_efficiency_scheme_almost_complete

⁴⁴ <https://www.manchesterclimate.com/sites/default/files/Roadmap%20to%20Net%20Zero%20Carbon%20-%20Report.pdf>

⁴⁵ <https://www.greenbooklive.com/index.js.p>

⁴⁶ <https://www.ukgbc.org/ukgbc-work/net-zero-carbon-buildings-verification/>

Recommended Actions

Action needs to be taken by government at local and national level, by institutions and organisations in the private and voluntary sector, and by residents and communities across the city.

These recommended actions have been co-designed with stakeholders across the city to help enable everyone to play their full part in tackling the climate crisis and meeting the ambitious targets that Manchester has adopted.

To be delivered locally / direct control lies in Manchester:

(New build)

- Buildings 1. **Property developers**, and those who commission new buildings in the public and private sector, to apply the highest zero carbon standards to new developments from 2023.
- Buildings 2. Manchester Climate Change Partnership (MCCP) to engage the developer community in progressing the sector's understanding of the **financial viability** considerations of stretching whole-life carbon standards.
- Buildings 3. Manchester City Council (MCC) to make full use of its existing planning powers, including the Local Plan, to regulate for **whole-life carbon emissions standards** in all new buildings, covering operational and embodied carbon in line with targets set out in Manchester's Zero Carbon New Build Roadmap, the UKGBC whole life carbon roadmap⁴⁷, and the emerging Future Buildings Standard, from 2023 (going faster than UK) and increasing over time.
- Buildings 4. MCC to require a percentage of energy used on site by new builds to be from **renewable energy** or low carbon sources in the locality.
- Buildings 5. MCC to use planning policies to include **carbon offset levies** for developments that do not meet specified zero-carbon requirements.

(Retrofit)

- Buildings 6. **Public sector** organisations to have retrofit programmes in place to reduce the operational emissions from their buildings in line with Manchester's carbon budget, and to disclose energy efficiency performance data.
- Buildings 7. **Private sector** organisations to retrofit their commercial or industrial premises in line with Manchester's carbon budget, and to disclose energy efficiency performance data.
- Buildings 8. MCC to develop a **Housing Retrofit Strategy by 2023** that covers all domestic housing whether owner occupied, private rented or social housing.
- Buildings 9. **Social housing providers** to retrofit at least one third of their 70,000 homes by 2032, alongside reducing energy use across their estates so that all homes achieve an EPC rating of B or above.
- Buildings 10. **Private rented sector (PRS) landlords** to allocate funds to assess the energy efficiency of their properties and develop an improvement plan to implement MEES regulations across all tenures, ensuring all Manchester's homes meet EPC C (at a minimum).

⁴⁷ www.ukgbc.org/wp-content/uploads/2021/11/UKGBC-Whole-Life-Carbon-Roadmap-A-Pathway-to-Net-Zero.pdf

- Buildings 11. MCC to **increase capacity for enforcement** of Minimum Energy Efficiency Standards (MEES) in the private rented sector
- Buildings 12. MCC to ensure planning and environmental health teams are fully conversant with low carbon retrofit measures, including air source heat pumps and external wall insulation, to **minimise barriers to their uptake**.
- Buildings 13. MCCP to support **engagement with Manchester residents** to maximise uptake of retrofit actions, including through 'Your Home Better'.
- Buildings 14. **Commercial landlords** to ensure energy monitoring and management processes are in place across their portfolio and to work transparently with tenants to minimise use, with requirements clearly set out in green leases.

To work at city-region level / with Greater Manchester partners on:

(Retrofit)

- Buildings 15. ENWL⁴⁸ to work with local partners to drive **uptake of solar PV** in domestic and non-domestic properties.
- Buildings 16. GMCA to fund dedicated support to the **green technology sector** to maximise economic benefits and job growth to Manchester.
- Buildings 17. Skills providers to develop and roll out **regional upskilling** programmes for retrofit to ensure Manchester residents can benefit from the growth of this emerging market.
- Buildings 18. Private sector organisations to incentivise and support green **apprenticeships**, building the local skills for net zero.

To advocate for national government to do:

(New build)

- Buildings 19. Use national planning policy to better support net zero transition by adopting **whole life carbon standards for all new developments**, ensuring a level playing field for all locations.
- Buildings 20. Adopt recommendations set out in UKGBC Roadmap to ensure building regulations require new buildings to adequately **predict or represent the actual performance** of operational carbon.
- Buildings 21. Update the National Calculation Methodology (NCM, as underpinned by SAP) and the EPC methodology to create a fit-for-purpose **predictive methodology** for energy performance of dwellings, that better reflects in-use energy⁴⁹
- Buildings 22. Introduce a phased approach to mandatory energy efficiency **data disclosure** through performance-based rating schemes for existing non-domestic buildings in the public and private sector.

(Retrofit)

- Buildings 23. Adopt a **National Retrofit Strategy**⁵⁰ and coordinate through a Retrofit Delivery Authority⁵¹ to set out and deliver a national homes upgrade

⁴⁸ Electricity North West Ltd

⁴⁹ <https://www.ukgbc.org/wp-content/uploads/2021/11/UKGBC-Whole-Life-Carbon-Roadmap-A-Pathway-to-Net-Zero.pdf>

⁵⁰ www.ukgbc.org/wp-content/uploads/2021/11/UKGBC-Whole-Life-Carbon-Roadmap-A-Pathway-to-Net-Zero.pdf

⁵¹ <https://www.constructionleadershipcouncil.co.uk/wp-content/uploads/2020/12/CLC-National-Retrofit-Strategy-final-for-consultation.pdf>

programme, fully coordinated with local government, industry, and relevant stakeholders.

- Buildings 24. Introduce **MEES on all tenures** at point of sale, including a retrofit assessment, with incremental increases over time from 2025, including funding to support enforcement.
- Buildings 25. More **evenly distribute the environmental levies** placed on gas and electricity to incentivise the electrification of heat and encourage low carbon heating uptake⁵².
- Buildings 26. **Reform EPC** to disincentive gas usage and act as a meaningful regulatory driver in reducing emissions.
- Buildings 27. Implement a standardised **verification** and accreditation scheme for net zero retrofit.
- Buildings 28. Tighten building regulations so that works to **existing dwellings** give clear triggers for energy improvement requirements.
- Buildings 29. Introduce and clearly signpost a **cut-off date** of 2030 for the sale of gas and oil boilers.
- Buildings 30. **Develop a ‘skills card’** as a quality assurance scheme for heat pump installers, similar to the Gas Safe scheme.
- Buildings 31. Deliver **upskilling campaigns** for relevant industry sectors (e.g., gas heating engineers) to remove barriers to the uptake of electrified and low carbon space heating, including heat pumps.
- Buildings 32. Introduce **variable stamp duty rates** that are adjusted in line with the energy performance of buildings.
- Buildings 33. **Remove VAT on refurbishment work** where energy performance targets are met.
- Buildings 34. Introduce **direct grants for low-income** households to support retrofit.
- Buildings 35. **Banking sector** to develop attractive financial offers for homeowners to overcome the high up-front capital costs of deep retrofit, e.g., low interest mortgage extensions and loans where performance targets are met.
- Buildings 36. **Institutional investors** based in the UK to disclose the operational energy and carbon performance of property portfolios (at asset level) in annual reporting.

To do differently / opportunities to innovate:

- Buildings 37. Property developers to deploy **digital twin technology** to increase our understanding of the financial viability of applying zero carbon standards to new builds.
- Buildings 38. MCC to enable **accelerated planning approval** for early adopters of future energy efficiency levels (with disclosure of performance on completion).
- Buildings 39. Developers to support **city-level second-hand materials markets** to drive circularity and material re-use in built environment sector.
- Buildings 40. Local areas to develop a **place-based approach** to domestic housing decarbonisation that bundles multiple low carbon measures together, e.g.,

⁵² <https://www.heatpumps.org.uk/wp-content/uploads/2019/11/A-Roadmap-for-the-Role-of-Heat-Pumps.pdf>

- insulation, solar PV, and battery storage, with innovative financial models to attract private finance in to provide the upfront capital investment required.
- Buildings 41. Social housing providers to explore opportunities for **collaborative procurement** of retrofit technologies (e.g., heat pumps) to obtain economies of scale and provide the retrofit market with a stable and sizable pipeline.
- Buildings 42. Financial institutions and lenders to increase the availability of **green mortgages** with reduced rates for the most efficient homes to incentivise housing retrofit.
- Buildings 43. Electrical product manufacturers to increase engagement with the Internet of Things (IoT), to enable greater uptake of **smart controls in homes**, helping to balance the grid and lower consumer fuel bills.
- Buildings 44. Commercial building owners/managers to use **digital modelling tools** to simulate and evaluate retrofit options for Heating, Ventilation and Air Conditioning (HVAC) systems; significant upskilling will be required to mainstream these skills across the building services industry⁵³.
- Buildings 45. Commercial property owners to **disclose energy efficiency performance data** to fixed standards such as NABERS, UKGBC, or BREEAM to enable benchmarking of building performance and drive retrofit across the sector.

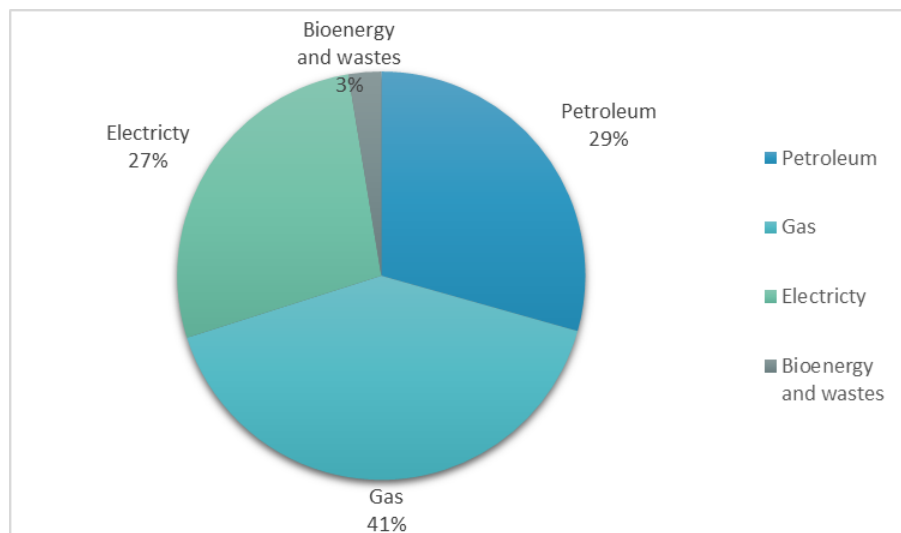
2b. Renewable energy

Current energy mix

Graph XX shows Manchester’s current energy mix. It is based on data from the UK government’s Department of Business, Energy, and Industrial Strategy (BEIS) for 2019 (there is always a lag in energy and emissions data), and covers all activities that use energy: transport, buildings, and industry.

It shows we remain heavily reliant on gas, primarily for heating, and on petrol/diesel for road transport.

As we shift away from fossil fuels to a low carbon future, our demand for electricity will increase. In Manchester it is projected to almost double in the next 15 years⁵⁴.



To support this, we need to create a step-change in the scale of renewable energy that we generate.

⁵³ <https://www.hvnplus.co.uk/news/much-more-to-do-to-upskill-sector-for-heat-pumps-experts-warn-28-05-2021/>

⁵⁴ <https://www.nationalgrideso.com/document/246851/download>

Renewable energy generation

39.3% of UK electricity is now generated by renewables sources⁵⁵. Manchester contributes only 0.06% of this⁶. Generation of electricity by solar PV in the UK has grown rapidly since 2010, increasing capacity from 95 MW to 13,800 MW at the end of 2021.

The production of renewable energy within Manchester's boundaries is below the national average at 2.7%⁵⁶ of demand. According to BEIS data for 2019, the 31 MW⁵⁷ generated in Manchester is broken down by technology type as follows:

- 22 MW from 6,800 solar PV installations
- 4.5 MW from 2 x anaerobic digestors
- 5.1 MW from 3 x plant biomass

In order to reach zero carbon

We need to see a **rapid shift away from fossil fuels** to electricity for heating, transport, and industry. To support this, we need to **increase renewable energy generation**, both locally and at national level.

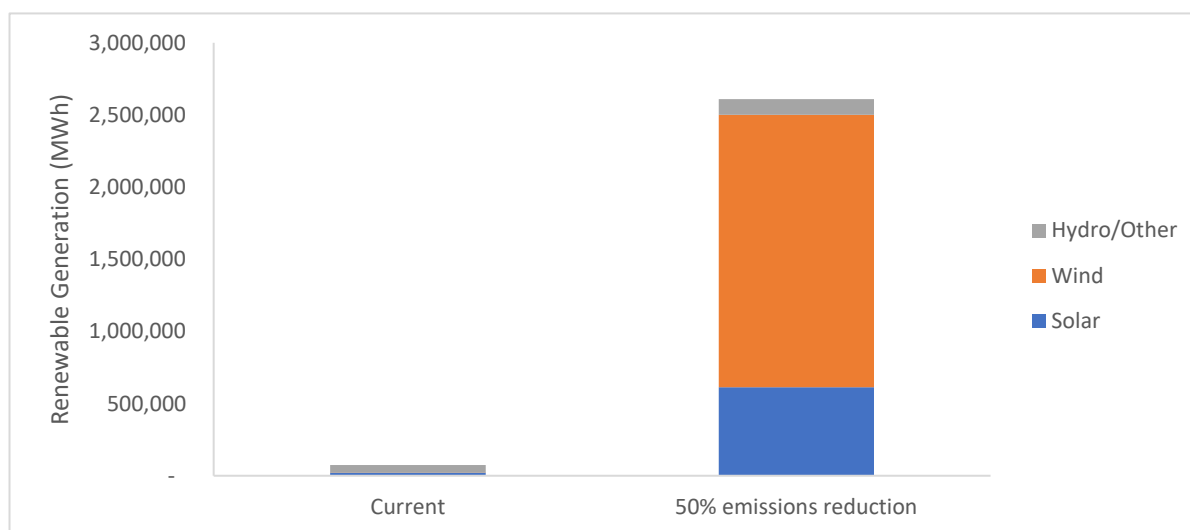
This needs to be coupled with a **step change in energy efficiency** across all sectors, and increased adoption of **smart grid** technologies and **local storage** to balance energy supply and demand for maximum efficiency.

Scale of action needed to reduce emissions by 50%:

Modelling by SCATTER indicates the following scale of action is needed.

- Manchester needs access to 1,534 MW of energy from renewable sources, a 35-fold increase from current levels.
- 35% of our renewable energy target can be produced within Manchester, predominantly from small-scale solar PV⁵⁸.

Graph XX below shows the scale of growth in renewable energy production needed.



⁵⁵https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1064765/Energy_Trends_March_2022.pdf

⁵⁶https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1030065/Renewable_electricity_by_local_authority_2014_to_2020_rev.xlsx

⁵⁷https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1030065/Renewable_electricity_by_local_authority_2014_to_2020_rev.xlsx

⁵⁸ Manchester Local Area Energy Plan* *link to be updated upon publication*

Increase in solar photovoltaic (PV) capacity

- 596 MW local, small-scale PV
- 600 MW large PV

Increase wind capacity

- 15 MW local onshore wind
- 9 MW large-scale onshore wind
- 312 MW from large-scale offshore wind

Other renewable technologies

- 0.3 MW small-scale hydroelectric

CO2 savings

If all these actions are achieved, there is a potential to cumulatively save **3,402k tCO₂e**

Costs and savings

The upfront capital cost of delivering this change is estimated to be **£644m**

- £345m – small-scale solar technology
- £12m – large-scale solar technology
- £167m – large-scale onshore wind
- £116m – large-scale offshore wind
- £3m – hydroelectric energy

The cumulative operational cost savings are estimated to be **£352m**

- £71m – small-scale solar technology
- £8m – large-scale solar technology
- £103m – large-scale onshore wind
- £169m – large-scale offshore wind
- £2m – hydroelectric energy

It should be noted that the upfront cost of generating renewable energy and the savings accrued are often incurred by different parties.

Potential Funding Sources:

- Smart Export Guarantee
- Electricity North West Powering our Communities Fund

More work is needed to develop new and innovative business models that can unlock private finance at scale (see section 7).

Other policy drivers and enablers

- Manchester Local Area Energy Plan.
- GMCA 5 year environment plan and Go Neutral⁵⁹ programme.
- ENWL and Cadent Roadmap to 2050⁶⁰.

⁵⁹ [Blog - Go Neutral Smart Energy Programme | GM Green City](#)

⁶⁰ <https://www.enwl.co.uk/about-us/regulatory-information/our-business-plan-2023-2028/>

- National Energy Security Strategy⁶¹.
- Ofgem consultation on Local Energy Markets and Strategic Innovation Fund⁶².

Challenges

- Lack of space for large scale solar or onshore wind in Manchester.
- Deployment of small-scale solar PV on commercial properties can increase business rates and disincentivise uptake.
- Development of smart, local area energy markets needs collaborative innovation and investment.
- Battery technologies are yet to catch up with solar PV in terms of efficiencies and price point.

Examples of good practice

- ENWL's Powering Our Communities Fund⁶³
- MCC's large scale solar investment⁶⁴
- Smart energy cities concept⁶⁵ as learnt through Manchester's 'Triangulum' project⁶⁶

Co-Benefits of action - Links to other headline objectives

Adaptation and resilience

- Increasing local renewable energy supply provides energy security and resilience against future fossil fuel price increases.
- As the production of renewable energy (solar and wind power) requires negligible amounts of water, it does not contribute to water scarcity concerns.

Health and wellbeing

- Improved energy affordability can deliver health benefits by reducing the risks of illness due to living in inadequately heated homes.
- Renewable energy helps to reduce air pollution.

Inclusive, zero carbon and sustainable economy

- In the UK, low carbon and renewable energy activities generated £46.7bn⁶⁷ turnover in 2018, directly employing 224,800 people (full-time equivalents).
- In Manchester, energy efficiency, low carbon heat and electricity support and estimated 6,175 jobs across manufacturing, construction and retrofit⁶⁸.

⁶¹ <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy>

⁶² <https://www.ofgem.gov.uk/publications/ofgem-launches-review-local-energy-system-operation>

⁶³ <https://www.enwl.co.uk/go-net-zero/community-and-local-energy/what-is-community-and-local-energy/case-studies/>

⁶⁴ https://www.manchester.gov.uk/news/article/8927/solar_farm_plan_to_cut_council_greenhouse_gas_emissions_advances

⁶⁵ <https://www.iea.org/reports/empowering-cities-for-a-net-zero-future>

⁶⁶ <https://www.manchesterclimate.com/content/triangulum-project>

⁶⁷ <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalesimates/2018>

⁶⁸ <https://democracy.greatermanchester-ca.gov.uk/documents/s19616/DRAFT%20LSR%20update%20Feb22%20v9%20280222.pdf>

Recommended Actions

Action needs to be taken by government at local and national level, by institutions and organisations in the private and voluntary sector, and by residents and communities across the city.

These recommended actions have been co-designed with stakeholders across the city to help enable everyone to play their full part in tackling the climate crisis and meeting the ambitious targets that Manchester has adopted.

To be delivered locally / direct control lies in Manchester:

- Energy 1. ENWL to work alongside Manchester’s public and private sectors and communities to **maximise investment in the city’s electricity network** to enable an increase in local renewable energy generation and a rapid electrification of heating and transport.
- Energy 2. Manchester City Council (MCC) to **set stretching requirements through the Local Plan** to increase renewable energy generation, for example:
- Require a percentage of energy used on site by new builds to be from renewable energy or low carbon sources in the locality.
 - Ensure district heating is prioritised in population-dense areas and encourage large developments to require heat planning alongside master planning.
 - Allocate land for onshore wind where this is technically feasible.
 - Ensure policies for housing, transport and energy are considered together, for example through the Local Area Energy Plan.
- Energy 3. Organisations in the **public and private sectors** (covering commercial, industrial and institutional buildings) to **maximise renewable energy generation on site** and explore off-site generation either through asset ownership or arrangements like power purchase agreements (PPA), with the aim to achieve 100% renewable electricity.
- Energy 4. Social housing providers, owner-occupiers, and private landlords in the **domestic housing sector** to maximise renewable energy generation on site, including through community energy initiatives⁶⁹.
- Energy 5. Manchester Climate Change Partnership (MCCP) to **work collaboratively** to increase renewable energy generation capacity across members’ portfolios.
- Energy 6. MCC to develop a **green skills action plan** to upskill and expand the green economy workforce, as outlined in the Work and Skills Strategy⁷⁰, ensuring residents can benefit from jobs growth in the renewable energy sector.

To work at city-region level / with Greater Manchester partners on:

- Energy 7. GMCA to support development of pipeline of renewable energy projects as set out in LAEPs ensuring **coordination across the city region**⁷¹
- Energy 8. ENWL to support delivery of a **smart, flexible, low carbon, energy grid** in Manchester.

