



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment -  
Options Assessment

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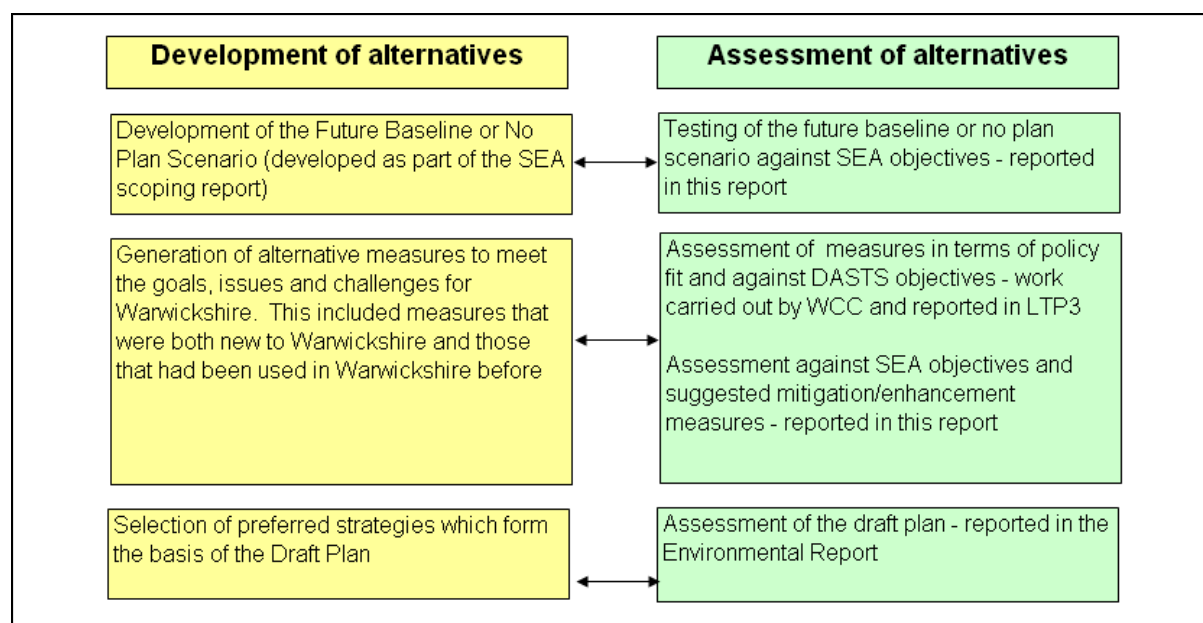
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# 1 Introduction

Strategic Environmental Assessment (SEA) involves an iterative process of collecting information, defining alternatives/options<sup>1</sup>, identifying environmental effects, developing mitigation measures and making recommendations/revising proposals in the light of predicted environmental effects. The essential purpose of this element of the Warwickshire LTP SEA is to identify the 'likely significant effects' on the environment of the alternative options presented as part of the Local Transport Plan Process.

The approach Warwickshire County Council has taken to developing options (and ENVIRON's approach to assessing those options) is outlined in Figure 1.

**Figure 1: Development and assessment of options**



The methodology of the options assessment is outlined in Section 2 of this report.

<sup>1</sup> Please note that for the purposes of this assessment the options presented have been considered as options and as alternative options. Therefore this report uses the terms options and alternatives interchangeably.

## 2 Methodology

### 2.1 Testing the future baseline or no plan scenario

A required step in SEA is testing the likely evolution of the baseline environment in the absence of the plan. This scenario is called the 'future baseline' or the 'no plan' scenario. All of the subsequent strategies of the LTP are then compared against this no plan scenario to enable plan makers to see the difference the plan would make compared to a situation where no plan was implemented.

The definition of the future baseline assumes that the LTP will not be implemented. However, there are a number of other transport and development programmes and projects which are likely to go ahead even in the absence of the LTP. For this reason it is important to be clear about what is included in the future baseline. The assumptions made regarding the future baseline in Warwickshire are shown in Figure 2.

**Figure 2: The Future Baseline**

**Continued operation of statutory functions of the Council:**

- Home to school travel;
- Concessionary fares;
- Disability Discrimination Act measures;
- Rural Bus Subsidy Grant;
- Social services responsibilities;
- Fulfil highway and bridge maintenance duties;
- Promotion of road safety and measures to improve road safety and prevent accidents;
- Road design to minimise accidents and environmental impacts (i.e. low noise surfacing);
- Under Transport Act 1985 - duty to formulate general policies for support of public transport services which are a requirement but are not being provided on commercial basis: subsidised services;
- Provision and enforcement of on-street parking;
- Duties under the Traffic Management Act 2004 including civil parking enforcement and network management duties; and
- Accident investigation.

**Other plans and programmes will deliver as planned:**

- Major developments and other plans will go ahead;
- Highways Agency schemes that are on the Government's Targeted Programme of Improvements will go ahead; and
- Plans of other transport agencies not reliant on the funds from the LTP will go ahead.

**Strategies within the current LTP that were not limited to the lifespan of the plan will not continue:**

Although most of the strategies within the LTP2 are not planned to be time limited, in reality they are because many of them rely on future funding from the LTP3 allocation. Therefore, it has been

assumed that no further funding will be forthcoming from the LTP3.
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The future baseline has been assessed against the SEA objectives in Assessment Table 1 at the end of this document.

## 2.2 Assessment of the alternative measures

The results of this assessment have been considered in conjunction with an appraisal that Warwickshire County Council has undertaken themselves on the impact of the measures on each of the five national transport goals. The deliverability and public acceptability of each measure was also considered. The details of this appraisal are reported in the Warwickshire Local Transport Plan 3. The analyses undertaken by the council and ENVIRON have then been used to select a package of measures that forms the Draft LTP.

At this stage in the assessment there is no detail available as to the location of the measures and how they will be implemented. Because of this lack of detail a much simpler approach has been used for this assessment compared to the assessment of the future baseline. For this assessment a simple checklist approach has been taken to assessing the potential impacts of the alternative measures. The assessment has not been undertaken against each SEA objective; rather they have been grouped into SEA topics (economy, climate, equality, safety and environment). A potential effect is indicated by a cross within the checklist which of the SEA topics is likely to be affected by each of the measures.

A column has been included which explains the reasoning behind these judgements and this also includes some of the relevant evidence that is available to help assess the effectiveness of such schemes. At the draft plan stage more information may be available on the implementation and location of these measures and this evidence will be used by the assessors at this point to help judge the likely effects of the plan. However it has been possible to make some recommendations at this stage on how measures might be taken forward to ensure their effectiveness. The assessment is shown in Assessment Table 2 at the end of this document.

SEA guidance also states that alternatives that are selected for testing also should be assessed for their cumulative effects. However, because of the lack of detail on the location and implementation of the measures this has not been possible. A cumulative assessment will be carried out as part of the SEA of the draft plan.

### 3 Defining Significance

It is important that each element of the plan is considered in relation to each SEA objective and effects identified and assessed in terms of how significant they are. The significance of the effects of the future baseline has been assessed and a description of how this has been undertaken is outlined below. Please note that because of the uncertainty related to the location of the measures and how they will be implemented it has not been possible to assess the significance of the measures at the options stage and this will be addressed at the next stage of assessment.

The SEA Directive specifies in Annex II the criteria that should be taken into account when determining likely significant effects. These criteria, which principally relate to the nature of the effects arising from the plan and the value and vulnerability of the receptors, have been adopted for the Warwickshire LTP assessment to assess whether an effect is likely to be significant. Deciding on the significance of the effects has entailed the assessor considering the following questions for each potential impact:

- How valuable and vulnerable is the receptor that is being impacted?
- How probable, frequent, long lasting and reversible are the effects?
- What is the magnitude and spatial scale of the effect?
- Are the effects positive or negative?
- Will the strategy scenario help the plan to reach the targets and objectives defined as part of the SEA framework?

The answers to these questions enable the assessor to assign a significance score to each potential impact identified within the assessment.

Guidance on the application of these questions and the final scoring system has been described below. Please note that due to the strategic nature of SEA and the varying amount and detail of evidence available on which to base assessments, in some cases it may not be possible to fully address each significance question. Where there are uncertainties or judgements made this has been made explicit in the assessment.

#### 3.1 Identification of receptor value and vulnerability

The assessment team have defined value and vulnerability as follows:

- Value: the value of a receptor is based on the scale of geographic reference, rarity, importance for biodiversity, social or economic reasons, and level of legal protection; and
- Vulnerability: how vulnerable that receptor is to change if conditions change and its ability to recover from that effect.

The SEA Guidance<sup>2</sup> does not provide specific information with relation to the definition of receptor value and vulnerability. Furthermore, it is not readily possible to develop a 'one

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<sup>2</sup> DfT. WebTag Unit 2.11: *Strategic Environmental Assessment and Transport Plans*. In Draft Guidance, January 2010.

size fits all' definition that applies consistently to all topics and therefore it is necessary to use the evidence available to determine the value and vulnerability of receptors and this is specific to each topic. A guideline framework for these classifications is provided below. In most cases the assessment of value and vulnerability has been based on qualitative rather than quantitative information and has, where necessary, made use of expert judgement.

**Table 1: Guidelines for identifying receptor value and vulnerability**

	Sample receptor definitions	
	Value	Vulnerability
<b>High</b>	E.g. receptor is rare, important for social or economic reasons, legally protected, of international or national designation.	E.g. potential pathways for change exist between scenarios (sources) and indicators. Receptor is in declining condition, dependent on a narrow range of conditions.
<b>Low</b>	E.g. receptor is common, of local or regional designation.	E.g. limited or no pathways from between scenarios and indicators. Receptor is in stable or favourable condition and dependent on a wide range of conditions.

### 3.1.1 The probability, frequency, duration and reversibility of effects

The probability of an effect happening is recorded as high, medium or low, a guideline framework for these classifications is provided below:

**Table 2: Guidelines for determining probability of effect**

Classification	Probability of the effect			
	High	Medium	Low	Very Low
<b>Guideline</b>	>90%	50-90%	10-50%	<10%

In the concept of transport assessment, probability of effect is linked closely to the idea of the deliverability of the strategy. High cost, high intervention strategies with a large degree of uncertainty as regards funding and implementation are likely to score relatively poorly.

The duration of the effects has been quantified where possible to ensure consistency with the long-term nature of the LTP process (which will plan to 2026) and the shorter implementation plan process. Guidelines for the duration of effects are given below:

**Table 3 Guidelines for determining duration of the effect**

Classification	Duration of the effect		
	Long Term	Medium Term	Short Term
<b>Guideline</b>	2019-2026	To the mid-point of the process 2014-2019	From the start of the strategy for a 3 year period 2011-2014

An indication of the frequency of the effect has been given where possible, whether it will be continual or intermittent over the period of time identified.

Finally, if possible, the effect has been described as reversible or irreversible. This judgement will be based on the timescale for a receptor's return to baseline condition without



intervention, in relation to a human lifetime. If the timescale for a receptor's return to baseline condition is greater than 50 years then it will be considered irreversible and if it is less then it will be considered reversible.

### 3.1.2 The spatial scale of effects

The spatial scale of the effect can be defined as whether it is local, regional, national or international. The area or location of the effect will be identified where relevant.

### 3.1.3 Positive and negative effects

A positive effect will be one that is favourable or otherwise beneficial to the condition of a receptor or an indicator.







A negative effect will be one that is unfavourable or otherwise adverse to the condition of a receptor or an indicator.

## 3.2 Achievement of SEA objectives

While not specifically required by the Directive, good practice and published guidance recommends the use of SEA objectives to assess performance and to compare the effects of scenarios. These have been identified in the scoping report and have been written to reflect local issues and targets and objectives that the LTP performance should contribute towards.

The results of the assessment are presented within a matrix which presents the performance of each option against each SEA objective. Consideration is also given as to whether each scenario helps to meet targets and objectives identified as important in Warwickshire, for example helping to reduce the number of people killed and seriously injured in road traffic accidents (KSIs). If relevant targets are not met it is very unlikely that a scenario will gain a significant positive impact under that objective (even if the scenario does show improvement). For example, if a scenario would lead to a reduction in the number of slight accidents but no change in the number of KSIs then it would be scored as slight positive (as Warwickshire is aiming at reducing KSI accidents as reflected in the SEA objectives). The matrix uses the notation as set out within Table 4 to define significance.

**Table 4: SEA Objective Appraisal Summary Table Key**

<b>Significant negative effect</b>		<b>Significant positive effect</b>	
<b>Minor negative effect</b>		<b>Minor positive effect</b>	
<b>No effect</b>		<b>Uncertain effect</b>	

## **4 Recommendations**

### **4.1 Introduction**

The results of the future baseline assessment are shown in Assessment Table 1. The results of the assessment of the alternative measures are shown in Assessment Table 2. In the section below we have outlined recommendations on how measures might be taken forward.

Please note that for the future baseline we have not made any recommendations. The reason for this is that this is not a strategy that will be taken forward – the purpose of this assessment is to use as a baseline for the assessment of the draft plan.

### **4.2 Assessment of the alternative measures**

Based on the evidence reviewed and the broad assessment undertaken the following recommendations can be made.

#### **4.2.1 Integration of planning and transport planning**

It is unclear what is meant by integration of planning and transport. We have presumed this means that adequate infrastructure will be provided to support new development. It would be useful if the draft plan is clearer regarding how planning and transport planning will be integrated.

#### **4.2.2 Parking**

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. The draft plan should be clear how effects on competition of centres will be avoided.

#### **4.2.3 Travel information**

Personalised travel planning would perform well against SEA objectives. However, there are identified risks with relation to its implementation and deliverability due to the cost implications. Therefore there is uncertainty as to whether the positive effects of this measure would be realised.

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) are needed and the draft plan should set out different ways to reach different audiences.

#### **4.2.4 Work and school travel**

School travel – no recommendations

Work travel - Research has shown 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. The draft plan should consider whether it can require changes in parking where workplace travel plans are recommended / required (although the main mechanisms to do this may be through the planning system). However, as with the parking recommendation above it will be important that other options are available to people if raising car parking charges or reducing spaces.

Work travel - 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. As businesses are unlikely to voluntarily undertake workplace travel plans, it is important that incentives or planning requirements are implemented, for example. The draft plan should refer to these mechanisms (even if they are outside the scope of the plan itself).

#### **4.2.5 Walking and cycling**

If a substantial increase in walking and cycling is planned in Warwickshire this needs to be accompanied by a strong programme of measures to improve the safety of active travel, such as 20mph zones, safe cycling infrastructure and other highways safety measures. The draft plan should set out how this will be implemented.

#### **4.2.6 Passenger transport**

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) yielded comparatively greater success. Therefore, it will be important to match up different activities for all modes that are being promoted. This highlights the importance of considering Smarter Choice Programmes in a holistic way, encompassing service improvements as well as marketing. Considering smart measures in isolation, independent from infrastructure or service improvements, would be unhelpful. Instead, infrastructure and service enhancement, marketing, information and publicity should all follow together from an assessment of a target market (such as pupil travel to school, or employee travel to work, or residents' travel to the town centre). The draft plan should approach measures in a holistic way wherever possible.

In terms of rapid transit / light rail this can be positive in the right circumstances and has proved to be well used in large city areas such as Birmingham. However, the systems are costly to build and careful thought is needed as to what areas of Warwickshire they are suitable for.

#### **4.2.7 Road users**

High occupancy vehicle 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. The draft plan should consider carefully where such measures are implemented, especially as this is a new measure to Warwickshire.

#### **4.2.8 Maintenance and minor works**

No recommendations.

#### **4.2.9 Freight movement**


The impacts of freight routing strategies need to be carefully considered as they do intensify the impact on communities and the environment in some areas (i.e. those on the route network). The draft plan should include measures to reduce these unacceptable effects including traffic management measures for other users on the network and signage.

In terms of rail, 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. The priority of the draft plan should be how the impact of local road freight can be reduced.

#### **4.2.10 Impact of traffic on centres**

No recommendations.

<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
<b>Economy</b>			
Help to improve reliability and connectivity of the transport system?	Include schemes that decrease journey times, congestion, improve journey time reliability and help to support Warwickshire's already strong economy?	Warwickshire benefits from a relatively strong and diverse economy and has seen strong employment growth over recent years. However, in the absence of measures promoted through the LTP necessary schemes will not be implemented and journey times and congestion will increase. Congestion may be especially severe in Warwick as although traffic speed data in the main towns (a proxy for congestion) do not show any clear pattern they do show that congestion in Warwick is more severe than in other areas. This is likely to be a long term effect (but reversible if successful schemes are implemented in the future) and will be significantly negative.	●
Support the delivery of the future spatial strategy?	Provide the necessary infrastructure to support the spatial strategy in a sustainable manner?	In the absence of measures promoted through the LTP the necessary infrastructure will not be put in place and journey times and congestion will increase. This is especially the case in the main towns as growth continues but without supporting transport infrastructure. This is likely to be a long term effect (but reversible if infrastructure is provided in the future) and will be significantly negative.	●
Enhance resilience through good management and maintenance of the transport system?	Help to manage routes effectively in order to maintain journey times?	Network management duties under the Traffic Management Act 2004 including civil parking enforcement will continue. However, despite network management duties remaining it would be increasingly difficult to manage routes effectively in the face of increased traffic growth and congestion. Only maintaining transport assets to a statutory minimum level would increase the maintenance backlog. This is likely to be a long term effect (but reversible if enhanced maintenance is provided in the future) and will be significantly negative.	●
Provide wider support to the economy through the movement of people and goods?	Provide / encourage the use of alternatives to road freight and provide routes for freight traffic that reduces impacts	In the absence of the plan there will be no measures to encourage alternatives to road freight and no encouragement to freight users to use advisory routes. Warwickshire experiences a lot of through movement of road based freight haulage and road freight does cause problems in some	●




<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	<p>on communities and the environment?</p> <p>Increase access to jobs, towns, tourist attractions, rural areas and the countryside by sustainable means?</p>	<p>areas. The majority of freight in the County will always be moved by road. In the absence of measures promoted through the LTP the impact of this freight traffic will worsen. This is likely to be a long term effect (but reversible if action is taken in the future) and will be significantly negative.</p> <p>Almost half the residents of North Warwickshire work elsewhere. High levels of trips are made from North Warwickshire towards Tamworth, Sutton Coldfield, Birmingham, Nuneaton and Coventry. A large proportion of people from outside the County work in Warwickshire. The majority of people in the area commute to work by car and in the absence of measures in the LTP (including promotion of workplace travel plans) travel by sustainable means (to jobs and other attractions/services) will remain low. This may be exacerbated through the future growth strategy of urban renaissance if more jobs are concentrated in the Major Urban Areas to the detriment of the smaller settlements. This is likely to be a long term effect (but reversible if conditions change) and will be significantly negative.</p>	
<b>Carbon emissions</b>			
Reduce carbon emissions	<p>Cause a change in vehicle miles or a change in the nature<sup>3</sup> of traffic that would cause changes in fuel use and CO<sub>2</sub>. (Link to LAA indicator NI 186: per capita CO<sub>2</sub> emissions in the Local Authority area)</p> <p>Increase the use of energy</p>	<p>Traffic mileage in Warwickshire is increasing but at a slower rate than was targeted. Traffic speed data in the main towns (a proxy for congestion) do not show any clear pattern but do show that congestion in Warwick is more severe than in other areas. In the absence of measures promoted through the LTP, vehicle miles, journey times and congestion will increase in the future baseline especially in the main towns as growth continues. The largest emitter of CO<sub>2</sub>, in regards to road transport, in Warwickshire is North Warwickshire, followed by Stratford upon Avon and Warwick, reflecting the road network and traffic density. CO<sub>2</sub> levels are likely to rise in the absence of measures bought forward as part of the LTP as there will be little support</p>	

<sup>3</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	from renewable sources in the transport system (to reach a target of 10% of the total energy consumed)	for sustainable modes and vehicle miles and congestion will increase.  There is no data available on the amount of renewable energy used in the transport system in Warwickshire. The target is 10% of the total energy use in transport systems to be derived from renewable sources. In the absence of measures brought forward as part of the LTP the target is unlikely to be met. Impacts on carbon emissions are likely to be a long term and irreversible effect (due to the long lag time in the climate) and will be significantly negative.	
Ensure that the transport system can cope with the unavoidable effects of climate change	Reduce the unavoidable effects of climate change (link to LAA indicator NI 188: Adapting to climate change)	The County is likely to experience a number of changes due to climate change such as warmer wetter winters, more stormy weather and hotter summers. This will have numerous effects on the transport system. A certain amount of unavoidable climate change is inevitable and will need to be planned for. As highway and bridge maintenance duties will continue in the absence of the plan it is assumed that some measures will be implemented to ameliorate the effects, thus reducing the effect from significant to minor negative. However, the effect is still negative, long term and irreversible.	●
<b>Equality of access</b>			
Improve accessibility to basic services for all groups in society?	Improve provision of public and community transport that makes key services <sup>4</sup> more accessible to all groups of people <sup>5</sup> (link to LAA indicator NI 75 Access to services and facilities by public transport,	Access to services in Warwickshire is poor in many areas for people without a car. Without the measures taken forward as part of the LTP accessibility levels will decline as services are withdrawn. Levels are also likely to decline with the withdrawal of the funding for the transport schemes taken forward as part of the WRASP. This is likely to be a long term effect (but reversible if conditions change with regards to accessibility) and will be significantly negative.	●

<sup>4</sup> Key services include schools and learning, open space and recreation, jobs, leisure facilities, areas of cultural heritage and health facilities

<sup>5</sup> According to the DfT this should include groups defined by race, gender, disability, age, religion and sexual orientation

<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	cycling and walking).	Travel by different age groups and social groups can be very different and provision needs to be tailored more effectively. The information available on travel by different groups is not complete for Warwickshire. However, in the absence of measures taken forward as part of the LTP accessibility levels will decline for all groups. This is likely to be a long term effect (but reversible if successful schemes are implemented in the future) and will be significantly negative.	
Help to improve the quality of urban and rural centres and reduce severance?	<p>Reduce traffic levels, severance, congestion or the nature of traffic in residential areas / town and village centres?</p> <p>Cause changes that reduce the impact of the transport system on townscape or introduce features that enhance the character of towns?</p>	<p>Community severance is caused by large volumes of traffic in many areas of the county. The future impact is dependent on future traffic levels. Without the measures put forward in the LTP traffic levels are likely to increase.</p> <p>Bus use and bus satisfaction have increased. Without the measures put forward in the LTP, congestion is likely to increase causing issues with bus time reliability. This may lead to a decrease in patronage and satisfaction. This is likely to be a long term effect (but reversible if traffic conditions improve) and will be significantly negative.</p>	
<b>Safety, security and health</b>			
Reduce the risk of death or injury on the transport system?	Lead to a decrease in traffic accidents /accident severity and help to meet KSI targets (link to LAA indicator NI 47 on road accidents)?	Numbers of people killed or seriously injured (KSI) and the numbers of children killed or seriously injured are both decreasing. The council is now on track to meet the original KSI 2010/11 target of 393 in 2008/09. Severity of car accidents may decrease in the longer term due to improved vehicle design and increased safety awareness amongst the public. However, in the absence of the measures in the LTP vehicle miles will increase (potentially increasing the number of accidents). Therefore, the number of accidents might increase in the absence of the plan but their severity may decrease due to changes in vehicle design.	<p> (accident numbers)</p> <p> (accident severity)</p>



<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
Make healthier modes of travel more attractive?	Increase walking and cycling to help increase the numbers of people regularly participating in physical activity (link to LAA local indicator 8 on increasing physical activity and NI156 on childhood obesity)?	<p>The population of Warwickshire is ageing and this needs to be considered in the provision of services and transport. The Warwickshire Blueprint work suggests that over 60's will make up 24% of the population in 2031 (compared to 17% of total population in 2006).</p> <p>Obesity is a particular problem for Warwickshire where the County's population is appearing high on regional league tables for obesity levels. Numbers of children who are obese is lower than the national average but the figures are still a cause for concern. 10.7% of Warwickshire's adult population are physically active, compared to 10.8% in England. In the absence of measures in the LTP to promote walking and cycling and reduce traffic and congestion, levels of walking and cycling are likely to decline. This will have a negative (potentially long term) effect on obesity levels and general health. However, this has not been scored as significantly negative because other factors are just as (if not more) important in encouraging people to take exercise.</p>	●
Reduce the impact of the transport system on air quality?	Cause any changes to traffic levels (particularly a change of over 10%) or the nature <sup>6</sup> of traffic past sensitive receptors (including	Air quality across the County is considered to be largely good but traffic is increasing in some of the AQMAs. Forecast improvements in vehicle technology mean that emissions of local pollutants should decrease in the future baseline although increased traffic and congestion might offset this in more urban areas.	○ (rural areas) ● (towns)

<sup>6</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	AQMAs)?		
Improve the security of the transport system?	Make transport systems / interchanges more secure? <sup>7</sup>	There is no data on the security of the transport system. However, in the absence of the plan and measures to improve security, it is likely to deteriorate. This is likely to be a long term effect (but reversible if successful schemes are implemented in the future). It has not been scored as significantly negative as other factors (such as actual crime levels, people's fear of crime, and design of new development and bus and train stations etc) are also likely to play their part and these are not influenced by the LTP.	●
<b>Quality of life/environment</b>			
Reduce the impact of the transport system on noise?	<ul style="list-style-type: none"> <li>• Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic past sensitive receptors or on sensitive /tranquil routes that would help to achieve WHO noise guidelines?</li> </ul>	People taking short cuts is likely to increase through rural lanes etc as drivers seek alternative routes to avoid congestion hot spots. Adverse noise impacts of increased growth in traffic and congestion are likely to affect towns and this may also lead to peak spreading (meaning that the noise will be present for longer periods of the day). This is likely to be a long term effect (but reversible if traffic conditions change in the future). However, it is only likely to be significantly negative in areas where traffic increases over 10% or the % of HGVs increases. This is likely to be a small proportion of the county so this has been marked as negative (but not significantly negative).	●
Protect and enhance townscape, landscape quality and character	<ul style="list-style-type: none"> <li>• Cause changes in traffic flows in areas that are valued for their landscape character?</li> </ul>	There is a scarcity of tranquil areas within Warwickshire. Only the south-western and south-eastern fringes of Stratford District, the southern part of Rugby Borough and the central area of North Warwickshire Borough have a large proportion of tranquil areas. Least tranquil areas are currently within Warwick District and Nuneaton & Bedworth Borough. The least tranquil areas are associated with built up areas and transport corridors. This is	●●

<sup>7</sup> It will be important for this objective to consider equality issues (the DfT recommends analysing effects related to race, gender, disability, age, religion and sexual orientation if possible)

<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
		<p>likely to worsen as traffic levels increase, there is continued growth in air traffic and the spread of towns and associated infrastructure. This may lead to people taking short cuts through rural lanes etc as people try to escape worsening traffic hotspots.</p> <p>Warwickshire contains some protected landscapes, particularly in the south of the County. Transport can affect landscape in a number of ways and transport is having a detrimental affect on a number of countryside character areas. It is assumed that traffic levels will increase in the future. Without the actions in the LTP3 it is assumed that the negative impact of transport on landscape will increase. This is likely to be a long term effect (but reversible if conditions change in the future) and will be significantly negative if traffic reduces the amount of unspoilt and tranquil countryside in the county.</p>	
Protect and enhance biodiversity and geodiversity at all levels	<ul style="list-style-type: none"> <li>• Cause direct loss of geodiversity or habitat fragmentation / loss especially that would risk achievement of Warwickshire BAP priority targets?</li> <li>• Cause a change in traffic flows or nature of traffic that will affect sensitive habitats or focal species?</li> <li>• Result in habitat creation and contribute to the achievement of the Warwickshire BAP targets?</li> </ul>	<p>Warwickshire is a County rich in biodiversity including international, national and local sites. Many of these sites and habitats occur next to highways, cycle routes, green lanes or other transport corridors. There have been significant declines in certain habitats and species in past years and much of the West Midlands wildlife is still under threat. Without active management it can be assumed that some habitats and species at least will continue to decline. Climate change is likely to result in changes to biodiversity such as in the distribution of species, in species composition of habitats, effects of drier/hotter summers and wetter/warmer winters land use changes and seasonal/phenological changes and some of these changes will promote biodiversity and some will be negative (therefore, the effect is uncertain). Without the plan there will be little opportunity to enhance roadside wildlife. However, this will be offset by a reduced impact from new infrastructure that would have been implemented through the LTP3.</p>	○/?

<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
Protect and enhance buildings, sites, areas and features of historic, archaeological and architectural interest	<ul style="list-style-type: none"> <li>• Cause direct impacts on sites or monuments through the provision of new infrastructure?</li> <li>• Cause a change in traffic flows or the nature of traffic that affects townscape, sites and monuments valued for their cultural heritage or changes the number of sites at risk?</li> </ul>	<p>There is a substantial cultural heritage resource within Warwickshire, with a high proportion of Listed Buildings and Conservation Areas, particularly concentrated within Warwick and Stratford. There are 3 Conservation Areas in Warwickshire are at risk, 19 listed buildings, 62 scheduled monuments and 4 registered parks and gardens are also at risk. Without intervention the heritage assets will remain at risk from inappropriate development affecting their settings. However, this may be partly offset by a reduced impact from new infrastructure that would have been implemented through the LTP3.</p> <p>Transport can have negative effects on the townscape and heritage of the settlements it passes through. There is a lack of published information about how the townscapes in Warwickshire are currently affected by traffic although it can be assumed that at least some towns are negatively affected. In the absence of the LTP, traffic levels are likely to increase in coming years with significant housing and economic growth. Also, in the absence of the LTP maintenance schemes are more likely to use standard materials which would not enhance the character of the streets. This is likely to be a long term effect (but reversible if conditions change in the future) and will be significantly negative.</p>	
Minimise the impact of the transport system on water resources, soil and mineral resources	<ul style="list-style-type: none"> <li>• Cause an improvement in water quality that could help to meet the WFD target of achievement of good ecological status of water bodies by 2015?</li> <li>• Cause changes to maintenance regimes that may decrease the need for water or decrease the</li> </ul>	<p>There was a gradual improvement in chemical water quality nationally and in Warwickshire between 2001 and 2006. In 2006 chemical water quality levels in North Warwickshire and Nuneaton &amp; Bedworth were significantly below levels in the rest of the County. Biological water quality levels in Warwickshire were below the average level for England in 2006. All rivers within Warwickshire classified under the Water Framework Directive (WFD) assessment were determined to be “at risk” with regards to the WFD criteria. Without intervention, water quality will continue to remain ‘at risk’ with regard to the Water Framework Directive criteria. As highway and bridge maintenance duties will continue in the absence of the plan it is assumed that some measures will be implemented to ameliorate the effects</p>	

<b>Assessment Table 1: Option - Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	<p>potential for flooding?</p> <ul style="list-style-type: none"> <li>• Reduce the demand for aggregate?</li> <li>• Help to protect loss or pollution of soils which support valued habitats or are already experiencing erosion?</li> </ul>	<p>on water and soil. However, the effect is still negative, long term and irreversible.</p> <p>Transport of minerals and waste by road can cause problems to local communities. Transport of minerals is likely to remain mainly by HGV. The future growth strategy will mean that more sand and gravel quarries are needed. Warwickshire County Council considers that coal could be transported from Daw Mill Colliery in Warwickshire to power stations outside of the County, such as Rugeley. In the absence of freight management measures freight traffic in unsuitable routes will increase. This is likely to be a long term effect (but reversible if action is taken in the future) and will be significantly negative.</p>	

<b>Assessment Table 2: Assessment of strategy measures</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	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>x</b>	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	<b>x</b>				<b>x</b>	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>						

Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
<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>	X	X	X	X	X	<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>
Work and school travel						

Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment Useful evidence to assist the assessment of draft plan
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>



Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
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>

Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
<b>Walking and cycling</b>						
<p>Develop cycle routes in and around our main towns</p> <p>Promotional events &amp; activities (including publishing town centre cycle guides)</p> <p>Cycle parking at key destinations</p> <p>Cycle training for children &amp; adults</p> <p>Pedestrian crossing facilities</p> <p>Reduce crime and fear of crime on key pedestrian routes</p> <p>Introduce pool bicycles (Bike Hubs) for individual use within main towns (<b>new to Warwickshire</b>)</p>	x	x	x	x	x	<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>

<b>Assessment Table 2: Assessment of strategy measures</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>
						<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>

Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
						<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>new to Warwickshire</b>)</p> <p>Rail development / new rail stations</p>	X	X	X	X	X	<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>

<b>Assessment Table 2: Assessment of strategy measures</b>						
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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) Scottish Executive Development Department Research Programme (2003): <i>Barriers to Modal Shift. Research Findings No.171/2003.</i> Derek Halden Consultancy.</p> <p>(4) DfT (2009): <i>Business attitudes to transport: knowledge review of the existing evidence</i></p>
<b>Road users</b>						
Improved signage and information for road users	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>	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				<b>X</b>		<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>

Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
						<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>

<b>Assessment Table 2: Assessment of strategy measures</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>
						<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)

Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
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  Introduce low emission zones in areas of poor air quality ( <b>new to Warwickshire</b> )  Delivery and stopping restrictions	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>



Assessment Table 2: Assessment of strategy measures						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment Useful evidence to assist the assessment of draft plan
<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.



Warwickshire Local  
Transport Plan 3  
Strategic Environmental  
Assessment



Environmental Report

Prepared for:  
**Warwickshire County Council**  
**Warwick**

Prepared by:  
**ENVIRON**  
**Exeter, UK**

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Appendix 1: SEA Scoping Report Topic Papers

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# Non Technical Summary

## This report

This report is the Non Technical Summary of the Environmental Report for Warwickshire's Third Local Transport Plan. The Environmental Report sets out the results of the Strategic Environmental Assessment (SEA) of the Warwickshire Local Transport Plan 3 (LTP3). The purpose of the Environmental Report is to give consultees information on the potential environmental and sustainability effects of the Draft LTP3 and to assist Warwickshire County Council in improving the Final LTP3.

## The SEA process

The Warwickshire LTP3 is being subject to a full SEA in line with the requirements of *Statutory Instrument 2004 No. 1633: The Environmental Assessment of Plans and Programmes Regulations 2004* (otherwise known as the SEA Regulations).

The SEA has been carried out by independent consultants ENVIRON, using the following guidance: Department for Transport (April 2009): *Strategic Environmental Assessment for Transport Plans and Programmes. TAG Unit 2.11. "In draft" Guidance.*

## Warwickshire's LTP3

The Local Transport Act 2008 requires most local transport authorities (including County Councils) in England to produce and maintain a Local Transport Plan (LTP). This is the third Local Transport Plan produced for Warwickshire. LTP1 covered the period 2001/02 to 2005/06 and LTP2 covered the period 2006/7 to 2010/11.

The LTP3 consists of a strategy and an implementation plan. The Strategy sets out the overall policy framework within which transport needs to be considered within Warwickshire. The timeframe for the strategy element is 2011-2026 and has been chosen to align the document with the Regional Spatial Strategy (RSS) and the Sustainable Community Strategy (SCS) for Warwickshire. The Strategy is split into modal / topic strategies and also into the following geographical areas:

- Northern Warwickshire;
- Eastern Warwickshire;
- Nuneaton and Bedworth;
- Leamington Spa, Warwick, Kenilworth and Whitnash;
- Southern Warwickshire; and
- The North-South corridor.

The Implementation Plan sets out the priorities for investment in the short (0-5 years), medium (5-10 years) and long (10-15 years) term. The implementation plan also sets out the performance and programme management framework for the LTP.

The objectives of the LTP are as follows:

- To promote greater equality of opportunity for all citizens in order to promote a fairer, more inclusive society;
- To seek reliable and efficient transport networks which will help promote full employment and a strong, sustainable local and sub-regional economy;
- To reduce the impact of transport on people and the [built and natural] environment and improve the journey experience of transport users;
- To improve the safety, security and health of people by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health;
- To encourage integration of transport, both in terms of policy planning and the physical interchange of modes; and
- To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change.

All elements of the LTP3 have been assessed as part of the SEA.

## Stages of the SEA

SEA is a tool to ensure the integration of environmental and sustainability considerations into the plan and decision making process. To achieve this aim, SEA is a parallel process which informs each stage of the LTP development. The LTP and SEA processes are shown in Figure NTS1.

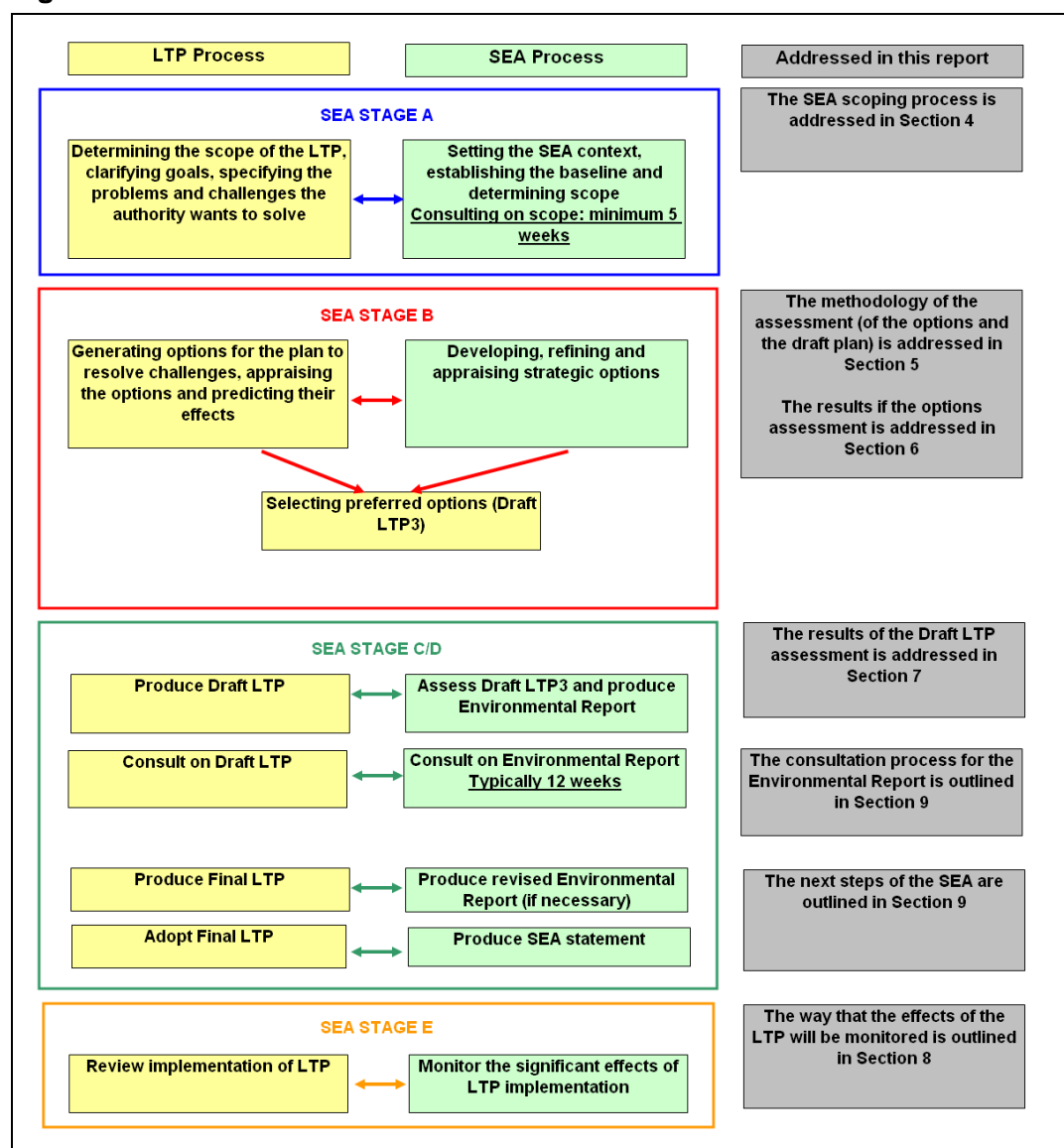
In addition, there are two other appraisal processes taking place alongside the SEA. The first is Habitat Regulations Assessment. The *Conservation of Habitats and Species Regulations 2010* (SI 2010/490) require that any plan or programme that is likely to have a significant effect on a Natura 2000 site<sup>1</sup> should be subject to Habitat Regulations Assessment (HRA). Warwickshire County Council is therefore required to assess its LTP3 through the HRA process as policies and transport projects in the plan can potentially affect Natura 2000 sites. Warwickshire County Council will be undertaking a HRA screening assessment to decide whether a full assessment will be required and a HRA screening report has been published alongside the publication of the Draft LTP3. The second appraisal process is Equality Impact Assessment (EQIA). Local authorities have a duty under race, disability and gender legislation<sup>2</sup> to carry out an Equality Impact Assessment (EQIA) of their LTP<sup>3</sup>. EQIA can help determine how an LTP affects different groups of people. DfT guidance on LTPs advises that an EQIA encompass race, gender, disability, age, religion/belief and sexual orientation. Warwickshire County Council will be producing an EQIA before the plan is finalised.

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1 Natura 2000 is an ecological network of protected conservation areas, set up to ensure the survival of Europe's most valuable species and habitats.

2 Race Relations (Amendment) Act 2000, requirement to produce and publish a Race Equality Scheme. Disability Discrimination Act 2005, requirement to produce a Disability Equality Scheme. Equality Act 2006, requirement to produce a Gender Equality Scheme.

3 The Equality Bill, going through Parliament during July 2009, consolidates equalities legislation, giving local authorities a single duty.

**Figure NTS1: The LTP and SEA Processes**

## Setting the Scope of the SEA

The purpose of scoping is to decide which issues should be covered in the SEA and to what level of detail. To do this the SEA team must collect information on what the environment is like in Warwickshire, how it is likely to change and must decide how transport can help to deliver the targets of other plans and programmes. A comprehensive scoping report and a set of topic papers were produced in February 2009 that detail this process. The five topic papers produced include:

- Economic growth (Topic Paper 1);
- Carbon emissions (Topic Paper 2);
- Equality of opportunity (Topic Paper 3);
- Safety, security and health (Topic Paper 4); and
- Quality of life and natural environment (Topic Paper 5).



Each topic paper set out:

- The other relevant policies, plans, programmes and sustainability objectives that the LTP is influenced by;
- Information on the baseline environment and the key environmental and sustainability issues faced in the county; and
- A SEA framework to assess the plan against. The SEA framework is the list of sustainability criteria that the plan is measured against in order to test its sustainability.

The topic papers are included as Appendix 1 to this Environmental Report. The results of the different scoping stages are summarised below plus the SEA framework that has been used to test the plan against.

### **Links with related plans, programmes and objectives**

A review has been undertaken of other relevant plans, policies, programmes (PPPs) and objectives. Many plans and policies set the context for transport, some directly and some indirectly. These include the National Transport Goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. It is vital that the LTP directly helps to deliver the goals of these other strategies. As well as these key documents international and national legislation and the plans and policies of other organisations (or other departments within the council) can have an influence on how the LTP should develop. A summary of these key documents has been provided below. Please see Appendix 1 for the full policy review.

### **National Transport Goals**

Developing a Sustainable Transport System (DfT, 2008) outlines five National Transport Goals:

- To support national economic competitiveness and growth, by delivering reliable and efficient transport networks;
- To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change;
- To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society;
- To contribute to better safety, security and health and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;
- To improve quality of life for transport users and non-transport users, and to promote a healthy natural environment.

The LTP has a direct role in delivering the National Transport Goals locally and the SEA tests how well it will do this.

## Regional Spatial Strategy (RSS)

The spatial strategy for the West Midlands as expressed through the RSS is fundamentally one of urban renaissance. For many years the development pattern in the region has been decentralisation from the Major Urban Areas (MUAs). The future spatial strategy can be summarised as follows:

- Development of a strategic scale will be focussed on the four Major Urban Areas of Birmingham/ Solihull, The Black Country, Coventry and the North Staffordshire conurbation;
- In other parts of the region major new development will be focussed in and adjacent to towns which are most capable of balanced and sustainable growth to complement the role of the MUAs. The following nine areas have been designated for this purpose as Settlements of Significant Development (SSD): Burton upon Trent, Hereford, **Nuneaton / Bedworth, Rugby**, Shrewsbury, Stafford, Telford, **Warwick / Leamington** and Worcester;
- Beyond the MUAs and SSDs, development will be of a smaller scale, to meet local housing needs and sustain the local economy and services; and
- In the region's rural areas the strategy supports rural renaissance, with a key role for market towns and larger villages and development on an appropriate local scale to address rural affordable housing needs.

It will be important that adequate transport and other infrastructure are provided to ensure that growth is sustainable and the LTP will be key in ensuring that this infrastructure will be developed.

## Sustainable Community Strategy and Local Area Agreement

The Sustainable Community Strategy (*A Sustainable Community Strategy for Warwickshire August 2009 - March 2026*) has three themes, each of which has three outcomes. The themes and outcomes are shown below.

Theme - Places:

Outcome 1: Our environment is clean, green and sustainable;

Outcome 2: Our housing is appropriate and affordable; and

Outcome 3: Our places are connected through transport, technology and services.

Theme – Prosperity:

Outcome 1: Our economy is innovative, competitive and entrepreneurial;

Outcome 2: Our workforce is diverse, trained and highly skilled; and

Outcome 3: Our economic well being is continuously improving

Theme – People:

Outcome 1: We belong to safe and strong communities where people get on together;

Outcome 2: We all live healthy, active and independent lives; and

Outcome 3: We all have the opportunity to enjoy and achieve.

The Local Area Agreement (LAA) is the key delivery plan for the Sustainable Community Strategy. It sets out the Government's and partners' priorities for Warwickshire and what will be tackled first. Success will be gauged by measuring progress against indicators. Relevant indicators include:

- NI 161 Average earnings of employees in the area;
- NI197: Improved local biodiversity – improve active management of local sites;
- N1 175 Access to services and facilities by public transport, walking and cycling (in communities defined as from towns to hamlets). 100% of the population should have basic access to services by 2010;
- NI 47 People killed or seriously injured in road traffic accidents;
- NI 56 Obesity in primary school age children in Year 6; and
- Local Indicator 8: Increase 5 a week physical activity.

The LTP can help deliver a number of these outcomes and targets. Where appropriate the contribution of transport to these outcomes and indicators have been built into the SEA framework.

## Baseline data and issues

The SEA Regulations require an examination of the current state of the environment and the likely evolution of the environment without the implementation of the plan (the “without the plan scenario”). This has been done through a desk-based study with the full results reported in the individual Topic Papers. It is important that the SEA is focused on how the LTP can influence environmental and sustainability conditions. For this reason each Topic Paper clearly outlines how transport can affect the particular issue. This has then guided the baseline data that has been collected and has ensured that the most appropriate SEA framework is designed. A summary of the main issues identified is shown in Table NTS1.

**Table NTS1: Sustainability baseline issues**

### Economy

Warwickshire benefits from a relatively strong and diverse economy and has seen strong employment growth over recent years. However, unemployment over the last year has doubled.

Almost half the residents of North Warwickshire work elsewhere. High levels of trips are made from North Warwickshire towards Tamworth, Sutton Coldfield, Birmingham, Nuneaton and Coventry. A large proportion of people from outside the County work in Warwickshire. The majority of people in the area commute to work by car.

Most people still travel to work by car but the majority of children travel to school using sustainable modes.

Traffic mileage in Warwickshire is increasing but at a slower rate than was targeted. Traffic speed data in the main towns (a proxy for congestion) do not show any clear pattern but do show that congestion in Warwick is more severe than in other areas.

Warwickshire experiences a lot of through movement of road based freight haulage and road freight does cause problems in some areas.

### Climate

There is no data available on the amount of renewable energy used in the transport system in Warwickshire. The target is 10% of the total energy use in transport systems to be derived from renewable sources

The largest emitter of CO<sub>2</sub>, in regards to road transport, in Warwickshire is North Warwickshire, followed by Stratford upon Avon and Warwick, reflecting the road network and traffic density

The County is likely to experience a number of changes due to climate change such as warmer wetter winters, more stormy weather and hotter summers. This will have numerous effects on the transport system

### Equality

Community severance caused by large volumes of traffic in some areas of the county

Access to services in Warwickshire is poor in many areas for people without a car

Travel by different age groups and social groups can be very different and provision needs to be tailored more effectively

Bus use and bus satisfaction have increased. The bus punctuality target is not quite on track.

### Safety, security and health

The population is ageing and this needs to be considered in the provision of services and transport

**Table NTS1: Sustainability baseline issues**

Air quality across the County is considered to be largely good. Traffic is increasing in some of the AQMAs.

Numbers of people killed or seriously injured (KSI) and the numbers of children killed or seriously injured are both decreasing. The council is now on track to meet the original KSI 2010/11 target of 393 in 2008/09.

Obesity is a particular problem for Warwickshire where the County's population is appearing high on regional league tables for obesity levels. Numbers of children who are obese is lower than the national average but the figures are still a cause for concern.

10.7% of Warwickshire's adult population are physically active, compared to 10.8% in England.

**Quality of life and the environment**

There is a scarcity of tranquil areas within Warwickshire. Least tranquil areas are in Warwick District and Nuneaton & Bedworth Borough. Only the south-western and south-eastern fringes of Stratford District, the southern part of Rugby Borough and the central area of North Warwickshire Borough have a large proportion of tranquil areas.

Warwickshire is a County rich in biodiversity from international, national and local sites. Many of these sites and habitats occur next to highways, cycle routes, green lanes or other transport corridors.

There is a substantial cultural heritage resource within Warwickshire, with a high proportion of Listed Buildings and Conservation Areas, particularly concentrated within Warwick and Stratford. 3 Conservation Areas in Warwickshire are at risk. The Conservation Area of Southam is at risk due to poor quality tarmac pavements and some 1980s brick paving. The fact that the town is bypassed by the road network means it has limited economic vitality. 19 listed buildings, 62 scheduled monuments and 4 registered parks and gardens are also at risk.

Warwickshire contains some protected landscapes, particularly in the south of the County. Transport can affect landscape in a number of ways and transport is having a detrimental affect on a number of countryside character areas.

Transport planning can contribute to green infrastructure networks by enhancing biodiversity interest on rights of way and promoting new rights of way that link areas of green infrastructure

Transport can have negative effects on the townscape and heritage of the settlements it passes through.

There was a gradual improvement in chemical water quality nationally and in Warwickshire between 2001 and 2006. In 2006 chemical water quality levels in North Warwickshire and Nuneaton & Bedworth were significantly below levels in the rest of the County. Biological water quality levels in Warwickshire were below the average level for England in 2006. All rivers within Warwickshire classified under the Water Framework Directive (WFD) assessment were determined to be "at risk" with regards to the WFD criteria.

Transport of minerals and waste by road can cause problems to local communities.

## Definition of the SEA framework

The SEA framework for the Warwickshire LTP SEA has been chosen after a review of the important issues and policies and to reflect the influence that transport can have on meeting objectives and resolving issues. The SEA framework is shown in Table NTS2. The SEA objectives represent important sustainability issues that the plan should be helping to achieve and elements of the LTP3 will be measured against the SEA objectives. The SEA appraisal questions act as more detailed reminders to the assessment team of issues that the appraisal needs to cover.

<b>Table NTS2: SEA framework</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA appraisal questions. Will the LTP...</b>
<b>Economy</b>	
Help to improve reliability and connectivity of the transport system?	<ul style="list-style-type: none"> <li>• Include schemes that decrease journey times, congestion, improve journey time reliability and help to support Warwickshire's already strong economy?</li> </ul>
Support the delivery of the future spatial strategy?	<ul style="list-style-type: none"> <li>• Provide the necessary infrastructure to support the spatial strategy in a sustainable manner?</li> </ul>
Enhance resilience through good management and maintenance of the transport system?	<ul style="list-style-type: none"> <li>• Help to manage routes effectively in order to maintain journey times?</li> </ul>
Provide wider support to the economy through the movement of people and goods?	<ul style="list-style-type: none"> <li>• Provide / encourage the use of alternatives to road freight and provide routes for freight traffic that reduces impacts on communities and the environment?</li> <li>• Increase access to jobs, towns, tourist attractions, rural areas and the countryside by sustainable means?</li> </ul>
<b>Carbon emissions</b>	
Reduce carbon emissions	<ul style="list-style-type: none"> <li>• Cause a change in vehicle miles or a change in the nature of traffic (*) that would cause changes in fuel use and CO<sub>2</sub>. (Link to LAA indicator NI 186: per capita CO<sub>2</sub> emissions in the Local Authority area)</li> <li>• Increase the use of energy from renewable sources in the transport system (to reach a target of 10% of the total energy consumed)</li> </ul>
Ensure that the transport system can cope with the unavoidable effects of climate change	<ul style="list-style-type: none"> <li>• Reduce the unavoidable effects of climate change (link to LAA indicator NI 188: Adapting to climate change)</li> </ul>
<b>Equality</b>	
Improve accessibility to basic services for all groups in society?	<ul style="list-style-type: none"> <li>• Improve provision of public and community transport that makes key services (**) more accessible to all groups of people (***) (link to LAA indicator NI 75 Access to services and facilities by public transport, cycling and walking).</li> </ul>
Help to improve the quality of urban and rural centres and reduce severance?	<ul style="list-style-type: none"> <li>• Reduce traffic levels, severance, congestion or the nature of traffic (*) in residential areas / town and village centres?</li> <li>• Cause changes that reduce the impact of the transport system on townscape or introduce features that enhance the character of</li> </ul>

**Table NTS2: SEA framework**

<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA appraisal questions. Will the LTP...</b>
	towns?
<b>Safety, security and health</b>	
Reduce the risk of death or injury on the transport system?	<ul style="list-style-type: none"> <li>Lead to a decrease in traffic accidents /accident severity and help to meet KSI targets (link to LAA indicator NI 47 on road accidents)?</li> </ul>
Make healthier modes of travel more attractive?	<ul style="list-style-type: none"> <li>Increase walking and cycling to help increase the numbers of people regularly participating in physical activity (link to LAA local indicator 8 on increasing physical activity and NI156 on childhood obesity)?</li> </ul>
Reduce the impact of the transport system on air quality?	<ul style="list-style-type: none"> <li>Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic (*) past sensitive receptors (including AQMAs)?</li> </ul>
Improve the security of the transport system?	<ul style="list-style-type: none"> <li>Make transport systems / interchanges more secure?</li> </ul> <p>(It will be important for this objective to consider equality issues (the DfT recommends analysing effects related to race, gender, disability, age, religion and sexual orientation if possible)).</p>
<b>Quality of life and the environment</b>	
Reduce the impact of the transport system on noise?	<ul style="list-style-type: none"> <li>Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic (*) past sensitive receptors or on sensitive /tranquil routes that would help to achieve WHO noise guidelines?</li> </ul>
Protect and enhance townscape, landscape quality and character	<ul style="list-style-type: none"> <li>Cause changes in traffic flows in areas that are valued for their landscape / townscape character?</li> </ul>
Protect and enhance biodiversity and geodiversity at all levels	<ul style="list-style-type: none"> <li>Cause direct loss of geodiversity or habitat fragmentation / loss especially that would risk achievement of Warwickshire BAP priority targets?</li> <li>Cause a change in traffic flows or nature of traffic (*) that will affect sensitive habitats or focal species?</li> <li>Result in habitat creation and contribute to the achievement of the Warwickshire BAP targets?</li> </ul>
Protect and enhance buildings, sites, areas and features of historic, archaeological and architectural interest	<ul style="list-style-type: none"> <li>Cause direct impacts on sites or monuments through the provision of new infrastructure?</li> <li>Cause a change in traffic flows or the nature of traffic (*) that affects townscape, sites and monuments valued for their cultural heritage or changes the number of sites at risk?</li> </ul>
Minimise the impact of the transport system on water resources, soil and mineral resources	<ul style="list-style-type: none"> <li>Cause an improvement in water quality that could help to meet the WFD target of achievement of good ecological status of water bodies by 2015?</li> <li>Cause changes to maintenance regimes that may decrease the need for water or decrease the potential for flooding?</li> <li>Reduce the demand for aggregate?</li> <li>Help to protect loss or pollution of soils which support valued</li> </ul>

**Table NTS2: SEA framework**

LTP SEA objective. Will the LTP...	LTP SEA appraisal questions. Will the LTP...
	habitats or are already experiencing erosion?

## Assessing the Effects of the LTP3

As recommended in DfT guidance, assessing the effects of the plan and the plan options has involved examining each strategy/measure in turn, and:

- Identifying the effects of the plan. This involves identifying changes to conditions in the future baseline scenario which are predicted to arise from the strategy/measure; and
- Assessing the significance of these effects. This involves describing these changes in terms of their magnitude, their geographical scale, the time period over which they will occur, whether they are permanent or temporary, positive or negative, probable or improbable, frequent or rare, and whether there are secondary, cumulative and/or synergistic effects. This information is then used to determine whether impacts are significant.

### Identifying the effects of the plan

Expert judgement is the main way that the effects of a LTP are identified. Many of the techniques available to provide a quantitative assessment for a transport project, for example the amount of carbon dioxide expected to be generated, are not useful to the team assessing a LTP (although the methodologies behind the techniques do give the team an understanding of the important issues). This is because SEA is used to assess relatively broad strategies rather than site specific proposals.

The SEA Regulations require an assessment of cumulative effects. These have been addressed in two ways as part of the assessment. The effects of the plan as a whole have been considered. The SEA has also considered what the effects of the plan are in combination with the effects of other plans and programmes such as the Regional Spatial Strategy and the relevant Local Development Frameworks.

### Assessing the significance of the effects

Once the effects are identified, it is important to discuss which of the effects are likely to be minor and which significant. The SEA Regulations specify the criteria that should be taken into account when determining likely significant effects. These criteria, which principally relate to the nature of the effects arising from the plan and the value and vulnerability of the receptors, are as follows:

- How valuable and vulnerable is the receptor that is being impacted?
- How probable, frequent, long lasting and reversible are the effects?
- What is the magnitude and spatial scale of the effect?
- Are the effects positive or negative?



The assessment of significance should involve the assessor considering the above criteria for each potential impact along with a consideration of how the plan will help to achieve (or not) the SEA objectives.

In the case of the Warwickshire LTP SEA, it has been difficult to assign significance to the effects because of the lack of detail provided in the LTP. The LTP is now split into a long term strategy document and an implementation plan. The long term strategy document for Warwickshire is mainly policy based with little guidance given in most cases to the likely location and timescale of the measures indicated (as may be expected in a long term policy based document). Even in the area strategies where broad locations for measures are sometimes given, the LTP is uncertain about when (or even if) these measures will be taken forward. This uncertainty is as a result of the lack of certainty over funding for the delivery of future transport services and schemes which is outside of the control of Warwickshire County Council.

The implementation plan is also a relatively strategic document and apart from naming the three major schemes, it does not outline any detail regarding the location of measures. In fact it states “Given the unpredictability about resources it is not sensible therefore to establish detailed programmes of work in this implementation plan”.

Because of these uncertainties in the plan itself it is impossible to establish certainty within the SEA. However, the SEA team feel that marking every impact as uncertain is not helpful. Therefore, we have adopted the following approach to significance (please see Table NTS3).






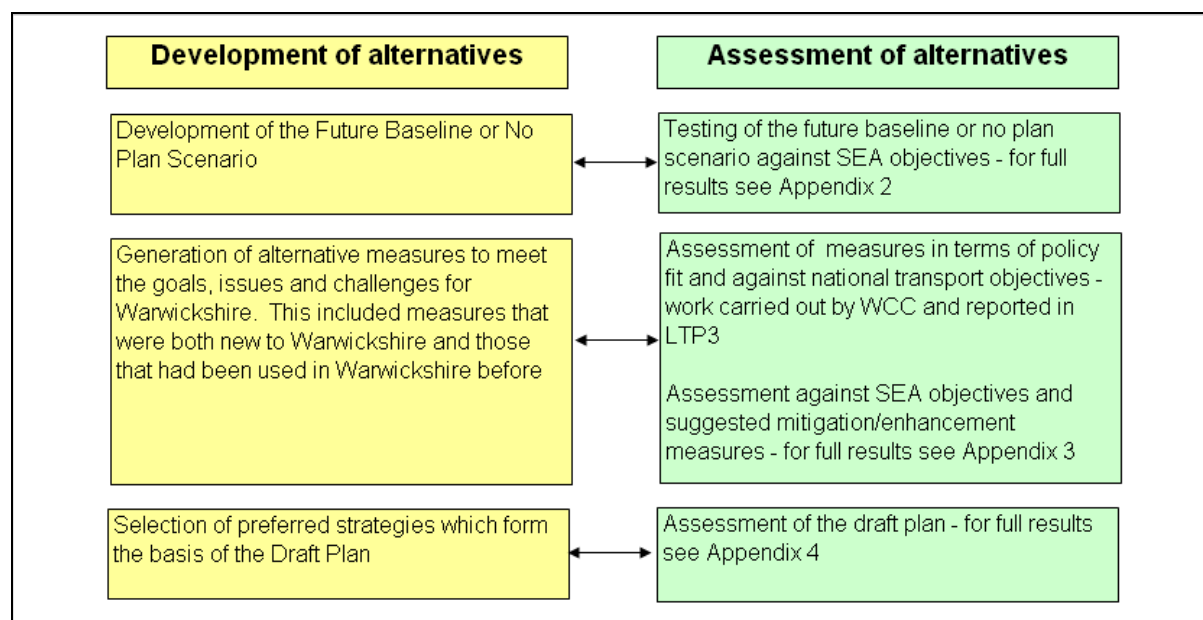
<b>Table NTS3: SEA significance scores</b>		
<b>Score</b>	<b>Description</b>	<b>Symbol</b>
Significant positive impact	The plan addresses all the elements that are required to protect the environment and address the sustainability issues in Warwickshire and would help to achieve all of the applicable SEA objectives (if implemented). The plan also sets out how, where and when these policies will be implemented and these will have a positive impact with relation to characteristics of the effect and the sensitivity of the receptors.	
Minor positive impact	The plan addresses all the elements that are required to protect the environment and address the sustainability issues in Warwickshire and would help to achieve all of the applicable SEA objectives (if implemented).	
Neutral	The plan does not have an effect on the achievement of the SEA objectives	
Minor negative impact	The plan conflicts with some of the SEA objectives	
Significant negative impact	The plan conflicts with some of the SEA objectives. The plan also sets out how, where and when these policies will be implemented and these will have a negative impact with relation to characteristics of the effect and the sensitivity of the receptors.	

Table NTS3: SEA significance scores		
Score	Description	Symbol
Uncertain	It is unclear whether there is the potential for a negative or positive effect on the SEA objective.	?

## The Effect of the LTP Options

The SEA Regulations state that the SEA should identify, describe and evaluate the likely significant effects of implementing the plan or programme; and reasonable alternatives<sup>4</sup>. The way that reasonable alternatives are defined in the LTP process is through identification and testing of plan options. The approach Warwickshire County Council has taken to developing options (and ENVIRON's approach to assessing those options) is outlined in Figure NTS2.

**Figure NTS2: Development and assessment of options**



### Testing the future baseline or no plan scenario

A required step in SEA is testing the likely evolution of the baseline environment in the absence of the plan. This scenario is called the 'future baseline' or the 'no plan' scenario. All of the subsequent strategies of the LTP are then compared against this no plan scenario to enable plan makers to see the difference the plan would make compared to a situation where no plan was implemented. The future baseline has been assessed and these results are shown in Appendix 2. The results are summarised below:

- The future baseline will have negative effects on many of the SEA objectives as road traffic and congestion increases and development continues and intensifies in the

<sup>4</sup> Please note that for the purposes of the assessment the options presented have been considered as options and as alternative options. Therefore this report uses the terms options and alternatives interchangeably.

towns especially (but in the absence of the necessary supporting transport infrastructure provided through the LTP). In the absence of the plan there will be no measures to encourage alternatives to road freight and no encouragement to freight users to use advisory routes, thus increasing the impact of freight on communities and the environment.

- CO<sub>2</sub> levels and air pollution are likely to rise in the absence of measures brought forward as part of the LTP as there will be little support for sustainable modes and vehicle miles will increase. Climate change itself will bring inevitable changes in the future, such as warmer wetter winters, more stormy weather and hotter summers. This will have numerous effects on the transport system. However, as highway and bridge maintenance duties will continue in the absence of the plan it is assumed that some measures will be implemented to ameliorate the effects.
- Access to services is poor in many areas of Warwickshire and without the measures taken forward as part of the LTP accessibility levels will decline as services are withdrawn. Levels are also likely to decline with the withdrawal of the funding for the transport schemes taken forward as part of the Warwickshire Rural Access to Services Programme (WRASP). Congestion will have effects on bus punctuality and reliability and will further worsen people's experience of the transport system.
- In terms of safety, the council is now on track to meet the original targets and severity of car accidents may decrease in the longer term due to improved vehicle design and increased safety awareness amongst the public. However, in the absence of the measures in the LTP vehicle miles will increase (increasing the risk of accidents) and the assumption needs to be that accident levels remain at a similar level at least in the short term.
- Effects on the environment from the transport system are also likely to worsen in the future baseline. Increasing traffic levels and congestion is likely to impact negatively upon landscape, townscape and biodiversity.

## Assessment of the alternative measures

At the options stage of the assessment there was no detail available as to the location of the measures and how they will be implemented. Because of this lack of detail a much simpler approach was used for this assessment compared to the assessment of the future baseline. For this assessment a simple checklist approach has been taken to assessing the potential impacts of the alternative measures. The assessment has not been undertaken against each SEA objective; rather they have been grouped into SEA topics (economy, climate, equality, safety and environment). A potential effect is indicated by a cross within the checklist which of the SEA topics is likely to be affected by each of the measures. A column has been included which explains the reasoning behind these judgements and this also includes some of the relevant evidence that is available to help assess the effectiveness of such schemes. It was possible to make some recommendations at this stage on how measures might be taken forward to ensure their effectiveness and some of these are highlighted below.

- Integration of planning and transport planning - it is unclear what is meant by integration of planning and transport. We have presumed this means that adequate

infrastructure will be provided to support new development. It would be useful if the draft plan is clearer regarding how planning and transport planning will be integrated.

- **Parking** - 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. The draft plan should be clear how effects on competition of centres will be avoided.
- **Travel information** - personalised travel planning would perform well against SEA objectives. However, there are identified risks with relation to its implementation and deliverability due to the cost implications. Therefore there is uncertainty as to whether the positive effects of this measure would be realised.
- **Work travel** - research has shown 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. The draft plan should consider whether it can require changes in parking where workplace travel plans are recommended / required (although the main mechanisms to do this may be through the planning system). However, as with the parking recommendation above it will be important that other options are available to people if raising car parking charges or reducing spaces.
- **Walking and cycling** - if a substantial increase in walking and cycling is planned in Warwickshire this needs to be accompanied by a strong programme of measures to improve the safety of active travel, such as 20mph zones, safe cycling infrastructure and other highways safety measures. The draft plan should set out how this will be implemented.
- **Passenger transport** - 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) yielded comparatively greater success. Therefore, it will be important to match up different activities for all modes that are being promoted. This highlights the importance of considering Smarter Choice Programmes in a holistic way, encompassing service improvements as well as marketing.
- **Road users** - high occupancy vehicle 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. The draft plan should consider carefully where such measures are implemented, especially as this is a new measure to Warwickshire.

## The Effect of the Draft LTP3

This section reports on the significant effects identified as part of the assessment of the Draft LTP3. The assessment of the Draft LTP3 has been carried out on a topic by topic basis and the full assessment is reported in Appendix 4. The effects of the Draft LTP3 are summarised below. Incorporation of mitigation measures to directly prevent or reduce an effect is an iterative part of the SEA process. Where a strategy scenario is likely to have significant

adverse environmental effects, measures should be considered to prevent, reduce or offset these effects. Measures to enhance beneficial effects should also be considered where appropriate. Mitigation effects to both reduce negative and enhance positive effects have been included below.

## Effects on economic growth

None of the strategies are likely to have a significantly positive effect on the economy objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the economy SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help support the economy of Warwickshire. The strategies contained within the plan should help to improve sustainable access to employment (both employment sites within the county and to areas such as Birmingham), help to manage the negative effects of HGV traffic, help to manage traffic better in the town centres, support regeneration in the less affluent north of the county and support initiatives such as the World Class Stratford Initiative. However, some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites) and the fact that transport modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels. Although the long term strategy is broadly positive, there is some uncertainty over the level of funding available to provide supporting transport infrastructure in the short term.

Mitigation measures identified to address potential negative or uncertain effects are as follows:

- As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable; and
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

Enhancement measures identified in order to improve the performance of the Strategies are as follows:

- Policy ASA1 of the Airport Accessibility Strategy could say ...and other stakeholders to improve sustainable surface access provision ...; and
- Policy ASA3 of the Airport Accessibility Strategy could be clearer about the level of passenger flights that will trigger a Surface Access Strategy for Coventry Airport.

## Effects on carbon emissions

Some of the modal/topic strategies are likely to have minor negative effects. The Sustainable Freight Distribution Strategy and the Airport Accessibility Strategy will provide

support for the re-introduction of air freight and passenger services at Coventry Airport and continuation of support of the same at Birmingham International Airport. Alone, these measures in the LTP will have a slight negative effect on emissions. However, in association with the expansion of Birmingham International Airport, the LTP will have a cumulative negative impact on carbon emissions. Other significant negative effects include the Highway Maintenance Strategy. The significant effect comes through an omission of a significant issue. Adaptation to the effects of climate change should be addressed in the Highway Maintenance Strategy and because of the importance of the issue this has been scored as significantly negative. The plan as a whole fails to address climate change adaptation and this is a significant omission. Significant negative effects are also identified with regard to the area strategies (apart from the North –South Corridor which has a positive effect). It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the various areas of the plan will lead to a change in climate emissions as transport modelling is not yet available. However, for climate emissions to decrease definable modal shift and reductions in vehicle miles would have to occur. The level of development in Warwickshire makes it unlikely that vehicle miles will decrease.

Mitigation measures identified to address potential negative or uncertain effects are as follows:

- The objectives of the plan should address adaptation to climate change;
- Consider adding an objective to the Area Strategies listed above related to reducing CO<sub>2</sub> emissions and adapting to climate change;
- With regards to the potential significant negative effects identified as a result of the Area Strategies, the fact that the spatial strategy and the transport interventions are likely to increase carbon emissions is a difficult issue to mitigate as development cannot be stopped yet there is reduced funding for transport interventions to enable modal switch. As noted below, work with District Councils should consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided;
- The Highway Maintenance Strategy does not discuss how the effects of climate change will require changes to maintenance regimes and this is a significant omission. Some of the changes that need to be addressed are changes in vegetation management, surfacing (with the rise in hot temperatures) and the potential of flooding on the highway drainage network; and
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

One enhancement measure is identified in order to improve the performance of the Taxi and Private Hire Vehicle Strategy as follows: The policies in the Taxi and Private Hire Vehicle Strategy go as far as encouraging the on-going replacement of older taxis and private hire vehicles in order to meet DDA requirements. Perhaps this can be extended to encouraging the replacement to cleaner vehicle fleets.



## Effects on equality of opportunity

None of the strategies are likely to have a significantly positive effect on the equality objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the equality SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve accessibility and improve the quality of communities. The strategies contained within the plan should help to support access to employment, healthcare and other services, make travel more affordable (through concessionary fare schemes, car sharing schemes etc) and through providing a greater range of travel options. The plan will also help to improve the quality of urban and rural centres through measures to reduce the impact of freight traffic, parking policies and through reducing congestion and the impact of vehicular traffic in certain areas. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. None of the strategies will have a negative effect on the SEA Objectives.

No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Equality of Opportunity SEA Objectives. However, a mitigation measure is put forward in relation to an uncertain performance recorded with regards to the Implementation Plan (April 2011 – March 2014); as follows: The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its sustainability effects. One enhancement measure is put forward in order to improve the Area Strategies, as follows: Consider adding an objective on improving accessibility to the Nuneaton and Bedworth, Eastern Warwickshire and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies.

## Effects on safety, security and health

None of the strategies are likely to have a significantly positive effect on the safety, security and health objectives but no negative impacts have been recorded either. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the safety, security and health SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve the safety and security of travel through tackling speeding, improving lighting, helping to maintain footways and the highways and helping to educate people about road safety. The strategy will also help to make healthier modes more attractive through improving walking and cycling routes and addressing security concerns at public transport interchanges. The strategies should also help to improve the air quality in the county, if modal switch is achieved. As with the other SEA Objectives, there is some uncertainty over the implementation of the schemes in the strategies. The Implementation Plan stresses that maintenance of the highway network is likely to be a priority (which will positive for safety), that a broadly balanced integrated transport programme will be maintained and the plan includes funding for casualty reduction, Safer Routes to Schools Programmes and cycling and walking. However, without certainty on funding and location of schemes, it is not possible to assess what the impact of the Implementation Plan will be on safety and health. However, the council does set out an

annual programme of work and it would be useful if this programme were subject to assessment to determine its effects on all the SEA objectives.

No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Safety, Security and Health SEA Objectives. However, mitigation measures are put forward in relation to the uncertain performances recorded, as follows:

- The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its sustainability effects.

A number of enhancement measures are put forward in order to improve the strategies, as follows:

- The final objectives of the Northern Warwickshire, Eastern Warwickshire, Nuneaton and Bedworth and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies could be amended to also cover reducing the impacts of traffic on communities; and
- There are other areas of Northern Warwickshire (apart from Coleshill) that would benefit from improved walking and cycling routes and the strategy should outline what the approach in other areas is likely to be. Even if there are no resources at present, this should be made clear in the strategy.

## **Effects on quality of life and natural environment**

None of the strategies are likely to have a significantly positive effect on the environment and quality of life objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the environment and quality of life SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help reduce the impact of transport on the environment. The strategies contained within the plan should help to provide alternative modes of transport and manage traffic to reduce the impact on communities and townscape and reduce congestion and traffic. All of these measures should help to reduce the impact of traffic on air, noise and biodiversity, improve landscapes and townscapes and reduce pollution from traffic. There are however, a small number of potential negative effects recorded within the assessment and mitigation measures are proposed to address these as appropriate. For example, the objectives of the LTP do not address the built environment, and the Sustainable Distribution Strategy, Highway Maintenance Strategy, Road Safety Strategy, Bridge Maintenance Strategy and Rights of Way and Recreational Highway Strategy would result in construction so could involve the use of natural resources.

The effect of the area strategies has been scored as uncertain. The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the



strategy regarding when and where transport schemes may be developed and this has made the strategies difficult to assess. Although the area strategies may make alternative modes more attractive and reduce the impact of traffic on townscapes it is not possible to definitely state the locations of any likely traffic reduction due to uncertainty regarding where and how measures are likely to be implemented. This uncertainty also means that direct land take impacts are not possible to predict. An exception to this is Phase 1 of the NUCKLE major scheme which is further advanced than the other parts of the plan. The NUCKLE scheme will be broadly positive in helping to achieve modal shift. However, there is a risk of some impacts on flooding and biodiversity – mitigation measures will need to be developed as part of the environmental assessment for the scheme.

Mitigation measures are identified in order to address potential negative effects and areas of uncertainty identified in the assessment, as follows:

- The plan objective on the environment should be changed to address the impact on the built environment;
- There is a risk that as the strategies and measures are developed negative impacts will occur. This is particularly a risk with the major schemes and it is suggested that major schemes (and all schemes if deemed a risk) should be subject to an assessment of their sustainability;
- As with the other strategies, the objectives of the Southern and Western Warwickshire Area Strategy should address the environmental impact of transport (rather than just air quality);
- The LTP needs to make a commitment to reducing the impact of the resources used to build new transport infrastructure. Policy HM6 of the Highway Maintenance Strategy states that the County Council will aim to undertake all of its highway maintenance work within the context of the principles of sustainability and environmental protection. A similar undertaking needs to be made for the construction of new infrastructure;
- Before highway widening is considered its impact on the environment should be considered;
- The location of the freight consolidation centres needs to be carefully selected so they are not located in (or increase traffic in) areas that are sensitive;
- Policy F6 on the Sustainable Freight Distribution Strategy could be reworded more positively in terms of avoiding environmental effects;
- It should be made clear that the maintenance of historic bridges and/or bridges of cultural value will be undertaken in consultation with English Heritage and local authority conservation officers in order to ensure that decisions made regarding bridge maintenance optimise the protection of the county's historic assets;
- The policy wording should include the minimisation of environment effects of bridge maintenance works;
- Policy RW1 of the Rights of Way and Recreational Highway Strategy could be strengthened by adding text which makes it clear that recycled and low environmental impact surfacing materials will be favoured for the surfacing of foot and cycle paths, where practicable. Policy RW1 of the Rights of Way and Recreational Highway Strategy should also make reference to protecting water resources; and

- In order to offset potential negative effects on archaeological and ecological features, the protection of such features should be given high priority in Policy RW5b of the Rights of Way and Recreational Highway Strategy.
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

Enhancement measures are also put forward, in order to improve the strategies, as follows:

- More information should be provided on how the environmental impact of traffic on environmentally sensitive areas is to be achieved within the Network Management Duty Strategy.

## Monitoring Measures

The SEA Regulations require authorities to:

*...monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action (Section 17 (1)).*

Monitoring measures proposed in this section refer to the significant effects that have been predicted to result from measures included in the Draft LTP3. However the monitoring programme itself will not commence until the Final LTP is adopted in March 2011. By then the monitoring requirements may have changed, either as a result of changes to the plan or due to other external influences on the baseline situation. European Commission guidance<sup>5</sup> provides advice on monitoring which suggests a phased approach to the design of a monitoring programme. This phased process will be used for LTP3, further details of which will be included in the SEA statement once the impacts of the Final LTP3 are known.

The draft monitoring programme is outlined in Table NTS4.

<b>Table NTS4: LTP3 monitoring programme</b>	
<b>Significant / uncertain effect identified<sup>6</sup></b>	<b>Monitoring required</b>
Uncertain effect: The effect of the Implementation Plan on the economy, the environment and climate emissions. The Implementation Plan concludes that it is not likely that significant infrastructure investment to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide	Each Local Development Framework will have its own monitoring processes through which the effects of development will be monitored. It is expected that this will be an effective way to monitor this significant effect. It will be important that the LTP team satisfies itself that each LDF has set in place adequate monitoring systems to ensure that there are no unacceptable transport

<sup>5</sup> European Commission (2003): Implementation of Directive 2001/42 on the assessment of the Effects of Certain Plans and Programmes on the Environment.

<sup>6</sup> The effects have been grouped into similar effects for the purpose of the monitoring programme.

**Table NTS4: LTP3 monitoring programme**

Significant / uncertain effect identified <sup>6</sup>	Monitoring required
higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.	impacts from development.
Significant effect: The effect of the area strategies and Implementation Plan on carbon emissions. If development is to take place without adequate transport infrastructure it likely that climate emissions will increase and this will have a negative impact on climate emissions.	
Uncertain effect: Some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites) and the fact that transport modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels.	
Significant effect: The cumulative effect of the LTP and the expansion of Birmingham International Airport on carbon emissions.	Birmingham International Airport reports on the carbon emissions from its operations in its quarterly Environment Monitoring Report and annual Community and Environment Report. This data will need to be collated on an annual basis and used to inform the LTP monitoring
Significant effect: The effect of the Highway Maintenance Strategy on the ability of the transport system to adapt to the effects of climate change (the strategy omits to plan for the maintenance issues that climate change might have on the transport system)	The action that is needed to change this effect from a negative into a positive is to include information on climate change adaptation in the LTP. If this is done no monitoring will be needed. If this is not incorporated then necessary monitoring will be set out in the final LTP3.

