

GM Air Quality Administration Committee

Date: 1 July 2022

Subject: GM Clean Air Plan – July 2022 Update

Report of: Councillor Andrew Western, Portfolio Lead for Clean Air

Purpose of Report

This report sets out the case for a new Greater Manchester Clean Air Plan and Greater Manchester's annual mean standards for NO₂ in 2021.

Recommendations:

The Air Quality Administration Committee is requested to:

1. Note the 'Case for a new Greater Manchester Clean Air Plan' document attached as Appendix 1 and associated appendices A to E will be submitted to the Secretary of State on the 1 July 2022;
2. Note that the document will be submitted as a draft document subject to any comments of Greater Manchester local authorities and that the next Air Quality Administration Committee will confirm the final submission and notify the Secretary of State of the change in status;
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. Agree the approach to 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;

BOLTON
BURY

MANCHESTER
OLDHAM

ROCHDALE
SALFORD

STOCKPORT
TAMESIDE

TRAFFORD
WIGAN

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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Equalities Impact, Carbon and Sustainability Assessment:

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

Risk Management

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

Legal Considerations

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.

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.

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.

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

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.

Number of attachments to the report: six

Comments/recommendations from Overview & Scrutiny Committee

Not applicable.

Background Papers

- 23 March 2022, Report for 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 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, report to AQAC: GM Clean Air Plan – Clean Air Zone: Camera and Sign Installation
- 21 September, report to AQAC: GM Clean Air Plan – Bus Replacement Funds
- 25 June 2021, report to GMCA: GM Clean Air Final Plan
- 31 January 2021, report to GMCA: GM Clean Air Plan: Consultation
- 31 July 2020, report to GMCA: Clean Air Plan Update
- 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
- 15 November 2018, report to HPEOS Committee: Clean Air Update
- 26 October 2018, report to GMCA: GM Clean Air Plan Update on Local Air Quality Monitoring
- 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.

Tracking/ Process

Does this report relate to a major strategic decision, as set out in the GMCA Constitution?

No

Exemption from call in

Are there any aspects in this report which means it should be considered to be exempt from call in by the relevant Scrutiny Committee on the grounds of urgency? No

GM Transport Committee – Not applicable

Overview and Scrutiny Committee – Not applicable

1. Background

- 1.1 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).
- 1.2 The development of the GM CAP is funded by Government and is overseen by the 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.

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/news/new-burdens-doctrine-guidance-for-government-departments)

- 1.3 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.
- 1.4 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
 - 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.
- 1.5 The GMCA Clean Air Update report of 29 May 2020² 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 Also considered by the GM authorities through their own constitutional decision-making arrangements.

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.

- 1.6 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%.
- 1.7 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.
- 1.8 On 21 September the Air Quality Administration Committee approved the establishment and distribution of the bus replacement funds.
- 1.9 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.
- 1.10 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.
- 1.11 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 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.

- 1.12 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 delivery arrangements for the Clean Air Zone in the meantime, including signage, funding and discount/exemption applications.
- 1.13 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. Overview

- 2.1 Poor air quality is a significant public health issue, causing certain types of disease and in Greater Manchester contributes to 1,200 deaths a year.
- 2.2 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.
- 2.3 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.
- 2.4 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.

- 2.5 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.
- 2.6 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.
- 2.7 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.
- 2.8 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.

3. Why a new plan?

- 3.1 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 focussed 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 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.

4. Core objectives of the New Clean Air Plan

4.1 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.

5. A Strong Track Record of Delivering the Right Solutions for GM

- 5.1 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
- 5.2 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.
- 5.3 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.

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)

5.4 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.

6. Participatory approach to the development of the new plan

6.1 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.

6.2 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 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.

6.3 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.

