

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 - St John's Area



Salford City Council



Oldham Council

TRAFFORD COUNCIL



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Version Status:	APPROVED	Prepared by:	Transport for Greater Manchester on behalf of the 10 Local Authorities of Greater Manchester
Date:	October 2024		

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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 St John's Area, Manchester 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 All 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 (NO₂) in the shortest possible time. The legal limit being defined as the long-term annual mean legal limit of 40 µg/m³.
- 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 NO₂ 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 test¹.
- 2.1.4 In March 2019, the ten GM Local Authorities collectively submitted an Outline Business Case (OBC)² for the GM CAP to JAQU outlining a package of measures to deliver regional compliance with legal limits for NO₂ 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 C³ 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.

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

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

³ <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 NO₂ 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 report⁴ on 25th June 2021⁵ 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.

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

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

- 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 NO₂ 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 NO₂ 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 Network⁹ (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.

⁹ 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'¹⁰ in July 2022, the GM Authorities were asked by government in January¹¹ 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'¹². 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 conditions¹³. This new evidence followed a JAQU-funded study to quantify nitrogen oxide (NO_x) and NO₂ 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-NO₂ (as opposed to NO_x) were highly variable, potentially worsening roadside NO₂ concentrations despite an overall reduction in NO_x 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.

¹⁰ https://assets.ctfassets.net/tlpgbv1k6h2/7jtkDc5AODypDQlw0cYwsl/67091a85f26e7c503a19ec7aeb2e8137/Appendix_1_-_Case_for_a_new_Greater_Manchester_Clean_Air_Plan.pdf

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

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

¹³ <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 guidance¹⁴ 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.

¹⁴ 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'¹⁵ on the 12th September 2024. The key findings of this report include that the retrofit technology fitted onto retrofitted buses is not reducing NO_x 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.

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

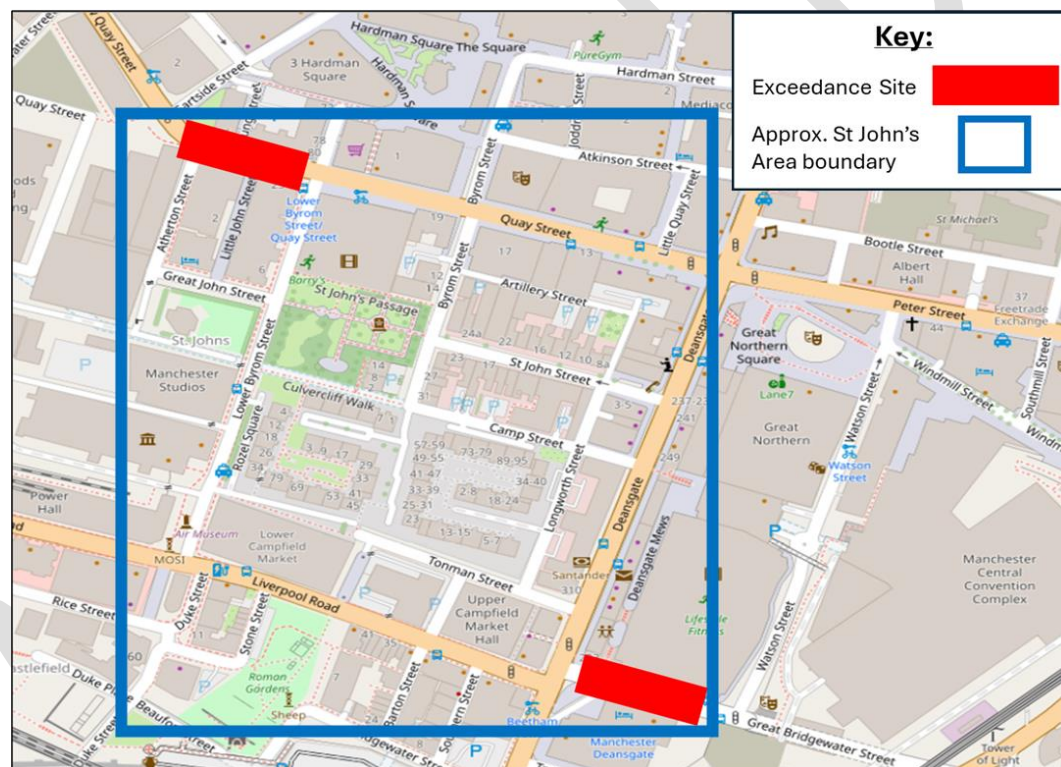
3 Context of this Document

- 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 NO₂ concentrations at this location.
- 3.1.2 Taxi measures support reduction in NO₂ 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 NO₂ 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 A34 Quay Street and Great Bridgewater Street. This note provides further information on these proposals.
- 3.1.4 This note has been developed with key inputs from Manchester City Council, the responsible local highway authority, to provide further information on the local measures proposed to achieve compliance at the A34 Quay Street and Great Bridgewater Street exceedance sites.

