



11. Monitoring

11.1 Performance monitoring in LTP2

Performance against the suite of indicators adopted for LTP2 is shown in the following table. This shows progress between 2005/06 and 2009/10 (the latest date for which figures are available). The extent to which our LTP2 strategy succeeded in delivering the targeted improvements was an important consideration in developing both the strategy for LTP3 and determining the most appropriate targets and indicators.

Headline indicator	Achievement in relation to expectations	Current Trend	Commentary
LTP2 area wide traffic	Met	Improving	Traffic levels on local roads rose very slightly in the early part of the LTP2 period, but have decreased recently due to the recession, resulting in no overall growth. On local roads, only light goods vehicles increased significantly. Traffic levels on the motorway network did grow.
LTP6a peak traffic flow to Regional Centre	Exceeded	Improving	
LTP6b peak traffic flow to Other Key Centres	Exceeded	Improving	
Bus patronage	Met	Worsening	Overall, this suggests that our approach to limit traffic growth, based on improving non-car modes, worked but also that traffic levels are quite sensitive to external influences like the economy. It is also worth noting that more ambitious targets to reduce traffic levels may be achievable with more rigorous approaches to demand management.
Rail patronage	Exceeded	Stable	Bus patronage grew steadily in the LTP2 period, until 2009/10 when the effects of the recession were felt, although patronage was still higher than in 2005/06. Bus patronage on certain corridors, such as QBC corridors, increased markedly as a result of the improvements.
			Rail patronage also grew steadily, but has reached a plateau more recently as many peak time trains are approaching (or exceeding) capacity.

Headline indicator	Achievement in relation to expectations	Current Trend	Commentary
Metrolink patronage	Met	Stable	Metrolink patronage was stable until 2009/10 when the effect of extensive Metrolink works and the recession combined to depress patronage; this is expected to recover and increase when the system is expanded.
LTP3 cycling	Exceeded	Improving	It was particularly pleasing to see the long term declining trend in cycle use reversed in the LTP2 period, with the target well exceeded and a number of supporting indicators confirming the increase. This is as a result of a more coordinated and intense effort to improve conditions and encourage cyclists
LTP11 walking	Met	Worsening	The picture for walking was patchy; the headline indicator suggests a significant decline after an increase late in the LTP1 period, and a number of other indicators demonstrate local variations in performance. Walking has not had the focussed attention that cycling has benefitted from, and being more diffuse is a lot more difficult to address.
LTP4 (NI 198) % car mode to school	Met overall	Improving	Mode split to schools highlighted the difference between primary schools, where non-car use increased, and secondary schools, where it increased. Whilst on track overall, this highlighted the difficulties of engaging and working with the secondary sector.
LTP12a non-car modal share to Regional Centre LTP12b non-car modal share to other Key Centres	Exceeded Exceeded	Stable Stable	Mode split indicators to the regional, other key centres and the airport also illustrated some success in increasing the share of trips by non-car modes, both in peak and inter-peak periods, whilst at the same time increasing the number of trips made. Improvements to non-car modes, traffic management and attempts to regenerate town centres have assisted this trend. However, the threat of out-of-town retail and employment locations remains significant.

Headline indicator	Achievement in relation to expectations	Current Trend	Commentary
LTP12c vehicle trips per passenger to airport	Met	Stable	
LTP5a (NI 178) bus punctuality (timetabled)			The way in which bus performance was measured was changed in mid-LTP2. Recent results would indicate that operator performance (measured by reliability) has improved, but that considerable scope exists to further improve network performance (measured by punctuality). Particular problems arise in the pm peak periods.
LTP 5b bus reliability (frequent)			
LTP7 (NI 167) congestion	Exceeded	Stable	Congestion monitoring focussed on 15 key corridors, and demonstrated an overall reduction in congestion, although there were differences between routes. Performance was assisted by works funded from the Congestion Performance Fund, and also the recent decline in traffic levels
NI 47 road safety killed and seriously injured (KSI) casualties	Met national, not met local	Improving	National targets for the reduction of KSI's and child KSI's have been met, but GM adopted more stringent local targets, for which only the child KSI target is likely to be met. Compared nationally, GM has a relatively good accident record. The most effective engineering schemes have largely been delivered, meaning that attention is likely to focus more on other techniques to address accident rates.
NI 48 road safety child KSI casualties	Met	Improving	
LTP1a (NI 175) accessibility (households)	Not met	Worsening	Difficulties were encountered with the way in which accessibility across GM was measured. It appears that access to key centres by public transport in the weekday am peak declined over the LTP2 period, largely due to changes in bus services
LTP1b (NI 176) accessibility (employment)		Stable	