# 1 Introduction

## 1.1 This report

This report sets out the results of the Strategic Environmental Assessment (SEA) of the Warwickshire Local Transport Plan 3 (LTP3). This report – the Environmental Report – will be subject to consultation with local stakeholders at the same time as the Draft LTP3. The purpose of this report is to:

- Give consultees information on the potential environmental and sustainability effects of the Draft LTP3 to aid them in their consideration during consultation; and
- Assist Warwickshire County Council in improving the Final LTP3 by highlighting where there are potential environmental and sustainability effects of implementing the Draft LTP3 as written.

## 1.2 The SEA process

The Warwickshire LTP3 is being subject to a full SEA in line with the requirements of *Statutory Instrument 2004 No. 1633: The Environmental Assessment of Plans and Programmes Regulations 2004* (otherwise known as the SEA Regulations). These Regulations require an environmental assessment to be carried out on certain plans and programmes prepared by public authorities that are likely to have a significant effect upon the environment. Certain plans, including LTPs, have been deemed by the Government to automatically require SEA<sup>7</sup>.

SEA extends the assessment of environmental impacts from individual development projects to regional, county and district level plans. Strategic Environmental Assessment is a systematic way to examine (and suggest ways to reduce) the likely effects of a plan on environmental, social and economic objectives.

The SEA has been carried out by independent consultants, ENVIRON using the following guidance: Department for Transport (April 2009): *Strategic Environmental Assessment for Transport Plans and Programmes. TAG Unit 2.11. "In draft" Guidance.*

## 1.3 The LTP3 process

The Transport Act 2000 required most local transport authorities (County Councils, Unitary Authorities and partnerships in metropolitan areas) in England to produce and maintain a Local Transport Plan (LTP). LTPs set out the authority's local transport strategies, policies, and an implementation programme. The first five year LTPs (LTP1) covered the period 2001/02 to 2005/06 and LTP2s cover the period 2006/7 to 2010/11.

The Local Transport Act 2008 (which amends the Local Transport Act 2000) sets out the requirements for LTP3s. LTPs are still mandatory documents but the Act has changed their role slightly. The main changes between LTP2 and LTP3 are shown below.

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<sup>7</sup> This is set out as a requirement in LTP guidance and also in Appendix 1 of *A Practical Guide to the Strategic Environmental Assessment Directive* (Office of the Deputy Prime Minister, 2005).

**Differences between LTP2 and LTP3**

- LTP3 will no longer be formally assessed by DfT
- DfT will no longer impose mandatory targets or require submission of formal transport monitoring reports (although LTPs will be examined as part of the Comprehensive Area Assessment process)
- LTPs must now include separate strategies and implementation plans (although most LTPs already include these)
- LTP3 will not necessarily have a five year timescale. Local transport authorities may replace their Plans as they see fit but LTPs must be kept up to date

The changes to LTP3 place responsibility on individual authorities to consider how to use the LTP process in the way which works best for them.

## **1.4 The structure of the Environmental Report**

The Environmental Report is divided into the following sections:

- Section 2 outlines the content and objectives of the LTP3;
- Section 3 outlines the stages of the SEA and the relationship of the SEA to other assessment processes;
- Section 4 outlines the work that was undertaken to define the scope of the SEA;
- Section 5 outlines the methods used to assess the Draft LTP3 and the LTP3 options;
- Section 6 outlines the results of the assessment of the plan options;
- Section 7 outlines the results of the assessment of the Draft LTP3 (including mitigation measures);
- Section 8 outlines how the effects of the plan will be monitored; and
- Section 9 outlines the next steps of the SEA, including the consultation.

## 2 Warwickshire LTP3

### 2.1 Outline of the plan's contents

The Plan is presented into two parts. Part 1: *The Strategy* sets out the overall policy framework within which transport needs to be considered within Warwickshire. The timeframe for the strategy element is 2011-2026 and has been chosen to align the document with the Regional Spatial Strategy (RSS) and the Sustainable Community Strategy (SCS) for Warwickshire. The Strategy is split into three sections:

- Part 1A provides the overall policy context and background to the LTP;
- Part 1B provides details on the overall objectives for the LTP and the key issues and challenges faced by the County over the next 15 years; and
- Part 1C outlines how the strategy has been developed and provides details of how it will be delivered by mode / topic and in each of the following geographical areas:
  - Northern Warwickshire
  - Eastern Warwickshire
  - Nuneaton and Bedworth
  - Leamington Spa, Warwick, Kenilworth and Whitnash
  - Southern Warwickshire
  - The North-South corridor
- The mode / topic strategies that are included in the LTP3 are:
  - Air Quality Strategy;
  - Accessibility Strategy;
  - Freight Strategy;
  - Parking Strategy;
  - Powered Two Wheelers Strategy;
  - Airport Access Strategy;
  - Land Use and Transportation Strategy;
  - Bus Strategy;
  - Passenger Rail Strategy;
  - Network Management Duty Strategy;
  - Taxi and Private Hire Strategy;
  - Intelligent Transport Strategy;
  - Community Transport Strategy;
  - Congestion Strategy;
  - Cycling Strategy;
  - Bus Information Strategy;

- Public Transport Interchange Strategy;
- Public Transport Strategy;
- Road Safety Strategy;
- Highway Maintenance Strategy;
- Walking Strategy;
- Travel Behaviour Strategy;
- Bridge Maintenance Strategy; and
- Public Rights of Way Strategy.

Part 2: *The Implementation Plan* sets out the priorities for investment in the short (0-5 years), medium (5-10 years) and long (10-15 years) term. The implementation plan also sets out the performance and programme management framework for the LTP.

All elements of the LTP3 have been assessed as part of the SEA.

The LTP and its Annexes can be found on the County Council's website:  
[www.warwickshire.gov.uk/ltp3](http://www.warwickshire.gov.uk/ltp3).

## 2.2 The objectives of the LTP3

The objectives of the LTP are as follows:

- To promote greater equality of opportunity for all citizens in order to promote a fairer, more inclusive society;
- To seek reliable and efficient transport networks which will help promote full employment and a strong, sustainable local and sub-regional economy;
- To reduce the impact of transport on people and the [built and natural] environment and improve the journey experience of transport users;
- To improve the safety, security and health of people by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health;
- To encourage integration of transport, both in terms of policy planning and the physical interchange of modes; and
- To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change.

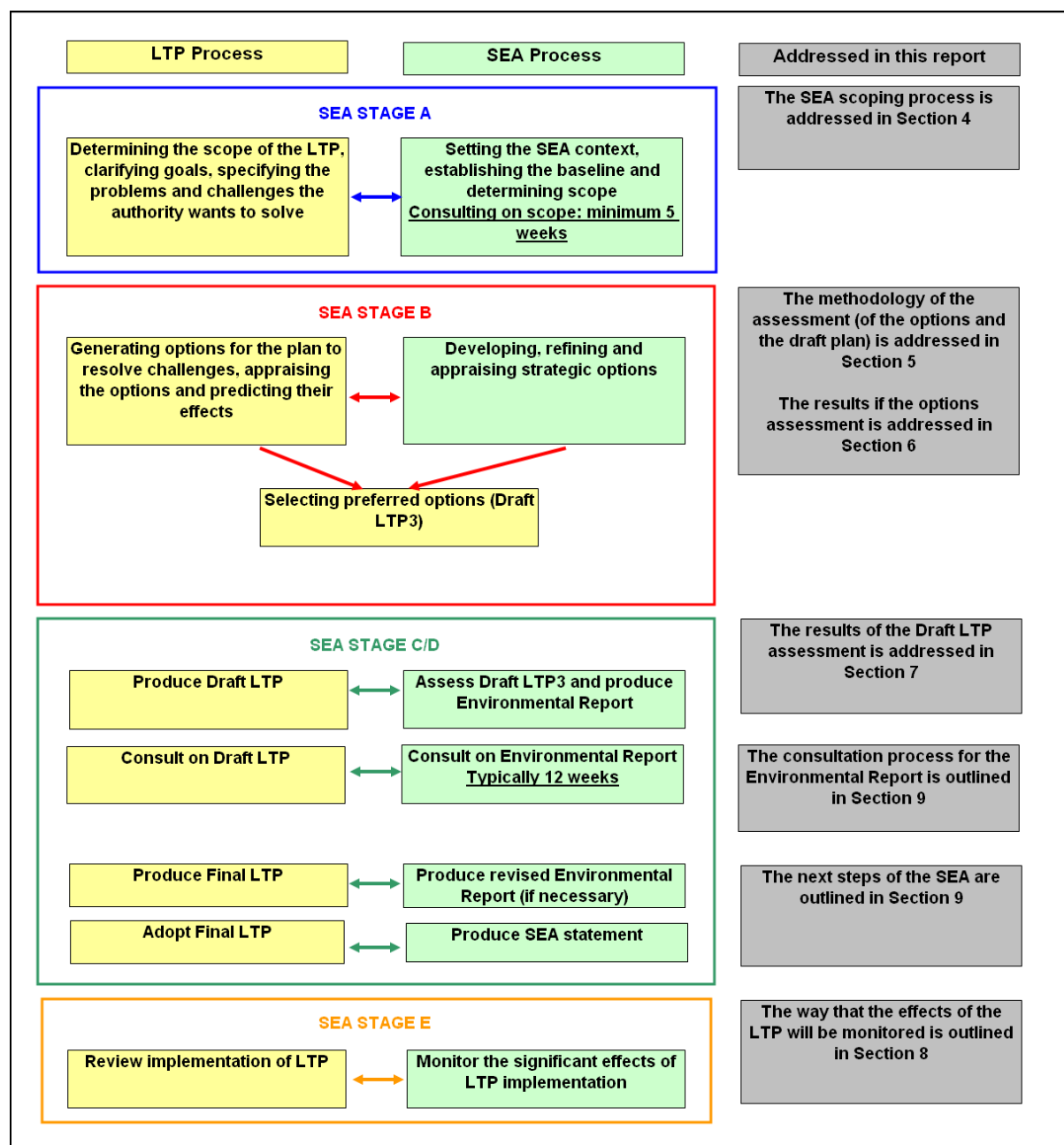
These objectives have been updated since LTP2 to ensure that they still remain relevant to Warwickshire. Objective 6 is an additional objective for this LTP, and supports the Government's commitment to tackling climate change as set out in the Climate Change Act 2008.

## 3 Stages of the SEA

### 3.1 Introduction

SEA is a tool to ensure the integration of environmental and sustainability considerations into the plan and decision making process. To achieve this aim, SEA is an iterative process informing each stage of the LTP development. The LTP and SEA processes are shown in Figure 1.

**Figure 1: The LTP and SEA Processes**





## 3.2 Related processes to SEA

A number of parallel assessment processes are occurring at the same time as the SEA. Please note that a separate Health Impact Assessment (HIA) is not being carried out on the LTP3. However, health issues of relevance to the LTP have been included within the SEA framework.

### 3.2.1 Habitat Regulations Assessment

The *Conservation of Habitats and Species Regulations 2010* (SI 2010/490) provides legal protection for habitats and species of European importance (so called Natura 2000 sites). The Regulations require that any plan or programme that is likely to have a significant effect on a European site is subject to Habitat Regulations Assessment (HRA). The Regulations state that “the plan-making authority for that plan shall, before the plan is given effect, make an appropriate assessment for the implications for the site in view of that site’s conservation objectives”.

Warwickshire County Council is therefore required to assess its LTP3 through the HRA process as policies and transport projects in the plan can potentially affect Natura 2000 sites. Warwickshire County Council will be undertaking a HRA screening assessment to decide whether a full assessment will be required and a HRA screening report has been published alongside the publication of the Draft LTP3.

### 3.2.2 Equalities Impact Assessment

Local authorities have a duty under race, disability and gender legislation<sup>8</sup> to carry out an Equality Impact Assessment (EQIA) of their LTP<sup>9</sup>. EQIA can help determine how an LTP affects different groups of people. DfT guidance on LTPs advises that an EQIA encompass race, gender, disability, age, religion/belief and sexual orientation. The EQIA and SEA processes are separate but in order to make the EQIA easier equalities issues have been built into the SEA framework. Warwickshire County Council will be producing an EQIA before the plan is finalised.

### 3.2.3 New Approach to Appraisal (NATA)

The New Approach to Appraisal (NATA) is the process which the government recommends is used by transport authorities to formulate and test transport options (both scheme options and options for plans and programmes). NATA has a set of five objectives (although these are being revised in light of the new national objectives for transport) and the process involves testing options against these objectives. This appraisal is conducted through filling in worksheets for each subject and then presenting the results of each option in an Appraisal Summary Table (AST). Government guidance on SEA for transport plans makes it clear that SEA should use the NATA framework as a basis and utilise its methodologies where possible. Because of the changes to the national objectives for transport (which have not

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<sup>8</sup> Race Relations (Amendment) Act 2000, requirement to produce and publish a Race Equality Scheme. Disability Discrimination Act 2005, requirement to produce a Disability Equality Scheme. Equality Act 2006, requirement to produce a Gender Equality Scheme.

<sup>9</sup> The Equality Bill, going through Parliament during July 2009, consolidates equalities legislation, giving local authorities a single duty.

yet been fully reflected in NATA guidance), ENVIRON sought guidance from DfT on how to integrate NATA and SEA. DfT indicated that SEA does not require the production of ASTs, nor does it require the use of the National Transport Goals and/or the NATA framework. However, it may be useful to take the NATA framework as a basis when developing the SEA framework. In light of this guidance (and in light of the changes to the national objectives for transport) the following approach to the SEA in terms of its relationship with NATA has been taken:

- Use of the Government's new National Transport Goals as a basis for the SEA but also including local issues where relevant; and
- Review of the NATA worksheets and methodologies to see if any of these methodologies can be used in the assessment. Unfortunately, the level of detail that NATA assumes will be available to the assessment is not generally present for a strategic level SEA. Therefore, it has been necessary to rely on expert judgment as the primary methodology used to assess the plan (see Section 5 of this report for more detail). Therefore the assessment is not presented using the NATA worksheets and Appraisal Summary Tables, however it is fully consistent with SEA good practice adheres to the requirements of the SEA Regulations.

## 4 Setting the Scope of the SEA

### 4.1 Introduction

The purpose of scoping is to decide which issues should be covered in the SEA and to what level of detail. To do this the SEA team must collect information on what the environment is like in Warwickshire, how it is likely to change and must decide how transport can help to deliver the targets of other plans and programmes, for example how transport can help achieve carbon targets. A comprehensive scoping report and topic papers were produced in February 2009 that set out this process. The following five topic papers were produced:

- Economic growth (Topic Paper 1);
- Carbon emissions (Topic Paper 2);
- Equality of opportunity (Topic Paper 3);
- Safety, security and health (Topic Paper 4); and
- Quality of life and natural environment (Topic Paper 5).

Each topic paper set out:

- The other relevant policies, plans, programmes and sustainability objectives that the LTP is influenced by;
- Information on the baseline environment and the key environmental and sustainability issues faced in the county; and
- A SEA framework to assess the plan against. The SEA framework is the list of sustainability criteria that the plan is measured against in order to test its sustainability. This SEA framework is based on the Government's National Transport Goals but also includes local issues where relevant

The scoping report and topic papers were sent to consultees in February 2009 for comment and several of the consultees suggested changes be made. Where the SEA team feel that these changes are relevant and useful to the process, these changes have been made and the topic papers have been updated. The information on how comments have been taken into account is available from the ENVIRON team if consultees want to see a copy. It will also form part of the SEA Adoption Statement at the end of the SEA process. The updated topic papers are included as Appendix 1 to this Environmental Report. The results of the different scoping stages are summarised below concluding with the presentation of the SEA framework that has been used to test the plan against.

### 4.2 Links with related plans, programmes and objectives

The SEA Regulations (see Schedule 2) state that an Environmental Report should outline:

- The plan's relationship with other relevant plans and programmes; and
- The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.

In order to fulfil this requirement, a review has been undertaken of other relevant plans, policies, programmes (PPPs) and objectives. The full results can be found in each individual Topic Paper in Appendix 1. The results are summarised below.

Many plans and policies set the context for transport, some directly and some indirectly. These include the National Transport Goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. It is vital that the LTP directly helps to deliver the goals of these other strategies. As well as these key documents international and national legislation and the plans and policies of other organisations (or other departments within the council) can have an influence on how the LTP should develop.

In each Topic Paper a summary has been included of the key documents that the LTP should help to deliver – the National Transport Goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. A separate review has also been undertaken on the other important policy documents that will influence the delivery of the LTP. A summary of these key documents has been provided below. Please see Appendix 1 for the full policy review.

#### **4.2.1 National Transport Goals**

Developing a Sustainable Transport System (DfT, 2008) outlines five National Transport Goals:

- To support national economic competitiveness and growth, by delivering reliable and efficient transport networks;
- To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change;
- To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society;
- To contribute to better safety, security and health and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health;
- To improve quality of life for transport users and non-transport users, and to promote a healthy natural environment.

The LTP has a direct role in delivering the National Transport Goals locally and the SEA tests how well it will do this.

#### **4.2.2 Regional Spatial Strategy (RSS)**

The latest version of the RSS is the *Draft West Midlands Regional Spatial Strategy Phase Two Revision - Draft Submission* (December 2007). An Examination in Public was held between 28th April – 24th June 2009 and the report of the Examination in Public Panel was published in September 2009 (*West Midlands Regional Spatial Strategy Phase Two Revision. Report of the Panel*, September 2009).

The spatial strategy for the West Midlands as expressed through the RSS is fundamentally one of urban renaissance. For many years the development pattern in the region has been

decentralisation from the Major Urban Areas (MUAs). The future spatial strategy can be summarised as follows:

- Development of a strategic scale will be focussed on the four Major Urban Areas of Birmingham/ Solihull, The Black Country, Coventry and the North Staffordshire conurbation;
- In other parts of the region major new development will be focussed in and adjacent to towns which are most capable of balanced and sustainable growth to complement the role of the MUAs. The following nine areas have been designated for this purpose as Settlements of Significant Development (SSD): Burton upon Trent, Hereford, **Nuneaton / Bedworth, Rugby**, Shrewsbury, Stafford, Telford, **Warwick / Leamington** and Worcester;
- Beyond the MUAs and SSDs, development will be of a smaller scale, to meet local housing needs and sustain the local economy and services; and
- In the region's rural areas the strategy supports rural renaissance, with a key role for market towns and larger villages and development on an appropriate local scale to address rural affordable housing needs.

The spatial strategy for Warwickshire translates into the housing and employment land figures shown in Table 1. It is important that adequate infrastructure is provided to ensure that growth is sustainable. The LTP will be key in ensuring that infrastructure is developed.

**Table 1: Development in Coventry, Solihull and Warwickshire, 2006-2026**

Authority	Housing provision	Employment land provision (ha)	Notes
Coventry	33,500	246	Housing: The RSS Panel Report suggests that 3,500 dwellings be located in Nuneaton and Bedworth Borough adjacent to the City boundary near Keresley and 3,500 in Warwick District adjacent to the City Boundary in vicinity of Gibbet Hill/Finham.
Solihull	10,500	45	
North Warwickshire	3,000	93	Employment: Includes 60ha of land for the expansion of Regional Logistic Sites at Birch Coppice and Hams Hall.
Nuneaton and Bedworth	11,000	96	
Rugby	11,000	108	Housing: 9,800 of this allocation is to be found within or adjacent to the urban area of Rugby.
Warwick	11,000	90	Employment: Includes a 50% share of the expansion of Warwick University.
Stratford-on-Avon	7,500	51	Housing: No housing provision is required in the District to meet the needs of Redditch.
Warwickshire	43,500	438	
<b>Total</b>	<b>87,500</b>	<b>729</b>	

### 4.2.3 Sustainable Community Strategy and Local Area Agreement

The Sustainable Community Strategy (*A Sustainable Community Strategy for Warwickshire August 2009 - March 2026*) has three themes, each of which has three outcomes. The themes and outcomes are shown below.

Theme - Places:

Outcome 1: Our environment is clean, green and sustainable;

Outcome 2: Our housing is appropriate and affordable; and

Outcome 3: Our places are connected through transport, technology and services.

Theme – Prosperity:

Outcome 1: Our economy is innovative, competitive and entrepreneurial;

Outcome 2: Our workforce is diverse, trained and highly skilled; and

Outcome 3: Our economic well being is continuously improving

Theme – People:

Outcome 1: We belong to safe and strong communities where people get on together;

Outcome 2: We all live healthy, active and independent lives; and

Outcome 3: We all have the opportunity to enjoy and achieve.

The Local Area Agreement (LAA) is the key delivery plan for the Sustainable Community Strategy. It sets out the Government's and partners' priorities for Warwickshire and what will be tackled first. Success will be gauged by measuring progress against indicators. Relevant indicators include:

- NI 161 Average earnings of employees in the area;
- NI197: Improved local biodiversity – improve active management of local sites;
- NI 1 % of people who believe people from different backgrounds get on well together in their local area;
- N1 175 Access to services and facilities by public transport, walking and cycling (in communities defined as from towns to hamlets). 100% of the population should have basic access to services by 2010;
- NI15: Most serious violent crime rate;
- NI 47 People killed or seriously injured in road traffic accidents;
- NI 56 Obesity in primary school age children in Year 6; and
- Local Indicator 8: Increase 5 a week physical activity.

The LTP can help deliver a number of these outcomes and targets. Where appropriate the contribution of transport to these outcomes and indicators have been built into the SEA framework.

### 4.3 Baseline data and issues

The SEA Regulations require an examination of the current state of the environment and the likely evolution of the environment without the implementation of the plan (the “without the plan scenario”)<sup>10</sup>. This has been done through a desk-based study with the full results reported in the individual Topic Papers in Appendix 1. It is important that the SEA is focused on how the LTP can influence environmental and sustainability conditions. For this reason each Topic Paper clearly outlines how transport can affect the particular issue. This has then guided the baseline data that has been collected and has ensured that the most appropriate SEA framework is designed. A summary of the main issues identified is shown in Table 2.

### 4.4 Definition of the SEA framework

The SEA Regulations do not specifically require the use of a framework of objectives in SEA, but they are a recognised way in which environmental effects can be described, analysed and compared. Each part of the SEA framework should be a statement of what is intended for the plan, specifying a desired outcome over a specified duration.

The SEA framework for the Warwickshire LTP SEA has been chosen after a review of the important issues and policies (including the RSS, National Transport Goals and Local Area Agreement) and has been chosen to reflect the influence that transport can have on meeting objectives and resolving issues. DfT Guidance on SEA<sup>11</sup> states that the performance of the plan against the SEA framework is normally measured by using indicators (to avoid confusion with monitoring indicators being developed as part of the monitoring strategy – these are being termed appraisal questions. Where measurable indicators and targets have been identified and are useful for the assessment these have also been clearly identified in the SEA framework). A number of appraisal questions have been chosen and these have been phrased in the form of questions which are specific to the potential effects of a LTP. Where targets exist for a particular issue this has been identified.

Links to the Local Area Agreement Indicators are highlighted where applicable to show where transport can help to meet wider Government objectives. The SEA framework is shown in Table 3.

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10 Please note that the without the plan scenario is discussed and reported in Section 5.

11 Strategic Environmental Assessment for Transport Plans and Programmes TAG Unit 2.11 “In draft” Guidance (DfT, April 2009)



**Table 2: Sustainability baseline issues****Economy**

Warwickshire benefits from a relatively strong and diverse economy and has seen strong employment growth over recent years. However, unemployment over the last year has doubled.

Almost half the residents of North Warwickshire work elsewhere. High levels of trips are made from North Warwickshire towards Tamworth, Sutton Coldfield, Birmingham, Nuneaton and Coventry. A large proportion of people from outside the County work in Warwickshire. The majority of people in the area commute to work by car.

Most people still travel to work by car but the majority of children travel to school using sustainable modes.

Traffic mileage in Warwickshire is increasing but at a slower rate than was targeted. Traffic speed data in the main towns (a proxy for congestion) do not show any clear pattern but do show that congestion in Warwick is more severe than in other areas.

Warwickshire experiences a lot of through movement of road based freight haulage and road freight does cause problems in some areas.

**Climate**

There is no data available on the amount of renewable energy used in the transport system in Warwickshire. The target is 10% of the total energy use in transport systems to be derived from renewable sources

The largest emitter of CO<sub>2</sub>, in regards to road transport, in Warwickshire is North Warwickshire, followed by Stratford upon Avon and Warwick, reflecting the road network and traffic density

The County is likely to experience a number of changes due to climate change such as warmer wetter winters, more stormy weather and hotter summers. This will have numerous effects on the transport system

**Equality**

Community severance caused by large volumes of traffic in some areas of the county

Access to services in Warwickshire is poor in many areas for people without a car

Travel by different age groups and social groups can be very different and provision needs to be tailored more effectively

Bus use and bus satisfaction have increased. The bus punctuality target is not quite on track.

**Safety, security and health**

The population is ageing and this needs to be considered in the provision of services and transport

Air quality across the County is considered to be largely good. Traffic is increasing in some of the AQMAs.

Numbers of people killed or seriously injured (KSI) and the numbers of children killed or seriously injured are both decreasing. The council is now on track to meet the original KSI 2010/11 target of 393 in 2008/09.

Obesity is a particular problem for Warwickshire where the County's population is appearing high on regional league tables for obesity levels. Numbers of children who are obese is lower than the national average but the figures are still a cause for concern.



**Table 2: Sustainability baseline issues**

10.7% of Warwickshire's adult population are physically active, compared to 10.8% in England.

### Quality of life and the environment

There is a scarcity of tranquil areas within Warwickshire. Least tranquil areas are in Warwick District and Nuneaton & Bedworth Borough. Only the south-western and south-eastern fringes of Stratford District, the southern part of Rugby Borough and the central area of North Warwickshire Borough have a large proportion of tranquil areas.

Warwickshire is a County rich in biodiversity from international, national and local sites. Many of these sites and habitats occur next to highways, cycle routes, green lanes or other transport corridors.

There is a substantial cultural heritage resource within Warwickshire, with a high proportion of Listed Buildings and Conservation Areas, particularly concentrated within Warwick and Stratford. 3 Conservation Areas in Warwickshire are at risk. The Conservation Area of Southam is at risk due to poor quality tarmac pavements and some 1980s brick paving. The fact that the town is bypassed by the road network means it has limited economic vitality. 19 listed buildings, 62 scheduled monuments and 4 registered parks and gardens are also at risk.

Warwickshire contains some protected landscapes, particularly in the south of the County. Transport can affect landscape in a number of ways and transport is having a detrimental affect on a number of countryside character areas.

Transport planning can contribute to green infrastructure networks by enhancing biodiversity interest on rights of way and promoting new rights of way that link areas of green infrastructure

Transport can have negative effects on the townscape and heritage of the settlements it passes through.

There was a gradual improvement in chemical water quality nationally and in Warwickshire between 2001 and 2006. In 2006 chemical water quality levels in North Warwickshire and Nuneaton & Bedworth were significantly below levels in the rest of the County. Biological water quality levels in Warwickshire were below the average level for England in 2006. All rivers within Warwickshire classified under the Water Framework Directive (WFD) assessment were determined to be "at risk" with regards to the WFD criteria.

Transport of minerals and waste by road can cause problems to local communities.

**Table 3: SEA framework**

<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA question. Will the LTP...</b>
<b>Economy</b>	
Help to improve reliability and connectivity of the transport system?	<ul style="list-style-type: none"> <li>• Include schemes that decrease journey times, congestion, improve journey time reliability and help to support Warwickshire's already strong economy?</li> </ul>
Support the delivery of the future spatial strategy?	<ul style="list-style-type: none"> <li>• Provide the necessary infrastructure to support the spatial strategy in a sustainable manner?</li> </ul>
Enhance resilience through good management and maintenance of the transport system?	<ul style="list-style-type: none"> <li>• Help to manage routes effectively in order to maintain journey times?</li> </ul>
Provide wider support to the economy through the movement of people and goods?	<ul style="list-style-type: none"> <li>• Provide / encourage the use of alternatives to road freight and provide routes for freight traffic that reduces impacts on communities and the environment?</li> <li>• Increase access to jobs, towns, tourist attractions, rural areas and the countryside by sustainable means?</li> </ul>
<b>Carbon emissions</b>	
Reduce carbon emissions	<ul style="list-style-type: none"> <li>• Cause a change in vehicle miles or a change in the nature of traffic (*) that would cause changes in fuel use and CO<sub>2</sub>. (Link to LAA indicator NI 186: per capita CO<sub>2</sub> emissions in the Local Authority area)</li> <li>• Increase the use of energy from renewable sources in the transport system (to reach a target of 10% of the total energy consumed)</li> </ul>
Ensure that the transport system can cope with the unavoidable effects of climate change	<ul style="list-style-type: none"> <li>• Reduce the unavoidable effects of climate change (link to LAA indicator NI 188: Adapting to climate change)</li> </ul>
<b>Equality</b>	
Improve accessibility to basic services for all groups in society?	<ul style="list-style-type: none"> <li>• Improve provision of public and community transport that makes key services (**) more accessible to all groups of people (***) (link to LAA indicator NI 75 Access to services and facilities by public transport, cycling and walking).</li> </ul>
Help to improve the quality of urban and rural centres and reduce severance?	<ul style="list-style-type: none"> <li>• Reduce traffic levels, severance, congestion or the nature of traffic (*) in residential areas / town and village centres?</li> <li>• Cause changes that reduce the impact of the transport system on townscape or introduce features that enhance the character of towns?</li> </ul>
<b>Safety, security and health</b>	
Reduce the risk of death or injury on the transport system?	<ul style="list-style-type: none"> <li>• Lead to a decrease in traffic accidents /accident severity and help to meet KSI targets (link to LAA indicator NI 47 on road accidents)?</li> </ul>
Make healthier modes of travel	<ul style="list-style-type: none"> <li>• Increase walking and cycling to help increase the numbers</li> </ul>

**Table 3: SEA framework**

<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA question. Will the LTP...</b>
more attractive?	of people regularly participating in physical activity (link to LAA local indicator 8 on increasing physical activity and NI156 on childhood obesity)?
Reduce the impact of the transport system on air quality?	<ul style="list-style-type: none"> <li>• Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic (*) past sensitive receptors (including AQMAs)?</li> </ul>
Improve the security of the transport system?	<ul style="list-style-type: none"> <li>• Make transport systems / interchanges more secure?</li> </ul> <p>(It will be important for this objective to consider equality issues (the DfT recommends analysing effects related to race, gender, disability, age, religion and sexual orientation if possible)).</p>
<b>Quality of life and the environment</b>	
Reduce the impact of the transport system on noise?	<ul style="list-style-type: none"> <li>• Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic (*) past sensitive receptors or on sensitive /tranquil routes that would help to achieve WHO noise guidelines?</li> </ul>
Protect and enhance townscape, landscape quality and character	<ul style="list-style-type: none"> <li>• Cause changes in traffic flows in areas that are valued for their landscape / townscape character?</li> </ul>
Protect and enhance biodiversity and geodiversity at all levels	<ul style="list-style-type: none"> <li>• Cause direct loss of geodiversity or habitat fragmentation / loss especially that would risk achievement of Warwickshire BAP priority targets?</li> <li>• Cause a change in traffic flows or nature of traffic (*) that will affect sensitive habitats or focal species?</li> <li>• Result in habitat creation and contribute to the achievement of the Warwickshire BAP targets?</li> </ul>
Protect and enhance buildings, sites, areas and features of historic, archaeological and architectural interest	<ul style="list-style-type: none"> <li>• Cause direct impacts on sites or monuments through the provision of new infrastructure?</li> <li>• Cause a change in traffic flows or the nature of traffic (*) that affects townscape, sites and monuments valued for their cultural heritage or changes the number of sites at risk?</li> </ul>
Minimise the impact of the transport system on water resources, soil and mineral resources	<ul style="list-style-type: none"> <li>• Cause an improvement in water quality that could help to meet the WFD target of achievement of good ecological status of water bodies by 2015?</li> <li>• Cause changes to maintenance regimes that may decrease the need for water or decrease the potential for flooding?</li> <li>• Reduce the demand for aggregate?</li> <li>• Help to protect loss or pollution of soils which support valued habitats or are already experiencing erosion?</li> </ul>

\* Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

\*\* Key services include schools and learning, open space and recreation, jobs, leisure facilities, areas of cultural heritage and health facilities

\*\*\* According to the DfT this should include groups defined by race, gender, disability, age, religion and sexual orientation

## 5 Assessing the Effects of the LTP3

### 5.1 Introduction

As recommended in DfT guidance, assessing the effects of the plan and the plan options has involved examining each strategy/measure in turn, including:

- Identifying the effects of the plan. This involves identifying changes to conditions in the future baseline scenario which are predicted to arise from the strategy/measure; and
- Assessing the significance of these effects. This involves describing these changes in terms of the nature and the magnitude of the impact and the sensitivity of the receiving environment. This information is then used to determine whether impacts are significant.

### 5.2 Identifying the effects of the plan

Many of the techniques available to provide a quantitative assessment for a transport project, for example the amount of carbon dioxide expected to be generated, are not useful to the team assessing a LTP. This is because SEA is used to assess relatively broad strategies rather than site specific proposals. Because of this expert judgment is the main way that the effects of a LTP are identified as part of SEA. This has been supported by documented evidence where possible. Uncertainty will be minimised through clearly documenting the assumptions made and the evidence used in undertaking the assessment.

The SEA Regulations require an assessment of cumulative effects. These have been addressed in two ways as part of the assessment. The effects of the plan as a whole are reported through the summaries of the assessment for each SEA topic in Appendix 4. The SEA has also considered what the effects of the plan are in combination with the effects of other developments, plans and programmes. A separate cumulative assessment has not been undertaken but the important cumulative effects have been drawn out as the elements of the plan are assessed. This has considered mainly the effects of likely future development in each area and the effects of transport plans and strategies. This integrated approach to the cumulative assessment has been taken because planning for development and planning for transport services to support development are so integrated.

### 5.3 Assessing the significance of the effects

Once the effects are identified, it is important to discuss which of the effects are likely to be minor and which significant. The SEA Regulations specify the criteria that should be taken into account when determining likely significant effects. These criteria, which principally relate to the nature of the effects arising from the plan and the value and vulnerability of the receptors, are as follows:

- How valuable and vulnerable is the receptor that is being impacted?
- How probable, frequent, long lasting and reversible are the effects?
- What is the magnitude and spatial scale of the effect?
- Are the effects positive or negative?

The assessment of significance should involve the assessor considering the above criteria for each potential impact along with a consideration of how the plan will help to achieve (or not) the SEA objectives.

In the case of the Warwickshire LTP SEA, it has been difficult to assign significance to the effects because of the lack of detail provided in the LTP. The LTP is now split into a long term strategy document and an implementation plan. The long term strategy document for Warwickshire is mainly policy based with little guidance given in most cases to the likely location and timescale of the measures indicated (as may be expected in a long term policy based document). Even in the area strategies where broad locations for measures are sometimes given, the LTP is uncertain about when (or even if) these measures will be taken forward. This uncertainty is as a result of the lack of certainty over funding for the delivery of future transport services and schemes which is outside of the control of Warwickshire County Council.

The implementation plan is also a relatively strategic document and apart from naming three major schemes does not outline any detail regarding the location of measures. In fact it states “Given the unpredictability about resources it is not sensible therefore to establish detailed programmes of work in this implementation plan”.

Because of these uncertainties in the plan itself it is impossible to establish certainty within the SEA. However, the SEA team feel that marking every impact as uncertain is not helpful. Therefore, we have adopted the following approach to significance (please see Table 4).






<b>Table 4: SEA significance scores</b>		
<b>Score</b>	<b>Description</b>	<b>Symbol</b>
Significant positive impact	The plan addresses all the elements that are required to protect the environment and address the sustainability issues in Warwickshire and would help to achieve all of the applicable SEA objectives (if implemented). The plan also sets out how, where and when these policies will be implemented and these will have a positive impact with relation to characteristics of the effect and the sensitivity of the receptors.	
Minor positive impact	The plan addresses all the elements that are required to protect the environment and address the sustainability issues in Warwickshire and would help to achieve all of the applicable SEA objectives (if implemented).	
Neutral	The plan does not have an effect on the achievement of the SEA objectives	
Minor negative impact	The plan conflicts with some of the SEA objectives	
Significant negative impact	The plan conflicts with some of the SEA objectives. The plan also sets out how, where and when these policies will be implemented and these will have a negative impact with relation to characteristics of the effect and the sensitivity of the receptors.	
Uncertain	It is unclear whether there is the potential for a negative or	?

Table 4: SEA significance scores		
Score	Description	Symbol
	positive effect on the SEA objective.	

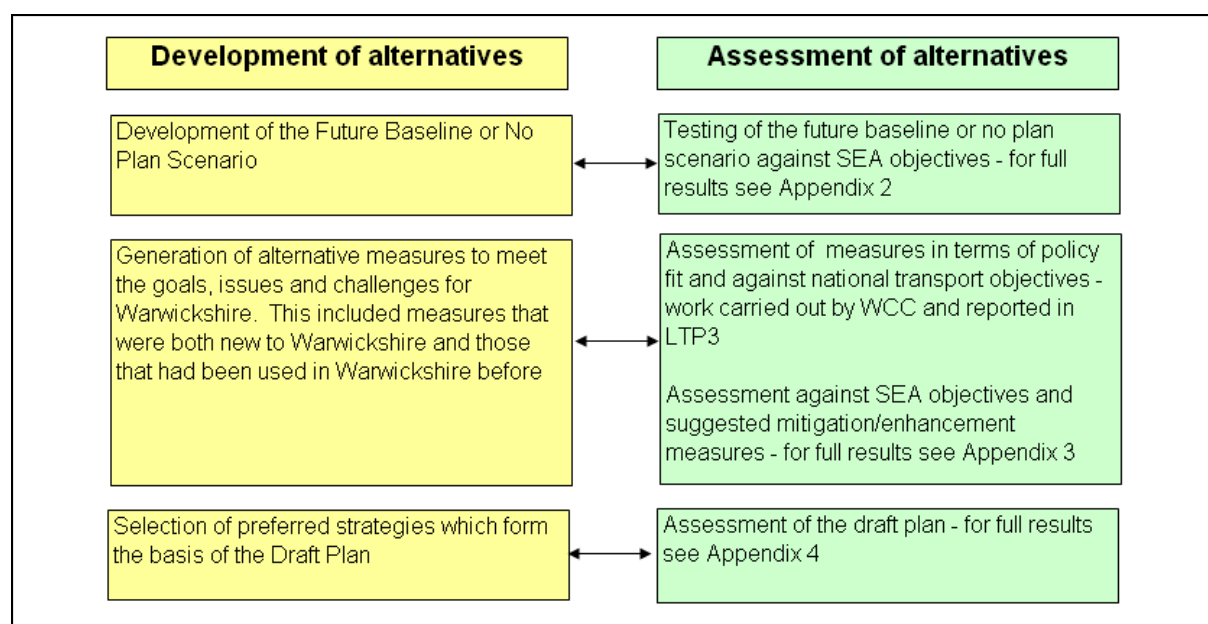
## 6 The Effect of the LTP Options

### 6.1 Introduction

The SEA Regulations state that the SEA should identify, describe and evaluate the likely significant effects of implementing the plan or programme; and reasonable alternatives<sup>12</sup>. The way that reasonable alternatives are defined in the LTP process is through identification and testing of plan options.

The approach taken for the development and assessment of the Warwickshire LTP3 plan options is outlined in Figure 2 below.

**Figure 2: Development and assessment of options**



### 6.2 Testing the future baseline or no plan scenario

#### 6.2.1 Methodology

A required step in SEA is testing the likely evolution of the baseline environment in the absence of the plan. This scenario is called the 'future baseline' or the 'no plan' scenario. All of the subsequent strategies of the LTP are then compared against this no plan scenario to enable plan makers to see the difference the plan would make compared to a situation where no plan was implemented.

The definition of the future baseline assumes that the LTP will not be implemented. However, there are a number of other transport and development programmes and projects which are likely to go ahead even in the absence of the LTP. For this reason it is important to be clear about what is included in the future baseline. The assumptions made regarding the future baseline in Warwickshire are shown in Figure 3.

<sup>12</sup> Please note that for the purposes of the assessment the options presented have been considered as options and as alternative options. Therefore this report uses the terms options and alternatives interchangeably.



**Figure 3: The Future Baseline****Continued operation of statutory functions of the Council:**

- Home to school travel;
- Concessionary fares;
- Disability Discrimination Act measures;
- Rural Bus Subsidy Grant;
- Social services responsibilities;
- Fulfil highway and bridge maintenance duties;
- Promotion of road safety and measures to improve road safety and prevent accidents;
- Road design to minimise accidents and environmental impacts (i.e. low noise surfacing);
- Under Transport Act 1985 - duty to formulate general policies for support of public transport services which are a requirement but are not being provided on commercial basis: subsidised services;
- Provision and enforcement of on-street parking;
- Duties under the Traffic Management Act 2004 including civil parking enforcement and network management duties; and
- Accident investigation.

**Other plans and programmes will deliver as planned:**

- Major developments and other plans will go ahead;
- Highways Agency schemes that are on the Government's Targeted Programme of Improvements will go ahead; and
- Plans of other transport agencies not reliant on the funds from the LTP will go ahead.

**Strategies within the current LTP that were not limited to the lifespan of the plan will not continue:**

Although most of the strategies within the LTP2 are not planned to be time limited, in reality they are because many of them rely on future funding from the LTP3 allocation. Therefore, it has been assumed that no further funding will be forthcoming from the LTP3.

## 6.2.2 Results

The future baseline has been assessed against the SEA objectives and these results against each of the SEA topics are shown in Appendix 2. The results are summarised below:

The future baseline will have negative effects on many of the SEA objectives as road traffic and congestion increases and development continues and intensifies in the towns especially (but in the absence of the necessary supporting transport infrastructure provided through the LTP). In the absence of the plan there will be no measures to encourage alternatives to road freight and no encouragement to freight users to use advisory routes, thus increasing the impact of freight on communities and the environment.

CO<sub>2</sub> levels and air pollution are likely to rise in the absence of measures brought forward as part of the LTP as there will be little support for sustainable modes and vehicle miles will increase. Climate change itself will bring inevitable changes in the future, such as warmer wetter winters, more stormy weather and hotter summers. This will have numerous effects on the transport system. However, as highway and bridge maintenance duties will continue in the absence of the plan it is assumed that some measures will be implemented to ameliorate the effects.

Access to services is poor in many areas of Warwickshire and without the measures taken forward as part of the LTP accessibility levels will decline as services are withdrawn. Levels are also likely to decline with the withdrawal of the funding for the transport schemes taken forward as part of the Warwickshire Rural Access to Services Programme (WRASP). Congestion will have effects on bus punctuality and reliability and will further worsen people's experience of the transport system.

In terms of safety, the council is now on track to meet the original targets and severity of car accidents may decrease in the longer term due to improved vehicle design and increased safety awareness amongst the public. However, in the absence of the measures in the LTP vehicle miles will increase (increasing the risk of accidents) and the assumption needs to be that accident levels remain at a similar level at least in the short term.

Effects on the environment from the transport system are also likely to worsen in the future baseline. Increasing traffic levels and congestion is likely to impact negatively upon landscape, townscape and biodiversity.

## **6.3 Assessment of the alternative measures**

### **6.3.1 Methodology**

The results of this assessment have been considered in conjunction with an appraisal that Warwickshire County Council has undertaken on the impact of the measures on each of the five National Transport Goals. This assessment also included a consideration of deliverability and public acceptability of each measure. The details of this appraisal are reported in the Warwickshire LTP3. The analyses undertaken by the Council and ENVIRON has then been used to select a package of measures that form the Draft LTP3.

At this stage in the assessment there was no detail available as to the location of the measures and how they will be implemented. Because of this lack of detail a simple checklist approach has been taken to assessing the potential impacts of the alternative measures. The checklist indicates which SEA objectives are likely to be affected by each of the measures. A column has been included which explains the reasoning behind these judgements. Within this column we have also indicated some of the evidence that is available to help assess the effectiveness of such schemes. It has also been possible to make some recommendations at this stage on how measures might be taken forward to ensure their effectiveness. The assessment is shown in Appendix 3 and the results are summarised below.

## 6.3.2 Results

### Integration of planning and transport planning

It is unclear what is meant by integration of planning and transport. We have presumed this means that adequate infrastructure will be provided to support new development. It would be useful if the draft plan is clearer regarding how planning and transport planning will be integrated.

### Parking

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. The draft plan should be clear how effects on competition of centres will be avoided.

### Travel information

Personalised travel planning would perform well against SEA objectives. However, there are identified risks with relation to its implementation and deliverability due to the cost implications. Therefore there is uncertainty as to whether the positive effects of this measure would be realised.

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) are needed and the draft plan should set out different ways to reach different audiences.

### Work and school travel

School travel – no recommendations

Work travel - Research has shown 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. The draft plan should consider whether it can require changes in parking where workplace travel plans are recommended / required (although the main mechanisms to do this may be through the planning system). However, as with the parking recommendation above it will be important that other options are available to people if raising car parking charges or reducing spaces.

Work travel - 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. As businesses are unlikely to voluntarily undertake workplace travel plans, it is important that incentives or planning requirements are implemented, for example. The draft plan should refer to these mechanisms (even if they are outside the scope of the plan itself).

## **Walking and cycling**

If a substantial increase in walking and cycling is planned in Warwickshire this needs to be accompanied by a strong programme of measures to improve the safety of active travel, such as 20mph zones, safe cycling infrastructure and other highways safety measures. The draft plan should set out how this will be implemented.

## **Passenger transport**

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) yielded comparatively greater success. Therefore, it will be important to match up different activities for all modes that are being promoted. This highlights the importance of considering Smarter Choice Programmes in a holistic way, encompassing service improvements as well as marketing. Considering smart measures in isolation, independent from infrastructure or service improvements, would be unhelpful. Instead, infrastructure and service enhancement, marketing, information and publicity should all follow together from an assessment of a target market (such as pupil travel to school, or employee travel to work, or residents' travel to the town centre). The draft plan should approach measures in a holistic way wherever possible.

In terms of rapid transit / light rail this can be positive in the right circumstances and has proved to be well used in large city areas such as Birmingham. However, the systems are costly to build and careful thought is needed as to what areas of Warwickshire they are suitable for.

## **Road users**

High occupancy vehicle 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. The draft plan should consider carefully where such measures are implemented, especially as this is a new measure to Warwickshire.

## **Maintenance and minor works**

No recommendations.

## **Freight movement**

The impacts of freight routing strategies need to be carefully considered as they do intensify the impact on communities and the environment in some areas (i.e. those on the route network). The draft plan should include measures to reduce these unacceptable effects including traffic management measures for other users on the network and signage.

In terms of rail, 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. The priority of the draft plan should be how the impact of local road freight can be reduced.

## **Impact of traffic on centres**

No recommendations.

## **7 The Effect of the Draft LTP3**

### **7.1 Introduction**

This section reports on the effects identified as part of the assessment of the Draft LTP3. The assessment of the Draft LTP3 has been carried out on a topic by topic basis and the full assessment is reported in Appendix 4. The effects of the Draft LTP3 are summarised below. Incorporation of mitigation measures to directly prevent or reduce an effect is an iterative part of the SEA process. Where a strategy scenario is likely to have significant adverse effects, measures should be considered to prevent, reduce or offset these effects. Measures to enhance beneficial effects should also be considered where appropriate. Mitigation effects to both reduce negative and enhance positive effects have been included below.

### **7.2 Effects on economic growth**

#### **7.2.1 Summary of the effects of the plan**

None of the strategies are likely to have a significantly positive effect on the economy objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the economy SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help support the economy of Warwickshire. The strategies contained within the plan should help to improve sustainable access to employment (both employment sites within the county and to areas such as Birmingham), help to manage the negative effects of HGV traffic, help to manage traffic better in the town centres, support regeneration in the less affluent north of the county and support initiatives such as the World Class Stratford Initiative. However, some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites) and the fact that transport modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels. Although the long term strategy is broadly positive, there is some uncertainty over the level of funding available to provide supporting transport infrastructure in the short term.

#### **7.2.2 Mitigation and enhancement measures**

Mitigation measures identified to address potential negative or uncertain effects are as follows:

- As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable; and
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well

as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

Enhancement measures identified in order to improve the performance of the Strategies are as follows:

- Policy ASA1 of the Airport Accessibility Strategy could say ...and other stakeholders to improve sustainable surface access provision ...; and
- Policy ASA3 of the Airport Accessibility Strategy could be clearer about the level of passenger flights that will trigger a Surface Access Strategy for Coventry Airport.

## **7.3 Effects on carbon emissions**

### **7.3.1 Summary of the effects of the plan**

Some of the modal/topic strategies are likely to have minor negative effects. The Sustainable Freight Distribution Strategy and the Airport Accessibility Strategy will provide support for the re-introduction of air freight and passenger services at Coventry Airport and continuation of support of the same at Birmingham International Airport. Alone, these measures in the LTP will have a slight negative effect on emissions. However, in association with the expansion of Birmingham International Airport, the LTP will have a cumulative negative impact on carbon emissions. Other significant negative effects include the Highway Maintenance Strategy. The significant effect comes through an omission of a significant issue. Adaptation to the effects of climate change should be addressed in the Highway Maintenance Strategy and because of the importance of the issue this has been scored as significantly negative. The plan as a whole fails to address climate change adaptation and this is a significant omission. Significant negative effects are also identified with regard to the area strategies (apart from the North –South Corridor which has a positive effect). It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the various areas of the plan will lead to a change in climate emissions as transport modelling is not yet available. However, for climate emissions to decrease definable modal shift and reductions in vehicle miles would have to occur. The level of development in Warwickshire makes it unlikely that vehicle miles will decrease.

### **7.3.2 Mitigation and enhancement measures**

Mitigation measures identified to address potential negative or uncertain effects are as follows:

- The objectives of the plan should address adaptation to climate change;
- Consider adding an objective to the Area Strategies listed above related to reducing CO<sub>2</sub> emissions and adapting to climate change;
- With regards to the potential significant negative effects identified as a result of the Area Strategies, the fact that the spatial strategy and the transport interventions are likely to increase carbon emissions is a difficult issue to mitigate as development cannot be stopped yet there is reduced funding for transport interventions to enable modal switch. As noted below, work with District Councils should consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided;



- The Highway Maintenance Strategy does not discuss how the effects of climate change will require changes to maintenance regimes and this is a significant omission. Some of the changes that need to be addressed are changes in vegetation management, surfacing (with the rise in hot temperatures) and the potential of flooding on the highway drainage network; and
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

One enhancement measure is identified in order to improve the performance of the Taxi and Private Hire Vehicle Strategy as follows: The policies in the Taxi and Private Hire Vehicle Strategy go as far as encouraging the on-going replacement of older taxis and private hire vehicles in order to meet DDA requirements. Perhaps this can be extended to encouraging the replacement to cleaner vehicle fleets.

## **7.4 Effects on equality of opportunity**

### **7.4.1 Summary of the effects of the plan**

None of the strategies are likely to have a significantly positive effect on the equality objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the equality SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve accessibility and improve the quality of communities. The strategies contained within the plan should help to support access to employment, healthcare and other services, make travel more affordable (through concessionary fare schemes, car sharing schemes etc) and through providing a greater range of travel options. The plan will also help to improve the quality of urban and rural centres through measures to reduce the impact of freight traffic, parking policies and through reducing congestion and the impact of vehicular traffic in certain areas. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. None of the strategies will have a negative effect on the SEA Objectives.

### **7.4.2 Mitigation and enhancement measures**

No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Equality of Opportunity SEA Objectives. However, a mitigation measure is put forward in relation to an uncertain performance recorded with regards to the Implementation Plan (April 2011 – March 2014); as follows: The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its sustainability effects. One enhancement measure is put forward in order to improve the Area Strategies, as follows: Consider adding an objective on improving accessibility to the Nuneaton and Bedworth, Eastern Warwickshire and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies.



## **7.5 Effects on safety, security and health**

### **7.5.1 Summary of the effects of the plan**

None of the strategies are likely to have a significantly positive effect on the safety, security and health objectives but no negative impacts have been recorded either. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the safety, security and health SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve the safety and security of travel through tackling speeding, improving lighting, helping to maintain footways and the highways and helping to educate people about road safety. The strategy will also help to make healthier modes more attractive through improving walking and cycling routes and addressing security concerns at public transport interchanges. The strategies should also help to improve the air quality in the county, if modal switch is achieved. As with the other SEA Objectives, there is some uncertainty over the implementation of the schemes in the strategies. The Implementation Plan stresses that maintenance of the highway network is likely to be a priority (which will positive for safety), that a broadly balanced integrated transport programme will be maintained and the plan includes funding for casualty reduction, Safer Routes to Schools Programmes and cycling and walking. However, without certainty on funding and location of schemes, it is not possible to assess what the impact of the Implementation Plan will be on safety and health. However, the council does set out an annual programme of work and it would be useful if this programme were subject to assessment to determine its effects on all the SEA objectives.

### **7.5.2 Mitigation and enhancement measures**

No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Safety, Security and Health SEA Objectives. However, mitigation measures are put forward in relation to the uncertain performances recorded, as follows:

- The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its sustainability effects.

A number of enhancement measures are put forward in order to improve the strategies, as follows:

- The final objectives of the Northern Warwickshire, Eastern Warwickshire, Nuneaton and Bedworth and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies could be amended to also cover reducing the impacts of traffic on communities; and
- There are other areas of Northern Warwickshire (apart from Coleshill) that would benefit from improved walking and cycling routes and the strategy should outline what the approach in other areas is likely to be. Even if there are no resources at present, this should be made clear in the strategy.

## **7.6 Effects on quality of life and natural environment**

### **7.6.1 Summary of the effects of the plan**

None of the strategies are likely to have a significantly positive effect on the environment and quality of life objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the environment and quality of life SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help reduce the impact of transport on the environment. The strategies contained within the plan should help to provide alternative modes of transport and manage traffic to reduce the impact on communities and townscape and reduce congestion and traffic. All of these measures should help to reduce the impact of traffic on air, noise and biodiversity, improve landscapes and townscapes and reduce pollution from traffic. There are however, a small number of potential negative effects recorded within the assessment and mitigation measures are proposed to address these as appropriate. For example, the objectives of the LTP do not address the built environment, and the Sustainable Distribution Strategy, Highway Maintenance Strategy, Road Safety Strategy, Bridge Maintenance Strategy and Rights of Way and Recreational Highway Strategy would result in construction so could involve the use of natural resources.

The effect of the area strategies has been scored as uncertain. The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategies difficult to assess. Although the area strategies may make alternative modes more attractive and reduce the impact of traffic on townscapes it is not possible to definitely state the locations of any likely traffic reduction due to uncertainty regarding where and how measures are likely to be implemented. This uncertainty also means that direct land take impacts are not possible to predict. An exception to this is Phase 1 of the NUCKLE major scheme which is further advanced than the other parts of the plan. The NUCKLE scheme will be broadly positive in helping to achieve modal shift. However, there is a risk of some impacts on flooding and biodiversity – mitigation measures will need to be developed as part of the environmental assessment for the scheme.

### **7.6.2 Mitigation and enhancement measures**

Mitigation measures are identified in order to address potential negative effects and areas of uncertainty identified in the assessment, as follows:

- The plan objective on the environment should be changed to address the impact on the built environment;
- There is a risk that as the strategies and measures are developed negative impacts will occur. This is particularly a risk with the major schemes and it is suggested that major

schemes (and all schemes if deemed a risk) should be subject to an assessment of their sustainability;

- As with the other strategies, the objectives of the Southern and Western Warwickshire Area Strategy should address the environmental impact of transport (rather than just air quality);
- The LTP needs to make a commitment to reducing the impact of the resources used to build new transport infrastructure. Policy HM6 of the Highway Maintenance Strategy states that the County Council will aim to undertake all of its highway maintenance work within the context of the principles of sustainability and environmental protection. A similar undertaking needs to be made for the construction of new infrastructure;
- Before highway widening is considered its impact on the environment should be considered;
- The location of the freight consolidation centres needs to be carefully selected so they are not located in (or increase traffic in) areas that are sensitive;
- Policy F6 on the Sustainable Freight Distribution Strategy could be reworded more positively in terms of avoiding environmental effects;
- It should be made clear that the maintenance of historic bridges and/or bridges of cultural value will be undertaken in consultation with English Heritage and local authority conservation officers in order to ensure that decisions made regarding bridge maintenance optimise the protection of the county's historic assets;
- The policy wording should include the minimisation of environment effects of bridge maintenance works;
- Policy RW1 of the Rights of Way and Recreational Highway Strategy could be strengthened by adding text which makes it clear that recycled and low environmental impact surfacing materials will be favoured for the surfacing of foot and cycle paths, where practicable. Policy RW1 of the Rights of Way and Recreational Highway Strategy should also make reference to protecting water resources; and
- In order to offset potential negative effects on archaeological and ecological features, the protection of such features should be given high priority in Policy RW5b of the Rights of Way and Recreational Highway Strategy.
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

Enhancement measures are also put forward, in order to improve the strategies, as follows:

- More information should be provided on how the environmental impact of traffic on environmentally sensitive areas is to be achieved within the Network Management Duty Strategy.

## 8 Monitoring Measures

### 8.1 Introduction

The SEA Regulations require authorities to:

*...monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action (Section 17 (1)).*

Monitoring measures proposed in this section refer to the significant and uncertain effects that have been predicted to result from measures included in the Draft LTP3. However the monitoring programme itself will not commence until the Final LTP is adopted in March 2011. By then the monitoring requirements may have changed, either as a result of changes to the plan or due to other external influences on the baseline situation. European Commission guidance<sup>13</sup> provides advice on monitoring which suggests a phased approach to the design of a monitoring programme. This phased process will be used for LTP3, further details of which will be included in the SEA statement once the impacts of the Final LTP3 are known.

In addition to the very specific actions included below, the LTP already includes a monitoring programme and the latest version of this is outlined in the Implementation Plan.

The monitoring programme is outlined in Table 5.

<b>Table NTS4: LTP3 monitoring programme</b>	
<b>Significant / uncertain effect identified<sup>14</sup></b>	<b>Monitoring required</b>
Uncertain effect: The effect of the Implementation Plan on the economy, the environment and climate emissions. The Implementation Plan concludes that it is not likely that significant infrastructure investment to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.	Each Local Development Framework will have its own monitoring processes through which the effects of development will be monitored. It is expected that this will be an effective way to monitor this significant effect. It will be important that the LTP team satisfies itself that each LDF has set in place adequate monitoring systems to ensure that there are no unacceptable transport impacts from development.
Significant effect: The effect of the area strategies and Implementation Plan on carbon emissions. If development is to take place without adequate transport infrastructure it likely that climate emissions will increase and this will have a negative impact on climate emissions.	
Uncertain effect: Some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location	

13 European Commission (2003): Implementation of Directive 2001/42 on the assessment of the Effects of Certain Plans and Programmes on the Environment.

14 The effects have been grouped into similar effects for the purpose of the monitoring programme.

**Table NTS4: LTP3 monitoring programme**

<b>Significant / uncertain effect identified<sup>14</sup></b>	<b>Monitoring required</b>
of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites) and the fact that transport modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels.	
Significant effect: The cumulative effect of the LTP and the expansion of Birmingham International Airport on carbon emissions.	Birmingham International Airport reports on the carbon emissions from its operations in its quarterly Environment Monitoring Report and annual Community and Environment Report. This data will need to be collated on an annual basis and used to inform the LTP monitoring
Significant effect: The effect of the Highway Maintenance Strategy on the ability of the transport system to adapt to the effects of climate change (the strategy omits to plan for the maintenance issues that climate change might have on the transport system)	The action that is needed to change this effect from a negative into a positive is to include information on climate change adaptation in the LTP. If this is done no monitoring will be needed. If this is not incorporated then necessary monitoring will be set out in the final LTP3.

**Table 5: LTP3 monitoring programme**

<b>Significant / uncertain effect identified<sup>15</sup></b>	<b>Monitoring required</b>
Uncertain effect: The effect of the Implementation Plan on the economy, the environment and climate emissions. The Implementation Plan concludes that it is not likely that significant infrastructure investment to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.	Each Local Development Framework will have its own monitoring processes through which the effects of development will be monitored. It is expected that this will be an effective way to monitor this significant effect. It will be important that the LTP team satisfies itself that each LDF has set in place adequate monitoring systems to ensure that there are no unacceptable transport impacts from development.
Significant effect: The effect of the area strategies and Implementation Plan on carbon emissions. If development is to take place without adequate transport infrastructure it likely that climate emissions will increase and this will have a negative impact on climate emissions.	
Uncertain effect: Some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites) and the fact that transport	

<sup>15</sup> The effects have been grouped into similar effects for the purpose of the monitoring programme.

**Table NTS4: LTP3 monitoring programme**

Significant / uncertain effect identified <sup>14</sup>	Monitoring required
modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels.	
Significant effect: The cumulative effect of the LTP and the expansion of Birmingham International Airport on carbon emissions.	Birmingham International Airport reports on the carbon emissions from its operations in its quarterly Environment Monitoring Report and annual Community and Environment Report. This data will need to be collated on an annual basis and used to inform the LTP monitoring
Significant effect: The effect of the Highway Maintenance Strategy on the ability of the transport system to adapt to the effects of climate change (the strategy omits to plan for the maintenance issues that climate change might have on the transport system)	The action that is needed to change this effect from a negative into a positive is to include information on climate change adaptation in the LTP. If this is done no monitoring will be needed. If this is not incorporated then necessary monitoring will be set out in the final LTP3.

## 9 Next Steps

### 9.1 Consultation on the Environmental Report

The primary role of the Environmental Report is to facilitate consultation with interested parties, including the public. The Environmental Report is published alongside the Draft LTP3 with the aim of providing stakeholders with sufficient information on the likely significant environmental effects of the plan. This is done at the Draft LTP3 stage to allow time to influence the development of the LTP3 prior to its completion.

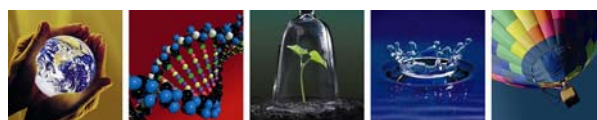
Comments received on the content of the Environmental Report will be taken into consideration in the next stages of the SEA (see below).

### 9.2 Adoption of the LTP3

If significant changes are made between the consultation on the Draft LTP3 and the Final LTP3, these changes will be assessed and information made available to the public.

Once the LTP has been adopted it is necessary to produce a statement which reports how the LTP team have taken the findings of the SEA and consultation results into account (a SEA Statement). This SEA Statement should be made available to stakeholders. It must cover:

- How environmental considerations have been integrated into the LTP, for example any changes to or deletions from the LTP in response to the information in the Environmental Report;
- How the Environmental Report has been taken into account;
- How the opinions and consultation responses have been taken into account. The summary should be sufficiently detailed to show how the LTP was changed to take account of issues raised, or why no changes were made;
- The reasons for choosing the LTP as adopted in the light of other reasonable alternatives dealt with; and
- The measures that are to be taken to monitor the significant environmental effects of implementation of the LTP. The Environmental Report will already have documented proposed measures concerning monitoring; these can now be confirmed or modified in the light of consultation responses.



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 1 (Topic Paper 1  
Economic Growth)

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# 1 Introduction

This is Topic Paper 1 of the SEA Environmental Report of the Warwickshire Local Transport Plan 3. The topic paper addresses the potential issues of relevance to the Warwickshire Local Transport Plan 3 which are related to the Government's National Transport Goal of:

## ***Supporting economic growth***

There are four other Topic Papers that address:

- Topic Paper 2: Reducing carbon emissions;
- Topic Paper 3: Promoting equality of opportunity;
- Topic Paper 4: Contributing to safety, security and health; and
- Topic Paper 5: Improving quality of life and the natural environment.

This paper sets out:

- The policy context that the LTP will need to address;
- The influence that the LTP can have on the issue highlighted;
- Review of available baseline data;
- Data gaps and sources of data;
- Sustainability issues identified and future trends; and
- Suggested SEA objectives.

## 2 Policy Context

Many plans and policies set the context for transport, some directly and some indirectly. These include the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. It is vital that the LTP directly helps to deliver the goals of these other strategies. As well as these key documents international and national legislation and the plans and policies of other organisations (or other departments within the council) can have an influence on how the LTP should develop.

A summary has been included below of the key documents that the LTP should help to deliver: the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. Table TP1.1 includes reviews of the other important policy documents that will influence the delivery of the LTP.

### 2.1 National Transport Goals

Developing a Sustainable Transport System (DfT, 2008) outlines five national transport goals:

- **Supporting economic growth;**
- Tackling climate change;

- Promoting equality of opportunity;
- Contribute to safety, security and health; and
- Improve quality of life.

The supporting economic growth goal in full reads:

***To support national economic competitiveness and growth, by delivering reliable and efficient transport networks.***

A number of key challenges are presented in the document. Relevant ones include:

- Improving the performance of existing networks, by targeting additional capacity where this is needed to meet growing demand; and
- Co-ordinate transport plans with growth plans to avoid the risk of more congestion and greater unreliability.

## **2.2 Regional Spatial Strategy (RSS)**

The latest version of the RSS is the *Draft West Midlands Regional Spatial Strategy Phase Two Revision - Draft Submission* (December 2007). An Examination in Public was held between 28th April – 24th June 2009 and the report of the Examination in Public Panel was published in September 2009 (*West Midlands Regional Spatial Strategy Phase Two Revision. Report of the Panel*, September 2009). The approach of the RSS to economic issues (as represented by the Draft RSS and the Panel Report) is set out below (please note that where policies are included below these have been summarised).

**Policy PA1 – Prosperity for All:** The Major Urban Areas (MUAs) will be the primary focus for additional investment in sustainable economic growth. Sustainable economic growth will be promoted in the rest of the region including the Settlements of Significant Development (SSDs). In non land use plans agencies should maintain and improve transport accessibility within and through the region. Where growth opportunities are provided outside the MUAs emphasis should be given to locations that promote economic linkages with MUAs in areas accessible by sustainable forms of transport.

**Policy PA2 – Urban Regeneration Zones:** Agencies should focus investment in the following regeneration zones – Coventry and Nuneaton.

**Policy PA3 – High Technology Corridors:** Three corridors are identified within which clusters of high technology developments will be promoted – one of these corridors is Coventry, Solihull and Warwickshire.

**Policy PA9 – Regional Logistics Sites:** Priority should be given to utilising the full potential of Hams Hall, Birch Coppice and Hortonwood.

**Policy PA11 – The Network of Town and City Centres:** The network of town and city centres will be the preferred location for large retail developments, office development and uses which attract a large number of people. The tiers are as follows:

- Regional centre – Birmingham;

- Major sub-regional centres - Coventry, Stoke-on-Trent, Wolverhampton, Brierley Hill; and
- Other strategic sub-regional centres - Telford, Walsall, Solihull, Worcester, Shrewsbury, West Bromwich, Burton, Hereford, Leamington Spa, Sutton Coldfield, Redditch, Stafford, Cannock, Kidderminster, Lichfield, Newcastle-under-Lyme, Nuneaton, Rugby, Stratford-upon-Avon, Tamworth.

Please note that the spatial strategy of the RSS is described in Section 4.5 of this topic paper.

## **2.3 Sustainable Community Strategy and Local Area Agreement**

The Sustainable Community Strategy (*A Sustainable Community Strategy for Warwickshire August 2009 - March 2026*) has three themes (each of which has three outcomes). Relevant to this topic paper is the theme of prosperity. This theme has the following outcomes:

- Our economy is innovative, competitive and entrepreneurial;
- Our workforce is diverse, trained and highly skilled; and
- Our economic well being is continuously improving

There are a number of objectives and actions relevant to this theme including:

### Tackling Inequality

- Continue to build a more resilient economy that can better withstand the effects of any future economic downturn; and
- Improve access to learning particularly amongst disadvantaged areas and groups and ensure that physical or geographic access and isolation is not a barrier for either employers looking to expand or invest or for residents in taking advantage of employment opportunities.

### Access

- Ensure provision of learning opportunities is accessible to all geographical areas and sections of the community; and
- Ensure that barriers to employment such as transport, lack of basic skills, childcare needs etc are addressed. Ensure that appropriate training, work experience, and job opportunities within both the public, private and voluntary and community sector are made more accessible for priority customer groups – e.g. via Local Employment Partnerships with employers.

### Sustainability

- Support and help develop local businesses, especially in growing and high value added sectors of the economy. Ensure there is a robust and diverse business base with a healthy proportion of jobs that are skilled and well paid. Promote and support the shift towards a low carbon economy; and

- Improve the coordination, alignment and integration of employment and skills provision across the County and develop a single 'Warwickshire Offer' for individuals and employers.

The Local Area Agreement (LAA) is the key delivery plan for the Sustainable Community Strategy. It sets out the Government's and partners' priorities for Warwickshire and what will be tackled first. Success will be gauged by measuring success against indicators. Relevant indicators include:

- NI 161 Average earnings of employees in the area; and
- NI171: VAT registration rate.

<b>Table TP1.1: Economy: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
<b>International documents</b>	
None	NA
<b>National documents</b>	
<p>Local Democracy, Economic Development and Construction Bill (2009)</p> <p>PPG21: Tourism (Department of the Environment, 1992)</p> <p>PPS6: Planning for Town Centres (Department for Communities and Local Government 2005)</p> <p>PPS7: Sustainable Development in Rural Areas (Department for Communities and Local Government 2004)</p> <p>PPS4: Planning for Prosperous Economics – CONSULTATION PAPER (Department for Communities and Local Government, 2009)</p>	<p>Local Democracy, Economic Development and Construction Bill: The bill outlines a new duty for local authorities to assess economic conditions; a joint duty on regional development agencies and local authorities to produce a single regional strategy; and powers for councils to co-operate in promoting economic development</p> <p>PPG21: This PPG focuses on broad principles and general criteria that are relevant to most types of tourist development</p> <p>PPS6: The Government's key objective for town centres is to promote their vitality and viability by planning for the growth and development of existing centres by focusing development in such centres and encouraging a wide range of services in a good environment, accessible to all</p> <p>PPS7: The Government's objectives for rural areas are to raise the quality of life and the environment in rural areas through the promotion of thriving, inclusive and sustainable rural communities; and to promote more sustainable patterns of development focusing most development in, or next to, existing towns and villages</p> <p>DRAFT PPS4: The Government's objectives are to achieve sustainable economic growth; deliver more sustainable patterns of development; improve accessibility, ensure that existing or new development is, or will be, accessible and well-served by a choice of means of transport; ensure that communities have access to a range of main town centre uses, and ensure that deficiencies in provision in areas with poor access to facilities are remedied</p>
<b>Regional documents</b>	
Connecting to Success: West Midlands Regional Economic Strategy (Advantage West Midlands, 2007)	Regional Economic Strategy: Sets out a number of strategic objectives including capitalising on sustainability and low-carbon opportunities; improving infrastructure; improving transport and communications to increase accessibility, efficiency and competitiveness; developing sustainable communities; and regenerating the most deprived communities. Some of the indicators the strategy will monitor are: Average vehicle delay for the slowest 10% of journeys on the strategic road network

<b>Table TP1.1: Economy: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
	(mins per 10 vehicle miles); % of all trips made by public transport; % people usually working from home or travelling to work using sustainable means of transport; and total fuel consumption for road transport per head of population (kg per person).
<b>Local documents</b>	
Warwickshire Regeneration and Competitiveness Strategy 2006/2010 (Warwickshire County Council, 2006)	Warwickshire Regeneration and Competitiveness Strategy: The aim is to create a sustainable and vibrant local economy which promotes employment and prosperity for all. To do this the strategy must create an environment in which businesses are able to innovate to create and sustain jobs; residents are encouraged to learn, acquire skills and competencies to enhance their employability; and help is targeted to those experiencing deprivation and disadvantage.



### 3 The Influence of the LTP

It is important that the SEA is focused on how the LTP can influence environmental and sustainability conditions. In this way the most appropriate SEA objectives are selected and the most appropriate baseline data collected. The LTP can influence the economy in the following ways:

- **Improve reliability** through maintaining and managing the existing transport system to reduce congestion and delays and provision of transport improvements that support the economy through improving accessibility, journey times and reducing congestion;
- **Improve connectivity** through managing the transport system and provision of new routes and services;
- **Support the delivery of housing and growth** through the provision of infrastructure and services;
- **Enhance resilience** through good management and maintenance of the transport system; and
- **Provide wider support** to the economy through the movement of people and goods.

### 4 Baseline Data

#### 4.1 Introduction

Whilst the expansion of the national economy has been robust during recent years the strength of the UK economy was brought into question in 2008. It is likely that all regions in the UK will continue to experience greater volatility with fluctuations in confidence and a softening of the labour market. Since the LTP2 was published in 2006 UK GDP has decreased significantly. This change in economic fortunes makes trends (and therefore, the future baseline) especially difficult to predict.

#### 4.2 Warwickshire's Economy

The data for this section of the report is taken from the Warwickshire Sustainable Community Strategy. Warwickshire benefits from a relatively strong and diverse economy, with a growing presence in knowledge intensive sectors (such as ICT and gaming, creative industries, business services and environmental technologies) whilst retaining a strong core of manufacturing businesses. The County has seen strong employment growth over recent years, and has attracted significant inward investment. However, to remain competitive within a global economy, there must be a continuation of growth of innovative and creative businesses.

The County as a whole has a strong record of new business start-ups, with new business registrations of 70.4 per 10,000 population – significantly higher than regional and national averages (55.5 and 60.1 respectively). However, across the County there are significant variations, with Stratford-on-Avon and Warwick districts having significantly higher levels of new registrations, and Nuneaton & Bedworth in particular with significantly lower levels. Broader measures of entrepreneurial activity within the County which look at people's

attitudes and propensities towards enterprise also show a clear north/south split, suggesting lower levels of aspirations and business confidence in the north of the County.

Warwickshire's residents on the whole have high skill levels. The County has fewer than average people with low or no qualifications, and higher than average numbers of people with high level skills (i.e. degree level or above). However, this general picture masks significant variations across the County. Broadly the north of the County is characterised by lower levels of qualifications. In particular, Warwick District has the highest proportion of residents with a degree or equivalent qualification in the West Midlands, at 44.9% of the working age population.

Whilst Warwickshire on the whole has high levels of employment and below average unemployment rates, unemployment had doubled between summer 2008 and summer 2009, and is at its highest level for nearly fourteen years.

### **4.3 Warwickshire's Road and Rail Network**

This section of the report is taken from the Warwickshire LTP2. Warwickshire is located to the south and east of the West Midlands conurbation, having strong links with Coventry, Solihull and Birmingham. There are two important travel corridors within Warwickshire: North/South - linking Nuneaton, Bedworth, Coventry, Kenilworth, Warwick and Leamington Spa; and East/West, linking Rugby, Coventry, Birmingham International Airport/National Exhibition Centre and Birmingham.

The M1, M6, M40, M42, M45 and M69 motorways pass through the County, while key trunk routes include the A5, A14, A38, A45, A46, A435 and A446. There are important motorway and trunk road interchanges at Longbridge (M40/A46), Tollbar End (A45/A46) and M1 Junction 19 (M1/M6/A14). In addition, a comprehensive network of secondary routes serves local destinations. The A46 and A444 both act as key routes in the North-South Corridor and the A46 provides a strategic link between the East Midlands (M1/M69) and the South West (M5).

In terms of rail, Warwickshire has a mixture of inter-city, cross-country and local rail services that meet a variety of travel demands across the County. Access to the West Coast Main Line (WCML) is provided at Coventry, Rugby and Nuneaton, with inter-city services to Birmingham New Street, London Euston and the north west of England. Local stopping services between Birmingham and Northampton also serve Coventry and Rugby.

Services to London Marylebone and Birmingham Moor Street/Snow Hill are provided from Leamington Spa, Warwick, and Warwick Parkway. Direct services from Stratford-upon-Avon to London Paddington also call at Warwick and Leamington Spa.

As well as long distance services on the WCML, Nuneaton is served by services from Birmingham to East Midlands/East Anglia and local services from Coventry via Bedworth. Water Orton is served by a number of services between Nuneaton and Birmingham.

Coventry and Leamington Spa are served by high frequency cross-country services between the South Coast, the Midlands and the North of England. These link into a UK-wide network of services at Birmingham New Street.

Although outside Warwickshire, the Cotswold Line between Oxford, Worcester, Malvern and Hereford provides an important link for residents in the south of the County. The nearest railway stations to Warwickshire on this line are Pershore, Evesham, Honeybourne and Moreton-in-Marsh. Peak and off-peak services to and from London Paddington are provided on this line.

In addition to the above, there are local stopping services between Leamington Spa and Birmingham Snow Hill, between Leamington Spa and Stratford-upon-Avon, and between Stratford-upon-Avon and Birmingham Snow Hill. Some services to Birmingham Snow Hill extend to Stourbridge, Kidderminster and Worcester.

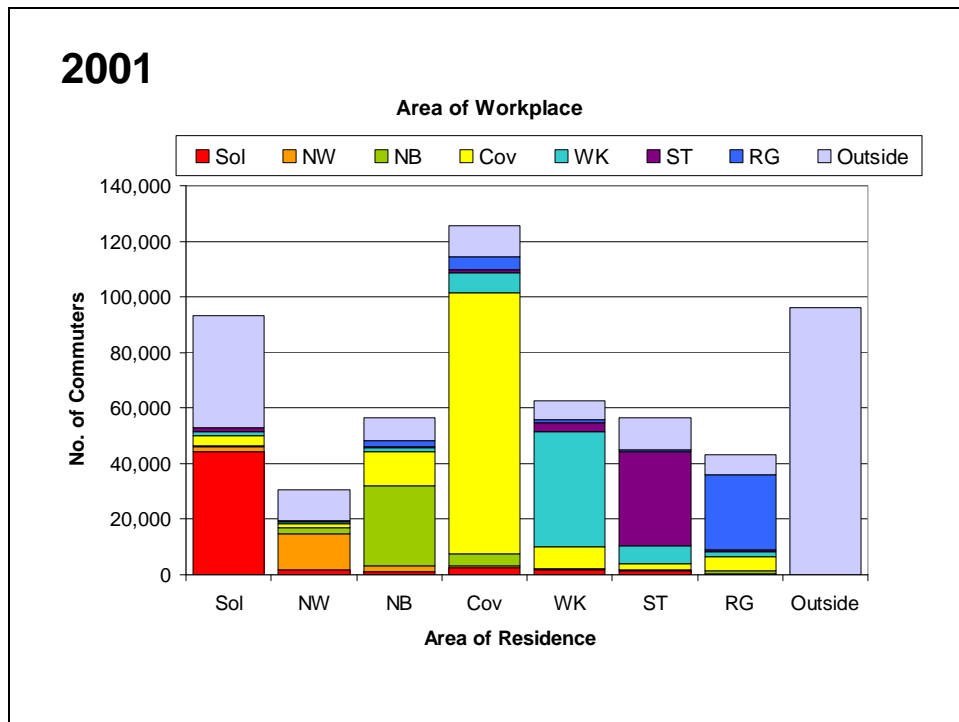
A new railway station at Coleshill opened in 2006/07, and is served by train services between Birmingham, Nuneaton and Leicester.

There are currently no through rail services in the North/South Corridor (including connection to Warwick and Stratford-upon-Avon), nor is there a rail station at Kenilworth.

(Please note that the bus network is discussed in the accessibility topic paper).

