

Somerset County Council Transport Policies Strategic Environmental Assessment

> Environmental Report Non Technical Summary

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1 Introduction

1.1 This report

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

1.2 The SEA process

The Somerset County Council Transport Policies 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, where appropriate, 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 Somerset County Council Transport Policies

The Local Transport Act 2008 requires Somerset County Council to produce and maintain a Local Transport Plan (LTP). This is the third Local Transport Plan produced for Somerset. LTP1 covered the period 2001/02 to 2005/06 and LTP2 covered the period 2006/7 to 2010/11.

The Somerset County Council Transport Policies document is both a long term transport strategy (2011-2026) and also a short term Implementation Plan (2011-2014). The long term strategy part of the plan is policy based and sets out 44 policies to guide transport planning and development in Somerset.

The Implementation Plan sets out how the Council intend to allocate resources over the next three year period.

The objectives of the Somerset County Council Transport Policies are set out as a number of goals. These are listed below:

- Making a positive contribution;
- Living sustainably;
- Ensuring economic well-being;
- Enjoying and achieving;
- Staying safe; and
- Being healthy.

2 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 process which informs each stage of the Somerset County Council Transport Policies development. In addition, a Habitat Regulations Assessment process is taking place alongside the SEA. 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 site¹ should be subject to Habitat Regulations Assessment (HRA). Somerset County Council is therefore required to assess its Somerset County Council Transport Policies through the HRA process as policies and transport projects in the plan can potentially affect Natura 2000 sites. Somerset County Council has completed a HRA screening assessment to decide whether a full assessment will be required and a HRA screening report has been published alongside the Draft Somerset County Council Transport Policies. This screening report sets out a number of recommendations to improve the performance of the plan. The screening assessment concludes that providing these recommendations are met before the final Somerset County Council Transport Policies is submitted, there is unlikely to be a significant effect on the Natura 2000 network.

3 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 Somerset, 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 September 2009 that detail this process. The six topic papers produced are:

- Health (Topic Paper 1);
- Community (Topic Paper 2);
- Economy (Topic Paper 3;
- Accessibility (Topic Paper 4);
- Environment (Topic Paper 5); and
- Natural resources (Topic Paper 6).

Each topic paper set out:

- The other relevant policies, plans, programmes and sustainability objectives that the Somerset County Council Transport Policies is influenced by;
- Information on the baseline environment and the key environmental and sustainability issues faced in the county; and

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.

• 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 the Environmental Report. The results of the different scoping stages are summarised below. The SEA framework that has been used to test the plan is also presented below.

3.1 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 (RSS)², the Sustainable Community Strategy and the Local Area Agreement. It is vital that the Somerset County Council Transport Policies 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 Somerset County Council Transport Policies should develop. A summary of these key documents has been provided below. Please see Appendix 1 of the Environmental Report for the full policy review against each topic.

3.1.1 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 Somerset County Council Transport Policies has a direct role in delivering the National Transport Goals locally and the SEA tests how well it will do this.

3.1.2 Sustainable Community Strategy and Local Area Agreement

The Sustainable Community Strategy for Somerset 2008-2026 has the following aims:

• Making a positive contribution;

² Please note that Regional Spatial Strategies have been revoked by the new government as of 6th July. At the time of the SEA scoping it was good practice to ensure that the principles and objectives of the RSS were reflected in the SEA. Because of this there may still be some references to the RSS in this Environmental Report.

- Living sustainably;
- Ensuring economic wellbeing;
- Enjoying and achieving;
- Staying safe; and
- Being healthy.

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 Somerset and what will be tackled first. Success will be gauged by measuring success against indicators. 32 indicators have been selected from a national list prepared by the Government and 18 have been selected to reflect issues of local importance. Relevant indicators include:

- NI 47 People killed or seriously injured in road traffic accidents;
- NI 56 Obesity in primary school age children in Year 6;
- NI 75 Access to services and facilities by public transport, cycling and walking;
- NI 137 Healthy life expectancy at aged 65;
- LP I6 Health of the Natural Environment;
- NI 186: Per capita CO₂ emissions in the Local Authority area; and
- NI 188: Adapting to climate change.

The Somerset County Council Transport Policies 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.

