Bee Network Committee

Date: Thursday 28 September 2023

Subject: Congestion Intervention Plan

Report of: Peter Boulton, Head of Highways, TfGM

Purpose of Report

This report provides an overview of the changing nature of Greater Manchester's (GM) highways network, the impact of congestion and identifies areas where improvements can be made to ease congestion and in particular support the reliability of the bus network as we enter a new era with bus franchising.

Recommendations:

Committee members are requested to:

1. Note GM's Road network is changing and the impact this can have on congestion.
2. Note the commencement of franchised bus operations and the negative impact that congestion can have on bus network performance.
3. Endorse the proposed improvements to Greater Manchester Road Activity Permit Scheme (GMRAPS) and other short-term measures being implemented to improve GM's highway network.
4. Endorse the development of a Red Route Network on key corridors in conjunction with Local Highway Authorities.
5. Endorse the development of a proposal for the introduction of Lane Rental in GM.

Contact Officers

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Equalities Impact, Carbon and Sustainability Assessment:

Recommendation - Key points for decision-makers

Support the development of short term highway network management improvement measures, a Red Route Network and a proposal for GM wide Lane Rental

Impacts Questionnaire

Impact Indicator	Result	Justification/Mitigation
Equality and Inclusion		
Health		
Resilience and Adaptation		
Housing		
Economy	G	A resilient highways network will make GM a better place to invest in Businesses will not be put off investing in GM if the highway network runs efficiently GM will be more attractive to businesses if it has a good transport network
Mobility and Connectivity	G	Better bus services that are frequent and relaible will encourage more travel to work opportunities The focus is on putting in measures that will improve congestion Less congestion will encourage PT use and AT use As detailed in the report
Carbon, Nature and Environment	G	A reduction in congestion will improve local air quality Improving bus performance by implementing measures to reduce congestion will make the bus more attractive to users and commuters may choose bus over private motor vehicles
Consumption and Production		

Contribution to achieving the GM Carbon Neutral 2038 target	By reducing congestion and bringing in measures that support the efficient network performance of bus operations commuters are more likely to choose PT over private vehicle use.

Further Assessment(s): Carbon Assessment

G	**Positive impacts overall, whether long or short term.**	A	**Mix of positive and negative impacts. Trade-offs to consider.**	R	**Mostly negative, with at least one positive aspect. Trade-offs to consider.**	RR	**Negative impacts overall.**

Carbon Assessment

Overall Score		
Buildings	**Result**	**Justification/Mitigation**
New Build residential	N/A	
Residential building(s) renovation/maintenance	N/A	
New build non-residential (including public) buildings	N/A	
Transport		
Active travel and public transport		indirectly - the introduction of red routes will provide more space for cyclists and reduce the risk of harm By reducing the unpredictability of journeys caused by parked cars and pooly planned and implemented roadworks access to education, shopping, leisure and work by PT will be improved
Roads, Parking and Vehicle Access		Red Routes will remove illegally parked vehicles allowing free flowing traffic along a route. This will benefit motorists and cyclists who choose to use the route Although it will be safer for cyclists
Access to amenities	N/A	
Vehicle procurement	N/A	
Land Use		
Land use	N/A	

	No associated carbon impacts expected.		High standard in terms of practice and awareness on carbon.		Mostly best practice with a good level of awareness on carbon.	
	Partially meets best practice/ awareness, significant room to improve.		Not best practice and/ or insufficient awareness of carbon impacts.			

Risk Management

Risk registers for the proposals will be developed and maintained as the proposals are progressed.

Legal Considerations

The legal consideration associated with the proposals will be established as the proposals are progressed.

Financial Consequences – Revenue

No specific financial (revenue) consequences at this stage although there will be for the implementation of Lane Rental and more details on this will be provided as the proposal is further developed.

Financial Consequences – Capital

The financial cost of Red Routes will be developed and opportunities for funding will be identified.

Number of attachments to the report: 0

Comments/recommendations from Overview & Scrutiny Committee

N/A

Background Papers

N/A

Tracking/ Process

Does this report relate to a major strategic decision, as set out in the GMCA Constitution?

No.

Exemption from call in

Are there any aspects in this report which means it should be considered to be exempt from call in by the relevant Scrutiny Committee on the grounds of urgency?