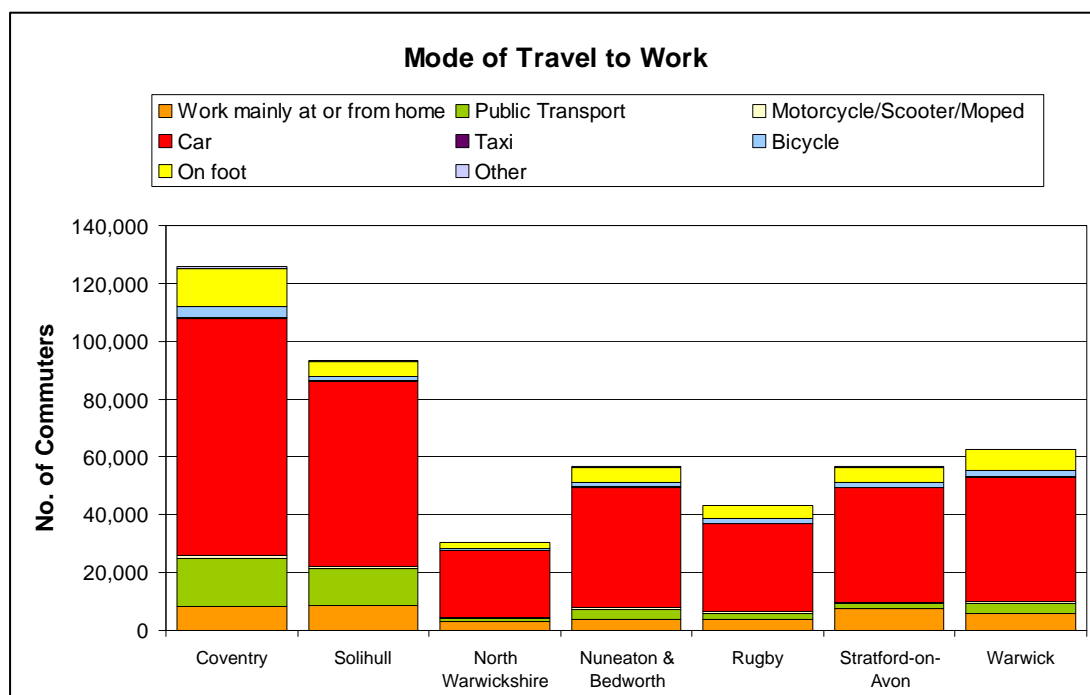
#### **4.4 Commuter Patterns**

A very obvious way that transport supports the economy is through enabling people to get to work. Figure TP1.1, shows the commuting patterns for Warwickshire and the surrounding areas. As can be seen from Figure TP1.1 the most self contained areas in the County are Warwick and Stratford-on-Avon. North Warwickshire is the least self contained with almost half of residents working elsewhere. High levels of trips are made from North Warwickshire towards Tamworth, Sutton Coldfield, Birmingham, Nuneaton and Coventry. This is due to the good access to Birmingham from North Warwickshire. The data also shows that a large proportion of people from outside the County work in Warwickshire.

**Figure TP1.1: Journey to work patterns**

(Source: Warwickshire Blueprint process, taken from census data)

Figure TP1.2 shows the mode of travel to work in the Warwickshire Districts, Solihull and Coventry. The graph shows that the majority of people in this sub area commute to work by car. The proportions of people using their car, walking and using public transport are approximately the same in all areas.

**Figure TP1.2: Mode of travel to work**

The LTP2 2008-2009 Final Draft Progress Report outlines the action that has been taken to reduce the reliance and dependency on the private car for journeys relating to school travel. During 2008/09, 48 School Travel Plans were developed and implemented. This brings the total number of Warwickshire schools with a Travel Plan in place to 228. The overall target is to ensure that each school in Warwickshire has a successful travel plan in place by 2010. The successful work with schools is demonstrated by the results of the 2008/09 school travel survey/school census. Results indicate that 65% of all school children travel to school using sustainable modes, up from 63% in 2007/08. The figure rises to 69% if car sharing is included as a sustainable travel mode.

#### 4.5 Future Spatial Strategy

The spatial planning strategy for Warwickshire is set through the RSS. The latest version of the RSS is the *Draft West Midlands Regional Spatial Strategy Phase Two Revision - Draft Submission* (December 2007). An Examination in Public was held between 28th April – 24th June 2009 and the report of the Examination in Public Panel was published in September 2009 (*West Midlands Regional Spatial Strategy Phase Two Revision. Report of the Panel*, September 2009).

The spatial strategy for the West Midlands as expressed through the RSS is fundamentally one of urban renaissance. For many years the development pattern in the region has been decentralisation from the Major Urban Areas (MUAs). The future spatial strategy can be summarised as follows:

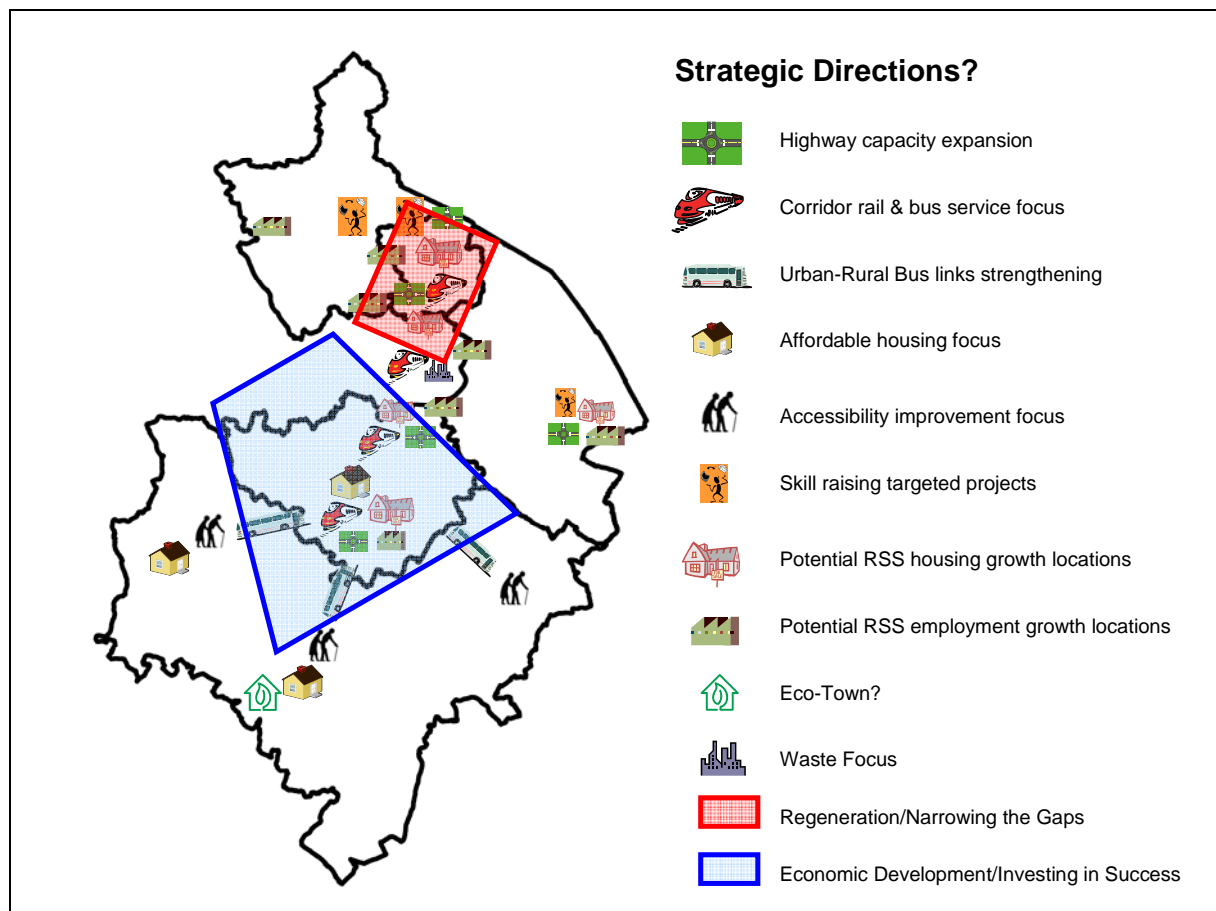
- Development of a strategic scale will be focussed on the four Major Urban Areas of Birmingham/ Solihull, The Black Country, Coventry and the North Staffordshire conurbation;
- In other parts of the region major new development will be focussed in and adjacent to towns which are most capable of balanced and sustainable growth to complement the role of the MUAs. The following nine areas have been designated for this purpose as Settlements of Significant Development (SSD): Burton upon Trent, Hereford, **Nuneaton / Bedworth, Rugby**, Shrewsbury, Stafford, Telford, **Warwick / Leamington** and Worcester;
- Beyond the MUAs and SSDs, development will be of a smaller scale, to meet local housing needs and sustain the local economy and services; and
- In the region's rural areas the strategy supports rural renaissance, with a key role for market towns and larger villages and development on an appropriate local scale to address rural affordable housing needs

The spatial strategy for Warwickshire translates into the housing and employment land figures shown in Table 1.2 (as recommended by the EiP Panel). It will be important that adequate transport and other infrastructure are provided to ensure that growth is sustainable.

**Table 1.2: Coventry, Solihull and Warwickshire housing and employment growth, 2006-2026**

<b>Authority</b>	<b>Housing provision</b>	<b>Employment land provision (ha)</b>	<b>Notes</b>
Coventry	33,500	246	Housing: The RSS Panel Report suggests that 3,500 dwellings be located in Nuneaton and Bedworth Borough adjacent to the City boundary near Keresley and 3,500 in Warwick District adjacent to the City Boundary in vicinity of Gibbet Hill/Finham.
Solihull	10,500	45	
North Warwickshire	3,000	93	Employment: Includes 60ha of land for the expansion of Regional Logistic Sites at Birch Coppice and Hams Hall.
Nuneaton and Bedworth	11,000	96	
Rugby	11,000	108	Housing: 9,800 of this allocation is to be found within or adjacent to the urban area of Rugby.
Warwick	11,000	90	Employment: Includes a 50% share of the expansion of Warwick University.
Stratford-on-Avon	7,500	51	Housing: No housing provision is required in the District to meet the needs of Redditch.
Warwickshire	43,500	438	
<b>Total</b>	<b>87,500</b>	<b>729</b>	

Warwickshire County Council has interpreted these requirements through the Warwickshire Blueprint work, which has been undertaken internally to plan for the future requirements of the County. These requirements are mapped in Figure TP1.3.

**Figure TP1.3: Interpretation of future growth requirements**

In June 2009, the West Midlands Region published a new transport programme for 2009 to 2026 to show funding priorities for major schemes (schemes costing more than £5m) across the region. The programme is intended to provide the transport infrastructure needed to support new housing and economic growth in the larger settlements across the region, and to improve important transport connections between the West Midlands and other parts of the Country. This programme sets out a number of transport studies which are seen as vital in addressing future growth. Warwickshire County Council is involved in Study 3: Improving connectivity in the Coventry North-South Corridor.

The only major transport scheme in Warwickshire which has been included in the regional programme is the NUCKLE scheme. The NUCKLE scheme is concerned with improvements to heavy rail services along the **N**uneaton, **C**oventry, **K**enilworth and **L**eamington Spa (NUCKLE) corridor. These are vital to supporting the housing and employment growth proposed in the RSS within the North/South corridor. A phased, incremental, approach has been taken to delivering NUCKLE. The phases are:

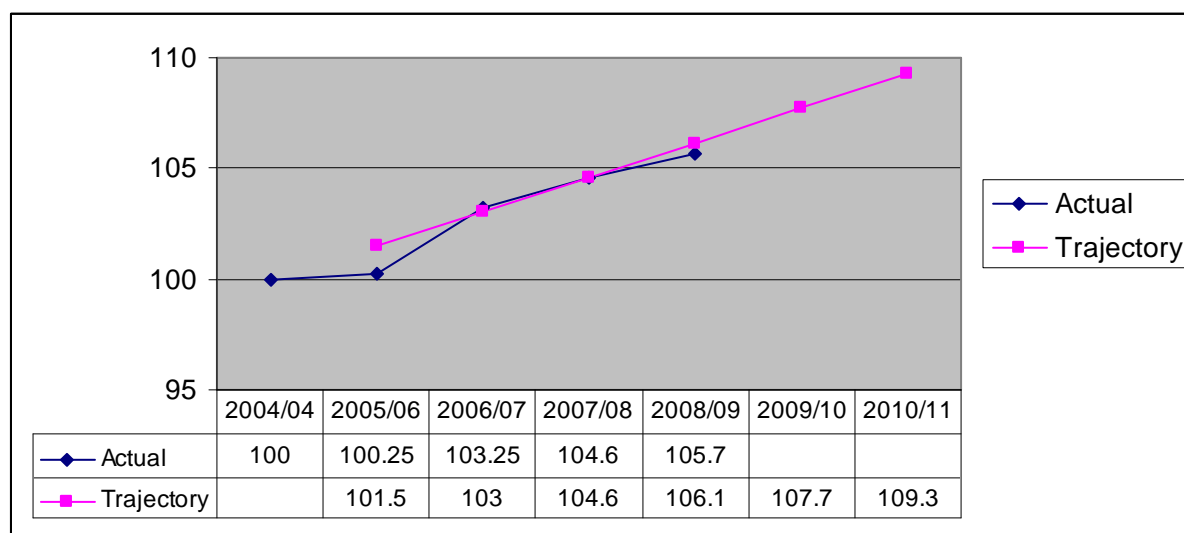
- Improve the Coventry – Nuneaton line;
- Provide a new station at Kenilworth;
- Provide a through service from Leamington Spa to Nuneaton; and
- Provide a Leicester/East Midlands - Nuneaton - Coventry - Kenilworth - Coventry - Leamington - Oxford - Thames Valley service.

Phase 1 has been identified both within the Regional Transport Priorities Action Plan, and also the Regional Funding Allocation (RFA) process. It is anticipated that a major scheme bid for Phase 1 will be submitted in late 2009. The scheme is likely to require a minimum of a three-year design and construction period, the earliest date for completion is likely to be 2012/13.

## 4.6 Congestion and Traffic Flows

Information on traffic flows has been monitored as part of the LTP process. Figure TP1.4 shows the change in area wide traffic mileage (indicator LTP2). As can be seen from below traffic mileage in Warwickshire is increasing but at a slower rate than was targeted. The slowing of the increase is likely to be related to the recession that has affected the UK since 2008 and therefore, may not be a long term trend.

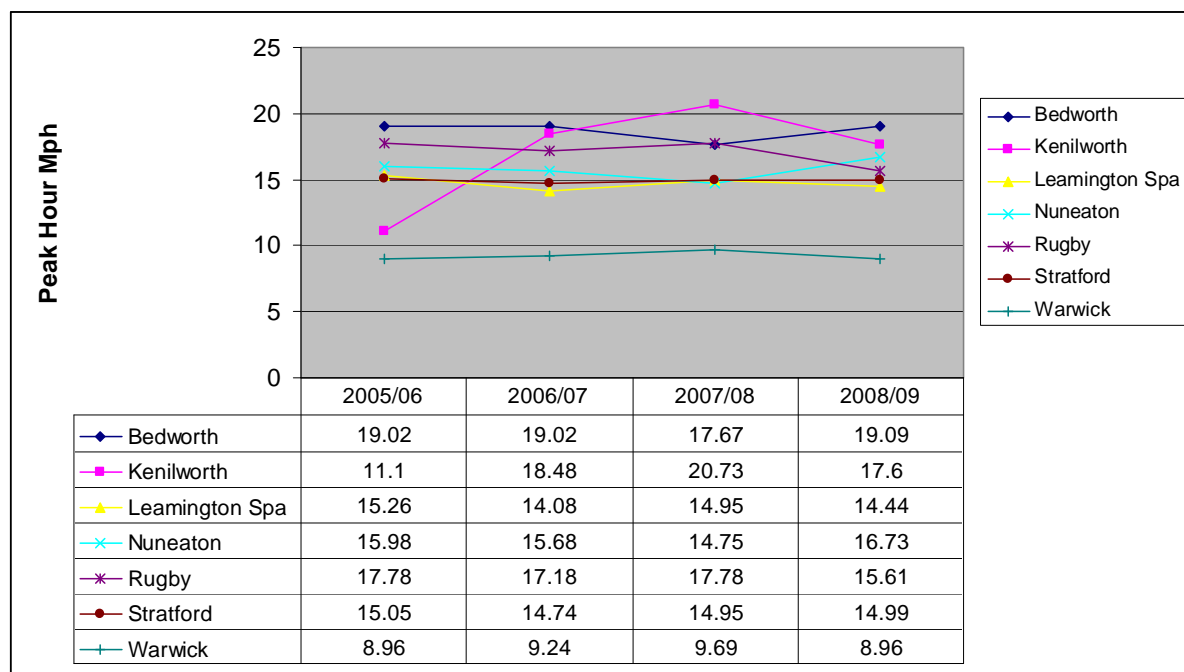
**Figure TP1.4: Change in area wide traffic mileage**



(Source: LTP2 2008-2009 Final Draft Progress Report)

Congestion in Warwickshire mostly occurs in peak periods as a result of commuter and school related traffic and is concentrated within and around the main town centres (Nuneaton, Bedworth, Rugby, Kenilworth, Warwick, Leamington Spa and Stratford-upon-Avon), on key inter-urban routes (e.g. A452 Kenilworth - Leamington Spa) and on the existing (or recently detrunked) motorway and trunk road network. The LTP contains an indicator which measures traffic speeds in the main towns and this is used as a proxy for congestion. The latest figures are shown in Figure TP1.5. These figures don't show any clear pattern with speeds increasing in some towns and decreasing in others. Interestingly in most towns the traffic speeds are roughly what they were in 2005/06 apart from Kenilworth and Rugby where traffic speeds have increased and decreased respectively. The other point made by this data is the clear difference in the traffic speeds in Warwick compared to the other towns, highlighting the congestion problem in Warwick.



**Figure TP1.5: Peak hour traffic speeds in the main towns**

(Source: LTP2 2008-2009 Final Draft Progress Report)

## 4.7 Network Management

The core objective in implementing the Network Management Strategy is to reduce the impact of traffic on the environment of town centres and residential areas in the main urban areas of the County. The plan has various objectives including:

- Developing a road hierarchy by level of use and by function;
- Identifying locations where regular congestion occurs and mapping the information through Geographic Information Systems (GIS). The network will be reviewed to see where trends and traffic growth could cause congestion in the future and action will be taken to remedy the situation;
- Development of a Considerate Contractor Scheme for Warwickshire and a voluntary Code of Good Practice for road works;
- Development of a business case for an ICT solution to link the disparate Traffic, Highway and Transport information databases so that information can be presented in a single place and in a consistent format; and
- Through the work of Warwickshire Freight Quality Partnership to seek to ensure best practice is followed by industry and that congestion is reduced through a better managed road network for delivery vehicles.

The 2006-2008 LTP Progress Report outlined some of the monitoring results from the network management plan process. Highlights include:

- The work to develop a road hierarchy is now in place;

- A diary of events has been prepared and is regularly updated. This is used to ensure that affected parts of the highway network are protected so that there are no conflicts of interest between the event and other activity on the highway; and
- The County Council is now part of the Elgin Roadwork's information website [www.elgin.gov.uk](http://www.elgin.gov.uk); and
- The County Council now maintains a register of all works (utility and highway). This is a GIS based system.

The Network Management Plan is in the process of being updated. Where any further relevant evidence is collected this will be included in the Environmental Report.

Please note that the latest information on the Transport Asset Management Plan (TAMP) process is discussed in the Topic Paper 2.

## 4.8 Freight Management

The information in this section is taken from the Warwickshire Sustainable Freight Distribution Strategy (which formed part of the Warwickshire LTP2).

Most freight in Warwickshire is moved by road at present and most freight will continue to be moved by road in the future. Due to its location on the motorway and trunk road network, Warwickshire experiences a lot of through movement of road based freight haulage. Vehicle movements are also prominent in the vicinity of Hams Hall and Daventry International Rail Freight Terminals, and around the industrial estates in the main towns. The town centres also experience lorry movements in relation to shop deliveries. There are several quarries and landfill sites in the County that generate large numbers of lorry movements, often impacting on some of the more rural areas.

The location of Warwickshire on the national rail network results in a large amount of through rail based freight movements. Key generators of rail freight in Warwickshire are Hams Hall International Rail Freight Terminal, Murco LPG (Bedworth), Daw Mill Colliery (near Fillongley), Warwickshire Oil Storage Depot (Kingsbury), Kineton MOD base, and car distribution from Birch Coppice. In addition, Daventry International Rail Freight Terminal (DIRFT) is located just outside the County boundary near Crick in Northamptonshire.

It is broadly accepted that freight movements of between 100 and 250 miles or more provide the best opportunity for carriage by rail. This, coupled with heavy loads, offers the greatest potential for maximising economies of scale. The majority of firms that deal with this type of freight movement, and are located near or adjacent to an operational railway line in Warwickshire, currently use rail for all or part of their journey. It should be acknowledged however that, given its proximity to the West Midlands conurbation and its location on the rail network, the majority of freight movements in Warwickshire are essentially through the County, and are therefore unlikely to be particularly suitable to any new rail freight initiatives. The diverse trip length nature and pattern of local road freight movements generated in the County are also unlikely to be suitable for transfer to rail.

There is currently no known movement of freight on the canal system serving Warwickshire. The canals are primarily used for leisure and recreational purposes.

The Warwickshire Advisory Lorry Route Map shows the most suitable routes around Warwickshire, the main industrial areas, re-fuelling stops, parking areas and services stations, all of which are suitable for heavy goods traffic. In addition it shows height and weight restrictions and approximate speed camera locations. The map is too large to add to this report but can be viewed at

<http://www.warwickshire.gov.uk/Web/corporate/pages.nsf/Links/CB1AA4F6ADE4FCC280256D81002D0F25>

The Freight Management Strategy is in the process of being updated. Where any further relevant evidence is collected this will be included in the Environmental Report.

## 5 Data Sources and Gaps

### 5.1 Data Sources

- Warwickshire Public Service Board (2009): A Sustainable Community Strategy for Warwickshire August 2009 - March 2026;
- Warwickshire Local Area Agreement Indicators and Targets 01/04/09;
- Quality of Life in Warwickshire 2008 (Warwickshire County Council, 2008);
- Delivering a Sustainable Transport System in the West Midlands, Regional Work Programme (June 2009);
- Warwickshire Advisory Lorry Route Map (2<sup>nd</sup> edition),
- Warwickshire County Council (2006) Local Transport Plan 2;
- Warwickshire County Council (2008) Local Transport Plan 2, 2006-2008 LTP Progress Report;
- Warwickshire County Council (2008) Local Transport Plan 2 2008-2009 Final Draft Progress Report; and
- Warwickshire County Council Blueprint work.

### 5.2 Data Gaps

No significant data gaps have been identified at this stage.

## 6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown below. These issues have been used to guide the selection of the SA Objectives that the plan will be assessed against.

- Warwickshire benefits from a relatively strong and diverse economy and has seen strong employment growth over recent years. However, unemployment over the last year has doubled.

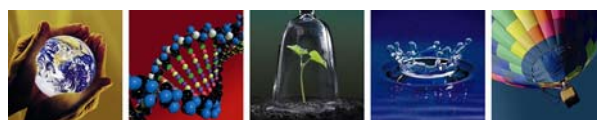
- Almost half the residents of North Warwickshire work elsewhere. High levels of trips are made from North Warwickshire towards Tamworth, Sutton Coldfield, Birmingham, Nuneaton and Coventry. A large proportion of people from outside the County work in Warwickshire. The majority of people in the area commute to work by car.
- Most people still travel to work by car but the majority of children travel to school using sustainable modes.
- Traffic mileage in Warwickshire is increasing but at a slower rate than was targeted. Traffic speed data in the main towns (a proxy for congestion) do not show any clear pattern but do show that congestion in Warwick is more severe than in other areas.
- Warwickshire experiences a lot of through movement of road based freight haulage and road freight does cause problems in some areas.

## 7 Suggested SEA Framework

The SEA objectives and indicators suggested for this topic are shown below. It is important that the SEA assesses whether the LTP is helping to achieve relevant targets. Therefore, where these have been found and are relevant to the LTP they have been built into the SEA indicators.

These objectives are based upon the DfT new NATA objectives (please see *TAG Unit: The Appraisal Process - consultation draft* on <http://www.dft.gov.uk/webtag/documents/project-manager/unit2.5c.php>) but amended to reflect local issues.

<b>Economy</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA indicator. Will the LTP...</b>
Help to improve reliability and connectivity of the transport system?	<ul style="list-style-type: none"> <li>• Include schemes that decrease journey times, congestion, improve journey time reliability and help to support Warwickshire's already strong economy?</li> </ul>
Support the delivery of the future spatial strategy?	<ul style="list-style-type: none"> <li>• Provide the necessary infrastructure to support the spatial strategy in a sustainable manner?</li> </ul>
Enhance resilience through good management and maintenance of the transport system?	<ul style="list-style-type: none"> <li>• Help to manage routes effectively in order to maintain journey times?</li> </ul>
Provide wider support to the economy through the movement of people and goods?	<ul style="list-style-type: none"> <li>• Provide / encourage the use of alternatives to road freight and provide routes for freight traffic that reduces impacts on communities and the environment?</li> <li>• Increase access to jobs, towns, tourist attractions, rural areas and the countryside by sustainable means?</li> </ul>



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 1 (Topic Paper 2  
Climate Emissions)

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:



**ENVIRON  
Birmingham, UK**

Date:

**May 2010**

Project or Issue Number:

**UK1815047**

Contract/Proposal No:	UK1815047
Issue:	1
Author	
(signature):	
Project Manager/Director	
(signature):	
Date:	May 2010

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Issue	Description of Status	Date	Reviewer Initials	Authors Initials
1	FINAL Draft	03/05/10	JC	EJ

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# 1 Introduction

This is Topic Paper 2 of the SEA Environmental Report of the Warwickshire Local Transport Plan 3. The topic paper addresses the potential issues of relevance to the Warwickshire Local Transport Plan 3 which are related to the Government's National Transport Goal of:

## ***Reducing carbon emissions***

There are four other Topic Papers that address:

- Topic Paper 1: Supporting economic growth;
- Topic Paper 3: Promoting equality of opportunity;
- Topic Paper 4: Contributing to safety, security and health; and
- Topic Paper 5: Improving quality of life and the natural environment.

This paper sets out:

- The policy context that the LTP will need to address;
- The influence that the LTP can have on the issue highlighted;
- Review of available baseline data;
- Data gaps and sources of data;
- Sustainability issues identified and future trends; and
- Suggested SEA objectives.

# 2 Policy Context

Many plans and policies set the context for transport, some directly and some indirectly. These include the National Transport Goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. It is vital that the LTP directly helps to deliver the goals of these other strategies. As well as these key documents international and national legislation and the plans and policies of other organisations (or other departments within the council) can have an influence on how the LTP should develop.

A summary has been included below of the key documents that the LTP should help to deliver – the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. Table TP2.1 includes reviews of the other important policy documents that will influence the delivery of the LTP.

## 2.1 National Transport Goals

Developing a Sustainable Transport System (DfT, 2008) outlines five national transport goals:

- Supporting economic growth;



- **Tackling climate change;**
- Promoting equality of opportunity;
- Contribute to safety, security and health; and
- Improve quality of life.

The tackling climate change goal in full reads:

***To reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of tackling climate change***

A number of key challenges are presented in the document. Relevant ones include:

- Deliver quantified net reductions in greenhouse gas emissions consistent with the Climate Change Bill and EU targets.

## **2.2 Regional Spatial Strategy (RSS)**

The latest version of the RSS is the *Draft West Midlands Regional Spatial Strategy Phase Two Revision - Draft Submission* (December 2007). An Examination in Public was held between 28th April – 24th June 2009 and the report of the Examination in Public Panel was published in September 2009 (*West Midlands Regional Spatial Strategy Phase Two Revision. Report of the Panel*, September 2009). The approach of the RSS to climate issues (as represented by the Draft RSS and the Panel Report) is set out below (please note that where policies are included below these have been summarised).

**Policy SR1 – Climate Change:** Regional and local authorities, agencies and others shall include policies and proposals in their plans, strategies and programmes to both mitigate and adapt to the worst impacts of climate change through exploiting opportunities arising from growth and development, developing and using renewable energy, reducing the need to travel, reducing waste going to landfill and enhancing and linking and extending natural habitat. New development should be required to facilitate walking, cycling and public transport.

Please note that the spatial strategy of the RSS is described in Section 4.5 of Topic Paper 1.

## **2.3 Sustainable Community Strategy and Local Area Agreement**

The Sustainable Community Strategy (*A Sustainable Community Strategy for Warwickshire August 2009 - March 2026*) has three themes (each of which has three outcomes). Relevant to this topic paper is the theme of places. This theme has the following outcomes:

- Our environment is clean, green and sustainable;
- Our housing is appropriate and affordable; and
- Our places are connected through transport, technology and services.

There are a number of objectives and actions relevant to this theme including:

### Sustainability and Access

- Ensure that in promoting access it is done so at low or no carbon cost and in a manner that does not lead to excessive depletion of resources;
- Educate, enable and empower communities to reduce carbon emissions and improve recycling within their own communities. Work and plan together to provide genuine alternatives to the car as a means of travel; and
- Work together to reduce public sector carbon emissions and work with the private sector to ensure adaptation to climate change. Ensure that planning and provision of services (including housing growth) is managed effectively to balance current needs with future demands.

The Local Area Agreement (LAA) is the key delivery plan for the Sustainable Community Strategy. It sets out the Government's and partners' priorities for Warwickshire and what will be tackled first. Success will be gauged by measuring success against indicators. Relevant indicators include:

- NI 186: Per capita CO<sub>2</sub> emissions in the Local Authority area; and
- NI 188: Adapting to climate change.

<b>Table TP2.1: Climate emissions: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
<b>International documents</b>	
<p>Kyoto Protocol to the UN Framework Convention on Climate Change (United Nations, 1992)</p> <p>Directive to Promote Electricity from Renewable Energy (2001/77/EC)</p>	<p>Kyoto: The UK has a legally binding target of a reduction of 12.5% of emissions below 1990 levels by 2012. The Road to Copenhagen: Sets out how Government hopes to build on the Kyoto commitments by working with EU partners at negotiations in Copenhagen in December 2009</p> <p>Directive to Promote Electricity from Renewable Energy: UK target is for renewables to account for 10% of UK consumption by 2010 and 20% by 2020</p>
<b>National documents</b>	
<p>UK Climate Change Act (2008)</p> <p>Consultation on the Adaptation Reporting Power in the Climate Change Act 2008 (Defra, 2009)</p> <p>The Stern Review Report on the Economics of Climate Change (2007)</p> <p>UK Renewable Energy Strategy (Department of Energy and Climate Change, 2009)</p> <p>Low Carbon Transport: A Greener Future (DfT, 2009)</p>	<p>UK Climate Change Act: Reductions in emissions of at least 80% by 2050, and reductions of at least 26% by 2020, against a 1990 baseline. The act also introduces carbon budgets for government departments and powers for Government to require public bodies to carry out an adaptation risk assessment and make plans to address those risks</p> <p>Consultation on the Adaptation Reporting Power: The document states that local authorities already fulfill their obligations through reporting on Local Authority National Indicator NI188</p> <p>Stern Review: Developed countries must cut carbon emissions by at least 60% by 2050 on 1990 levels</p> <p>UK Renewable Energy Strategy: Ensure 15% of our energy comes from renewable sources by 2020; and 10% of transport energy from renewables, up from the current level of 2.6% of road transport consumption</p> <p>Low Carbon Transport: Re-iterates the 10% target in UK Renewable Energy Strategy. Transport measures nationally will need to contribute to a reduction of 17.7 million tonnes of CO<sub>2</sub> in 2020.</p>
<b>Regional documents</b>	
<p>West Midlands Climate Change Action Plan (Various Regional Partners, 2007)</p> <p>West Midlands Energy Strategy (Various Regional Partners, 2004) and 2006 Monitoring Report</p>	<p>West Midlands Climate Change Action Plan: Has the following relevant priority - plan for low carbon, well-adapted sustainable communities with high quality green infrastructure and thriving biodiversity, with low-carbon new development, improved existing stock, and sustainable transport and waste planning to deliver substantially reduced emissions and resilience to likely climate change impacts.</p> <p>Regional Energy Strategy: The strategy sets targets for reducing carbon emissions by sector along with a regional target for renewable energy equivalent to 5% of regional electricity consumption by</p>

<b>Table TP2.1: Climate emissions: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
	2010. This reflects the region's limited capacity for deployment of some of the currently most cost effective technologies such as offshore wind, and the emphasis on energy efficiency as the key priority. The target for transport is to stabilise emissions by 2010 and reduce by 0.7 Mt (7%) by 2020. The 2006 monitoring report indicated that estimates of transport CO2 emissions are up by 1.8% between 2002 and 2004 with a 10% increases in emissions from diesel offsetting a 6.5% decrease in emissions from petrol vehicles.
<b>Local documents</b>	
Warwickshire Climate Change Strategy (Warwickshire Climate Change Partnership, no date given)	Warwickshire Climate Change Strategy: The target set out within the strategy is to reduce greenhouse gas emissions in Warwickshire to at least the level set out by Government policy, 15%-18% reduction by 2010 and a 60% reduction by 2050 (against 1990 levels). The objective for transport is to reduce greenhouse gas emissions resulting from transport (particularly road transport), both through the transport planning function and the council's own activities.

### 3 The Influence of the LTP

It is important that the SEA is focused on how the LTP can influence environmental and sustainability conditions. In this way the most appropriate SEA objectives are selected and the most appropriate baseline data collected. The Local Transport Plan can influence carbon emissions in the following ways:

- Reduce the contribution of the transport system to **carbon emissions** by enabling a shift to more sustainable forms of transport, reducing vehicle miles and other changes that may improve fuel use such as changes in speed; and
- Ensure that the transport system can cope with the **unavoidable effects of climate change**.

### 4 Baseline Data

#### 4.1 Use of Fuel and Renewable Energy

The UK Renewable Energy Strategy sets out some national figures on the use of renewable energy. In 2008 the UK transport sector used 598TWh of energy; approximately 9TWh came from renewable sources (1.5%). The target is by 2020 for 10% of all transport energy to come from renewables sources.<sup>1</sup>

The overall vision for the transport sector is set out in the Department for Transport's strategy for low-carbon transport, Low Carbon Transport: A Greener Future (DfT, 2009). The strategy is based on the following themes:

- Supporting a shift to new technologies and fuels;
- Promoting lower carbon transport choices; and
- Using market-based measures to encourage a shift to lower carbon transport.

Some of the actions that will assist in meeting the transport target are cleaner fuels and cleaner technology and a shift to renewable sources of energy such as sustainable biofuels, electricity and hydrogen. The strategy assumes that the short term 10% target will predominantly be met through biofuels. Other innovations, such as the potential increased electrification of rail and road transport, could play a more auxiliary role approaching 2020, becoming more significant in the longer term.

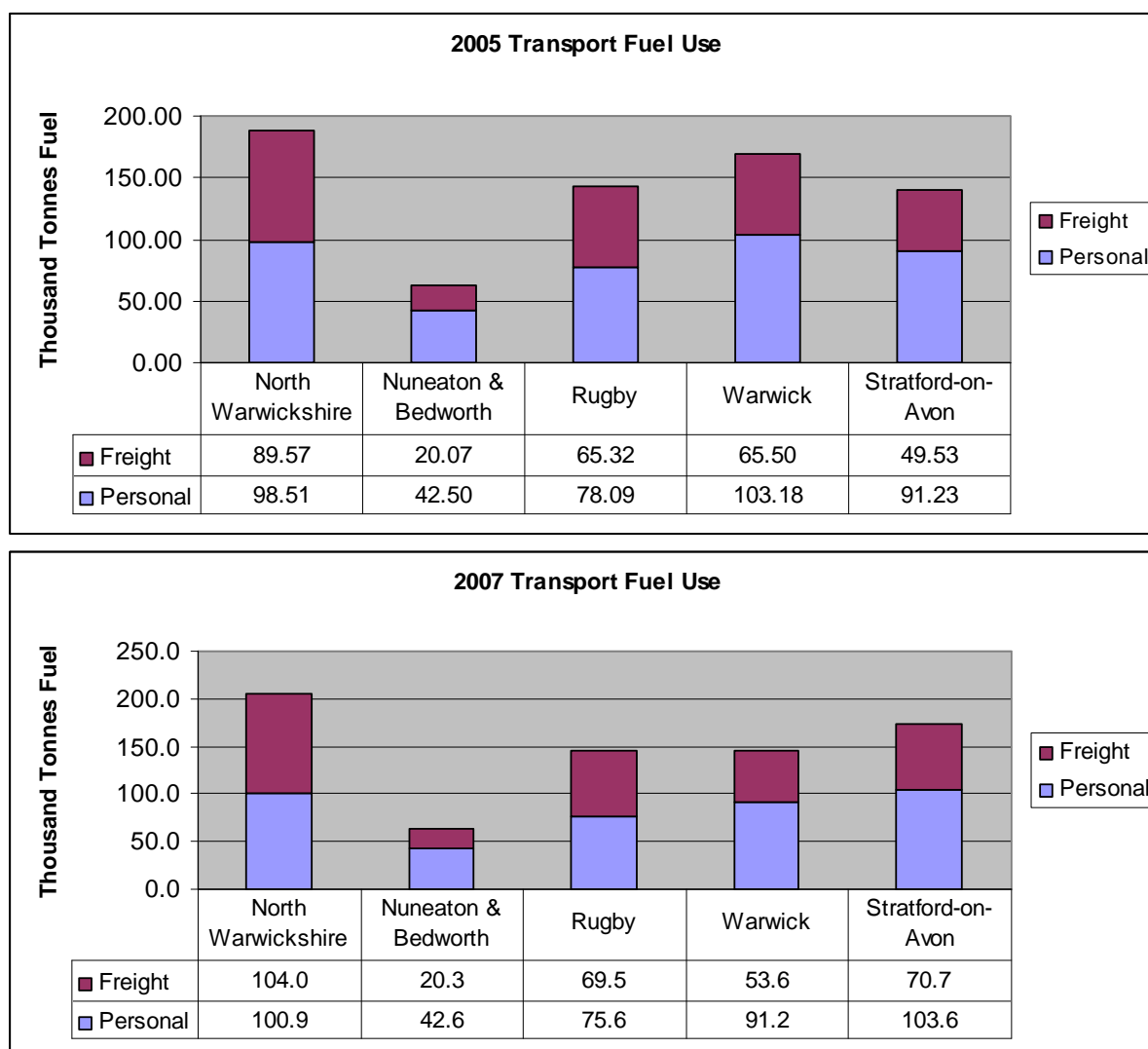
The Department of Energy and Climate Change (DECC) publishes data on fuel use for transport.

[http://www.decc.gov.uk/en/content/cms/statistics/regional/road\\_transport/road\\_transport.aspx](http://www.decc.gov.uk/en/content/cms/statistics/regional/road_transport/road_transport.aspx)

Figure TP2.1 shows the data for 2005 and 2007 respectively.

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<sup>1</sup> Under the provisions of the Renewable Energy Directive, the share of renewables in the transport sector is calculated in relation to total surface transport (road and rail) only, i.e. excluding aviation and shipping.

**Figure TP2.1: Transport fuel use 2005 and 2007**

Fuel levels have stayed roughly the same in most areas but have increased in North Warwickshire and Stratford on Avon and decreased in Warwick.

In Warwickshire there has been an increase in the number of cars running on gas/bio-fuel and hybrid electric power (see Table TP2.2).

**Table TP2.2 Number of licensed cars by propulsion type, 2005-2006**

Propulsion Type	March 2005	December 2006	% Change
Petrol	221,164	214,033	-3.2
Diesel	56,669	68,831	21.5
Electricity	5	2	60.0
Steam	1	1	0.0
Gas	11	8	27.3

**Table TP2.2 Number of licensed cars by propulsion type, 2005-2006**

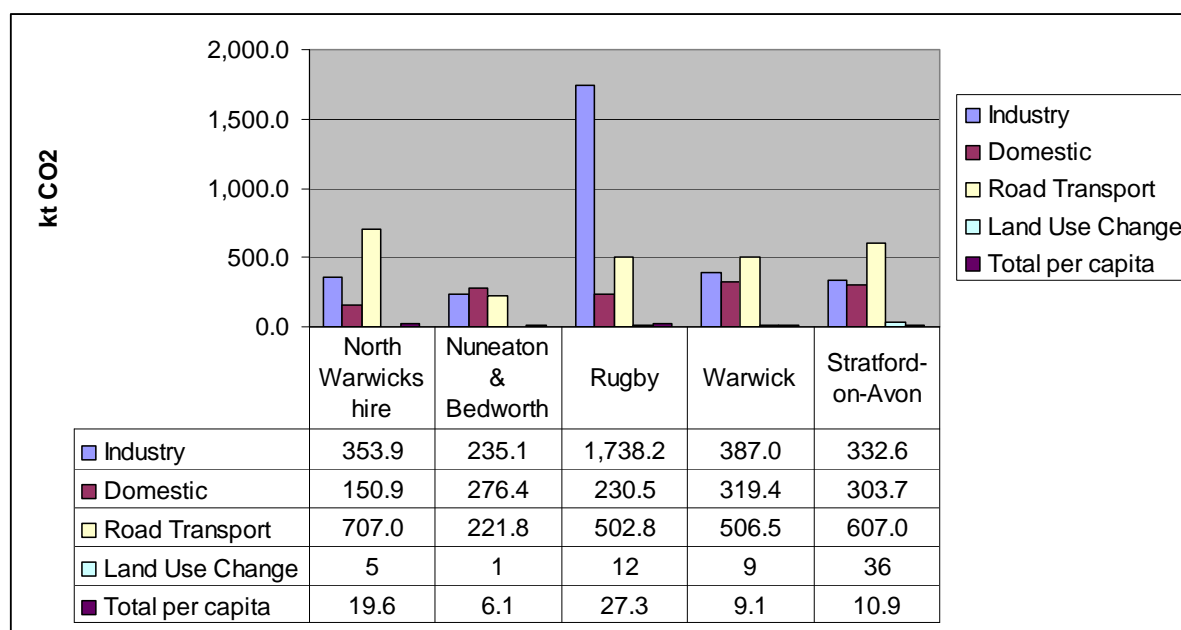
Propulsion Type	March 2005	December 2006	% Change
Petrol/Gas	321	375	16.8
Gas/Bi-Fuel	236	148	37.3
Hybrid Electric	25	143	472.0
<b>Total</b>	<b>278,432</b>	<b>283,541</b>	<b>1.8</b>

(Source: Warwickshire Energy Statistics, Climate Change Strategy Update, 2007)

One of the ways transport can utilise more sustainable energy is through biofuel. However, the sustainability of biofuel is currently in question and the future contribution of biofuels to energy security and the emergence of a low carbon energy economy in the UK will depend significantly on the incentives offered by government policies.<sup>2</sup>

## 4.2 CO<sub>2</sub> Emissions Data

Statistics from DECC (2007) show that road transport's share of the West Midlands CO<sub>2</sub> emissions was 30% (in 2007). Figure TP2.2 shows the source of CO<sub>2</sub> emissions in each of the Warwickshire Districts.

**Figure TP2.2: Emissions in the Warwickshire districts**

(Source: [http://www.decc.gov.uk/en/content/cms/statistics/climate\\_change/climate\\_change.aspx](http://www.decc.gov.uk/en/content/cms/statistics/climate_change/climate_change.aspx))

According to Figure TP2.2 the largest emitter of CO<sub>2</sub>, in regards to road transport in Warwickshire is North Warwickshire, followed by Stratford upon Avon and Warwick, reflecting the road network and traffic density.

<sup>2</sup> The Royal Society (January, 2008): Sustainable biofuels: prospects and challenges.

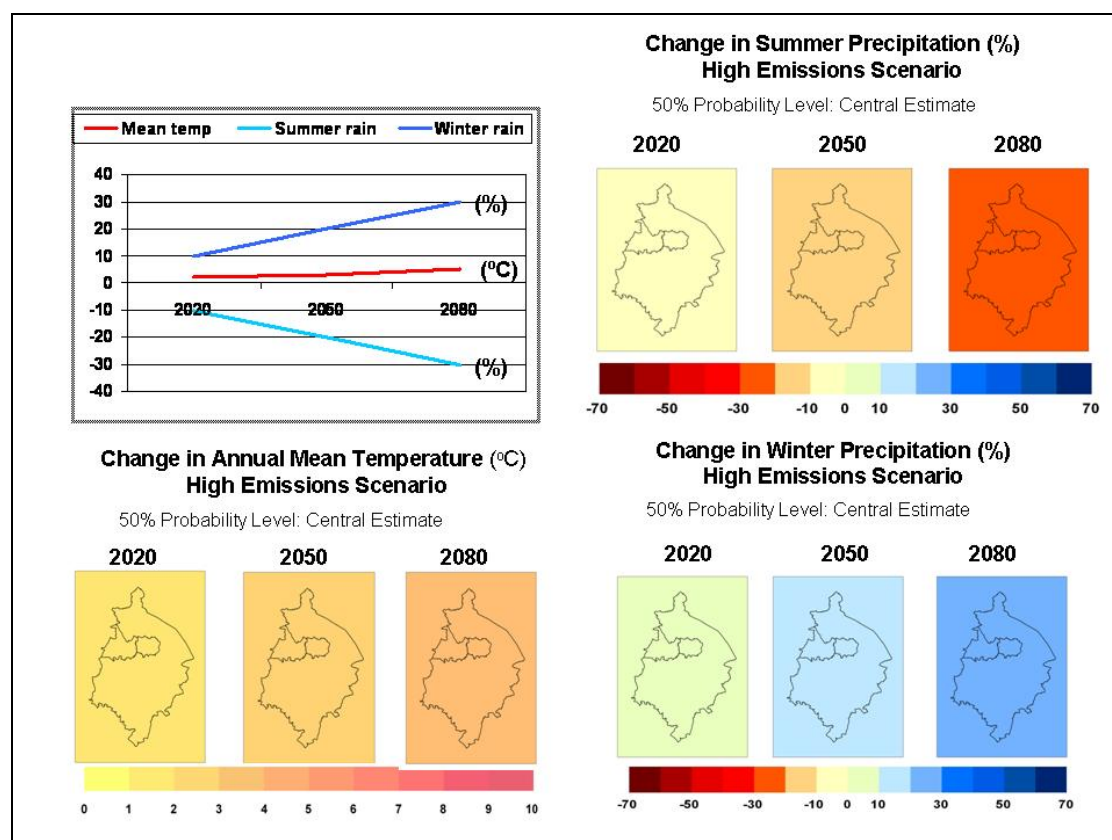
### 4.3 Climate Change Adaptation

According to the Warwickshire Climate Change Partnership, Warwickshire has set a target of reaching level 3 on the National Indicator NI188 (Planning to Adapt to Climate Change) by 2010/11. The indicator was established to ensure that local authorities are prepared to manage risks from climate change. Level 3 means that the council will have a comprehensive action plan and prioritised action in all priority areas. Not many authorities have reached Level 3 as yet.

Data from the Climate Change Impacts Partnership has been used by Warwickshire County Council in its Warwickshire Blueprint work, which has been undertaken internally to plan for the future requirements of the County. This work summarised the anticipated changes in the region's climate over the next 50 to 80 years. The main changes that the region is likely to experience are summarised below and are illustrated in Figures TP2.3.

- The region is becoming warmer and by the 2050s average temperatures may rise between 3 – 4 °C; and
- Winters are likely to become wetter (a 10 - 20% increase in rainfall is expected by the 2050s); whilst summers are becoming drier (10 - 20% decrease in rainfall is expected by the 2050s).

**Figure TP2.3: Climate change impacts**



(Source: Presentation on Warwickshire's Climate Blueprint)



In regards to the impacts of climate change on transport they include an increase in infrastructure damage, service disruptions, accident risk and rise in maintenance costs. Other impacts include a potential increase in holiday road traffic, a direct result of the reduction in holiday air travel. The extent of this impact will cover a wide range of transport routes (highway, bridges, rail tracks, river and canal crossings). The severity of the impacts will be dictated by location and type, and rural areas are more likely to become isolated due to flooding. Southern areas of Warwickshire have been identified as being most likely to experience severe impacts due to climate change (Warwickshire Blueprint work).

National research work has been undertaken on how climate change may impact on the transport system. These are shown below.

### **The impact of climate change on the transport system**

#### **Wetter winters and more frequent summer thunderstorms**

- Groundwater, fluvial, flash flooding incidents
- Changes to groundwater levels and drainage systems
- Changes to road safety as people need to drive more in heavy rain. Increased vegetation can also obscure signs

#### **Increased wind speeds**

- Bridges, signs, overhead cables and other tall structures are at risk from increased wind speeds

#### **Higher peak temperatures**

- Greater thermal expansion of bridges and flyovers and buckling of train tracks
- Increased use of external spaces, more cycling and walking and greater demand for access to rivers and coast
- Concrete deterioration may increase from higher summer temperatures and driving rain
- Asphalt and concrete will behave in different ways. Black surfaces may melt and rut in summer. This causes the aggregate to subside and the road to lose its grip (road-stone polishing).

#### **Increasing subsidence / heave**

- Broken water mains
- Embankments are at risk of both subsidence and heave, as a result of wetter winters, drier summers and changing vegetation

#### **Increasing fluvial / tidal flow may cause**

- Increased scouring of bridge footings

#### **Changes to the management of landscape and biodiversity**

- This is a surprisingly large issue as highway authorities own considerably large areas of soft estate. Climate change is likely to change the plant species that will thrive, and increase overall growth rate. There is likely also to be some soil erosion.

(Sources: [http://sdrnadmin.rechord.com/wp-content/uploads/cc\\_adaptation.pdf](http://sdrnadmin.rechord.com/wp-content/uploads/cc_adaptation.pdf); Developing a Transport Strategy for Climate Change Adaptation (Sustainable Development Research Network, 2008) The Changing Climate: Impact on the Department for Transport (2005))

The Warwickshire Climate Change Partnership Action Plan details specific objectives and measures on climate change adaptation. The Action Plan includes the following actions:

- Sustainable Construction Project: Including the production of a sustainable construction practices support document, the production of a sustainable building for Warwickshire DVD and organising a conference on supply chain development;
- Public Health Services in Changing Climate: Includes the production of Seasonal Death Warwickshire report;
- Adapting County Risk Management and other Strategies to include Climate Change: This is addressed through risk management, a strategy audit and the Critical Infrastructure Group;
- Biodiversity Adaptation: Including arranging a conference on Climate Change adaptation and biodiversity;
- Warwickshire's Carbon Compensation and Adaptation Scheme: This is designed to encourage residents to offset their carbon emissions by helping adaptation projects in Bangladesh and Nepal. Warwickshire's scheme was established in 2007 by the Warwickshire Climate Change Partnership.

The main objectives set out in the Action Plan by the Warwickshire Climate Change Partnership do not include specific objectives on transport.

One of the most significant impacts of climate change is likely to be an increase in flooding (both severity and frequency of flooding). An initial Strategic Flood Risk Assessment was carried out for Warwickshire in 2008. County wide flood maps were produced and can be found on the following link:

<http://www.warwickshire.gov.uk/Web/corporate/pages.nsf/Links/B662B971B6AF565A80257465003565EF>

The latest wide-spread flooding in Warwickshire occurred in summer 2007 (June and July). The floods impacted on over 75 communities in Warwickshire where 5-150 properties were flooded. In total over 2000 properties were flooded and this greatly raised the focus on drainage matters. Backlog of blocked gullies also increased to 14%.

The Water Management Bill will ensure that County authorities should publish a flood risk action plan. This will need to address how to manage flooding from highways. Warwickshire County Council is currently planning how it will adhere to these regulations.

#### **4.4 Transport Asset Management Process**

Warwickshire County Council was recently awarded £500,000 funding to implement its second round of the Transport Asset Management Plan (TAMP) funding. This second round of activity will focus on reducing the impact of climate change in Warwickshire and Warwickshire's contribution to helping to meet overall climate change targets. The TAMP will focus on four areas of work:

- Traffic and highway management to help reduce bus journey times;
- Reducing street lighting material use and energy consumption;
- Improving drainage solutions; and
- Reducing material use whilst maintaining asset value.

Some of the actions that will be undertaken as part of the project are:

- Bus journey times: Use of Geographic Positioning System (GPS) data loggers onboard vehicles to highlight frequent delays and pinpoint congestion hotspots. The analysis is used to enable bus timetable amendments and delivery of traffic management schemes;
- Street lighting: Funding will be used to trial a Street Lighting Central Management System. This will enable the council to dim, alter or turn off certain street lights at certain times. Funding will also be used to trial replacement of illuminated signs with retro-reflective signs. In the best case scenario this may result in a reduction in emissions of 2.1 tonnes of carbon dioxide;
- Drainage: The drainage asset management proposals have a number of actions - to collect gully numbers and positions more accurately in order to be able to identify actions needed to reduce drainage problems;
- Material use: The council aims to develop a searchable map based system which collects information together on surface treatments, traffic flows, condition and rate of deterioration and drainage systems on stretches of road. This will help the council to select the most appropriate maintenance regime.

## 5 Data Sources and Gaps

### 5.1 Data Sources

- The UK Renewable Energy Strategy (2009);
- DECC Statistics about: Climate Change and Fuel Use  
[http://www.decc.gov.uk/en/content/cms/statistics/regional/road\\_transport/road\\_transport.aspx](http://www.decc.gov.uk/en/content/cms/statistics/regional/road_transport/road_transport.aspx)
- [http://www.decc.gov.uk/en/content/cms/statistics/climate\\_change/climate\\_change.aspx](http://www.decc.gov.uk/en/content/cms/statistics/climate_change/climate_change.aspx)
- Low Carbon Transport: A Greener Future (DfT, 2009);
- Developing a Transport Strategy for Climate Change Adaptation (2008);
- The Changing Climate: Impact on the Department for Transport (2005);
- London Climate Change Partnership - Climate Change Adaptation for London's Transport System. Presentation to Transport for London (date unknown).  
[http://sdrnadmin.rechord.com/wp-content/uploads/cc\\_adaptation.pdf](http://sdrnadmin.rechord.com/wp-content/uploads/cc_adaptation.pdf);
- Warwickshire Energy Statistics: Climate Change Strategy Update; second report for Warwickshire County Council (WCC, 2007);
- Warwickshire County Council Application for Funding: Transport Asset Management: Element 2 (WCC, 2008);
- Warwickshire Climate Change Partnership  
<http://www.warwickshire.gov.uk/Web/corporate/pages.nsf/Links/87ECDD25B72D877F802575320041281B>; and

- Strategic Flood Risk Assessment for Local Development Framework Level 1 (Halcrow, February 2008).

## 5.2 Data Gaps

No significant data gaps have been identified at this stage.

## 6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown below. These issues have been used to guide the selection of the SA Objectives that the plan will be assessed against.

- There is no data available on the amount of renewable energy used in the transport system in Warwickshire. The target is 10% of the total energy use in transport systems to be derived from renewable sources
- The largest emitter of CO<sub>2</sub>, in regards to road transport, in Warwickshire is North Warwickshire, followed by Stratford upon Avon and Warwick, reflecting the road network and traffic density
- The County is likely to experience a number of changes due to climate change such as warmer wetter winters, more stormy weather and hotter summers. This will have numerous effects on the transport system

## 7 Suggested SEA Framework

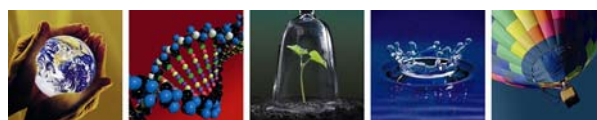
The SEA objectives and indicators suggested for this topic are shown below. It is important that the SEA assesses whether the LTP is helping to achieve relevant targets. Therefore, where these have been found and are relevant to the LTP they have been built into the SEA indicators.

These objectives are based upon the DfT new NATA objectives (please see *TAG Unit: The Appraisal Process - consultation draft* on <http://www.dft.gov.uk/webtag/documents/project-manager/unit2.5c.php>) but amended to reflect local issues.

<b>Carbon emissions</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA indicator. Will the LTP...</b>
Reduce carbon emissions	<ul style="list-style-type: none"> <li>• Cause a change in vehicle miles or a change in the nature<sup>3</sup> of traffic that would cause changes in fuel use and CO<sub>2</sub>. (Link to LAA indicator NI 186: per capita CO<sub>2</sub> emissions in the Local Authority area)</li> <li>• Increase the use of energy from renewable sources in the transport system (to reach a target of 10% of</li> </ul>

<sup>3</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

<b>Carbon emissions</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA indicator. Will the LTP...</b>
	the total energy consumed)
Ensure that the transport system can cope with the unavoidable effects of climate change	<ul style="list-style-type: none"><li>• Reduce the unavoidable effects of climate change (link to LAA indicator NI 188: Adapting to climate change)</li></ul>



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 1 (Topic Paper 3  
Equality of Opportunity)

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:



**ENVIRON  
Birmingham, UK**

Date:

**May 2010**

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# 1 Introduction

This is Topic Paper 3 of the SEA Environmental Report of the Warwickshire Local Transport Plan 3. The topic paper addresses the potential issues of relevance to the Warwickshire Local Transport Plan 3 which are related to the Government's National Transport Goal of:

## *Promoting equality of opportunity*

There are four other Topic Papers that address:

- Topic Paper 1: Supporting economic growth;
- Topic Paper 2: Reducing carbon emissions;
- Topic Paper 4: Contributing to safety, security and health; and
- Topic Paper 5: Improving quality of life and the natural environment.

This paper sets out:

- The policy context that the LTP will need to address;
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A summary has been included below of the key documents that the LTP should help to deliver: the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. Table TP3.1 includes reviews of the other important policy documents that will influence the delivery of the LTP.

## 2.1 National Transport Goals

Developing a Sustainable Transport System (DfT, 2008) outlines five national transport goals:

- Supporting economic growth;
- Tackling climate change;

- **Promoting equality of opportunity;**
- Contribute to safety, security and health; and
- Improve quality of life.

The equality of opportunity goal in full reads:

***To promote greater equality of opportunity for all citizens, with the desired outcome of achieving a fairer society.***

A number of key challenges are presented in the document. Relevant ones include:

- The aim is to ensure that the transport system provides everyone with access to the goods and services, employment opportunities and social and leisure activities they desire;
- It should also provide connections to, from and within areas away from the main population centres, such as rural areas and market towns; and
- Transport should also contribute, for example, to regeneration plans.

## **2.2 Regional Spatial Strategy (RSS)**

The latest version of the RSS is the *Draft West Midlands Regional Spatial Strategy Phase Two Revision - Draft Submission* (December 2007). An Examination in Public was held between 28th April – 24th June 2009 and the report of the Examination in Public Panel was published in September 2009 (*West Midlands Regional Spatial Strategy Phase Two Revision. Report of the Panel*, September 2009). The approach of the RSS to equality / community issues (as represented by the Draft RSS and the Panel Report) is set out below (please note that where policies are included below these have been summarised).

**Policy CF8 – Delivering Mixed Communities:** Local authorities in determining the mix of new housing provision should consider the needs of different groups (for example students, young people, migrants, older people, black and ethnic communities and families with children).

**Policy T1 – Developing accessibility and mobility:** Access across the region will be improved in a way that supports the spatial strategy, reduces the need to travel, expands travel choice and protects the environment. This will be achieved by measures to improve accessibility in the Major Urban Areas, other urban areas, market towns and rural areas.

Please note that the spatial strategy of the RSS is described in Section 4.5 of Topic Paper 1.

## **2.3 Sustainable Community Strategy and Local Area Agreement**

The Sustainable Community Strategy (*A Sustainable Community Strategy for Warwickshire August 2009 - March 2026*) has three themes (each of which has three outcomes). Relevant to this topic paper is the theme of places. This theme has the following outcomes:

- Our environment is clean, green and sustainable;
- Our housing is appropriate and affordable; and

- Our places are connected through transport, technology and services.

There are a number of objectives and actions relevant to this theme including:

#### Tackling Inequality

- Ensuring that rural areas in particular are targeted to improve accessibility.

#### Access

- Ensure that access issues underpin the planning of our places and delivery of services.

#### Sustainability

- Ensure that in promoting access it is done so at low or no carbon cost and in a manner that does not lead to excessive depletion of resources.

The Local Area Agreement (LAA) is the key delivery plan for the Sustainable Community Strategy. It sets out the Government's and partners' priorities for Warwickshire and what will be tackled first. Success will be gauged by measuring success against indicators. Relevant indicators include:

- NI 1 % of people who believe people from different backgrounds get on well together in their local area;
- N1 175 Access to services and facilities by public transport, walking and cycling (in communities defined as from towns to hamlets). 100% of the population should have basic access to services by 2010.

<b>Table TP3.1: Equality: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
<b>International documents</b>	
No relevant documents	NA
<b>National documents</b>	
No relevant documents	NA
<b>Regional documents</b>	
West Midlands Health and Well-being Strategy (West Midlands Regional Health Partnership, January 2008)	West Midlands Health and Well-being Strategy: Priorities for action include encouraging stakeholders involved in transport and access to services to proactively consider the health impact of their policies and how they can contribute to reducing health inequalities; reduce social exclusion and promote independence by improving safe access to services by providing quality transport networks; and encourage employers to have active travel plans which promote walking, cycling and the use of public transport.
<b>Local documents</b>	
No relevant documents	NA

### 3 The Influence of the LTP

It is important that the SEA is focused on how the LTP can influence environmental and sustainability conditions. In this way the most appropriate SEA objectives are selected and the most appropriate baseline data collected. The Local Transport Plan can influence equality of opportunity in the following ways:

- **Improving accessibility** to basic services such as education, healthcare, employment, leisure and shopping in particular for certain groups in society to ensure they are not disadvantaged (DfT guidance recommends analysing effects related to race, gender, disability, age, religion and sexual orientation if possible)
- **Improving affordability** of transport to ensure certain groups are not disadvantaged; and
- Helping to **reduce severance** and **regenerate urban and rural centres** through reducing and managing traffic and the impacts of the road system.

## 4 Baseline Data

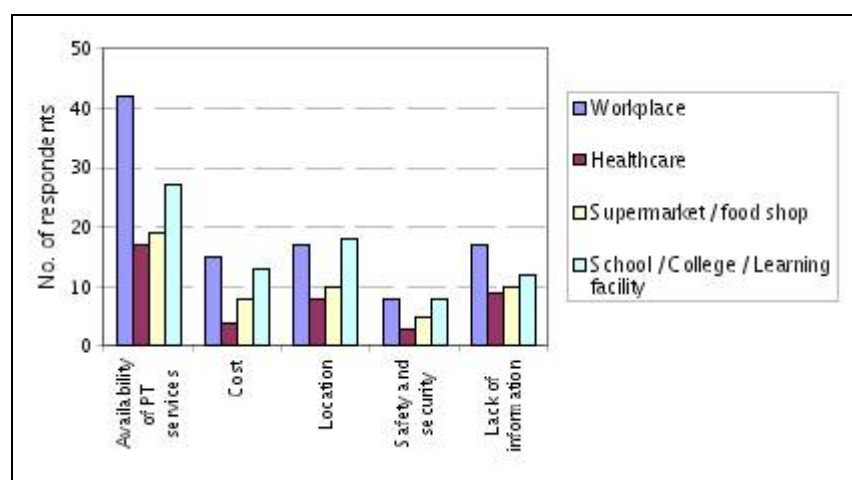
### 4.1 Accessibility to Services

The data for this section of the report is taken mostly from the Warwickshire Sustainable Community Strategy and the Warwickshire LTP2 Accessibility Strategy. A third of Warwickshire's population live in rural areas, with 18% of the population living in villages, hamlets or isolated dwellings. Significantly, over 22% of people aged 60 and over live in rural Warwickshire and nearly a quarter of these people live in hamlets or isolated dwellings.

The more rural areas of the County often face great difficulties in accessing services, and an analysis of the government's deprivation indices suggests that several of Warwickshire's rural communities face significant levels of deprivation in terms of barriers to services. However, simply living in a rural area does not necessarily translate as a problem of access to services; many of these rural communities have high levels of car ownership, are mobile, and do not perceive themselves to be experiencing difficulties. The latest Public Satisfaction Survey (2008/09) illustrated that residents in our more rural Districts and Boroughs (North Warwickshire, Rugby and Stratford-on-Avon) perceive themselves to have no significantly greater problems in accessing services such as local shops, GPs, parks and libraries than more urban Districts/Boroughs.

There are, however, some rural communities where problems of lower levels of car ownership, more limited public transport, lower incomes and an ageing population combine to present challenges in terms of taking services to the customer. Personal circumstances often present a greater barrier to accessing services than geographical distance.

Figure TP3.1 shows the results from a 2005 Citizens' Panel Survey. These data indicate the extent to which certain factors limit peoples' ability to access key destinations.

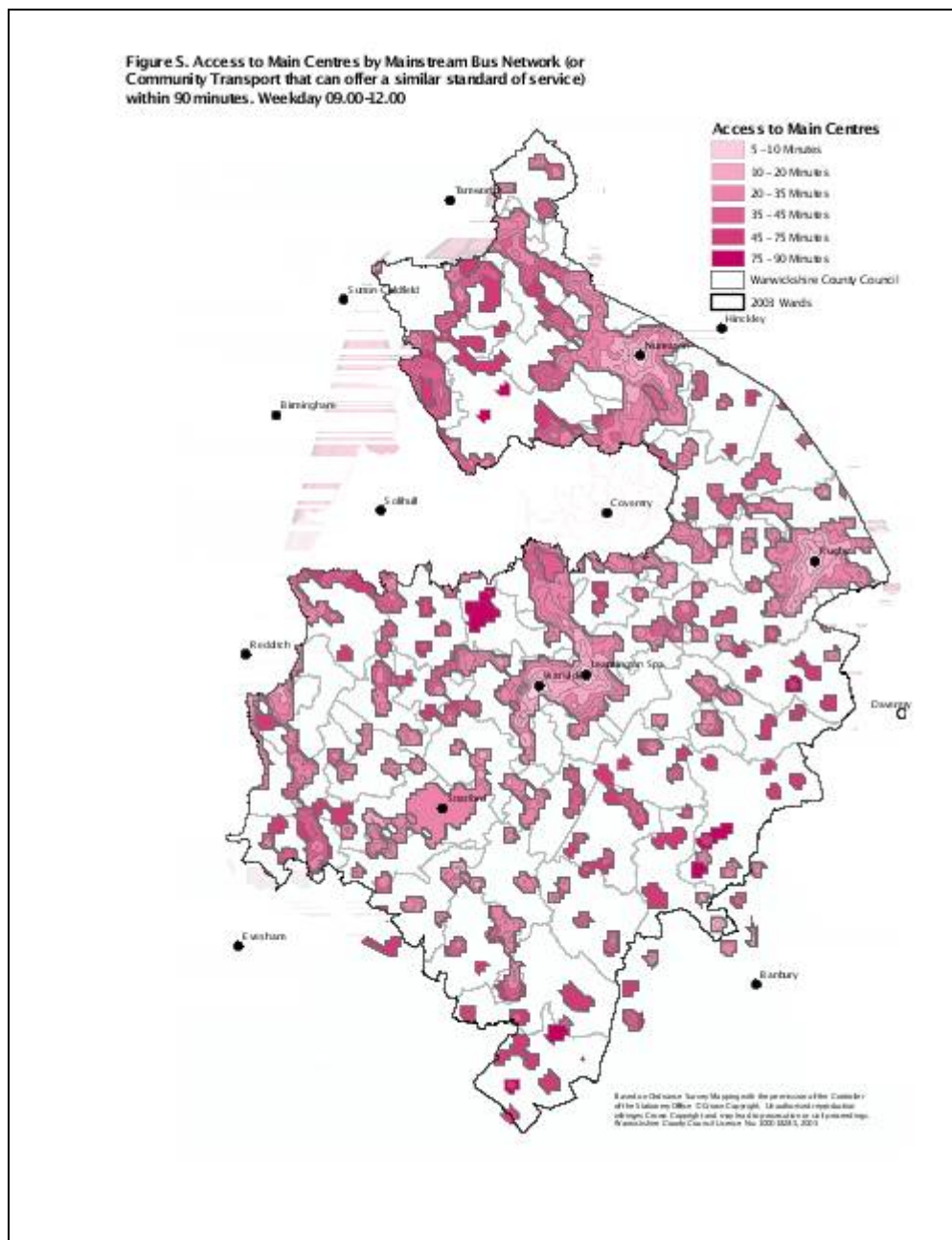
**Figure 3.1: Factors which limit access to services**

Although the overall view is mixed, the availability of public transport services is the main factor which limits panel members accessing each of the services to any extent. Location of facilities and lack of information are listed to a lesser extent.

In terms of geographic barriers, results from the same survey showed that:

- A greater % of respondents from North Warwickshire state that the barriers severely limit or limit their ability to access services. This is particularly significant in relation to the availability of public transport services for journeys to work, education and food shopping, the cost of transport to education, the location of education and lack of information for journeys to work and education;
- Stratford District has the second highest percentage of respondents stating that the barriers severely limit or limit their ability to access services. This is most notable in relation to the availability of public transport services, cost of travel, location of services and lack of information;
- Respondents from Nuneaton and Bedworth identified the availability of public transport as the most significant barrier, particularly for journeys to work and education. To a lesser extent the cost of travel and the location of services were identified as barriers, again most notably for journeys to work and education;
- The most significant barrier in Rugby Borough is the availability of public transport services, in particular for journeys to work and education. To a lesser extent the location of services was identified as a barrier, most notably for journeys to work; and
- Respondents from Warwick District identified the availability of public transport as the most significant barrier, particularly for journeys to work and education.

The Accessibility Strategy in the LTP2 includes a large number of maps showing access to different services. There are too many maps to reproduce in this report. However, it is useful to include the map showing access to main centres. This is shown in Figure TP3.2.

**Figure TP3.2: Access to main centres**

(Source: LTP2 Accessibility Strategy)

The results of the analysis that accompanied this map showed that over 95% of Warwickshire residents have access to main centres by bus within a 90 minute threshold. The target is to improve this by 2% by 2010/11.

## 4.2 Accessibility Planning

The council's approach to accessibility planning is set out in the LTP2. The strategy focuses on reducing or removing barriers that serve to limit access to services. A number of cross cutting actions were identified in the Accessibility Strategy, as follows:

- Agree a framework to ensure that the accessibility implications of significant LTP schemes and measures are assessed;



- Use Accession (accessibility mapping software) to assist in the allocation of local bus funding in support of the accessibility strategy;
- Investigate whether appropriate integration between the County Council's functions and forms of transport could lead to better accessibility and better use of resources;
- Agree a framework with District Councils to ensure that accessibility considerations are integrated into planning policy; and
- Agree a framework for accessibility assessments to be carried out for major new development proposals.

In addition to taking forward the cross-cutting actions identified above, priorities have been identified for different themes, as highlighted below:

#### Access to Health and Healthy Food

- Explore options to deliver health services more locally; and
- Assist with accessibility mapping work for health service reviews, including the review of acute services in Coventry and Warwickshire.

#### Access to Education

- Pilot study to investigate the implications of increased collaboration and specialisation for access to education in South Warwickshire (with the aim of rolling out lessons learnt from the pilot study area more generally if appropriate).

#### Access to Employment:

- Carry out additional mapping work to investigate access to employment sites offering shift work; and
- Carry out additional mapping work to investigate access to employment advice centres (e.g. JobcentrePlus).

Unfortunately, accessibility planning work in Warwickshire has taken a step backwards in recent months. The Warwickshire Rural Access to Services Programme (WRASP) was established in 2006 and forms a key component of the LTP Accessibility Strategy. The programme helped to improve access to services for those individuals and communities most in need. During 2008/09, the programme assisted a total of 371 people into employment via a variety of initiatives and schemes including Wheels to Work schemes and schemes to assist in access to services. Despite the excellent outcomes and outputs achieved by the WRASP, the funding for the Partnership has been withdrawn by Advantage West Midlands and this withdrawal of funding has directly impacted on service provision, with the vast majority of schemes operated under the WRASP ceasing to operate earlier in 2009.

Progress against the Accessibility Strategy is measured through the LTP indicator, LTP1 Access to Main Centres. This indicator has recently been re-configured to reflected changes to National Indicator set (NI 175). 2007/08 now forms the baseline year – this means that only one year of data are so far available. In 2008/2009:

- 99.92% of people had basic access to services (99.83% in 2007/08);



- 97.01% of people had daily access to services (96.83% in 2007/08);
- 95.45% of people had limited access to employment opportunities and key services (95.14% in 2007/08);
- 89.53% of people had access to employment and good access to other key services (88.19% % in 2007/08); and
- 79.6% of people had access to employment and comprehensive access to other key services (78.27 % in 2007/08).

The withdrawal of funding from WRASP may impact negatively on these indicators in future years.

### 4.3 Public Transport Services

A number of inter-urban movements in the County are served by bus. These are predominantly provided on a commercial basis by a variety of operators. There are bus services linking the urban areas in the North/South Corridor. Separate services from Leamington Spa and Warwick allow through journeys to Stratford-upon-Avon, albeit with a change of bus. Inter-urban bus services operate on the following main corridors:

- Coventry - Kenilworth - Leamington Spa - Warwick;
- Leamington Spa - Warwick - Stratford-upon-Avon;
- Birmingham - Birmingham International Airport - Coventry - Rugby;
- Rugby - Southam - Leamington Spa;
- Stratford-upon-Avon - Henley in Arden - Shirley - Birmingham;
- Tamworth - Atherstone - Nuneaton;
- Tamworth - Kingsbury - Birmingham;
- Coleshill - Water Orton - Birmingham;
- Leicester - Hinckley - Nuneaton - Bedworth - Coventry;
- Rugby - Daventry - Banbury;
- Stratford-upon-Avon - Evesham; and
- Alcester - Studley - Redditch.

In addition, there are also:

- Local services of varying quality and frequency operating within the main towns;
- Reasonably good bus services linking many of the smaller towns with the main urban areas; these also provide links with the villages and rural areas through which they pass; and
- Generally infrequent services in rural parts of the County, which are neither served by the inter-urban services nor the services linking the smaller towns with the main urban areas.

The County Council financially supports a number of these services, including evening and Sunday services.

Several of the indicators used to measure progress on the LTP are related to public transport. Key results from the latest progress report are:

- LTP5 – Bus punctuality indicator: 82.7% of all buses were on time in 2008/09 compared to 80.5% in 2006/2007. This is not quite on target (target is 83% in 2008/09).
- Indicator BV102 - Number of bus passenger journeys: This has increased from 11,160,000 in 2004/05 to 14,800,000. This is above target. The most significant reason for the increase was the introduction of free concessionary travel in Warwickshire in April 2006 for older and disabled passengers. In addition to this, the National Concessionary Fare Scheme was launched in April 2008.; and
- Indicator BV104 - Bus satisfaction (all bus services): This has increased from 47% of bus users satisfied with the service in 2003/2004 to 61.3% in 2008/09. A publicity and marketing campaign was launched in Spring 2006 to promote the improvements made in recent years in bus improvements across the County to the general public. It is thought that this has contributed to the sharp rise in satisfaction rates over the first two years of the LTP.

Bus punctuality was highlighted as an issue in the 2007/2008 LTP Delivery Report. In order to address this issue a Bus Punctuality Improvement Partnership (BPIP) has been established. The BPIP attempts to ensure that bus services in Warwickshire adhere to the published timetable. To date the Partnership has focused on the Service X17 (Coventry – Kenilworth – Leamington). Data has been collected to identify highway locations where the service experiences the most congestion points and as a result, traffic management solutions have been identified.

#### **4.4 Access to Broadband**

The latest research illustrates that poor broadband coverage and performance is not limited to rural areas. Although less than 1% of households cannot get broadband, there is still variation in the speed of service provided and several parts of the County, both urban and rural, are currently performing below the government's target of 2Mbps by 2012 (Warwickshire Sustainable Community Strategy).

#### **4.5 Equality of Access**

DfT Guidance on Local Transport Plans recommends that equalities impact assessment of transport policy should address effects related to race, gender, disability, age, religion and sexual orientation. Data is not available on how access to transport affects all of these groups in Warwickshire. However, data is available regarding how access to services affects some groups and this is presented in Table TP3.2.

<b>Table TP3.2: Equality of access</b>	
<b>Key Points</b>	<b>Location Specific Information</b>
<b>Elderly people (over the age of 65)</b>	
Just over 16% of Warwickshire's population is over the age of 65. Financial constraints and mobility issues may be significant factors within this age group. Importantly, the number of people aged 65-74 is forecast to increase by 44% in Warwickshire by 2021 whilst the population aged over 85 is forecast to increase by 74.2%.	Stratford District (a rural/semi rural district) has an older age profile than other Warwickshire districts, with over 18% of the total population aged over 65. Conversely, only 14.8% of Nuneaton & Bedworth's population is aged over 65.
<b>People of working age (16-74)</b>	
There are approximately 369,000 people aged 16-74 in Warwickshire, representing approximately 73% of the total population. It is vital that this age group is taken into account in the accessibility assessments as limits on access to education and employment may have a significant effect on life chances now and in the future.	Warwick District has a slightly higher proportion of the population who are of working age (76%) when compared to the County overall.
<b>People without access to a car</b>	
People without access to a car may not be able to access key services quickly and easily; they are reliant on public transport and thus may be at significant risk of suffering social exclusion. This is especially true if key services are not available within the local vicinity or the area is poorly served by public transport.	Levels of car ownership in Warwickshire are higher than on a regional or national basis. Just under a fifth of Warwickshire households do not have access to a car. This is significantly lower than the national (27%) and regional (27%) figures. There are hotspots of low levels of car ownership across the County, notably in Nuneaton & Bedworth and Rugby Borough.
<b>People with a Limiting Long Term Illness (LLI)</b>	
The Limiting Long Term Illness (LLI) dataset is derived from the 2001 Census and can be used as a suitable proxy for disability. Approximately 17% of Warwickshire's population has a LLI, and this proportion is likely to increase, as Warwickshire's age structure gets older.	The health of Warwickshire's population is generally good when compared to a national basis. However, there are hotspots of poor health throughout the County, notably in North Warwickshire and Nuneaton & Bedworth, and to a lesser extent, Rugby.
<b>Low income population (Job Seekers Allowance claimants)</b>	
The number of people who are in receipt of Jobseekers Allowance (JSA) provides a good proxy for identifying people out of work.	The unemployment rate in Nuneaton & Bedworth Borough is consistently significantly higher than the County average. Pockets of high unemployment also exist in Rugby Borough, Warwick District.

(Source: Warwickshire LTP2 Accessibility Strategy)

The DfT has carried out research entitled "Social Inclusion – Transport Aspects" which analyses how transport policies can affect different groups. Understanding how transport affects different groups will be useful when assessing the impact of the LTP on these

groups. A précis of this research is outlined in Table TP3.3. The full research reports can be found at <http://www.dft.gov.uk/pgr/inclusion/>

**Table TP3.3: Access by different social groups**

Social group	Précis of research
Young people and children	<ul style="list-style-type: none"> <li>• Until the age of about 10, there is little difference between travel by boys and girls. Both travel mainly as car passengers</li> <li>• At secondary school age car travel decreases and bus use increases. Boys are more likely to cycle. Girls make more trips overall than boys</li> <li>• Travel by rail and taxi become more significant from about 16</li> <li>• Use of public transport by young people is impeded partly by steep bus fare rises after the age of 14. Additional problems were raised about bus drivers' behaviour and young people's personal security on buses</li> <li>• Young people have a positive view about cycling although it is associated with a number of problems such as lack of cycle lanes, fear of traffic and fear of theft</li> <li>• Walking was perceived by young people as more efficient than the bus for short journeys, although parents have expressed concerns over safety</li> </ul>
Women	<ul style="list-style-type: none"> <li>• There is a fairly even split between men and women in respect of total number of journeys made</li> <li>• However, data suggest (albeit 10 year old data) that men travel more miles a year</li> <li>• The great majority of journeys, for both men and women, are made by car. Women are in the majority on buses and on foot, men on trains (slightly), motor-cycles and bicycle</li> <li>• There are notable differences between men and women in their reasons for travelling. Women have a greater proportion of shopping and escort education trips (i.e. taking children to or from school)</li> <li>• Because women are far more likely to be in part-time employment, and to be making social visits to families and friends, they travel more often off-peak than men; while because of women's fear of violence and aggression means that they are far less willing than men to travel after dark</li> </ul>
Older people	<ul style="list-style-type: none"> <li>• Four-fifths of the respondents would prefer not to travel long distances, at night, in bad weather and in town centres</li> <li>• Older people are constrained by cost and by difficulties in walking, using public transport and lack of means to access certain destinations</li> <li>• Poor maintained pavements were also raised as a key issue amongst older people</li> </ul>
Minority, Ethnic and Faith Communities	<ul style="list-style-type: none"> <li>• There is inadequate understanding by service providers of the transport needs of minority ethnic and faith communities</li> <li>• The views of minority ethnic and faith communities are often left out of consultation and customer care surveys. The lack of information can result in missed commercial opportunities</li> <li>• Racist behaviour by both staff and other passengers (including in waiting areas) is a problem for passengers in minority ethnic and faith communities</li> </ul>

**Table TP3.3: Access by different social groups**

Social group	Précis of research
	<ul style="list-style-type: none"> <li>Transport services often do not reflect the travel patterns or needs of changing local communities. Many routes are radial, focused on town centres, so people needing to travel between locations outside the centre have to change buses or trains more frequently. This makes journeys longer, more complicated and expensive. Given the location of many ethnic community shopping and other facilities, this can have an unintentional discriminatory effect</li> </ul>

## 4.6 Community Severance

Community severance is defined in the Design Manual for Roads and Bridges as the *separation of residents from facilities and services they use within their community caused by changes in traffic flow*. Discussion with Warwickshire County Council has highlighted that the following routes are particularly at risk from suffering from community severance as they travel through residential and/or town centre areas.

