

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

## Appendix 9 - Compliance with the Secretary of State's Direction



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# 1 **APPENDIX 9 – COMPLIANCE WITH THE SECRETARY OF STATE'S DIRECTION**

1.1 This appendix sets out how the proposals meet the requirements of the Ministerial Direction.

## **Background to the Direction issued in March 2020**

1.2 The Direction issued by the Secretary of State in March 2020 requires the 10 GM local authorities to implement their local plan for NO<sub>2</sub> compliance which involves a Charging Clean Air Zone Class C with additional measures.

1.3 As part of the Outline Business Case (submitted to the Joint Air Quality Unit (JAQU) in March 2019) an options appraisal analysis was undertaken. This included, in addition to a GM-wide CAZ C (Option 8), consideration among other options, for example, of a GM-wide CAZ D along with consideration of a CAZ C with a CAZ D in the Inner Ring Road (IRR).

1.4 This analysis followed guidance issued by the Joint Air Quality Unit (JAQU) for local authorities implementing a Clean Air Zone. It concluded that a GM-wide CAZ D was not one of the three best-performing measures that would be taken forward for further, more detailed appraisal. The basis for this decision is set out in the Strategic Case and the Options Appraisal Report, in particular paragraphs 8.6 - 8.11. It was considered unlikely that a GM-wide CAZ D could be delivered by 2021, and therefore this approach presented a risk that no real improvements to air quality would be achieved for some time as well as leaving the compliance date highly uncertain (paragraph 8.7). The conclusion was reached, therefore, that this option would not deliver compliance in the shortest possible time and that it would perform even more poorly in terms of reducing human exposure, as there would be a long period without action on the ground, during which time considerable progress towards compliance would be expected for the other options.

1.5 Two of the three best performing options that were taken forward for further, more detailed appraisal included charging non-compliant cars in the regional centre, namely option 5(i) (CAZ D in the IRR); and option 5(ii) (CAZ D in the IRR and charging all diesel vehicles). However, options 5(i) and 5(ii) did not bring forward compliance with the legal limit for nitrogen dioxide in Greater Manchester quicker than the preferred option (option 8), but at the same time – in 2024.

1.6 Comparing the three Options 5(i), 5(ii) and 8 showed that in 2021, all 3 Options reduced the number of exceedances above the legal limit by between 70% to 80%, with Option 5(ii) delivering the greatest emissions benefit in the first year. By 2023, all sites would be near compliance with all Options, with a maximum of three non-compliant sites predicted, and the three Options were all forecast to deliver compliance in the same year, 2024. The impact on human exposure over the lifetime of the Plan (assumed to be 2021 to 2024) was similar with all Options; and all delivered emissions reductions and reductions in concentrations region-wide and avoided or mostly avoided the risk of redistributing concentrations.

