5. Congestion

Objective 2 - Reduce congestion

Our core objective is to reduce congestion to improve the economy of the county and relieve environmental problems.

Congestion Policies

Policy TC1 **Oxfordshire County Council will manage, and where appropriate improve, the county's transport network effectively to reduce congestion and minimise disruption and delays to the travelling public.**

Policy TC2 **Oxfordshire County Council will work with major traffic generators to promote sustainable travel for journeys to employment, health, shopping and education in order to reduce congestion.**

Policy TC3 **Oxfordshire County Council will ensure that travel information is timely, accurate and easily accessible in a range of appropriate formats.**

Policy TC4 **Oxfordshire County Council will manage the parking under its control to reduce congestion.**

Policy TC5 **Oxfordshire County Council will identify suitable and unsuitable routes for freight movement, balancing the needs of businesses with protection of the local environment and maintaining the highway network.**

Congestion Strategy

5.1 Congestion occurs when the demands placed on a part of the transport network exceeds the capacity of the network to deal with it effectively. Congestion can therefore be tackled by either increasing the capacity of the network or reducing the demand. Oxfordshire County Council will be tackling congestion by seeking to implement measures that apply both these approaches, including:

* Co-ordinated network management
* Better information to travellers
* Incident management and co-ordination of roadworks and events
* Targeted improvements at bottlenecks
* Coherent parking policies
* Clear routes for freight traffic
* Traffic reduction through travel planning, information, publicity and marketing

Co-ordinated Network Management

Network Management Duty

5.2 Even when funding for improvements is available, increasing road space through new road or road widening schemes can be limited by physical or environmental constraints. Therefore we are seeking to make the most efficient use of current road space through ensuring that roads and junctions are operating at their maximum design capacities. The capacity of part of the road network can be increased without major new construction by ensuring that it runs as efficiently and effectively as possible. This can be achieved through network and traffic management.

5.3 In 2004 the Government introduced the Traffic Management Act. The Act introduced a major new duty, *the Network Management Duty*, on Local Traffic Authorities (LTAs). It applies to all LTAs and encourages them to reduce and manage congestion, manage works on the highway, and have contingency plans.

5.4 Oxfordshire County Council has always carried out a level of network management, particularly with the co-ordination of works. The introduction of the *Traffic Management Act 2004* and the Network Management Duty gave greater importance to Network Management leading to the development of a *Travel and Information Management Policy* and *Network Management Plan*.

Network Management Plan

5.5 The Network Management Plan sets out how we will introduce effective network management in the county. The Plan includes a series of key actions to improve network management in Oxfordshire:

* Development of Urban Traffic Management and Control

(UTMC) in Oxford;

* Undertaking a timing review of traffic signals;
* Developing methods to monitor and report levels of congestion;
* Developing contingency plans for strategic routes;
* Production of a communications plan for unplanned events;
* Recording all works on an electronic register;
* Reviewing the county's Traffic Sensitive Streets Network;
* Producing a guide for event organisers on their traffic management responsibilities; and
* Reviewing existing controlled parking zones in Oxford.

5.6 Fundamental to successful network management is the understanding of what is currently happening on the road network and what is planned for the future. The development of communication strategies and ensuring the effective noticing of all works on the highway will be a significant challenge over the next few years ("Noticing" is the official notification of any activity that is likely to affect the operation of the road network).

Travel Information

5.7 An important element of making the network work as well as possible is ensuring that the travelling public have the information available to allow them to make informed decisions. This is equally important when dealing with the normal working of the network and when there are temporary disruptions such as accidents, roadworks or public events.

Travel and Information Management

5.8 Oxfordshire County Council has developed a Travel and Information Management Strategy. This sets out our vision on how we can make the best use of technology to help manage our roads and provide meaningful, up-to-date information to the public. It sets out our aims and identifies the principles and good working practices to achieve them.

5.9 The strategy paved the way for the creation of a traffic control room where intelligent transport systems enable the network to be managed in real time. The network area that the traffic control room manages is the whole of Oxfordshire, however currently most of the tools for gathering network data and managing the network are focused in and around Oxford.

Communications

5.10 A high quality strategy for communications is also essential for unplanned events, such as accidents. Accidents are by nature a random event and their severity, duration and impact can vary greatly. We are responsible for working with our partners in co-ordinating traffic following accidents on the county's network and subsequently clearing it up. Effective and efficient response and co-ordination is required to keep disruption to a minimum. Contingency plans are being developed so that quick and effective action can be taken whenever an incident occurs.