4 St John's Area - Overview

- 4.1.1 The St John's Area is a locality in Manchester City Centre, close to the A34 Quay Street and Great Bridgewater Street exceedance sites and is the location of the proposed traffic management measures modelled to achieve compliance in 2025.
- 4.1.2 Due to the close proximity of the A34 Quay Street and Great Bridgewater Street exceedance sites, the development of local measures for these locations has been considered in a single work package with identified measures modelled to target compliance at both exceedance sites.
- 4.1.3 **Figure 1** shows the location of the exceedance sites forecast in 2025 which the St John's Area local measures are modelled to address.

Figure 1 St John's Area, Manchester (Source: OpenStreetMap)



- 4.1.4 As part of the GM CAP, interventions are required to bring these sites of air quality exceedance into compliance with NO₂ thresholds (below 40µg). As set out in Section 7.3 of the *Appraisal Report*, these sites remain in exceedance of the legal limit after the deployment of bus and taxi measures and are forecast to be non-compliant in 2025. **Table 1** shows the vehicle composition along the local measure exceedance sites which show a mixed proportion of vehicle types at each location with a relatively low volumes of bus and taxi at Great Bridgewater Street. Whilst the proportion of bus at the A34 Quay Street is relatively high compared to other local routes (28%), electrification of buses along this route would not as a single measure achieve compliance. Therefore, 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 NO₂ concentrations and source apportionment at key compliance points on the GM road network - 2025 Do Minimum

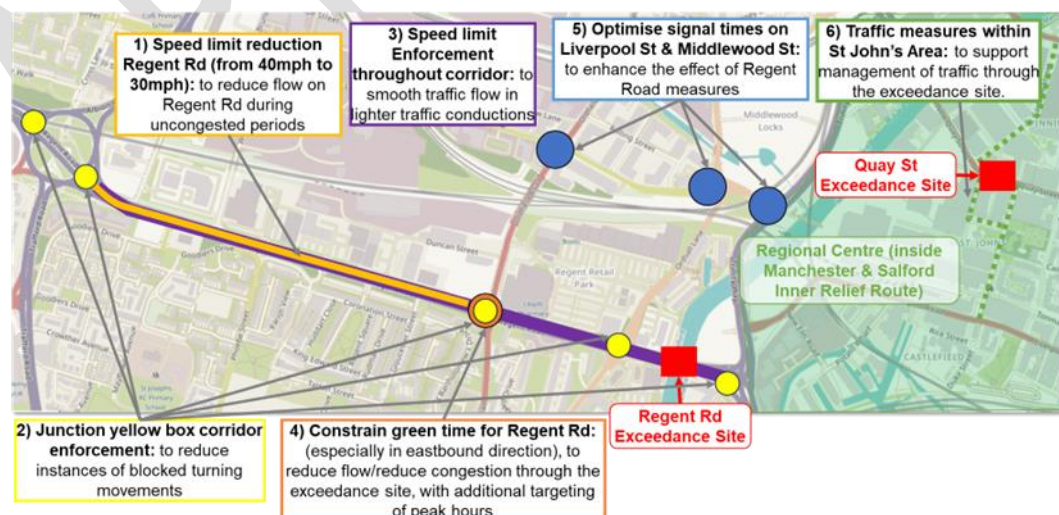
Point ID	Census ID	Road name	GM Authority	NOx contribution by vehicle type (%)				
				Bus	Taxi	HGV	LGV	Car
1322_3273	27975	A34 Quay St	Manchester	28%	5%	17%	21%	30%
1324_3276_DW	N/A	Great Bridgewater St	Manchester	7%	6%	26%	26%	35%

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5 St John's Area – Local Measures