- 1.7 Options 5(i) and 5(ii) include a CAZ Category D within the IRR bringing cars into scope for the scheme. This was considered because the city centre contains the highest density of sites in exceedance and many of the sites with the highest concentrations. As such it was thought that such a scheme would be necessary to deliver compliance within Greater Manchester in the shortest possible time. However, the analysis suggested that the last sites to become compliant were on or just outside the IRR and therefore that compliance with the legal limit for nitrogen dioxide within Greater Manchester was not ultimately determined by concentrations in the city centre. Consequently, although Options 5(i) and 5(ii) would bring greater benefits in terms of emissions reductions, particularly in the opening year, these were not as distinct as anticipated. Fundamentally, the analysis suggested that a city centre CAZ D did not bring forward the year of compliance despite bringing more people in scope for a charge including private car drivers going to work or to visit the retail and leisure destinations in the city centre.
- 1.8 It would have been reasonable to conclude simply from the modelling carried out that there was greater certainty in the estimated year of compliance for Options 5(i) and particularly 5(ii), as they consistently delivered lower concentrations in the modelled years. However, their delivery is subject to significant risks that make achieving compliance within Greater Manchester in the shortest possible time less likely. Options 5(i) and 5(ii) involve implementing an additional CAZ that involves private cars, alongside the region-wide CAZ proposed in all three Options. This creates challenges in terms of obtaining approvals and managing risks, and of deliverability, in terms of the achievability of delivering proposals of this scale, and of obtaining the necessary human and financial resources. Option 5(ii) carried additional risk of failure due to its innovative nature. Due to a lack of evidence on the effectiveness and impacts of such a proposal, forecasts for this option were considered particularly uncertain. Option 8 presented many delivery challenges, but was more feasible and achievable than Options 5(i) and 5(ii) and thus also offered greater confidence that compliance can be achieved in the shortest possible time.
- 1.9 It was also considered that Options 5(i) and 5(ii) might cause unacceptable and significant unintended consequences and distributional impacts, particularly in terms of the impact on affordability for residents, the impact on the local economy, and the impact on the quality of life of local residents. There were particular concerns in terms of the potential impacts on low income car dependent workers, small businesses, and city centre retail. Option 8 delivered compliance in the same year without the same potential risk of damaging economic impacts.
- 1.10 On balance, therefore, it was considered that Option 8, whilst remaining a substantial and complex undertaking, was the surest way of delivering compliance in the shortest possible time, providing considerable health benefits at the lowest cost to society and the economy, of the three Options.
- 1.11 In July 2019 the Secretary of State issued a direction under section 85 of the Environment Act 1995 requiring the 10 GM local authorities to implement the local plan for NO<sub>2</sub> compliance for the areas for which they were responsible, involving a Charging Clean Air Zone Class C with additional measures, but with an obligation

to provide further options appraisal to demonstrate the applicable class of charging clean air zone and other matters to provide assurance that the local plan would deliver compliance in the shortest possible time and by 2024 at the latest.

- 1.12 Following this Direction ClientEarth wrote contending that the option chosen did not reflect its interpretation of the duties imposed on the Secretary of State by EU law.
- 1.13 JAQU's approach was that, in selecting an option among those which may achieve compliance on the same date, reduction of human exposure in the interim was a factor to be scored and weighed appropriately when applying Critical Success Factors (CSF) when comparing the options: it did not of itself necessarily determine which of those options should be selected. JAQU's guidance adopts, at para 2.3, a single primary pass/fail CSF (i.e. compliance in the shortest possible time) and treats reduction in human exposure as part of the secondary CSF theme of "strategic and wider air quality fit", one of a number of themes which include value for money, affordability and distributional impacts. It also notes that options should be selected/rejected based on the final combined weighted score of these CSFs. JAQU's approach, as set out in the options appraisal guidance, is that the reduction of human exposure is one factor to be considered amongst a number of other relevant factors, such as cost and practicability, when choosing between two options which achieve compliance in the same amount of time. Thus, JAQU's approach is that a local authority may *not* be bound to select the option that appears at the OBC stage (as further detailed modelling may still be required) to reduce human exposure more quickly, over and above all other factors. Rather, it may be legitimate to choose an option that does *not* reduce human exposure as quickly as other options if it performed better in relation to other factors.
- 1.14 The selection of GM's preferred option followed the JAQU approach and explained in the Strategic Case why Option 8 was preferred, i.e., it performed better on a number of other secondary CSFs, including affordability and distributional impacts, than the IRR CAZ D options - see paragraph 1.7.21 onwards.
- 1.15 JAQU confirmed that the options appraisal had correctly applied the JAQU options appraisal guidance at the OBC stage, including consideration of the reduction in human exposure; and that the direction required the local plan to be *implemented* in such a way as to achieve a quicker reduction in human exposure if that could be done.
- 1.16 JAQU's officer level feedback on the Outline Business Case (OBC) requested further evidence as part of the options appraisal to provide reassurance that the preferred option would deliver compliance in the shortest possible time and to provide further evidence in support of the bid for Funds.
- 1.17 Extensive data gathering, analysis and modelling was carried out following the submission of the OBC in order to respond to JAQU's questions and to develop more detailed proposals. This work was summarised in a series of 32 evidence

notes<sup>1</sup> and further supplementary Technical Reports submitted to JAQU in draft between July 2019 and February 2020.

