

Traffic Management Act 2004
Network Management
Duty Guidance

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November 2004

Foreword

The Government is committed to tackling congestion on the road network. The Traffic Management Act 2004 gives local traffic authorities new powers and a duty to keep roads clear and traffic moving.

The Government's 2004 White Paper, *The Future of Transport*, emphasises the importance of active and co-ordinated management of the road network. The network management duty established under the Act reinforces this. The new duty will take effect from January 2005, and authorities will be able to focus more sharply on tackling the causes of congestion and disruption.

Network management is one element of an authority's transport activities and should complement other policies and actions. As such, local traffic authorities should incorporate desired outcomes and policies under the network management duty within Local Transport Plans in order to achieve a coherent approach.

The *Network Management Duty Guidance* includes techniques of network management providing a practicable and good practice approach to performing the duty.

This guidance was prepared by a working group composed of key stakeholders, including those representing local authorities and utility companies and an advisory group that comprised representatives from road user groups. It was also the subject of extensive consultation with interested organisations. I should like to thank those involved for their hard work.

I hope that this new guidance will help authorities to perform the duty, for the delivery of a better-managed road network that we all want to see.



Charlotte Atkins
Parliamentary Under Secretary

November 2004



CONTENTS

	Page
INTRODUCTION	3
Context	3
The Network Management Duty	4
The Traffic Manager requirement	5
Strategic Approach	6
SCOPE OF THE DUTY	6
Main considerations	6
Managing other issues	7
Monitoring and evaluation	8
BROAD PRINCIPLES OF NETWORK MANAGEMENT	9
Common requirements	9
A whole authority approach	10
Working with partners and stakeholders	11
Managing works in the street	12
Information gathering and dissemination	12
ISSUES FOR PARTICULAR CIRCUMSTANCES	13
The Highways Agency	13
London	13
GOOD PRACTICE ADVICE ON TECHNIQUES AND APPROACH	15
Identifying and managing different road types	15
Monitoring the road network	16
Identifying locations where regular congestion occurs	16
Co-ordination and direction of works	17
Dealing with planned events	18
Management of incidents	19
Making the best use of technology	20
Managing parking and other traffic regulation	21
Enforcing road traffic regulation	22
Accommodating essential service traffic	22
Regular reviews of the network	22
Consultation and engagement with stakeholders	23
Provision of travel information to road users and the community	23

Network Management Duty Guidance

1. This guidance is issued by the Secretary of State for Transport under Section 18 of the Traffic Management Act 2004 (“the Act”). It applies to Local Traffic Authorities (LTAs) in England, which must have regard to this guidance when exercising their network management duty under the Act.

INTRODUCTION

Context

2. Making the best use of our current road network is important for both economic vitality and society in general. Roads facilitate the transport of people and goods, provide access to homes, businesses and other destinations, and provide public space where people shop, socialise or relax. Under the surface lies the infrastructure for the communications and services that underpin a modern society.
3. The provision of additional road space, especially in our towns and cities, is often impractical and undesirable. In most cases the local road network will be a finite resource with legitimate competing pressures from those that use it. This needs to be managed effectively.
4. Road users may have differing expectations. Reliable journey times are important to the majority of users. Added to this are the needs of the LTAs and the utilities to occupy the road in order to maintain and upgrade their equipment for the benefit of their customers. For everyone, the ability to undertake their activities in safety remains a priority.
5. Clearly potential conflicts need to be carefully handled and a co-ordinated, proactive approach is necessary to manage the network.
6. Local authorities play an important role in this. Management of the road network in England is split: the Highways Agency is responsible for the national motorways and trunk roads; local roads, comprising 97% of the network, are the responsibility of 116 metropolitan and shire district, unitary and county authorities, Transport for London (TfL) and the London Boroughs.
7. These authorities already have a range of powers and duties under which they maintain and improve the network, and manage its use and the activities taking place on it. These include the Highways Act 1980 (“the 1980 Act”) principally covering the structure of the network; the New Roads and Street Works Act 1991 (“the 1991 Act”) covering utility street works; and the Road Traffic Regulation Act 1984 regulating the activities of road users.
8. The Act adds to these powers. It also adds the network management duty, which requires local traffic authorities to do all that is reasonably practicable to manage the network effectively to keep traffic moving.

The Network Management Duty

9. Part 2 of the Act places a network management duty on LTAs. Section 16 (1) states:

“It is the duty of a local traffic authority to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives:

 - (a) securing the expeditious movement of traffic on the authority’s road network; and,
 - (b) facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority.”
10. Section 31 of the Act specifically states that the term “traffic” includes pedestrians. So the duty requires the LTA to consider the movement of all road users: pedestrians and cyclists, as well as motorised vehicles – whether engaged in the transport of people or goods.
11. The road network means the network of roads for which the authority is the traffic authority under the Road Traffic Regulation Act 1984 (c.27).
12. The overall aim of the “expeditious movement of traffic” implies a network that is working efficiently without unnecessary delay to those travelling on it. But the duty is also qualified in terms of practicability and other responsibilities of the authority. This means that the duty is placed alongside all the other things that an authority has to consider, and it does not take precedence. So, for example, securing the expeditious movement of vehicles should not be at the expense of an authority’s road safety objectives. But, the statutory duty reflects the importance placed on making best use of existing road space for the benefit of all road users.
13. Road users do not generally view the road network as divided between local authorities. They use the network as a whole, irrespective of who is responsible. Under the duty, not only does an authority need to consider its own network, but also the effects of its actions on the networks of others. This is to prevent either results being achieved by moving the problem elsewhere, or conflicting policies causing problems across administrative boundaries. But more positively, it is to achieve the best operation of the network as a whole, especially in conurbations where networks of adjacent authorities can be highly inter-related.
14. The Act defines the action that an authority may take in performing the duty as including anything that would contribute to the more efficient use of the network, or that would avoid, eliminate or reduce congestion or disruption.
15. The duty is not limited to the actions of the traffic department within an authority. Local authorities will need to consider the duty when exercising any power that can affect the road network. Although the duty is framed by reference to a “local traffic authority”, it extends to the authority exercising its powers as highway authority and street authority under the 1980 Act and 1991 Act, and indeed any power to regulate or co-ordinate the uses made of any road.

