

# Draft Greater Manchester Maintenance Strategy 7

## 7.1 Foreword

The eleven Greater Manchester Authorities (Bury, Bolton, Rochdale, Oldham, Tameside, Stockport, Manchester, Wigan, Salford, Trafford, and the Greater Manchester Passenger Transport Authority (GMPTA)) are committed to the development of a prosperous, attractive and healthy conurbation that will benefit all its communities. We recognise the critical role an integrated transport system plays in delivering urban renaissance, social inclusion and a safer, more attractive environment.

The Greater Manchester Local Transport Plan (LTP) and individual Transport Asset Management Plans (TAMP) contains the strategies which we believe can deliver a modern, efficient and effective transport system that meets the needs of all users. With a sustained period of enhanced levels of investment in the policies and programmes, our Local Transport Plan will deliver benefits for the users of all modes of transport, offering real choice and a sustainable, practical alternatives to car travel for many journeys.

Providing new capital assets, vital though these are to the success of our objectives, is not enough. Once built or installed new items of infrastructure must be maintained to a high standard if they are to continue to operate effectively and contribute over the longer term to the delivery of our transport strategy.

But we must maintain much more than these new assets. We have over 770 km of Principal Roads, 860 km of other classified roads and 7340 km of unclassified Roads, a total of nearly 9000 km of adopted public highways (including ROW) in Greater Manchester, and are responsible for nearly 2000 bridges and structures with spans of more than 1.5 metres. We have around a quarter of a million street lighting columns, over 3000 km of public rights of way, over 1000 traffic signals and more than 830 pedestrian crossing facilities. Limited resources and a lack of investment in previous years have left a challenging backlog of major and smaller scale maintenance that must be tackled.

The development of this Maintenance Strategy builds on the progress made by the 10 highway authorities in Greater Manchester in developing an objective assessment framework and forms the basis for the individual Transport Asset Management Plans for determining maintenance priorities for roads, bridges and structures in each District. The maintenance strategy recognises that the transportation infrastructure is wider than the highway network alone as it involves such assets as the public transport infrastructure, statutory undertakers equipment and off-highway transport routes.

Public transport and other non-highway assets must also be maintained effectively. Some of these are in our control, others in the control of other agencies. There is also a need to consider cross boundary working with other authorities outside the Greater Manchester boundary for key routes into the area.

For the first time therefore we are considering transport maintenance in its entirety. We are pleased that this document offers an opportunity to manage the transport maintenance effort in a coordinated and effective manner.

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Working for a county-wide approach to transport maintenance, to which all partners are subscribed, will help to ensure that the conurbation's integrated transport network continues to contribute directly to the delivery of a vibrant, successful, safe and attractive Greater Manchester.

### 7.2 Introduction

This document is intended to serve as a framework for the ten highways authorities in Greater Manchester and GMPTA to determine how their maintenance programmes can best deliver countywide, strategic priorities and support transport asset management.

Maintenance is fundamental to the continuing contribution of our transport and public rights of way network to the economic regeneration and urban renaissance of our cities, towns and centres besides encouraging access to urban and rural areas. It contributes to environmental improvement, not just in terms of the site specific benefits that a well maintained piece of infrastructure can achieve but also in respect of securing an overall condition that encourages and sustains a greater use of more sustainable modes of travel and a healthier life style.

Maintenance can also help us meet social inclusion objectives, particularly where it is targeted in areas of deprivation or where it helps address concerns about safety and security or, indeed, where it ensures continued access to areas of employment and for goods and services.

The GMLTP maintenance strategy brings together in one document consideration of maintenance in respect of all elements of the network for which the 10 Highway Authorities are responsible or have some direct control. By identifying the key objectives of maintenance the partners can determine how local resources can be prioritised in a strategic context. While prioritisation is a matter for individual spending Authorities and will reflect local needs, the presence of a countywide maintenance strategy can identify the combination of measures that are likely to have the widest possible positive impact. It will also help form the basis for individual asset management plans.

This document builds on work already undertaken in Greater Manchester in respect of prioritising maintenance on the Primary Route Network. It extends this concept, and adapts it, so that it is possible to determine how highways maintenance, bridges and structures maintenance and public transport maintenance can all be carried out within the context of meeting LTP and TAMP objectives. By measuring the outcomes of our maintenance programmes it will be possible to gauge the extent to which maintenance expenditure represents value for money at the strategic level.

### 7.3 Objectives

We have a vision for the maintenance of our transport infrastructure in Greater Manchester.

We intend to reverse the trend of deterioration of our network that has been taking place over many years and to provide a network that is safe, attractive, environmentally and financially sustainable and fit for purpose. Collectively we intend to move up into the top 25% of highway authorities in respect of maintenance performance.

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The objectives within this maintenance strategy and the TAMP will form a fundamental part of the LTP2 and will have a specific focus on delivering effective maintenance programmes. For carriageways our aim is to improve and maintain the strength, ride quality and visual appearance of the highway network as a whole. Achieving a consistent standard across the county on all strategic routes including Principal Road Network (PRN), Quality Bus Corridors (QBCs), and on carriageway cycle routes will bring about greater network integrity and ensure it operates equally effectively irrespective of geographic location. Our objectives for footways and off carriageway cycle routes are to provide a safe effective network for all users. The overall objective is to provide a sustainable highway infrastructure managed at the minimum cost using whole life costing principles as outlined in the TAMP.

On bridges and structures our objective is to prioritise expenditure on strengthening and to make safe and accessible those structures that play an important role in the economic and community life of the locality.