⁶⁹ [What is community energy? | Community Energy England](https://www.communityenergy.org.uk/what-is-community-energy/)

⁷⁰ <https://www.manchester.gov.uk/info/200024/consultations-and-surveys/8359/new-work-and-skills-strategy-for-manchester-consultation>

⁷¹ <https://democracy.greatermanchester-ca.gov.uk/documents/s19633/GM%20LAEPs.pdf>

- Energy 9. GMCA to support the development of **local energy markets**⁷² that coordinate the generation, supply, storage, transport, and consumption of energy from decentralised energy resources, involving network utilities and energy companies.
- Energy 10. GMCA to promote the ‘Go Neutral’⁷³ framework to other sectors beyond the public estate.
- Energy 11. GMCA to work with ENWL to support **resource and strategic planning** for network capacity applications across the ten districts.
- Energy 12. GMCA to support Manchester partners to adopt a ‘**GM-first**’ policy for renewable energy generation and setting higher ambition for net zero energy as set out in ‘Places for Everyone’⁷⁴
- Energy 13. Higher education sector to develop and roll out a **regional upskilling** programme for renewable energy generation and local energy markets.
- Energy 14. GMCA to support **owner occupiers** who are ‘able to pay’ to incorporate renewable energy projects into domestic retrofit through ‘Your home better’⁷⁵.
- Energy 15. ENWL to fund cooperative and **community energy** schemes for renewable energy generation⁷⁶.
- Energy 16. GMCA to work with Manchester on delivering **campaigns to residents and businesses** to encourage installation of renewable energy generation.
- Energy 17. To encourage Manchester **businesses** to engage with relevant initiatives including the Energy Innovation Agency and the GM Business Growth Hub to explore opportunities for diversification into the green technology and services sector.

To advocate for national government to do:

- Energy 18. Increase the availability of **development finance and capacity** to local areas to accelerate development of renewable energy projects suitable for green funding (potentially through UKIB)⁷⁷.
- Energy 19. Consider bringing forward **subsidy schemes** to support local energy generation and battery storage.
- Energy 20. **Change the environmental levies** on the electricity bill into a carbon levy on electricity, gas and oil bills, based on their carbon impacts - as per CCC recommendation⁷⁸
- Energy 21. Confirm policy position to support **hydrogen and industrial heat pumps** to incentive industrial heat and process decarbonisation.
- Energy 22. Clarify or include energy projects as a suitable category in **future lending terms for PWLB** to enable local authorities to access low-cost investment finance for energy projects.

⁷² <https://www.greatermanchester-ca.gov.uk/what-we-do/environment/energy-supply/>

⁷³ <https://democracy.greatermanchester-ca.gov.uk/documents/s18852/07a%20Go%20Neutral%20Update.pdf>

⁷⁴ <https://www.greatermanchester-ca.gov.uk/GMCAFiles/PFE/Supporting%20documents/04%20Sustainable%20and%20Resilient%20Places/04.01.05%20Carbon%20and%20Energy%20Topic%20Paper.pdf>

⁷⁵ <https://www.greatermanchester-ca.gov.uk/what-we-do/environment/homes-workplaces-and-public-buildings/retrofitting/>

⁷⁶ <https://www.enwl.co.uk/go-net-zero/community-and-local-energy/supporting-community-energy/>

⁷⁷ <https://www.ukib.org.uk/strategic-plan>

⁷⁸ www.theccc.org.uk/wp-content/uploads/2020/12/Local-Authorities-and-the-Sixth-Carbon-Budget.pdf

- Energy 23. **Increase powers and resources** for local authorities to deliver systems-based, area-wide planning for net zero, to require buildings to connect to district heat schemes, and to increase scale of renewable energy projects.
- Energy 24. **Reduce business rates and VAT on private wire solar** to remove unintended barriers to uptake of renewable energy by the private sector.
- Energy 25. Introduce a **carbon intensity limit** on power generation⁷⁹.

To do differently / opportunities to innovate:

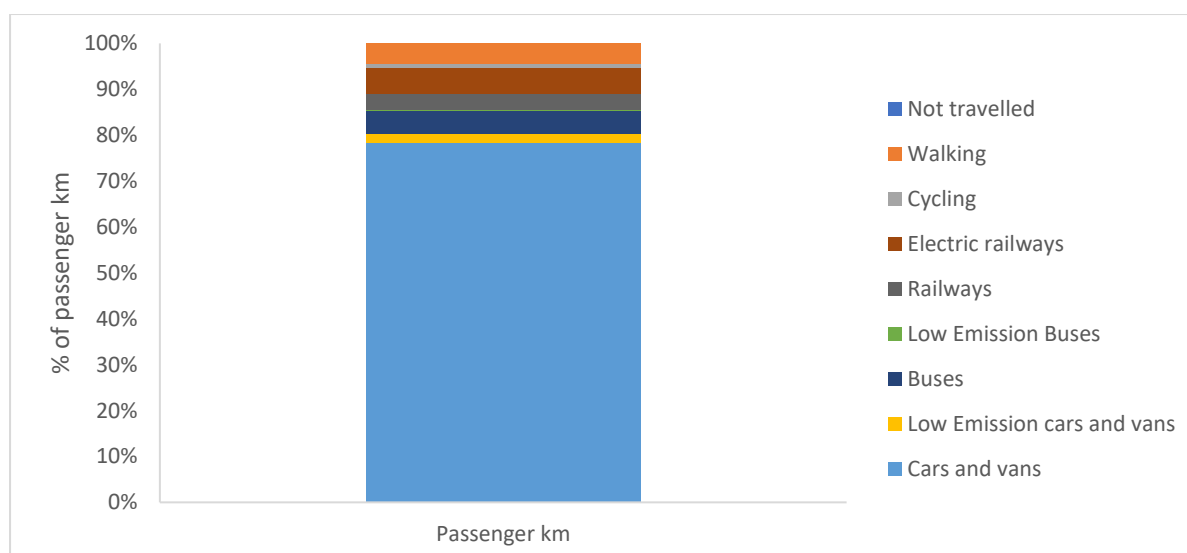
- Energy 26. Use open access **digital technology** to enable residents and businesses to more easily assess the suitability of their property for renewable energy generation, to help increase deployment.
- Energy 27. Launch a **local climate bond**⁸⁰, based around the UK Green Taxonomy criteria, that raises finance for local renewable energy projects.
- Energy 28. Innovate and advocate for research into **small-scale wind generation** that could be deployed across the city.
- Energy 29. GMCA to utilise devolved skills functions and the newly created **GM Energy Innovation Agency** to support growth in the local green economy, with a focus on increasing renewable energy generation and decarbonising buildings and transport⁸¹.

2c. Transport

Current emissions

Transport is responsible for 24% of Manchester's direct emissions. Within that, 95% of emissions are from on-road vehicles: cars, buses, vans, and motorbikes.

Graph XX below shows the percentage of passenger kilometres travelled in 2018 by mode of transport. This tells us how we travel. The spread of carbon emissions will differ slightly from this as some of the km will be via low-carbon modes of transport such as electric cars.



⁷⁹<https://www.nationalgrideso.com/future-energy/net-zero-explained/what-carbon-intensity>

⁸⁰<https://www.greenfinanceinstitute.co.uk/news-and-insights/local-climate-bonds-a-cost-effective-way-to-raise-billions-for-councils-green-plans-says-new-campaign/>

⁸¹<https://www.energyinnovationagency.co.uk/>

Over the last 30 years, transport emission reductions have not reduced at the same rate as other sources of greenhouse gas emissions. There are several reasons for this, including:

- Population growth
- Increased disposable income
- Increased length of journeys
- Falling relative cost of motoring – 15% down in real terms over the last twenty years
- Increased cost of rail fares – risen by over 20% in twenty years
- Increased bus and coach fares – risen by over 40% in twenty years⁸²
- Shift towards large vehicles – 31% of new car sales are classed as large vehicles compared to 21% in 2010⁸³

In Manchester:

- At the end of 2021, there were only 1,454 ultra-low emissions vehicles registered, which is below the national average⁸⁴.
- Most buses are still running on diesel⁸⁵.
- 36% of all trips that start in Manchester are neighbourhood trips under 2kms and could be walked in around 20 minutes or less⁸⁶.
- There remains a paucity of public transport options to tackle Manchester's growing night-time economy in comparison with larger cities like London.

In Greater Manchester:

- Too many short trips are made by car - 30% of trips under 1km and 62% of trips between 1 and 2km.
- We are behind both the UK and the North West average for installing electric vehicle charging infrastructure⁸⁷.

However, there are some positive trends:

- In 2019, 78% of peak morning travel (over 108,000 journeys) into Manchester city centre was made by public transport (63%) or active travel (15%)⁸⁸.
- In the decade leading up to 2019, there was a 19% reduction in the number of cars entering the city centre at peak morning travel time (reducing from over 27,000 to under 23,000)⁸⁹.
- As a result of changes caused by the Covid-19 pandemic, there has been an increase in hybrid working which is predicted to cause commuting to fall by 1 in 10 journeys as we move away from the 5-day commuting week⁹⁰.
- Between 2010 and 2020 the size of the Metrolink network was tripled, converting many city-centre bound journeys from car to public transport. In 2019 Metrolink accounted for 16% of peak morning journeys⁹¹.

⁸² Decarbonising Transport – A Better, Greener Britain (publishing.service.gov.uk).

⁸³ Reducing UK emissions, 2019 Progress Report to Parliament, Committee on Climate Change, July 2019

⁸⁴ [Vehicle licensing statistics data tables - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/vehicle-licensing-statistics-data-tables)

⁸⁵ <https://www.businessgrowthhub.com/green-technologies-and-services/green-intelligence/resource-library/greater-manchester-set-for-europe-leading-e-bus-fleet>

⁸⁶ <https://tfgm.com/our-five-year-transport-delivery-plan>

⁸⁷ <https://electrictravel.tfgm.com/greater-manchesters-ev-strategy/>

⁸⁸ [City Centre Transport Strategy to 2040](#)

⁸⁹ [City Centre Transport Strategy to 2040](#)

⁹⁰ <https://democracy.greatermanchester-ca.gov.uk/documents/s8356/GMTC%2020200710%20Transport%20Recovery%20Report.pdf>

⁹¹ [City Centre Transport Strategy to 2040](#)

In order to reach zero carbon

We need to **travel less** and **change the way we travel**, ensuring we chose the right type of transport for each journey, prioritising active travel (walking and wheeling) and public transport, particularly for short trips.

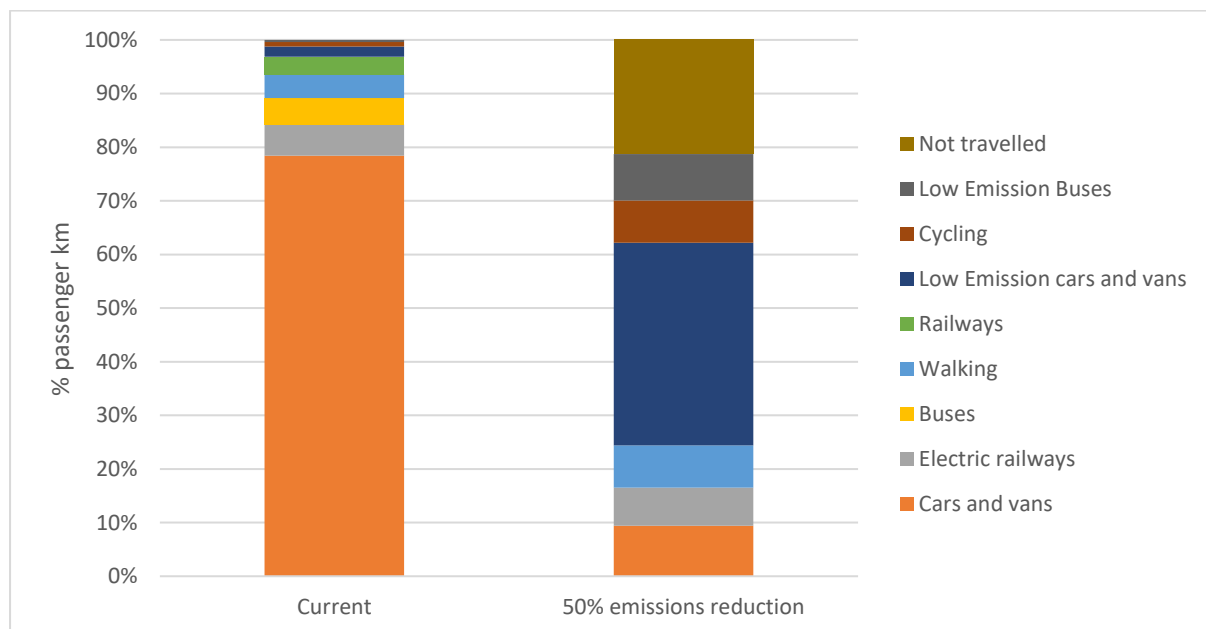
We need to rapidly reduce our dependency on fossil fuels and **deploy electric vehicles** at scale for public and private transport.

Scale of action needed to reduce emissions by 50%:

Modelling by SCATTER indicates the following scale of action is needed.

- 30% reduction in overall distance travelled – we need to travel less for example by more homeworking, accessing services remotely, and making more use of use of local facilities and services.
- 20% of journeys need to be made by active travel – walking or cycling/wheeling.
- 20% of journeys needs to be made by public transport.
- 9% reduction in freight mileage and 71% increase in freight fuel efficiency.
- 80% of remaining passenger miles that are by cars, vans and motorbikes need to be in electric or hybrid electric vehicles.

Graph XX shows the modal shift in passenger miles needed to meet a 50% reduction in direct emissions.



CO2 savings

The estimated CO2 savings from delivering all the above actions is **1,360ktCO₂e**

Costs and savings

The upfront capital cost of delivering this change is estimated to be **£398m**

- £325.9m – purchase of new electric vehicles
- £16.3m – electric vehicle charging infrastructure
- £38m – electrification of buses and the associated charging infrastructure
- £17m – electrification of rail and the associated rail infrastructure

Operational cost savings are estimated to be **£362m**

- £244m savings – reduced running cost of electric vehicles
- £22m savings – reduced running cost of electric buses
- £21m savings from electrified trains
- £94m revenue savings from freight mileage reduction

It should be noted that the upfront cost of decarbonising transport and the savings accrued from modal shift are often incurred by different parties.

Potential funding sources:

TfGM have been successful in securing £1.07bn from the Government's City Region Sustainable Transport Settlement⁹² and a report to GMCA on 24th June 2022 sets out an allocation from City Region Sustainable Transport Settlements (CRSTS) of £115m. £90m will be provided for Zero Emission buses and £25m for fixings and fittings in depots to charge them.

Other funding that could support the city's transition includes:

- DfT Active Travel Capability Fund⁹³
- DEFRA Air Quality grant programme⁹⁴
- OZEV Electric Vehicle Charge-point Grant⁹⁵
- OZEV Workplace Charging Scheme⁹⁶
- GM Active Travel Fund⁹⁷

Other policy drivers and enablers

Manchester City Centre Transport Strategy⁹⁸ is focused on delivering a net-zero carbon transport system and includes the following targets (from a 2019 baseline):

- Reduce car journeys to 10% by 2040, compared to 21%.
- Increase public transport trips into the city centre by around 50% (Metrolink), over 50% (bus) and around 90% (rail) by 2040.
- Increase walking and cycling trips by around 70%.

The Manchester Local Area Energy Plan (LAEP) calls for:

- 72,000 electric vehicle charging points to be installed at a cost of £40 million.

The Greater Manchester transport strategy 2040 sets ambition for:⁹⁹

- 50% of all journeys to be by public transport or active travel by 2040.

⁹² <https://www.gov.uk/government/publications/city-region-sustainable-transport-settlements-confirmed-allocations>

⁹³ <https://www.gov.uk/government/publications/capability-fund-local-transport-authority-allocations>

⁹⁴ <https://www.gov.uk/government/collections/air-quality-grant-programme>

⁹⁵ <https://www.gov.uk/government/collections/government-grants-for-low-emission-vehicles#ev-chargepoint-grant>

⁹⁶ <https://www.gov.uk/guidance/workplace-charging-scheme-guidance-for-applicants>

⁹⁷ <https://www.gmconsult.org/strategy-team/gmactivetravelfundschemes/>

⁹⁸ https://assets.ctfassets.net/nv7y93idf4jq/6HANAC6XKWnyvZ508tbVfq/f661cc31bad890a4f388de49e79c1826/CCTS_Full_Document_Final_170321.pdf

⁹⁹ <https://tfgm.com/2040-transport-strategy>

- 1 million more active travel and public transport journeys per day by 2040.
- No net increase in motor vehicle traffic and 200,000 more EVs by 2040.

The Greater Manchester Streets for All Strategy¹⁰⁰ sets out a vision to ensure that our streets are welcoming, green, and safe spaces for all people that enable more travel by walking, cycling and using public transport and create thriving places that support local communities and businesses¹⁰¹

Nationally there are commitments for:

- 50% of all journeys in towns and cities to be walked or cycled by 2030¹⁰².
- No sales of cars and vans with only a petrol or diesel engine after 2030 and no sales of new fossil fuel vehicles (including hybrids) after 2040¹⁰³.

Challenges

- To make walking the natural choice, people need safe, inclusive, and attractive walking routes.
- To enable more people to cycle, there needs to be high quality, connected and safe cycling infrastructure, people need to be able to access a bike and have a place to safely park/store it.
- To encourage people to access more services and activities online, instead of travelling, we need to ensure digital skills and technologies are widely available.
- The space needed to deliver more priority for active travel and public transport infrastructure may be constrained in the city centre and some built-up residential areas, and will, in some cases, require road space to be reallocated away from general traffic towards the most space-efficient and sustainable modes¹⁰⁴.
- There are some systemic barriers to using public transport, such as safety and security to lone passengers, particularly women, which need to be addressed to enable modal shift.
- As we switch away from fossil fuels to electric vehicles, the demand for electricity needs to be met by sufficient increased supply.
- Electric vehicles have a higher upfront cost than most petrol or diesel vehicles.
- Switching large numbers of cars to electric reduces direct emissions in operation but results in an increase in embodied carbon through mass production.
- Delivering the infrastructure needed to support behaviour change requires a significant scale and pace of change, which presents challenges in terms of capacity of local government and delivery authorities, and due to the inherent difficulties of delivering infrastructure within an existing system.
- Revenue funding is needed to maintain integrated transport systems, including cycle infrastructure and footpaths, not just the upfront capital cost of infrastructure.

¹⁰⁰ [Streets for All | Transport for Greater Manchester \(tfgm.com\)](https://www.tfgm.com/streets-for-all)

¹⁰¹ https://downloads.ctfassets.net/nv7y93idf4jq/7FiejTsJ68eaa8wQw8MiWw/bc4f3a45f6685148eba2a2cb618c2424f/03_GM_2040_TS_Full.pdf

¹⁰² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf

¹⁰³ <https://www.gov.uk/government/publications/transport-decarbonisation-plan>

¹⁰⁴ <https://bettertransport.org.uk/sites/default/files/research-files/Sustainable-Transport-and-the-NPPF.pdf> and [Streets for All | Transport for Greater Manchester \(tfgm.com\)](https://www.tfgm.com/streets-for-all)

Co-benefits of action - Links to other headline objectives

Adaptation and resilience

- Creating new transport infrastructure for active travel and public transport brings the opportunity to increase tree planting and to embed sustainable urban drainage systems, building resilience to climate risk within our critical infrastructure.

Health and wellbeing

- Increased active travel improves health and could save the NHS £17bn within 20 years by reducing prevalence of type 2 diabetes, dementia, heart disease and cancer¹⁰⁵.
- A more integrated and affordable public transport system can save households money on owning and running a car, significant as the cost of living rises¹⁰⁶.
- Reduced use of internal combustion engine cars, vans and motorbikes improves air quality and reduces the negative health effects of air pollution.
- Electric vehicles are cheaper to run and usually cheaper to service and maintain¹⁰⁷.

Inclusive, zero carbon and sustainable economy

- The need to create new infrastructure for sustainable travel and electric vehicles is a new opportunity for jobs and business growth – for example, a report by Transition Economics for the TUC suggests investing in the electrification of transport could help deliver 59,000 new jobs in the UK¹⁰⁸.
- An integrated public transport system and active travel network can reduce the undesirable impacts of congestion on business and help drive economic growth¹⁰⁹.
- By changing how we move goods around the city, particularly in 'last mile' delivery, we can create opportunities for new business - a report by Accenture notes that, creating local fulfilment centres to support the 'last-mile' supply chain could create jobs and lower last-mile emissions between 17-26% by 2025¹¹⁰.

Examples of good practice

- The Bee Network aims to provide a fully integrated active travel and public transport system joining together cycling, buses, trams and walking by 2024, with rail incorporated by 2030, to transform how people travel in Greater Manchester.
- A cycle hire scheme with over 1,200 pedal bikes and 300 e-bikes¹¹¹ is available across Manchester, Salford and Trafford.

