1. PURPOSE OF REPORT

1.1 The report details the timetable and the next steps required to progress the Outline Business Case of the Greater Manchester Clean Air Plan.

2. RECOMMENDATIONS

2.1 That the committee:

a) Note and discuss the progress in producing the Outline Business Case for the GM Clean Air Plan;

b) Consider the next steps and approval process to submit the Outline Business Case for the GM Clean Air Plan to Government no later than 31 December 2018;

c) Note the update regarding the outcomes of Target Determination and consider and discuss how to ensure clear and consistent understanding of the outcomes of Target Determination, modelling, and the developing GM Clean Air Plan;

d) Note the Early Measures funding awarded to GM to increase the charging infrastructure for Electric Vehicles and incentivise their uptake, as part of the Greater Manchester Clean Air Plan.

3. CONTACT OFFICERS

3.1 Simon Warburton, Transport Strategy Director, TfGM, 0161 244 1427

4. BACKGROUND

4.1 The UK Plan for tackling roadside nitrogen dioxide concentrations (hereafter referred to as the ‘National Plan’) (DEFRA, July 2017) identified 29 local authorities, including seven in Greater Manchester (GM), with areas likely to exceed the statutory NO2 annual mean EU Limit Value of 40 µg/m3 (the EU Limit Value) beyond 2020. In March 2018, 33 more local authorities were defined as having “shorter-term NO2 problems” - including Oldham in GM.
4.2 The Government’s National Plan compels these local authorities to follow a specified process to develop plans for implementing measures to deliver compliance with the EU Limit Value in the ‘shortest possible time’. This process and timetable is summarised in Table 1, including the status in Greater Manchester (GM). Each output of the feasibility study (e.g. the SOC, OBC and FBC) is assessed by Government via the Joint Air Quality Unit (JAQU).

4.3 **Table 1. Process and timetable for producing GM Clean Air Plans**

<table>
<thead>
<tr>
<th>Deadline</th>
<th>Activity</th>
<th>GM status</th>
</tr>
</thead>
<tbody>
<tr>
<td>March-April 2018</td>
<td>Submit Strategic Outline Case (SOC) to Government</td>
<td>Submitted</td>
</tr>
<tr>
<td>June 2018</td>
<td>Submit initial evidence of GM NO\textsubscript{2} concentrations and determine target areas for action</td>
<td>Submitted: awaiting JAQU confirmation</td>
</tr>
<tr>
<td>July 2018</td>
<td>Submit Oldham feasibility study to Government</td>
<td>Submitted</td>
</tr>
<tr>
<td>31 December 2018</td>
<td>Submit Outline Business Case (OBC), including preferred option.</td>
<td>Feasibility study underway</td>
</tr>
<tr>
<td>31 December 2018</td>
<td>Submit Full Business Case (FBC) unless public consultation required*</td>
<td>Feasibility study underway</td>
</tr>
<tr>
<td>2019</td>
<td>Public consultation (as required) Bid for Clean Air Fund implementation monies</td>
<td>n/a yet</td>
</tr>
<tr>
<td>By 2021</td>
<td>Measures to be implemented</td>
<td>n/a yet</td>
</tr>
</tbody>
</table>

*If public consultation needed, FBC to be submitted as soon as possible after OBC.

4.4 The FBC will act as the GM Clean Air Plan. It will include measures to achieve compliance, and mitigation measures to support communities affected by the compliance measures. The plan must be implemented by 2021 or the shortest possible time to deliver compliance with the EU Limit Value.

4.5 UK Government guidance identifies charging Clean Air Zones (CAZ) as the measure it is able to model nationally which will achieve statutory NO\textsubscript{2} limit values in towns and cities in the shortest possible time. Local authorities must subsequently consider charging Clean Air Zones as their benchmark measure for implementation unless they identify alternatives that are at least as effective at reducing NO\textsubscript{2} and deliver compliance as quickly.

4.6 Government specifies four classes of charging Clean Air Zone:
- Class A: Buses, coaches, taxis and private hire vehicles.
- Class B: Buses, coaches, heavy goods vehicles (HGVs) taxis and private hire vehicles.
• Class C: Buses, coaches, HGVs, large vans, minibuses, small vans/light commercials, taxis and private hire vehicles.
• Class D: Buses, coaches, HGVs, large vans, minibuses, small vans/light commercials, taxis and private hire, cars, motorcycles/mopeds.