- 1.18 This included Technical Note 17<sup>2</sup> (December 2019) which responded to a request from JAQU to demonstrate that a GM-wide CAZ D could not bring forward compliance. This further evidence supported the decision not to progress with a GM-wide CAZ D and built upon the analysis within the GM CAP Outline Business Case (OBC) in relation to the issues surrounding the introduction of a CAZ D across the whole of GM, as an alternative to current proposals for the GM CAP. It stated that:

*“Key conclusions from the OBC assessment of Option 6, a GM-wide CAZ D scenario, were as follows:*

- It is very unlikely that Option 6 could be delivered by 2021 and it appears unlikely that it could be delivered much before 2023. All aspects of the scheme, from the technical work required to design the scheme, to the scale of the infrastructure provision and customer service offer required to deliver it, would be slow, complex and subject to considerable risk. Moreover, the ‘all or nothing’ nature of this proposal presents a risk that no real improvements to air quality would be achieved for quite some time, and the time to compliance would be highly uncertain as a result;*
- The scale of the intervention across the whole of GM is considered to be potentially undeliverable in physical terms and significantly risk delay to compliance as a result;*
- It would not be possible in the required timescales to deliver transformative public transport improvements to facilitate sufficient mode shift. This would therefore significantly risk delay to compliance in order to have sufficient provision – which itself would incur substantial additional cost;*
- A scheme on this scale would raise very significant issues in terms of the economic and social impact on the region, and widespread mitigation Measures would be required that are not likely to be feasible; and*
- In summary, Option 6 would not deliver compliance in the shortest possible time, a fundamental Critical Success Factor (CSF), and would perform even more poorly in terms of reducing human exposure as there would be a long period without action on the ground; during which time considerable progress towards compliance would be expected with Option 8.*

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<sup>1</sup> Note that 6 further technical notes were produced later in 2020, all notes are available at [Technical Documents | Clean Air Greater Manchester \(cleanairgm.com\)](#)

<sup>2</sup> [Note 17 - Evidence supporting the decision not to progress with a GM-wide CAZ D \(ctfassets.net\)](#)

*Further, it is noted that a scheme affecting private cars on this geographical scale is unprecedented:*

- *GM covers 1,280km<sup>2</sup> whereas in comparison the CAZ D scheme proposed in Birmingham covers just 8km . There are 1.1 million cars registered to households across Greater Manchester, of which around 200-250k are expected to remain non-compliant by 2021.*
- *Case study analysis of Leeds and Birmingham CAP submissions, shows that similarly to GM, they discounted expansions to their respective CAZ areas due to implementation considerations, anticipated construction and user costs and consideration that there would be limited impact on air quality compliance targets.*
- *These less comprehensive CAZ definitions in terms of geographic coverage and in the case of Leeds, lesser degree of CAZ, were accepted by JAQU on the basis that they did not bring forward compliance, despite the submissions acknowledging some improved air quality under alternative options.*

*The analysis within this Note reinforces the OBC conclusions and highlights additional aspects:*

- *In order to develop, consult upon and deliver such a scheme as a GM-wide CAZ D, considerable planning activity would be required, encompassing research and data collection; modelling and analysis; policy development and scheme design; impacts assessments amongst other activities. Our experience is that this activity would typically take up to 2 years.*
- *There are several reasons to believe that a scheme on this scale could not be delivered within the timescale required, related to the feasibility of providing a sufficient camera network; boundary considerations and the need to minimise diverting traffic and tackle any safety concerns; and the provision of customer management services at a sufficient scale and quality within the time available.*
- *Therefore, a GM-wide CAZ D would pose an unacceptable delivery risk and as a result, would threaten the ability of the CAP to deliver compliance by the preferred option date of 2024 or to deliver earlier reductions in human exposure.*
- *Whilst GM applied best endeavours to adapt the behavioural responses available, these were not considered to be fully appropriate for a robust assessment at a GM-wide CAZ D scale scheme for the following reasons:*
  - *The responses are considered inappropriate and overly optimistic for a regional scale scheme which involved charging of private cars. This is because, on a regional scale, the assumed level of public transport*

