



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 3: Assessment of  
Options

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**Warwickshire County Council  
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<b>Assessment of alternative measures/options</b>						
<b>Measure</b>	<b>Economy</b>	<b>Climate</b>	<b>Equality</b>	<b>Safety</b>	<b>Env</b>	<b>Reasoning behind the assessment</b> <b>Useful evidence to assist the assessment of draft plan</b>
<b>Integration of planning and transport planning</b>						
Better integration of transport and land use planning to reduce the need to travel	X	X	X	X	X	Better integration of transport and land use planning helps to ensure that development has adequate transport infrastructure to support development in a way that is sustainable and does not increase congestion, traffic in inappropriate areas and total vehicle miles. This reduces the risk of impacts on the economy, air quality, CO <sub>2</sub> emissions and community effects such as severance.
<b>Parking</b>						
Better enforcement of parking restrictions  Increasing car parking charges in town centres	X				X	Increasing parking charges in town centres and enforcing parking restrictions may have some positive effects on traffic in town centres but only if alternative modes of transport are available. If they are not, this may cause people to choose to travel to other centres.
<b>Travel information</b>						

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<p>Tailored travel information for local journeys (Personalised Travel Planning) <b>(new to Warwickshire)</b></p> <p>Education &amp; promotional campaigns</p> <p>Improved passenger information before and during travel</p>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<p>Tailored travel information is likely to be the most effective out of these measures in helping people to make more sustainable travel choices. However, it is costly, so may not be a practical approach if resources are uncertain. Educational and promotional programmes are also likely to be effective at providing people with information on travel choices and potentially improving accessibility and potentially causing a small amount of modal shift, thus having secondary effects on the environment.</p> <p>Measures new to Warwickshire – Personalised travel planning can be effective in inducing modal shift by making people aware of travel options. However, it can be costly to operate and careful thought would need to be given to its targeting. The council have given it a low priority.</p> <p><u>Useful evidence/information</u></p> <p>Personalised travel planning is costly to operate. Research on the DfT sustainable travel towns indicate that the cost per individual receiving intervention materials (including contractor costs, materials costs and staff costs but not monitoring) was roughly £25-£29 (1).</p> <p>Research has shown that traditional information services are not appropriate for occasional public transport users. Simpler information which does not require detailed knowledge (e.g. of street names) and more flexible tickets and ticket purchase options are needed (2)</p> <p>(1) DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report</i>. (2) Scottish Executive Development Department Research Programme (2003): <i>Barriers to Modal Shift. Research Findings No.171/2003</i>. Derek Halden Consultancy.</p>
<b>Work and school travel</b>						

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Safer Routes to School School Travel Plans to reduce car use for school journeys	X	X	X	X	X	<p>This will be positive in terms of accessibility by increasing choice. If they cause some level of modal shift from car use they will be positive for climate, the environment and the economy (from reducing car miles and congestion).</p> <p><u>Useful evidence/information</u></p> <p>The DfT sustainable travel demonstration towns showed that interventions targeted at school and workplace travel are likely to have been particularly important in the towns, because of their effect on peak hour trips. Car use for the journey to school fell by between 9% and 17% in the three towns (as measured by school travel surveys) (1).</p> <p>In Warwickshire, the 2008/2009 census indicated that 65% of all school children travel to school using sustainable miles up from 63% in 2007/2008 (2)</p> <p>(1) DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report.</i></p> <p>(2) <i>Warwickshire LTP Delivery Report 2008/2009.</i></p>

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Workplace Travel Plans to reduce car use for commuting  Charging for car parking at work places	X	X	X	X	X	<p>This will be positive in terms of accessibility by increasing choice. If they cause some level of modal shift from car use they will be positive for climate, the environment and the economy (from reducing car miles and congestion).</p> <p><u>Useful evidence/information</u></p> <p>The 2004 research (1) showed that workplace travel plans can be successful in urban and rural areas. However, one important aspect was thought to be parking with the most successful travel plans reducing parking or charging for parking.</p> <p>The DfT sustainable travel demonstration towns showed that interventions targeted at school and workplace travel are likely to have been particularly important in the towns, because of their effect on peak hour trips. Car driver distance for commuting fell amongst residents of two of the towns (as measured by the household survey) (2).</p> <p>Recent research on business attitudes to transport has shown that take up of travel plans is low (apart from in large organisations) and businesses see transport as a fairly low priority (3). As businesses are unlikely to voluntarily undertake WTPs, it is important that incentives or planning requirements are implemented, for example (3)</p> <p>The number of the workforce covered by a workplace travel plan in Warwickshire has increased from 8.6% in 2005/06 to 14.8% in 2008/2009 but it is unclear whether these are voluntary or through planning conditions (4).</p> <p>(1) Cairns S, Sloman L, Newson C, Anable J, Kirkbride A &amp; Goodwin P (2004) 'Smarter Choices – Changing the Way We Travel'.</p> <p>(2) DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report. Chapter on walking and cycling.</i></p> <p>(3) DfT (2009): <i>Business attitudes to transport: knowledge review of the existing evidence</i></p> <p>(4) <i>Warwickshire LTP Delivery Report 2008/2009.</i></p>