We intend to pay attention to detail in respect of vulnerable users e.g. pedestrians, cyclists and motor cyclists. We intend to improve the condition of footway, pedestrian crossings and street lighting for the benefit of all users. By doing this we can reduce the number of accident claims that have been steadily rising and bring about greater confidence in walking as a viable alternative for short journeys. By dealing promptly with potholes, particularly those close to the kerb and undertake regular sweeping along gutters, we can make cycle journeys safer and more comfortable. Ensuring ironwork is flush and the use of appropriate surface materials on carriageways, particularly close to bends or junctions, can help to improve safety for all users. To ensure the efficient use of the network we recognise the importance of maintaining signs including street nameplates.

For public rights of way our objective is, by undertaking adequate and timely maintenance, to ensure that the current network remains accessible to all users, including horse riders and cyclists, where appropriate, and to encourage the development of the network to enhance access to both rural and urban locations so encouraging wider usage.

As part of an efficient and sustainable public transport network we wish to create and maintain waiting environments that are inviting and properly serviced

## 7.4 Problems, Issues and Opportunities

### Funding

Maintenance of the transport infrastructure in Greater Manchester has been under-funded over many years. Our maintenance programmes have generally been unable to keep pace with the rate of deterioration. The Government's Ten Year Plan for Transport released some enhanced resources for maintenance and set a target for arresting all deterioration on local roads by 2010. Deterioration has been reduced but not halted. The levels of funding required for a sustainable highway infrastructure will be identified in TAMP documents.

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Funding remains a serious concern for Authorities in Greater Manchester, although across the county we shall continue to make the best use of resources and explore alternative procurement methods and funding systems (e.g. Prudential Borrowing where it can be shown to be economically sound).

A further strain is placed on funding through the need to utilise costly and enhanced materials and systems to support and maintain enhanced infrastructures implemented through the LTP process to support its objectives without this additional burden being recognised by increasing the level of revenue funding.

However, funding to meet the best value maintenance targets contained within the second Local Transport Plan will be determined on a formulaic basis and will largely determine the backlog to be tackled each year.

The SCANNER condition survey of the PRN indicated that a considerable percentage of the network should be considered for maintenance. The UKPMS condition surveys on the Other Classified and Unclassified roads indicated that the rest of the highway network is also in urgent need of repair. To arrest deterioration and remove the backlog of maintenance over a five-year period conservative estimates suggest annual expenditure in the order of £45m is required. Such expenditure would be additional to that needed to implement a regular resurfacing programme of the whole road network over 30 years, (i.e. 3% per annum) which would cost around a further £80 million per annum.

### **Accident Claims**

There has been an exponential increase in accident related claims. Through the introduction of a more formal inspection and repair regime and a more rigorous defence against claims highway authorities have been able to set in place a more formal planned maintenance regime in accordance with the recommendations of the Code of Practice for Maintenance Management.

### **Weight of traffic**

Bus, HGV and abnormal heavy load traffic flows on the network continue to increase, albeit slowly, causing increasing damage. The increase in permissible vehicle weight to 44 tonnes creates a further and disproportionate increase in the stress on the road structure necessitating more frequent and extensive repairs. This is further exacerbated by traffic management which forces the use of particular sections of the carriageway for example through the introduction of bus lanes or the use of hatching to channel traffic.

### **Conflicting demands**

Demands for improved lighting (due in part to the recognised link with crime prevention and reduced fear of crime) result in increased energy consumption and conflict with demands to reduce LA CO<sub>2</sub> emissions. This will need to be addressed when authorities are identifying levels of service in their TAMPs.

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## Role of Utility Companies

Street works openings and reinstatements by utility companies continue to be a major cause of long term structural damage to the carriageway and footway network. There are still high rates of reinstatement failures of utility trenches. The effect of these is to create the appearance of a poorly maintained network, to dramatically increase the rate of deterioration to the fabric of the highway and reduce the life and riding quality of roads and the quality of footways.

Authorities will work in accordance with the Traffic Management Act 2004 to reduce the impact of works carried out by Utility Companies.

## Revenue Costs

The introduction of high specification materials and speed reduction features requires a high standard of maintenance. The costs of maintaining them are funded from revenue funding. The ten-year Plan for Transport has enabled Highway Authorities to increase the level of capital funding they can borrow but this additional funding has to be repaid over a number of years again from the revenue allocation. Ideally the increasing pressures on revenue maintenance should be recognised in the annual Revenue Support Grant calculation, but this is a matter for Government and outside local authority control. Revenue costs for street lighting continue to escalate due to above inflationary increases in connection charges set by United Utilities.

In general the headings that are funded through revenue budgets include:

- Structural damage on local roads
- Winter maintenance
- Footpaths, footways and road edges
- Carriageway markings, coloured and anti-skid surfacing
- Repair and replacement of refuges, kerb build-outs and bollards (often located in vulnerable locations)
- Surface repairs around speed cushions
- Street lighting maintenance
- Road Signing including bollards and lining
- Safety barriers and guard rails
- Minor (reactive) bridge maintenance
- Clearing encroaching vegetation/tree husbandry
- Street cleaning and weed control
- Highway drainage
- Highway trees, verges and landscape areas
- Grass cutting
- Public rights of way

Funding constraints have resulted in most Authorities focussing on short term repairs to satisfy their legal responsibilities for safety. Longer term works of repair and reconstruction tend to be deferred to a point beyond the optimum for treatment, by which time progressive deterioration

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has continued and costs have increased. The Transport Asset Management Plans being developed will clearly identify the funding required to ensure a sustainable highway infrastructure asset as is needed to redress this issue.

### **Best Value**

The Best Value process required service providers to engage with the communities for whom they were providing a service. Where Best Value reviews of transport related areas of service have been carried out in Greater Manchester the results invariably show that people are primarily concerned about the poor condition of the highway network and the quality of street lighting.