16. Section 17 of the Act sets out the arrangements that an LTA must make to manage its own road network. These include the appointment of a Traffic Manager, and establishing processes to identify and, where reasonably practicable, deal with things that could cause congestion and disruption. Arrangements must also include determining specific policies and objectives for the different roads in their network, and monitoring the effectiveness of their arrangements and actions in meeting the duty.
17. So, under the duty local traffic authorities have to take account of the needs of all road users, take action to minimise, prevent or deal with problems, and consider the implications of decisions for both their network and that of others. Inevitably, choices will have to be made and priorities set, both within network management and within the authority's wider activities. But the duty, and the objective embedded in it, provides a framework within which those decisions are taken. This guidance sets out in more detail what this will entail for a LTA.
18. Part 2 of the Act came into force on 4 January 2005 and from this date local traffic authorities have the duty in sections 16 and 17 of the Act to manage their local road network with a view to achieving certain objectives. Local authorities should not delay in taking up actions to fulfil their responsibilities under Part 2 and to manage expectations of the business communities and general public of the impact of the network management duty. Further guidance on the criteria that the Secretary of State proposes to apply in deciding action at the stages of intervention under section 27 of the Act will be issued shortly.
19. Such provisions of the Act as have not as yet come into force will be brought into force as early as is practicable.

The Traffic Manager requirement

20. The Act requires that a Traffic Manager be appointed to perform the tasks that an authority considers necessary for meeting the duty. This is a statutory post and all LTAs must have such an appointed person, who is to be known as the Traffic Manager. The post holder may carry other responsibilities for the authority. The key outcome for the authority is that it will need to deliver a co-ordinated, planned, and effective response to the network management duty across the whole organisation, and to ensure that agreed actions are implemented.
21. It is for an LTA to decide the level of seniority of the Traffic Manager post, whether it is a stand alone post or is combined with other duties, whether it could be filled by an existing employee and what resources the Traffic Manager will require. In deciding this, the authority has to take into account how far the role will require the Traffic Manager to consider and influence all the functions of the authority and decisions made by it that could have an impact on traffic movement. That, in turn, will affect the status and responsibilities the Traffic Manager would be given.

22. In practice it is likely that the Traffic Manager would provide a focal point within the local authority, championing the need to consider the duty in all areas of work. As every LTA is required to have a Traffic Manager that person should be well positioned to work closely with their peers in other authorities and foster co-operation with District Councils (where relevant) and the Highways Agency and with other partners and stakeholders such as the Police, utilities, bus operators etc.

Strategic Approach

23. The Government's 2004 White Paper *The Future of Transport* emphasises the importance of the active and co-ordinated management of the road network. The network management duty established under the Act reinforces this.
24. The strategies and planning undertaken to meet the duty must be consistent with wider local, regional and national policies and guidance and the overall policies of local authorities.
25. Network management is one element of an authority's transport activities and should complement other policies and actions. As such, LTAs should look to embed desired outcomes and appropriate policies and plans under the network management duty within Local Transport Plans (LTPs) in order to achieve a coherent approach.

SCOPE OF THE DUTY

Main considerations

26. The LTA has to consider the needs of all road users, including utilities, when carrying out its network management duty. The LTA has to manage the road space for everyone, and make decisions about trade-offs between competing demands according to its policies and the particular circumstances of the part of the network being considered.
27. The duty to identify current and future causes of congestion and disruption, and to plan and take action accordingly, will mean that authorities will need to have access to the information needed to do this. The needs of utilities (and the authorities themselves) to work on roads, and the wide range of road users can all affect network capacity. So it is important that LTAs promote pro-active co-ordination of the network, adopt a planned, evidence-led approach to known events, and develop contingencies for the unforeseen.
28. This will mean putting arrangements in place to gather accurate information about planned works or events, consider how to organise them to minimise their impact, and agree (or stipulate) their timing to best effect.