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<b>Walking and cycling</b>						
Develop cycle routes in and around our main towns  Promotional events & activities (including publishing town centre cycle guides)  Cycle parking at key destinations  Cycle training for children & adults  Pedestrian crossing facilities  Reduce crime and fear of crime on key pedestrian routes  Introduce pool bicycles (Bike Hubs) for individual use within main towns ( <b>new to Warwickshire</b> )	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<p>Improving walking and cycling provision can be positive in many ways – it can help directly improve health and accessibility. A secondary effect is potential reductions in car mileage (which has effects on the economy and the environment). However, walking and cycling schemes should not be implemented to reduce car mileage alone as they are likely to have a relatively small effect on this (especially in rural areas).</p> <p>Measures new to Warwickshire – pool bicycles have been used in some of the DfT sustainable travel towns and were found to be useful to help encourage people who cannot afford a cycle to use this mode. The effect on car mileage is unlikely to be significant but the measure is very positive for accessibility.</p> <p><u>Useful evidence/information</u></p> <p>Cycling in Warwickshire has been on the increase in Warwickshire and the number of cycling trips has increased 20% since 2004 (1). The corresponding decrease in road traffic mileage is not known.</p> <p>A lot of work on the success of cycling and walking measures has been undertaken for the DfT sustainable travel demonstration towns (2). It is difficult to compare the results from these with Warwickshire but some general comments can be made. Please note that the sustainable travel demonstration towns included more measures than just walking and cycling and the results look at the success of the measures as a whole. Car driver mileage by residents of the Sustainable Travel Towns fell by about 5%~7% (on trips &lt;50km) during the course of the programme. Effects of walking and cycling alone, however, are likely to be much lower than this. Climate emissions also dropped by about 50kg per person per annum.</p> <p>The towns experienced different levels of increase in cycling (from 0% increase but against a background of decline) to a 100% increase. Not all towns sustained their increase. This highlighted the importance of ongoing initiatives and/or locking in with new infrastructure, in order to generate a new trajectory of cycle use.</p>

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						<p>Although the risk of an accident per kilometre walked or cycled did not necessarily increase, two of the towns did see increases in absolute numbers for some types of casualty. Authorities setting out to encourage walking and cycling should support their promotional efforts with a strong programme of measures to improve the safety of active travel, such as 20mph zones, safe cycling infrastructure and other highways safety measures. In addition, the number of people who never do any physical activity has decreased in all the towns.</p> <p>(1) <i>Warwickshire LTP Delivery Report 2008/2009.</i></p> <p>(2) DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report.</i></p>
<b>Passenger transport</b>						
<p>Improvements to buses (including new buses and increased service frequency / QBCs)</p> <p>Bus priority</p> <p>Improved public transport interchange</p> <p>Concessionary fares schemes</p> <p>Flexible buses offering door to door transport for eligible groups</p>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<p>Improving public transport services will improve accessibility and social inclusion, especially the use of flexible buses. A secondary effect is potential reductions in car mileage (which has effects on the economy and the environment) if the improved services and infrastructure cause people to move from car travel to public transport.</p> <p><u>Useful evidence/information</u></p> <p>Research (1) on quality bus partnerships shows that patronage increases of between 5 and 50% can be expected with route upgrades.</p> <p>Newer research on the sustainable travel demonstration towns has shown that where there was a focus on encouraging a particular mode of travel, promotional measures that were accompanied by improvements in the quality of the 'offer' (e.g. better bus services, or new cycle infrastructure) this yielded comparatively greater success (2).</p> <p>In Warwickshire the ridership of buses on the Quality Bus Partnership routes has increased by over 40% since 2003/2004) (3).</p> <p>(1) Cairns S, Sloman L, Newson C, Anable J, Kirkbride A &amp; Goodwin P (2004) <i>Smarter</i></p>