5.11 We have excellent real-time journey time data coverage for Oxford through our journey time management system and through the real-time bus tracking equipment. This can be used for the management of the network on a day-to-day basis along with monitoring general performance and trends.

5.12 Dissemination of information is an important element in managing the network. Information is currently passed to members of the public through electronic variable message signs on the road, real time information displays at bus stops, mobile phone and websites. Information needs to be timely, accurate and consistent. To publicise the information available there is a need to improve good working relationships with radio stations, Thames Valley Police, bus operators and freight companies. We will also provide greater information coverage to the public with more roadside electronic signs and an enhanced travel website.

Co-ordination of Roadworks and Events

Works register

5.13 Managing and co-ordinating the control of works and events that may impact upon all forms of traffic is a key part of delivering the network management duty. Fundamental to achieving this is the effective noticing of all roadworks on an electronic register, ensuring that works on site are signed and guarded correctly to ensure safety, and reduce delays.

5.14 Oxfordshire County Council is working closely with utility companies and its partners to ensure that accurate and timely notices are submitted for works.

5.15 Information on the most disruptive roadworks is displayed on our website, including the "top ten" works that are being carried out in the county at any time. This information is also fed into the *eLGIN* website where the information can be viewed alongside works on motorways, trunk roads and neighbouring authority roads.

5.16 We also have a responsibility to co-ordinate events, including filming, with works on the highway. This includes liaising with the district councils, police and event organisers to ensure that the impact on transport is fully taken into account, and that traffic is able to continue to flow.

Contingency Planning

5.17 The effective management of traffic requires the planning of the response necessary following incidents on the highway: the sooner an alternative routeing plan can be put into action, the less the impact on traffic.

5.18 This work identifies key diversions and communication strategies to deal with incidents that block or severely affect a lane of the highway. We have already completed plans for sections of the A420, A44 and Oxford ring road. A rolling program will eventually see diversion strategies developed for all the main routes and towns in Oxfordshire. These strategies are being built into the traffic management system so they can be swiftly acted upon.

5.19 The HA has formal diversion routes agreed with us so that if there is an incident on the A34 or M40 that requires a closure then approved signed diversion routes can be used. We are currently working on formal diversion routes for our main routes so that when incidences occur we will know what diversion route to use and it also enables permanent signs to be in place, making diversions faster to implement and diversion routes clearer.

5.20 Modelling traffic flow patterns is becoming more advanced and its use is becoming more widespread. A micro-simulation model has been produced to help with understanding wider impacts of incidents, planned events, and contingency plans. Our longer term aspiration is to link the model with the traffic management database to enable faster than real-time testing of contingency plans during incidents or roadworks.

Enforcement of Traffic Orders

5.21 Oxfordshire County Council has a dedicated traffic enforcement

team that undertakes civil parking and bus lane enforcement within Oxford. The effective management of parking arrangements and other traffic regulation orders ensure that the highway network is not abused and that traffic continues to flow in the right channels. A project to extend de-criminalised parking to the whole of the county is under way to give us enforcement powers to regulate on-street parking countywide. As part of this we have entered into an agreement with West Oxfordshire District Council to delegate our on-street parking enforcement powers; decisions will need to be made on how parking is enforced across the remaining three districts.

Targeted Improvements

Road Capacity

5.22 Roads play the major role in transport in Oxfordshire, and this is likely to remain the case throughout the life of this Local Transport Plan. Congestion can be relieved by increasing the local capacity although care needs to be taken with this approach to avoid the additional capacity attracting more trips to be made and thereby reducing the benefits of the scheme.

Network Improvements

5.23 Every local area will have its own specific needs and the appropriate solutions will be different. However, the range of possible solutions can successfully be looked at in the priority order listed below:

* Modal shift – can mechanisms be put in place, either services, infrastructure or better information, to encourage greater use of walking, cycling or public transport for all or part of the journey.
* Network management – if a road or junction is not operating beyond its capacity then can changes be made to realise the full capacity, such as lower speed limits, intelligent signals etc.
* Capacity improvements – can physical measures be implemented to move a greater number of people through the local road network - this could consider measures such as improving junction design, High Occupancy Vehicle (HOV) Lanes, route closures to all or certain types of vehicles, turning restrictions etc.
* Road widening – can local widening at junctions or

congested points help alleviate the problem or longer stretches of road widening be considered.