- 5.1.1 The submission of evidence to JAQU in December 2023 provided an overview of the indicative local measures which were proposed to achieve compliance at A34 Quay Street and Great Bridgewater Street. GM submitted a high-level modelled local measures test which achieved forecast compliance in 2025 at the A34 Quay Street and Great Bridgewater Street. However, this was a theoretical solution to achieve the desired air quality outcome and subject to a worked-up proposal with the local highway authority.
- 5.1.2 The modelled test showed that achieving a 10mph flow on local roads feeding into the A34 Quay Street could be an effective means of reducing traffic volumes on adjacent routes by making trips through the A34 Quay Street a less attractive route, redistributing trips onto other routes, and therefore delivering air quality benefits on the A34 Quay Street and delivering compliance at this exceedance location.
- 5.1.3 Following the December 2023 submission, GM has worked closely with Manchester City Council, taking into account wider highway improvement works associated with the City Centre Transport Strategy¹⁶, to identify locally-deliverable measures which would replicate the modelled test in emissions terms and achieve forecast compliance and has subsequently been refined through an option identification and selection process.
- 5.1.4 The identified measures are summarised 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



¹⁶

https://assets.ctfassets.net/nv7y93idf4jq/6HANAC6XKWNyVZ508tbVfq/f661cc31bad890a4f388de49e79c1826/CCTS_Full_Document_Final_170321.pdf

6 Option Identification and Selection

- 6.1.1 GM undertook a longlisting exercise with Manchester City Council to identify local measures in the St John's Area which would reduce NO₂ concentrations at the A34 Quay Street and Great Bridgewater Street exceedance sites. Following this exercise, 20 local measures were identified which can be categorised within the following type of measures:
- Speed management;
 - Reducing movements except bus and local residents;
 - Reducing general traffic movements;
 - Movement configuration;
 - Road closure to traffic;
 - Freight restrictions; and
 - Signal optimisation.
- 6.1.2 From the identified longlist, GM undertook a shortlisting exercise based on a range of relevant criteria which broadly align with the JAQU's Critical Success Factors (CSFs), the use of CSFs is consistent with the main GM CAP appraisal, reported as part of the *Appraisal Report*. The local measures have undergone a two-stage sifting exercise, initially scored based on a range of strategic, financial, air quality and deliverability criteria with the second stage focusing on the ability of the measures to achieve compliance in the shortest time possible and by 2026 at the latest.
- 6.1.3 The two-stage sifting exercise resulted in six schemes being modelled to understand traffic and air quality implications to compliance at the A57 Regent Road and Great Bridgewater Street exceedance site.
- 6.1.4 Based on the performance of individual measures, only measures that restrict movements for general traffic whilst supporting movement for bus and local residents on Lower Byrom Street were modelled to achieve compliance at the A34 Quay Street, ensure that Greater Bridgewater Street also achieved compliance and did not result in other sites becoming non-compliant in 2025.
- 6.1.5 Signal tests were considered as part of the sifting process as lower cost and easier to implement options, however, these were discounted based on initial traffic outputs which concluded that these tests were unlikely to achieve the required air quality improvement at the A34 Quay Street and Great Bridgewater Street.

6.1.6 Following the individual local measure model runs for the A34 Quay Street, Option 2 (restricting movements for general traffic whilst supporting movement for bus and local residents on Lower Byrom Street) has therefore been selected as the proposed option and represents the same outcome as the modelled test (10mph) submitted as part of the December 2023 evidence submission. The following sections summarise the individual measure components which are proposed to take forward to public consultation, for the A34 Quay Street following the option sifting and selection process that has been undertaken.

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7 Traffic Management Measures – St John’s area

7.1 Introduction

- 7.1.1 Manchester City Council and TfGM have considered several possible options as outlined above and have identified measures which complement the objectives of the wider City Centre Transport Strategy (CCTS) and local plans for the regional centre¹⁷.
- 7.1.2 The identified shortlist measures consist of traffic management measures in the St John’s Area, restricting movements for general traffic whilst supporting movement for bus and local residents on Lower Byrom Street, which is one of the main routes onto the A34 Quay Street, routing north-south, close the A34 Quay Street and Great Bridgewater Street exceedance sites. To support this, it is also proposed any consultation would consider the enforcement of the yellow box junctions on the A34 Quay Street to support bringing closer alignment of modelled and observed behaviours.
- 7.1.3 Restricting movements for general traffic whilst supporting movement for bus and local residents on Lower Byrom Street is modelled to achieve a sufficient reduction in traffic flow past one of the final exceedance sites to bring it into compliance in 2025.
- 7.1.4 To complement this, enforcement of yellow box junctions along the A34 Quay Street corridor is proposed as a supporting measure and would be considered as part of consultation. Modelling assumes vehicles do not obstruct junctions (i.e., full compliance of yellow boxes), and therefore to have a higher confidence in model outcomes being achieved, yellow box enforcement measures are proposed at key intersections.
- 7.1.5 There are currently yellow boxes present at the following junctions along A34 Quay Street corridor:
- A6042 Trinity Way / A34 Irwell Street (leading to A34 Quay Street) / Loverose Way¹⁸
 - A34 Quay Street / Water Street
 - A34 Quay Street Gartside Street
 - A34 Quay Street / A56 Deansgate