3.2 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 Somerset County Council Transport Policies 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

Health

- The population is ageing and this needs to be considered in the provision of services and transport
- Poor and worsening air quality in Taunton and Yeovil especially and road traffic noise along a number of sensitive routes including the stretches of the M5, A38, A358, A303, A3088, A37 and the A39
- Child road accident statistics are higher than target and pedestrian accidents have increased in the last year of data
- Obesity and childhood obesity are increasing; less than 25% of people in Somerset undertake as much physical activity as recommended and the number of people cycling is below target. However, cycling and walking in the Taunton Strategy Study Area in particular is higher than the national average

Community

- People generally feel safer in Somerset and feel that anti social behaviour is less of an issue than people in the UK on average
- Community severance caused by large volumes of traffic
- Development in Somerset will occur mainly in larger towns and adequate transport is needed to support this

Economy

- Up to 31% of people who live in Somerset work outside the county boundary
- Most people still travel to work by car and a large proportion of pupils are still driven to school
- There is congestion in key points in Taunton, Bridgwater and Yeovil but congestion is better than target due to the economic slowdown
- Unclear data on the growth in overall traffic mileage due to changes in fuel prices and economic performance
- Number of HGVs using Somerset's strategic routes is declining but decisions made by other authorities and the use of satellite navigation equipment can cause problems in Somerset

Accessibility

- Access to services (especially healthcare) in Somerset 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 punctuality is improving but there are problems with bus stop information
- Somerset has good rail access between the main towns and to areas outside the county. Use of the rail network has increased in recent years

Environment

- Somerset 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
- Somerset has a number of Special Road Verges which are identified sites within the highways that

Table NTS1: Sustainability baseline issues

are of biodiversity interest, usually containing wild flowers of importance, such as orchids

- A large proportion of Somerset is protected landscape or is rural in character. 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

Natural resources

- There is no data available on the amount of renewable energy used in the transport system in Somerset. The target is 10% of the total energy use in transport systems to be derived from renewable sources
- Somerset's cars emit more CO₂ than in other areas because of the rural nature of the county and the average age of the fleet. Road transport emits a higher amount of CO₂ in Sedgemoor, South Somerset and Taunton Deane. This is likely to be due to the rural nature of South Somerset and the influence of the M5 in Sedgemoor and Taunton Deane
- 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
- Water consumption per head is higher in Somerset than in the UK as a whole. This is an important issue in terms of maintenance
- There has been deterioration in groundwater quality in the Wessex Water region. Transport can also have impacts on sensitive watercourses and soil if drainage is not adequate
- Use of recycled aggregates Somerset re-uses a high proportion of road planings and this should continue
- Transport of minerals and waste by road can cause problems to local communities

3.3 Definition of the SEA framework

The SEA framework for the Somerset County Council Transport Policies 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 Somerset County Council Transport Policies 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.

Table NTS2: SEA framework	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies	Somerset County Council Transport Policies SEA question. Will the Transport Policies
1. Health	
1a: Improve the safety of 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)?
1b: Make healthier modes of travel easier and more attractive?	 Increase walking and cycling and help to meet the Somerset SCS target to increase the number of children and adults regularly participating in physical activity (link to LAA indicator NI 56 on obesity; NI 121 on circulatory disease; NI 137 on life expectancy)?
1c: Reduce the impact of the transport system on air and noise pollution?	Reduce traffic/congestion that affects an AQMA or would help to meet air quality objectives?
	• Cause any changes to traffic levels (particularly a change of over 10%) or the nature of traffic (*) past sensitive receptors or on sensitive routes (**) that would help to achieve WHO noise guidelines?
	Reduce traffic in tranquil areas?
2. Communities	
2a: Help to improve the quality of urban and rural centres?	 Reduce traffic levels, 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 (this could include changes to highway signage, lighting and highway furniture) or introduce features that enhance the character of towns?
	 Support the spatial strategy for the area including providing improvements to transport in rural areas?
2b: Improve the security of the transport system?	Make transport systems / interchanges more secure and contribute to the targets in the Somerset Crime Reduction and Drugs Strategy to reduce the fear of crime and reduce anti social behaviour?
2c: Reduce the community severance effects of transport?	• Result in a reduction in community severance (i.e. improved crossing facilities, reduced traffic speed, reduced traffic levels)?
3. Economy	
3a: Help to manage and maintain the existing transport system efficiently?	Help to manage routes effectively in order to maintain journey times?
3b: Invest in transport improvements that	Include schemes that decrease journey times,

Table NTS2: SEA framework	
Somerset County Council Transport Policies SEA objective. Will the Transport Policies…	Somerset County Council Transport Policies SEA question. Will the Transport Policies
help the economy of Somerset?	congestion, improve journey time reliability and help to meet congestion targets in the Somerset County Council Transport Policies?
3c: Provide more sustainable transport access to rural areas, the countryside and visitor attractions?	 Increase access to tourist attractions, rural areas and the countryside by public transport and help to meet the objective of the Somerset Economic Strategy to revitalise the economy of Somerset's market towns and rural communities?
3d: Reduce the impact of road freight on communities?	• Provide / encourage the use of alternatives to road freight and provide routes for freight traffic that reduces impacts on communities and the environment?
4. Accessibility	
4a: Improve sustainable access to basic services for all groups in society	 Improve provision of public and community transport that makes key services (***) more accessible (link to LAA indicator NI 75 Access to services and facilities by public transport, cycling and walking).
	• Improve access for certain equality groups (race, gender, disability, age, religion and sexual orientation) and contribute to the DfT goal of promoting greater equality of opportunity for all citizens. This includes changes to physical infrastructure and services.
5. Environment	
5a: Protect and enhance biodiversity at all levels	Cause direct habitat fragmentation / loss especially that would risk achievement of Somerset BAP priority targets?
	Cause a change in traffic flows or nature of traffic (*) that will affect sensitive habitats or focal species?
5b: Protect and enhance buildings, sites, areas and features of historic,	Cause direct impacts on sites or monuments through the provision of new infrastructure?
archaeological and architectural interest	 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?
5c: Protect and enhance landscape quality and character	Cause changes in traffic flows in areas that are valued for their landscape character?
	 Introduction of new infrastructure to existing areas. This will include new routes, changes to highways signing, lighting and highway furniture such as noise barriers?
6. Natural resources	