¹⁰⁵ <https://www.sustrans.org.uk/media/4471/4471.pdf>

¹⁰⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/953951/Transport_and_inequality_report_document.pdf

¹⁰⁷ <https://www.buyacar.co.uk/cars/economical-cars/electric-cars/650/cost-of-running-an-electric-car>

¹⁰⁸ <https://www.tuc.org.uk/research-analysis/reports/rebuilding-after-recession-plan-jobs>

¹⁰⁹ [Streets for All | Transport for Greater Manchester \(tfgm.com\)](https://www.tfgm.com/streets-for-all)

¹¹⁰ https://www.accenture.com/_acnmedia/PDF-148/Accenture-Sustainable-Mile-POV.pdf

¹¹¹ [Cycle Hire | TfGM Bee Active](https://www.tfgm.com/cycle-hire)

Recommended Actions

Action needs to be taken by government at local and national level, by institutions and organisations in the private and voluntary sector, and by residents and communities across the city.

These recommended actions have been co-designed with stakeholders across the city to help enable everyone to play their full part in tackling the climate crisis and meeting the ambitious targets that Manchester has adopted.

To be delivered locally / direct control lies in Manchester:

- Transport 1. Businesses to adopt policies that encourage **business travel** to be done via sustainable transport options and enable virtual working.
- Transport 2. Businesses to encourage and **incentivise employees to commute via sustainable modes of travel** (including walking, cycling, public transport, and car sharing).
- Transport 3. Businesses to **shift their fleet to electric vehicles** and install electric vehicle charging points as appropriate to their location, ensuring they avoid encouraging unnecessary car travel into local centres.
- Transport 4. **Logistics companies** to reduce fuel use, increase fuel efficiency, and explore alternative vehicles.
- Transport 5. **Schools to encourage walking and cycling** to school via road safety education campaigns and school street schemes.
- Transport 6. **Residents to change the way we travel**, ensuring we chose the right type of transport for each journey, prioritising active travel (walking and wheeling) and public transport, particularly for short trips.
- Transport 7. **Cultural, leisure and tourist destinations** to provide readily accessible information on how visitors can reach them by public transport or active travel and explore incentives to discourage car travel.
- Transport 8. Manchester Climate Change Partnership (MCCP) to deliver collaborative **behaviour change campaigns** to encourage use of active travel, public transport and shared modes of transport, such as car clubs and cycle hire schemes, through its networks.
- Transport 9. Manchester City Council (MCC) to deliver more **active travel infrastructure** and develop new schemes that **integrate sustainable transport choices**, including e-mobility, and **smart logistics** into neighbourhoods like the Ancoats Mobility Hub.
- Transport 10. MCC to adopt the principles of the **15/30-minute neighbourhood** within planning policy to ensure residents can access essential services without the need for a car.
- Transport 11. MCC to **reallocate road space** on appropriate parts of the network to support the delivery of infrastructure for more sustainable modes of transport, including buses, walking, and cycling/wheeling, and gradually **remove inner city centre parking supply** as sustainable travel options are improved
- Transport 12. MCC to implement **reductions in speed limits** across the city to help reduce emissions and support delivery of road safety programmes.
- Transport 13. MCC to target reductions in the **carbon impact of construction and maintenance** of highways.

Transport 14. MCC to develop and implement a strategy for electric vehicle charging infrastructure, including within car parks, and set requirements for **electric vehicle charging infrastructure to be integrated** within new residential, workplace and commercial developments.

To work at city-region level / with Greater Manchester partners on:

Transport 15. Deliver the **Streets for All** strategy¹¹² and **Bee Network** ambition for an integrated, affordable, and sustainable transport system which will join up buses, trams, cycling and walking by 2024 and rail by 2030.

Transport 16. Investigate and implement cutting edge **smart transport solutions**, getting the most out of digital technology to improve our understanding of travel patterns, and improve physical and digital integration of low-carbon modes¹¹³.

Transport 17. Increase the number of **zero emissions buses** and transition to an electric bus fleet.

Transport 18. Deliver the **GM Clean Air Plan** to improve air quality.

Transport 19. **Minimise embodied carbon in new transport infrastructure** and vehicles under best practice guidance like the PAS2080 carbon management standard.

Transport 20. **Incentivise sustainable travel** behaviour change and deliver public transport and active travel schemes into and within the city centre, targeting 90% of all morning peak trips to the city centre by public transport or active travel.¹¹⁴

Transport 21. Support improvements to distribution, delivery, service, and logistics activities that **reduce heavy goods vehicle emissions** using traffic powers, restricting vehicle type, weight and delivery times in specific areas, as outlined in its Freight and Logistics Strategy.¹¹⁵

Transport 22. Deliver **awareness raising campaigns** and initiatives in collaboration with local partners to enable all businesses and residents to take tangible actions to reduce transport emissions.

To advocate for national government to do:

Transport 23. Provide **long-term, multi-year devolved capital funding** to allow Greater Manchester to invest in smart and sustainable transport solutions, including active and public transport and fleet transition.

Transport 24. Provide **additional revenue funding for capacity and capability** at the local level to enable planning and delivery of local climate change strategies.

Transport 25. Provide **integrated funding for decarbonised transport** as recommended in the National Audit Office report.¹¹⁶

Transport 26. Review the most effective range of **tax measures**, including VAT, to incentivise and drive uptake of zero emission vehicles.

Transport 27. **Reallocate some of the resources** of the national road building budget to road safety and sustainable travel schemes.

¹¹² <https://tfgm.com/strategy/streets-for-all>

¹¹³ <https://tfgm.com/city-centre-transport-strategy> and

https://downloads.ctfassets.net/nv7y93idf4jq/7FiejTsJ68eaa8wQw8MiWw/bc4f3a45f6685148eba2acb618c2424f03_GM_2040_TS_Full.pdf

¹¹⁴ <https://democracy.manchester.gov.uk/documents/s31521/City%20Centre%20Transport%20Strategy%20Update.pdf>

¹¹⁵ <https://tfgm.com/freight>

¹¹⁶ <https://www.nao.org.uk/report/local-government-and-net-zero-in-england/>

- Transport 28. Work collaboratively with local partners on **reducing emissions across the strategic and local roads networks**¹¹⁷.
- Transport 29. Introduce legislation to **phase out new sales of diesel buses** and coaches by 2040 at the latest, as has been done with cars (2035)¹¹⁸.
- Transport 30. Publish the **Local Authority Transport Toolkits** to support identification and assessment of local transport decarbonisation strategies.
- Transport 31. Reinforce active travel and travel decarbonisation messages in **national behaviour change campaigns** and provide funding for local campaigns to support this work¹¹⁹.
- Transport 32. Introduce grants for second hand electric vehicles purchases, **helping lower income households** and small businesses.

To do differently / opportunities to innovate:

- Transport 33. To enable more flexible and hybrid working patterns, introduce **new flexible travel initiatives** like the Metrolink Clipper Card.
- Transport 34. Work collaboratively with local businesses to **integrate sustainable last mile logistics** in the city, e.g., through shared local logistics hubs.
- Transport 35. Expand options for **electric shared mobility schemes**, including car clubs, bikes, scooters, and e-cargo bikes.

2d. Aviation emissions

Sub-objective:

We want the emissions from all flights from Manchester Airport to be fully aligned with the Paris Agreement. We believe this means operating within a limited carbon budget for UK aviation, as part of a wider international budget.

Current emissions

Whilst aviation emissions are not part of Manchester's carbon budget, it is recognised that aviation emissions must be tackled as part of ensuring that the city, and the UK overall, play their full part in delivering the Paris Agreement.

The 2021 Manchester Climate Change Annual Report ¹²⁰ outlined the impact of the Covid-19 pandemic on aviation emissions, with emissions from Manchester airport reducing by 91% in 2020 compared to 2019, and emissions from UK airports falling by 75% over the same period.

Now that lockdowns and travel restrictions have lifted, we fully expect to see an upturn in aviation emissions to be reported in the 2022 Annual Report.

In order to reach zero carbon

We need to **work collaboratively** across the aviation industry, with national government and international partners to ensure aviation emissions are reduced in line with the Paris Agreement.

¹¹⁷ <https://nationalhighways.co.uk/netzerohighways/>

¹¹⁸ <https://www.gov.uk/government/consultations/ending-the-sale-of-new-diesel-buses/ending-of-the-sale-of-new-diesel-buses>

¹¹⁹ <https://news.tfgm.com/news/half-of-respondents-to-greater-manchester-survey-open-to-walking-and-cycling-more-post-pandemic>

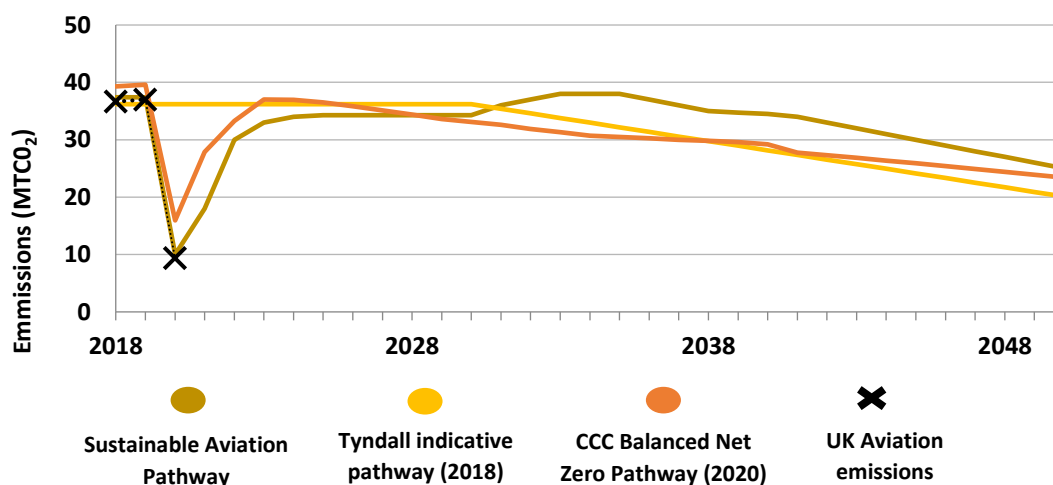
¹²⁰ [MCCA Annual Report 2021 Final.docx \(manchesterclimate.com\)](#)

We need to **enable residents and businesses to make informed choices** about their travel behaviours, including an understanding of the climate impacts.

Other policy drivers and enablers

- Decarbonisation Roadmap: A Path to Net Zero¹²¹ – a report from Sustainable Aviation, a coalition of UK airlines, airports, and manufacturers, that outlines how the UK aviation industry can achieve net zero by 2050 including through sustainable aviation fuels, introduction of known and new more efficient aircraft, and better air traffic management and operating procedures. Interim targets were also published¹²².
- Flightpath to the future: a strategic framework for the aviation sector¹²³ – sets out the commitment to include international aviation and shipping emissions in the UK's sixth carbon budget (2033-2037) for the first time.
- The Climate Change Committee's Sixth Carbon Budget¹²⁴ – recommended that aviation emissions in 2030 should be 20% below 2019 levels, without carbon offsetting or removal.
- Jet Zero Council – a partnership between industry and government with the aim of achieving zero emission transatlantic flight within a generation and delivering new technologies and innovative ways to cut aviation emissions. MAG are represented on this Council and the Jet Zero Strategy is due to be published in 2022.

Graph XX shows the emission reduction pathways proposed for UK aviation by Sustainable Aviation and the CCC alongside the indicative pathway developed by the Tyndall Centre.



Challenges

- There are challenges for all cities like Manchester in reconciling their climate change responsibilities with having a major international airport, that brings significant employment, business, cultural and tourism benefits, within its boundaries.

¹²¹ [SustainableAviation_CarbonReport_20200203.pdf](#)

¹²² <https://www.sustainableaviation.co.uk/news/uk-aviation-industry-strengthens-commitment-to-achieving-net-zero-and-launches-first-interim-decarbonisation-targets/>

¹²³ [Flightpath to the future: a strategic framework for the aviation sector - GOV.UK \(www.gov.uk\)](#)

¹²⁴ <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

- Regional policies that unilaterally impose costs in one region that are not shared nationally or internationally can distort the aviation market, resulting in emissions being displaced to another city, as travellers chose a different airport, rather than creating a reduction in aviation emissions. As such, decarbonising aviation must be tackled collectively at a national and industry-wide level.

Examples of good practice

- Manchester Airports Group (MAG) has reduced carbon emissions across its estate and all MAG airports are certified as carbon neutral, including Manchester Airport. MAG has also committed to being net zero by 2038.¹²⁵
- The infrastructure to access the airport, and Airport City, has been made more accessible via public transport and walking and cycling, including a new pedestrian and cycle bridge over the motorway link, enabling more sustainable transport choices to be made when travelling to/from the airport.

Recommended Actions

To support the common aim of establishing Manchester Airport, and the city of Manchester, as a national and international leader in sustainable aviation, Manchester Climate Change Partnership has worked together to develop and commit to the following agreement:

To work with the UK Government and other stakeholders to ensure that emissions from flights are kept within a carbon budget for UK aviation that is fully aligned with the Tyndall budget and the Paris Agreement (the “UK Aviation Budget”). This includes flights by Manchester citizens, businesses and other organisations, and all flights from airports in which the city has a stake.

As with the Manchester Climate Change Framework as a whole, the following principles underpin our approach to this sub-objective:

- *The principle of urgency, to ensure that high impact actions are taken in the short term to minimise cumulative emissions and their climate effects.*
- *The precautionary principle, to ensure that we are confident of remaining within the UK Aviation Budget by only adopting proven measures, while also supporting research into innovative approaches that do not rely on carbon offsetting or speculate on future technologies that may not deliver the reductions required.*
- *The principle of equity, to ensure fair access to transport and an equitable distribution of the remaining global carbon budget.*

To meet this sub-objective, we will pursue the following actions:

- *Empower citizens, businesses, and other organisations to understand the climate impact of their aviation practices and take action to reduce it*
- *Engage and collaborate with national government, regulatory agencies, other cities and the industry to ensure aviation emissions remain within the UK Aviation Budget*
- *Monitor progress through emissions reporting and budgeting, track the contribution of mitigation measures, and periodically review the underpinning science*
- *Recommend actions to ensure that the city plays its fair part in keeping aviation emissions within the UK Aviation Budget, while mitigating the risk of redistributing flights, emissions and associated social and economic benefits*

¹²⁵ <https://democracy.manchester.gov.uk/documents/s30609/Aviation%20and%20Carbon%20Emissions.pdf>

In support of this agreement, Manchester Climate Change Agency will engage with members of the Core Cities network, especially those with an airport within their boundaries, to develop a common approach to aviation emissions.

2e. Indirect / consumption-based emissions

Sub-objective:

To better understand the broader climate change impact of the city's consumption of goods and services and take action to develop more sustainable consumption practices for the city's residents and organisations.

The Climate Change Framework states that the greenhouse gas emissions from goods and services consumed in Manchester contribute to the city's overall climate impact, even though they may have been made elsewhere in the UK or globally.

Our consumption-based emissions are from the things that we buy and ultimately dispose of, for example, food, clothes, phones, electrical equipment, furniture, other manufactured goods, and construction materials.

As part of building a thriving and sustainable city, we need to promote resource productivity within our businesses, encourage more circular business models and the use of more sustainable materials, and eliminate waste by designing it out at source. These actions will stimulate innovation, skills development, and the growth of green jobs.

At the same time, we need to change the way that we behave as consumers and how we treat products at the end of their life.

Our indirect emissions may be 60% greater than our direct emissions but are more difficult to assess accurately than direct emissions, particularly at city-scale, and so target-setting and monitoring is not yet possible.

Update on research

Recent research by the University of Manchester is helping to provide a more detailed understanding of our consumption-based emissions in order that we may take action to reduce them; this was published in the city's 2021 Annual Climate Change Report¹²⁶.

In summary, this research shows that Manchester's consumption-based emissions footprint was estimated to be 3.3m tCO₂e in 2017 and 3.12m tCO₂e in 2019; with an average per capita footprint of 5.6 tCO₂e. It also identified several hotspots¹²⁷ where action should be focused to deliver the greatest impact: food and drink, construction, waste and wastewater, and transport beyond the city; and did a deep dive on the role of food in particular¹²⁸.

In order to reach zero carbon

The **consumption-based emissions of cities need to half by 2030**, before halving once again by 2036, and finally stabilising at 0.7tCO₂e per capita by 2050¹²⁹.

We need to **produce goods and services more sustainably**, moving to a circular economy, alongside becoming more **sustainable consumers**.

¹²⁶ <https://www.manchesterclimate.com/sites/default/files/MCCA%20Annual%20Report%202021%20Final.pdf>

¹²⁷ https://www.manchesterclimate.com/sites/default/files/Decarbonising%20Consumption%20in%20Manchester_0.pdf

¹²⁸ https://www.manchesterclimate.com/sites/default/files/Sustainable%20Food%20Mission_Part%201_Final_1.pdf and

https://www.manchesterclimate.com/sites/default/files/Manchester%20Food%20Mission_Part%202_Final.pdf

¹²⁹ [2270_C40_CBE_MainReport_250719.original.pdf](https://www.manchesterclimate.com/sites/default/files/2270_C40_CBE_MainReport_250719.original.pdf)

We must **reduce waste**, including unnecessary **food waste**, and manage unavoidable waste as sustainably as possible, maximising reusing and recycling.

Scale of action identified by SCATTER:

SCATTER's ability to model indirect emissions is more restricted than for direct emissions and so the targets it produces are limited to waste and food.

Things we buy and throw away

- 24% reduction in the volume of waste
- 15% increase recycling rates

Food

- 20% reduction in the amount of meat and dairy in food and supply chains
- 50% reduction in food waste

Other policy drivers and enablers

- Greater Manchester's 5-year Environment Plan¹³⁰ sets four priorities related to reducing emissions from the production and consumption of resources: producing goods more sustainably, being responsible consumers, managing waste sustainably and reducing unnecessary food waste. It is also targeting a recycling rate of 65% by 2035 across the city region.
- DEFRA's Resources and Waste Strategy¹³¹ has been designed to accelerate the transition to a circular economy, to support an effective domestic recycling infrastructure and to tackle the challenges of plastic pollution and food waste. It's 25 Year Environment Plan¹³² also targets a doubling of resource productivity by 2050.
- Climate-related disclosures are already mandatory for large businesses and the UK government is exploring whether indirect emission should be included in future to help drive increased resource efficiency and reduce waste.
- A recent Food Strategy policy paper¹³³ sets the objective to reduce greenhouse gas emissions and the environmental impacts of the food system, in line with the UK's net zero commitments and biodiversity targets and preparing for the risks from a changing climate

Challenges

- Cities often have little direct influence over indirect emissions; for example, it is not possible to control the carbon intensity of power used in the manufacturing process of an imported product, or how that product is transported.
- Individual consumers cannot change the way the global economy operates on their own, however, they can exercise some choice over what they buy.
- Manufacturing businesses within a value chain often have limited power to change a product's design or packaging; the shift to more circular economies requires collaboration across parties within these chains.

¹³⁰ [5-year-plan-branded_3.pdf \(greatermanchester-ca.gov.uk\)](#)

¹³¹ [Resources and waste strategy: at a glance - GOV.UK \(www.gov.uk\)](#)

¹³² [At a glance: summary of targets in our 25 year environment plan - GOV.UK \(www.gov.uk\)](#)

¹³³ [Government food strategy - GOV.UK \(www.gov.uk\)](#)

- Indirect emissions are more difficult to estimate and monitor, meaning that identifying actions and tracking progress is not as accessible as for direct emissions; this applies to cities, and to large and small organisations and individuals.

Examples of good practice

- Many members of Manchester’s Climate Change Partnership are working to reduce their indirect emissions, for example Manchester City Football Club are working to become a zero waste organisation¹³⁴.
- Small and medium-sized organisations in Manchester have access to a coordinated range of support services to help them improve their resource efficiency. These services can be accessed via the Bee Net Zero website¹³⁵
- There are multiple projects in Manchester that support residents and communities to grow their own food and cook healthy, sustainable meals, helping to reduce food waste. These include Real Food Wythenshawe¹³⁶, Manchester Healthy Schools¹³⁷ and Growing Manchester¹³⁸.TH
- Manchester Climate Change Agency’s ‘In Our Nature’ programme supported the launch of community fridges in Moss Side, Wythenshawe, Crumpsall and Failsworth to stop food ending up in the bin¹³⁹.
- Manchester City Council’s procurement policy includes a 10% weighting for environmental performance to help drive reductions in indirect emissions through the public sector supply chain.
- Plastic Free GM is a campaign to ask businesses, organisations, and individuals to pledge to eliminate avoidable single use plastics¹⁴⁰.
- Three Renew Shops have been opened across Greater Manchester in a partnership between GMCA and Suez. They sell pre-loved household items that have been donated by residents at their local waste recycling centre¹⁴¹.
- WRAP¹⁴², the waste and resources action programme, delivers research, technical advice, case studies, and sectoral support to help change the way things are produced, consumed, and disposed of.

Co-benefits of action - Links to other headline objectives

Adaptation and resilience

- Increasing local food production helps build the city’s resilience to disruptive events in the global supply chain¹⁴³ often caused by climate change.
- Reducing food waste can significantly reduce emissions; 8-10 % of global greenhouse gas emissions¹⁴⁴ are caused by unconsumed (e.g., lost or wasted) food.

