

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

## Evidence Submission for a new GM Clean Air Plan

### Local Measures Note - A57 Regent Road



Salford City Council



Oldham Council

TRAFFORD COUNCIL



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## **1 Purpose of this Document**

- 1.1.1 This note provides a high-level overview of the proposed Investment-led Plan Local Traffic Measures at the A57 Regent Road, Salford to provide further detail on relevant information contained in the *Appraisal Report*.
- 1.1.2 This information has been compiled ahead of any formal engagement with designers and contractors who would develop the detailed design of each measure component. This activity would only commence if the government issued a direction to the GM Authorities to implement the Investment-led Plan.
- 1.1.3 Where relevant, measures outlined in this document would require Traffic Regulation Orders that are subject to statutory public consultation.

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## 2 Greater Manchester Clean Air Plan Overview

### 2.1 Background to the Clean Air Plan

- 2.1.1 In 2017 the Secretary of State (SoS) for Environment, Food and Rural Affairs issued directions under the Environment Act 1995 requiring many local authorities, to produce feasibility studies to identify the option which will deliver compliance with the requirement to meet legal limits for nitrogen dioxide (NO<sub>2</sub>) in the shortest possible time. The legal limit being defined as the long-term annual mean legal limit of 40 µg/m<sup>3</sup>.
- 2.1.2 In Greater Manchester (GM), the ten 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 NO<sub>2</sub> exceedances at the roadside, herein known as Greater Manchester Clean Air Plan (GM CAP).
- 2.1.3 The development of the GM CAP is funded by government and is overseen by the Joint Air Quality Unit (JAQU), the joint Department for Environment, Food and Rural Affairs (DEFRA) and Department for Transport (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 test<sup>1</sup>.
- 2.1.4 In March 2019, the ten GM Local Authorities collectively submitted an Outline Business Case (OBC)<sup>2</sup> for the GM CAP to JAQU outlining a package of measures to deliver regional compliance with legal limits for NO<sub>2</sub> emissions in the shortest possible time.
- 2.1.5 In July 2019, the Environment Act 1995 (Greater Manchester) Air Quality Direction 2019 was made, which required all ten of the GM local authorities to implement a charging Clean Air Zone Class C<sup>3</sup> with additional measures. There was also an obligation to provide further scenarios appraisal information to demonstrate the applicable Class of Charging CAZ and other matters to provide assurance that the local plan would deliver compliance in the shortest possible time and by 2024 at the latest.

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<sup>1</sup> 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/guidance/new-burdens-doctrine-guidance-for-government-departments)

<sup>2</sup> <https://cleanairgm.com/technical-documents/#outline-business-case>

<sup>3</sup> <https://www.gov.uk/government/publications/air-quality-clean-air-zone-framework-for-england/annex-a-clean-air-zone-minimum-classes-and-standards>

- 2.1.6 In March 2020, the Environment Act 1995 (Greater Manchester) Air Quality Direction 2020 was made, which required the submission of an Interim FBC (along with confirmation that all public consultation activity has completed) as soon as possible and by no later than 30 October 2020. The 2020 direction confirmed that legal duty remains to ensure the GM CAP (Charging Clean Air Zone Class C with additional measures) is implemented so that NO<sub>2</sub> compliance is achieved in the shortest possible time and by 2024 at the latest and that human exposure is reduced as quickly as possible. The Ministerial letter accompanying the March 2020 direction confirmed that the minister was satisfied that the main evidence queries from the July 2019 direction had been addressed.
- 2.1.7 A statutory consultation on the proposals took place in Autumn 2020.
- 2.1.8 The GMCA - Clean Air Final Plan report<sup>4</sup> on 25th June 2021<sup>5</sup> endorsed GM's Final CAP and policy in compliance with this direction, 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, the JAQU reviewed and approved all technical and delivery submissions. Within this document, this is referred to as the Previous GM CAP.

## **2.2 The Previous GM CAP and the impacts of Covid-19**

- 2.2.1 Under the Previous GM CAP, GM was awarded £123 million by government for funds aimed at encouraging vehicle upgrades to secure compliance and mitigating the impacts of the GM-wide CAZ. The funds included £15.4 million for bus retrofit, £3.2 million for bus replacement, £10.2 million for Private Hire Vehicles (PHVs), £10.1 million for Hackney Carriages, £7.6 million for Heavy Goods Vehicles (HGVs), £4.4 million for coaches, £2.0 million for minibuses and £70.0 million for Light Goods Vehicles (LGVs).
- 2.2.2 The June 2021 Clean Air Final Plan report set out that the Air Quality Administration Committee (AQAC) had the authority to establish and distribute the funds set out in the agreed GM Clean Air Plan policy. On 21 September 2021 the AQAC approved the establishment and distribution of the agreed bus replacement funds.
- 2.2.3 On 13 October 2021 the AQAC 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.
  - From the end of January 2022 applications for funding would open for PHVs, Hackney Carriages, coaches, minibuses and LGVs.

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<sup>4</sup> <https://democracy.greatermanchester-ca.gov.uk/documents/s15281/GMCA%20210621%20Report%20Clean%20Air%20Plan%20-%20FINAL%20FINAL.pdf>

<sup>5</sup> Also considered by the GM authorities through their own constitutional decision-making arrangements.