No

1. Background

1.1. Greater Manchester, through the GM Transport Strategy 2040, has made a strong commitment to delivering a transport system which:

- supports sustainable economic growth and the efficient and effective movement of people and goods;
- improves the quality of life for all by being integrated, affordable and reliable;
- protects our environment and supports our target to be net zero carbon by 2038 as well as improving air quality; and
- capitalises on recent technology and innovation.

1.2. Delivering on this commitment is a huge challenge. We have been setting out, and are demonstrating, our ambition through major initiatives such as Made to Move, Streets for All, Bus Franchising, the new GM Bus Strategy, and the Bee Network.

1.3. These initiatives call on all of us involved in enabling and delivering transport infrastructure and services to do things differently and so improve public transport and active travel options in the region. They also call upon the wider public – residents, businesses, and visitors - to embrace change in how, where, and when they travel.

1.4. The GM Streets for All strategy is a people focused approach to how we design, improve, and operate our highways and streets which will facilitate and encourage this change.

1.5. Central to this is the need to balance competing demands upon our streets and the space and time allocated to each use: walking and wheeling, cycling facilities, bus, general traffic, parking and charging, and servicing; as well as non-transport uses around place and public realm.

1.6. GM does not have the same integrated approach to managing the Key Route Network (KRN)[1] as in London, with each of the ten local authorities holding their respective highway powers. Through the Key Route Network, TfGM fulfils the delegated functions, in collaboration with the 10 GM Local Highway Authorities,

[1] Greater Manchester's KRN encompasses some 656km of network, around 7% of all local authority roads. The KRN comprises 49% of all A and B roads but carries 63% of the traffic on these roads and 67% during the peaks.

National Highways, GM Police and road users to achieve a reliable, resilient, and safe highway network.

1.7. This has enabled GM to establish a mature and extensive model of regional highway collaboration. The combined agencies provide a unique scale of capacity and capability to address all aspects of policy and operations on both the KRN and the wider GM network. However, we recognise that congestion remains a significant area of concern and we are committed to continuous improvement and ensuring that a strategic network-based approach to GM's highway network is adopted through the further development of this model.

1.8. The Bee Network Committee will provide us with a forum where we can, working in collaboration, further develop the strategic model of network management for Greater Manchester's highway network and help move GM more closely in line with how the road network is run in London. This would help support a number of benefits including, helping the delivery of Local Transport Plans, consistent delivery standards, reducing unnecessary delays for all road users through effective network management, improved bus services and active travel network and reducing costs by exploiting regional procurement opportunities.

2. Greater Manchester's Changing Highway Network

2.1. Greater Manchester's roads are changing. To support the ambitious programme outlined above, we are optimising the use of limited street space to deliver better and more space for walking, wheeling, and cycling; to give more priority for public transport; and to make our streets better places to live, spend time in, and travel along. This is essential in achieving the aspirations set out in the 2040 Transport Strategy and ensuring the transport network keeps pace with population growth and supports sustainable economic growth throughout the city-region by providing better transport options to move our residents and visitors more cleanly and efficiently.

2.2. Measures such as improved junction design, new adaptive traffic signals, and continual improvement in Urban Traffic Control (UTC) performance will go some way to moderating the impact on general motor traffic associated with this reallocation of street space and the impact of works providing new buildings and better utilities but can only go so far in mitigating these effects.

2.3. Given this reallocation of street space, if general motorised traffic demand remains the same, congestion – in the form of delay and queue lengths will increase. It is

crucial that this is managed effectively, to avoid potential negative impacts on economic growth and the attractiveness of the region to investors and underlines the importance of a reliable, frequent and cost-effective public transport system that gives people a real alternative to private motor vehicles at the same time as providing capacity for those who need to use their own vehicle.

2.4. A further challenge to tackling congestion is changes in personal car-keeping in GM. Personal car ownership has continued to grow with private car registrations increasing by around 15% since 2009.

3. Bus Franchising, Growth and Congestion

3.1. Most of our bus services share space in our streets with other traffic, and are, therefore, caught up in traffic congestion when it occurs.

3.2. The current extent and effectiveness of bus priority measures, such as bus lanes on our main radial routes and bus priority in town and city centres, is relatively limited in extent. This means our buses are too often caught up in congestion with general traffic, impacting journey times, and impacting on the ability of operators to run a reliable service.