The current nationally determined Best Value Performance Indicators for highways maintenance have been adopted within this strategy as a means of identifying how well the maintenance strategy is performing against national, as well as local, targets. In addition a number of local indicators have also been devised and these will also inform progress towards our objectives.

### **Transport Asset Management Plans**

Councils are now required to produce Transport Asset Management Plans for their transport infrastructure and these will be a basic resource in the preparation of the LTP. As part of this process the location and condition of their highway related assets are essential considerations in the delivery of local services and must be considered as part of the overall planning process.

The Transport Asset Management Plan will contain inventory and condition information for the whole of the transport infrastructure. To prioritise the maintenance needs for adopted highways, Public Rights of Way and other assets to be included in the LTP, pavement management systems whole life costing techniques and economic rates of return will be used as appropriate

### **Code of Practice for Maintenance Management**

We have had regard to the national Code of Practice for Maintenance Management in preparing this strategy.

One important objective of the Code of Practice is to encourage the harmonisation of highway maintenance practices and standards which take into account user expectations. Our strategy encourages the use of consistent standards between adjacent Authorities, especially on the strategic routes that cross boundaries.

### **Bridges - Network Rail**

Network Rail owns many bridges carrying highways over railway lines. The assessment of these has been proceeding in parallel with the assessment of those owned by the Highways Authorities. However, whereas Authority owned bridges have now largely been assessed this is not the case for Network Rail bridges. This has made it difficult to predict the likely cost to particular Authorities should strengthening be required.

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The obligations for bridge strengthening is shared between Network Rail and Highways Authorities but these responsibilities are not identical. If a bridge meets Network Rail's load bearing obligations of 24 tons (as set out in the 1968 Transport Act) then it has no obligation to undertake strengthening work. The Highway Authority may, however, at its own expense, request Network Rail to strengthen the bridge to carry 44 tonnes. If a bridge fails to meet Network Rail's load bearing obligations then the cost of strengthening it to 44 tonnes is shared proportionately between the two, dependent on bridge condition.

The prioritisation and timing of bridge works for both Network Rail and Highways Authority owned bridges over live rail lines are generally governed by Network Rail, even where finance comes from highway sources. This is largely due to the need to undertake work during pre-arranged track possessions wherever possible, thereby keeping possession and other disruption costs to a minimum. In many cases it is years before rail possession dates can be identified.

Similar issues exist with the strengthening of road over track/canal bridges owned by British Waterways and Metrolink.

### Highway Retaining Walls

Authorities in the Pennine areas of the conurbation, particularly Oldham, Tameside, Rochdale, Bury, Stockport and Bolton have highways constructed along the sides of valleys. These have retaining walls supporting the adjacent land above the road and a burr wall on the other side supporting the road. Many of these date back to the Industrial Revolution and were not designed to carry today's weights of traffic, particularly those roads that now carry the principal road network, abnormal loads and QBCs. Similarly, problems exist with the stability of steep slopes either supporting or adjacent to highways.

Wall collapses, movement of failing walls and carriageway deformation are becoming increasingly common and costly to put right. The ability of these roads to fulfil their current function within the transport network is reducing but where resources are available it will be important to co-ordinate retaining walls strengthening and reconstruction work with carriageway surfacing works.

### Street Lighting

The level of funding for replacement and renewal of street lighting has generally not been sufficient to keep pace with the current rate of deterioration of the lighting stock. In addition, increasing demand for white lighting places pressure over and above the replacement of old stock. We have not been able therefore to meet the identified need to improve the network to meet latest standards and satisfy public expectations. Alternative funding sources have been identified within Greater Manchester. Manchester City Council, for example, has pursued a Private Finance Initiative to address the street lighting issue. However, generally changes in LTP funding are needed and Districts have completed the Department for Transport's street lighting inventory as a first step in identifying for Government the precise scale and nature of the street lighting problem.

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### 7.5 The Maintenance Strategy

Our strategy for maintenance within the LTP is to ensure our transport infrastructure meets the requirements of a modern, regenerated, attractive and competitive conurbation, and is in line with the strategic policies outlined in the LTP.

In addition the strategy aims to ensure that the maintenance is carried out at minimum cost in accordance with whole life costing principles outlined in the TAMP

Our priority is to deliver a safe, reliable, accessible and sustainable transport system for all users. Thereafter our focus is to implement maintenance works, in line with the Code of Practice on Maintenance Management, which set out to achieve the following:

- Prioritise expenditure based on local needs and achieving maximum value to the community but with reference to LTP objectives concerning economic and urban regeneration, social inclusion and environmentally sustainable transport;
- Ensure network availability and facilitate reliability for all users, particularly public transport, pedestrians and cyclists;
- Undertake regular reactive and cyclic maintenance to ensure the integrity of the fabric of the highway
- Ensure maximum accessibility for all users during maintenance works;
- Improve the integrity of the network;
- Maximise value to the community by seeking to incorporate integrated facilities (eg bus, cycle pedestrian facilities) as part of maintenance programmes;
- Assist maximum efficiency of the network by maintaining signage for all users;
- Minimise cost over time (by using whole life costing, condition projection and economic ranking techniques);
- Obtain maximum environmental benefit through specifications and methods of working.
- Provide safer streets by improving lighting on the network and maintaining it.
- Gradual shift of resources away from reactive works towards preventative and planned maintenance
- Reducing our liability on claims to enhance spend on the network

We will meet these objectives by pursuing the following measures:

- Maintaining bridges, structures, carriageways, footways, off road cycle routes, signage, Public Rights of Way and street lighting efficiently, effectively and to modern standards;
- Deploying a robust monitoring regime of public transport related operating standards;
- Maintaining high standards of facilities maintenance at bus stations and bus stops;
- Maintain enhanced and improved traffic management and safety measures provided through the LTP process to agreed standards.
- Maintain the efficient flow of traffic through the requirements of the 2004 Traffic Management Act;

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- Incorporating design features within maintenance works that achieve wider LTP objectives, including the provision of roadspace reallocation, enhancements to pedestrian crossings, disabled persons access, raised kerbs at bus stops etc.
- Employing environmental best practice in respect of site management, the recycling and safe use and disposal of waste material, hours of operation, use of locally sourced materials, improvement of air quality where practicable and responsible fleet management practices.