2.2.4 On 20th January 2022, the AQAC considered the findings of an initial review of conditions within the supply chain of LGVs in particular following Covid-19 related impacts, which were impacting the availability of compliant vehicles and supply-side constraints resulting in price increases, particularly in the second-hand market<sup>6</sup>. The AQAC agreed that a request should be made to the SoS to pause the opening of the next phase of Clean Air Funds. This was to allow an urgent and fundamental joint policy review with government, to identify how a revised policy could be agreed to deal with the supply issues and local businesses' ability to comply with the GM CAP.

2.2.5 On 8th February 2022, the AQAC noted the submission of a report "Issues Leading to Delayed Compliance Based on the Approved GM CAP Assumptions". The report concluded that on balance, the latest emerging evidence suggested that with the approved plan in place, it was no longer likely that compliance would be achieved in 2024. Members also requested that arrangements were put in place for those vehicles owners who had already placed orders pending funding opening at the end of January to ensure they are not detrimentally impacted by the decision to pause the opening of the funds. Government subsequently issued The Environment Act 1995 (Greater Manchester) Air Quality Direction 2022<sup>7</sup> which confirmed that the March 2020 Direction had been revoked and required that by 1st July 2022 the GM authorities should:

- Review the measures specified in the local plan for NO<sub>2</sub> compliance and associated mitigation measures; and
- Determine whether to propose any changes to the detailed design of those measures, or any additional measures.

2.2.6 This Direction ('the Direction') also stated that the local plan for NO<sub>2</sub> compliance, with any proposed changes, must ensure the achievement of NO<sub>2</sub> compliance in the shortest possible time and by 2026 at the latest. It should also ensure that human exposure to concentrations of NO<sub>2</sub> above the legal limit is reduced as quickly as possible.

### **2.3 The Case for a new GM CAP**

2.3.1 On 1st July 2022, the AQAC noted that the 'Case for a new Greater Manchester Clean Air Plan<sup>8</sup> document and associated appendices would be submitted to the SoS as a draft document subject to any comments of GM Authorities.

2.3.2 On 17th August 2022, the AQAC agreed to submit the 'Case for a new Greater Manchester Clean Air Plan' to the SoS as a final version and approved the Case for a New Plan - Air Quality Modelling Report for submission to JAQU.

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<sup>6</sup> <https://democracy.greatermanchester-ca.gov.uk/documents/s18685/ARUP%20Technical%20Note.pdf>

<sup>7</sup> [The Environment Act 1995 \(Greater Manchester\) Air Quality Direction 2022 \(publishing.service.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/111111/Environment-Act-1995-Greater-Manchester-Air-Quality-Direction-2022.pdf)

<sup>8</sup> [https://assets.cifassets.net/tlpgbv1k6h2/7jtkDc5AODypDQlw0cYwsl/67091a85f26e7c503a19ec7aeb2e8137/Appendix\\_1\\_-\\_Case\\_for\\_a\\_new\\_Greater\\_Manchester\\_Clean\\_Air\\_Plan.pdf](https://assets.cifassets.net/tlpgbv1k6h2/7jtkDc5AODypDQlw0cYwsl/67091a85f26e7c503a19ec7aeb2e8137/Appendix_1_-_Case_for_a_new_Greater_Manchester_Clean_Air_Plan.pdf)

- 2.3.3 The 'Case for a new Greater Manchester Clean Air Plan' set out that challenging economic conditions, rising vehicle prices and ongoing pandemic impacts meant that the original plan of a GM-wide charging CAZ was no longer the right solution to achieve compliance, instead proposing an investment-led, non-charging GM CAP.
- 2.3.4 The primary focus of the 'Case for a new Greater Manchester Clean Air Plan' was to identify a plan to achieve compliance with the legal limit value for NO<sub>2</sub> in a way that considered the cost-of-living crisis and associated economic challenges faced by businesses and residents. This would be achieved through an investment-led approach combined with wider measures that the GM Authorities are implementing and aimed to reduce NO<sub>2</sub> emissions to within legal limits, in the shortest possible time and at the latest by 2026.
- 2.3.5 The 'Case for a new Greater Manchester Clean Air Plan' proposed using the remaining funding that the government has awarded to GM for the Previous GM CAP to deliver an investment-led approach to invest in vehicle upgrades, rather than imposing daily charges, and deliver new Zero Emission Buses (ZEBs) as part of the Bee Network<sup>9</sup> (a London-style integrated transport network for GM). The new plan would ensure that the reduction of harmful emissions would be at the centre of GM's wider objectives. Within this document, this plan is referred to as the 'Investment-led Plan'.
- 2.3.6 The GM Authorities committed to a participatory approach to the development of the new plan to ensure that the GM Authorities' proposals would be well-grounded in evidence in terms of the circumstances of affected groups and possible impacts of the new plan on them, and therefore the deliverability and effectiveness of that plan.
- 2.3.7 Between August and November 2022, the GM Authorities carried out engagement and research with key stakeholders - vehicle-owning groups and representatives of other impacted individuals, such as community, business, environment and equality-based groups. This activity included targeted engagement sessions with all groups, and an online survey and supporting qualitative research activity with vehicle-owning groups.
- 2.3.8 Input from those engaged informed the ongoing policy development process as the GM Authorities developed the package of measures forming the Investment-led Plan.

