Worcestershire Local Transport Plan 3

Network Management Plan

Find out more online:
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worcestershire county council

Contents

1. Introduction 1
   - 1.1 Background 1
   - 1.2 What is Our Network Management Duty? 3
   - 1.3 Wider Objectives 7
   - 1.4 Key Criteria of Worcestershire's Network Management Plan 10
   - 1.5 Policy Compliance 10
2. Implementing the Network Management Duty 11
   - 2.1 Introduction 11
   - 2.2 Considering the Needs of All Road Users 11
   - 2.3 Co-ordinating and Planning Works and Known Events 16
   - 2.4 Gathering Information and Providing Information Needs 19
   - 2.5 Incident Management and Contingency Planning 24
   - 2.6 Dealing with Traffic Growth 30
   - 2.7 Land Use and Transportation Planning 30
   - 2.8 Working with all Stakeholders - Internal and External 32
   - 2.9 Ensuring parity with others 35
   - 2.10 Providing Evidence to Demonstrate Network Management. 37

1. Introduction

1.1 Background

1.1.1 Worcestershire's Network Management Plan provides the strategic framework for the development of measures which will enable Worcestershire County Council (WCC) to carry out its Network Management Duty under the Traffic Management Act 2004. The Traffic Management Act (TMA) was introduced in 2004 to tackle congestion and disruption on the road network. The Act places a duty on local traffic authorities to ensure the expeditious movement of traffic on their road network and those networks of surrounding authorities.

1.1.2 It is a statutory requirement of the TMA that each Highway Authority appoint a Traffic Manager. In Worcestershire the Traffic Manager is responsible for compliance with the Network Management Duty as set out in the TMA through the delivery of the Network Management Plan (NMP).

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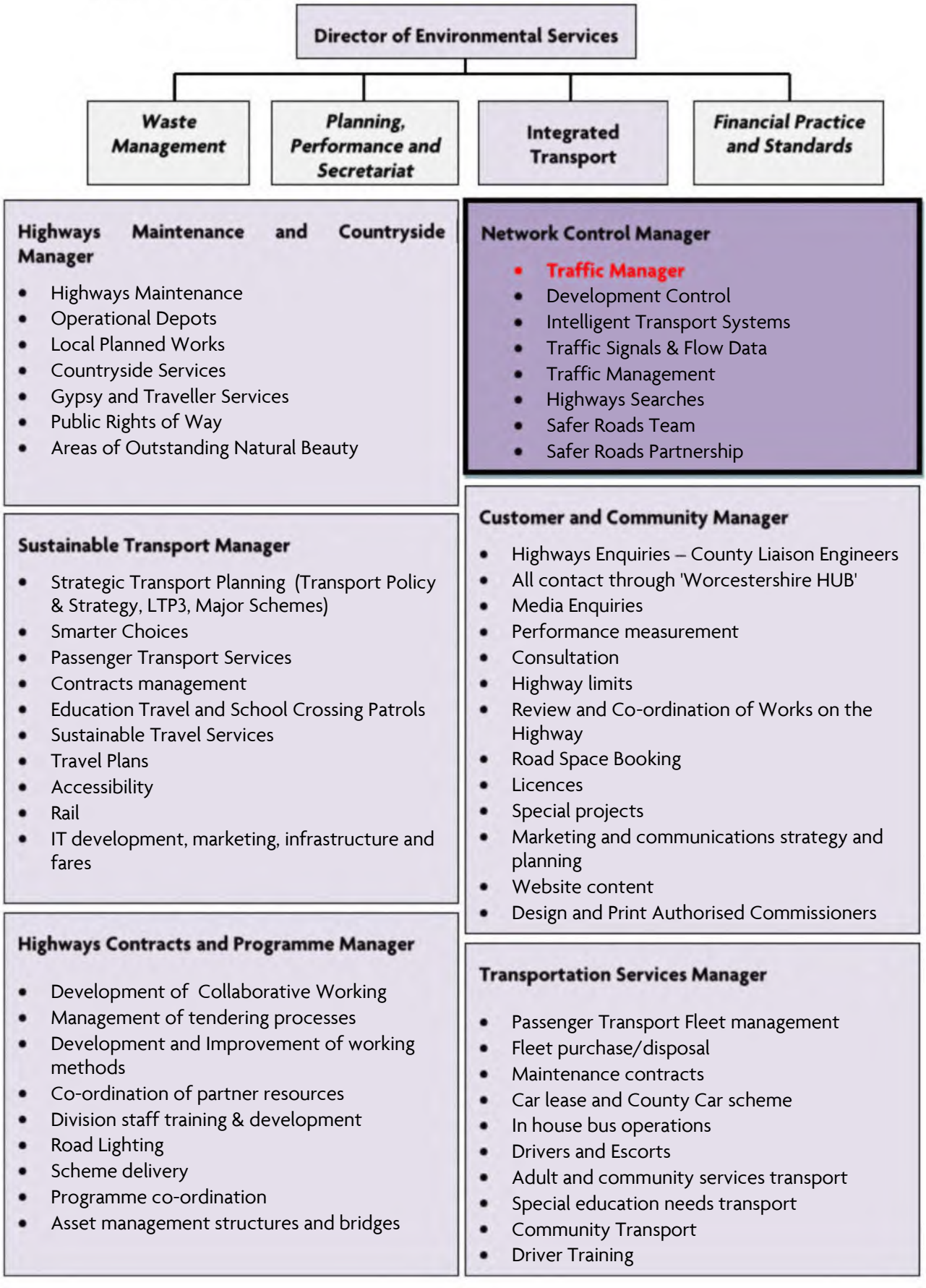
1.1.3 Worcestershire County Council's Network Control Unit Manager takes the responsibilities of the Traffic Manager. The structure diagram in Figure 1.1 shows the position of the Network Control Manager within the County's Environmental Services Directorate.

Figure 1.1 – Network Management Organisational Structure



1.1.4 Worcestershire's Traffic Manager's role also links the Network Management Duty to Regional and Local strategies with the NMP being required to be consistent with local, regional and wider national policies and guidance.

1.1.5 Worcestershire County Council is a member of the West Midlands, Shires and Unitaries Traffic Management Forum. The vision that this group has agreed for the delivery of the Network Management Duty is to: 'Continue to improve delivery of the Network Management Duty through cross-boundary working and using best practice principals, thereby enabling consistency, efficiency and effectiveness'.

1.1.6 The NMP is primarily focused on tackling congestion and compliance with the Network Management Duty but has also been developed to support Worcestershire's Community Strategy and Local Transport Plan.

1.1.7 Worcestershire's Network Management Plan will help to improve the efficiency of the existing transport network and encourage use of sustainable transport modes (walk, cycle and passenger transport) where these can and should offer a viable alternative to the car. This document sets out the Worcestershire County Council policy on the delivery of our Network Management Duty and supersedes all previous documentation published by Worcestershire County Council on the subject. The document sets out the technical processes underpinning the delivery of the NMD. This policy document will be treated as a live document, and so will be updated over time in response to changing economic and social environment and technological advances.

1.1.8 An efficient transport network is essential in order to give people, in both the urban and rural areas of Worcestershire, access to the opportunities and benefits that contribute to the enjoyment of a better quality of life. Transport user needs (including freight) will continue to be met by a combination of road, rail, bus, community transport and taxi services (or similar initiatives) or any appropriate combination of these modes. Each of these activities and modes has interlinked strategies and common aims. Their provision will be integrated to provide the most effective transport system that will deliver against identified socio-economic objectives. The Worcestershire NMP has been developed to support the delivery of an efficient multi-modal transport network where modal choice is maximised.

1.2 What is Our Network Management Duty?

1.2.1 As transport networks become more congested, and the business case for and affordability of major new highway construction as the sole sustainable long-term solution becomes more difficult. There is a growing need to adopt policies that manage demand and make full use of existing assets.

1.2.2 One of the main aims of the Network Management Duty is to reduce congestion on all highways. Congestion has a number of significant adverse impacts, including:

- *On the performance of the Worcestershire economy, with extended and variable journey times imposing additional direct costs on businesses and employees and adversely affecting productivity and innovation*
- *On the environment, including in terms of Air Quality and carbon emissions*

1.2.3 Congestion is caused by three main initiators; road works, incidents and capacity (including on street parking) issues. In Worcestershire we pursue the following measures to minimise congestion.