3.3. Buses are disproportionately affected by congestion caused, for example, by roadworks as compared to other motor vehicles as:

- Bus drivers cannot choose to divert from their usual route, either before or during their journey, unlike other drivers
- An individual bus goes along the same route each time it runs the same service, resulting in a cumulative effect over the day.

- Passenger confidence in buses turning up / arriving on-time is impacted. The effect of delays caused, for example, by roadworks impact on passengers throughout the length of the route, even for passengers who do not travel through the roadworks section. These passengers will usually be unaware as to why their bus is late or does not turn up at all. Use of service updates via websites, Apps and real time information screens, if provided at stops can provide some mitigation of this.
- Bus timetables are scheduled with a certain amount of running time and an element of layover (for unknowns such as road traffic collisions and congestion) at intermediate points and at the end of the route. Once this is exceeded, timetable adherence is destroyed.
- Where a particular vehicle is scheduled to run different services over the course of a day, customers are unlikely to appreciate why their bus is late or does not turn up when there are no roadworks on their bus route.
- Bus drivers' work hours are heavily regulated, in terms of breaks and maximum number of hours. Where a driver is scheduled to return the vehicle to the depot, typically at the end of daytime service frequencies, if the bus is running late from accumulated delays, they may have to run in to the depot without completing all their planned trips, resulting in timetabled services not operating and buses not turning up for passengers and driving pasts stops displaying 'not in service.'

3.4. Now that bus franchising has commenced GMCA will receive all fare revenue from the franchised services ticket sales but in doing so takes on the risk associated with patronage levels. This represents a significant financial risk for Greater Manchester, with GMCA and TfGM clearly accountable.

3.5. As the Greater Manchester Bus Strategy sets out, the bus network itself can play an important role in reducing road congestion. On average, each car in Greater Manchester carries just 1.3 people. Buses can carry many more people than cars and are a more efficient way to use limited road space.

3.6. Attracting non-bus users to travel by bus and current bus users to use it more will therefore be one of the most effective ways to reduce congestion and improve conditions for all road users.

3.7. A reliable bus network, one where buses are given priority over general traffic and can avoid congestion will be more attractive to current passengers and will be more

likely to attract new customers including people switching from travel by car. As Greater Manchester enters a new era of franchised bus services it is essential that we focus on issues that make bus journeys unreliable or that slow buses down and continue to develop and implement measures to address them.

3.8. At present, GM road traffic volumes have returned to pre-pandemic levels with 35 million trips on the road network each week.

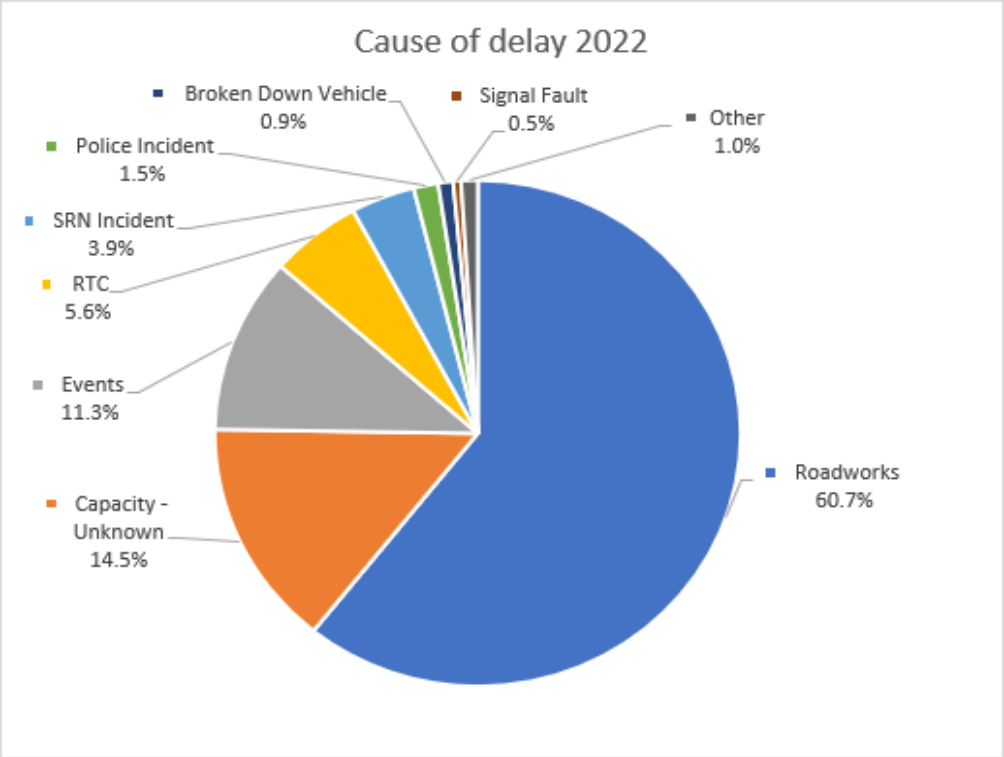
3.9. The cost of road congestion to GM was estimated in the GM Transport Strategy 2040 as being £1.3bn per year at 2015 values, which equates in today's prices to £1.6bn.