### North Warwickshire

- A5 in the vicinity of Dordon/Grendon/Baddesley Ensor.

### Nuneaton and Bedworth Borough

- A444 Leicester Road (Railway Bridge), Nuneaton;
- A444 Weddington Road, Nuneaton;
- A444 Coton Road, Nuneaton;
- A444 Newtown Road, Nuneaton;
- A444 Roanne Ringway, Nuneaton;
- A444 Bond Street, Nuneaton;
- B4102 Queens Road, Nuneaton;
- B4114 Corporation Street, Nuneaton; and
- B4114 Attleborough Road, Nuneaton.

### Rugby Borough

- B5414 Church Street/North Street, Rugby;
- D3152 Oliver Street, Rugby;
- A4071 Bilton Road, Rugby;
- A426 Corporation Street, Rugby;
- A426 Dunchurch Road, Rugby; and
- A426 Newbold Road, Rugby.

### Warwick District

- A445 North Rock, Warwick;
- A425 Saltisford, Warwick;
- A429 St Nicholas Church Street, Warwick;
- C37 Bowling Green Street, Warwick;
- A429 High Street/Jury Street, Warwick;
- A425 Castle Hill, Warwick;
- A452 Bridge Street, Kenilworth;
- B4103 Warwick Road, Kenilworth; and
- A425 High Street, Leamington Spa.

#### Stratford District

- A435 Alcester Road, Studley;
- C76 Wood Street, Stratford-upon-Avon;
- D6216 Bridge Street, Stratford-upon-Avon;
- A3400 High Street/Stratford Road, Henley-in-Arden; and
- A4189 Warwick Road, Henley-in-Arden.

### **4.7 Transport Affordability**

For some people the costs of private or public transport are very high and often unaffordable. Bus fares have risen by nearly a third since 1985. Motoring costs account for 24 per cent of the weekly expenditure of households in the lowest income quintile who have cars (Warwickshire LTP2).

It has been identified that the cost of using public transport can act as a deterrent for young people to access learning, leisure and social opportunities. As a result the County Council have provided funding for further work to be undertaken to examine the feasibility of providing a concessionary fare scheme for young people in Warwickshire. This study is due to report shortly.

## **5 Data Sources and Gaps**

### **5.1 Data Sources**

- Social Inclusion: Transport aspects (DfT, 2006) <http://www.dft.gov.uk/pgr/inclusion/>;
- Warwickshire Public Service Board (2009): A Sustainable Community Strategy for Warwickshire August 2009 - March 2026;
- Warwickshire LTP2 Accessibility Strategy;
- Warwickshire Public Satisfaction Survey (2008/09); and
- LTP2 2008-2009 Final Draft Progress Report.

## 5.2 Data Gaps

The following data gaps have been identified:

- The particular issues that different equality groups in Warwickshire face. The only available data is at a national level for some groups.

## 6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown below. These issues have been used to guide the selection of the SA Objectives that the plan will be assessed against.

- Community severance caused by large volumes of traffic in some areas of the county
- Access to services in Warwickshire is poor in many areas for people without a car
- Travel by different age groups and social groups can be very different and provision needs to be tailored more effectively
- Bus use and bus satisfaction have increased. The bus punctuality target is not quite on track.

## 7 Suggested SEA Framework

The SEA objectives and indicators suggested for this topic are shown below. It is important that the SEA assesses whether the LTP is helping to achieve relevant targets. Therefore, where these have been found and are relevant to the LTP they have been built into the SEA indicators.

These objectives are based upon the DfT new NATA objectives (please see *TAG Unit: The Appraisal Process - consultation draft* on <http://www.dft.gov.uk/webtag/documents/project-manager/unit2.5c.php>) but amended to reflect local issues.

<b>Equality</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA indicator. Will the LTP...</b>
Improve accessibility to basic services for all groups in society?	<ul style="list-style-type: none"> <li>• Improve provision of public and community transport that makes key services<sup>1</sup> more accessible to all groups of people<sup>2</sup> (link to LAA indicator NI 75 Access to services and facilities by public transport, cycling and</li> </ul>

<sup>1</sup> Key services include schools and learning, open space and recreation, jobs, leisure facilities, areas of cultural heritage and health facilities

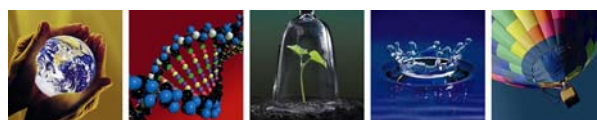
<sup>2</sup> According to the DfT this should include groups defined by race, gender, disability, age, religion and sexual orientation

<b>Equality</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA indicator. Will the LTP...</b>
	walking).
Help to improve the quality of urban and rural centres and reduce severance?	<ul style="list-style-type: none"> <li>• Reduce traffic levels, severance, congestion or the nature of traffic<sup>3</sup> in residential areas / town and village centres?</li> <li>• Cause changes that reduce the impact of the transport system on townscape or introduce features that enhance the character of towns?</li> </ul>

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<sup>3</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.





Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 1 (Topic Paper 4  
Safety, Security and Health)

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:

**ENVIRON  
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# 1 Introduction

This is Topic Paper 4 of the SEA Environmental Report of the Warwickshire Local Transport Plan 3. The topic paper addresses the potential issues of relevance to the Warwickshire Local Transport Plan 3 which are related to the Government's National Transport Goal of:

## ***Contributing to safety, security and health***

There are four other Topic Papers that address:

- Topic Paper 1: Supporting economic growth;
- Topic Paper 2: Reducing carbon emissions;
- Topic Paper 3: Promoting equality of opportunity; and
- Topic Paper 5: Improving quality of life and the natural environment.

This paper sets out:

- The policy context that the LTP will need to address;
- The influence that the LTP can have on the issue highlighted;
- Review of available baseline data;
- Data gaps and sources of data;
- Sustainability issues identified and future trends; and
- Suggested SEA objectives.

# 2 Policy Context

Many plans and policies set the context for transport, some directly and some indirectly. These include the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. It is vital that the LTP directly helps to deliver the goals of these other strategies. As well as these key documents international and national legislation and the plans and policies of other organisations (or other departments within the council) can have an influence on how the LTP should develop.

A summary has been included below of the key documents that the LTP should help to deliver: the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. Table TP4.1 includes reviews of the other important policy documents that will influence the delivery of the LTP.

## 2.1 National Transport Goals

Developing a Sustainable Transport System (DfT, 2008) outlines five national transport goals:

- Supporting economic growth;
- Tackling climate change;

- Promoting equality of opportunity;
- **Contribute to safety, security and health; and**
- Improve quality of life.

The safety, security and health goal in full reads:

***To contribute to better safety, security and health and longer life-expectancy by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health.***

A number of key challenges are presented in the document. Relevant challenges include:

- Reduce transport accidents;
- Reduce social costs of transport; and
- Improve the health of individuals by enabling physical activity.

## 2.2 Regional Spatial Strategy (RSS)

The latest version of the RSS is the *Draft West Midlands Regional Spatial Strategy Phase Two Revision - Draft Submission* (December 2007). An Examination in Public was held between 28th April – 24th June 2009 and the report of the Examination in Public Panel was published in September 2009 (*West Midlands Regional Spatial Strategy Phase Two Revision. Report of the Panel*, September 2009). The approach of the RSS to safety and health (as represented by the Draft RSS and the Panel Report) is set out below (please note that where policies are included below these have been summarised).

**Policy SR2 – Creating Sustainable Communities:** Authorities should make provision for the full range of spatial requirements needed to create sustainable communities. This should include the necessary public transport infrastructure and give priority to the most low carbon forms of transport.

**Policy T3 – Walking and Cycling:** LTPs should provide greater opportunity for walking and cycling by developing safe, secure, direct, convenient and attractive networks which connect town centres and local facilities, giving pedestrians and cyclists priority in town centres and residential areas and providing links between smaller settlements and centres.

Please note that the spatial strategy of the RSS is described in Section 4.5 of Topic Paper 1.

## 2.3 Sustainable Community Strategy and Local Area Agreement

The Sustainable Community Strategy (*A Sustainable Community Strategy for Warwickshire August 2009 - March 2026*) has three themes (each of which has three outcomes). Relevant to this topic paper is the theme of people. This theme has the following outcomes:

- We belong to safe and strong communities where people get on together;
- We all live healthy, active and independent lives; and
- We all have the opportunity to enjoy and achieve.

There are a number of objectives and actions relevant to this theme including:

#### Tackling Inequality

- Address health inequality across Warwickshire through an emphasis on targeted and preventative work in areas of acute need.

#### Access

- Work in partnership with the private sector and the public to ensure that people have genuine access, choice and opportunity to engage in healthier lifestyles irrespective of geography and background.

The Local Area Agreement (LAA) is the key delivery plan for the Sustainable Community Strategy. It sets out the Government's and partners' priorities for Warwickshire and what will be tackled first. Success will be gauged by measuring success against indicators. Relevant indicators include:

- NI15: Most serious violent crime rate;
- NI 47 People killed or seriously injured in road traffic accidents;
- NI 56 Obesity in primary school age children in Year 6; and
- Local Indicator 8: Increase 5 a week physical activity.

<b>Table TP4.1: Safety: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
<b>International documents</b>	
<p>Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe</p> <p>Directive on Environmental Noise (2002/49/EC)</p> <p>World Health Organisation Guideline Values (WHO, 2006)</p>	<p>Air Quality Directive: Under the directive Member States are required to reduce exposure to various pollutants including PM2.5 and NOx by 2020</p> <p>Directive on Environmental Noise: Each Member State should determine exposure to environmental noise through noise mapping, ensure that information on environmental noise and its effects is made available to the public and to adopt action plans</p> <p>WHO Guidelines: Between 23.00 and 07.00 hours, noise levels should not exceed 30 dB LAeq to allow undisturbed sleep. Outdoor noise levels of 50 dB should not be exceeded between 07.00 and 23.00, in order to prevent people being 'moderately annoyed'</p>
<b>National documents</b>	
<p>Making the Case: Improving Health through Transport (Health Development Agency, 2005)</p> <p>The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. Working Together for Clean Air (DETR, 2000)</p> <p>PPG24: Planning and Noise (ODPM, 1994)</p>	<p>Making the Case: Improving Health through Transport: Transport can promote psychological wellbeing through access to education, employment, social networks and access to good quality food</p> <p>Air Quality Strategy: The Strategy sets objectives for eight main air pollutants to protect health. Performance against these objectives will be monitored where people are regularly present and might be exposed to air pollution. There are also two new objectives to protect vegetation and ecosystems. These will be monitored away from urban and industrial areas and motorways</p> <p>PPG24: Noise-sensitive developments should be located away from existing sources of significant noise (or programmed development such as new roads) and potentially noisy developments should be located in areas where noise will not be an important consideration / where it can be minimised</p>
<b>Regional documents</b>	
<p>West Midlands Health and Well-being Strategy (West Midlands Regional Health Partnership, January 2008)</p>	<p>West Midlands Health and Well-being Strategy: Priorities for action include encouraging transport planners to proactively consider the health impact of their policies and how they can contribute to reducing health inequalities; reduce social exclusion and promote independence by improving safe access to services by providing quality transport networks.</p>
<b>Local documents</b>	
No relevant documents	NA

### 3 The Influence of the LTP

It is important that the SEA is focused on how the LTP can influence environmental and sustainability conditions. In this way the most appropriate SEA objectives are selected and the most appropriate baseline data collected. The Local Transport Plan can influence safety, security and health in the following ways:

- Through improving the safety of road users, pedestrians and cyclists and **reducing the risk of death or injury**;
- Through making healthier modes of travel and **physical activity** more attractive / easier;
- Through improving **air quality** (by improving congestion / reducing traffic and persuading people to use more sustainable modes); and
- **Reducing crime** through improving the security of road users, pedestrians and cyclists and **improving security**.

### 4 Baseline Data

#### 4.1 Place Survey

Generally, Warwickshire is considered a safe place to live and visit. Crime levels are below the national average and have been falling during the past two years. However, there is often a mismatch between perception and reality, and the fear of crime can be high. According to the 2008/09 Place Survey, only 11% of residents feel very safe when out in their local area at night. Furthermore, one in six residents feels that anti-social behaviour is a problem in their local area.

Community cohesion remains a difficult phenomenon to measure. The recent Place Survey reports that 81% of residents feel people from different backgrounds get on well together in their local area. Despite this, only six in ten residents feel they belong to their neighbourhood.

#### 4.2 Crime and Transport Related Crime

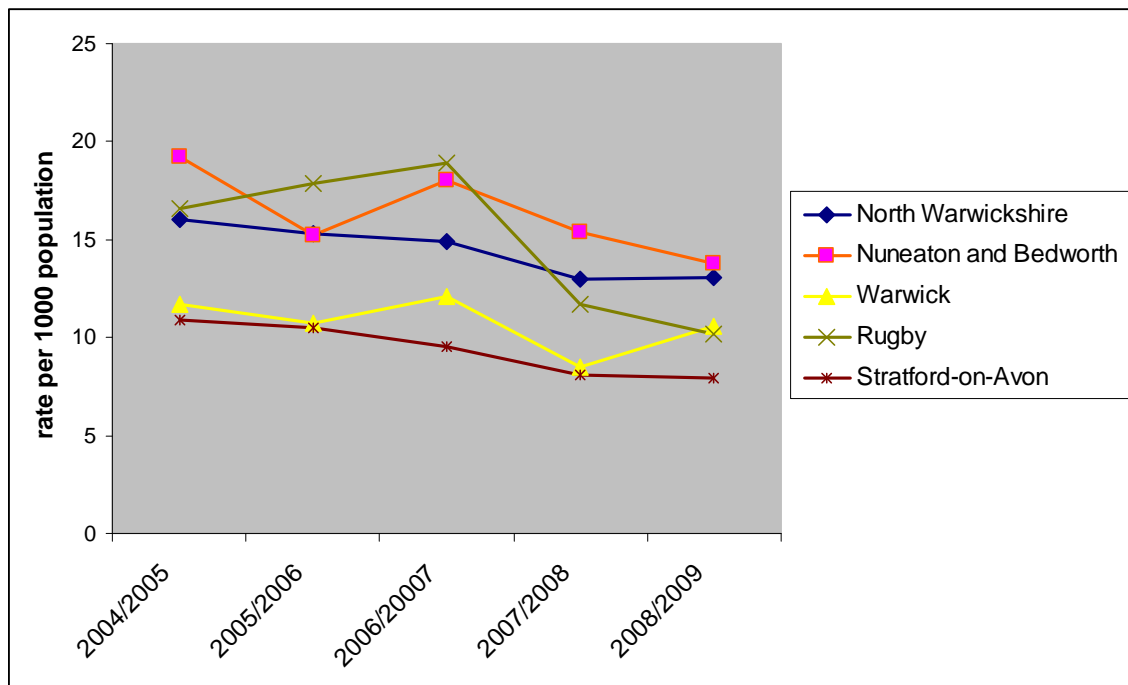
The Home Office have a web tool for interrogating crime data called Instant Atlas: (<http://www.homeoffice.gov.uk/rds/ia/atlas.html>). Data from this web tool is shown in Table TP4.2 for all the districts in Warwickshire.



**Table TP4.2: Total crime per 1000 population**

District/Borough	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009
North Warwickshire	73.7	78.5	76.3	67.5	63.7
Nuneaton and Bedworth	106.3	102.2	104.9	97.9	88.5
Warwick	77.9	74.4	79.4	70.4	72.1
Rugby	93.3	96.3	100.8	86.1	74.4
Stratford-on-Avon	61.9	63.5	62.8	58.8	53.6

As can be seen from Table TP4.2 total crime has been decreasing in all areas of the County. The Instant Atlas also includes data on offences against vehicles. Data for the period of 2004 – 2009 is shown in Figure TP4.1. Vehicle crime is also decreasing in all areas of the County.

**Figure TP4.1: Vehicle related crime (rate per 1000 population)**

(Source: <http://www.homeoffice.gov.uk/rds/ia/atlas.html>)

The Audit Commission publishes data on how safe people feel both in the day and after dark. Table TP4.3 shows these results for all the districts in Warwickshire.

<b>Table TP4.3: % of residents who feel safe (2006/2007)</b>			
<b>Indicator</b>	<b>2004/2005</b>	<b>2005/2006</b>	<b>2006/2007</b>
% of residents who say that they feel fairly safe or very safe during the day	97.3	97.2	98.5
% of residents who say that they feel fairly safe or very safe outside after dark	78.6	73.4	74.2

(Source: Audit Commission 2006/2007 (latest data available) see <http://www.areaprofiles.audit-commission.gov.uk>)

This compares to average UK figures as follows:

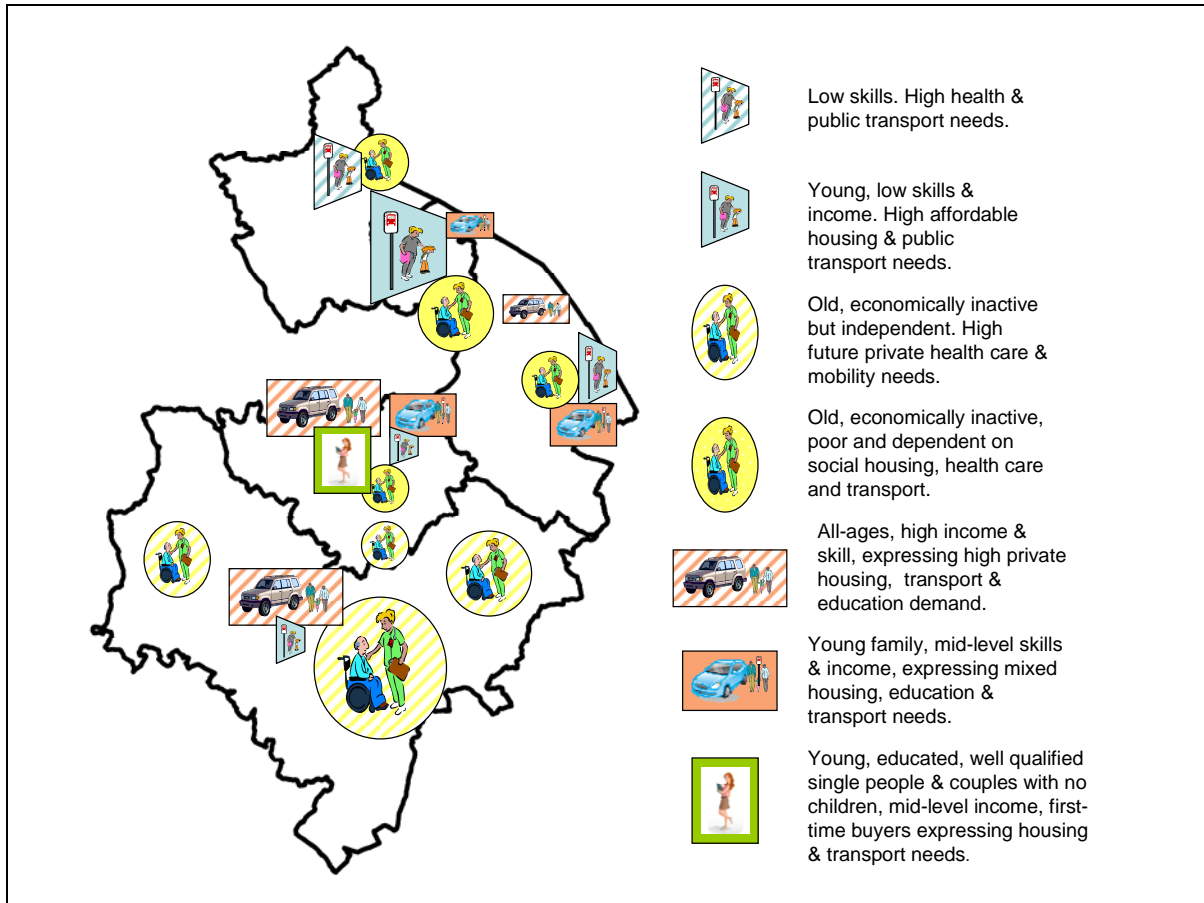
- 70.2 % of residents in 2006/2007 who say that they feel fairly safe or very safe outside after dark (down from 70.35% in 2003/04); and
- 97.24 % of residents in 2006/2007 who say that they feel fairly safe or very safe during the day (down from 97.48% in 2003/04).

People in Warwickshire generally feel safer than people in the UK as a whole in the day and after dark.

### 4.3 General Health Data

The data for this section of the report is taken from the Warwickshire Sustainable Community Strategy. According to the Sustainable Community Strategy, Warwickshire already performs well across most health indicators compared to the national average. Although life expectancy is above national trends, Warwickshire is facing an ageing population likely to experience chronic disease and disability. An ageing population brings increasing pressures, particularly in terms of adult social care and making effective links with other areas such as income maximisation, housing and support and dealing with climate variations (cold winters/hot summers). The latest information from the Warwickshire Health Improvement Monitoring Report for the first quarter of 2009/2010, reports that Warwickshire in the period of 2005-2007 has similar mortality rates compared to the whole of the West Midlands.

Figure TP4.2 shows the future health and social needs profile of different areas in Warwickshire. Please note that the size of each symbol provides an indication of the relative future change of that particular symbol.

**Figure 4.2: Future health and social needs profile**

(Source: Warwickshire blueprint work)

The increase in life expectancy has not translated into an increase in healthy life expectancy. Problems associated with poor diet and inadequate exercise have manifested themselves in a variety of ways and the prominence given to childhood obesity both masks the fact that as a society we are becoming more obese and highlights the importance of ensuring that children's health is tackled now to avoid problems in the future. Obesity is a particular problem for Warwickshire where the County's population is appearing high on regional league tables for adult obesity levels.

There are significant levels of mental ill health in the County across all age ranges – for example, in relation to children and young people. Currently services supporting young people with these issues are working with almost 2% of the school population aged 0-16 year.

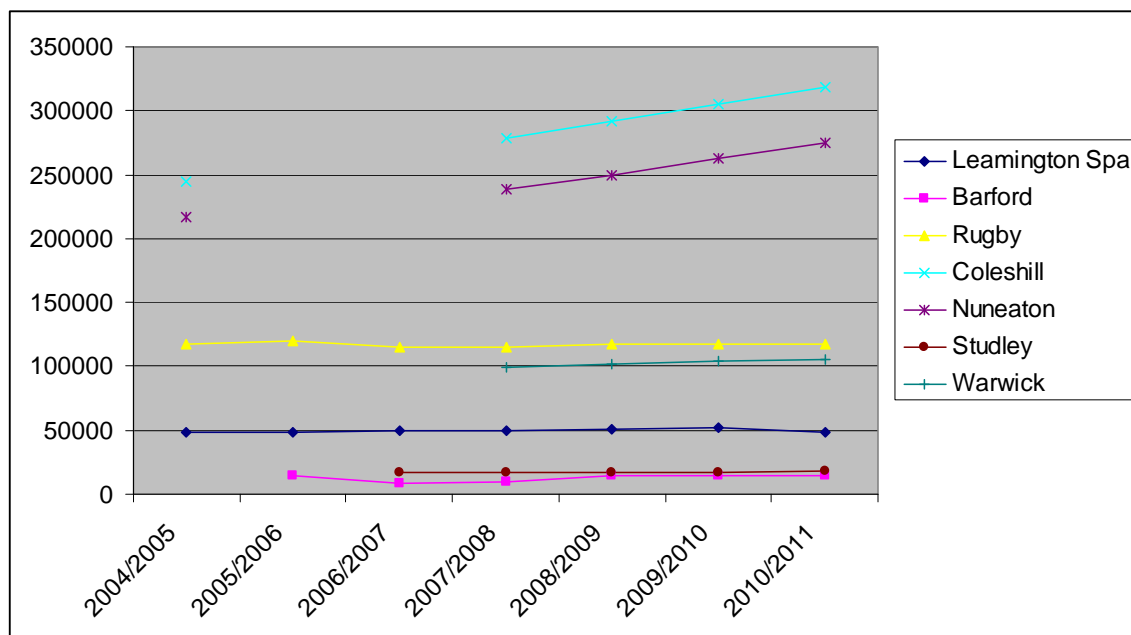
## 4.4 Air Quality Data

In the preparation of LTP2, Warwickshire local authorities produced a joint Air Quality Strategy. According to the Strategy air quality across the County is considered to be largely good. A number of Air Quality Management Areas (AQMAs) have been declared across the County; the declarations have identified transport as the most significant contributor to elevated air pollution levels. Table 4.4 details the AQMAs within Warwickshire Districts/Boroughs as well as any anticipated changes in the declarations as reported in the LTP2 2008-2009 Final Draft Progress Report and in the local authorities' most recent Air Quality reports.

The LTP Air Quality indicator (LTP8), included within the LTP2, refers to a reduction on the number of exceedences of the national air quality standards between 2005 and 2010. Additional targets include efforts towards retaining traffic volumes at 2004 levels in Nuneaton, Rugby, Warwick and Leamington Spa. An additional target has been set to ensure that air pollutant levels do not exceed standards where they previously have not.

Figure 4.3 presents progress with indicator LTP8 as reported in the LTP2 2008-2009 Final Draft Progress Report. The figure illustrates actual traffic flows for 2006/2007 in AQMAs and from 2008 onwards traffic flow projections (rather than actual data).

**Figure TP4.3 Traffic flows: actual and trajectories in Warwickshire**



As can be seen from Figure TP4.3, traffic levels have (and are set to) increase in Coleshill and Nuneaton. In the LTP2 progress report a number of major schemes have been implemented that impact the AQMAs. The A429 Barford bypass opened in 2007 and removed through-traffic from Barford village; as a result Warwick District Council has revoked the AQMA. Progress has been made in regards to public transport;

examples include the Atherstone railway improvements, the new Warwick bus station, the increase in bus information points and bus punctuality improvements (service X17). Cycling infrastructure projects are underway, specifically phase 1 of the Nuneaton cycle scheme, phase 2 of the Weddington Road cycle scheme and the extension of the Stratford upon Avon foot/cycleway. The A429 Coventry Road cycle scheme has completed one year of operation with monitoring data indicating an increase of 18% of cycle/walking patronage year on year.

<b>Table TP4.4 Air Quality Management Areas in Warwickshire</b>				
<b>Area</b>	<b>AQMA name</b>	<b>Pollutant of Concern</b>	<b>Description of AQMA</b>	<b>2008-2009 LTP PR / Local Authority Air Quality reports</b>
North Warwickshire	Coleshill	Nitrogen Dioxide	Stonebridge Road, Coleshill Road, M42 and M5 bound the AQMA	De trunking of the A446 has been implemented. New Target has been included
Nuneaton and Bedworth	Leicester Road Gyratory	Nitrogen Dioxide	Area of Nuneaton centred on the Leicester Road Gyratory system and incorporating sections of the Leicester, Old Hinckley and Weddington Roads	New AQMA declared during 2006/2007-2007/2008
	Midland Road to Corporation Street	Nitrogen Dioxide	Covers parts of the B4114 route including Midland Road, Central Avenue, Corporation Street and at the Manor Court Road junction	Proposed AQMA – Consultation completed in July 2009
Rugby	Rugby	Nitrogen Dioxide	Includes whole urban area of Rugby bounded by the southern boundary with Daventry DC, A5, M6, minor roads to the west of Long Lawford, A45 and M45.	No reliable data for 2007/2008 period due to the significant vehicle disruption by the Rugby Western Relief Road
Warwick	Leamington Spa	Nitrogen Dioxide	Junction of Bath Street, High Street and Clemet Street	No change reported. Traffic trajectory to 2011 expects decrease in flow.
	Warwick	Nitrogen Dioxide and PM <sub>10</sub>	Encompasses properties along High Street, Jury Street, Bowling Green Street, Theatre Street, Northgate, The Butts, Smith Street, Church St and part of Saltisford, and also including a number of nearby properties.	Amended in 2008 to include nine additional roads within Warwick
	Warwick Road	Nitrogen Dioxide	Encompasses all properties along Warwick Road, Kenilworth between the junctions with Station Road and Waverley Road.	No updated information available

Table TP4.4 Air Quality Management Areas in Warwickshire				
Area	AQMA name	Pollutant of Concern	Description of AQMA	2008-2009 LTP PR / Local Authority Air Quality reports
	New Street	Nitrogen Dioxide	An area encompassing all properties fronting New Street, Kenilworth from the junction with Bridge Street/Fieldgate Lane up to (and including) No. 17 New Street.	No updated information available
	Barford	Nitrogen Dioxide	An area runs along Bridge Street and Wellesbourne Road in the village of Barford	AQMA revoked
Stratford-on Avon	Strudley	Nitrogen Dioxide	An area encompassing part of Alcester Road, Studley.	New AQMA declared during 2007/2008

## 4.5 Health Facilities in Warwickshire

NHS Warwickshire was established in 2006, replacing the three former Primary Care Trusts, South Warwickshire, North Warwickshire and Rugby. There are ten hospitals in Warwickshire, five of which are community hospitals. These are listed in Table TP4.5

Table TP4.5 Hospitals in Warwickshire	
Local Authority	Name
Warwick District Council	Warwick Hospital
	Royal Leamington Spa Rehabilitation Hospital
Nuneaton and Bedworth Borough Council	George Elliot Hospital
	Breamcote Hospital
Rugby District Council	Hospital of St. Cross
Coventry City Council	University Hospitals Coventry and Warwickshire
Stratford-on-Avon Borough Council	Stratford Hospital
	Ellen Badger Hospital
	Nicol Unit

(Source: Warwickshire PCT: Your guide to local services)

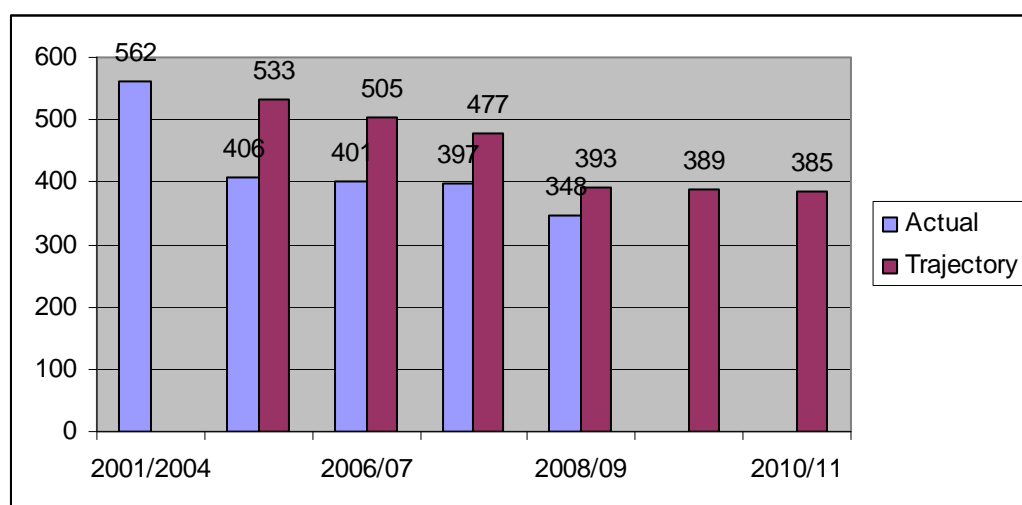
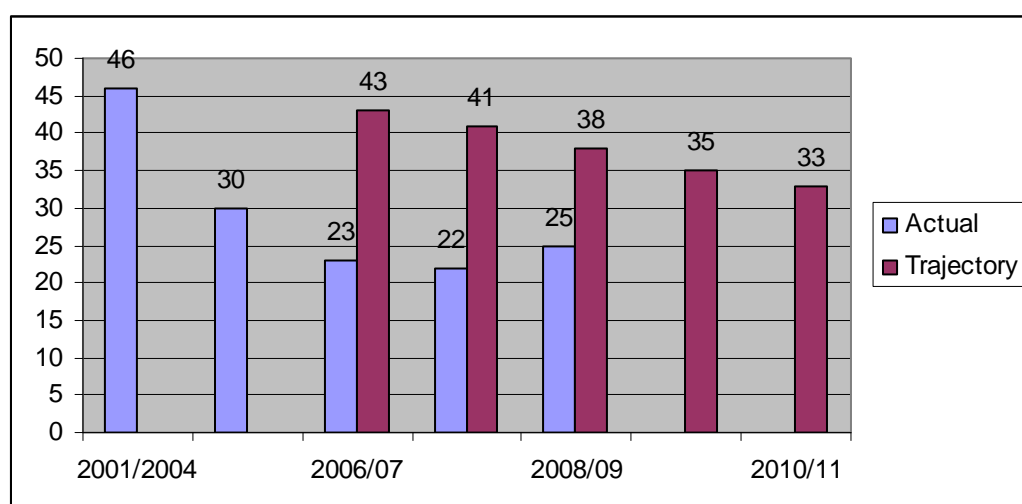
## 4.6 Road Safety

Road Safety is monitored by looking at the number of people killed or seriously injured (KSI) and the number of children killed or seriously injured. According to the latest data, total KSI accidents are performing well and are below target as are child KSI accidents. Child KSI accidents did increase in the last year. Due to excellent progress against the KSI target, the trajectory/target from 2008/09 onwards has been reviewed. The reviewed target figure equates to a 31% reduction on the 2001-2004 baseline and the council is now on track to meet the original 2010/11 target of 393 in 2008/09. The latest figures and comparison to the trajectory targets are presented in Figures TP4.4 and TP4.5.

One concern is the fact that national data has shown that children from the lowest social class are five times more likely than children from the highest social class to be killed as pedestrians (Making the Case: Improving Health through Transport (Health Development Agency, 2005). No data is available in Warwickshire to confirm these assertions.

The Warwickshire Road Safety Partnership forms a key initiative in working towards the road safety targets. The partnership has the following members – Warwickshire Police, Warwickshire County Council, the NHS, the Highways Agency and the Warwickshire Fire and Rescue Service. The Partnership uses a combination of engineering measures, encouragement, enforcement and education to progress its aims.



**Figure TP4.4: Total KSI casualties****Figure TP4.5: Total child KSI casualties**

An additional indicator reviews slight injuries on Warwickshire's roads. The target for this indicator has also declined faster than the target trajectory.

#### 4.7 Physical Fitness and Health in Warwickshire

The 2009 Health Profile for Warwickshire summarises progress with a collection of health indicators. Table TP2.6 summarises health indicator results for Warwickshire extracted from the 2009 Health Profile. As shown by Table TP4.6, 27% of the adult population in Warwickshire is considered obese, compared to national average of 23.6%. In addition, 10.7% of Warwickshire's adult population are physically active, compared to 10.8% in England.

**Table TP4.6: Health indicators for Warwickshire**

Indicator	Warwickshire	England
Physically Active adults <sup>1</sup>	10.7	10.8
Obese adults <sup>2</sup>	27.1	23.6
Physically active children <sup>3</sup>	90.7	90.0
Obese children <sup>4</sup>	8.0	9.6
<sup>1</sup> % aged 16+ 2007/2008		
<sup>2</sup> % direct estimate from the Health Survey for England 2003-2005		
<sup>3</sup> % 5-16 year olds who spend at least 2 hours per week on high quality PE and school sport 2007/2008		
<sup>4</sup> % of school children in reception year 2007/2008		

(Source: Warwickshire Observatory)

According to the 2009 Health Profile for Warwickshire, the percentage of children that are obese is lower than the national average. Table TP4.7 presents the latest available data on Children's Body Mass Index (BMI). As Table TP4.7 shows the % of obese and overweight children rises as they reach Year 6.

**Table TP4.7: Children's BMI (2007/2008)**

	Obese	Overweight
Reception year	8.0%	12.9%
Year 6	18.1%	13.5%

(Source: West Midlands Public Health Observatory)

According to the LTP2 Draft Progress Report, there has been an improvement in cycling and walking provisions and cycling trips have increased by 20% between 2004 and 2009 (LTP indicator LTP3 – cycling trips). There have been a number of initiatives on improving journeys to school, including School Travel Plans and the Walk Once a Week scheme. There are 24 schools that have Walk Once a Week schemes, and 50 schools that operate a Trophy scheme. According to the LTP2 draft PR, in 2008/2009 65% of all school children travel to school using sustainable modes, up from 63% in 2007/2008. During 2008/2009, 26 Safer Routes Schemes have been completed, including a new footpath through Stokington Recreation Ground in Nuneaton and a cycle route to North Leamington School.

## 5 Data Sources and Gaps

### 5.1 Data Sources

- Making the Case: Improving Health through Transport (Health Development Agency, 2005);
- 2001 census data;
- Health Profile 2009 Warwickshire (Department for Health, 2009);
- West Midlands Public Health Observatory (<http://www.wmpho.org.uk/>);
- Warwickshire Observatory (<http://www.warwickshireobservatory.org/>);
- Health Improvement Monitoring Report Q1 2009/2010 (NHS, 2009);
- Home Office Instant Atlas <http://www.homeoffice.gov.uk/rds/ia/atlas.html>;
- Audit Commission Area Profiles (<http://www.areaprofiles.audit-commission.gov.uk>);
- Warwickshire Public Service Board (2009): A Sustainable Community Strategy for Warwickshire August 2009 - March 2026;
- Health Improvement Monitoring Report for the first quarter of 2009/2010;
- LTP2 2008-2009 Final Draft Progress Report;
- Warwickshire PCT: Your guide to local services; and
- 2009 Health Profile for Warwickshire.

### 5.2 Data Gaps

No significant data gaps have been identified at this stage.

## 6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown below. These issues have been used to guide the selection of the SA Objectives that the plan will be assessed against.

- The population is ageing and this needs to be considered in the provision of services and transport
- Air quality across the County is considered to be largely good. Traffic is increasing in some of the AQMAs.
- Numbers of people killed or seriously injured (KSI) and the numbers of children killed or seriously injured are both decreasing. The council is now on track to meet the original KSI 2010/11 target of 393 in 2008/09.
- Obesity is a particular problem for Warwickshire where the County's population is appearing high on regional league tables for obesity levels. Numbers of children who

are obese is lower than the national average but the figures are still a cause for concern.

- 10.7% of Warwickshire's adult population are physically active, compared to 10.8% in England.

## 7 Suggested SEA Framework

The SEA objectives and indicators suggested for this topic are shown below. It is important that the SEA assesses whether the LTP is helping to achieve relevant targets. Therefore, where these have been found and are relevant to the LTP they have been built into the SEA indicators.

These objectives are based upon the DfT new NATA objectives (please see *TAG Unit: The Appraisal Process - consultation draft* on <http://www.dft.gov.uk/webtag/documents/project-manager/unit2.5c.php>) but amended to reflect local issues.

<b>Safety</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA indicator. Will the LTP...</b>
Reduce the risk of death or injury on the transport system?	<ul style="list-style-type: none"> <li>• Lead to a decrease in traffic accidents /accident severity and help to meet KSI targets (link to LAA indicator NI 47 on road accidents)?</li> </ul>
Make healthier modes of travel more attractive?	<ul style="list-style-type: none"> <li>• Increase walking and cycling to help increase the numbers of people regularly participating in physical activity (link to LAA local indicator 8 on increasing physical activity and NI156 on childhood obesity)?</li> </ul>
Reduce the impact of the transport system on air quality?	<ul style="list-style-type: none"> <li>• Cause any changes to traffic levels (particularly a change of over 10%) or the nature<sup>1</sup> of traffic past sensitive receptors (including AQMAs)?</li> </ul>
Improve the security of the transport system?	<ul style="list-style-type: none"> <li>• Make transport systems / interchanges more secure?</li> </ul> <p>(It will be important for this objective to consider equality issues (the DfT recommends analysing effects related to race, gender, disability, age, religion and sexual orientation if possible)).</p>

<sup>1</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 1 (Topic Paper 5:  
Quality of Life and the  
Natural Environment)

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:

**ENVIRON  
Birmingham, UK**



Date:

**May 2010**

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# 1 Introduction

This is Topic Paper 5 of the SEA Environmental Report of the Warwickshire Local Transport Plan 3. The topic paper addresses the potential issues of relevance to the Warwickshire Local Transport Plan (LTP) 3 which are related to the Government's National Transport Goal of:

## ***Improving quality of life and the natural environment***

There are four other Topic Papers that address:

- Topic Paper 1: Supporting economic growth;
- Topic Paper 2: Reducing carbon emissions;
- Topic Paper 3: Promoting equality of opportunity; and
- Topic Paper 4: Contributing to safety, security and health.

This paper sets out:

- The policy context that the LTP will need to address;
- The influence that the LTP can have on the issue highlighted;
- Review of available baseline data;
- Data gaps and sources of data;
- Sustainability issues identified and future trends; and
- Suggested SEA objectives.

## 2 Policy Context

Many plans and policies set the context for transport, some directly and some indirectly. These include the National Transport Goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. It is vital that the LTP directly helps to deliver the goals of these other strategies. As well as these key documents international and national legislation and the plans and policies of other organisations (or other departments within the council) can have an influence on how the LTP should develop.

A summary has been included below of the key documents that the LTP should help to deliver – the national transport goals, the Regional Spatial Strategy, the Sustainable Community Strategy and the Local Area Agreement. Table TP5.1 includes reviews of the other important policy documents that will influence the delivery of the LTP.

### 2.1 National Transport Goals

Developing a Sustainable Transport System (DfT, 2008) outlines five national transport goals:



- Supporting economic growth;
- Tackling climate change;
- Promoting equality of opportunity;
- Contribute to safety, security and health; and
- **Improve quality of life and promote a healthy natural environment.**

The quality of life goal in full reads:

***To improve quality of life for transport users and non-transport users, and to promote a healthy natural environment***

A number of key challenges are presented in the document. Relevant ones include:

- Future transport strategy should be based on packages of transport measures that actively enhance the environment and improve our quality of life; and
- Where new infrastructure is required, the government will seek solutions that mitigate unavoidable adverse impacts such as land-take and noise.

## **2.2 Regional Spatial Strategy (RSS)**

The latest version of the RSS is the *Draft West Midlands Regional Spatial Strategy Phase Two Revision - Draft Submission* (December 2007). An Examination in Public was held between 28th April – 24th June 2009 and the report of the Examination in Public Panel was published in September 2009 (*West Midlands Regional Spatial Strategy Phase Two Revision. Report of the Panel*, September 2009). The approach of the RSS to environmental issues (as represented by the Draft RSS and the Panel Report) is set out below (please note that where policies are included below these have been summarised).

**Policy QE1 – Conserving and Enhancing the Environment:** Agencies should support regeneration by restoring degraded areas, conserving assets and creating new high quality environments.

**Policy QE5 – Protection and Enhancement of the Historic Environment:** Strategies should protect, conserve and enhance the region's diverse historic environment including historic rural landscapes, urban settlements, listed buildings and other monuments/buildings, the historic transport network and strategic river corridors.

**Policy QE6 – Conservation, Enhancement and Restoration of the Region's landscapes:** Agencies should conserve, enhance and where necessary restore the quality, diversity and distinctiveness of landscape character.

**Policy QE7 – Protecting, Managing and Enhancing the Region's Biodiversity and Nature Conservation Resources:** Plans and programmes should encourage the maintenance and enhancement of the region's biodiversity resources.

**Policy QE9 – The Water Environment:** Development plans should protect or improve water quality including managing demand and supply, protecting wetland species and habitats and maintain and enhance waterway corridors.

**SR4: Improving Air Quality for Sensitive Ecosystems:** This policy directs local authorities into considering the impacts of new developments and increased traffic movements on all European sites and to adopt appropriate mitigation measures.

Please note that the spatial strategy of the RSS is described in Section 4.5 of Topic Paper 1.

## 2.3 Sustainable Community Strategy and Local Area Agreement

The Sustainable Community Strategy (*A Sustainable Community Strategy for Warwickshire August 2009 - March 2026*) has three themes, each of which has three outcomes. Relevant to this topic paper is the theme of places. This theme has the following outcomes:

- Our environment is clean, green and sustainable;
- Our housing is appropriate and affordable; and
- Our places are connected through transport, technology and services.

There are a number of objectives and actions relevant to this theme including:

### Tackling Inequality

- Ensure that appropriate linkages are made between a clean green environment and the extent to which people feel safe and are proud of their communities.

### Access

- Educate, enable and empower communities to reduce carbon emissions and improve recycling within their own communities. Work and plan together to provide genuine choice alternatives to the car as a means of travel.

### Sustainability

- Work together to reduce public sector carbon emissions and work with the private sector to ensure adaptation to climate change. Ensure that planning and provision of services (including housing growth) is managed effectively to balance current needs with future demands.

The Local Area Agreement (LAA) is the key delivery plan for the Sustainable Community Strategy. It sets out the Government's and partners' priorities for Warwickshire and what will be tackled first. Success will be gauged by measuring progress against indicators. Relevant indicators include:

- NI191: Residual household waste per head;
- NI195: Improved street and environmental cleanliness; and
- NI197: Improved local biodiversity – improve active management of local sites.

<b>Table TP5.1: Quality of life and the environment: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
<b>International documents</b>	
<p>Proposals for an EU Soil Framework Directive</p> <p>Waste Framework Directive (91/156/EEC)</p> <p>Water Framework Directive (2000/60/EC)</p> <p>Conservation of Natural Habitats and Wild Fauna &amp; Flora (Directive 92/43/EC) (the 'Habitats Directive') and the Council Directive 79/409/EEC on the conservation of wild birds (the 'Birds Directive')</p> <p>The Convention on Biological Diversity, Rio de Janeiro 1992</p> <p>European Landscape Convention (European Commission, 2000)</p>	<p>Proposals for an EU Soil Framework Directive: No applicable objectives or targets</p> <p>Waste Framework Directive: No applicable objectives or targets</p> <p>Water Framework Directive: Achievement of good ecological status and good surface water chemical status by 2015</p> <p>Directive 92/43/EC: Each Member State must prepare a national list of the best wildlife sites in order to form a European network of Sites of Community Importance (SCIs). Once adopted, these are designated by Member States as Special Areas of Conservation (SACs), and along with Special Protection Areas (SPAs) classified under the EC Birds Directive, form a network of protected areas known as Natura 2000. Plans and projects can only be permitted having ascertained no adverse effect on the integrity of these sites.</p> <p>Convention on Biological Diversity: To achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth.</p> <p>European Landscape Convention: Each member state agrees to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity and to establish, involve the public in the definition of, and implement landscape policies aimed at landscape protection, management and planning.</p>
<b>National documents</b>	

**Table TP5.1: Quality of life and the environment: General policy context**

Key documents	Objectives / targets and requirements relevant to the LTP
<p>A Draft Soil Strategy for England (Defra, 2008)</p> <p>Waste Strategy for England (Department for Environment, Food and Rural Affairs, 2007)</p> <p>Future Water - The Government's water strategy for England (2008)</p> <p>The Draft Flood and Water Management Bill (2009)</p>	<p>A Draft Soil Strategy for England: The key objective is to ensure that the construction industries and planning authorities ensure soils are able to fulfil as many as possible of their functions especially storing, transporting and filtering water</p> <p>Waste Strategy for England: Recycling and composting of household waste – at least 40% by 2010, 45% by 2015 and 50% by 2020; and recovery of municipal waste – 53% by 2010, 67% by 2015 and 75% by 2020</p> <p>Future Water: The Government's ambition is to reduce average consumption to 130 litre per head per day by 2030, or to as low as 120 litres per head per day depending on technological development and innovation</p> <p>Water Management Bill: The bill will ensure that county authorities should publish a flood risk action plan. This will need to address how to manage flooding from highways</p>
<p>Natural England, LTP and Rights of Way Improvement Plan (ROWIP) Integration. Good Practice Note (2009)</p> <p>Protected Landscapes: Draft Policy for Consultation (Natural England, 2009)</p>	<p>LTP and Rights of Way Improvement Plan Integration: Local authorities should be clear about how ROWIPs and LTPs relate to each other- their common themes, objectives and how the new LTP flexibilities enable pragmatic integration measures in the new plans and projects.</p> <p>Protected Landscapes: Draft Policy for Consultation: Partnership working is central to achieving the most effective representation, governance, management and delivery mechanisms for protected landscapes.</p>
<p>The Conservation (Natural Habitats &amp;c.) Regulations 1994 (amended 2009)</p> <p>Natural Environment and Rural Communities Act (Defra, 2006)</p> <p>Countryside and Rights of Way Act 2000 (CRoW)</p> <p>UK Biodiversity Action Plan (1994)</p> <p>Planning Policy Statement 9 – Biodiversity and Geological Conservation (2005)</p>	<p>Conservation (Natural Habitats &amp;c.) Regulations: Competent authorities i.e. any public body has a general duty, in the exercise of any of their functions, to have regard to the EC Habitats Directive. This includes the provisions for Habitat Regulations Assessment of any plan or project that could affect the integrity of a Natura 2000 site.</p> <p>Natural Environment and Rural Communities Act: Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.</p> <p>CRoW Act: The act provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases protection for SSSI and strengthens wildlife enforcement legislation, and provides for better management of AONB.</p>

<b>Table TP5.1: Quality of life and the environment: General policy context</b>	
<b>Key documents</b>	<b>Objectives / targets and requirements relevant to the LTP</b>
	<p>UK BAP: Conservation of biodiversity should be an integral part of Government programmes, policy and action and the precautionary principle should guide decisions.</p> <p>Working within the Grain of Nature: Ensure that biodiversity is embedded in all aspects of public policy.</p> <p>PPS9: Local authorities should make adequate provision for development/growth whilst ensuring effective conservation of wildlife and natural features and they should have regard to the relative significance of international, national, local and informal designations in considering the weight to be attached to nature conservation interests.</p>
<p>PPG15: Planning and the Historic Environment (1994) and PPG16: Archaeology and Planning (1990)</p> <p>Draft Heritage Protection Bill (Department for Culture, Media and Sport, 2008)</p> <p>The Historic Environment: A Force for Our Future (Department for Culture, Media and Sport, 2001)</p>	<p>PPS15 and 16: The protection of the historic environment needs to be taken into account in the formulation of authorities' planning policies. Plans should include policies for the protection, enhancement and preservation of sites of archaeological interest and of their settings. These are principles which can usefully be applied to LTPs.</p> <p>Draft Heritage Protection Bill: Sets out the legislative framework for a unified and simpler heritage protection system that will be more open, accountable and transparent. This could have a bearing on transport projects if they affect heritage assets.</p> <p>The Historic Environment: A Force for Our Future: This document has the objectives of the historic environment being accessible to everybody and protected and sustained for the benefit of our own and future generations.</p>
<b>Regional documents</b>	
<p>Draft West Midlands Regional Waste Management Strategy (West Midlands Regional Waste Planning Technical Group, November 2001)</p> <p>West Midlands Climate Change Action Plan (West Midlands Regional Assembly, December 2007)</p> <p>The West Midlands Historic Environment Strategy (West Midlands Historic Environment Forum, 2009)</p> <p>Streets for All West Midlands (English Heritage,</p>	<p>West Midlands Regional Waste Management Strategy: The draft Waste Management Strategy aims to review the facilities in the region and set targets for waste recycling and recovery and the reduction in dependence on landfill. In the draft Strategy it is proposed that the national targets are adopted for the West Midlands (see National Waste Strategy above).</p> <p>Climate Change Action Plan: Includes a priority to plan for low carbon, well-adapted sustainable communities with high quality green infrastructure and thriving biodiversity and sustainable transport and waste planning to deliver reduced emissions and resilience to climate change.</p> <p>The Historic Environment Strategy: No directly relevant objectives or targets.</p>

**Table TP5.1: Quality of life and the environment: General policy context**

Key documents	Objectives / targets and requirements relevant to the LTP
<p>2005)</p> <p>West Midlands Cultural Strategy 2001 – 2006 (Culture West Midlands, 2001)</p>	<p>Streets for All: The primary aim is to improve the appearance of public spaces by showing how practical solutions to common highway problems can be achieved and how good practice can become everyday practice. The underlying principles are to reduce clutter, co-ordinate design and to reinforce local character, whilst maintaining safety for all.</p> <p>The Cultural Strategy: Includes a priority to widen access to cultural activities and to promote more opportunities for people to take part in informal recreation and sport and including improving disability access. The Strategy also discusses the importance of quality of the public realm, townscapes, green spaces and parks, creating places that build on local distinctiveness, valuing the historic environment and improving quality of place for communities.</p>
Local documents	
<p>Warwickshire, Coventry and Solihull Local Biodiversity Action Plan</p> <p>Biodiversity Strategy: Working for Warwickshire's Wildlife (Warwickshire County Council, June 2006)</p> <p>Warwickshire Climate Change Strategy 'Thinking global, action local' (Warwickshire County Council, June 2006)</p> <p>Cotswolds AONB Management Plan 2008-13 (Cotswolds Conservation Board, 2008)</p> <p>Warwickshire's Waste Minimisation Strategy 2007-2015 (Warwickshire Waste Partnership, 2007)</p> <p>Warwickshire's Municipal Waste Management Strategy (Warwickshire Waste Partnership, 2005)</p> <p>Warwickshire Minerals Local Development Framework Minerals Core Strategy Revised Spatial Options (Warwickshire County Council, February 2009)</p>	<p>Warwickshire, Coventry and Solihull Local Biodiversity Action Plan: Aims to protect the characteristic wildlife and landscapes of the sub-region. The 5 key challenges of the Strategy are maintaining and improving the condition of habitats, species and ecosystems; developing and area based approach to restoring wildlife; monitoring the condition of habitats, species and ecosystems; re-connecting and integrating action for biodiversity with other environmental, social and economic activity; and coping with the impacts of climate change.</p> <p>Working for Warwickshire's Wildlife: The aim of the strategy is to work with partners to protect and enhance existing and future wildlife populations and habitats in Warwickshire, within a resilient landscape. The strategy will achieve this by increasing the amount of land and buildings positively managed for biodiversity, averting local extinction of species and reducing the number of species on the danger. Relevant objectives are, to ensure that WCC considers biodiversity in exercising all of its regulatory functions and management of the council's own estate.</p> <p>The Climate Change Strategy: Includes an objective to reduce greenhouse gas emissions through better waste management, including waste minimisation and increased recycling, more efficient use of resources and more environmentally aware procurement (including infrastructure).</p> <p>Cotswolds AONB Management Plan: Changing lifestyles and transportation have been identified as a force for change. The key issue is that the increasing demand for more reliable journey times between employment centres will lead to pressure for road widening and other 'improvement' schemes on major roads in the AONB.</p>

**Table TP5.1: Quality of life and the environment: General policy context**

Key documents	Objectives / targets and requirements relevant to the LTP
<p>Waste Development Framework Core Strategy Preferred Options and Proposals (Warwickshire County Council, 2006)</p>	<p>The Waste Minimisation Strategy: Sets out how waste growth will be reduced within the County and move towards more sustainable waste management practices. The Warwickshire Waste Partnership has set itself the challenging target of reducing waste by 10% to 2015.</p> <p>The Municipal Waste Management Strategy: The main aim of the strategy is to move up the waste hierarchy while reducing reliance on landfill. Some of the targets of the strategy are to aim to reach countywide targets of between 40-45% recycling by 2009/10; limit the amount of waste disposed of to landfill; and after maximising recycling treat residual waste using thermal treatment.</p> <p>The Warwickshire Minerals Core Strategy: The objectives of the Minerals Core Strategy include the following. To promote the use of recycled or secondary materials and promote waste minimisation to reduce the overall demand for primary mineral extraction; to minimise the impact of the movement of bulk materials by road on local communities and where possible encourage the use of alternative modes of transport; and to promote the use of locally extracted materials to encourage local distinctiveness and reduce transportation.</p> <p>The Warwickshire Waste Core Strategy: The objectives of the Core Strategy include helping to deliver sustainable development through driving waste management up the waste hierarchy; addressing waste as a resource and looking to disposal as the last option; and ensuring the design and layout of new development supports sustainable waste management.</p>



### 3 The Influence of the LTP

It is important that the SEA is focused on how the LTP can influence environmental and sustainability conditions. In this way the most appropriate SEA objectives are selected and the most appropriate baseline data collected. The Local Transport Plan can influence quality of life and the natural environment in the following ways:

- Through reducing the **noise** effects of the transport system (both on people and wildlife) and improving the **urban environment**;
- Through affecting **biodiversity**, the **water** environment, **cultural heritage** and **landscape** through introducing new traffic / routes into areas that are environmentally sensitive (i.e. through new transport routes directly causing noise pollution, habitat loss, fragmentation of habitats, changes to / visual effects on sensitive landscape areas, direct impacts on valued monuments, buildings and conservation areas) and / or through changing transport conditions on existing routes that can affect the environment. For example through increasing traffic and pollution/disturbance;
- Through improving people's **experience of travel**; and
- Through minimising the impact of the transport system on **soil and mineral resources**.

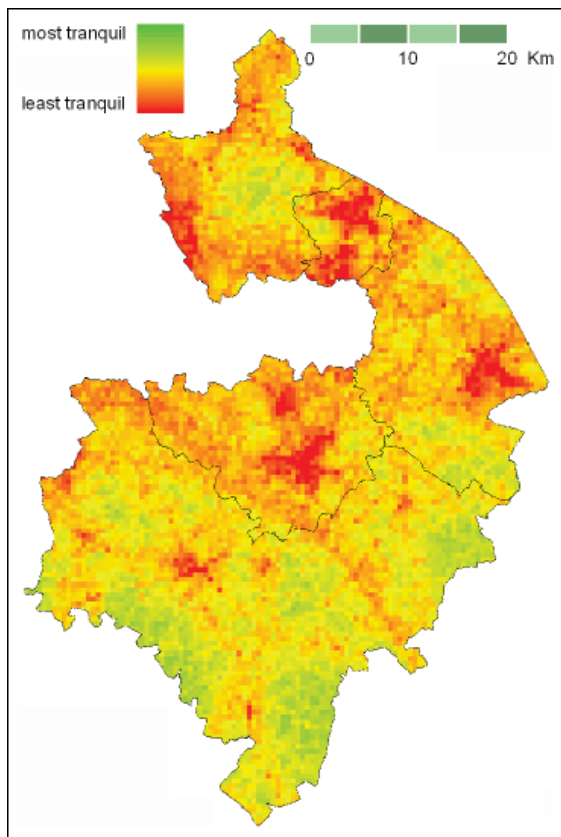
### 4 Baseline Data

#### 4.1 Noise

The European Environmental Noise Directive requires European Member States to establish through the process of noise mapping the number of people exposed to noise above certain levels from major roads, major railways, major airports and in agglomerations (large urban areas). Once these areas are mapped the Directive requires member states to adopt action plans to manage noise issues and effects, including noise reduction if necessary. The Department of Environment, Food and Rural Affairs (Defra) is currently in the process of mapping areas of the country that are most significantly affected by noise. When this data is available it will be added to the Environmental Report.

The Campaign to Protect Rural England (CPRE) has produced noise maps of tranquil areas which are shown in Figure TP5.1 below.



**Figure TP5.1: Tranquil Areas in Warwickshire**

(Crown copyright. All rights reserved. The Countryside Agency 2006. Licence No. 100018881)

(Source: CPRE <http://www.cpre.org.uk/campaigns/landscape/tranquillity/national-and-regional-tranquillity-maps/county-tranquillity-map-warwickshire>).

Each 500m by 500m square of England has been given a tranquillity score, based on 44 factors; these were then colour coded from dark green for those places most likely to make people feel tranquil to bright red for those least likely. Squares that may have the same colour may differ markedly in the different 'components', both positive and negative, which determine their overall score.

The average scores for all local authorities has been compiled from the map and ranged from +28.6 in Northumberland (the most tranquil) to -79.5 in Slough Unitary Authority. Warwickshire scored -12.0 and features 36<sup>th</sup> of 87 local authorities. Apart from London, the West Midlands region's tranquillity score (-64.4) is the lowest in England.

There is a scarcity of green tranquil areas within Warwickshire; both Warwick District and Nuneaton & Bedworth Borough fare particularly badly with only the south-western and south-eastern fringes of Stratford District, the southern part of Rugby Borough and the central area of North Warwickshire Borough that enjoy true peace and quiet.

The main transport corridors and built up areas can be easily recognised from the tranquillity maps in Figure TP5.1 and the situation can only worsen with the growth in road traffic,

increase in air traffic and the spread of towns and associated infrastructure into the countryside. (Source: Warwickshire Observatory).

## 4.2 Biodiversity

### 4.2.1 Regional Biodiversity and Natural Areas

Although the region has the second lowest coverage of semi-natural habitats in the country, due in part to having no coastline, it has nationally significant proportions of a number of habitats including 20% of England's lowland meadows and 9% of the country's remaining lowland heathland. The West Midlands is one of only two regions where the decline in key farmland bird species has not yet been halted. Some wetland birds such as lapwing, snipe and curlew are now restricted to a few sites across the region.

2% (28,000 ha) of the region is notified as SSSI, the lowest cover of any region, although by number (442) they account for 10% of all England's SSSI. As with the wider biodiversity resource within England they are fragmented and increasingly vulnerable to the effects of climate change.

The West Midlands is particularly important for woodland and wood pasture which are good for butterflies and is the most important region for traditional orchards which support a huge range of other invertebrates. The urban environment also enjoys a wide range of biodiversity, with birds such as black redstart and peregrine falcon increasingly found in urban areas (Source: Natural England [http://www.naturalengland.org.uk/regions/west\\_midlands/sone/default.aspx](http://www.naturalengland.org.uk/regions/west_midlands/sone/default.aspx)).

There are five main priority habitats in the region:

- Lowland meadows;
- Lowland dry acid grassland;
- Lowland wood pasture and parkland;
- Lowland heathland; and
- Arable land.

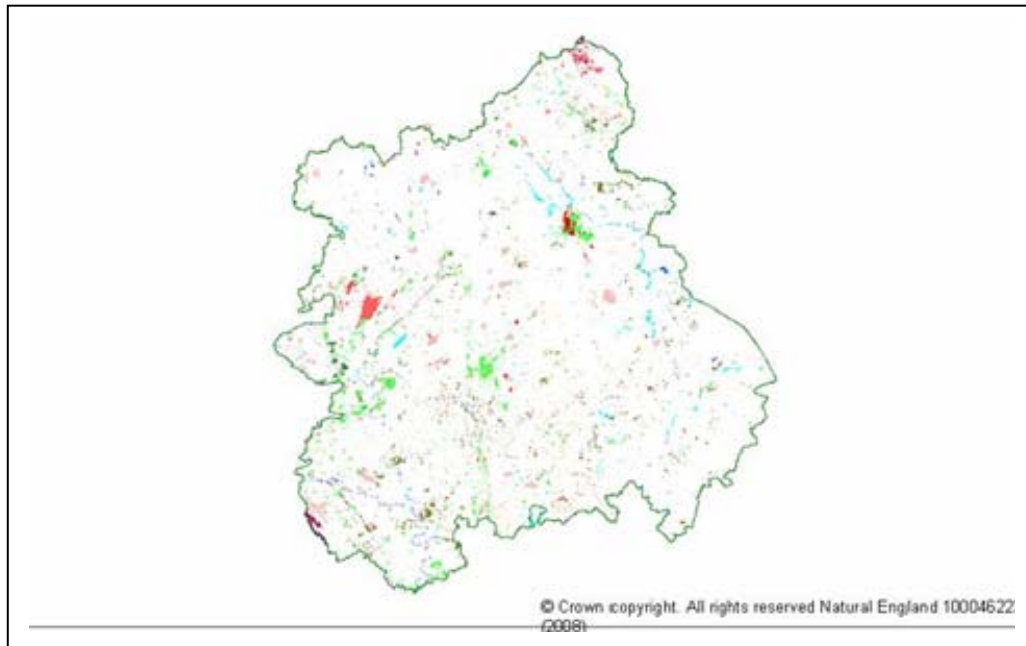
There are as many as a 136 priority species in the region that need immediate and well-managed conservation action. Examples of priority species include:

- Mammals: Lesser horse-shoe bat;
- Birds: Corn bunting;
- Fishes: Allis shad;
- Amphibians: Great crested newt;
- Plants: Early gentian; and
- Invertebrates: Violet click beetle.

(Source: Environment Agency website)

The Regional Habitat Data Project is a project managed by the West Midlands Biodiversity Partnership (WMBP) which aims to create a reliable spatial representation of all known priority BAP habitat across the West Midlands region. The Regional Habitat Data Project aims to validate GIS datasets held by Natural England (the national habitat inventory). The initial GIS data set is shown in Figure TP5.2.

**Figure TP5.2: BAP Habitats in the West Midlands Region**



(Source: West Midlands Biodiversity Partnership website)

Figure TP5.2 shows a wide distribution of BAP habitats in the West Midlands, many of which are small in size. However, there are concentrations in some parts of the region.

The next step in this project is to ensure that initial GIS layer is completed with all existing data sets translated and gaps in data identified. Once this work is completed the GIS will provide a sound evidence base for future strategic planning within the region.

A Regional Biodiversity Audit was undertaken in 2001. This now needs to be updated, but the conclusions of the 2001 audit were as follows:

- The audit showed that the West Midlands contain 21 of the 26 priority wildlife habitats and one quarter of the 526 priority species identified in the UKBAP. This species and habitat diversity reflects the variety of the Region's natural assets, including upland moorland, woodlands, heathlands, grassland, river floodplain and extensive areas of arable and pastoral farmland.
- The status and population trends of a subset of the region's UK priority species are an urgent concern. Several species occur in very few (and sometimes unprotected) localities, e.g. tassel stonewort, are in severe decline, e.g. pearl-bordered fritillary, or are now locally extinct, e.g. pillwort in Shropshire. Others are recently lost from the region, e.g. marsh warbler and black grouse, or await confirmation of this fact, e.g. buttoned snout moth. The most vulnerable species usually have special and restricted

habitat needs but others are in fast decline over large areas of typical countryside, such as corn bunting on arable farmland.

(Source: West Midlands Biodiversity Partnership website)

A comprehensive list of targets for habitats has been developed for the region. The targets are presented in Table TP5.3. These are currently being updated as a part of the review of the RSS. Table TP5.2 presents progress on Warwickshire Local BAP targets in 2007.

**Table TP5.3: Progress on Local Biodiversity Action Plan targets, 2007**

Habitat Action Plans	Progress	Change in Land Cover	Species Action Plans	Progress
Allotments	↔	Loss	Adder	↓
Canals	↑	No data	Argent & Sable Moth	↔
Churchyards & Cemeteries	↑	No data	Barn Owl	↑
Disused Industrial & Railway Land	↓	No data	Bats	↔
Fen & Swamp	↔	No change	Bittern	↔
Field Margins	↑	Increase	Black Poplar	↑
Gardens	↔	No data	Bloody-nosed Beetle	↑
Hedgerows	↔	No data	Chalk Carpet Moth	↑
Lowland Acid Grassland	↔	No change	Common Dormouse	↓↓
Lowland Calcareous Grassland	↑	No change	Cuckoo Bee	↑
Lowland Heathland	↔	Loss	Dingy Skipper Butterfly	↑
Lowland Neutral Grassland	↑ **	Loss**	Dotted Bee-fly	↑
Parks & Public Open Spaces	↑	No data	Farmland Birds	↔
Ponds, Lakes & Reservoirs	↔	Loss	Great Crested Newt	Slight ↓
Quarries & Gravel Pits	↑	Loss	Lapwing	↓
Reedbeds	↑	No change	Leaf-rolling Weevil	↑
Rivers & Streams	↓	No change	Otter	↑
Roadside Verges	↓	No data	Rare Bumblebees	↑

**Table TP5.3: Progress on Local Biodiversity Action Plan targets, 2007**

<b>Habitat Action Plans</b>	<b>Progress</b>	<b>Change in Land Cover</b>	<b>Species Action Plans</b>	<b>Progress</b>
School Grounds	↓	No data	Red Wood Ant	Slight ↑
Scrub & Carr	↓	Loss	Scarce Arable Plants	↑
The Built Environment	↔	No data	Small Blue Butterfly	↑
<b>Traditional Orchards</b>	↑	Increase	Snipe	↓
<b>Woodlands</b>	↑	Increase	Song Thrush	↑
<b>Wood-pasture, Parkland &amp;</b>	↔	No data	Water Vole	↓
<b>Veteran Trees</b>			White-clawed Crayfish	↓
			Wood White Butterfly	↑

Notes: Change of land cover - as recorded by the Habitat Biodiversity Audit between 2001 and 2006. **UKHAPs and UKSAPs are highlighted in bold**

\*\* Discrepancy between overall progress & land cover change on the Lowland Neutral Grassland plan is due to the reporting on actions in 2005 preceding the Audit.

(Source: LBAP co-ordinator, Warwickshire County Council. Table obtained from the Warwickshire Observatory)

<b>Table TP5.2: Regional priority habitat targets</b>			
<b>Habitat Type</b>	<b>Target for Protection</b>	<b>Target for Restoration</b>	<b>Target for Re-creation</b>
Upland oakwood	Maintain all examples	450ha by 2010	350ha by 2010
Lowland beech and yew woodland	Maintain all examples	No present target	No present target
Upland mixed ashwood	Maintain all examples	250ha by 2015	35ha by 2015
Wet woodland	Maintain current 627ha	25ha by 2015	370ha by 2015
Lowland wood pasture and parkland	Maintain current 2,581ha	250ha by 2010	Initiate 20 sites by 2005
Lowland oak and mixed deciduous woodland	Maintain all examples	1,700ha by 2020	1,700ha by 2020
Ancient and/ or species-rich hedgerows	Maintain all examples	50% by 2010 100% by 2010	No present target
Cereal field margins	Full extent unknown	1,000ha by 2010	No present target
Floodplain grazing marsh	Maintain current 4,898ha	250ha by 2010	40ha by 2010
Lowland meadows and pastures	Maintain current 1,553ha	30% by 2005 and 100% by 2015	30ha by 2010
Upland hay meadows	Maintain all examples	No present target	No present target
Lowland calcareous grassland	Maintain current 367ha	30% by 2005, 100% by 2015	20ha by 2010
Upland calcareous grassland	Maintain current 72ha	75% by 2005	5 - 10ha by 2005
Lowland dry acid grassland	Maintain current 755ha	30% by 2005, 100% by 2015	50ha by 2010
Upland heathland	Maintain current 3,726ha	300ha by 2015	190ha by 2010
Lowland heathland	Maintain current 2,987ha	Improve condition of all existing sites by 2010	300ha by 2005
Purple moor grass and rush pastures	Maintain all examples	30% by 2005, 100% by 2015	20ha by 2010
Fens	Maintain current 180ha	Improve quality of degraded sites by 2015	No present target

<b>Table TP5.2: Regional priority habitat targets</b>			
<b>Habitat Type</b>	<b>Target for Protection</b>	<b>Target for Restoration</b>	<b>Target for Re-creation</b>
Reedbeds	Maintain current 33ha	70ha by 2010	50ha by 2010
Lowland raised bog	Maintain current 451ha of raised bog sites and intact bog	Improve condition of degraded sites by 2005	No present target
Blanket bog	Maintain all examples	1,670ha by 2015	No present target
Mesotrophic lakes	Maintain all examples	No present target	No present target
Eutrophic standing waters	Maintain current 234ha	No present target	No present target
<b>Regionally important landscape features</b>			
Rivers and streams	Maintain 822kms of main river	No present target	No present target
Standing open waters, ponds and canals	Maintain current 4,565ha and 1,585kms of canal	No present target	No present target
Hedgerows	Unknown	No present target	No present target
Small woodlands	Unknown	No present target	No present target
<b>Nature conservation targets in towns and cities</b>			
Built up areas and gardens	Maintain current 8,444ha	Government-endorsed English Nature standards for accessible natural greenspace (ODPM September 2002): - a greenspace of at least 2ha <300m from home – a Local Nature reserve provision at a minimum of 1ha per thousand population – at least one greenspace of 20 ha within 2km of home, one 100ha site within 5km home, and one 500ha site within 10km of home.	

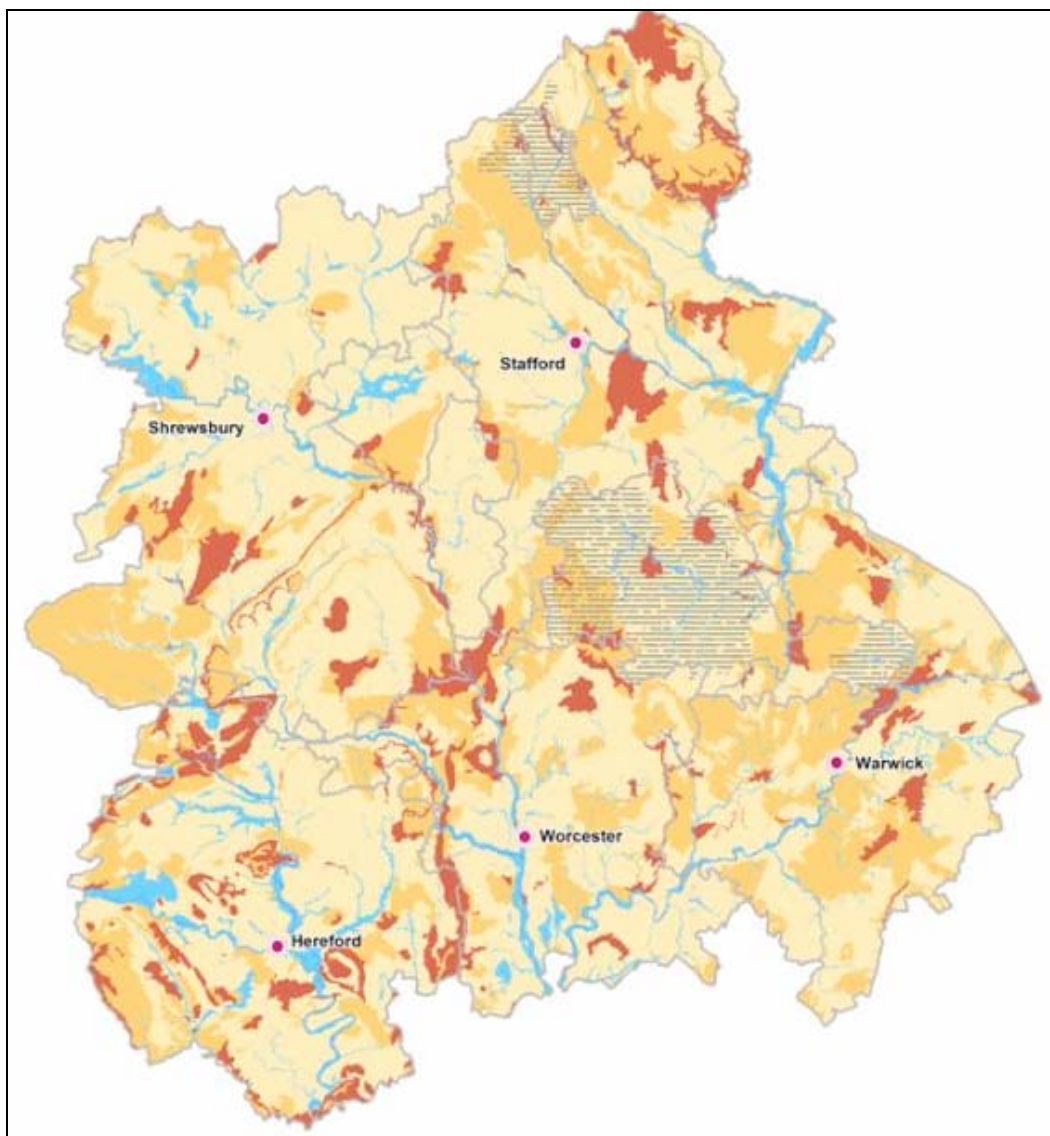
(Source: Restoring the Region's Wildlife Regional Biodiversity Strategy for the West Midlands, West Midlands Biodiversity Partnership, 2005)

The Living Landscapes project is another useful regional source of data on biodiversity. This project is run by the West Midlands Biodiversity Partnership. The project has produced a West Midlands Regional Biodiversity Map and this is shown in Figure TP5.3. The zones range from zone 1 (the darkest colour) to zone 3 (the lightest). The definition of the zones is below:

- Zone 1: Large interconnected landscapes rich in biodiversity and providing life-supporting ecological networks;
- Zone 2: Extensive areas of habitat linking and buffering other areas and supporting multiple needs; and
- Zone 3: Generally smaller, more isolated areas of habitat, often in highly modified landscapes, supporting mixed uses and providing ecosystem services.

The project is also currently mapping biodiversity enhancement areas. However, these maps are not available as yet so have not been included in this report.



**Figure TP5.3: Biodiversity Opportunity Mapping**

(Source: West Midlands Biodiversity Partnership and Natural England: Enhancing Biodiversity Across the West Midlands).

### 4.3 Adapting Biodiversity to Climate Change

In 2006 the West Midlands Biodiversity Partnership established a joint sub-group with the Climate Change Partnership run by Sustainability West Midlands. After reviewing the available evidence the sub-group concluded that the likely effects of climate change on biodiversity in the West Midlands are as follows:

- Changes in distribution of species (loss of species at southerly edge of distribution, spread of species at northern edge of distribution including pests/diseases);
- Changes in species composition of habitats (favouring more adaptable species);
- Effects of drier/hotter summers (lack of water to support wetlands, water quality and temperature problems due to low dilution, low flows reducing aquatic habitat, fire risk, urban heat island effects);

- Effects of wetter/warmer winters (increased flooding of wet grassland, migratory birds moving north and east);
- Effects of seasonal/phenological changes (longer growing season, flowers/pollinators and predator young/prey out of phase); and
- Land use changes (novel crops, management changes).

The sub-group has developed a draft set of adaptation principles which it intends to promote. These are shown below

#### **West Midlands Biodiversity Partnership Climate Change Adaptation Principles**

- 1. Develop Ecologically Resilient Landscapes**
  - 1a Conserve and Enhance Variation within the Landscape
  - 1b Make Space for the Natural Development of Rivers
  - 1c Establish Ecological Networks
- 2. Conserve the Habitat and Species Baseline**
  - 2a Conserve Protected Areas
  - 2b Conserve Range and Ecological Variability of Habitats and Species
- 3. Reduce Sources of Harm not Linked to Climate**
- 4. Make Sound Decisions based on Analysis**
  - 4a Thoroughly Analyse Causes of Change
  - 4b Set Up and Implement Monitoring Systems
  - 4c Use Adaptive Conservation Targets and Priorities
- 5. Communicate Issues**

(Source: West Midlands Biodiversity Partnership website)

### **4.3.1 Biodiversity Audit for Warwickshire**

The Habitat Biodiversity Audit for Warwickshire is a partnership of all the local authorities in the area, Natural England, the Environment Agency and the Warwickshire Wildlife Trust. . The project has culminated in the classification of every land parcel and the production of alert maps showing areas of potential interest. Contact has been made with Warwickshire County Council regarding this data but no data has been obtained. In reality the level of detail presented in these maps is likely to be too detailed for the level of assessment the SEA will be undertaking.