1.2.4 **Road works:** Although road works account for a small percentage of congestion issues (approx 10%) across Worcestershire, from the public viewpoint, it can be one of the most irritating as it is often unexpected and therefore not planned for in any journey times. In addition this is an area that benefits from good management and recent legislation has assisted through increased notice periods for works. Hence, Worcestershire is concentrating on this area by ensuring that all works on the highway likely to cause congestion are included in co-ordination and reduction measures. This is achieved through:

- *Regular meetings of all works promoters*
- *Control and co-ordination of all uses of the highway*
- *Joint working between different parties*
- *Limited working at peak times*
- *Minimum lengths of carriageway working on key routes*
- *Appropriate traffic management ensuring diversion routes free from roadworks*
- *Pursuance of alternative working methods to reduce carriageway occupation requirements*
- *No road works on high traffic density routes during events or extremely busy periods*
- *Public Information dissemination through the WEB, Media, letter and signage including VMS*

1.2.5 **Incidents**: Congestion can be the result of adverse weather, accidents, events or any other matter, which effectively blocks the highway, for example, a fallen tree or demonstration. The impact of incidents which account for approximately 25% of congestion are minimised through the following measures:

- *Contingency and operation plans for extreme weather conditions. These include :*
  - *Winter Maintenance Plan*
  - *Operation plans for flooding and high winds*
- *Event management to co-ordinate effectively in advance*
- *Emergency Contact arrangements to deal with incidents*
- *Immediate contractor response unit to remove any obstruction or repair any highway defect*
- *Traffic Management to divert traffic from problem area*
- *Liaison with external parties such as the police and utilities to reduce and monitor impact*
- *Public Information dissemination through the WEB, Media letter and signage including VMS*

1.2.6 **Capacity**: There are several areas within Worcestershire, which experience congestion during the morning and evening peak traffic flows, i.e. when vehicular demand exceeds available capacity. The main area is Worcester City where congestion is partially the result of insufficient capacity on the river crossings in the area. Congestion caused by capacity issues account for 65% of congestion.

1.2.7 Since, this is the main cause of congestion it is a high priority within Worcestershire with many initiatives aimed at controlling its growth through minimising traffic growth, encouraging use of alternative transport modes (particularly in congested urban areas and along key inter-urban corridors), liaison with internal and external parties, and network optimum utilisation plans.

1.2.8 **Traffic Growth**: With key routes already over capacity causing congestion during peak periods further growth in traffic will only add to this congestion hence Worcestershire has implemented the following measures to reduce the traffic growth.

- *Sustainable Travel - This is encouraged through allocation of road space for all modes of travel and public advertisement /information. The road user hierarchy will be implemented in such a way that supports walking and cycling for local journeys and public transport use in favour of the car for other trips*
- *School and Workplace Travel Plans - These encourage the use of alternative travel arrangements and assistance being put in place to encourage people to choose a more sustainable travel method.*
- *Work Pattern Alterations - Worcestershire County Council being one of the larger employers has encouraged flexible working enabling office staff to regularly work from home reducing travel requirements.*
- *New Developments - All major developments must consider and make provision for alternative travel arrangements*
- *Public transport strategy - The Council pursues initiatives to increase the usage of public transport though improved services.*
- *Regional strategy - Worcestershire ensure regional initiatives that support pursue growth make allowance for the consequential impact.*

1.2.9 **Liaison:** Capacity issues that cause congestion are managed through liaison with all as follows:

- *Adjacent authorities - Liaison with HA and adjacent authorities pursues aligned policies and the development of operating procedures across boundaries*
- *Public - Liaison allows us to keep the public informed hence managing the flow of traffic across the network with appropriate guidance*
- *Police - Communication in this area is key to keeping traffic moving during incidents on the network.*
- *Second Tier Authorities - This allows us to influence development, parking strategies and service operations.*

- *Other County Council Directorates - The ability to influence other directorates policies is helping to pursue peak journey time reductions through altered work patterns*
- *Freight Groups - Liaison to pursue use of appropriate routes to minimise impact of HGV traffic.*
- *Regional Groups - Liaison to pursue use of appropriate and sufficient routes*

1.2.10 **Network Optimisation**: In order to maximise use of the network for all users with the result of reducing congestion Worcestershire is pursuing the following measures

- *Network Hierarchy and Lorry routes*
- *Traffic management schemes to encourage traffic to use appropriate routes and utilise current road space efficiently*
- *Intelligent Transport Systems - Increase the use and efficiency of these systems which include SCOOT and VMS*
- *Small scale capacity improvements through increased road space at key hotspot junctions*
- *Pursuance of relief roads/bridges to increase river crossing capacity at key congestion points*
- *Parking obstructions minimised on key routes - Civil Parking Enforcement is being pursued through liaison with second tier authorities.*
- *Traffic Sensitive routes identified for road works management*
- *Urban Parking Strategies - These include reducing congestion through the provision of long-stay parking at edge of urban centre locations and providing rail or bus services for the section of journey into the congested urban centre*

1.2.11 In pursuing all of the above congestion reduction measures the Traffic Manager will pursue the Vision as outlined previously (1.1.5). In this respect when implementing the network management duty the Traffic Manager will have due regard for reducing the impact of high traffic flows on the environment to improve health through reduced accidents, improved air quality and schemes that protect communities whilst encouraging development and improving accessibility to all.

1.3 Wider Objectives

1.3.1 The purpose of the Worcestershire NMP is to set out the processes and approach required to establish the most efficient transport network and facilities which will address the needs of both current and potential future users in Worcestershire and deliver the transport objectives of the Government and Worcestershire County Council.

1.3.2 The DfT Network Management Duty Guidance states that the NMP must be consistent with wider local, regional and national policies and guidance. The diagram overleaf shows the key policies and guidance that have influenced the development of this Network Management Plan.

1.3.3 The starting point for this Worcestershire NMP is the overall socio-economic objectives of LTP3, which have been developed to reflect national and local policy, which are outlined in Table 1.1.

1.3.4 The Worcestershire NMP must also support the Worcestershire Sustainable Community Strategy (WSCS) which includes the following six themes, all of which are influenced by the performance and availability of transport infrastructure and services:

- *Communities that are safe and feel safe;*
- *A better environment for today and tomorrow;*
- *Economic success that is shared by all;*
- *Improving health and well being;*
- *Meeting the needs of children and young people; and*
- *Stronger Communities (including housing, culture, poverty and volunteering).*

1.3.5 Table 1.1 identifies how the Worcestershire NMP will contribute towards achieving the wider socio-economic objectives of the LTP3 and Worcestershire Sustainable Community Strategy.

Table 1.1 – The Network Management Plan and How It Will Deliver Against Worcestershire Local Transport Plan 3 and Sustainable Community Strategy Objectives

LTP3 Objectives	*Worcestershire Sustainable Community Strategy Objectives*	*How the NMP Can Deliver Against These Objectives*
To support Worcestershire's economic competitiveness and growth through delivering a reliable and efficient transport network	Economic success that is shared by all Stronger Communities	The cost to the economy of congestion is well documented. Access to the strategic highway network is a key consideration for both existing businesses and potential developers. The Network Management Plan aims to ensure that congestion does not hinder the economic progress of the County through maintaining traffic flow on main transport corridors, working with commercial and freight organisations to ensure the efficient

The Economic Objective		movement of goods and providing input to the land use planning process to ensure future development is accessible by all modes of travel and has a minimal impact on congestion. The plan aims to increase the economic viability and vitality of rural and urban areas alike, making them attractive areas for future inward investment. Specifically, the NMP will reduce congestion through: • *Co-ordination of planned highway works and known events* • *Incident Management and Contingency Plans* • *Promotion of sustainable travel to reduce traffic growth* • *Liaison with emergency services, neighbouring highway authorities, district councils and freight and passenger transport operators* • *Network Optimisation through traffic management and parking policies, Intelligent Transport Systems Policies and network hierarchy and routing plans.*
To reduce the impacts of transport in Worcestershire on the local environment, by reducing noise and transport-related emissions of carbon dioxide and other greenhouse gases, with the desired outcomes of tackling climate change and reducing the impacts of transport on public health **The Environment Objective**	**A better environment for today and tomorrow**	Increasing traffic growth and restrictions on traffic flow not only causes increased congestion but also decreases the air quality of the area. The NMP aims to improve the efficiency of the transport network reducing congestion (see above) and wasted mileage and thus reducing traffic related emissions. The NMP will ensure traffic is most appropriately routed to reduce negative impacts on the environment. Worcestershire's Traffic Manager will work closely with the District Council Environmental Health Departments to produce Air Quality Action Plans for the removal of current AQMA designations and the prevention of further deterioration in air quality due to traffic levels and flows.

To contribute towards better safety, security, health and longer life-expectancy in Worcestershire, by reducing the risk of death, injury or illness arising from transport and promoting healthy modes of travel **The Health and Safety Objective**	**Communities that are safe and feel safe**	The NMP aims to reduce road traffic accidents, support travel by healthier means and enhance community safety and security by: • *Regular inspection of road works to ensure safety* • *Contingency planning for emergencies and incidents affecting the highway and travelling public (includes winter maintenance)* • *Encouraging walking and cycling and ensuring the protection of pedestrian and cycling highway facilities during planned and unplanned works* • *Providing real time information to give early warning of hazards on the highway*
To optimise equality of opportunity for all of Worcestershire's citizens with the desired outcome of creating a fairer society. **The Equality Objective**	**Stronger Communities** **Meeting the needs of children and young people**	The NMP aims to improve access to workplaces, facilities and services for all, and ensure the safety of motorists, vulnerable road users and pedestrians. Social inclusion is fostered, by helping to meet the transport needs of all social groups, including rural residents who in turn can help promote a more efficient and sustainable, integrated transport system. Advance information on planned works and events together with real time information for incidents will be provided via a wide range of media to reach all those potentially affected. A key objective of the NMP is to ensure that the same standards, approaches and priorities are applied to all activities on the network
To enhance the quality of life for Worcestershire's residents by promoting a healthy, natural environment, conserving our historic built environment and preserving our heritage assets **The Quality of Life Objective**	**Improving health and well being;**	The NMP aims to help protect the natural environment and the historic fabric of our towns and cities, by reducing the adverse effects of congestion and disruption to the highway network. This can act to enhance overall quality of place, and therefore quality of life in Worcestershire. Advance and real time information improves quality of life by enabling people to plan journeys door to door with increased confidence and maximises their travel choice.
To enhance the quality of Worcestershire's Transport Asset,	**Stronger Communities**	The NMP aims to relieve communities of the adverse affects of noise, severance and visual intrusion relating to works on the highway network

through sensitive and appropriate design with the desired outcome of reducing the costs and inconvenience of maintenance works **The Asset Management Objective**		

1.3.6 The target audience for this policy includes a wide range of stakeholders comprising the representatives of the residents of Worcestershire, highway network users (across all modes of transport), voluntary groups, the Department for Transport, local authority partners, passenger transport users and operators, the Highways Agency and regulatory bodies. To be thorough and robust, this policy document by necessity covers a wide range of, often technical, issues. The level of technical detail is necessary to ensure the document is precise and unambiguous.