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<sup>9</sup> The Bee Network is Greater Manchester integrated transport system joining together bus, Metrolink, rail and active travel  
<https://tfgm.com/corporate/business-plan/case-studies/bee-network>

## 2.4 The Investment-led Plan and the impact of bus retrofit issues

2.4.1 Having submitted the 'Case for a new Greater Manchester Clean Air Plan'<sup>10</sup> in July 2022, the GM Authorities were asked by government in January<sup>11</sup> 2023 to:

- *Provide modelling results for a benchmark CAZ to address the persistent exceedances identified in central Manchester and Salford, in order for these to be compared against your proposals.*
- *Identify a suitable approach to address persistent exceedances identified in your data on the A58 Bolton Road in Bury in 2025, and to propose a suitable benchmark.*
- *Set out how the measures you have proposed will be modelled and evidenced overall, and to ensure that they are modelled without any unnecessary delay.*

2.4.2 The GM Authorities undertook the work required to supply this further evidence and on 8th March 2023 submitted the report 'Approach to Address Persistent Exceedances Identified on the A58 Bolton Road, Bury'<sup>12</sup>. GM Authorities also worked to address the remaining two requests from government by June 2023 on the basis of providing further information to support its Investment-led Plan and testing the proposal against a suitable benchmark CAZ, herein referred to as the 'CAZ Benchmark'.

2.4.3 In April 2023, government advised TfGM that it was to pause any new spending on bus retrofit as it had evidence that retrofitted buses have poor and highly variable performance in real-world conditions<sup>13</sup>. This new evidence followed a JAQU-funded study to quantify nitrogen oxide (NO<sub>x</sub>) and NO<sub>2</sub> emissions from buses under real-world driving conditions in three cities across the UK, including Manchester (monitoring took place in Manchester City Centre between 21st November and 12th December 2022). The monitoring indicated that retrofitted buses were not reducing emissions as expected, with significant variation in performance between bus models with retrofit technologies. Furthermore, emissions of primary-NO<sub>2</sub> (as opposed to NO<sub>x</sub>) were highly variable, potentially worsening roadside NO<sub>2</sub> concentrations despite an overall reduction in NO<sub>x</sub> emissions.

2.4.4 Government therefore commenced a six-month focused research programme to quickly investigate the causes of this poor performance and scope how it could be improved, which was anticipated to be reported in Autumn 2023.

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<sup>10</sup> [https://assets.ctfassets.net/tlpgbv1k6h2/7jtkDc5AODypDQlw0cYwsl/67091a85f26e7c503a19ec7aeb2e8137/Appendix\\_1\\_-\\_Case\\_for\\_a\\_new\\_Greater\\_Manchester\\_Clean\\_Air\\_Plan.pdf](https://assets.ctfassets.net/tlpgbv1k6h2/7jtkDc5AODypDQlw0cYwsl/67091a85f26e7c503a19ec7aeb2e8137/Appendix_1_-_Case_for_a_new_Greater_Manchester_Clean_Air_Plan.pdf)

<sup>11</sup> <https://democracy.greatermanchester-ca.gov.uk/documents/s24937/Appendix%201.%20Ministerial%20Letter%20to%20GM%20with%20attachment.pdf>

<sup>12</sup> <https://democracy.greatermanchester-ca.gov.uk/documents/s24939/Appendix%203.%20GM%20CAP%20A58%20Bury%20Measure%20Report%20DRAFT%20for%20AQAC%20Approval%20Feb%202023.pdf>

<sup>13</sup> <https://democracy.greatermanchester-ca.gov.uk/documents/s27699/Appendix%201.%20Letter%20from%20DfT%20to%20Greater%20Manchester%20regarding%20Bus%20Retrofit%20Update.pdf>



- 2.4.5 In the light of government's new evidence, JAQU issued revised general guidance<sup>14</sup> to authorities producing CAPs nationwide. In summary, this required that air quality modelling should no longer assume any air quality benefits from a retrofitted bus.
- 2.4.6 GM incorporated the revised guidance, as agreed with JAQU, into the modelling which underpins the development of its CAP to produce a report that appraises the ability of the Investment-led Plan and the CAZ Benchmark to deliver compliance with the legal limit value in the shortest possible time and by no later than 2026. The key findings from government's six-month focused research programme were not available at the time this work was undertaken.
- 2.4.7 The first version of the *Appraisal Report* and supporting documentation was submitted to government in December 2023. The *Appraisal Report* concluded that GM's Investment-led Plan can deliver compliance in 2025 and performs better than a CAZ Benchmark.

## **2.5 Key developments since December 2023 submission**

- 2.5.1 Since the submission of evidence to JAQU in December 2023 there have been a number of key developments, resulting in a need to update the modelling, the *Appraisal Report* and supporting documentation.
- 2.5.2 Further modelling was undertaken in Summer 2024 to consider and address the following key developments:
- Delay to Stockport all-electric bus depot;
  - Changes to bus fleets (operational and planned); and
  - Correction to Euro V retrofit bus modelling emission values.
- 2.5.3 Drafts of the *Appraisal Report* and supporting documentation were updated to take account of the key developments and the Summer 2024 modelling, in preparation for submission to government. These updates did not change GM's conclusion that the Investment-led, non-charging plan can deliver compliance in 2025 and performs better than a CAZ Benchmark.