### **4.3.2 Internationally Designated Sites**

Under the Conservation (Natural Habitats &c.) Regulations 1994 (as amended 2007), Warwickshire County Council, as the 'competent authority' under the Regulations, is required to assess its LTP through the Habitat Regulations Assessment (HRA) process as policies and transport projects in the plan can potentially affect Natura 2000 sites. Warwickshire County Council will be undertaking a HRA screening assessment and a

separate HRA screening report will be produced shortly which will draw on the data provided here. Natura 2000 sites consist of site designated as:

- Special Areas of Conservation (SAC). These are designated due to the presence of habitats, listed in Annex I, and species, listed in Annex II of the Habitats Directive (92/43/EEC); and/or
- Special Protection Areas (SPA). These are designated for bird species listed under Article 4 of the Birds Directive (79/409/EEC).

In addition, Ramsar sites are internationally important wetland sites that have been designated under the Ramsar Convention on Wetlands 1971. Under Government policy, as set out in Planning Policy Statement 9: Biodiversity and Geological Conservation, they are to be treated as Natura 2000 sites.

Ensor's Pool SAC is the only European designated site located within Warwickshire. The following European designated sites are within 15km of the Warwickshire boundary:

- Bredon Hill SAC;
- Cannock Extension Canal SAC;
- Lyppard Grange Ponds SAC; and
- River Mease SAC.

Table TP5.4 presents the conservation objectives for each of these European designated sites.

<b>Table TP5.4: Conservation objectives of Natura 2000 sites in and within 15km of Warwickshire</b>	
<b>European designated site</b>	<b>Conservation Objectives</b>
<b>European designated sites within Warwickshire</b>	
Ensor's Pool SAC	To maintain*, in favourable condition, the habitat for the population of White-clawed crayfish ( <i>Austropotamobius pallipes</i> )
<b>European designated sites within 15km of the Warwickshire Boundary</b>	
Bredon Hill SAC	Conservation objective for the European interest on the SSSI is to maintain*, in favourable condition, the habitats for <i>Limoniscus violaceus</i> , with particular reference to wood-pasture and ancient ash woodland.
Cannock Extension Canal SAC	Conservation objective for the European interest on the SSSI is, subject to natural change, to maintain*, in favourable condition, the habitat for the internationally important population of Floating Water Plantain ( <i>Luronium natans</i> ), with particular reference to the standing open water.
Lyppard Grange Ponds SAC	Conservation objective for the European interest on the SSSI is to maintain*, in favourable condition, the habitats for the population of Great crested newt ( <i>Triturus cristatus</i> )
River Mease SAC	Conservation objective for the European interest on the SSSI is to maintain*, in favourable condition, the habitats for the population of: <ul style="list-style-type: none"> <li>• Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation</li> </ul>

**Table TP5.4: Conservation objectives of Natura 2000 sites in and within 15km of Warwickshire**

European designated site	Conservation Objectives
	<ul style="list-style-type: none"> <li>• Spine Loach (<i>Cobitis taenia</i>)</li> <li>• Bullhead (<i>Cottus gobio</i>)</li> <li>• White Clawed Crayfish (<i>Austropotamobius pallipes</i>)</li> <li>• Otter (<i>Lutra lutra</i>)</li> </ul>

\* maintenance implies restoration if the feature is not currently in a favourable condition.

(Source: Habitats Regulation Assessment - Screening Report for Minerals and Waste Development Frameworks (Warwickshire County Council, no date provided))

Some of the general types of issues that may be of relevance to a LTP are:

- Where new road schemes are proposed (or in some cases just changes in management such as an increase in lighting), screening will be needed to ensure that no effects are likely. This will include direct land take and fragmentation of habitats and also indirect effects on species and habitats. Other examples could include changing the hydrology of an area through building a new road;
- Some sites are dependent on limiting the amount of recreation that occurs due to direct habitat effects, (erosion etc), or due to disturbance of particular species. Screening would need to address whether the LTP will improve accessibility to these areas;
- Some sites are particularly vulnerable to atmospheric deposition of nitrogen or dust. Screening will need to address whether the LTP will result in increased traffic (and nitrogen deposition or dust – if even only temporarily) past relevant sites; and
- Some sites are vulnerable to pollution from run off. Screening will need to address drainage systems and address whether the LTP will result in increased traffic (and run off) that affects designated sites.

The screening assessment will assess whether any of these conditions apply to the sites above and whether there is a risk of the LTP introducing conditions that could affect the conservation objectives and integrity of the sites.

### 4.3.3 Nationally Designated Sites

#### Sites of Special Scientific Interest

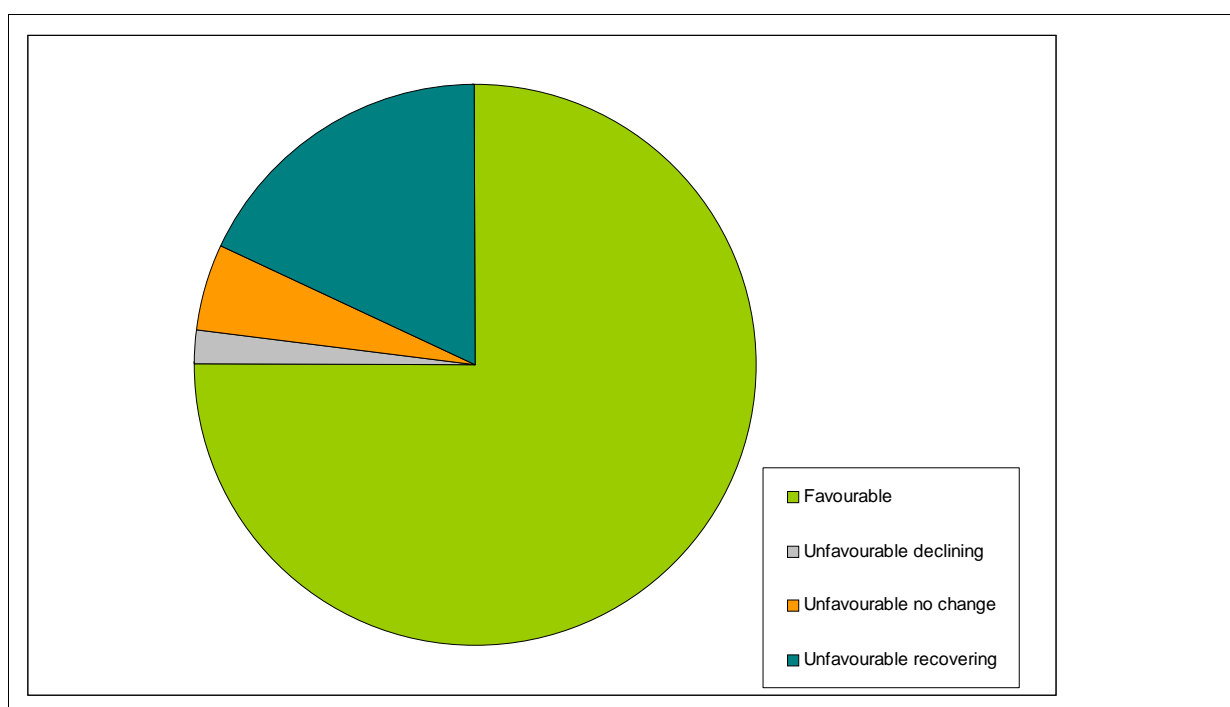
Sites of Special Scientific Interest (SSSI) are the country's best wildlife and geological sites. SSSI are important as they support plants and animals that find it more difficult to survive in the wider countryside. Protecting and managing SSSI is a shared responsibility, and an investment for the benefit of future generations.

There are 62 SSSI in Warwickshire. These are sub divided into 99 units and total 1,351 hectares in area (0.7% of the County's total land area). The County's largest SSSI is Bentley Park Wood in North Warwickshire with an area of 105 hectares. Across the districts, more

than half of the SSSI in Warwickshire are located in Stratford-on-Avon District, although a third of the land area lies in North Warwickshire. Rugby District has 6 SSSI, accounting for nearly a fifth of the land area; Warwick and Nuneaton & Bedworth each account for only 1% of the land area, with 6 and 2 sites, respectively.

The chart below shows the condition of Warwickshire SSSI as a percentage of their total area. The figures exclude those units of cross-boundary sites that fall outside the County, for example the Staffordshire unit of Alvecote Pools, but include Warwickshire's units of the River Blythe SSSI outside Solihull.

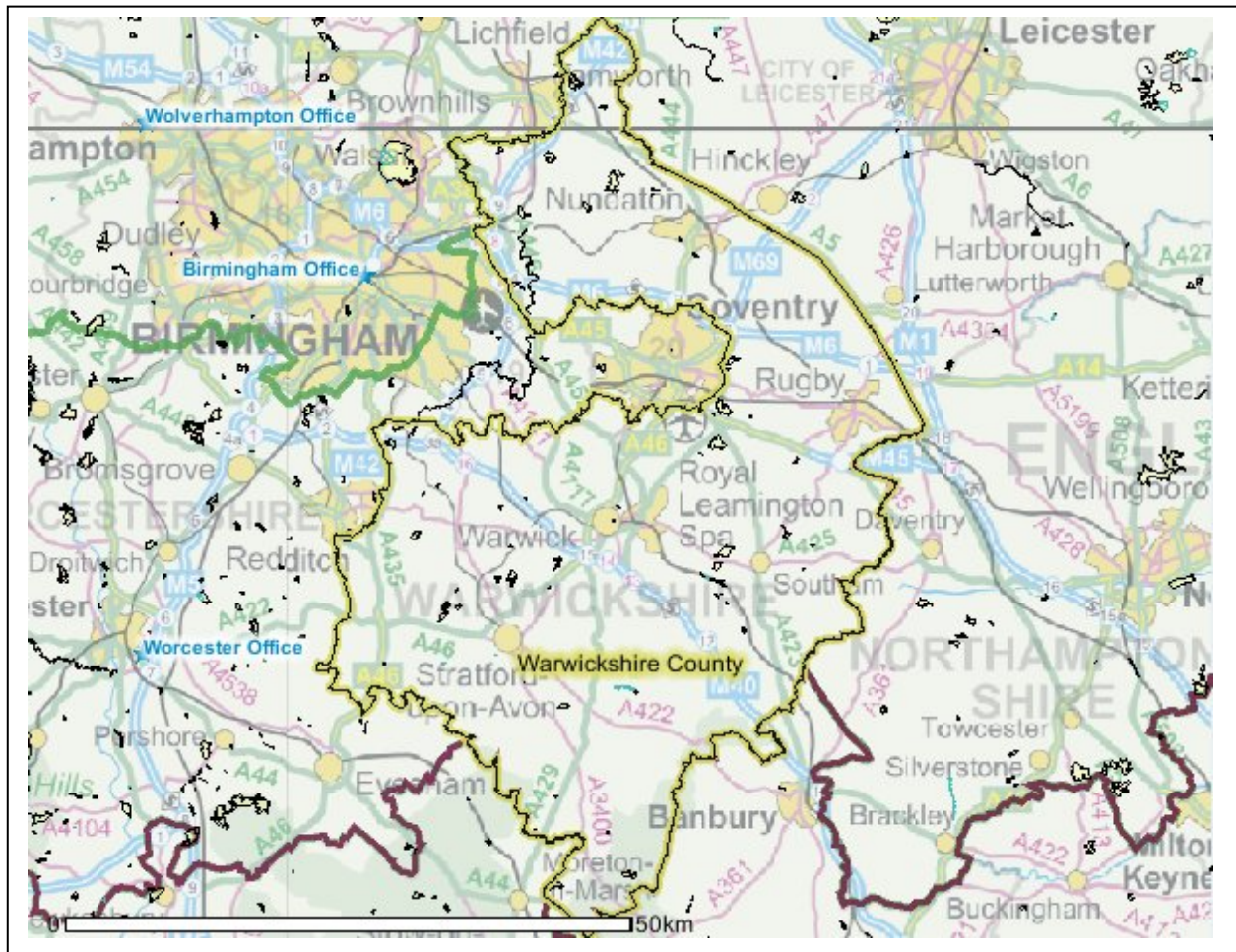
**Figure TP5.4: Warwickshire SSSI Condition (data compiled 2009)**



(Source: Natural England website)

Figure TP5.4 shows that 75% of the SSSI component sites within Warwickshire are in a favourable condition, but 25% are in an unfavourable condition (declining, no change or recovering). The distribution of SSSI in Warwickshire is shown in Figure TP5.5.



**Figure TP5.5: SSSI in Warwickshire**

(Source: Nature on the Map © Crown Copyright and database right 2008. All rights reserved. Ordnance Survey Licence number 100022021. © Crown copyright. Licence number 100022432)

#### 4.3.4 Locally Designated Sites

##### Local Nature Reserves

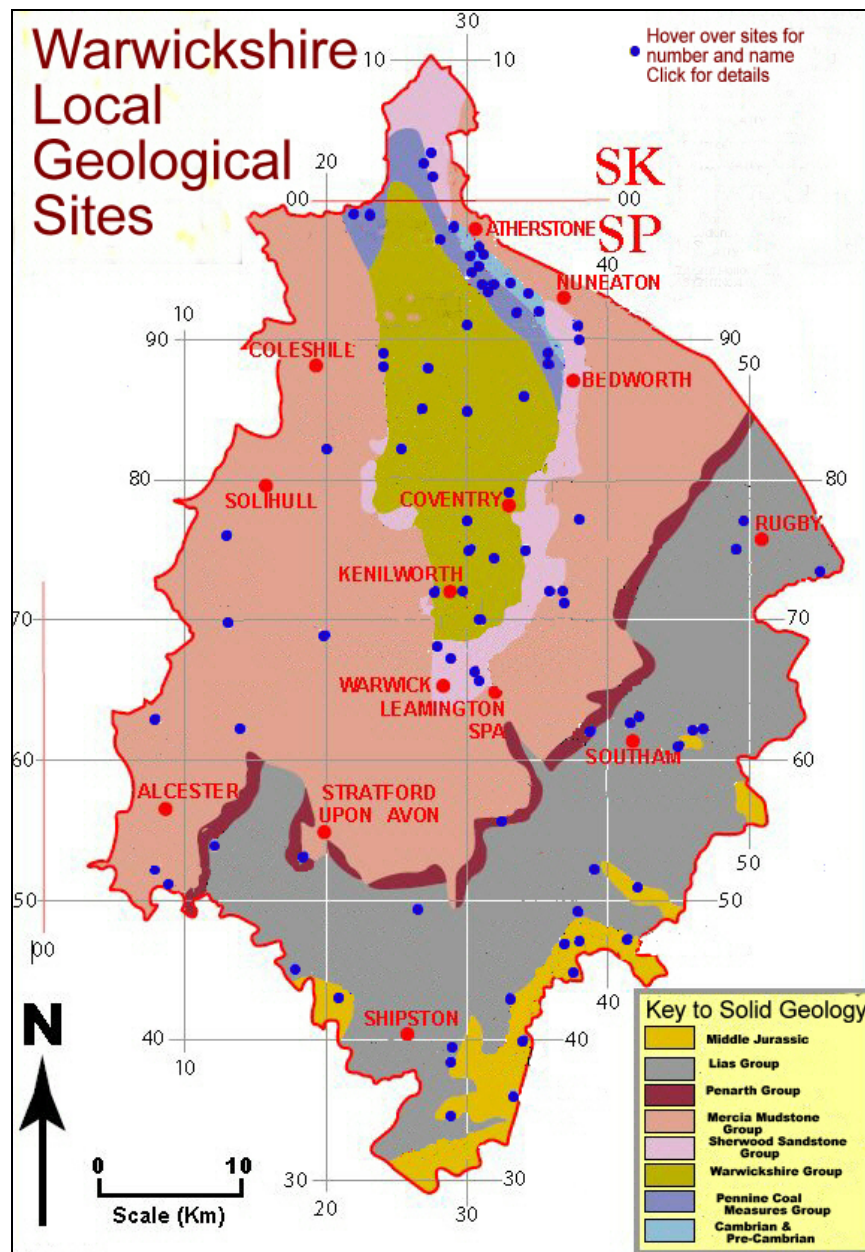
There are currently 19 Local Nature Reserves in Warwickshire. They range in size from under one hectare to over sixty hectares. Three of them incorporate areas designated as SSSI and one includes area designated as a SAC. Altogether they cover 274 hectares, or 0.14% of the total land area of the County, which represents 0.52 hectares per 1,000 population. The extent of LNRs in Warwickshire remains below the target of one hectare per 1,000 population, but compares well with the majority of authorities in the West Midlands. There are no National Nature reserves in Warwickshire.

There are also a large number of non-statutory local wildlife sites in Warwickshire. Warwickshire County Council has signed up to protection and enhancement of Local Sites through National Indicator NI 197. Some work has been undertaken on mapping some of the local sites for this monitoring programme. Contact has been made with Warwickshire County Council regarding this data but no data has been obtained. In reality the level of detail presented in these maps is likely to be too detailed for the level of assessment the SEA will be undertaking.

### 4.3.5 Warwickshire Local Geological Sites

Local Geological Sites (LoGS) are designated by locally developed criteria, and are currently the most important places for geology and geomorphology outside statutorily protected land. The designation of LoGS is one way of recognising and protecting important Earth Science and landscape features for future generations to enjoy. There are over 80 sites designated as Warwickshire Local Geological Sites (LOGS). These sites are shown in Figure TP5.6. More details can be found on the website on the following website: <http://www.wgcg.co.uk/>.

**Figure TP5.6: Warwickshire Local Geological Sites**



(Source: <http://www.wgcg.co.uk/>)

### 4.3.6 Biodiversity Linkages with Transport

According to the Regional Biodiversity Strategy for the West Midlands (West Midlands Biodiversity Partnership, 2005), the region's biodiversity is affected by the development, management and use of the transport network, both by direct destruction of habitat or countryside features such as trees and hedgerows, and indirectly through disturbance, the disruption of wildlife networks and corridors, and fragmentation of species populations.

If managed appropriately, transport links such as canals, road and rail verges can themselves provide valuable wildlife habitats and corridors, and contribute to maintaining and improving ecosystems as part of greenspace networks. Emissions from vehicles, planes and trains can affect local biodiversity and diffuse pollution affects specific sites and the wider countryside. Polluted road run-off can damage biodiversity. Current activities in the region are road verge nature reserves, planting and management of motorway embankments and the management of canal banks for water vole. The transport sector should play the following role in the protection and enhancement of biodiversity within the region through:

- Undertaking adequate surveys prior to transport network plans being drawn up and plan routes and introduce features such as otter under-passes to minimise disturbance to biodiversity;
- Ensuring responsible management of run-off, where possible developing opportunities for habitat creation;
- Where-ever possible avoiding damage to biodiversity. Where this is not possible, employing mitigation and compensation measures such as the creation of alternative areas for biodiversity which ensure that ecosystem functions are maintained and improved;
- Integrating biodiversity conservation into long term management;
- Taking a strategic approach to biodiversity, and linking to area-based initiatives; and
- Supporting greening initiatives and image enhancement in transport corridors.

## 4.4 Heritage

### 4.4.1 Listed Buildings and Scheduled Monuments

There is a substantial cultural heritage resource within Warwickshire, with a high proportion of Listed Buildings and Conservation Areas, particularly concentrated within Warwick and Stratford. Information on listed buildings and scheduled monuments in Warwickshire is shown in Table TP5.5 for each of the Boroughs.

Table TP5.5: Heritage designations in Warwickshire		
Authority	Listed Buildings	Conservation Areas
Warwickshire	5,913	112



North Warwickshire	583	10
Nuneaton & Bedworth	91	5
Rugby	461	0
Stratford on Avon	3,323	76
Warwick	1,455	21

(Source: Sustainability Appraisal of Warwickshire's Mineral and Waste Development Framework Scoping Report (Warwickshire County Council, 2006))

The English Heritage 2009 Heritage at Risk Register and Conservation Areas at Risk Register includes the results of the first ever national survey into the condition of Conservation Areas within the region. The survey indicates that the following Conservation Areas in Warwickshire are at risk:

- Lower Shuckburgh;
- Southam; and
- Kingsbury.

The reasons why the Conservation Area of Southam in Warwickshire has been identified as at risk relate to transport. This market town centre has poor quality tarmac pavements and some 1980s brick paving. The fact that the town is bypassed by the road network means it has limited economic vitality.

166 of the region's 2,754 Grade I and II\* listed buildings and structural monuments are at risk of decay or neglect (of which 19 are in Warwickshire).

260 of the region's 1422 Scheduled Ancient Monuments (of which 62 are in Warwickshire) are at risk, including Studley Old Castle, Stratford-upon-Avon.

There are 32 registered Parks and Gardens in Warwickshire. In Warwickshire, the medieval deer park at Stoneleigh Abbey, the landscape at Ryton House, the Pugin designed gardens at Bilton Grange at Dunchurch and the gardens of Guy's Cliffe on the banks of the River Avon are at risk because their condition gave cause for concern due to possible developments in the surrounding area that could affect their setting. (Sources: Warwickshire Communities website <http://warkcom.net/live/welcome.asp?id=1275> and English Heritage, Heritage at Risk Register 2009).

#### 4.4.2 Historic Landscape Character

The Warwickshire Historic Landscape Characterisation (HLC) project is part of a national programme funded by English Heritage. It aims to digitally map the present day historic character of the Warwickshire landscape.

HLC provides a broad-brush overview of complex aspects of development of the landscape to provide better understanding of the historic landscape resource and its capacity for

change, and to establish an integrated approach to its sustainable management in partnership with other organisations.

The project examines changes in the landscape from various sources, primarily historic and modern maps and aerial photographs. Attributes of groups of land parcels exhibiting broadly similar characteristics are identified, and the resulting data is entered onto a Geographical Information System map layer with linked textual information in the Historic Environment Record.

A selection of maps have been produced showing different ways of viewing the historic landscape character of Warwickshire. The maps are too detailed to be represented within this topic paper but provide a baseline data reference for the SEA. The maps can be accessed at <http://www.warwickshire.gov.uk/hlc>.

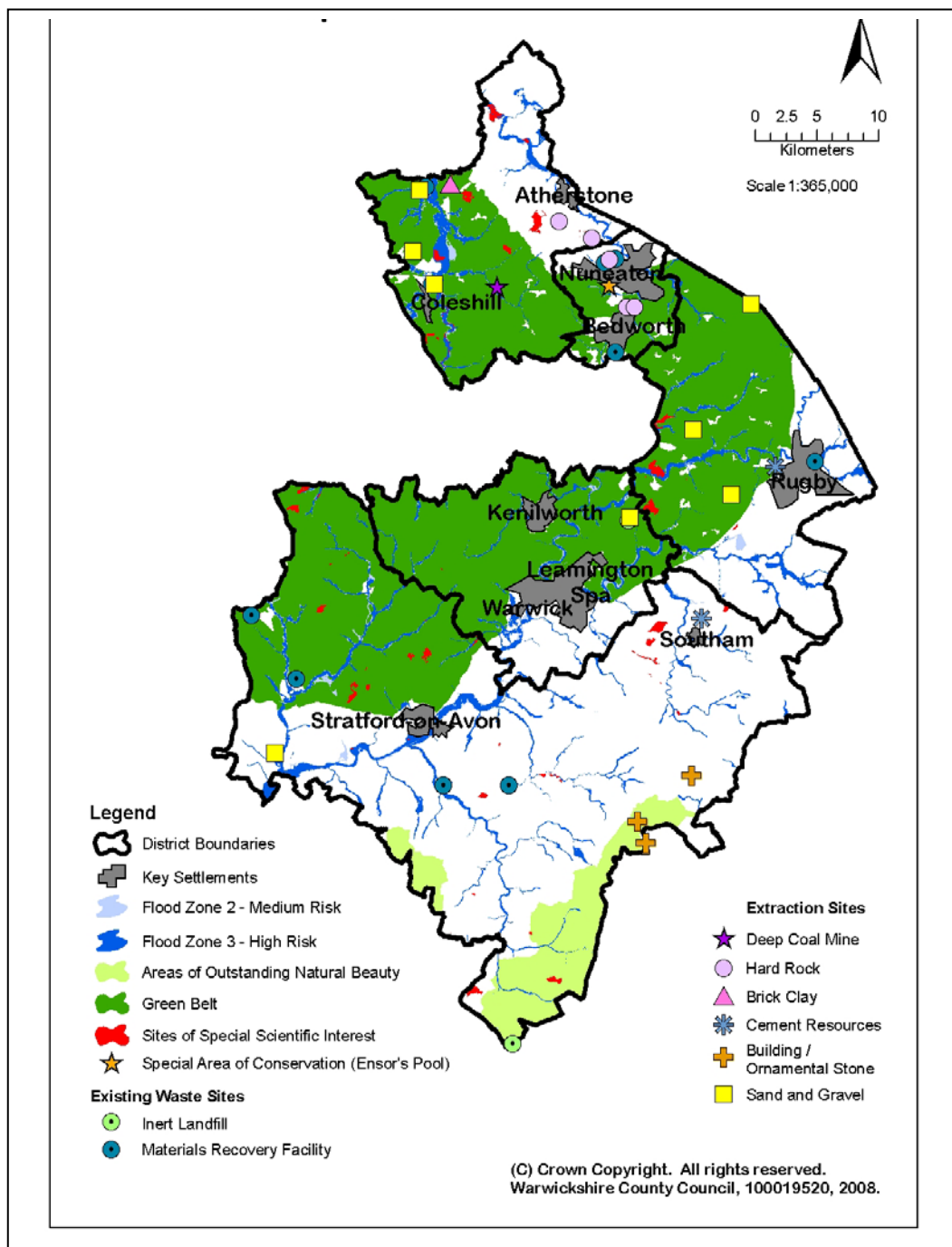
## **4.5 Landscape**

### **4.5.1 Protected Landscapes and Green Belt**

Part of the Cotswolds Area of Outstanding Natural Beauty (AONB) is in the southern area of the County. AONB and National Parks are designated for the purpose of conserving and enhancing their natural beauty, including landform and geology, plants and animals, landscape features and cultural elements. The Countryside and Rights of Way Act also requires AONB boards to produce management plans and provides them with the power to set up Conservation Boards.

A large area of Warwickshire is designated as Green Belt. Green Belts have been an essential element of planning policy for over forty years in the UK and the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open. The Green Belt in Warwickshire is concentrated on the north of the County.

Figure TP5.7 is taken from the Warwickshire Minerals Local Development Framework Minerals Core Strategy Revised Spatial Options (Warwickshire County Council, February 2009) and shows the distribution of AONB as well as other environmental assets.

**Figure TP5.7: Significant Environmental Assets within Warwickshire**

(Source: Warwickshire Minerals Local Development Framework Minerals Core Strategy Revised Spatial Options (Warwickshire County Council, February 2009). Please note that this figure does not include local sites.

Transport can have a negative effect on landscapes in the following ways:

- Through inappropriate volume and speed of traffic;

- Through inappropriate use of rural routes for freight; and
- Through inappropriate highway improvements, excessive signage, lighting and other road 'furniture' that erode the special character of the landscapes.

## 4.5.2 Landscape Character

The existing landscape character of the West Midlands is changing: 63% of the Character Areas in the region have neglected or diverging agricultural landscape character.

The national landscape character assessment conducted by Natural England identifies 159 distinct Countryside Character Areas in England. The main Countryside Character Areas within Warwickshire are presented in Table TP5.6:

Each Countryside Character Area has a factsheet produced by Natural England and these outline the actions that are needed to maintain the character of each of the areas. In the main these actions are for land-owners and countryside managers. However, there are some transport actions identified and it should be noted that all of the areas identified are suffering from development pressure so some extent. Table TP5.6 highlights the actions from these factsheets that are relevant to transport.

<b>Table TP5.6: Countryside Character Area issues</b>	
<b>Character Area</b>	<b>Transport issues identified</b>
106. Severn and Avon Vales	None identified.
96. Dunsmore and Feldon	<p>Dunsmore: Management of the enclosure road verges, which are often quite wide, provides an opportunity to create areas of acid grassland and heathland.</p> <p>Feldon: Hedges have been lost through removal and neglect, with a resulting disruption and deterioration of the strong field pattern. The management of the enclosure road verges, which are often quite wide, is an opportunity to create species-rich grassland.</p>
95. Northamptonshire Uplands	None identified.
97. Arden	Rural character has been affected by 'suburbanisation', including inappropriate building materials and layouts for new development, ornamental planting and upgrading of minor roads. Roads such as the M42 have considerable impact on the landscape and other highway schemes are under consideration.
94. Leicestershire Vales	There has been substantial development of large edge-of town buildings and new roads which can be intrusive in what is often a very open landscape
72. Mease/Sence Lowlands	Villages at the edge of the area are likely to come under increasing pressure for commuter development. Past management of watercourses has tended to remove features of nature-conservation and landscape interest.
69. Trent Valley Washlands	Development has consistently encroached upon the Washlands, including new major roads and motorways, such as the A50 link to the A6.

**Table TP5.6: Countryside Character Area issues**

Character Area	Transport issues identified
107. Cotswolds	Tourism and through-traffic have brought a requirement for upgraded roads, bypasses and through-routes with associated upgrading and an increased number of signs for minor routes. There is pressure for facilities at tourist honeypots, with associated congestion, erosion of footpaths, bridleways and viewing points. There are continuing pressures for landfill, quarrying and extraction of gravel and minerals.
67. Cannock Chase and Cank Wood	Continued pressure for aggregates extraction, waste disposal and stone quarrying.

### 4.5.3 Public Rights of Way and Green Infrastructure

Warwickshire County Council has produced a Countryside Access and Rights of Way Improvement Plan (CAROWIP) which was approved by Councillors, and took effect from 1 April 2006. The Plan, prepared under Section 60 of the Countryside and Rights of Way Act 2000 (the CROW Act), establishes a framework for rights of way and countryside access work over the next ten years and identifies the key issues and pressures which affect countryside access and public rights of way in Warwickshire. The Warwickshire rights of way network is outlined in Table TP5.7

**Table TP5.7: Warwickshire's Right of Way network**

	Number of paths	Length (miles)	% of network by length
Footpath	2,911	1,442	82.5
Bridleway	393	303	17.3
Byway	8	3	0.2

(Source: Warwickshire Countryside Access and Rights of Way Improvement Plan)

Green Infrastructure (GI) is the network of green spaces and natural elements that intersperse and connect our cities, towns and villages. It is the open spaces, waterways, gardens, woodlands, green corridors, wildlife habitats, street trees, natural heritage and open countryside. Green Infrastructure provides multiple benefits for the economy, the environment and people. A number of Warwickshire's Local Planning Authorities have conducted green infrastructure studies as part of their LDF evidence base (Rugby, Coventry, Nuneaton and Bedworth, others are in the process of completing these studies). These studies are too detailed at this stage for the purposes of the SEA scoping report. However, these will be reviewed at a later stage if they will assist with the assessment (i.e. if a transport intervention is proposed that will affect an area of green infrastructure).

The West Midlands Green Infrastructure Prospectus (Regional Environment Partnership of the West Midlands Regional Assembly, 2007) is a technical paper which is presented as a guide to the spatial mapping and assessment of GI needs and opportunities. There is also a general consensus that the West Midlands needs an integrated approach to GI planning from the regional through to the local level, and a recognition of how GI can help deliver a wide range of social, economic and environmental benefits against policy objectives.

Warwickshire's network of over 1,700 miles of public paths provides access to the countryside for quiet recreation and enjoyment.

The Millennium Way is a 100 mile long distance footpath across central England stretching from Pershore to Middleton Cheney, passing through Warwickshire.

## **4.6 Water Issues**

Please note that flooding and drainage issues are addressed in Topic Paper 2.

### **4.6.1 Groundwater Vulnerability**

Groundwater in England and Wales provides up to a third of drinking water resources together with providing a major contribution to maintaining the natural flow of many surface waters and rivers. The Environment Agency has defined Source Protection Zones (SPZs) for 2,000 groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show areas where groundwater supplies are considered particularly vulnerable to contamination from pollution in the area and are divided into three main zones (inner, outer and total catchment), the spatial extent of which are is determined through a combination of ground conditions, how the groundwater is removed, and other environmental factors.

Any pollution that can travel to the borehole within 50 days from any point within the zone is classified as being inside the inner protection zone. An outer zone covers either a 400 days pollutant travel path or 25% of the total catchment area – whichever area is the biggest.

Warwickshire is relatively free from Source Protection Zones which tend to be concentrated in urban centres and more densely populated settlements. Environment Agency data records 24 groundwater abstraction boreholes centred on the County's urban settlements. Most southerly, six boreholes are located close to the centre of Stratford on Avon and a further two close to neighbouring Wellesbourne. More northerly, in Warwick District the closely situated settlements of Warwick and Leamington Spa are served by a further total of six boreholes, to the north of each is demarcated a protected catchment area.

Towards the centre of the County lies the city of Coventry. The accumulation of water abstraction sources, together with densely populated settlement causes much of the area to be protected as catchment zones and outer protection zones, some of which overlap into Warwickshire. (Source: Sustainability Appraisal of Warwickshire's Mineral and Waste Development Framework Scoping Report (Warwickshire County Council, 2006).

### **4.6.2 Water Quality**

The Environment Agency, under the General Quality Assessment (GQA) programme, assesses the quality of watercourses in England & Wales. Watercourses and their catchment areas often cross local authority boundaries and therefore the quality of water within a local authority area may be affected by factors outside the area.

Chemical water quality is an indicator of general organic pollution. There was a gradual improvement in chemical water quality nationally and in Warwickshire between 2001 and



2006. In 2006, 66% of England & Wales' water network was graded 'good', the corresponding figure for Warwickshire is 53%.

There was a distinct north-south divide in terms of chemical water quality within the County during 2006; quality levels in North Warwickshire and Nuneaton & Bedworth are significantly below levels in the rest of the County. Only in Warwick District is the chemical water quality above the average for England.

Biological Quality is an indicator of the 'health' of rivers. Biological water quality levels in Warwickshire were below the average level for England in 2006. (Source: Warwickshire Observatory).

The Environment Agency has assessed the characteristics of surface waters against the recent European Water Framework Directive (WFD) which aims to protect and enhance water resources, promote sustainable water consumption, reduce water pollution and lessen the effects of floods and droughts. As a result they have compiled statistics of river vulnerability to point sources of pollution, diffuse sources of pollution, water abstraction and flow regulation, physical or 'morphological' alteration to water bodies and alien species. All rivers within Warwickshire classified under the WFD assessment were determined to be "at risk" from one or more of the above criteria.

In addition to rivers and streams, Warwickshire's water resources are complemented by the addition of seven navigable canals, the Grand Union, Oxford, Coventry, Ashby, Birmingham, Fazeley and Stratford upon Avon Canals. A few stretches of these are classified by British Waterways as 'unsatisfactory' for a combination of physical and chemical reasons, however water quality has improved dramatically over the last decade to reach the current grades, allowing otters to return to the canals to breed, rest and fish. (Source: Sustainability Appraisal of Warwickshire's Mineral and Waste Development Framework Scoping Report (Warwickshire County Council, 2006).

#### **4.6.3 Water Supply**

Warwickshire takes in two of the major water catchments of the Midlands region. The Avon Catchment takes water from the south and east of the Midlands into the River Severn and Bristol Channel via the Avon and its tributaries (e.g. the Sowe, Leam, Dene, Stour, Alne and Arrow), while the Tame Catchment takes water from the north-west of the County (as well as much of the West Midlands) into the Trent, Humber and North Sea via River Leam the Tame and its tributaries (e.g. the Blythe, Cole and Anker). In addition to these two major catchment areas, an element of the Thames Catchment also lies within the extreme southern tip lies of Warwickshire. (Source: Sustainability Appraisal of Warwickshire's Mineral and Waste Development Framework Scoping Report (Warwickshire County Council, 2006).

#### **4.7 Other Natural Resources**

Please note that air quality is addressed in Topic Paper 4.

### 4.7.1 Soils, Geology and Minerals

Information is taken from the Environment Agency's 2004 report on The State of Soils in England and Wales unless otherwise stated. Soil is the physical material that covers much of the earth's surface and serves a number of purposes such as:

- Providing a platform for development;
- Playing a key role in natural systems such as environmental buffering
- Supporting 'food and fibre' production;
- Contributing to biodiversity by supporting habitats on and in soil;
- Providing a source of raw materials such as peat and clay; and
- Recording and protecting cultural heritage.

Agricultural land has been classified according to its productivity in terms of food production. The West Midlands has a higher proportion of grade 1 land than England but the distribution between counties is uneven, with a higher proportion in Herefordshire and Shropshire and lower proportions in Staffordshire and Warwickshire. Table TP5.8 presents the percentages of each classification in Warwickshire, with Grades 1 to 3A being considered the best and most versatile agricultural land. It should be noted that Natural England must be consulted under the Town and Country Planning (General Development Procedure) Order (GDPO) 1995 Article 10(w) on development proposals likely to lead to the loss of >20 ha best and most versatile agricultural land

<b>Table TP5.8: Provisional ALC – national, regional and county context (proportion of ALC grades as % of total land area)</b>			
<b>ALC Grade</b>	<b>England</b>	<b>West Midlands</b>	<b>Warwickshire</b>
1 (excellent)	2.7	1.1	0.1
2 (very good)	14.2	17.1	11.9
3 (good to moderate)	48.2	53.3	74.5
4 (poor)	14.1	14.6	7.9
5 (very poor)	8.4	2.5	0.1
Non-Agricultural	5.0	2.3	1.0
Urban	7.3	8.6	4.4

(Source: <https://statistics.defra.gov.uk/esg/default.asp>, 2005)



Warwickshire has significant deposits of coal, sand and gravel and hard rock as well as less important deposits of limestone, ironstone and clay. The majority of mineral exploitation focuses on sand and gravel, particularly in the north of the County and in adjacent counties of Staffordshire and Leicestershire. While also extending into Stratford on Avon District, the south of the County also features wider extents of workable limestone with iron ore and ironstone quarries also to be found on the border areas of adjacent Oxfordshire. Having no viable deposits of other minerals such as salt, peat and chalk, it relies on imports from other counties.

In line with the national decline in primary aggregate production which has been realized in recent years, production of crushed rock and sand and gravel in the West Midlands has fallen since 1999. Despite being its primary mineral resource, Warwickshire's production of sand and gravel has also declined in recent years. Notably however, in contrast with national and regional trends, the County's production of crushed rock increased by 4.4% between 2002 and 2003, to 0.7 million tonnes, reversing the decline of the previous few years. (Source: Sustainability Appraisal of Warwickshire's Mineral and Waste Development Framework Scoping Report (Warwickshire County Council, 2006).

At present there are 8 sand and gravel sites in Warwickshire. Several have very limited reserves. Coleshill Quarry and Marsh Farm are currently being restored with minimal output while Dunton and Middleton Hall Quarry have stopped large scale production. Therefore, there may be a large fall in production in the near future at a time when there is a need to implement large scale sub-regional growth.

The Minerals LDF Core Strategy Revised Spatial Options (Warwickshire County Council, 2009) suggests that in order to meet the apportionment targets, potentially 5 or more new sand and gravel quarries may be required in Warwickshire, assuming that each quarry could produce at least 100,000 tonnes per annum over 5-10 years.

The outcrop of hard rock in the north of the County around Mancetter and Griff quarries make these supplies regionally important. The composition of the rock means that this mineral serves a national market for road building. Large areas of the South East have no local supplies of such rock and require supplies from this source in Warwickshire.

The Kingsbury Works in North Warwickshire supplies bricks nationally. Its strategic importance is demonstrated by the scale of the operation (approximately 67 million bricks produced from 210,000 tonnes of Etruria Marl) and the rarity of certain unusual brick types which are exported from the County to a national market.

The one underground pit in Warwickshire (Daw Mill near Fillongley) is the largest coal pit in the country. There is much coal still underground which is most likely to be extracted by open cast methods. At present one site has been submitted for consideration for minerals development. Warwickshire County Council considers that the product could be transported to power stations outside of the County, such as Rugeley, and therefore could contribute to the national energy supply.

The main cement works in Warwickshire are around Rugby and Southam. The works at Southam serves the large cement manufacturing plant at Rugby which is strategically significant in its own right in the production of cement and also as a waste facility.

In terms of the production of building stone in Warwickshire, Hornton stone is used in the Cotswolds for traditional construction materials. In the context of the Cotswold AONB, there

is only one quarry in Warwickshire and therefore this site is strategically important for the County in terms of this specific mineral.

It is proposed in the Minerals Core Strategy Revised Spatial Options (Warwickshire County Council, 2009) that all new minerals developments should have a detailed traffic impact assessment showing that where HGVs are the chosen transportation option they must avoid unacceptable impacts on local communities. The assessment should also consider road and rail transport modes and clearly demonstrate they are unfeasible. Warwickshire has a county lorry advisory route (see Topic Paper 1). All sites using road as the preferred method of transporting minerals should have good access to the primary transport network.

Where HGVs are going to be widely used developers must expect to enter in to legal routing agreements or the implementation of road improvement schemes to reduce the impact of traffic movements and ensure that the access route linking the development to the principal road network is of the required standard of the relevant Highways Authority.

Warwickshire County Council uses a small amount of recycled aggregates for highway maintenance. The latest submission to the Annual Asphalt Industry Alliance 2009 Maintenance Survey showed that this was less than 5% for percentage of recycled materials in newly laid re-surfacing. This is based upon re-using road planings in secondary maintenance activities, therefore the quantity is totally dependent upon whether any planings are created or not. The overall maintenance activity is designed to provide the most economic/effective treatment to the road.

#### **4.7.2 Waste**

District and Borough Councils are responsible for the collection of waste and the County Council is responsible for its disposal. Whilst it is still the case that a majority of household waste produced in the County goes to landfill, the proportion is decreasing. Warwickshire was one of the first councils in the country to produce a Waste Minimisation Strategy. This strategy sets out not only how Warwickshire can recycle more, but also how the County can cut the overall amount of waste produced and so reduce the amount of rubbish sent to landfill.

The amount of waste produced by Warwickshire's residents fell by 3.7% in 2007/8, but was still well above the 2000/1 level. Less than 60% of this waste goes to landfill which, although still high, has been decreasing every year for the last six years. In 2006/7, Warwickshire ranked 14th out of the thirty four counties in England on the amount it sent to landfill, that is, it sent a lower proportion of its waste to landfill than 20 other counties.

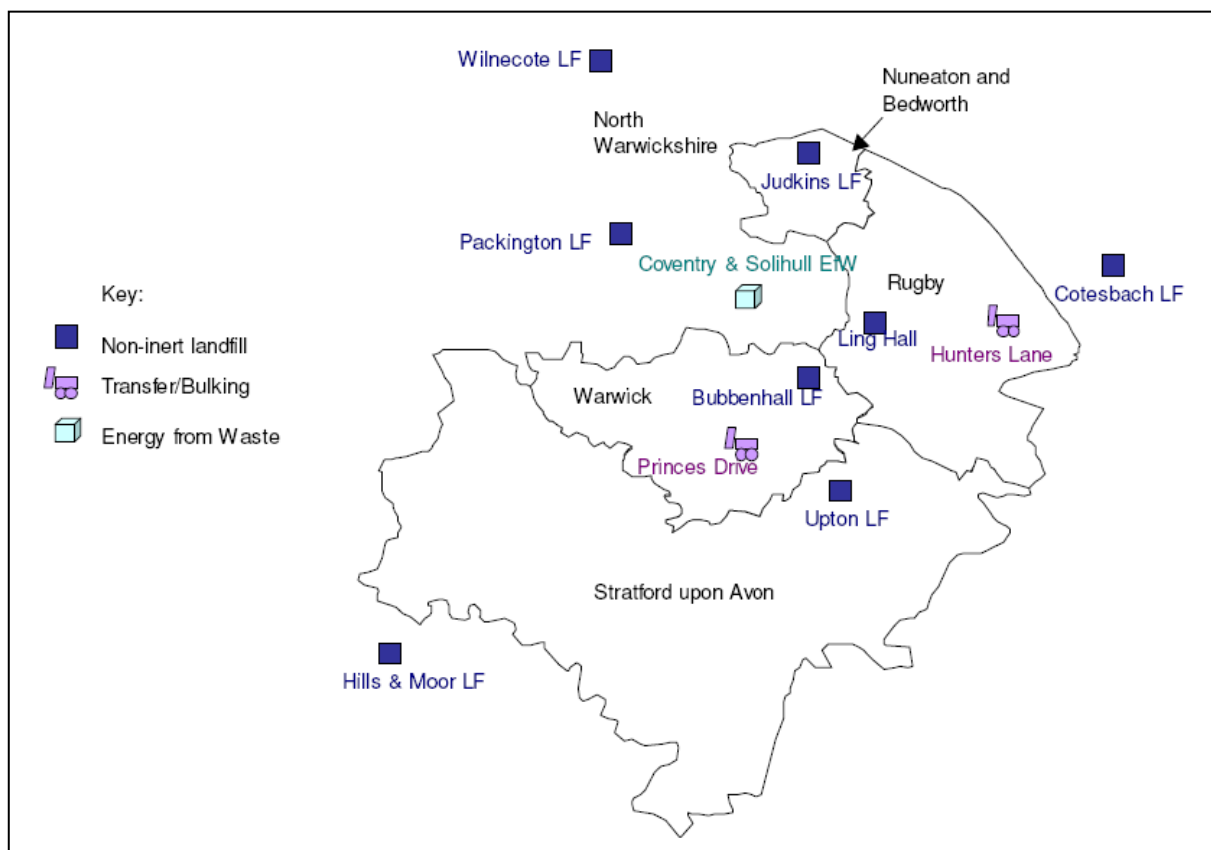
Residual waste produced per household ranges from 572kg in Warwick to 829kg in Rugby. Recycling and composting levels have increased, but still vary quite widely across the districts. Over 40% of waste is recycled in Stratford-on-Avon District, but only a quarter in Rugby and Nuneaton & Bedworth. In 2006/07 Rugby Borough and North Warwickshire Borough rolled out additional green waste collections and both Warwick and Stratford-on-Avon will have switched to alternate weekly collections during 2008/9.

Landfill tax rises by £8/tonne each year and is currently levied at £32/tonne and will reach £48/tonne by 2010/11. To reduce costs and in order to comply with EU landfill diversion targets for biodegradable waste Warwickshire County Council is planning to increase recycling and composting rates to more than 40% in the next few years. However, increasing

recycling and composting alone will not be sufficient, and some of the remaining waste will have to be incinerated to still further reduce the amount of biodegradable waste sent to landfill.

Figure TP5.8 shows the distribution of landfills and disposal facilities used to deal with the waste produced in Warwickshire.

**Figure TP5.8: Locations of current landfills and disposal facilities**



(Source: Warwickshire's Municipal Waste Management Strategy (Warwickshire Waste Partnership, 2006))

## 5 Data Sources and Gaps

### 5.1 Data Sources

- Campaign to Protect Rural England (CPRE)  
<http://www.cpre.org.uk/campaigns/landscape/tranquillity/national-and-regional-tranquillity-maps/county-tranquillity-map-warwickshire> ;
- Defra (2008) Future Water;
- Defra (2005) <https://statistics.defra.gov.uk/esg/default.asp>;
- Developing a Transport Strategy for Climate Change Adaptation (2008);
- English Heritage, Heritage at Risk Register 2009;
- Environment Agency <http://www.environment-agency.gov.uk/>;

- Millennium Way website <http://walking.41club.org/>;
- Natural England <http://www.naturalengland.org.uk/>
- Nature on the Map <http://www.natureonthemap.org.uk/>;
- The State of Soils in England and Wales (Environment Agency, 2004);
- Warwickshire Communities website [http://warkcom.net/live/welcome.asp?id=1275](http://warkcom.net/live/welcome.asp?id=1275;);
- Warwickshire County Council (2009) Warwickshire Minerals Local Development Framework Minerals Core Strategy Revised Spatial Options;
- Warwickshire County Council (2006) Sustainability Appraisal of Warwickshire's Mineral and Waste Development Framework Scoping Report;
- Annual Asphalt Industry Alliance 2009 Maintenance Survey;
- Warwickshire County Council (no date provided) Habitats Regulation Assessment - Screening Report for Minerals and Waste Development Frameworks;
- Warwickshire County Council <http://www.warwickshire.gov.uk/>;
- Warwickshire Observatory <http://www.warwickshireobservatory.org/observatory/>;
- West Midlands Biodiversity Partnership <http://www.wmbp.org/>;
- West Midlands Biodiversity Partnership (2005) Restoring the Region's Wildlife Regional Biodiversity Strategy for the West Midlands.

## 5.2 Data Gaps

- Data on scheduled monuments has not been found for Warwickshire;
- Information relating to the soil types within Warwickshire or issue in relation to the County's soils has not been accessible;
- Data related to the use of recycled aggregates for highway maintenance;
- It's very difficult to determine objectively how traffic affects townscapes and people's perceptions of a town;
- There is no data relating to the current impacts of traffic on townscape within Warwickshire; and
- There is no information about specific roads which are currently adversely affected by minerals transportation.

## 6 Sustainability Issues

Sustainability issues identified through the policy review and collection of baseline data are shown below. These issues have been used to guide the selection of the SEA Objectives that the plan will be assessed against.

- There is a scarcity of tranquil areas within Warwickshire. Least tranquil areas are in Warwick District and Nuneaton & Bedworth Borough. Only the south-western and south-eastern fringes of Stratford District, the southern part of Rugby Borough and the central area of North Warwickshire Borough have a large proportion of tranquil areas.

- Warwickshire is a County rich in biodiversity from international, national and local sites. Many of these sites and habitats occur next to highways, cycle routes, green lanes or other transport corridors.
- There is a substantial cultural heritage resource within Warwickshire, with a high proportion of Listed Buildings and Conservation Areas, particularly concentrated within Warwick and Stratford. 3 Conservation Areas in Warwickshire are at risk. The Conservation Area of Southam is at risk due to poor quality tarmac pavements and some 1980s brick paving. The fact that the town is bypassed by the road network means it has limited economic vitality. 19 listed buildings, 62 scheduled monuments and 4 registered parks and gardens are also at risk.
- Warwickshire contains some protected landscapes, particularly in the south of the County. Transport can affect landscape in a number of ways and transport is having a detrimental affect on a number of countryside character areas.
- Transport planning can contribute to green infrastructure networks by enhancing biodiversity interest on rights of way and promoting new rights of way that link areas of green infrastructure
- Transport can have negative effects on the townscape and heritage of the settlements it passes through.
- There was a gradual improvement in chemical water quality nationally and in Warwickshire between 2001 and 2006. In 2006 chemical water quality levels in North Warwickshire and Nuneaton & Bedworth were significantly below levels in the rest of the County. Biological water quality levels in Warwickshire were below the average level for England in 2006. All rivers within Warwickshire classified under the Water Framework Directive (WFD) assessment were determined to be “at risk” with regards to the WFD criteria.
- Transport of minerals and waste by road can cause problems to local communities.

## 7 Suggested SEA Framework

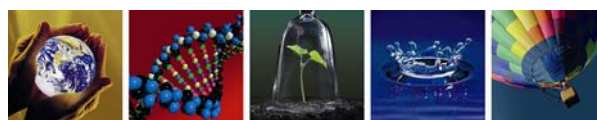
The SEA objectives and indicators suggested for this topic are shown below. It is important that the SEA assesses whether the LTP is helping to achieve relevant targets. Therefore, where these have been found and are relevant to the LTP they have been built into the SEA indicators.

These objectives are based upon the DfT new NATA objectives (please see *TAG Unit: The Appraisal Process - consultation draft* on <http://www.dft.gov.uk/webtag/documents/project-manager/unit2.5c.php>) but amended to reflect local issues.

Quality of life and the environment	
LTP SEA objective. Will the LTP...	LTP SEA indicator. Will the LTP...
Reduce the impact of the transport system on noise?	<ul style="list-style-type: none"> <li>• Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic past sensitive receptors or on sensitive /tranquil routes that would help to achieve WHO noise guidelines?</li> </ul>
Protect and enhance townscape,	<ul style="list-style-type: none"> <li>• Cause changes in traffic flows in areas that are</li> </ul>

<b>Quality of life and the environment</b>	
<b>LTP SEA objective. Will the LTP...</b>	<b>LTP SEA indicator. Will the LTP...</b>
landscape quality and character	valued for their landscape / townscape character?
Protect and enhance biodiversity and geodiversity at all levels	<ul style="list-style-type: none"> <li>• Cause direct loss of geodiversity or habitat fragmentation / loss especially that would risk achievement of Warwickshire BAP priority targets?</li> <li>• Cause a change in traffic flows or nature of traffic<sup>1</sup> that will affect sensitive habitats or focal species?</li> <li>• Result in habitat creation and contribute to the achievement of the Warwickshire BAP targets?</li> </ul>
Protect and enhance buildings, sites, areas and features of historic, archaeological and architectural interest	<ul style="list-style-type: none"> <li>• Cause direct impacts on sites or monuments through the provision of new infrastructure?</li> <li>• Cause a change in traffic flows or the nature of traffic that affects townscape, sites and monuments valued for their cultural heritage or changes the number of sites at risk?</li> </ul>
Minimise the impact of the transport system on water resources, soil and mineral resources	<ul style="list-style-type: none"> <li>• Cause an improvement in water quality that could help to meet the WFD target of achievement of good ecological status of water bodies by 2015?</li> <li>• Cause changes to maintenance regimes that may decrease the need for water or decrease the potential for flooding?</li> <li>• Reduce the demand for aggregate?</li> <li>• Help to protect loss or pollution of soils which support valued habitats or are already experiencing erosion?</li> </ul>

<sup>1</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 2: Assessment of  
the Future Baseline

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:



**ENVIRON  
Birmingham, UK**

Date:

**May 2010**

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Project Manager/Director	
(signature):	
Date:	May 2010


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Version Control Record				
Issue	Description of Status	Date	Reviewer Initials	Authors Initials
1	FINAL Draft	03/05/10	JC	EJ



<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
<b>Economy</b>			
Help to improve reliability and connectivity of the transport system?	Include schemes that decrease journey times, congestion, improve journey time reliability and help to support Warwickshire's already strong economy?	Warwickshire benefits from a relatively strong and diverse economy and has seen strong employment growth over recent years. However, in the absence of measures promoted through the LTP necessary schemes will not be implemented and journey times and congestion will increase. Congestion may be especially severe in Warwick as although traffic speed data in the main towns (a proxy for congestion) do not show any clear pattern they do show that congestion in Warwick is more severe than in other areas. This is likely to be a long term effect (but reversible if successful schemes are implemented in the future) and will be significantly negative.	●
Support the delivery of the future spatial strategy?	Provide the necessary infrastructure to support the spatial strategy in a sustainable manner?	In the absence of measures promoted through the LTP the necessary infrastructure will not be put in place and journey times and congestion will increase. This is especially the case in the main towns as growth continues but without supporting transport infrastructure. This is likely to be a long term effect (but reversible if infrastructure is provided in the future) and will be significantly negative.	●
Enhance resilience through good management and maintenance of the transport system?	Help to manage routes effectively in order to maintain journey times?	Network management duties under the Traffic Management Act 2004 including civil parking enforcement will continue. However, despite network management duties remaining it would be increasingly difficult to manage routes effectively in the face of increased traffic growth and congestion. Only maintaining transport assets to a statutory minimum level would increase the maintenance backlog. This is likely to be a long term effect (but reversible if enhanced maintenance is provided in the future) and will be significantly negative.	●
Provide wider support to the economy through the movement of people and goods?	Provide / encourage the use of alternatives to road freight and provide routes for freight traffic that reduces impacts	In the absence of the plan there will be no measures to encourage alternatives to road freight and no encouragement to freight users to use advisory routes. Warwickshire experiences a lot of through movement of road based freight haulage and road freight does cause problems in some	●




<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	<p>on communities and the environment?</p> <p>Increase access to jobs, towns, tourist attractions, rural areas and the countryside by sustainable means?</p>	<p>areas. The majority of freight in the County will always be moved by road. In the absence of measures promoted through the LTP the impact of this freight traffic will worsen. This is likely to be a long term effect (but reversible if action is taken in the future) and will be significantly negative.</p> <p>Almost half the residents of North Warwickshire work elsewhere. High levels of trips are made from North Warwickshire towards Tamworth, Sutton Coldfield, Birmingham, Nuneaton and Coventry. A large proportion of people from outside the County work in Warwickshire. The majority of people in the area commute to work by car and in the absence of measures in the LTP (including promotion of workplace travel plans) travel by sustainable means (to jobs and other attractions/services) will remain low. This may be exacerbated through the future growth strategy of urban renaissance if more jobs are concentrated in the Major Urban Areas to the detriment of the smaller settlements. This is likely to be a long term effect (but reversible if conditions change) and will be significantly negative.</p>	
<b>Carbon emissions</b>			
Reduce carbon emissions	<p>Cause a change in vehicle miles or a change in the nature<sup>1</sup> of traffic that would cause changes in fuel use and CO<sub>2</sub>. (Link to LAA indicator NI 186: per capita CO<sub>2</sub> emissions in the Local Authority area)</p> <p>Increase the use of energy</p>	<p>Traffic mileage in Warwickshire is increasing but at a slower rate than was targeted. Traffic speed data in the main towns (a proxy for congestion) do not show any clear pattern but do show that congestion in Warwick is more severe than in other areas. In the absence of measures promoted through the LTP, vehicle miles, journey times and congestion will increase in the future baseline especially in the main towns as growth continues. The largest emitter of CO<sub>2</sub>, in regards to road transport, in Warwickshire is North Warwickshire, followed by Stratford upon Avon and Warwick, reflecting the road network and traffic density. CO<sub>2</sub> levels are likely to rise in the absence of measures bought forward as part of the LTP as there will be little support</p>	

<sup>1</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	from renewable sources in the transport system (to reach a target of 10% of the total energy consumed)	<p>for sustainable modes and vehicle miles and congestion will increase.</p> <p>There is no data available on the amount of renewable energy used in the transport system in Warwickshire. The target is 10% of the total energy use in transport systems to be derived from renewable sources. In the absence of measures brought forward as part of the LTP the target is unlikely to be met. Impacts on carbon emissions are likely to be a long term and irreversible effect (due to the long lag time in the climate) and will be significantly negative.</p>	
Ensure that the transport system can cope with the unavoidable effects of climate change	Reduce the unavoidable effects of climate change (link to LAA indicator NI 188: Adapting to climate change)	The County is likely to experience a number of changes due to climate change such as warmer wetter winters, more stormy weather and hotter summers. This will have numerous effects on the transport system. A certain amount of unavoidable climate change is inevitable and will need to be planned for. As highway and bridge maintenance duties will continue in the absence of the plan it is assumed that some measures will be implemented to ameliorate the effects, thus reducing the effect from significant to minor negative. However, the effect is still negative, long term and irreversible.	●
<b>Equality of access</b>			
Improve accessibility to basic services for all groups in society?	Improve provision of public and community transport that makes key services <sup>2</sup> more accessible to all groups of people <sup>3</sup> (link to LAA indicator NI 75 Access to services and facilities by public transport,	Access to services in Warwickshire is poor in many areas for people without a car. Without the measures taken forward as part of the LTP accessibility levels will decline as services are withdrawn. Levels are also likely to decline with the withdrawal of the funding for the transport schemes taken forward as part of the Warwickshire Rural Access to Services Programme (WRASP). This is likely to be a long term effect (but reversible if conditions change with regards to accessibility) and will be significantly	●

<sup>2</sup> Key services include schools and learning, open space and recreation, jobs, leisure facilities, areas of cultural heritage and health facilities

<sup>3</sup> According to the DfT this should include groups defined by race, gender, disability, age, religion and sexual orientation

<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	cycling and walking).	negative.  Travel by different age groups and social groups can be very different and provision needs to be tailored more effectively. The information available on travel by different groups is not complete for Warwickshire. However, in the absence of measures taken forward as part of the LTP accessibility levels will decline for all groups. This is likely to be a long term effect (but reversible if successful schemes are implemented in the future) and will be significantly negative.	
Help to improve the quality of urban and rural centres and reduce severance?	Reduce traffic levels, severance, congestion or the nature of traffic in residential areas / town and village centres?  Cause changes that reduce the impact of the transport system on townscape or introduce features that enhance the character of towns?	Community severance is caused by large volumes of traffic in many areas of the county. The future impact is dependent on future traffic levels. Without the measures put forward in the LTP traffic levels are likely to increase.  Bus use and bus satisfaction have increased. Without the measures put forward in the LTP, congestion is likely to increase causing issues with bus time reliability. This may lead to a decrease in patronage and satisfaction. This is likely to be a long term effect (but reversible if traffic conditions improve) and will be significantly negative.	
<b>Safety, security and health</b>			
Reduce the risk of death or injury on the transport system?	Lead to a decrease in traffic accidents /accident severity and help to meet KSI targets (link to LAA indicator NI 47 on road accidents)?	Numbers of people killed or seriously injured (KSI) and the numbers of children killed or seriously injured are both decreasing. The council is now on track to meet the original KSI 2010/11 target of 393 in 2008/09. Severity of car accidents may decrease in the longer term due to improved vehicle design and increased safety awareness amongst the public. However, in the absence of the measures in the LTP vehicle miles will increase (potentially increasing the number of accidents). Therefore, the number of accidents might increase in the absence of the plan but their severity may	 (accident numbers)   (accident severity)

<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
		decrease due to changes in vehicle design.	
Make healthier modes of travel more attractive?	Increase walking and cycling to help increase the numbers of people regularly participating in physical activity (link to LAA local indicator 8 on increasing physical activity and NI156 on childhood obesity)?	<p>The population of Warwickshire is ageing and this needs to be considered in the provision of services and transport. The Warwickshire Blueprint work suggests that over 60's will make up 24% of the population in 2031 (compared to 17% of total population in 2006).</p> <p>Obesity is a particular problem for Warwickshire where the County's population is appearing high on regional league tables for obesity levels. Numbers of children who are obese is lower than the national average but the figures are still a cause for concern. 10.7% of Warwickshire's adult population are physically active, compared to 10.8% in England. In the absence of measures in the LTP to promote walking and cycling and reduce traffic and congestion, levels of walking and cycling are likely to decline. This will have a negative (potentially long term) effect on obesity levels and general health. However, this has not been scored as significantly negative because other factors are just as (if not more) important in encouraging people to take exercise.</p>	●
Reduce the impact of the transport system on air quality?	Cause any changes to traffic levels (particularly a change of over 10%) or the nature <sup>4</sup> of traffic past sensitive receptors (including AQMAs)?	Air quality across the County is considered to be largely good but traffic is increasing in some of the AQMAs. Forecast improvements in vehicle technology mean that emissions of local pollutants should decrease in the future baseline although increased traffic and congestion might offset this in more urban areas.	○ (rural areas) ● (towns)
Improve the security of the transport system?	Make transport systems / interchanges more secure? <sup>5</sup>	There is no data on the security of the transport system. However, in the absence of the plan and measures to improve security, it is likely to deteriorate. This is likely to be a long term effect (but reversible if	●


<sup>4</sup> Nature of traffic is meant as a very broad term and refers to the make up of traffic (i.e. % of HGVs), timing of traffic, management of traffic (i.e. installation of speed humps, changes to road surfaces etc) or anything else that might cause increased nuisance and pollution.

<sup>5</sup> It will be important for this objective to consider equality issues (the DfT recommends analysing effects related to race, gender, disability, age, religion and sexual orientation if possible)

<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
		successful schemes are implemented in the future). It has not been scored as significantly negative as other factors (such as actual crime levels, people's fear of crime, and design of new development and bus and train stations etc) are also likely to play their part and these are not influenced by the LTP.	
<b>Quality of life/environment</b>			
Reduce the impact of the transport system on noise?	<ul style="list-style-type: none"> <li>• Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic past sensitive receptors or on sensitive /tranquil routes that would help to achieve WHO noise guidelines?</li> </ul>	People taking short cuts is likely to increase through rural lanes etc as drivers seek alternative routes to avoid congestion hot spots. Adverse noise impacts of increased growth in traffic and congestion are likely to affect towns and this may also lead to peak spreading (meaning that the noise will be present for longer periods of the day). This is likely to be a long term effect (but reversible if traffic conditions change in the future). However, it is only likely to be significantly negative in areas where traffic increases over 10% or the % of HGVs increases. This is likely to be a small proportion of the county so this has been marked as negative (but not significantly negative).	●
Protect and enhance townscape, landscape quality and character	<ul style="list-style-type: none"> <li>• Cause changes in traffic flows in areas that are valued for their landscape character?</li> </ul>	<p>There is a scarcity of tranquil areas within Warwickshire. Only the south-western and south-eastern fringes of Stratford District, the southern part of Rugby Borough and the central area of North Warwickshire Borough have a large proportion of tranquil areas. Least tranquil areas are currently within Warwick District and Nuneaton &amp; Bedworth Borough. The least tranquil areas are associated with built up areas and transport corridors. This is likely to worsen as traffic levels increase, there is continued growth in air traffic and the spread of towns and associated infrastructure. This may lead to people taking short cuts through rural lanes etc as people try to escape worsening traffic hotspots.</p> <p>Warwickshire contains some protected landscapes, particularly in the south of the County. Transport can affect landscape in a number of ways and transport is having a detrimental affect on a number of countryside</p>	●

<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
		character areas. It is assumed that traffic levels will increase in the future. Without the actions in the LTP3 it is assumed that the negative impact of transport on landscape will increase. This is likely to be a long term effect (but reversible if conditions change in the future) and will be significantly negative if traffic reduces the amount of unspoilt and tranquil countryside in the county.	
Protect and enhance biodiversity and geodiversity at all levels	<ul style="list-style-type: none"> <li>• Cause direct loss of geodiversity or habitat fragmentation / loss especially that would risk achievement of Warwickshire BAP priority targets?</li> <li>• Cause a change in traffic flows or nature of traffic that will affect sensitive habitats or focal species?</li> <li>• Result in habitat creation and contribute to the achievement of the Warwickshire BAP targets?</li> </ul>	Warwickshire is a County rich in biodiversity including international, national and local sites. Many of these sites and habitats occur next to highways, cycle routes, green lanes or other transport corridors. There have been significant declines in certain habitats and species in past years and much of the West Midlands wildlife is still under threat. Without active management it can be assumed that some habitats and species at least will continue to decline. Climate change is likely to result in changes to biodiversity such as in the distribution of species, in species composition of habitats, effects of drier/hotter summers and wetter/warmer winters land use changes and seasonal/phenological changes and some of these changes will promote biodiversity and some will be negative (therefore, the effect is uncertain). Without the plan there will be little opportunity to enhance roadside wildlife. However, this will be offset by a reduced impact from new infrastructure that would have been implemented through the LTP3.	○/?
Protect and enhance buildings, sites, areas and features of historic, archaeological and architectural interest	<ul style="list-style-type: none"> <li>• Cause direct impacts on sites or monuments through the provision of new infrastructure?</li> <li>• Cause a change in traffic flows or the nature of traffic that affects</li> </ul>	There is a substantial cultural heritage resource within Warwickshire, with a high proportion of Listed Buildings and Conservation Areas, particularly concentrated within Warwick and Stratford. There are 3 Conservation Areas in Warwickshire are at risk, 19 listed buildings, 62 scheduled monuments and 4 registered parks and gardens are also at risk. Without intervention the heritage assets will remain at risk from inappropriate development affecting their settings. However, this may be partly offset by	●/●



<b>Assessment of the Future Baseline</b>			
<b>SEA Objective</b>	<b>SEA Indicator</b>	<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>
	townscape, sites and monuments valued for their cultural heritage or changes the number of sites at risk?	<p>a reduced impact from new infrastructure that would have been implemented through the LTP3.</p> <p>Transport can have negative effects on the townscape and heritage of the settlements it passes through. There is a lack of published information about how the townscapes in Warwickshire are currently affected by traffic although it can be assumed that at least some towns are negatively affected. In the absence of the LTP, traffic levels are likely to increase in coming years with significant housing and economic growth. Also, in the absence of the LTP maintenance schemes are more likely to use standard materials which would not enhance the character of the streets. This is likely to be a long term effect (but reversible if conditions change in the future) and will be significantly negative.</p>	
Minimise the impact of the transport system on water resources, soil and mineral resources	<ul style="list-style-type: none"> <li>• Cause an improvement in water quality that could help to meet the WFD target of achievement of good ecological status of water bodies by 2015?</li> <li>• Cause changes to maintenance regimes that may decrease the need for water or decrease the potential for flooding?</li> <li>• Reduce the demand for aggregate?</li> <li>• Help to protect loss or pollution of soils which support valued habitats or are already experiencing</li> </ul>	<p>There was a gradual improvement in chemical water quality nationally and in Warwickshire between 2001 and 2006. In 2006 chemical water quality levels in North Warwickshire and Nuneaton &amp; Bedworth were significantly below levels in the rest of the County. Biological water quality levels in Warwickshire were below the average level for England in 2006. All rivers within Warwickshire classified under the Water Framework Directive (WFD) assessment were determined to be “at risk” with regards to the WFD criteria. Without intervention, water quality will continue to remain ‘at risk’ with regard to the Water Framework Directive criteria. As highway and bridge maintenance duties will continue in the absence of the plan it is assumed that some measures will be implemented to ameliorate the effects on water and soil. However, the effect is still negative, long term and irreversible.</p> <p>Transport of minerals and waste by road can cause problems to local communities. Transport of minerals is likely to remain mainly by HGV. The future growth strategy will mean that more sand and gravel quarries are needed. Warwickshire County Council considers that coal could be transported from Daw Mill Colliery in Warwickshire to power stations</p>	



Assessment of the Future Baseline			
SEA Objective	SEA Indicator	Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect
	erosion?	outside of the County, such as Rugeley. In the absence of freight management measures freight traffic in unsuitable routes will increase. This is likely to be a long term effect (but reversible if action is taken in the future) and will be significantly negative.	



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 3: Assessment of  
Options

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:



**ENVIRON  
Birmingham, UK**

Date:

**May 2010**

Project or Issue Number:

**UK1815047**

Contract/Proposal No:	UK1815047
Issue:	1
Author	
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Project Manager/Director	
(signature):	
Date:	May 2010

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Version Control Record				
Issue	Description of Status	Date	Reviewer Initials	Authors Initials
1	FINAL Draft	03/05/10	JC	EJ

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment Useful evidence to assist the assessment of draft plan
Integration of planning and transport planning						
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.
Parking						
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.
Travel information						

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
<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>	X	X	X	X	X	<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>
Work and school travel						

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment Useful evidence to assist the assessment of draft plan
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>

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
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>

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
<b>Walking and cycling</b>						
<p>Develop cycle routes in and around our main towns</p> <p>Promotional events &amp; activities (including publishing town centre cycle guides)</p> <p>Cycle parking at key destinations</p> <p>Cycle training for children &amp; adults</p> <p>Pedestrian crossing facilities</p> <p>Reduce crime and fear of crime on key pedestrian routes</p> <p>Introduce pool bicycles (Bike Hubs) for individual use within main towns (<b>new to Warwickshire</b>)</p>	x	x	x	x	x	<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>



Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
						<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>
Passenger transport						
<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>	X	X	X	X	X	<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>

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
						<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>new to Warwickshire</b>)</p> <p>Rail development / new rail stations</p>	X	X	X	X	X	<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>

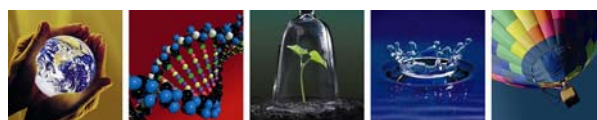
Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
						<p>and existing lines extended (3).</p> <p>Research has shown that the main barriers to travelling by train are hard 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) Scottish Executive Development Department Research Programme (2003): <i>Barriers to Modal Shift. Research Findings No.171/2003.</i> Derek Halden Consultancy.</p> <p>(4) DfT (2009): <i>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>

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
						<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>

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
						<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				X		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	X			X		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	X					This will have positive economic effects as traffic disruption and delay is minimised.
Minor junction / signal improvements at congestion hotspots	X			X	X	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	X			X		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	X	X		X	X	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)

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment  Useful evidence to assist the assessment of draft plan
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  Introduce low emission zones in areas of poor air quality ( <b>new to Warwickshire</b> )  Delivery and stopping restrictions	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>

Assessment of alternative measures/options						
Measure	Economy	Climate	Equality	Safety	Env	Reasoning behind the assessment Useful evidence to assist the assessment of draft plan
<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>						<p>congestion by stopping inappropriate stopping and parking.</p>



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental Report

Appendix 4: Assessment of  
Draft Plan – Assessment  
Matrices

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:

**ENVIRON  
Birmingham, UK**

Date:



**May 2010**

Project or Issue Number:

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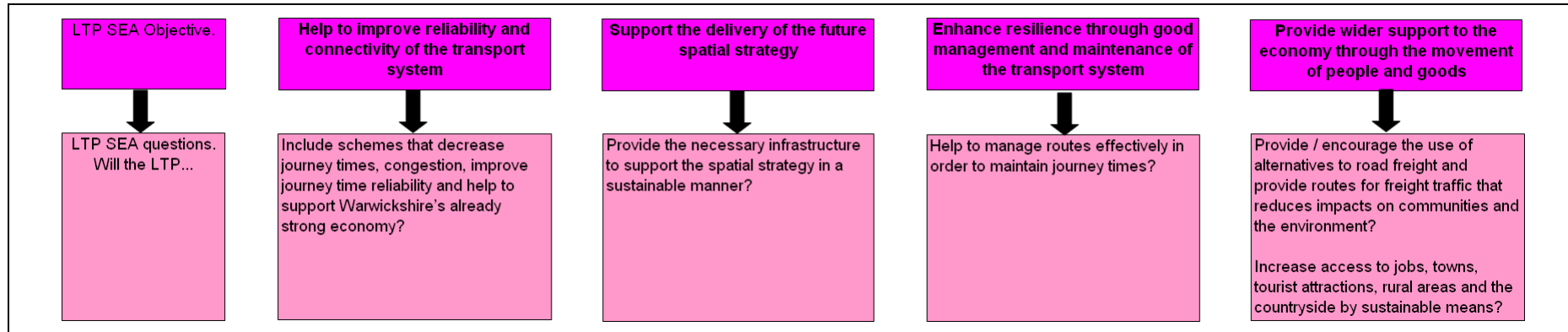
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Version Control Record				
Issue	Description of Status	Date	Reviewer Initials	Authors Initials
A	First Draft	17/05/10	JC	EJ
1	Draft to client	26/05/10	JC	EJ
2	FINAL DRAFT	28/05/10	JC	EJ

# 1 SEA Topic: Economy

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which seek to provide reliable and efficient transport networks.	●	
<b>Area strategies<sup>1</sup></b>		
<b>Northern Warwickshire</b>		
The objectives for the area discuss the long term stability and growth of the economy and supporting planned housing and employment growth. Congestion is not deemed to be an issue when compared to other areas of Warwickshire. Therefore, significant actions are not provided to improve congestion. Access to employment	?	As the locations of development and the available funding become

<sup>1</sup> Please note that because of limited time to undertake the assessment the strategies are presented in the matrices in the order that they were sent to the SEA team by Warwickshire County Council. This may not be the order in which they appear in the LTP3.