5. GREATER MANCHESTER'S APPROACH TO DEVELOPING A CLEAN AIR PLAN

5.1 As agreed at the 1 September 2017 WLT meeting, TfGM has been coordinating the GM feasibility study on behalf of the GMCA and the ten GM local authorities, working closely with Districts, who remain legally responsible for compliance.

5.2 The purpose of taking a GM-wide approach was to avoid introducing measures in one part of the conurbation that simply displace NO2 concentrations to other locations, and to ensure that (as far as possible) the eventual GM Clean Air Plan complements other GM-wide strategies including the existing GM Air Quality Action Plan and GM Low Emission Strategy.

5.3 A GM Clean Air Plan Senior Leadership Steering Group (Steering Group) is responsible for guiding the feasibility study, briefing senior officers and elected members in their respective organisations and securing local approvals. Members include Directors or Assistant Directors from each GM local authority and senior representatives from Highways England, Public Health England, AGMA, Local Partnerships and TfGM.

6. PROCESS TO OUTLINE BUSINESS CASE

6.1 Government requires local authorities to collect ‘Initial Evidence’ (IE) of the NO2 exceedances in each local authority area to determine target areas for action. The IE identifies road links which are forecast to exceed the EU Limit Value beyond 2020, including destination links, radial links and those with a close relationship with the Strategic Road Network (motorway network managed by Highways England).

6.2 The subsequent review process - called ‘Target Determination’ - involves confirming the specific reductions in NO2 concentrations required for each area of forecast exceedance with Government. GM submitted our evidence at the end of May and are awaiting the outcome of this process, which JAQU recently indicated would available in August 2018.

6.3 Once Target Determination is complete, information on the reductions in NO2 concentrations required in each local authority area, and the likely changes needed to achieve these will be available.

6.4 The GM Strategic Outline Case included a shortlist of potential measures for reducing NO2 concentrations to legal limits within the shortest possible time (see Appendix 1). The shortlist was refined with the Districts using JAQU guidance, and the two primary success criteria:

1. Reduction of local air pollutant NO2 (and other substances including PM10, PM2.5) concentrations to below the EU Limit Values.
2. Ability to be delivered at least as quickly as a charge-based clean air zone could.

6.5 This allowed less effective measures to be removed from consideration or considered as mitigation measures only.

6.6 Once we have the outcome of ‘Target Determination’ the Steering Group can model the options to achieve legal compliance in the shortest possible time (from the shortlist of potential measures in Appendix 1). We currently anticipate that this will be completed by the end of August/early September 2018. Please note that is not the complete OBC.

6.7 It will be at this time that we will be able to predict the reduction in trip numbers that will be required to achieve the necessary improvements in air quality. This will enable us to address the Committee’s request for more detail on NO\textsubscript{2} reductions necessary and associated trip reductions (dated 19 March 2018).

6.8 As Government has identified charge-based Clean Air Zones as the benchmark measure, the modelling process used to identify a preferred option to achieve compliance in the shortest possible time in GM is required to focus on this measure first. The Steering Group members will brief senior officers and elected members within their organisations on the options for achieving compliance.

6.9 The Steering Group is currently also developing a programme of public awareness raising concerning air quality issues affecting GM, working with colleagues in Public Health and across the ten Districts. This will commence during early autumn 2018 to build greater public awareness and understanding of the GM air quality issue and associated impacts. Under the identity of ‘Clean Air GM’, this would build on past public engagement activity – e.g. Clean Air Day – and aim to educate key audiences about air pollution, the health impacts, and what they can do to make a difference.

7. APPROVING THE OUTLINE BUSINESS CASE

7.1 Government have imposed extremely tight deadlines on local authorities with identified exceedances to develop and implement measures to achieve legal compliance in the shortest possible time. Notably the legal requirement to submit an Outline Business Case (OBC) for a preferred option, using HM Treasury Green Book processes no later than 31 December 2018.

7.2 The complete OBC must be approved by all ten GM local Authorities by early December 2018 to meet the government’s deadlines. It is currently assumed that the OBC should also proceed through the relevant GM-level governance processes during this timeframe.