## 7.6 Prioritisation of Maintenance Works

Getting the balance right between planned, preventative and reactive maintenance is a critical issue and central to how we prioritise expenditure and this will be informed by the TAMPs. There will always be a call for emergency and reactive repairs. However, as the backlog of repairs is addressed the need to carry out reactive works should reduce, resulting in a greater proportion of expenditure being made available for planned and preventative works

Given that we have a significant backlog of maintenance work to tackle and limited resources to do it with, despite enhanced levels of funding recently being made available through the Government's Ten Year Transport Plan, it is necessary to prioritise how these maintenance resources are spent if the targets set out under the second Greater Manchester Local Transport Plan are to be achieved.

The various measures we have identified to achieve our maintenance objectives will take time to implement. The priority continues to focus on ensuring the network operates safely and meets our statutory and safety obligations. This will be especially significant in cases where claims or awards against Highways Authorities for alleged failures to maintain the network are unusually high but also in cases where bridges and structures on important routes or providing access to key centres are known to be at high risk of failure. Wider LTP objectives are very much dependent on the provision of a safe transport network.

Similar assessments will be undertaken by individual authorities for maintaining the environment for vulnerable users. These include for example:

- If they are in need of repair and are heavily trafficked by pedestrians and cyclists;
- If they fall on a network of strategic or cross-boundary routes or provide a Safe Route to School; and
- If they provide important links between areas of deprivation and public transport facilities, centres of employment or walking and other healthy activities, such considerations would suggest expenditure would be favoured on these routes.

The Greater Manchester Concise Pedestrian and Cycle Audit (COPECAT) offers a further tool to help guide practitioners in ensuring maintenance works they design and implement are capable of accommodating the particular needs of these users.

The future development of UKPMS as an objective tool for prioritising works, condition projection and economic development will be utilised where possible to ensure targets are met at optimum costs.

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In order for the Strategy to remain effective and to continue to contribute to achieving the long term aims of the LTP, works associated with the provision of bus and cycle lanes, traffic calming and vehicle control, and the quality of bus corridors will need to be regularly and adequately maintained or renewed, though additional resources will need to be found.

### 7.7 Measuring Effectiveness

In order to carry out these measures we have identified a range of tasks or actions that will impact on our maintenance programme of works.

The outcomes of our actions are explained in the causal chain diagrams that follow. It will be possible to measure our performance through target setting in each area of activity once a full assessment of baseline data has identified what information exists and what still needs to be gathered through the Transport Asset Management Plans.

The causal chain diagrams list a number of performance indicators for which baseline data already exists or will be gathered. In some cases we already have targets against which we can assess our performance, particularly Best Value Performance Indicators which have been set at the national level. We are working on developing local indicators in other areas of maintenance activity, assisted by the work of Greater Manchester Performance Management Group.

Much maintenance activity lends itself to measurement. It is easy to count the number of street columns replaced, the length of carriageway repaired etc... and to an extent we are already doing this through the Best Value monitoring regime.

However, we are required to measure the outcomes of what we are doing. Where maintenance elements are employed it can positively contribute to the outcomes of many integrated transport schemes but cannot necessarily be measured as a separate item.

Causal chains are an effective way of showing the inter-relatedness of various components of strategy development and actual implementation. They are used in the Local Transport Plan to show the link between our programme and our objectives and to provide a performance-monitoring framework.

A new causal framework diagram can be found at Appendix 1. We have produced three causal chains to explain our activity in the following areas:

- Highways maintenance (including street lighting and urban traffic control)
- Bridges and Structures Maintenance
- Public Transport Maintenance

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## 7.8 Action Plan

To deliver the LTP maintenance strategy and carry out the measures we have identified as necessary to achieve desired and measurable outcomes we have prepared an action plan of specific tasks and activities. These are outlined below. They can be found also in the causal chain diagrams in Appendix 1 where the interconnectedness of the various components of the whole strategy is well illustrated.

We will carry out the following specific actions:

### Highway Maintenance (including non-carriageway highway)

Objective	Actions
Safe network of highways	<ul style="list-style-type: none"> <li>● Comply with statutory obligations</li> <li>● Address response times to reports of defects</li> <li>● Undertake condition surveys for the whole of the classified road network</li> <li>● Collect UKPMS condition data/ SCANNER type surveys for carriageways.</li> <li>● Maintain carriageway edges for vulnerable and other users</li> <li>● Maintain footways to a high standard, (including standards of street cleaning), particularly for heavily trafficked or important pedestrian links</li> <li>● Maintain carriageways features which impact on motorcycle and cyclists safety, e.g raised ironworks etc</li> <li>● Ensure street furniture and signs are kept in a safe serviceable condition.</li> <li>● Maintain signage, markings and other street furniture to a high standard to ensure highway users are correctly informed of requirements</li> <li>● Maintain and improve street lighting as appropriate</li> <li>● Investigate how to improve user friendliness and publicity of “hotlines” and other mechanisms for reporting highway defects</li> <li>● Liaise with other stakeholders to encourage safety provision on those parts of the network which do not form part of the adopted highway e.g. pedestrian and cycle routes through parks, off road cycle ways, canal towpaths, etc.</li> <li>● Maintain highway drainage systems to maintain the structure of the highway and to reduce flooding risk to property and ensure user safety.</li> <li>● Carry out winter maintenance in accordance with the relevant code of practice.</li> <li>● Maintain verges and highway trees to a safe standard. i.e. visibility splays remove trees, roots, branches and vegetation that are a safety hazard etc.</li> </ul>