* New road links or bypasses – can new road connections be used to help direct traffic away from problem locations.

5.24 Oxfordshire County Council has already identified two areas where major network development is required and where work is in progress to identify major strategic improvements for the future:

* On the A34 through Central Oxfordshire and on the northern and southern approaches to Oxford at the Oxford Ring Road (the "Access to Oxford" project);
* In the Science Vale UK area (Didcot/Harwell/Wantage) where major housing and economic growth is planned.

5.25 In addition we will be identifying other network development needs as part of the development of the district councils' Local Development Frameworks.

Parking

Parking Policy

5.26 The availability of parking plays a major part in drivers' decisions on what trips they make, when they make them and which routes they take. Oxfordshire County Council has developed a parking policy document which, though primarily designed to bring consistency to the way Civil Parking Enforcement (CPE) is or will be carried out throughout the county, also brings together existing district and county council policies in one document.

5.27 Our parking policy will put in place parking controls designed to reduce congestion, provide parking for activities such as visiting local shops and protect parking in residential streets for those people living there. However, without enforcement, such controls can quickly become ineffective. There are many calls on police resources so that the amount of effort that they can put in to parking enforcement is likely to be limited. A CPE service provides a dedicated team concentrating solely on vehicles parked in contravention of the Traffic Regulation Orders.

5.28 CPE has been in place in Oxford since 1997. The process of introducing this across the county has started: an application has been made to the Department for Transport for West Oxfordshire to become a Civil Parking Area. The aspiration of extending CPE

to the other districts within Oxfordshire will continue.

5.29 There are four main types of public parking:

* on-street pay & display,
* free or metered on-street parking,
* Park & Ride, and
* off-street car parks.

5.30 All but the last of these are our direct responsibility (off-street car parks across the county are managed by the district councils). A coherent approach to and relationship between all types of parking facility, particularly car parks and Park & Ride, is needed.

5.31 To be effective in reducing congestion, parking needs to be managed so that it encourages drivers to use other means of travel to work. This can be through charging policies or through restricting parking times or duration. For such a policy to be publicly acceptable there needs to be adequate and effective alternatives for drivers to use. By and large Oxford meets this ideal - city centre car park tariffs are set at a high long stay rate and there is no all-day metered parking in the city centre. Instead, there is a highly developed bus network as well as around 5,500 Park & Ride spaces. The cost of using these services is significantly less than the daily rate for city centre parking.

5.32 Outside Oxford, parking enforcement is currently limited and therefore the full benefit of parking policies are not always realised. Banbury and Bicester have parking controls and off-street car parks. There are also residents' parking schemes in Abingdon, Bicester and Henley and one proposed for Banbury but these cannot become fully effective until CPE powers are in place. Witney will have CPE powers from early 2010 but, as West Oxfordshire District Council does not charge in its car parks, any controls to manage parking are limited to enforcing maximum stay periods. The other district councils provide varying degrees of free parking in towns. This is generally said to be to benefit businesses but it does encourage short car journeys into the towns rather than the use of other modes.

Park & Ride Capacity

5.33 The success of Oxford's Park & Ride system has meant that the parking sites are regularly reaching capacity. Park & Ride availability is influenced by two factors: the physical size of the sites

and the use to which those spaces are put. Three of the five sites - Thornhill (to the east), Seacourt (to the west) and Peartree (to the north) reach capacity every day, the first two immediately after the morning peak. These two sites are used to a degree for purposes other than as a Park & Ride site for Oxford. Thornhill is used by people travelling to London and the airports on express coaches and Seacourt is used as convenient parking for nearby offices and businesses.

5.34 Expansion of Park & Ride is not a quick process, even if it is desired from a strategic point of view. Oxfordshire County Council's view is that Park & Ride services should not replace the use of local bus services where these are available for larger parts of a journey. This means that the location and costs of new sites and services needs to be carefully considered before construction or introduction.

Lorry Routeing

5.35 While they usually make up a small proportion of the overall traffic flow (except on specific roads such as the A34), lorries can play a major part in creating congestion as well as contributing to other environmental problems associated with it, such as air pollution, noise etc. However, problems caused by lorry traffic are seldom easy to remedy without causing difficulties to the local and national economy.