6.4 Purpose of engagement, following submission on 1st 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.

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

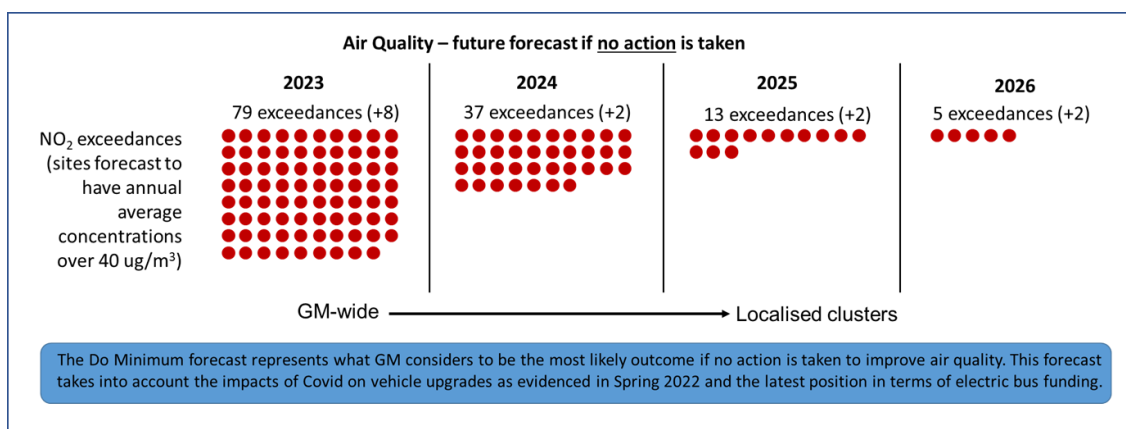
7.1 The primary focus of the new plan is to achieve compliance in a way that considers the current cost of living crisis and associated economic challenge faced by businesses and residents. An investment-led approach will be combined with all the wider measures that GM is implementing and aims to reduce 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.
- 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.