29. Some situations, such as unforeseen weather conditions, security alerts and other incidents are outside a local authority's control. But again, in meeting the duty the LTA must establish contingency plans for dealing with these promptly and effectively, as far as is reasonably practicable. It is the LTA's responsibility to ensure that all parties involved in making these arrangements work are fully consulted during their development, and have the information they need to put them into practice quickly.
30. With increasing pressure on road networks LTAs will also need to identify trends in traffic growth on specific routes and put in place policies for managing incremental change.
31. The duty on an LTA does not stop at its borders. Each is required to facilitate the expeditious flow of traffic on the networks of others. In practice, for an LTA this will mean identifying those authorities that could be affected by their actions and making arrangements for managing this, even though they may not be immediately adjacent authorities. These would include consultation on initiatives, the sharing of information needed to meet the duty, and processes for ensuring that policies are consistent.
32. In order that traffic can move as freely as possible across administrative boundaries and in order to minimise impacts on traffic wherever they occur, it is important that all of those traffic authorities with an interest agree joint working arrangements.
33. More detailed guidance on how this would work where the Highways Agency is responsible for roads in an area, and how the London Boroughs and TfL should operate together are set out in the section entitled "Issues For Particular Circumstances".

Managing other issues

Wider responsibilities

34. As the network management duty is not at the expense of the LTA's other duties and objectives it is clearly important for an authority to continue to obtain Best Value for its expenditure.
35. Nothing in the Act requires authorities to disregard considerations of value for money and the proportionality of any given response. Section 17(4) explicitly excludes anything that appears to have an insignificant effect on the movement of traffic. And the concept of practicability would include affordability.
36. Safety and environmental considerations remain important as does the operation, maintenance, repair and provision of services. The duty takes account of this. For example, measures to secure the expeditious movement of traffic should always be safe for all road users, particularly pedestrians, cyclists and motorcyclists. Clearly in meeting their duty LTAs also need to consider their other responsibilities such as those under environmental protection legislation, the Disability Discrimination Act, Health and Safety and planning legislation.

Management of demand

37. Historic trends suggest that pressure on road networks, and in many cases, traffic congestion is likely to grow each year as the country becomes more prosperous and more people can afford to own cars. Car usage has also increased as motorists travel further to work and for leisure purposes. LTAs will need to consider the best ways to deal with any prospective rise in demand.
38. Government and local authorities have been looking at ways of reducing the demand so as to moderate or stem traffic growth even when the economy is growing. This has resulted in changes to land use plans, the establishment of school and workplace travel plans, and the promotion of tele-working amongst other things. More directly this has led to the desire to make cycling and walking safer and more attractive and the encouragement of public transport through ticketing schemes or better information, bus priority and quality initiatives, and congestion charging. These can all help to secure the more efficient use of the road network and successful measures can have an impact on its operation. They should not be seen as being in conflict with the principles of the duty and it is for the LTA to decide on the most appropriate approach for managing demand on their own network.
39. Primarily, the network management duty is about dealing efficiently with the traffic presented on the network – both now and in the future – and the various activities that are causing or have the potential to cause congestion or disruption to the movement of traffic. There is a degree of overlap in that some of the measures suggested above to reduce demand involve traffic management action, e.g. parking restraint, but they are largely complementary and should appear alongside network management arrangements in LTPs.

Monitoring and evaluation

40. LTAs are required to monitor the effectiveness of their processes and assess the implementation of procedures and strategies in managing the road network.
41. The ultimate aim is to improve network performance, and authorities should look to identify indicators that demonstrate this and are relevant to their network. As far as possible these should be taken from the indicators used in the LTP process. But where these are not sufficient to show the full range of performance against the duty, an authority should look to others that best reflect local circumstances.
42. Monitoring the road network should be sufficient to identify where there are causes of disruption that have an effect on the movement of large numbers of pedestrians and cyclists in a locality or at a particular time.
43. Clearly the performance of a network can be affected by factors outside the control of the traffic authority. Some may be influenced by an authority's wider policies and responsibilities such as development control, or the provision of attractive alternatives to encourage modal shift. Others may be beyond the reach of an authority altogether. There is also the need to establish how well placed an authority is to respond to future demands.

44. For these reasons monitoring and evaluation needs to cover the organisational structures and decision-making processes put in place to meet the duty, as well as the outcomes.
45. The intention is that the duty itself will be sufficient for all LTAs to manage their networks efficiently. But given the importance of getting this right, the Act does contain powers for the Secretary of State to intervene where an authority is failing to meet the duty.
46. The Act requires the Secretary of State to publish guidance about the criteria that he proposes to apply for the purpose of deciding whether formally to intervene under the powers of the Act by giving an intervention notice or making an intervention order. This will set out in more detail the monitoring and evaluation requirements, along with advice on the choice of indicators.
47. The arrangements established by LTAs for fulfilling the duty should be reflected in their Local Transport Plans (Local Implementation Plans for London Boroughs).

BROAD PRINCIPLES OF NETWORK MANAGEMENT

48. The network management duty applies to all LTAs but the issues they each face may differ. In some areas congestion is a problem and its reduction or prevention is, therefore, one of the major considerations in managing the network. In other areas there may be little congestion but the lack of alternative routes makes careful management of works and contingency planning on these roads a necessity.
49. It is for each LTA to decide on appropriate courses of action that are consistent with their wider policies and objectives.

Common requirements

50. Whilst the challenges faced will differ depending on local circumstances, there are things that are common to all authorities that are required to be managed effectively. As part of the duty it is important that each LTA has systems in place to deal with:
 - the normal day to day running of the network including managing its own works and other activities on the road as well as those of utilities and others, and managing where appropriate those users moving about on the network;
 - contingency plans to allow a rapid response to accidents and emergencies, taking account of the relative importance of different roads to the various road users; and,
 - regular or one off “events” such as carnivals, street markets, sporting fixtures and seasonal weather conditions.