¹³⁴ <https://www.mancity.com/meta/media/2axiocfh/sustainability-game-plan-august-2021.pdf>

¹³⁵ [Bee Net Zero | The journey to becoming Net Zero](#)

¹³⁶ [About | Real Foods Wythenshawe \(realfoodwythenshawe.com\)](#)

¹³⁷ [Healthy Schools \(manchesterhealthyschools.nhs.uk\)](#)

¹³⁸ https://secure.manchester.gov.uk/info/200048/health_and_wellbeing/7621/growing_manchester

¹³⁹ [Community Fridges | Hubbub Foundation](#)

¹⁴⁰ [Plastic Free GM - GM Green City](#)

¹⁴¹ [Renew Shops are open - Recycle for Greater Manchester: Recycle for Greater Manchester](#)

¹⁴² [WRAP - The Climate Crisis: Act Now](#)

¹⁴³ <https://cityco.com/cms/wp-content/uploads/2021/02/MFB-Policy-Statement.pdf>

¹⁴⁴ <https://www.unep.org/resources/report/unep-food-waste-index-report-2021>

Health and wellbeing

- The move to a more sustainable food system can aid in tackling food poverty by providing equal access to healthy, affordable, and appropriate meals for all.
- Community participation in local food growing can facilitate physical activity as well as healthier food options. Participation can also reduce stress, improve mood, and increase confidence¹⁴⁵.

Inclusive, zero carbon and sustainable economy

- The Our Manchester Industrial Strategy¹⁴⁶ positions the development of our low carbon technology sector and clean growth as a priority; these actions will help to reduce indirect emissions and create local business and job opportunities.
- Supporting local SMEs not only reduces emissions associated with logistics but also helps to circulate wealth in the local economy¹⁴⁷.

Recommended Actions

Action needs to be taken by government at local and national level, by institutions and organisations in the private and voluntary sector, and by residents and communities across the city.

These recommended actions have been co-designed with stakeholders across the city to help enable everyone to play their full part in tackling the climate crisis and meeting the ambitious targets that Manchester has adopted.

To be delivered locally / direct control lies in Manchester:

- Indirect emissions 1. **Businesses to improve the resource efficiency of their products and operations** to minimise indirect emissions and eliminate waste at source, eventually moving towards circular economy models, working across their value chains as appropriate. This is particularly relevant to the manufacturing, textiles, construction and food and drink sectors and should be done in conjunction with improving energy efficiency.
- Indirect emissions 2. **Residents to become more informed consumers**, reducing their consumption of red meat and dairy, new clothing, consumer electronics and other manufactured goods.
- Indirect emissions 3. Public, private and third sector organisations to **implement sustainable food policies and procurement practices** to minimise the consumption of red meat and dairy, and to reduce food miles and unnecessary food waste
- Indirect emissions 4. All organisations and individuals to **reduce our water use**, and therefore the emissions associated with transporting and treating it.
- Indirect emissions 5. All organisation and individuals to **reduce our production of waste** and increase our **reuse** and **recycling** rates.

To work at city-region level / with Greater Manchester partners on:

- Indirect emissions 6. Continue to **help local businesses go green**, building on the Bee Net Zero website and partnership, with targeted support for small and medium-sized enterprises.

¹⁴⁵ <https://www.mind.org.uk/information-support/tips-for-everyday-living/nature-and-mental-health/how-nature-benefits-mental-health/>

¹⁴⁶ https://www.manchester.gov.uk/downloads/download/7156/our_manchester_industrial_strategy

¹⁴⁷ <https://www.theguardian.com/money/2013/dec/06/shop-locally-small-business-saturday-seven-reasons>

Indirect emissions 7. Manchester University **NHS Foundation Trust (MFT)** to lead by example through the healthy enhancement of food and drink provision for patients, staff, and visitors within canteens, vending and retail outlets on NHS sites.

Indirect emissions 8. GMCA to help drive down overall rates of waste production and **drive-up rates of reuse and recycling** across all waste streams from domestic, commercial, and industrial activity.

To advocate for national government to do:

Indirect emissions 9. **Fund business support** programmes and initiatives that enable organisations of all sizes and in all sectors to take effective action to reduce their indirect emissions and shift to a circular economy.

Indirect emissions 10. Develop a **standardised labelling system** to inform consumers about the environmental and climate impacts of goods, extending the electronics rating system to other products.

Indirect emissions 11. Deliver national **behaviour change campaigns** to encourage consumer behaviour change around goods and services associated with hotspots for consumption-based emissions.

Indirect emissions 12. Support development of **more accurate data** on indirect emissions and increase requirements for indirect emissions to be included in **financial disclosures**.

3. ADAPTATION & RESILIENCE

Headline objective:

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.

Current climate impacts

Climate change modelling by the UK Met Office tells us to expect:

- Hotter, drier summers with +5.6°C summer mean daily temperature
- Warmer, wetter winters with +28% winter mean precipitation
- More frequent and intense weather events, including heatwaves and floods

Flooding is Manchester's biggest climate risk

- There are more than 48,000 homes at flood risk in Manchester¹⁴⁸
- Storm Christoph January 2021 led to 3000 properties across Didsbury and Northenden to be evacuated
- February 2022, the UK's Meteorological Office named three major storms in one week for the first time; Manchester saw 430 at risk and disruption to critical infrastructure services

¹⁴⁸<https://democracy.manchester.gov.uk/documents/s30078/Approach%20to%20Flood%20Prevention%20and%20Management.pdf>

Update on research and initiatives

Since publication of the Framework, Manchester Metropolitan University and Manchester Climate Change Agency (MCCA) have collaborated to produce:

- Manchester’s climate risk: a framework for understanding hazards & vulnerability¹⁴⁹. This provides organisations with a method for assessing exposure to climate risk.
- Principles of progressive resilience¹⁵⁰. To help the city’s businesses and residents to act on climate adaptation.
- Manchester Climate Ready (MCR) website¹⁵¹. Providing examples of adaptation action from members of the Manchester Climate Change Partnership.

MCCA is also working with:

- The Met Office on:
 - A City Pack¹⁵² to forecast climate projections at local level and to highlight the importance of addressing climate risk.
 - A heat mapping tool to give the city a better understanding of its exposure and vulnerability to heat over time.
- The University of Exeter on a Local Climate Adaptation Tool¹⁵³ (LCAT) that is intended to recommend adaptation action that will support health and wellbeing.
- The IGNITION project’s green infrastructure baseline for the city¹⁵⁴.

Other policy drivers and enablers

- The Climate Change Committee’s annual progress report 2022¹⁵⁵ raised the increasing need for adaptation action across the UK economy and sectors.
- Greening Finance: A Roadmap to Sustainable Investing¹⁵⁶ suggests mandatory requirements to the pensions and investment sectors to assess and disclose climate risk on portfolios, to help shift financial flows to align with a net-zero, nature-positive economy.
- The Environment Agency Flood and Coastal Erosion Risk Management Strategy¹⁵⁷ and Strategy Action Plan¹⁵⁸ sets out how they will deliver a £5.2 billion capital investment programme allocated to flooding and coastal erosion by 2027¹⁵⁹.

¹⁴⁹ <https://www.manchesterclimate.com/sites/default/files/Climate%20vulnerability%20framework.pdf>

¹⁵⁰ Reference to be updated on publication

¹⁵¹ Reference to be updated on publication

¹⁵² Reference to be updated on publication

¹⁵³ <https://thentrythis.org/projects/climate-and-health-tool/>

¹⁵⁴ <https://www.greatermanchester-ca.gov.uk/media/4135/ignition-fact-files-a-baseline-final.pdf>

¹⁵⁵ <https://www.theccc.org.uk/publication/2022-progress-report-to-parliament/>

¹⁵⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1031805/CS0821102722-006_Green_Finance_Paper_2021_v6_Web_Accessible.pdf

¹⁵⁷ <https://www.gov.uk/government/publications/national-flood-and-coastal-erosion-risk-management-strategy-for-england--2>

¹⁵⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/985128/FCERM_Strategy_Action_Plan_2021.pdf#:~:text=The%20Flood%20and%20Coastal%20Erosion%20Risk%20Management%20%28FCERM%29,Coastal%20Erosion%20Risk%20Management%20Strategy%20for%20England%20%28the

¹⁵⁹ <https://www.gov.uk/government/news/environment-agency-sets-out-roadmap-for-more-flood-and-climate-resilient-nation>

- National Infrastructure Commission sets out clear recommendations for adaptation action in its report: *Anticipate, React, Recover- Resilient Infrastructure Systems*¹⁶⁰
- The UK Infrastructure Bank’s Strategic Plan¹⁶¹ sets out how it will explore projects that make the UK’s infrastructure more resilient to climate change and better adapted to future risks- including the impact of climate change on financial assets.
- The Bank of England published its first climate stress tests in 2022¹⁶², highlighting the need for UK banks and insurers to act on climate change to avoid climate-related losses.
- The Government’s green taxonomy helps to tackle greenwashing by providing frameworks and legislation for sustainable financial disclosure.

Challenges

- Quantifying and assessing the risk of climate change to businesses, households and the financial system is in its infancy with gaps in standardised data and reporting, this makes it difficult to quantify the benefit of adaptation and resilience actions.
- Properties at increased climate risk may be subject to reduced lending rates from banks and increased insurance premiums, making insurance coverage unaffordable for many households¹⁶³.
- Adaptation planning takes time, especially for infrastructure, buildings, and the natural environment, which means actions need to start now to avoid ‘lock-in’ to high levels of risk in 2050 and beyond.¹⁶⁴
- Future Homes Standards and building regulations¹⁶⁵ are not proposing to cover climate adaptation measures within new and existing buildings.
- DEFRA’s survey *What does a well-adapted England look like?*¹⁶⁶ found that people in Greater Manchester need more information on the risks associated with climate change and the type of actions they can take.
- Increased investor interest in Environmental, Social and Governance practices (ESG), opens the risk of ‘greenwashing’¹⁶⁷.

Co-benefits - Links to other headline objectives

Staying within our carbon budget

- Nature-based solutions that build resilience to climate change can also deliver net-zero benefits in the form of carbon capture and sequestration.

Health and wellbeing

- Actions to address climate risk will benefit the most vulnerable communities.

¹⁶⁰ <https://nic.org.uk/app/uploads/Anticipate-React-Recover-28-May-2020.pdf>

¹⁶¹ <https://www.ukib.org.uk/strategic-plan>

¹⁶² <https://www.bankofengland.co.uk/stress-testing/2022/results-of-the-2021-climate-biennial-exploratory-scenario>

¹⁶³ <https://www.bankofengland.co.uk/stress-testing/2022/results-of-the-2021-climate-biennial-exploratory-scenario>

¹⁶⁴ <https://www.theccc.org.uk/uk-action-on-climate-change/adapting-to-a-warmer-uk/>

¹⁶⁵ <https://www.gov.uk/government/consultations/the-future-homes-standard-changes-to-part-l-and-part-f-of-the-building-regulations-for-new-dwellings>

¹⁶⁶ <https://www.ukclimaterisk.org/wp-content/uploads/2020/10/2020-10-20-Is-the-UK-on-track-to-adapt-to-climate-change-Conference-Summary-1.pdf> D

¹⁶⁷ Monetising environmental activities like carbon offsetting, without widely agreed standards to ensure they are paid fairly

- Nature-based solutions that build resilience can also provide access to good quality green space which supports health and wellbeing and enhances quality of life.

Inclusive, zero carbon and climate resilient economy

- Action to build climate resilience helps to grow the green technology and services sector which brings growth and jobs opportunities for Manchester, especially in sectors such as construction, water, infrastructure, and nature conservation¹⁶⁸.

Recommended Actions

Action needs to be taken by government at local and national level, by institutions and organisations in the private and voluntary sector, and by residents and communities across the city.

These recommended actions have been co-designed with stakeholders across the city to help enable everyone to play their full part in tackling the climate crisis and meeting the ambitious targets that Manchester has adopted.

To be delivered locally / direct control lies in Manchester:

- Adaptation 1. Manchester City Council (MCC) to lead a **detailed risk and vulnerability assessment** of the city and produce an **adaptation plan**, directing action towards increasing the resilience of our critical infrastructure and most vulnerable communities.
- Adaptation 2. MCC to ensure that its **planning, housing, and infrastructure policies** incorporate climate adaptation and resilience, including through deployment of nature-based solutions, to avoid increasing exposure to risk through new developments.
- Adaptation 3. Public sector organisations to **transparently report** on what they are doing to mitigate the risks of climate change to their services and how these risks are being governed, in line with TCFD reporting standards.
- Adaptation 4. **Manchester Climate Change Partnership** members to share learning on assessing organisational climate risks and building resilience through value chains.
- Adaptation 5. Manchester Climate Change Agency (MCCA) to work with local partners such as the 'climate creatives challenge'¹⁶⁹ to explore new and innovative ways to **raise awareness of climate risk to communities**.

To work at city-region level / with Greater Manchester partners on:

- Adaptation 6. **Greater Manchester Pension Fund** to actively work towards a greater percentage of its investment portfolio being defined as environmentally sustainable, as defined by the UK Green Taxonomy¹⁷⁰.
- Adaptation 7. GMCA to work with Manchester partners to develop innovative ways to **unlock private investment** into adaptation and resilience.
- Adaptation 8. **GM Environment Fund** to explore the use of Social Investment Tax Relief to drive funding into local social enterprises that deliver nature-based solutions to adapting to climate change.

¹⁶⁸ <https://www.theccc.org.uk/publication/uk-housing-fit-for-the-future/> and <https://www.theccc.org.uk/publication/local-authorities-and-the-sixth-carbon-budget/>

¹⁶⁹ <https://www.climatecreativeschallenge.com>

¹⁷⁰ [UK Green Taxonomy – GTAG \(greenfinanceinstitute.co.uk\)](https://www.greenfinanceinstitute.co.uk)

To advocate for national government to do:

- Adaptation 9. To ensure climate resilience is factored into all **public capital spending**, including the National Infrastructure and Construction pipeline of £650 billion investment by 2030¹⁷¹.
- Adaptation 10. To set a **high level ambition for adaptation** to mirror the UK's target to reach net zero by 2050 as called for by the Climate Change Committee¹⁷².
- Adaptation 11. To set out a **National Resilience Strategy** to focus on the UK's ability to anticipate, assess, prevent, mitigate, respond to, and recover from known, unknown, direct, indirect and emerging climate risks¹⁷³.
- Adaptation 12. Strengthen the ownership and accountability of the cross-Whitehall **National Adaptation Strategy** to drive adaptation principles across Government policy and strategy.
- Adaptation 13. Develop national **adaptation and resilience infrastructure standards** as called for by the National Infrastructure Commissions report: 'Anticipate, React, Respond'¹⁷⁴.
- Adaptation 14. Use the **Green Finance Strategy** to set the frameworks for more integration of investment into measures for resilience, emission reduction and nature restoration.
- Adaptation 15. Develop more **localised climate risk and vulnerability data** to guide investment and decision-making, as recommended by The World Bank report¹⁷⁵.
- Adaptation 16. Require infrastructure operators to develop and maintain long term **resilience strategies** that meet resilience standards¹⁷⁶.
- Adaptation 17. Put in place longer term support to continue the work of **Flood Re**¹⁷⁷, a joint initiative between the Government and insurers, making flood cover part of household insurance policies more affordable.
- Adaptation 18. HM Treasury to **expand mandatory TCFD** reporting to the public sector¹⁷⁸.

To do differently / opportunities to innovate:

- Adaptation 19. HM Treasury to commission a review on the **economics of climate resilience** to understand the costs and benefits and drive smarter public-private investment into adaptation¹⁷⁹.
- Adaptation 20. HM Treasury to develop an **Environmental Investment Tax Relief** to incentivise investment into environmental outcomes including adaptation and resilience.
- Adaptation 21. Advocate for national action to support the **Commission for Climate Resilient Infrastructure**¹⁸⁰ requiring all infrastructure to be resilient by 2025.

¹⁷¹ <https://www.gov.uk/government/collections/national-infrastructure-plan>

¹⁷² <https://www.theccc.org.uk/publication/2022-progress-report-to-parliament/#recommendations-to-government>

¹⁷³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1001404/Resilience_Strategy_-_Call_for_Evidence.pdf#page12

¹⁷⁴ <https://nic.org.uk/studies-reports/resilience/>

¹⁷⁵ <https://openknowledge.worldbank.org/handle/10986/35203>

¹⁷⁶ <https://publications.parliament.uk/pa/cm201415/cmselect/cmenvaud/453/45309.htm>

¹⁷⁷ <https://www.floodre.co.uk/>

¹⁷⁸ <https://www.icaew.com/insights/viewpoints-on-the-news/2022/jan-2022/summary-of-public-sector-sustainability-reporting-landscape>

¹⁷⁹ <https://www.gov.uk/government/speeches/finance-resilience-net-zero-and-nature>

¹⁸⁰ <https://resilientinvestment.org/>

4. HEALTH AND WELLBEING

Headline Objective:

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.

The Climate Change Framework clearly articulates that the actions we need to take to reduce our CO2 emissions and adapt the city to climate change also have the potential to improve the health and wellbeing of Manchester’s residents. And conversely; actions that improve health and wellbeing can simultaneously help to tackle the climate crisis¹⁸¹.

It calls for new strategic initiatives to accelerate action and remove barriers that are limiting further action, and notes they need to be focused on the people and communities where climate action has most potential to improve health and wellbeing.

Update on research and initiatives

In 2020, the UK’s Climate Change Committee published ‘Sustainable Health Equity: Achieving Net Zero UK’¹⁸² which gave evidence to show that climate change will lead to more unpredictable systemic shocks that will impact population health.

In June 2021, Greater Manchester was declared a ‘Marmot City Region’ following the publication of ‘Build Back Fairer in Greater Manchester: Health Equity and Dignified Lives’¹⁸³.

Following this, in 2022, a Manchester Marmot Taskforce was established to take the Marmot recommendations and create a tailored action plan¹⁸⁴ for the city. Manchester’s Climate Change Agency (MCCA) provided expert advice to this Taskforce.

Over the same period, MCCA worked with the Manchester Health and Wellbeing Board to establish an independent Health and Wellbeing Advisory Group for Manchester’s Climate Change Partnership.

This advisory group has fed its expertise into this report and agreed to focus on developing a set of indicators to track climate and health that will support production of future Annual Reports that track the city’s progress against the Framework objectives.

In addition to these initiatives, research on the effects of climate change on health and wellbeing is showing that the affects will be cumulative, becoming more severe and unpredictable over time if left unaddressed, commonly impacting our most vulnerable communities first and worst. It is also showing that climate change will impact people both directly and indirectly.

Direct impacts are created by our changing climate increasing our exposure to heat and cold, UV radiation, air pollution, pollen, emerging infections, and the impacts of extreme weather events such as flooding and its associated water-borne diseases.

- Poor air quality kills 28,000 to 36,0000 people in the UK each year¹⁸⁵.

¹⁸¹ [Manchester Climate Change Framework 2020-25.pdf](#)

¹⁸² <https://www.instituteofhealthequity.org/resources-reports/sustainable-health-equity-achieving-a-net-zero-uk/main-report.pdf>

¹⁸³ <https://www.instituteofhealthequity.org/about-our-work/latest-updates-from-the-institute/greater-manchester-a-marmot-city-region>

¹⁸⁴ Marmot Manchester plan to follow upon publication

¹⁸⁵ <https://airqualitynews.com/2018/08/22/comeap-updates-estimates-on-uk-air-pollution-deaths/>

- Heatwaves cause an average 8% increase in emergency hospital admissions on the top 5% of hottest days in the UK. For every 1°C increase in temperature over 20°C, ambulance callouts for the NHS increase by 1%¹⁸⁶.
- Whilst flood water poses a relatively small risk of drowning, people who are unable to relocate after a flood are at risk of ill health from living in damp homes and the experience of flooding can also generate severe mental health impacts that may outlast the immediate impacts of the flood itself.

Indirect impacts of climate change on population health are much more complex and systemic but are increasingly being recognised in global reports¹⁸⁷ including, under-nutrition related to food insecurity, respiratory illnesses from cold damp homes and rising levels of obesity due to lack of physical activity and provision of good quality green space or active transport infrastructure.

Co-Benefits / Links to other headline objectives

Staying within our carbon budget

- Energy efficient housing helps to reduce fuel poverty and creates warm, dry homes that improve health and wellbeing, and are more affordable to run. It also reduces our CO2 emissions.
- Cycling and walking (active travel) improves health outcomes, reduces pressure on the NHS and reduces our CO2 emissions, improving air quality.
- Healthy, sustainable, and resilient food systems ensure more affordable, nutritious diets and reductions in greenhouse gas emissions.

Adaptation and resilience

- Addressing the health impacts associated with heatwaves, cold spells, storms, and flooding is part of adapting to extreme weather events and building resilience to climate change.
- Creating neighbourhoods with access to good quality green space, improves health and wellbeing and increases our resilience to climate change through nature-based solutions.

Inclusive, zero carbon and sustainable economy

- Incorporating health and wellbeing into our measures of economic success (away from GDP) can support more inclusive local economic growth.
- Building environmentally sustainable health care systems and facilities creates a health care system resilient to climate change that is able to best support the economic growth and development of the city.