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Objective	Actions
	<ul style="list-style-type: none"> <li>● Develop longer-term maintenance plans as part of the Transport Asset Maintenance Plan.</li> <li>● Maintain Steps in appropriate manor.</li> </ul>
Ensure network availability	<ul style="list-style-type: none"> <li>● Monitor condition of the Principal Roadnetwork</li> <li>● Focus maintenance expenditure on areas of the network in accordance to condition, usage and requirements of the local stakeholders and the Principal Road Maintenance Prioritisation Matrix (Appendix 2).</li> <li>● Programme all works to minimise whole life cost of maintenance and to minimise disruption to the network</li> <li>● Maximise roadspace available during maintenance procedures and consider use of off peak maintenance to minimise delays</li> <li>● Co-ordinate works with utility companies to minimise disruption and encourage co-ordination between utility companies in accordance with the requirements of the Traffic Management Act 2004</li> <li>● Develop programmes relevant to local stakeholders.</li> <li>● Improve liaison with stakeholders (including bus, freight operators, rail and tram operators) on planned and emergency highway maintenance works, and investigate with utility companies how information about non-emergency streetworks can be improved and disseminated to the public in advance</li> <li>● Meet obligations under the Countryside and Rights of Way Act in respect of inspections and removal of obstructions from rights of way</li> <li>● Integrate maintenance works with other highways improvement and Public Utility works</li> <li>● Plan works, including consideration/application of off-peak maintenance operations, to minimise user delay</li> <li>● Ensure adequate signing around streetworks, especially for pedestrians and vulnerable users, and traffic segregated routes</li> <li>● Employ best known weather forecasting techniques to maximise opportunities to plan winter gritting to ensure all key routes are passable</li> <li>● Where appropriate co-ordinate works between neighbouring authorities</li> <li>● Promote network availability of those parts of the network which do not form part of the adopted highway e.g. pedestrian and cycle routes through parks, off road cycleways, canal towpaths, etc.</li> <li>● Improve training and skill levels for staff employed on roads that will enhance whole life expectancy.</li> </ul>
Achieve network integrity	<ul style="list-style-type: none"> <li>● Ensure consistency of drop crossing provision on drop crossings on pedestrian and cycle routes and other areas</li> </ul>

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Objective	Actions
	<ul style="list-style-type: none"> <li>● Ensure adequate and consistent standards of route signing across the network particularly on PRN, strategic cycle network and key pedestrian links</li> <li>● Adopt consistent standards of surfacing in bus lanes, cycle and walking routes (including Safe Routes to School and key walking routes that join with other authorities)</li> <li>● Liaise with adjoining authorities and service providers, public transport operators and other key stakeholders on standards, programming, signing and co-ordination of works</li> </ul>
Ensure reliability of network	<ul style="list-style-type: none"> <li>● Provide information to stakeholders (i.e. public transport/freight operators) about planned programmes of works through a variety of media, including website updates, roadworks bulletins and direct communication</li> <li>● Remove diversions/lift restrictions/end closures as soon as possible after completion of works</li> <li>● Lobby Government for tighter controls including the ability by Local Authorities to implement a more comprehensive inspection of utility company works</li> <li>● Adopt maintenance designs that accommodate needs of people with mobility impairment, including the use of dropped crossings and the removal of street clutter (non-essential or obsolete street furniture) and the appropriate location of new items to avoid unnecessary obstacles,</li> <li>● Incorporate consideration of the needs of cyclists into highway inspections</li> </ul>
Maximise value to the community	<ul style="list-style-type: none"> <li>● Incorporate improvements to facilities for public transport, cyclists and pedestrians as part of standard maintenance works (e.g. white lining, dropped kerbs at crossings, raised kerbs at bus stops)</li> <li>● Use noise reducing surfaces in noise sensitive locations</li> <li>● Adopt environmental best practice, including on-site recycling and use of recycled materials, minimising transfer to landfill (and then only using licensed sites), sourcing materials locally where possible</li> <li>● Adopting maintenance designs appropriate to the character of the area, for example in Conservation Areas or areas attracting large numbers of visitors</li> <li>● Undertake a review of the public rights of way network to identify locations where work could be carried out to increase the suitability for the partial sighted and other disadvantaged and wheelchair users</li> <li>● Encourage low maintenance planting and only in areas that are easily serviced and present no potential long term damage</li> </ul>

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Objective	Actions
	<ul style="list-style-type: none"> <li>Continued use of the GM Concise Pedestrian and Cycle Audit (COPECAT) to ensure specific needs of vulnerable users are taken into account during maintenance works</li> <li>Further promote the substitution of white lighting to reduce fear of crime in the community.</li> </ul>
Improve accessibility across network	<ul style="list-style-type: none"> <li>Within areas of social deprivation ensure that recognition is given to physical links to the wider community such as maintenance of bus routes, cycle routes and pedestrian links</li> </ul>