*provision implicit in the fixed percentage for 'change mode' is not consistent with the provision of public transport option available in GM. Introducing a CAZ D where there is not a public transport alternative available, means that people only have the choice of paying the charge or upgrading their vehicle. This would in reality likely deliver lower emissions benefits than forecast at the sifting stage for Option 6.*

- *The behavioural responses available to those affected by a city centre scheme (and to a lesser extent, the inner London proposal) are different to the responses available to those affected by a region-wide scheme.*
- *Furthermore, it is considered a credible risk that a scheme of the scale proposed in Option 6, in combination with the schemes expected to go live elsewhere, would affect the cost of upgrading to a compliant vehicle, with the risk that a lower rate of upgrade than forecast and consequently lower than forecast emissions reductions would be achieved.*

*Based on the available modelling – based on an implementation date of 2021 which is not in fact considered deliverable - the evidence suggests that a GM-wide CAZ D would not bring forward compliance compared to the preferred option:*

- *The modelling was considered suitable for the purpose of identifying the likely best performing options for more detailed appraisal, but not as a credible forecast of when “compliance is not just possible but likely”.*
- *The evidence available now suggests that even a GM wide CAZ D scheme would converge to the same final points of non-compliance in the city centre, meaning that (assuming delivery prior to 2024 was possible) compliance would be likely to be achieved at around the same time.*

*Some of the most deprived areas in England are located in the areas of GM where people are most likely to own a non-compliant car, and also have limited access to public transport. Around 60,000 people live in deprived communities with high levels of non-compliant car ownership and poor public transport accessibility. A GM-wide CAZ D would have dramatic ramifications across the north-west region and country as a whole, the scale of which should not be underestimated.”*

- 1.19 Following the submission of technical notes 1 to 29 and review by JAQU's Technical Independent Review Panel (T-IRP) in November 2019, JAQU accepted GM's proposed methodology and requested resubmission of the Technical Reports underpinning the plan.

- 1.20 A further technical note, submitted on February 14 2020 to JAQU in draft for consideration by JAQU and the Technical Independent Review Panel (T-IRP), Note 30<sup>3</sup>, summarised a sensitivity test involving a GM-wide CAZ Class C charging zone introduced in 2021 (with LGVs, minibuses and coaches registered in GM exempt until 2023) with supporting measures and with and without an Inner Ring Road CAZ Class D. This showed that the addition of a CAZ Class D within the IRR (assuming it was also implemented in 2021) would not affect the date for compliance (2024) and that, although it would reduce the number of non-compliant sites in the interim, it would only reduce the total GM-wide NO<sub>2</sub> emissions compared with the Do-Minimum by 1% more than the Class C option.
- 1.21 The Technical Reports<sup>4</sup> and key supporting technical notes<sup>5</sup> were reviewed by JAQU and the T-IRP in February 2020.
- 1.22 Subsequently the Secretary of State issued a further direction on March 16 2020 with which the 10 GM local authorities must now comply. It provides that the authorities must take steps to implement the local plan for NO<sub>2</sub> compliance for the areas for which they are responsible. The local plan for NO<sub>2</sub> compliance is:
- “the detailed scheme (excluding any associated mitigation measures) which the authorities identified as part of [the UK Plan for tackling roadside nitrogen dioxide concentrations 2017] to deliver compliance with the legal limit value for nitrogen dioxide in the shortest possible time that was considered by the Secretary of state on 16 March 2020, the approved measures of which are summarised in Schedule 1”.*
- 1.23 The summary of the local plan measures in Schedule 1 was “Charging Clean Air Zone Class C with additional measures” with the deadline “to be implemented as soon as possible and at least in time to bring forward compliance to 2024”.
- 1.24 The proposals as they stood in March 2020 included the following measures, as set out in the note ‘Modelling Assumptions for the ‘Option for Consultation’<sup>6</sup> submitted to JAQU in draft in January 2021:
- A category C CAZ covering the whole of Greater Manchester in 2021 with charge levels at £60 (HGV/bus/coach), £10 (LGV/minibus) and £7.50 (taxi);
  - Temporary exemptions to 2023 for LGVs, minibuses, GM-licensed wheelchair accessible Hackney Carriages and Private Hire Vehicles, and GM-registered coaches;