## **2.6 Developments following Summer 2024 modelling**

- 2.6.1 Following the substantial drafting to update the *Appraisal Report* and supporting material (to address the key developments since the December 2023 submission), two additional issues have arisen.
- 2.6.2 Firstly, a risk identified in the December 2023 submission "Delays to bus depot electrification" has materialised and there is now a delivery delay to the electrification of Queens Road depot. This was due to take place by January 2025, which was the assumed delivery date in the modelling of the Investment-led Plan.

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<sup>14</sup> Bus Retrofit Update - Technical Guidance for Local Authorities, JAQU Guidance, May 2023

- 2.6.3 This poses a significant challenge to achieving compliance in 2025, as 73 ZEBs are to be operated out of Queens Road depot. The issue affects 12 bus services, which run through 17 forecast 'Do Minimum' exceedance sites in 2025.
- 2.6.4 Secondly, in July 2024 National Highways also advised TfGM that the temporary speed limit on the M602 is to be removed, and the 70mph speed limit reinstated. The M602 temporary speed limit is assumed to be in place in the Investment-led Plan modelling assumptions.
- 2.6.5 The implications of these two issues are addressed in the *Supplementary Appraisal Report*, included as part of this evidence submission documentation. Therefore, the *Appraisal Report* and associated documentation, including this report, should be read in conjunction with the *Supplementary Appraisal Report*.
- 2.6.6 In addition, since the drafting of the *Appraisal Report* and supporting material, government published the 'Bus Retrofit Performance Report'<sup>15</sup> on the 12th September 2024. The key findings of this report include that the retrofit technology fitted onto retrofitted buses is not reducing NO<sub>x</sub> emissions to the levels expected and retrofit performance is highly variable. These findings are consistent with the guidance issued in May 2023. Therefore, the publication of the study findings has no impact on the Investment-led Plan, the *Appraisal Report* and supporting material.

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<sup>15</sup> <https://assets.publishing.service.gov.uk/media/66e1ab11951c1776394a003c/bus-retrofit-performance-24.pdf>

### **3 Context of this Document**

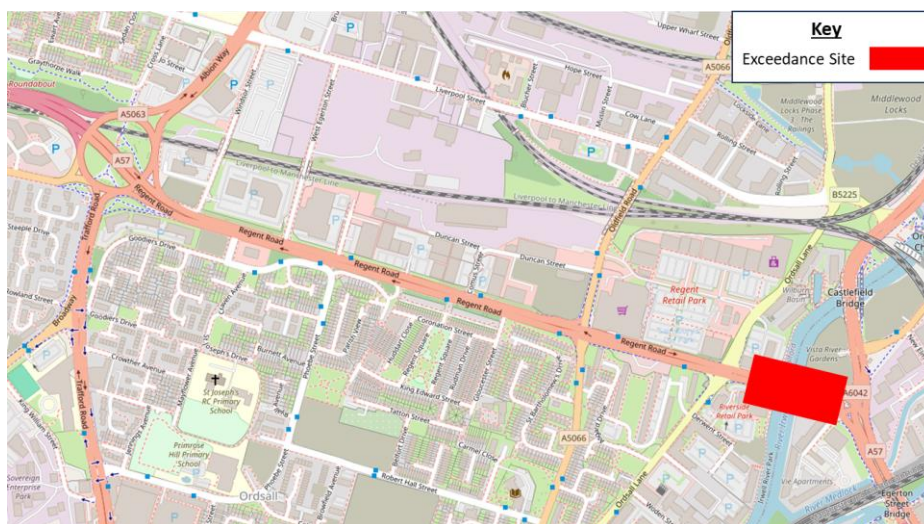
- 3.1.1 As set out in Section 7.3 of the *Appraisal Report*, there are three remaining exceedance sites after the deployment of bus and taxi measures. These sites are: A57 Regent Road, Great Bridgewater Street and A34 Quay Street. Whilst the deployment of Zero Emission Buses at these locations has been shown to be effective, there is not a sufficient number of buses that pass the A57 Regent Road, Great Bridgewater Street and A34 Quay Street to bring these locations into compliance in 2025. In addition, there are local conditions at the exceedance site location at A34 Quay Street and Great Bridgewater Street such as the canyoning effect of a road bridge which influence the NO<sub>2</sub> concentrations at this location.
- 3.1.2 Taxi measures support reduction in NO<sub>2</sub> concentrations at each exceedance location, in addition providing a wider resilience benefit to those already achieving compliance, however the level of reduction is not sufficient to achieve compliance at the three exceedance sites. Therefore, a series of targeted local measures are proposed to reduce NO<sub>2</sub> exceedance concentrations at these sites.
- 3.1.3 The submission of evidence to JAQU in December 2023 provided an overview of GM's Investment-led Plan local traffic measures at the exceedance site located at A57 Regent Road. This note provides further information on these proposals.
- 3.1.4 This note has been developed with key inputs from Salford City Council, the responsible local highway authority, and Greater Manchester Police (GMP) to provide further information on the local measures proposed to achieve compliance at the A57 Regent Road exceedance site.

## 4 A57 Regent Road - Overview

4.1.1 The exceedance site on the A57 Regent Road, Salford is located between Ordsall Lane and the Inner Ring Road.

4.1.2 **Figure 1** shows the location of the exceedance site on A57 Regent Road.