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						<p><i>Choices – Changing the Way We Travel.</i></p> <p>(2) DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report.</i></p> <p>(3) <i>Warwickshire LTP Delivery Report 2008/2009.</i></p>
<p>Rapid transit / light rail (<b><i>new to Warwickshire</i></b>)</p> <p>Rail development / new rail stations</p>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<p>Improving public transport services will improve accessibility and social inclusion. A secondary effect is potential reductions in car mileage (which has effects on the economy and the environment) if the improved services and infrastructure cause people to move from car travel to public transport.</p> <p>Measures new to Warwickshire – rapid transit / light rail can be positive in the right circumstances and has proved to be well used in large city areas such as Birmingham. They are costly to build and careful thought is needed as to what areas of Warwickshire they are suitable for. The council have given it a low priority.</p> <p><u>Useful evidence/information</u></p> <p>In the UK as a whole, Rail travel has increased by nearly 70 per cent since 1980 despite the effects of the Hatfield crash in October 2000. Investment in national rail infrastructure has increased significantly since privatisation. The reliability of train services has been improving gradually since 2000, as has passenger satisfaction with journeys undertaken (1).</p> <p>In Warwickshire Coleshill Parkway has attracted around 70% of passengers that are new to rail and this is indicative that people are choosing to travel by train in favour of other modes. Rail patronage in Warwickshire in general is also up from 3.81 million passenger journeys in 2003/04 to 5.54 in 2008/09 (for rail services to and from Warwickshire) (2).</p> <p>Light rail can be popular in the right circumstances. The eight light rail systems in England (including Centro West Midlands) between them account for around 4 per cent (188 million passenger journeys) of local public transport journeys in 2008/09. This is nearly three times as many journeys as were made in 1985/86. Usage has increased as new lines are developed</p>

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						<p>and existing lines extended (3).</p> <p>Research has shown that the main barriers to travelling by train are hard factors such as the competitiveness of travel time and cost and rail capacity and reliability (2). Other research has suggested that rail travel may be of growing importance to businesses, reflecting perceived advantages such as ability to work on trains, easier access to city centres and being less stressful than driving. However, dissatisfaction with rail fare prices, punctuality and parking at stations was also highlighted (4).</p> <p>(1) <i>DfT Transport Trends, February 2009</i></p> <p>(2) <i>Warwickshire LTP Delivery Report 2008/2009.</i></p> <p>(3) <i>Scottish Executive Development Department Research Programme (2003): Barriers to Modal Shift. Research Findings No.171/2003.</i> Derek Halden Consultancy.</p> <p>(4) <i>DfT (2009): Business attitudes to transport: knowledge review of the existing evidence</i></p>
<b>Road users</b>						
Improved signage and information for road users	X	X	X	X	X	Improved signage and information for road users can help reduce congestion and the economy by routing drivers more effectively around town centres in particular. This can have secondary effects on safety, climate and the environment (by reducing unnecessary car mileage and congestion).
Speed reduction measures, including enforcement, education and engineering measures				X		<p>Speed reduction measures can be positive in reducing CO<sub>2</sub> emissions and improving safety. There is a strong link between vehicle speed in built up areas, the risk of collisions with pedestrians and to the level of injury sustained. By reducing vehicle speeds through the use of packages of urban safety measures, including traffic calming and traffic management, injuries to pedestrians can be reduced. A secondary effect of this is increasing walking and cycling rates if the fear of traffic is decreased.</p> <p><u>Useful evidence/information</u></p>

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						<p>Studies have shown that higher speeds increase both the likelihood of injuries and their severity (1)</p> <p>In the research below, the introduction of 20 miles/h zones led to a 61 per cent reduction in all casualties and a 70 per cent reduction in child pedestrian casualties in the affected areas (3)</p> <p>Studies have also shown that the main barrier to cycling is fear of traffic (2).</p> <p>(1) TRL (2007): <i>The manual for streets – evidence and research</i>.</p> <p>(2) TRL Report 481. <i>A quantitative study of the attitudes of individuals to cycling</i>, 2001</p> <p>(3) Webster, D., and Mackie, A. (1996) <i>Review of traffic calming schemes in 20 mph zones</i>. TRL Report 215. Transport Research Laboratory, Crowthorne)</p>
<p>Car sharing (including promotion of Carsharing database to companies)</p> <p>Pool cars for individual use in local communities (carclubs)</p> <p>Dedicated lanes for vehicles with two or more passengers (HoV lanes) (<b>new to Warwickshire</b>)</p>	X	X			X	<p>This is positive for accessibility as it can provide access to a car / lift for people who may not be able to afford a car and encourage its use through HoV lanes. If people who already own a car are switching to car sharing or getting rid of their car to use a community car club this might have some effect on car mileage. However, in isolation this is likely to be relatively insignificant.</p> <p>Measures new to Warwickshire – HoV lanes can be positive in encouraging car sharing and can be positive in reducing traffic levels. They are likely to be more effective if implemented in association with workplace travel plans and in areas where there is high congestion.</p>
Charging for road use at the point of travel	X	X			X	<p>Road user charging can reduce car mileage and congestion depending on how it is implemented. If car mileage and congestion are reduced there will be positive secondary effects on CO<sub>2</sub>, air quality and other environmental and quality of life factors. If people have no option but to travel by car for reasons of disability etc, blanket road user charging can be negative for equality and accessibility.</p> <p><u>Useful evidence/information</u></p>