Table NTS2: SEA framework			
Somerset County Council Transport Policies SEA objective. Will the Transport Policies	Somerset County Council Transport Policies SEA question. Will the Transport Policies		
6a: Reduce the contribution of the transport system to carbon emissions	• Cause a change in vehicle miles or a change in the nature of traffic (*) that would cause changes in fuel use and CO ₂ that would assist in meeting the SCS target of reducing the amount of carbon dioxide produced per person in Somerset (link to LAA indicator NI 185: CO ₂ reduction from Local Authority operations; NI 186: per capita CO2 emissions in the Local Authority area)		
	 Increase the use of energy from renewable sources in the transport system (to reach a target of 10% of the total energy consumed) 		
6b: 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)		
6c: Minimise the impact of the transport system on water resources, soil and mineral resources	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?		
	Cause changes to maintenance regimes that may decrease the need for water or decrease the potential for flooding?		
	Reduce the demand for aggregate?		
	 Help to protect loss or pollution of soils which support valued habitats or are already experiencing erosion? 		

(*): 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.

(**): Sensitive receptor refers to homes, schools and hospitals

(***): Key services include schools and learning, open space and recreation, jobs, leisure facilities, areas of cultural heritage and health facilities.

4 Assessing the Effects of the Somerset County Council Transport Policies

As recommended by 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 (where possible) describing these changes in terms of the sensitivity of the environment and the nature and the

magnitude of the impact (for example the geographical scale and 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.

4.1 Identifying the effects of the plan

Expert judgement is the main way that the effects of a transport plan are identified. Many of the techniques used to provide a quantitative assessment for a transport project, for example the amount of carbon dioxide expected to be generated, are not always available to the team assessing a transport plan (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 team has considered how the different elements of the plan might inter-relate to cause effects. The team has also considered how the plan and other plans / projects might inter-relate to cause effects.

4.2 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 Somerset County Council Transport Policies (as with many strategic plans), it is difficult to assign significance to the effects because of the lack of detail available on the likely location and nature of the measures planned. Because of these uncertainties, it is difficult to consider the criteria above as in many cases there will not be the information available on the nature of the receptors and the potential impacts. However, the SEA team feel that scoring every impact as uncertain is not helpful. Therefore, we have adopted the following approach to significance for the assessment which focuses more on the achievement of the SEA objectives and the existing baseline information (please see Table NTS3).

Table NTS3: SEA significance scores			
Score	Description Symbol		
Significant positive impact	The plan addresses all the elements that are required to protect the environment and address the sustainability issues in Somerset 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 Somerset 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	0	
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 positive effect on the SEA objective.	?	

5 The Effect of the 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 alternatives³. The way that reasonable alternatives are defined in the Somerset County Council Transport Policies process is through identification and testing of plan options. The approach Somerset County Council has taken to developing options (and ENVIRON's approach to assessing those options) is outlined in Figure NTS2.

³ 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 NTS2: Development and assessment of options

5.1 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 Somerset County Council Transport Policies 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 absence of measures promoted through the Somerset County Council Transport Policies the necessary infrastructure will not be put in place and journey times, congestion and impact on communities and townscape will increase. 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. Maintaining transport assets to only the statutory minimum level would increase the maintenance backlog;
- Private cars in Somerset emit more CO₂ than in other areas because of the rural nature of the county and the average age of the fleet. According to the Taunton Transport Study CO₂ levels are forecast to increase by 42% in the Taunton study area in the future baseline scenario. CO₂ levels are also likely to rise in other areas of the county in the absence of measures bought forward as part of the Somerset County Council Transport Policies as there will be little support for sustainable modes and vehicle miles and congestion will increase;
- Access to services in Somerset is poor in many areas for people without a car.
 Without the measures taken forward as part of the Somerset County Council Transport Policies, accessibility levels will decline as services are withdrawn;

- In terms of safety, total KSI accidents and children KSI accidents are both generally in decline. The 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 Somerset County Council Transport Policies 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; and
- Somerset is a county rich in biodiversity, cultural heritage and has many attractive and historic landscapes. Effects on the environment from the transport system are likely to worsen in the future baseline. Increasing traffic levels and congestion is likely to impact negatively upon landscape, townscape and biodiversity.