**Figure 1 A57 Regent Road, Salford - Site of Exceedance (Source: OpenStreetMap)**



4.1.3 As part of the GM CAP, interventions are required to bring this site of air quality exceedance into compliance with NO<sub>2</sub> thresholds (below 40µg). As set out in Section 7.3 of the *Appraisal Report*, this site remains in exceedance of the legal limit after the deployment of bus and taxi measures and is forecast to be non-compliant in 2025. **Table 1** shows the vehicle composition at this exceedance site and shows a mixed proportion of vehicle types with relatively low volumes of bus and taxis. Therefore, from the Investment-led Plan measures available, local measures influencing vehicle speeds and flow would likely be effective despite the different composition of vehicles at these exceedance locations.

**Table 1 Predicted annual mean NO<sub>2</sub> concentrations and source apportionment at key compliance points on the GM road network - 2025 Do Minimum**

Point ID	Census ID	Road name	GM Authority	NO <sub>x</sub> contribution by vehicle type (%)				
				Bus	Taxi	HGV	LGV	Car
1349_299 3_DW	73792	A57 Regent Rd	Salford	1%	6%	18%	31%	44%

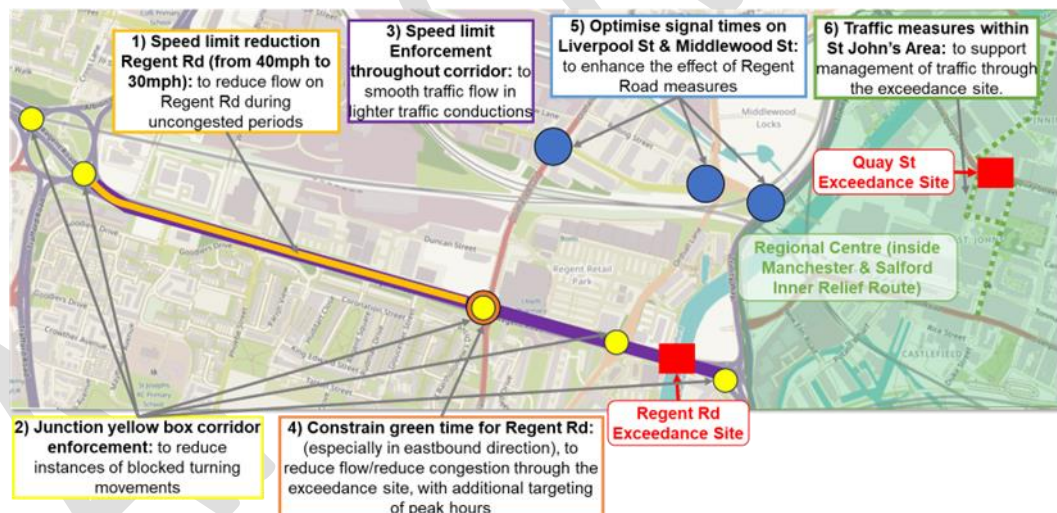
## 5 A57 Regent Road – Local Measures

5.1.1 The submission of evidence to JAQU in December 2023 provided an overview of the targeted local measures which were proposed for the A57 Regent Road. They comprised of signal optimisation at A57 Regent Road and on the adjacent parallel routes and speed restrictions on the A57 Regent Road. These measures have been refined to supplement the two targeted measures with enforcement-related measures. In summary, the refined set of local measures at the A57 Regent Road is proposed to consist of the following:

- Speed limit change with enforcement;
- Signal optimisation; and
- Yellow box enforcement.

5.1.2 An overview of Regent Road measures is set out in **Figure 2**. This figure has been updated following the overview of local measures which was set out in the Appraisal Report, submitted as part of the December 2023 evidence submission.

**Figure 2 Overview of Local Measures**



5.1.3 Prior to the December 2023 evidence submission, GM collated a list of options to achieve NO<sub>2</sub> compliance with legal limits in the shortest possible time and by 2026 at the latest. The shortlisted options focused on signal optimisation and speed restrictions were put forward for JAQU consideration as part of the December 2023 evidence submission. With further refinement GM has identified the following measures aiming to mitigate against the potential risk of exceedance:

- Speed limit enforcement;
- Signal optimisation; and
- Yellow box enforcement at key junctions.

5.1.4 These measures aim to regulate traffic flow along the corridor to provide compliance with agreed NO<sub>2</sub> concentrations.

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## 5.2 Speed Limit Change & Enforcement

### Introduction

- 5.2.1 A reduction in speed through the procurement of a Traffic Regulation Order has been identified as one of the measures on the A57 Regent Road to help achieve compliance at the exceedance site during time periods where traffic is considered as 'free flowing'.
- 5.2.2 Speed limit reductions have already been introduced on the M602 (70mph to 60mph) and on the A57 Mancunian Way (50mph to 30mph), which is located to the West and East of A57 Regent Road respectively.
- 5.2.3 Modelling demonstrates that the combined effect of a reduction in vehicle speeds and rerouting from the A57 Regent Road achieves compliance at this location. A reduction in vehicle speeds makes a route less attractive, increasing the likelihood of trips redistributing onto other routes.
- 5.2.4 Based on a desktop review of the A57 Regent Road corridor, it has been considered that up to 18 average speed cameras (9 average speed camera links) will be required for maximum coverage to enforce the speed limit throughout the corridor for both directions. This combines a blend of active and inactive cameras.