¹⁷ The primary aim of the CCTS is for 90% of all trips to the Regional Centre in the morning peak to be made on foot, by cycle or on public transport before 2040. The strategy sets out proposals to further improve the Regional Centre’s public transport and active travel networks and reduce car-based trips over the longer term.

¹⁸ Implementation of yellow box enforcement at this junction subject to agreement with Salford City Council as the responsible local highway authority.

7.2 Cost Estimate of Measures

7.2.1 The high-level costing for the St John's Area 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 A57 Regent Road local measure (considered in the separate note "Local Traffic Measures – A57 Regent Road" included as part of this evidence submission documentation). TfGM are working closely with Manchester City Council to develop the scheme costs to produce a strategic cost estimate that is developed consistently with the A57 Regent Road local measure.

7.3 Delivery Timescales

7.3.1 Based on GM receiving a direction from government to proceed with the Investment-led Plan imminently, it is considered that local traffic management measures identified for the St John's Area would likely to be operational by Autumn 2025, subject to support at public consultation. This high-level estimate has been identified prior to engagement of designers and contractors which will be conducted once GM has received a government direction.

7.3.2 The identified traffic management measures will require Traffic Regulation Orders (TROs) for the measures to be legally operational and enforceable. TROs are governed by legislation set out in the Road Traffic Regulation Act 1984 and The Local Authorities' Traffic Orders (Procedure) (England and Wales) Regulations 1996. Consultation is a statutory requirement in relation to TROs and the Local Authority is required to give due consideration to objections received before making the order. Manchester City Council have procedures in place to mitigate the risk around the receipt of objections by way of undertaking early engagement and consultation with the public on proposals before the statutory consultation. A standard TRO process in Manchester City Council usually takes approximately 12 months from concept to delivery.

7.4 GM CAP Legacy or Decommissioning

7.4.1 Once the Greater Manchester Authorities demonstrated compliance with the legal limits at the A34 Quay Street and Great Bridgewater Street exceedance sites, there would not be a clean air requirement to continue to have this measure in operation and therefore decommissioning costs have been included as set out in Section 7.2.

7.4.2 However, it is recognised that the St John's area local traffic measures will also have wider benefits beyond air quality.

- 7.4.3 These measures would make a positive contribution to Greater Manchester's Vision Zero Strategy¹⁹ which aims to eliminate all traffic fatalities and life-change injuries while increasing safe, healthy and equitable mobility for all²⁰. In addition, the identified local measures align with the City Centre Transport Strategy²¹, 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.
- 7.4.4 Therefore, subject to supporting data, Manchester City Council may decide to continue the operation of the local measures after compliance has been achieved.

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¹⁹ <https://www.greatermanchester-ca.gov.uk/media/9264/vision-zero-strategy-greater-manchester.pdf>

²⁰ [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)
ll.