### Bridges and Structures Maintenance

Objective	Actions
Safe network of bridges and structures	<ul style="list-style-type: none"> <li>Comply with statutory obligations</li> <li>Complete bridge assessment programme</li> <li>Identify defects through routine inspection</li> <li>Implement strengthening works</li> <li>Pursue joint approach on Network Rail bridges</li> <li>Investigate joint approach to co-ordinated programme of bridge strengthening over phase 3 Metrolink track</li> <li>Investigate possible alternative funding sources of bridges and structures maintenance to supplement existing LTP resources such as council prudential borrowing and development contribution.</li> </ul>
Ensure accessibility on all LA owned bridges and structures	<ul style="list-style-type: none"> <li>Maintain maximum roadspace during works</li> <li>Integrate works with other highways schemes</li> <li>Carry out forward planning of works to minimise periods of traffic management and user delay</li> <li>Carry out risk assessment of bridges to identify effects of closure against chances of bridge failure</li> </ul>
Ensure network reliability	<ul style="list-style-type: none"> <li>Provide information to stakeholders (i.e. public transport/freight operators) about planned programmes of works</li> </ul>

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Objective	Actions
	<ul style="list-style-type: none"> <li>● Provide information to stakeholders about planned weight restrictions</li> <li>● Remove diversions/lift restrictions/end closures as soon as possible after completion of works</li> </ul>
Improve integrity of network	<ul style="list-style-type: none"> <li>● Set up mechanism for inter-authority liaison on maintenance works on strategic routes and PRN</li> <li>● Manage maintenance programmes to ensure co-ordination of different projects on the network</li> <li>● Establish common standards to parts of network with a strategic role (e.g. PRN, QBCs, strategic cycle network etc)</li> <li>● Develop sub strategy for highway slopes and embankments</li> </ul>
Maximise value to the community	<ul style="list-style-type: none"> <li>● Incorporate cycle facilities (in appropriate locations) as part of standard maintenance practice where there is a new bridge or upgrade in order to have improvement.</li> <li>● Make improvements to pedestrian environment on improved bridges</li> <li>● Upgrade street lighting alongside bridges and structure as part of maintenance project</li> <li>● Install noise reducing surfaces in noise sensitive locations</li> <li>● Adopt environmental best practice, including on-site recycling and use of recycled materials, minimising transfer to landfill (and then only using licensed sites), sourcing materials locally where possible.</li> </ul>

## Public Transport

Objective	Actions
Safe and comfortable waiting environment	<ul style="list-style-type: none"> <li>● Implement regular planned preventative maintenance</li> <li>● Maintain bus stations according to 5 year programme</li> <li>● Clean and maintain bus shelters, retaining or enhancing existing levels of passenger comfort, (unless special a locations circumstances require certain facilities to be removed)</li> <li>● Adopt higher maintenance standards for QBC stops</li> <li>● Pursue partnerships between PTE, LAs and Police to reduce vandalism</li> </ul>
Private sector operators maintain a safe, efficient and reliable public transport network	<ul style="list-style-type: none"> <li>● Ensure subsidised services operate according to contract</li> </ul>

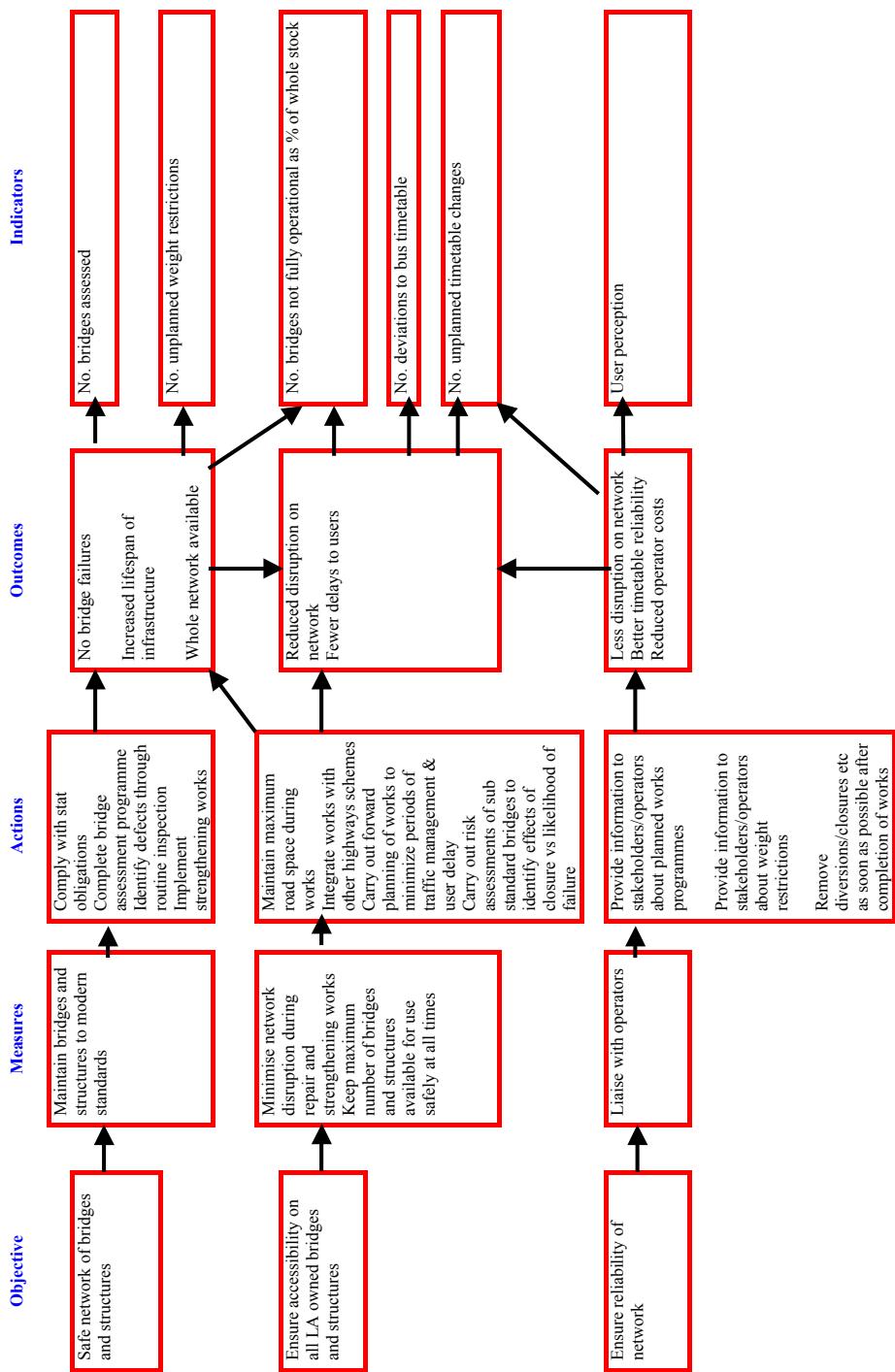
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Objective	Actions
	<ul style="list-style-type: none"> <li>● Agree maintenance obligations for QBC operators</li> <li>● Lobby Network Rail and Metrolink to ensure system is maintained to high standard</li> <li>● Apply SQUIRE monitoring regime at rail stations</li> <li>● Apply Metqual quality standards at Metrolink stops and to tram network</li> <li>● Keep quality standards under review to reflect industry improvements and changing user expectations</li> </ul>
<p>Maintain road network for efficient and comfortable operation of bus services</p>	<ul style="list-style-type: none"> <li>● Undertake off-peak maintenance in appropriate circumstances</li> <li>● Minimise disruption on QBC network</li> <li>● Inform operators of potential disruption to services</li> <li>● Maintain route availability</li> <li>● Adopt higher and consistent standards of maintenance on QBC network, including surface ride quality, signs and lines, surface colour and passenger information</li> <li>● Undertake regular and frequent inspections of QBC</li> <li>● Adopt rapid response to UTC failures on QBC and at junctions with bus priority</li> </ul>