### Cost Estimate of Measure

- 5.2.5 The high-level costing for the A57 Regent Road local measures has been presented as a funding allocation of £5m as part of the December 2023 evidence submission. This funding allocation includes costs associated with the St John's Area local measure (considered in the separate note "Appraisal Report Appendix 4 - St John's Area – Local Measures Note" included as part of this evidence submission documentation). TfGM are working closely with Salford City Council to develop the scheme costs to produce a strategic cost estimate that is developed consistently with the St John's Area local measure.

### Delivery Timescales

- 5.2.6 Based on GM receiving a direction from government to proceed with the Investment-led Plan imminently, it is considered that speed limit changes, as modelled, can be implemented by the beginning of 2025, subject to support at public consultation. Further work is required to understand the implementation dates associated with the speed enforcement element which is subject to engagement of designers and contractors which will be conducted once GM has received a government direction.

### GM CAP Legacy or Decommissioning

- 5.2.7 Once the Greater Manchester Authorities have demonstrated compliance with the legal limits at the A57 Regent Road exceedance site location, there would not be a requirement to continue to have this measure in operation and therefore decommissioning costs have been included.

- 5.2.8 However, it is recognised that speed management measures on this route have wider benefits beyond solely air quality.
- 5.2.9 This measure would make a positive contribution to Greater Manchester's Vision Zero Strategy<sup>16</sup> which aims to eliminate all traffic fatalities and life-change injuries while increasing safe, healthy and equitable mobility for all<sup>17</sup>. In addition, the identified local measures align with the City Centre Transport Strategy<sup>18</sup>, developed by Transport for Greater Manchester, Manchester City Council and Salford City Council to guide how city centre transport is improved across the next two decades.
- 5.2.10 Therefore, it may be determined by the Safer Roads Partnership<sup>19</sup> to continue the operation of the speed management cameras after compliance has been achieved.

### 5.3 Signal Optimisation

#### Introduction

- 5.3.1 Signal timing adjustments were applied within the modelling on A57 Regent Signal optimisation at A57 Regent Road & adjacent parallel routes Road, namely at the A57 Regent Road / Oldfield Road junction and the M602 J3 west arm approach. These adjustments would be supported by further adjustments to parallel routes at the junctions of Oldfield Road / Middlewood Street, Ordsall Lane / Middlewood Street / Hampson Street and Hampson Street / Trinity Way.
- 5.3.2 These adjustments would be conducted to improve average speeds through the exceedance site and constrain overall traffic flows travelling eastbound along Regent Road to increase capacity on parallel routes. Signal optimisation has been modelled to have a materially beneficial impact on compliance at the A57 Regent Road exceedance site by improving the flow of traffic, leading to a reduction in congestion and a resulting emission benefit.
- 5.3.3 There is potential to provide a more regulated flow of traffic onto A57 Regent Road, by updating signals/signal control along the corridor.
- 5.3.4 The signals at the following junctions have been identified for improvement:
- A57 Regent Road /M602 Circulatory

<sup>16</sup> <https://www.greatermanchester-ca.gov.uk/media/9264/vision-zero-strategy-greater-manchester.pdf>

<sup>17</sup> [https://www.greatermanchester-ca.gov.uk/what-we-do/greater-manchester-strategy/vision-zero-strategy/#:~:text=Greater%20Manchester%20Combined%20Authority%20\(GMCA,healthy%2C%20equitable%20mobility%20for%20a](https://www.greatermanchester-ca.gov.uk/what-we-do/greater-manchester-strategy/vision-zero-strategy/#:~:text=Greater%20Manchester%20Combined%20Authority%20(GMCA,healthy%2C%20equitable%20mobility%20for%20a) II.

<sup>18</sup> [https://assets.ctfassets.net/nv7y93idf4jq/6HANAC6XKWNyvZ508tbVfq/f661cc31bad890a4f388de49e79c1826/CCTS\\_Full\\_Document\\_Final\\_170321.pdf](https://assets.ctfassets.net/nv7y93idf4jq/6HANAC6XKWNyvZ508tbVfq/f661cc31bad890a4f388de49e79c1826/CCTS_Full_Document_Final_170321.pdf)

<sup>19</sup> Safer Roads Greater Manchester Partnership is a multi-agency partnership committed to reducing the number of deaths and injuries on Greater Manchester's roads. SRGM comprises Transport for Greater Manchester's Safer Roads Group and 'DriveSafe' responsible for the delivery of the National Driver Intervention Scheme in Greater Manchester); with other Greater Manchester (GM) organisations, including: Greater Manchester Police (GMP), Greater Manchester Fire and Rescue Service (GMFRS), North West Ambulance Service (NWAS) and the 10 Greater Manchester Local Authorities and the Greater Manchester Combined Authority (GMCA).



- A57 Regent Road Ordsall Lane

- 5.3.5 The A57 Regent Road /M602 Circulatory currently operates using fixed time signals. This could benefit from introduction of variable demand dependent signals, which would assist in control of stage timings by allowing stages to operate using a minimum/maximum time-period. This can be further enhanced by using SCOOT<sup>20</sup> to optimize flow throughout the corridor.
- 5.3.6 A reduction in flow is required on A57 Regent Road to achieve air quality compliance at the site of exceedance. To make the corridor a 'less attractive' route option, a delay can be induced on the A57 Regent Road eastbound approach of A57 Regent Road/Ordsall Lane junction, by allocating a proportion of green time from the eastbound movement to the westbound right turn movement (A57 Regent Road westbound to Ordsall Lane northbound)

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<sup>20</sup> <https://trlsoftware.com/products/traffic-control/scoot/>

### Cost Estimate of Measure

- 5.3.7 The high-level costing for the A57 Regent Road local measures has been presented as a funding allocation of £5m as part of the December 2023 evidence submission. This funding allocation includes costs associated with the St John's Area local measure (considered in the separate note "Local Measures Note - St John's Area" included as part of this evidence submission documentation). TfGM are working closely with Salford City Council to develop the scheme costs to produce a strategic cost estimate that is developed consistently with the St John's Area local measure.