51. Authorities are expected to have a clear understanding of the problems facing the different parts of their network and the needs of different road users, along with balanced policies for addressing them. It is for the local authority to decide the levels of priority given to the different road users on each road. Although priority may be given to one mode over another on certain roads, for example pedestrians in town centres or to buses through roadspace re-allocation on a radial road, an authority should take a balanced approach to overall network management.
52. It may also be relevant to take into consideration seasonal variations of the network and to plan relevant courses of action for different times of year. This may be the case in towns or rural areas that attract tourists and holidaymakers or have a high number of them travelling through their network.
53. This leads to the need for a structured approach to the allocation of road space to be developed for different routes or types of route in the authority's road network. This also has to take into account other traffic management initiatives such as traffic calming, improving town centres, public transport priority, and the LTA's road safety plan.
54. To meet the duty LTAs will not only need to have developed this sort of approach for their road network, but also to keep it under regular review.

A whole authority approach

55. The duty requires consideration of anything that affects the co-ordination or regulation of the flow of traffic, not just the activities of the highways department and third parties. As such, authorities should look to ensure that the whole organisation is aware of the duty and the implications for them.
56. By virtue of the Act an authority will need to ensure that all its departments are aware of the need to consider the implications of their actions against the authority's strategy for meeting the duty. For example, if an authority lets a contract that allows refuse collection on a route in rush hour it would be expected to demonstrate that due regard had been given to the duty beforehand. For the same example, where in shire areas the district is responsible for that service the LTA should make them aware of the duty, and suggest conditions to the contract that would minimise the impact on road users.
57. LTAs that are in two-tier areas should liaise with all the relevant departments across all authorities whose work affects the road network and ensure that they are aware of the duty and their impact on the movement of traffic. Co-operation and communication should be the principal mechanisms in these situations where the LTA does not have powers of direction over certain activities that have an impact on the network, for example planning consents.

Working with partners and stakeholders

The Police

58. Both Police and LTAs have responsibilities for the management of traffic on the road network. Some of these responsibilities may change as local authorities take on civil enforcement of parking and other traffic offences. The best outcome will be achieved by LTAs and Police working together to establish which activities should be carried out by each organisation, and which are best carried out together.
59. There is a need for LTAs to consider how best to involve the Police in decision-making processes. Sharing information about planning and contingencies can improve the quality of the end product and ensure that everyone is clear of their role and responsibilities in the event that it needs to be put into practice.
60. For an LTA the Police also offer a valuable source of information which can be used to manage the network and respond to events. Authorities will need to determine how best to utilise this, and the processes that are required to ensure that it is readily available.

Passenger Transport Executives and Bus Operators

61. Although Passenger Transport Executives (PTEs) are not bound by the requirements of the Act, as the promoter and co-ordinator of public transport services they play an important role in the major conurbations. They are responsible for implementing the policies set out in the LTP and the bus strategy that forms part of it, on which the LTA would have been consulted.
62. LTAs need to consider how best to involve PTEs and bus operators to ensure the most efficient use of the network, both for the bus services and for other road users. Examples would be to ensure that they had advance warning of works that could affect bus services and consulting them on future activity in order to minimise disruption; and to assist PTEs with implementing bus priority measures set out in the LTP.
63. Where necessary, LTAs should work with the relevant parties, including Traffic Commissioners and bus operators, in formulating and implementing improvement plans for bus punctuality.

Public Consultation

64. The LTA should seek the views of residents, local businesses and the different road users both when deciding which policies on network management to adopt and when monitoring whether these policies are delivering the required outcomes. Such consultation should preferably be part of the authority's overall public consultation programme.

Managing works in the street

65. Works by utilities, developers and the LTA on the road network have a significant impact on traffic. Under the duty an authority would need to ensure that works are carried out with sufficient urgency, given the congestion and disruption they cause. Works should not be looked at in isolation. Consideration will need to be given to the effect of concurrent schemes on the road network, how they may affect established contingency plans, or their impact on other known activities.
66. Authorities already have powers under the 1991 Act to regulate utilities' works. The Traffic Management Act tightens the existing regulatory framework within which utility companies are permitted to dig up local roads, giving authorities more powers to co-ordinate, control and direct works effectively with the aim of minimising disruption.
67. Skips, scaffolding and other items (such as building materials) are often left in the roads and footways during building works to properties adjacent to the highway. These can cause inconvenience and obstruction to road users. Authorities should, when giving permission for such items to be placed on the highway, ensure that the inconvenience and obstruction to road users is kept to a minimum, taking particular account of pedestrians, cyclists, motorcyclists and people with sensory or mobility difficulties. It should also ensure that adequate signing and other information is provided, any diversion arrangements are adequate and the works are completed within a reasonable, agreed period.
68. Parity is an important principle in exercising the duty. Authorities must lead by example, applying the same standards and approaches to their own activities as to those of others.

Information gathering and dissemination

69. Gathering and considering information will be a key element of an authority's work in meeting the duty. This information can provide evidence of the need to adopt particular policies, their success or otherwise, and assist in the operational management of the network.
70. Consideration should also be given to the methods of sharing the information with road users. As well as being well received, timely and readily accessible information can result in better use of the network through influencing journey choice or helping people find the best route. In the case of organisations such as the emergency services, PTEs etc, adequate notice of activities that can affect their operations are vital.
71. Authorities should establish the needs of these different groups and consider how best to disseminate information available to them to deliver improved management of the network. Processes should be put in place to deliver this.