7.3 To meet the timescales set by Government it will be essential to ensure clear and consistent understanding of the outcomes of Target Determination, the modelling of the options for achieving legal compliance, and the developing GM Clean Air Plan in the coming months.
7.4 As agreed by WLT, TfGM will provide briefing materials, slide sets and other collateral and support the Steering Group members to lead on ensuring appropriate briefing of their respective leaders, elected members and officers as required.

8. EARLY MEASURES FUNDING: EXPANDING GREATER MANCHESTER’S ELECTRIC VEHICLE NETWORK

8.1 GM successfully applied for Government Early Measures Funding to implement work to address NO2 concentrations in the conurbation in the run up to finalising and implementing the GM Clean Air Plan.

8.2 The proposal was developed with and agreed by all ten GM Local Authorities and focussed on expanding the Greater Manchester Electric Vehicle (GMEV) Network and a Communications and Engagement Programme.

8.3 There are currently 2,234 registered plug-in vehicles in GM, whilst nationally ULEVs form 2.9% of all new car sales. The projected increase in sales of Ultra-Low emission Vehicles (ULEVs) and current market dynamics and incentives indicate the need for a considerable uplift in rapid charging provision in GM to support growing demand.

8.4 The UK Climate Change Commission has set a target for 60% of all car sales to be ULEV by 2030, and 100% by 2040, at which point Government anticipates no petrol/diesel vehicles will be sold. This equates to a target of 9% ULEV sales by 2020 and 32% by 2025. In GM this would mean additional unit sales of 6,300 vehicles in 2020 and 25,600 by 2025 (not including vehicles travelling to GM).

8.5 The Early Measures funding will facilitate expansion of the GMEV Network, including rapid charging infrastructure, by delivering up to 48 new public rapid charging points (24 dual headed posts).

8.6 Deployment will be targeted using a selection process developed by TfGM and the Districts, and agreed by the Steering Group. Selection is expected to consider the following factors:
   • Known areas of poor air quality.
   • Locations with a prevalence of journey origin-destinations where ULEV vehicles can reduce emissions.
   • Locations with advanced plans for EV installation.

8.7 GM will also appoint Electric Vehicle (EV) Network suppliers and operators to confirm viable sites for rapid charger installation.

8.8 TfGM will also work with the Local Authorities to develop and deliver a comprehensive engagement programme for encouraging the uptake of ULEVs that also supports the GM Clean Air Plan.

8.9 This will target businesses and their staff, residents and visitors to:
• Raise awareness and use of the GMEV Network and new charging infrastructure.
• Increase sales of ULEVs.
• Increase confidence and knowledge in the GMEV Network.
• Increase confidence in ULEVs by addressing barriers like range, performance, choice, cost and charging.

8.10 Targeted promotion and bespoke support will be delivered to over 600 businesses in the Business Travel Network, and via business intermediaries. TfGM will also liaise with the Energy Saving Trust to identify potential synergies with their fleet review work. Communications and engagement will be prioritised to match areas with EV charging infrastructure and vehicle usage, and journeys with poor air quality.

8.11 The Early Measures programme will be completed by September 2019, although communications and engagement activity could be extended beyond this date subject to funding.

The following is a list of the background papers on which this report is based in accordance with the requirements of Section 100D(1) of the Local Government Act 1972. It does not include documents, which would disclose exempt or confidential information as identified by that Act.

The above papers and documents may be inspected during normal office hours at GMCA, Churchgate House, 56 Oxford Street, Manchester M1 6EU.
Appendix 1: Shortlisted of potential measures for tackling NO\textsubscript{2} in GM