3.10. Road congestion might be seen as a by-product of a successful and thriving place with more traffic competing for space on the busiest routes causing delays to people's journeys. It is accepted that a degree of traffic congestion is inevitable in busy and growing towns and cities and most people plan for the extra time it might take to make road journeys during peak periods when lots of people are travelling at the same time.

3.11. People tend to be more sensitive to journey time reliability, those occasions when the degree of congestion and associated delay is less predictable or more extreme, often because of road works, breakdowns, major events, serious incidents, or severe weather. Such variability can cause real frustration and inconvenience to people. It also has implications for reliability of bus services, which either run late, or have additional time and operating resource built into timetables to account for variability.

3.12. Traffic congestion results in more noise and air pollution. Road transport accounts for 65% of nitrogen dioxide emissions, which have been linked to cancer, asthma, heart disease and dementia and so tackling poor air quality is a key priority in Greater Manchester.

3.13. During 2022 on the GM monitored highway corridors, roadworks were the major contributor to unexpected delays (delay above those typical for that section of the network at that time of day and day of week) (60.7%), followed by capacity (14.5%), events such as football matches and concerts (11.3%) and road traffic collisions (5.6%).



3.14. If we are to achieve the Bee Network transformation and the vision set out in the Streets for All Strategy that ensures buses, operate reliably we will need to gain a better understanding of traffic congestion issues, focusing on those corridors and locations where it particularly impacts bus operations.

3.15. This approach is informing several ongoing activities through, for example, the Quality Bus Transit programme and Bus Pinch Point schemes, that will be delivered through City Region Sustainable Transport Settlement (CRSTS) funding. It is likely that further bus priority measures, including further reallocation of road space, will be required beyond these planned schemes to mitigate the impact of general traffic congestion on buses, with a view to reducing journey times and operating costs, and increasing reliability and patronage.

4. Improvements to Greater Manchester Road Activity Permit Scheme (GMRAPS)

4.1. Permit schemes provide a way to reduce the disruption caused by roadworks through introducing increased levels of control over activities, providing a lever to influence how works are carried out, and demonstrates whether there is parity amongst all works promoters either local authority or statutory undertakers.

4.2. A number of interventions have been identified through improvements to GMRAPS processes to ensure that a consistent approach is adhered to by each Local Highway Authority (LHA) throughout the region.

All highway works to be recorded on GMRAPS with realistic and accurate information.

4.3. The lack of publicly available information relating to events on the highway and where highway capacity is compromised causes issues for road users being able to plan journeys and identify where and when delays may be expected. With the advent of real time journey planning via sat-navs / Apps, the need for up-to-date accurate information is more relevant than ever.

4.4. Additionally, the lack of this information or inaccurate information leads to unexpected works being present on the highway further leading to delays, congestion, and road user frustration.

4.5. GM Local Highway Authorities (GMLHA) need to ensure all permits are submitted onto GMRAPS for both utility and highway improvement activities. This is not the case across the region and some authorities are still not permitting elements of their own activities almost 10 years following the introduction of this statutory requirement.

4.6. In addition to roadworks permits highway authorities need to identify locations and durations where the carriageway is compromised. This will include skip, scaffolding and hoarding licences and locations where developers temporarily take highway capacity to accommodate their developments.