ISSUES FOR PARTICULAR CIRCUMSTANCES

The Highways Agency

72. As of March 2004, the Highways Agency (HA) network of motorways and trunk roads represents approximately only 3% of the road network in England but carries a third of all traffic and two thirds of all heavy freight traffic. The network is of strategic importance and its efficient operation is fundamental to the economic well-being of the country. The HA network passes through, or is adjacent to, many authorities' areas, including TfL and some of the London Boroughs. Activities on the local road network can significantly affect traffic on the HA's network and the reverse can also be true. In considering arrangements for meeting the duty, all LTAs need to specifically consider the effects of their actions on the motorway and trunk road network and the measures that could be taken to mitigate any adverse effects.
73. Whilst the duty is not applied directly to the HA through the Act, the Agency has already been given an equivalent remit by the Secretary of State to manage better its existing network and to reduce the impact of congestion and congestion related delays. This includes the HA facilitating the movement of traffic on local road networks.
74. The HA and LTAs will need to work together to consider how to implement the requirement in the Act to facilitate movement across the entire network. LTAs will need to give due regard to HA's role in providing strategic operational co-ordination of the motorway and trunk road network and co-operate with the various parts of the HA's organisation including: the National Traffic Control Centre (NTCC), the Regional Control Centres (RCCs), the HA's Area Teams and the HA's various service providers (its contractors and other agents). The HA has already entered into operational agreements with the majority of LTAs covering the operation of the NTCC. Further detailed agreements may also be required with other parts of the HA's organisation. Co-operation must extend to all aspects of network management but particularly: the planning and implementation of diversionary routes; the co-ordination of planned works and events; and reaction to unplanned events including emergency and contingency planning arrangements.

London

75. The duty applies to each of the 32 London Boroughs, the Corporation of London and TfL, who are all LTAs. Each is required to appoint a Traffic Manager.
76. In this section the term "Boroughs" is taken to include the Corporation of London.
77. London provides specific challenges in terms of the network management duty. There is the importance of the network of strategic roads, the proximity of the Boroughs, and the fact that the actions of any authority can quickly have an impact on the roads of another. Road users have a right to expect a consistent approach to network management across the capital. As a result of the Act, TfL and the Boroughs, both individually and collectively, will need to work closely to deliver the duty.

78. All parties will have to ensure that their arrangements for meeting the duty are compatible. There will need to be a degree of predictability in responses to events, from emergencies to bad weather. Mechanisms will also be required for sharing the information needed to manage the whole network in London, both strategically and on a day to day basis.
79. All of this suggests the need for the Boroughs to reach agreement with TfL at an early stage on how to achieve these objectives, and give due regard to TfL's leading role in providing strategic operational co-ordination. All traffic authorities need to take account of the whole network and its contiguous nature, and must consider the wider implications of their actions within the exercise of their duty.
80. Boroughs will need to work co-operatively with TfL to ensure that the network as a whole in London is effectively managed. TfL would be expected to engage in discussions with the Boroughs about the necessary arrangements that need to be put in place to ensure co-ordination and co-operation, and consider the views expressed.
81. The Mayor's Transport Strategy (MTS) forms the basis on which the TfL Road Network (TLRN) and Borough roads should be managed. Part of TfL's role as London's strategic transport authority is to identify reasonable and practicable outcomes from Borough activities to support the MTS and TfL's policies for meeting the Network Management Duty. Examples would include ensuring, as far as possible, that bus services were uninterrupted throughout the year, and that enforcement was undertaken to prevent unnecessary congestion.
82. Boroughs will need to take into account both the objectives of the MTS and the outcomes identified by TfL in their approach to their duty, and put arrangements in place to successfully deliver those outcomes.
83. This should all be reflected in Borough's Local Implementation Plans (LIPs). Under the GLA Act 1999, LIPS are subject to the Mayor's approval.
84. In considering arrangements for meeting the duty all LTAs in London need to consider the effects of their actions on the networks of others outside the capital.

GOOD PRACTICE ADVICE ON TECHNIQUES AND APPROACH

85. The techniques of traffic management listed below have been shown to be effective in improving the management of road networks. Not all these techniques may be applicable to all LTAs, nor is this intended to provide a comprehensive guide to everything that is available.
86. This guidance provides a snapshot of these techniques and will not be updated to reflect every change in practice or revised publication. It is the responsibility of LTAs to keep up to date with the latest developments in each area.

Identifying and managing different road types

87. Identifying and grouping roads according to their location and the activities on them can assist LTAs balance competing demands whilst continuing to manage their network efficiently. To group roads in this way a LTA should define the uses of different sections of road or types of road in its network, then establish hierarchies of different road users for these different sections or category of roads. These road user hierarchies will depend on the authority's policy objectives and the road classification, layout and the extent of its use by different types of traffic including cyclists, and its use by pedestrians as a place for example, for living, working and shopping.
88. In a town centre environment a road user hierarchy might give particular attention to the accessibility needs of pedestrians and people with disabilities, including around temporary works. So the resulting hierarchy might be:
 - Visually impaired and other disabled people
 - Pedestrians
 - Cyclists
 - Buses and Public Transport (including taxis and private hire vehicles)
 - Freight (including loading facilities)
 - Private cars and motorcycles
 - On street parking
89. In other environments a different hierarchy might result, giving more emphasis to the movement of people and goods including more extensive bus priority on significant bus routes or priority to freight traffic. Each LTA will need to strike a balance that reflects the policies and priorities set out in their transport strategies, those of the Mayor in London and those of the PTE in a metropolitan area.