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| Clean Air Zone: Class B, C or D. Different geographical areas/time restrictions being modelled | Class B: Buses, coaches, HGV, taxis and PHV  
Class C: Class B + large vans, minibuses, small vans and light commercials  
Class D: Class C + cars, motorcycles/mopeds |
| Differential parking charges                                             | For example: different charges for times of day, vehicle type, car sharers and could include workplace parking levy |
| Retrofit or upgrade public transport fleet                               | Retrofit or upgrade to higher Euro standard |
| Increase public transport capacity                                        | Looking at specific routes where most impact will be made |
| Switch bus/HGV/LGV fuelling stations or GM fleet to GtL fuel             | Using GAS-To-Liquid fuel as an alternative to diesel |
| Electric vehicle incentivisation                                        | Increase Electric Vehicle uptake through infrastructure or financial incentives |
| Retrofit or upgrade LA fleet                                             | Move to EV or higher Euro standard by changing procurement policy |
| Congestion Deal – increase capacity                                      | Review existing junction improvement plans to understand potential benefit for specific junctions and look at making changes sooner |
| Congestion Deal – encouraging alternatives                              | Encouraging alternative travel choices through road space reallocation |
| Congestion Deal – network management                                     | Changes to traffic signal timing to optimise flows, to reduce congestion |
| Private hire and taxi alternative fuels                                 | Incentivise PHVs to change to EV/ULEV vehicles and/or free top up at taxi charge points, increasing EV infrastructure  
Retrofitting and increasing LPG refuelling infrastructure for taxis |
| Communications campaigns                                                | Increased awareness of health and cost benefits for public for different modes of transport or around a particular community/schools |
| Travel choices/Active Travel programme - engagement                     | Working with employers and individuals to encourage sustainable travel choices and build awareness of the options available |
| Active travel programme - infrastructure                                | Increase the options available to cycle and walk through an enhanced infrastructure programme |
Greater Manchester Clean Air Plan
Housing, Planning and Environment Scrutiny Committee

16th August 2018
The impact of air pollution

- “[Poor] air quality is the largest environmental risk to public health in the UK. It is known to have more severe effects on vulnerable groups, for example the elderly, children and people already suffering from pre-existing health conditions such as respiratory and cardiovascular conditions”\(^1\).

- The Royal College of Physicians estimates air pollution accounts for around 40,000 deaths annually\(^2\), whilst the UK Committee on the Medical Effects of Air Pollutants estimates the affects of NO\(_2\) on mortality are equivalent to 23,500 deaths annually in the UK\(^3\).

- Long term exposure to air pollution probably contributes small but significant amounts to the deaths of a large number of people. Short term exposure also has health impacts, particularly for vulnerable groups.

- The health impacts of air pollution reduce the ability of people to work and increase demand on public services, with an estimated annual social cost of £22.6 billion\(^4,5\). In 2012 poor UK air quality had an estimated total productivity cost of up to £2.7 billion\(^6\).

- Air pollution also impacts the environment and threatens biodiversity, crop yields and ecosystems.
In 2012 poor air quality had an estimated total national productivity cost of £2.7 BILLION.
AIR POLLUTION can be split into **TWO** categories

**GASES**
Including *nitrogen dioxide*, benzene, carbon monoxide, carbon dioxide and ozone

**PM**
Particles of dust (particulates) and liquid droplet suspended in the air
ROAD TRANSPORT is responsible for 80% of NO2 concentrations at roadside, of which diesel vehicles are the largest source.
Who is responsible for Air Quality?

- EU 2008 Directive on Ambient Air Quality sets legal limit values for a range of air pollutants, including NO$_2$.
- UK Air Quality Standards Regulations 2010.
- Environment Act 1995, s85.3(a).
- Statutory Local Air Quality Management.
UK Air Quality Plans

- **December 2015:** National Air Quality Plan proposed Clean Air Zones in Birmingham, Derby, Leeds, Nottingham, and Southampton by end of 2019.

- **July 2017:** ‘UK Plan for tackling Roadside NO\(_2\) concentrations’ instructs 23 more local authorities to undertake feasibility studies for introducing measures to reduce NO\(_2\) to legal levels in the “shortest possible time”.
  - This included Bolton, Bury, Manchester, Salford, Stockport, Tameside, Trafford.

- **March 2018:** supplement to National Plan instructs 33 local authorities with shorter-term NO\(_2\) problems to establish measures to reduce NO\(_2\) concentrations in the “shortest possible time”.
  - This included Oldham.
A Greater Manchester Clean Air Plan

- The GMCA, local authorities and TfGM are producing a coordinated GM feasibility study and Clean Air Plan to avoid displacing NO$_2$ to other locations, and work within existing GM strategies.
- A GM Clean Air Plan Steering Group has been created with representatives from all 10 GM local authorities, Highways England, Public Health England and JAQU.
- GM has secured £1.3m ‘Early Measures’ funding to increase the electric vehicle charging infrastructure and encourage greater use of Ultra Low Emission Vehicles (ULEVs) in GM in the run up to implementing the Clean Air Plan.
The National Plan identifies charging Clean Air Zones (CAZ) as the benchmark measure for achieving statutory NO$_2$ limit values in the shortest possible time.