5.2 Assessment of the alternative measures

The SEA regulations state that an Environmental Report should outline of the reasons for selecting the alternatives dealt with and these reasons are outlined in this section of the Non Technical Summary. The Council has set out options/alternatives for the main policy elements of the plan. The options selected for each strategy within the Somerset County Council Transport Policies represent a range of different actions and initiatives that could be used to achieve the best results. Some options were based on education and softer measures, others were directed towards engineering solutions and some options were a combination of the two. When developing these options, Somerset County Council considered whether these options were broadly affordable, whether they would be acceptable to Somerset communities and also whether they were deliverable.

A number of options were developed for Taunton on the basis of the considerations outlined above. However, at the stage of the Draft Somerset County Council Transport Policies no alternative options have been outlined for Yeovil. There are several reasons for this. Over the last 2-3 years, Somerset County Council has been collecting data and evidence in order plan infrastructure and services to support proposed growth in housing and employment in the Taunton area (Wellington, Taunton, Bridgwater) and Yeovil. Much of this work has been guided by the land use planning work being undertaken by the District Councils in these areas. While parcels of land for development in the Taunton area have been broadly determined, in Yeovil there is still discussion amongst local decision makers as to where the best place is to allocate the growth. As a result, Somerset County Council has not been able to accurately model and test the different spatial alternatives for Yeovil and therefore, no options have been developed. Somerset County Council are therefore continuing to use their previous work on the Eastern and Western corridor improvement options as a basis for the strategy but recognise that these will eventually be superseded by a Yeovil Transport Strategy.

The strategy options made available to the SEA team were assessed against the SEA objectives and mitigation / enhancement measures suggested for the further development of the options. The results of the options assessment are discussed below.

5.2.1 Taunton strategy options

Three strategy options have been assessed for Taunton, against a future baseline scenario to 2026. This future baseline scenario sees a significant growth in travel demand, with accompanying increase in the level of carbon dioxide emissions, delays and congestion and a reduction in economic productivity. This is predicted to adversely affect townscape, air quality and increase community severance.

The first strategy option is for a low level of investment in transport improvements, comprising bus measures, walking and cycling schemes and junction improvements. These are predicted to have a negligible impact on the strategy objectives, with environmental and social conditions still likely to decline.

The second strategy option provides for an increased level of intervention, however, with higher cost. Some improvement to congestion and public transport is predicted, however, conditions for walkers and cyclists are predicted to deteriorate and, overall, this scenario is not predicted to substantively achieve the strategy objectives.

The third strategy option is characterised by travel demand management and is the most costly option. However, this option would reduce congestion and delay in many areas and, consequently, have beneficial effects on journey time reliability. There would also be reductions in air and noise pollution and a 1% reduction in CO_2 emissions relative to the baseline.

5.2.2 Modal strategy options

Various strategy options for each modal strategy have been assessed against the SA objectives. In general, the strategy options range from measures with a low level of intervention to measures providing funding for a high level of intervention.

Firstly, the freight strategy options all show some positive attributes to help drivers choose more suitable routes, provide research on alternative freight modes and help reduce the impact of freight traffic. The options which include physical restrictions may be problematic, due to cost and potential for increasing vehicle miles and carbon emissions.

The rail strategy options will all help to make rail services and railway stations more accessible and to improve journey time reliability by rail. The most costly option, which includes provision of direct funding, is the only option likely to increase the number of services available. However, funding is uncertain for this option.

The parking strategy options are all likely to have positive impacts on the reduction of traffic in town centres. However, there is some uncertainty regarding the effectiveness of some measures, which appear to be working against each other (e.g. some measures aim to reduce parking and others aim to increase provision and reduce cost).

The motorcycling strategy has not put forward different strategy options, but instead has provided a long list of measures that could be taken forward and which have been formulated into an action plan. Overall, the action plan will have positive impacts on the safety of motorcyclists, and it may also have other sustainability benefits through encouraging people to use motorcycles instead of cars.

The bus strategy has also provided a list of measures that could be taken forward, which have been assessed generically. The strategy aims to promote improvements to the quality of the bus service and, if successful, will move people from cars to public transport and also help reduce CO_2 emissions and pollution.

The walking strategy has also provided a list of measures that could be taken forward, which have been assessed generically. The strategy aims to improve the pedestrian environment and encourage more walking and, overall, it is likely to have a positive impact, particularly in relation to safety, health and accessibility. However, there is uncertainty regarding whether significant new infrastructure will need to be built.

6 The Effect of the Draft Somerset County Council Transport Policies

The Somerset County Council Transport Policies was assessed within appraisal matrices. The full assessment matrices can be found in Appendix 4. Six assessment matrices have been produced (one for each SEA theme). The results of the assessment are summarised below in three ways.