Bus Operator Roadworks Viewer

4.7. This tool complements roadworks information provided on the GMRAPS public website. To assist bus operators in managing the impact of roadworks, TfGM have developed an automated bus operator roadworks notification tool. This tool provides individual bus operators with registered works affecting their services that is automatically generated daily. To assist operators there is development of an interactive web-based system to allow a more user friendly and visual experience exclusively for bus operators to allow an enhanced forward view of up and coming works by bus service.

Consistent district permitting - including independent advice of permits on the Key Route Network (KRN) By TfGM

4.8. This proposal provides for a consistent approach to permitting for the GMLHAs and a focus on the enhanced review of permits, suggestions to reduce the impact of works and greater challenge back to both utility companies and LHAs. This is key

to support an improved GMRAPS operation and enhance the opportunity to introduce a Lane Rental scheme in the future. This proposal will require the renewal and adoption of common standards and practice throughout the region.

4.9. Independent review of all permit applications for the KRN will also be carried out. The key focus will be to ensure that LHAs are applying all appropriate checks in a consistent way across the KRN, and reasonable challenge is being applied to reduce work durations whenever possible as well as making suggestions to reduce the impact of works e.g. use of more adaptive temporary traffic signal technology. In addition, it is believed that this approach would enable the management of the more complex cross boundary activity and the impacts of highway activities on a route basis, therefore benefiting the wider highway network.

5. Other Short Term Improvements

5.1. TfGM is currently working with the 10 GMLHAs to develop a best practice Roadworks Charter, aimed at utilising best practice and better coordination of works, with the overall aim of reducing highway delays and inconvenience. Development is on-going but is expected to be completed by the end of the year. Key to the Charter is ensuring that statutory undertakers are key signatories in addition to GMLHAs and TfGM.

5.2. Monthly roadwork meetings with Bus Franchising Tranche 1 GMLHA have commenced. The meetings are also attended by the relevant bus operator partners. The aim is to discuss and coordinate up and coming works, with the overall aim of reducing disruption on the highway network and undertaking lessons learnt exercises, to inform reducing impacts of future similar works. These roadwork meetings will be rolled out across all LHA's and become an intrinsic way of how GM helps to better manage its highways.

5.3. Real time late running traffic signal priority has been implemented at circa. 120 traffic signal junctions across Greater Manchester. The system operates by a bus utilising onboard technology to communicated with Split, cycle and offset optimisation technique (SCOOT) controlled traffic signals, which allows late running buses to be given priority in real-time. Rollout of the technology is continuing in order of Bus Franchising Tranche rollout.

5.4. A number of GMLHA's will soon be able to introduce measures to enforce moving traffic restrictions, such as banned turns and yellow box junctions. Enforcement has historically been the responsibility of Greater Manchester Police. These

additional powers have the potential to reduce network congestion and improve highway safety. Targeted enforcement of certain types of restrictions may also help bring about improved journey times for public transport and emergency service vehicles and increase safety for cyclists, pedestrians, and other vulnerable road users.

6. Develop a Red Route Network on key corridors into the Regional Centre.

6.1. Where urban roads are heavily congested and there is a need to control parking or loading to maintain the free flow of vehicles, it is normally sufficient to prohibit waiting and loading at specific times of day using traditional traffic regulation orders such as yellow lines. However, the use of traditional yellow lines and loading restrictions does not prevent vehicles stopping for the purpose of picking up and setting down passengers or loading on waiting restrictions (yellow lines), these actions can contribute to traffic congestion on busy roads.

6.2. An alternative way of controlling waiting and loading is through a red route. First introduced in London, red routes can now be introduced throughout England. A red route does not need to operate for the full day, provision can be made for parking and loading at certain times or in designated locations. Red routes are intended to be used strategically to deal with traffic problems assessed on a whole route basis, not to deal with issues on relatively short lengths of road.

6.3. Drivers should not be permitted to stop for any purpose other than in an emergency or in designated locations. Red routes will typically operate for 24 hours or, if overnight parking can be permitted, throughout the day, typically 7 am to 7 pm. Provision will need to be made for loading where this is essential for businesses along the route and cannot be accommodated either off highway or on adjacent roads. A red route can therefore include loading bays which operate either for the full duration of the control period or for some shorter period.

6.4. A Red Route Clearway is similar to the 24hour rural clearway except that it applies also to the verge and footway, not just to the main carriageway. No vehicle is permitted to stop at any time for any purpose, except in signed laybys / designated locations or elsewhere in an emergency.