Local authorities must consider introducing charging CAZ unless they can identify alternatives that are at least as effective at reducing NO$_2$, and deliver compliance as quickly as a charging Clean Air Zone.

### FOUR CLASSES OF CLEAN AIR ZONE:

<table>
<thead>
<tr>
<th>CLASS A</th>
<th><img src="image" alt="Bus" /> <img src="image" alt="Car" /> <img src="image" alt="Van" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS B</td>
<td><img src="image" alt="Bus" /> <img src="image" alt="Car" /> <img src="image" alt="Van" /> <img src="image" alt="Truck" /></td>
</tr>
<tr>
<td>CLASS C</td>
<td><img src="image" alt="Bus" /> <img src="image" alt="Car" /> <img src="image" alt="Van" /> <img src="image" alt="Truck" /></td>
</tr>
<tr>
<td>CLASS D</td>
<td><img src="image" alt="Bus" /> <img src="image" alt="Car" /> <img src="image" alt="Van" /> <img src="image" alt="Truck" /> <img src="image" alt="Van" /> <img src="image" alt="Car" /></td>
</tr>
</tbody>
</table>

- Buses, coaches and HGVs that meet Euro VI emissions standards must be exempt from any charges or restrictions.
- Cars, vans and taxis that meet Euro 6 (diesel) or Euro 4 (petrol) emissions standards must be exempt from any charges or restrictions.
- Ultra-low emission vehicles with a significant zero-emission range must be exempt from any charges or restrictions.
UNDERTAKE A DETAILED FEASIBILITY STUDY
to assess the options for reducing NO₂
to legal limits in the shortest possible
time (benchmarked against a
Charging Clean Air Zone)
PRIMARY SUCCESS FACTOR:

Meet the statutory limit values for NO₂ concentrations within the “shortest possible time” (or at least as quickly as a charge-based Clean Air Zone could)
PRODUCE AND SUBMIT A BUSINESS CASE
for the preferred option for their locality by 31 December 2018
UNDEARTAKE PUBLIC CONSULTATION on the preferred option if required
APPLY FOR CLEAN AIR FUNDING
NO$_2$ IMPLEMENT MEASURES to reduce NO$_2$ to below legal limits by 2021 at the latest
**The National Plan: how the timescales affect GM**

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2017</td>
<td>Government directive to 7 GM Local Authorities to conduct a feasibility study and Business Case to reduce NO$_2$ in the shortest possible time or 2021 at the latest.</td>
</tr>
<tr>
<td>March 2018</td>
<td>Strategic Outline Case element of the business case produced, approved by GM authorities, and submitted to JAQU.</td>
</tr>
<tr>
<td>May 2018</td>
<td>Government directive to 1 additional GM Authority (Oldham) to review steps to reduce NO$_2$ in the shortest possible time.</td>
</tr>
<tr>
<td>June 2018</td>
<td>Submitted ‘Initial Evidence’ of NO$_2$ concentrations to determine ‘Target Areas’.</td>
</tr>
<tr>
<td>July 2018</td>
<td>Submitted Oldham feasibility study to Government</td>
</tr>
</tbody>
</table>
| By 31 December 2018 | Submit Outline Business Case  
                        | Submit Full Business case unless public consultation required*                                                                                     |
| 2019          | Public consultation (as required)  
                        | Bid for Clean Air Fund implementation support                                                                                                       |
| By 2021       | Measures to be implemented                                                                                                                                                                                  |

*If public consultation needed, as soon as possible after OBC*
Options being considered in other cities

Many local authorities across England have been mandated to take action to tackle NO₂. For example:

- **Leeds** has undertaken public consultation on introducing a Class B Clean Air Zone (buses, coaches, taxis/PHV and HGVs).
- **Birmingham** is currently consulting on a Class D Clean Air Zone (buses, coaches, taxis/PHV, HGVs and cars).
- **Southampton** is considering a Class B Clean Air Zone (buses, coaches and heavy goods vehicles (HGVs) below the Euro VI emissions standard).
Next steps

• Complete ‘Target Determination’.
• Model the options to achieve legal compliance in the shortest possible time. Estimated completion end of August/early September 2018.
• Awareness raising concerning air quality issues affecting GM.
• The complete OBC must be approved by all ten GM local Authorities by early December 2018 to meet the government’s deadlines.
• The OBC should also proceed through relevant GM-level governance.