1.4 Key Criteria of Worcestershire's Network Management Plan

1.4.1 In line with the objectives identified above, the DfT Network Management Duty Guidance sets out specific criteria that a local highway authority NMP will need to incorporate:

- *Consider the needs of all road users, including statutory undertakers and all modes of travel*
- *Co-ordinate and plan highway works and known events*
- *Gather highway network information, analyse and inform all stakeholders*
- *Develop contingency plans and incident management plans*
- *Mitigate traffic growth*
- *Liaise and consult with all stakeholders*
- *Ensure parity between all undertakers of works on the highway*
- *Monitor and review*

1.5 Policy Compliance

1.5.1 This Worcestershire LTP3 ITS Policy has been developed to be fully compliant with all current and relevant National and Local Policy. A summary of these policies is provided in the LTP3 Essential References Document. In particular, this document is aligned with the emerging Core Strategies which have been developed by the Worcestershire Borough, City and District Councils.

2. Implementing the Network Management Duty

2.1 Introduction

2.1.1 The following sections of this plan highlight the core of the authorities' issues, actions and performance in relation to implementing the Network Management Duty.

2.2 Considering the Needs of All Road Users

Key Issues:

- *Develop a clear understanding of the problems facing different parts of the network*
- *Develop a structured approach to the allocation of road space*
- *All forms of user should be recognised and catered for, e.g. people with disabilities, pedestrians/cyclists on a level footing with vehicular traffic*
- *Roads need to be grouped in a new hierarchical system according to location, use and activities occurring on them to provide consistency for stakeholders*
- *Working together with stakeholders through local partnership working and consultation*
- *The road hierarchy needs to be balanced to take account of other policies and plans such as Asset Management Plans, etc.*
- *Facilitate the economic vitality of the community and support regeneration*

2.2.1

Road Hierarchy Review

2.2.2 The Network Management Duty requires authorities to "*determine specific policies or objectives in relation to different roads or classes of road in their road network*" in order to balance competing demands whilst continuing to manage the network efficiently. The duty guidance suggests that the various uses of different sections of road or types of road be defined and then hierarchies established of different road users for these sections or categories of road. The network management duty expects authorities to have a clear understanding of the problems on different parts of the network and the needs of different road users, along with balanced policies for addressing them.

2.2.3 The identification of traffic sensitive sections of the highway network is incorporated to the Street Gazetteer based on the criteria set out in NRSWA. In addition, Worcestershire is developing a GIS database collating a comprehensive suite of transportation information layers covering:

- *Local Street Gazetteer*
- *Traffic sensitivity based on the parameters set in section 5.4 of the Code of practice for the Co-ordination of Street Works and Works for Road Purposes and Related Matters (3 Edition)*
- *Sections of network requiring Contingency Plans in accordance with Civil Contingencies Act 2004*

- *Roads with Special Engineering Difficulties (SED)*
- *Car parking strategies and enforcement plans*
- *Off Network Tactical Diversion Routes in partnership with Highways Agency*
- *Traffic count data including speeds and journey time data*
- *Speed Limits*
- *Accident data*
- *Traffic signals – including queuing data where SCOOT operates*
- *Bus services - frequency and patronage levels*
- *Cycling - facilities and count data*
- *Pedestrian - facilities and flows*
- *Traffic calming – including school walking and cycling routes*
- *Freight routes - weight restrictions, HGV count data, key freight movement generators*
- *Planned development with forecast traffic generation*

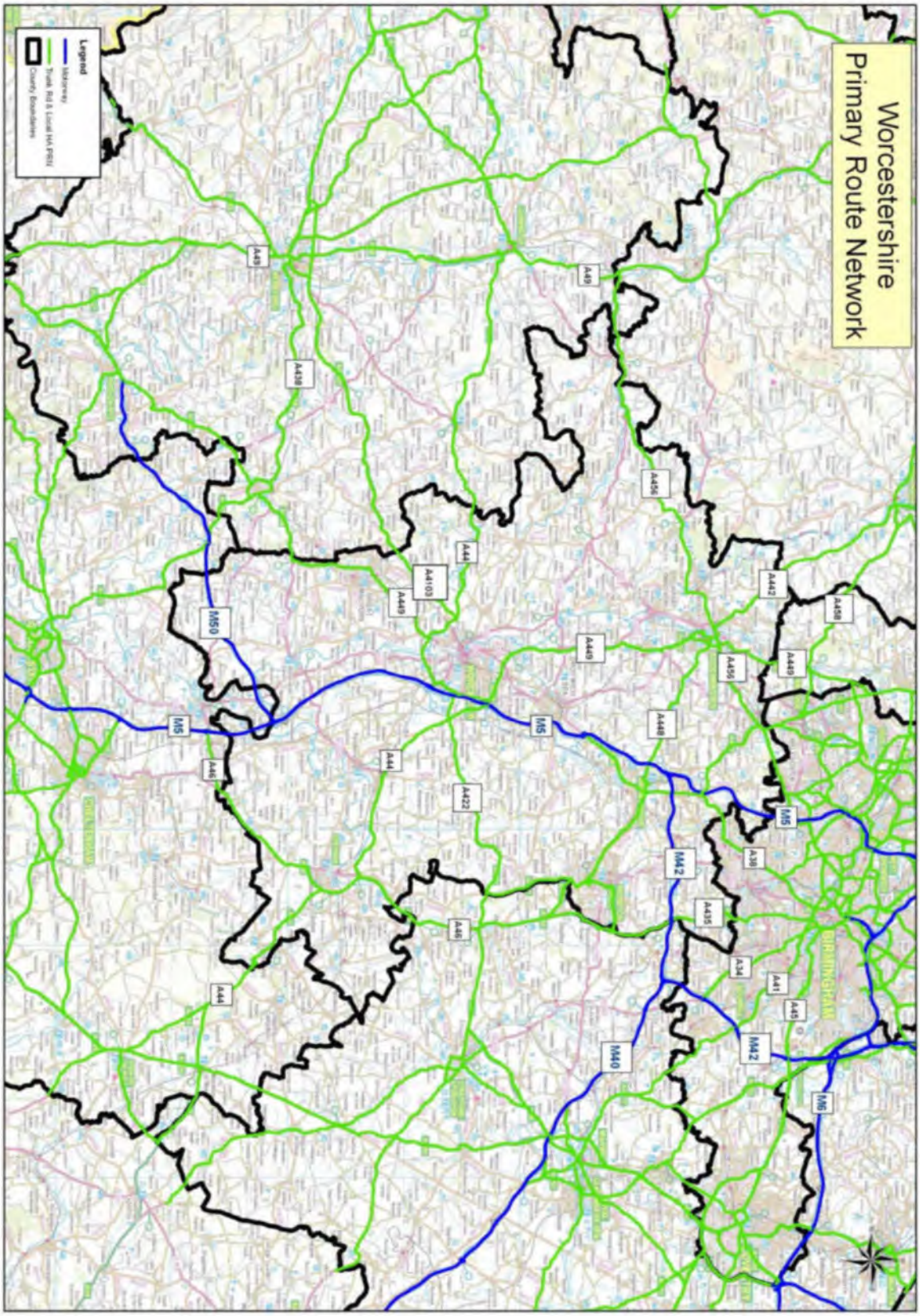
2.2.4 This database will be capable of being interrogated and analysed to provide an overview of the traffic (all modes) characteristics across the network as a whole and inform a road hierarchy based on level of use and function and identify potential traffic congestion hotspots. The database will be regularly updated to enable future reviews of the system as required, to take account of actual, rather than planned changes on the network.

Primary Route Network (PRN)

2.2.5 The PRN forms the main network of highways in the country for longer distance journeys, linking key destinations. The higher level PRN is the motorway and trunk road network, administered by the Highways Agency (HA) and funded by the Government. The lower level is the PRN that is maintained by the local highway authorities but approved by the Government. This is further supported by the District and local Distributor roads within the hierarchy and maintained by local highway authorities.

2.2.6 The intention behind the road hierarchy is to integrate land use planning and to direct traffic to suitable routes, ensuring that the highway design and layout reflects their relevant function. Investment in the network is being targeted to adapt the highway to be better able to perform its function reflecting the needs of different users. Clearly the PRN is important for longer distance journeys and the economic well being of Worcestershire and the region. Figure 2.1 shows the PRN for Worcestershire.