90. The LTA should work with neighbouring authorities to ensure that similar categories are given to sections of road that are on either side of the boundary between authorities. Those roads that provide the main access to a community or region should also be identified.

Monitoring the road network

91. The efficient management of the road network relies heavily upon the collection and use of accurate, reliable and timely data. LTAs should ensure that systems are in place to monitor the state of the traffic on the network and its effect on road safety and the environment. This information can be obtained from a variety of sources such as automatic traffic detectors, pollution monitors, and traffic surveys using both enumerators and floating cars.
92. The Department has placed a contract with ITIS Holdings to purchase data (2001-2006) estimating speeds of vehicles equipped with automatic location systems mainly covering urban areas. This data will be one month in arrears. This will be processed and Local Authorities may access it (e.g. link-level speed estimates by 15 minute time period) for Local Transport Plan or equivalent work. The Department will work with LTAs to help make sense of the ITIS data.
93. Data from traffic responsive urban traffic management and CCTV systems can be processed to give an early warning of incidents and unexpectedly high levels of congestion. Regular surveys of the public's perception of the state of the network can also give a good indication of whether or not conditions are improving over time.
94. Information on journey times can be obtained from vehicles equipped with automatic location systems and from automatic numberplate recognition systems. Members of the public, Police and bus drivers can also be valuable sources of information on the state of the network.
95. LTAs will need to establish what data they require, how it will be collated centrally and how it will be distributed to stakeholders.

Identifying locations where regular congestion occurs

96. Some congestion is simply the outcome of the demand for road space exceeding the capacity of the road network. An authority should identify and map locations where congestion occurs on their road network on a regular basis and establish the most likely reasons for this congestion. It should also look too for trends at locations that suggest traffic growth will shortly lead to congestion, and take action accordingly. Such congestion can be caused by:
- insufficient junction capacity or width of carriageway to cope with the demand;
 - outdated and badly sited road signs;
 - poorly designed road markings;
 - poorly implemented and poorly maintained traffic signals and traffic control systems;
 - poorly sited parking and loading bays and poor levels of enforcement of traffic and parking regulations.

97. The locations where congestion occurs can then be ranked by criteria such as the number of people affected, frequency of delays and how easy it is to implement possible traffic management measures. Combinations of these rankings will assist the authority to plan a programme of remedial works.
98. Other congestion is caused by the effect on traffic of planned events, such as road works, utilities' works, concerts and sporting events, or unexpected incidents. Appropriate management arrangements for these events and incidents are discussed below.

Co-ordination and direction of works

99. LTAs should ensure that the principles that they use to manage utilities' street works are also applied to the management of their own works. The systems and processes should be reviewed regularly, in discussions with representatives of utilities, to ensure that they minimise disruption and advise members of the public of such activities on the network.
100. Systems to record and co-ordinate both planned utilities' works and planned road works should be in place. Consideration should be given to the use of map based systems, which have the capability to display events such as street works, and are a valuable aid to both the operators of the network and to the public.
101. Access to this information should be given to utilities, contractors and adjoining authorities so that they can review their activities in the light of the activity of others. Systems to manage utilities' works and the local authorities' own works, along with other planned activities that can temporarily take capacity from the network (e.g. skips and scaffolding associated with redevelopment, street fairs or sporting events) should be established.
102. These systems can be used to identify traffic impacts in the context of other works and planned events so that opportunities for joint working or for scheduling small works in the shadow of larger ones can be considered. LTAs should also encourage the planning of works and the use of different construction and maintenance techniques to minimise disruption. Examples that have proved to be effective are:
 - requiring that work is only undertaken at certain times of the day and/or on certain days of the week i.e. scheduling work to avoid peak times;
 - applying different requirements for work on different types of road i.e. a busy commuter route may benefit from night working, but on a quiet residential road, daytime working would be preferable so that residents' night time is not disturbed;
 - identifying alternative routes on which planned works are prohibited until the other road is clear (road pairing);
 - providing information on 'paired roads' so that others can use this to plan their work;
 - sharing trenches i.e. planned work undertaken on the same stretches of road at the same time. This has benefits for businesses, residents, road users and the highway authorities, besides minimising disruption.

103. LTAs should make full use of the existing powers under the 1991 Act to manage and co-ordinate street works. They should also:
- require that all temporary traffic control, especially temporary traffic signals, be only used where and when necessary. Temporary traffic signals should either be vehicle-actuated or, at appropriate times, be operated manually;
 - provide information on a local website of works that it is anticipated will cause disruption to traffic.
104. Further detailed guidance is given in the Codes of Practice under Part Three of the 1991 Act, issued by the Department for Transport.
105. The Act provides a number of additions to existing Street Works legislation, which should assist authorities to manage and co-ordinate these works. Authorities should give consideration to how best to use these new tools as and when they become available.