Table NTS4 sets out the significant effects that have been highlighted by the assessment (significantly positive or significantly negative). Sections 6.1 - 6.6 summarise the general performance of the plan under the six SEA themes and Table NTS5 outlines mitigation and enhancement measures.

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Table NTS4: Significant effects identified as part of the Somerset County Council Transport Policies		
Policy No	Effect identified	
Please note that no significant negative effects were identified.		
Policy 25 on Taunton	Significant positive effect with regards to air pollution. Modelling undertaken as part of the Taunton Transport Strategy Review showed significant reductions in nitrogen dioxide on some routes in the town as a result of the schemes presented as part of the policy. However, please see below regarding the likelihood of implementation of schemes in the plan.	

6.1 Effects on health

Only one of the policies is likely to have a significant positive effect on the health SEA objectives. This is the policy for Taunton in Annex B which shows a significant positive effect with regards to air pollution. Modelling undertaken as part of the Taunton Transport Strategy Review showed significant reductions in nitrogen dioxide on some routes in the town as a result of the schemes presented as part of the policy. None of the other policies are likely to have a significantly positive effect on the health SEA objectives. The Somerset County Council Transport Policies largely performs well against the health SEA objectives as the Somerset County Council Transport Policies includes policies that will:

• Help improve health through encouraging modal shift from private car to more sustainable modes of travel (thus improving air quality and reducing nuisance from traffic noise);

- Help to make healthier modes of transport more attractive through improving walking and cycling routes;
- Improve the safety of the transport system through effective highway maintenance;
- · Help to manage the impacts of freight traffic; and
- Introduce safety education programs and programmes such as safer routes to schools.

All of these measures, when implemented (recognising that the assessment of the Implementation Plan has shown that they are not likely to be implemented in the short term), will help to improve health and safety within Somerset. Many of the policies are likely to inter-relate to have a cumulative positive effect on health and safety. Many of the policies on public and community transport, parking, walking and development planning will be mutually re-enforcing in helping people to decide to switch to more sustainable modes. As people switch to more sustainable modes, traffic and congestion improve as does air quality, accident rates and noise. These improvements are then positive in helping more people to decide that walking and cycling is safe and pleasant.

The rail policy and the parking policies have an uncertain impact on the health SEA objective. Although the rail policy discusses improving station facilities it is not clear whether this includes increasing cycle parking. Due to the fact that all stations in Somerset currently have inadequate cycle parking it would be useful for this policy to directly address the issue. The parking policy also shows an uncertain impact. This is firstly, because there is currently no information available about the likely impact of the park and ride sites proposed, and secondly because of uncertainties regarding the intent of the policy regarding departure from parking standards.

Some of the policies are likely to cause a minor negative impact. The policies for Taunton, Bridgwater and Wellington show a minor negative effect on accidents. This is because modelling has shown that the policies would not help fully to meet targets of reducing people killed and seriously injured on the road. However, many of the schemes identified will help contribute positively towards the safety of the transport network for pedestrians through the implementation of 20 mph zones, traffic calming, pedestrian priority, shared spaces etc in town centres and by improving junctions considering needs of non-car users.

As with the other SEA objectives, there is some uncertainty over the implementation of the schemes in the strategies and the Implementation Plan in its current form is likely to have a minor negative effect due to the likely reduction in funding available (it is recognised that the Implementation Plan is a draft and may change once levels of resources are known). The plan stresses that maintenance of the highway network is likely to be a priority and that funding will be set aside to deliver the road safety objectives as agreed through the road safety partnership. This should be positive for safety but it is likely that the funding available to encourage healthier modes of travel is going to be much reduced for the foreseeable future.

6.2 Effects on communities

The policies in the Somerset County Council Transport Policies largely perform well against the SEA objectives as they include measures to help improve the quality of urban and rural centres through:

- Measures to manage traffic better;
- Provision of better pedestrian facilities;
- Measures to manage the impact of freight traffic;
- Parking policies and other measures to reduce congestion; and
- Measures to reduce the impact of vehicular traffic in certain areas.

All of these measures, when implemented (recognising that the assessment of the Implementation Plan has shown that they are not likely to be implemented in the short term), will help the communities of Somerset. In a similar way to the health SEA objective, many of the policies are likely to inter-relate to have a positive cumulative effect on communities. Many of the policies on public and community transport, parking, walking and development planning will be mutually re-enforcing in helping people to decide to switch to more sustainable modes. As people switch to more sustainable modes, traffic and congestion will improve as will air quality, accident rates and noise (thus helping to improve rural and urban centres). These improvements are then positive in helping more people to decide that walking and cycling is safer and pleasant. None of the policies assessed are likely to have a significant positive impact on the community SEA objectives.