Figure 2.1 - The Worcestershire Primary Route Network



Allocation of Road Space for all Modes of Travel

2.2.7 National, regional and local policy promotes the implementation of a more sustainable transport system as the key measure to meet the demand for travel now and in the future. With respect to the Network Management Plan this policy background means that optimising the efficiency of the road network solely by increasing capacity for private vehicular traffic or optimising existing road space in favour of private vehicular traffic is not an acceptable course of action. Rather, the efficient use of road space will focus on the identification of bus priority measures and safer more convenient walking and cycling facilities with the aim of reducing the dependence on and demand to travel by car.

Multi Modal Approach

2.2.8 Clearly the balance between the reallocation of road space to sustainable modes and the impact of this on congestion is a key consideration of the NMP. Thus where road capacity is limited and demand for travel high the design of priority schemes for sustainable travel will require multi modal traffic modelling techniques to be utilised to better inform the optimum solution.

2.2.9 The County Council will employ appropriate multi modal modelling techniques to assess the impact and determine the best options for the reallocation of road space to sustainable travel modes. Two separate Land Use and Transportation Models have been developed covering Worcester City and its immediate surroundings and the Wyre Forest District area. The Worcester City model is multi-modal and uses EMME3 and SATURN software (the former for demand modelling, mode choice and passenger transport assignment, the latter for highway traffic assignment). The Wyre Forest Model is a SATURN traffic demand and assignment model. These models enable assessment of the impact of different land use options on demand for travel, traffic growth and volumes on the highway network (in the case of the Wyre Forest model) and the highway and passenger transport network (in the case of the Worcester Model). The models enable testing of options for maintaining and improving transport network performance, including traffic flow. The County Council will continue to update and maintain these models using them as a forecasting tool for future development proposals, demand growth by mode, modal choice and allocation of scarce network capacity.

2.2.10 In addition to the above models the County Council also utilises ACCESSION modelling to provide transport accessibility planning advice to the Local Development Framework. Accessibility assessment using the ACCESSION software is a valuable tool to aid land use decisions that are taken by the Local Planning Authorities to reduce the need to travel by car through the location of developments and the design of transport infrastructure and services to promote the use of sustainable travel modes in preference to travelling by car. The need for Accessibility Assessment, using ACCESSION software, will be a requirement for any development proposal likely to generate significant travel demand.

2.2.11 Spreadsheet models have also been developed for Pershore, Evesham, Droitwich, Malvern, Bromsgrove and Redditch, to test the impacts of potential new developments on the transport network.

Car Parking Strategies

2.2.12 Parking management, restrictions and enforcement have a key role to play in reducing congestion and supporting the ease of movement and safety of sustainable travel modes. Civil Parking Enforcement has been implemented in four districts in the County Worcester City, Wychavon, Redditch and Wyre Forest. This has led to an improvement in the resources available to enforce on and off–street parking restrictions, with the associated benefits for congestion, road user safety and bus service reliability.

2.2.13 The County Council is actively encouraging all second tier authorities to take forward CPE in their areas and identify locations where parking and stopping restrictions will have significant benefit to the levels of congestion on the network.

2.2.14 Urban Car Parking Strategies: Worcester City will be the initial focus for an Urban Car Parking Strategy aimed at reducing the impact of the private car trips on congestion. The strategy will utilise the road hierarchy and integrate with land use planning to direct traffic to suitable routes. It will ensure that the highway design and layout reflects their relevant function whilst ensuring the city remains accessible for all and economically competitive. The strategy will draw upon the proposals within Phase 1 of the Worcester Transport Strategy and the emerging strategy for subsequent phases. The strategy for Worcester is for balanced package of investment across all modes of transport, including the implementation of measures which offer people realistic alternatives to the car for journeys to/from and within the city. This includes use of rail and bus Park and Ride to encourage transfer of trips on the edge of the City Centre where their impact can be minimised.

Figure 2.2 – Midland Road, Worcester Before and After Parking Restriction Implementation

Before *After*

Freight Strategy

2.2.15 The LTP3 Multimodal Freight Policy provides the strategic framework for the development of measures which will help to improve the efficient movement and operation of freight by all modes around the county, which will act to positively enhance the vitality of the local economy. It is recognised that in Worcestershire the majority of freight is transported by road. The NMP will support the Multimodal Freight Policies by facilitating the efficient movement of freight across the highway network including the provision of parking and rest facilities. Worcestershire's Traffic Manager will liaise with freight operators through the Freight Quality Partnership to develop the road hierarchy and freight focussed intelligent transport systems and in the dissemination of highway network information e.g. major disruptions, diversion routes etc

2.3 Co-ordinating and Planning Works and Known Events

Key Issues

- *Develop methods to effectively manage all activities on the network and proactively co-ordinate them.*
- *A planned and evidence-based approach is required to managing significant events affecting the network, including contingency plans*

Planned Works

2.3.1 Booking System for Planned Works: Worcestershire's Street Works Team are responsible for the booking of planned works on the highway and the granting of licences for skips and scaffolding. The team continuously review the impact of works and events on the highway network through a road space booking system. Their role is to ensure that combinations of works, events or obstructions are co-ordinated to reduce disruption by providing an optimum solution for accommodating highway occupation demands in accordance with the Traffic Management Act. Specifically, through the road space booking system on which both external and internal works are recorded the following is pursued

- *Minimum duration of works*
- *Works completed as notified*
- *Simultaneous working*
- *Staggered working*
- *Minimum Traffic Control lengths*
- *Public notification arrangements*

2.3.2 In addition, regular inspections are carried out to ensure works are both safe and are of sufficient quality not to require further highway occupation for repair.

2.3.3 Worcestershire has developed a street gazetteer that provides a wide range of information on the status and condition of every part of the County's highway network including the level of traffic sensitivity. The street gazetteer will provide the basis for the layering of further highway and transportation data. Once a notice has been issued to carry out works at a specific location on the highway, the street works team identify the traffic sensitivity of the location and measures to minimise disruption, including the positioning and operation of temporary traffic signals.

2.3.4 The Street Works Register is published on the Worcestershire County Council website http://www.worcestershire.gov.uk/cms/transport-and-streets/streets/roadworks-and-road-closures.aspx which shows planned road works and road closures and applications for licenses for skips and scaffolds on the highway as well as for temporary traffic lights, lane closures and road closures.

2.3.5 Co-ordination and Improvement Meetings: The County Council's Street Works Team provides a blank forward planning form to all those responsible for planning works on the highway including maintenance teams, improvement scheme teams, utility companies, developers and the street lighting team. These forms are collated by Worcestershire's NRSWA team and results merged. Worcestershire County Council then holds a quarterly co-ordination meeting with all those planning works and West Mercia Police traffic management. These meetings identify traffic sensitive locations, potential trench sharing opportunities and potential conflicting highway occupation requirements to pursue agreement of a future schedule of major works and events on the highway that meets the needs of all road users with the minimum disruption. Additionally, quality of works and noticing is discussed and improvement pursued as appropriate.

2.3.6 The County Council has an Integrated Programme Management Board which has established all planned highway maintenance and improvement schemes both County Council and developer led over a 3 year rolling period. The Integrated Transport Programme Board meets monthly and continuously updates the programme. The programme utilises project management software as well as being presented on GIS for improved scheme identification and co-ordination. Measures are being pursued to link the planning applications system APPUNIFORM and the Street Works Forward Plan directly into the Integrated Programme to enable all potential and planned works on the highway to be viewed on GIS as well as in the Project Management system.

2.3.7 Worcestershire County Council provides licences and co-ordinates temporary traffic signals, road closures, NRSWA (1991) section 50, Highways Act section 171, skips and scaffolding ensuring minimum disruption to the highway network.

2.3.8 The continuous nature of the highway network and the importance of ensuring traffic is kept moving as freely as possible across administrative boundaries is recognised and Worcestershire is actively involved in the West Midlands Service Improvement Groups (MSIG), Shires and Unitaries Traffic Manager Group (WMS&U TMG), Regional Highways & Utilities Committee (HAUC) and Joint Authorities Group (JAG).

Incident on M5

2.3.9 In addition Worcestershire is liaising directly with neighbouring authorities and the Highways Agency to ensure a consistent approach to network management by aligning policies. All cross border roads are being identified to enable automated notification of street works on such roads under the responsibility of other local authorities. Similar liaison with the Highways Agency ensures works on the trunk road and motorway network that could impact on Worcestershire's local highway network are identified. In particular diversion routes have been identified and agreed with the highways agency. The National Traffic Control Centre's (NTCC) Traffic Information System automatically informs Worcestershire County Council's NRSWA team of incidents on the motorway and trunk road network via email and we inform the NTCC of works and incidents on our local roads that may affect the motorway and trunk road network.

Events

2.3.10 There are a number of events that take place on a regular basis in Worcestershire. These events are entered on an Events Calendar with co-ordination and public notification as detailed above for road works. Major annual events have their own working parties, which look at safety and traffic management alongside other organisational arrangements. The major events in Worcestershire include the Victorian Christmas Fayre, Worcester; The Spring Garden Show and other events at the Three Counties Show Ground in Malvern.