Dealing with planned events

106. A significant portion of traffic congestion is caused by the effect on traffic of planned events such as sporting events, demonstrations, carnivals, parades and street markets. LTAs should establish effective event planning and management processes, which also take into account known roadworks. These event planning processes should include:
- acquiring accurate information about all events that will affect network operation through good communication channels, contact points, awareness reports, meetings, etc;
 - collecting this information at a single point so that effects and interactions can be determined. Events can be co-ordinated and programmed and reviewed where conflicts are identified;
 - gaining a sound understanding of the event and likely effects to inform network management decisions;
 - where appropriate, holding planning discussions to ensure that the events take place at a time and in a manner that has the minimum effect on network operations;
 - being aware of the possibility that a road user hierarchy for a particular road may change at certain times and deciding how best to deal with this e.g. after large spectator events. There may well be substantial pedestrian flows and authorities should balance increased, short-term pedestrian demands with those of motor vehicle traffic. A further factor to take into account may be the higher number of bus passengers travelling from the event;
 - preparing plans to reduce the impact of the event on overall network operation e.g. re-arranging traffic signal timings on the network around the event or working closely with public transport operators to ensure the efficient use of road space;
 - disseminating information about the event early and continuously within the LTAs organisation, externally to other organisations that need to know such as the Police and other emergency services, PTEs, and other road users. This is to ensure that everyone knows what is expected and can make their own plans and preparations.

107. The event planning stage will identify the likely impact of the events and the level of ongoing event management required. Good event management practices include:
- reassessing plans as additional works in the street or events are identified;
 - ensuring that arrangements to mitigate the effects of the event on the network are prepared and that they can be implemented when required;
 - testing complex contingency plans in advance so that their effects are known;
 - ensuring that adequate early publicity arrangements are being used;
 - co-ordinating the LTA's own day-to-day activities to ensure they are compatible with the plans for the event;
 - making sure that everything needed is in place at the start of the event;
 - inspecting and monitoring the event to ensure that its effects are those anticipated, and taking prompt action to deal with anything unforeseen;
 - providing robust real-time information on what is actually happening to those who need to know.
108. Where events occur on a regular basis, the way in which each event is planned and managed should be reviewed on completion of the event. The results of this review should be used to update the event plan and management arrangements for future events.
109. LTAs will need to work with each other and with the HA to ensure that an adequate network exists and is maintained for routes for Abnormal Indivisible Loads (AILs). Plans for development and improvement on such routes need to ensure that efficient movement of AILs can take place both during and following completion of any activities on the network.

Management of incidents

110. Incidents can be caused by the following factors:
- road traffic accidents;
 - broken down vehicles;
 - debris or diesel spillage on the road;
 - failures of the carriageway, such as pot holes;
 - failures of utilities' apparatus, which cause disruption to the highway, such as burst water or gas mains;
 - emergency repairs to utilities' and telecoms apparatus;
 - adverse weather conditions;
 - major incidents where a road has to be closed for safety or operational reasons; and
 - security alerts.
111. The unexpected nature of such incidents means that their consequential effects on the road network are very difficult to deal with. Many authorities have, however, set up processes to identify such events quickly and to respond to them promptly and efficiently. These include the establishment of a traffic management centre, CCTV surveillance, automatic incident detection and provision for emergency response to events often in conjunction with the Police and other parties such as neighbouring local authorities and the Highways Agency.

112. In many cases incident management will be led by the Police in conjunction with the other emergency services. LTAs will need to work closely with the emergency services and other authorities. This is to support them both in the management of the incident and by the active management of its effects on the road network. Robust processes and procedures should be developed for types of incident that occur frequently on the network such as adverse weather conditions.
113. Examples are policies and processes for the salting of roads both before and after ice forms, snow clearance, and dealing with fog and floods. These plans should be co-ordinated with those of adjoining authorities to ensure that, for example, the salting and snow clearance vehicles of one authority are not held up by delays on other authorities' roads and that similar policies are adopted on routes which cross boundaries between authorities.
114. While the locations of accidents, emergency repairs and other such events cannot be foreseen, authorities should make reasonable contingency plans to deal with any such incident on key roads.
115. The Code of Practice for Maintenance Management, published by the Institution of Highways and Transportation, gives detailed guidance on handling emergencies and adverse weather conditions, as well as other common occurrences, such as diesel spillages.

Making the best use of technology

116. New technology such as Urban Traffic Management and Control (UTMC) and Intelligent Transport Systems (ITS) can provide significant benefits to network operation for relatively low cost.
117. ITS are a broad range of diverse technologies for managing transport networks and providing services to transport operators and travellers that authorities can use to support the delivery of a wide range of local transport policies. ITS include:
 - Urban Traffic Control (UTC) – a system to better manage the use of the road network by co-ordinating traffic signal timings;
 - Car Park Management – the use of electronic roadside signs to help drivers find vacant car park spaces quickly, which helps to reduce traffic congestion;
 - Bus Priority – a method to reduce the journey time of late running buses by changing traffic signals in their favour;
 - Travel Information – providing the public with accurate information to help them plan their journeys, or alter their plans should an incident occur;
 - Access Control – a means of restricting access to an area for some or all types of traffic by the use of rising bollards or automatic barriers;
 - Tidal Flow Systems – using variable message signs to indicate the traffic lanes in use for peak traffic entering or leaving a congested area;
 - systems to advise drivers of hazards, such as low bridges and to warn them to reduce speeds, if necessary, at dangerous bends.