The rail policy will have an uncertain impact. Although the policy discusses improving station facilities it is not clear whether this includes security improvements. As security of stations is a concern to some passengers it would be useful for this policy to directly address the issue.

The goal on living sustainability is likely to cause a minor negative impact as it excludes reference to townscapes.

As with the other SEA Objectives, there is some uncertainty over the implementation of the schemes in the strategies and the Implementation Plan in its current form is likely to have a minor negative effect due to the likely reduction in funding available (it is recognised that the Implementation Plan is a draft and may change once levels of resources are known). The plan stresses that maintenance of the highway network is likely to be a priority and that funding for other areas of the transport system is likely to decline. This will cause a negative effect in the short term on the quality of centres and community severance as traffic is likely to increase in the absence of infrastructure to support more sustainable modes.

6.3 Effects on the economy

The policies in the Somerset County Council Transport Policies largely perform well against the SEA objectives as they include measures to:

- Manage, maintain and enhance the existing transport system;
- · Reduce traffic volumes and congestion; and
- Manage freight traffic.

All of these measures, when implemented (recognising that the assessment of the Implementation Plan has shown that they are not likely to be implemented in the short term), will help the economy of Somerset. In a similar way to the health and community SEA objectives, many of the policies are likely to inter-relate to have a positive cumulative effect on congestion, journey time reliability and therefore, the economy. None of the policies assessed are likely to have a significant positive impact on the economy SEA objectives.

The policies in relation to Taunton, Wellington and Bridgwater will have an uncertain impact on the economy. All of these policies include a list of schemes and little information is available on the likely effect of these schemes on parameters such as congestion and journey time reliability.

The goals are likely to cause a minor negative impact as they do not address access to rural areas and the countryside or management of freight.

As with the other SEA objectives, there is some uncertainty over the implementation of the schemes in the strategies and the Implementation Plan in its current form is likely to have a minor negative effect due to the likely reduction in funding available (it is recognised that the Implementation Plan is a draft and may change once levels of resources are known). The plan stresses that maintenance of the highway network is likely to be a priority and that funding for other areas of the transport system is likely to decline. This is likely to have a negative effect in the short term on the economy if development occurs without the necessary transport infrastructure.

6.4 Effects on accessibility

The policies in the Somerset County Council Transport Policies largely perform well against the SEA objectives as they include measures to:

- Improve the provision of public and community transport that will help improve access to key facilities; and
- Help improve access and facilities for certain groups of people, such as people with disabilities.

All of these measures, when implemented (recognising that the assessment of the Implementation Plan has shown that they are not likely to be implemented in the short term), will help improve accessibility for people in Somerset.

None of the policies assessed are likely to have a significant positive impact on the accessibility SEA Objectives. None of the policies will have an uncertain effect or a minor negative effect on the accessibility SEA Objectives.

As with the other SEA Objectives, there is some uncertainty over the implementation of the schemes in the strategies and the Implementation Plan in its current form is likely to have a negative effect due to the likely reduction in funding available (it is recognised that the Implementation Plan is a draft and may change once levels of resources are known). The plan stresses that maintenance of the highway network is likely to be a priority and that funding for other areas of the transport system is likely to decline (funding could be cut by up to 50%). This will cause a negative effect in the short term on accessibility in the absence of infrastructure to support public and community transport services.

6.5 Effects on the environment

The policies in the Somerset County Council Transport Policies largely perform well against the SEA objectives as they include measures that will help reduce the impact of transport on the environment. The policies 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 biodiversity and heritage and improve landscapes and townscapes. All of these measures, when implemented (recognising that the assessment of the Implementation Plan has shown that they are not likely to be implemented in the short term), will help improve the environment of Somerset. There are a number of impact-interactions between the environmental SEA objectives and the other SEA objectives. For example, there is a clear inter-relationship between air quality and biodiversity. A positive impact on air quality (as highlighted in the health section above) could have an indirect and cumulative effect on biodiversity as improved air quality can help to reverse the degradation of some habitats. There is also a clear inter-relationship between effects on urban and rural centres and heritage/townscape. If traffic management measures are put in place to improve the quality of centres this is likely to have a positive impact on heritage (as many of Somerset's towns and villages have historic cores). None of the policies assessed are likely to have a significant positive impact on the environment SEA Objectives.

Several policies are likely to have an uncertain impact. This includes the effects of the Taunton, Bridgwater and Wellington schemes in Annex B on heritage and landscape. The Council has indicated that there are no details available on these schemes and their locations so the impact has been scored as uncertain. The Implementation Plan could also have an uncertain effect as it is highlighting potential significant funding cuts. The effect of this is that the schemes highlighted above are unlikely to be implemented in the short term. This could mean that some negative environmental effects are avoided in the short term but also means that schemes to reduce the negative impacts of traffic on townscape are not taken forward. In the absence of information on the likely timescales for schemes the impact has been scored as uncertain.