### Delivery Timescales

- 5.3.8 This measure will be implemented by GM's Urban Traffic Control team by the beginning of 2025. This measure can be delivered in a short timescale due to the measure not requiring physical infrastructure changes.

### GM CAP Legacy or Decommissioning

- 5.3.9 Once the GM Authorities have been able to demonstrate compliance at the A57 Regent Road exceedance site location, there would not be a requirement to continue to have this measure in operation. As this measure is considered to be minimal in cost to implement and manage, it is not anticipated that decommissioning costs associated with optimisation of signals are required. Therefore, the GM Authorities will review the optimal signal arrangements at junctions in-scope once compliance is demonstrated to improve journey times and minimise congestion.

## 5.4 Yellow Box Enforcement

### Introduction

5.4.1 There are currently yellow boxes present at the following junctions along A57 Regent Road:

- M602/A5063 Albion Way/A57 Regent Road/A6042 Trinity Way roundabout
- A57 Regent Road/ A5066 Oldfield Road
- A57 Regent Road/Ordsall Lane
- A57 Regent Road/A6042 Trinity Way<sup>21</sup>

5.4.2 It is proposed that enforcement of yellow box junctions along the A57 Regent Road corridor is undertaken to support bringing closer alignment of modelled and observed behaviours. The condition of the yellow boxes along the A57 Regent Road, example shown in **Figure 3**, influences the ability of the local highway authority to enforce intrusions. In addition to condition, appropriate signage and camera installations at each junction are required to legally enforce intrusions. The boxes will need checking for compliance, renewing and the installation of appropriate signs to advise motorists of camera enforcement.

**Figure 3 A57 Regent Road / Ordsall Lane Junction**



5.4.3 The following data includes the rate of compliance which was observed during a study conducted in 2016.

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<sup>21</sup> Implementation of yellow box enforcement at this junction subject to agreement with Manchester City Council as the responsible local highway authority.

- 5.4.4 **Table 2** below shows the rate of yellow box infringement observed in November 2016 (3-day average) on A57 Regent Road/Ordsall Lane:

**Table 2 Rate of Yellow Box Infringement observed on A57 Regent Road/Ordsall Lane**

Peak Period	Infringement Rate	Number of Yellow Box Violations (Vehs)
AM Peak (07:00-10:00)	1.14%	352
Inter-Peak Period (10:00-16:00)	0.80%	564
PM Peak (16:00 - 19:00)	1.60%	544

- 5.4.5 A site visit was conducted on 17<sup>th</sup> April 2024 to observe behaviour at yellow box junctions located on the A57 Regent Road corridor. Observations at Ordsall Lane and Oldfield Road were conducted during the PM peak period (17:00-18:00).
- 5.4.6 Traffic conditions were relatively 'light' during the site visit, however there were instances of yellow box infringement observed during the peak period. Incidents of yellow box infringements from the site visit can be seen in Annex 1.
- 5.4.7 Modelling of the proposed measure assumes vehicles will not obstruct junctions (i.e., full compliance with yellow box restrictions).

#### Cost Estimate of Measure

- 5.4.8 The high-level costing for the A57 Regent Road local measures has been presented as a funding allocation of £5m as part of the December 2023 evidence submission. This funding allocation includes costs associated with the St John's Area local measure (considered in the separate note "Local Measures Note - St John's Area" included as part of this evidence submission documentation). TfGM are working closely with Salford City Council to develop the scheme costs to produce a strategic cost estimate that is developed consistently with the St John's Area local measure.

#### Delivery Timescales

- 5.4.9 Based on GM receiving a direction from government to proceed with the Investment-led Plan imminently, it is considered that yellow box enforcement measures can be implemented sufficiently quickly to achieve compliance in 2025. Further work is required to understand the implementation dates associated with the speed enforcement element which is subject to engagement of designers and contractors which will be conducted once GM has received a government direction.