Recommended Actions

Health 1. The city to carry out a **vulnerability assessment** to map at hyperlocal level where climate change will exacerbate known health inequality so that action can be prioritised and targeted.

Health 2. MCCA to work with the Health and Wellbeing Advisory Group and Marmot Taskforce to **develop city-scale indicators** to track and report the impacts of climate change on health.

¹⁸⁶<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/climaterelatedmortalityandhospitaladmissionsenglandandwales/2001to2020/previous/v1>

¹⁸⁷[https://doi.org/10.1016/s0140-6736\(17\)32464-9](https://doi.org/10.1016/s0140-6736(17)32464-9)

Health 3. Manchester City Council (MCC) to incorporate health equity and climate action into **policies and strategies** in a consistent and transparent manner and implement methods to measure their impact.

Health 4. Manchester’s Marmot Taskforce to lead implementation of its action plan.

5. INCLUSIVE, ZERO CARBON & CLIMATE RESILIENT ECONOMY

Headline 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

Update on research and initiatives

Manchester Climate Change Agency (MCCA) continues to work with C40¹⁸⁸, CDP, and the World Business Council on Sustainable Development on the City-Business Climate Alliance¹⁸⁹ (CBCA) initiative.

Manchester is one of eight cohort cities alongside Dallas, Durban, Lisbon, New York, Stockholm, Tel Aviv and Vancouver.

A detailed survey is being carried out with Manchester Climate Change Partnership (MCCP) members to quantify the collective impact of their climate actions, draw out good practice that can be shared through a peer to peer learning programme, and identify opportunities to leverage expertise for collaborations on city-scale challenges.

MCCA is also involved in a partnership of business support organisations across Greater Manchester whose objective is to coordinate services and help make this the easiest place for businesses to go green. The partnership launched the Bee Net Zero website¹⁹⁰ in late 2021 to provide access to credible information and to signpost support services.

Manchester City Council’s new Work and Skills Strategy¹⁹¹ recognises the importance of understanding the skills gaps within the low carbon sector and capitalising on the opportunities for reskilling the local workforce. It acknowledges that one of the main barriers to delivering the right training and qualifications at scale is a lack of demand for training from employers and residents due to unstable demand in the market.

Recommended Actions

Economy 1. Manchester Climate Change Partnership (MCCP) to use its collective spending power and influence to **help create demand for green skills and local growth** in the green technologies and services sector, including building retrofit, electrification of heating, renewable energy generation and adaptation.

Economy 2. MCCP to accelerate the decarbonisation of its members through a **peer to peer learning** programme.

Economy 3. MCCP to leverage specialist expertise and capacity from organisations across the city into addressing specific city-scale challenges, following the blueprint of the zero carbon new build standard¹⁹², including local offsetting.

¹⁸⁸ [The Alliance Partners — City-Business Climate Alliance](#)

¹⁸⁹ [Meet the Members — City-Business Climate Alliance](#)

¹⁹⁰ [Bee Net Zero | The journey to becoming Net Zero](#)

¹⁹¹ [New Work and Skills draft strategy | Manchester City Council](#)

¹⁹² [Manchester Climate Change Partnership adopts and endorses a Roadmap to Net Zero Carbon New Buildings in Manchester | Manchester Climate Change](#)

- Economy 4. MCCA to help **transfer relevant learning** from other CBCA cohort cities to Manchester.
- Economy 5. MCCA and MCCP to promote **Bee Net Zero** services through their networks and support the development of new programmes that will benefit Manchester businesses and residents.
- Economy 6. Bee Net Zero partners to share information on the impact being delivered by Manchester businesses receiving support and on the growth of the local green technologies and services sector.

6. ENSURING A JUST TRANSITION

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 actions to help the transition to a zero carbon and climate resilient city do not have a negative impact on the most vulnerable people, and that the costs do not fall unevenly on those that are least able to afford them.

Rising cost of living

This update to the Climate Change Framework comes at a time of much economic uncertainty and significant increases to the cost of living.

For residents, we recognise that:

- High inflation is likely to reduce disposable incomes and spending power.
- More residents may be pushed into poverty, residents already in poverty may find it significantly harder to recover.
- Residents on the fringes of eligibility for support may be amongst the worst affected.
- 19.8% of Manchester households are now fuel poor.
- 12.3% of United Utilities customers in Manchester are accessing financial support.
- 11.4% of Manchester households are struggling with food insecurity and the number of food providers has almost doubled since 2017.

For business, we recognise that:

- Inflation has caused upwards pressure on wages, the cost of raw materials and energy, increasing business costs. Supply chain disruption is also contributing to price inflation.
- Decreasing consumer confidence and squeezed household budgets are leading to fewer sales and creating cashflow issues in the face of rising costs, particularly impacting on the retail, hospitality, culture, and leisure sectors.
- A potential Real Living Wage increase of 10-15% in October (to be implemented in March 2023) is positive for employees but may disincentivise investment by businesses, especially in sectors where low pay is more prevalent.

For the public and voluntary/charitable sector we recognise that:

- Price inflation is affecting budgets (especially relating to fixed costs like energy) and project viability, as well as lowering the relative value of funding awards provided.

- Uncertain funding reduces the ability of organisations to plan ahead and deliver services to support residents, communities and business.

Recommendations in the 2022 Update

The recommended actions outlined in this Update have been designed to reflect our understanding and knowledge on how we can tackle both climate change and wider socioeconomic challenges together, addressing multiple issues and delivering multiple benefits with well-designed actions. For example:

- Insulating properties creates warmer, healthier homes that are cheaper to heat and that create fewer greenhouse gas emissions.
- Improving the efficiency of product design and manufacturing processes reduces the cost of material and energy inputs to industry.
- Decarbonising our buildings, transport and consumption patterns creates opportunities for innovation and growth for our businesses which creates new jobs and skills for local people.

Details of these co-benefits are highlighted in each chapter of the Framework Update.

7. FINANCING THE TRANSITION

The cost of the transition to an inclusive, zero carbon and climate-resilient city, is significant. Estimates to decarbonise Manchester's local energy system is £13.2bn¹⁹³ (£4 billion by 2030).

The UK Cities Climate Investment Commission (UKCCIC) City Investment Analysis Report¹⁹⁴ describes the challenge in this way:

The transition of our existing carbon intensive systems to net zero will require significant up front capital and presents unique challenges for UK cities.

- **Scale:** it is estimated that £206 billion (in a range of £112-£334 billion) will be needed to achieve the net zero pledges made by the UK's Core Cities and London Councils.
- **Urgency:** implementation must accelerate as soon as possible to meet the targeted zero carbon deadlines.
- **Complexity:** the systemic transitions required within cities are complex and interlinked and are unlikely to be achieved successfully through individual decision-making.
- **Just Transition:** already stretched social inequities risk being exacerbated if the outcomes of policy changes are not appropriately considered.

The quantity of capital that must be deployed is beyond the reach of public finances and if the funding gap is met only by citizens and businesses there will be damaging impacts on the poorest sections of society which is a counter to the intended just transition.

Private sector finance is therefore critical in addressing climate change and the scale of private finance available is sufficient to support substantial progress towards our zero carbon ambitions.

However, there are significant hurdles to overcome and new approaches must be developed to unlock this resource.

¹⁹³ Local Areas Energy Plan to be published 2022

¹⁹⁴ https://www.corecities.com/sites/default/files/field/attachment/UKCCIC_Final_Report-1.pdf

This may include bundling climate measures together, coordinating delivery with multiple stakeholders and blending finance from different sources, for example grant-based funding and returns-based funding.

‘Financing Green’¹⁹⁵ creates huge opportunities for UK financial institutions¹⁹⁶, however, the mechanisms to drive investment into green outcomes are new and need to be developed at scale to produce a rate of return that is attractive.

Financial benefits must be aggregated to support repayable finance and improvements in fuel poverty, health outcomes and carbon emissions must be evaluated and harnessed together in a precise financial framework.

Standardisation of reporting, governance, billing, and legal structures will be required to encourage private investor confidence and allow aggregation for scaled investment¹⁹⁷.

The city scale presents an attractive and substantial proposition for investors to bring together projects to generate sufficient scale, volume, and predictability.

The Green Finance Institute, The UK Infrastructure Bank and the UKCCIC are working to support local areas to develop investable pipelines of climate activity and the new financial mechanisms that will be needed to deploy them.

In its second phase of work, the Connected Places Catapult¹⁹⁸ are working in partnership with local authorities, industry, and the investment community to develop a gold standard for net zero investment, exploring the skills, capacities, and infrastructure that local areas need to develop projects and attract private finance.

MCCA secured Manchester’s ongoing engagement with this work, with the city being one of three focus cities in this phase. The outcomes will help Manchester to develop robust business cases and investment models that give the confidence, scale and longevity needed by the investor community¹⁹⁹ to unlock private finance at scale into local climate action.

The government’s Green Finance Strategy²⁰⁰ and ‘Greening Finance: a Roadmap to Sustainable Investing’²⁰¹ also recognise the role of the financial sector in delivering climate and environmental objectives, by setting out a series of steps for businesses and investors to factor climate risk into mainstream financial decision making:

- To green portfolios through aligning activity to the UK Green Taxonomy²⁰²
- To disclose data on the risks and vulnerability climate change poses to business through the Taskforce on Financial-related Climate Disclosures (TCFD)²⁰³.
- To plan for the transition to a net zero future through publishing Transition Plans²⁰⁴.

¹⁹⁵ <https://www.gov.uk/government/publications/green-finance-strategy>

¹⁹⁶ <https://www.theccc.org.uk/publication/uk-energy-prices-and-bills-2017-report-supporting-research/>
<https://data.oecd.org/gdp/gdp-long-term-forecast.htm>

¹⁹⁷ https://www.corecities.com/sites/default/files/field/attachment/UKCCIC_Final_Report-1.pdf

¹⁹⁸ [Connected Places Catapult - The UK's innovation accelerator for cities, transport & place leadership.](https://www.connectedplaces.org.uk/news/uk-cities-climate-investment-commission-report/)

¹⁹⁹ <https://cp.catapult.org.uk/news/uk-cities-climate-investment-commission-report/>

²⁰⁰ <https://www.gov.uk/government/publications/green-finance-strategy>

²⁰¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1031805/CS0821102722-006_Green_Finance_Paper_2021_v6_Web_Accessible.pdf

²⁰² <https://www.greenfinanceinstitute.co.uk/programmes/uk-green-taxonomy-gtag/>

²⁰³ <https://www.fsb-tcf.org/>

²⁰⁴ <https://transitiontaskforce.net/>

9. ENGAGEMENT WITH STAKEHOLDERS

Manchester Climate Change Agency (MCCA) has engaged with numerous stakeholders through a variety of channels over the last twelve months to ensure a diverse range of input has been incorporated into the recommended actions in this 2022 Framework Update.

An overview of these conversations is presented here and will be covered in more detail in the appendices that will accompany the final publication.

Conversations continue to be held including with Manchester Climate Change Partnership members and via a forthcoming survey to residents and businesses in late summer.

Engagement with residents and businesses

Manchester's first Climate Assembly was held between August and September 2021 as part of the Zero Carbon Cities project²⁰⁵ and has fed into this Framework Update.

The materials from all the workshops can be found on the Commonplace website²⁰⁶ and resulted in creation of a "Mandate on Climate Action"²⁰⁷ which was taken to the COP26 Conference in Glasgow in November 2021.

A survey of residents and businesses was also carried out in September and October 2021 to understand:

- The types of positive climate action that they are already taking on – buildings, energy, transport, things we buy and things we throw away, food, green infrastructure, and nature-based solutions.
- The types of barriers that are encountered when trying to adopt more sustainable behaviours and the kind of additional support that may be required to enable them to do more, including practical and financial assistance, shifts in local and national policy, and a change in public perception.

In addition, detailed conversations with residents have been carried out via MCCA's In Our Nature community engagement programme which have involved understanding the climate priorities of diverse communities across the city.

MCCA is also part of a coalition of business support organisations who engage with thousands of small and medium sized companies on climate change.

The results of all these conversations have showed that the residents and businesses of Manchester want to take action to tackle climate change and need help to do so. They recognise that their ability to do more will be enhanced by more ambitious local and national policy and by increased and targeted investment in sustainable infrastructure such as active travel networks. They also see the benefits of climate action in terms of reduced energy bills, healthier lifestyles, new business opportunities and access to more green space.

Manchester Climate Change Partnership

Manchester Climate Change Partnership (MCCP) is a cross sectoral partnership of organisations that are engaged in helping transition the city to zero carbon. It includes representation from across the city's private, public, health, faith, culture, property, social housing, academic sectors and communities.

²⁰⁵ <https://energy-cities.eu/hubs/>

²⁰⁶ <https://zerocarbonmanchester.commonplace.is/proposals/in-our-nature-community-assembly/step1>

²⁰⁷ https://res.cloudinary.com/commonplace-digital-limited/image/upload/v1633687544/projects/zerocarbonmanchester/workshops/Mandate_Upload.pdf

As such they bring a diverse and inclusive range of voices to the Framework Update and have been consulted on a regular basis including in July, September, and November 2021; and January, March, May and July 2022.

In addition, MCCC has several Advisory Groups²⁰⁸ that have provided expert input and academic challenge to the Framework Update including:

- **Zero Carbon Advisory Group** – includes the University of Manchester’s Tyndall Centre and Sustainable Consumption Institute, Manchester Metropolitan University, Friends of the Earth and Anthesis.
- **Adaptation and Resilience Advisory Group** – includes the University of Manchester, Manchester Metropolitan University, the Greater Manchester Resilience Unit, the Environment Agency, and Groundwork Manchester.
- **Health and Wellbeing Advisory Group** – includes the NHS, Public Health, Salford University and Manchester City Council.

Wider stakeholder engagement

MCCA has engaged with a wide variety of stakeholders throughout development of this Update, to ensure technical expertise and input from many sectors.

This includes engagement with:

- Manchester Climate Change Youth Board
- Manchester Housing Providers Partnership
- Manchester Strategic Housing Board
- Manchester Health and Wellbeing Board
- Manchester’s Marmot Taskforce
- Manchester Food Board
- Manchester Zero Carbon Skills Group
- Manchester Zero Carbon Communities Group (In our Nature delivery partners)
- Manchester City Council:
 - Council Leader, Executive Member for Environment and Climate Change and Senior Management Team
 - Environment and Climate Change Scrutiny Committee
 - Zero Carbon Coordination Group
 - Officers leading on Work and Skills, Estates, Local Area Energy Planning, Planning, City Centre Regeneration, Growth and Development, Neighbourhoods, City Policy, Housing, Highways, Transport, Procurement, and Green and Blue Infrastructure
- Transport for Greater Manchester (TfGM)
- Greater Manchester Combined Authority (GMCA) Environment Team
- Electricity North West Ltd
- UK Core Cities Low Carbon Group
- City Business Climate Alliance partners – including C40, CDP and the World Business Council for Sustainable Development

²⁰⁸ <https://www.manchesterclimate.com/advisory-groups>

Manchester City Council Report for Information

Report to: Environment & Climate Change Scrutiny Committee - 21 July 2022

Subject: MCC Climate Change Action Plan: Quarterly Progress Report, Quarter 1 April – June 2022

Report of: The Deputy Chief Executive and City Treasurer

Summary

The Council declared a Climate Emergency in July 2019 and developed a Climate Change Action Plan (CCAP) 2020-25, which was approved by Executive in March 2020. Quarterly updates and an Annual Report covering year one (2020-21) of the CCAP are available online at www.manchester.gov.uk/zerocarbon.

This report provides an update on progress in delivery of the Council's CCAP in Quarter 1 2022-23 (April – June 2022)

Recommendations

The Environment and Climate Change Scrutiny Committee is recommended to note the contents of the report and the progress that has been made in delivering the CCAP 2020-25 during the last three months (April – June 2022).

Wards Affected: All

<p>Environmental Impact Assessment - the impact of the issues addressed in this report on achieving the zero-carbon target for the city</p>
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<p>The Council's Climate Change Action Plan 2020-25 sets out the actions that will be delivered to ensure that the Council plays its full part in delivering the city's Climate Change Framework 2020-25</p>
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<p>Equality, Diversity and Inclusion - the impact of the issues addressed in this report in meeting our Public Sector Equality Duty and broader equality commitments</p>

<p>Actions set out in the Climate Change Action Plan 2020-25 recognise the need for just and equal delivery of the climate action across the city, focusing on the areas such as community engagement, accessible transport, access to green spaces and tackling fuel poverty.</p>
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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 transition to a zero carbon city will help the city's economy become more sustainable and will generate jobs within the low carbon energy and goods sector. This will support the implementation of the Our Manchester Industrial Strategy and Manchester Economic Recovery and Investment Plan
A highly skilled city: world class and home grown talent sustaining the city's economic success	Manchester is one of a small number of UK cities that have agreed a science-based target and is leading the way in transitioning to a zero carbon city. It is envisaged that this will give the city opportunities in the green technology and services sector.
A progressive and equitable city: making a positive contribution by unlocking the potential of our communities	Transitioning to a zero-carbon city can help to tackle fuel poverty by reducing energy bills. Health outcomes will also be improved through the promotion of more sustainable modes of transport, improved air quality and easy access to green spaces.
A liveable and low carbon city: a destination of choice to live, visit, work	Becoming a zero carbon city will help to make the city a more attractive place for people to live, work, visit and study.
A connected city: world class infrastructure and connectivity to drive growth	A zero carbon transport system would create a world class business environment to drive sustainable economic growth.

Full details are in the body of the report, along with any implications for:

- Equal Opportunities Policy
- Risk Management
- Legal Considerations

Financial Consequences – Revenue

It is not expected that there will be any financial consequences to the Revenue budget that should arise from the content of this report.

Financial Consequences – Capital

It is not expected that there will be any financial consequences to the Capital budget that should arise from the content of this report.

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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 City Council Climate Change Action Plan 2020-25
Manchester City Council Climate Emergency Declaration July 2019
Manchester Climate Change Framework 2020-25

1.0 Purpose of the report

- 1.1 The purpose of this report is to provide a progress update on Manchester City Council's delivery of its CCAP 2020-2025 for Quarter 1 2022-23 (April – June 2022), to update on the Council's specific actions it has committed to, in order to achieve zero carbon ambitions by 2038 at the latest as well as track progress of the Council's actions at a citywide level to lead by example and influence and encourage other stakeholders to take action.
- 1.2 All activity described in this report relates to the period in which the report is issued, in this instance April to June 2022, and specifically focuses on the Council's own direct CO2 emissions as well as its city-wide leadership role. Emissions data relates to the previous quarter due to billing and data monitoring being quarterly in arrears i.e. January to March 2022.
- 1.3 This Quarter 1 progress report has been shared with the City Council's Zero Carbon Coordination Group and Strategic Management Team to ensure its accuracy and transparency and will be published in an accessible format on the Council's website.

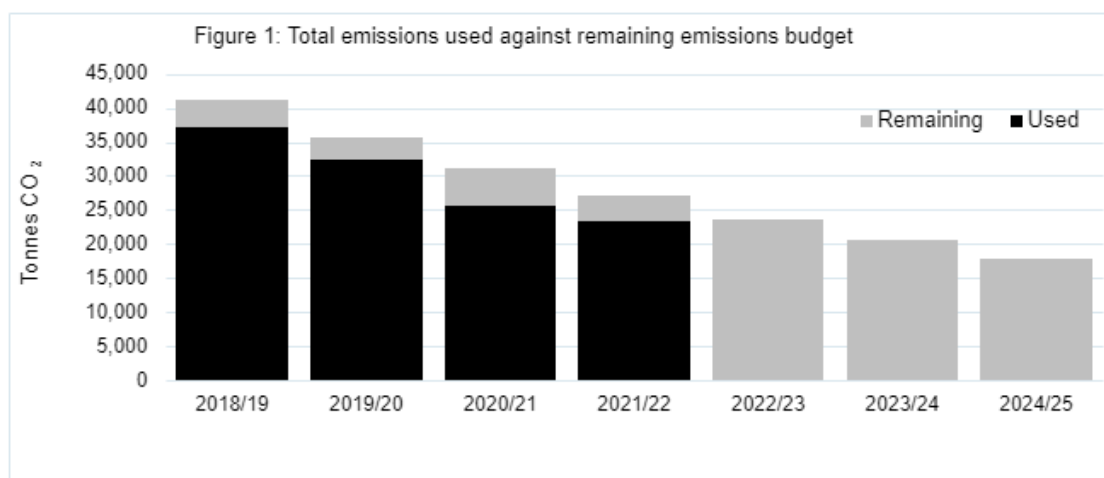
2.0 Background

- 2.1 A five-year CCAP 2020-25 went live following approval at Executive in March 2020.
- 2.2 This plan was considered by Strategic Management Team and the Neighbourhoods and Environment Scrutiny Committee throughout the CCAP's first year, with a detailed progress presented to the Neighbourhoods and Environment Scrutiny Committee on 10 February 2021. [Here](#) is a link to the meeting papers.
- 2.3 Following the establishment of the new Environment and Climate Change Scrutiny Committee, regular updates on delivery of the CCAP have been provided via the Quarterly Progress Reports, which have been scheduled into the Committee's work programme. Previous quarterly progress reports are also available on the Council's website and can be found [here](#).
- 2.4 The MCC CCAP 2020-2025 is currently being refreshed and will be shared with the Environment and Climate Change Scrutiny Committee and Executive in September 2022. Whilst we continue working to reduce MCC's own direct CO2 emissions, there will be a strong focus on our city-wide leadership role and work across Greater Manchester in support of wider climate change objectives.