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>is addressed, mainly through the provision of an inter urban quality bus corridor between Nuneaton, Atherstone and Tamworth, increasing car parking provision at Atherstone station and the commitment to keep under review the need for further cycling improvements to link Hams Hall to Coleshill Parkway Station.</p> <p>In terms of supporting the delivery of the future spatial strategy, the LTP commits to inputting into the LDF process. North Warwickshire will see housing growth of 3,000 in the period to 2026 and there will be further expansion of the employment sites at Hams Hall and Birch Coppice. These developments are likely to cause cumulative effects on traffic levels and the development at Hams Hall and Birch Coppice are likely to cause increases in freight traffic. To reduce the impact of this, the LTP includes such actions such as the review of environmental weight limits and a management strategy for HGV parking around Hams Hall.</p> <p>Because of the uncertainty regarding the location of development the impact of the strategy has been scored as uncertain.</p>		<p>more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.</p>
<b>Eastern Warwickshire</b>		
<p>The objectives discuss supporting planned housing and employment growth and supporting the regeneration of Rugby Town Centre and supporting the stability and growth of the local economy.</p> <p>Rugby will see development of 11,000 dwellings and 108 ha of employment land. Future development may cause a cumulative negative impact on traffic levels and congestion, as could further development at DIRFT. In terms of the likely sites for development, the Gateway Rugby Site is likely to have traffic impacts on the A426 corridor and junction 1 of the M6. However, it is well located to existing and proposed employment sites facilitating more sustainable travel. The Rugby Radio Station site will require some improvements to make the site accessible to the town centre and the traffic impact acceptable (including a new railway station that could assist employees of DIRFT get to work sustainably). These measures should be positive but not enough detail is known at the present time to assess the proposals in detail and it is likely that the developers of the sites will have to carry out transport modelling to ensure that the impact of the sites are acceptable on the transport system.</p> <p>In terms of freight, the area has a large proportion of employment related to the transport and distribution sectors meaning that HGVs make up a large amount of traffic in the area. It is anticipated that the opening of the Western Relief Road (which is being built at the moment) will have a positive impact on HGV traffic in Rugby. The expansion of DIRFT may have some impacts on Rugby if improvements are not made to the</p>	?	<p>As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.</p>

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
strategic and local road network. This is subject to a high level of uncertainty at the moment and further modelling is expected to determine the likely impact on the road network.		
<b>Nuneaton and Bedworth</b>		
<p>The objectives for the area discuss supporting the regeneration of the town centres and the stability and growth of the economy. The strategy includes issues such as promoting a step change in public transport in the North South Corridor and a comprehensive network of bus services within Nuneaton and Bedworth, linking residential areas with town centres, rail stations, employment sites and Coventry (which will assist people in accessing work opportunities), improving interchanges (including new railway stations), securing travel plans, a Variable Message Signing scheme on the main approaches to Nuneaton town centre and improving the management of the transport assets in the area.</p> <p>The area is designated within the Coventry and Nuneaton Regeneration Zone (including a Regional Investment Site although no details are available on this at the moment) and will experience a high level of development (11,000 houses and 96 ha of employment land – although their location has not yet been determined). Future development may cause a cumulative negative impact on traffic levels and congestion especially in Nuneaton as it has experienced the fastest rate of traffic growth in the county and already has a number of areas which experience congestion (especially where arterial routes meet the Ring Road). Increased congestion is likely to hamper the efforts to regenerate the area and could have a significant negative effect unless mitigated. However, a number of improvements are included in the transport interventions section of the strategy that are designed to help support the level of development in the area. These include rail improvements, enhanced north-south bus services, quality bus partnerships, a new station at Galley Common (facilitating trips to Birmingham and Leicester) and a number of highway improvements. However, the strategy makes it clear that these proposals have not been costed and it is unclear whether they will go ahead. The proposals to support development will be used in due course to inform the preparation of the LDF Infrastructure Delivery Plan. Other measures are discussed in the strategy including a number of new rail stations in the NUCKLE corridor (Nuneaton-Coventry-Leamington Spa). The NUCKLE scheme is a major scheme in the LTP. The NUCKLE scheme is addressed in the North-South Corridor assessment.</p> <p>In terms of freight, measures will consider the implementation of restricted loading periods, a review of current signage and the investigation of opening up rail freight access to and from the Judkins Quarry site.</p>	?	As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>All of these measures will be positive in reducing the negative impact of freight.</p> <p>Because of the uncertainty regarding the location of development the impact of the strategy has been scored as uncertain.</p>		
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		
<p>The objectives for the area discuss stabilising and growing the local economy of the area.</p> <p>One of the main issues in the area affecting the economy is congestion. Warwick in particular has experienced a high rate of population growth and will see significant growth in the next few years (11,000 houses and 90ha of employment land to 2026) and this development could cause increased congestion in a number of areas including near the concentration of schools in Warwick. However, focusing growth in these locations will help to reduce distances residents need to travel, thereby allowing more trips to be undertaken on foot and by bike, minimise the impact of through traffic on the town centres, make best use of the existing bus network and allow easy access to the existing rail network at Warwick, Warwick Parkway and Leamington railway stations. A number of measures are also included that will make sustainable access to areas of employment easier.</p> <p>A number of measures are suggested that may help reduce traffic including school and workplace travel plans, improvements to public transport (bus and rail) and also the investigation of a park and ride site to serve Leamington and Warwick. A number of improvements are included in the transport interventions section of the strategy that are designed to help support the level of development in the area. This includes better public transport services both in urban and rural parts of the Borough and enhanced north-south bus services, improving transport interchange, promoting alternatives to the private car and promoting workplace travel plans. In terms of freight, the council will continue to review existing loading restrictions and will review signing on arterial routes.</p> <p>Other measures are discussed in the strategy including a number of new rail stations in the NUCKLE corridor (Nuneaton-Coventry-Leamington Spa) and a Kenilworth Railway Station. The NUCKLE scheme and Kenilworth Station are major schemes in the LTP. Warwickshire County Council is at a very early stage with the planning for Kenilworth Railway Station so no specific information is available on the impact of the scheme. The NUCKLE scheme is addressed in the North-South Corridor assessment.</p> <p>Because of the uncertainty regarding the measures which will be implemented to reduce the impact of</p>	?	<p>As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.</p>

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
development on the transport system and the funding available, the impact of the strategy has been scored as uncertain.		
<b>Southern and Western Warwickshire</b>		
<p>The objectives discuss supporting the World Class Stratford Initiative by reducing vehicle dominance in the town centre, tackling congestion and supporting new housing and employment growth.</p> <p>The district is likely to experience high population growth in the next few years. Coupled with the fact that the district will experience a significant amount of development (7500 new dwellings to 2026), this means that the LTP is likely to be implemented against a backdrop of increasing traffic. Culture and tourism obviously play a major part in the economy of the district but visitors need to be encouraged to stay longer. Commuting patterns also have a big influence on traffic and result in a lot of cross town movements and congestion. A number of key junctions in and around the town centre are already at capacity and between 2002 and 2008 there has been a 2% decrease in morning peak vehicle speeds (indicating that congestion is worsening). Increasing development is likely to have a negative effect on congestion unless transport measures can be implemented to prevent this. A number of measures are proposed within the strategy to support development and reduce congestion such as area wide traffic management, traffic signal co-ordination etc but the strategy makes it clear that these measures are subject to feasibility and funding. A lot of these will need to be developer funded so it's difficult to assess due to the uncertainty over implementation. A number of public transport schemes are also proposed including a new railway station – Stratford Parkway (listed as a major scheme in the Implementation Plan). This will help sustainable commuting to places such as Birmingham. Warwickshire County Council is at a very early stage with the planning for the major scheme so no specific information is available on the impact of the scheme.</p> <p>In terms of HGVs Stratford experiences particular problems in the town centre and some rural villages. The villages that are affected are those along the section of the A435 to the north of Alcester. The council is proposing a number of measures such as investigating restrictions on access, securing voluntary route agreements and promoting use of dedicated commercial vehicle satellite navigation systems. These should be positive in reducing some of the problems associated with HGVs.</p> <p>Because of the uncertainty regarding the measures which will be implemented to reduce the impact of development on the transport system and the funding available, the impact of the strategy has been scored as uncertain.</p>	?	As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>The North South Corridor</b>		
<p>The objectives address supporting the local and sub regional economy and supporting planned housing and employment growth.</p> <p>The main thrust of the strategy is to reduce social and economic inequalities between the affluent south and less affluent north of the area. Parts of the area in the north of the corridor have suffered economic decline whilst the south of the area has successfully attracted modern industries. The prosperity of the south in particular has resulted in pressure on the transport system as commuters travel through the area. Development, travel demand and congestion in the corridor are set to increase and the aim of the strategy is to make the area more permeable allowing more sustainable transport choices to be made. Future travel demand will be heavily influenced by development pressures and development will be happening against a backdrop of increasing congestion. A key shortcoming is the lack of a through public transport service between the north and the south without the requirement to change at Coventry. Provision of such a service would help to provide access to employment without having a detrimental impact on congestion and will help to link areas of need to areas of opportunity. The step change includes providing high quality, convenient public transport access to existing and proposed development areas in the corridor and in particular development of a secure through bus service and the NUCKLE scheme which is listed as a major scheme in the Implementation Plan. Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that phase 1 of the scheme will have the following benefits - supporting the Coventry-Nuneaton Regeneration Zone, supporting the future development of the Coventry Arena, supporting the Friargate office and residential development in Coventry City Centre and providing enhanced transport links to the education and skills training facilities in Coventry and at Warwick University. The scheme will also help to enable greater levels of modal shift helping to reduce congestion and traffic levels. No information is available on later phases of the NUCKLE scheme.</p>	?	As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.
<b>Modal / topic strategies</b>		
<b>Air Quality Strategy</b>		
Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement	●	



The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have positive effects on congestion, journey times and reliability. The strategy is likely to be positive.		
<b>Accessibility Strategy</b>		
The accessibility work undertaken so far has focused on access to work. The ongoing work with the Job Centre (under policy AS7) to provide locally delivered services might enable some people to get back into work more quickly. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. The strategy is likely to be positive.	●	
<b>Sustainable Freight Distribution Strategy</b>		
The strategy should be positive in terms of making freight movements more efficient and reducing congestion (through targeted improvements to the road and rail network and setting up freight consolidation centres); through reducing the impact of freight on the environment and communities (through continuing the local and regional freight quality partnerships and associated measures) and providing more certainty to operators regarding routing and access. The strategy also discusses improving access to and expanding rail freight facilities. This may be important for some businesses in Warwickshire although the strategy acknowledges that there is limited opportunity for modal shift in Warwickshire onto rail as the majority of companies who transport suitable loads already use rail for part of their journey. In addition, preliminary studies by the DfT (DfT (December 2008): <i>Delivering a sustainable transport system: the logistics perspective</i> ) 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. However, the strategy is still likely to be positive to some degree.	●	
<b>Parking Strategy</b>		
If the strategy is successful it will have a key role in reducing congestion and traffic flow (and hence support the economy). This will be mainly through reducing the amount people circulate looking for parking but also possibly through small amounts of modal shift especially if parking is improved at stations (improving car parking at railway stations has been shown as vital in promoting a shift from car to rail journeys). The strategy also includes measures to help the tourism economy by improving coach parking. Real time information is also likely to be useful in reducing congestion and traffic and studies have shown that in larger	●	

The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
cities variable message car parking signs can reduce the average distance travelled by a group of drivers by 30% (Paul Kompfner et al (1998): ITS City Pioneers Toolbox). Therefore, the strategy is likely to be positive.		
<b>Powered Two Wheeler Strategy</b>		
The use of PTWs can be positive for the economy if it helps people access employment who otherwise couldn't. There is also an opportunity to reduce congestion if a substantial number of people switch from cars to PTWs (although a significant shift is unlikely). The strategy encourages the use of PTWs through measures to improve safety, parking and integration with other modes. The strategy is likely to be positive.	●	
<b>Airport Accessibility Strategy</b>		
Access to airports is important for the economy because it gives access to workers at Birmingham International Airport and access to air travel for the business traveller and international visitors to Warwickshire. The strategy discusses several measures in terms of improving reliability of transport services, the coverage of public transport services and co-ordination of services and integrated ticketing. The strategy is likely to be positive. There are some elements of the strategy that could be better defined and these are discussed in the final column.	●	<p>Policy ASA1 of the Airport Accessibility Strategy could say ...and other stakeholders to improve <b>sustainable</b> surface access provision ...</p> <p>Policy ASA3 of the Airport Accessibility Strategy could be clearer about the level of passenger flights that will trigger a Surface Access Strategy for Coventry Airport.</p>
<b>Land Use and Transportation Strategy</b>		
The spatial development strategy is to focus development on urban areas and main towns. In Warwickshire these areas are already congested (especially Warwick) so the effect of new development may cause more congestion problems and impact on the economy. Better integration of transport and land use planning helps to ensure that the cumulative effect of development is less because there is 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. The strategy includes several measures to do this including through working	●	

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
with the planning authorities and developers to put in place travel plans and more sustainable transport systems. This will be positive for the economy if successful.		
<b>Bus Strategy</b>		
A greater need exists than is being provided by for the bus network. This is likely to be having impacts on the economy if people are being forced to use their cars in the absence of services (and causing congestion). It also means that some people may not be able to access employment opportunities. The strategy includes several measures to increase the use of buses and this includes revisions to fare structures and ticketing, development of further urban Quality Bus Corridors, provision of better bus information and other measures to improve the quality and availability of bus services. The past success of bus measures in Warwickshire shows that these measures are likely to be positive, especially in light of the fact that the strategy will include both promotional measures and improvements in the quality of the 'offer' – research has shown that this is key to modal switch (DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report</i> ).	●	
<b>Passenger Rail Strategy</b>		
A greater need exists than is being provided for by the rail network. This is likely to be having impacts on the economy if people are being forced to use their cars in the absence of services (and causing congestion). It also means that some people may not be able to access employment opportunities. The strategy includes several measures to increase the efficiency of the rail service, including coordination of public transport services to encourage interchange and improving the quality of rail services in terms of reliability and punctuality. These measures are likely to be positive, especially in light of the fact that the strategy will include both promotional measures and improvements in the quality of the 'offer' and the fact that rail patronage in Warwickshire is up from 3.81 million passenger journeys in 2003/04 to 5.54 in 2008/09.	●	
<b>Network Management Duty Strategy</b>		
Roads facilitate the movement of goods and services and provide access to homes and businesses. The Network Management Strategy aims to deliver reliable and efficient transport that supports economic growth and has a key objective to improve the cycling and walking environment thereby encouraging greater levels of walking and cycling which may lead to reduced congestion. The strategy is likely to be positive.	●	
<b>Taxi and Private Hire Vehicle Strategy</b>		

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
A successful, efficient and affordable taxi service will contribute to a town's economy and benefits both local residents and visitors therefore the strategy as a whole is likely to be positive.	●	
<b>Intelligent Transport Systems Strategy</b>		
ITS is increasingly playing a major role in enhancing the mobility of people and goods which will have a positive effect on the economy. Therefore, the strategy as a whole is likely to be positive.	●	
<b>Community Transport Strategy</b>		
A greater need exists than is being provided for by the existing community transport network. This is likely to be having impacts on the economy if people cannot access jobs and services. The vision of the strategy includes provision of an affordable and integrated network of community transport services, and Policies PTCT2 and PTCT4 in particular support this. Policy PTCT2 aims to encourage transport interchange, increase the reliability and punctuality of services and reduce journey times, while Policy PTCT4 aims to increase the contribution of community transport to sustainable economic growth. The Action Plan refers to a number of measures, such as 'Wheels to Work' and 'Buster Werkenbak' which improve access to employment. Therefore, the strategy as a whole is likely to be positive.	●	
<b>Congestion Strategy</b>		
It is recognised that high levels of congestion may have a detrimental effect on economic performance. The strategy would help support economic competitiveness and growth by delivering reliable and efficient transport networks, especially in areas such as Warwick which are experiencing high levels of congestion. The strategy is likely to be positive.	●	
<b>Cycling Strategy</b>		
Several improvements to cycleways and extensions of cycle routes have been achieved in recent years, which are beneficial for accessing employment opportunities and services and reducing traffic congestion. The strategy aims to build on these to promote cycling as a transport choice. Policy CY2 in particular aims to provide safe and convenient access to town centres, employment sites, schools and public transport interchanges, and Policy CY3 gives priority to developing cycle infrastructure within the main urban areas and around key inter-urban links generating significant commuting movements. The strategy is likely to be	●	

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
positive.		
<b>Bus Information Strategy</b>		
The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which will contribute positively to the economy. This will be met through the provision of bus information that is simple to use and through improving bus information in line with the minimum requirements listed in the strategy. The Action Plan contains measures for the enhancement of bus information, including the timescale of these. The strategy is likely to be positive.	●	
<b>Public Transport Interchange Strategy</b>		
The strategy aims to encourage modal shift onto public transport, through improving integration between different public transport modes. Better integration of transport modes helps to reduce journey times and congestion and ensure better access to jobs and services by means other than the car. The strategy includes several measures to do this, such as enhancement of existing and provision of new interchange facilities at railway stations and working with the planning authorities, public transport operators and Network Rail to promote integration between transport modes. This will be positive for the economy if successful.	●	
<b>Public Transport Strategy</b>		
This strategy provides the strategic framework for the public transport mode specific strategies (the Bus, Passenger Rail, Community Transport and Taxi and Private Hire Vehicle Strategies), the Public Transport Interchange Strategy and the Bus Information Strategy. Its aim is to grow the market for public transport by making the product attractive to existing and potential users. If successful, the strategy will have a positive effect on the economy, by improving the provision of public and community transport and reducing congestion. The strategy is supported by a number of policies, and as a whole it is likely to be positive.	●	
<b>Road Safety Strategy</b>		
The strategy aims to improve road safety throughout the county. The strategy covers a wide variety of means to achieve this, such as working with the emergency services, the Highways Agency and the community, education campaigns, influencing road user behaviour and combating excessive speed through the use of safe and appropriate speed limits and safety cameras. Reduction in the number of people killed or injured on	●	

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
the roads is likely to have a positive impact on the economy, through saving associated costs. The Action Plan contains measures for the delivery of the Road Safety Strategy and the strategy as a whole is likely to be positive.		
<b>Highway Maintenance Strategy</b>		
A well maintained road network can improve travel times for people travelling to work, to school, or other education establishments, travelling to shops, for tourism, business; and transporting goods and delivering to businesses, shops and houses. The Highway Maintenance Strategy also works towards minimising delays from roadworks. The strategy states that the Council will use a variety of methods to ensure that the highway network is maintained in the most appropriate and economic way. The strategy as a whole is likely to be positive.	●	
<b>Bridge Maintenance Strategy</b>		
The main thrust of the Bridge Maintenance Strategy is to maintain bridges and other highway structures. This will help to ensure that delivery vehicles and HGVs can access areas that they need to and will have a positive effect on the economy in this regard.	●	
<b>Changing Travel Behaviour Strategy</b>		
It is recognised that high levels of congestion may have a detrimental effect on economic performance. The Changing Travel Behaviour Strategy will help reduce congestion by encouraging sustainable travel by improving information, opportunities and the attractiveness of alternative modes. The strategy as a whole is likely to be positive.	●	
<b>Walking Strategy</b>		
As well as providing benefits to the individual, increasing the amount of walking can contribute towards reducing congestion. Congestion costs the economy billions of pounds every year and negatively affecting quality of life for many. Improved conditions for walking contribute towards wider regeneration initiatives, and at the same time, successful regeneration initiatives can lead to increased pedestrian activity. Safe and attractive streets and public places are fundamental to attracting shoppers, visitors and tourists. The strategy as a whole is likely to be positive.	●	

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Rights of Way and Recreational Highway Strategy</b>		
<p>The Strategy aims to improve connectivity of the Rights of Way and recreational highway across the county, including in inter-urban and other urban areas. This could help to improve connectivity of transport systems.</p> <p>The Strategy will help to maintain, improve and promote access to the countryside using the Rights of Way and recreational highway. The provision of the high quality network of footpaths and cycle paths, particularly those connecting tourism attractions could also help to support the tourism industry in the county.</p>	●	
<b>Implementation Plan (April 2011 – March 2014)<sup>2</sup></b>		
<p>Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet known. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Maintaining the highway network and providing a balanced integrated transport programme are likely to be positive. The Implementation Plan concludes that it is not likely that significant infrastructure investment to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.</p>

<sup>2</sup> Please note that the major schemes are discussed in the relevant area strategies. An assessment of the plan with and without major schemes has not been undertaken. This is because of the strategic and uncertain nature of the plan and the fact that major schemes are at such an early stage of planning.

### Assessment Conclusions - economy

**Summary of performance:** None of the strategies are likely to have a significantly positive effect on the economy objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the economy SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help support the economy of Warwickshire. The strategies contained within the plan should help to improve sustainable access to employment (both employment sites within the county and to areas such as Birmingham), help to manage the negative effects of HGV traffic, help to manage traffic better in the town centres, support regeneration in the less affluent north of the county and support initiatives such as the World Class Stratford Initiative. However, some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites) and the fact that transport modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels. Although the long term strategy is broadly positive, there is some uncertainty over the level of funding available to provide supporting transport infrastructure in the short term.

#### Mitigation and enhancement measures:

Mitigation measures identified to address potential negative or uncertain effects are as follows:

- As the locations of development and the available funding become more definitive, Warwickshire County Council should continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable; and
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

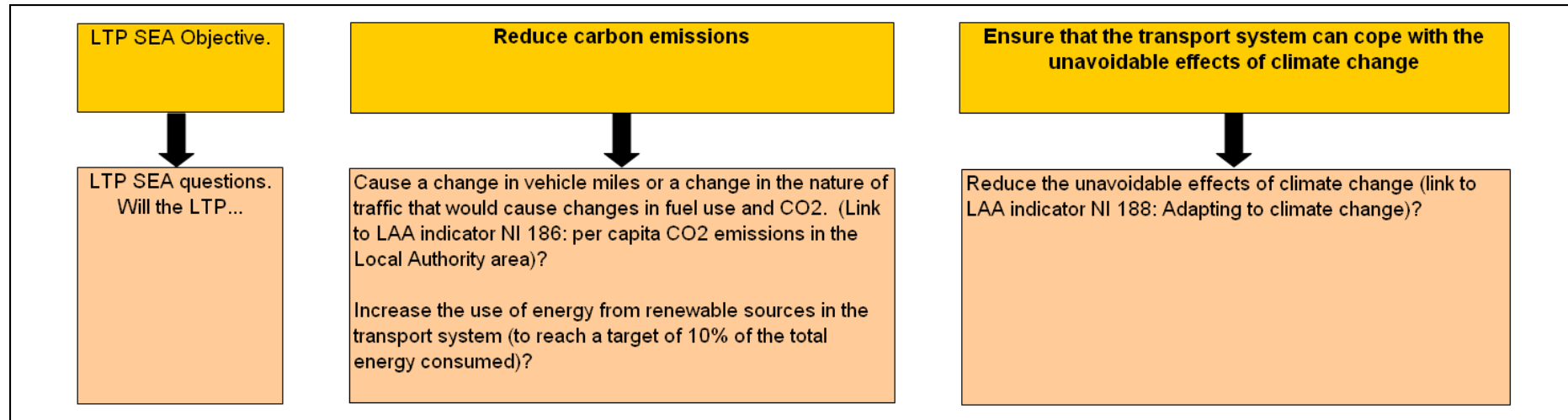
Enhancement measures identified in order to improve the performance of the Strategies are as follows:

- Policy ASA1 of the Airport Accessibility Strategy could say ...and other stakeholders to improve **sustainable** surface access provision ...; and
- Policy ASA3 of the Airport Accessibility Strategy could be clearer about the level of passenger flights that will trigger a Surface Access Strategy for Coventry Airport.





## 2 SEA Topic: Climate Emissions

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes an objective to reduce transport emissions of carbon dioxide. However, the objectives do not address climate change adaptation and this is likely to be an important issue for the county.	●	The objectives of the plan should address adaptation to climate change.
<b>Area strategies</b>		
<b>Northern Warwickshire</b>		

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change.</p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not available. For climate emissions to decrease definable modal shift and reductions in vehicle miles would have to occur. There are some measures in the strategy which may make alternative modes more attractive but the level of development makes it likely that climate emissions will increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative. In addition, there is some uncertainty over the transport improvements needed to support growth. The other area strategies have been more definitive in this regard.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>	●	<p>Consider adding an objective to the Northern Warwickshire Area Strategy related to reducing CO<sub>2</sub> emissions and adapting to climate change.</p> <p>The fact that the spatial strategy and the transport interventions are likely to increase carbon emissions is a difficult issue to mitigate as development cannot be stopped yet there is reduced funding for transport interventions to enable modal switch. As noted in the Implementation Plan suggested mitigation, work with District Councils should actively consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided</p>
<b>Eastern Warwickshire</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change.</p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth</p>	●	See mitigation for North Warwickshire Area Strategy

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in Rugby means that emissions are likely to increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>		
<b>Nuneaton and Bedworth</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change.</p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in Nuneaton and Bedworth and the fact that Nuneaton has experienced the fastest rate of traffic growth in the county over recent years means that emissions are likely to increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>		See mitigation for North Warwickshire Area Strategy
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change.</p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in the area (and the fact that the area has a lot of through traffic on the strategic highway network which contributes to emissions) means that emissions are likely to increase</p>		See mitigation for North Warwickshire Area Strategy

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>		
<b>Southern and Western Warwickshire</b>		
<p>The strategy (unlike the other strategies) does not include an objective on reducing the environmental impact of traffic although there is an objective relating to air quality.</p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in the area means that emissions are likely to increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>	●	See mitigation for North Warwickshire Area Strategy
<b>The North South Corridor</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change.</p> <p>Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that the scheme will save 154 tonnes CO<sub>2</sub> a year compared to the base case. No information is available on later phases of the NUCKLE scheme.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>	●	Consider adding an objective to the North South Corridor Area Strategy related to reducing environmental impact, CO <sub>2</sub> emissions and adapting to climate change.

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Modal / topic strategies</b>		
<b>Air Quality Strategy</b>		
Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have a beneficial impact in the reduction of CO <sub>2</sub> emissions. The strategy is likely to be positive.	●	
<b>Accessibility Strategy</b>		
Any strategies that favour sustainable modes of transport will help reduce CO <sub>2</sub> emissions. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. The strategy is likely to be positive.	●	
<b>Sustainable Freight Distribution Strategy</b>		
Any strategies that move freight away from road or air travel will help reduce CO <sub>2</sub> emissions. However, as already acknowledged, there is limited opportunity for modal shift in Warwickshire onto rail so the impact is likely to be neutral in this regard. The use and development of freight handling facilities at Coventry Airport (Baginton) will result in an increase in air based freight transport (and therefore in CO <sub>2</sub> emissions and emissions of air pollutants) based on today's emissions (as the airport has been closed since 2009). The effect of the plan on its own will be minor negative but the cumulative effect of the plan in association with the re-opening of Coventry Airport is likely to be significantly negative.	● (LTP alone) ● (cumulative effect)	It is not possible within the LTP to mitigate the effect of the re-opening of Coventry Airport. It is within the power of the LTP only to promote alternative freight modes and the Sustainable Freight Distribution Strategy already does this.
<b>Parking Strategy</b>		
If the strategy is successful it will have a key role in reducing congestion and traffic flow (and hence reduce CO <sub>2</sub> emissions). This will be mainly through reducing the amount people circulate looking for parking but also possibly through small amounts of modal shift especially if parking is improved at stations (improving car parking at railway stations has been shown as vital in promoting a shift from car to rail journeys). The strategy	●	

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
is likely to be positive.		
<b>Powered Two Wheeler Strategy</b>		
There can be substantial environmental benefits from increased motorcycle use compared to car use, including lower emissions and lower fuel consumption. Policies that promote the use and improved safety of PTW may result in a modal shift from car to PTW which in turn would help reduce CO <sub>2</sub> emissions. The strategy is likely to be positive.	●	
<b>Airport Accessibility Strategy</b>		
Strategies to improve the co-ordination and facilities of public transport services to aviation facilities and to improve multi-modal integration may help encourage the use of public transport to and from airports and therefore reduce CO <sub>2</sub> emissions from vehicles. Air travel is a major source of CO <sub>2</sub> emissions therefore strategies that encourage the use of air travel such as the implementation of a new Birmingham International Airport Surface Access Strategy to support the proposed expansion of the airport and the development of a Surface Access Strategy for Coventry Airport (should passenger flights recommence from this airport in the future) may lead to an increase in CO <sub>2</sub> emissions. The effect of the plan on its own will be minor negative but the cumulative effect of the plan in association with the expansion of Birmingham International Airport and the re-opening of Coventry Airport is likely to be significantly negative.	● (LTP alone) ● (cumulative effect)	It is not possible within the LTP to mitigate the effect of the expansion of Birmingham International Airport and the re-opening of Coventry Airport. It is within the power of the LTP only to promote alternative modes to airports and the Airport Accessibility Strategy already does this.
<b>Land Use and Transportation Strategy</b>		
The spatial development strategy is to focus development on urban areas and main towns. Better integration of transport and land use planning helps to ensure that the cumulative effect of development is less because there is adequate transport infrastructure to support development in a way that is sustainable. The strategy includes several measures to do this including through working with the planning authorities and developers to put in place travel plans and more sustainable transport systems. This will be positive in terms of reducing CO <sub>2</sub> emissions if successful.	●	
<b>Bus Strategy</b>		
Delivery of the policies set out in the Public Transport Strategy along with the Bus Strategy measures such as	●	

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
improved availability, quality and affordability of service, information through real time information and the general public awareness may contribute to a modal shift from private car to bus. If significant modal switch occurs, this will help encourage the use of public transport and therefore reduce CO <sub>2</sub> emissions from vehicles.		
<b>Passenger Rail Strategy</b>		
The Passenger Rail Strategy outlines policies that offer accessibility through the rail transport system, both in terms of physical access to transport and its availability. If modal switch occurs, this will help encourage the use of public transport and therefore reduce CO <sub>2</sub> emissions from vehicles.	●	
<b>Network Management Duty Strategy</b>		
The Network Management Duty Strategy contains policies to help reduce congestion and a key objective is to improve the cycling and walking environment thereby encouraging greater levels of walking for short journeys, particularly to town centres, workplaces, schools and public transport interchanges. If these measures are successful they will help to reduce CO <sub>2</sub> emissions.	●	
<b>Taxi and Private Hire Vehicle Strategy</b>		
The Taxi and Private Hire Vehicle Strategy has the vision of an “ <i>environmentally friendly provision of taxis</i> ” however, it is not clear how this will be achieved through the policies outline in this strategy. The overall effect of the policy is considered to be neutral. However, with further information on how the above objective is likely to be achieved the effect could be minor positive.	○	The policies in the Taxi and Private Hire Vehicle Strategy go as far as encouraging the on-going replacement of older taxis and private hire vehicles in order to meet DDA requirements. Perhaps this can be extended to encouraging the replacement to cleaner vehicle fleets.
<b>Intelligent Transport Systems Strategy</b>		

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
ITS works by managing congestion on key local routes. If the strategy is successful in reducing congestion, CO <sub>2</sub> levels will benefit.	●	
<b>Community Transport Strategy</b>		
Overall public transport services should be co-ordinated with community transport to encourage interchange consistent with the aims of the Public Transport Interchange Strategy, the Bus Strategy and the Passenger Rail Strategy. This should provide a greater range of travel opportunities and options for travellers and reducing car dependency. If this is successful this will reduce CO <sub>2</sub> emissions.	●	
<b>Congestion Strategy</b>		
High levels of congestion may adversely affect CO <sub>2</sub> emissions as engines use more fuel when idling and stop - starting. If the strategy is successful in reducing congestion, CO <sub>2</sub> levels will benefit.	●	
<b>Cycling Strategy</b>		
Switching people from cars to cycling will contribute towards carbon reduction objectives through contributing to modal shift. The strategy works towards developing improvements to cycling infrastructure and to promoting the benefits of cycling. If these measures are successful in helping people to cycle more this will be positive.	●	
<b>Bus Information Strategy</b>		
The Bus Information Strategy promotes improvements to the quality and availability of information and to the waiting environment and has close links with the Changing Travel Behaviour Strategy, which is aimed at influencing people's travel behaviour away from car use towards more sustainable modes of transport. If the strategy is successful in moving people from cars to public transport there will be benefits in reducing CO <sub>2</sub> emissions.	●	
<b>Public Transport Interchange Strategy</b>		
The Public Transport Interchange Strategy provides opportunity to enhance existing and provide new interchange facilities at rail stations and public transport interchanges, promote integration between rail, bus and community transport services and provide new rail stations including strategic park and ride / parkway	●	



The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
stations on the rail network. Providing excellent public transport interchange provision is fundamental in achieving objectives of increasing patronage, improving passenger satisfaction, encouraging modal shift onto public transport and tackling climate change.		
<b>Public Transport Strategy</b>		
Delivery of the policies set out in the Public Transport Strategy along with the Bus Strategy measures such as improved availability, quality and affordability of service, information through real time information and the general public awareness may contribute to a modal shift from private car to bus. If modal switch occurs, this will help reduce CO <sub>2</sub> emissions from vehicles.	●	
<b>Road Safety Strategy</b>		
The main way that the strategy can influence CO <sub>2</sub> emissions is through making roads safer for people to cycle and walk, thus helping to achieve modal shift. The strategy in particular focuses on safety of the school journey and this can be positive particularly for reducing vehicle trips in the morning peak (DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report</i> ). If the measures are successful in making the roads safer, CO <sub>2</sub> emissions may decrease.	●	
<b>Highway Maintenance Strategy</b>		
<p>The Highway Maintenance includes measures to upgrade Mercury lighting which can have energy and carbon savings however the upgrading of the more common low-pressure sodium lights involves an increase in energy use. The strategy promotes the use of new light sources such as Cosmopolis in new developments and energy efficient lighting improvements as part of a lighting design scheme and the use of LED's for street lighting. The strategy also aims to identify the most appropriate highway construction materials; reduce the amount of construction waste; and to recycle materials on site where possible.</p> <p>The strategy does not discuss how the effects of climate change will require changes to the maintenance regimes and this is an important omission.</p>	●	The Highway Maintenance Strategy does not discuss how the effects of climate change will require changes to maintenance regimes and this is a significant omission. Some of the changes that need to be addressed are changes in vegetation management, surfacing (with the rise in hot temperatures) and the potential of flooding on the

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
		highway drainage network.
<b>Bridge Maintenance Strategy</b>		
Where major bridge works take place, the County Council will actively encourage the recycling of materials on site to minimise the amount of virgin stone and other materials needed from local quarries. This will be positive in terms of reducing CO <sub>2</sub> emissions from quarrying virgin stone.	●	
<b>Changing Travel Behaviour Strategy</b>		
The Changing Travel Behaviour Strategy provides a range of 'soft' measures which seek to encourage more people to choose sustainable travel by improving information, opportunities and the attractiveness of alternative modes. The strategy has an integral role within the LTP to complement 'hard' policies and infrastructure improvements and persuade people to consider using sustainable modes of transport. If the strategy is successful in moving people from cars to public transport there will be benefits in reducing CO <sub>2</sub> emissions.	●	
<b>Walking Strategy</b>		
Walking produces no emissions or adverse affect on the environment and can, therefore, contribute towards carbon reduction objectives and local air pollution targets. The walking strategy works towards to improving conditions for walking and encouraging more people to walk for local journeys. If these measures are successful in helping people to walk more this will be positive.	●	
<b>Rights of Way and Recreational Highway Strategy</b>		
This strategy is unlikely to make a significant positive contribution to the Climate Emissions SEA Objectives, however, it does support the reduction of carbon emissions through encouraging walking and cycling within the county. The strategy is not locationally specific and therefore it is not possible to demonstrate that improvements to the Rights of Way and recreational highway network will introduce walking and cycling alternatives to private motorised transport for certain journeys.	● / ?	
<b>Implementation Plan (April 2011 – March 2014)</b>		
Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and	?	The Implementation Plan

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
the level of resources available is not yet known. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Maintaining the highway network and providing a balanced integrated transport programme are likely to be positive for managing traffic (and potentially helping to manage the effects of climate change). However, the Implementation Plan concludes that it is not likely that significant infrastructure investment to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.		states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

Assessment Conclusions – climate change
<p><b>Summary of performance:</b> Some of the modal/topic strategies are likely to have minor negative effects. The Sustainable Freight Distribution Strategy and the Airport Accessibility Strategy will provide support for the re-introduction of air freight and passenger services at Coventry Airport and continuation of support of the same at Birmingham International Airport. Alone, these measures in the LTP will have a slight negative effect on emissions. However, in association with the expansion of Birmingham International Airport, the LTP will have a cumulative negative impact on carbon emissions. Other significant negative effects include the Highway Maintenance Strategy. The significant effect comes through an omission of a significant issue. Adaptation to the effects of climate change should be addressed in the Highway Maintenance Strategy and because of the importance of the issue this has been scored as significantly negative. The plan as a whole fails to address climate change adaptation and this is a significant omission. Significant negative effects are also identified with regard to the area strategies (apart from the North–South Corridor which has a positive effect). It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the various areas of the plan will lead to a change in climate emissions as transport modelling is not yet available. However, for climate emissions to decrease definable modal shift and reductions in vehicle miles would have to occur. The level of development in Warwickshire makes it unlikely that vehicle miles will decrease.</p> <p><b>Mitigation and enhancement measures:</b></p>

### Assessment Conclusions – climate change

Mitigation measures identified to address potential negative or uncertain effects are as follows:

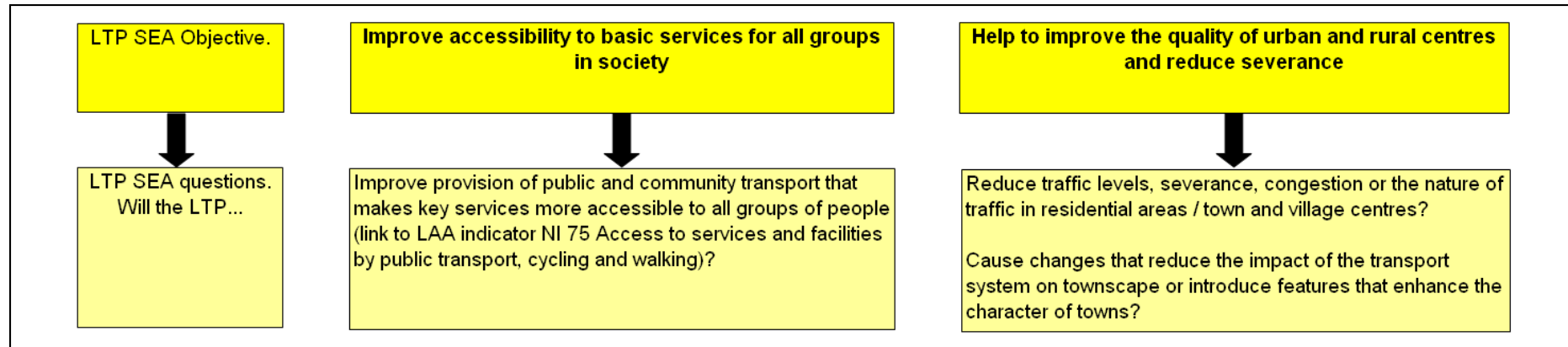
- The objectives of the plan should address adaptation to climate change;
- Consider adding an objective to the Area Strategies listed above related to reducing CO<sub>2</sub> emissions and adapting to climate change;
- With regards to the potential significant negative effects identified as a result of the Area Strategies, the fact that the spatial strategy and the transport interventions are likely to increase carbon emissions is a difficult issue to mitigate as development cannot be stopped yet there is reduced funding for transport interventions to enable modal switch. As noted below, work with District Councils should consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided;
- The Highway Maintenance Strategy does not discuss how the effects of climate change will require changes to maintenance regimes and this is a significant omission. Some of the changes that need to be addressed are changes in vegetation management, surfacing (with the rise in hot temperatures) and the potential of flooding on the highway drainage network; and
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

One enhancement measure is identified in order to improve the performance of the Taxi and Private Hire Vehicle Strategy as follows:

- The policies in the Taxi and Private Hire Vehicle Strategy go as far as encouraging the on-going replacement of older taxis and private hire vehicles in order to meet DDA requirements. Perhaps this can be extended to encouraging the replacement to cleaner vehicle fleets.

### 3 SEA Topic: Equality of Opportunity

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which seek to promote greater equality of opportunity for all citizens in order to promote a fairer society and aims to reduce the impact of transport on people.	●	
<b>Area strategies</b>		
<b>Northern Warwickshire</b>		
The objectives are positive in that they address supporting access to services and facilities particularly for those without access to a car.	●	
North Warwickshire has areas that are amongst the most deprived in the county. Most of the population live		

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
in rural areas and this makes access to services difficult for those without a car (this is demonstrated by low public transport usage – although this has increased in the last few years). A number of proposals should be positive in improving access to services and improving the quality of urban and rural centres. This includes the provision of an inter urban quality bus corridor between Nuneaton, Atherstone and Tamworth, village traffic plans, bus information points and improving the quality of information on bus and community transport services, and development of taxibus services. In terms of improvements to town and village centres, the village traffic plans should be positive in reducing the effects of traffic on village centres. All of these measures should be positive in improving access and improve town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.		
<b>Eastern Warwickshire</b>		
<p>The objectives do not address accessibility. This may be less of an issue in Rugby itself but is an issue in the more rural parts of the area.</p> <p>There have been a number of bus improvements in Rugby in recent years. Planning for buses to serve the new development sites in Rugby is underway and these services are also planned to integrate better with the railway station. Better bus information is also proposed for new bus information points. In terms of community transport the following measures will be positive for accessibility – continuing to make County vehicles available for voluntary sector use and seeking service level agreements with community transport operators. In terms of improvements to town centres and reductions in severance, the plans to pedestrianism the centre of Rugby will be positive. All of these measures should be positive in improving access and improving town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>	●	Consider adding an objective on improving accessibility to the Eastern Warwickshire Area Strategy.
<b>Nuneaton and Bedworth</b>		
<p>The objectives do not address accessibility. As this is a more deprived area of the county accessible public and community transport is an important issue.</p> <p>The strategy includes issues such as promoting a step change in public transport in the North South Corridor (which will assist people in accessing work opportunities), improving interchanges (including new railway stations), a 'through' bus service between Nuneaton-Bedworth-Coventry-Kenilworth-Warwick/Leamington</p>	●	Consider adding an objective on improving accessibility to the Nuneaton and Bedworth Area Strategy.

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>Spa, an inter urban quality bus corridor between Nuneaton-Atherstone-Tamworth and integrating land use proposals with accessibility improvements.</p> <p>Car ownership is the lowest in the county but bus use within the Borough is higher than the county average. This makes it vital that the strategy helps to improve transport services for those without access to a car.</p> <p>A number of improvements are included in the transport interventions section of the strategy that may help improve accessibility. These include rail improvements, enhanced north-south bus service, a comprehensive network of bus services and a new station at Galley Common. However, the strategy makes it clear that these proposals have not been costed and it is unclear whether they will go ahead. The proposals to support development will be used in due course to inform the preparation of the LDF Infrastructure Delivery Plan. A number of access improvements are also included in the Nuneaton and Bedworth Masterplan including reconfiguration of Nuneaton Bus Station. Other measures are discussed in the strategy including quality bus corridors and new stations in the NUCKLE corridor. However, when and how these measures will go ahead is unclear. Community transport is discussed in the strategy which states that enhanced facilities and information points will be provided. Again, this element of the strategy is uncertain.</p> <p>In terms of the quality of centres, conflicts between traffic and people are evident in areas such as Bedworth Town Centre and some local centres in Nuneaton. A number of improvements are included including vehicular restrictions along Mill Street in Bedworth (including a number of public realm improvements) (included in the Nuneaton and Bedworth Masterplan) and improvements for pedestrians throughout the area (included in the transport interventions section of the strategy).</p> <p>All of these measures should be positive in improving access and improving town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		
<p>The objectives do not address accessibility. This may be less of an issue in the urban areas but is an issue in the more rural parts of the area.</p> <p>Car ownership levels are relatively high but there are still issues with accessibility especially in the more rural areas. Bus use is slightly lower than the county average.</p>	●	Consider adding an objective on improving accessibility to the Warwick, Leamington Spa, Kenilworth and Whitnash Area

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>The town centres of Warwick, Leamington Spa and Kenilworth are affected by traffic in terms of townscape and an additional factor is the effect on historic and older buildings. The strategy proposes the continuance of the Warwick Town Centre Traffic Management Scheme which should be positive in reducing the impact of traffic on the townscape of Warwick.</p> <p>A number of improvements are included in the strategy that are designed to help improve accessibility including a continued focus on walking, cycling and motorcycling, promoting better public transport services (including a comprehensive network of bus services within Warwick, Leamington Spa, Whitnash and Kenilworth linking residential areas with town centres, rail stations, employment sites and Coventry) and interchange and integrating land development proposals with accessibility. The strategy also makes the commitment to upgrade a number of key bus routes. There will also be enhanced interchange at Leamington Spa Railway Station and provision of further bus information points. A new station at Kenilworth will also be investigated. This is listed as a major scheme in the Implementation Plan – Warwickshire County Council is at a very early stage with the planning for the major scheme so no specific information is available on the impact of the scheme.</p> <p>All of these measures should be positive in improving access and improve town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		Strategy.
<b>Southern and Western Warwickshire</b>		
<p>The objectives discuss ensuring good accessibility for residents and visitors.</p> <p>The district has the highest proportion of people over retirement age in the county and the population over 65 is set to grow significantly. Although the car ownership level is high, the rural nature of the district makes accessibility difficult for people without a car. Measures included to improve accessibility include promotion of the Shakespeare Line Upgrade, improvements in the efficiency of bus services in Stratford, improved bus information points, bus quality corridors between Stratford-Blackhill and Warwick and Stratford-Bidford on Avon and Evesham. A new bus-rail interchange is also proposed at Stratford Rail Station. Further bus information points are also proposed as is a new station – Stratford Parkway (which is included as a major scheme in the Implementation Plan). Demand responsive and flexible services will also be investigated as will community transport schemes such as Wheels to Work. The likely new development sites in the area are also generally considered to have good levels of accessibility, particularly given their proximity to the A46,</p>	●	



<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>Bishopton Park and Ride and the proposed Stratford Parkway Rail Station.</p> <p>Traffic has a detrimental effect on townscape with effects particularly acute in Stratford Town Centre, Bridgeway Gyratory and Arden Street/Grove Road. However, the implementation of Stratford's walkable core will reduce traffic effects in these areas.</p> <p>All of these measures should be positive in improving access and improving the town centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		
<b>The North South Corridor</b>		
<p>The North South Corridor is a truly multi modal corridor including comprehensive road, rail and bus links. However, a key shortcoming is the lack of a through public transport service between the north and the south without the requirement to change at Coventry. Provision of such a service would help to provide access to employment without having a detrimental impact on congestion and will help to link areas of need to areas of opportunity. If fully implemented the strategy would have a significant positive effect on equality. However, because of uncertainties regarding implementation and funding the strategy has been scored as slight positive.</p> <p>Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that the scheme, especially the two new stations between Coventry and Nuneaton, greatly enhance access to rail services. No information is available on later phases of the NUCKLE scheme.</p>	●	
<b>Modal / topic strategies</b>		
<b>Air Quality Strategy</b>		
<p>Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have positive effects on congestion, provision of travel alternatives and traffic that can affect neighbourhoods and communities. The strategy is likely to be positive.</p>	●	

The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Accessibility Strategy</b>		
One of the objectives of the accessibility strategy is to improve provision of an accessible public transport network, including to healthcare facilities, education and training opportunities. If strategies to reduce public transport fares for students and to raise awareness among school pupils of walking and cycling routes and public transport options are successful, they will have a positive effect on equality of opportunity. In addition, Policy AS4 states that the County Council will support initiatives that help make travel to services more affordable and investigate opportunities to develop a concessionary travel scheme. It will also continue to promote affordable solutions for those with less conventional travel patterns, e.g. car sharing schemes. This will be positive for equality of opportunity if successful. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period.	●	
<b>Sustainable Freight Distribution Strategy</b>		
The strategy is likely to have a positive impact through reducing the impact of freight on the environment and communities (through continuing the local and regional freight quality partnerships and associated measures). For example, Policy F2 aims to ensure signage directs heavy goods vehicles to industrial areas and town centres via the best routes, and also seeks to control heavy goods vehicle movements through or near environmentally sensitive areas; and Policy F3 aims to encourage the location of new development likely to generate significant freight movements in areas that have good access to the rail network. The strategy is likely to be positive.	●	
<b>Parking Strategy</b>		
The vision of the strategy is to effectively manage the supply and enforcement of parking to complement the Council's overall transport strategy. If successful, the strategy will have a key role in reducing the environmental impact of traffic congestion through the appropriate use of public parking, which will also help improve the quality of urban and rural centres. In addition, the strategy aims to continue work with Network Rail and train operating companies to ensure that parking at railway stations is accessible and sufficient to meet the demands of those travellers who are unable to access the station by other sustainable modes (Policy P10). The strategy is likely to be positive.	●	
<b>Powered Two Wheeler Strategy</b>		

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
The use of PTWs can be positive for equality of opportunity in the county, as people who cannot afford cars can sometimes afford PTWs. The strategy is likely to be positive.	●	
<b>Airport Accessibility Strategy</b>		
Access to airports by public transport is important for equality of opportunity. Policy ASA1 aims to improve surface access provision to Birmingham International Airport and Coventry Airport. This is supported by Policy ASA2, which supports the provision of readily available and easy to understand public transport timetables, routes and fares, including integrated ticketing between modes. An ongoing target is to improve the reliability and punctuality of public transport services to aviation. The strategy is likely to be positive.	●	
<b>Land Use and Transportation Strategy</b>		
The land use and transportation strategy seeks to offer accessibility to the widest cross-section of the population and gives people more travel choices to access work, services and leisure activities. The strategy is, therefore, very much aimed at promoting equality of opportunity. It seeks to achieve this by encouraging new development which is accessible and integrated with the transport network, including modes other than the car. If successful, Policy LUT3, in particular, will seek developer contributions for public transport, community transport and pedestrian and cycling facilities. Policy LUT10 aims to ensure that all development is appropriate in terms of accessibility, design and layout and can contribute to the local area and improve connectivity with new footways, cycleways and public transport where required. The strategy is likely to be positive.	●	
<b>Bus Strategy</b>		
A greater need exists than is being provided for by the bus network. This is likely to be impacting on access to opportunities. The vision of the strategy, to provide an affordable, accessible and convenient network of bus services, and particularly Policy PTB2, aim to promote equality of opportunity. In addition, the Action Plan includes developing a County-wide concessionary travel scheme, including for cross-boundary bus, rail and community transport services, and promoting improvements in the punctuality and reliability of bus services. These measures are likely to have a positive effect on equality of opportunity.	●	
<b>Passenger Rail Strategy</b>		
A greater need exists than is being provided for by the rail network. This is likely to be impacting access to	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
opportunities. The vision of the strategy, to provide an affordable, accessible and convenient network of rail services, and particularly Policy PTB2, aim to promote equality of opportunity. The Action Plan contains specific actions to: examine opportunities for revisions to fare structures and levels; examine measures to implement through ticketing availability between modes; and investigate opportunities to develop a concessionary travel scheme for rail, bus and community transport services. These measures are likely to have a positive effect on equality of opportunity.		
<b>Network Management Duty Strategy</b>		
The strategy aims to manage the road network to get the best out of the available road space and manage works to minimise delays and disruptions. These also help to improve the quality of urban and rural centres and reducing severance. The strategy is likely to be positive.	●	
<b>Taxi and Private Hire Vehicle Strategy</b>		
The vision of the strategy, to provide affordable, accessible and convenient taxis and private hire vehicles, and particularly Policy PTT2, aim to promote equality of opportunity. Specific aims are to increase the range of travel opportunities and options for travellers, including provision of taxi buses to meet specific travel needs. The strategy is likely to be positive.	●	
<b>Intelligent Transport Systems Strategy</b>		
ITS will enable better management of traffic and thereby reduce delays and congestion. Specific measures are described in the Action Plan, and address the introduction of bus priority at key bus routes and other similar short and medium-term measures and this will help to improve the punctuality and reliability of public transport.	●	
<b>Community Transport Strategy</b>		
A greater need exists than is being provided for by the existing community transport network. This is likely to be having impacts on equality of opportunity if people within disadvantaged user groups (who are the major user groups of community transport) cannot access jobs and services. The vision of the strategy includes provision of an affordable, accessible and convenient network of community transport services, in order to promote social inclusion and to widen access to services, health, social and recreational facilities, employment and training. Policies PTCT1 and PTCT2 in particular emphasise this aim, and also cross-refer	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
to the Public Transport and Bus Strategies. In addition, the Action Plan contains measures to support these policies, such as to develop a county-wide concessionary travel scheme, to examine opportunities for through ticketing between transport modes and to improve the image of community transport travel. The strategy is likely to be positive.		
<b>Congestion Strategy</b>		
The strategy contains measures to reduce congestion, such as encouraging public transport use and providing further Park & Ride facilities and this will help to improve the punctuality and reliability of public transport. This will have a positive effect particularly in terms of the quality of centres.	●	
<b>Cycling Strategy</b>		
The strategy seeks to address actual and perceived barriers to cycling and increase levels of cycling in the county. The strategy aims to ensure that cycle routes achieve high standards of design, enhancing the character of towns, and seeks to secure funding from developers towards cycling improvements in the vicinity of new development sites.	●	
<b>Bus Information Strategy</b>		
Research has shown that traditional information services are not appropriate for occasional public transport users. Simpler information which does not require detailed knowledge and more flexible tickets and ticket purchase options are needed (Scottish Executive Development Department Research Programme (2003): Barriers to Modal Shift. Research Findings No.171/2003. Derek Halden Consultancy). The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which will contribute positively to equality of opportunity. This will be met through the provision of bus information that is simple to use and through improving bus information in line with the minimum requirements listed in the strategy. The Action Plan contains measures for the enhancement of bus information, including the timescale of these. The strategy is likely to be positive.	●	
<b>Public Transport Interchange Strategy</b>		
The strategy aims to encourage modal shift onto public transport, through improving integration between different public transport modes. Better integration of transport modes helps to improve accessibility to basic	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
services for all groups in society and to reduce traffic and congestion. The strategy includes several measures to do this, such as through enhancement of existing and provision of new interchange facilities at railway stations and working with the planning authorities, public transport operators and Network Rail to promote integration between transport modes. This will be positive for equality of opportunity if successful.		
<b>Public Transport Strategy</b>		
This strategy provides the strategic framework for the public transport mode specific strategies (the Bus, Passenger Rail, Community Transport and Taxi and Private Hire Vehicle Strategies), the Public Transport Interchange Strategy and the Bus Information Strategy. Its aim is to grow the market for public transport by making the product attractive to existing and potential users. If successful, the strategy will have a positive effect on equality of opportunity, by improving the provision of public and community transport. The strategy is supported by a number of policies, and as a whole it is likely to be positive.	●	
<b>Road Safety Strategy</b>		
The strategy's policies cover a wide variety of actions such as through working with the emergency services, the Highways Agency and the community, education campaigns, influencing road user behaviour and combating excessive speed through the use of safe and appropriate speed limits and safety cameras. This is likely to have a positive impact on equality of opportunity, through improving the quality of urban and rural centres. The strategy as a whole is likely to be positive.	●	
<b>Highway Maintenance Strategy</b>		
The strategy aims to maintain the highway network in order to ensure it is safe for all types of road user and that its asset value is maintained. This is likely to have a positive impact on the quality of urban and rural centres and enhancing the character of towns through routine maintenance activities such as grass cutting, tree maintenance and maintaining the network of street lighting. The strategy as a whole is likely to be positive.	●	
<b>Bridge Maintenance Strategy</b>		
The strategy's specific objective is to avoid any deterioration in the bridge stock in Warwickshire. In terms of equality of opportunity, Policy BM5 states that the Council will take account of all users of the highway network through the strategy and ensure that there is no direct or indirect discrimination. In addition, Policy	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
BM4 seeks to conserve those bridges which form part of the cultural heritage of Warwickshire, unless such works would be prohibitively expensive or impractical. The strategy also sets criteria for bridge monitoring, including bridge condition indicators and key performance indicators. The strategy as a whole is likely to be positive.		
<b>Changing Travel Behaviour Strategy</b>		
The strategy aims to encourage more people to choose sustainable travel, to complement the transport infrastructure improvements made through the LTP3. In particular, the strategy aims to reduce the number of single occupancy car trips and increase the proportion of journeys made by walking, cycling, public transport and car sharing. This is likely to have a positive impact on equality of opportunity, through supporting the improvement of public and community transport provision. The strategy's policies describe measures such as the implementation of travel plans for schools, work places, residential developments and railway stations and travel awareness campaigns to promote the benefits of sustainable modes of transport. The strategy as a whole is likely to have a positive impact on equality of opportunity.	●	
<b>Walking Strategy</b>		
The strategy focuses on walking for key utility journeys and aims to improve the pedestrian environment and encourage more walking. Walking has the additional benefit of promoting social inclusion, and the strategy is also concerned with making access easier for all users of the street environment, including those in wheelchairs and mobility scooters and those with sensory impairments. The strategy's policies include the implementation of travel plans for schools and work places, the creation of high quality and attractive pedestrian environments within town centres and improving pedestrian access to public transport services. The Action Plan summarises the actions that will enable the policies to be delivered. Therefore, the strategy is likely to have a positive impact on equality of opportunity.	●	
<b>Rights of Way and Recreational Highway Strategy</b>		
The Rights of Way and Recreational Highway Strategy is unlikely to have a significant positive contribution towards the achievement of the Equality of Opportunity SEA Objectives. However, it does include a number of measures which will improve equality of access to the Rights of Way and Recreational Highway network for all users, including those for whom physical barriers are a problem (such as stiles) and ethnic minority groups and those unfamiliar with the countryside.	●	

The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Implementation Plan (April 2011 – March 2014)</b>		
Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet known. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Because of these uncertainties, It is not possible to assess what the impact of the Implementation Plan will be on equality. However, the council does set out an annual programme of work and it would be useful if this programme were subject to assessment to determine its effects on all the SEA objectives.	?	The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its sustainability effects.

Assessment Conclusions – equality of opportunity
<p><b>Summary of performance:</b> None of the strategies are likely to have a significantly positive effect on the equality objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the equality SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve accessibility and improve the quality of communities. The strategies contained within the plan should help to support access to employment, healthcare and other services, make travel more affordable (through concessionary fare schemes, car sharing schemes etc) and through providing a greater range of travel options. The plan will also help to improve the quality of urban and rural centres through measures to reduce the impact of freight traffic, parking policies and through reducing congestion and the impact of vehicular traffic in certain areas. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. None of the strategies will have a negative effect on the SEA Objectives.</p> <p><b>Mitigation and enhancement measures:</b></p> <p>No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Equality of Opportunity SEA Objectives. However, a mitigation measure is put forward in relation to an uncertain performance recorded with regards to the Implementation Plan (April 2011 – March 2014); as follows:</p> <ul style="list-style-type: none"> <li>The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its sustainability effects.</li> </ul> <p>One enhancement measure is put forward in order to improve the Area Strategies, as follows:</p>

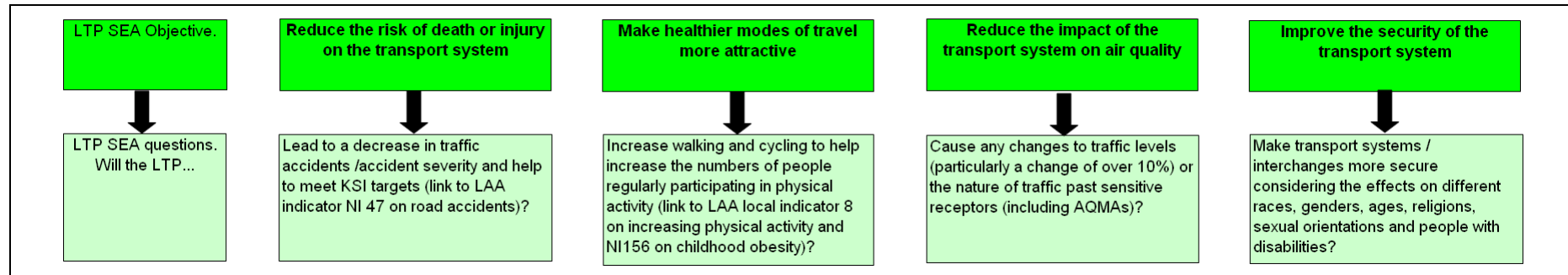


**Assessment Conclusions – equality of opportunity**

- Consider adding an objective on improving accessibility to the Nuneaton and Bedworth, Eastern Warwickshire and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies.

## 4 SEA Topic: Safety, Security and Health

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which seek to improve the safety, security and health of people by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health.	●	
<b>Area strategies</b>		
<b>Northern Warwickshire</b>		
<p>The objectives address reducing the environmental impact of traffic and this is positive. However, the objectives do not address reducing the impacts of traffic on communities directly.</p> <p>Road safety in Northern Warwickshire has improved significantly in recent years. The village traffic plans should be positive in addressing small scale safety issues such as speeding, lighting, footway maintenance and drainage. Other measures which may contribute to better health include the commitment to keep under</p>	●	The final objective of the Northern Warwickshire Area Strategy could be amended to also cover reducing the impacts of traffic on

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>review the need for further cycling improvements in Coleshill. However, there are other areas of Northern Warwickshire that would benefit from improved walking and cycling routes. This is important because of the high levels of obesity compared to other areas of Warwickshire.</p> <p>The AQMA in Coleshill is caused mainly by the motorway network. Actions which could have a positive cumulative effect include the transfer of traffic onto the M6 toll and the introduction of active traffic management on the M42 and M6. These measures should help to reduce traffic levels in the vicinity of the AQMA. Monitoring over the past few years has shown reductions in NOx.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		<p>communities.</p> <p>There are other areas of Northern Warwickshire that would benefit from improved walking and cycling routes and the strategy should outline what the approach in other areas is likely to be. Even if there are no resources at present, this should be made clear in the strategy.</p>
<b>Eastern Warwickshire</b>		
<p>The objectives address reducing the environmental impact of traffic and this is positive. However, the objectives do not address reducing the impacts of traffic on communities directly.</p> <p>In terms of safety and plans to get people to walk and cycle more, the plans to pedestrianise the centre of Rugby, the Connect2 scheme, the further small improvements such as upgraded crossings and the planned cycle schemes should be positive.</p> <p>The whole of Rugby is a AQMA but the main impact on air quality in Rugby is likely to be from development over the next 15 years. If the transport improvements planned for the two main development sites (Rugby Radio Station and Gateway Rugby) are delivered this will help to ameliorate the effect. However, these need to be supported by wider measures to create behavioural change.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>	●	<p>The final objective of the Eastern Warwickshire could be amended to also cover reducing the impacts of traffic on communities.</p>
<b>Nuneaton and Bedworth</b>		
<p>The objectives address reducing the environmental impact of traffic and this is positive. However, the</p>	●	<p>The final objective of the</p>

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>objectives do not address reducing the impacts of traffic on communities directly.</p> <p>The area has a higher proportion of people who class themselves in poor health than other areas of the county and also performs below average in socio-economic terms. There are significantly higher incidences of road casualties in poorer communities in West Nuneaton. It also has the highest crime rate in the county and the highest levels of obesity. A number of improvements are included in the transport interventions section of the strategy that may help improve safety. These include improvements for pedestrians and provision of highway improvements that will reduce the potential for rat running in residential areas. However, the strategy makes it clear that these proposals have not been costed and it is unclear whether they will go ahead. The proposals to support development will be used in due course to inform the preparation of the LDF Infrastructure Delivery Plan. Other measures are discussed in the strategy which might encourage people to walk and cycle more including new pedestrian routes and pedestrian environment in town centres and a number of priority cycle routes (including enhanced information on cycle routes).</p> <p>Since LTP2 two AQMAs have been declared within the area. Air Quality Action Plans include such measures as Urban Traffic Management Control and Variable Message Signage which should be positive in reducing circulatory traffic. It is not possible to assess quantitatively at this stage whether the measures will lead to a change in the level of emissions as a detailed transport model is not yet available.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		<p>Nuneaton and Bedworth Area Strategy could be amended to also cover reducing the impacts of traffic on communities.</p>
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		
<p>The objectives address reducing the environmental impact of traffic and this is positive. However, the objectives do not address reducing the impacts of traffic on communities directly.</p> <p>Warwick District performs relatively well on health indicators and in socio-economic terms the area is ranked above average. Casualties from traffic accidents have remained the same since 2004 but the numbers killed and seriously injured has decreased. There is a high rate of accidents involving motorcyclists. Cycling improvements will focus on improvements in the urban cycle networks plus some inter-urban routes. This will be accompanied by actively promoting and marketing cycling for short journeys. A number of improvements are included in the strategy that are designed to help improve safety including continued maintenance of the</p>	●	<p>The final objective of the Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategy could be amended to also cover reducing the impacts of traffic on communities.</p>

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>highway network and promoting road safety and implementing casualty reduction programmes.</p> <p>There are 4 declared AQMAs and it may be necessary to declare a further AQMA. The levels of obesity are still regarded as high although they are not as high as other areas in the county. In terms of air quality, the nature of the road network means there is little scope to improve the highway capacity. Measures to manage the highway network will be used to improve air quality.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		
<b>Southern and Western Warwickshire</b>		
<p>The objectives discuss improving local air quality. Air quality is mentioned in the strategy but the work on how to improve the AQMAs in Stratford and Studley is at an early stage.</p> <p>The total numbers of road casualties has stayed static since 2000 but the total number of people killed and seriously injured has fallen over a third. Some junction improvements are highlighted in the strategy. Access by foot and cycle can be difficult in Stratford especially across the River Avon and between the northern and western sectors of the town. The strategy includes work on the Walkable Core in Stratford and states that the council will progress some cycling schemes subject to funding being available.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>	●	
<b>The North South Corridor</b>		
<p>Continued safety improvements form an important part of the strategy, including addressing incidences of road casualties anticipated as a result of increased travel demand. The strategy will have a positive effect on safety. The strategy has been scored as slight positive, however, because of the uncertainty of funding available to deliver the strategy. Walking and cycling schemes are not included in the strategy because of its nature as a strategic travel corridor.</p> <p>Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies</p>	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that road accidents will be reduced through modal shift but that this will be partly offset by increased rail use and rail accident risk. In terms of security, the new stations will be provided with lighting, CCTV and passenger help points, significantly improving security for journeys by public transport in North Coventry and Bermuda Park. No information is available on later phases of the NUCKLE scheme.		
<b>Modal / topic strategies</b>		
<b>Air Quality Strategy</b>		
The vision of the air quality strategy is to maintain and improve air quality in order to improve health and quality of life. If public transport, walking and cycling strategies are successful they will have positive effects on health. The strategy is likely to be positive.	●	
<b>Accessibility Strategy</b>		
The objectives of the accessibility strategy include developing safe, convenient and attractive transport networks to help improve overall access, and addressing real and perceived concerns regarding personal safety when using transport infrastructure. If strategies to improve waiting facilities at transport interchanges and to raise awareness among school pupils of walking and cycling routes are successful, they will have a positive impact on safety, security and health. Policy AS5 states that the County Council will address problems of crime and fear of crime in and around transport. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. The strategy is likely to be positive.	●	
<b>Sustainable Freight Distribution Strategy</b>		
At present there is a reliance on road based freight movement within Warwickshire, which results in adverse impacts on rural roads and within residential areas and problems related to lorry parking and theft from high-sided vehicles. The strategy is likely to have a positive impact through reducing the impact of freight on the environment and communities thus improving local air quality and the safety/perception of safety in communities (through continuing the local and regional freight quality partnerships and associated measures). For example, Policy F2 aims to ensure signage directs heavy goods vehicles to industrial areas and town	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
centres via the best routes, and also seeks to control heavy goods vehicle movements through or near environmentally sensitive areas; and Policy F3 aims to encourage the location of new development likely to generate significant freight movements in areas that have good access to the rail network. The strategy is likely to be positive.		
<b>Parking Strategy</b>		
If successful, the strategy will have a key role in the provision of dedicated secure cycle parking facilities in town centres, at public transport interchanges and other key service destinations (Policy P8). This will help to make healthier modes of travel more attractive. In addition, the strategy will provide dedicated secure parking facilities for powered two wheeler users (Policy P9). It also aims to continue work with Network Rail and train operating companies to ensure that parking at railway stations is accessible and sufficient to meet the demands of those travellers who are unable to access the station by other sustainable modes (Policy P10). These measures, if successful, will improve the security of the transport system and will have a positive impact on safety security and health.	●	
<b>Powered Two Wheeler Strategy</b>		
The strategy is likely to have a key role in the prevention of motorcycle accidents and motorcycle theft. Policy PTW2 is aimed at improving parking facilities for PTWs in order to prevent theft. Policy PTW3 aims to increase safety and reduce congestion by allowing access for PTWs to areas normally restricted, such as bus lanes, Advance Stop Lanes and other areas subject to access control. The strategy also includes targets to develop and support a PTW education and awareness programme, and to further reduce the number of PTW accidents and casualties that occur in Warwickshire. Road safety issues are tackled in more detail in Warwickshire's Road Safety Strategy, and issues relating to PTW safety will be pursued through the development and implementation of a dedicated Motorcycle Casualty Reduction Plan.	●	
<b>Airport Accessibility Strategy</b>		
Access to airports by public transport should play a positive role in helping to reduce traffic levels and congestion, thus to promote safety, security and health. In addition, a specific action from the strategy is to provide enhanced facilities for airport passengers at public transport interchanges, which will also promote safety and security. The strategy is likely to be positive.	●	
<b>Land Use and Transportation Strategy</b>		

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
The strategy aims to encourage new development which is safe and appropriate in terms of design and layout. The strategy is likely to be positive.	●	
<b>Bus Strategy</b>		
The vision of the strategy includes promotion of a safe network of bus services, and Policy PTB3 states that proposals will be developed for a 'step change' in the quality of public transport on key corridors, including buses and bus-based rapid transit. Both of these indicate that the strategy is likely to have a positive impact on safety, security and health. In addition, the Action Plan includes maintenance arrangements for bus shelters, providing financial support to locations where the level of service standards are not provided by the current network and encouraging bus operators to specify on-vehicle CCTV or other appropriate safety measures on new orders of vehicles. The strategy is likely to be positive.	●	
<b>Passenger Rail Strategy</b>		
The vision of the strategy includes promotion of a safe network of rail services, and Policy PTPR6 states that proposals will be developed for a 'step change' in the quality of public transport on key corridors, including Heavy Rail and Light Rail. Both of these indicate that the strategy is likely to have a positive impact on safety, security and health. In addition, the Action Plan includes measures for the delivery of passenger improvements at railway stations and the enhancement of existing and provision of new interchange facilities at stations. The strategy is likely to be positive.	●	
<b>Network Management Duty Strategy</b>		
The vision of the strategy is that people would be able to travel safely within Warwickshire and one of the core objectives of the strategy is that it would promote modes that are beneficial to health. Policy NMD4 aims to put in place a series of contingency options and diversion routes, and Policy NMD7 aims to manage and coordinate activities and events on the network, both to prevent build-up of traffic. Policy NMD11 ensures that information regarding incidents and road-works will be made available and Policy NMD13 ensures implementation of a winter service policy relating to gritting, snow clearance and provision of salt bins. These policies will contribute to reduction of accidents. Policy NMD14 also aims to ensure that the safety and protection of works is carried out to the required standard and that full courtesy and consideration is given to all road users, especially pedestrians and cyclists. The strategy is likely to be positive.	●	



<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Taxi and Private Hire Vehicle Strategy</b>		
The vision of the strategy is that people would be able to travel safely across the County using taxis and private hire vehicles. A more specific aim is given in Policy PTT2, which states that taxi waiting facilities should provide reasonable shelter, comfort, suitable heating and ventilation for the time of year, as well as facilities to address personal safety and security issues. The strategy is likely to be positive.	●	
<b>Intelligent Transport Systems Strategy</b>		
The strategy contains policies on dealing with traffic growth and on traffic signal junctions and pedestrian crossings, both of which contribute to safety, security and health. Policy ITS8 cross-refers to other initiatives such as the 'Safer Routes to School' initiative and 'Casualty Reduction Schemes' which will be supported. In addition, the Action Plan contains measures such as developing CCTV and ANPR (automatic number plate recognition) links with Warwickshire Police and the District/Borough Councils. The strategy is likely to be positive.	●	
<b>Community Transport Strategy</b>		
The vision of the strategy includes provision of a safe network of community transport services in order to promote social inclusion and to widen access to services, health, social and recreational facilities, employment and training. Policy PTCT2 in particular emphasises this aim, stating that stops, bus stations and interchanges should provide both a perception and reality of personal safety and security. The strategy is likely to be positive.	●	
<b>Congestion Strategy</b>		
Policy CS1 ensures that improvements to reduce congestion will not normally be implemented where they may be detrimental to the safety and/or convenience of pedestrians, cyclists or public transport users and Policy CS3 requires new development to provide funding for improvements aimed at minimising traffic growth. The strategy is likely to be positive.	●	
<b>Cycling Strategy</b>		
The strategy seeks to address actual and perceived barriers to cycling and increase levels of cycling in the county. Several improvements to cycleways and extensions of cycle routes have been achieved in recent	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
years, which are beneficial for public health and improving road safety. The strategy aims to build on these to improve the safety and quality of the cycling environment promote cycling as a healthy transport choice, proving safe and convenient access to town centres, employment sites, schools and public transport interchanges. It also seeks to ensure that secure cycle parking facilities are provided in key public places and that cycle training for children and adults is provided. Studies have shown that the main barrier to cycling is fear of traffic (TRL Report 481. <i>A quantitative study of the attitudes of individuals to cycling</i> , 2001). The strategy aims to combat this through implementing traffic restraint or calming schemes and off highway links, the introduction of further 20 mph speed limits in town centres and residential areas and developing safe cycle routes to all secondary schools. All of these measures will be mutually supportive.		
<b>Bus Information Strategy</b>		
The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which can contribute positively to safety, security and health if it results in reduced traffic levels.	●	
<b>Public Transport Interchange Strategy</b>		
The strategy aims to encourage modal shift onto public transport, through improving integration between different public transport modes. A major theme of the strategy is to improve existing public transport interchange facilities, including enhancements to walking and cycling accessibility. The strategy includes several measures to do this, such as through enhancement of existing and provision of new interchange facilities at railway stations and working with the planning authorities, public transport operators and Network Rail to promote integration between transport modes. This will be positive for safety, security and health if successful.	●	
<b>Public Transport Strategy</b>		
This strategy provides the strategic framework for the public transport mode specific strategies (the Bus, Passenger Rail, Community Transport and Taxi and Private Hire Vehicle Strategies), the Public Transport Interchange Strategy and the Bus Information Strategy. Its aim is to grown the market for public transport by making the product attractive to existing and potential users. If successful, the strategy will have a positive effect on safety, security and health, by reducing traffic levels and making transport systems more secure. The strategy is supported by a number of policies, and as a whole it is likely to be positive.	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Road Safety Strategy</b>		
The strategy aims to improve road safety throughout the county, defined as reducing the number of people killed and injured on Warwickshire's roads. The position of Warwickshire, at the centre of England and the motorway network, means it has a higher than average number of casualties for its population. Consequently, the strategy's policies aim to achieve a reduction in the number of casualties through a wide variety of means, including working with the emergency services, the Highways Agency and the community, through education campaigns, influencing road user behaviour and combating excessive speed through the use of safe and appropriate speed limits and safety cameras. This is all likely to have a positive impact on safety, security and health through reducing the risk of death or injury on the road network. The Action Plan contains measures for the delivery of the road safety strategy and the strategy as a whole is likely to be positive.	●	
<b>Highway Maintenance Strategy</b>		
The strategy aims to maintain the highway network in order to ensure it is safe for all types of road user and that its asset value is maintained. This is likely to have a positive impact on safety, through routine maintenance activities such as reviewing the condition of footways, cycleways and carriageways and undertaking maintenance work where there are potholes or the condition is likely to cause safety or usage problems. Other routine maintenance activities include winter maintenance, maintenance of signs and lines, safety inspections and electricity cable renewal. The strategy as a whole is likely to be positive.	●	
<b>Bridge Maintenance Strategy</b>		
In terms of safety, the strategy's policies ensure that all structures will be inspected on a two-yearly cycle, weak bridges will be strengthened and post completion surveys will be carried out on an individual scheme basis. The strategy also describes criteria for bridge monitoring, including bridge condition indicators and key performance indicators. The strategy as a whole is likely to have a positive impact on safety.	●	
<b>Changing Travel Behaviour Strategy</b>		
The strategy aims to encourage more people to choose sustainable travel, to complement the transport infrastructure improvements made through the LTP3. In particular, the strategy aims to reduce the number of single occupancy car trips and increase the proportion of journeys made by walking, cycling, public transport	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
and car sharing. This is likely to have a positive impact on health in association with the measures outlined in the Public Transport, Walking and Cycling Strategies aimed at improving the safety and security of these modes. The policies describe measures such as the implementation of travel plans for schools, work places, residential developments and railway stations and travel awareness campaigns to promote the benefits of sustainable modes of transport. The strategy as a whole is likely to have a positive impact on safety, security and health.		
<b>Walking Strategy</b>		
The strategy focuses on walking for key utility journeys and aims to improve the pedestrian environment and encourage more walking. Walking has the additional benefit of promoting health and quality of life. The strategy's policies include the provision of safe and convenient pedestrian crossing facilities and partnership working to improve safety and personal security for pedestrians. The Action Plan summarises the actions that will enable the policies to be delivered. Therefore, the strategy is likely to have a positive impact on safety, security and health.	●	
<b>Rights of Way and Recreational Highway Strategy</b>		
This Strategy includes a number of policies which aim to improve the safety and security of users of the Rights of Way and Recreational Highway network. Measures include maintenance of paths and bridges, responses to reports of defects and policies in relation to electric fences and education regarding livestock. The strategy also encourages walking and cycling and other recreational use of the network including horse riding and running, through the maintenance and improvement of paths and through way-finding improvements and better provision of information about routes. Therefore, the strategy is likely to have a positive impact on safety, security and health.	●	
<b>Implementation Plan (April 2011 – March 2014)</b>		
Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet known. The plan stresses that maintenance of the highway network is likely to be a priority (which will positive for safety), that a broadly balanced integrated transport programme will be maintained and the plan includes funding for casualty reduction, Safer Routes to Schools Programmes and cycling and walking. Without certainty on funding and location of schemes, it is not possible to assess what the impact of the Implementation Plan will be on safety and health. However, the council does set out	?	The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its

The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
an annual programme of work and it would be useful if this programme were subject to assessment to determine its effects on all the SEA objectives.		sustainability effects.

### Assessment Conclusions – safety, security and health

**Summary of performance:** None of the strategies are likely to have a significantly positive effect on the safety, security and health objectives but no negative impacts have been recorded either. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the safety, security and health SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve the safety and security of travel through tackling speeding, improving lighting, helping to maintain footways and the highways and helping to educate people about road safety. The strategy will also help to make healthier modes more attractive through improving walking and cycling routes and addressing security concerns at public transport interchanges. The strategies should also help to improve the air quality in the county, if modal switch is achieved. As with the other SEA Objectives, there is some uncertainty over the implementation of the schemes in the strategies. The Implementation Plan stresses that maintenance of the highway network is likely to be a priority (which will positive for safety), that a broadly balanced integrated transport programme will be maintained and the plan includes funding for casualty reduction, Safer Routes to Schools Programmes and cycling and walking. However, without certainty on funding and location of schemes, it is not possible to assess what the impact of the Implementation Plan will be on safety and health. However, the council does set out an annual programme of work and it would be useful if this programme were subject to assessment to determine its effects on all the SEA objectives.

#### Mitigation and enhancement measures:

No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Safety, Security and Health SEA Objectives. However, mitigation measures are put forward in relation to the uncertain performances recorded, as follows:

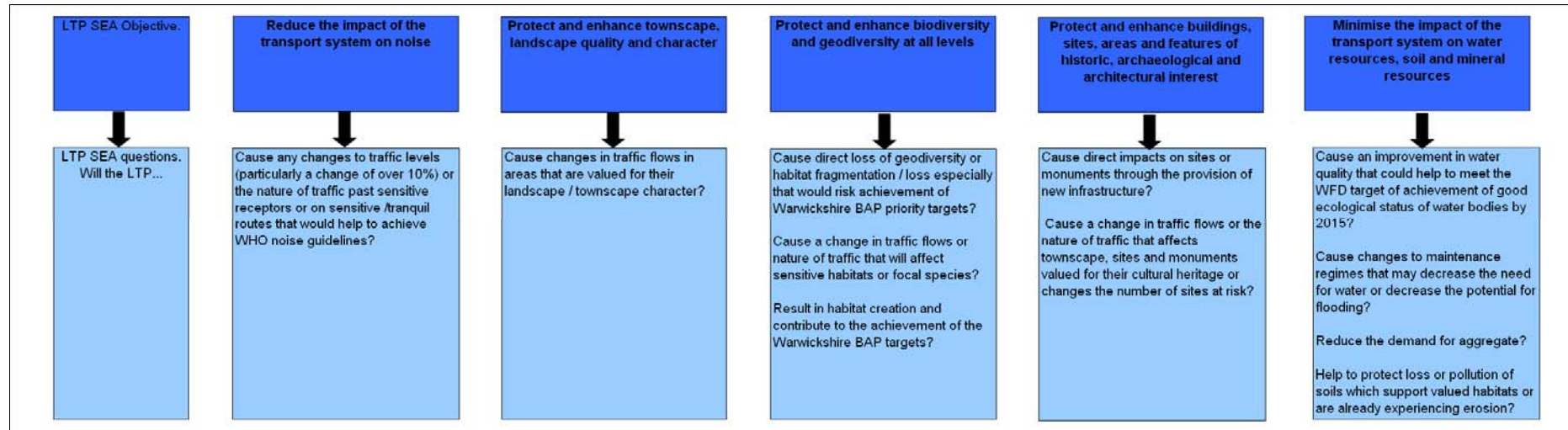
- The Implementation Plan states that council will set out an annual work programme. This work programme should be assessed for its sustainability effects.

A number of enhancement measures are put forward in order to improve the strategies, as follows:

- The final objectives of the Northern Warwickshire, Eastern Warwickshire, Nuneaton and Bedworth and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies could be amended to also cover reducing the impacts of traffic on communities; and
- There are other areas of Northern Warwickshire (apart from Coleshill) that would benefit from improved walking and cycling routes and the strategy should outline what the approach in other areas is likely to be. Even if there are no resources at present, this should be made clear in the strategy.