2.3.11 In addition there are numerous sporting facilities that on occasion attract large visitor numbers such as Worcestershire County Cricket Club, Worcester Racecourse and Worcester Rugby Club. Various measures have been put in place to manage traffic flows when events take place. For example temporary traffic management is put in place to direct traffic, additional park and ride/walk sites have been established and special bus services.

2.3.12 In addition to these major events there are numerous minor events such as charity/fun runs, and rallies which can have a major impact on the highway and therefore require planning to pursue any traffic management and safety measures. Whilst all known events are managed there are some events that do not require notification but can cause traffic chaos such as car boot sales. Where these occur regularly at known locations then liaison with the organiser is quickly established and safety and traffic management measures implemented.

Tour of Britain passing along Hylton Rd in Worcester

2.4 Gathering Information and Providing Information Needs

Key Issues

- *Monitor traffic flow*
- *Identify locations where congestion occurs*
- *Develop effective arrangements to gather accurate information about planned works and events*
- *Manage and organise information on planned activities to ensure that the impact on the network is minimised*
- *Make appropriate information available about the authority's network to stakeholders*
- *Develop reliable and accurate information for stakeholders and the public to enable improved planning and travel options.*
- *Encourage sharing and dissemination of information through a wide range of channels*
- *Provide information to other street authorities in line with statutory obligations*

Monitoring the Road Network

2.4.1 The County Council monitors traffic flows across the county's road network through:

- *Permanent and temporary loop vehicle detectors for traffic volumes*
- *Manual counts for recording directional flows at junctions*
- *Journey time surveys*
- *Speed surveys*
- *Origin-destination roadside interview surveys*
- *Mobile CCTV cameras for all traffic movements including freight and pedestrian*
- *Utilise SCOOT ASTRID database for traffic flows at signalised junctions*

2.4.2 In addition we plan to implement Urban Traffic Management and Control systems such as Automatic Number Plate Recognition cameras and GPS enabled bus ticketing systems to give continuous real time journey time data, and the upgraded SCOOT traffic signals control system to provide traffic flow data at signalised junctions.

2.4.3 The large amount of traffic data being collected requires a framework to identify collation of the data in a meaningful way for the purpose of identifying congestion and informing the development of solutions to reduce congestion. Worcestershire aims to summarise the large amount of traffic data collected by inputting the information as layers on the GIS based network hierarchy map (as described in section 2.1.1) and also by producing an Annual Traffic Report that summarises the County's traffic data.

Identifying Congestion Hotspots

2.4.4 Key congestion hotspots throughout the county have been identified through the analysis of a mixture of traffic flow and speed information, road design capacity, journey time data and queuing data from traffic signal operations and declaration of Air Quality Management Area status. The routes identified as most prone to congestion and potential improvement measures are shown in Table 2.1.

Table 2.1 - Progress on Measures to Relieve Worcestershire's Congestion Hotspots

Location of Congestion Hotspot	Improvement Scheme
Worcester	
Radial routes into city and city bridge including Dolday (AQMA)	Worcester Transport Strategy aims to reduce the need to travel by car. The strategy includes (subject to funding): • Building on 'Choose How You Move' campaign (2004-2009) • Connect 2 walk/cycle routes (2006-2011) • Improved cycle infrastructure along 3 routes (2011 – 2016) • Improved facilities for pedestrians, cyclists and bus users along key radial and orbital corridors (2006-2016) • Improved facilities for rail users corridors (2011 – 2016)

Location of Congestion Hotspot	Improvement Scheme
	• Rail and bus Park and Ride supported by rapid transit corridors (2006-2016) • ITS strategy to provide real time travel information on highway, online and via mobile phone.
AQMA's declared at: Lowesmoor • Rainbow Hill • Newtown Rd	Initiatives reducing the need to travel by car to reduce traffic levels are proposed to manage congestion and AQMA's in Worcester. Additionally traffic management scheme options will be considered where feasible for these specific AQMA sites.
A4440 Worcester Southern Link Road	Junction improvements at A38/A4440 'The Ketch', A449/A4440 Powick and A44/A4440 Whittington. Worcester Transport Strategy includes the increase in Primary Route Network capacity to accommodate through traffic.
Kidderminster	
Radial routes and ring road especially A456 Ring Road northern section. A451 Stourport Road Employment Corridor	The regeneration of Kidderminster town is linked to the Stourport Rd Employment Corridor in a strategic plan for the area. In relation to transport improvements in Kidderminster the focus is on improving links between the town centre and destinations beyond the ring road including the rail station to reduce the segregation caused by the ring road. A Wyre Forest Transport Strategy will be developed to determine the best options for the area as a whole. Within this strategy major road scheme options are being considered to improve access to the strategic road network from this economic regeneration area. The favoured schemes will be integral to the Wyre Forest Transport Strategy
Horsefair (AQMA)	This site is within an area identified for redevelopment and regeneration. The redesign of the road network will be included to ensure air quality improvements result.
Welchgate, Bewdley (AQMA)	A traffic management scheme is being developed to improve air quality on this narrow street.
Bromsgrove	
A38 between M5 junction 5 and M42 junction 1 (includes AQMA at M42 junction 1)	MOVA has been installed at signals on A38 junction with Birmingham Rd (2009). Relocation and improvement of Bromsgrove Rail Station to significantly increase capacity and improve the accessibility of the rail network and encourage commuters away from their cars and onto the train. (2011 - 2014)
Evesham	
High Street and A4184	Evesham High Street Improvement Scheme (2009-2010)

Location of Congestion Hotspot	Improvement Scheme
junction with B4084 Port Street - AQMA	Off line construction of a new Abbey Bridge and Viaduct to 40 tonnes weight limit and redesign of junction with B4084. (major maintenance scheme – 2012 - 2015) Review of signal timings and/or vehicle detection will be considered for the Port Street junction with Waterside.
Stourport Town Centre	Traffic management scheme implemented 2007/08 Wyre Forest Transport Strategy (see Kidderminster improvements above)
M5 Junction 6 (Highways Agency)	Improvement scheme installing MOVA controlled signals with entry/exit lane improvements

2.4.5 This identification of congestion hotspots will be updated and expanded in the NMP through development of the road hierarchy GIS database (see section 2.1.1) and traffic data collection.

A4440 Worcester Southern Link Road

Information on Street Works

2.4.6 The computer software system, Exxor, is utilised to collect and co-ordinate data for statutory notices, which includes our own maintenance and improvement works, developer works, and other parties works under licence. Utilities can view the system to co-ordinate their own works. This is a noticing co-ordination system but the authority is considering a move towards a permit system on a regional basis, which is being reviewed with the WM(S&U) TMG. This would provide greater control and a consistent approach across the whole region making it easier for utilities to plan their works.

2.4.7 For road closures a statutory process is followed through the County Council, which includes advertisement in local papers and notices on site to ensure the public are kept fully informed. The county council produces a weekly Road Works Report, for the forthcoming week, which is distributed to the emergency services, public transport operators, District and County Councillors, adjacent local authorities, local media (radio and press) and county and district council staff. A more detailed spreadsheet update including temporary traffic signals is produced on a weekly basis and distributed to highways maintenance staff and the police traffic management section. This spreadsheet is used to provide an update of the external website that ensures the public can access up to date information relating to road works.

2.4.8 In addition, the public is kept further informed of works through local signing prior to works commencement and letter drops to residents as appropriate to the impact of the works. Where major works are planned, meetings are held with organisations such as the police, local traders, Council members etc. to determine a suitable traffic management plan to minimise impact of the works. This meeting will ensure media coverage and advance signage is put in place as required.

2.4.9 To enhance information available over the Web, Worcestershire is considering the introduction of ELGIN (electronic local government information network), which would provide a quality mapping system identifying road works in the area. This would provide a consistent system across the local traffic manager region. Worcestershire is also considering involvement in the Travel Information Highway (TIH) which is an agreed framework for joining traffic and travel information together via the Internet to make our travel data available to partners and the public.

2.4.10 The County Council works in close partnership with key stakeholders and gathers highway network information from these partners as well as keeping them informed of traffic flows, planned road works, closures and events, consulting on proposed diversionary routes and highway improvement schemes. Information gathered from key stakeholders includes:

- *West Mercia Constabulary, Traffic Division: notification of incidents and the subsequent update on clearance of congestion*
- *Passenger transport operators: data on bus reliability, patronage levels and identification of congestion hotspots.*
- *Other Local Highway Authorities: incidents, planned road works and closures, events and weight restrictions that impact on Worcestershire's highway network, and dissemination of best practice in Network Management through various meetings such as the traffic managers group WMU&S TMG, Midlands Service Improvement Group (MSIG), HAUC and JAG.*

- *District Councils: notification of events and activities that could cause congestion, Civil Parking Enforcement monitoring information and hotspot identification, car park usage data and future land use planning and planning applications that impact the highway network.*
- *Highways Agency: incident notification, currently negotiating access to CCTV coverage of M5 junctions.*
- *Freight haulage organisations: information on highway network problems experienced.*
- *Police: information on highway network problems experienced specifically emergency issues such as accidents.*
- *Buses: information on highway network congestion locations.*

Intelligent Transport Systems

2.4.11 The business case for and affordability of increasing the highway capacity through construction of new highway is not a sustainable long term solution. Thus, as the transport network becomes congested there is a need to adopt policies that make full use of existing assets and manage demand for space on the highway. ITS offers real possibilities to meet this challenge by real time monitoring of the highway network performance and providing advanced warning to the traffic manager and public. ITS provides the means to manage the demand put on the network proactively on an area wide basis.