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						<p>Vehicle miles in Warwickshire have increased by 5% since 2004 (1)</p> <p>According to SACTRA (2), there is scope to achieve some reduction in traffic volumes through restraint measures which will at the same time improve economic efficiency. However, these should be focused on congested parts of the network.</p> <p>(1) <i>Warwickshire LTP Delivery Report 2008/2009.</i></p> <p>(2) SACTRA (2000): <i>Transport investment, transport intensity and economic growth.</i></p>
<b>Maintenance and minor works</b>						
Maintain footways and cycleways to a high standard				<b>X</b>		This will contribute to improved pedestrian safety (by investment in the longer term condition) and may persuade some people to walk or cycle where they otherwise may not have.
Maintaining the highway to a good standard	<b>X</b>			<b>X</b>		Maintenance of highway structures to approved standards contributes to safety, availability of the road network and maximizes value for money investment. There are likely to be limited effects in relation to traffic flow/congestion.
Co-ordinate works and manage incidents on the highway to minimise disruption	<b>X</b>					This will have positive economic effects as traffic disruption and delay is minimised.
Minor junction / signal improvements at congestion hotspots	<b>X</b>			<b>X</b>	<b>X</b>	This will have positive economic effects as traffic flow (and journey time and reliability) should improve at congestion hotspots. This might also have positive effects on CO <sub>2</sub> if the flows of traffic are improved and stop-start motoring is reduced.
Engineering measures at collision hotspots	<b>X</b>			<b>X</b>		This will have positive safety effects as collision hotspots are made safer. This will also have positive economic effects if disruption (and journey time and reliability) is minimised.
<b>Freight movement</b>						
Improving the movement of freight in the County e.g. transfer	<b>X</b>	<b>X</b>		<b>X</b>	<b>X</b>	The traffic effects of implementing freight networks and restrictions are to reduce the unacceptable effects of lorries on some areas and at unacceptable times of day (in town)

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of freight from road to rail, routing of heavy goods vehicles via suitable roads						<p>centres). However, there will still be impacts on areas unsuitable for freight. Although a strategy could reduce the overall negative traffic effects of freight it will in effect intensify the impact in some areas (i.e. those on the route network). The strategy should include measures to reduce these unacceptable effects including traffic management, measures for other users on the network and signage. If the strategy is successful in reducing overall miles travelled this will be positive for CO<sub>2</sub> in particular as HGVs are responsible for around 20% of UK domestic transport GHG emissions and vans for around 11% (2). Preliminary studies by the DfT show that the West Coast Main Line in the midlands already has a high proportion of long distance freight moved by rail, therefore, the potential for modal shift may be more restricted in this area (3). The priority should be how the impact of local freight can be reduced.</p> <p><u>Useful evidence/information</u></p> <p>The amount of domestic freight moved in the UK has increased overall by 40% between 1980 and 2008. The majority of the increase is due to goods moved by road, which has increased by 76 per cent since 1980. The average length of haul for road freight has increased since 1980. At 88 kilometres, it is now 31 per cent higher than at the start of the period (1).</p> <p>(1) DfT <i>Transport Trends, February 2009</i></p> <p>(2) DfT (April 2010): <i>Freight Modal Choice Study</i></p> <p>(3) DfT (December 2008): <i>Delivering a sustainable transport system: the logistics perspective</i></p>
Impact of traffic on centres						
Village Traffic Calming	X			X	X	<p>These measures are likely to be positive in reducing some of the effects of traffic in town and village centres. This will also have positive effects in terms of the environment including air quality, noise, landscape and townscape.</p> <p>Measures new to Warwickshire – low emission zones could be useful in areas of poor air quality by requiring vehicles to meet Euro III standards for particulate emissions. There are a number of areas with declared AQMAs. Delivery and stopping restrictions could reduce</p>
Introduce low emission zones in areas of poor air quality ( <b>new to Warwickshire</b> )						
Delivery and stopping restrictions						

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<p>in town centres and along key routes (inc. Red Routes) <b>(new to Warwickshire)</b></p> <p>Pedestrianisation/pedestrian priority in town centres</p> <p>Traffic restrictions / re-routing at times when air quality is poor</p>						congestion by stopping inappropriate stopping and parking.