

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

Note 2: Next steps for data collection and the development of analytical tools



Salford City Council



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1 Introduction

1.1 In their letter to TfGM of 23rd May 2019, JAQU requested details on a number of analytical areas where TfGM have been progressing work in order to develop the Full Business Case (FBC) in support of their Clean Air Plan (CAP). Details of ongoing work in those areas is provided in summary form as part of the formal response from TfGM to that letter.

1.2 This note provides further detail on additional data collection and the development of tools planned beyond the work already carried out.

2 Additional Research / Evidence

2.1 Overview

2.1.1 A number of areas have been identified where either the working groups, or individual projects within the overall CAP, require additional evidential support or analysis to ensure the successful implementation of the CAP, beyond the work already undertaken and described in the various papers to be provided to JAQU on the 12th July 2019.

2.1.2 These include:

- Behavioural research for LGVs;
- Desktop reviews of other emerging evidence;
- Development of operating cost models for Taxis; and
- Additional data collection on the freight market.

2.2 LGV Behavioural Research

2.2.1 A review of the freight market in GM has already been undertaken and is reported separately in the draft presentation “Analysis of the Freight Market”, prepared in May 2019. This helped to support the development of operating cost models for LGVs and HGVs, which reflect the practical operating costs of a number of vehicle types and the impact that CAZ related charges may have.

2.2.2 However it is recognised that the LGV (van) market is particularly complex and comprises a large number of what are termed ‘sole traders’. These are small businesses, typically with a single van used for business that may also serve as the primary, or secondary, transport for domestic use.

2.2.3 This sector of the market can be challenging to reach in terms of standard consultation activities and is likely to have limited awareness of the proposals relative to larger businesses within GM. The options available to them in terms of making changes to their business vehicle are also likely to be more complicated due to:

- Lack of resilience (only one or maybe two vehicles available);

- Proportionately larger direct financial impact of vehicle change;
 - Scope for changing to a vehicle type not affected by the CAZ (downsizing from van to estate car); and
 - Mixed use of vehicle (business and domestic).
- 2.2.4 TfGM have therefore commissioned specific market research to target these small business van users to help better understand their likely response to the CAZ and inform a number of areas in the FBC relating to the wider CAP including:
- Demand response (emission levels and economic case);
 - Distributional Impact Analysis; and
 - Potential need for financial support (economic and financial case).
- 2.2.5 The outputs from the work will be available later in the summer and will be reported to JAQU as well as ultimately feeding into the FBC.
- 2.3 Behavioural Research for other groups
- 2.3.1 GM is also considering whether similar behavioural research will be required for other groups, particularly taxi drivers and operators.
- 2.4 Development of Operating Cost Models for other groups
- 2.4.1 We are already developing and using operating cost models for LGVs and HGVs and it has become clear that there could be value in adopting a similar approach for the taxi sector, particularly private hire vehicles (PHV).
- 2.4.2 This is to ensure that:
1. Behavioural responses in the transport and subsequent AQ modelling are appropriately assessed; and
 2. The potential need for financial assistance to this sector can be robustly estimated.
- 2.4.3 There are some very valuable datasets available that can feed this tool, notably a comprehensive record of GM registered PHVs that includes vehicle type and age information. But there are also challenges in this field, notably the number of PHVs registered elsewhere in the country which operate, and are actually based, in GM.
- 2.4.4 The operating cost model will reflect the most common vehicle makes, and the associated age profile thereof, used as PHVs in GM based upon the registered database. It will then adopt a similar decision tree structure to the LGV and HGV operating cost models to identify the most realistic response to a CAZ charge assuming that individuals seek to minimise their overall cost.

- 2.4.5 The starting point will be an analysis of the costs for these common vehicle profiles in 'no CAZ charge' environment taking account of:
- Purchase price;
 - Operating Costs based on typical Mileage; and
 - Fare Revenue.
- 2.4.6 The decision tree will then help to determine whether or not the CAZ charge, as currently defined, would impact the balance of costs and revenues enough for the operator to change their behaviour / vehicle.
- 2.4.7 The responses in the model are likely to include:
- Pay charge (i.e. zero impact on AQ though effect on economy of operation either directly or passed through to customer);
 - Cease GM operation (it may be practical for some operators to continue running a PHV but operate in a neighbouring area); and
 - Upgrade to compliant vehicle by purchase or lease of either new or second hand vehicle (differentiating by fuel type including EV option).
- 2.4.8 We are actively seeking to obtain robust data to quantify the scale of this issue and to ensure this feeds into downstream activities.
- 2.4.9 Similarly, GM is also considering whether it would be possible to develop a similar cost model for coaches and/or minibuses.
- 2.5 Additional Data Collection on the GM Freight Market
- 2.5.1 The work to date, including the "Analysis of the Freight Market", has utilised a variety of desktop based evidential reviews including third party reports and national and regional statistics.
- 2.5.2 One of the areas that has only limited available data currently is the commodity types carried by the GM freight fleet (including those not based within GM) and the relative proportion of various company types, in particular the scale of sole trader operations.
- 2.5.3 A potential partial solution to this evidence gap is to undertake Specialised Goods Vehicle Counts (SGVCs) at key locations within GM. SGVCs are a technique developed by AECOM's Freight Team and are conducted at specifically chosen locations with the purpose of assessing commercial vehicle age, size, type, industry category, commodity and direction of travel. This is a unique approach to understanding freight movements and enables a range of relevant and accurate information to be collected in direct relation to a project brief. A typical SGVC covers 12 hours from 7am to 7pm on a typical weekday. The technique can be extended to not only collect HGV data but van data if required but this requires more resource.

2.5.4 The survey shows registration number of the vehicle, haulier name (if available), vehicle type, body type, industry type and direction. What is more, once the analysis of the data is performed we are able to establish the proportion of traffic by sector, proportion of body type and proportion of Euro engines by type. It allows us to know many of the names of hauliers that have the oldest vehicles and what sectors they are working in. Typically a list of the top 10 hauliers using a route is produced and this allows direct consultation with those companies if required.

2.5.5 A key issue with doing SGVCs is they cannot tell us the exact origin or destination of vehicles accounted for in the survey. But it is a useful “snapshot” of traffic on specific roads in question and can be tailored to the roads with the worst air quality. Due to the time it takes to perform one survey and the sheer quantity of vehicles on the road, it is difficult to collect enough data to have an accurate representation of the total population. Nevertheless, it can have a role to play on understanding core corridors. Freight tends to operate in very regular patterns.

2.6 Evidence arising from the conversation

2.6.1 Analysis is currently underway of the responses to the public conversation conducted in Spring 2019. This will provide useful insight on possible behavioural responses to the various measures proposed, and on the possible impacts of the scheme that may need to be taken into account as part of the Data, Evidence and Modelling workstream.

2.7 Emerging Evidence from other bodies

2.7.1 There are a range of studies emerging that are either local authority led or being promoted by interested stakeholder groups. TfGM are reviewing these to identify any relevant information which may support the projects / workstreams.

2.7.2 A recent local example is a survey by the Federation of Small Businesses (FSB), which was undertaken in May and June of this year, for which results are now emerging.

2.7.3 TfGM are in discussion with FSB to see if we can be provided with details of the survey in order to supplement our own data sources.