Headline indicator	Achievement in relation to expectations	Current Trend	Commentary
LTP8b air quality (index of tonnes NOx emitted on major roads)	Exceeded, but some concerns	Improving	Although the levels of NOx emitted by road traffic fell in exceedance of our target, this did not appear to be reflected in actual NO ₂ concentrations on street. This phenomenon was observed in other urban areas also, for reasons which are not fully understood. This failure to meet EU standards resulted in an application by the UK government for an extension of the EU objective date to 2015, but this would require further action to meet this target by this date
LTP9 climate change (index of tonnes CO2 emitted on major roads)	Met	Improving	Carbon emissions have reflected road traffic levels, and remained fairly stable. It should be noted however, that these are likely to need to reduce significantly in order to meet future EU and Government targets
LTP10a accessible infrastructure (buses)			Improvements to physical accessibility were made, with increasing numbers of wheelchair accessible buses and raised bus stop kerbs, although progress on improving rail station accessibility was limited
LTP10b accessible infrastructure (bus stops)	Met	Improving	
LTP10c accessible infrastructure (rail stations)	No target	Stable	
NI 168 principal road maintenance	Varies	Worsening	Highway condition varied between road class and District. Overall, on principal roads, although condition remained relatively stable and improved recently in Rochdale and Oldham, a number of Districts did not meet recent targets. On non-principal classified roads a similar picture emerges, but in this case results largely matched District targets. For unclassified roads, the picture is mixed, with some authorities worsening, some being stable, and some improving. Footway condition data is now not collected by most authorities; a different methodology is being sought

11.2 Indicators and targets for LTP3

An essential part of achieving and demonstrating value for money is through performance management and evidence-based planning. We will continue to collect the necessary information on travel patterns and behaviours so that we can be confident that our proposals will properly address people's needs and will offer the best value for money. A review of data collection by Greater Manchester authorities and our partners is underway in order to ensure that data are shared widely, that duplication is eliminated, and that the most cost-effective data collection methods are used.

We need to monitor the effects of our policies in order to ensure they are achieving our objectives and giving good value for money, and enable adjustments to be made if they are not working properly. We propose to monitor the effectiveness of the strategy through a limited number of 'headline' indicators and targets, set out in the following table. These have been chosen on the basis of being able to provide timely, relevant, cost-effective management information.

Detailed work on targets is still underway, but work to date would suggest that targets are expected to lie in the following ranges, given the above assumptions. Initial modelling based on the agreed economic forecast suggests that whilst there will be local improvements, particularly where major transport schemes are introduced, the overall trend will be for increasing traffic volumes caused by rising employment and population, combined with reducing household size and consequent increase in car ownership. The ability of the LTP to address this situation in the short term is further compounded by limited availability of funds.

Indicator	Baseline	LTP2 trend	Likely trend to 2015/16
Mode Split Non-car use to work	(2008) i) trips by GM residents: 27% ii) trips to GM workplaces: 26%	Slight increase in use of non-car modes to work and to key centres	Increase in both PT and car trips. Major PT schemes likely to increase non-car mode share along their corridors, but overall in GM forecast increasing employment, incomes and decreasing household size are expected to induce greater car use. Impact of limited resources for local transport.
Journey time reliability Difference between speeds on the worst and best days on the key strategic route network	N/A	N/A, but congestion reduced on the 15 monitored routes, due in part to reducing traffic volumes in the recession	Slight decrease in reliability due to increasing car trips and congestion

Indicator	Baseline	LTP2 trend	Likely trend to 2015/16
Bus Performance Broken down into: <ul style="list-style-type: none"> • Bus reliability (<i>operator performance</i>) • Bus punctuality for scheduled services, mid-point of route (<i>network performance</i>) • Bus regularity for frequent services (<i>network performance</i>) 	(2009/10) 97% 70% 95.7%	Method of measurement changed during LTP2. Data suggests a slight improvement of bus reliability, and stable punctuality.	Improvement in bus reliability through Quality Partnerships and Code of Conduct with operators. Bus punctuality slightly worse due to increase in congestion.
Equality of Access Difference in generalised cost of am peak commuter journeys between car and public transport	N/A	Not measured previously	Balance between effects of major PT schemes which decrease ratio, but road congestion which increases it. Overall likely to be a slight worsening, but significant improvement in corridors with major investment.
CO₂ emissions From road traffic	(2009)	Stable	Slight increase due to additional vehicle kilometres and limited introduction of new technology.
Road Safety Total KSI casualties	(average annual KSI casualties 2004-2008) 966	Significant decrease	Slight decrease as vehicle kilometres will rise, and the most effective accident remedial schemes have already been delivered.
Air quality Tonnes NO _x emissions from road traffic	(2009)	Significant decrease, although proportional reduction in NO ₂ not observed.	Slight decrease: increasing vehicle kilometres offset by technological improvements
Maintenance Percentage of classified road network where maintenance should be considered	(2009/10) Appx 11.9%	Generally improved, but conditions vary between District and road classification	Worsening, due to budget cuts and possible more severe winters

We will also develop our approach to monitoring and evaluation to reflect the requirements of the Equality Act 2010.