## GM CAP Legacy or Decommissioning

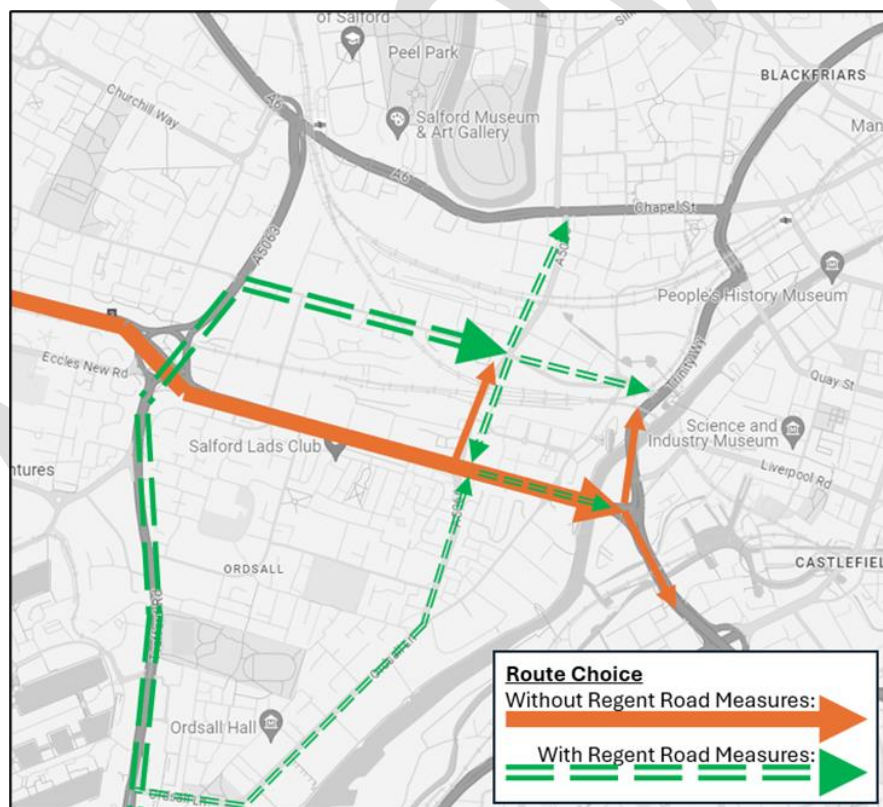
- 5.4.10 Once the Greater Manchester Authorities have been able to demonstrate compliance at the A57 Regent Road exceedance site, there would not be a requirement from a Clean Air Plan perspective to continue to have this measure in operation. However, this measure provides wider road safety and journey performance-related benefits. It is therefore proposed that the associated monitoring and operating costs would be borne by GM once it has been determined by JAQU that the Greater Manchester Authorities have been able to demonstrate compliance at this exceedance location.

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## 6 Traffic Results

- 6.1.1 The traffic impact of the planned measures at the A57 Regent Road have been modelled for the 2025 forecast year for each of the AM, OP and PM periods and considers impacts on vehicle flows, delays, speeds and volume/capacity. The individual measure components have been tested as a single scheme however the yellow box enforcement component has not been modelled as the desired driver behaviour (not blocking junctions) is reflected in the strategic traffic model.
- 6.1.2 Overall, the impacts of the Regent Road measures are localised to the A57 Regent Road and the area within a mile of the road, with the largest impacts being a reduction of traffic along the route, with vehicles reassigning to parallel routes, mainly Liverpool Street as shown in the schematic presented in **Figure 4**. Impacts on the wider area are minimal, particularly in terms of speed and delays and for areas within the IRR. The site of exceedance on Regent Road is not impacted as heavily as the rest of the road, but there is still a reduction of vehicles between 10-100 depending on peak and direction of traffic.

**Figure 4 A57 Regent Road Measures - Route choice impact**



- 6.1.3 The reassignment is mostly as expected, with the measures making Regent Road less desirable as an option, resulting in vehicles using other routes. The main patterns visible are traffic heading to/from the city centre using Liverpool Street rather than Regent Road and also traffic choosing to use alternative junctions on the M60 to reach the city centre without using Regent Road. Other patterns of reassignment include vehicles near Regent Road that have their routes become less or more desirable due to traffic which uses Liverpool Street and other roads rather than Regent Road. This reassignment is not as large and does not impact sites of exceedance.
- 6.1.4 The measures have a subtle impact on average two-way vehicle speeds with up to a 4mph reduction in average vehicle speeds in the off-peak observed along the A57 Regent Road, between Oldfield Road and the M602. The scale of vehicle speed reduction in the AM and PM period is up to 2mph.

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## 7 Air Quality Results

- 7.1.1 The A57 Regent Road local measures tested, which consist of a speed limit change on the A57 Regent Road and signal optimisation on the A57 Regent Road and adjacent parallels, are modelled to deliver -0.5 µg/m<sup>3</sup> in 2025 which is sufficient to deliver compliance supported by the other Investment-led Plan measures. The incremental air quality benefit from the Investment-led Plan measures, including the local traffic measures is summarised in **Table 3**.

**Table 3 NO<sub>2</sub> concentration with each Investment-led Plan Measure – 2025 (µg/m<sup>3</sup>)**

Point ID	Road name	GM Authority	Do Min.	With Bus Measure	With Bus & Taxi Measure	With Bus & Taxi & LTM Measure	Total Investment-led Plan Change in NO <sub>2</sub> conc.
1349_2993_DW	A57 Regent Rd	Salford	41.2	41.1	40.9	40.4	-0.8

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## **8 Next Steps**

- 8.1.1 TfGM and Salford City Council have developed this note to provide a high-level outline of the local traffic measure in anticipation of government approval of the Investment-led Plan.
- 8.1.2 Early public engagement and consultation will be key to mitigating the risks of delivery within the 2025 timeframe.
- 8.1.3 The next step would be to develop a detailed design along with an assessment of the costs and an implementation plan that identifies any risks. The final design, costs and timescales will be submitted to JAQU as part of the Investment-led Clean Air Plan following completion of the next phase of work.

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## Annex 1 – Regent Road Site Visit Evidence



Figure A1: Ordsall Lane - Yellow Box Infringement



Figure A2: Oldfield Road - Yellow Box Infringement