3.0 Quarter 1 Progress Report April to June 2022

- 3.1 The Council is making good progress in meeting its target to reduce its direct CO2 emissions by 50% by 2025. Since 2020, the Council has exceeded its annual reductions targets and the Quarter 1 report attached shows continued progress is being made with the Council on track to meet its 2025 target.

- 3.2 The Quarterly Progress Report highlights the progress that has been made against individual actions within the CCAP during the first quarter of 2022-23, with the Council's direct carbon emissions data covering the previous quarter, in this case, January – March 2022, due to the availability of billing and data monitoring which is drawn from billing information from the previous quarter.
- 3.3 The report shows the Council has emitted 23,410 tonnes of CO₂ between April 2021 and March 2022, which is 13% below the available budget (27,056 tonnes of CO₂) – these are the most up to date figures for the year 2021-22. These emissions relate to Council buildings and energy, streetlights, waste collection and operational fleet, and MCC business travel.
- 3.4 Figure 1 shows the Council's emissions from 2018/19 to end of 2021/22:



- 3.5 The progress report shows that the Council's CO₂ emissions reflect a continued overall downwards trend. The total carbon emissions in Q4 2021-22 are 20% lower than Q4 in the previous year and 31% lower than Q4 in 2019-20 (pre COVID-19).
- 3.6 There has been a slight increase in emissions from business travel due to an increase in physical meetings and events following the easing of COVID-19 restrictions, however, Q4 2021-22 emissions are still 57 tonnes lower than Q4 2019-20.
- 3.7 The report highlights progress made across the five workstreams contained within the Council's CCAP and focuses on actions outlined in the CCAP Work Plan for 2022-23. The actions covered include delivery of the Estate Decarbonisation Programme, development and delivery of the active travel schemes across the city, delivering events more sustainably, such as Manchester Day, latest progress on tree planting and city-wide community engagement activities.

4.0 Key Achievements

- 4.1 The Council's Corporate Estates Team have been making good progress with delivering the Estates Carbon Reduction Programme. Wythenshawe Forum

was one of the highest carbon emitting Council buildings. Following works by the Council, there is now a forecast 49% reduction in CO2 emissions from energy consumption per year. Decarbonisation measures included LED lighting, a combined heat and power engine, solar photovoltaic (PV) panels, a solar PV battery, an air source heat pump and a new Building Management System.

- 4.2 The Council has worked with the UK Cities Climate Investment Commission (UK CCIC) as part of a research study focusing on enabling local authorities to identify potential new funding sources which are needed to deliver net zero projects. This work also included the Manchester Climate Change Agency and the GMCA.
- 4.3 The Culture and Events team are the first team within the Council to undertake a bespoke Carbon Literacy training programme, delivered by Julie's Bicycle, a not-for-profit organisation, mobilising the arts and culture to take action on the climate and ecological crisis. This additional training equips the Culture and Events staff with further carbon literacy skills and knowledge specific to their sector and enable them to support the organisations they work with to become more sustainable and to reduce their emissions. This training was really well received, and staff are now looking to apply their learnings with the organisations they work with across the city.
- 4.4 Six community groups, established through the In Our Nature programme, delivered a range of successful activities, workshops and knowledge sharing in their local communities, focusing on areas such as recycling, growing food and planting, rewilding, and hosting community training and workshops.
- 4.5 The City Council is building additional Zero Carbon capacity into key services across the Council including our Housing teams. A new Strategic Housing Service Project Manager is now in post. The recruitment for Zero Carbon Programme Manager is underway with interviews taking place in July. Development of the work programme for these posts is underway and will focus on leading on housing retrofit and zero carbon housing.
- 4.6 Manchester City Council, working with City of Trees, has planted 1,288 trees, bringing a total number to 4,401 trees planted by the Council and partners during this latest planting season. Additional funding from the UK Government's Urban Tree Challenge Fund was secured to support further planting across the city. A further 2,620 hedgerow trees and 8 additional community orchards have also been planted this season
- 4.7 The Environment Agency visited West Gorton Sponge Park to look at different ways the Sustainable Drainage Systems (SuDS) have been implemented throughout the park. The Executive Member for Environment also went on a tour around the park, guided by the GrowGreen team. Gorton Park Friends Group is now fully established and active.
- 4.8 The Bee Green Education Summit took place on 30 June at Connell Co-op College, aiming to support school leaders, business managers and governors

with practical ideas and resources to support change and receive advice from experts. The day was a success and further details will be captured and reported in the Quarter 2 report.

5.0 Next Steps

- 5.1 Officers are conducting a refresh of the Council's 2020-25 CCAP to keep the Plan up to date. This refresh will capture any new projects and activities taking place between 2020-25 and to ensure that the existing actions included in the Plan remain relevant and ambitious. In the refreshed Plan, there will be greater focus on our city-wide leadership role and our work across GM in support of wider climate change objectives. The refreshed CCAP will be presented to the Committee in September 2022.
- 5.2 Officers leading on delivery of the CCAP 2020-25 will continue to focus on the actions outlined in the Work Plan 2022-23 and will present a progress report for Quarter 2 to the Committee in October 2022.
- 5.3 Emissions data for 2021-22 is being collated to include year-end billing data and the updated figures will be included in the Council's CCAP Annual Report, which will be presented to the Committee in September 2022.

6.0 Recommendations

- 6.1 The Environment and Climate Change Scrutiny Committee is recommended to note the contents of the report and the progress that has been made in delivering the Climate Change Action Plan (CCAP) 2020-25 during the last three months (April – June 2022).

Appendices

Appendix 1 - CCAP Q1 Quarterly Progress Report April – June 2022

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Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

Introduction

This report is focused on the Manchester City Council's journey to being zero carbon by 2038 at the latest and sets out the latest progress of the Council's Climate Change Action Plan (CCAP) 2020-25. All activity described in this report relates to the period in which the report is issued, in this instance April to June 2022, and specifically focuses on Manchester City Council's own direct CO₂ emissions as well as its city-wide leadership role. Emissions data relates to the previous quarter due to the delay in billing and data monitoring, i.e., January to March 2022.

CO₂ Emissions

The CCAP has a target to reduce direct emissions of CO₂ by 50% over the five-year period of 2020-25. To achieve this, the Council has a target to reduce its emissions by 13% every year, for five years.

The CCAP also sets a carbon budget of 119,988 tonnes of CO₂ for the five-year period of 2020-25, calculated using science-based targets.

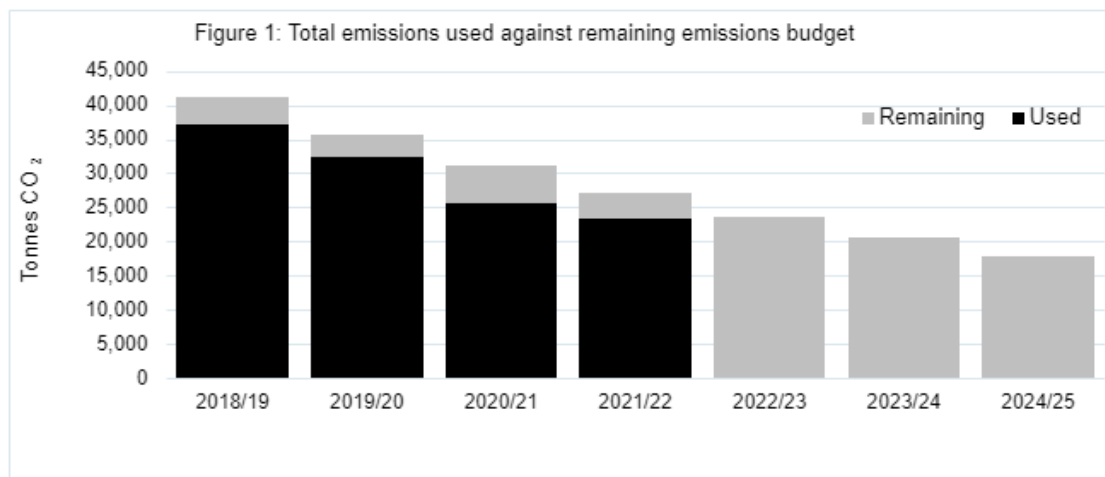


Figure 1 shows the CO₂ emissions for each year of the CCAP 2020-25, against the annual emissions budget. The graph commences from the baseline year, 2018-19 to highlight the year on year budget reduction. From 2018-19 until the current year, the Council has remained within the emissions budget.

The carbon budget for 2021-22 is 27,056 tonnes.



BUDGET

27,056 tonnes CO₂ – Emissions Budget 2021-22

23,410 tonnes CO₂ – Emissions released to date 2021-22*

*Emissions to date include best estimates due to billing timelines; the annual report qualifies actual emissions.

The Council has emitted 23,410 tonnes of CO₂ between April 2021 and March 2022; 87% of the available budget – these are the most up to date figures for the year. The emissions relate to Council buildings, streetlights, waste collection, operational fleet, and business travel. The charts below show a quarter-by-quarter view of emissions from April 2019 for the different Council activities responsible for direct CO₂ emissions. Seasonal differences are shown, e.g. energy consumption and emissions peak in winter, the impact of COVID-19 and overall trends.

Note: where emissions data for the latest quarter has to include some element of a best estimate, for example where accurate billing or monitoring data will become available in future periods, figures are marked as (p) for provisional; where emissions data for the past quarter is revised, on the basis of more accurate data becoming available, figures are marked as (r) for revised. As data is being verified for the whole year at the time of writing this report, figures are marked as (r) for multiple quarters.

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

Data from the previous two years is included since COVID-19 has meant that emissions in 2020-21 were unusual and in most instances, it is more meaningful to compare Q4 in 2021-22 to Q4 in 2019-20 than to the previous year.

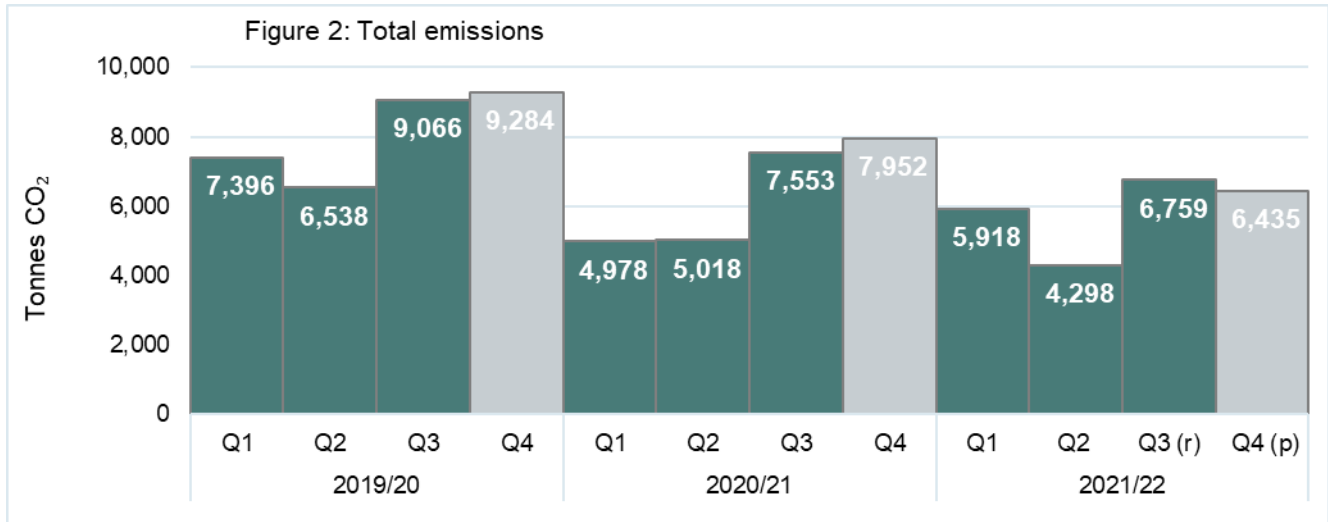


Figure 2 shows the Council’s total emissions and reflects the overall downward trend seen in Figures 3-7 below, alongside expected seasonal variations. Total emissions in Q4 2021-22 are 20% lower than Q4 in the previous year and 31% lower than Q4 in 2019-20 (pre COVID-19).

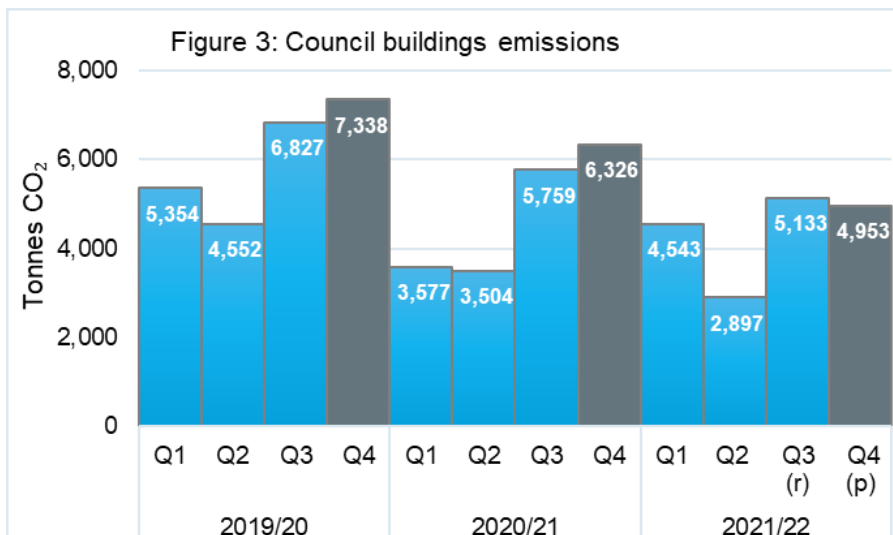
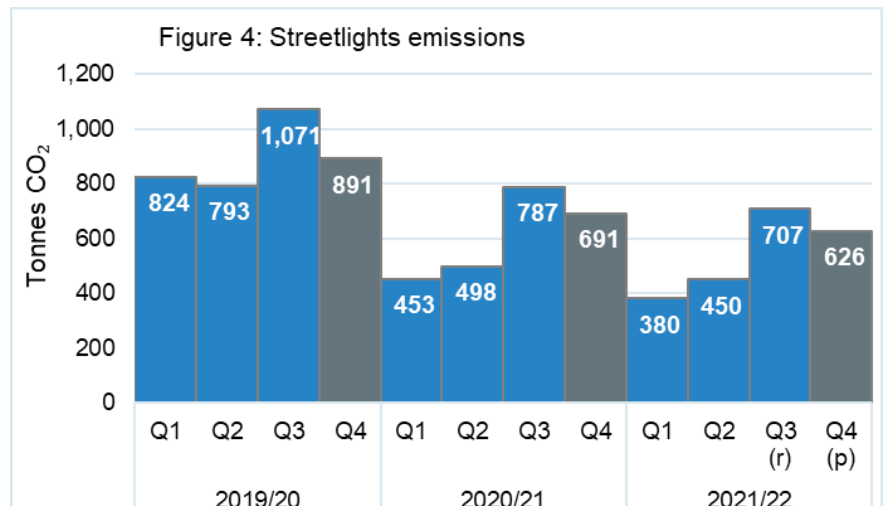


Figure 3 shows emissions from energy use in Council buildings in Q4 2021-22 are 22% lower than Q4 in the previous year and 33% lower than in Q4 2019-20. This reduction has been driven by the ongoing installation of energy efficiency measures and renewable energy technology (e.g. LED lighting, heat pumps, solar PV) across the Council estate, and by the decarbonisation of the national grid.

Figure 4 shows that emissions from streetlights are on a downward trend as a result of LED installations.

Emissions in Q4 2021-22 are 9% lower than Q4 in the previous year and 30% lower than the same quarter in 2019-20.

As the LED replacement programme is complete, we expect only seasonal change going forward.



Manchester Climate Change Action Plan 2020-25
 Progress Update Q1 April – June 2022

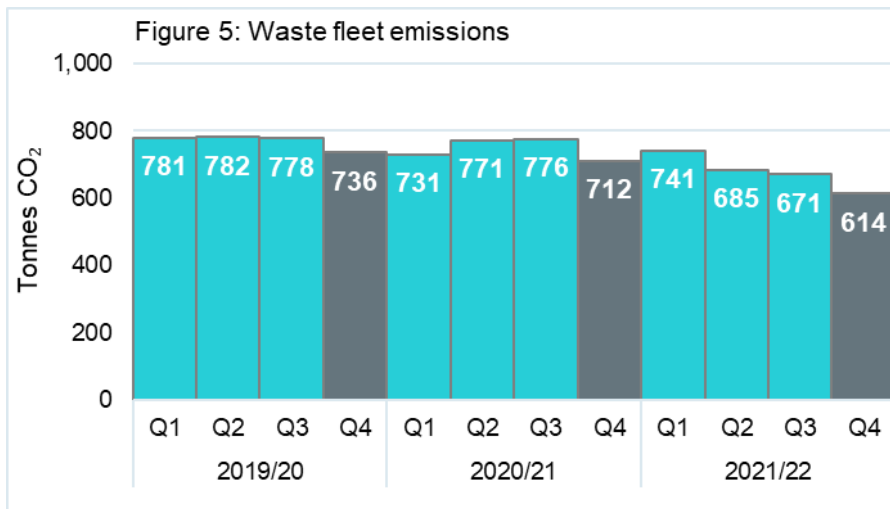


Figure 5 shows emissions from fuel used by the waste fleet fell in Q4 2021-22 and were 14% lower than in Q4 the previous year.

Emissions have fallen in Q4 2021-22 due to the ongoing deployment of the electric refuse collection vehicles (eRCVs). 25 eRCVs are now operational.

Figure 6 shows that emissions from the Council's operational fleet in Q4 2021-22 are 5% lower than Q4 in the previous year and 12% lower than Q4 in 2019-20.

The rolling replacement programme continues to provide electric vehicles and other alternative modes of transport to the existing petrol and diesel vehicles.

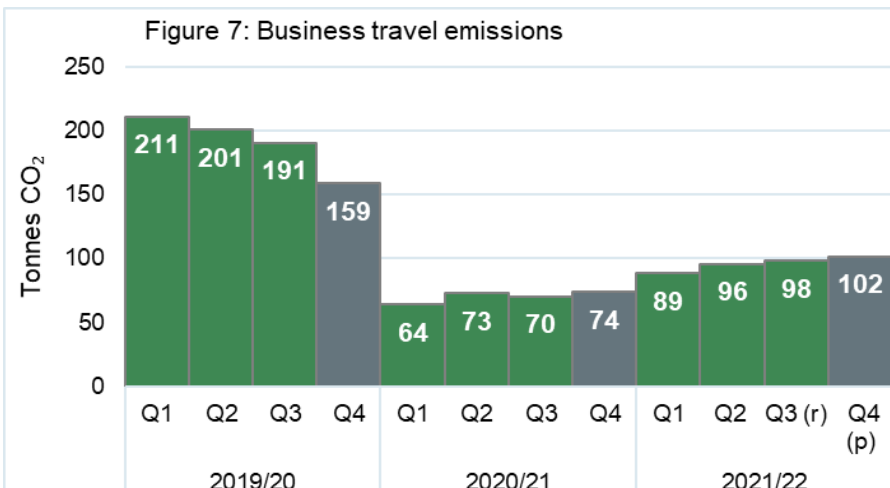
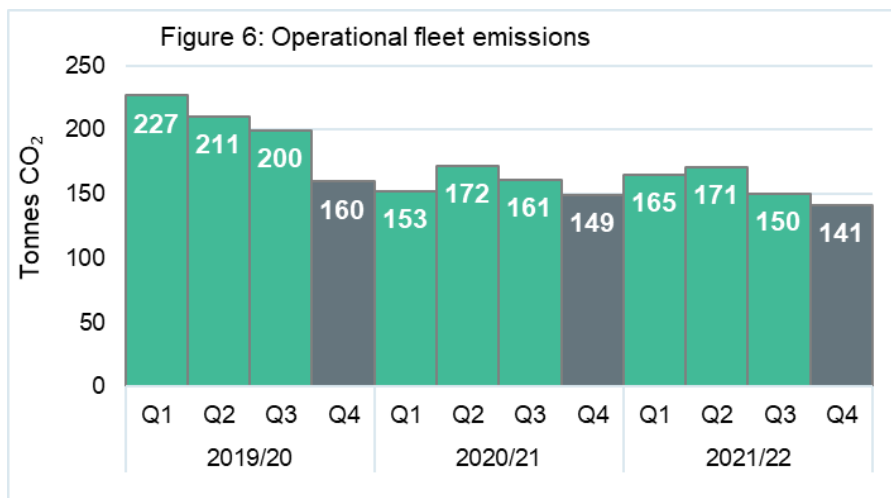


Figure 7 shows that business travel emissions remain significantly lower than pre COVID-19 levels. Emissions from business travel in Q4 of 2021-22 are 36% lower than Q4 in 2019-20.