The headline indicators will be supported by other information to enable us to better understand progress, diagnose problems, and design effective solutions. Examples will include indicators measuring outcomes, such as numbers of trips by public transport, cycling and walking, modal split at different times of the day, traffic levels, public transport punctuality and reliability, train and Metrolink overcrowding and mode of travel to school. An important aspect will be comparing inequalities by examining differences between deprived and other areas. Other indicators measuring outputs, or schemes delivered, and inputs, i.e. spend in different categories, will also be produced. Some examples of the suggested main diagnostic indicators are given in the table below.

In addition, it will be essential for us to evaluate the effects of specific actions to make sure that they fulfil our expectations and give us confidence that those techniques can be applied usefully elsewhere in future. This applies especially to higher cost or innovative schemes.

Diagnostic Indicator	Main supported headline indicators	Rationale
Key Centre Mode Split For regional centre, other key centres and airport, during am, off-peak and pm peaks	All	The Greater Manchester Spatial Framework stresses the important of key centres for GM's economic performance and to improve accessibility to service and employment opportunities. In order to function effectively, use must be made of a variety of modes, favouring active modes and public transport.
Mode split by journey purpose, levels of walking, cycling and public transport patronage	All	In order for Greater Manchester to function effectively, use must be made of a variety of modes, favouring active modes and public transport. This will also contribute to health and environmental aspirations.
Rail and Metrolink overcrowding	Mode split to work	Overcrowding is currently a large factor in inhibiting further trips by these modes, with subsequent repercussions on economic performance and environmental goals. This will enable us to monitor the impact of the additional capacity provided
Vehicle kilometres On main roads	Journey time reliability, CO ₂ emissions, air quality, road safety	Vehicle use is a main influence on carbon emissions, air quality and road casualties.

Diagnostic Indicator	Main supported headline indicators	Rationale
Vehicle journey times On key strategic route network in am and pm peaks	Journey time reliability, CO ₂ emissions, air quality,	Used in conjunction with the journey time reliability indicator, this will help us achieve our objective of fast, reliable journeys, thereby minimising the costs of transport to the economy. Assessment of network conditions on key bus routes will help us understand and reduce bus delays.
Frequency of occurrence of worst congestion events On key strategic route network in am and pm peaks	Journey time reliability	This will be most useful with anticipated future improved recording of congestion causes. It supports a similar Highways Agency indicator.
Transport CO₂ emissions By journey purpose, per £GVA,	CO ₂ emissions	Greater detail on the sources of transport CO ₂ emissions will help us prioritise actions. Emissions /£ GVA will help determine the scale of decoupling from economic growth.
CO₂ emissions From road traffic with an origin or destination within GM	CO ₂ emissions	We can affect CO ₂ transport emissions both by network management and influencing travel choice for trips with an origin or destination within Greater Manchester. This indicator allows us to examine the latter, which is particularly important as longer distance trips, often using network outside Greater Manchester, contribute most CO ₂ .
Road safety Casualties by severity, age, user group, deprived areas, rate / population	Road safety	Greater detail on the breakdown of casualties will help us prioritise actions and ensure equality of exposure to risk.
Air quality PM10 emissions from traffic, NO ₂ concentrations, exposure to poor air quality	Air quality	Greater detail will help us prioritise actions, determine progress towards meeting the EU standard, and also examine particulates.
Maintenance Of main roads, street lights & bridges	Journey time reliability Road safety	This is a key aspect of value for money and good asset management, which is likely to be a priority for investment over the next five years at least.
Land Use Planning Local Development Framework indicators	All	Land use is the main determinant of transport demand. These measurements will give an indication of the rate of development and the impact on travel demand.

Diagnostic Indicator	Main supported headline indicators	Rationale
<p>Public Satisfaction & perception</p> <p>Short-medium term investigation of identified priority issues in order to directly influence measures. Initial suggestions for issues to be investigated include congestion, journey times and information provision</p>	Depends on topic to be researched	Greater insight will help us identify solutions, prioritise actions, and indicate how we can best meet the public's needs.

11.3 Application of Performance Management

We now have a significant history and understanding of the use of performance information and have learnt much in the way of presenting the information to decision makers, and using the targets to manage performance. In LTP3 we will adopt a more mature approach to judging performance against targets, which will involve:

- classification of progress to 'above or below trend' rather than 'pass or fail';
- explaining the context and limitations of the target, possibly involving the use of appropriate ranges to cover uncertainty;
- better explanation of the reasons for performance, including differentiation between external and controllable factors; and
- avoiding regular changes to targets unless triggered by the indicator exhibiting significant and sustained deviation from trajectory, or by a significant change to circumstances from those assumed when the target was set.

Performance information will first be considered by officer working groups. Agreed actions will then be authorised by the Transport for Greater Manchester Committee. Members will receive a full summary of performance at least annually, with arrangements for reporting against headline indicators in a similar manner to that previously used for GMITA.