5.36 We are progressing relationships with both the Highways Agency and the two freight associations (Freight Transport Association and Road Haulage Association). These relationships will help to assist to establish suitable freight routes and diversion routes are established to help remove these trips from unsuitable rural roads and villages. These agreed routes will also help us to manage the network regarding maintenance of these routes and day to day operation.

Congestion and journey reliability

5.37 Several of the county's major roads currently experience regular congestion: A34 north from Abingdon, A40 between Witney and Oxford, large sections of the Oxford Ring Road. Other routes may experience congestion in the future if traffic continues to grow, possibly including the M40 south of Oxford. Congestion on the major routes can often be a cause of drivers seeking to find alternative routes on more minor roads. Measures to reduce overall congestion on these routes would help lorries along with

other traffic; it is unlikely that specific measures for allowing lorries to bypass congestion hotspots (such as lorry only lanes) would be generally applicable within Oxfordshire.

5.38 The A34 is a particular problem within Oxfordshire. This is a two-lane dual-carriageway road with a high proportion of heavy goods vehicles (up to 20% of daily trips with higher proportions at some times of the day). The road is subject to congestion caused by the heavy overall traffic flow and the capacity of junctions (particularly at the junction with M40) and by frequent incidents. One significant problem along this road is caused by lorries overtaking each other causing moving blockages to overall flow along the route.

Route information and satellite navigation systems

5.39 The Oxfordshire Freight Quality Partnership produced a lorry routeing map in 2006 showing the major locations of lorry movement generation and the preferred routes to get to each of these. This was updated in 2008 but needs to be kept up to date and brought into line with similar maps produced by neighbouring counties. It is likely that over the course of the Plan period that there will be opportunities to use new technologies to better publicise this advice.

5.40 The use of unsuitable roads by large lorries is an ongoing problem, particularly on rural routes. While weight restrictions can be used to reduce the problems caused by this, their use has to be balanced against any costs to the economy and legitimate needs for access.

5.41 In recent years satellite navigation systems have caused increases in lorry traffic on many unsuitable roads across the country. A current problem is that systems do not generally discriminate in route choice between large and small vehicles. More advanced systems in the future may provide a solution to this but there is also a clear need to ensure that, as far as possible, satellite navigation companies have information on the suitability or otherwise of roads to carry traffic.

Freight consolidation

5.42 Freight consolidation and trans-shipment are methods which have been suggested to reduce lorry numbers on specific roads or in sensitive areas. With consolidation, haulage loads are combined to reduce the numbers of lorries needed; with trans-shipment, final

deliveries are made by smaller or more environmentally acceptable vehicles by separating out those which are to be delivered to a defined site or area. Oxfordshire County Council will consider these as potential solutions if opportunities arise and if a viable working model is developed for either technique.

Rest and layovers

5.43 Lorry drivers are required to take both daily and overnight driving breaks by the *Driver Hours Directive 1985*. For this reason, areas for goods vehicles to stop and park when away from base play a vital part in the national delivery network. However, in recent years there has been a reduction in the number of rest area sites available for lorries. Many service areas on non-motorway routes are now not available for lorries. Safety and traffic management concerns, relating to the time that lorries take to accelerate out of them reducing speed on the main carriageway, have led to the removal of some roadside lay-bys.

5.44 Well designed and located lorry parks can play a role in reducing the mileage run by visiting vehicles, promoting driver well-being, helping with efficient deliveries and minimising disruption to communities. However the benefits of such facilities would need to be balanced against the local environmental impacts that they would bring in deciding on whether any particular site was suitable for this use. The Department for Transport has published a strategy (November 2009) to encourage the development and use of secure lorry parking locations. Any proposals within Oxfordshire would need to be in line with this national strategy.

Traffic Reduction

5.45 As well as the measures to increase the capacity of the network, congestion can also be dealt with by measures to reduce the demand placed on the transport system. Traffic reduction measures can consist of initiatives to improve facilities or encourage the use of alternative modes that place fewer demands on the road network.

5.46 This could include:

* Car Share - We have recently launched Oxfordshire Car Share, providing a matching service for all those who live, work and travel in and around Oxfordshire. With links to smaller car share schemes in the county, the scheme aims

to take cars off the road by putting users of the same route together.

* Public Transport - Tackling congestion effectively will involve promoting public transport alternatives, particularly to people who currently never use them.
* Cycling - To reduce congestion there is a strong case for promoting cycling to non-users, particularly for people making short journeys.

These are outlined in more detail in Chapters 9-12 on travel planning, public transport, walking and cycling.