2.4.12 Worcestershire's LTP3 ITS Policy sets out the processes and approach required to establish the most efficient transport network and travel facilities through the use of advanced technology. At the hub of the ITS Policy is Urban Traffic Management Control (UTMC), which provides the facility to integrate a wide variety of information on highway network conditions from numerous sources/systems to support network management and provide comprehensive travel information across a wide range of communication channels.

2.5 Incident Management and Contingency Planning

Key Issues

- *Developing contingency plans for our network and the interaction with other networks.*
- *Working with and consulting all stakeholders to achieve continuity of contingency planning across boundaries for unforeseen events*
- *Providing all stakeholders with the required information to react quickly to plan implementation*
- *Ensuring contingency plans take into account the relative importance of different roads to the various road users*

2.5.1 The County Council and traffic management partners have to deal with unplanned incidents and emergencies on the highway including:

- *Emergency utility works e.g. major gas, water leaks;*
- *Flooding and other extreme weather incidents*
- *Road traffic accidents*
- *Accidental and malicious damage to highway assets*
- *Spillage for example chemicals, lorry loads etc*
- *Traffic signals failure*
- *Motorway lane and total closures*

2.5.2 There are a wide range of unplanned incidents that have the outcome of causing traffic congestion and disruption. We have Area Response Teams located in our North and South depots. Officers in these teams ensure that the highway network is made safe following an incident including road closures and diversions, traffic management, clearing of debris from the carriageway and arranging for repairs. These teams operate an "on call" system to ensure that incidents that occur out of the authority's normal hours of operation are attended. During normal operating hours this duty has been absorbed into the standard duties of the officers involved.

2.5.3 The County Council considers the provision of real time information as a key tool in the management of unplanned incidents. Notification of unplanned incidents comes from a number of sources, including the utility companies, emergency services and the public. The County Council's toolkit for responding to unplanned incidents includes:

- *Road closure*
- *Diversion routes*
- *Repair*
- *Warning signs on the highway*
- *Public information through local radio and website*

2.5.4 We have implemented an incident feedback process that is undertaken following any major incident. This requires a meeting to discuss the incident and any issues raised. These meetings are recorded, noting any issues that need to be dealt with. Action points are used to improve services. We also look to see if similar comments are raised at the next incident. This would be seen as a failing of our procedures, highlighting a major issue that we would have to address as a matter of urgency.

2.5.5 Dependant on the nature and size of the incident involved these feedback sessions may contain just the Network Management Group, or it may have much wider representation e.g. emergency planning, emergency services and the media.

2.5.6 The authority regularly exchanges updated emergency contact details with the police and National Traffic control centre. In conjunction with the Highways Agency we undertake an annual review of the contents of the Detailed Local Operating Agreement which contains this information. The County Council also publishes Emergency contact numbers and distributes them to wide variety of stakeholders.

2.5.7 Key partners across the County including the Police, Worcestershire County Council, Health Authority, Energy Supply Companies, Severn Trent Water and District Councils follow an incident management protocol based on the following level of emergency:

- ***Bronze Control*** *- partners and identified stakeholders are alerted by email/ phone call of a potential incident/emergency. This is often instigated by the Police but can be other partners e.g. health alert will originate from the Health Authority.*
- ***Silver Control*** *- a meeting is called to bring the appropriate partners/stakeholders together to agree the response to an incident/emergency*
- ***Gold Control*** *- ongoing emergency response required to a major incident that is a threat to public safety.*

2.5.8 The major flooding incident in July 2007 brought in the 'Silver Control' protocol and it was agreed that in addition to the County Councils Highway Area Response Teams the Worcestershire Hub call centre would also operate 24 hr/day to answer public enquiries.

2.5.9 We work closely with the West Mercia Police to ensure that congestion and disruption caused by the movement of abnormal loads is kept to a minimum. Movements are kept wherever possible to non traffic sensitive times of the day and do not move on parts of the network when they are likely to be affected by planned events. The County Council also uses its records to help operators identify other owners of structures which might be affected by the abnormal load movements.

2.5.10 With respect to plans for Chemical factory incidents Worcestershire's Emergency Planning Team have two Control of Major Accident Hazard (COMAH) plans. The diversion routes and traffic management is co-ordinated through our Highways Maintenance Units with signage and road closures put into place by our highway Area Response Teams.

Contingency Planning

2.5.11 Worcestershire's Traffic Manager liaises with the Emergency Planning Team to ensure highway and transport actions are incorporated into contingency plans.

The Civil Contingencies Act (2004) defines an emergency as:

- An event or situation which threatens serious damage to human welfare
- An event or situation which threatens serious damage to the environment
- War or terrorism which threatens serious damage to security.

2.5.12 Our role as a Local Authority is to support the emergency services in the case of a major incident. We are on call 24 hours a day and will coordinate the Council's response during a major incident. When the immediate life-threatening period has passed, the Local Authority will play a major role in restoring normality to the community and to the area affected as quickly as possible.

2.5.13 The Traffic Management Act 2004 places a duty upon the Local Traffic Authority to ensure that contingency plans are in place which allow a rapid response to accidents and emergencies and take account of the relative importance of different roads to the various road users.

2.5.14 In this instance, multi-agency contingency plans have been developed and a community risk register is being maintained, with further investigations being undertaken to identify vulnerable, strategic and sensitive parts of the highway network. This work will be used to inform the existing contingency plans and to help assess the implications for the whole transport network including neighbouring authorities' networks and those routes controlled by the Highways Agency.

2.5.15 In considering arrangements for meeting this duty, we will specifically consider the effects of our actions on the Motorway and Trunk Road network and the measures that could be taken to mitigate any adverse effects. All parties will have to ensure that their arrangements for meeting the traffic management duty are compatible. Agreement of tactical diversion routes are in accordance with the Highways Agency's Area Management Memorandum No. 71/06 Off Network Tactical Diversion Routes.

2.5.16 We will develop a generic contingency plan framework to use for all developed specific Contingency Plans. The framework used by the Highways Agency will be used as a guide to best practice. All of the County's Primary Route network will be covered by a Contingency Plan.

Flooding

2.5.17 Worcestershire is susceptible to flooding throughout the County with the rivers Avon, Severn and Teme being most notable in relation to the increasingly frequent flooding events experienced in recent years. Worcestershire also suffers with a very limited number of road crossings of these rivers, which can lead to severe highway network problems if any of these bridges become impassable.

Floods in Tenbury Wells

2.5.18 Two drainage groups deal with flooding /land drainage issues throughout the County. The Land Drainage Partnership looks at general issues affecting the County and how matters may be improved in the future. The Technical Officers Group looks at current issues and how they may be achieved with the aim of closer working relationships between the various agencies. Both groups contain representatives from Worcestershire County Council, the Worcestershire District Councils, National Farmers Union, Severn Trent and the Environment Agency with Land Owner and Drainage Board representatives also attending the Partnership meetings.

2.5.19 The Environment Agency is compiling new maps of flood areas based on recent floods. A permanent flood alleviation barrier has been constructed along the River Severn in Worcester to reduce the main highway network problems caused by the river flooding.

Winter Maintenance

2.5.20 The County Council, as the Highway Authority, is responsible for providing a winter service on adopted public highways within the county except for motorways and trunk roads. The purpose of the winter service is to provide assistance to road users by treating the highway network to mitigate the effects of ice and snow and to maintain traffic movements, whilst minimising the impact of the service operations on the environment.

2.5.21 Worcestershire County Council Winter Service Policy can be viewed at http://www.worcestershire.gov.uk/cms/transport-and-streets/streets/gritting/winter-service-policy.aspx. The purpose of this policy is to set out the principles that the County Council uses to meet its obligations and duties in respect of the winter service. It lays down which categories of road are to be treated, in what order of priority, and how quickly they should be treated. It is intended, through the use of this Policy, to ensure that the treated network maximises safe travel throughout the county.

2.5.22 The objectives of the winter service, so far as is reasonably practicable, are to:

- *Ensure the safe movement of vehicles and pedestrians on the highway network*
- *Minimise delays, accidents and damage to the highway resulting from ice and snow*
- *Undertake the winter service effectively and efficiently within the limitations of finite resources according to network hierarchy and severity of weather conditions.*

2.5.23 Weather information will be obtained from specialist forecasters, roadside monitoring stations and in unpredictable circumstances it may be supplemented by patrol inspections.

2.5.24 Winter Service operations will give priority to routes comprising the Principal Road Network, main and secondary distributor roads, links to villages, major bus routes, emergency service locations and reasonable proximity to schools.

2.5.25 Precautionary salting is carried out on approximately 30% of the road network. Precautionary routes are reviewed annually by the winter service manager taking into account any service requests received or difficulties encountered in delivering the service during the previous winter season.