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<sup>3</sup> [Note 30 - GM CAP Alternative Sensitivity Test Modelling Summary Note \(ctfassets.net\)](#)

<sup>4</sup> Technical Reports T1 – T4, AQ1 – AQ3 and the Analytical Assurance Statement for the Consultation Option, as published at [Technical Documents | Clean Air Greater Manchester \(cleanairgm.com\)](#)

<sup>5</sup> Technical Notes 30, 31 and 32 were submitted in January/February 2020, available at [Technical Documents | Clean Air Greater Manchester \(cleanairgm.com\)](#)

<sup>6</sup> See [Technical Documents | Clean Air Greater Manchester \(cleanairgm.com\)](#)



- Measures to invest in electric vehicle charging infrastructure for taxis and a try-before-you-buy electric taxi scheme;
- Funds to upgrade the bus fleet; and
- Funds for Taxi, PHV, LGV and HGV operators to upgrade their vehicles, plus Loan/Finance measures.

1.25 The Direction further provided that:

*“The authorities must ensure that the local plan for No2 compliance is implemented so that –*

*“(a) compliance with the legal limit value for nitrogen dioxide is achieved in the shortest possible time, and by 2024 at the latest; and*

*(b) exposure to levels above the legal limit for nitrogen dioxide are reduced as quickly as possible.”*

#### **Compliance with the Direction**

1.26 The GM Clean Air Plan Policy (Appendix 1) proposes that a charging CAZ will be introduced on 30 May 2022<sup>7</sup>. This is now the earliest possible date for its implementation.

- a. The ten GM local authorities have begun the preparatory implementation and contract arrangements required to deliver the CAZ and other GM CAP measures in order to maintain delivery momentum in line with the funding arrangements agreed with Government. TfGM is running the procurement exercises with potential suppliers on behalf of the ten GM local authorities to final evaluation and is to provide a report to allow the authorities to make a decision to award to the successful supplier(s) following receipt of the confirmation of funding from Government.
- b. The geographic scale of the zone (almost 1,300km<sup>2</sup>) is such that over 2,300 road signs and almost 1,000 automatic number plate recognition (ANPR) cameras will need to be installed on the highway network. The cameras need to be integrated into a technology platform, that will also be connected to the payment and vehicle checking services which have been established by central government. In addition, the operational teams of both TfGM and the chosen supplier must be recruited, trained and mobilised. Whilst much of this technology is tried and tested, the programme schedule is complex. This schedule currently shows that implementation of a scheme that has fully tested all of the component parts is late May 2022 and therefore this is the earliest date that the GM CAZ could launch.

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<sup>7</sup> Subject to joint GM and JAQU agreement on overall ‘readiness’, including that the Central Charging Portal and national Vehicle Checker is ‘GM ready’.

- c. The funds which support the introduction of the charging zone will be implemented from November 2021. To effectively manage the distribution of the funds it is necessary to develop an IT platform, integrate that with a number of third parties for the purposes of validating applicant data and allowing for applicants to apply to a number of selected financiers should they wish to apply for a financial product to support their vehicle upgrade. As such November 2021 is the earliest that the funds can commence being distributed.