6.5. Clearly benefits of red routes vary from scheme to scheme but they typically include;

- Journey time reduction for all traffic;
- Improved and simplified traffic movement;
- Environmental benefits, including reduce traffic waiting at signals, noise, and smoother consumption of fuel;
- Potentially more pleasant environments for pedestrians and cyclists, both alongside and in crossing;
- Safety improvements, primarily around parking, turning and reduction of opportunities for illegal parking.

6.6. As stated, specific quantified benefits are likely to vary but the example of the West Midlands red routes shows that emerging benefits have been;

- Reduced journey times of over 8%
- Reliability improvements of up to 40%
- Bus journey time reductions of up to 21%
- Parking in contravention reduced by 60%
- Collision reduction of around 8%

6.7. Clearly the development of red routes will be of great benefit in the region. The busiest corridors in GM will be assessed to see if the introduction of a red route would deliver some of the benefits highlighted above. Once the corridors have been identified TfGM will work with individual LHA's to ensure the most appropriate intervention is proposed for any particular route and to identify potential sources of funding. The red route network will focus on the busiest routes where lack of controlled parking is causing congestion for other road users on a strategic whole corridor basis.

7. Develop a proposal for the introduction of Lane Rental in GM

7.1. A lane rental scheme is a legislative scheme and a further extension to the existing permit scheme, GMRAPS. It allows LHA's to charge organisations undertaking roadworks for the time their works occupy specified streets at traffic sensitive times.

7.2. The expected benefits from a lane rental scheme are primarily derived from the financial incentive that results in behavioural changes by organisations undertaking works. For instance, it is expected that the length of time a work site on the highway is unoccupied would be reduced or more resources are used to speed up activities, in that organisations would want to reduce the level of the charge applied. As a result, organisations are more likely to complete works to the correct standard first time to avoid a return visit, and/or and undertake work outside of peak periods or overnight.

7.3. A recent monitoring report[2] on current lane rental schemes demonstrates several clear benefits compared with the start of the scheme:

- 98% of highway authority and 83% of utility works avoided a charge, and therefore were undertaken outside of traffic-sensitive times;
- the average number of collaborative works sites, where more than one organisation utilises the site at the same time, have increased by 65% since the scheme was introduced;
- there has been a 27% increase in planned utility works that take place overnight; and,
- customer satisfaction related to roadworks have experienced significant improvements, including reports of unoccupied sites.

7.4. A successful lane rental scheme should result in all relevant works being undertaken outside of traffic sensitive times, and therefore no charges applied. However, in practice it is not always possible to undertake works outside of traffic sensitive times.

7.5. A Lane Rental Scheme may therefore generate a surplus once running costs have been deducted from income received, but a lane rental scheme should not be viewed as an additional source of revenue for GMLHA. The regulations make clear that the charging Authority must apply the net proceeds for purposes intended to reduce the disruption and other adverse effects caused by roadworks. The DfT's Guidance provides further examples on the areas that could apply for this application of such surplus, this includes:

[2] Lane Rental Monitoring Report April 2020 to March 2021 (tfl.gov.uk)

- Investment in innovation and developing new products or disruption saving techniques;
- Installing “pipe subways” or ducting that enables apparatus to be accessed more easily and without causing disruption to traffic;
- Measures to improve the quality or accessibility of records about the location of underground pipes, wires, and other apparatus;
- Measures to help abate noise, pollution or safety hazards arising because of works;
- Repairing potholes caused by utility street works; and
- Implementing extraordinary measures to mitigate congestion caused by works, especially major works projects.

7.6. TfGM, working with the GMLHA’s will assess the KRN, and other significant roads within the GM region to develop proposals for a GM Lane Rental scheme. The introduction of a GM scheme will have significant benefits to journey time reliability and highway availability for all modes. To progress a GM scheme the following next steps will need to be followed:

- Obtain approval to proceed;
- Agree the proposal of a joint application with DfT;
- Form a lane rental working group and agree affected highways;
- Undertake formal consultation with various stakeholders;
- Submit an application to introduce a scheme to the Secretary of State;
- Develop governance arrangements for lane rental surplus; and,
- Bring a lane rental scheme into legal effect following a trial period.

7.7 The process to introduce a successful lane rental scheme in GM is expected to take approximately two years to complete.