2.5.26 The Precautionary Network is pre-defined and comprises:

- *The Principal Road Network, Main Distributor roads and Secondary Distributor roads (as defined in the carriageway hierarchy).*
- *Commuter routes (rural roads carrying more than 2,000 vehicles per day).*
- *Locally Important roads in the carriageway hierarchy and at least one route in to all villages so far is as reasonably practicable.*
- *Major bus routes (in urban areas roads with 8 or more service buses per hour and in rural areas 2 or more service buses per hour).*
- *No greater than 500m from a school.*
- *Emergency Service locations - police stations, fire stations, hospitals and ambulance stations.*

2.5.27 The aim is to treat the precautionary network in advance of the onset of potentially hazardous conditions so far as is reasonably practicable. Treatment is usually carried out during the evening so as to avoid late afternoon traffic.

2.5.28 Secondary Routes may be treated in exceptional conditions after operations are complete on the Precautionary Network subject to resources being available. The Secondary Network is pre-defined and comprises:

- *Less important local, village and estate distributor roads having significant traffic flows.*
- *Minor bus routes (in urban areas roads with 7 or less service buses per hour and in rural areas 1 or less service buses per hour).*
- *School transport routes operated by Worcestershire CC.*

2.5.29 Priority for snow clearance is given to classified A roads followed by B roads on the precautionary network. During prolonged periods of adverse conditions footways and cycleways in town centres are cleared according to network hierarchy and resources being available.

2.5.30 In the event that salt stocks approach critical levels, a Silver Control is called and salt conservation measures initiated.

2.5.31 Grit bins will normally be provided and maintained with stocks of salt/grit mixture where they provide a necessary improvement to road safety and benefit to the community subject to assessment of each location using consistent methodology and available resource.

2.5.32 A Winter Service Operational Plan is maintained that details the procedural and functional arrangements necessary to provide the service in accordance with this Policy. The Operational Plan is reviewed annually after the end of the winter season. The Operational Plan includes such things as:

- *Details of the precautionary and secondary routes.*
- *Precautionary decision matrix.*
- *Arrangements for communications between the Winter Service Supervisors, contractor, inspectors and emergency services.*
- *Procedures for linking to weather forecasters and Bureaux services.*
- *Procedure for recording daily decisions and actions during the winter season.*
- *Record of current Winter Service fleet vehicles and equipment.*
- *Pre-season fleet preparation activities.*
- *Inspection routes.*
- *Snow clearing zones and arrangements.*
- *Prolonged severe weather arrangements.*
- *Salt restocking arrangements.*

2.6 Dealing with Traffic Growth

Key Issues

- *Identify locations or trends of traffic growth*
- *Implement policies and actions to effectively manage incremental changes in traffic growth and congestion*

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Use and Transportation Planning

2.6.1 Worcestershire is forecast to experience growth during the LTP3 period (2011 – 2026) in response to the needs of businesses, the economy and the demand for housing. This growth will occur in the form of both commercial and residential development.

Reducing Travel by Private Car

2.6.2 Reducing the need to travel by car has been one of the key objectives of Worcestershire's Local Transport Plan from 2001 onwards. Sustained delivery of improvements to infrastructure and services to support increased use of passenger transport, walking and cycling has been central to achieving this objective. Worcestershire has so far had a strong track record in delivering such schemes, and will seek to build on this success during the LTP3 period.

2.6.3 Accessibility planning techniques using ACCESSION software have been adopted to develop strategies for the improvement of the passenger transport network. These techniques enable identification of the gaps in accessibility to the current bus network and evaluation of the competitiveness of passenger transport compared with the car both for cost and journey times. Improvement options can then be developed and evaluated against the objectives of increasing accessibility levels, bus patronage and transfer of car trips onto the bus.

2.6.4 The LTP3 Smarter Choices Policy focuses on reducing the need to travel by car through the use of marketing and information measures which seek to encourage and enable the use of sustainable travel modes, and typically include workplace, school, residential, community and personal travel planning, car sharing initiatives, car clubs, improved information provision, and innovative marketing, media and awareness-raising campaigns.

2.6.5 Worcestershire County Council was one of three local authorities to be awarded DfT funding from 2004 – 2009 for Worcester as a demonstration Sustainable Travel Town Project. This project established the 'Choose How You Move' initiative promoting sustainable transport options through an intensive marketing campaign including personal travel planning as well as highway improvements. The initiative achieved a 12 % reduction in car travel and a corresponding increase in walking, cycling and public transport patronage. The County Council will continue to build on the success of this project across the County through the LTP3 Smarter Choices Policy as well as providing best practice advice to other local authorities.

2.6.6 Worcestershire County Council's Development Control Team within the Network Control Unit is responsible for ensuring the transport implications of new developments have been properly considered and that suitable mitigation measures are being implemented to minimise the impact of the development on the transport network. Where a development will generate a significant amount of traffic a Transport Assessment is required detailing the traffic impact and the measures to reduce this impact and ensure a sustainable and environmentally sound development. It is Worcestershire County Council's policy that all new developments must be designed as sustainable developments. Therefore, Transport Assessments must explore the full potential for the development traffic to be accommodated by passenger transport, walking or cycling as a priority over highway capacity improvements.

2.7 Working with all Stakeholders - Internal and External

Key Issues

- *Implementation of a "whole-authority" approach.*
- *Awareness of the NMP for all internal officers exercising duties that impact upon the network to enable them to take account of the NMD*
- *Adequate liaison with second-tier organisations and other bodies to ensure that they have an awareness of the NMD in the exercising of their powers*
- *Involvement and consultation of all stakeholders in decisions and initiatives relating to network management.*
- *Adequate policies and actions to improve the network consistently for all users*

Whole Authority Approach

2.7.1 The County Council provides a daily spreadsheet update of all works being carried out on the highway network including skip and scaffold licences and temporary traffic signals. This information is collated and disseminated through liaison with internal teams and external stakeholders to ensure information regarding activities on the network is consistent and accurate.

2.7.2 The traffic manager liaises with key staff across the County Council including:

- *Emergency Planning, for input to emergency plans*
- *Strategic Transport Planning providing input on tackling congestion, air quality action plans and Safer Roads Partnership.*
- *Corporate in relation to managing planned major events.*

2.7.3 The Worcestershire Partnership brings together local government, public services including health, learning providers, the police and probation, voluntary and community organisations and local businesses within Worcestershire. The Partnership is responsible for developing Worcestershire's Community Strategy. Within the partnership sits the Economy and Transport Theme Group. This group has been established to develop the Economic Strategy Delivery Plan. The group ensures appropriate transport improvements are programmed to support the Worcestershire Economic Strategy. A principal consideration of this strategy is the management of congestion on the highway network.

Government Agencies

2.7.4 Worcestershire County Council maintains regular liaison with Government Office for West Midlands and the Department for Transport (DfT) to ensure that we are working to national guidance and best practice and to share information and data on performance monitoring and strategic transport planning.

2.7.5 Worcestershire has a good relationship with the West Mercia Constabulary - Traffic Management Division, working in partnership to deal with incidents affecting the highway. We are developing joint procedures between the HA and WM Constabulary for the management of incidents on the motorway network including the consideration of common route cards and route numbering for diversionary routes across the West Midlands region.

Stakeholders

2.7.6 Worcestershire County Council has a dedicated Highways Control Centre (HCC) to respond to enquiries from the public linked to the single access point for public information the Worcestershire Hub. The HCC is supported by a team of County Highways Liaison Engineers covering six specific areas of the County and providing the local link to the County's Integrated Transport Service.

2.7.7 The Development Control Team within the Network Control Unit works closely with the District Planners and private developers to review planning applications, prior to approval, to ensure that any substantial effect on traffic flow is adequately assessed and appropriate mitigation measures included as part of the planning approval.

2.7.8 We work in partnership with District Environmental Health Departments to develop Action Plans for declared Air Quality Management Areas where traffic has been identified as the cause of the air quality problem.

2.7.9 The County's Sustainable Transportation Team liaise closely with the bus operating companies to ensure they are kept up to date with any highway works that may disrupt bus services and their concerns are taken into consideration when programming works.

2.7.10 We regularly attend Regional HAUC meetings, with the other local authorities and utility companies to discuss any issues that may arise on the network and our implementation of the TMA 2004. We are working with all statutory undertakers and encourage joint occupation of road space to improve forward planning and minimise highway network obstruction.

2.7.11 Consultation is carried out with relevant parties prior to individual plans and policies being agreed by the County Council. This would typically include members of the general public and any specific user group, for e.g. ramblers and equestrians would be consulted in rights of way matters and teachers, school staff, students and parents included in a School Travel Plans consultation. The development of our Local Transport Plans have involved a comprehensive consultation of a very wide range of stakeholders and interest groups including the public

Cross Boundary

2.7.12 Worcestershire's Traffic manager is actively involved in the WM (S&U) TMG to ensure a consistent approach to the network management duty across the West Midlands region. This group inputs to the National Traffic Managers Forum and follows the National Guidance framework.

2.7.13 Worcestershire has representatives, including our Street Works Manager, on the Midlands Service Improvement Group (MSIG), which is made up of 30 authorities across the Midlands, in order to discuss best practise arrangements relating to the Network Management Duty.