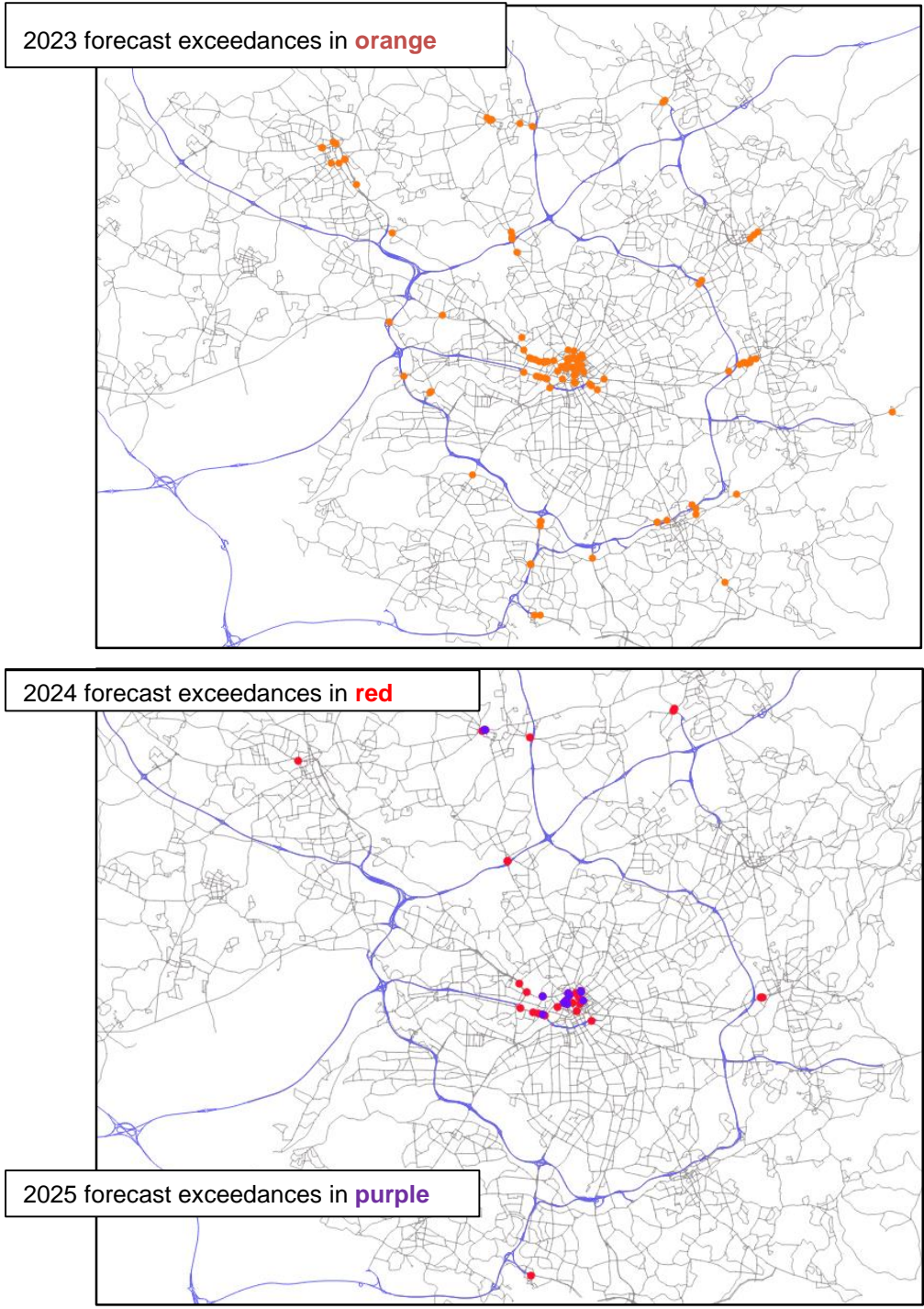
8. NO₂ Exceedances forecast 2023-2026

- 8.1 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.
- 8.2 The GM CAP needs to be targeted at reducing NO₂ concentrations at the last remaining locations of non-compliance.



8.3 NO₂ Forecast in 2023

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

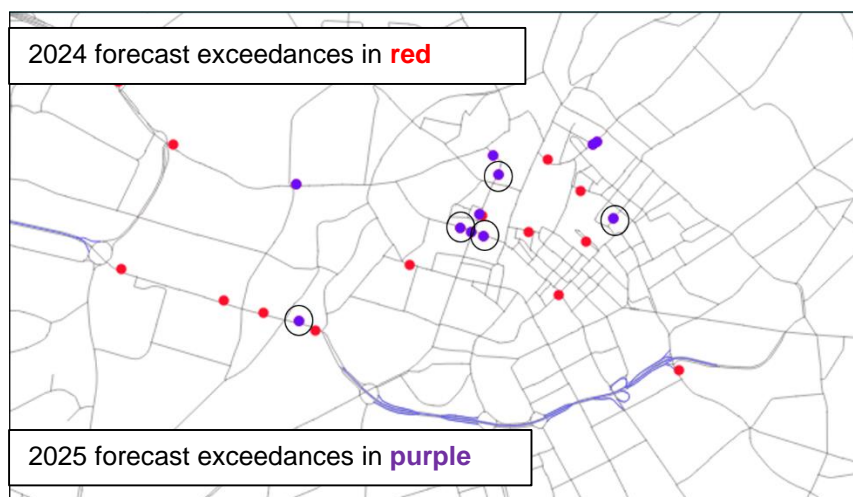


8.4 NO₂ Forecast in 2024 and 2025

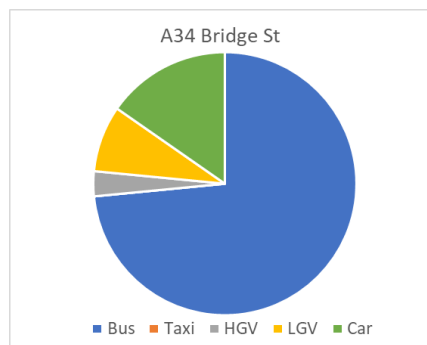
- 37 exceedances in 2024, 13 exceedances by 2025.
- By 2024, Oldham, Stockport, Trafford and Wigan are expected to be compliant.
- By 2025, Bolton, Rochdale and Tameside are also expected to be compliant.
- Exceedances remain in Bury, Manchester and Salford in 2025.