Several aspects of the plan are likely to cause a minor negative impact. This includes the goal on living sustainability as it excludes reference to townscapes. The only policy that will have a minor negative effect is the policy on freight management. This is because Traffic Regulation Orders pose the risk of moving HGV traffic to more sensitive areas in terms of environmental impact.

6.6 Effects on natural resources

The policies in the Somerset County Council Transport Policies largely perform well against the SEA objectives as they include measures to:

- Encourage modal shift;
- Manage traffic better; and
- Plan for the impacts of climate change.

All of these measures, when implemented (recognising that the assessment of the Implementation Plan has shown that they are not likely to be implemented in the short term), will help to conserve the natural resources of Somerset and reduce carbon emissions. In a

similar way to the health, community and economy SEA objectives, many of the policies are likely to inter-relate to have a cumulative effect on traffic miles and therefore, carbon emissions. None of the policies assessed are likely to have a significant positive impact on the natural resources SEA objectives.

Some of the policies have an uncertain impact. This includes policies related to bus interchanges and walking and cycling networks which would benefit from consideration of how to integrate climate change adaptation issues into walking and bus interchange infrastructure – i.e. planning for suitable shade etc. The Taunton, Bridgwater, Yeovil and Wellington schemes in Annex B will also have an uncertain impact on natural resources. The Council has indicated that there are no details available on these schemes and their locations so the impact on natural resources has been scored as uncertain. Other policies likely to have an uncertain impact are the policy on parking and this is because of uncertainties about the intent of the policy regarding departure from parking standards.

The only policy that will have a minor negative effect is the policy on freight management. This is because Traffic Regulation Orders pose the risk that HGV routes are lengthened and so can increase carbon emissions.

As with the other SEA objectives, there is some uncertainty over the implementation of the schemes in the strategies and the Implementation Plan in its current form is likely to have a minor negative effect due to the likely reduction in funding available (it is recognised that the Implementation Plan is a draft and may change once levels of resources are known). The plan stresses that maintenance of the highway network is likely to be a priority and that funding for other areas of the transport system is likely to decline (funding could be cut by up to 50%). However, in terms of emissions of CO_2 the effect is likely to be negative in the short term as traffic is likely to rise as development and growth continues and in the absence of schemes to encourage modal shift.

6.7 Mitigation and enhancement measures

Incorporation of mitigation measures to directly prevent or reduce an effect is an iterative part of the SEA process. Where a policy 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 reported in the matrices in Appendix 4 and are also reported in Table NTS5.

Table 10: Mitigation and enhancement measures identified

Health SEA Objectives

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

- Under Policy 17, further assessment work is needed on the new park and ride sites before development goes ahead and appropriate mitigation measures need to be put in place if needed. Policy 17 or its supporting text should make reference to the scheme appraisal processes that Somerset County Council has in place and should make it clear when and how this process will be undertaken.
- Policy 17 should make it clear what is meant by departure from the parking standards and whether this means that more parking would be sanctioned for certain sites.
- As schemes are implemented as part of Annex B their impact on accidents should be investigated and options for improving their safety performance considered. Annex B should make reference to the scheme appraisal processes that Somerset County Council has in place and should make it clear when and how this process will be undertaken.

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

- A number of measures were suggested as part of the options assessment that could be low cost ways of improving motorcycle safety and these should be considered for the final plan under Policy 22. These measures are further engaging with key stakeholder groups, continuing to seek opportunities to gather feedback from riders and ensuring that the needs of motorcyclists are considered in traffic calming schemes.
- If other measures can be included in the plan (apart from a Moped Loan Scheme) to promote smaller powered two wheelers they should be included in Policy 22.
- Policy 11 could be clearer in setting out how it will mitigate for the safety effects of electric vehicles (i.e. the fact that they are quieter and more difficult for pedestrians and other vehicles to hear).

Community SEA Objectives

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

- The living sustainably goal should be extended to address protection of the heritage and townscape of Somerset.
- As security at stations is a concern of some passengers, it would be appropriate for Policy 10 to refer to security improvements directly.

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

• Annex B should clarify what the following means and how it will be achieved: "reduce severance caused by roads carrying high volumes of traffic".

Table 10: Mitigation and enhancement measures identified

Economy SEA Objectives

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

- If access to rural areas and the countryside is seen as a priority it should be addressed in the goals.
- If freight issues are seen as a priority they should be addressed in the goals.
- Once more detail is known on the schemes listed in Annex B assessment work should be undertaken to assess the effects of the schemes on congestion and journey times. The policies or their supporting text should make reference to the scheme appraisal processes that Somerset County Council has in place and should make it clear when and how this process will be undertaken.
- Annex B should be clearer whether better routes to rural areas (for example, West Somerset) will be provided through the policy.

No enhancement measures have been identified.

Accessibility SEA Objectives

There are no mitigation or enhancement measures suggested.