However, travel has increased slightly each quarter as restrictions have eased and business travel has resumed.

Staff are taking a hybrid approach to work, and whilst virtual meetings are popular,

more face-to-face meetings and events are taking place.

Compared to the previous quarter, there has been little change across the use of Car Club, travel by car (grey fleet) and taxi increased slightly, and business travel by rail reduced by 28%. A total of ten flights were taken in Q4 2021-22: four flights across Adults and Children's Services to fulfil statutory responsibilities and three return flights were taken to Ireland for civic duties to engage in the Athy St Patrick's Day Parade and to unveil a plaque to celebrate Athy's unique contribution to culture in Manchester. Alternative modes of travel were considered and ruled out for this trip.

Key Performance Indicator Spotlight:

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

Despite all the challenges presented by COVID-19, community groups, Councillors, Council staff and environmental organisations have worked together across the city to ensure every neighbourhood in Manchester has thriving big trees.

**Tree Planting (October 2021 – May 2022 planting season):**

4401	Trees planted
2620	Small hedge trees planted
8	Community Orchard planted
£150k	Additional funding secured
10%	Increase in the numbers of MCC managed street and highway trees

Progress Report Headlines:**Key Achievements:**

- Manchester City Council has been shortlisted for two awards for its zero carbon programme: 2022 MJ Achievement Award Finalist for 'Leadership in Responding to Climate Emergency' and LGC Award 2022 for 'Climate Response'.
- The Council, along with MCCA have engaged with the UK Cities Climate Investment Commission (UK CCIC) as part of a research study to understand the ways in which local authorities identify funds and deliver net zero projects. GMCA have also been approached as part of the study.
- Strategic Housing Service Project Manager is now in post and will support delivery of Housing Investment & Retrofit.
- Salix (grant administrator) has formally approved the extension of Public Sector Decarbonisation Scheme Phase 1 to the end June 2022. This extension will allow for all contracted works affected by delays during the project period to be completed by the new deadline.
- £1.07bn of UK Government funding for Greater Manchester (GM) has been confirmed, the City Region Sustainable Transport Settlement for 2022-2027 will be used to deliver a range of projects across the GM.
- A Sustainability Project Manager has been appointed to deliver the Council's commitment to be Single Use Plastic Free by 2024.
- The Culture and Events teams are the first cohort within the Council to undertake a bespoke Carbon Literacy training programme, delivered by Julie's Bicycle. This additional training aims to equip Culture and Events staff with further carbon literacy knowledge specific to supporting the organisations they work with to be more environmentally sustainable and to reduce their own carbon emissions. This training was well received, and staff are now looking to apply their learnings with the organisations they engage with
- UK China Hydrogen Forum launched at an official event attended by the Chinese embassy. This project aims to improve understanding of the opportunities and challenges of using hydrogen, particularly in cities and will focus on Manchester and Wuhan as pilot partners.
- MCCA submitted a funding bid to the National Lottery's Climate Action Fund for just under £2.5m, to support a three-year, city-wide community climate action programme. The programme will engage and support both place-based communities and those who want to

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

reduce their carbon footprint through more sustainable lifestyle choices. A decision is expected mid-June.

- Six community groups, established through the In Our Nature programme, delivered a range of successful activities, workshops and knowledge sharing in their local communities, focusing on areas such as recycling, growing food and planting.
- Successfully hosted the Bee Green Education Summit for Schools and educational settings, in partnership with Co-op Connell College.

New Risks and Issues:

- Rising inflation and increasing costs of materials required for infrastructure schemes is putting delivery within allocated budgets at risk.
- Accurate calculation of carbon emissions for the Civil Quarter Heat Network (CQHN) is complex and challenging. The energy provider for the CQHN produced analysis regarding the allocation of carbon across the heat and power outputs to the energy centre, which will help to work through the complexities and allow for more accurate emissions reporting in the future.
- UK Government is tightening budgets for public transport services, for example funding for the GM Bus Service Improvement Plan is 50% less than requested, risking local public transport services and associated benefits for decarbonisation targets.
- The national jobs market is very competitive and attracting suitable and sufficiently qualified candidates for recruitment opportunities is a challenge.

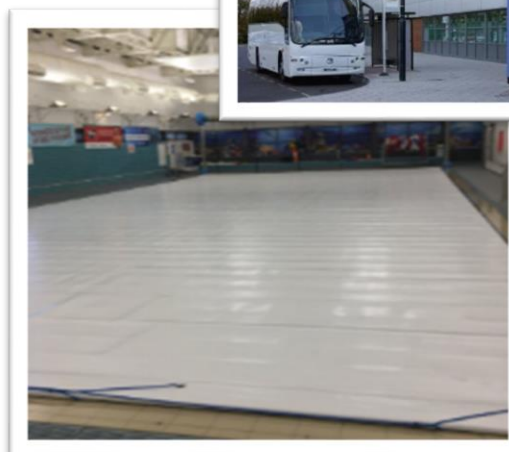
Seeing is Believing: Wythenshawe Forum

The Council's Corporate Estates Team have been delivering the estates carbon reduction programme. Supported by contractors, Ameresco and utilising funds from the Council and UK Government's Public Sector Decarbonisation Scheme (PSDS), a variety of decarbonisation measures have been installed. The highest carbon emitting buildings have been prioritised and Wythenshawe Forum was one of these buildings.

In a typical year (pre COVID-19), Wythenshawe Forum emitted 699 tCO₂ from burning gas and 603 tCO₂ from consuming electricity, totalling 1,302 tCO₂ per annum. The work completed as part of the carbon reduction programme has forecast carbon savings of approximately 640 tCO₂ per annum, delivering a 49% reduction in emissions from energy consumption.

Decarbonisation measures installed at Wythenshawe Forum include:

- a large LED lighting & controls upgrade
- combined Heat and Power Engine
- new pool cover
- solar photovoltaic (PV) panels on the roof
- solar PV battery storage
- a large Air Source Heat Pump



resulted in the



Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

- a new Building Management System

Progress Report by Workstream: (by exception)

Buildings and Energy (Workstream 1):

1.1 The Estates Programme (Phase 1) works are complete with a small number of exceptions with challenges out of our control, for example third party dependencies and building access restrictions. The buildings affected are Space, Sharp and the Tennis & Football Centre.

Phase 1 (a) works, funded by European Regional Development Fund must be complete by July 2023. Two projects are underway, solar car ports at the National Cycling Centre (NCC) and roof mounted solar PV at the Hammerstone Road Depot. The contractor for the solar car ports at the NCC has commenced detailed ground surveys and design, with work expected to start on sight from July 2022 and phased completions scheduled to begin in September 2022.

Phase 2 works, funded by Public Sector Decarbonising Scheme Round 1 (PSDS1), are almost complete as the programme end date was extended to June 2022. All projects are forecast to complete within the new deadline with the exception of the installation of a battery at Hough End Leisure Centre which experienced delays with the supply of the battery and some elements of the Building Management System work which was impacted by delayed network investigations and design. A costed impact assessment of these forecast delays is in development.

Phase 3 works funded by Public Sector Decarbonising Scheme Round 3 (PSDS3) are now in development as the funding has been confirmed. Manchester City Council Project Delivery Team is in place and working with procurement to appoint a delivery partner.

1.4 Following the update to [Executive on the 19th January 2022](#), the Council took its original decision to proceed and seek to purchase a solar farm or enter into a suitable Power Purchase Agreement. Since that decision, global energy markets have changed significantly. Initially we saw rapidly increasing electricity prices in autumn 2021 as a result of higher global gas prices and historically low wind output for September 2021. With the commencement of war in the Ukraine, European energy supplies have been further disrupted and prices have risen further. The outlook for energy prices is significantly higher than when the original decision was taken. As a result of higher prices and the UK's new Energy Security Strategy (March 2022), the market for assets to purchase has become significantly more competitive with assets demanding a higher price and being in short supply.

1.7 GMCA have developed a retrofit accelerator scheme to assist "willing to pay" homeowners who want advice on how to retrofit their homes. It is being led with the University of Salford and draws in partners from the housing sector, businesses, and other organisations across GM.

1.8 Strategic Housing Service Project Manager is now in post. The recruitment for Zero Carbon Programme Manager is underway with interviews taking place in July. Development of the work programme for these posts is underway and will focus on leading on housing retrofit and zero carbon housing.

A number of sites have been identified as potential properties to include in a bid for the second wave of the Social Housing Decarbonisation Fund (SHDF) including four tower blocks in Newton Heath and 30 properties on George Leigh Street and Anita Street in Ancoats. This bid will be part of a Greater Manchester Combined Authority (GMCA) submission as the funder has recommended consortia bids.

One Manchester are progressing retrofit works on around 90 former council properties on the Grey Mare Lane estate in East Manchester as part of the SHDF demonstrator project.

Workshops are being held with the Council's Private Finance Initiative contractors to review their asset management plans in order to align their work with the Council's zero carbon ambition.

1.12 Changes to the timetable of the Local Plan are being considered to fully understand the implications of the recent Levelling Up and Regeneration Bill.

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

Travel and Transport (Workstream 2):

2.1 The final two eRCVs were received in April and following the installation of cameras and other software, they are now fully operational, taking the total eRCV count to 27 (50% of the waste fleet).

2.3 Recruitment is underway for a Project Officer to support the embedding of the Staff Travel Policy and promotion of the associated staff travel incentives. The main focus for the new post will be working with Council Services to understand specific opportunities and challenges preventing sustainable business travel.

2.4 Funding from the Active Travel Fund (ATF) and the Mayor's Challenge Fund is supporting work on several Bee Network schemes: Consultation on the Levenshulme and Burnage scheme is complete and detailed designs are being progressed. Designs also progressing on the Fallowfield Loop/Manchester Cycleway with a tender package being compiled. Consultation on Wythenshawe has taken place with the decision made to withdraw the scheme due to lack of buy in. ATF City Centre Triangle is out for consultation with a new route along London Road to be used as the preferred option.

In May Manchester City Council was awarded a total of £3.95m under ATF Round 3 to support delivery of the Alan Turing Way and Fountain Street/High Street active travel schemes. A consultant to help produce an Active Travel Strategy and Investment Plan is expected to be appointed in June 2022.

2.5 £1.07bn of UK Government funding for Greater Manchester (GM) has been confirmed. The funding is part of the City Region Sustainable Transport Settlement for 2022-2027 and will be used to deliver a range of projects across GM including rail, tram, bus, active travel, and electric vehicle charging infrastructure. The projects are expected to provide significant benefits for sustainable transport in Manchester.

GM was awarded £94.8m for measures under the GM Bus Service Improvement Plan, which included proposals for integrated ticketing, fare revenue subsidy, and operational infrastructure. This was less than half of the funding requested and risks to bus services remain.

2.6 Key schemes in the City Centre Transport Strategy continue to be delivered through funding under the City Region Sustainable Transport Settlement (CRSTS). Concept designs and outline business cases are in the development phase for Deansgate, Bus Corridors and Victoria North Streets for All and due to be delivered by late 2022.

£25m capital funding has been secured for Ancoats Mobility Hub from Homes England and further work is underway to commission transport planning for Ancoats Active Neighbourhood scheme for funding under CRSTS.

2.8 Work continues to develop incentives and provide sustainable commuting options for staff. An EV leasing proposal is currently being developed with MCC Finance team and GMCA. The next stage is to undertake soft market testing with potential providers.

Reducing Consumption-based Emissions (Workstream 3):

3.1 Work is underway to develop a guide and training for commissioners who will be responsible for evaluating responses to the environmental questions in bids. Steps are also being taken to explore how the guidance in tender documentation and the questionnaires are refined to ensure that they are accessible to small businesses.

The Integrated Commissioning and Procurement Team held a consultation session with commissioning leads to understand their training requirements. Outputs of the session will be shared with the Growth Company to explore the support they can offer and the associated cost.

3.3 Specialist Markets, Commercial and Events team and the Zero Carbon team worked together to pilot a new Reusable Mug Deposit Scheme for the upcoming events at Piccadilly Gardens and Manchester Day. Additional events are being explored as part of the pilot, which will see the use of polypropylene pint and half pint glasses and polycarbonate wine and gin glasses to enable the Council to test the use of these new products which aim to eradicate the use of avoidable single use

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

plastic and significantly reduce the carbon footprint of events. Data from the pilot will be used to inform the roll out across further events and this will be reported in future Quarterly reports.

3.4 Integrated Commissioning and Procurement Team are using the learnings from the development of the Sustainable Events Guide and the Zero Carbon Culture Guide to improve the Citywide Supplier Toolkit guidance and ensure it is accessible for small to medium-size businesses.

3.5 A Sustainability Project Manager has been appointed to deliver the Council's commitment to be Single Use Plastic (SUP) Free by 2024. A plan of action is being developed to set a baseline and monitor progress to becoming SUP free. Activity will include engagement across the Council, communications on reducing the use of SUP's and the collection of data.



Central Library Café, which forms part of the Council's estate, has been trialling a sustainable milk packaging with the aim to further reduce the use of single use plastics.

World Refill Day is taking place on 16th June and work is underway to engage with businesses across the city to raise awareness of the scheme, as well as explore how it could be incorporated into upcoming Manchester Day celebrations.

3.6 FoodSync have drafted a refresh of the Manchester Food Board action plan, which will be aligned to the refreshed Manchester Climate Change Framework and the Council's CCAP.

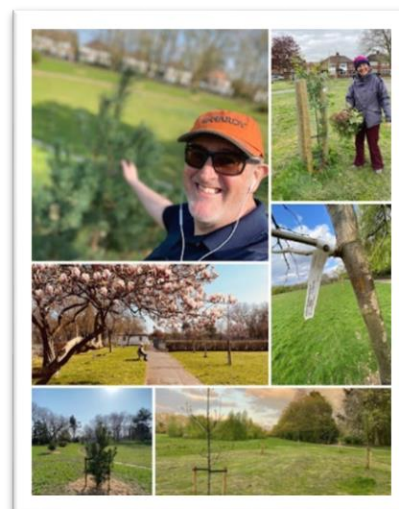
Climate Change Adaptation and Carbon Sequestration (Workstream 4):

4.1 Manchester City Council, working with City of Trees, has planted 1,288 trees, bringing a total number to 4,401 trees planted by the Council and partners during this latest planting season. Additional funding from the UK Government's Urban Tree Challenge Fund was secured to support further planting across the city. 2,620 hedgerow trees and 8 additional community orchards have also been planted this season.

4.2 The Environment Agency visited West Gorton Sponge Park to look at different ways the Sustainable Drainage Systems (SuDS) have been implemented throughout the park. The Executive Member for Environment also went on a tour around the park, guided by the GrowGreen team. Gorton Park Friends Group is now fully established and active.

4.3 Ongoing discussions are taking place with the Green & Blue Infrastructure Board to discuss how the findings from the tree opportunity mapping report can best be utilised to shape future tree planting and tree management.

4.4 Locations have been identified for planting more than 1,200 trees in phase 2 of Tree Action MCR. A bid for Urban Tree Challenge funding for 2022-23 is being developed between the Council and City of Trees.



Catalysing Change (Workstream 5):

5.1 Carbon Literacy training is now mandatory for all staff, which has had a positive impact on the uptake. 1,402 Council staff and 54 elected members have undertaken the training and received certification from the Carbon Literacy Project. A further 50 staff are awaiting their certification. Officers are engaging with Member Services to set up dedicated carbon literacy training sessions for the remaining members who are not yet certified.

Recruitment for the additional capacity to manage the Carbon Literacy training programme has been successful and a candidate has been appointed. They are due to start in August 2022.

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

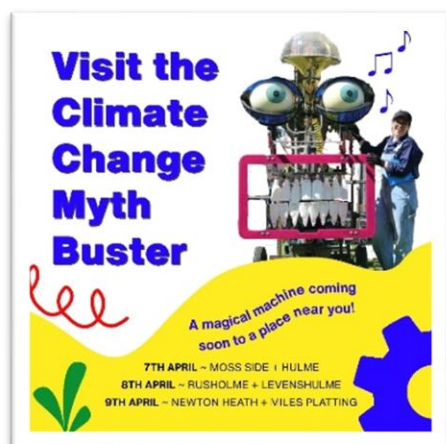
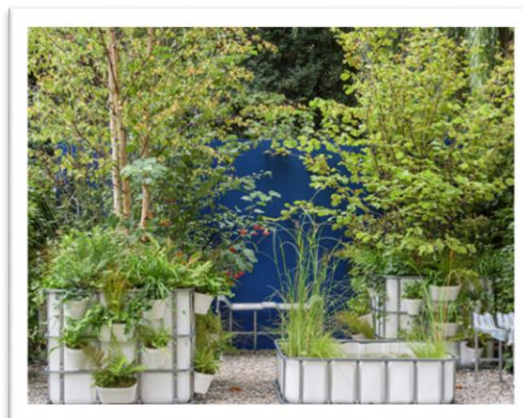
5.3 Zero carbon as a priority has been included within 2022-23 Service Plan template, which has been completed by around 50 Council services. The responses from services to the zero carbon priority will be collated to understand what actions are taking place across the organisation.

Budget for 2022-23 includes additional capacity across all five workstreams to support delivery the Climate Change Action Plan.

The Voluntary, Community and Social Enterprise (VCSE) Team are taking the learnings from embedding climate action within the Culture Grants and applying this to the Our Manchester VCSE grants.

5.4 Six community groups established through the In Our Nature programme continue to receive ongoing support to implement practical improvements in their areas. Each group is focusing on the issues related to their communities, with ambition to engage more residents through a number of events and consultations. Some examples of the activities being held include:

- the creation of an 'Eco Street' in Miles Platting
- upcycling 50 Intermediate Bulk Containers into planters to install along roads, parks and neglected spaces across Hulme
- 'Rewilding Rusholme' which aims to bring nature back to Rusholme through planting pollution capturing hedges, restoration of the sensory garden and litter picking
- Enhancement of the 'MossSide Story' hub sharing climate related stories, workshops, and training to inspire climate action amongst residents
- Grierson Street Community Garden – community green hub hosting weekly training and workshops, such as sustainable food growing



Manchester Climate Change Agency commissioned Walk the Plank to tour an interactive art and theatre installation across five areas, with the aim of addressing common myths around climate change and 'bust' them in a fun, family friendly, hour-long show. The tour was very well received and engaged around 100 people.

Citywide communications campaigns under the 'In Our Nature' banner continues to be led by the project partner Hubbub. A full bid for £2.5m to the National Lottery Community Fund has been submitted to further support this work over the next 3 years. The outcome is expected late June 2022.

5.5 An engagement toolkit and sustainable merchandise have been created for the Neighbourhoods teams to use in community engagement, and the new Neighbourhood section on the Council's Zero Carbon website pages is now live. This section covers local action and projects, including In Our Nature and the Neighbourhood Investment Fund, ward climate action plans and Climate Change Neighbourhood Officers contact details.

Monthly meetings with the Communications team, Executive Member for Environment, Deputy Chief Executive and Zero Carbon team continue to take place and provide opportunity to discuss and highlight good news stories and projects within the climate agenda. Internal Communications continue to showcase ongoing projects and shine a light on staff stories.

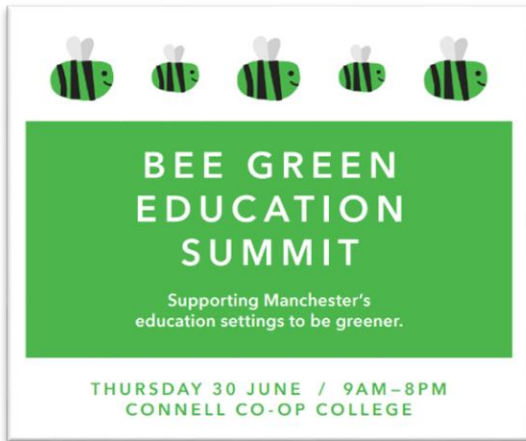
5.6 Council funding has unlocked new financial contributions from the Manchester Climate Change Partnership (MCCP) to fund an additional Deputy Director role at the Manchester Climate

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

Change Agency (MCCA). Further funding is required to support delivery of the In Our Nature programme and continuation of a Youth Lead role.

5.7 The refresh of the Manchester Climate Change Framework will be completed over summer 2022 and will provide an opportunity for new engagement with partners. Changes are being made to Manchester Climate Change Agency reporting to ensure clarity, particularly around actions for Manchester Climate Change Partnership members.



5.8 Final preparations for the Bee Green Education Summit have taken place and the event was held on 30th June at the Connell Co-op College and aimed to support school leaders, business managers and governors with practical ideas and resources to support change and receive tools and advice from experts. The event covered subjects such as reducing energy consumption, promoting active travel, waste management and recycling, nature-based solutions and more. A Hub with environmental resources was launched following the event to support schools to develop their own climate change action plans.