8.5 NO₂ Forecast of last remaining sites in 2026

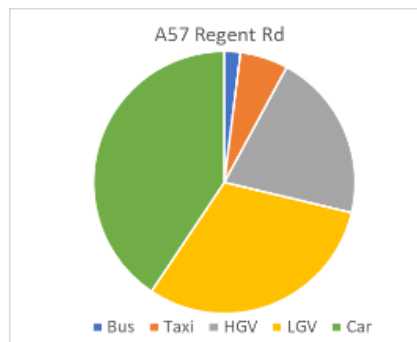
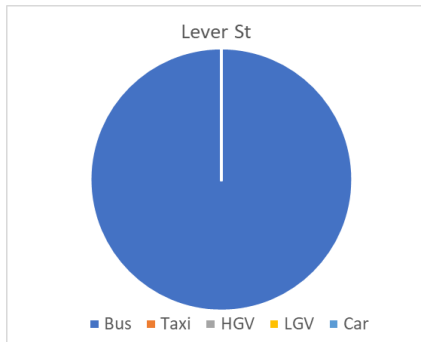
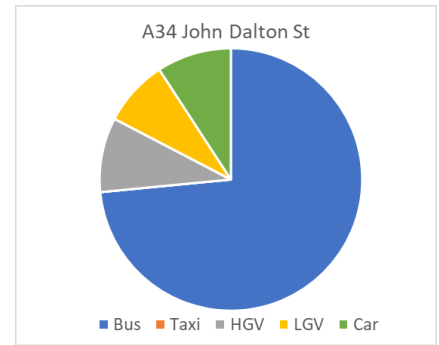
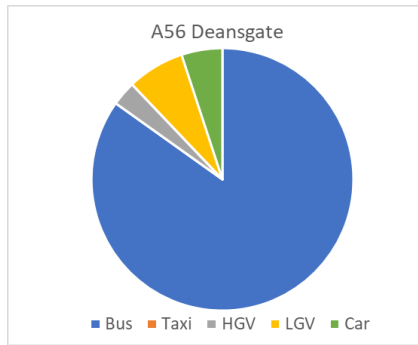
- By 2025, exceedances found only in Manchester and Salford and at Bury Bridge.
- By 2026, Bury Bridge is expected to be compliant.
- The last remaining sites in 2026 are at the A57 Regent Rd, A34 John Dalton / Bridge St, A56 Deansgate, and Lever St (circled).
- Natural compliance forecast in 2027.



8.6 City Centre emissions



- At the four city centre remain non-compliant over 70% of electric buses could be air quality.⁹
- In contrast, Regent



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. NO₂ Monitoring Results 2021

- 9.1 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'.
- 9.2 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

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.

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.

9.3 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 consideration when comparing the results from individual monitoring locations.

9.4 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.

9.5 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.

9.6 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 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

- 9.7 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.
- 9.8 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.
- 9.9 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.
- 9.10 Maps showing the location of the LAQM monitoring sites are provided on the [CleanAirGM Data Hub](#).

Table 1 Summary of LAQM NO₂ monitoring in GM in 2021

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.

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

9.11 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, 62 exceedances were recorded out of 359 operational sites, suggesting an overall downward trend in annual mean concentrations.

9.12 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 new GM CAP is determined.

- 9.13 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.
- 9.14 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).
- 9.15 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.
- 9.16 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	14	14	14
Bury	5	16	16	16
Manchester	20	91	91	91

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.

Oldham	0	9	9	9
Rochdale	0	12	12	12
Salford	5	27	27	27
Stockport	10	19	19	19
Tameside	5	14	14	14
Trafford	5	14	14	14
Wigan	0	6	6	6
Total	55	222	222	222

9.17 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](#).