Environment SEA Objectives

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

- The living sustainably goal should be extended to address protection of the heritage and townscape of Somerset.
- Under Annex B, further environmental assessment work is needed on all the schemes before development goes ahead and appropriate mitigation measures need to be put in place. Annex B should make reference to the scheme appraisal processes that Somerset County Council has in place and should make it clear when and how this process will be undertaken.
- If Traffic Regulation Orders are taken forward under Policy 18 their routing should be carefully planned and monitored to ensure that they do not move HGV traffic onto more sensitive routes in terms of biodiversity, heritage and landscape. The policy or its supporting text should commit to this.
- Environmental factors and issues should form a consideration in the site selection of the Drivers Centre under Policy 21 and the policy or supporting text should commit to this.

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

• The supporting text of Policy 13 that refers to loss or disturbance to Natura 2000 sites should be extended to include cycle routes.

Table 10: Mitigation and enhancement measures identified

• The Habitat Regulations Screening Assessment made the recommendation that the supporting text to Policy 11 (previously Policy 17) should stipulate that, before supporting new technologies, consideration should be given to wildlife species and habitats that are sensitive to changes in land use, and the provisions of the Conservation of Habitats and Species Regulations 2010 should be complied with.

Natural Resources SEA Objectives

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

- It would be useful if Policy 4 discussed climate change adaptation and integrated climate issues into work undertaken to improve bus stops and interchanges ensuring that shade is available at as many bus stops as possible, for example.
- It would be useful if Policy 7 and 8 integrated climate issues into pedestrian and cycling standards. Examples of measures include shaded walk ways, avoiding areas at risk from flooding, use of materials which don't contribute to surface water runoff etc.
- Further environmental assessment work is needed on all the schemes in –Annex B before development goes ahead and appropriate mitigation
 measures need to be put in place. This work should address the effects of the schemes on carbon emissions and other natural resources. The policies or
 their supporting text should make reference to the scheme appraisal processes that Somerset County Council has in place and should make it clear when
 and how this process will be undertaken.
- Policy 17 should make it clear what is meant by departure from the parking standards and whether this means that more parking would be sanctioned for certain sites.
- If Traffic Regulation Orders are taken forward as part of Policy 18 their routing should be carefully planned and monitored to ensure that they do not increase the level of carbon emissions unacceptably. The policy or its supporting text should commit to this.

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

- It would be useful if the final climate action plan stated how the Council could work towards climate change targets through the funding available in the short term and the schemes likely to be implemented.
- Policy 19 should outline what the community objectives are or are likely to be in different locations. It is suggested that these objectives should include reducing the unavoidable effects of climate change.
- Policy 19 would be more positive if it included consideration of responsible sourcing and sustainability of material.
- If other measures can be included in the plan (apart from a Moped Loan Scheme) to promote smaller powered two wheelers they should be included in Policy 22.

7 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 Somerset County Council Transport Policies. However the monitoring programme itself will not commence until the Final Somerset County Council Transport Policies 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 guidance⁴ provides advice on monitoring which suggests a phased approach to the design of a monitoring programme. This phased process will be used for Somerset County Council Transport Policies, further details of which will be included in the SEA statement once the impacts of the Final Somerset County Council Transport Policies are known.

Table NTS6: Somerset County Council Transport Policies monitoring programme		
Significant / uncertain effect identified ⁵	Monitoring required	
Uncertain effect - the effect of Policy 10 (the rail policy) on healthier modes of travel: The policy does not directly mention cycle parking so it is unclear whether it will help to encourage people to cycle to stations.	The action that is needed to change this effect from an uncertain effect is to include the required information in the Somerset County Council Transport Policies. If this is done no monitoring will be needed. If this is not incorporated then	
Uncertain effect – the effect of Policy 10 (the rail policy) on transport security issues. The policy does not directly address security issues directly so it is unclear whether it will help to improve station security.	necessary monitoring will be set out in the final Somerset County Council Transport Policies	
Uncertain effect – the effect of Policy 4, 7 and 8 (on public transport, walking and cycling networks) on climate change adaptation. The policies would benefit from integration of climate change adaptation issues into the planning of bus stop infrastructure and walking networks.		
Uncertain effect – the effect of policy 17 (parking) on carbon emissions and air pollution. It is unclear from this policy the implication of providing parking levels that depart from the standards and this should be clarified.		

The draft monitoring programme is outlined in Table NTS6.

⁴ European Commission (2003): Implementation of Directive 2001/42 on the assessment of the Effects of Certain Plans and Programmes on the Environment.

⁵ The effects have been grouped into similar effects for the purpose of the monitoring programme. Please note that the assessment identified no significant negative effects.

transport schemes and Somerset County Council has indicated that little information about the impact of these schemes is available. The mitigation suggested for these schemes is that further assessment work should be undertaken on their sustainability effects once more detail is known.	• •
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