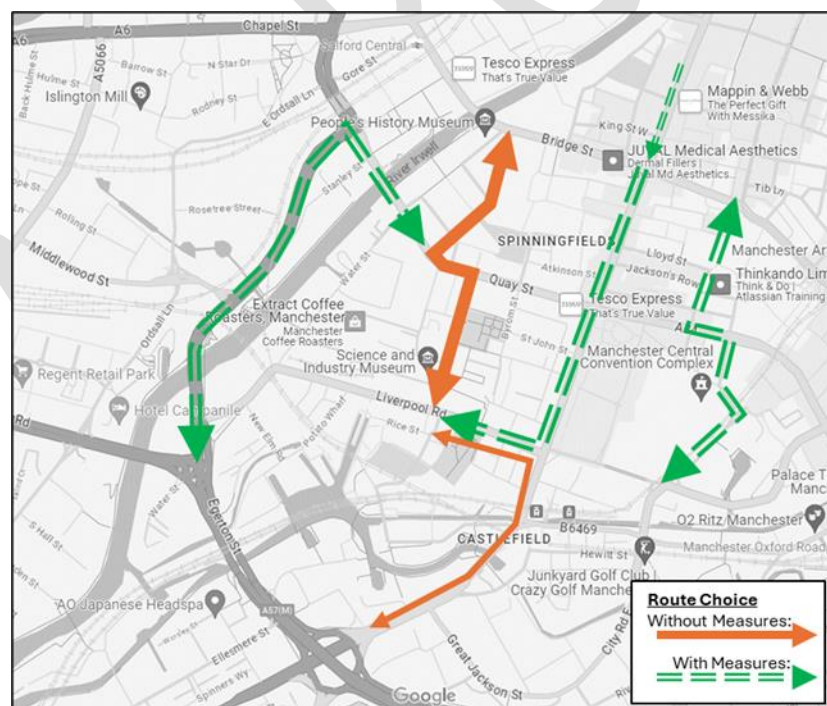
²¹ https://assets.ctfassets.net/nv7y93idf4jq/6HANAC6XKWnyvZ508tbVfq/f661cc31bad890a4f388de49e79c1826/CCTS_Full_Document_Final_170321.pdf

8 Traffic Results

8.1.1 The traffic impact of the planned measures in the St John's Area have been modelled for the 2025 forecast year for each of the AM, OP and PM periods²² 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 due to the desired driver behaviour of not blocking junctions is reflected in the strategic traffic model. This section presents the traffic results for the St John's Area local traffic measures.

8.1.2 The most significant impact is seen in the vehicle flow difference. The removal of flows on Lower Byrom Street causes reassignment for vehicles travelling through the city centre. Overall, traffic in the immediate vicinity decreases, with reassignment taking vehicles on alternative parallel routes. The local traffic measures on Lower Byrom Street removes over 400 vehicles which use the routes in both direction in each of the peaks. These 400 vehicles reassign to parallel routes such as Deansgate, Trinity Way and Portland Street, reducing the traffic which enters Liverpool Road, A34 Quay Street or Bridge Street to use Lower Byrom Street as shown in the schematic presented in **Figure 3**. Generally, the impacts are localised to A34 Quay Street and the road network within 1 mile of it.

Figure 3 St John's Area Measures - Route choice impact



²² The SATURN model represents three time periods comprising of: a weekday morning peak hour 08:00-09:00, an evening peak hour 17:00-18:00; and an average inter-peak hour for the 10:00-15:30 time period.

8.1.3 Overall, the CAP traffic modelling conducted has shown that the local traffic measures result in vehicles reassigning to parallel routes, reducing flow feeding into the A34 Quay Street and thus reducing NO₂ concentrations forecast at the A34 Quay Street and bringing this site into compliance. Impacts on the wider area are minimal, particularly in terms of speed and delays. The impact on air quality exceedance would likely be overall positive, with the reduction of traffic on Gartside Street/Quay Street. The increase in vehicles as a product of the reassignment does impact other sites of exceedance, however the impact is not as significant. This local traffic measure is also modelled to have a sufficient level of benefit to achieve compliance at Great Bridgewater Street.

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9 Air Quality Results

9.1.1 The St John's Area local measures have been tested as part of the Investment-led Plan core scenario modelling forecast for 2025. For the purposes of the wider Investment-led Plan, the air quality benefits associated with local measures in the St John's Area have not been updated following the December 2023 submission due to modelled incremental outputs of local measures delivering similar results from the updated proposal comprising of traffic management measures and yellow box enforcement. The incremental air quality benefit from the Investment-led Plan measures, including the local traffic measures as modelled in the December 2023 submission are summarised in **Table 2**.

Table 2 NO₂ concentration with each Investment-led Plan Measure – 2025 (µg/m³)

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 ₂ conc.
1322_3273	A34 Quay St	Manchester	48.2	41.2	41.0	38.0	-10.2
1324_3276_DW	Great Bridgewater St	Manchester	41.8	40.7	40.6	37.5	-4.3

10 Next Steps

- 10.1.1 TfGM and Manchester 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.
- 10.1.2 Early public engagement and consultation will be key to mitigating the risks of delivery within the 2025 timeframe.
- 10.1.3 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.

APPROVED