## 5 SEA Topic: Quality of Life and the Environment

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which aim to improve quality of life and to promote a healthy natural environment. It is assumed that this adequately addresses issues related to noise, landscape and biodiversity. The objectives do not address the built environment or the use of natural resources and this is an important omission.	●	The objective on the environment should be changed to address the impact on natural resources and the built environment.
<b>Area strategies</b>		

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Northern Warwickshire</b>		
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. There are some measures in the strategy which may make alternative modes more attractive and reduce the impact of traffic on townscapes (the village traffic plan initiative and review of the HGV weight limit policy, for example) but the rural nature of the area means that significant modal switch is unlikely. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; there may be some issues regarding building new cycle paths and the development of a new railway station at Kingsbury, both of which will require the use of aggregates and may have direct impacts on sensitive environmental receptors. However, Warwickshire County Council has informed the SEA team that there are no details on the location of this station at the moment and no environmental assessment has yet been carried out.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided.</p>
<b>Eastern Warwickshire</b>		



The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and how they would change traffic patterns (as a transport model run has not yet been undertaken) and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. There are some measures in the strategy which may make alternative modes more attractive such as a new station to serve the Rugby Radio Station site, the proposed network of bus services that will be integrated into the wider bus network, better interchange facilities between bus and rail for example, but the level of development expected means that decreases in road traffic are unlikely. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; the main areas of direct land take impact are likely to be in the vicinity of the two proposed urban extensions: Gateway Rugby and Rugby Radio Station (and the land needed for the supporting infrastructure) which, if supported by the Inspector at the EiP, will provide the focus for development in the town for the next 15-20 years. These may include improvements to M6 Junction 1, provision of new accesses and improved junctions and provision of new link from the development to the M45/A45. This development will require the use of aggregates and other natural resources as infrastructure is developed. The two development sites do also have some environmental sensitivities including potential Sites of Nature Conservation interest and BAP Habitats, effects on landscape quality to the East of Rugby and potential effects on Old Brownsover</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided.</p>



The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
Conservation Area and unless mitigated the effect of the development and the effect of infrastructure improvements could have a potentially significant effect. However, mitigation measures have been set out as part of the Sustainability Appraisal of the Rugby Core Strategy and infrastructure improvements will be subject to their own environmental assessment processes.		
<b>Nuneaton and Bedworth</b>		
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. The strategy aims to promote alternatives to the private car and Nuneaton and Bedworth does already have high levels of public transport use. However, the levels of development expected in the area means that decreases in road traffic are unlikely. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided. However, public realm improvements which are noted in the strategy are likely to have positive impacts on townscape.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; there may be some issues regarding building new cycle and footpaths, improving transport interchanges and reconfiguring the bus station. In terms of direct land take impacts from development; there is some uncertainty over where development will take place and this impact has also been scored as uncertain. The Nuneaton and Bedworth area also has a major scheme in the area – the NUCKLE scheme. The NUCKLE</p>	?	The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided.

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
scheme is addressed in the North-South Corridor assessment.		
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. The strategy aims to promote alternatives to the private car. However, the levels of development expected in the area means that decreases in road traffic are unlikely. The cultural and built heritage of the area is also very sensitive so the magnitude of impacts is likely to be high if traffic increases in sensitive areas. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided. However, the Warwick Town Centre Traffic Management Scheme which is noted in the strategy is likely to have positive impacts on townscape.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; there may be some issues regarding building new cycle and footpaths and improving transport interchanges etc. Growth in Warwick District will primarily be focused to the south of the Warwick/Leamington Spa urban area and so any new transport infrastructure is likely to be located here. There is some sensitivity in this area including landscape and biodiversity sensitivities and detailed work has been carried out on the proposed development sites through the LDF process in a Habitat Biodiversity Audit and a landscape character assessment of the area. However, mitigation measures will be set out as part of the Sustainability Appraisal</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of development if transport infrastructure is not provided.</p>

<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>of the Warwick District Core Strategy and infrastructure improvements will be subject to their own environmental assessment processes.</p> <p>There is also likely to be a direct effect from the development of Kenilworth station – which is a major scheme listed in the Implementation Plan. Warwickshire County Council is at a very early stage with the planning for the major scheme so no specific information is available on the impact of the scheme.</p>		
<b>Southern and Western Warwickshire</b>		
<p>Air quality is addressed in the objectives but this could be widened out to consider the impacts on the environment more generally.</p> <p>An important issue in the area is the value of the cultural and built heritage. The heritage of Stratford upon Avon is of national significance. The southern edge of the area also lies within the Cotswold AONB.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. The strategy aims to promote alternatives to the private car. However, the levels of development expected in the area means that decreases in road traffic are unlikely in most areas. In the centre of Stratford, the walkable core concept may lead to some positive impacts especially if coach traffic is reduced in certain sensitive areas. However, a detailed design has yet to be agreed and funding has yet to be secured. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport</p>	?	<p>As with the other strategies, the objectives of the Southern and Western Warwickshire Area Strategy should address the environmental impact of transport (rather than just air quality).</p> <p>Before highway widening is considered its impact on the environment should be considered.</p> <p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of</p>

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<p>infrastructure is not provided.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure, the main risks are from the upgrade of the Shakespeare Line, the development of Stratford Parkway station and from infrastructure to support development. An ecological appraisal has been carried out on the location of the Stratford Parkway Station (Arup, December 2009) and this found that there were some sensitivities of the site including negative effects on hedgerows, reptiles and bats. However, these effects were felt to be significant only at a parish level and mitigation measures have been outlined in the appraisal.</p> <p>In Stratford-on-Avon a significant proportion of proposed new residential development is to be located on the western and north-western periphery of Stratford-on-Avon the town which does have some environmental sensitivity including impacts on Conservation Areas and sensitive areas of landscape. However, mitigation measures will be set out as part of the Sustainability Appraisal of the Stratford-on-Avon District Core Strategy and infrastructure improvements will be subject to their own environmental assessment processes.</p> <p>The strategy does discuss using local highway widening as a way of reducing congestion and this could have impacts dependent on the location of the schemes.</p> <p>One potential impact will be the re-opening of the Stratford – Honeybourne railway line – however, the council does not lend its support to this scheme and it does not form part of the strategy. the line forms an important wildlife corridor and part of the line is a designated Nature Reserve.</p>		development if transport infrastructure is not provided.
<b>The North South Corridor</b>		
<p>Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. According to this report (and the responses of statutory consultees to the report), there are some potential environmental impacts of the scheme. This includes the effect of the new Coventry Arena and Bermuda Park Stations on flooding (as they are located in Flood Zone 3) and the slight impact that platform constructions would have on wooded areas at Bermuda Park and Bedworth. There are also likely to be effects on natural resources and short term effects of construction (on issues like noise). However, the schemes will have no impacts on landscape, townscape or heritage (and this latter impact has been conformed by English Heritage). No information is available on later phases of the NUCKLE scheme. The next stage of the</p>	?	

The effect of the draft plan on quality of life and the environment		
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scheme will be a full environmental assessment where mitigation and enhancement measures will be outlined.		
<b>Air Quality Strategy</b>		
Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have direct positive effects on air quality which should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	●	
<b>Accessibility Strategy</b>		
Any reductions in traffic that the accessibility policies could achieve would benefit noise levels, air quality and traffic impacts on historic buildings and areas valued for their landscape and townscape value, although the magnitude of traffic reduction achieved through these policies is likely to be negligible. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	○	
<b>Sustainable Freight Distribution Strategy</b>		
<p>Policy F1 discusses freight consolidation centres. These need to be carefully located to ensure that their positive effects can be maximised.</p> <p>Policy F2 includes accommodating the needs of freight and balancing this with the need for environmental protection. This policy could result in both positive and negative effects. Negative effects could be associated with new infrastructure, such as bridges or bridge strengthening maintenance which requires the use of natural resources and could affect hydrological regimes and habitats through construction. On a positive note, Policy F2 aims to protect town centres and inappropriate routes from the impacts of HGVs which supports achieving improvements with regards to landscape, townscape and heritage.</p> <p>Policy F6 supports the use of pipelines which could cause negative effects particularly during construction. However, the policy also includes mitigation for such effects through requiring minimal environmental impact</p>	●/●	<p>The location of the freight consolidation centres needs to be carefully selected so they are not located in (or increase traffic in) areas that are sensitive.</p> <p>Policy F6 could be reworded more positively in terms of avoiding environmental effects.</p>

<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>both during and after installation of the necessary infrastructure and therefore this potential effect would be a minor negative effect, recognising that the policy requires the minimisation of effects rather than the avoidance of effects.</p> <p>The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).</p>		
<b>Parking Strategy</b>		
<p>Policy P2 aims to improve the environmental impacts of congestion (including regarding noise, townscape and air quality) through the appropriate use of parking restrictions, provision and availability of information. Park and Ride facilities are supported in Policy P4. Policy P8 also supports provision of cycle parking in town centres, public transport interchanges and other key service destinations. The strategy is likely to be positive.</p>	●	
<b>Powered Two Wheeler Strategy</b>		
<p>Overall compared to cars, motorcycles produce fewer emissions. Generally they perform better for carbon dioxide and oxides of nitrogen, but are worse in respect of hydrocarbons. A shift from cars to PTW could also help to improve reduce congestion which should help to alleviate air quality issues in congested areas. The policies within the PTW Strategy should therefore result in a positive effect with regards to air quality. It is uncertain whether an increase in the number of PTW on the roads within Warwickshire would have any effect with regard to noise. In the long term the effect of encouraging PTW use is uncertain as the emissions performance and fuel consumption of cars may be much better than PTW, depending on technological advances and legislation. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity). The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).</p>	●	
<b>Airport Accessibility Strategy</b>		
<p>The Airport Accessibility Strategy should generally support the achievement of the SA Objective relating to air quality through providing options other than the private car to reach airports. This should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. There is a risk that if public transport services are extended into unsociable hours, this could have a negative effect with regards to noise – however, the level of residential use nearby the airports is low so the level of nuisance</p>	●	

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should be low.		
<b>Land Use and Transportation Strategy</b>		
The spatial development strategy is to focus development on urban areas and main towns. In Warwickshire these areas are already congested (especially Warwick) so new development may cause more congestion problems and impact on air quality, townscape and historic buildings. Better integration of transport and land use planning helps to ensure that the cumulative effect of development is less because there is 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. The strategy includes several measures to do this including through working with the planning authorities and developers to put in place travel plans and more sustainable transport systems. This will be positive for air quality, townscape and historic buildings if successful. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity) although there may be cumulative effects on natural resources through the building of housing and employment development and supporting infrastructure. The use of aggregates for maintenance is addressed in the Highway Maintenance Strategy but is not addressed in terms of new infrastructure. This should be rectified.	●/●	The LTP needs to make a commitment to reducing the impact of the resources used to build new transport infrastructure. Policy HM6 of the Highway Maintenance Strategy states that the County Council will aim to undertake all of its highway maintenance work within the context of the principles of sustainability and environmental protection. A similar undertaking needs to be made for the construction of new infrastructure.
<b>Bus Strategy</b>		
The strategy as a whole is likely to be positive because the policies promote the use of bus travel which should reduce use of the private car and therefore emissions to air. This should have direct positive effects on air quality which should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Passenger Rail Strategy</b>		
The passenger rail strategy will encourage greater use of rail travel, linked to other public transport modes, and in line with the walking and cycling strategies, as an alternative to the private car. This should have a	●	



<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
generally positive effect with regard to reducing emissions and improving air quality. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).		
<b>Network Management Duty Strategy</b>		
<p>One of the key objectives of the Network Management Strategy is to reduce the environmental impact of traffic (in terms of its speed, volume and emissions) on environmentally sensitive areas which should have a broadly positive effect with regards to air quality and noise and with regards to habitats, historic buildings and townscape / landscape if traffic is managed more effectively within towns and villages. However, the policies provide little information on how this objective will be achieved.</p> <p>Policy NMD12 aims to improve network efficiency which should reduce congestion on major routes and therefore reduce air quality impacts in these areas. Policy NMD14 will ensure access for pedestrians and cyclists during safety and protection works. The overall effect of the policy is considered to be neutral. However, with further information on how the above objective is likely to be achieved the effect could be positive. The strategy is unlikely to have significant effects on water resources and soil and mineral resources (including geodiversity).</p>	○	More information should be provided on how the environmental impact of traffic on environmentally sensitive areas is to be achieved within the Network Management Duty Strategy.
<b>Taxi and Private Hire Vehicle Strategy</b>		
The policies within the Taxi and Private Hire Strategy support the use of public transport and taxis and private hire vehicles as alternatives to the private car. This will generally be positive with regards to air quality, however, it is not considered likely that this Strategy will have as positive effect on air quality compared with the Bus Strategy or Passenger Rail Strategy and therefore the overall effect is considered to be minor positive. The strategy will not have a direct effect on any of the other SEA questions.	●	
<b>Intelligent Transport Systems Strategy</b>		
ITS can help in the management of emissions levels at key points on the urban and inter-urban network. The Council will seek to increase the benefits of ITS in the county which will help to manage emissions and improve air quality. This should have indirect benefits with regard to biodiversity and historic buildings. ITS will also be used to ensure reliable and punctual public transport services which should encourage the use of public transport. Policy ITS8 also supports using ITS for pedestrian crossings, although the policy only	●	



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<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
commits to considering the use of the technology for traffic signal junctions and controlled pedestrian crossing facilities. Therefore, the strategy as a whole is likely to be positive. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).		
<b>Community Transport Strategy</b>		
The main thrust of the Community Transport Strategy is to improve accessibility. It is not envisaged that the Strategy will have a significant impact on any of the SEA questions.	○	
<b>Congestion Strategy</b>		
<p>Population growth and economic growth are likely to result in increased congestion in Warwickshire. Currently, congestion in Warwickshire is mainly found on certain key routes in urban areas and at some key junctions on the strategic rural highway network in Warwickshire. Congestion is particularly severe in Warwick which is sensitive in terms of townscape and heritage.</p> <p>The measures to reduce congestion within the Strategy include improving modal shift which will help to reduce trips made by car and reduce overall emissions, having indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is also likely to improve townscape in areas where traffic is reduced. The strategy is likely to be positive in this regard. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).</p>	●	
<b>Cycling Strategy</b>		
The policies within the Cycling Strategy should all encourage cycling as a mode of transport as well as a leisure pursuit. Increasing cycling for commuting and accessing services and facilities could reduce the use of private cars and improve air quality, noise, townscape and indirectly, historic buildings and biodiversity. The effect of the strategy should be positive. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new cycle infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	

<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Bus Information Strategy</b>		
The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which can contribute positively to environmental conditions if it results in reduced traffic levels. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	●	
<b>Public Transport Interchange Strategy</b>		
The strategy as a whole is likely to be positive because the policies encourage greater use of public transport which can contribute positively to environmental conditions if it results in reduced traffic levels. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Public Transport Strategy</b>		
The strategy as a whole is likely to be positive because the policies encourage greater use of public transport which can contribute positively to environmental conditions if it results in reduced traffic levels. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Road Safety Strategy</b>		
There is little direct relationship between the Road Safety Strategy and the SEA Objectives. However the policies within the strategy include the use of engineering to improve safety and to reduce speeds. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new safety infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Highway Maintenance Strategy</b>		

<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
The maintenance of the highway will require the use of aggregates, however Policy HM2 requires materials to be recycled on site where possible which provide some mitigation for this negative effect. Policy HM6 also states that the County Council will aim to undertake all of its highway maintenance work within the context of the principles of sustainability and environmental protection. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats.	●	
<b>Bridge Maintenance Strategy</b>		
<p>The Strategy includes the protection and maintenance of bridges which form a vital part of the County's cultural heritage, but only if such works are not prohibitively expensive or impractical. This wording suggests that some historic assets may not be maintained, particularly those which are considered not to be a vital part of the County's cultural heritage. However, policy BM7 includes working in partnership with English Heritage which should mitigate for a potential adverse effect on historic assets.</p> <p>Policy BM6 encourages the minimisation of the use of virgin stone and other materials, which could include soils and aggregate and the recycling of materials on site.</p> <p>Bridge maintenance could result in water pollution, soil pollution or loss of soils and negative effects on biodiversity during maintenance works / construction.</p> <p>The extent or location of potential negative effects of this Strategy on biodiversity, water quality, and use of aggregates is not known and therefore a minor negative (rather than a major negative) effect is recorded.</p>	●	<p>It should be made clear that the maintenance of historic bridges and/or bridges of cultural value will be undertaken in consultation with English Heritage and local authority conservation officers in order to ensure that decisions made regarding bridge maintenance optimise the protection of the County's historic assets.</p> <p>The policy wording should include the minimisation of environment effects of bridge maintenance works.</p>
<b>Changing Travel Behaviour Strategy</b>		
The strategy as a whole is likely to be positive because the policies promote the use of public transport, walking, cycling and reduce single occupancy of vehicles which could reduce use of the private car and volumes of traffic and therefore reduce emissions to air which should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is unlikely to	●	

<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).		
<b>Walking Strategy</b>		
<p>The policies should all encourage walking as a mode of transport. Increasing walking for commuting and accessing services and facilities could reduce the use of private cars and improve air quality, noise, townscape and indirectly, historic buildings and biodiversity. The effect of this aspect of the strategy should be positive.</p> <p>The strategy includes the maintenance of footpaths which should help to avoid erosion of soils. The strategy encourages walking in the countryside. Although this could increase the number of people coming into contact with wildlife and natural environments, it is uncertain whether this could result in negative effects e.g. from littering and damage to habitats, or positive effects e.g. from improving people's awareness and appreciation of wildlife and natural areas. Such potential effects are likely to be minor (either negative or positive). The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new cycle infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy). Overall the strategy is considered to have a minor positive effect.</p>	●	
<b>Rights of Way and Recreational Highway Strategy</b>		
<p>Policy RW1 of this strategy sets out measures for surfacing rights of way and recreational highways. The type of surfacing material will be determined on the basis of the needs of all path users, cost, sustainability, local distinctiveness and the local ecology. It is not clear whether recycled and low environmental impact materials will be favoured where practicable. This policy also makes no reference to protecting the water environment, which could be negatively affected by run-off from hard surfaced paths.</p> <p>Standardised way marking will be used unless local distinctiveness or named-trails are being promoted in partnership with another organisation. This will help to protect the rural landscape from visually intrusive signage.</p> <p>This strategy priorities creations, diversions, conversation and extinguishments of paths which could affect SSSIs over other ecological features, the protection of which is given medium priority within Policy RW5b.</p>	●/●	Policy RW1 of the Rights of Way and Recreational Highway Strategy could be strengthened by adding text which makes it clear that recycled and low environmental impact surfacing materials will be favoured for the surfacing of foot and cycle paths, where practicable. Policy RW1 of the Rights of Way and

<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
The protection of archaeological features is also given only medium priority and therefore this policy risks potential negative effects on archaeological and ecological features.		<p>Recreational Highway Strategy should also make reference to protecting water resources.</p> <p>In order to offset potential negative effects on archaeological and ecological features, the protection of such features should be given high priority in Policy RW5b.</p>
<b>Implementation Plan (April 2011 – March 2014)</b>		
<p>Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet known. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Maintaining the highway network and providing a balanced integrated transport programme are likely to be positive for managing traffic (and potentially helping to manage the effects of transport on communities and the built and natural environment) but at the lower levels of funding allocation (£1.25 million integrated transport funding), no funding has been allocated for “improving our streets” and this could mean that improvements are not made to townscape. The Implementation Plan concludes that it is not likely that significant infrastructure investment to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to ‘top up’ developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.</p>

## Assessment Conclusions – quality of life and the environment

**Summary of performance:** None of the strategies are likely to have a significantly positive effect on the environment and quality of life objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the environment and quality of life SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help reduce the impact of transport on the environment. The strategies contained within the plan should help to provide alternative modes of transport and manage traffic to reduce the impact on communities and townscape and reduce congestion and traffic. All of these measures should help to reduce the impact of traffic on air, noise and biodiversity, improve landscapes and townscapes and reduce pollution from traffic. There are however, a small number of potential negative effects recorded within the assessment and mitigation measures are proposed to address these as appropriate. For example, the objectives of the LTP do not address the built environment, and the Sustainable Distribution Strategy, Highway Maintenance Strategy, Road Safety Strategy, Bridge Maintenance Strategy and Rights of Way and Recreational Highway Strategy would result in construction so could involve the use of natural resources.

The effect of the area strategies has been scored as uncertain. The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategies difficult to assess. Although the area strategies may make alternative modes more attractive and reduce the impact of traffic on townscapes it is not possible to definitely state the locations of any likely traffic reduction due to uncertainty regarding where and how measures are likely to be implemented. This uncertainty also means that direct land take impacts are not possible to predict. An exception to this is Phase 1 of the NUCKLE major scheme which is further advanced than the other parts of the plan. The NUCKLE scheme will be broadly positive in helping to achieve modal shift. However, there is a risk of some impacts on flooding and biodiversity – mitigation measures will need to be developed as part of the environmental assessment for the scheme.

### Mitigation and enhancement measures:

Mitigation measures are identified in order to address potential negative effects and areas of uncertainty identified in the assessment, as follows:

- The plan objective on the environment should be changed to address the impact on the built environment;
- There is a risk that as the strategies and measures are developed negative impacts will occur. This is particularly a risk with the major schemes and it is suggested that major schemes (and all schemes if deemed a risk) should be subject to an assessment of their sustainability;
- As with the other strategies, the objectives of the Southern and Western Warwickshire Area Strategy should address the environmental impact of transport (rather than just air quality);
- The LTP needs to make a commitment to reducing the impact of the resources used to build new transport infrastructure. Policy HM6 of the Highway

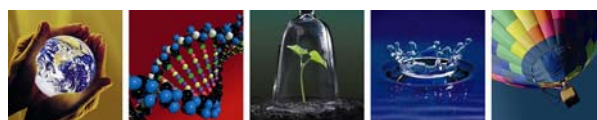
**Assessment Conclusions – quality of life and the environment**

Maintenance Strategy states that the County Council will aim to undertake all of its highway maintenance work within the context of the principles of sustainability and environmental protection. A similar undertaking needs to be made for the construction of new infrastructure;

- Before highway widening is considered its impact on the environment should be considered;
- The location of the freight consolidation centres needs to be carefully selected so they are not located in (or increase traffic in) areas that are sensitive;
- Policy F6 on the Sustainable Freight Distribution Strategy could be reworded more positively in terms of avoiding environmental effects;
- It should be made clear that the maintenance of historic bridges and/or bridges of cultural value will be undertaken in consultation with English Heritage and local authority conservation officers in order to ensure that decisions made regarding bridge maintenance optimise the protection of the county's historic assets;
- The policy wording should include the minimisation of environment effects of bridge maintenance works;
- Policy RW1 of the Rights of Way and Recreational Highway Strategy could be strengthened by adding text which makes it clear that recycled and low environmental impact surfacing materials will be favoured for the surfacing of foot and cycle paths, where practicable. Policy RW1 of the Rights of Way and Recreational Highway Strategy should also make reference to protecting water resources; and
- In order to offset potential negative effects on archaeological and ecological features, the protection of such features should be given high priority in Policy RW5b of the Rights of Way and Recreational Highway Strategy.
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process should actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

Enhancement measures are also put forward, in order to improve the strategies, as follows:

- More information should be provided on how the environmental impact of traffic on environmentally sensitive areas is to be achieved within the Network Management Duty Strategy.



Warwickshire Local  
Transport Plan 3  
Strategic Environmental  
Assessment

Environmental Report Annex  
reflecting changes made to  
the Adopted LTP3



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Appendix 1: Assessment of the Adopted LTP3



# 1 Introduction

## 1.1 This report

The Warwickshire LTP3 has been subject to a full strategic environmental assessment (SEA) in line with the requirements of *Statutory Instrument 2004 No. 1633: The Environmental Assessment of Plans and Programmes Regulations 2004* (otherwise known as the SEA Regulations). These Regulations require an environmental assessment to be carried out on certain plans and programmes prepared by public authorities that are likely to have a significant effect upon the environment. Certain plans, including LTPs, have been deemed by the Government to automatically require SEA<sup>1</sup>.

The SEA has been carried out by independent consultants, ENVIRON using the following guidance: Department for Transport (April 2009): *Strategic Environmental Assessment for Transport Plans and Programmes. TAG Unit 2.11. "In draft" Guidance*.

An Environmental Report was published in May 2010 that set out the methodology of the SEA and the results of the assessment that had been carried out on the plan options and the Draft LTP3. The Environmental Report was subject to consultation with local stakeholders at the same time as the Draft LTP3.

Warwickshire County Council has now considered the consultation responses to the Draft LTP3 and the results of the SEA and has now completed the final document, the Adopted LTP3. It is now necessary to consider what the environmental and sustainability effects of the Adopted LTP3 will be.

This report outlines the changes made to the plan and their likely implications for sustainability. It is important that this report is read in conjunction with the Warwickshire LTP3 Environmental Report. This document is available on the following website:

[www.warwickshire.gov.uk/ltp](http://www.warwickshire.gov.uk/ltp)

## 1.2 The structure of this report

This report is divided into the following sections:

- Section 2 identifies and reports on the assessment of the significant changes to the plan; and
- Section 3 outlines how the effects of the Adopted LTP3 will be monitored.

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<sup>1</sup> This is set out as a requirement in LTP guidance and also in Appendix 1 of *A Practical Guide to the Strategic Environmental Assessment Directive* (Office of the Deputy Prime Minister, 2005).

## 2 Identifying and assessing the significant changes

### 2.1 Identifying the changes to the plan

Changes have been made to the plan in response to the SEA recommendations and consultation responses. Changes have also been made to reflect any political and policy changes that have occurred since the publication of the Draft LTP. Examples include changes to the position with regards to the District Local Development Frameworks due to the abolition of the Regional Spatial Strategy.

Because of the large size of the Adopted LTP3, ENVIRON has had to rely on a schedule of consultation responses provided by Warwickshire County Council to identify the significant changes made to the plan. Please note that Warwickshire County Council has checked ENVIRON's understanding of the significant changes to the plan and has agreed that this is correct. In addition, due to the large number of policies contained within the document the policy references in the assessment matrices in Appendix 1 still refer to the policy numbers in the Draft LTP3.

Table 1 summarises the significant changes that have been made to the strategy and outlines in brief the approach that has been taken to assessing the changes.

The assessment of the Draft LTP3 was carried out on a topic by topic basis and the full assessment recorded in assessment matrices. Where a change to the plan has been deemed significant (as recorded in Table 1) changes have been made to the assessment matrices which can be found in Appendix 1.

**Table 1: Summary of significant changes made to the plan**

Element of the plan	Summary of significant changes made to the plan	Approach to assessing the changes
Plan objectives	An additional objective has been added to LTP3 to support the Government's commitment to tackling climate change (both mitigation and adaptation).	The effect of the new objective is reflected in the assessment matrices in Appendix 1.
<b>Area strategies</b>		
Northern Warwickshire	The situation with regards to the LDF has been updated.	The change with regard to the LDF will not affect the conclusions of the assessment but some small changes have been made to the references to housing numbers in the assessment matrices in Appendix 1.
Eastern Warwickshire	<p>The situation with regards to the LDF has been updated. Further contextual information has been added including in relation to the newly opened Rugby Western Relief Road.</p> <p>An objective has been added on improving accessibility to the Nuneaton and Bedworth, Eastern Warwickshire and Warwick, Leamington Spa, Kenilworth and Whitnash Area</p>	<p>The change with regard to the LDF will not affect the conclusions of the assessment but some small changes have been made to the references to housing numbers in the assessment matrices in Appendix 1.</p> <p>The information on the Rugby Western Relief Road is contextual and would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to</p>

**Table 1: Summary of significant changes made to the plan**

Element of the plan	Summary of significant changes made to the plan	Approach to assessing the changes
	Strategies,.	<p>this change in the plan.</p> <p>The effect of the change to the objective is reflected in the assessment matrices in Appendix 1.</p>
Nuneaton and Bedworth	<p>The situation with regards to the LDF has been updated. Further contextual information has been added with regard to the NUCKLE scheme.</p> <p>An objective has been added on improving accessibility to the Nuneaton and Bedworth, Eastern Warwickshire and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies.</p>	<p>The change with regard to the LDF will not affect the conclusions of the assessment but some small changes have been made to the references to housing numbers in the assessment matrices in Appendix 1.</p> <p>The information on the NUCKLE scheme is contextual and would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.</p> <p>The effect of the change to the objective is reflected in the assessment matrices in Appendix 1.</p>
Warwick, Leamington Spa, Kenilworth and Whitnash	<p>The situation with regards to the LDF has been updated.</p> <p>The reference to a Park &amp; Ride site in Leamington / Warwick has been deleted.</p> <p>An objective has been added on improving accessibility to the Nuneaton and Bedworth, Eastern Warwickshire and Warwick, Leamington Spa, Kenilworth and Whitnash Area Strategies.</p>	<p>The change with regard to the LDF will not affect the conclusions of the assessment but some small changes have been made to the references to housing numbers in the assessment matrices in Appendix 1.</p> <p>The information on the Park and Ride Site would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.</p> <p>The effect of the change to the objective is reflected in the assessment matrices in Appendix 1.</p>
Southern and Western Warwickshire	<p>The situation with regards to the LDF has been updated.</p> <p>A further AQMA in Henley-in-Arden within Stratford-on-Avon District is likely to be declared in the near future.</p> <p>Further detail has been added regarding the reopening of the Stratford upon Avon to Long Marston railway line.</p> <p>One of the strategy objectives has changed to reflect the wider environmental impact of transport (wider than air quality).</p>	<p>The change with regard to the LDF will not affect the conclusions of the assessment but some small changes have been made to the references to housing numbers in the assessment matrices in Appendix 1.</p> <p>The information on the Henley in Arden AQMA and the Stratford upon Avon to Long Marston railway line would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.</p> <p>The effect of the change to the objective is reflected in the assessment matrices</p>

**Table 1: Summary of significant changes made to the plan**

Element of the plan	Summary of significant changes made to the plan	Approach to assessing the changes
		in Appendix 1.
The North South Corridor	An update on the NUCKLE scheme has been provided.  The North-South Corridor chapter has been amended to reflect the important role which the rural areas within and adjacent to the corridor play in supplementing the main north-south movements.	The information on the NUCKLE scheme and information on rural areas is contextual and would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.
<b>Modal / topic strategies</b>		
Rural Strategy	This is a new strategy that has been added since the Draft LTP3.	This has been assessed and this is reported in the assessment matrices in Appendix 1.
Air Quality Strategy	No significant changes have been made to the strategy.	N/A
Accessibility Strategy	No significant changes have been made to the strategy.	N/A
Sustainable Freight Distribution Strategy	The wording in the strategy has been amended to reflect the fact that the location of the freight consolidation centres needs to be in areas that are environmentally suitable. The strategy has also been amended to provide additional protection to the environment during the construction of pipelines.	The changes regarding the freight consolidation centres and construction of pipelines have been assessed and this is reported in the assessment matrices in Appendix 1.
Parking Strategy	Policy P1 of the strategy has been amended to read "The County Council will continue to work with the five Warwickshire District/Borough Councils <b>and adjoining Authorities</b> to deliver a coordinated approach to the supply, pricing and enforcement of on and off-street parking provision in a way that supports the objectives of the Local Transport Plan, the Local Development Frameworks and other Supplementary Planning Documents.	The change to Policy P1 is a minor change and would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.
Powered Two Wheeler Strategy	No significant changes have been made to the strategy.	N/A
Airport Accessibility Strategy	Policy ASA3 of the Airport Accessibility Strategy has been made clearer in terms of the level of passenger flights that will trigger a Surface Access Strategy for Coventry Airport.  Policy ASA1 has been changed so it refers to improving <b>sustainable</b> surface	These changes have been assessed and this is reported in the assessment matrices in Appendix 1.

**Table 1: Summary of significant changes made to the plan**

Element of the plan	Summary of significant changes made to the plan	Approach to assessing the changes
	access to airports.	
Land Use and Transportation Strategy	<p>Policy LUT6 has been amended to read "Policy LUT6 ensures all works within the highway are carried out to an acceptable standard, <b>will endeavour to provide for pedestrians and cyclists</b> and will not be at the detriment to highway safety and future maintenance.</p> <p>Text has been added to outline what is required from developers in terms of traffic modelling for new developments.</p>	<p>The effect of the change to Policy LUT6 is reflected in the assessment matrices in Appendix 1.</p> <p>The reference to traffic modelling for new development would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.</p>
Bus Strategy	<p>The Proposed Leamington - Warwick - Barford - Wellesbourne - Stratford-upon-Avon Quality Bus Corridor Scheme has now been included in the Bus Strategy.</p> <p>A reference to the proposal for a potential Park and Ride site near Ansty has been added to the North-South Corridor Chapter.</p>	<p>The reference to the park and ride proposal in Ansty and the Proposed Leamington - Warwick - Barford - Wellesbourne - Stratford-upon-Avon Quality Bus Corridor Scheme would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.</p>
Passenger Rail Strategy	<p>The strategy also includes the County Council's position on High Speed Rail 2. In December 2010, Warwickshire County Council voted to oppose the proposed HS2 London to Birmingham high speed rail link.</p> <p>An amendment has been made to the text Policy PTPR4 of the Passenger Rail Strategy related to the issue of access improvements to BIFT/Birch Coppice/Kingsbury oil sidings.</p>	<p>The effect of High Speed Rail 2 has been discussed within the assessment matrices in Appendix 1.</p> <p>The amendment to Policy PTPR4 would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.</p>
Network Management Duty Strategy	No significant changes have been made to the strategy.	N/A
Taxi and Private Hire Vehicle Strategy	An additional policy and associated entry in the Action Plan has been included in the strategy to encourage the replacement of existing fleets over time with cleaner vehicles.	This change has been assessed and this is reported in the assessment matrices in Appendix 1.
Intelligent Transport Systems Strategy	No significant changes have been made to the strategy.	N/A
Community Transport Strategy	No significant changes have been made to the strategy.	N/A
Congestion	No significant changes have been made	N/A



**Table 1: Summary of significant changes made to the plan**

<b>Element of the plan</b>	<b>Summary of significant changes made to the plan</b>	<b>Approach to assessing the changes</b>
Strategy	to the strategy.	
Cycling Strategy	No significant changes have been made to the strategy.	N/A
Bus Information Strategy	No significant changes have been made to the strategy.	N/A
Public Transport Interchange Strategy	No significant changes have been made to the strategy.	N/A
Public Transport Strategy	No significant changes have been made to the strategy.	N/A
Road Safety Strategy	No significant changes have been made to the strategy.	N/A
Highway Maintenance Strategy	<p>The issue of climate change adaptation and its effects on highway maintenance are now addressed in the strategy in an additional policy (Policy HM8).</p> <p>Policy HM6 has been strengthened to ensure that all new construction work (as well as maintenance) will be undertaken within the context of the principles of sustainability and environmental protection.</p>	These changes have been assessed and this is reported in the assessment matrices in Appendix 1.
Bridge Maintenance Strategy	Policy BM5 on bridge maintenance has been changed so that it better addresses the environment.	This change has been assessed and this is reported in the assessment matrices in Appendix 1.
Changing Travel Behaviour Strategy	No significant changes have been made to the strategy.	N/A
Walking Strategy	No significant changes have been made to the strategy.	N/A
Rights of Way and Recreational Highway Strategy	According to the County Council the main change to the strategy is at Policy RW4A. This is the policy that deals with the review of the Definitive Map and Statement of Public Rights of Way. The policy has given more detail regarding the order in which the reviews will be undertaken.	The amendment to Policy RW4A would not change the conclusions of the assessment. Therefore, no changes have been made to Appendix 1 due to this change in the plan.
Implementation Plan (April 2011 – March 2012)	The amount of funding likely to be available for transport has changed since the Draft LTP3 was published and	Changes to the Implementation Plan have been assessed and are reported in the assessment matrices in Appendix 1.

**Table 1: Summary of significant changes made to the plan**

Element of the plan	Summary of significant changes made to the plan	Approach to assessing the changes
2014)2	a Performance Management section has now been added to the Implementation Plan.	

## 2.2 The effects of the Adopted LTP3

The assessment of the Draft LTP3 was carried out on a topic by topic basis and the full assessment recorded in assessment matrices. Where a change to the plan has been deemed significant (as recorded in Table 1 above) changes have been made to these assessment matrices. These assessment matrices are shown in Appendix 1 of this report. To ensure that the assessment of the changes is as clear as possible, where changes have been made to the assessment these are written in Appendix 1 in **red** text. The assessment matrices as completed, therefore, represent an assessment of the sustainability effects of the Adopted Plan as a whole (including changes made since the Draft LTP3).

The effects of the Adopted LTP3 are summarised in Table 2. This also includes any outstanding mitigation or enhancement measures which were highlighted in the SEA of the Draft LTP3 but which have not been taken on board by the County Council. It should be noted, however, that most of the mitigation and enhancement measures suggested through the SEA of the Draft LTP3 have been taken on board.

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2 Please note that the major schemes are discussed in the relevant area strategies. An assessment of the plan with and without major schemes has not been undertaken. This is because of the strategic and uncertain nature of the plan and the fact that major schemes are at such an early stage of planning.

<b>Table 2: Effects of the Adopted LTP3</b>	
<b>Effects of the plan</b>	<b>Mitigation and enhancement measures</b>
<b>SEA topic: Economic growth</b>	
<p>None of the strategies are likely to have a significantly positive effect on the economy objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the economy SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help support the economy of Warwickshire. The strategies contained within the plan should help to improve sustainable access to employment (both employment sites within the county and to areas such as Birmingham), help to manage the negative effects of HGV traffic, help to manage traffic better in the town centres, support regeneration in the less affluent north of the county and support initiatives such as the World Class Stratford Initiative. However, some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites and <b>following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed</b>) and the fact that transport modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels. Although the long term strategy is broadly positive, there is some uncertainty over the level of funding available to provide supporting transport infrastructure in the short term.</p> <p><b>There are no significant negative or minor negative effects identified. The Area Strategies and Implementation Plan have an uncertain score due to the reasons outlined above.</b></p>	<p>Mitigation measures identified to address potential negative or uncertain effects are as follows:</p> <ul style="list-style-type: none"> <li>• <b>As the locations of development and the available funding become more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable; and</b></li> <li>• <b>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process will actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.</b></li> </ul> <p>No enhancement measures have been suggested.</p>
<b>SEA topic: Carbon emissions</b>	
<p>Some of the modal/topic strategies are likely to have minor negative effects. The Sustainable Freight Distribution Strategy and the Airport Accessibility Strategy will provide support for the re-introduction of air freight and passenger services at Coventry Airport and continuation of</p>	<p>Mitigation measures identified to address potential negative or uncertain effects are as follows:</p> <ul style="list-style-type: none"> <li>• It is not possible within the LTP to mitigate the effect of the re-opening</li> </ul>

<b>Table 2: Effects of the Adopted LTP3</b>	
<b>Effects of the plan</b>	<b>Mitigation and enhancement measures</b>
<p>support of the same at Birmingham International Airport. Alone, these measures in the LTP will have a slight negative effect on emissions. However, in association with the expansion of Birmingham International Airport, the LTP will have a significant cumulative negative impact on carbon emissions. Significant negative effects are also identified with regard to the area strategies (apart from the North –South Corridor which has a positive effect). It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the various areas of the plan will lead to a change in climate emissions as transport modelling is not yet available. However, for climate emissions to decrease definable modal shift and reductions in vehicle miles would have to occur. The level of development in Warwickshire makes it unlikely that vehicle miles will decrease.</p>	<p>of Coventry Airport. It is within the power of the LTP only to promote alternative freight modes and the Sustainable Freight Distribution Strategy already does this.</p> <ul style="list-style-type: none"> <li>It is not possible within the LTP to mitigate the effect of the expansion of Birmingham International Airport and the re-opening of Coventry Airport. It is within the power of the LTP only to promote alternative modes to airports and the Airport Accessibility Strategy already does this.</li> <li>The fact that the spatial strategy and the transport interventions are likely to increase carbon emissions is a difficult issue to mitigate as development cannot be stopped yet there is reduced funding for transport interventions to enable modal switch. Pressure for new housing and employment development within Warwickshire is outside of the County Council's control. The priority therefore is to ensure that this development comes forward in a sustainable and integrated way, and that its impact on the local highway network is mitigated. This will be achieved through the ongoing work with the District Councils;</li> <li>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process will actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.</li> </ul> <p>No enhancement measures have been suggested.</p>
<b>SEA topic: Equality of opportunity</b>	
<p>None of the strategies are likely to have a significantly positive effect on the equality objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the equality SEA Objectives</p>	<p>No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Equality of Opportunity SEA Objectives. However, a mitigation measure is put forward in relation to an uncertain performance recorded with regards to the</p>

<b>Table 2: Effects of the Adopted LTP3</b>	
<b>Effects of the plan</b>	<b>Mitigation and enhancement measures</b>
<p>(mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve accessibility and improve the quality of communities. The strategies contained within the plan should help to support access to employment, healthcare and other services, make travel more affordable (through concessionary fare schemes, car sharing schemes etc) and through providing a greater range of travel options. The plan will also help to improve the quality of urban and rural centres through measures to reduce the impact of freight traffic, parking policies and through reducing congestion and the impact of vehicular traffic in certain areas. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. None of the strategies will have a negative effect on the SEA Objectives.</p>	<p>Implementation Plan as follows:</p> <ul style="list-style-type: none"> <li>• <b>The Transport Capital Programme is prepared in the context of a number of criteria including delivery of LTP objectives (including sustainability).</b></li> </ul> <p>No enhancement measures have been suggested.</p>
<p><b>SEA topic: Safety, security and health</b></p> <p>None of the strategies are likely to have a significantly positive effect on the safety, security and health objectives but no negative impacts have been recorded either. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the safety, security and health SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve the safety and security of travel through tackling speeding, improving lighting, helping to maintain footways and the highways and helping to educate people about road safety. The strategy will also help to make healthier modes more attractive through improving walking and cycling routes and addressing security concerns at public transport interchanges. The strategies should also help to improve the air quality in the county, if modal switch is achieved. As with the other SEA Objectives, there is some uncertainty over the implementation of the schemes in the strategies. The Implementation Plan stresses that maintenance of the highway network is likely to be a priority (which will positive for safety), that a broadly balanced</p>	<p>No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Safety, Security and Health SEA Objectives. However, mitigation measures are put forward in relation to the uncertain performances recorded, as follows:</p> <ul style="list-style-type: none"> <li>• <b>The Transport Capital Programme is prepared in the context of a number of criteria including delivery of LTP objectives (including sustainability).</b></li> </ul> <p>No enhancement measures have been suggested.</p>

<b>Table 2: Effects of the Adopted LTP3</b>	
<b>Effects of the plan</b>	<b>Mitigation and enhancement measures</b>
integrated transport programme will be maintained and the plan includes funding for casualty reduction, Safer Routes to Schools Programmes and cycling and walking. However, without certainty on funding and location of schemes, it is not possible to assess what the impact of the Implementation Plan will be on safety and health.	
<b>SEA topic: Quality of life and natural environment</b>	
<p>None of the strategies are likely to have a significantly positive effect on the environment and quality of life objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the environment and quality of life SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help reduce the impact of transport on the environment. The strategies contained within the plan should help to provide alternative modes of transport and manage traffic to reduce the impact on communities and townscape and reduce congestion and traffic. All of these measures should help to reduce the impact of traffic on air, noise and biodiversity, improve landscapes and townscapes and reduce pollution from traffic.</p> <p>The effect of the area strategies has been scored as uncertain. The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategies difficult to assess. Although the area strategies may make</p>	<p>Mitigation measures are identified in order to address potential negative effects and areas of uncertainty identified in the assessment, as follows:</p> <ul style="list-style-type: none"> <li>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. <b>This process aims to ensure that where possible, future development is sustainable.</b></li> </ul> <p>No enhancement measures have been suggested.</p>

Table 2: Effects of the Adopted LTP3	
Effects of the plan	Mitigation and enhancement measures
alternative modes more attractive and reduce the impact of traffic on townscapes it is not possible to definitely state the locations of any likely traffic reduction due to uncertainty regarding where and how measures are likely to be implemented. This uncertainty also means that direct land take impacts are not possible to predict. An exception to this is Phase 1 of the NUCKLE major scheme which is further advanced than the other parts of the plan. The NUCKLE scheme will be broadly positive in helping to achieve modal shift. However, there is a risk of some impacts on flooding and biodiversity – mitigation measures will need to be developed as part of the environmental assessment for the scheme.	

### 3 Monitoring Measures

The SEA Regulations require authorities to:

*...monitor the significant environmental effects of the implementation of each plan or programme with the purpose of identifying unforeseen adverse effects at an early stage and being able to undertake appropriate remedial action (Section 17 (1)).*

A monitoring programme to monitor the effects of the Draft LTP3 was set out in the Environmental Report. This monitoring programme has been updated below. Monitoring measures proposed in this section refer to the significant and uncertain effects that have been predicted to result from measures included in the Adopted LTP3. In addition to the very specific actions included below, the LTP already includes a monitoring programme and the latest version of this is outlined in the Adopted LTP.

The monitoring programme is outlined in Table 3.

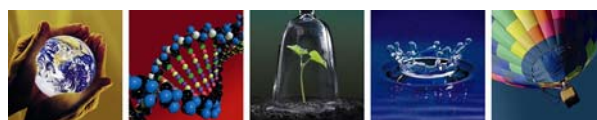
<b>Table 3: LTP3 monitoring programme</b>	
<b>Significant / uncertain effect identified<sup>3</sup></b>	<b>Monitoring required</b>
Uncertain effect: The effect of the Implementation Plan on the economy, the environment and climate emissions. . The Implementation Plan concludes that <b>no allocation is envisaged from LTP Block Allocations or Council resources</b> to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.	<p>This issue has arisen due to the recent abolition of the RSS, and the decision by four of the five Warwickshire District/Borough Council's to revise their Local Development Framework Core Strategies. The delay that this will bring may mean that by the time development comes forward, the financial position of the Authority will have improved.</p> <p>However, each Local Development Framework will have its own monitoring processes through which the effects of development will be monitored. It is expected that this will be an effective way to monitor this significant effect. It will be important that the LTP team satisfies itself that each LDF has set in place adequate monitoring systems to ensure that there are no unacceptable transport impacts from development.</p>
Significant effect: The effect of the area strategies and Implementation Plan on carbon emissions. If development is to take place without adequate transport infrastructure it likely that climate emissions will increase and this will have a negative impact on climate emissions.	
Uncertain effect: Some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites and following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed). In addition, transport modelling has not yet been undertaken to determine the effect of development	

<sup>3</sup> The effects have been grouped into similar effects for the purpose of the monitoring programme.



**Table 3: LTP3 monitoring programme**

Significant / uncertain effect identified <sup>3</sup>	Monitoring required
on congestion and traffic levels.	
Significant effect: The cumulative effect of the LTP and the expansion of Birmingham International Airport on carbon emissions / re-opening of Coventry Airport on carbon emissions.	<p>Birmingham International Airport reports on the carbon emissions from its operations in its quarterly Environment Monitoring Report and annual Community and Environment Report. Although in close proximity to Warwickshire, Birmingham International Airport (BIA) is located within Solihull Metropolitan Borough (MBC). As such, this will not form part of the Warwickshire LTP monitoring process. However, it is suggested that the County Council contact Solihull MBC to confirm their proposed monitoring approach in relation to this and other impacts of BIA.</p> <p>If and when Coventry Airport re-opens it is assumed that it will also monitor carbon emissions. A similar approach to BIA would be suggested as above.</p>



Warwickshire County Council

LTP3 Strategic  
Environmental Assessment  
Environmental

Appendix 1: Assessment of  
Adopted LTP3 – Assessment  
Matrices

Prepared for:

**Warwickshire County Council  
Warwick**

Prepared by:

**ENVIRON  
Birmingham, UK**

Date:



**March 2011**

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Contract/Proposal No:	UK1815047
Issue:	2
Author	
(signature):	
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(signature):	
Date:	March 2011

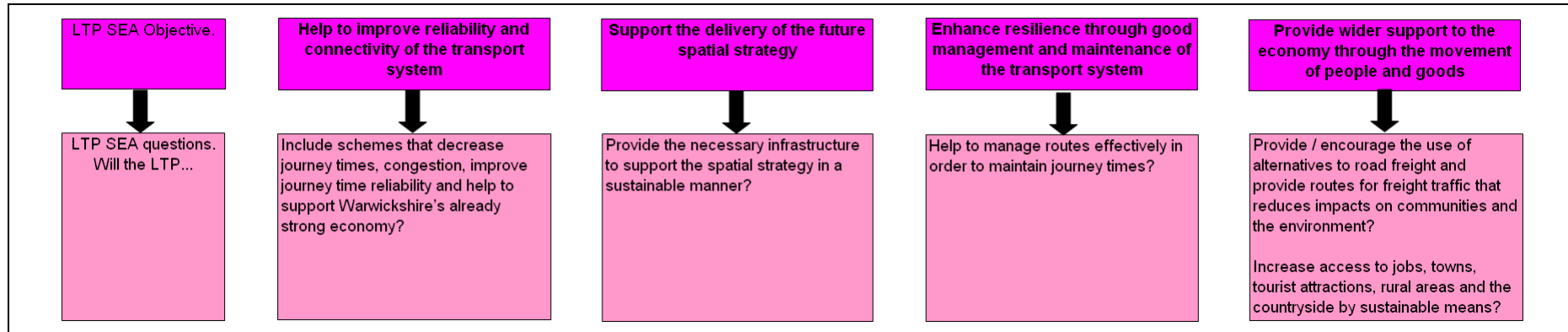
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Version Control Record				
Issue	Description of Status	Date	Reviewer Initials	Authors Initials
A	First Draft	01/03/11	JC	EJ
1	DRAFT to client	17/03/11	JC	EJ
2	FINAL Report	22/03/11	JC	EJ

# 1 SEA Topic: Economy

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which seek to provide reliable and efficient transport networks.	●	
<b>Area strategies<sup>1</sup></b>		
<b>Northern Warwickshire</b>		
The objectives for the area discuss the long term stability and growth of the economy and supporting planned housing and employment growth. Congestion is not deemed to be an issue when compared to other areas of Warwickshire. Therefore, significant actions are not provided to improve congestion. Access to employment	?	As the locations of development and the available funding become

<sup>1</sup> Please note that because of limited time to undertake the assessment the strategies are presented in the matrices in the order that they were sent to the SEA team by Warwickshire County Council. This may not be the order in which they appear in the LTP3.

The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>is addressed, mainly through the provision of an inter urban quality bus corridor between Nuneaton, Atherstone and Tamworth, increasing car parking provision at Atherstone station and the commitment to keep under review the need for further cycling improvements to link Hams Hall to Coleshill Parkway Station.</p> <p>In terms of supporting the delivery of the future spatial strategy, the LTP commits to inputting into the LDF process. Development in North Warwickshire is likely to cause cumulative effects on traffic levels and the development at Hams Hall and Birch Coppice are likely to cause increases in freight traffic. To reduce the impact of this, the LTP includes such actions such as the review of environmental weight limits and a management strategy for HGV parking around Hams Hall.</p> <p>The draft LTP3 Area Chapters originally set out the mitigation measures which were required for the five Warwickshire District/Borough Local Development Framework (LDF) Core Strategies to come forward. However, following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed. Because of the uncertainty regarding the location of development the impact of the strategy has been scored as uncertain. However, the County Council has committed to play a key role in identifying the sustainable transport measures which are required as the detail of the revised LDF Core Strategies becomes available.</p>		<p>more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.</p>
<b>Eastern Warwickshire</b>		
<p>The objectives discuss supporting planned housing and employment growth and supporting the regeneration of Rugby Town Centre and supporting the stability and growth of the local economy.</p> <p>Future development in Rugby may cause a cumulative negative impact on traffic levels and congestion, as could further development at DIRFT. In terms of the likely sites for development, the Gateway Rugby Site is likely to have traffic impacts on the A426 corridor and junction 1 of the M6. However, it is well located to existing and proposed employment sites facilitating more sustainable travel. The Rugby Radio Station site will require some improvements to make the site accessible to the town centre and the traffic impact acceptable (including a new railway station that could assist employees of DIRFT get to work sustainably). These measures should be positive but not enough detail is known at the present time to assess the proposals in detail and it is likely that the developers of the sites will have to carry out transport modelling to ensure that the impact of the sites are acceptable on the transport system.</p> <p>In terms of freight, the area has a large proportion of employment related to the transport and distribution</p>	?	<p>As the locations of development and the available funding become more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.</p>

The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>sectors meaning that HGVs make up a large amount of traffic in the area. It is anticipated that the opening of the Western Relief Road (which is being built at the moment) will have a positive impact on HGV traffic in Rugby. The expansion of DIRFT may have some impacts on Rugby if improvements are not made to the strategic and local road network. This is subject to a high level of uncertainty at the moment and further modelling is expected to determine the likely impact on the road network.</p> <p>The draft LTP3 Area Chapters originally set out the mitigation measures which were required for the five Warwickshire District/Borough Local Development Framework (LDF) Core Strategies to come forward. However, following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed. Because of the uncertainty regarding the location of development the impact of the strategy has been scored as uncertain. However, the County Council has committed to play a key role in identifying the sustainable transport measures which are required as the detail of the revised LDF Core Strategies becomes available.</p>		
<b>Nuneaton and Bedworth</b>		
<p>The objectives for the area discuss supporting the regeneration of the town centres and the stability and growth of the economy. The strategy includes issues such as promoting a step change in public transport in the North South Corridor and a comprehensive network of bus services within Nuneaton and Bedworth, linking residential areas with town centres, rail stations, employment sites and Coventry (which will assist people in accessing work opportunities), improving interchanges (including new railway stations), securing travel plans, a Variable Message Signing scheme on the main approaches to Nuneaton town centre and improving the management of the transport assets in the area.</p> <p>The area is designated within the Coventry and Nuneaton Regeneration Zone (including a Regional Investment Site although no details are available on this at the moment) and will experience a high level of development. Future development may cause a cumulative negative impact on traffic levels and congestion especially in Nuneaton as it has experienced the fastest rate of traffic growth in the county and already has a number of areas which experience congestion (especially where arterial routes meet the Ring Road). Increased congestion is likely to hamper the efforts to regenerate the area and could have a significant negative effect unless mitigated. However, a number of improvements are included in the transport interventions section of the strategy that are designed to help support the level of development in the area. These include rail improvements, enhanced north-south bus services, quality bus partnerships, a new station at Galley Common (facilitating trips to Birmingham and Leicester) and a number of highway improvements.</p>	?	<p>As the locations of development and the available funding become more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.</p>

The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>However, the strategy makes it clear that these proposals have not been costed and it is unclear whether they will go ahead. The proposals to support development will be used in due course to inform the preparation of the LDF Infrastructure Delivery Plan. Other measures are discussed in the strategy including a number of new rail stations in the NUCKLE corridor (Nuneaton-Coventry-Leamington Spa). The NUCKLE scheme is a major scheme in the LTP. The NUCKLE scheme is addressed in the North-South Corridor assessment.</p> <p>In terms of freight, measures will consider the implementation of restricted loading periods, a review of current signage and the investigation of opening up rail freight access to and from the Judkins Quarry site. All of these measures will be positive in reducing the negative impact of freight.</p> <p>The draft LTP3 Area Chapters originally set out the mitigation measures which were required for the five Warwickshire District/Borough Local Development Framework (LDF) Core Strategies to come forward. However, following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed. Because of the uncertainty regarding the location of development the impact of the strategy has been scored as uncertain. However, the County Council has committed to play a key role in identifying the sustainable transport measures which are required as the detail of the revised LDF Core Strategies becomes available.</p>		
Warwick, Leamington Spa, Kenilworth and Whitnash		
<p>The objectives for the area discuss stabilising and growing the local economy of the area.</p> <p>One of the main issues in the area affecting the economy is congestion. Warwick in particular has experienced a high rate of population growth and will see significant growth in the next few years and this development could cause increased congestion in a number of areas including near the concentration of schools in Warwick. However, focusing growth in these locations will help to reduce distances residents need to travel, thereby allowing more trips to be undertaken on foot and by bike, minimise the impact of through traffic on the town centres, make best use of the existing bus network and allow easy access to the existing rail network at Warwick, Warwick Parkway and Leamington railway stations. A number of measures are also included that will make sustainable access to areas of employment easier.</p> <p>A number of measures are suggested that may help reduce traffic including school and workplace travel plans, improvements to public transport (bus and rail) and also the investigation of a park and ride site to</p>	?	<p>As the locations of development and the available funding become more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable.</p>



<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>serve Leamington and Warwick. A number of improvements are included in the transport interventions section of the strategy that are designed to help support the level of development in the area. This includes better public transport services both in urban and rural parts of the Borough and enhanced north-south bus services, improving transport interchange, promoting alternatives to the private car and promoting workplace travel plans. In terms of freight, the council will continue to review existing loading restrictions and will review signing on arterial routes.</p> <p>Other measures are discussed in the strategy including a number of new rail stations in the NUCKLE corridor (Nuneaton-Coventry-Leamington Spa) and a Kenilworth Railway Station. The NUCKLE scheme and Kenilworth Station are major schemes in the LTP. Warwickshire County Council is at a very early stage with the planning for Kenilworth Railway Station so no specific information is available on the impact of the scheme. The NUCKLE scheme is addressed in the North-South Corridor assessment.</p> <p>The draft LTP3 Area Chapters originally set out the mitigation measures which were required for the five Warwickshire District/Borough Local Development Framework (LDF) Core Strategies to come forward. However, following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed. Because of the uncertainty regarding the location of development the impact of the strategy has been scored as uncertain. However, the County Council has committed to play a key role in identifying the sustainable transport measures which are required as the detail of the revised LDF Core Strategies becomes available.</p>		
<b>Southern and Western Warwickshire</b>		
<p>The objectives discuss supporting the World Class Stratford Initiative by reducing vehicle dominance in the town centre, tackling congestion and supporting new housing and employment growth.</p> <p>The district is likely to experience high population growth in the next few years. Coupled with the fact that the district will experience a significant amount of development this means that the LTP is likely to be implemented against a backdrop of increasing traffic. Culture and tourism obviously play a major part in the economy of the district but visitors need to be encouraged to stay longer. Commuting patterns also have a big influence on traffic and result in a lot of cross town movements and congestion. A number of key junctions in and around the town centre are already at capacity and between 2002 and 2008 there has been a 2% decrease in morning peak vehicle speeds (indicating that congestion is worsening). Increasing development is likely to have a negative effect on congestion unless transport measures can be implemented</p>	?	<p>As the locations of development and the available funding become more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make</p>

The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>to prevent this. A number of measures are proposed within the strategy to support development and reduce congestion such as area wide traffic management, traffic signal co-ordination etc but the strategy makes it clear that these measures are subject to feasibility and funding. A lot of these will need to be developer funded so it's difficult to assess due to the uncertainty over implementation. A number of public transport schemes are also proposed including a new railway station – Stratford Parkway (listed as a major scheme in the Implementation Plan). This will help sustainable commuting to places such as Birmingham. Warwickshire County Council is at a very early stage with the planning for the major scheme so no specific information is available on the impact of the scheme.</p> <p>In terms of HGVs Stratford experiences particular problems in the town centre and some rural villages. The villages that are affected are those along the section of the A435 to the north of Alcester. The council is proposing a number of measures such as investigating restrictions on access, securing voluntary route agreements and promoting use of dedicated commercial vehicle satellite navigation systems. These should be positive in reducing some of the problems associated with HGVs.</p> <p>The draft LTP3 Area Chapters originally set out the mitigation measures which were required for the five Warwickshire District/Borough Local Development Framework (LDF) Core Strategies to come forward. However, following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed. Because of the uncertainty regarding the location of development the impact of the strategy has been scored as uncertain. However, the County Council has committed to play a key role in identifying the sustainable transport measures which are required as the detail of the revised LDF Core Strategies becomes available.</p>		development sustainable.
The North South Corridor		
<p>The objectives address supporting the local and sub regional economy and supporting planned housing and employment growth.</p> <p>The main thrust of the strategy is to reduce social and economic inequalities between the affluent south and less affluent north of the area. Parts of the area in the north of the corridor have suffered economic decline whilst the south of the area has successfully attracted modern industries. The prosperity of the south in particular has resulted in pressure on the transport system as commuters travel through the area. Development, travel demand and congestion in the corridor are set to increase and the aim of the strategy is to make the area more permeable allowing more sustainable transport choices to be made. Future travel</p>	?	As the locations of development and the available funding become more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that

The effect of the draft plan on the economy		
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<p>demand will be heavily influenced by development pressures and development will be happening against a backdrop of increasing congestion. A key shortcoming is the lack of a through public transport service between the north and the south without the requirement to change at Coventry. Provision of such a service would help to provide access to employment without having a detrimental impact on congestion and will help to link areas of need to areas of opportunity. The step change includes providing high quality, convenient public transport access to existing and proposed development areas in the corridor and in particular development of a secure through bus service and the NUCKLE scheme which is listed as a major scheme in the Implementation Plan. Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that phase 1 of the scheme will have the following benefits - supporting the Coventry-Nuneaton Regeneration Zone, supporting the future development of the Coventry Arena, supporting the Friargate office and residential development in Coventry City Centre and providing enhanced transport links to the education and skills training facilities in Coventry and at Warwick University. The scheme will also help to enable greater levels of modal shift helping to reduce congestion and traffic levels. No information is available on later phases of the NUCKLE scheme.</p>		are needed to make development sustainable.
<b>Modal / topic strategies</b>		
<b>Rural Strategy (new strategy)</b>		
<p>The Rural Strategy does not introduce new policies but instead cross references to other policies within the LTP3 and states that these policies may be positive for rural areas. The strategy cross references the Sustainable Freight Distribution Strategy and the Network Management Duty Strategy as strategies that can affect the economy. However, the strategy does not add new policies to the LTP3 so has been scored as neutral.</p>	○	
<b>Air Quality Strategy</b>		
<p>Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have positive effects on congestion, journey times and reliability. The strategy is likely to be positive.</p>	●	

The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Accessibility Strategy</b>		
The accessibility work undertaken so far has focused on access to work. The ongoing work with the Job Centre (under policy AS7) to provide locally delivered services might enable some people to get back into work more quickly. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. The strategy is likely to be positive.	●	
<b>Sustainable Freight Distribution Strategy</b>		
The strategy should be positive in terms of making freight movements more efficient and reducing congestion (through targeted improvements to the road and rail network and setting up freight consolidation centres); through reducing the impact of freight on the environment and communities (through continuing the local and regional freight quality partnerships and associated measures) and providing more certainty to operators regarding routing and access. The strategy also discusses improving access to and expanding rail freight facilities. This may be important for some businesses in Warwickshire although the strategy acknowledges that there is limited opportunity for modal shift in Warwickshire onto rail as the majority of companies who transport suitable loads already use rail for part of their journey. In addition, preliminary studies by the DfT (DfT (December 2008): <i>Delivering a sustainable transport system: the logistics perspective</i> ) 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. However, the strategy is still likely to be positive to some degree.	●	
<b>Parking Strategy</b>		
If the strategy is successful it will have a key role in reducing congestion and traffic flow (and hence support the economy). This will be mainly through reducing the amount people circulate looking for parking but also possibly through small amounts of modal shift especially if parking is improved at stations (improving car parking at railway stations has been shown as vital in promoting a shift from car to rail journeys). The strategy also includes measures to help the tourism economy by improving coach parking. Real time information is also likely to be useful in reducing congestion and traffic and studies have shown that in larger cities variable message car parking signs can reduce the average distance travelled by a group of drivers by 30% (Paul Kompfner et al (1998): ITS City Pioneers Toolbox). Therefore, the strategy is likely to be positive.	●	

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Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Powered Two Wheeler Strategy</b>		
The use of PTWs can be positive for the economy if it helps people access employment who otherwise couldn't. There is also an opportunity to reduce congestion if a substantial number of people switch from cars to PTWs (although a significant shift is unlikely). The strategy encourages the use of PTWs through measures to improve safety, parking and integration with other modes. The strategy is likely to be positive.	●	
<b>Airport Accessibility Strategy</b>		
Access to airports is important for the economy because it gives access to workers at Birmingham International Airport and access to air travel for the business traveller and international visitors to Warwickshire. The strategy discusses several measures in terms of <b>improving sustainable access to airports</b> , reliability of transport services, the coverage of public transport services and co-ordination of services and integrated ticketing. <b>Policy ASA3 of the Airport Accessibility Strategy in the Final LTP3 has been made clearer in terms of the level of passenger flights that will trigger a Surface Access Strategy for Coventry Airport.</b> The strategy is likely to be positive.	●	
<b>Land Use and Transportation Strategy</b>		
The spatial development strategy is to focus development on urban areas and main towns. In Warwickshire these areas are already congested (especially Warwick) so the effect of new development may cause more congestion problems and impact on the economy. Better integration of transport and land use planning helps to ensure that the cumulative effect of development is less because there is 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. The strategy includes several measures to do this including through working with the planning authorities and developers to put in place travel plans and more sustainable transport systems. This will be positive for the economy if successful.	●	
<b>Bus Strategy</b>		
A greater need exists than is being provided by for the bus network. This is likely to be having impacts on the economy if people are being forced to use their cars in the absence of services (and causing congestion). It also means that some people may not be able to access employment opportunities. The strategy includes several measures to increase the use of buses and this includes revisions to fare structures and ticketing, development of further urban Quality Bus Corridors, provision of better bus information and other measures	●	

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
to improve the quality and availability of bus services. The past success of bus measures in Warwickshire shows that these measures are likely to be positive, especially in light of the fact that the strategy will include both promotional measures and improvements in the quality of the 'offer' – research has shown that this is key to modal switch (DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report</i> ).		
<b>Passenger Rail Strategy</b>		
A greater need exists than is being provided for by the rail network. This is likely to be having impacts on the economy if people are being forced to use their cars in the absence of services (and causing congestion). It also means that some people may not be able to access employment opportunities. The strategy includes several measures to increase the efficiency of the rail service, including coordination of public transport services to encourage interchange, network capacity improvements and improving the quality of rail services in terms of reliability and punctuality. These measures are likely to be positive, especially in light of the fact that the strategy will include both promotional measures and improvements in the quality of the 'offer' and the fact that rail patronage in Warwickshire is up from 3.81 million passenger journeys in 2003/04 to 5.54 in 2008/09.	●	
<b>Network Management Duty Strategy</b>		
Roads facilitate the movement of goods and services and provide access to homes and businesses. The Network Management Strategy aims to deliver reliable and efficient transport that supports economic growth and has a key objective to improve the cycling and walking environment thereby encouraging greater levels of walking and cycling which may lead to reduced congestion. The strategy is likely to be positive.	●	
<b>Taxi and Private Hire Vehicle Strategy</b>		
A successful, efficient and affordable taxi service will contribute to a town's economy and benefits both local residents and visitors therefore the strategy as a whole is likely to be positive.	●	
<b>Intelligent Transport Systems Strategy</b>		
ITS is increasingly playing a major role in enhancing the mobility of people and goods which will have a positive effect on the economy. Therefore, the strategy as a whole is likely to be positive.	●	

<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Community Transport Strategy</b>		
A greater need exists than is being provided for by the existing community transport network. This is likely to be having impacts on the economy if people cannot access jobs and services. The vision of the strategy includes provision of an affordable and integrated network of community transport services, and Policies PTCT2 and PTCT4 in particular support this. Policy PTCT2 aims to encourage transport interchange, increase the reliability and punctuality of services and reduce journey times, while Policy PTCT4 aims to increase the contribution of community transport to sustainable economic growth. The Action Plan refers to a number of measures, such as 'Wheels to Work' and 'Buster Werkenbak' which improve access to employment. Therefore, the strategy as a whole is likely to be positive.	●	
<b>Congestion Strategy</b>		
It is recognised that high levels of congestion may have a detrimental effect on economic performance. The strategy would help support economic competitiveness and growth by delivering reliable and efficient transport networks, especially in areas such as Warwick which are experiencing high levels of congestion. The strategy is likely to be positive.	●	
<b>Cycling Strategy</b>		
Several improvements to cycleways and extensions of cycle routes have been achieved in recent years, which are beneficial for accessing employment opportunities and services and reducing traffic congestion. The strategy aims to build on these to promote cycling as a transport choice. Policy CY2 in particular aims to provide safe and convenient access to town centres, employment sites, schools and public transport interchanges, and Policy CY3 gives priority to developing cycle infrastructure within the main urban areas and around key inter-urban links generating significant commuting movements. The strategy is likely to be positive.	●	
<b>Bus Information Strategy</b>		
The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which will contribute positively to the economy. This will be met through the provision of bus information that is simple to use and through improving bus information in line with the minimum requirements listed in the strategy.	●	



<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
The Action Plan contains measures for the enhancement of bus information, including the timescale of these. The strategy is likely to be positive.		
<b>Public Transport Interchange Strategy</b>		
The strategy aims to encourage modal shift onto public transport, through improving integration between different public transport modes. Better integration of transport modes helps to reduce journey times and congestion and ensure better access to jobs and services by means other than the car. The strategy includes several measures to do this, such as enhancement of existing and provision of new interchange facilities at railway stations and working with the planning authorities, public transport operators and Network Rail to promote integration between transport modes. This will be positive for the economy if successful.	●	
<b>Public Transport Strategy</b>		
This strategy provides the strategic framework for the public transport mode specific strategies (the Bus, Passenger Rail, Community Transport and Taxi and Private Hire Vehicle Strategies), the Public Transport Interchange Strategy and the Bus Information Strategy. Its aim is to grow the market for public transport by making the product attractive to existing and potential users. If successful, the strategy will have a positive effect on the economy, by improving the provision of public and community transport and reducing congestion. The strategy is supported by a number of policies, and as a whole it is likely to be positive.	●	
<b>Road Safety Strategy</b>		
The strategy aims to improve road safety throughout the county. The strategy covers a wide variety of means to achieve this, such as working with the emergency services, the Highways Agency and the community, education campaigns, influencing road user behaviour and combating excessive speed through the use of safe and appropriate speed limits and safety cameras. Reduction in the number of people killed or injured on the roads is likely to have a positive impact on the economy, through saving associated costs. The Action Plan contains measures for the delivery of the Road Safety Strategy and the strategy as a whole is likely to be positive.	●	
<b>Highway Maintenance Strategy</b>		
A well maintained road network can improve travel times for people travelling to work, to school, or other education establishments, travelling to shops, for tourism, business; and transporting goods and delivering to	●	



<b>The effect of the draft plan on the economy</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
businesses, shops and houses. The Highway Maintenance Strategy also works towards minimising delays from roadworks. The strategy states that the Council will use a variety of methods to ensure that the highway network is maintained in the most appropriate and economic way. The strategy as a whole is likely to be positive.		
<b>Bridge Maintenance Strategy</b>		
The main thrust of the Bridge Maintenance Strategy is to maintain bridges and other highway structures. This will help to ensure that delivery vehicles and HGVs can access areas that they need to and will have a positive effect on the economy in this regard.	●	
<b>Changing Travel Behaviour Strategy</b>		
It is recognised that high levels of congestion may have a detrimental effect on economic performance. The Changing Travel Behaviour Strategy will help reduce congestion by encouraging sustainable travel by improving information, opportunities and the attractiveness of alternative modes. The strategy as a whole is likely to be positive.	●	
<b>Walking Strategy</b>		
As well as providing benefits to the individual, increasing the amount of walking can contribute towards reducing congestion. Congestion costs the economy billions of pounds every year and negatively affecting quality of life for many. Improved conditions for walking contribute towards wider regeneration initiatives, and at the same time, successful regeneration initiatives can lead to increased pedestrian activity. Safe and attractive streets and public places are fundamental to attracting shoppers, visitors and tourists. The strategy as a whole is likely to be positive.	●	
<b>Rights of Way and Recreational Highway Strategy</b>		
The Strategy aims to improve connectivity of the Rights of Way and recreational highway across the county, including in inter-urban and other urban areas. This could help to improve connectivity of transport systems.  The Strategy will help to maintain, improve and promote access to the countryside using the Rights of Way and recreational highway. The provision of the high quality network of footpaths and cycle paths, particularly those connecting tourism attractions could also help to support the tourism industry in the county.	●	

The effect of the draft plan on the economy		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Implementation Plan (April 2011 – March 2015)<sup>2</sup></b>		
<p>Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet certain. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Maintaining the highway network and providing a balanced integrated transport programme are likely to be positive. The Implementation Plan concludes that <b>no allocation is envisaged from LTP Block Allocations or Council resources</b> to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process will actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.</p>

<sup>2</sup> Please note that the major schemes are discussed in the relevant area strategies. An assessment of the plan with and without major schemes has not been undertaken. This is because of the strategic and uncertain nature of the plan and the fact that major schemes are at such an early stage of planning.

### Assessment Conclusions - economy

**Summary of performance:** None of the strategies are likely to have a significantly positive effect on the economy objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the economy SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help support the economy of Warwickshire. The strategies contained within the plan should help to improve sustainable access to employment (both employment sites within the county and to areas such as Birmingham), help to manage the negative effects of HGV traffic, help to manage traffic better in the town centres, support regeneration in the less affluent north of the county and support initiatives such as the World Class Stratford Initiative. However, some uncertainties exist regarding the impact of the area strategies because there is uncertainty regarding the location of development in some areas (as the Local Development Frameworks have not got to the stage where they can be definite about development sites and **following the recent abandonment of the RSS, four of the five of the LDFs are now in the process of being reviewed**) and the fact that transport modelling has not yet been undertaken to determine the effect of development on congestion and traffic levels. Although the long term strategy is broadly positive, there is some uncertainty over the level of funding available to provide supporting transport infrastructure in the short term. **There are no significant negative or minor negative effects identified. The Area Strategies and Implementation Plan have an uncertain score due to the reasons outlined above.**

#### Mitigation and enhancement measures:

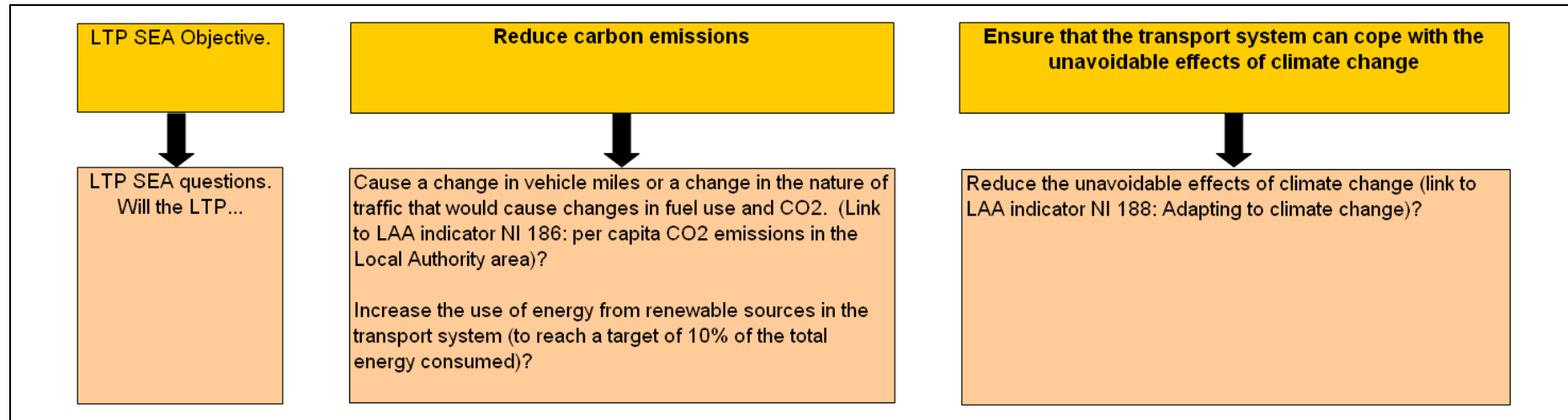
Mitigation measures identified to address potential negative or uncertain effects are as follows:

- **As the locations of development and the available funding become more definitive, Warwickshire County Council will continue its supporting role to the LDF process by clarifying the transport interventions that are needed to make development sustainable; and**
- **The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process will actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.**

No enhancement measures have been suggested.