A two-day Student Assembly will also take place on 21st and 22nd June across 6 different locations with different clusters of schools. The Student Assembly aimed to encourage young people to work together, influence Government and work with their schools to tackle climate change.

5.9 Executive Members and Senior Officers continue to represent Manchester's interests on a number of Greater Manchester Boards including GMCA, Green City Region Partnership, Wider Leadership and Directors of Place. Recent items the Council has contributed to include: Housing Retrofit Accelerator; Green Spaces Fund; Mayors Cycling & Walking Challenge Fund and City Region Sustainable Transport Settlement. Joint work with the GMCA has been undertaken to support the UK Cities Climate Investment Commission.

5.11 The European funded Zero Carbon Cities project final event takes place on 9th June 2022 in Manchester at Central Library and virtually. The event will mark the end of the project and provide an opportunity to showcase the outcomes of the project. Attendees will include project partners from across the city and Europe and city stakeholders. Attendees will also have an opportunity to join a guided tour of West Gorton 'Sponge' Park.

MCCA have secured funding to support the delivery of training on renewable energy to communities in Manchester as part of a multi-city, European funded 3-year project called TRANSIT, which will provide €98,000 (approx. £80,000) and is led by the Innovation and Research in Malta.

5.12 The new Work & Skills Strategy is planned to go to Executive in July 2022. A Green Skills Action Plan is being developed based on the five proposed priorities in the "Liveable and Low Carbon" section of the Work & Skills Strategy. Partner engagement in developing the action plan is planned to take place at a workshop on 7th June.

The Work & Skills Team have commissioned Groundwork to deliver 'Every Job is a Green Job' programme, working with schools and career leads to make young people aware of job opportunities in the green sector. The team are also working with Manchester College on the development of a Retrofit Skills Academy in the city.

Press Coverage April – June 2022:

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

Public Sector Decarbonisation Scheme (Round one)25th March

Greener Greater Manchester: £19m energy efficiency scheme almost complete

[Greener Greater Manchester.com, £19m energy efficiency scheme almost complete](#)29th March

Construction.co.uk: £19m energy scheme in Manchester almost complete

[Construction.co.uk: £19m energy scheme in Manchester almost complete](#)**Wythenshawe Climate Emergency Event**17th March

Manchester News: Join the Council in the fight against climate change

[Manchester News: Join the Council in the fight against climate change](#)**New Low Carbon Housing Developments in Northern Quarter**22nd March

Manchester Evening News: NQ site selected for new council housing development

[Manchester Evening News, NQ site selected for new council housing development](#)22nd March

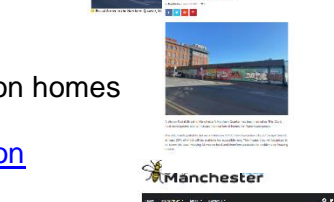
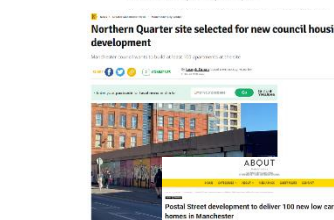
About Manchester: Postal Street development to deliver 100 new low carbon homes in Manchester

[About Manchester, Postal Street development to deliver 100 new low carbon homes in Manchester](#)27th May

Manchester News: Consultation: Local people asked for views on first This City Housing development in Ancoats

[Manchester News, Consultation: Local people asked for views on first This City Housing development in Ancoats](#)**Public Sector Decarbonisation Scheme (Round three)**31st May

Manchester Evening News: The Manchester buildings set to benefit from £6m to cut emissions

[Manchester Evening News, The Manchester buildings set to benefit from £6m to cut emissions](#)

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

31st May

About Manchester: Funding win for £6m scheme to cut carbon emissions from buildings including the National Football Museum

[About Manchester: Funding win for £6m scheme to cut carbon emissions from buildings including the National Football Museum](#)

30th May

Place North West: Arbeta among round three decarbonisation wins

[Place North West: Arbeta among round three decarbonisation wins](#)

30th May

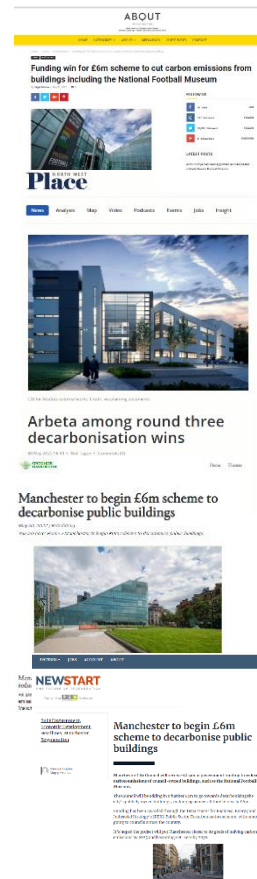
Greener Greater Manchester.com: Manchester to begin £6m scheme to decarbonise public buildings

[Greener Greater Manchester.com: Manchester to begin £6m scheme to decarbonise public buildings](#)

30th May

New Start magazine: Manchester to begin £6m scheme to decarbonise public buildings

[New Start magazine: Manchester to begin £6m scheme to decarbonise public buildings](#)



RAG Rating at a glance:

The actions in the following tables, that will deliver reductions in the Council's direct energy-related emissions have a specific Annual tCO₂ Savings Target. These actions are set to reduce emissions by 50% by 2025 (i.e., delivering a total annual reduction of over 15,000 tonnes) which is a headline commitment of the Action Plan. Detailed progress on emissions reductions is shown at the start of this report.

Workstream 1: Buildings & Energy

RAG	Action Summary	Deadline	Annual tCO ₂ Saving Target
1.1	MCC Estates carbon reduction programme	March 2025	4,800
1.2	Manchester Build Standard	December 2020	-
1.3	Buildings and Energy Strategy	April 2020	-
1.4	Large scale renewable energy generation	December 2020	7,000
1.5	LED street lighting	December 2020	220
1.6	Civic Quarter Heat Network	2021	1,600
1.7	Housing stock condition survey	2021	-
1.8	Northwards Housing	Tbc	Tbc
1.9	Commercial and non-domestic buildings	Ongoing	Tbc
1.10	Local Energy Plan for Manchester	April 2020	-
1.11	Leasing and disposing of Council buildings	April 2020	-
1.12	Manchester Local Plan	2023	-
1.13	Partnerships e.g., UKGBC	Ongoing	-

Workstream 2: Travel & Transport

RAG	Action Summary	Deadline	Annual tCO ₂ Saving Target
2.1	Electric refuse collection vehicles	March 2021	900
2.2	Replace operational fleet with EVs	Ongoing	400
2.3	Travel policy for staff and members	April 2020	100
2.4	Cycling and walking networks	Ongoing	-

Manchester Climate Change Action Plan 2020-25

Progress Update Q1 April – June 2022

2.5	Greater Manchester Transport Strategy 2040	Ongoing	
2.6	City Centre Transport Strategy	2020 & ongoing	
2.7	Aviation emissions and Manchester airport	Ongoing	Tbc
2.8	Sustainable travel incentives	Ongoing	

Workstream 3: Sustainable Consumption

RAG	Action Summary	Deadline	Annual tCO ₂ Saving Target
3.1	10% environmental weighting in procurement	September 2021	
3.2.	Tyndall Centre findings on consumption emissions	December 2020	Tbc
3.3.	Eliminate single use plastics in estates and markets	2024	
3.4	Supplier toolkit	December 2020	
3.5	Single use plastics in licensed activities	December 2020	
3.6	Manchester Food Board priorities	Ongoing	

Workstream 4: Adaptation & Sequestration

RAG	Action Summary	Deadline	Annual tCO ₂ Saving Target
4.1	Plant 1,000 trees 1,000 hedge trees 4 orchards pa	Ongoing	
4.2	West Gorton 'sponge park'	Ongoing	
4.3	Tree opportunity mapping assessment	December 2020	
4.4	Funding for beacon trees	March 2021	

Workstream 5: Catalysing Change

RAG	Action Summary	Deadline	Annual CO ₂ Saving Target
5.1	Carbon literacy	2025	
5.2	10% environmental weighting in procurement (see 3.1)	April 2020	
5.3	Carbon accounting in decision making	Ongoing	
5.4	Community engagement and ward plans	April 2020	
5.5	Citywide communications strategy	April 2020	
5.6	Fund Manchester Climate Change Agency	April 2020	
5.7	Support Manchester Climate Change Partnership	December 2020	
5.8	Large scale event with schools	June 2020	
5.9	Influence GM stakeholders to decarbonise	Ongoing	
5.10	Play a part in COP26	November 2020	
5.11	International networks and projects	Ongoing	
5.12	Green Skills Plan	September 2020	
			15,020

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**Manchester City Council
Report for Information**

Report to: Environment and Climate Change Scrutiny Committee – 21 July 2022

Subject: Overview Report

Report of: Governance and Scrutiny Support Unit

Summary

This report provides the following information:

- Recommendations Monitor
- A summary of key decisions relating to the Committee's remit
- Items for Information
- Work Programme

Recommendation

The Committee is invited to discuss the information provided and agree any changes to the work programme that are necessary.

Wards Affected: All

Contact Officers:

Name: Lee Walker

Position: Governance and Scrutiny Support Officer

Telephone: 0161 234 3376

Email: lee.walker@manchester.gov.uk

Background documents (available for public inspection): None

1. Monitoring Previous Recommendations

This section of the report lists recommendations made by the Environment and Climate Change Scrutiny Committee. Where applicable, responses to each will indicate whether the recommendation will be implemented, and if it will be, how this will be done.

Date	Item	Recommendation	Response	Contact Officer
13 January 2021	NESC/21/06 Monitoring and Compliance – Construction Sites	Recommend that Officers, in consultation with the Executive Member for Environment, Planning and Transport arrange a briefing session for Members of the Committee that provides an overview of a range of activities that included, but not restricted to planning and related enforcement; roles and responsibilities and Traffic Regulation Orders.	A response to this recommendation has been requested and will be reported back once received.	Julie Roscoe Director of Planning, Building Control and Licensing
22 July 2021	ECCSC/21/11 Climate Change Action Plan Quarterly Progress Report: Q1 April - June 2021	That every school on a main arterial route with high volumes of traffic have a tree planting plan included as part of the tree strategy to promote clean air.	A response to this recommendation has been requested and will be reported back once received.	Julie Roscoe Director of Planning, Building Control and Licensing
14 October 2021	ECCSC/21/21 Climate Change Action Plan Quarterly Progress Report, Q2 July - September 2021	The Executive Member for Environment and Officers arrange a briefing session for Members on the modelling that was used to agree and set the suite of targets reported in the Action Plan.	A response to these recommendations has been requested and will be reported back once received.	Cllr Rawlins Executive Member for Environment

9 December 2021	ECCSC/21/33 Aviation and Carbon Emissions	That the Executive Member for the Environment convene a meeting with Members of the Committee to discuss further the issues raised at the meeting.	Executive Member for Environment and Transport is progressing this recommendation.	Cllr Rawlins Executive Member for Environment
9 December 2021	ECCSC/21/34 Grounds Maintenance Update: The Use of Pesticides	<p>1. That a briefing note be prepared by Officers that describes the approach taken by other Local Authorities to stop using Glyphosate and the alternate methods of weed control adopted.</p> <p>2. That a briefing note be prepared by Officers that describes the approach taken by local Registered Housing Providers to reduce their use of Glyphosate and the alternate methods considered to control weeds.</p>	The Executive Member for Environment and Transport advised the meeting of 23 June 2022 that the policy relating to the use of Glyphosate would be circulated to members of the Committee and that a report would be provided to a future meeting of the Committee.	Heather Coates in consultation with Cllr Rawlins, Executive Member for Environment

2. Key Decisions

The Council is required to publish details of key decisions that will be taken at least 28 days before the decision is due to be taken. Details of key decisions that are due to be taken are published on a monthly basis in the Register of Key Decisions.

A key decision, as defined in the Council's Constitution is an executive decision, which is likely:

- To result in the Council incurring expenditure which is, or the making of savings which are, significant having regard to the Council's budget for the service or function to which the decision relates, or
- To be significant in terms of its effects on communities living or working in an area comprising two or more wards in the area of the city.

The Council Constitution defines 'significant' as being expenditure or savings (including the loss of income or capital receipts) in excess of £500k, providing that is not more than 10% of the gross operating expenditure for any budget heading in the in the Council's Revenue Budget Book, and subject to other defined exceptions.

An extract of the most recent Register of Key Decisions, published on **11 July 2022**, containing details of the decisions under the Committee's remit is included overleaf. This is to keep members informed of what decisions are being taken and to agree, whether to include in the work programme of the Committee.

Subject / Decision	Decision Maker	Decision Due Date	Consultation	Background Documents	Contact Officer
<p>GM Clean Air Plan review (2022/05/31A)</p> <p>Note an update on the Greater Manchester Clean Air Plan review prior to submission of a preliminary response to Government on the review.</p>	Executive	22 July 2022		Report on the GM Clean Air Plan review	Michael Marriott, Head of Local Planning & Infrastructure Michael.Marriott@manchester.gov.uk

**Environment and Climate Change Scrutiny Committee
Work Programme – July 2022**

Thursday 21 July 2022, 10 am (Report deadline Tuesday 12 July 2022)

Item	Purpose	Lead Executive Member	Lead Officer	Comments
MCC Climate Change Action Plan – Quarter 1 Update report	To receive and comment upon the MCC Climate Change Action Plan quarterly update report. The Committee have requested specific information in relation to the communications strategy with residents, businesses and other key stakeholders.	Cllr Rawlins	Mark Duncan / Sarah Henshall / Gina Twigg	
Manchester Climate Change Agency / Partnership Framework 2.0	To receive and comment upon the draft content of the Manchester Climate Change Framework 2.0. The Committee have requested specific information in relation to the communications strategy with residents, businesses and other key stakeholders.	Cllr Rawlins	Samantha Nicholson	
Clean Air Plan Policy Review	To receive the Clean Air Plan Policy Review and note progress made. Members have requested this report includes a discussion on the actions taken to address idling in vehicles.	Cllr Rawlins	Phil Havenhand	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee’s work programme and any items for information.	-	Scrutiny Support Officer	

Thursday 8 September 2022, 10 am (Report deadline Friday 26 August 2022) * To accommodate the Bank Holiday

Item	Purpose	Lead Executive Member	Lead Officer	Comments
Manchester Climate Change Framework 2.0	To receive and comment upon the final version of the Manchester Climate Change Framework 2.0.	Cllr Rawlins	Sam Nicholson	
MCC Climate Change Action Plan 2021/22 Annual Report	To receive and comment upon the MCC Climate Change Action Plan 2021/22 Annual Report.	Cllr Rawlins	Mark Duncan / Sarah Henshall / Gina Twigg	
MCC Climate Change Action Plan Refresh	To receive the refreshed MCC Climate Change Action Plan at the mid-point of the period 2020-25.	Cllr Rawlins	Sarah Henshall / Gina Twigg	
Housing Retrofit	To consider emerging proposals and provide an opportunity for members to contribute to and influence this policy.	Cllr Rawlins Cllr White Cllr Hacking	Becca Heron / Martin Oldfield / David Ashmore	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.	-	Scrutiny Support Officer	

Thursday 13 October 2022, 10 am (Report deadline Tuesday 4 October 2022)

Item	Purpose	Lead Executive Member	Lead Officer	Comments
MCC Climate Change Action Plan – Quarter 2 Update report	To receive and comment upon the MCC Climate Change Action Plan quarterly update report.	Cllr Rawlins	Mark Duncan / Sarah Henshall / Gina Twigg	
Manchester Climate Change Agency/ Partnership 2021/22 Annual Report	To receive and comment upon the Manchester Climate Change Agency 2021/22 Annual report.	Cllr Rawlins	Samantha Nicholson	
Waste, Recycling and Street Cleansing Update	This report provides an update on progress in delivering waste, recycling, and street cleansing services, describing how the activity contributes to the climate change agenda and key priorities for future.	Cllr Igbon	Heather Coates	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.	-	Scrutiny Support Officer	

Thursday 10 November 2022, 10 am (Report deadline Tuesday 1 November 2022)

Item	Purpose	Lead Executive Member	Lead Officer	Comments
Update on the 2023/24 budget position	To receive a report on the Council's anticipated budget position for 2023/24, the budget process and draft proposals for any services in the remit of this committee.	Cllr Rawlins Cllr Igbon	Carol Culley Paul Hindle	
Working with Schools	To receive a report on the Council's work to support schools in relation to the climate emergency.	Cllr Rawlins Councillor Bridges	Amanda Corcoran	Invitation to be sent to Cllr Reid, Chair of the Children and Young People Scrutiny Committee
Embedding Carbon Literacy within the Council	To receive information on the progress being made towards embedding a zero carbon culture within the Council (as part of the Carbon Literacy journey).	Cllr Rawlins	Suzanne Grimshaw	
Neighbourhood Teams and Community Engagement	To receive a report that describes how the Neighbourhood Teams are working with local communities to address climate change.	Cllr Igbon	Shefali Kapoor	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.	-	Scrutiny Support Officer	

Thursday 8 December 2022, 10 am (Report deadline Tuesday 29 November 2022)

Item	Purpose	Lead Executive Member	Lead Officer	Comments
Local Area Energy Plan	To receive an update on the progress of the Local Area Energy Plan.	Cllr Rawlins	Becca Heron / Pat Bartoli	
Single Use Plastic Free 2024 Progress Report	To receive a report on the progress being made towards our pledge to be Single Use Plastics Free by 2024.	Cllr Rawlins	Mark Duncan / Helen Harland	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.	-	Scrutiny Support Officer	

Thursday 12 January 2023, 10 am (Report deadline Monday 31 December 2022)

Item	Purpose	Lead Executive Member	Lead Officer	Comments
MCC Climate Change Action Plan – Quarter 3 Update report	To receive and comment upon the MCC Climate Change Action Plan quarterly update report.	Cllr Rawlins	Mark Duncan / Sarah Henshall / Gina Twigg	
Manchester Airport and Aviation Emissions	To receive a report that discusses the steps taken to reduce emissions that result from the aviation industry.	Cllr Rawlins	David Houliston	

Electric Vehicle Charging	To receive a report that describes the provision and delivery of electrical charging points for motor vehicles.	Cllr Rawlins	Rebecca Heron	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.	-	Scrutiny Support Officer	

Thursday 9 February 2023, 10 am (Report deadline Tuesday 31 January 2023)

Item	Purpose	Lead Executive Member	Lead Officer	Comments
2023/24 Budget Report	Consideration of the final 2023/24 budget proposals that will go onto February Budget Executive and Scrutiny and March Council.	Cllr Rawlins Cllr Igbon	Carol Culley Paul Hindle	
Planning Policy and Climate Change	To receive a report that considers how planning policy contributes to addressing climate change. The report will include, but not restricted to carbon standards for new build homes; flooding mitigation and heat island mitigation.	Cllr White	Julie Roscoe	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.	-	Scrutiny Support Officer	

Thursday 10 March 2023, 10 am (Report deadline Tuesday 28 February 2023)

Item	Purpose	Lead Executive Member	Lead Officer	Comments
Zero Carbon Culture Guides	To receive information on the work being delivered in relation to engaging Culture organisations with their zero carbon journeys.	Cllr Rawlins / Cllr Rahman	Sarah Elderkin / Louise Lanigan	
Manchester Green and Blue Strategy and Implementation Plan, including annual update and a report on the Tree Action Plan	To receive the annual update on the delivery of the Green and Blue Implementation Plan together with information on the delivery of the Tree Action Plan. The Committee have requested that this item includes discussion on flood risk management with reference to the Victoria North Development; the role of partners such as the Environment Agency and their response to incident of spillages and pollution in rivers and information on the Our Rivers, Our City Strategy.	Cllr Rawlins	Julie Roscoe	
Overview Report	This is a monthly report, which includes the recommendations monitor, relevant key decisions, the Committee's work programme and any items for information.	-	Scrutiny Support Officer	

Items to be scheduled

Item	Purpose	Lead Executive Member	Lead Officer	Comments
Active Travel	Scope of this report is to be agreed.	Cllr Rawlins		Invitation to be sent to Cllr Johns, Chair of Economy Scrutiny Committee
Staff Active Travel Scheme	To receive a report that provides information on the Manchester City Council Staff Active Travel Scheme.	Cllr Rawlins	Annalie Pearce Amy Powe	This item to be scheduled for the same meeting that the Active Travel report is considered.
Biodiversity Strategy	To consider and comment on the Biodiversity Strategy prior to submission to the Executive.	Cllr Rawlins	Julie Roscoe	October or November meeting TBC
Parks and Open Spaces	To receive a report that provides information on the approach to open spaces to promote biodiversity and reduce carbon emissions. Members have requested that this includes consideration on the use of pesticides, including its use in allotments, woodland space and the interface between grounds maintenance and street cleansing services.	Cllr Igbon	Kylie Ward Matthew Bennett	
Carbon Reduction Procurement Progress Report	To receive an update report on the steps that have been taken within the council's procurements to support carbon reduction	Cllr Rawlins	Mark Leaver Peter Schofield	Update to the report considered 23 June 2022.