- 1.27 The local plan as set out in the GM Clean Air Plan Policy (Appendix 1), as so implemented, is forecast to achieve compliance with the legal limit value for nitrogen dioxide within Greater Manchester in 2024, which is the shortest possible time. This final plan provides for a CAZ Class C with additional measures as required by the direction. Its detail differs in a number of respects from some of the detailed individual proposals in the local plan considered by the Secretary of State in March 2020 as a result of consultation, a possibility that the Secretary of State would no doubt have contemplated when issuing the direction. These detailed changes are not considered to affect the outcomes which the Direction sought. For the avoidance of doubt, it is proposed to seek the Secretary of State's confirmation that the policy does not require the direction to be varied if it is to be implemented and to request a variation if he considers that it is required.
- 1.28 GM have followed Government guidance in terms of considering modelling uncertainties and has worked closely with JAQU's technical team and Technical Independent Review Panel (T-IRP) throughout the process to ensure the forecasting methodology is as robust as possible<sup>8</sup>. A discussion of uncertainty in the modelling of the Option for Consultation is set out in the Analytical Assurance Statement<sup>9</sup>.
- 1.29 By and large, the analysis relies on well established data sources and on values provided by JAQU, TAG and the Green Book, including DEFRA's EFT v9.1a. GM's Plan does not rely on measures that are uncertain or aspirational. Compliance is achieved as a result of behaviour change (in terms of vehicle owners upgrading to cleaner vehicles) resulting from a Clean Air Zone, coupled with the provision of funding to support upgrade. The Plan relies only on measures that have a direct impact on the type of vehicles on the road (in terms of their emissions standard) and that are planned and funded and under the control of GM's authorities.
- 1.30 GM have considered the impacts of Covid-19 on the GM CAP, as set out in the 'Impacts of Covid-19 on the GM CAP Report'<sup>10</sup> and have specifically considered the impact on uncertainty, in line with Government guidance. At the time of writing, the UK is still operating under pandemic-related restrictions on activity and travel. It is

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<sup>8</sup> T-IRP reviews have been sought as follows: (i) Initial Evidence Submission in May 2018; (ii) Outline Business Case in April 2019; (iii) Review of technical notes in November 2019; (iv) Review of updated Technical Reports (Consultation Option) and technical notes 30-32 in January 2020; (v) Review of further technical notes (34-37) in August 2020; (vi) GM's proposed approach to representing Covid-19 impacts in the core scenario in April 2021; and (vii) GM's Air Quality Modelling Report (post-Consultation) in June 2021.

<sup>9</sup> [GM CAP Option for Consultation - Analytical Assurance Statement \(ctfassets.net\)](https://www.ctfassets.net)

<sup>10</sup> This can be found in Appendix 5 of the June 2021 GMCA report

therefore too early to say with certainty what the impacts of Covid-19 will be post-pandemic on behaviour, travel patterns, businesses and the economy. The Government's guidance on reflecting the impacts of Covid-19 within the modelling is set out in Appendix A of the Air Quality Modelling Report<sup>11</sup> and GM's proposed approach to representing the impact of Covid-19 in core modelling scenarios is set out in Appendix D of that same report. This includes a discussion of uncertainty, as section 7 of Appendix D; concluding that there is greater uncertainty as a result of the pandemic, with some aspects potentially worsening air quality and others potentially providing air quality improvements. Overall, Appendix D of the Air Quality Modelling Report concludes that it is very unlikely that any improvements to air quality would be of a sufficient scale to mean that action was no longer required.

- 1.31 In order to achieve compliance in the shortest possible time, GM needs to progress the modelling underpinning the GM CAP based on a set of reasonable assumptions about the medium-to-long term impacts of the pandemic. GM has made its best estimates of what is likely to happen based on the available evidence. These conclude that compliance is forecast to be achieved in Greater Manchester in 2024 with the local plan<sup>12</sup>. This is the same date as produced by the Consultation Option, and meets the requirements of the Ministerial Direction for such compliance to be achieved by 2024 at the latest. Compliance is achieved three years earlier than predicted without the GM CAP in place.
- 1.32 Nonetheless, uncertainty remains and as a result, sensitivity testing is planned and underway to consider the possible impacts of delayed development plans, increased homeworking, changes to GDP, impacts on public transport, and changes to vehicle purchasing costs and the affordability, feasibility or appeal of upgrade as a result of the pandemic. Sensitivity testing will also be conducted to assess the possible impact of other factors affecting certainty, unrelated to the pandemic.