## 2 SEA Topic: Climate Emissions

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes an objective to reduce transport emissions of carbon dioxide and adapt to climate change.	●	
<b>Area strategies</b>		
<b>Northern Warwickshire</b>		
The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO <sub>2</sub> emissions or adapting to climate change. However, the LTP includes an overarching aim related to reducing CO <sub>2</sub> emissions and adapting to climate change. The objectives	●	The fact that the spatial strategy and the transport interventions are likely to

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not available. For climate emissions to decrease definable modal shift and reductions in vehicle miles would have to occur. There are some measures in the strategy which may make alternative modes more attractive but the level of development makes it likely that climate emissions will increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative. In addition, there is some uncertainty over the transport improvements needed to support growth. The other area strategies have been more definitive in this regard.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>		<p>increase carbon emissions is a difficult issue to mitigate as development cannot be stopped yet there is reduced funding for transport interventions to enable modal switch. Pressure for new housing and employment development within Warwickshire is outside of the County Council's control. The priority therefore is to ensure that this development comes forward in a sustainable and integrated way, and that its impact on the local highway network is mitigated. This will be achieved through the ongoing work with the District Councils.</p>
<b>Eastern Warwickshire</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change. However, the LTP includes an overarching aim related to reducing CO<sub>2</sub> emissions and adapting to climate change. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future</p>	●	<p>See mitigation for North Warwickshire Area Strategy</p>

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in Rugby means that emissions are likely to increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>		
<b>Nuneaton and Bedworth</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change. <b>However, the LTP includes an overarching aim related to reducing CO<sub>2</sub> emissions and adapting to climate change. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</b></p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in Nuneaton and Bedworth and the fact that Nuneaton has experienced the fastest rate of traffic growth in the county over recent years means that emissions are likely to increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>	●	See mitigation for North Warwickshire Area Strategy
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change. <b>However, the LTP includes an overarching aim related to reducing CO<sub>2</sub> emissions and adapting to climate change. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</b></p>	●	See mitigation for North Warwickshire Area Strategy

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in the area (and the fact that the area has a lot of through traffic on the strategic highway network which contributes to emissions) means that emissions are likely to increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>		
<b>Southern and Western Warwickshire</b>		
<p>The strategy (unlike the other strategies) does not include an objective on reducing the environmental impact of traffic although there is an objective relating to air quality. <b>However, the LTP includes an overarching aim related to reducing CO<sub>2</sub> emissions and adapting to climate change. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</b></p> <p>It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the area will lead to a change in climate emissions as a transport model of the effect of future developments is not yet available. For climate emissions to decrease definable modal shift would have to occur. The level of development expected in the area means that emissions are likely to increase and this will have a negative impact on climate emissions. Because of the importance of reducing carbon emissions this has been scored as significantly negative.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>	●	See mitigation for North Warwickshire Area Strategy
<b>The North South Corridor</b>		
<p>The objective on reducing the environmental impact of traffic is positive. The objectives discuss improving air quality but do not discuss reducing CO<sub>2</sub> emissions or adapting to climate change. <b>However, the LTP includes an overarching aim related to reducing CO<sub>2</sub> emissions and adapting to climate change. The objectives</b></p>	●	

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</p> <p>Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that the scheme will save 154 tonnes CO<sub>2</sub> a year compared to the base case. No information is available on later phases of the NUCKLE scheme.</p> <p>Adaptation to climate change is not addressed in the strategy. However, adaptation is better addressed in the section of the plan that deals with highway maintenance.</p>		
<b>Modal / topic strategies</b>		
<b>Rural Strategy (new strategy)</b>		
<p>The strategy recognises that levels of car ownership and use are generally higher in rural areas, partly due to the difficulties of access and transport. The Rural Strategy does not introduce new policies but instead cross references to other policies within the LTP3 and states that these policies may be positive for rural areas. The strategy cross references the Bus, Passenger Rail, Walking and Cycling Strategies and the Network Management Duty Strategies and these are policies that might be positive for climate change. However, the strategy does not add new policies to the LTP3 so has been scored as neutral.</p>	○	
<b>Air Quality Strategy</b>		
<p>Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have a beneficial impact in the reduction of CO<sub>2</sub> emissions. The strategy is likely to be positive.</p>	●	
<b>Accessibility Strategy</b>		
<p>Any strategies that favour sustainable modes of transport will help reduce CO<sub>2</sub> emissions. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been</p>	●	



<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. The strategy is likely to be positive.		
<b>Sustainable Freight Distribution Strategy</b>		
Any strategies that move freight away from road or air travel will help reduce CO <sub>2</sub> emissions. However, as already acknowledged, there is limited opportunity for modal shift in Warwickshire onto rail so the impact is likely to be neutral in this regard. The use and development of freight handling facilities at Coventry Airport (Baginton) will result in an increase in air based freight transport (and therefore in CO <sub>2</sub> emissions and emissions of air pollutants) based on today's emissions (as the airport has been closed since 2009). The effect of the plan on its own will be minor negative but the cumulative effect of the plan in association with the re-opening of Coventry Airport is likely to be significantly negative.	<p>● (LTP alone)</p> <p>● (cumulative effect)</p>	It is not possible within the LTP to mitigate the effect of the re-opening of Coventry Airport. It is within the power of the LTP only to promote alternative freight modes and the Sustainable Freight Distribution Strategy already does this.
<b>Parking Strategy</b>		
If the strategy is successful it will have a key role in reducing congestion and traffic flow (and hence reduce CO <sub>2</sub> emissions). This will be mainly through reducing the amount people circulate looking for parking but also possibly through small amounts of modal shift especially if parking is improved at stations (improving car parking at railway stations has been shown as vital in promoting a shift from car to rail journeys). The strategy is likely to be positive.	●	
<b>Powered Two Wheeler Strategy</b>		
There can be substantial environmental benefits from increased motorcycle use compared to car use, including lower emissions and lower fuel consumption. Policies that promote the use and improved safety of PTW may result in a modal shift from car to PTW which in turn would help reduce CO <sub>2</sub> emissions. The strategy is likely to be positive.	●	
<b>Airport Accessibility Strategy</b>		
Strategies to improve the co-ordination and facilities of public transport services to aviation facilities and to improve multi-modal integration may help encourage the use of public transport to and from airports and therefore reduce CO <sub>2</sub> emissions from vehicles. Air travel is a major source of CO <sub>2</sub> emissions therefore	<p>● (LTP alone)</p> <p>●</p>	It is not possible within the LTP to mitigate the effect of the expansion of

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
strategies that encourage the use of air travel such as the implementation of a new Birmingham International Airport Surface Access Strategy to support the proposed expansion of the airport and the development of a Surface Access Strategy for Coventry Airport (should passenger flights recommence from this airport in the future) may lead to an increase in CO <sub>2</sub> emissions. The effect of the plan on its own will be minor negative but the cumulative effect of the plan in association with the expansion of Birmingham International Airport and the re-opening of Coventry Airport is likely to be significantly negative.	(cumulative effect)	Birmingham International Airport and the re-opening of Coventry Airport. It is within the power of the LTP only to promote alternative modes to airports and the Airport Accessibility Strategy already does this.
<b>Land Use and Transportation Strategy</b>		
The spatial development strategy is to focus development on urban areas and main towns. Better integration of transport and land use planning helps to ensure that the cumulative effect of development is less because there is adequate transport infrastructure to support development in a way that is sustainable. The strategy includes several measures to do this including through working with the planning authorities and developers to put in place travel plans, more sustainable transport systems <b>and also to provide for pedestrians and cyclists in new highway works</b> . This will be positive in terms of reducing CO <sub>2</sub> emissions if successful.	●	
<b>Bus Strategy</b>		
Delivery of the policies set out in the Public Transport Strategy along with the Bus Strategy measures such as improved availability, quality and affordability of service, information through real time information and the general public awareness may contribute to a modal shift from private car to bus. If significant modal switch occurs, this will help encourage the use of public transport and therefore reduce CO <sub>2</sub> emissions from vehicles.	●	
<b>Passenger Rail Strategy</b>		
The Passenger Rail Strategy outlines policies that offer accessibility through the rail transport system, both in terms of physical access to transport and its availability. If modal switch occurs, this will help encourage the use of public transport and therefore reduce CO <sub>2</sub> emissions from vehicles.	●	
<b>Network Management Duty Strategy</b>		
The Network Management Duty Strategy contains policies to help reduce congestion and a key objective is to	●	

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
improve the cycling and walking environment thereby encouraging greater levels of walking for short journeys, particularly to town centres, workplaces, schools and public transport interchanges. If these measures are successful they will help to reduce CO <sub>2</sub> emissions.		
<b>Taxi and Private Hire Vehicle Strategy</b>		
The Taxi and Private Hire Vehicle Strategy has the vision of an “ <i>environmentally friendly provision of taxis</i> ”. In the Final LTP3 an additional policy and associated entry in the Action Plan has been to encourage the replacement of existing fleets over time with cleaner vehicles.	●	
<b>Intelligent Transport Systems Strategy</b>		
ITS works by managing congestion on key local routes. If the strategy is successful in reducing congestion, CO <sub>2</sub> levels will benefit.	●	
<b>Community Transport Strategy</b>		
Overall public transport services should be co-ordinated with community transport to encourage interchange consistent with the aims of the Public Transport Interchange Strategy, the Bus Strategy and the Passenger Rail Strategy. This should provide a greater range of travel opportunities and options for travellers and reducing car dependency. If this is successful this will reduce CO <sub>2</sub> emissions.	●	
<b>Congestion Strategy</b>		
High levels of congestion may adversely affect CO <sub>2</sub> emissions as engines use more fuel when idling and stop - starting. If the strategy is successful in reducing congestion, CO <sub>2</sub> levels will benefit.	●	
<b>Cycling Strategy</b>		
Switching people from cars to cycling will contribute towards carbon reduction objectives through contributing to modal shift. The strategy works towards developing improvements to cycling infrastructure and to promoting the benefits of cycling. If these measures are successful in helping people to cycle more this will be positive.	●	
<b>Bus Information Strategy</b>		

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
The Bus Information Strategy promotes improvements to the quality and availability of information and to the waiting environment and has close links with the Changing Travel Behaviour Strategy, which is aimed at influencing people's travel behaviour away from car use towards more sustainable modes of transport. If the strategy is successful in moving people from cars to public transport there will be benefits in reducing CO <sub>2</sub> emissions.	●	
<b>Public Transport Interchange Strategy</b>		
The Public Transport Interchange Strategy provides opportunity to enhance existing and provide new interchange facilities at rail stations and public transport interchanges, promote integration between rail, bus and community transport services and provide new rail stations including strategic park and ride / parkway stations on the rail network. Providing excellent public transport interchange provision is fundamental in achieving objectives of increasing patronage, improving passenger satisfaction, encouraging modal shift onto public transport and tackling climate change.	●	
<b>Public Transport Strategy</b>		
Delivery of the policies set out in the Public Transport Strategy along with the Bus Strategy measures such as improved availability, quality and affordability of service, information through real time information and the general public awareness may contribute to a modal shift from private car to bus. If modal switch occurs, this will help reduce CO <sub>2</sub> emissions from vehicles.	●	
<b>Road Safety Strategy</b>		
The main way that the strategy can influence CO <sub>2</sub> emissions is through making roads safer for people to cycle and walk, thus helping to achieve modal shift. The strategy in particular focuses on safety of the school journey and this can be positive particularly for reducing vehicle trips in the morning peak (DfT (2010): <i>The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report</i> ). If the measures are successful in making the roads safer, CO <sub>2</sub> emissions may decrease.	●	
<b>Highway Maintenance Strategy</b>		
The Highway Maintenance includes measures to upgrade Mercury lighting which can have energy and carbon savings however the upgrading of the more common low-pressure sodium lights involves an increase	●	.

<b>The effect of the draft plan on climate</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>in energy use. The strategy promotes the use of new light sources such as Cosmopolis in new developments and energy efficient lighting improvements as part of a lighting design scheme and the use of LED's for street lighting. The strategy also aims to identify the most appropriate highway construction materials; reduce the amount of construction waste; and to recycle materials on site where possible.</p> <p>The strategy also addresses through new policy HM8, how highway maintenance needs to be adapted to cope with unavoidable impacts of climate change.</p>		
<b>Bridge Maintenance Strategy</b>		
Where major bridge works take place, the County Council will actively encourage the recycling of materials on site to minimise the amount of virgin stone and other materials needed from local quarries. This will be positive in terms of reducing CO <sub>2</sub> emissions from quarrying virgin stone.	●	
<b>Changing Travel Behaviour Strategy</b>		
The Changing Travel Behaviour Strategy provides a range of 'soft' measures which seek to encourage more people to choose sustainable travel by improving information, opportunities and the attractiveness of alternative modes. The strategy has an integral role within the LTP to complement 'hard' policies and infrastructure improvements and persuade people to consider using sustainable modes of transport. If the strategy is successful in moving people from cars to public transport there will be benefits in reducing CO <sub>2</sub> emissions.	●	
<b>Walking Strategy</b>		
Walking produces no emissions or adverse affect on the environment and can, therefore, contribute towards carbon reduction objectives and local air pollution targets. The walking strategy works towards to improving conditions for walking and encouraging more people to walk for local journeys. If these measures are successful in helping people to walk more this will be positive.	●	
<b>Rights of Way and Recreational Highway Strategy</b>		
This strategy is unlikely to make a significant positive contribution to the Climate Emissions SEA Objectives, however, it does support the reduction of carbon emissions through encouraging walking and cycling within the county. The strategy is not locationally specific and therefore it is not possible to demonstrate	●	

The effect of the draft plan on climate		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
categorically that improvements to the Rights of Way and recreational highway network will introduce walking and cycling alternatives to private motorised transport for certain journeys, although the general effect should be positive.		
<b>Implementation Plan (April 2011 – March 2015)</b>		
<p>Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet certain. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Maintaining the highway network and providing a balanced integrated transport programme are likely to be positive for managing traffic (and potentially helping to manage the effects of climate change). However, the Implementation Plan concludes that <b>no allocation is envisaged from LTP Block Allocations or Council resources</b> to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to 'top up' developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process will actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.</p>

Assessment Conclusions – climate change
<p><b>Summary of performance:</b> Some of the modal/topic strategies are likely to have minor negative effects. The Sustainable Freight Distribution Strategy and the Airport Accessibility Strategy will provide support for the re-introduction of air freight and passenger services at Coventry Airport and continuation of support of the same at Birmingham International Airport. Alone, these measures in the LTP will have a slight negative effect on emissions. However, in association with the expansion of Birmingham International Airport, the LTP will have a significant cumulative negative impact on carbon emissions. Significant negative effects are also identified with regard to the area strategies (apart from the North –South Corridor which has a positive effect). It is not possible to assess quantitatively whether the measures in association with the level of growth expected in the various areas of the plan will lead to a change in climate emissions as transport modelling is not yet available. However, for climate emissions to decrease definable modal shift and reductions in vehicle</p>

**Assessment Conclusions – climate change**

miles would have to occur. The level of development in Warwickshire makes it unlikely that vehicle miles will decrease.

**Mitigation and enhancement measures:**

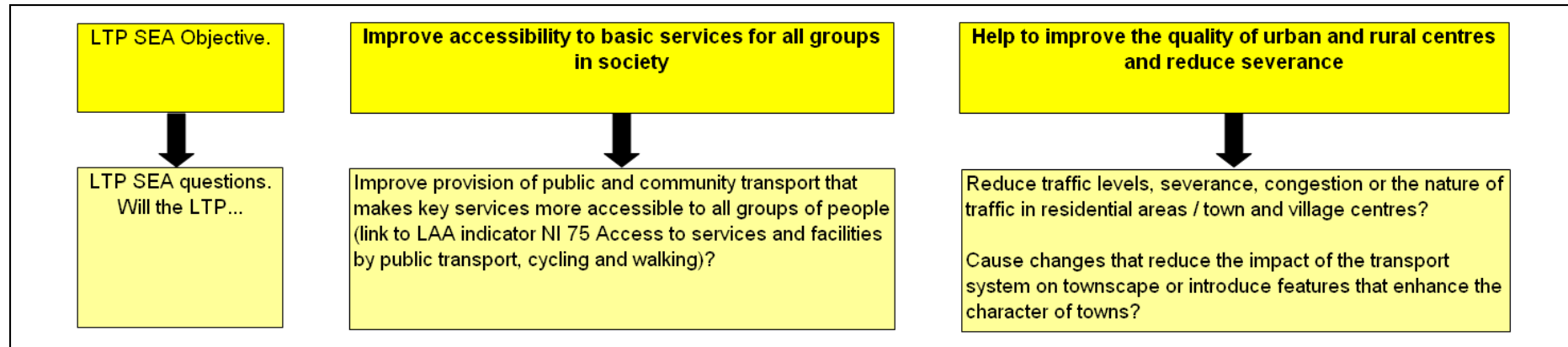
Mitigation measures identified to address potential negative or uncertain effects are as follows:

- It is not possible within the LTP to mitigate the effect of the re-opening of Coventry Airport. It is within the power of the LTP only to promote alternative freight modes and the Sustainable Freight Distribution Strategy already does this.
- It is not possible within the LTP to mitigate the effect of the expansion of Birmingham International Airport and the re-opening of Coventry Airport. It is within the power of the LTP only to promote alternative modes to airports and the Airport Accessibility Strategy already does this.
- The fact that the spatial strategy and the transport interventions are likely to increase carbon emissions is a difficult issue to mitigate as development cannot be stopped yet there is reduced funding for transport interventions to enable modal switch. Pressure for new housing and employment development within Warwickshire is outside of the County Council's control. The priority therefore is to ensure that this development comes forward in a sustainable and integrated way, and that its impact on the local highway network is mitigated. This will be achieved through the ongoing work with the District Councils;
- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process will actively consider the sustainability impacts (as well as the transport impacts) of the different levels of infrastructure that could be provided with different funding levels.

No enhancement measures have been suggested.

### 3 SEA Topic: Equality of Opportunity

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which seek to promote greater equality of opportunity for all citizens in order to promote a fairer society and aims to reduce the impact of transport on people.	●	
<b>Area strategies</b>		
<b>Northern Warwickshire</b>		
The objectives are positive in that they address supporting access to services and facilities particularly for those without access to a car.	●	
North Warwickshire has areas that are amongst the most deprived in the county. Most of the population live		



The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
in rural areas and this makes access to services difficult for those without a car (this is demonstrated by low public transport usage – although this has increased in the last few years). A number of proposals should be positive in improving access to services and improving the quality of urban and rural centres. This includes the provision of an inter urban quality bus corridor between Nuneaton, Atherstone and Tamworth, village traffic plans, bus information points and improving the quality of information on bus and community transport services, and development of taxibus services. In terms of improvements to town and village centres, the village traffic plans should be positive in reducing the effects of traffic on village centres. All of these measures should be positive in improving access and improve town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.		
<b>Eastern Warwickshire</b>		
<p>The objectives include reference to accessibility.</p> <p>There have been a number of bus improvements in Rugby in recent years. Planning for buses to serve the new development sites in Rugby is underway and these services are also planned to integrate better with the railway station. Better bus information is also proposed for new bus information points. In terms of community transport the following measures will be positive for accessibility – continuing to make County vehicles available for voluntary sector use and seeking service level agreements with community transport operators. In terms of improvements to town centres and reductions in severance, the plans to pedestrianism the centre of Rugby will be positive. All of these measures should be positive in improving access and improving town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>	●	.
<b>Nuneaton and Bedworth</b>		
<p>The objectives include reference to accessibility.</p> <p>The strategy includes issues such as promoting a step change in public transport in the North South Corridor (which will assist people in accessing work opportunities), improving interchanges (including new railway stations), a 'through' bus service between Nuneaton-Bedworth-Coventry-Kenilworth-Warwick/Leamington Spa, an inter urban quality bus corridor between Nuneaton-Atherstone-Tamworth and integrating land use proposals with accessibility improvements.</p>	●	

The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>Car ownership is the lowest in the county but bus use within the Borough is higher than the county average. This makes it vital that the strategy helps to improve transport services for those without access to a car.</p> <p>A number of improvements are included in the transport interventions section of the strategy that may help improve accessibility. These include rail improvements, enhanced north-south bus service, a comprehensive network of bus services and a new station at Galley Common. However, the strategy makes it clear that these proposals have not been costed and it is unclear whether they will go ahead. The proposals to support development will be used in due course to inform the preparation of the LDF Infrastructure Delivery Plan. A number of access improvements are also included in the Nuneaton and Bedworth Masterplan including reconfiguration of Nuneaton Bus Station. Other measures are discussed in the strategy including quality bus corridors and new stations in the NUCKLE corridor. However, when and how these measures will go ahead is unclear. Community transport is discussed in the strategy which states that enhanced facilities and information points will be provided. Again, this element of the strategy is uncertain.</p> <p>In terms of the quality of centres, conflicts between traffic and people are evident in areas such as Bedworth Town Centre and some local centres in Nuneaton. A number of improvements are included including vehicular restrictions along Mill Street in Bedworth (including a number of public realm improvements) (included in the Nuneaton and Bedworth Masterplan) and improvements for pedestrians throughout the area (included in the transport interventions section of the strategy).</p> <p>All of these measures should be positive in improving access and improving town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		
<p><b>The objectives include reference to accessibility.</b></p> <p>Car ownership levels are relatively high but there are still issues with accessibility especially in the more rural areas. Bus use is slightly lower than the county average.</p> <p>The town centres of Warwick, Leamington Spa and Kenilworth are affected by traffic in terms of townscape and an additional factor is the effect on historic and older buildings. The strategy proposes the continuance of the Warwick Town Centre Traffic Management Scheme which should be positive in reducing the impact of</p>	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<p>traffic on the townscape of Warwick.</p> <p>A number of improvements are included in the strategy that are designed to help improve accessibility including a continued focus on walking, cycling and motorcycling, promoting better public transport services (including a comprehensive network of bus services within Warwick, Leamington Spa, Whitnash and Kenilworth linking residential areas with town centres, rail stations, employment sites and Coventry) and interchange and integrating land development proposals with accessibility. The strategy also makes the commitment to upgrade a number of key bus routes. There will also be enhanced interchange at Leamington Spa Railway Station and provision of further bus information points.</p> <p>All of these measures should be positive in improving access and improve town and village centres. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		
<b>Southern and Western Warwickshire</b>		
<p>The objectives discuss ensuring good accessibility for residents and visitors.</p> <p>The district has the highest proportion of people over retirement age in the county and the population over 65 is set to grow significantly. Although the car ownership level is high, the rural nature of the district makes accessibility difficult for people without a car. Measures included to improve accessibility include promotion of the Shakespeare Line Upgrade, improvements in the efficiency of bus services in Stratford, improved bus information points, bus quality corridors between Stratford-Blackhill and Warwick and Stratford-Bidford on Avon and Evesham. A new bus-rail interchange is also proposed at Stratford Rail Station. Further bus information points are also proposed as is a new station – Stratford Parkway. Demand responsive and flexible services will also be investigated as will community transport schemes such as Wheels to Work. The likely new development sites in the area are also generally considered to have good levels of accessibility, particularly given their proximity to the A46, Bishopton Park and Ride and the proposed Stratford Parkway Rail Station.</p> <p>Traffic has a detrimental effect on townscape with effects particularly acute in Stratford Town Centre, Bridgeway Gyratory and Arden Street/Grove Road. However, the implementation of Stratford's walkable core will reduce traffic effects in these areas.</p> <p>All of these measures should be positive in improving access and improving the town centres. The strategy</p>	●	

The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.		
<b>The North South Corridor</b>		
<p>The North South Corridor is a truly multi modal corridor including comprehensive road, rail and bus links. However, a key shortcoming is the lack of a through public transport service between the north and the south without the requirement to change at Coventry. Provision of such a service would help to provide access to employment without having a detrimental impact on congestion and will help to link areas of need to areas of opportunity. If fully implemented the strategy would have a significant positive effect on equality. However, because of uncertainties regarding implementation and funding the strategy has been scored as slight positive.</p> <p>Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that the scheme, especially the two new stations between Coventry and Nuneaton, greatly enhance access to rail services. No information is available on later phases of the NUCKLE scheme.</p>	●	
<b>Modal / topic strategies</b>		
<b>Rural Strategy (new strategy)</b>		
Approximately one third of the population live in rural Warwickshire. The strategy recognises that one of the key issues facing residents living, working or visiting rural areas in Warwickshire is poor accessibility to the transport network. The overall aim of the County Council's Rural Strategy is to contribute to an improvement in accessibility levels and reduce the impact of traffic in rural areas. The Rural Strategy does not introduce new policies but instead cross references to other policies within the LTP3 and states that these policies may be positive for rural areas. The strategy cross references the Accessibility Strategy and the Bus, Passenger Rail, Taxi and Private Hire and Community Transport Strategies. However, the strategy does not add new policies to the LTP3 so has been scored as neutral.	○	
<b>Air Quality Strategy</b>		
Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have positive effects on congestion, provision of travel alternatives and traffic that can affect neighbourhoods and communities. The strategy is likely to be positive.		
<b>Accessibility Strategy</b>		
One of the objectives of the accessibility strategy is to improve provision of an accessible public transport network, including to healthcare facilities, education and training opportunities. If strategies to reduce public transport fares for students and to raise awareness among school pupils of walking and cycling routes and public transport options are successful, they will have a positive effect on equality of opportunity. In addition, Policy AS4 states that the County Council will support initiatives that help make travel to services more affordable and investigate opportunities to develop a concessionary travel scheme. It will also continue to promote affordable solutions for those with less conventional travel patterns, e.g. car sharing schemes. This will be positive for equality of opportunity if successful. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period.	●	
<b>Sustainable Freight Distribution Strategy</b>		
The strategy is likely to have a positive impact through reducing the impact of freight on the environment and communities (through continuing the local and regional freight quality partnerships and associated measures). For example, Policy F2 aims to ensure signage directs heavy goods vehicles to industrial areas and town centres via the best routes, and also seeks to control heavy goods vehicle movements through or near environmentally sensitive areas; and Policy F3 aims to encourage the location of new development likely to generate significant freight movements in areas that have good access to the rail network. The strategy is likely to be positive.	●	
<b>Parking Strategy</b>		
The vision of the strategy is to effectively manage the supply and enforcement of parking to complement the Council's overall transport strategy. If successful, the strategy will have a key role in reducing the environmental impact of traffic congestion through the appropriate use of public parking, which will also help improve the quality of urban and rural centres. In addition, the strategy aims to continue work with Network Rail and train operating companies to ensure that parking at railway stations is accessible and sufficient to	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
meet the demands of those travellers who are unable to access the station by other sustainable modes (Policy P10). The strategy is likely to be positive.		
<b>Powered Two Wheeler Strategy</b>		
The use of PTWs can be positive for equality of opportunity in the county, as people who cannot afford cars can sometimes afford PTWs. The strategy is likely to be positive.	●	
<b>Airport Accessibility Strategy</b>		
Access to airports by public transport is important for equality of opportunity. Policy ASA1 aims to improve surface access provision to Birmingham International Airport and Coventry Airport. This is supported by Policy ASA2, which supports the provision of readily available and easy to understand public transport timetables, routes and fares, including integrated ticketing between modes. An ongoing target is to improve the reliability and punctuality of public transport services to aviation. The strategy is likely to be positive.	●	
<b>Land Use and Transportation Strategy</b>		
The land use and transportation strategy seeks to offer accessibility to the widest cross-section of the population and gives people more travel choices to access work, services and leisure activities. The strategy is, therefore, very much aimed at promoting equality of opportunity. It seeks to achieve this by encouraging new development which is accessible and integrated with the transport network, including modes other than the car. If successful, Policy LUT3, in particular, will seek developer contributions for public transport, community transport and pedestrian and cycling facilities. Policy LUT10 aims to ensure that all development is appropriate in terms of accessibility, design and layout and can contribute to the local area and improve connectivity with new footways, cycleways and public transport where required. The strategy is likely to be positive.	●	
<b>Bus Strategy</b>		
A greater need exists than is being provided for by the bus network. This is likely to be impacting on access to opportunities. The vision of the strategy, to provide an affordable, accessible and convenient network of bus services, and particularly Policy PTB2, aim to promote equality of opportunity. In addition, the Action Plan includes developing a County-wide concessionary travel scheme, including for cross-boundary bus, rail and community transport services, and promoting improvements in the punctuality and reliability of bus	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
services. These measures are likely to have a positive effect on equality of opportunity.		
<b>Passenger Rail Strategy</b>		
A greater need exists than is being provided for by the rail network. This is likely to be impacting access to opportunities. The vision of the strategy, to provide an affordable, accessible and convenient network of rail services, and particularly Policy PTB2, aim to promote equality of opportunity. The Action Plan contains specific actions to: examine opportunities for revisions to fare structures and levels; examine measures to implement through ticketing availability between modes; and investigate opportunities to develop a concessionary travel scheme for rail, bus and community transport services. These measures are likely to have a positive effect on equality of opportunity.	●	
<b>Network Management Duty Strategy</b>		
The strategy aims to manage the road network to get the best out of the available road space and manage works to minimise delays and disruptions. These also help to improve the quality of urban and rural centres and reducing severance. The strategy is likely to be positive.	●	
<b>Taxi and Private Hire Vehicle Strategy</b>		
The vision of the strategy, to provide affordable, accessible and convenient taxis and private hire vehicles, and particularly Policy PTT2, aim to promote equality of opportunity. Specific aims are to increase the range of travel opportunities and options for travellers, including provision of taxi buses to meet specific travel needs. The strategy is likely to be positive.	●	
<b>Intelligent Transport Systems Strategy</b>		
ITS will enable better management of traffic and thereby reduce delays and congestion. Specific measures are described in the Action Plan, and address the introduction of bus priority at key bus routes and other similar short and medium-term measures and this will help to improve the punctuality and reliability of public transport.	●	
<b>Community Transport Strategy</b>		
A greater need exists than is being provided for by the existing community transport network. This is likely to be having impacts on equality of opportunity if people within disadvantaged user groups (who are the major	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
user groups of community transport) cannot access jobs and services. The vision of the strategy includes provision of an affordable, accessible and convenient network of community transport services, in order to promote social inclusion and to widen access to services, health, social and recreational facilities, employment and training. Policies PTCT1 and PTCT2 in particular emphasise this aim, and also cross-refer to the Public Transport and Bus Strategies. In addition, the Action Plan contains measures to support these policies, such as to develop a county-wide concessionary travel scheme, to examine opportunities for through ticketing between transport modes and to improve the image of community transport travel. The strategy is likely to be positive.		
<b>Congestion Strategy</b>		
The strategy contains measures to reduce congestion, such as encouraging public transport use and providing further Park & Ride facilities and this will help to improve the punctuality and reliability of public transport. This will have a positive effect particularly in terms of the quality of centres.	●	
<b>Cycling Strategy</b>		
The strategy seeks to address actual and perceived barriers to cycling and increase levels of cycling in the county. The strategy aims to ensure that cycle routes achieve high standards of design, enhancing the character of towns, and seeks to secure funding from developers towards cycling improvements in the vicinity of new development sites.	●	
<b>Bus Information Strategy</b>		
Research has shown that traditional information services are not appropriate for occasional public transport users. Simpler information which does not require detailed knowledge and more flexible tickets and ticket purchase options are needed (Scottish Executive Development Department Research Programme (2003): Barriers to Modal Shift. Research Findings No.171/2003. Derek Halden Consultancy). The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which will contribute positively to equality of opportunity. This will be met through the provision of bus information that is simple to use and through improving bus information in line with the minimum requirements listed in the strategy. The Action Plan contains measures for the enhancement of bus information, including the timescale of these. The strategy is likely to be positive.	●	



<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Public Transport Interchange Strategy</b>		
The strategy aims to encourage modal shift onto public transport, through improving integration between different public transport modes. Better integration of transport modes helps to improve accessibility to basic services for all groups in society and to reduce traffic and congestion. The strategy includes several measures to do this, such as through enhancement of existing and provision of new interchange facilities at railway stations and working with the planning authorities, public transport operators and Network Rail to promote integration between transport modes. This will be positive for equality of opportunity if successful.	●	
<b>Public Transport Strategy</b>		
This strategy provides the strategic framework for the public transport mode specific strategies (the Bus, Passenger Rail, Community Transport and Taxi and Private Hire Vehicle Strategies), the Public Transport Interchange Strategy and the Bus Information Strategy. Its aim is to grown the market for public transport by making the product attractive to existing and potential users. If successful, the strategy will have a positive effect on equality of opportunity, by improving the provision of public and community transport. The strategy is supported by a number of policies, and as a whole it is likely to be positive.	●	
<b>Road Safety Strategy</b>		
The strategy's policies cover a wide variety of actions such as through working with the emergency services, the Highways Agency and the community, education campaigns, influencing road user behaviour and combating excessive speed through the use of safe and appropriate speed limits and safety cameras. This is likely to have a positive impact on equality of opportunity, through improving the quality of urban and rural centres. The strategy as a whole is likely to be positive.	●	
<b>Highway Maintenance Strategy</b>		
The strategy aims to maintain the highway network in order to ensure it is safe for all types of road user and that its asset value is maintained. This is likely to have a positive impact on the quality of urban and rural centres and enhancing the character of towns through routine maintenance activities such as grass cutting, tree maintenance and maintaining the network of street lighting. The strategy as a whole is likely to be positive.	●	

<b>The effect of the draft plan on equality</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Bridge Maintenance Strategy</b>		
The strategy's specific objective is to avoid any deterioration in the bridge stock in Warwickshire. In terms of equality of opportunity, Policy BM5 states that the Council will take account of all users of the highway network through the strategy and ensure that there is no direct or indirect discrimination. In addition, Policy BM4 seeks to conserve those bridges which form part of the cultural heritage of Warwickshire, unless such works would be prohibitively expensive or impractical. The strategy also sets criteria for bridge monitoring, including bridge condition indicators and key performance indicators. The strategy as a whole is likely to be positive.	●	
<b>Changing Travel Behaviour Strategy</b>		
The strategy aims to encourage more people to choose sustainable travel, to complement the transport infrastructure improvements made through the LTP3. In particular, the strategy aims to reduce the number of single occupancy car trips and increase the proportion of journeys made by walking, cycling, public transport and car sharing. This is likely to have a positive impact on equality of opportunity, through supporting the improvement of public and community transport provision. The strategy's policies describe measures such as the implementation of travel plans for schools, work places, residential developments and railway stations and travel awareness campaigns to promote the benefits of sustainable modes of transport. The strategy as a whole is likely to have a positive impact on equality of opportunity.	●	
<b>Walking Strategy</b>		
The strategy focuses on walking for key utility journeys and aims to improve the pedestrian environment and encourage more walking. Walking has the additional benefit of promoting social inclusion, and the strategy is also concerned with making access easier for all users of the street environment, including those in wheelchairs and mobility scooters and those with sensory impairments. The strategy's policies include the implementation of travel plans for schools and work places, the creation of high quality and attractive pedestrian environments within town centres and improving pedestrian access to public transport services. The Action Plan summarises the actions that will enable the policies to be delivered. Therefore, the strategy is likely to have a positive impact on equality of opportunity.	●	
<b>Rights of Way and Recreational Highway Strategy</b>		

The effect of the draft plan on equality		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
The Rights of Way and Recreational Highway Strategy is unlikely to have a significant positive contribution towards the achievement of the Equality of Opportunity SEA Objectives. However, it does include a number of measures which will improve equality of access to the Rights of Way and Recreational Highway network for all users, including those for whom physical barriers are a problem (such as stiles) and those unfamiliar with the countryside.	●	
<b>Implementation Plan (April 2011 – March 2015)</b>		
Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet certain. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Because of these uncertainties, It is not possible to assess what the impact of the Implementation Plan will be on equality. However, the council does set out an annual programme of work and has confirmed that this annual work programme (also known as the Transport Capital Programme) is prepared in the context of a number of criteria, including asset management considerations, affordability, political priorities and delivery of LTP objectives (including sustainability).	?	The Transport Capital Programme is prepared in the context of a number of criteria including delivery of LTP objectives (including sustainability).

Assessment Conclusions – equality of opportunity
<p><b>Summary of performance:</b> None of the strategies are likely to have a significantly positive effect on the equality objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the equality SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve accessibility and improve the quality of communities. The strategies contained within the plan should help to support access to employment, healthcare and other services, make travel more affordable (through concessionary fare schemes, car sharing schemes etc) and through providing a greater range of travel options. The plan will also help to improve the quality of urban and rural centres through measures to reduce the impact of freight traffic, parking policies and through reducing congestion and the impact of vehicular traffic in certain areas. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. None of the strategies will have a negative effect on the SEA Objectives.</p> <p><b>Mitigation and enhancement measures:</b></p> <p>No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the</p>

**Assessment Conclusions – equality of opportunity**

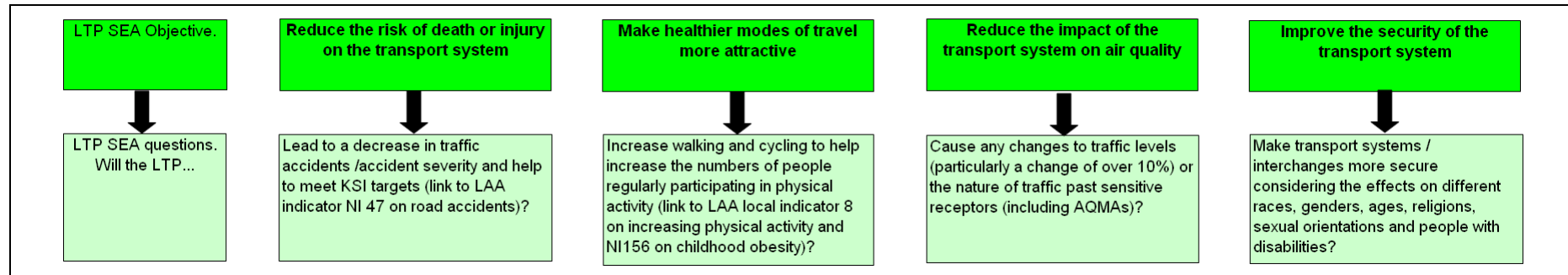
Equality of Opportunity SEA Objectives. However, a mitigation measure is put forward in relation to an uncertain performance recorded with regards to the Implementation Plan as follows:

- The Transport Capital Programme is prepared in the context of a number of criteria including delivery of LTP objectives (including sustainability).

No enhancement measures have been suggested.

## 4 SEA Topic: Safety, Security and Health

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which seek to improve the safety, security and health of people by reducing the risk of death, injury or illness arising from transport and by promoting travel modes that are beneficial to health.	●	
<b>Area strategies</b>		
<b>Northern Warwickshire</b>		
The objectives address reducing the environmental impact of traffic and this is positive. <b>The LTP includes an overarching aim related to reducing the impact of transport on people and the environment. This is considered appropriate given that the issue applies to the whole County. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</b>	●	

The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>Road safety in Northern Warwickshire has improved significantly in recent years. The village traffic plans should be positive in addressing small scale safety issues such as speeding, lighting, footway maintenance and drainage. Other measures which may contribute to better health include the commitment to keep under review the need for further cycling improvements in Coleshill. <b>The strategy also states that improving cycling in smaller towns is a longer term aspiration.</b> This is important because of the high levels of obesity compared to other areas of Warwickshire.</p> <p>The AQMA in Coleshill is caused mainly by the motorway network. Actions which could have a positive cumulative effect include the transfer of traffic onto the M6 toll and the introduction of active traffic management on the M42 and M6. These measures should help to reduce traffic levels in the vicinity of the AQMA. Monitoring over the past few years has shown reductions in NOx.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>		
<b>Eastern Warwickshire</b>		
<p>The objectives address reducing the environmental impact of traffic and this is positive. <b>The LTP includes an overarching aim related to reducing the impact of transport on people and the environment. This is considered appropriate given that the issue applies to the whole County. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</b></p> <p>In terms of safety and plans to get people to walk and cycle more, the plans to pedestrianise the centre of Rugby, the Connect2 scheme, the further small improvements such as upgraded crossings and the planned cycle schemes should be positive.</p> <p>The whole of Rugby is a AQMA but the main impact on air quality in Rugby is likely to be from development over the next 15 years. If the transport improvements planned for the two main development sites (Rugby Radio Station and Gateway Rugby) are delivered this will help to ameliorate the effect. However, these need to be supported by wider measures to create behavioural change.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as</p>	●	

The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.		
<b>Nuneaton and Bedworth</b>		
<p>The objectives address reducing the environmental impact of traffic and this is positive. <b>The LTP includes an overarching aim related to reducing the impact of transport on people and the environment. This is considered appropriate given that the issue applies to the whole County. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</b></p> <p>The area has a higher proportion of people who class themselves in poor health than other areas of the county and also performs below average in socio-economic terms. There are significantly higher incidences of road casualties in poorer communities in West Nuneaton. It also has the highest crime rate in the county and the highest levels of obesity. A number of improvements are included in the transport interventions section of the strategy that may help improve safety. These include improvements for pedestrians and provision of highway improvements that will reduce the potential for rat running in residential areas. However, the strategy makes it clear that these proposals have not been costed and it is unclear whether they will go ahead. The proposals to support development will be used in due course to inform the preparation of the LDF Infrastructure Delivery Plan. Other measures are discussed in the strategy which might encourage people to walk and cycle more including new pedestrian routes and pedestrian environment in town centres and a number of priority cycle routes (including enhanced information on cycle routes).</p> <p>Since LTP2 two AQMAs have been declared within the area. Air Quality Action Plans include such measures as Urban Traffic Management Control and Variable Message Signage which should be positive in reducing circulatory traffic. It is not possible to assess quantitatively at this stage whether the measures will lead to a change in the level of emissions as a detailed transport model is not yet available.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>	●	
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		

The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>The objectives address reducing the environmental impact of traffic and this is positive. The LTP includes an overarching aim related to reducing the impact of transport on people and the environment. This is considered appropriate given that the issue applies to the whole County. The objectives contained within the five Area Strategies and the North-South Corridor Strategy are designed to highlight the individual priorities within each geographical area of Warwickshire rather than County-wide issues.</p> <p>Warwick District performs relatively well on health indicators and in socio-economic terms the area is ranked above average. Casualties from traffic accidents have remained the same since 2004 but the numbers killed and seriously injured has decreased. There is a high rate of accidents involving motorcyclists. Cycling improvements will focus on improvements in the urban cycle networks plus some inter-urban routes. This will be accompanied by actively promoting and marketing cycling for short journeys. A number of improvements are included in the strategy that are designed to help improve safety including continued maintenance of the highway network and promoting road safety and implementing casualty reduction programmes.</p> <p>There are 4 declared AQMAs and it may be necessary to declare a further AQMA. The levels of obesity are still regarded as high although they are not as high as other areas in the county. In terms of air quality, the nature of the road network means there is little scope to improve the highway capacity. Measures to manage the highway network will be used to improve air quality.</p> <p>Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.</p>	●	
<b>Southern and Western Warwickshire</b>		
<p>The objectives discuss improving local air quality. Air quality is mentioned in the strategy but the work on how to improve the AQMAs in Stratford and Studley is at an early stage.</p> <p>The total numbers of road casualties has stayed static since 2000 but the total number of people killed and seriously injured has fallen over a third. Some junction improvements are highlighted in the strategy. Access by foot and cycle can be difficult in Stratford especially across the River Avon and between the northern and western sectors of the town. The strategy includes work on the Walkable Core in Stratford and states that the council will progress some cycling schemes subject to funding being available.</p>	●	



<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
Overall the strategy will be positive in terms of improving health and safety. The strategy has been scored as slight positive (and not significantly positive), however, because of the uncertainty of funding available to deliver the strategy.		
<b>The North South Corridor</b>		
Continued safety improvements form an important part of the strategy, including addressing incidences of road casualties anticipated as a result of increased travel demand. The strategy will have a positive effect on safety. The strategy has been scored as slight positive, however, because of the uncertainty of funding available to deliver the strategy. Walking and cycling schemes are not included in the strategy because of its nature as a strategic travel corridor.  Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. This report states that road accidents will be reduced through modal shift but that this will be partly offset by increased rail use and rail accident risk. In terms of security, the new stations will be provided with lighting, CCTV and passenger help points, significantly improving security for journeys by public transport in North Coventry and Bermuda Park. No information is available on later phases of the NUCKLE scheme.	●	
<b>Modal / topic strategies</b>		
<b>Rural Strategy (new strategy)</b>		
The Rural Strategy does not introduce new policies but instead cross references to other policies within the LTP3 and states that these policies may be positive for rural areas. The strategy cross references the Network Management Duty Strategy and the Sustainable Freight Distribution Strategy as places in the plan that deal with traffic management and safety issues. However, the strategy does not add new policies to the LTP3 so has been scored as neutral.	○	
<b>Air Quality Strategy</b>		
The vision of the air quality strategy is to maintain and improve air quality in order to improve health and quality of life. If public transport, walking and cycling strategies are successful they will have positive effects	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
on health. The strategy is likely to be positive.		
<b>Accessibility Strategy</b>		
The objectives of the accessibility strategy include developing safe, convenient and attractive transport networks to help improve overall access, and addressing real and perceived concerns regarding personal safety when using transport infrastructure. If strategies to improve waiting facilities at transport interchanges and to raise awareness among school pupils of walking and cycling routes are successful, they will have a positive impact on safety, security and health. Policy AS5 states that the County Council will address problems of crime and fear of crime in and around transport. Although funding has been withdrawn from the Warwickshire Access to Services Partnership Scheme, attempts have been made to mainstream accessibility improvements into the wider LTP strategies in an effort to secure delivery over the plan period. The strategy is likely to be positive.	●	
<b>Sustainable Freight Distribution Strategy</b>		
At present there is a reliance on road based freight movement within Warwickshire, which results in adverse impacts on rural roads and within residential areas and problems related to lorry parking and theft from high-sided vehicles. The strategy is likely to have a positive impact through reducing the impact of freight on the environment and communities thus improving local air quality and the safety/perception of safety in communities (through continuing the local and regional freight quality partnerships and associated measures). For example, Policy F2 aims to ensure signage directs heavy goods vehicles to industrial areas and town centres via the best routes, and also seeks to control heavy goods vehicle movements through or near environmentally sensitive areas; and Policy F3 aims to encourage the location of new development likely to generate significant freight movements in areas that have good access to the rail network. The strategy is likely to be positive.	●	
<b>Parking Strategy</b>		
If successful, the strategy will have a key role in the provision of dedicated secure cycle parking facilities in town centres, at public transport interchanges and other key service destinations (Policy P8). This will help to make healthier modes of travel more attractive. In addition, the strategy will provide dedicated secure parking facilities for powered two wheeler users (Policy P9). It also aims to continue work with Network Rail and train operating companies to ensure that parking at railway stations is accessible and sufficient to meet the demands of those travellers who are unable to access the station by other sustainable modes (Policy P10).	●	

The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
These measures, if successful, will improve the security of the transport system and will have a positive impact on safety security and health.		
<b>Powered Two Wheeler Strategy</b>		
The strategy is likely to have a key role in the prevention of motorcycle accidents and motorcycle theft. Policy PTW2 is aimed at improving parking facilities for PTWs in order to prevent theft. Policy PTW3 aims to increase safety and reduce congestion by allowing access for PTWs to areas normally restricted, such as bus lanes, Advance Stop Lanes and other areas subject to access control. The strategy also includes targets to develop and support a PTW education and awareness programme, and to further reduce the number of PTW accidents and casualties that occur in Warwickshire. Road safety issues are tackled in more detail in Warwickshire's Road Safety Strategy, and issues relating to PTW safety will be pursued through the development and implementation of a dedicated Motorcycle Casualty Reduction Plan.	●	
<b>Airport Accessibility Strategy</b>		
Access to airports by public transport should play a positive role in helping to reduce traffic levels and congestion, thus to promote safety, security and health. In addition, a specific action from the strategy is to provide enhanced facilities for airport passengers at public transport interchanges, which will also promote safety and security. The strategy is likely to be positive.	●	
<b>Land Use and Transportation Strategy</b>		
The strategy aims to encourage new development which is safe and appropriate in terms of design and layout and also to provide for pedestrians and cyclists in new highway works. The strategy is likely to be positive.	●	
<b>Bus Strategy</b>		
The vision of the strategy includes promotion of a safe network of bus services, and Policy PTB3 states that proposals will be developed for a 'step change' in the quality of public transport on key corridors, including buses and bus-based rapid transit. Both of these indicate that the strategy is likely to have a positive impact on safety, security and health. In addition, the Action Plan includes maintenance arrangements for bus shelters, providing financial support to locations where the level of service standards are not provided by the current network and encouraging bus operators to specify on-vehicle CCTV or other appropriate safety measures on new orders of vehicles. The strategy is likely to be positive.	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Passenger Rail Strategy</b>		
The vision of the strategy includes promotion of a safe network of rail services, and Policy PTPR6 states that proposals will be developed for a 'step change' in the quality of public transport on key corridors, including Heavy Rail and Light Rail. Both of these indicate that the strategy is likely to have a positive impact on safety, security and health. In addition, the Action Plan includes measures for the delivery of passenger improvements at railway stations and the enhancement of existing and provision of new interchange facilities at stations. The strategy is likely to be positive.	●	
<b>Network Management Duty Strategy</b>		
The vision of the strategy is that people would be able to travel safely within Warwickshire and one of the core objectives of the strategy is that it would promote modes that are beneficial to health. Policy NMD4 aims to put in place a series of contingency options and diversion routes, and Policy NMD7 aims to manage and coordinate activities and events on the network, both to prevent build-up of traffic. Policy NMD11 ensures that information regarding incidents and road-works will be made available and Policy NMD13 ensures implementation of a winter service policy relating to gritting, snow clearance and provision of salt bins. These policies will contribute to reduction of accidents. Policy NMD14 also aims to ensure that the safety and protection of works is carried out to the required standard and that full courtesy and consideration is given to all road users, especially pedestrians and cyclists. The strategy is likely to be positive.	●	
<b>Taxi and Private Hire Vehicle Strategy</b>		
The vision of the strategy is that people would be able to travel safely across the County using taxis and private hire vehicles. A more specific aim is given in Policy PTT2, which states that taxi waiting facilities should provide reasonable shelter, comfort, suitable heating and ventilation for the time of year, as well as facilities to address personal safety and security issues. The strategy is likely to be positive.	●	
<b>Intelligent Transport Systems Strategy</b>		
The strategy contains policies on dealing with traffic growth and on traffic signal junctions and pedestrian crossings, both of which contribute to safety, security and health. Policy ITS8 cross-refers to other initiatives such as the 'Safer Routes to School' initiative and 'Casualty Reduction Schemes' which will be supported. In addition, the Action Plan contains measures such as developing CCTV and ANPR (automatic number plate recognition) links with Warwickshire Police and the District/Borough Councils. The strategy is likely to be	●	

The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
positive.		
<b>Community Transport Strategy</b>		
The vision of the strategy includes provision of a safe network of community transport services in order to promote social inclusion and to widen access to services, health, social and recreational facilities, employment and training. Policy PTCT2 in particular emphasises this aim, stating that stops, bus stations and interchanges should provide both a perception and reality of personal safety and security. The strategy is likely to be positive.	●	
<b>Congestion Strategy</b>		
Policy CS1 ensures that improvements to reduce congestion will not normally be implemented where they may be detrimental to the safety and/or convenience of pedestrians, cyclists or public transport users and Policy CS3 requires new development to provide funding for improvements aimed at minimising traffic growth. The strategy is likely to be positive.	●	
<b>Cycling Strategy</b>		
The strategy seeks to address actual and perceived barriers to cycling and increase levels of cycling in the county. Several improvements to cycleways and extensions of cycle routes have been achieved in recent years, which are beneficial for public health and improving road safety. The strategy aims to build on these to improve the safety and quality of the cycling environment promote cycling as a healthy transport choice, providing safe and convenient access to town centres, employment sites, schools and public transport interchanges. It also seeks to ensure that secure cycle parking facilities are provided in key public places and that cycle training for children and adults is provided. Studies have shown that the main barrier to cycling is fear of traffic (TRL Report 481. <i>A quantitative study of the attitudes of individuals to cycling</i> , 2001). The strategy aims to combat this through implementing traffic restraint or calming schemes and off highway links, the introduction of further 20 mph speed limits in town centres and residential areas and developing safe cycle routes to all secondary schools. All of these measures will be mutually supportive.	●	
<b>Bus Information Strategy</b>		
The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
can contribute positively to safety, security and health if it results in reduced traffic levels.		
<b>Public Transport Interchange Strategy</b>		
The strategy aims to encourage modal shift onto public transport, through improving integration between different public transport modes. A major theme of the strategy is to improve existing public transport interchange facilities, including enhancements to walking and cycling accessibility. The strategy includes several measures to do this, such as through enhancement of existing and provision of new interchange facilities at railway stations and working with the planning authorities, public transport operators and Network Rail to promote integration between transport modes. This will be positive for safety, security and health if successful.	●	
<b>Public Transport Strategy</b>		
This strategy provides the strategic framework for the public transport mode specific strategies (the Bus, Passenger Rail, Community Transport and Taxi and Private Hire Vehicle Strategies), the Public Transport Interchange Strategy and the Bus Information Strategy. Its aim is to grown the market for public transport by making the product attractive to existing and potential users. If successful, the strategy will have a positive effect on safety, security and health, by reducing traffic levels and making transport systems more secure. The strategy is supported by a number of policies, and as a whole it is likely to be positive.	●	
<b>Road Safety Strategy</b>		
The strategy aims to improve road safety throughout the county, defined as reducing the number of people killed and injured on Warwickshire's roads. The position of Warwickshire, at the centre of England and the motorway network, means it has a higher than average number of casualties for its population. Consequently, the strategy's policies aim to achieve a reduction in the number of casualties through a wide variety of means, including working with the emergency services, the Highways Agency and the community, through education campaigns, influencing road user behaviour and combating excessive speed through the use of safe and appropriate speed limits and safety cameras. This is all likely to have a positive impact on safety, security and health through reducing the risk of death or injury on the road network. The Action Plan contains measures for the delivery of the road safety strategy and the strategy as a whole is likely to be positive.	●	

<b>The effect of the draft plan on safety, security and health</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
<b>Highway Maintenance Strategy</b>		
The strategy aims to maintain the highway network in order to ensure it is safe for all types of road user and that its asset value is maintained. This is likely to have a positive impact on safety, through routine maintenance activities such as reviewing the condition of footways, cycleways and carriageways and undertaking maintenance work where there are potholes or the condition is likely to cause safety or usage problems. Other routine maintenance activities include winter maintenance, maintenance of signs and lines, safety inspections and electricity cable renewal. The strategy as a whole is likely to be positive.	●	
<b>Bridge Maintenance Strategy</b>		
In terms of safety, the strategy's policies ensure that all structures will be inspected on a two-yearly cycle, weak bridges will be strengthened and post completion surveys will be carried out on an individual scheme basis. The strategy also describes criteria for bridge monitoring, including bridge condition indicators and key performance indicators. The strategy as a whole is likely to have a positive impact on safety.	●	
<b>Changing Travel Behaviour Strategy</b>		
The strategy aims to encourage more people to choose sustainable travel, to complement the transport infrastructure improvements made through the LTP3. In particular, the strategy aims to reduce the number of single occupancy car trips and increase the proportion of journeys made by walking, cycling, public transport and car sharing. This is likely to have a positive impact on health in association with the measures outlined in the Public Transport, Walking and Cycling Strategies aimed at improving the safety and security of these modes. The policies describe measures such as the implementation of travel plans for schools, work places, residential developments and railway stations and travel awareness campaigns to promote the benefits of sustainable modes of transport. The strategy as a whole is likely to have a positive impact on safety, security and health.	●	
<b>Walking Strategy</b>		
The strategy focuses on walking for key utility journeys and aims to improve the pedestrian environment and encourage more walking. Walking has the additional benefit of promoting health and quality of life. The strategy's policies include the provision of safe and convenient pedestrian crossing facilities and partnership working to improve safety and personal security for pedestrians. The Action Plan summarises the actions	●	

The effect of the draft plan on safety, security and health		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
that will enable the policies to be delivered. Therefore, the strategy is likely to have a positive impact on safety, security and health.		
<b>Rights of Way and Recreational Highway Strategy</b>		
This Strategy includes a number of policies which aim to improve the safety and security of users of the Rights of Way and Recreational Highway network. Measures include maintenance of paths and bridges, responses to reports of defects and policies in relation to electric fences and education regarding livestock. The strategy also encourages walking and cycling and other recreational use of the network including horse riding and running, through the maintenance and improvement of paths and through way-finding improvements and better provision of information about routes. Therefore, the strategy is likely to have a positive impact on safety, security and health.	●	
<b>Implementation Plan (April 2011 – March 2015)</b>		
Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet certain. The plan stresses that maintenance of the highway network is likely to be a priority (which will positive for safety), that a broadly balanced integrated transport programme will be maintained and the plan includes funding for casualty reduction, Safer Routes to Schools Programmes and cycling and walking. Without certainty on funding and location of schemes, it is not possible to assess what the impact of the Implementation Plan will be on safety and health. However, the council does set out an annual programme of work and has confirmed that this annual work programme (also known as the Transport Capital Programme) is prepared in the context of a number of criteria, including asset management considerations, affordability, political priorities and delivery of LTP objectives (including sustainability).	?	The Transport Capital Programme is prepared in the context of a number of criteria including delivery of LTP objectives (including sustainability).

Assessment Conclusions – safety, security and health
<b>Summary of performance:</b> None of the strategies are likely to have a significantly positive effect on the safety, security and health objectives but no negative impacts have been recorded either. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the safety, security and health SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help improve the safety and security of travel through tackling speeding, improving lighting, helping to maintain footways and the highways and helping to educate people about road safety. The strategy will also help to make healthier modes more attractive



**Assessment Conclusions – safety, security and health**

through improving walking and cycling routes and addressing security concerns at public transport interchanges. The strategies should also help to improve the air quality in the county, if modal switch is achieved. As with the other SEA Objectives, there is some uncertainty over the implementation of the schemes in the strategies. The Implementation Plan stresses that maintenance of the highway network is likely to be a priority (which will positive for safety), that a broadly balanced integrated transport programme will be maintained and the plan includes funding for casualty reduction, Safer Routes to Schools Programmes and cycling and walking. However, without certainty on funding and location of schemes, it is not possible to assess what the impact of the Implementation Plan will be on safety and health.

**Mitigation and enhancement measures:**

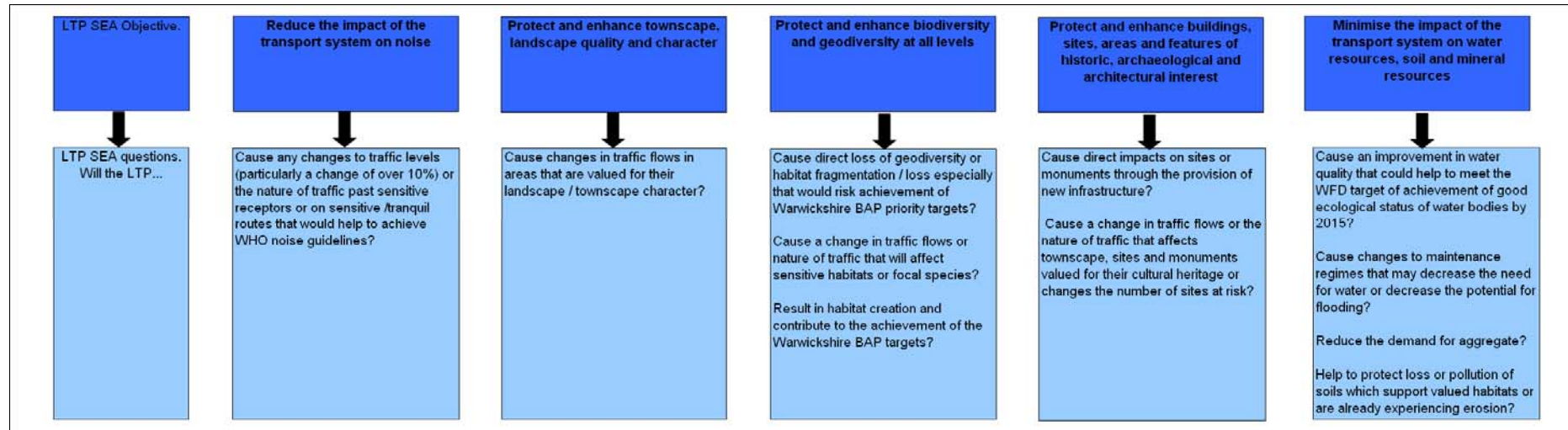
No mitigation measures are identified in order to address potential negative effects because none have been identified within the assessment against the Safety, Security and Health SEA Objectives. However, mitigation measures are put forward in relation to the uncertain performances recorded, as follows:

- The Transport Capital Programme is prepared in the context of a number of criteria including delivery of LTP objectives (including sustainability).

No enhancement measures have been suggested.

## 5 SEA Topic: Quality of Life and the Environment

The plan has been assessed against the following SEA objectives and questions:



The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Plan objectives</b>		
The plan includes objectives which aim to improve quality of life and to promote a healthy natural and built environment.	●	
<b>Area strategies</b>		
<b>Northern Warwickshire</b>		

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. There are some measures in the strategy which may make alternative modes more attractive and reduce the impact of traffic on townscapes (the village traffic plan initiative and review of the HGV weight limit policy, for example) but the rural nature of the area means that significant modal switch is unlikely. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; there may be some issues regarding building new cycle paths and the development of a new railway station at Kingsbury, both of which will require the use of aggregates and may have direct impacts on sensitive environmental receptors. However, Warwickshire County Council has informed the SEA team that there are no details on the location of this station at the moment and no environmental assessment has yet been carried out.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. <b>This process aims to ensure that where possible, future development is sustainable.</b></p>
<b>Eastern Warwickshire</b>		
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the</p>	?	<p>The Implementation Plan states that the council is</p>

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and how they would change traffic patterns (as a transport model run has not yet been undertaken) and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. There are some measures in the strategy which may make alternative modes more attractive such as a new station to serve the Rugby Radio Station site, the proposed network of bus services that will be integrated into the wider bus network, better interchange facilities between bus and rail for example, but the level of development expected means that decreases in road traffic are unlikely. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; the main areas of direct land take impact are likely to be in the vicinity of the two proposed urban extensions: Gateway Rugby and Rugby Radio Station (and the land needed for the supporting infrastructure) which, if supported by the Inspector at the EiP, will provide the focus for development in the town for the next 15-20 years. These may include improvements to M6 Junction 1, provision of new accesses and improved junctions and provision of new link from the development to the M45/A45. This development will require the use of aggregates and other natural resources as infrastructure is developed. The two development sites do also have some environmental sensitivities including potential Sites of Nature Conservation interest and BAP Habitats, effects on landscape quality to the East of Rugby and potential effects on Old Brownsover Conservation Area and unless mitigated the effect of the development and the effect of infrastructure improvements could have a potentially significant effect. However, mitigation measures have been set out as part of the Sustainability Appraisal of the Rugby Core Strategy and infrastructure improvements will be</p>		<p>working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. <b>This process aims to ensure that where possible, future development is sustainable.</b></p>

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
subject to their own environmental assessment processes.		
<b>Nuneaton and Bedworth</b>		
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. The strategy aims to promote alternatives to the private car and Nuneaton and Bedworth does already have high levels of public transport use. However, the levels of development expected in the area means that decreases in road traffic are unlikely. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided. However, public realm improvements which are noted in the strategy are likely to have positive impacts on townscape.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; there may be some issues regarding building new cycle and footpaths, improving transport interchanges and reconfiguring the bus station. In terms of direct land take impacts from development; there is some uncertainty over where development will take place and this impact has also been scored as uncertain. The Nuneaton and Bedworth area also has a major scheme in the area – the NUCKLE scheme. The NUCKLE scheme is addressed in the North-South Corridor assessment.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. <b>This process aims to ensure that where possible, future development is sustainable.</b></p>
<b>Warwick, Leamington Spa, Kenilworth and Whitnash</b>		

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. The strategy aims to promote alternatives to the private car. However, the levels of development expected in the area means that decreases in road traffic are unlikely. The cultural and built heritage of the area is also very sensitive so the magnitude of impacts is likely to be high if traffic increases in sensitive areas. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided. However, the Warwick Town Centre Traffic Management Scheme which is noted in the strategy is likely to have positive impacts on townscape.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure; there may be some issues regarding building new cycle and footpaths and improving transport interchanges etc. Growth in Warwick District will primarily be focused to the south of the Warwick/Leamington Spa urban area and so any new transport infrastructure is likely to be located here. There is some sensitivity in this area including landscape and biodiversity sensitivities and detailed work has been carried out on the proposed development sites through the LDF process in a Habitat Biodiversity Audit and a landscape character assessment of the area. However, mitigation measures will be set out as part of the Sustainability Appraisal of the Warwick District Core Strategy and infrastructure improvements will be subject to their own environmental assessment processes.</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. <b>This process aims to ensure that where possible, future development is sustainable.</b></p>



The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
There is also likely to be a direct effect from the development of Kenilworth station (if this scheme goes ahead – it wasn't selected for funding by central Government). Warwickshire County Council is at a very early stage with the planning for the scheme so no specific information is available on its potential impact.		
<b>Southern and Western Warwickshire</b>		
<p>The objective on reducing the environmental impact of traffic is positive.</p> <p>An important issue in the area is the value of the cultural and built heritage. The heritage of Stratford upon Avon is of national significance. The southern edge of the area also lies within the Cotswold AONB.</p> <p>The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes may be developed and this has made the strategy difficult to assess. However, in terms of reducing traffic, a definable modal shift would have to occur to have significant benefits on the environment. The strategy aims to promote alternatives to the private car. However, the levels of development expected in the area means that decreases in road traffic are unlikely in most areas. In the centre of Stratford, the walkable core concept may lead to some positive impacts especially if coach traffic is reduced in certain sensitive areas. However, a detailed design has yet to be agreed and funding has yet to be secured. Because the locations of traffic change are unknown in relation to environmental assets, this impact has been scored as uncertain and there is a risk that as measures are developed negative impacts will occur. There are various ways that this risk will be reduced – through the environmental assessment that will be undertaken on major schemes, through the LDF SEA process and through the work that the council is undertaking with District Councils and developers to establish detailed requirements and phasing for infrastructure. In order to reduce the risks to the environment, this process should consider the sustainability impacts of development if transport infrastructure is not provided.</p> <p>In terms of direct land take impacts and use of aggregates for development of new transport infrastructure, the main risks are from the upgrade of the Shakespeare Line, the development of Stratford Parkway station</p>	?	<p>The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process aims to ensure that where possible, future development is sustainable.</p>

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>and from infrastructure to support development. An ecological appraisal has been carried out on the location of the Stratford Parkway Station (Arup, December 2009) and this found that there were some sensitivities of the site including negative effects on hedgerows, reptiles and bats. However, these effects were felt to be significant only at a parish level and mitigation measures have been outlined in the appraisal.</p> <p>In Stratford-on-Avon a significant proportion of proposed new residential development is to be located on the western and north-western periphery of Stratford-on-Avon the town which does have some environmental sensitivity including impacts on Conservation Areas and sensitive areas of landscape. However, mitigation measures will be set out as part of the Sustainability Appraisal of the Stratford-on-Avon District Core Strategy and infrastructure improvements will be subject to their own environmental assessment processes.</p> <p>The strategy does discuss using local highway widening as a way of reducing congestion and this could have impacts dependent on the location of the schemes. <b>However, the County Council has committed to examining the environmental impact of highway widening schemes, particularly where they involve the loss of established areas of highway verge.</b></p> <p>One potential impact will be the re-opening of the Stratford – Honeybourne railway line – however, the council does not lend its support to this scheme and it does not form part of the strategy. the line forms an important wildlife corridor and part of the line is a designated Nature Reserve.</p>		
The North South Corridor		
<p>Preliminary work has been undertaken on Phase 1 of the NUCKLE scheme (Improved service frequencies between Coventry-Bedworth-Nuneaton with new stations at Ricoh Arena and Bermuda, platform lengthening at Bedworth and a new bay platform at Coventry) in the Coventry-Nuneaton Rail Upgrade Business Case. According to this report (and the responses of statutory consultees to the report), there are some potential environmental impacts of the scheme. This includes the effect of the new Coventry Arena and Bermuda Park Stations on flooding (as they are located in Flood Zone 3) and the slight impact that platform constructions would have on wooded areas at Bermuda Park and Bedworth. There are also likely to be effects on natural resources and short term effects of construction (on issues like noise). However, the schemes will have no impacts on landscape, townscape or heritage (and this latter impact has been conformed by English Heritage). No information is available on later phases of the NUCKLE scheme. The next stage of the scheme will be a full environmental assessment where mitigation and enhancement measures will be outlined.</p>	?	



The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<b>Modal / topic strategies</b>		
<b>Rural Strategy (new strategy)</b>		
The strategy recognises that one of the key issues facing residents living, working or visiting rural areas in Warwickshire is the impact of traffic on local communities and in environmentally sensitive areas. The overall aim of the County Council's Rural Strategy is to contribute to an improvement in accessibility levels and reduce the impact of traffic in rural areas. The Rural Strategy does not introduce new policies but instead cross references to other policies within the LTP3 and states that these policies may be positive for rural areas. The strategy cross references various strategies that could be positive for the environment such as the Rights of Way Strategy and Walking and Cycling Strategies. However, the strategy does not add new policies to the LTP3 so has been scored as neutral.	○	
<b>Air Quality Strategy</b>		
Implementation of the wider LTP policies contained in the Public Transport, Cycling, Walking and Changing Travel Behaviour Strategies and the preparation of Air Quality Action Plans (which include improvement measures to traffic management, public transport, walking and cycling facilities and initiatives to change travel behaviour) should have direct positive effects on air quality which should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	●	
<b>Accessibility Strategy</b>		
Any reductions in traffic that the accessibility policies could achieve would benefit noise levels, air quality and traffic impacts on historic buildings and areas valued for their landscape and townscape value, although the magnitude of traffic reduction achieved through these policies is likely to be negligible. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	○	
<b>Sustainable Freight Distribution Strategy</b>		
Policy F1 discusses freight consolidation centres. These need to be carefully located to ensure that their positive effects can be maximised. The strategy reflects the fact that the location of the freight consolidation	●	

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
<p>centres needs to be in areas that are environmentally suitable.</p> <p>Policy F2 includes accommodating the needs of freight and balancing this with the need for environmental protection. This policy could result in both positive and negative effects. Negative effects could be associated with new infrastructure, such as bridges or bridge strengthening maintenance which requires the use of natural resources and could affect hydrological regimes and habitats through construction. On a positive note, Policy F2 aims to protect town centres and inappropriate routes from the impacts of HGVs which supports achieving improvements with regards to landscape, townscape and heritage.</p> <p>Policy F6 supports the use of pipelines which could cause negative effects particularly during construction. However, the policy also includes mitigation for such effects through requiring <b>avoidance of</b> environmental impact both during and after installation of the necessary infrastructure.</p> <p>The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).</p>		
<b>Parking Strategy</b>		
<p>Policy P2 aims to improve the environmental impacts of congestion (including regarding noise, townscape and air quality) through the appropriate use of parking restrictions, provision and availability of information. Park and Ride facilities are supported in Policy P4. Policy P8 also supports provision of cycle parking in town centres, public transport interchanges and other key service destinations. The strategy is likely to be positive.</p>	●	
<b>Powered Two Wheeler Strategy</b>		
<p>Overall compared to cars, motorcycles produce fewer emissions. Generally they perform better for carbon dioxide and oxides of nitrogen, but are worse in respect of hydrocarbons. A shift from cars to PTW could also help to improve reduce congestion which should help to alleviate air quality issues in congested areas. The policies within the PTW Strategy should therefore result in a positive effect with regards to air quality. It is uncertain whether an increase in the number of PTW on the roads within Warwickshire would have any effect with regard to noise. In the long term the effect of encouraging PTW use is uncertain as the emissions performance and fuel consumption of cars may be much better than PTW, depending on technological advances and legislation. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity). The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and</p>	●	

The effect of the draft plan on quality of life and the environment		
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soil and mineral resources (including geodiversity).		
<b>Airport Accessibility Strategy</b>		
The Airport Accessibility Strategy should generally support the achievement of the SA Objective relating to air quality through providing options other than the private car to reach airports. This should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. There is a risk that if public transport services are extended into unsociable hours, this could have a negative effect with regards to noise – however, the level of residential use nearby the airports is low so the level of nuisance should be low.	●	
<b>Land Use and Transportation Strategy</b>		
The spatial development strategy is to focus development on urban areas and main towns. In Warwickshire these areas are already congested (especially Warwick) so new development may cause more congestion problems and impact on air quality, townscape and historic buildings. Better integration of transport and land use planning helps to ensure that the cumulative effect of development is less because there is 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. The strategy includes several measures to do this including through working with the planning authorities and developers to put in place travel plans, more sustainable transport systems and also to provide for pedestrians and cyclists in new highway works. This will be positive for air quality, townscape and historic buildings if successful. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity) although there may be cumulative effects on natural resources through the building of housing and employment development and supporting infrastructure. The use of aggregates for maintenance and new construction is addressed in the Highway Maintenance Strategy and this will address the impacts of new infrastructure.	●	
<b>Bus Strategy</b>		
The strategy as a whole is likely to be positive because the policies promote the use of bus travel which should reduce use of the private car and therefore emissions to air. This should have direct positive effects on air quality which should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on	●	

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).		
<b>Passenger Rail Strategy</b>		
The passenger rail strategy will encourage greater use of rail travel, linked to other public transport modes, and in line with the walking and cycling strategies, as an alternative to the private car. This should have a generally positive effect with regard to reducing emissions and improving air quality. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy). <b>If High Speed 2 goes ahead (despite the County Council's objections) this could have a cumulative effect on the environment of the plan area. However, the government have not yet determined the exact alignment. This will not be determined until 2015 so the cumulative effect of the Warwickshire LTP3 with High Speed Rail 2 is not possible to assess at this time.</b>	●	
<b>Network Management Duty Strategy</b>		
One of the key objectives of the Network Management Strategy is to reduce the environmental impact of traffic (in terms of its speed, volume and emissions) on environmentally sensitive areas which should have a broadly positive effect with regards to air quality and noise and with regards to habitats, historic buildings and townscape / landscape if traffic is managed more effectively within towns and villages.  Policy NMD12 aims to improve network efficiency which should reduce congestion on major routes and therefore reduce air quality impacts in these areas. Policy NMD14 will ensure access for pedestrians and cyclists during safety and protection works. The overall effect of the policy is considered to be neutral. However, with further information on how the above objective is likely to be achieved the effect could be positive. The strategy is unlikely to have significant effects on water resources and soil and mineral resources (including geodiversity).	○	
<b>Taxi and Private Hire Vehicle Strategy</b>		
The policies within the Taxi and Private Hire Strategy support the use of public transport and taxis and private hire vehicles as alternatives to the private car. This will generally be positive with regards to air quality, however, it is not considered likely that this Strategy will have as positive effect on air quality compared with the Bus Strategy or Passenger Rail Strategy and therefore the overall effect is considered to be minor	●	

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positive. The strategy will not have a direct effect on any of the other SEA questions.		
<b>Intelligent Transport Systems Strategy</b>		
ITS can help in the management of emissions levels at key points on the urban and inter-urban network. The Council will seek to increase the benefits of ITS in the county which will help to manage emissions and improve air quality. This should have indirect benefits with regard to biodiversity and historic buildings. ITS will also be used to ensure reliable and punctual public transport services which should encourage the use of public transport. Policy ITS8 also supports using ITS for pedestrian crossings, although the policy only commits to considering the use of the technology for traffic signal junctions and controlled pedestrian crossing facilities. Therefore, the strategy as a whole is likely to be positive. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	●	
<b>Community Transport Strategy</b>		
The main thrust of the Community Transport Strategy is to improve accessibility. It is not envisaged that the Strategy will have a significant impact on any of the SEA questions.	○	
<b>Congestion Strategy</b>		
Population growth and economic growth are likely to result in increased congestion in Warwickshire. Currently, congestion in Warwickshire is mainly found on certain key routes in urban areas and at some key junctions on the strategic rural highway network in Warwickshire. Congestion is particularly severe in Warwick which is sensitive in terms of townscape and heritage.  The measures to reduce congestion within the Strategy include improving modal shift which will help to reduce trips made by car and reduce overall emissions, having indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is also likely to improve townscape in areas where traffic is reduced. The strategy is likely to be positive in this regard. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	●	
<b>Cycling Strategy</b>		

<b>The effect of the draft plan on quality of life and the environment</b>		
<b>Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)</b>	<b>Significance of the effect</b>	<b>Suggested mitigation and enhancement measures</b>
The policies within the Cycling Strategy should all encourage cycling as a mode of transport as well as a leisure pursuit. Increasing cycling for commuting and accessing services and facilities could reduce the use of private cars and improve air quality, noise, townscape and indirectly, historic buildings and biodiversity. The effect of the strategy should be positive. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new cycle infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Bus Information Strategy</b>		
The strategy aims to ensure excellent public transport information is available to address the needs of current and potential passengers, and to grow the market for public transport by increasing its accessibility, which can contribute positively to environmental conditions if it results in reduced traffic levels. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).	●	
<b>Public Transport Interchange Strategy</b>		
The strategy as a whole is likely to be positive because the policies encourage greater use of public transport which can contribute positively to environmental conditions if it results in reduced traffic levels. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Public Transport Strategy</b>		
The strategy as a whole is likely to be positive because the policies encourage greater use of public transport which can contribute positively to environmental conditions if it results in reduced traffic levels. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Road Safety Strategy</b>		

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Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
There is little direct relationship between the Road Safety Strategy and the SEA Objectives. However the policies within the strategy include the use of engineering to improve safety and to reduce speeds. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new safety infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy).	●	
<b>Highway Maintenance Strategy</b>		
The maintenance of the highway will require the use of aggregates, however Policy HM2 requires materials to be recycled on site where possible which provide some mitigation for this negative effect. Policy HM6 also states that the County Council will aim to undertake all of its highway maintenance work within the context of the principles of sustainability and environmental protection. The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats.	●	
<b>Bridge Maintenance Strategy</b>		
<p>The Strategy includes the protection and maintenance of bridges which form a vital part of the County's cultural heritage, but only if such works are not prohibitively expensive or impractical. This wording suggests that some historic assets may not be maintained, particularly those which are considered not to be a vital part of the County's cultural heritage. However, (final LTP3) policy BM6 includes consultation with and working in partnership with English Heritage which should mitigate for a potential adverse effect on historic assets.</p> <p>Policy BM6 encourages the minimisation of the use of virgin stone and other materials, which could include soils and aggregate and the recycling of materials on site.</p> <p>Bridge maintenance could result in water pollution, soil pollution or loss of soils and negative effects on biodiversity during maintenance works / construction.</p> <p>The extent or location of potential negative effects of this Strategy on biodiversity, water quality, and use of aggregates is not known and therefore a minor negative (rather than a major negative) effect is recorded.</p>	●	
<b>Changing Travel Behaviour Strategy</b>		
The strategy as a whole is likely to be positive because the policies promote the use of public transport, walking, cycling and reduce single occupancy of vehicles which could reduce use of the private car and	●	

The effect of the draft plan on quality of life and the environment		
Impact of the option (including if appropriate nature and spatial extent of the impact, probability, duration, frequency and reversibility)	Significance of the effect	Suggested mitigation and enhancement measures
volumes of traffic and therefore reduce emissions to air which should also have indirect positive effects with regards to certain historic buildings and habitats which are sensitive to air pollution. The strategy is unlikely to have significant effects on landscape, direct impacts on species and habitats, water resources and soil and mineral resources (including geodiversity).		
<b>Walking Strategy</b>		
<p>The policies should all encourage walking as a mode of transport. Increasing walking for commuting and accessing services and facilities could reduce the use of private cars and improve air quality, noise, townscape and indirectly, historic buildings and biodiversity. The effect of this aspect of the strategy should be positive.</p> <p>The strategy includes the maintenance of footpaths which should help to avoid erosion of soils. The strategy encourages walking in the countryside. Although this could increase the number of people coming into contact with wildlife and natural environments, it is uncertain whether this could result in negative effects e.g. from littering and damage to habitats, or positive effects e.g. from improving people's awareness and appreciation of wildlife and natural areas. Such potential effects are likely to be minor (either negative or positive). The strategy is unlikely to have significant effects on landscape and direct impacts on species and habitats. However, building new cycle infrastructure is likely to have impacts on natural resources, especially mineral resources (this is addressed in the Land Use and Transportation Strategy). Overall the strategy is considered to have a minor positive effect.</p>	●	
<b>Rights of Way and Recreational Highway Strategy</b>		
<p>Policy RW1 of this strategy sets out measures for surfacing rights of way and recreational highways. The type of surfacing material will be determined on the basis of the needs of all path users, cost, sustainability, local distinctiveness and the local ecology. Standardised way marking will be used unless local distinctiveness or named-trails are being promoted in partnership with another organisation. This will help to protect the rural landscape from visually intrusive signage.</p> <p>This strategy prioritises creations, diversions, conversation and extinguishments of paths which could affect SSSIs, the protection of which is given high priority within Policy RW5b. The protection of other ecological and archaeological features is given medium priority. <b>However, in almost all cases, archaeological and ecological features co-exist positively with rights of way and recreational highways and if a site or feature needs</b></p>	●	



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safeguarding, this is likely to be picked up at an early stage and routes can be temporarily closed if necessary, until the issue was resolved by a diversion or extinguishment.		
<b>Implementation Plan (April 2011 – March 2015)</b>		
Little detail is given in the Implementation Plan regarding the schemes that are likely to be taken forward and the level of resources available is not yet certain. The plan stresses that maintenance of the highway network is likely to be a priority and that a broadly balanced integrated transport programme will be maintained. Maintaining the highway network and providing a balanced integrated transport programme are likely to be positive for managing traffic (and potentially helping to manage the effects of transport on communities and the built and natural environment) but at the lower levels of funding allocation mean that no funding has been allocated for “improving our streets” for 2011-2012 and this could mean that improvements are not made to townscape in the short term. The Implementation Plan concludes that no allocation is envisaged from LTP Block Allocations or Council resources to support LDFs will occur during this Implementation Plan. This means that the funding available from the council to ‘top up’ developer funding (to provide additional infrastructure/provide higher quality infrastructure where appropriate) is less likely to be available. However, the effects of this are uncertain because of uncertainties regarding the level of funding likely to be available.	?	The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. This process aims to ensure that where possible, future development is sustainable.

Assessment Conclusions – quality of life and the environment
<p><b>Summary of performance:</b> None of the strategies are likely to have a significantly positive effect on the environment and quality of life objectives. This is because of uncertainty regarding when, where and how measures are likely to be implemented. The long term strategies within the LTP3 largely perform well against the environment and quality of life SEA Objectives (mostly scoring minor positive marks) as they include strategies and measures that (if implemented) will help reduce the impact of transport on the environment. The strategies contained within the plan should help to provide alternative modes of transport and manage traffic to reduce the impact on communities and townscape and reduce congestion and traffic. All of these measures should help to reduce the impact of traffic on air, noise and biodiversity, improve landscapes and townscapes and reduce pollution from traffic.</p> <p>The effect of the area strategies has been scored as uncertain. The proposals in the strategy will have effects on the environment in three ways – through changing the amount of traffic in certain sensitive areas (areas sensitive to noise, water and soil pollution, sensitive landscapes, habitats and townscapes), through direct land take impacts (i.e. a direct impact from land use changes on environmental resources such as a habitats, species, designated conservation / landscape areas, water body or listed building / heritage resource) or through building new infrastructure and changing maintenance regimes (which can change / increase the demand for natural resources). There is a high degree of uncertainty in the strategy regarding when and where transport schemes</p>

**Assessment Conclusions – quality of life and the environment**

may be developed and this has made the strategies difficult to assess. Although the area strategies may make alternative modes more attractive and reduce the impact of traffic on townscapes it is not possible to definitely state the locations of any likely traffic reduction due to uncertainty regarding where and how measures are likely to be implemented. This uncertainty also means that direct land take impacts are not possible to predict. An exception to this is Phase 1 of the NUCKLE major scheme which is further advanced than the other parts of the plan. The NUCKLE scheme will be broadly positive in helping to achieve modal shift. However, there is a risk of some impacts on flooding and biodiversity – mitigation measures will need to be developed as part of the environmental assessment for the scheme.

**Mitigation and enhancement measures:**

Mitigation measures are identified in order to address potential negative effects and areas of uncertainty identified in the assessment, as follows:

- The Implementation Plan states that the council is working closely with District Councils and developers to establish detailed requirements and phasing for infrastructure. **This process aims to ensure that where possible, future development is sustainable.**

No enhancement measures have been suggested.