2.7.14 A transport access strategy has been agreed between the County Council, Centro and Birmingham City Council. The strategy covers access to the Longbridge area by rail, bus, cycle and on foot. Also included are mitigation measures for the impact of traffic growth on roads located in Worcestershire caused by the Longbridge development including junction 4 of M5 and junctions 1&2 of M4 located within Worcestershire.

2.7.15 We work in partnership with the freight industry as well as adjoining highway and planning authorities through the Countywide and Vale Freight Quality Partnerships to ensure a consistent approach to the management of HGV traffic travelling within and passing through Worcestershire. This is of particular importance for the Vale FQP which includes Worcestershire, Gloucestershire and Warwickshire County Councils developing traffic management schemes to manage the high levels of HGV traffic in this environmentally sensitive area.

2.7.16 We work in partnership with our neighbouring local highway authorities and the Highways Agency on a range of issues. From local agreements within our Winter Service Policy to cross border contingency plans and specific consultation on planned events we work closely with the neighbouring highway authorities to manage our adjoining networks. Whenever necessary we also liaise with our own and neighbouring District Councils.

Consultation Process

2.7.17 The process of preparing this Highway Network Management Plan has involved wide ranging consultation including both internal and external stakeholders. This has enabled the views and priorities of each stakeholder to be considered. The result is intended to be a balanced Plan meeting the needs of all users of the highway network in the most efficient way. The list of consultees is shown in Appendix A.

2.7.18 In addition this Plan will be incorporated into Worcestershire's Local Transport Plan 3 (LTP3) which is due to be published in April 2011 and will be extensively consulted on throughout the programme of development which is set to commence early 2010.

2.8 Ensuring Parity with Others

Key Issues:

- *Ensure that the same standards, approaches and priorities are applied to all activities on the network*
- *Develop appropriate indicators to evidence parity between all undertakers of works*

2.8.1 Worcestershire County Council has set in place a street works inspection procedure that covers both our own highway works as well as the statutory undertakers ensuring that reporting of performance of works against standards is carried out uniformly. Six monthly Worcestershire HAUC meetings take place between the Street Works manager, statutory undertakers, County Council maintenance engineers, county council highway improvement project officers and county council works contractors. These meetings enable open discussions on performance against standards and benchmarking.

2.8.2 Through our software system EXOR we receive notices for all works from statutory undertakers and our own highway maintenance and improvements teams. We have increased our staff resources in programming of highway maintenance and improvement works to enable noticing to take place for all internal works

2.8.3 The Street Works team sits within the Community and Response Unit and as such is separate from the units involved in highway maintenance and improvement. This helps the Street Works Team to remain impartial in ensuring adequate notice, co-ordination and inspection of works on the highway. The Street Works Manager liaises with the Integrated Programme Board that sets out the future highway improvements and maintenance programme as a 3 year forecast and also the Highways Board that aims to improve communication of policies and procedures across the Integrated Transport Service.

2.8.4 Worcestershire's Traffic Manager is actively involved in the West Midlands (Shire and Unitaries) Traffic Managers Group (WM(S&U)TMG), formed in 2005 with the aim of developing a regional approach to the implementation of the Network Management Duty. One of the tasks of the group is to monitor street works permit schemes being implemented by other local highway authorities and consider the opportunity for implementation across the region to ensure a uniform protocol for the co-ordination of street works.

2.8.5 Worcestershire have agreed through the WM(S&U)TMG to consider a benchmark performance indicator for the group to measure disruption on major routes (category 0,1 and 2 roads). The indicators being considered is:

2.8.6 The number of days that road closures and temporary traffic signals are present on these roads in the am peak (measured per km)

2.8.7 Worcestershire is carrying out performance monitoring of all works promoters using the performance indicators agreed through the Midlands Service Improvement Group. The indicators are shown in Section 2.9.

2.9 Providing Evidence to Demonstrate Network Management.

Key Issues:

- *Monitoring the effectiveness of network management policies/actions*
- *Developing and improving actions taken to optimise the performance of the available network*
- *Appropriately using the available powers to effectively manage the network*

2.9.1 We have appointed a Traffic Manager, Sally Everest, who is the Network Control Unit Manager within Worcestershire's Integrated Transport Service.

2.9.2 As a partner in the West Midlands (Shires and Unitaries) Traffic Managers Forum we have agreed to co-ordinate the development of our Network Management Plan to ensure uniformity across the region.

2.9.3 Civil Parking Enforcement has been implemented across 4 of the 6 Districts in Worcestershire. The County Council are in discussions with the remaining Districts to pursue the implementation of CPE. Bromsgrove District Council are currently considering implementation.

2.9.4 Worcester's congestion problems are primarily due to the limited River Severn road crossing capacity. The Worcester Transport Strategy is being developed by building on the success of Worcester as a national demonstration project for the Sustainable Travel Towns Initiative. The strategy aims to reduce congestion and accommodate future economic growth through the more efficient use of the existing highway network through increased use of sustainable travel. Thus, a number of congestion related performance indicators are being regularly monitored for Worcester including:

- *Percentage of journeys made by bus, bicycle and on foot in Worcester*
- *Change in annual traffic flow*
- *In bound am peak journey times on key routes into the city*

2.9.5 Other countywide indicators relevant to the progress of the NMP include:

- *Change in annual traffic mileage*
- *Change in cycling levels*
- *Bus patronage and reliability*
- *Air quality*

2.9.6 A set of current performance indicators that are being regularly monitored are shown in Table 2.2 overleaf.

Table 2.2 - Current Performance Indicators for Monitoring NMP

Indicator	Baseline	Progress Commentary
LTP Average Annual Traffic Mileage – indexed	2006 6798 million vehicle kms = 100	LTP2 monitoring indicates that there has been a trend of increasing traffic mileage in Worcestershire prior to the adoption of the NMP
NI 167 Journey times morning peak inbound to Worcester	2008/09 Average 4.5 mins 13.3 mph	Worcester is the main urban area in the county and the only one to attract more commuting inwards than outgoing commuting. Limited river crossing capacity in Worcester coupled with historic narrow streets significantly contribute to the traffic congestion problems that the city experiences. Progress against this indicator is expected through the improved street works co-ordination, the implementation of the ITS strategy and sustainable travel schemes through the LTP2.
Number of declared Air Quality Management Areas	2008/09 AQMA's = 8	Since the adoption of LTP2 in 2006 there has been an increase in AQMA's from 3 to 8. Progress against this indicator is expected through traffic management schemes implemented through the LTP2 and also better management of congestion levels through the NMP.
LTP Bus reliability: percentage of buses starting their route on time	2007/08 89.1%	Congestion is the primary reason for bus unreliability. Widely varying journey times is a particular problem that is triggered by a very congested network and is especially problematic to bus timetabling
LTP Annual increase in cycling levels – indexed	2007/08 Average daily cycle trips = 85 Indexed to 100	LTP2 monitoring indicates that there is a trend of increasing cycling, a reduction in children being driven to school and increasing bus patronage. The implementation of successful sustainable transport strategies through the LTP2 impacts positively on the NMD by reducing the need to travel by car. LTP2 monitoring indicates a reduction in children being driven to school. The implementation of effective travel plans through the LTP2 impacts positively on the NMD.
LTP Percentage of children travelling to school by car (excluding car share)	2007/08 32.3%	
BVPI 102 Bus patronage	2007/08 15.25 million	

2.9.7 Additional performance indicators have been identified specifically for the Network Management Plan, shown in Table 2.3 overleaf. A large proportion of these new indicators have been developed and agreed through MSIG and relate to the uniform monitoring of highway works to ensure parity for all works promoters and minimise disruption to the travelling public.

Table 2.3 Proposed New Indicators for the NMP

Proposed Indicator	Baseline
MSIG SWKPI 1 - Defect Inspections categorised by each work promoter. ▪ The number of B & C Defects identified. ▪ The number of recycled defects. ▪ The number of remedial notices served.	TBC
MSIG SWKPI 2 - Section 74 Durations. For each work promoter - the total days of overrun by traffic sensitive streets and by road category.	TBC
MSIG SWKPI 3 - Temporary Traffic Regulation Orders. For each work promoter - the total number of closures on all roads by road category.	TBC
MSIG SWKPI 4 - Temporary Traffic Signals. For each work promoter – total number of days in use by road category.	TBC
MSIG SWKPI 5 – Notices. For each work promoter: – ▪ number of all notices by works category and for all road types and the number of cancelled notices. ▪ number of extension requested, allowed by work category and by road category and the total number of days. ▪ number of early starts requested, allowed by works category by road category and total number of days.	TBC
MSIG SWKPI 6 - Fixed Penalty Notices. ▪ Each work promoter – number of FPN's issued by offence. ▪ by offence, the number of waived FPN's.	TBC
MSIG SWKPI 7 - Sample Inspections. Each work promoter by works category and failures shown as a percentage of totals done to date.	TBC
Percentage of public that are satisfied with local traffic information	TBC
Percentage of county's strategic highway network covered by a contingency plan	TBC

2.9.8 Finally the development of the ITS strategy will increase the number and scope of real time monitoring of the network e.g. automatic number plate recognition cameras recording journey times. Real time monitoring will increase the scope for evaluating the traffic impact of planned and unplanned events and incidents, journey time reliability and UTC/ UTMC strategies.

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To the best of our knowledge all information was correct at the time of printing: March 2011.

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