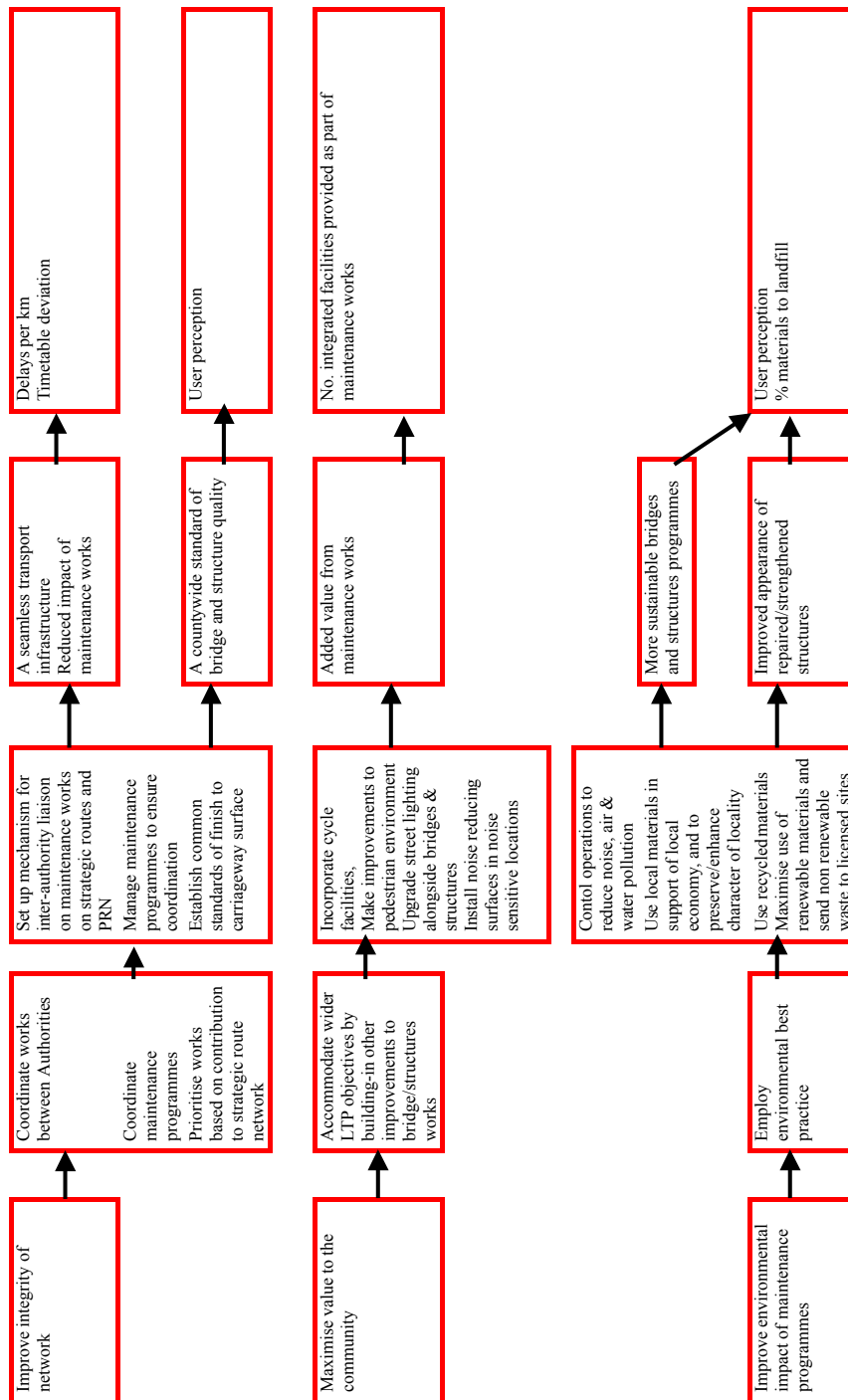


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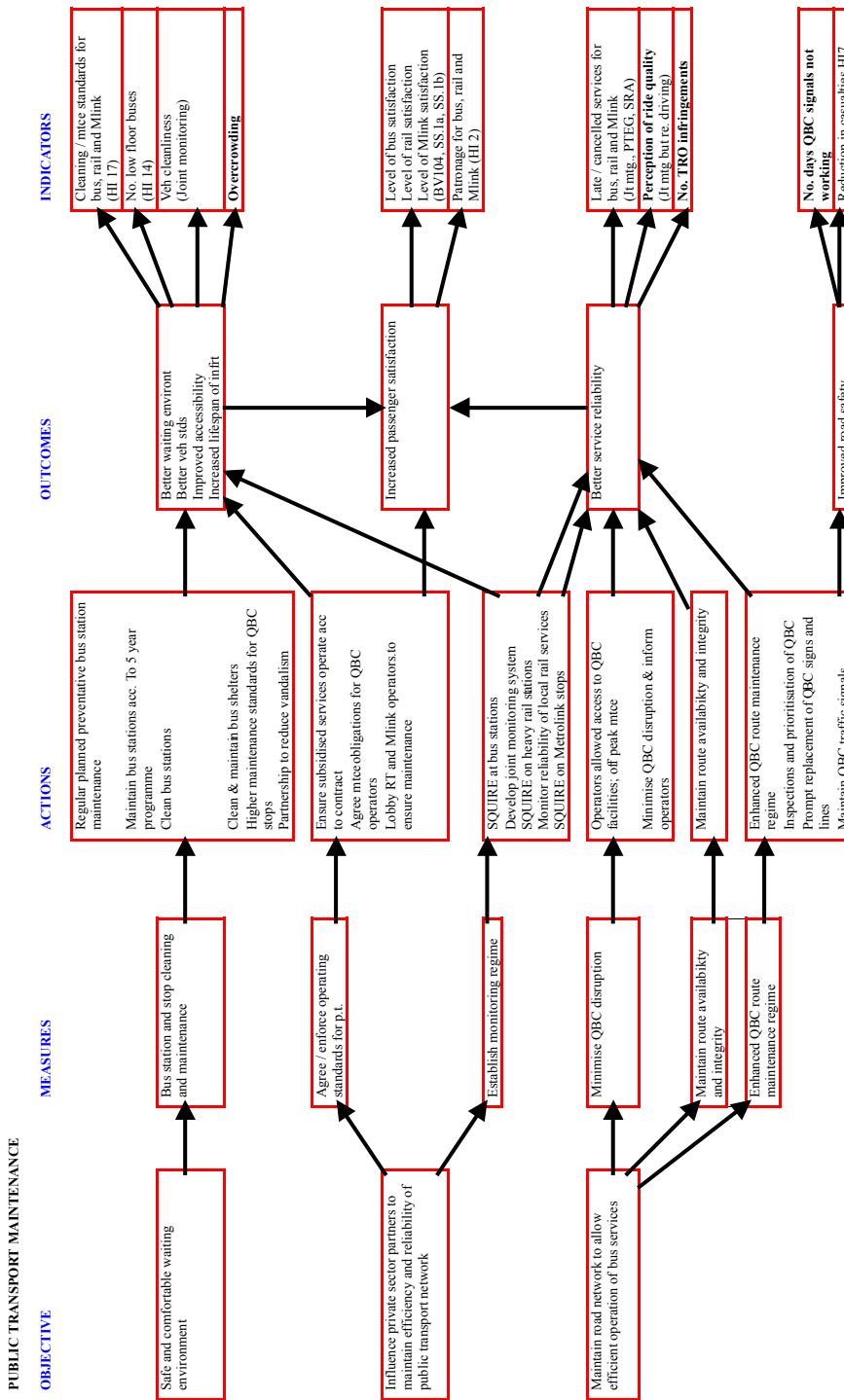
## BRIDGES & STRUCTURES MAINTENANCE



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## 7.10 Appendix 2: Principal Road Maintenance Prioritising Matrix

### Appendix 2

#### Principal road maintenance prioritising matrix

Factor		Scoring system
1)	Location	Primary routes Strategic routes Principal roads
2)	Structural repairs programme	Incorporates a highway structure within the five year programme of identified needs
3)	Bus routes	Within a Quality Bus Corridor On a frequent bus route On an infrequent bus route
4)	Freight route	On a designated freight route On an abnormal load route
5)	Traffic flows	Over 2.0 "million standard axles" per year Between 1.0 and 2.0 "msa" per year Between 0.5 and 1.0 "msa" per year Between 0 and 0.5 "msa" per year
6)	Local Transport Plan aims	Cycle lane provision Noise reducing surfacing Significant re-use of materials Traffic Management measures Associated footway works (i.e. up to a maximum of 10 points)
7)	Riding Quality	Poor Satisfactory Good Excellent
8)	Local Scheme Priority	High Medium

The full table can be found in "Capital Maintenance: The Greater Manchester Approach – Greater Manchester Local Transport Plan 2001/02 – 2005/06"

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