Table 3 Number of GM CAP Exceedances

Authority	Number of Exceedances (>40.4µg/m ³)			
	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

- 9.18 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
- 9.19 For the year ending September 2021, overall national road traffic levels were approximately 16% lower than pre-pandemic levels.¹⁸
- 9.20 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.

10. Changes in economic context since Summer 2021

10.1 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.
- GM business composition and outlook from Growth Company Survey.
- GM resident population - wage growth, disposable income, etc.

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>

- 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

- 10.2 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.
- 10.3 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.
- 10.4 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.

11. The changed conditions within the vehicle market

- 11.1 The price of new and used commercial vehicles is rising, making upgrade less affordable.
- 11.2 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	<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

Vehicle Type	Commentary on changed conditions
81% compliant in 2023 ¹⁹	<p>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.</p> <ul style="list-style-type: none"> • Price rises reflect these shortages as well as increases in the cost of materials (for new vehicles).
<p>Vans</p> <p>Est. 277,400 vehicles serving GM¹⁹</p> <p>52% compliant in 2023¹⁹</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 GM</p> <p>59% compliant in 2023¹⁹</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.

¹⁹ 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 Cabs</p> <p>2,100 Hackneys licensed in GM 35% compliant in 2023¹⁹</p> <p>PHV</p> <p>12,400 PHVs licensed in GM 68% compliant in 2023¹⁹</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. • 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.

12. Development of the new plan

- 12.1 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.
- 12.2 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.

13. New Plan Measures

- 13.1 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.

Vehicle type	Measure subject to review during participatory policy approach
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, 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.

13.2 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.

Exceedance cluster	Measure subject to review during participatory policy approach
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 and local servicing plans 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 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.

14. Equality Considerations

- 14.1 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.
- 14.2 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.
- 14.3 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	

14.4 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 EqlA will consider the impact of this plan on the groups above.

14.5 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 EqlA:

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

14.6 In addition to the above, the 'Good Lives for All in Greater Manchester will inform the EqlA. 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 EqlA for the new CAP.

14.7 To inform a full EqlA 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.

15. Government Asks

- 15.1 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.
- 15.2 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.
- 15.3 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.
- 15.4 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.
- 15.5 Under an investment-led non-charging GM CAP the ANPR cameras installed for the 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.

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

- 16.1 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.
- 16.2 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	<ul style="list-style-type: none"> • Verbal update to be given at meeting.
Road Haulage Association – 22 June 2022	<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.
Confederation of Passenger Transport – 21 June 2022	<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.
All GM Hackney and Private Hire Vehicle representatives – 23 June 2022	<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.

Group	Summary of Feedback
	<ul style="list-style-type: none"> • 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.
One Bus Network – 23 June 2022	<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. • Keen to see low bus speeds in the city centre resolved, as this is contributor to bus emissions.

17. Next Steps

- 17.1 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 can confirm the submission as an agreed document there will be an opportunity for the 'Case for a new Greater Manchester Clean Air Plan' document attached as Appendix 1 and associated appendices A to E to be considered, as required, through the local governance arrangements of the individual authorities. This will take place before the next Air Quality Administration Committee who can then formally confirm the submission.
- 17.2 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.

17.3 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.

18. Recommendations

18.1 The recommendations are set out at the front of the report.

19. Appendices

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

18.3 Appendix A – Technical Note: Vehicle Sector Review – HGV Sector – attached as a supplementary paper.

18.4 Appendix B – Technical Note: Vehicle Sector Review – Taxis (Hackney Carriages and Private Hire Vehicles) – attached as a supplementary paper.

18.5 Appendix C – Technical Note: Current issues in the Van Sector – attached as a supplementary paper.

18.6 Appendix D – Technical Note: Vehicle Sector Review – Coach and Minibus – attached as a supplementary paper.

18.7 Appendix E – Changes in economic context since July 2021– attached as a supplementary paper.