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<sup>11</sup> This can be found in Appendix 6 of the June 2021 GMCA report

<sup>12</sup> Achieving compliance in Greater Manchester is not possible sooner with the other options that have been suggested. GM's forecasting has consistently shown that a GM-wide CAZ C achieves compliance in 2024 across GM. No other scheme has been identified that can achieve compliance more quickly, including the implementation of a CAZ D within the inner ring road (IRR). This has been the conclusion of modelling carried out at OBC (See AQ3 Local Plan Air Quality Modelling Report produced at OBC [https://assets.ctfassets.net/tlpqbvy1k6h2/6cCMBaILO7s6AjpWez5FHw/cb027ecf0d9ddc51332bda106f1ab8b7/AQ3\\_Local\\_Plan\\_Air\\_Quality\\_Modelling\\_Report.pdf](https://assets.ctfassets.net/tlpqbvy1k6h2/6cCMBaILO7s6AjpWez5FHw/cb027ecf0d9ddc51332bda106f1ab8b7/AQ3_Local_Plan_Air_Quality_Modelling_Report.pdf)) and prior to consultation (See AQ3 Local Plan Air Quality Modelling Report produced for the Option for Consultation [GM CAP Option for Consultation - Local Plan Air Quality Modelling Tracking Table \(AQ3\) \(ctfassets.net\)](#) and [Note 30 - GM CAP Alternative Sensitivity Test Modelling Summary Note \(ctfassets.net\)](#)), and the modelling of the post-consultation policy (as set out in the post-consultation Air Quality Modelling Report) confirms that compliance is forecast to be achieved in 2024. Although sensitivity testing has not been carried out considering a CAZ D in addition to the post-consultation policy, it can reasonably be concluded that a CAZ D in the IRR would not bring forward the date of compliance with the legal limits from 2024. This is because the results of the modelling for the Preferred Package show that there are five points of exceedance remaining in 2023 before compliance occurs in 2024. The spatial pattern of exceedance remains consistent, but the maximum concentrations are now at locations outside the IRR on the A58 Bolton Road, Bury. Modelling of the impacts of a CAZ D in the IRR have previously shown negligible impact on NO<sub>2</sub> concentrations at the A58 because it is not strategically linked with access to the regional centre. Therefore, implementing a CAZ D in the IRR would not be expected to bring forward compliance at the A58 or therefore across GM as a whole.

- 1.33 If the sensitivity testing identifies any potential issues with the plan as it stands, this will indicate that adaptive planning is required and GM will need to work with JAQU to agree mechanisms to facilitate this. Adaptations could include reviewing the charge levels; funding offers; or eligibility criteria for funding, with the aim of further encouraging upgrade if it appears that more people are choosing to stay and pay than forecast. GM could also review permanent discounts and exemptions if it becomes apparent that non-compliant vehicles will constitute a greater proportion of the on-the-road fleet than expected.
- 1.34 The local plan as set out in the GM Clean Air Plan Policy has a defined timetable for implementation and it will be implemented so that exposure to levels above the legal limit for nitrogen dioxide are reduced as quickly as possible. For example, Bus Retrofit commenced to ensure the most polluting vehicles should be retrofitted first and the policy proposes that the oldest vans are targeted first with funds, with other funds targeting the smallest commercial-vehicle owning businesses first, which are the least likely to be able to upgrade and typically operate the oldest vehicles.
- 1.35 Once the plan is in place, monitoring will also be required to ensure that the policy and proposals contained in the GM CAP remain appropriate throughout the lifetime of the interventions. GM will ensure that the CAP Monitoring and Evaluation Plan sets out to address issues where uncertainty remains as to post-pandemic conditions (or for other reasons), as identified in the sensitivity testing, and for example in terms of vehicle fleets, travel patterns and the provision of bus services. If the monitoring reveals issues with the performance of the measures that form the plan, again, an adaptive planning approach will be required, such that GM and JAQU can agree any changes to the plan that would make it more effective.
- 1.36 There are a number of other requirements in the Direction requiring steps to be taken by certain times that have not proved to be achievable given the effects of COVID-19 among other matters. The main outstanding requirements to be complied with is the submission of an interim full business case to be followed by a full business case.