118. Further information on ITS can be gained from the Department's ITS Assist project web site, www.its-assist.org.uk.
119. These services can be provided by stand-alone systems but more benefits can be gained by integrating them into a UTMC system. In these systems a common database is used to share relevant information between individual systems. The systems are often managed by staff in the same traffic management and control centres. Details of the Department's UTMC research programme and recent demonstration projects in Preston, Reading, Stratford upon Avon and York can be obtained from the UTMC web site, www.utmc.gov.uk
120. Traffic signal systems provide a powerful means by which LTAs can manage actively the movement of traffic on the network. Traffic adaptive Urban Traffic Control systems such as SCOOT can be set up to do this automatically for most of the time. Similarly traffic signals at isolated junctions should operate using either vehicular actuated control or the MOVA (Microprocessor Optimised Vehicle Actuation) algorithm that assess the best signal timings depending on conditions.
121. Where fixed time UTC systems are used or where obstructions or badly parked vehicles make the SCOOT model invalid, operator intervention with contingency plans or SCOOT procedures can be effective. LTAs should ensure that the traffic signal plans or, at isolated sites, maximum timings are set appropriately to deal with varying network conditions by time of day and day of week.

Managing parking and other traffic regulation

122. LTAs maintain portfolios of traffic regulation orders, which have developed over many years. Developments of (and adjacent to) the road network and changes to the flow of traffic on the network may affect the need for or appropriateness of these orders.
123. Authorities need to ensure that roadside controls preventing loading or parking or banning particular traffic movements, changes in speed limits etc. continue to exist where there is a need for them. Also traffic signs (including road markings) associated with traffic regulation orders need to be of a sufficient standard to both convey a message to road users and allow enforcement.
124. LTAs should consider these issues when making traffic regulation orders, and regularly review the following on a planned basis:
- appropriateness, adequacy and relevance of the orders;
 - consistency of orders along routes and co-ordination with adjacent authorities to bring about consistency of strategic routes across authorities' boundaries;
 - accuracy of orders to ensure they are understandable and robust and sustainable if challenged;
 - use of appropriate systems and processes to improve the management of orders;
 - maintenance arrangements for signs and road markings.

125. If traffic regulation orders are no longer suitable for local conditions, they should be amended or revoked.

Enforcing road traffic regulation

126. Road traffic law sets the framework for using the roads safely and efficiently. Enforcing it is an essential part of ensuring that the optimum use is made of the existing road network. Appropriate levels of enforcement have an effect on people's safety and their quality of life and on the economy. The Police have a central role in enforcement activities and LTAs should establish good working relationships with them.

127. The Road Traffic Act 1991 brought about a number of key changes in the way parking enforcement is managed. LTAs were able to enforce non-endorsable parking offences using the civil process. The Traffic Management Act will increase the number of highway and traffic infringements that LTAs are able to enforce, when the requisite regulations are in place.

Accommodating essential service traffic

128. LTAs should work together with local businesses, retailers and representatives of the freight and road haulage industry to develop means of ensuring economic and efficient servicing of premises and deliveries, whilst mitigating adverse problems.

129. LTAs should identify and sign routes that are suitable for lorries and consider the use of traffic regulation orders to discourage the use of minor roads, villages and other sensitive areas. LTAs should also make use of good practice guidance on freight transport, an example being TransportEnergy's Best Practice programme (www.transportenergy.co.uk), to identify opportunities for working with the freight industry to improve operational efficiencies.

130. Authorities should work with the Police to establish appropriate routes for different types and sizes of abnormal loads, which may travel on their road network.

Regular reviews of the network

131. The original network context of traffic regulation orders, and other aspects of traffic management schemes, such as traffic signs, road markings, traffic signal methods of operation and guard railing can change over time, being adversely affected by new developments and shifts in traffic patterns. These should be reviewed regularly on either a route or area basis. During these reviews opportunities to improve and simplify traffic signs and to reduce street clutter should be identified.

132. Fixed time traffic signal timings lose some of their effectiveness and should ideally be reviewed every 3 years. Traffic adaptive traffic signals at isolated junctions and adaptive control systems can also lose some of their benefits over time as the network's characteristics and use change. Consequently, the underlying traffic models have to be reviewed.
133. LTAs should establish systems for ensuring that the network and its infrastructure are well maintained and reviewed on a regular basis. LTAs should also establish a well publicised reporting and repair process for road defects and equipment faults. Automatic fault reporting systems and CCTV surveillance can provide some of this information but other good sources of information are members of the public, Police and council officers, bus drivers and taxi drivers.

Consultation and engagement with stakeholders

134. When developing strategies and processes for improving the operation of the road network, LTAs should consult with the public, frontagers, representatives of road users and neighbouring authorities with an interest. The regular public consultation process carried out by the authority should be reviewed and if possible, amendments made to it so that consultation on network operation is included as part of this regular process.
135. Focus groups of representative street users and facilitated meetings with representatives of street users and adjoining authorities are other useful means of consultation. Surveys of staff in the LTA engaged on network management can also provide valuable information.
136. One of the findings from several consultation exercises carried out by LTAs is that the public have little idea of who is responsible for the management of the road network in their area and would welcome a well publicised method of contacting someone responsible.

Provision of travel information to road users and the community

137. Information on road works and street works combined with accurate and timely information about events and incidents on the network, provide a good source of travel information. This can be transmitted to the public by the use of variable message signs, radio and television travel reports, travel information providers and the internet.
138. LTAs should work with a variety of media providers to provide such services, which may allow road users to choose a different route or mode of travel or to delay or defer their proposed journey.